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Getting Started with AWS Elemental MediaConvert Using the SDKs

To use one of the AWS SDKs to access AWS Elemental MediaConvert, start by setting up your client configuration. As with most AWS services, you need to set up your client with your access key and secret key. For AWS Elemental MediaConvert specifically, you also need to request an endpoint that is specific to your account and set up your configuration so that your requests go to that account endpoint.

To get started with AWS Elemental MediaConvert using one of the AWS SDKs, configure the following:

- Your IAM access key and secret key.
- Your AWS region. The region you choose is usually the one where you store your input and output files. If your input or output Amazon S3 buckets are in regions other than the one you specify here, you will be billed for data-transfer charges.
  
  **Important**
  The region in your client configuration must match the region embedded in your account endpoint; otherwise, your requests will fail.

- Your account endpoint. All of your transcoding requests must be sent to your account endpoint, not to a public AWS Elemental MediaConvert endpoint.

Each SDK contains a method called DescribeEndpoints that allows you to request this endpoint. Send your DescribeEndpoints request to the public endpoint for AWS Elemental MediaConvert that corresponds to the region in your client configuration. For a full list of AWS Elemental MediaConvert public endpoints, see AWS Elemental MediaConvert Regions and Endpoints. For more information about getting your account endpoint, see Getting Started with the API.

  **Important**
  Only make the DescribeEndpoints call once in your application. Don’t use DescribeEndpoints to create your AWS Client each time you make a request to AWS Elemental MediaConvert. Otherwise, you will hit the throttle maximum on the public API endpoint.

For links to client configuration information in each of the SDK documents, choose the appropriate topic from the following list.

**Topics**

- AWS CLI (p. 2)
- SDK for C++ (p. 2)
- SDK for Go (p. 2)
- SDK for Java (p. 2)
- SDK for JavaScript (p. 3)
- SDK for .NET (p. 3)
- SDK for PHP (p. 3)
- SDK for Python (p. 4)
- SDK for Ruby (p. 4)
- Tools for Powershell (p. 4)
AWS CLI

If you are using the AWS Command Line Interface, get started as follows:

1. First use describe-endpoints to get your account endpoint and set your region.
   
   ```
   aws mediaconvert describe-endpoints --region ap-northeast-3
   ```

2. Use the --endpoint-url option to send your request to your account endpoint.
   
   ```
   aws mediaconvert get-job --id job_ID --endpoint-url https://abcd1234.mediaconvert.ap-northeast-3.amazonaws.com
   ```

Find further instructions for setting the account endpoint and the corresponding AWS region in the Command Line Options topic of the AWS Command Line Interface reference.

SDK for C++

Find instructions for setting the account endpoint and the corresponding AWS region in the AWS Client Configuration topic of the AWS SDK for C++ documentation.

SDK for Go

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for Go documentation:

- Specifying the AWS Region
- Creating an Account Endpoint

SDK for Java

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for Java 2.0 documentation:

- AWS Region Selection
- Choosing a Specific Endpoint

For example:

```java
String endpoint = "https://abcd1234.mediaconvert.us-east-1.amazonaws.com";
String region = Regions.US_EAST_1.toString();
EndpointConfiguration endpointConfiguration = new EndpointConfiguration(endpoint, region);

AWSMediaConvert mcClient = AWSMediaConvertClientBuilder.standard()
    .withEndpointConfiguration(endpointConfiguration)
    .build();
```
SDK for JavaScript

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for JavaScript documentation:

Setting the AWS Region

Endpoints for AWS Elemental MediaConvert

For example:

```javascript
var config = {endpoint: 'https://abcd1234.mediaconvert.us-west-1.amazonaws.com'};
var mcClient = new AWS.MediaConvert(config);
var getJobParams = {Id: 'job_ID'};
mcClient.getJob(getJobParams, function(err, data) {
    if (err) console.log(err, err.stack); // an error occurred
    else console.log(data); // successful response
});
```

SDK for .NET

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for .NET documentation:

AWS Region Selection

Configuring Other Application Parameters, AWSEndpointDefinition

You can also read about sending requests to an account endpoint in the AWS Developer Blog post Overriding Endpoints in the AWS SDK for .NET.

SDK for PHP

Find instructions for setting the account endpoint and the corresponding AWS region in the following section of the AWS SDK for PHP documentation:

Configuration, endpoint

For example:

```php
<?php
require 'vendor/autoload.php';
$options = [
    'version' => '2017-08-29',
    'region' => 'us-west-2',
    'endpoint' => 'https://abcd1234.mediaconvert.us-west-1.amazonaws.com.'
];
$mediaConvertClient = new MediaConvertClient($options);
$result = $mediaConvertClient->getJob([}
'Id' => 'VALID JOB ID', // REQUIRED
});
echo $result;
?>

### SDK for Python

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for Python (Boto) API Reference:

**Session Reference** This topic provides information on setting the endpoint and region for a single session. If you don't specify the region here, the default one in the environment will be used.

For example:

```python
mc_client = boto3.client('mediaconvert', endpoint_url='https://abcd1234.mediaconvert.us-west-1.amazonaws.com')
get_job_response = mc_client.get_job(Id='job_ID')
```

**Credentials** This topic provides information on setting the region in the default environment.

### SDK for Ruby

Find instructions for setting the account endpoint and the corresponding AWS region in the following sections of the AWS SDK for Ruby API Reference:

**Setting a Region**

**Setting a Nonstandard Endpoint**

### Tools for Powershell

Find instructions for both setting the account endpoint and for setting the corresponding AWS region in the **Specifying AWS Regions** section of the AWS Tools for PowerShell documentation.

In brief, specify an account endpoint as a URL by adding the -EndpointUrl common parameter to your AWS Tools for PowerShell command:

```powershell
AWS-PowerShellCmdlet -EndpointUrl "custom endpoint URL" -Other -Parameters
```
Getting Started with AWS Elemental MediaConvert Using the API

To use the AWS Elemental MediaConvert REST API, follow these steps:

1. **Set up your permissions.**

   There are two sets of permissions you need to set up before using AWS Elemental MediaConvert:
   - Permissions that the AWS Elemental MediaConvert service can assume on your behalf, to access your S3 buckets and invoke API Gateway. For instructions on how to set this up, see the Set Up IAM Permissions topic of the AWS Elemental MediaConvert User Guide.
   - Your Signature Version 4 authentication for the requests you send to AWS. When you use the AWS Command Line Interface or one of the AWS SDKs, these tools automatically sign the requests for you with the access key and secret key that you specify in your client configuration.

2. **Set up S3 file locations.**

   The service reads your input files from and saves your output files to Amazon S3 buckets. For instructions on creating these buckets, see the Create Storage for Files topic of the AWS Elemental MediaConvert User Guide.

3. **Request your account endpoint.**

   Send a POST request with an empty body to the following endpoint, substituting in your region. Usually, this is the region where you store your input and output files. Note that this region must match the region you set up in your client configuration.

   ```
   https://mediaconvert.<region>.amazonaws.com/2017-08-29/endpoints
   ```

   For example, for the region `ap-southeast-2`, the endpoint is the following:

   ```
   https://mediaconvert.ap-southeast-2.amazonaws.com/2017-08-29/endpoints
   ```

   For a full list of AWS Elemental MediaConvert public endpoints, see AWS Elemental MediaConvert Regions and Endpoints.

   The service returns an endpoint similar to "https://abcd1234.mediaconvert.us-west-1.amazonaws.com", where the first eight digits after "https://" are an alphanumeric combination unique to your account and the region matches the regional endpoint that you send the request to. This is the endpoint to use for your transcoding requests.

   **Important**
   Send every other AWS Elemental MediaConvert request to this endpoint. Only use the `https://mediaconvert.<region>.amazonaws.com/2017-08-29/endpoints` public endpoint to request your account endpoint.

4. **Send your transcoding requests.**

   Using the account endpoint you received from your POST request, send your requests to manage transcoding jobs, queues, job templates, and presets. For general information about how these resources work, see the AWS Elemental MediaConvert User Guide. For high level information about each resource, including information about each transcoding setting, see the Resources portion of this guide.
If you use Postman to send your requests, you can optionally copy and import the preconfigured postman collections available in the AWS Elemental MediaConvert User Guide.

**Important**
If you request your account endpoint programatically, only do so once in your application. Don’t make a request to the public endpoint each time you make a request to AWS Elemental MediaConvert. Otherwise, you will hit the throttle maximum on the public API endpoint.
Important Notes

Versioned Endpoints

When you send requests programatically, you must specify the API version you send the requests to. The current API version is 2017-08-29.

Therefore, you must construct your endpoint like this:

https://mediaconvert.<region>.amazonaws.com/2017-08-29/<resource>/<parameter>

For example:

https://abcd1234.mediaconvert.region-name-1.amazonaws.com/2017-08-29/queues/my-queue

Using the AWS CLI

When you send requests using the AWS CLI, use PascalCase for all properties. For example, if you used the properties settings and timecodeConfig in your API call, you must change those to Settings and TimecodeConfig for your CLI call. This is required because the CLI is built on Python, which uses PascalCase for properties.

About the Resources Section of This Guide

The Resources section of this guide provides two topics for each high level resource. The first topic describes the resource and the second provides information for working on a specific instance of the resource. For example, jobs has a topic, Jobs, and a topic, A Specific Job. Within each topic you'll find the available REST methods for the resource and the schema for your request body.

Note: The schemas provided in this guide are not working examples. For example job settings, see the AWS Elemental MediaConvert User Guide example job settings.
Resources

The AWS Elemental MediaConvert REST API includes the following resources.

Topics
- Request Account Endpoint (p. 8)
- Job Templates (p. 11)
- A Specific Job Template (p. 158)
- Jobs (p. 305)
- A Specific Job (p. 454)
- Presets (p. 582)
- A Specific Preset (p. 695)
- Queues (p. 809)
- A Specific Queue (p. 816)

Request Account Endpoint

URI

/2017-08-29/endpoints

HTTP Methods

POST

Operation ID: DescribeEndpoints

Send an request with an empty body to the regional API endpoint to get your account API endpoint.

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>DescribeEndpointsResponse</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 10)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 10)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 403         | ExceptionBody (p. 10) | 403: AccessDeniedException  
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process. |
| 404         | ExceptionBody (p. 10) | 404: ResourceNotFoundException  
The resource you requested does not exist. |
| 429         | ExceptionBody (p. 10) | 429: LimitExceededException  
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission. |
| 409         | ExceptionBody (p. 10) | 409: ResourceInUseException  
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing. |

Schemas

Request Bodies

Example POST

```
{
  "nextToken (p. 10)": "string",
  "maxResults (p. 10)": integer
}
```

Response Bodies

Example DescribeEndpointsResponse

```
{
  "endpoints (p. 10)
  ```
Example ExceptionBody

{
   "message (p. 11)": "string"
}

Properties

DescribeEndpointsRequest

nextToken

Use this string, provided with the response to a previous request, to request the next batch of endpoints.

Type: string
Required: False

maxResults

Type: integer
Required: False
Format: int32

DescribeEndpointsResponse

endpoints

List of endpoints

Type: Array of type Endpoint (p. 10)
Required: False

nextToken

Use this string to request the next batch of endpoints.

Type: string
Required: False

Endpoint

url

URL of your account-specific endpoint.

Type: string
Required: False
ExceptionBody

message

Type: string
Required: False

Job Templates

URI

/2017-08-29/jobTemplates

HTTP Methods

GET

Operation ID: ListJobTemplates

Retrieve a JSON array of up to twenty of your job templates. This will return the templates themselves, not just a list of them. To retrieve the next twenty templates, use the nextToken string returned with the array.

Query Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>listBy</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>nextToken</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>maxResults</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>order</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
</tbody>
</table>

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>ListJobTemplatesResponse (p. 23)</td>
<td></td>
</tr>
</tbody>
</table>
| 400         | ExceptionBody (p. 43)         | 400: BadRequestException
The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax. |
| 500         | ExceptionBody (p. 43)         | 500: InternalServerException
The service encountered an unexpected condition and cannot fulfill your request. |
### Status Code | Response Model | Description
--- | --- | ---
403 | ExceptionBody (p. 43) | 403: AccessDeniedException
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.

404 | ExceptionBody (p. 43) | 404: ResourceNotFoundException
The resource you requested does not exist.

429 | ExceptionBody (p. 43) | 429: LimitExceededException
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.

409 | ExceptionBody (p. 43) | 409: ResourceInUseException
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.

### POST

Operation ID: CreateJobTemplate

Create a new job template. For information about job templates see the User Guide at [http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html](http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html)

### Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 201 | CreateJobTemplateResponse | 201: CreatedResponse
Your resource has been successfully created. |

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 400 | ExceptionBody (p. 43) | 400: BadRequestException
The conditional request failed. The service can't process your |
### Status Code

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>ExceptionBody (p. 43)</td>
<td>500: <strong>InternalServiceException</strong> The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 43)</td>
<td>403: <strong>AccessDeniedException</strong> You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the <strong>AWS Signature Version 4</strong> signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody (p. 43)</td>
<td>404: <strong>ResourceNotFoundException</strong> The resource you requested does not exist.</td>
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<td>429</td>
<td>ExceptionBody (p. 43)</td>
<td>429: <strong>LimitExceededException</strong> Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
<tr>
<td>409</td>
<td>ExceptionBody (p. 43)</td>
<td>409: <strong>ResourceInUseException</strong> The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>

### Schemas

### Request Bodies

**Example GET**

```json
{}
```
**Example POST**

```
{
    "settings (p. 62)" : {
        "timecodeConfig (p. 113)" : {
            "timestampOffset (p. 151)" : "string",
            "anchor (p. 151)" : "string",
            "start (p. 151)" : "string",
            "source (p. 151)" : enum
        },
        "adAvailOffset (p. 113)" : integer,
        "nielsenConfiguration (p. 113)" : {
            "distributorId (p. 138)" : "string",
            "breakoutCode (p. 138)" : integer
        },
        "inputs (p. 113)" : [
            {
                "audioSelectors (p. 107)" : {
                },
                "audioSelectorGroups (p. 108)" : {
                },
                "filterEnable (p. 108)" : enum,
                "deblockFilter (p. 108)" : enum,
                "videoSelector (p. 108)" : {
                    "colorSpace (p. 156)" : enum,
                    "hdr10Metadata (p. 156)" : {
                        "redPrimaryY (p. 96)" : integer,
                        "greenPrimaryY (p. 96)" : integer,
                        "whitePointX (p. 97)" : integer,
                        "maxLuminance (p. 97)" : integer,
                        "greenPrimaryX (p. 97)" : integer,
                        "whitePointY (p. 97)" : integer,
                        "redPrimaryX (p. 97)" : integer,
                        "bluePrimaryX (p. 97)" : integer,
                        "maxFrameAverageLightLevel (p. 98)" : integer,
                        "BluePrimaryY (p. 98)" : integer,
                        "maxContentLightLevel (p. 98)" : integer,
                        "minLuminance (p. 98)" : integer
                    },
                    "programNumber (p. 156)" : integer,
                    "pid (p. 157)" : integer,
                    "colorSpaceUsage (p. 157)" : enum
                },
                "filterStrength (p. 108)" : integer,
                "programNumber (p. 108)" : integer,
                "timecodeSource (p. 108)" : enum,
                "captionSelectors (p. 108)" : {
                },
                "denoiseFilter (p. 109)" : enum,
                "psiControl (p. 109)" : enum,
                "inputClippings (p. 109)" : [
                    {
                        "startTimecode (p. 106)" : "string",
                        "endTimecode (p. 106)" : "string"
                    }
                ]
            }
        ]
    }
}```
"outputGroups (p. 113)": 
{
  "outputs (p. 142)": 
  {
    "extension (p. 140)": "string",
    "videoDescription (p. 141)": 
    {
      "fixedAfd (p. 153)": integer,
      "scalingBehavior (p. 154)": enum,
      "respondToAfd (p. 154)": enum,
      "codecSettings (p. 154)": 
      {
        "h265Settings (p. 153)": 
        {
          "slices (p. 90)": integer,
          "minInterval (p. 91)": integer,
          "parNumerator (p. 91)": integer,
          "flickerAdaptiveQuantization (p. 91)": enum,
          "gopSizeUnits (p. 91)": enum,
          "hrdBufferSize (p. 91)": integer,
          "qualityTuningLevel (p. 91)": enum,
          "maxBitrate (p. 91)": integer,
          "bitrate (p. 92)": integer,
          "spatialAdaptiveQuantization (p. 92)": enum,
          "sampleAdaptiveOffsetFilterMode (p. 92)": enum,
          "temporalIds (p. 92)": enum,
          "slowPal (p. 92)": enum,
          "tiles (p. 92)": enum,
          "codecProfile (p. 92)": enum,
          "alternateTransferFunctionSei (p. 92)": enum,
          "unregisteredSeiTimecode (p. 92)": enum,
          "framerateControl (p. 93)": enum,
          "telecine (p. 93)": enum,
          "framerateConversionAlgorithm (p. 93)": enum,
          "codecLevel (p. 93)": enum,
          "numberReferenceFrames (p. 93)": integer,
          "temporalAdaptiveQuantization (p. 93)": enum,
          "hrdBufferInitialFillPercentage (p. 93)": integer,
          "framerateNumerator (p. 93)": integer,
          "framerateDenominator (p. 93)": integer,
          "framerateConversionAlgorithm (p. 93)": enum,
          "framerateDenominator (p. 94)": integer,
          "adaptivQuantization (p. 94)": enum,
          "interlaceMode (p. 94)": enum,
          "gopSize (p. 94)": number,
          "gopReference (p. 94)": enum,
          "sceneChangeDetect (p. 95)": enum,
          "parDenominator (p. 95)": integer,
          "parControl (p. 95)": enum,
          "rateControlMode (p. 95)": enum
        }
      }
    }
  }
}
Schemas

```javascript
"gopSizeUnits (p. 133)": enum,
"hrdBufferSize (p. 133)": integer,
"qualityTuningLevel (p. 133)": enum,
"maxBitrate (p. 133)": integer,
"bitrate (p. 133)": integer,
"spatialAdaptiveQuantization (p. 134)": enum,
"slowPal (p. 134)": enum,
"codecProfile (p. 134)": enum,
"intraDeoPrecision (p. 134)": enum,
"softness (p. 134)": integer,
"framerateControl (p. 134)": enum,
"telecine (p. 134)": enum,
"framerateConversionAlgorithm (p. 134)": enum,
"codecLevel (p. 134)": enum,
"temporalAdaptiveQuantization (p. 135)": enum,
"framerateNumerator (p. 135)": integer,
"framerateDenominator (p. 135)": integer,
"parNumerator (p. 82)": integer,
"parDenominator (p. 82)": integer,
"syntax (p. 86)": enum,
"rateControlMode (p. 86)": enum
},
"h264Settings (p. 153)": {
  "slices (p. 82)": integer,
  "minIInterval (p. 82)": integer,
  "parNumerator (p. 82)": integer,
  "flickerAdaptiveQuantization (p. 82)": enum,
  "gopSizeUnits (p. 82)": enum,
  "hrdBufferSize (p. 82)": integer,
  "qualityTuningLevel (p. 83)": enum,
  "maxBitrate (p. 83)": integer,
  "bitrate (p. 83)": integer,
  "spatialAdaptiveQuantization (p. 83)": enum,
  "slowPal (p. 83)": enum,
  "codecProfile (p. 83)": enum,
  "unregisteredSeiTltimecode (p. 83)": enum,
  "softness (p. 83)": integer,
  "framerateControl (p. 84)": enum,
  "telecine (p. 84)": enum,
  "framerateConversionAlgorithm (p. 84)": enum,
  "codecLevel (p. 84)": enum,
  "gopClosedCadence (p. 84)": integer,
  "gopBReference (p. 85)": integer,
  "sceneChangeDetect (p. 86)": enum,
  "gopSize (p. 86)": number,
  "gopReference (p. 86)": enum,
  "sceneChangeDetect (p. 86)": enum,
  "parDenominator (p. 86)": integer,
  "parControl (p. 86)": enum,
  "syntax (p. 86)": enum,
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    "channelMapping (p. 147)": {
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        "fontSize (p. 55)": integer,
        "shadowXOffset (p. 55)": integer,
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        "fontColor (p. 55)": enum
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Response Bodies

Example ListJobTemplatesResponse

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Example CreateJobTemplateResponse

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  "height (p. 147)": integer
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"height (p. 155)": integer
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Schemas

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`audioTypeControl (p. 50)`: enum,
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  `channelMapping (p. 147)`: {
    `outputChannels (p. 59)`: [
      `inputChannels (p. 142)`: [integer
    ]
  }
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`channelsIn (p. 147)`: integer
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`codecSettings (p. 51)`: {
  `codec (p. 49)`: enum,
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    `channels (p. 157)`: integer,
    `bitDepth (p. 157)`: integer,
    `sampleRate (p. 157)`: integer
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  `ac3Settings (p. 49)`: {
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    `codingMode (p. 47)`: enum,
    `metadataControl (p. 47)`: enum,
    `lfeFilter (p. 47)`: enum,
    `bitrate (p. 47)`: integer,
    `bitstreamMode (p. 47)`: enum,
    `sampleRate (p. 47)`: integer
  },
  `aacSettings (p. 49)`: {
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    `codecProfile (p. 44)`: enum,
    `codingMode (p. 44)`: enum,
    `specification (p. 44)`: enum,
    `bitrate (p. 45)`: integer,
    `rawFormat (p. 45)`: enum,
    `rateControlMode (p. 45)`: enum,
    `sampleRate (p. 45)`: integer,
    `audioDescriptionBroadcasterMix (p. 45)`: enum
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    `bitDepth (p. 48)`: integer,
    `sampleRate (p. 48)`: integer
  },
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    `passthroughControl (p. 73)`: enum,
    `metadataControl (p. 73)`: enum,
    `bitrate (p. 73)`: integer,
    `dynamicRangeCompressionRf (p. 73)`: enum,
    `sampleRate (p. 73)`: integer,
    `l1t3SurroundMixLevel (p. 74)`: number,
    `surroundExMode (p. 74)`: enum,
    `dynamicRangeCompressionLine (p. 74)`: enum,
    `lifeControl (p. 74)`: enum,
    `codingMode (p. 74)`: enum,
    `surroundMode (p. 74)`: enum,
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    `lifeFilter (p. 74)`: enum,
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"dcFilter (p. 75)" : enum,
"stereoDownmix (p. 75)" : enum,
"bitstreamMode (p. 75)" : enum,
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"loRoCenterMixLevel (p. 75)" : number
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  "bitrate (p. 129)" : integer,
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  "algorithmControl (p. 52)" : enum,
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  "loudnessLogging (p. 52)" : enum,
  "correctionGateLevel (p. 52)" : integer,
  "algorithm (p. 53)" : enum
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    "cslgAtom (p. 130)" : enum,
    "freeSpaceBox (p. 130)" : enum
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  "transportStreamId (p. 126)" : integer,
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  "patInterval (p. 127)" : integer,
  "programNumber (p. 127)" : integer,
  "timedMetadataPid (p. 127)" : integer,
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  "audioPids (p. 121)" : [
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  "ebpAudioInterval (p. 121)" : enum,
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  "audioFramesPerPes (p. 121)" : integer,
  "maxPcrInterval (p. 121)" : integer,
  "scte35Pid (p. 122)" : integer,
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  "celgAtom (p. 129)": enum,
  "clapAtom (p. 129)": enum
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  "moovPlacement (p. 77)": enum
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    "audioRenditionSets (p. 105)": "string",
    "audioGroupId (p. 105)": "string"
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    "languageCode (p. 57)": enum,
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"yPosition (p. 54)": integer,
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"outlineSize (p. 55)": integer,
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"alignment (p. 55)": enum,
"shadowColor (p. 56)": enum,
"fontColor (p. 56)": enum
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  "yPosition (p. 67)": integer,
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  "fontOpacity (p. 68)": integer,
  "shadowOpacity (p. 68)": integer,
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  "shadowXOffset (p. 68)": integer,
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  "fontSize (p. 69)": integer,
  "shadowYOffset (p. 69)": integer,
  "alignment (p. 69)": enum,
  "shadowColor (p. 69)": enum,
  "fontColor (p. 69)": enum
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    "minBufferTime (p. 63)": integer,
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        "systemIds (p. 148)": ["string"
      ],
      "url (p. 149)": "string"
    }
  },
  "destination (p. 64)": "string",
  "segmentLength (p. 64)": integer,
  "segmentControl (p. 64)": enum,
  "dashIsoGroupSettings (p. 142)": {
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    "baseUrl (p. 63)": "string",
    "minBufferTime (p. 63)": integer,
    "encryption (p. 64)": {
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        "systemIds (p. 148)": ["string"
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      "url (p. 149)": "string"
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  }
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  "encryption (p. 138)" : {
    "speakeKeyProvider (p. 137)" : {
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      "systemIds (p. 148)" : [
        "string"
      ],
      "url (p. 149)" : "string"
    }
  },
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  "manifestEncoding (p. 138)" : enum,
  "destination (p. 138)" : "string"
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  "timestampDeltaMilliseconds (p. 101)" : integer,
  "outputSelection (p. 101)" : enum,
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      "captionChannel (p. 99)" : integer,
      "languageCode (p. 99)" : enum
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  "segmentControl (p. 102)" : enum,
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  "timedMetadataId3Period (p. 102)" : integer,
  "captionLanguageSetting (p. 102)" : enum,
  "minSegmentLength (p. 102)" : integer,
  "directoryStructure (p. 102)" : enum,
  "currentTime (p. 102)" : enum,
  "baseUrl (p. 103)" : "string",
  "encryption (p. 103)" : {
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    "constantInitializationVector (p. 100)" : "string",
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      "keyFormat (p. 149)" : "string",
      "staticKeyValue (p. 149)" : "string",
      "url (p. 149)" : "string"
    },
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    "speakeKeyProvider (p. 100)" : {
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      "systemIds (p. 148)" : [
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      "url (p. 149)" : "string"
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"segmentLength (p. 103)": integer,
"manifestDurationFormat (p. 103)": enum
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"customName (p. 142)": "string"
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"id3 (p. 106)": "string",
"timecode (p. 106)": "string"
}
]
},
"availBlanking (p. 114)": {
"availBlankingImage (p. 53)": "string"
},
"lastUpdated (p. 111)": "string",
"createdAt (p. 112)": "string",
"name (p. 112)": "string",
"description (p. 112)": "string",
"category (p. 112)": "string",
"type (p. 112)": enum,
"arn (p. 112)": "string",
"queue (p. 112)": "string"
}

Example ExceptionBody

{
"message (p. 77)": "string"
}

Properties

AacAudioDescriptionBroadcasterMix (enum)

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains "broadcaster mixed AD". Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

- BROADCASTER_MIXED_AD
- NORMAL

AacCodecProfile (enum)

AAC Profile.

- LC
HEV1
HEV2

**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_5_1

**AacRateControlMode (enum)**

Rate Control Mode.

- CBR
- VBR

**AacRawFormat (enum)**

Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container" for the output container.

- LATM_LOAS
- NONE

**AacSettings**

**vbrQuality**

- Type: string
- Required: False

**codecProfile**

- Type: string
- Required: False

**codingMode**

- Type: string
- Required: True

**specification**

- Type: string
- Required: False
bitrate
Average bitrate in bits/second. Valid values depend on rate control mode and profile.

  Type: integer
  Required: False
  Minimum: 6000
  Maximum: 1024000

rawFormat

  Type: string
  Required: False

rateControlMode

  Type: string
  Required: False

sampleRate
Sample rate in Hz. Valid values depend on rate control mode and profile.

  Type: integer
  Required: True
  Minimum: 8000
  Maximum: 96000

audioDescriptionBroadcasterMix

  Type: string
  Required: False

AacSpecification (enum)
Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.

  MPEG2
  MPEG4

AacVbrQuality (enum)
VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.

  LOW
  MEDIUM_LOW
  MEDIUM_HIGH
  HIGH

Ac3BitstreamMode (enum)
Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.
**Ac3CodingMode (enum)**

Dolby Digital coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_3_2_LFE

**Ac3DynamicRangeCompressionProfile (enum)**

If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.

- FILM_STANDARD
- NONE

**Ac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

- ENABLED
- DISABLED

**Ac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED

**Ac3Settings**

**dynamicRangeCompressionProfile**

- **Type:** string
- **Required:** False

**dialnorm**

Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.
Properties

Type: integer
Required: False
Minimum: 1
Maximum: 31

codingMode
Type: string
Required: False

metadataControl
Type: string
Required: False

lfeFilter
Type: string
Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.
Type: integer
Required: False
Minimum: 64000
Maximum: 640000

bitstreamMode
Type: string
Required: False

sampleRate
Sample rate in hz. Sample rate is always 48000.
Type: integer
Required: False
Minimum: 48000
Maximum: 48000

AfdSignaling (enum)
This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to whether there are AFD values in the output video data and what those values are.
* Choose None to remove all AFD values from this output.
* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.
* Choose Auto to calculate output AFD values based on the input AFD scaler data.

NONE
AUTO
FIXED

**AiffSettings**

**channels**

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2

**bitDepth**

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type:** integer
- **Required:** False
- **Minimum:** 16
- **Maximum:** 24

**sampleRate**

Sample rate in hz.

- **Type:** integer
- **Required:** False
- **Minimum:** 8000
- **Maximum:** 192000

**AncillarySourceSettings**

**sourceAncillaryChannelNumber**

Specifies the 608 channel number in the ancillary data track from which to extract captions. Unused for passthrough.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 4

**AntiAlias (enum)**

Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.
AudioCodec (enum)
Type of Audio codec.

- AAC
- MP2
- WAV
- AIFF
- AC3
- EAC3
- PASSTHROUGH

AudioCodecSettings

codec
Type: string
Required: True

wavSettings
Type: WavSettings (p. 157)
Required: False

ac3Settings
Type: Ac3Settings (p. 46)
Required: False

aacSettings
Type: AacSettings (p. 44)
Required: False

aiffSettings
Type: AiffSettings (p. 48)
Required: False

eac3Settings
Type: Eac3Settings (p. 73)
Required: False

mp2Settings
Type: Mp2Settings (p. 129)
**AudioDefaultSelection (enum)**

When an "Audio Description":#audio_description specifies an AudioSelector or AudioSelectorGroup for which no matching source is found in the input, then the audio selector marked as DEFAULT will be used. If none are marked as default, silence will be inserted for the duration of the input.

- DEFAULT
- NOT_DEFAULT

**AudioDescription**

**languageCodeControl**

Type: string

Required: False

**audioTypeControl**

Type: string

Required: False

**remixSettings**

Advanced audio remixing settings.

Type: RemixSettings (p. 147)

Required: False

**audioType**

Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.

Type: integer

Required: False

Minimum: 0

Maximum: 255

**audioSourceName**

Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.

Type: string

Required: False
codecSettings

Type: AudioCodecSettings (p. 49)
Required: True

languageCode

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

Type: string
Required: False

streamName

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (e.g. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

Type: string
Required: False
Pattern: ^[\w\s]*$

audioNormalizationSettings

Advanced audio normalization settings.

Type: AudioNormalizationSettings (p. 52)
Required: False

AudioLanguageCodeControl (enum)

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode' will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

FOLLOW_INPUT
USE_CONFIGURED

AudioNormalizationAlgorithm (enum)

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

ITU_BS_1770_1
ITU_BS_1770_2

AudioNormalizationAlgorithmControl (enum)

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.

CORRECT_AUDIO
MEASURE_ONLY

AudioNormalizationLoudnessLogging (enum)
If set to LOG, log each output's audio track loudness to a CSV file.
   LOG
   DONT_LOG

AudioNormalizationPeakCalculation (enum)
If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.
   TRUE_PEAK
   NONE

AudioNormalizationSettings

targetLkfs
Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.
   Type: number
   Required: False
   Format: float
   Minimum: -59.0
   Maximum: 0.0

algorithmControl
   Type: string
   Required: False

peakCalculation
   Type: string
   Required: False

loudnessLogging
   Type: string
   Required: False

correctionGateLevel
Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.
   Type: integer
   Required: False
   Minimum: -70
**Maximum**: 0

**algorithm**

*Type*: string  
*Required*: False

**AudioSelectorType (enum)**

Specifies the type of the audio selector.

- **PID**
- **TRACK**
- **LANGUAGE_CODE**

**AudioTypeControl (enum)**

When set to `FOLLOW_INPUT`, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to `BROADCASTER_MIXED_AD`.

- **FOLLOW_INPUT**
- **USE_CONFIGURED**

**AvailBlanking**

**availBlankingImage**

Blanking image to be used. Leave empty for solid black. Only bmp and png images are supported.

*Type*: string  
*Required*: False

*Pattern*: `^s3://(.*).(bmp|BMP|png|PNG)$`

**BurninDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False

*Minimum*: 0  
*Maximum*: 2147483647

**backgroundColor**

*Type*: string
Required: False

teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.
shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

```plaintext
Type: integer  
Required: False  
Minimum: -2147483648  
Maximum: 2147483647
```

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

```plaintext
Type: integer  
Required: True  
Minimum: 0  
Maximum: 10
```

outlineColor

```plaintext
Type: string  
Required: True
```

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

```plaintext
Type: integer  
Required: False  
Minimum: 0  
Maximum: 96
```

shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

```plaintext
Type: integer  
Required: False  
Minimum: -2147483648  
Maximum: 2147483647
```

alignment

```plaintext
Type: string
```
Required: True

**shadowColor**

**Type:** string  
**Required:** False

**fontColor**

**Type:** string  
**Required:** False

**BurninSubtitleAlignment (enum)**

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- CENTERED
- LEFT

**BurninSubtitleBackgroundColor (enum)**

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleFontColor (enum)**

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE

**BurninSubtitleOutlineColor (enum)**

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
WHITE  
YELLOW  
RED  
GREEN  
BLUE

**BurninSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**CaptionDescription**

**captionSelectorName**

Specifies which "Caption Selector" to use from each input when generating captions. The name should be of the format "Caption Selector <N>", which denotes that the Nth Caption Selector will be used from each input.

- **Type:** string
- **Required:** True

**languageDescription**

Human readable information to indicate captions available for players (eg, English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

- **Type:** string
- **Required:** False
- **Pattern:** ^\[\w \]*$

**languageCode**

Indicates the language of the caption output track.

- **Type:** string
- **Required:** False

**destinationSettings**

- **Type:** CaptionDestinationSettings (p. 58)
CaptionDestinationSettings

burninDestinationSettings
  Type: BurninDestinationSettings (p. 53)
  Required: False

teletextDestinationSettings
  Type: TeletextDestinationSettings (p. 149)
  Required: False

ttmlDestinationSettings
  Type: TtmlDestinationSettings (p. 152)
  Required: False

destinationType
  Type: string
  Required: True

dvbSubDestinationSettings
  Type: DvbSubDestinationSettings (p. 67)
  Required: False

sccDestinationSettings
  Type: SccDestinationSettings (p. 148)
  Required: False

CaptionDestinationType (enum)
  BURN_IN
  DVB_SUB
  EMBEDDED
  SCC
  SRT
  TELETEXT
  TTML
  WEBVTT

CaptionSourceSettings

fileSourceSettings
  Type: FileSourceSettings (p. 77)
  Required: False
ancillarySourceSettings
  Type: AncillarySourceSettings (p. 48)
  Required: False

embeddedSourceSettings
  Type: EmbeddedSourceSettings (p. 76)
  Required: False

sourceType
  Type: string
  Required: True

dvbSubSourceSettings
  Type: DvbSubSourceSettings (p. 69)
  Required: False

teletextSourceSettings
  Type: TeletextSourceSettings (p. 150)
  Required: False

CaptionSourceType (enum)
Use Source (SourceType) to identify the format of your input captions. The service cannot auto-detect caption format.

  ANCILLARY
  DVB_SUB
  EMBEDDED
  SCC
  TTML
  STL
  SRT
  TELETEXT
  NULL_SOURCE

ChannelMapping
outputChannels
  Type: Array of type OutputChannelMapping (p. 142)
  Required: True

ColorCorrector
saturation
  Saturation level.
## Properties

**brightness**

Brightness level.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 100

**hdr10Metadata**

- **Type**: Hdr10Metadata (p. 96)
- **Required**: False

**contrast**

Contrast level.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 100

**hue**

Hue in degrees.

- **Type**: integer
- **Required**: False
- **Minimum**: -180
- **Maximum**: 180

**colorSpaceConversion**

- **Type**: string
- **Required**: False

**ColorMetadata (enum)**

Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.

- IGNORE
- INSERT

**ColorSpace (enum)**

Specifies the colorspace of an input. This setting works in tandem with "Color Corrector":#color_corrector > color_space_conversion to determine if any conversion will be performed.
FOLLOW
REC_601
REC_709
HDR10
HLG_2020

**ColorSpaceConversion (enum)**

Determines if colorspace conversion will be performed. If set to _None_, no conversion will be performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with differing colorspaces. An input's colorspace can be specified explicitly in the "Video Selector": #inputs-video_selector if necessary.

NONE
FORCE_601
FORCE_709
FORCE_HDR10
FORCE_HLG_2020

**ColorSpaceUsage (enum)**

There are two sources for color metadata, the input file and the job configuration. This enum controls which takes precedence. FORCE: System will use color metadata supplied by user, if any. If the user does not supply color metadata the system will use data from the source. FALLBACK: System will use color metadata from the source. If source has no color metadata, the system will use user-supplied color metadata values if available.

FORCE
FALLBACK

**ContainerSettings**

container

*Type*: string  
*Required*: True

mp4Settings

*Type*: Mp4Settings (p. 130)  
*Required*: False

m3u8Settings

*Type*: M3u8Settings (p. 125)  
*Required*: False

m2tsSettings

*Type*: M2tsSettings (p. 120)  
*Required*: False
movSettings

  Type: MovSettings (p. 128)
  Required: False

f4vSettings

  Type: F4vSettings (p. 77)
  Required: False

ContainerType (enum)

Container for this output. Some containers require a container settings object. If not specified, the default object will be created.

  F4V
  ISMV
  M2TS
  M3U8
  MOV
  MP4
  MPD
  MXF
  RAW

CreateJobTemplateRequest

settings

  Type: JobTemplateSettings (p. 113)
  Required: True

name

The name of the job template you are creating.

  Type: string
  Required: True

description

Optional. A description of the job template you are creating.

  Type: string
  Required: False

category

Optional. A category for the job template you are creating

  Type: string
  Required: False
queue

Optional. The queue that jobs created from this template are assigned to. If you don't specify this, jobs will go to the default queue.

Type: string
Required: False

CreateJobTemplateResponse

jobTemplate

Type: JobTemplate (p. 111)
Required: False

DashIsoEncryptionSettings

spekeKeyProvider

Type: SpekeKeyProvider (p. 148)
Required: True

DashIsoGroupSettings

fragmentLength

Length of fragments to generate (in seconds). Fragment length must be compatible with GOP size and Framerate. Note that fragments will end on the next keyframe after this number of seconds, so actual fragment length may be longer. When Emit Single File is checked, the fragmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

Type: integer
Required: True
Minimum: 1
Maximum: 2147483647

baseUrl

A partial URI prefix that will be put in the manifest (.mpd) file at the top level BaseURL element. Can be used if streams are delivered from a different URL than the manifest file.

Type: string
Required: False

minBufferTime

Minimum time of initially buffered media that is needed to ensure smooth playout.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647
encryption

DRM settings.

Type: DashIsoEncryptionSettings (p. 63)
Required: False

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string
Required: True
Pattern: ^s3:\\|\:\|

segmentLength

Length of mpd segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer. When Emit Single File is checked, the segmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

Type: integer
Required: True
Minimum: 1
Maximum: 2147483647

segmentControl

Type: string
Required: False

hbbtvCompliance

Type: string
Required: False

DashIsoHbbtvCompliance (enum)

Supports HbbTV specification as indicated

HBBTV_1_5
NONE

DashIsoSegmentControl (enum)

When set to SINGLE_FILE, a single output file is generated, which is internally segmented using the Fragment Length and Segment Length. When set to SEGMENTED_FILES, separate segment files will be created.

SINGLE_FILE
SEGMENTED_FILES

DeinterlaceAlgorithm (enum)

Only applies when you set Deinterlacer (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.

INTERPOLATE
INTERPOLATE_TICKER
BLEND
BLEND_TICKER

Deinterlacer

mode

Type: string
Required: False

control

Type: string
Required: False

algorithm

Type: string
Required: False

DeinterlacerControl (enum)

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

FORCE_ALL_FRAMES
NORMAL

DeinterlacerMode (enum)

Use Deinterlacer (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

DEINTERLACE
INVERSE_TELECINE
ADAPTIVE
**DropFrameTimecode (enum)**

Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

- DISABLED
- ENABLED

**DvbNitSettings**

**networkName**

The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: True

**networkId**

The numeric value placed in the Network Information Table (NIT).

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 65535

**nitInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 25
- **Maximum**: 2000

**DvbSdtSettings**

**sdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 25
- **Maximum**: 2000

**serviceName**

The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.
Type: string
Required: False

serviceProviderName

The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

Type: string
Required: False

outputSdt

Type: string
Required: False

DvbSubDestinationSettings

xPosition

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundColor

Type: string
Required: False

teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647
**backgroundOpacity**

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 255

**fontOpacity**

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 255

**shadowOpacity**

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 255

**fontResolution**

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 96
- **Maximum:** 600

**shadowYOffset**

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**outlineSize**

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.
Type: integer
Required: True
Minimum: 0
Maximum: 10

outlineColor
Type: string
Required: True

fontSize
A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.
Type: integer
Required: False
Minimum: 0
Maximum: 96

shadowXOffset
Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.
Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

alignment
Type: string
Required: True

shadowColor
Type: string
Required: False

fontColor
Type: string
Required: False

DvbSubSourceSettings
pid
When using DVB-Sub with Burn-In or SMPTE-TT, use this PID for the source content. Unused for DVB-Sub passthrough. All DVB-Sub content is passed through, regardless of selectors.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

DvbSubtitleAlignment (enum)
If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED
LEFT

DvbSubtitleBackgroundColor (enum)
Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

DvbSubtitleFontColor (enum)
Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

WHITE
BLACK
YELLOW
RED
GREEN
BLUE

DvbSubtitleOutlineColor (enum)
Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

BLACK
WHITE
YELLOW
RED
GREEN
BLUE

DvbSubtitleShadowColor (enum)
Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.
Properties

NONE
BLACK
WHITE

DvbSubtitleTeletextSpacing (enum)

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

FIXED_GRID
PROPORTIONAL

DvbTdtSettings

tdtInterval

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: True
Minimum: 1000
Maximum: 30000

Eac3AttenuationControl (enum)

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

ATTENUATE_3_DB
NONE

Eac3BitstreamMode (enum)

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

COMPLETE_MAIN
COMMENTARY
EMERGENCY
HEARING_IMPAIRED
VISUALLY_IMPAIRED

Eac3CodingMode (enum)

Dolby Digital Plus coding mode. Determines number of channels.

CODING_MODE_1_0
CODING_MODE_2_0
CODING_MODE_3_2

Eac3DcFilter (enum)

Activates a DC highpass filter for all input channels.
ENABLED
DISABLED

**Eac3DynamicRangeCompressionLine (enum)**

Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

**Eac3DynamicRangeCompressionRf (enum)**

Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

**Eac3LfeControl (enum)**

When encoding 3/2 audio, controls whether the LFE channel is enabled.

- LFE
- NO_LFE

**Eac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

- ENABLED
- DISABLED

**Eac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED

**Eac3PassthroughControl (enum)**

When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.
Eac3PhaseControl (enum)
Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

- SHIFT_90_DEGREES
- NO_SHIFT

Eac3Settings

dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 31

passthroughControl

- Type: string
- Required: False

metadataControl

- Type: string
- Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.

- Type: integer
- Required: False
- Minimum: 64000
- Maximum: 640000

dynamicRangeCompressionRf

- Type: string
- Required: False

sampleRate
Sample rate in hz. Sample rate is always 48000.

- Type: integer
- Required: False
Minimum: 48000
Maximum: 48000

**LtRtSurroundMixLevel**
Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

  Type: number
  Required: False
  Format: float
  Minimum: -60.0
  Maximum: -1.5

**surroundExMode**

  Type: string
  Required: False

**dynamicRangeCompressionLine**

  Type: string
  Required: False

**lfeControl**

  Type: string
  Required: False

**codingMode**

  Type: string
  Required: False

**surroundMode**

  Type: string
  Required: False

**attenuationControl**

  Type: string
  Required: False

**lfeFilter**

  Type: string
  Required: False

**phaseControl**

  Type: string
Properties

**Required:** False

**LtRtCenterMixLevel**

Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type:** number
- **Required:** False
- **Format:** float
- **Minimum:** -60.0
- **Maximum:** 3.0

**dcFilter**

- **Type:** string
- **Required:** False

**stereoDownmix**

- **Type:** string
- **Required:** False

**bitstreamMode**

- **Type:** string
- **Required:** False

**LoRoSurroundMixLevel**

Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5, -3.0, -4.5, -6.0, -60

- **Type:** number
- **Required:** False
- **Format:** float
- **Minimum:** -60.0
- **Maximum:** -1.5

**LoRoCenterMixLevel**

Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type:** number
- **Required:** False
- **Format:** float
- **Minimum:** -60.0
- **Maximum:** 3.0

**Eac3StereoDownmix (enum)**

Stereo downmix preference. Only used for 3/2 coding mode.
Eac3SurroundExMode (enum)
When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

- NOT_INDICATED
- ENABLED
- DISABLED

Eac3SurroundMode (enum)
When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

- NOT_INDICATED
- ENABLED
- DISABLED

EmbeddedConvert608To708 (enum)
When set to UPCONVERT, 608 data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

- UPCONVERT
- DISABLED

EmbeddedSourceSettings

source608ChannelNumber
Specifies the 608/708 channel number within the video track from which to extract captions. Unused for passthrough.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 4

convert608To708

- Type: string
- Required: False

source608TrackNumber
Specifies the video track index used for extracting captions. The system only supports one input video track, so this should always be set to '1'.

- Type: integer
Required: False  
Minimum: 1  
Maximum: 1

ExceptionBody

message

Type: string  
Required: False

F4vMoovPlacement (enum)

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVE_DOWNLOAD  
NORMAL

F4vSettings

moovPlacement

Type: string  
Required: False

FileGroupSettings

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string  
Required: True  
Pattern: ^s3:\/\/

FileSourceConvert608To708 (enum)

If set to UPCONVERT, 608 caption data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

UPCONVERT  
DISABLED

FileSourceSettings

timeDelta

Specifies a time delta in seconds to offset the captions from the source file.
**Properties**

**convert608To708**
- **Type**: string
- **Required**: False

**sourceFile**
External caption file used for loading captions. Accepted file extensions are 'scc', 'ttml', 'dfxp', 'stl', 'srt', and 'smi'. Auto-populated when Infer External Filename is checked.
- **Type**: string
- **Required**: True
- **Pattern**: `(s3://)(.*?)\.(scc|SCC|ttml|TTML|dfxp|DFXP|stl|STL|srt|SRT|smi|SMI)`

**FrameCaptureSettings**

**framerateDenominator**
Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each Capture.
- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

**maxCaptures**
Maximum number of captures (encoded jpg output files).
- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 10000000

**framerateNumerator**
Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.NNNNNNN.jpg where N is the 0-based frame sequence number zero padded to 7 decimal places.
- **Type**: integer
- **Required**: False
Minimum: 1
Maximum: 2147483647

**quality**

JPEG Quality - a higher value equals higher quality.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 100

**H264AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

OFF  
LOW  
MEDIUM  
HIGH  
HIGHER  
MAX

**H264CodecLevel (enum)**

H.264 Level.

AUTO  
LEVEL_1  
LEVEL_1_1  
LEVEL_1_2  
LEVEL_1_3  
LEVEL_2  
LEVEL_2_1  
LEVEL_2_2  
LEVEL_3  
LEVEL_3_1  
LEVEL_3_2  
LEVEL_4  
LEVEL_4_1  
LEVEL_4_2  
LEVEL_5  
LEVEL_5_1  
LEVEL_5_2

**H264CodecProfile (enum)**

H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

BASELINE  
HIGH  
HIGH_10BIT  
HIGH_422
H264EntropyEncoding (enum)

Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

- CABAC
- CAVLC

H264FieldEncoding (enum)

Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

- PAFF
- FORCE_FIELD

H264FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or ‘pop’ on I-frames.

- DISABLED
- ENABLED

H264FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

H264FramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

H264GopBReference (enum)

If enable, use reference B frames for GOP structures that have B frames > 1.

- DISABLED
- ENABLED

H264GopSizeUnits (enum)

Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS
H264InterlaceMode (enum)

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

```
PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD
```

H264ParControl (enum)

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

```
INITIALIZE_FROM_SOURCE
SPECIFIED
```

H264QualityTuningLevel (enum)

Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

```
SINGLE_PASS
SINGLE_PASS_HQ
MULTI_PASS_HQ
```

H264RateControlMode (enum)

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

```
VBR
CBR
```

H264RepeatPps (enum)

Places a PPS header on each encoded picture, even if repeated.

```
DISABLED
ENABLED
```

H264SceneChangeDetect (enum)

Scene change detection (inserts I-frames on scene changes).
DISABLED
ENABLED

**H264Settings**

**slices**
Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 32

**minIInterval**
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 30

**parNumerator**
Pixel Aspect Ratio numerator.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

**flickerAdaptiveQuantization**

- **Type**: string
- **Required**: False

**gopSizeUnits**

- **Type**: string
- **Required**: False

**hrdBufferSize**
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
**Required**: False
**Minimum**: -2147483648
**Maximum**: 2147483647

**qualityTuningLevel**

- **Type**: string
- **Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
  - **Minimum**: -2147483648
  - **Maximum**: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

- **Type**: integer
  - **Required**: False
  - **Minimum**: 1000
  - **Maximum**: 2147483647

**spatialAdaptiveQuantization**

- **Type**: string
  - **Required**: False

**slowPal**

- **Type**: string
  - **Required**: False

**codecProfile**

- **Type**: string
  - **Required**: False

**unregisteredSeiTimecode**

- **Type**: string
  - **Required**: False

**softness**

Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
Properties

framerateControl

Type: string
Required: False

telecine

Type: string
Required: False

framerateConversionAlgorithm

Type: string
Required: False

codecLevel

Type: string
Required: False

numberReferenceFrames

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

Type: integer
Required: False
Minimum: 1
Maximum: 6

temporalAdaptiveQuantization

Type: string
Required: False

repeatPps

Type: string
Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. \( \frac{24000}{1001} = 23.976 \) fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

fieldEncoding

Type: string
Required: False

entropyEncoding

Type: string
Required: False

framerateDenominator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, \( \frac{24000}{1001} = 23.976 \) fps. Use FramerateDenominator to specify the denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When you use the console for transcode jobs that use framerate conversion, provide the value as a decimal number for Framerate. In this example, specify 23.976.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647
adaptiveQuantization
  Type: string
  Required: False

interlaceMode
  Type: string
  Required: False

gopSize
  GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
  Type: number
  Required: False
  Format: float
  Minimum: 0.0

gopBReference
  Type: string
  Required: False

sceneChangeDetect
  Type: string
  Required: False

parDenominator
  Pixel Aspect Ratio denominator.
  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

parControl
  Type: string
  Required: False

syntax
  Type: string
  Required: False

rateControlMode
  Type: string
Required: False

**H264SlowPal (enum)**

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

- DISABLED
- ENABLED

**H264SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

- DISABLED
- ENABLED

**H264Syntax (enum)**

Produces a bitstream compliant with SMPTE RP-2027.

- DEFAULT
- RP2027

**H264Telecine (enum)**

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

- NONE
- SOFT
- HARD

**H264TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- DISABLED
- ENABLED

**H264UnregisteredSeiTimecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- DISABLED
- ENABLED

**H265AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.
H265AlternateTransferFunctionSei (enum)

Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).

- DISABLED
- ENABLED

H265CodecLevel (enum)

H.265 Level.

- AUTO
- LEVEL_1
- LEVEL_2
- LEVEL_2_1
- LEVEL_3
- LEVEL_3_1
- LEVEL_4
- LEVEL_4_1
- LEVEL_5
- LEVEL_5_1
- LEVEL_5_2
- LEVEL_6
- LEVEL_6_1
- LEVEL_6_2

H265CodecProfile (enum)

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as [Profile] / [Tier], so “Main/High” represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

- MAIN_MAIN
- MAIN_HIGH
- MAIN10_MAIN
- MAIN10_HIGH
- MAIN_422_8BIT_MAIN
- MAIN_422_8BIT_HIGH
- MAIN_422_10BIT_MAIN
- MAIN_422_10BIT_HIGH

H265FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.
DISABLED
ENABLED

**H265FramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

**H265FramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

**H265GopBReference (enum)**

If enable, use reference B frames for GOP structures that have B frames > 1.

DISABLED
ENABLED

**H265GopSizeUnits (enum)**

Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

FRAMES
SECONDS

**H265InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD
**H265ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**H265QualityTuningLevel (enum)**

Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

- SINGLE_PASS
- SINGLE_PASS_HQ
- MULTI_PASS_HQ

**H265RateControlMode (enum)**

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

**H265SampleAdaptiveOffsetFilterMode (enum)**

Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

- DEFAULT
- ADAPTIVE
- OFF

**H265SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

- DISABLED
- ENABLED

**H265Settings**

**slices**

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 32
Properties

**minIInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

**parNumerator**

Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

**flickerAdaptiveQuantization**

Type: string
Required: False

**gopSizeUnits**

Type: string
Required: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**qualityTuningLevel**

Type: string
Required: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
### Properties

**Minimum:** -2147483648  
**Maximum:** 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

- **Type:** integer  
- **Required:** False  
- **Minimum:** 1000  
- **Maximum:** 2147483647

**spatialAdaptiveQuantization**

- **Type:** string  
- **Required:** False

**sampleAdaptiveOffsetFilterMode**

- **Type:** string  
- **Required:** False

**temporalIds**

- **Type:** string  
- **Required:** False

**slowPal**

- **Type:** string  
- **Required:** False

**tiles**

- **Type:** string  
- **Required:** False

**codecProfile**

- **Type:** string  
- **Required:** False

**alternateTransferFunctionSei**

- **Type:** string  
- **Required:** False

**unregisteredSeiTimecode**

- **Type:** string
Properties

framerateControl

<table>
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<tbody>
<tr>
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telecine

<table>
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framerateConversionAlgorithm

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codecLevel

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</thead>
<tbody>
<tr>
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</table>

numberReferenceFrames

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

<table>
<thead>
<tr>
<th>Type</th>
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<tr>
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<tr>
<td>Minimum</td>
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<td>Maximum</td>
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temporalAdaptiveQuantization

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</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
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</table>

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

<table>
<thead>
<tr>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>Required</td>
<td>False</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>100</td>
</tr>
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</table>

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

<table>
<thead>
<tr>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>Required</td>
<td>False</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
</tr>
</tbody>
</table>
Maximum: 2147483647

**numberBFramesBetweenReferenceFrames**

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

**gopClosedCadence**

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**framerateDenominator**

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

**adaptiveQuantization**

Type: string
Required: False

**interlaceMode**

Type: string
Required: False

**gopSize**

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

**gopBReference**

Type: string
Required: False

sceneChangeDetect

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

rateControlMode

Type: string
Required: False

H265SlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

H265SpatialAdaptiveQuantization (enum)

Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

H265Telecine (enum)

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.971 output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.971.

NONE
SOFT
HARD
H265TemporalAdaptiveQuantization (enum)

Adjust quantization within each frame based on temporal variation of content complexity.

- DISABLED
- ENABLED

H265TemporalIds (enum)

Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbpPbp display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

- DISABLED
- ENABLED

H265Tiles (enum)

Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

- DISABLED
- ENABLED

H265UnregisteredSeiTimecode (enum)

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- DISABLED
- ENABLED

Hdr10Metadata

**redPrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

**greenPrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000
whitePointX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

maxLuminance

Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

greenPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

whitePointY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

redPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

bluePrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
Required: False
Minimum: 0
Maximum: 50000

**maxFrameAverageLightLevel**

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

**bluePrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

**maxContentLightLevel**

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

**minLuminance**

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**HlsAdMarkers (enum)**

- ELEMENTAL
- ELEMENTAL_SCTE35

**HlsAudioTrackType (enum)**

Four types of audio-only tracks are supported: Audio-Only Variant Stream The client can play back this audio-only stream instead of video in low-bandwidth scenarios. Represented as an EXT-X-STREAM-INF in the HLS manifest. Alternate Audio, Auto Select, Default Alternate rendition that the client should
try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=YES, AUTOSELECT=YES Alternate Audio, Auto Select, Not Default Alternate rendition that the client may try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=YES Alternate Audio, not Auto Select Alternate rendition that the client will not try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=NO

- ALTERNATE_AUDIO_AUTO_SELECT_DEFAULT
- ALTERNATE_AUDIO_AUTO_SELECT
- ALTERNATE_AUDIO_NOT_AUTO_SELECT
- AUDIO_ONLY_VARIANT_STREAM

**HlsCaptionLanguageMapping**

**languageDescription**

Caption language description.

- **Type:** string
- **Required:** False

**captionChannel**

Caption channel.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**languageCode**

- **Type:** string
- **Required:** False

**HlsCaptionLanguageSetting (enum)**

Applies only to 608 Embedded output captions. Insert: Include CLOSED-CAPTIONS lines in the manifest. Specify at least one language in the CC1 Language Code field. One CLOSED-CAPTION line is added for each Language Code you specify. Make sure to specify the languages in the order in which they appear in the original source (if the source is embedded format) or the order of the caption selectors (if the source is other than embedded). Otherwise, languages in the manifest will not match up properly with the output captions. None: Include CLOSED-CAPTIONS=NONE line in the manifest. Omit: Omit any CLOSED-CAPTIONS line from the manifest.

- **INSERT**
- **OMIT**
- **NONE**

**HlsClientCache (enum)**

When set to ENABLED, sets #EXT-X-ALLOW-CACHE:no tag, which prevents client from saving media segments for later replay.
DISABLED
ENABLED

HlsCodecSpecification (enum)
Specification to use (RFC-6381 or the default RFC-4281) during m3u8 playlist generation.

RFC_6381
RFC_4281

HlsDirectoryStructure (enum)
Indicates whether segments should be placed in subdirectories.

SINGLE_DIRECTORY
SUBDIRECTORY_PER_STREAM

HlsEncryptionSettings

initializationVectorInManifest
  Type: string
  Required: False

customInitializationVector
This is a 128-bit, 16-byte hex value represented by a 32-character text string. If this parameter is not set then the Initialization Vector will follow the segment number by default.

  Type: string
  Required: False
  Pattern: ^[0-9a-fA-F]{32}$

staticKeyProvider
  Type: StaticKeyProvider (p. 149)
  Required: False

type
  Type: string
  Required: True

spekeKeyProvider
  Type: SpekeKeyProvider (p. 148)
  Required: False

encryptionMethod
  Type: string
  Required: False
HlsEncryptionType (enum)

Encrypts the segments with the given encryption scheme. Leave blank to disable. Selecting 'Disabled' in the web interface also disables encryption.

- AES128
- SAMPLE_AES

HlsGroupSettings

segmentsPerSubdirectory

Number of segments to write to a subdirectory before starting a new one. directoryStructure must be SINGLE_DIRECTORY for this setting to have an effect.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

streamInfResolution

Type: string
Required: False

timestampDeltaMilliseconds

Provides an extra millisecond delta offset to fine tune the timestamps.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

outputSelection

Type: string
Required: False

captionLanguageMappings

Type: Array of type HlsCaptionLanguageMapping (p. 99)
Required: False

clientCache

Type: string
Required: False

codecSpecification

Type: string
Required: False
Properties

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

- **Type**: string
- **Required**: True
- **Pattern**: ^s3://

**segmentControl**

- **Type**: string
- **Required**: False

**timedMetadataId3Frame**

- **Type**: string
- **Required**: False

**timedMetadataId3Period**

Timed Metadata interval in seconds.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**captionLanguageSetting**

- **Type**: string
- **Required**: False

**minSegmentLength**

When set, Minimum Segment Size is enforced by looking ahead and back within the specified range for a nearby avail and extending the segment size if needed.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 2147483647

**directoryStructure**

- **Type**: string
- **Required**: False

**programDateTime**

- **Type**: string
- **Required**: False
baseUrl
A partial URI prefix that will be prepended to each output in the media .m3u8 file. Can be used if base manifest is delivered from a different URL than the main .m3u8 file.

  Type: string
  Required: False

encryption
DRM settings.

  Type: HlsEncryptionSettings (p. 100)
  Required: False

adMarkers
Choose one or more ad marker types to pass SCTE35 signals through to this group of Apple HLS outputs.

  Type: Array of type string
  Required: False

programDateTimePeriod
Period of insertion of EXT-X-PROGRAM-DATE-TIME entry, in seconds.

  Type: integer
  Required: False
  Minimum: 0
  Maximum: 3600

manifestCompression

  Type: string
  Required: False

segmentLength
Length of MPEG-2 Transport Stream segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer.

  Type: integer
  Required: True
  Minimum: 1
  Maximum: 2147483647

manifestDurationFormat

  Type: string
  Required: False

HlsIFrameOnlyManifest (enum)
When set to INCLUDE, writes I-Frame Only Manifest in addition to the HLS manifest
HlsInitializationVectorInManifest (enum)

The Initialization Vector is a 128-bit number used in conjunction with the key for encrypting blocks. If set to INCLUDE, Initialization Vector is listed in the manifest. Otherwise Initialization Vector is not in the manifest.

    INCLUDE
    EXCLUDE

HlsKeyProviderType (enum)

Indicates which type of key provider is used for encryption.

    SPEKE
    STATIC_KEY

HlsManifestCompression (enum)

When set to GZIP, compresses HLS playlist.

    GZIP
    NONE

HlsManifestDurationFormat (enum)

Indicates whether the output manifest should use floating point values for segment duration.

    FLOATING_POINT
    INTEGER

HlsOutputSelection (enum)

Indicates whether the .m3u8 manifest file should be generated for this HLS output group.

    MANIFESTS_AND_SEGMENTS
    SEGMENTS_ONLY

HlsProgramDateTime (enum)

Includes or excludes EXT-X-PROGRAM-DATE-TIME tag in .m3u8 manifest files. The value is calculated as follows: either the program date and time are initialized using the input timecode source, or the time is initialized using the input timecode source and the date is initialized using the timestamp_offset.

    INCLUDE
    EXCLUDE

HlsSegmentControl (enum)

When set to SINGLE_FILE, emits program as a single media resource (.ts) file, uses #EXT-X-BYTERANGE tags to index segment for playback.
SINGLE_FILE
SEGMENTED_FILES

HlsSettings

iFrameOnlyManifest
  Type: string
  Required: False

segmentModifier
String concatenated to end of segment filenames. Accepts "Format Identifiers":#format_identifier_parameters.
  Type: string
  Required: False

audioTrackType
  Type: string
  Required: False

audioRenditionSets
List all the audio groups that are used with the video output stream. Input all the audio GROUP-IDs that are associated to the video, separate by ":
  Type: string
  Required: False

audioGroupId
Specifies the group to which the audio Rendition belongs.
  Type: string
  Required: False

HlsStreamInfResolution (enum)
Include or exclude RESOLUTION attribute for video in EXT-X-STREAM-INF tag of variant manifest.
  INCLUDE
  EXCLUDE

HlsTimedMetadataId3Frame (enum)
Indicates ID3 frame that has the timecode.
  NONE
  PRIV
  TDRL
### Id3Insertion

**id3**

Use ID3 tag (Id3) to provide a tag value in base64-encode format.

- **Type**: string
- **Required**: True
- **Pattern**: `^[A-Za-z0-9+/=]{0,2}$`

### timecode

Provide a Timecode (TimeCode) in HH:MM:SS:FF or HH:MM:SS;FF format.

- **Type**: string
- **Required**: True
- **Format**: timecode
- **Pattern**: `^\([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}$`

### ImageInserter

**insertableImages**

Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.

- **Type**: Array of type InsertableImage (p. 109)
- **Required**: True

### InputClipping

**startTimecode**

Set Start timecode (StartTimecode) to the beginning of the portion of the input you are clipping. The frame corresponding to the Start timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

- **Type**: string
- **Required**: False
- **Format**: timecode
- **Pattern**: `^\([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}$`

**endTimecode**

Set End timecode (EndTimecode) to the end of the portion of the input you are clipping. The frame corresponding to the End timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

- **Type**: string
- **Required**: False
- **Format**: timecode
**Pattern**: `^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:;[0-9]{2}$`

**InputDeblockFilter (enum)**

Enable Deblock (InputDeblockFilter) to produce smoother motion in the output. Default is disabled. Only manually controllable for MPEG2 and uncompressed video inputs.

- ENABLED
- DISABLED

**InputDenoiseFilter (enum)**

Enable Denoise (InputDenoiseFilter) to filter noise from the input. Default is disabled. Only applicable to MPEG2, H.264, H.265, and uncompressed video inputs.

- ENABLED
- DISABLED

**InputFilterEnable (enum)**

Use Filter enable (InputFilterEnable) to specify how the transcoding service applies the denoise and deblock filters. You must also enable the filters separately, with Denoise (InputDenoiseFilter) and Debloc (InputDeblockFilter).

- Auto - The transcoding service determines whether to apply filtering, depending on input type and quality.
- Disable - The input is not filtered. This is true even if you use the API to enable them in (InputDeblockFilter) and (InputDeblockFilter).
- Force - The input is filtered regardless of input type.

- AUTO
- DISABLE
- FORCE

**InputPsiControl (enum)**

Set PSI control (InputPsiControl) for transport stream inputs to specify which data the demux process to scans.

- Ignore PSI - Scan all PIDs for audio and video.
- Use PSI - Scan only PSI data.

- IGNORE_PSI
- USE_PSI

**InputTemplate**

**audioSelectors**

Use Audio selectors (AudioSelectors) to specify a track or set of tracks from the input that you will use in your outputs. You can use mutiple Audio selectors per input.

**Type**: object

**Required**: False
audioSelectorGroups

Specifies set of audio selectors within an input to combine. An input may have multiple audio selector groups. See "Audio Selector Group" for more information.

- **Type**: object
- **Required**: False

filterEnable

- **Type**: string
- **Required**: False

deblockFilter

- **Type**: string
- **Required**: False

videoSelector

- **Type**: VideoSelector (p. 156)
- **Required**: False

filterStrength

Use Filter strength (FilterStrength) to adjust the magnitude the input filter settings (Deblock and Denoise). The range is -5 to 5. Default is 0.

- **Type**: integer
- **Required**: False
- **Minimum**: -5
- **Maximum**: 5

programNumber

Use Program (programNumber) to select a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported. Default is the first program within the transport stream. If the program you specify doesn’t exist, the transcoding service will use this default.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

timecodeSource

- **Type**: string
- **Required**: False

captionSelectors

Use Captions selectors (CaptionSelectors) to specify the captions data from the input that you will use in your outputs. You can use multiple captions selectors per input.
Type: object
Required: False

denoiseFilter

Type: string
Required: False

psiControl

Type: string
Required: False

inputClippings

(inputClippings) contains sets of start and end times that together specify a portion of the input to be used in the outputs. If you provide only a start time, the clip will be the entire input from that point to the end. If you provide only an end time, it will be the entire input up to that point. When you specify more than one input clip, the transcoding service creates the job outputs by stringing the clips together in the order you specify them.

Type: Array of type InputClipping (p. 106)
Required: False

InputTimecodeSource (enum)

Use Timecode source (InputTimecodeSource) to specify how timecode information from your input is adjusted and encoded in all outputs for the job. Default is embedded. Set to Embedded (EMBEDDED) to use the timecode that is in the input video. If no embedded timecode is in the source, will set the timecode for the first frame to 00:00:00:00. Set to Start at 0 (ZEROBASED) to set the timecode of the initial frame to 00:00:00:00. Set to Specified start (SPECIFIEDSTART) to provide the initial timecode yourself the setting (Start).

EMBEDDED
ZEROBASED
SPECIFIEDSTART

InsertableImage

duration

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

fadeOut

Use Fade out (FadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don’t specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.
Properties

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

imageY

Use Top (ImageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

fadeIn

Use Fade in (FadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don't specify a value for Fade in, the image will appear abruptly at the Start time.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

imageX

Use Left (ImageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

width

Specify the Width (Width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

startTime

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

Type: string
Required: False
opacity

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.

Type: integer
Required: True
Minimum: 0
Maximum: 100

layer

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

Type: integer
Required: True
Minimum: 0
Maximum: 7

height

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

imageInserterInput

Use Image location (imageInserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

Type: string
Required: True
Pattern: ^s3://.*\.(bmp|BMP|png|PNG|tga|TGA)$

JobTemplate

settings

Type: JobTemplateSettings (p. 113)
Required: True

lastUpdated

The timestamp in epoch seconds when the Job template was last updated.

Type: string
Required: False
Format: date-time
createdAt
The timestamp in epoch seconds for Job template creation.

Type: string
Required: False
Format: date-time

name
A name you create for each job template. Each name must be unique within your account.

Type: string
Required: True

description
An optional description you create for each job template.

Type: string
Required: False

category
An optional category you create to organize your job templates.

Type: string
Required: False

type

Type: string
Required: False

arn
An identifier for this resource that is unique within all of AWS.

Type: string
Required: False

queue
Optional. The queue that jobs created from this template are assigned to. If you don't specify this, jobs will go to the default queue.

Type: string
Required: False

JobTemplateListBy (enum)
Optional. When you request a list of job templates, you can choose to list them alphabetically by NAME or chronologically by CREATION_DATE. If you don't specify, the service will list them by name.

NAME
JobTemplateSettings

timecodeConfig

Contains settings used to acquire and adjust timecode information from inputs.

- **Type**: TimecodeConfig (p. 151)
- **Required**: False

adAvailOffset

When specified, this offset (in milliseconds) is added to the input Ad Avail PTS time.

- **Type**: integer
- **Required**: False
- **Minimum**: -1000
- **Maximum**: 1000

nielsenConfiguration

Nielsen configuration settings

- **Type**: NielsenConfiguration (p. 138)
- **Required**: False

inputs

Use Inputs (inputs) to define the source file used in the transcode job. There can only be one input in a job template. Using the API, you can include multiple inputs when referencing a job template.

- **Type**: Array of type InputTemplate (p. 107)
- **Required**: False

outputGroups

(OutputGroups) contains one group of settings for each set of outputs that share a common package type. All unpackaged files (MPEG-4, MPEG-2 TS, Quicktime, MXF, and no container) are grouped in a single output group as well. Required in (OutputGroups) is a group of settings that apply to the whole group. This required object depends on the value you set for (Type) under (OutputGroups)->(OutputGroupSettings). Type, settings object pairs are as follows:

* FILE_GROUP_SETTINGS, FileGroupSettings
* HLS_GROUP_SETTINGS, HlsGroupSettings
* DASH_ISO_GROUP_SETTINGS, DashIsoGroupSettings
* MS_SMOOTH_GROUP_SETTINGS, MsSmoothGroupSettings

- **Type**: Array of type OutputGroup (p. 142)
- **Required**: True
timedMetadataInsertion

- **Type:** [TimedMetadataInsertion](#)
- **Required:** False

availBlanking

Settings for ad avail blanking. Video can be blanked or overlaid with an image, and audio muted during SCTE-35 triggered ad avails.

- **Type:** [AvailBlanking](#)
- **Required:** False

LanguageCode (enum)


- ENG
- SPA
- FRA
- DEU
- GER
- ZHO
- ARA
- HIN
- JPN
- RUS
- POR
- ITA
- URD
- VIE
- KOR
- PAN
- ABK
- AAR
- AFR
- AKA
- SQI
- AMH
- ARG
- HYE
- ASM
- AVA
- AVE
- AYM
- AZE
- BAM
- BAK
- EUS
- BEL
- BEN
- BIH
- BIS
- BOS
BRE
BUL
MYA
CAT
KHM
CHA
CHE
NYA
CHU
CHV
COR
COS
CRE
HRV
CES
DAN
DIV
NLD
DZO
ENM
EPO
EST
EWE
FAO
FIJ
FIN
FRM
FUL
GLA
GLG
LUG
KAT
ELL
GRN
GUJ
HAT
HAU
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HUN
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</table>
ListJobTemplatesRequest

nextToken

Use this string, provided with the response to a previous request, to request the next batch of job templates.

Type: string
**Required**: False

### maxResults
Optional. Number of job templates, up to twenty, that will be returned at one time.

- **Type**: integer
- **Required**: False
- **Format**: int32

### category
Optionally, specify a job template category to limit responses to only job templates from that category.

- **Type**: string
- **Required**: False

### listBy

- **Type**: string
- **Required**: False

### order

- **Type**: string
- **Required**: False

### ListJobTemplatesResponse

### nextToken
Use this string to request the next batch of job templates.

- **Type**: string
- **Required**: False

### jobTemplates

- **Type**: Array of type JobTemplate (p. 111)
- **Required**: False

#### M2tsAudioBufferModel (enum)
Selects between the DVB and ATSC buffer models for Dolby Digital audio.

- DVB
- ATSC

#### M2tsBufferModel (enum)
Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.
MULTIPLEX
NONE

**M2tsEbpAudioInterval (enum)**

When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_FIXED_INTERVALS
- VIDEO_INTERVAL

**M2tsEbpPlacement (enum)**

Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_AUDIO_PIDS
- VIDEO_PID

**M2tsEsRateInPes (enum)**

Controls whether to include the ES Rate field in the PES header.

- INCLUDE
- EXCLUDE

**M2tsPcrControl (enum)**

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

**M2tsRateMode (enum)**

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

**M2tsScte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
M2tsSegmentationMarkers (enum)

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-I01-130118. ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

NONE
RAI_SEGSTART
RAI_ADAPT
PSI_SEGSTART
EBP
EBP_LEGACY

M2tsSegmentationStyle (enum)

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $segmentation_time seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $segmentation_time seconds. Note that EBP lookahead is a slight exception to this rule.

MAINTAIN_CADENCE
RESET_CADENCE

M2tsSettings

dvbTeletextPid

Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

bitrate

The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

Type: integer
Required: False
Minimum: 0
### Properties

**Maximum**: 2147483647

**segmentationTime**

The length in seconds of each segment. Required unless markers is set to _none_.

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**audioPids**

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type**: Array of type integer
- **Required**: False

**rateMode**

- **Type**: string
- **Required**: False

**ebpAudioInterval**

- **Type**: string
- **Required**: False

**fragmentTime**

The length in seconds of each fragment. Only used with EBP markers.

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**audioFramesPerPes**

The number of audio frames to insert for each PES packet.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**maxPcrInterval**

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.
Properties

**scte35Pid**

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 500

**privateMetadataPid**

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**pmtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 1000

**segmentationStyle**

- **Type**: string
  - **Required**: False

**audioBufferModel**

- **Type**: string
  - **Required**: False

**programNumber**

The value of the program number field in the Program Map Table.

- **Type**: integer
  - **Required**: False
  - **Minimum**: 0
  - **Maximum**: 65535
**Properties**

**dvbNitSettings**
- **Type**: `DvbNitSettings (p. 66)`
- **Required**: False

**scte35Source**
- **Type**: string
- **Required**: False

**pmtPid**
Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.
- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**bufferModel**
- **Type**: string
- **Required**: False

**ebpPlacement**
- **Type**: string
- **Required**: False

**dvbSdtSettings**
- **Type**: `DvbSdtSettings (p. 66)`
- **Required**: False

**nullPacketBitrate**
Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.
- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**pcrPid**
Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.
- **Type**: integer
- **Required**: False
- **Minimum**: 32
**Properties**

**Maximum**: 8182

**minEbpInterval**

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 10000

**transportStreamId**

The value of the transport stream ID field in the Program Map Table.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 65535

**pcrControl**

- **Type**: string
- **Required**: False

**videoPid**

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**esRateInPes**

- **Type**: string
- **Required**: False

**segmentationMarkers**

- **Type**: string
- **Required**: False

**dvbTdtSettings**

- **Type**: `DvbTdtSettings (p. 71)`
- **Required**: False
**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 1000

**dvbSubPids**

Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type**: Array of type integer
- **Required**: False

**M3u8PcrControl (enum)**

When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.

- **PCR_EVERY_PES_PACKET**
- **CONFIGURED_PCR_PERIOD**

**M3u8Scte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- **PASSTHROUGH**
- **NONE**

**M3u8Settings**

**pmtPid**

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**pcrPid**

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
Properties

Minimum: 32
Maximum: 8182

audioPids
Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer
Required: False

audioFramesPerPes
The number of audio frames to insert for each PES packet.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

scte35Pid
Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

transportStreamId
The value of the transport stream ID field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

videoPid
Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

pcrControl

Type: string
Required: False
privateMetadataPid
Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer  
Required: False  
Minimum: 32  
Maximum: 8182

pmtInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 1000

patInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 1000

programNumber
The value of the program number field in the Program Map Table.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 65535

timedMetadataPid
Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer  
Required: False  
Minimum: 32  
Maximum: 8182

timedMetadata
Type: string  
Required: False

tscte35Source
Type: string
**Properties**

**Required:** False

**MovClapAtom (enum)**

When enabled, include 'clap' atom if appropriate for the video output settings.

- INCLUDE
- EXCLUDE

**MovCslgAtom (enum)**

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

- INCLUDE
- EXCLUDE

**MovMpeg2FourCCControl (enum)**

When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.

- XDCAM
- MPEG

**MovPaddingControl (enum)**

If set to OMNEON, inserts Omneon-compatible padding

- OMNEON
- NONE

**MovReference (enum)**

A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.

- SELF_CONTAINED
- EXTERNAL

**MovSettings**

**reference**

- **Type:** string
  - **Required:** False

**paddingControl**

- **Type:** string
Required: False

mpeg2FourCCControl

Type: string
Required: False

cslgAtom

Type: string
Required: False

clapAtom

Type: string
Required: False

Mp2Settings

channels

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

Type: integer
Required: False
Minimum: 1
Maximum: 2

bitrate

Average bitrate in bits/second.

Type: integer
Required: False
Minimum: 32000
Maximum: 384000

sampleRate

Sample rate in hz.

Type: integer
Required: False
Minimum: 32000
Maximum: 48000

Mp4CslgAtom (enum)

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

INCLUDE
EXCLUDE

**Mp4FreeSpaceBox (enum)**

Inserts a free-space box immediately after the moov box.

  INCLUDE
  EXCLUDE

**Mp4MoovPlacement (enum)**

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

  PROGRESSIVE_DOWNLOAD
  NORMAL

**Mp4Settings**

**mp4MajorBrand**

Overrides the "Major Brand" field in the output file. Usually not necessary to specify.

  Type: string
  Required: False

**moovPlacement**

  Type: string
  Required: False

**cslgAtom**

  Type: string
  Required: False

**freeSpaceBox**

  Type: string
  Required: False

**Mpeg2AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

  OFF
  LOW
  MEDIUM
  HIGH

**Mpeg2CodecLevel (enum)**

Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.
AUTO
LOW
MAIN
HIGH1440
HIGH

**Mpeg2CodecProfile (enum)**

Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.

- MAIN
- PROFILE_422

**Mpeg2FramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**Mpeg2FramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**Mpeg2GopSizeUnits (enum)**

Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

**Mpeg2InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
**FOLLOW_TOP_FIELD**

**FOLLOW_BOTTOM_FIELD**

### Mpeg2IntraDcPrecision (enum)

Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value auto, the service will automatically select the precision based on the per-frame compression ratio.

- **AUTO**
- **INTRA_DC_PRECISION_8**
- **INTRA_DC_PRECISION_9**
- **INTRA_DC_PRECISION_10**
- **INTRA_DC_PRECISION_11**

### Mpeg2ParControl (enum)

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- **INITIALIZE_FROM_SOURCE**
- **SPECIFIED**

### Mpeg2QualityTuningLevel (enum)

Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.

- **SINGLE_PASS**
- **MULTI_PASS**

### Mpeg2RateControlMode (enum)

Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).

- **VBR**
- **CBR**

### Mpeg2SceneChangeDetect (enum)

Scene change detection (inserts I-frames on scene changes).

- **DISABLED**
- **ENABLED**

### Mpeg2Settings

#### minIInterval

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within i-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as
setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 30

**parNumerator**
Pixel Aspect Ratio numerator.

**Type**: integer  
**Required**: False  
**Minimum**: 1  
**Maximum**: 2147483647

**gopSizeUnits**

**Type**: string  
**Required**: False

**hrdBufferSize**
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

**Type**: integer  
**Required**: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**qualityTuningLevel**

**Type**: string  
**Required**: False

**maxBitrate**
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

**Type**: integer  
**Required**: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**bitrate**
Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

**Type**: integer
Required: False
Minimum: 1000
Maximum: 2147483647

spatialAdaptiveQuantization
Type: string
Required: False

slowPal
Type: string
Required: False

codecProfile
Type: string
Required: False

intraDcPrecision
Type: string
Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
Type: integer
Required: False
Minimum: 0
Maximum: 128

framerateControl
Type: string
Required: False

telecine
Type: string
Required: False

framerateConversionAlgorithm
Type: string
Required: False

codecLevel
Type: string
Required: False
temporalAdaptiveQuantization
Type: string
Required: False

hrdBufferInitialFillPercentage
Percentage of the buffer that should initially be filled (HRD buffer model).
Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator
Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames
Number of B-frames between reference frames.
Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence
Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

framerateDenominator
Framerate denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization
Type: string
Properties

Required: False

**interlaceMode**
- **Type**: string
- **Required**: False

**gopSize**
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**sceneChangeDetect**
- **Type**: string
- **Required**: False

**parDenominator**
Pixel Aspect Ratio denominator.
- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

**parControl**
- **Type**: string
- **Required**: False

**syntax**
- **Type**: string
- **Required**: False

**rateControlMode**
- **Type**: string
- **Required**: False

**Mpeg2SlowPal (enum)**
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
- **DISABLED**
- **ENABLED**
**Mpeg2SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

- DISABLED
- ENABLED

**Mpeg2Syntax (enum)**

Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).

- DEFAULT
- D_10

**Mpeg2Telecine (enum)**

Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

- NONE
- SOFT
- HARD

**Mpeg2TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- DISABLED
- ENABLED

**MsSmoothAudioDeduplication (enum)**

COMBINE_DUPLICATE_STREAMS combines identical audio encoding settings across a Microsoft Smooth output group into a single audio stream.

- COMBINE_DUPLICATE_STREAMS
- NONE

**MsSmoothEncryptionSettings**

**spekeKeyProvider**

- Type: SpekeKeyProvider (p. 148)
- Required: True

**MsSmoothGroupSettings**

**fragmentLength**

Use Fragment length (FragmentLength) to specify the mp4 fragment sizes in seconds. Fragment length must be compatible with GOP size and framerate.

- Type: integer
Properties

**encryption**

Required: True
Minimum: 1
Maximum: 2147483647

**Type**: MsSmoothEncryptionSettings (p. 137)
Required: False

**audioDeduplication**

Type: string
Required: False

**manifestEncoding**

Type: string
Required: False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string
Required: True
Pattern: ^s3:\/\/

**MsSmoothManifestEncoding (enum)**

Use Manifest encoding (MsSmoothManifestEncoding) to specify the encoding format for the server and client manifest. Valid options are utf8 and utf16.

- UTF8
- UTF16

**NielsenConfiguration**

**distributorId**

Use Distributor ID (DistributorID) to specify the distributor ID that is assigned to your organization by Nielsen.

Type: string
Required: False

**breakoutCode**

Use Nielsen Configuration (NielsenConfiguration) to set the Nielsen measurement system breakout code. Supported values are 0, 3, 7, and 9.
Properties

Type: integer  
Required: False  
Minimum: 0  
Maximum: 9

### NoiseReducer

#### filter

Type: string  
Required: True

#### filterSettings

Type: NoiseReducerFilterSettings (p. 139)  
Required: False

#### spatialFilterSettings

Type: NoiseReducerSpatialFilterSettings (p. 140)  
Required: False

**NoiseReducerFilter (enum)**

Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).

* Bilateral is an edge preserving noise reduction filter
* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters
* Conserve is a min/max noise reduction filter
* Spatial is frequency-domain filter based on JND principles.

```
BILATERAL
MEAN
GAUSSIAN
LANCZOS
SHARPEN
CONSERVE
SPATIAL
```

#### NoiseReducerFilterSettings

#### strength

Relative strength of noise reducing filter. Higher values produce stronger filtering.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 3
NoiseReducerSpatialFilterSettings

strength
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 16

postFilterSharpenStrength
Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

speed
The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

- **Type**: integer
- **Required**: False
- **Minimum**: -2
- **Maximum**: 3

Order (enum)
When you request lists of resources, you can optionally specify whether they are sorted in ASCENDING or DESCENDING order. Default varies by resource.

- ASCENDING
- DESCENDING

Output

extension
Use Extension (Extension) to specify the file extension for outputs in File output groups. If you do not specify a value, the service will use default extensions by container type as follows:

- MPEG-2 transport stream, m2ts
- Quicktime, mov
- MXF container, mxf
- MPEG-4 container, mp4
- No Container, the service will use codec extensions (e.g. AAC, H265, H265, AC3)
videoDescription

(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

Type: VideoDescription (p. 153)
Required: False

audioDescriptions

(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.

Type: Array of type AudioDescription (p. 50)
Required: False

captions

Type: String
Required: False

captionDescriptions

(CaptionDescriptions) contains groups of captions settings. For each output that has captions, include one instance of (CaptionDescriptions). (CaptionDescriptions) can contain multiple groups of captions settings.

Type: Array of type CaptionDescription (p. 57)
Required: False

nameModifier

Use Name modifier (NameModifier) to have the service add a string to the end of each output filename. You specify the base filename as part of your destination URI. When you create multiple outputs in the same output group, Name modifier is required. Name modifier also accepts format identifiers. For DASH
ISO outputs, if you use the format identifiers $Number$ or $Time$ in one output, you must use them in the same way in all outputs of the output group.

**Properties**

**ISO outputs**

You must use the format identifiers $Number$ or $Time$ in all outputs of the output group.

**Type:** string

**Required:** False

**OutputChannelMapping**

**inputChannels**

**Type:** Array of type integer

**Required:** True

**OutputGroup**

**outputs**

This object holds groups of encoding settings, one group of settings per output.

**Type:** Array of type Output (p. 140)

**Required:** True

**outputGroupSettings**

**Type:** OutputGroupSettings (p. 142)

**Required:** True

**name**

**Type:** string

**Required:** False

**customName**

Use Custom Group Name (CustomName) to specify a name for the output group. This value is displayed on the console and can make your job settings JSON more human-readable. It does not affect your outputs. Use up to twelve characters that are either letters, numbers, spaces, or underscores.

**Type:** string

**Required:** False

**OutputGroupSettings**

**dashIsoGroupSettings**

**Type:** DashIsoGroupSettings (p. 63)

**Required:** False

**fileGroupSettings**

**Type:** FileGroupSettings (p. 77)
Properties

**Required**: False

**msSmoothGroupSettings**

**Type**: MsSmoothGroupSettings (p. 137)

**Required**: False

**type**

**Type**: string

**Required**: True

**hlsGroupSettings**

**Type**: HlsGroupSettings (p. 101)

**Required**: False

**OutputGroupType (enum)**

- HLS_GROUP_SETTINGS
- DASH_ISO_GROUP_SETTINGS
- FILE_GROUP_SETTINGS
- MS_SMOOTH_GROUP_SETTINGS

**OutputSdt (enum)**

Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter "SDT Manually" means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

- SDT_FOLLOW
- SDT_FOLLOW_IF_PRESENT
- SDT_MANUAL
- SDT_NONE

**OutputSettings**

**hlsSettings**

**Type**: HlsSettings (p. 105)

**Required**: False

**ProresCodecProfile (enum)**

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

- APPLE_PRORES_422
- APPLE_PRORES_422_HQ
- APPLE_PRORES_422_LT
- APPLE_PRORES_422_PROXY
**ProresFramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresFramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**ProresInterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

**ProresParControl (enum)**

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresSettings**

- **slowPal**
  - Type: string
  - Required: False

- **framerateControl**
  - Type: string
Properties

**telecine**
Type: string  
Required: False

**framerateDenominator**
Framerate denominator.
Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**framerateConversionAlgorithm**
Type: string  
Required: False

**interlaceMode**
Type: string  
Required: False

**codecProfile**
Type: string  
Required: False

**parNumerator**
Pixel Aspect Ratio numerator.
Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**parControl**
Type: string  
Required: False

**parDenominator**
Pixel Aspect Ratio denominator.
Type: integer  
Required: False  
Minimum: 1
Maximum: 2147483647

framerateNumerator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

ProresSlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

ProresTelecine (enum)

Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
HARD

Rectangle

width

Width of rectangle in pixels.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

x

The distance, in pixels, between the rectangle and the left edge of the video frame.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

y

The distance, in pixels, between the rectangle and the top edge of the video frame.
Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

**height**

Height of rectangle in pixels.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

**RemixSettings**

**channelsOut**

Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

Type: integer
Required: True
Minimum: 1
Maximum: 8

**channelMapping**

Type: ChannelMapping (p. 59)
Required: True

**channelsIn**

Specify the number of audio channels from your input that you want to use in your output. With remixing, you might combine or split the data in these channels, so the number of channels in your final output might be different.

Type: integer
Required: True
Minimum: 1
Maximum: 16

**RespondToAfd (enum)**

Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to AFD values in the input.

* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio, and output display aspect ratio.

* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set AfdSignaling to (AUTO).
* Choose None to remove all input AFD values from this output.

    NONE
    RESPOND
    PASSTHROUGH

**ScalingBehavior (enum)**

Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output (StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to allow the service to letterbox your video instead. This setting overrides any positioning value you specify elsewhere in the job.

    DEFAULT
    STRETCH_TO_OUTPUT

**SccDestinationFramerate (enum)**

Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized in the output. Specify a framerate that matches the framerate of the associated video. If the video framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe (FRAMERATE_29_97_NON_DROPFRAME).

    FRAMERATE_23_97
    FRAMERATE_24
    FRAMERATE_29_97_DROPFRAME
    FRAMERATE_29_97_NON_DROPFRAME

**SccDestinationSettings**

**framerate**

    Type: string
    Required: False

**SpekeKeyProvider**

**resourceld**

The SPEKE-compliant server uses Resource ID (Resourceld) to identify content.

    Type: string
    Required: True
    Pattern: ^[\w-]+$ 

**systemIds**

Relates to SPEKE implementation. DRM system identifiers. DASH output groups support a max of two system ids. Other group types support one system id.

    Type: Array of type string
    Required: True
url

Use URL (Url) to specify the SPEKE-compliant server that will provide keys for content.

- **Type**: string
- **Required**: True
- **Format**: uri
- **Pattern**: ^https:\/\/

**StaticKeyProvider**

**keyFormatVersions**

Relates to DRM implementation. Either a single positive integer version value or a slash delimited list of version values (1/2/3).

- **Type**: string
- **Required**: False
- **Pattern**: ^\d+(\/\d+)*$

**keyFormat**

Relates to DRM implementation. Sets the value of the KEYFORMAT attribute. Must be 'identity' or a reverse DNS string. May be omitted to indicate an implicit value of 'identity'.

- **Type**: string
- **Required**: False
- **Pattern**: ^(identity|\[A-Za-z\]{2,6}(\.[A-Za-z0-9-]{1,63})\{1,63\})$

**staticKeyValue**

Relates to DRM implementation. Use a 32-character hexadecimal string to specify Key Value (StaticKeyValue).

- **Type**: string
- **Required**: True
- **Pattern**: ^[A-Za-z0-9]{32}$

url

Relates to DRM implementation. The location of the license server used for protecting content.

- **Type**: string
- **Required**: True
- **Format**: uri

**TeletextDestinationSettings**

**pageNumber**

Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.
Properties

Type: string  
**Required:** False  
**Pattern:** `^[1-8][0-9a-fA-F][0-9a-eA-E]$`

**TeletextSourceSettings**

**pageNumber**

Use Page Number (PageNumber) to specify the three-digit hexadecimal page number that will be used for Teletext captions. Do not use this setting if you are passing through teletext from the input source to output.

Type: string  
**Required:** False  
**Pattern:** `^[1-8][0-9a-fA-F][0-9a-eA-E]$`

**TimecodeBurnin**

**prefix**

Use Prefix (Prefix) to place ASCII characters before any burned-in timecode. For example, a prefix of "EZ-" will result in the timecode "EZ-00:00:00:00". Provide either the characters themselves or the ASCII code equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

Type: string  
**Required:** False  
**Pattern:** `^[ -~]+$`

**fontSize**

Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

Type: integer  
**Required:** False  
**Minimum:** 10  
**Maximum:** 48

**position**

Type: string  
**Required:** False

**TimecodeBurninPosition (enum)**

Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- TOP_CENTER
- TOP_LEFT
- TOP_RIGHT
- MIDDLE_LEFT
**Properties**

**TimecodeConfig**

**timestampOffset**

Only applies to outputs that support program-date-time stamp. Use Time stamp offset (TimestampOffset) to overwrite the timecode date without affecting the time and frame number. To use this, you must also enable Insert program-date-time (InsertProgramDateTime) in the output settings.

* Type: string
  * Required: False
  * Pattern: `^([0-9]{4})~([0-19][0-9]|[12][0-9])[0-9][0-9]~([01][0-9]|2[0-4])[0-9]([0-5][0-9]|12)[0-9][301]$`

**anchor**

If you use an editing platform that relies on an anchor timecode, use Anchor Timecode (Anchor) to specify a timecode that will match the input video frame to the output video frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF). This setting ignores framerate conversion. System behavior for Anchor Timecode varies depending on your setting for Timecode source (TimecodeSource).

  * If Timecode source (TimecodeSource) is set to Specified Start (specifiedstart), the first input frame is the specified value in Start Timecode (Start). Anchor Timecode (Anchor) and Start Timecode (Start) are used calculate output timecode.
  * If Timecode source (TimecodeSource) is set to Start at 0 (zerobased) the first frame is 00:00:00:00.
  * If Timecode source (TimecodeSource) is set to Embedded (embedded), the first frame is the timecode value on the first input frame of the input.

* Type: string
  * Required: False
  * Format: timecode
  * Pattern: `^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:;[0-9]{2}$`

**start**

Only use when you set Timecode Source (TimecodeSource) to Specified Start (SPECIFIEDSTART). Use Start timecode (Start) to specify the timecode for the initial frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF).

* Type: string
  * Required: False
  * Format: timecode
  * Pattern: `^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:;[0-9]{2}$`

**source**

* Type: string
  * Required: False
**TimecodeSource (enum)**

Use Timecode Source (TimecodeSource) to set how timecodes are handled within this input. To make sure that your video, audio, captions, and markers are synchronized and that time-based features, such as image inserter, work correctly, choose the Timecode source option that matches your assets. All timecodes are in a 24-hour format with frame number (HH:MM:SS:FF).

- **Embedded (EMBEDDED)** - Use the timecode that is in the input video. If no embedded timecode is in the source, the service will use Start at 0 (ZEROBASED) instead.
- **Start at 0 (ZEROBASED)** - Set the timecode of the initial frame to 00:00:00:00.
- **Specified Start (SPECIFIEDSTART)** - Set the timecode of the initial frame to a value other than zero. You use Start timecode (Start) to provide this value.

  * EMBEDDED
  * ZEROBASED
  * SPECIFIEDSTART

**TimedMetadata (enum)**

If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.

  * PASSTHROUGH
  * NONE

**TimedMetadataInsertion**

**id3Insertions**

Id3Insertions contains the array of Id3Insertion instances.

- **Type**: Array of type Id3Insertion (p. 106)
- **Required**: True

**TtmlDestinationSettings**

**stylePassthrough**

- **Type**: string
- **Required**: False

**TtmlStylePassthrough (enum)**

Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

  * ENABLED
  * DISABLED

**Type (enum)**

  * SYSTEM
  * CUSTOM
VideoCodec (enum)

Type of video codec

- FRAME_CAPTURE
- H_264
- H_265
- MPEG2
- PRORES

VideoCodecSettings

h265Settings

Type: H265Settings (p. 90)
Required: False

codec

Type: string
Required: True

proresSettings

Type: ProresSettings (p. 144)
Required: False

mpeg2Settings

Type: Mpeg2Settings (p. 132)
Required: False

h264Settings

Type: H264Settings (p. 82)
Required: False

frameCaptureSettings

Type: FrameCaptureSettings (p. 78)
Required: False

VideoDescription

fixedAfd

Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAfd) to specify a four-bit AFD value which the service will write on all frames of this video output.

Type: integer
Required: False
Minimum: 0
Maximum: 15

**scalingBehavior**

_Type:_ string  
_Required:_ False

**respondToAfd**

_Type:_ string  
_Required:_ False

**codecSettings**

_Type:_ VideoCodecSettings (p. 153)  
_Required:_ True

**afdSignaling**

_Type:_ string  
_Required:_ False

**colorMetadata**

_Type:_ string  
_Required:_ False

**timecodeInsertion**

_Type:_ string  
_Required:_ False

**width**

Use **Width** (Width) to define the video resolution width, in pixels, for this output. If you don't provide a value here, the service will use the input width.

_Type:_ integer  
_Required:_ False  
_Minimum:_ 32  
_Maximum:_ 4096

**sharpness**

Use **Sharpness** (Sharpness) setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.

_Type:_ integer  
_Required:_ False  
_Minimum:_ 0
Maximum: 100

antiAlias

Type: string
Required: False

videoPreprocessors

Find additional transcoding features under Preprocessors (VideoPreprocessors). Enable the features at each output individually. These features are disabled by default.

Type: VideoPreprocessor (p. 155)
Required: False

position

Use Position (Position) to point to a rectangle object to define your position. This setting overrides any other aspect ratio.

Type: Rectangle (p. 146)
Required: False

dropFrameTimecode

Type: string
Required: False

crop

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

Type: Rectangle (p. 146)
Required: False

height

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don’t provide a value here, the service will use the input height.

Type: integer
Required: False
Minimum: 32
Maximum: 2160

VideoPreprocessor

timecodeBurnin

Timecode burn-in (TimecodeBurnIn)—Burns the output timecode and specified prefix into the output.
Type: TimecodeBurnin (p. 150)
Required: False

noiseReducer
Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

Type: NoiseReducer (p. 139)
Required: False

colorCorrector
Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

Type: ColorCorrector (p. 59)
Required: False

imageInserter
Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

Type: ImageInserter (p. 106)
Required: False

deinterlacer
Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.

Type: Deinterlacer (p. 65)
Required: False

VideoSelector

colorSpace

Type: string
Required: False

hdr10Metadata

Type: Hdr10Metadata (p. 96)
Required: False

programNumber

Selects a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported.

Type: integer
Required: False
**Properties**

**Minimum**: -2147483648  
**Maximum**: 2147483647

**pid**

Use PID (Pid) to select specific video data from an input file. Specify this value as an integer; the system automatically converts it to the hexadecimal value. For example, 257 selects PID 0x101. A PID, or packet identifier, is an identifier for a set of data in an MPEG-2 transport stream container.

- **Type**: integer  
- **Required**: False  
- **Minimum**: 1  
- **Maximum**: 2147483647

**colorSpaceUsage**

- **Type**: string  
- **Required**: False

**VideoTimecodeInsertion (enum)**

Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

- **DISABLED**  
- **PIC_TIMING_SEI**

**WavSettings**

**channels**

Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

- **Type**: integer  
- **Required**: False  
- **Minimum**: 1  
- **Maximum**: 8

**bitDepth**

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type**: integer  
- **Required**: False  
- **Minimum**: 16  
- **Maximum**: 24

**sampleRate**

Sample rate in Hz.
Type: integer  
Required: False  
Minimum: 8000  
Maximum: 192000

A Specific Job Template

URI

/2017-08-29/jobTemplates/ name

HTTP Methods

GET

Operation ID: GetJobTemplate

Retrieve the JSON for a specific job template.

Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>GetJobTemplateResponse (p. 172)</td>
<td>200: OkResponse</td>
</tr>
</tbody>
</table>
| 400         | ExceptionBody (p. 191)                | 400: BadRequestException  
The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax. |
| 500         | ExceptionBody (p. 191)                | 500: InternalServiceException  
The service encountered an unexpected condition and cannot fulfill your request. |
| 403         | ExceptionBody (p. 191)                | 403: AccessDeniedException  
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials |
**PUT**

Operation ID: UpdateJobTemplate

Modify one of your existing job templates.

**Path Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

**Responses**

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>UpdateJobTemplateResponse (p. 181)</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 191)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

using the AWS Signature Version 4 signing process.

404: ResourceNotFoundException

The resource you requested does not exist.

429: LimitExceededException

Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.

409: ResourceInUseException

The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.

The conditional request failed. The service can’t process your request because of a problem in the request. Please check your request form and syntax.
<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 500         | ExceptionBody (p. 191) | 500: InternalServiceException
The service encountered an unexpected condition and cannot fulfill your request. |
| 403         | ExceptionBody (p. 191) | 403: AccessDeniedException
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process. |
| 404         | ExceptionBody (p. 191) | 404: ResourceNotFoundException
The resource you requested does not exist. |
| 429         | ExceptionBody (p. 191) | 429: LimitExceededException
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission. |
| 409         | ExceptionBody (p. 191) | 409: ResourceInUseException
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing. |

DELETE

Operation ID: DeleteJobTemplate

Permanently delete a job template you have created.

Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>
### Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>ExceptionBody (p. 191)</td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>202</td>
<td>DeleteJobTemplateResponse (p. 191)</td>
<td>Your request has been accepted. Processing has not yet begun.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 191)</td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 191)</td>
<td>You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody (p. 191)</td>
<td>The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody (p. 191)</td>
<td>Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
<tr>
<td>409</td>
<td>ExceptionBody (p. 191)</td>
<td>The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>
Schemas

Request Bodies

Example GET

```
{
   "name (p. 226)" : "string"
}
```

Example PUT

```
{
   "settings (p. 299)" : {
      "timecodeConfig (p. 260)" : {
         "timestampOffset (p. 297)" : "string",
         "anchor (p. 297)" : "string",
         "start (p. 297)" : "string",
         "source (p. 298)" : enum
      },
      "adAvailOffset (p. 260)" : integer,
      "nielsenConfiguration (p. 260)" : {
         "distributorId (p. 285)" : "string",
         "breakoutCode (p. 285)" : integer
      },
      "inputs (p. 260)" : [ {
         "audioSelectors (p. 255)" : {
         },
         "audioSelectorGroups (p. 255)" : {
         },
         "filterEnable (p. 255)" : enum,
         "deblockFilter (p. 255)" : enum,
         "videoSelector (p. 255)" : {
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            "hdr10Metadata (p. 303)" : {
               "redPrimaryY (p. 244)" : integer,
               "greenPrimaryY (p. 244)" : integer,
               "whitePointX (p. 244)" : integer,
               "maxLuminance (p. 244)" : integer,
               "greenPrimaryX (p. 244)" : integer,
               "whitePointY (p. 245)" : integer,
               "redPrimaryX (p. 245)" : integer,
               "bluePrimaryX (p. 245)" : integer,
               "maxFrameAverageLightLevel (p. 245)" : integer,
               "bluePrimaryY (p. 245)" : integer,
               "maxContentLightLevel (p. 245)" : integer,
               "minLuminance (p. 246)" : integer
            },
            "programNumber (p. 303)" : integer,
            "pid (p. 304)" : integer,
            "colorSpaceUsage (p. 304)" : enum
         },
         "filterStrength (p. 256)" : integer,
         "programNumber (p. 256)" : integer,
         "timecodeSource (p. 256)" : enum,
         "captionSelectors (p. 256)" : {
         },
         "denoiseFilter (p. 256)" : enum,
         "psiControl (p. 256)" : enum,
         "inputClippings (p. 256)" : [{
```
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"endTimecode (p. 254)": "string"
}
],
"outputGroups (p. 261)": [
  {
    "outputs (p. 288)": [
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        "videoDescription (p. 287)": {
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          "scalingBehavior (p. 301)": enum,
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              "minInterval (p. 238)": integer,
              "parNumerator (p. 238)": integer,
              "flickerAdaptiveQuantization (p. 238)": enum,
              "gopSizeUnits (p. 238)": enum,
              "hrdBufferSize (p. 239)": integer,
              "qualityTuningLevel (p. 239)": enum,
              "maxBitrate (p. 239)": integer,
              "bitrate (p. 239)": integer,
              "spatialAdaptiveQuantization (p. 239)": enum,
              "sampleAdaptiveOffsetFilterMode (p. 239)": enum,
              "temporalIds (p. 239)": enum,
              "slowPal (p. 240)": enum,
              "tiles (p. 240)": enum,
              "codecProfile (p. 240)": enum,
              "alternateTransferFunctionSei (p. 240)": enum,
              "framerateControl (p. 240)": enum,
              "telecine (p. 240)": enum,
              "framerateConversionAlgorithm (p. 240)": enum,
              "codecLevel (p. 240)": enum,
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              "sceneChangeDetect (p. 242)": enum,
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        }
      }
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  }
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    "softness (p. 280)" : integer,
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    "framerateConversionAlgorithm (p. 281)" : enum,
    "codecLevel (p. 281)" : enum,
    "temporalAdaptiveQuantization (p. 281)" : enum,
    "hrdBUFFERInitialFillPercentage (p. 281)" : integer,
    "framerateNumerator (p. 281)" : integer,
    "numberBFramesBetweenReferenceFrames (p. 281)" : integer,
    "gopClosedCadence (p. 282)" : integer,
    "framerateDenominator (p. 282)" : integer,
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    "syntax (p. 283)" : enum,
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"hue (p. 208)" : integer,
"colorSpaceConversion (p. 208)" : enum
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"insertableImages (p. 253)" : [ 
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"imageY (p. 257)" : integer,
"fadeIn (p. 257)" : integer,
"imageX (p. 258)" : integer,
Schemas

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"startTime (p. 258)": "string",
"opacity (p. 258)": integer,
"layer (p. 258)": integer,
"height (p. 258)": integer,
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  "control (p. 212)": enum,
  "algorithm (p. 212)": enum
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"position (p. 302)": {
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  "x (p. 293)": integer,
  "y (p. 293)": integer,
  "height (p. 293)": integer
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  "x (p. 293)": integer,
  "y (p. 293)": integer,
  "height (p. 293)": integer
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  "remixSettings (p. 198)": {
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    "channelMapping (p. 293)": {
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          ]
      ]
    },
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      "bitDepth (p. 304)": integer,
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    "codecProfile (p. 192)" : enum,
    "codingMode (p. 193)" : enum,
    "specification (p. 193)" : enum,
    "bitrate (p. 193)" : integer,
    "rawFormat (p. 193)" : enum,
    "rateControlMode (p. 193)" : enum,
    "sampleRate (p. 193)" : integer,
    "audioDescriptionBroadcasterMix (p. 193)" : enum
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    "sampleRate (p. 196)" : integer
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    "passthroughControl (p. 220)" : enum,
    "metadataControl (p. 220)" : enum,
    "bitrate (p. 220)" : integer,
    "dynamicRangeCompressionRf (p. 221)" : enum,
    "sampleRate (p. 221)" : integer,
    "1ltRtSurroundMixLevel (p. 221)" : number,
    "surroundExMode (p. 221)" : enum,
    "dynamicRangeCompressionLine (p. 221)" : enum,
    "lfeControl (p. 221)" : enum,
    "codingMode (p. 221)" : enum,
    "surroundMode (p. 221)" : enum,
    "attenuationControl (p. 222)" : enum,
    "lfeFilter (p. 222)" : enum,
    "phaseControl (p. 222)" : enum,
    "1ltRtCenterMixLevel (p. 222)" : number,
    "dcFilter (p. 222)" : enum,
    "stereoDownmix (p. 222)" : enum,
    "bitstreamMode (p. 222)" : enum,
    "loRoSurroundMixLevel (p. 222)" : number,
    "loRoCenterMixLevel (p. 223)" : number
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"mp2Settings (p. 198)" : {
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    "bitrate (p. 276)" : integer,
    "sampleRate (p. 276)" : integer
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"streamName (p. 199)" : "string",

"audioNormalizationSettings (p. 199)" : {
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    "algorithmControl (p. 200)" : enum,
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    " loudnessLogging (p. 200)" : enum,
    " correctionGateLevel (p. 200)" : integer,
    "algorithm (p. 201)" : enum
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"containerSettings (p. 287)" : {
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        "moovPlacement (p. 277)" : enum,
        "csigAtom (p. 277)" : enum,
        "freeSpaceBox (p. 277)" : enum
    },
    "m3u8Settings (p. 209)" : {
}
Schemas

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],
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"scte35Pid (p. 272)" : integer,
"transportStreamId (p. 273)" : integer,
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"pcrControl (p. 273)" : enum,
"privateMetadataPid (p. 273)" : integer,
"pmtInterval (p. 273)" : integer,
"patInterval (p. 273)" : integer,
"programNumber (p. 274)" : integer,
"timedMetadataPid (p. 274)" : integer,
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"scte35Source (p. 274)" : enum
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"m2tsSettings (p. 209)" : { 
    "dvbTeletextPid (p. 267)" : integer,
    "bitrate (p. 267)" : integer,
    "segmentationTime (p. 267)" : number,
    "audioPids (p. 267)" : [
        integer
    ],
    "rateMode (p. 267)" : enum,
    "ebpAudioInterval (p. 267)" : enum,
    "fragmentTime (p. 268)" : number,
    "audioFramesPerPtes (p. 268)" : integer,
    "maxPcrInterval (p. 268)" : integer,
    "scte35Pid (p. 268)" : integer,
    "privateMetadataPid (p. 268)" : integer,
    "pmtInterval (p. 268)" : integer,
    "segmentationStyle (p. 269)" : enum,
    "audioBufferModel (p. 269)" : enum,
    "programNumber (p. 269)" : integer,
    "dvbNitSettings (p. 269)" : { 
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        "networkId (p. 213)" : integer,
        "nitInterval (p. 213)" : integer
    },
    "scte35Source (p. 269)" : enum,
    "pmtPid (p. 269)" : integer,
    "bufferModel (p. 269)" : enum,
    "ebpPlacement (p. 269)" : enum,
    "dvbSdtSettings (p. 270)" : { 
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        "serviceName (p. 214)" : "string",
        "serviceProviderName (p. 214)" : "string",
        "outputSdt (p. 214)" : "string",
        "nullPacketBitrate (p. 270)" : number,
        "pcrPid (p. 270)" : integer,
        "minEbpInterval (p. 270)" : integer,
        "transportStreamId (p. 270)" : integer,
        "pcrControl (p. 270)" : enum,
        "videoPid (p. 271)" : integer,
        "esRateInPes (p. 271)" : integer,
        "segmentationMarkers (p. 271)" : enum,
        "dvbTdtSettings (p. 271)" : { 
            "tdtInterval (p. 218)" : integer
        },
        "patInterval (p. 271)" : integer,
        "dvbSubPids (p. 271)" : [
            integer
        ]
    }
}
"movSettings (p. 210)": {
  "reference (p. 275)": enum,
  "paddingControl (p. 275)": enum,
  "mpeg2FourCCControl (p. 275)": enum,
  "csigAtom (p. 275)": enum,
  "clapAtom (p. 275)": enum
},
"f4vSettings (p. 210)": {
  "moovPlacement (p. 224)": enum
},
"preset (p. 287)": "string",
"outputSettings (p. 287)": {
  "hlsSettings (p. 289)": {
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    "segmentModifier (p. 252)": "string",
    "audioTrackType (p. 252)": enum,
    "audioRenditionSets (p. 253)": "string",
    "audioGroupId (p. 253)": "string"
  }
},
"captionDescriptions (p. 288)": [
  {
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    "languageDescription (p. 205)": "string",
    "languageCode (p. 205)": enum,
    "destinationSettings (p. 205)": {
      "burninDestinationSettings (p. 206)": {
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        "backgroundColor (p. 201)": enum,
        "teletextSpacing (p. 202)": enum,
        "yPosition (p. 202)": integer,
        "backgroundOpacity (p. 202)": integer,
        "fontOpacity (p. 202)": integer,
        "shadowOpacity (p. 202)": integer,
        "fontResolution (p. 202)": integer,
        "shadowYOffset (p. 203)": integer,
        "outlineSize (p. 203)": integer,
        "outlineColor (p. 203)": enum,
        "fontSize (p. 203)": integer,
        "fontColor (p. 203)": enum
      },
      "teletextDestinationSettings (p. 206)": {
        "pageNumber (p. 296)": "string"}
    },
    "ttm1DestinationSettings (p. 206)": {
      "stylePassthrough (p. 298)": enum
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    "dvbSubDestinationSettings (p. 206)": {
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      "backgroundColor (p. 214)": enum,
      "teletextSpacing (p. 215)": enum,
      "yPosition (p. 215)": integer,
      "backgroundOpacity (p. 215)": integer,
      "fontOpacity (p. 215)": integer,
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      "outlineColor (p. 216)": enum,
      "fontSize (p. 216)": integer,
"shadowXOffset (p. 216)": integer,
"alignment (p. 216)": enum,
"shadowColor (p. 217)": enum,
"foregroundColor (p. 217)": enum
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"sccDestinationSettings (p. 206)": {
"framerate (p. 294)": enum
}
]
"nameModifier (p. 288)": "string"
}
],
"outputGroupSettings (p. 288)": {
"dashIsoGroupSettings (p. 289)": {
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"baseUrl (p. 210)": "string",
"minBufferTime (p. 211)": integer,
"encryption (p. 211)": {
"spekeKeyProvider (p. 210)": {
"resourceId (p. 294)": "string",
"systemIds (p. 295)": [
"string"
],
"url (p. 295)": "string"
}
},
"destination (p. 211)": "string",
"segmentLength (p. 211)": integer,
"segmentControl (p. 211)": enum,
"hbbtvCompliance (p. 211)": enum
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"fileGroupSettings (p. 289)": {
"destination (p. 224)": "string"
},
"msSmoothGroupSettings (p. 289)": {
"fragmentLength (p. 284)": integer,
"encryption (p. 284)": {
"spekeKeyProvider (p. 284)": {
"resourceId (p. 294)": "string",
"systemIds (p. 295)": [
"string"
],
"url (p. 295)": "string"
}
},
"audioDeduplication (p. 284)": enum,
"manifestEncoding (p. 284)": enum,
"destination (p. 284)": "string"
},
"type (p. 289)": enum,
"hlsGroupSettings (p. 289)": {
"segmentsPerSubdirectory (p. 248)": integer,
"streamInfResolution (p. 248)": enum,
"timestampDeltaMilliseconds (p. 248)": integer,
"outputSelection (p. 249)": enum,
"captionLanguageMappings (p. 249)": [
{ "languageDescription (p. 246)": "string",
"captionChannel (p. 246)": integer,
"languageCode (p. 247)": enum
}
],
"clientCache (p. 249)": enum,
"codecSpecification (p. 249)": enum,
Example DELETE

```
{
    "name (p. 213)" : "string"
}
```
Response Bodies

Example GetJobTemplateResponse

```json
{
  "jobTemplate (p. 226)": {
    "settings (p. 259)": {
      "timecodeConfig (p. 260)": {
        "timestampOffset (p. 297)": "string",
        "anchor (p. 297)": "string",
        "start (p. 297)": "string",
        "source (p. 298)": enum
      },
      "adAvailOffset (p. 260)": integer,
      "nielsenConfiguration (p. 260)": {
        "distributorId (p. 285)": "string",
        "breakoutCode (p. 285)": integer
      },
      "inputs (p. 260)": [
        "audioSelectors (p. 255)": {
        },
        "audioSelectorGroups (p. 255)": {
        },
        "filterEnable (p. 255)": enum,
        "deblockFilter (p. 255)": enum,
        "videoSelector (p. 255)": {
          "colorSpace (p. 303)": enum,
          "Hdr10Metadata (p. 303)": {
            "redPrimaryY (p. 244)": integer,
            "greenPrimaryY (p. 244)": integer,
            "whitePointX (p. 244)": integer,
            "maxLuminance (p. 244)": integer,
            "greenPrimaryX (p. 244)": integer,
            "whitePointY (p. 245)": integer,
            "redPrimaryX (p. 245)": integer,
            "bluePrimaryX (p. 245)": integer,
            "maxFrameAverageLightLevel (p. 245)": integer,
            "bluePrimaryY (p. 245)": integer,
            "maxContentLightLevel (p. 245)": integer,
            "minLuminance (p. 246)": integer
          },
          "programNumber (p. 303)": integer,
          "pid (p. 304)": integer,
          "colorSpaceUsage (p. 304)": enum
        },
        "filterStrength (p. 256)": integer,
        "programNumber (p. 256)": integer,
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        },
        "denoiseFilter (p. 256)": enum,
        "psiControl (p. 256)": enum,
        "inputClippings (p. 256)": [
          {
            "startTimecode (p. 254)": "string",
            "endTimecode (p. 254)": "string"
          }
        ],
        "outputGroups (p. 261)": [
          {
            "outputs (p. 288)": [
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  "videoDescription (p. 287)": {
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    "scalingBehavior (p. 301)": enum,
    "respondToAfd (p. 301)": enum,
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        "qualityTuningLevel (p. 239)": enum,
        "maxBitrate (p. 239)": integer,
        "bitrate (p. 239)": integer,
        "scalingBehavior (p. 239)": enum,
        "sampleAdaptiveOffsetFilterMode (p. 239)": integer,
        "temporalIds (p. 239)": enum,
        "slowPal (p. 240)": enum,
        "tiles (p. 240)": enum,
        "codecProfile (p. 240)": enum,
        "alternateTransferFunctionSei (p. 240)": enum,
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        "framerateDenominator (p. 241)": integer,
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        "telecine (p. 241)": enum,
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        "rateControlMode (p. 242)": enum
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      "proresSettings (p. 300)": {
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        "gopSize (p. 291)": number
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      "mpeg2Settings (p. 300)": {
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        "framerateDenominator (p. 280)": integer,
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        "framerateDenominator (p. 280)": integer,
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        "framerateNumerator (p. 280)": integer,
        "framerateDenominator (p. 280)": integer,
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        "framerateNumerator (p. 280)": integer,
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  "qualityTuningLevel (p. 230)": enum,
  "maxBitrate (p. 230)": integer,
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  "interlaceMode (p. 233)": enum,
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  "parDenominator (p. 233)": integer,
  "parControl (p. 234)": enum,
  "syntax (p. 234)": enum,
  "rateControlMode (p. 234)": enum
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"framerateNumerator (p. 226)" : integer,
"quality (p. 226)" : integer
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  "timecodeBurnin (p. 302)" : {
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    "fontSize (p. 296)" : integer,
    "position (p. 296)" : enum
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  "noiseReducer (p. 303)" : {
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      "strength (p. 286)" : integer
    },
    "spatialFilterSettings (p. 285)" : {
      "strength (p. 286)" : integer,
      "postFilterSharpenStrength (p. 286)" : integer,
      "speed (p. 286)" : integer
    }
  },
  "colorCorrector (p. 303)" : {
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    "brightness (p. 208)" : integer,
    "hdr10Metadata (p. 208)" : {
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      "greenPrimaryY (p. 244)" : integer,
      "whitePointX (p. 244)" : integer,
      "maxLuminance (p. 244)" : integer,
      "greenPrimaryX (p. 244)" : integer,
      "whitePointY (p. 245)" : integer,
      "redPrimaryX (p. 245)" : integer,
      "bluePrimaryX (p. 245)" : integer,
      "maxFrameAverageLightLevel (p. 245)" : integer,
      "bluePrimaryY (p. 245)" : integer,
      "maxContentLightLevel (p. 245)" : integer,
      "minLuminance (p. 246)" : integer
    },
    "contrast (p. 208)" : integer,
    "hue (p. 208)" : integer,
    "colorSpaceConversion (p. 208)" : enum
  },
  "imageInserter (p. 303)" : {
    "insertableImages (p. 253)" : [ {
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      "imageY (p. 257)" : integer,
      "faDeIn (p. 257)" : integer,
      "imageX (p. 258)" : integer,
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      "opacity (p. 258)" : integer,
      "layer (p. 258)" : integer,
      "height (p. 258)" : integer,
      "imageInserterInput (p. 259)" : "string"
    } ]
  }
}
Schemas

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  "control (p. 212)": enum,
  "algorithm (p. 212)": enum
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  "x (p. 293)": integer,
  "y (p. 293)": integer,
  "height (p. 293)": integer
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"crop (p. 302)": {
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  "x (p. 293)": integer,
  "y (p. 293)": integer,
  "height (p. 293)": integer
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    "audioTypeControl (p. 198)": enum,
    "remixSettings (p. 198)": {
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      "channelMapping (p. 293)": {
        "outputChannels (p. 207)": [
        {
          "inputChannels (p. 288)": [integer

        ]

      }

    },
    "channelsIn (p. 293)": integer
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  "audioType (p. 198)": integer,
  "audioSourceName (p. 198)": "string",
  "codecSettings (p. 199)": {
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    "wavSettings (p. 197)": {
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      "bitDepth (p. 304)": integer,
      "sampleRate (p. 304)": integer
    },
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      "dynamicRangeCompressionProfile (p. 195)": enum,
      "dialnorm (p. 195)": integer,
      "codingMode (p. 195)": enum,
      "metadataControl (p. 195)": enum,
      "lfeFilter (p. 195)": enum,
      "bitrate (p. 195)": integer,
      "bitstreamMode (p. 195)": enum,
      "sampleRate (p. 195)": integer
    },
    "aacSettings (p. 197)": {
      "vbrQuality (p. 192)": enum,
      "codecProfile (p. 192)": enum,
      "codingMode (p. 193)": enum,
      "specification (p. 193)": enum,
      "bitrate (p. 193)": integer,
      "rawFormat (p. 193)": enum,
      "rateControlMode (p. 193)": enum,
      "sampleRate (p. 193)": integer,
"audioDescriptionBroadcasterMix (p. 193)" : enum,
"aiffSettings (p. 197)" : {
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  "bitDepth (p. 196)" : integer,
  "sampleRate (p. 196)" : integer
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  "passthroughControl (p. 220)" : enum,
  "metadataControl (p. 220)" : enum,
  "bitrate (p. 220)" : integer,
  "dynamicRangeCompressionRf (p. 221)" : enum,
  "sampleRate (p. 221)" : integer,
  "LtRtSurroundMixLevel (p. 221)" : number,
  "surroundExMode (p. 221)" : enum,
  "dynamicRangeCompressionLine (p. 221)" : enum,
  "lifeControl (p. 221)" : enum,
  "codingMode (p. 221)" : enum,
  "surroundMode (p. 221)" : enum,
  "attenuationControl (p. 222)" : enum,
  "lifeFilter (p. 222)" : enum,
  "phaseControl (p. 222)" : enum,
  "LtRtCenterMixLevel (p. 222)" : number,
  "dcFilter (p. 222)" : enum,
  "stereoDownmix (p. 222)" : enum,
  "bitstreamMode (p. 222)" : enum,
  "loRoSurroundMixLevel (p. 222)" : number,
  "loRoCenterMixLevel (p. 223)" : number
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  "bitrate (p. 276)" : integer,
  "sampleRate (p. 276)" : integer
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"audioNormalizationSettings (p. 199)" : {
  "targetLkfs (p. 200)" : number,
  "algorithmControl (p. 200)" : enum,
  "peakCalculation (p. 200)" : enum,
  "loudnessLogging (p. 200)" : enum,
  "correctionGateLevel (p. 200)" : integer,
  "algorithm (p. 201)" : enum
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},
"containerSettings (p. 287)" : {
  "container (p. 209)" : enum,
  "mp4Settings (p. 209)" : {
    "mp4MajorBrand (p. 276)" : "string",
    "moovPlacement (p. 277)" : enum,
    "cslgAtom (p. 277)" : enum,
    "freeSpaceBox (p. 277)" : enum
  },
  "m3u8Settings (p. 209)" : {
    "pmtPid (p. 272)" : integer,
    "pcrPid (p. 272)" : integer,
    "audioPids (p. 272)" : [integer]
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  "audioFramesPerPes (p. 272)" : integer,
  "scte35Pid (p. 272)" : integer,
  "transportStreamId (p. 273)" : integer,
  "videoPid (p. 273)" : integer}
"pcrControl (p. 273)": enum,
"privateMetadataPid (p. 273)": integer,
"pmtInterval (p. 273)": integer,
"patInterval (p. 273)": integer,
"programNumber (p. 274)": integer,
"timedMetadataPid (p. 274)": integer,
"timedMetadata (p. 274)": enum,
"scte35Source (p. 274)": enum
},
"m2tsSettings (p. 209)": {
  "dvbTeletextPid (p. 267)": integer,
  "bitrate (p. 267)": integer,
  "segmentationTime (p. 267)": number,
  "audioPids (p. 267)": [ integer ]
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"rateMode (p. 267)": enum,
"ebpAudioInterval (p. 267)": enum,
"fragmentTime (p. 268)": number,
"audioFramesPerPes (p. 268)": integer,
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"scte35Pid (p. 268)": integer,
"privateMetadataPid (p. 268)": integer,
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"bufferModel (p. 269)": enum,
"ebpPlacement (p. 269)": enum,
"dvbSdtSettings (p. 271)": {
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  "serviceName (p. 214)": "string",
  "serviceProviderName (p. 214)": "string",
  "outputSdt (p. 214)": enum
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"nullPacketBitrate (p. 270)": number,
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"pcrControl (p. 270)": enum,
"videoPid (p. 271)": integer,
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  "paddingControl (p. 275)": enum,
  "mpeg2FourCCControl (p. 275)": enum,
  "cslgAtom (p. 275)": enum,
  "clapAtom (p. 275)": enum
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"f4vSettings (p. 210)": {
"moovPlacement (p. 224)": enum
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    "audioRenditionSets (p. 253)": "string",
    "audioGroupId (p. 253)": "string"
  }
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"captionDescriptions (p. 288)": [
  {
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    "languageDescription (p. 205)": "string",
    "languageCode (p. 205)": enum,
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        "outlineSize (p. 203)": integer,
        "outlineColor (p. 203)": enum,
        "fontSize (p. 203)": integer,
        "shadowYOffset (p. 203)": integer,
        "alignment (p. 203)": enum,
        "shadowColor (p. 204)": enum,
        "foregroundColor (p. 204)": enum
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      "teletextDestinationSettings (p. 206)": {
        "pageNumber (p. 296)": "string"
      },
      "ttmlDestinationSettings (p. 206)": {
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      "destinationType (p. 206)": enum,
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        "teletextSpacing (p. 215)": enum,
        "yPosition (p. 215)": integer,
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        "outlineColor (p. 216)": enum,
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        "shadowYOffset (p. 216)": integer,
        "alignment (p. 216)": enum,
        "shadowColor (p. 217)": enum,
        "foregroundColor (p. 217)": enum
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      },
    }},
  }},
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  "hbbtvCompliance (p. 211)": enum
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"msSmoothGroupSettings (p. 289)": {
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      "url (p. 295)": "string"
    },
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  "manifestEncoding (p. 284)": enum,
  "destination (p. 284)": "string"
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"hlsGroupSettings (p. 289)": {
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      "languageCode (p. 247)": enum
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  ],
  "clientCache (p. 249)": enum,
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  "destination (p. 249)": "string",
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  "timedMetaDataId3Period (p. 249)": integer,
  "captionLanguageSetting (p. 250)": enum,
  "minSegmentLength (p. 250)": integer,
  "directoryStructure (p. 250)": enum,
  "programDateTime (p. 250)": enum,
  "baseUrl (p. 250)": "string"}
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        "keyFormatVersions (p. 295)": "string",
        "keyFormat (p. 295)": "string",
        "staticKeyValue (p. 295)": "string",
        "url (p. 295)": "string"
    },
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    "spekeKeyProvider (p. 248)": {
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        "systemIds (p. 295)": [
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        ],
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"manifestDurationFormat (p. 251)": enum
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"customName (p. 288)": "string"
},
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    "id3Insertions (p. 298)": [
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            "id3 (p. 253)": "string",
            "timecode (p. 253)": "string"
        }
    ],
    "availBlanking (p. 261)": {
        "availBlankingImage (p. 201)": "string"
    },
    "lastUpdated (p. 259)": "string",
    "createdAt (p. 259)": "string",
    "name (p. 259)": "string",
    "description (p. 259)": "string",
    "category (p. 259)": "string",
    "type (p. 260)": enum,
    "arn (p. 260)": "string",
    "queue (p. 260)": "string"
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}

Example UpdateJobTemplateResponse

{
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        "settings (p. 259)": {
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                "anchor (p. 297)": "string",
                "start (p. 297)": "string"
            }
        }
    }
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"source (p. 298)": enum
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"adAvailOffset (p. 260)": integer,
"nielsenConfiguration (p. 260)": {
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  "breakoutCode (p. 285)": integer
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"inputs (p. 260)": [
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    "audioSelectorGroups (p. 255)": {
    },
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    "deblockFilter (p. 255)": enum,
    "videoSelector (p. 255)": {
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      "hdr10Metadata (p. 303)": {
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        "whitePointY (p. 245)": integer,
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        "bluePrimaryX (p. 245)": integer,
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        "bluePrimaryY (p. 245)": integer,
        "maxContentLightLevel (p. 245)": integer,
        "minLuminance (p. 246)": integer
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      "pid (p. 304)": integer,
      "colorSpaceUsage (p. 304)": enum
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    "filterStrength (p. 256)": integer,
    "programNumber (p. 256)": integer,
    "timecodeSource (p. 256)": enum,
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    "psiControl (p. 256)": enum,
    "inputClippings (p. 256)": [
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        "endTimecode (p. 254)": "string"
      }
    ]
  },
  "outputGroups (p. 261)": [
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          "videoDescription (p. 287)": {
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            "respondToAfD (p. 301)": enum,
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                "parNumerator (p. 238)": integer,
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                "gopSizeUnits (p. 238)": enum,
                "minLatency (p. 238)": integer,
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  "rateControlMode (p. 234)": enum
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  "quality (p. 226)": integer
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    "postFilterSharpenStrength (p. 286)": integer,
    "speed (p. 286)": integer
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  "brightness (p. 208)": integer,
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    "whitePointX (p. 244)": integer,
    "maxLuminance (p. 244)": integer,
    "greenPrimaryX (p. 244)": integer,
    "whitePointY (p. 245)": integer,
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    "bluePrimaryX (p. 245)": integer,
    "maxFrameAverageLightLevel (p. 245)": integer,
    "bluePrimaryY (p. 245)": integer,
    "maxContentLightLevel (p. 245)": integer,
    "minLuminance (p. 246)": integer
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  "contrast (p. 208)": integer,
  "hue (p. 208)": integer,
  "colorSpaceConversion (p. 208)": enum
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      "fadeIn (p. 257)": integer,
      "imageX (p. 258)": integer,
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      "height (p. 258)": integer,
      "imageInserterInput (p. 259)": "string"
    }
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  "algorithm (p. 212)": enum
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  "y (p. 293)": integer,
  "height (p. 293)": integer
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  "y (p. 293)": integer,
  "height (p. 293)": integer
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    "audioTypeControl (p. 198)": enum,
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      "channelMapping (p. 293)": {
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      }
    }
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    "metadataControl (p. 195)": enum,
    "lfeFilter (p. 195)": enum,
    "bitrate (p. 195)": integer,
    "bitstreamMode (p. 195)": enum,
    "sampleRate (p. 195)": integer
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    "codecProfile (p. 192)": enum,
    "codingMode (p. 193)": enum,
    "specification (p. 193)": enum,
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    "rawFormat (p. 193)": enum,
    "rateControlMode (p. 193)": enum,
    "sampleRate (p. 193)": integer,
    "audioDescriptionBroadcasterMix (p. 193)": enum
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    "bitDepth (p. 196)": integer,
    "sampleRate (p. 196)": integer
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    "metadataControl (p. 220)": enum,
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"dynamicRangeCompressionLine (p. 221)" : enum,
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"surroundMode (p. 221)" : enum,
"attenuationControl (p. 222)" : enum,
"lfeFilter (p. 222)" : enum,
"phaseControl (p. 222)" : enum,
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"dcFilter (p. 222)" : enum,
"stereoDownmix (p. 222)" : enum,
"bitstreamMode (p. 222)" : enum,
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"loRoCenterMixLevel (p. 223)" : number,
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  "algorithmControl (p. 200)" : enum,
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  "correctionGateLevel (p. 200)" : integer,
  "algorithm (p. 201)" : enum
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    "cslgAtom (p. 277)" : enum,
    "freeSpaceBox (p. 277)" : enum
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    "pcrPid (p. 272)" : integer,
    "audioPids (p. 272)" : [ integer
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    "scte35Pid (p. 272)" : integer,
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    "videoPid (p. 273)" : integer,
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    "pmtInterval (p. 273)" : integer,
    "patInterval (p. 273)" : integer,
    "programNumber (p. 274)" : integer,
    "timedMetadataPid (p. 274)" : integer,
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    "scte35Source (p. 274)" : enum
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  "m2tsSettings (p. 209)" : {
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"ebpAudioInterval (p. 267)" : enum,
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"pmtInterval (p. 268)" : integer,
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  "networkId (p. 213)" : integer,  
  "nitInterval (p. 213)" : integer 
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"pmtPid (p. 269)" : integer,
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"ebpPlacement (p. 269)" : enum,
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  "serviceProviderName (p. 214)" : "string",  
  "outputSdt (p. 214)" : "string",  
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  "minEbpInterval (p. 270)" : integer,
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  "pcrInterval (p. 270)" : integer,
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  "segmentationMarkers (p. 271)" : enum,
  "dvbSubPids (p. 271)" : [ integer 
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  "mpeg2FourCCControl (p. 275)" : enum,
  "c10gAtom (p. 275)" : enum,
  "clapAtom (p. 275)" : enum 
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"f4vSettings (p. 210)" : {  
  "moovPlacement (p. 224)" : enum 
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    "audioGroupId (p. 253)" : "string"  
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        "fontOpacity (p. 202)": integer,
        "fontResolution (p. 202)": integer,
        "shadowOpacity (p. 203)": integer,
        "fontColor (p. 204)": enum
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        "backgroundOpacity (p. 215)": integer,
        "fontOpacity (p. 215)": integer,
        "fontResolution (p. 215)": integer,
        "shadowOpacity (p. 215)": integer,
        "fontColor (p. 217)": enum
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      "msPlayReadyKeyProvider (p. 295)": {
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        "type (p. 295)": "string",
        "keyUri (p. 295)": "string",
        "keyUriPartIndex (p. 295)": integer
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"timestampDeltaMilliseconds (p. 248)": integer,
"outputSelection (p. 249)": enum,
"captionLanguageMappings (p. 249)": [
{
"languageDescription (p. 246)": "string",
"captionChannel (p. 246)": integer,
"languageCode (p. 247)": enum
},
"clientCache (p. 249)": enum,
"codecSpecification (p. 249)": enum,
"destination (p. 249)": "string",
"segmentControl (p. 249)": enum,
"timedMetadataId3Frame (p. 249)": enum,
"timedMetadataId3Period (p. 249)": integer,
"captionLanguageSetting (p. 250)": enum,
"minSegmentLength (p. 250)": integer,
"directoryStructure (p. 250)": enum,
"programDateTime (p. 250)": enum,
"baseUrl (p. 250)": "string",
"encryption (p. 250)": {
"initializationVectorInManifest (p. 247)": enum,
"constantInitializationVector (p. 247)": "string",
"spekeKeyProvider (p. 248)": {
"resourceId (p. 294)": "string",
"systemIds (p. 295)": ["string"],
"url (p. 295)": "string"
},
"type (p. 248)": enum,
"spekeKeyProvider (p. 248)": {
"resourceId (p. 294)": "string",
"systemIds (p. 295)": ["string"],
"url (p. 295)": "string"}
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  "url (p. 295)": "string",
  "encryptionMethod (p. 248)": enum
},
  "adMarkers (p. 250)": [
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  ],
  "programDateTimePeriod (p. 250)": integer,
  "manifestCompression (p. 251)": enum,
  "segmentLength (p. 251)": integer,
  "manifestDurationFormat (p. 251)": enum
},
  "name (p. 288)": "string",
  "customName (p. 288)": "string"
}],
  "timedMetadataInsertion (p. 261)": {
    "id3Insertions (p. 298)": [
      {
        "id3 (p. 253)": "string",
        "timecode (p. 253)": "string"
      }
    ],
    "availBlanking (p. 261)": {
      "availBlankingImage (p. 201)": "string"
    }
  },
  "lastUpdated (p. 259)": "string",
  "createdAt (p. 259)": "string",
  "name (p. 259)": "string",
  "description (p. 259)": "string",
  "category (p. 259)": "string",
  "type (p. 260)": enum,
  "arn (p. 260)": "string",
  "queue (p. 260)": "string"
}

Example DeleteJobTemplateResponse

{


Example ExceptionBody

{
  "message (p. 224)": "string"
}

Properties

AacAudioDescriptionBroadcasterMix (enum)

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains “broadcaster mixed AD”. Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you
choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

- BROADCASTER_MIXED_AD
- NORMAL

**AacCodecProfile (enum)**

AAC Profile.

- LC
- HEV1
- HEV2

**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_5_1

**AacRateControlMode (enum)**

Rate Control Mode.

- CBR
- VBR

**AacRawFormat (enum)**

Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container" for the output container.

- LATM_LOAS
- NONE

**AacSettings**

**vbrQuality**

- **Type**: string
- **Required**: False

**codecProfile**

- **Type**: string
Properties

**Required**: False

**codingMode**

Type: string
Required: True

**specification**

Type: string
Required: False

**bitrate**

Average bitrate in bits/second. Valid values depend on rate control mode and profile.

Type: integer
Required: False
Minimum: 6000
Maximum: 1024000

**rawFormat**

Type: string
Required: False

**rateControlMode**

Type: string
Required: False

**sampleRate**

Sample rate in Hz. Valid values depend on rate control mode and profile.

Type: integer
Required: True
Minimum: 8000
Maximum: 96000

**audioDescriptionBroadcasterMix**

Type: string
Required: False

**AacSpecification (enum)**

Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.

MPEG2
MPEG4
AacVbrQuality (enum)

VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.

- LOW
- MEDIUM_LOW
- MEDIUM_HIGH
- HIGH

Ac3BitstreamMode (enum)

Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.

- COMPLETE_MAIN
- COMMENTARY
- DIALOGUE
- EMERGENCY
- HEARING_IMPAIRED
- MUSIC_AND_EFFECTS
- VISUALLY_IMPAIRED
- VOICE_OVER

Ac3CodingMode (enum)

Dolby Digital coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_3_2_LFE

Ac3DynamicRangeCompressionProfile (enum)

If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.

- FILM_STANDARD
- NONE

Ac3LfeFilter (enum)

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

- ENABLED
- DISABLED

Ac3MetadataControl (enum)

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED
Ac3Settings

dynamicRangeCompressionProfile

Type: string
Required: False

dialnorm

Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.

Type: integer
Required: False
Minimum: 1
Maximum: 31

codingMode

Type: string
Required: False

metadataControl

Type: string
Required: False

lfeFilter

Type: string
Required: False

bitrate

Average bitrate in bits/second. Valid bitrates depend on the coding mode.

Type: integer
Required: False
Minimum: 64000
Maximum: 640000

bitstreamMode

Type: string
Required: False

sampleRate

Sample rate in hz. Sample rate is always 48000.

Type: integer
Required: False
Minimum: 48000
Maximum: 48000
**AfdSignaling (enum)**

This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to whether there are AFD values in the output video data and what those values are.

* Choose None to remove all AFD values from this output.
* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.
* Choose Auto to calculate output AFD values based on the input AFD scaler data.

    NONE
    AUTO
    FIXED

**AiffSettings**

**channels**

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

    Type: integer
    Required: False
    Minimum: 1
    Maximum: 2

**bitDepth**

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

    Type: integer
    Required: False
    Minimum: 16
    Maximum: 24

**sampleRate**

Sample rate in hz.

    Type: integer
    Required: False
    Minimum: 8000
    Maximum: 192000

**AncillarySourceSettings**

**sourceAncillaryChannelNumber**

Specifies the 608 channel number in the ancillary data track from which to extract captions. Unused for passthrough.

    Type: integer
    Required: False
    Minimum: 1
    Maximum: 4
**AntiAlias (enum)**

Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.

- DISABLED
- ENABLED

**AudioCodec (enum)**

Type of Audio codec.

- AAC
- MP2
- WAV
- AIFF
- AC3
- EAC3
- PASSTHROUGH

**AudioCodecSettings**

**codec**

- Type: string
- Required: True

**wavSettings**

- Type: WavSettings (p. 304)
- Required: False

**ac3Settings**

- Type: Ac3Settings (p. 195)
- Required: False

**aacSettings**

- Type: AacSettings (p. 192)
- Required: False

**aiffSettings**

- Type: AiffSettings (p. 196)
- Required: False

**eac3Settings**

- Type: Eac3Settings (p. 220)
- Required: False
mp2Settings
- **Type:**Mp2Settings (p. 275)
- **Required:**False

AudioDefaultSelection (enum)
When an "Audio Description":#audio_description specifies an AudioSelector or AudioSelectorGroup for which no matching source is found in the input, then the audio selector marked as DEFAULT will be used. If none are marked as default, silence will be inserted for the duration of the input.

- DEFAULT
- NOT_DEFAULT

AudioDescription

languageCodeControl
- **Type:**string
- **Required:**False

audioTypeControl
- **Type:**string
- **Required:**False

remixSettings
Advanced audio remixing settings.
- **Type:**RemixSettings (p. 293)
- **Required:**False

audioType
Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.
- **Type:**integer
- **Required:**False
- **Minimum:**0
- **Maximum:**255

audioSourceName
Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.
**Properties**

**Type**: string  
**Required**: False

**codecSettings**

**Type**: AudioCodecSettings (p. 197)  
**Required**: True

**languageCode**

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

**Type**: string  
**Required**: False

**streamName**

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (eg. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

**Type**: string  
**Required**: False  
**Pattern**: ^[\w\s]*$

**audioNormalizationSettings**

Advanced audio normalization settings.

**Type**: AudioNormalizationSettings (p. 200)  
**Required**: False

**AudioLanguageCodeControl (enum)**

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode' will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

- FOLLOW_INPUT
- USE_CONFIGURED

**AudioNormalizationAlgorithm (enum)**

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

- ITU_BS_1770_1
- ITU_BS_1770_2

**AudioNormalizationAlgorithmControl (enum)**

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.
CORRECT_AUDIO
MEASURE_ONLY

AudioNormalizationLoudnessLogging (enum)
If set to LOG, log each output's audio track loudness to a CSV file.

    LOG
    DONT_LOG

AudioNormalizationPeakCalculation (enum)
If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.

    TRUE_PEAK
    NONE

AudioNormalizationSettings

targetLkfs
Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.

    Type: number
    Required: False
    Format: float
    Minimum: -59.0
    Maximum: 0.0

algorithmControl

    Type: string
    Required: False

peakCalculation

    Type: string
    Required: False

loudnessLogging

    Type: string
    Required: False

correctionGateLevel
Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.

    Type: integer
    Required: False
Minimum: -70  
Maximum: 0

**algorithm**  
Type: string  
Required: False

**AudioSelectorType (enum)**  
Specifies the type of the audio selector.  

- PID  
- TRACK  
- LANGUAGE_CODE

**AudioTypeControl (enum)**  
When set to FOLLOW_INPUT, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to BROADCASTER_MIXED_AD.  

- FOLLOW_INPUT  
- USE_CONFIGURED

**AvailBlanking**

**availBlankingImage**  
Blanking image to be used. Leave empty for solid black. Only bmp and png images are supported.  

Type: string  
Required: False  
Pattern: ^(s3://)(.*?)\.(bmp|BMP|png|PNG)$

**BurninDestinationSettings**

**xPosition**  
Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.  

Type: integer  
Required: False  
Minimum: 0  
Maximum: 2147483647

**backgroundColor**  
Type: string
Required: False

teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.
**shadowYOffset**

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**outlineSize**

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 10

**outlineColor**

- **Type:** string
- **Required:** True

**fontSize**

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 96

**shadowXOffset**

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**alignment**

- **Type:** string
**Required:** True

**shadowColor**
- **Type:** string
- **Required:** False

**fontColor**
- **Type:** string
- **Required:** False

**BurninSubtitleAlignment (enum)**
If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- CENTERED
- LEFT

**BurninSubtitleBackgroundColor (enum)**
Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.
- NONE
- BLACK
- WHITE

**BurninSubtitleFontColor (enum)**
Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.
- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE

**BurninSubtitleOutlineColor (enum)**
Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.
- BLACK
**BurninSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**CaptionDescription**

**captionSelectorName**

Specifies which "Caption Selector":#inputs-caption_selector to use from each input when generating captions. The name should be of the format "Caption Selector <N>", which denotes that the Nth Caption Selector will be used from each input.

- Type: string
- Required: True

**languageDescription**

Human readable information to indicate captions available for players (eg, English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

- Type: string
- Required: False
- Pattern: ^[^\w ]*$

**languageCode**

Indicates the language of the caption output track.

- Type: string
- Required: False

**destinationSettings**

- Type: CaptionDestinationSettings (p. 206)
Required: False

**CaptionDestinationSettings**

**burninDestinationSettings**

- **Type:** BurninDestinationSettings (p. 201)
- **Required:** False

**teletextDestinationSettings**

- **Type:** TeletextDestinationSettings (p. 296)
- **Required:** False

**ttmlDestinationSettings**

- **Type:** TtmlDestinationSettings (p. 298)
- **Required:** False

**destinationType**

- **Type:** string
- **Required:** True

**dvbSubDestinationSettings**

- **Type:** DvbSubDestinationSettings (p. 214)
- **Required:** False

**sccDestinationSettings**

- **Type:** SccDestinationSettings (p. 294)
- **Required:** False

**CaptionDestinationType** (enum)

- BURN_IN
- DVB_SUB
- EMBEDDED
- SCC
- SRT
- TELETEXT
- TTML
- WEBVTT

**CaptionSourceSettings**

**fileSourceSettings**

- **Type:** FileSourceSettings (p. 225)
- **Required:** False
ancillarySourceSettings
Type: AncillarySourceSettings (p. 196)
Required: False

embeddedSourceSettings
Type: EmbeddedSourceSettings (p. 223)
Required: False

sourceType
Type: string
Required: True

dvbSubSourceSettings
Type: DvbSubSourceSettings (p. 217)
Required: False

teletextSourceSettings
Type: TeletextSourceSettings (p. 296)
Required: False

CaptionSourceType (enum)
Use Source (SourceType) to identify the format of your input captions. The service cannot auto-detect caption format.

ANCILLARY
DVB_SUB
EMBEDDED
SCC
TTML
STL
SRT
TELETEXT
NULL_SOURCE

ChannelMapping

outputChannels
Type: Array of type OutputChannelMapping (p. 288)
Required: True

ColorCorrector

saturation
Saturation level.
Type: integer  
Required: False  
Minimum: 1  
Maximum: 100

**brightness**  
Brightness level.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 100

**hdr10Metadata**  
Type: Hdr10Metadata (p. 244)  
Required: False

**contrast**  
Contrast level.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 100

**hue**  
Hue in degrees.

Type: integer  
Required: False  
Minimum: -180  
Maximum: 180

**colorSpaceConversion**  
Type: string  
Required: False

**ColorMetadata (enum)**  
Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.

IGNORE  
INSERT

**ColorSpace (enum)**  
Specifies the colorspace of an input. This setting works in tandem with "Color Corrector":#color_corrector > color_space_conversion to determine if any conversion will be performed.
FOLLOW
REC_601
REC_709
HDR10
HLG_2020

ColorSpaceConversion (enum)
Determines if colorspace conversion will be performed. If set to _None_, no conversion will be performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with differing colorspaces. An input's colorspace can be specified explicitly in the "Video Selector".#Inputs-video_selector if necessary.

NONE
FORCE_601
FORCE_709
FORCE_HDR10
FORCE_HLG_2020

ColorSpaceUsage (enum)
There are two sources for color metadata, the input file and the job configuration. This enum controls which takes precedence. FORCE: System will use color metadata supplied by user, if any. If the user does not supply color metadata the system will use data from the source. FALLBACK: System will use color metadata from the source. If source has no color metadata, the system will use user-supplied color metadata values if available.

FORCE
FALLBACK

ContainerSettings

container
Type: string
Required: True

mp4Settings
Type: Mp4Settings (p. 276)
Required: False

m3u8Settings
Type: M3u8Settings (p. 272)
Required: False

m2tsSettings
Type: M2tsSettings (p. 267)
Required: False
movSettings

Type: MovSettings (p. 275)
Required: False

f4vSettings

Type: F4vSettings (p. 224)
Required: False

ContainerType (enum)

Container for this output. Some containers require a container settings object. If not specified, the default object will be created.

F4V
ISMV
M2TS
M3U8
MOV
MP4
MPD
MXF
RAW

DashIsoEncryptionSettings

spekeKeyProvider

Type: SpekeKeyProvider (p. 294)
Required: True

DashIsoGroupSettings

fragmentLength

Length of fragments to generate (in seconds). Fragment length must be compatible with GOP size and Framerate. Note that fragments will end on the next keyframe after this number of seconds, so actual fragment length may be longer. When Emit Single File is checked, the fragmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

Type: integer
Required: True
Minimum: 1
Maximum: 2147483647

baseUrl

A partial URI prefix that will be put in the manifest (.mpd) file at the top level BaseURL element. Can be used if streams are delivered from a different URL than the manifest file.

Type: string
**Properties**

**Required:** False

**minBufferTime**

Minimum time of initially buffered media that is needed to ensure smooth playout.

**Type:** integer

**Required:** False

**Minimum:** 0

**Maximum:** 2147483647

**encryption**

DRM settings.

**Type:** DashIsoEncryptionSettings (p. 210)

**Required:** False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

**Type:** string

**Required:** True

**Pattern:** ^s3:/\/*

**segmentLength**

Length of mpd segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer. When Emit Single File is checked, the segmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

**Type:** integer

**Required:** True

**Minimum:** 1

**Maximum:** 2147483647

**segmentControl**

**Type:** string

**Required:** False

**hbbtvCompliance**

**Type:** string

**Required:** False

**DashIsoHbbtvCompliance (enum)**

Supports HbbTV specification as indicated
HBBTV_1_5
NONE

**DashIsoSegmentControl (enum)**

When set to SINGLE_FILE, a single output file is generated, which is internally segmented using the Fragment Length and Segment Length. When set to SEGMENTED_FILES, separate segment files will be created.

- SINGLE_FILE
- SEGMENTED_FILES

**DeinterlaceAlgorithm (enum)**

Only applies when you set Deinterlace (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.

- INTERPOLATE
- INTERPOLATE_TICKER
- BLEND
- BLEND_TICKER

**Deinterlacer**

**mode**

- Type: string
- Required: False

**control**

- Type: string
- Required: False

**algorithm**

- Type: string
- Required: False

**DeinterlacerControl (enum)**

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

- FORCE_ALL_FRAMES
- NORMAL
DeinterlacerMode (enum)

Use Deinterlacer (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

- DEINTERLACE
- INVERSE_TELECINE
- ADAPTIVE

DeleteJobTemplateRequest

name

- Type: string
- Required: True

DeleteJobTemplateResponse

DropFrameTimecode (enum)

Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

- DISABLED
- ENABLED

DvbNitSettings

networkName

The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

- Type: string
- Required: True

networkId

The numeric value placed in the Network Information Table (NIT).

- Type: integer
- Required: True
- Minimum: 0
- Maximum: 65535

nitInterval

The number of milliseconds between instances of this table in the output transport stream.

- Type: integer
- Required: True
- Minimum: 25
Maximum: 10000

**DvbSdtSettings**

**sdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 25
- **Maximum**: 2000

**serviceName**

The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**serviceProviderName**

The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**outputSdt**

- **Type**: string
- **Required**: False

**DvbSubDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**backgroundColor**

- **Type**: string
- **Required**: False
teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

Type: integer
shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 10

outlineColor

Type: string
Required: True

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 96

shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

alignment

Type: string
Required: True
**shadowColor**

*Type:* string  
*Required:* False

**fontColor**

*Type:* string  
*Required:* False

### DvbSubSourceSettings

**pid**

When using DVB-Sub with Burn-In or SMPTE-TT, use this PID for the source content. Unused for DVB-Sub passthrough. All DVB-Sub content is passed through, regardless of selectors.

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 2147483647

### DvbSubtitleAlignment (enum)

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- CENTERED
- LEFT

### DvbSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

### DvbSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE
**DvbSubtitleOutlineColor (enum)**

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
- WHITE
- YELLOW
- RED
- GREEN
- BLUE

**DvbSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**DvbSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**DvbTdtSettings**

**tdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: True
- **Minimum**: 1000
- **Maximum**: 30000

**Eac3AttenuationControl (enum)**

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

- ATTENUATE_3_DB
- NONE

**Eac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

- COMPLETE_MAIN
Eac3CodingMode (enum)
Dolby Digital Plus coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_2_0
- CODING_MODE_3_2

Eac3DcFilter (enum)
Activates a DC highpass filter for all input channels.

- ENABLED
- DISABLED

Eac3DynamicRangeCompressionLine (enum)
Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

Eac3DynamicRangeCompressionRf (enum)
Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

Eac3LfeControl (enum)
When encoding 3/2 audio, controls whether the LFE channel is enabled.

- LFE
- NO_LFE

Eac3LfeFilter (enum)
Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.
ENABLED
DISABLED

Eac3MetadataControl (enum)
When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

FOLLOW_INPUT
USE_CONFIGURED

Eac3PassthroughControl (enum)
When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.

WHEN_POSSIBLE
NO_PASSTHROUGH

Eac3PhaseControl (enum)
Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

SHIFT_90_DEGREES
NO_SHIFT

Eac3Settings
dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

Type: integer
Required: False
Minimum: 1
Maximum: 31

passthroughControl
Type: string
Required: False

metadataControl
Type: string
Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.
**dynamicRangeCompressionRf**

*Type:* string  
*Required:* False

**sampleRate**

Sample rate in hz. Sample rate is always 48000.

*Type:* integer  
*Required:* False  
*Minimum:* 48000  
*Maximum:* 48000

**ltRtSurroundMixLevel**

Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

*Type:* number  
*Required:* False  
*Format:* float  
*Minimum:* -60.0  
*Maximum:* -1.5

**surroundExMode**

*Type:* string  
*Required:* False

**dynamicRangeCompressionLine**

*Type:* string  
*Required:* False

**lfeControl**

*Type:* string  
*Required:* False

**codingMode**

*Type:* string  
*Required:* False

**surroundMode**

*Type:* string
Properties

Required: False

attenuationControl

Type: string
Required: False

lfeFilter

Type: string
Required: False

phaseControl

Type: string
Required: False

ltRtCenterMixLevel

Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: 3.0

dcFilter

Type: string
Required: False

stereoDownmix

Type: string
Required: False

bitstreamMode

Type: string
Required: False

loRoSurroundMixLevel

Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5, -3.0, -4.5, -6.0, -60

Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: -1.5
Properties

IoRoCenterMixLevel
Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -60.0
- **Maximum**: 3.0

Eac3StereoDownmix (enum)
Stereo downmix preference. Only used for 3/2 coding mode.

- NOT_INDICATED
- LO_RO
- LT_RT
- DPL2

Eac3SurroundExMode (enum)
When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

- NOT_INDICATED
- ENABLED
- DISABLED

Eac3SurroundMode (enum)
When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

- NOT_INDICATED
- ENABLED
- DISABLED

EmbeddedConvert608To708 (enum)
When set to UPCONVERT, 608 data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

- UPCONVERT
- DISABLED

EmbeddedSourceSettings

source608ChannelNumber
Specifies the 608/708 channel number within the video track from which to extract captions. Unused for passthrough.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 4
convert608To708

Type: string  
Required: False

source608TrackNumber

Specifies the video track index used for extracting captions. The system only supports one input video track, so this should always be set to '1'.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 1

ExceptionBody

message

Type: string  
Required: False

F4vMoovPlacement (enum)

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

   PROGRESSIVE_DOWNLOAD  
   NORMAL

F4vSettings

moovPlacement

Type: string  
Required: False

FileGroupSettings

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string  
Required: True  
Pattern: ^s3:\\/

FileChooserConvert608To708 (enum)

If set to UPCONVERT, 608 caption data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.
UPCONVERT
DISABLED

**FileSourceSettings**

t**imeDelta**

Specifies a time delta in seconds to offset the captions from the source file.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**convert608To708**

- **Type:** string
- **Required:** False

**sourceFile**

External caption file used for loading captions. Accepted file extensions are 'scc', 'ttml', 'dfxp', 'stl', 'srt', and 'smi'. Auto-populated when Infer External Filename is checked.

- **Type:** string
- **Required:** True
- **Pattern:** `^(s3://)(.*?)\.(scc|SCC|ttml|TTML|dfxp|DFXP|stl|STL|srt|SRT|smi|SMI)$`

**FrameCaptureSettings**

**framerateDenominator**

Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each Capture.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2147483647

**maxCaptures**

Maximum number of captures (encoded jpg output files).

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 10000000
framerateNumerator

Frame capture will encode the first frame of the output stream, then one frame every framerateNumerator/framerateDenominator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.NNNNNNN.jpg where N is the 0-based frame sequence number zero padded to 7 decimal places.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

quality

JPEG Quality - a higher value equals higher quality.

Type: integer
Required: False
Minimum: 1
Maximum: 100

GetJobTemplateRequest

name

Type: string
Required: True

GetJobTemplateResponse

jobTemplate

Type: JobTemplate (p. 259)
Required: False

H264AdaptiveQuantization (enum)

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

OFF
LOW
MEDIUM
HIGH
HIGHER
MAX

H264CodecLevel (enum)

H.264 Level.

AUTO
LEVEL_1
LEVEL_1_1
H264CodecProfile (enum)
H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

- BASELINE
- HIGH
- HIGH_10BIT
- HIGH_422
- HIGH_422_10BIT
- MAIN

H264EntropyEncoding (enum)
Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

- CABAC
- CAVLC

H264FieldEncoding (enum)
Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

- PAFF
- FORCE_FIELD

H264FlickerAdaptiveQuantization (enum)
Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

- DISABLED
- ENABLED

H264FramerateControl (enum)
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED
H264FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.
  
  DUPPLICATE_DROP
  INTERPOLATE

H264GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.
  
  DISABLED
  ENABLED

H264GopSizeUnits (enum)
Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.
  
  FRAMES
  SECONDS

H264InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.
  
  PROGRESSIVE
  TOP_FIELD
  BOTTOM_FIELD
  FOLLOW_TOP_FIELD
  FOLLOW_BOTTOM_FIELD

H264ParControl (enum)
Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.
  
  INITIALIZE_FROM_SOURCE
  SPECIFIED

H264QualityTuningLevel (enum)
Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.
  
  SINGLE_PASS
  SINGLE_PASS_HQ
MULTI_PASS_HQ

**H264RateControlMode (enum)**

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

**H264RepeatPps (enum)**

Places a PPS header on each encoded picture, even if repeated.

- DISABLED
- ENABLED

**H264SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

- DISABLED
- ENABLED

**H264Settings**

**slices**

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 32

**minIInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 30

**parNumerator**

Pixel Aspect Ratio numerator.

- **Type**: integer
Properties

**flickerAdaptiveQuantization**
- Type: string
- Required: False

**gopSizeUnits**
- Type: string
- Required: False

**hrdBufferSize**
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.
- Type: integer
- Required: False
- Minimum: -2147483648
- Maximum: 2147483647

**qualityTuningLevel**
- Type: string
- Required: False

**maxBitrate**
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.
- Type: integer
- Required: False
- Minimum: -2147483648
- Maximum: 2147483647

**bitrate**
Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.
- Type: integer
- Required: False
- Minimum: 1000
- Maximum: 2147483647

**spatialAdaptiveQuantization**
- Type: string
- Required: False
Properties

slowPal
  Type: string
  Required: False

codecProfile
  Type: string
  Required: False

unregisteredSeiTimecode
  Type: string
  Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
  Type: integer
  Required: False
  Minimum: 0
  Maximum: 128

framerateControl
  Type: string
  Required: False

telecine
  Type: string
  Required: False

framerateConversionAlgorithm
  Type: string
  Required: False

codecLevel
  Type: string
  Required: False

numberReferenceFrames
Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.
  Type: integer
  Required: False
  Minimum: 1
Maximum: 6

temporalAdaptiveQuantization
Type: string
Required: False

repeatPps
Type: string
Required: False

hrdBufferInitialFillPercentage
Percentage of the buffer that should initially be filled (HRD buffer model).
Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator
Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames
Number of B-frames between reference frames.
Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence
Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

fieldEncoding
Type: string
Properties

entropyEncoding
Type: string
Required: False

framerateDenominator
When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateDenominator to specify the denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When you use the console for transcode jobs that use framerate conversion, provide the value as a decimal number for Framerate. In this example, specify 23.976.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization
Type: string
Required: False

interlaceMode
Type: string
Required: False

gopSize
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

gopBReference
Type: string
Required: False

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

parControl
Type: string  
Required: False

syntax
Type: string  
Required: False

rateControlMode
Type: string  
Required: False

H264SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED  
ENABLED

H264SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED  
ENABLED

H264Syntax (enum)
Produces a bitstream compliant with SMPTE RP-2027.

DEFAULT  
RP2027

H264Telecine (enum)
This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

NONE  
SOFT
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARD</td>
<td></td>
</tr>
<tr>
<td><strong>H264TemporalAdaptiveQuantization (enum)</strong></td>
<td>Adjust quantization within each frame based on temporal variation of content complexity.</td>
</tr>
<tr>
<td>DISABLED</td>
<td></td>
</tr>
<tr>
<td>ENABLED</td>
<td></td>
</tr>
<tr>
<td><strong>H264UnregisteredSeiTimecode (enum)</strong></td>
<td>Inserts timecode for each frame as 4 bytes of an unregistered SEI message.</td>
</tr>
<tr>
<td>DISABLED</td>
<td></td>
</tr>
<tr>
<td>ENABLED</td>
<td></td>
</tr>
<tr>
<td><strong>H265AdaptiveQuantization (enum)</strong></td>
<td>Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>LOW</td>
<td></td>
</tr>
<tr>
<td>MEDIUM</td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
</tr>
<tr>
<td>HIGHER</td>
<td></td>
</tr>
<tr>
<td>MAX</td>
<td></td>
</tr>
<tr>
<td><strong>H265AlternateTransferFunctionSei (enum)</strong></td>
<td>Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).</td>
</tr>
<tr>
<td>DISABLED</td>
<td></td>
</tr>
<tr>
<td>ENABLED</td>
<td></td>
</tr>
<tr>
<td><strong>H265CodecLevel (enum)</strong></td>
<td>H.265 Level.</td>
</tr>
<tr>
<td>AUTO</td>
<td></td>
</tr>
<tr>
<td>LEVEL_1</td>
<td></td>
</tr>
<tr>
<td>LEVEL_2</td>
<td></td>
</tr>
<tr>
<td>LEVEL_2_1</td>
<td></td>
</tr>
<tr>
<td>LEVEL_3</td>
<td></td>
</tr>
<tr>
<td>LEVEL_3_1</td>
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</tr>
<tr>
<td>LEVEL_5_1</td>
<td></td>
</tr>
<tr>
<td>LEVEL_5_2</td>
<td></td>
</tr>
<tr>
<td>LEVEL_6</td>
<td></td>
</tr>
<tr>
<td>LEVEL_6_1</td>
<td></td>
</tr>
</tbody>
</table>
LEVEL_6_2

H265CodecProfile (enum)

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as [Profile] / [Tier], so "Main/High" represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

MAIN_MAIN
MAIN_HIGH
MAIN10_MAIN
MAIN10_HIGH
MAIN_422_8BIT_MAIN
MAIN_422_8BIT_HIGH
MAIN_422_10BIT_MAIN
MAIN_422_10BIT_HIGH

H265FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

DISABLED
ENABLED

H265FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

H265FramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

H265GopBReference (enum)

If enable, use reference B frames for GOP structures that have B frames > 1.

DISABLED
ENABLED

H265GopSizeUnits (enum)

Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

FRAMES
H265InterlaceMode (enum)

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of “top field first” and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

  PROGRESSIVE
  TOP_FIELD
  BOTTOM_FIELD
  FOLLOW_TOP_FIELD
  FOLLOW_BOTTOM_FIELD

H265ParControl (enum)

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

  INITIALIZE_FROM_SOURCE
  SPECIFIED

H265QualityTuningLevel (enum)

Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

  SINGLE_PASS
  SINGLE_PASS_HQ
  MULTI_PASS_HQ

H265RateControlMode (enum)

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

  VBR
  CBR

H265SampleAdaptiveOffsetFilterMode (enum)

Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

  DEFAULT
  ADAPTIVE
OFF

H265SceneChangeDetect (enum)

Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

H265Settings

slices

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

Type: integer
Required: False
Minimum: 1
Maximum: 32

minIInterval

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

parNumerator

Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

flickerAdaptiveQuantization

Type: string
Required: False

gopSizeUnits

Type: string
Properties

**Required**: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**qualityTuningLevel**

- **Type**: string
- **Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

- **Type**: integer
- **Required**: False
- **Minimum**: 1000
- **Maximum**: 2147483647

**spatialAdaptiveQuantization**

- **Type**: string
- **Required**: False

**sampleAdaptiveOffsetFilterMode**

- **Type**: string
- **Required**: False

**temporalIds**

- **Type**: string
- **Required**: False
slowPal

  Type: string
  Required: False

tiles

  Type: string
  Required: False

codecProfile

  Type: string
  Required: False

alternateTransferFunctionSei

  Type: string
  Required: False

unregisteredSeiTimecode

  Type: string
  Required: False

framerateControl

  Type: string
  Required: False

telecine

  Type: string
  Required: False

framerateConversionAlgorithm

  Type: string
  Required: False

codecLevel

  Type: string
  Required: False

numberReferenceFrames

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

  Type: integer
  Required: False
Minimum: 1
Maximum: 6

temporalAdaptiveQuantization

Type: string
Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647
adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

rateControlMode

Type: string
Required: False

H265SSlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
**H265SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

**H265Telecine (enum)**

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

NONE
SOFT
HARD

**H265TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

**H265TemporalIds (enum)**

Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbPbPb display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

DISABLED
ENABLED

**H265Tiles (enum)**

Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

DISABLED
ENABLED

**H265UnregisteredSeiTimecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

DISABLED
ENABLED

Hdr10Metadata

redPrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

greenPrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

whitePointX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxLuminance

Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

greenPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000
whitePointY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

redPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

bluePrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxFrameAverageLightLevel

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

bluePrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxContentLightLevel

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.
Type: integer
Required: True
Minimum: 0
Maximum: 65535

**minLuminance**

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**HlsAdMarkers (enum)**

ELEMENTAL
ELEMENTAL_SCTE35

**HlsAudioTrackType (enum)**

Four types of audio-only tracks are supported:
- Audio-Only Variant Stream: The client can play back this audio-only stream instead of video in low-bandwidth scenarios. Represented as an EXT-X-STREAM-INF in the HLS manifest. Alternate Audio, Auto Select, Default Alternate rendition that the client should try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=YES, AUTOSELECT=YES Alternate Audio, Auto Select, Not Default Alternate rendition that the client may try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=NO Alternate Audio, not Auto Select Alternate rendition that the client will not try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=NO

ALTERNATE_AUDIO_AUTO_SELECT_DEFAULT
ALTERNATE_AUDIO_AUTO_SELECT
ALTERNATE_AUDIO_NOT_AUTO_SELECT
AUDIO_ONLY_VARIANT_STREAM

**HlsCaptionLanguageMapping**

**languageDescription**

Caption language description.

Type: string
Required: False

**captionChannel**

Caption channel.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647
languageCode

    Type: string
    Required: False

HlsCaptionLanguageSetting (enum)

Applies only to 608 Embedded output captions. Insert: Include CLOSED-CAPTIONS lines in the manifest. Specify at least one language in the CC1 Language Code field. One CLOSED-CAPTION line is added for each Language Code you specify. Make sure to specify the languages in the order in which they appear in the original source (if the source is embedded format) or the order of the caption selectors (if the source is other than embedded). Otherwise, languages in the manifest will not match up properly with the output captions. None: Include CLOSED-CAPTIONS=NONE line in the manifest. Omit: Omit any CLOSED-CAPTIONS line from the manifest.

    INSERT
    OMIT
    NONE

HlsClientCache (enum)

When set to ENABLED, sets #EXT-X-ALLOW-CACHE:no tag, which prevents client from saving media segments for later replay.

    DISABLED
    ENABLED

HlsCodecSpecification (enum)

Specification to use (RFC-6381 or the default RFC-4281) during m3u8 playlist generation.

    RFC_6381
    RFC_4281

HlsDirectoryStructure (enum)

Indicates whether segments should be placed in subdirectories.

    SINGLE_DIRECTORY
    SUBDIRECTORY_PER_STREAM

HlsEncryptionSettings

initializationVectorInManifest

    Type: string
    Required: False

customInitializationVector

This is a 128-bit, 16-byte hex value represented by a 32-character text string. If this parameter is not set then the Initialization Vector will follow the segment number by default.

    Type: string
Properties

<table>
<thead>
<tr>
<th>Required</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>^[0-9a-fA-F]{32}$</td>
</tr>
</tbody>
</table>

**staticKeyProvider**

Type: StaticKeyProvider (p. 295)

Required: False

**type**

Type: string

Required: True

**spekeKeyProvider**

Type: SpekeKeyProvider (p. 294)

Required: False

**encryptionMethod**

Type: string

Required: False

**HlsEncryptionType (enum)**

Encrypts the segments with the given encryption scheme. Leave blank to disable. Selecting 'Disabled' in the web interface also disables encryption.

- AES128
- SAMPLE_AES

**HlsGroupSettings**

**segmentsPerSubdirectory**

Number of segments to write to a subdirectory before starting a new one. directoryStructure must be SINGLE_DIRECTORY for this setting to have an effect.

Type: integer

Required: False

Minimum: 1

Maximum: 2147483647

**streamInfResolution**

Type: string

Required: False

**timestampDeltaMilliseconds**

Provides an extra millisecond delta offset to fine tune the timestamps.

Type: integer
**outputSelection**

*Type:* string  
*Required:* False

**captionLanguageMappings**

*Type:* Array of type [HlsCaptionLanguageMapping](#)  
*Required:* False

**clientCache**

*Type:* string  
*Required:* False

**codecSpecification**

*Type:* string  
*Required:* False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

*Type:* string  
*Required:* True  
*Pattern:* ^s3:\/\/

**segmentControl**

*Type:* string  
*Required:* False

**timedMetadataId3Frame**

*Type:* string  
*Required:* False

**timedMetadataId3Period**

Timed Metadata interval in seconds.

*Type:* integer  
*Required:* False  
*Minimum:* -2147483648
Properties

**captionLanguageSetting**

- **Type:** string
- **Required:** False

**minSegmentLength**

When set, Minimum Segment Size is enforced by looking ahead and back within the specified range for a nearby avail and extending the segment size if needed.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 2147483647

**directoryStructure**

- **Type:** string
- **Required:** False

**programDateTime**

- **Type:** string
- **Required:** False

**baseUrl**

A partial URI prefix that will be prepended to each output in the media .m3u8 file. Can be used if base manifest is delivered from a different URL than the main .m3u8 file.

- **Type:** string
- **Required:** False

**encryption**

DRM settings.

- **Type:** HlsEncryptionSettings (p. 247)
- **Required:** False

**adMarkers**

Choose one or more ad marker types to pass SCTE35 signals through to this group of Apple HLS outputs.

- **Type:** Array of type string
- **Required:** False

**programDateTimePeriod**

Period of insertion of EXT-X-PROGRAM-DATE-TIME entry, in seconds.

- **Type:**
- **Required:**
manifestCompression

Type: string  
Required: False

segmentLength

Length of MPEG-2 Transport Stream segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer.

Type: integer  
Required: True
Minimum: 1  
Maximum: 2147483647

manifestDurationFormat

Type: string  
Required: False

HlsIFrameOnlyManifest (enum)

When set to INCLUDE, writes I-Frame Only Manifest in addition to the HLS manifest

INCLUDE
EXCLUDE

HlsInitializationVectorInManifest (enum)

The Initialization Vector is a 128-bit number used in conjunction with the key for encrypting blocks. If set to INCLUDE, Initialization Vector is listed in the manifest. Otherwise Initialization Vector is not in the manifest.

INCLUDE
EXCLUDE

HlsKeyProviderType (enum)

Indicates which type of key provider is used for encryption.

SPEKE
STATIC_KEY

HlsManifestCompression (enum)

When set to GZIP, compresses HLS playlist.

GZIP
NONE

**HlsManifestDurationFormat (enum)**
Indicates whether the output manifest should use floating point values for segment duration.

- FLOATING_POINT
- INTEGER

**HlsOutputSelection (enum)**
Indicates whether the `.m3u8` manifest file should be generated for this HLS output group.

- MANIFESTS_AND_SEGMENTS
- SEGMENTS_ONLY

**HlsProgramDateTime (enum)**
Includes or excludes EXT-X-PROGRAM-DATE-TIME tag in `.m3u8` manifest files. The value is calculated as follows: either the program date and time are initialized using the input timecode source, or the time is initialized using the input timecode source and the date is initialized using the timestamp_offset.

- INCLUDE
- EXCLUDE

**HlsSegmentControl (enum)**
When set to SINGLE_FILE, emits program as a single media resource (.ts) file, uses #EXT-X-BYTERANGE tags to index segment for playback.

- SINGLE_FILE
- SEGMENTED_FILES

**HlsSettings**

**iFrameOnlyManifest**

- **Type**: string
- **Required**: False

**segmentModifier**

String concatenated to end of segment filenames. Accepts "Format Identifiers":#format_identifier_parameters.

- **Type**: string
- **Required**: False

**audioTrackType**

- **Type**: string
- **Required**: False
**audioRenditionSets**
List all the audio groups that are used with the video output stream. Input all the audio GROUP-IDs that are associated to the video, separate by ','.

- **Type:** string
- **Required:** False

**audioGroupId**
Specifies the group to which the audio Rendition belongs.

- **Type:** string
- **Required:** False

**HlsStreamInfResolution (enum)**
Include or exclude RESOLUTION attribute for video in EXT-X-STREAM-INF tag of variant manifest.

- INCLUDE
- EXCLUDE

**HlsTimedMetadataId3Frame (enum)**
Indicates ID3 frame that has the timecode.

- NONE
- PRIV
- TDRL

**Id3Insertion**

**id3**
Use ID3 tag (Id3) to provide a tag value in base64-encode format.

- **Type:** string
- **Required:** True
- **Pattern:** ^[A-Za-z0-9+/]+=\{0,2}\$

**timecode**
Provide a Timecode (TimeCode) in HH:MM:SS:FF or HH:MM:SS;FF format.

- **Type:** string
- **Required:** True
- **Format:** timecode
- **Pattern:** ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}\$

**ImageInserter**

**insertableImages**
Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.
Properties

**Type**: Array of type InsertableImage (p. 257)

**Required**: True

---

**InputClipping**

**startTimecode**

Set Start timecode (StartTimecode) to the beginning of the portion of the input you are clipping. The frame corresponding to the Start timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

**Type**: string

**Required**: False

**Format**: timecode

**Pattern**: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9] [:][0-9]{2}$

**endTimecode**

Set End timecode (EndTimecode) to the end of the portion of the input you are clipping. The frame corresponding to the End timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

**Type**: string

**Required**: False

**Format**: timecode

**Pattern**: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9] [:][0-9]{2}$

---

**InputDeblockFilter (enum)**

Enable Deblock (InputDeblockFilter) to produce smoother motion in the output. Default is disabled. Only manually controllable for MPEG2 and uncompressed video inputs.

- ENABLED
- DISABLED

---

**InputDenoiseFilter (enum)**

Enable Denoise (InputDenoiseFilter) to filter noise from the input. Default is disabled. Only applicable to MPEG2, H.264, H.265, and uncompressed video inputs.

- ENABLED
- DISABLED

---

**InputFilterEnable (enum)**

Use Filter enable (InputFilterEnable) to specify how the transcoding service applies the denoise and deblock filters. You must also enable the filters separately, with Denoise (InputDenoiseFilter) and Deblock (InputDeblockFilter).

* Auto - The transcoding service determines whether to apply filtering, depending on input type and quality.
* Disable - The input is not filtered. This is true even if you use the API to enable them in (InputDeblockFilter) and (InputDeblockFilter).

* Force - The input is filtered regardless of input type.

AUTO
DISABLE
FORCE

InputPsiControl (enum)
Set PSI control (InputPsiControl) for transport stream inputs to specify which data the demux process to scans.

* Ignore PSI - Scan all PIDs for audio and video.
* Use PSI - Scan only PSI data.

IGNORE_PSI
USE_PSI

InputTemplate

audioSelectors
Use Audio selectors (AudioSelectors) to specify a track or set of tracks from the input that you will use in your outputs. You can use mutiple Audio selectors per input.

Type: object
Required: False

audioSelectorGroups
Specifies set of audio selectors within an input to combine. An input may have multiple audio selector groups. See "Audio Selector Group":#inputs-audio_selector_group for more information.

Type: object
Required: False

filterEnable

Type: string
Required: False

deblockFilter

Type: string
Required: False

videoSelector

Type: VideoSelector (p. 303)
Required: False
filterStrength

Use Filter strength (FilterStrength) to adjust the magnitude the input filter settings (Deblock and Denoise). The range is -5 to 5. Default is 0.

- **Type:** integer
- **Required:** False
- **Minimum:** -5
- **Maximum:** 5

programNumber

Use Program (programNumber) to select a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported. Default is the first program within the transport stream. If the program you specify doesn't exist, the transcoding service will use this default.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

timecodeSource

- **Type:** string
- **Required:** False

captionSelectors

Use Captions selectors (CaptionSelectors) to specify the captions data from the input that you will use in your outputs. You can use multiple captions selectors per input.

- **Type:** object
- **Required:** False

denoiseFilter

- **Type:** string
- **Required:** False

psiControl

- **Type:** string
- **Required:** False

inputClippings

(InputClippings) contains sets of start and end times that together specify a portion of the input to be used in the outputs. If you provide only a start time, the clip will be the entire input from that point to the end. If you provide only an end time, it will be the entire input up to that point. When you specify more than one input clip, the transcoding service creates the job outputs by stringing the clips together in the order you specify them.

- **Type:** Array of type InputClipping (p. 254)
InputTimecodeSource (enum)

Use Timecode source (InputTimecodeSource) to specify how timecode information from your input is adjusted and encoded in all outputs for the job. Default is embedded. Set to Embedded (EMBEDDED) to use the timecode that is in the input video. If no embedded timecode is in the source, will set the timecode for the first frame to 00:00:00:00. Set to Start at 0 (ZEROBASED) to set the timecode of the initial frame to 00:00:00:00. Set to Specified start (SPECIFIEDSTART) to provide the initial timecode yourself the setting (Start).

- EMBEDDED
- ZEROBASED
- SPECIFIEDSTART

InsertableImage

duration

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.

- Type: integer
- Required: False
- Minimum: -2147483648
- Maximum: 2147483647

fadeOut

Use Fade out (FadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don't specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.

- Type: integer
- Required: False
- Minimum: -2147483648
- Maximum: 2147483647

imageY

Use Top (ImageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

- Type: integer
- Required: True
- Minimum: -2147483648
- Maximum: 2147483647

fadeIn

Use Fade in (FadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don't specify a value for Fade in, the image will appear abruptly at the Start time.

- Type: integer
- Required: False
- Minimum: -2147483648
- Maximum: 2147483647
imageX

Use Left (ImageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

  Type: integer  
  Required: True  
  Minimum: -2147483648  
  Maximum: 2147483647

width

Specify the Width (Width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

  Type: integer  
  Required: False  
  Minimum: -2147483648  
  Maximum: 2147483647

startTime

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

  Type: string  
  Required: False

opacity

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.

  Type: integer  
  Required: True  
  Minimum: 0  
  Maximum: 100

layer

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

  Type: integer  
  Required: True  
  Minimum: 0  
  Maximum: 7

height

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.

  Type: integer  
  Required: False
**Minimum**: -2147483648  
**Maximum**: 2147483647

**imageInserterInput**

Use Image location (imageInserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

- **Type**: string  
- **Required**: True  
- **Pattern**: `(s3://)(.*)\.(bmp|BMP|png|PNG|tga|TGA)\$`

**JobTemplate**

**settings**

- **Type**: JobTemplateSettings (p. 260)  
- **Required**: True

**lastUpdated**

The timestamp in epoch seconds when the Job template was last updated.

- **Type**: string  
- **Required**: False  
- **Format**: date-time

**createdAt**

The timestamp in epoch seconds for Job template creation.

- **Type**: string  
- **Required**: False  
- **Format**: date-time

**name**

A name you create for each job template. Each name must be unique within your account.

- **Type**: string  
- **Required**: True

**description**

An optional description you create for each job template.

- **Type**: string  
- **Required**: False

**category**

An optional category you create to organize your job templates.

- **Type**: string
Properties

**Required**: False

- **type**
  - **Type**: string
  - **Required**: False

- **arn**
  - An identifier for this resource that is unique within all of AWS.
  - **Type**: string
  - **Required**: False

- **queue**
  - Optional. The queue that jobs created from this template are assigned to. If you don't specify this, jobs will go to the default queue.
  - **Type**: string
  - **Required**: False

**JobTemplateSettings**

**timecodeConfig**

Contains settings used to acquire and adjust timecode information from inputs.

- **Type**: TimecodeConfig (p. 297)
- **Required**: False

**adAvailOffset**

When specified, this offset (in milliseconds) is added to the input Ad Avail PTS time.

- **Type**: integer
- **Required**: False
  - **Minimum**: -1000
  - **Maximum**: 1000

**nielsenConfiguration**

Nielsen configuration settings

- **Type**: NielsenConfiguration (p. 285)
- **Required**: False

**inputs**

Use Inputs (inputs) to define the source file used in the transcode job. There can only be one input in a job template. Using the API, you can include multiple inputs when referencing a job template.

- **Type**: Array of type InputTemplate (p. 255)
**Properties**

**Required:** False

**outputGroups**

(OutputsGroups) contains one group of settings for each set of outputs that share a common package type. All unpackaged files (MPEG-4, MPEG-2 TS, Quicktime, MXF, and no container) are grouped in a single output group as well. Required in (OutputsGroups) is a group of settings that apply to the whole group. This required object depends on the value you set for (Type) under (OutputsGroups)>(OutputsGroupSettings). Type, settings object pairs are as follows:

* FILE_GROUP_SETTINGS, FileGroupSettings
* HLS_GROUP_SETTINGS, HlsGroupSettings
* DASH_ISO_GROUP_SETTINGS, DashIsoGroupSettings
* MS_SMOOTH_GROUP_SETTINGS, MsSmoothGroupSettings

**Type:** Array of type OutputGroup (p. 288)

**Required:** True

**timedMetadataInsertion**

**Type:** TimedMetadataInsertion (p. 298)

**Required:** False

**availBlanking**

Settings for ad avail blanking. Video can be blanked or overlaid with an image, and audio muted during SCTE-35 triggered ad avails.

**Type:** AvailBlanking (p. 201)

**Required:** False

**LanguageCode (enum)**

Code to specify the language, following the specification "ISO 639-2 three-digit code":http://www.loc.gov/standards/iso639-2/

ENG
SPA
FRA
DEU
GER
ZHO
ARA
HIN
JPN
RUS
POR
ITA
URD
VIE
KOR
PAN
ABK
AAR
AFR
AKA
SQI
AMH
ARG
HYE
ASM
AVA
AVE
AYM
AZE
BAM
BAK
EUS
BEL
BEN
BIH
BIS
BOS
BRE
BUL
MYA
CAT
KHM
CHA
CHE
NYA
CHU
CHV
COR
COS
CRE
HRV
CES
DAN
DIV
NLD
DZ0
ENM
EPO
EST
EWE
FAO
FIJ
FIN
FRM
FUL
GLA
GLG
LUG
KAT
ELL
GRN
GUJ
HAT
HAU
HEB
HER
HMO
HUN
ISL
IDO
IBO
IND
INA
ILE
IKU
IPK
GLE
JAV
KAL
KAN
KAU
KAS
KAZ
KIK
KIN
KIR
KOM
KON
KUA
KUR
LAO
LAT
LAV
LIM
LIN
LIT
LUB
LTZ
MKD
MLG
MSA
MAL
MLT
GLV
MRI
MAR
MAH
MON
NAU
NAV
NDE
NBL
NDO
NEP
SME
NOR
NOB
NNO
OCI
OJI
ORI
ORM
OSS
PLI
FAS
POL
PUS
QUE
QAA
RON
ROH
RUN
SMO
SAG
SAN
SRD
SRB
SNA
III
SND
SIN
SLK
SLV
SOM
SOT
SUN
SWA
SSW
SWE
TGL
TAH
TGK
TAM
TAT
TEL
THA
BOD
TIR
TON
TSO
TSN
TUR
TUK
TWI
UIG
UKR
UZB
M2tsAudioBufferModel (enum)
Selects between the DVB and ATSC buffer models for Dolby Digital audio.

DVB
ATSC

M2tsBufferModel (enum)
Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.

MULTIPLEX
NONE

M2tsEbpAudioInterval (enum)
When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are selected (segmentationMarkers is EBP or EBP_LEGACY).

VIDEO_AND_FIXED_INTERVALS
VIDEO_INTERVAL

M2tsEbpPlacement (enum)
Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are selected (segmentationMarkers is EBP or EBP_LEGACY).

VIDEO_AND_AUDIO_PIDS
VIDEO_PID

M2tsEsRateInPes (enum)
Controls whether to include the ES Rate field in the PES header.
M2tsPcrControl (enum)

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

M2tsRateMode (enum)

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

M2tsScte35Source (enum)

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

M2tsSegmentationMarkers (enum)

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-I01-130118. ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

- NONE
- RAI_SEGSTART
- RAI_ADAPT
- PSI_SEGSTART
- EBP
- EBP_LEGACY

M2tsSegmentationStyle (enum)

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $segmentation_time seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $segmentation_time seconds. Note that EBP lookahead is a slight exception to this rule.
MAINTAIN_CADENCE
RESET_CADENCE

**M2tsSettings**

**dvbTeletextPid**
Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**bitrate**
The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**segmentationTime**
The length in seconds of each segment. Required unless markers is set to _none_.

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**audioPids**
Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type**: Array of type integer
- **Required**: False

**rateMode**

- **Type**: string
- **Required**: False

**ebpAudioInterval**

- **Type**: string
- **Required**: False
fragmentTime

The length in seconds of each fragment. Only used with EBP markers.

Type: number
Required: False
Format: float
Minimum: 0.0

audioFramesPerPES

The number of audio frames to insert for each PES packet.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

maxPCRInterval

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 500

scte35PID

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

privateMetadataPID

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

pmtInterval

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 1000

segmentationStyle
Type: string
Required: False

audioBufferModel
Type: string
Required: False

programNumber
The value of the program number field in the Program Map Table.
Type: integer
Required: False
Minimum: 0
Maximum: 65535

dvbNitSettings
Type: DvbNitSettings (p. 213)
Required: False

scte35Source
Type: string
Required: False

pmtPid
Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a
decimal or hexadecimal value.
Type: integer
Required: False
Minimum: 32
Maximum: 8182

bufferModel
Type: string
Required: False

ebpPlacement
Type: string
Required: False

dvbSdtSettings

Type: DvbSdtSettings (p. 214)
Required: False

nullPacketBitrate

Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.

Type: number
Required: False
Format: float
Minimum: 0.0

pcrPid

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

minEbpInterval

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.

Type: integer
Required: False
Minimum: 0
Maximum: 10000

transportStreamId

The value of the transport stream ID field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

pcrControl

Type: string
Required: False

**videoPid**

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
**Required:** False
**Minimum:** 32
**Maximum:** 8182

**esRateInPes**

Type: string
**Required:** False

**segmentationMarkers**

Type: string
**Required:** False

**dvbTdtSettings**

Type: DvbTdtSettings (p. 218)
**Required:** False

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
**Required:** False
**Minimum:** 0
**Maximum:** 1000

**dvbSubPids**

Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer
**Required:** False

**M3u8PcrControl (enum)**

When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.

PCREVERY_PES_PACKET
CONFIGURED_PCR_PERIOD
Properties

**M3u8Scte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M3u8Settings**

**pmtPid**

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**pcrPid**

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**audioPids**

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type**: Array of type integer
- **Required**: False

**audioFramesPerPes**

The number of audio frames to insert for each PES packet.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**scte35Pid**

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
**transportStreamId**

The value of the transport stream ID field in the Program Map Table.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**videoPid**

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**pcrControl**

- **Type:** string
- **Required:** False

**privateMetadataPid**

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**pmtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
**Properties**

**Maximum**: 1000

**programNumber**

The value of the program number field in the Program Map Table.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 65535

**timedMetadataPid**

Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**timedMetadata**

- **Type**: string
- **Required**: False

**scte35Source**

- **Type**: string
- **Required**: False

**MovClapAtom (enum)**

When enabled, include 'clap' atom if appropriate for the video output settings.

- **INCLUDE**
- **EXCLUDE**

**MovCslgAtom (enum)**

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

- **INCLUDE**
- **EXCLUDE**

**MovMpeg2FourCCControl (enum)**

When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.

- **XDCAM**
MPEG

MovPaddingControl (enum)
If set to OMNEON, inserts Omneon-compatible padding
- OMNEON
- NONE

MovReference (enum)
A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.
- SELF_CONTAINED
- EXTERNAL

MovSettings

reference
- Type: string
- Required: False

paddingControl
- Type: string
- Required: False

mpeg2FourCCControl
- Type: string
- Required: False

cslgAtom
- Type: string
- Required: False

clapAtom
- Type: string
- Required: False

Mp2Settings

channels
Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.
Properties

Type: integer
Required: False
Minimum: 1
Maximum: 2

**bitrate**

Average bitrate in bits/second.

Type: integer
Required: False
Minimum: 32000
Maximum: 384000

**sampleRate**

Sample rate in hz.

Type: integer
Required: False
Minimum: 32000
Maximum: 48000

**Mp4CslgAtom (enum)**

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

INCLUDE
EXCLUDE

**Mp4FreeSpaceBox (enum)**

Inserts a free-space box immediately after the moov box.

INCLUDE
EXCLUDE

**Mp4MoovPlacement (enum)**

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVEDOWNLOAD
NORMAL

**Mp4Settings**

**mp4MajorBrand**

Overrides the "Major Brand" field in the output file. Usually not necessary to specify.

Type: string
Required: False
moovPlacement
  Type: string
  Required: False

cslgAtom
  Type: string
  Required: False

freeSpaceBox
  Type: string
  Required: False

Mpeg2AdaptiveQuantization (enum)
Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.
  OFF
  LOW
  MEDIUM
  HIGH

Mpeg2CodecLevel (enum)
Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.
  AUTO
  LOW
  MAIN
  HIGH1440
  HIGH

Mpeg2CodecProfile (enum)
Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.
  MAIN
  PROFILE_422

Mpeg2FramerateControl (enum)
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use
the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for
Framerate.
  INITIALIZE_FROM_SOURCE
  SPECIFIED

Mpeg2FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.
DUPLICATE_DROP
INTERPOLATE

**Mpeg2GopSizeUnits (enum)**

Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

**Mpeg2InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

**Mpeg2IntraDcPrecision (enum)**

Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value auto, the service will automatically select the precision based on the per-frame compression ratio.

- AUTO
- INTRA_DC_PRECISION_8
- INTRA_DC_PRECISION_9
- INTRA_DC_PRECISION_10
- INTRA_DC_PRECISION_11

**Mpeg2ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**Mpeg2QualityTuningLevel (enum)**

Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.
SINGLE_PASS
MULTI_PASS

Mpeg2RateControlMode (enum)
Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).

VBR
CBR

Mpeg2SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

Mpeg2Settings

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

gopSizeUnits

Type: string
Required: False

hrdBufferSize
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False

279
Minimum: -2147483648
Maximum: 2147483647

qualityTuningLevel
Type: string
Required: False

maxBitrate
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.
Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

bitrate
Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.
Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

spatialAdaptiveQuantization
Type: string
Required: False

slowPal
Type: string
Required: False

codecProfile
Type: string
Required: False

intraDcPrecision
Type: string
Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
Properties

framerateControl

Type: string
Required: False

telecine

Type: string
Required: False

framerateConversionAlgorithm

Type: string
Required: False

codecLevel

Type: string
Required: False

temporalAdaptiveQuantization

Type: string
Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Properties

Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

sceneChangeDetect

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Properties

Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

syntax
Type: string
Required: False

controlMode
Type: string
Required: False

Mpeg2SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

Mpeg2SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

Mpeg2Syntax (enum)
Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).

DEFAULT
D_10

Mpeg2Telecine (enum)
Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
SOFT
HARD

Mpeg2TemporalAdaptiveQuantization (enum)
Adjust quantization within each frame based on temporal variation of content complexity.
DISABLED
ENABLED

**MsSmoothAudioDeduplication (enum)**

COMBINE_DUPLICATE_STREAMS combines identical audio encoding settings across a Microsoft Smooth output group into a single audio stream.

- COMBINE_DUPLICATE_STREAMS
- NONE

**MsSmoothEncryptionSettings**

**spekeKeyProvider**

- **Type:** SpekeKeyProvider (p. 294)
- **Required:** True

**MsSmoothGroupSettings**

**fragmentLength**

Use Fragment length (FragmentLength) to specify the mp4 fragment sizes in seconds. Fragment length must be compatible with GOP size and framerate.

- **Type:** integer
- **Required:** True
- **Minimum:** 1
- **Maximum:** 2147483647

**encryption**

- **Type:** MsSmoothEncryptionSettings (p. 284)
- **Required:** False

**audioDeduplication**

- **Type:** string
- **Required:** False

**manifestEncoding**

- **Type:** string
- **Required:** False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

- **Type:** string
Required: True
Pattern: ^s3:/\/

MsSmoothManifestEncoding (enum)
Use Manifest encoding (MsSmoothManifestEncoding) to specify the encoding format for the server and client manifest. Valid options are utf8 and utf16.

- UTF8
- UTF16

NielsenConfiguration
distributorId
Use Distributor ID (DistributorID) to specify the distributor ID that is assigned to your organization by Neilsen.

- Type: string
- Required: False

breakoutCode
Use Nielsen Configuration (NielsenConfiguration) to set the Nielsen measurement system breakout code. Supported values are 0, 3, 7, and 9.

- Type: integer
- Required: False
- Minimum: 0
- Maximum: 9

NoiseReducer
filter

- Type: string
- Required: True

filterSettings

- Type: NoiseReducerFilterSettings (p. 286)
- Required: False

spatialFilterSettings

- Type: NoiseReducerSpatialFilterSettings (p. 286)
- Required: False

NoiseReducerFilter (enum)
Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).
* Bilateral is an edge preserving noise reduction filter
* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters
* Conserve is a min/max noise reduction filter
* Spatial is frequency-domain filter based on JND principles.

```
BILATERAL
MEAN
GAUSSIAN
LANCZOS
SHARPEN
CONSERVE
SPATIAL
```

**NoiseReducerFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 3

**NoiseReducerSpatialFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 16

**postFilterSharpenStrength**
Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 3

**speed**
The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

Type: integer  
Required: False  
Minimum: -2  
Maximum: 3
**Output**

**extension**

Use Extension (Extension) to specify the file extension for outputs in File output groups. If you do not specify a value, the service will use default extensions by container type as follows:

* MPEG-2 transport stream, m2ts
* Quicktime, mov
* MXF container, mxf
* MPEG-4 container, mp4
* No Container, the service will use codec extensions (e.g. AAC, H265, H265, AC3)

Type: string
Required: False

**videoDescription**

(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

Type: VideoDescription (p. 300)
Required: False

**audioDescriptions**

(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.

Type: Array of type AudioDescription (p. 198)
Required: False

**containerSettings**

Type: ContainerSettings (p. 209)
Required: False

**preset**

Use Preset (Preset) to specify a preset for your transcoding settings. Provide the system or custom preset name. You can specify either Preset (Preset) or Container settings (ContainerSettings), but not both.

Type: string
Required: False

**outputSettings**

Type: OutputSettings (p. 289)
Required: False
captionDescriptions

(CaptionDescriptions) contains groups of captions settings. For each output that has captions, include one instance of (CaptionDescriptions). (CaptionDescriptions) can contain multiple groups of captions settings.

Type: Array of type CaptionDescription (p. 205)
Required: False

nameModifier

Use Name modifier (NameModifier) to have the service add a string to the end of each output filename. You specify the base filename as part of your destination URI. When you create multiple outputs in the same output group, Name modifier is required. Name modifier also accepts format identifiers. For DASH ISO outputs, if you use the format identifiers $Number$ or $Time$ in one output, you must use them in the same way in all outputs of the output group.

Type: string
Required: False

OutputChannelMapping

inputChannels

Type: Array of type integer
Required: True

OutputGroup

outputs

This object holds groups of encoding settings, one group of settings per output.

Type: Array of type Output (p. 287)
Required: True

outputGroupSettings

Type: OutputGroupSettings (p. 289)
Required: True

name

Type: string
Required: False

customName

Use Custom Group Name (CustomName) to specify a name for the output group. This value is displayed on the console and can make your job settings JSON more human-readable. It does not affect your outputs. Use up to twelve characters that are either letters, numbers, spaces, or underscores.

Type: string
Required: False
OutputGroupSettings

dashIsoGroupSettings
Type: DashIsoGroupSettings (p. 210)
Required: False

fileGroupSettings
Type: FileGroupSettings (p. 224)
Required: False

msSmoothGroupSettings
Type: MsSmoothGroupSettings (p. 284)
Required: False

OutputGroupType (enum)
  HLS_GROUP_SETTINGS
  DASH_ISO_GROUP_SETTINGS
  FILE_GROUP_SETTINGS
  MS_SMOOTH_GROUP_SETTINGS

OutputSdt (enum)
Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter "SDT Manually" means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

  SDT_FOLLOW
  SDT_FOLLOW_IF_PRESENT
  SDT_MANUAL
  SDT_NONE

OutputSettings

hlsSettings
Type: HlsSettings (p. 252)
Required: False

**ProresCodecProfile (enum)**

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

- APPLE_PRORES_422
- APPLE_PRORES_422_HQ
- APPLE_PRORES_422_LT
- APPLE_PRORES_422_PROXY

**ProresFramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresFramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**ProresInterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

**ProresParControl (enum)**

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).
initialize_from_source

Properties

ProresSettings

slowPal

Type: string
Required: False

framerateControl

Type: string
Required: False

telecine

Type: string
Required: False

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateConversionAlgorithm

Type: string
Required: False

interlaceMode

Type: string
Required: False

codecProfile

Type: string
Required: False

parNumerator

Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateNumerator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

ProresSlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

ProresTelecine (enum)

Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
HARD

Rectangle

width

Width of rectangle in pixels.

Type: integer
Required: True
Minimum: -2147483648
**Maximum**: 2147483647

**x**
The distance, in pixels, between the rectangle and the left edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**y**
The distance, in pixels, between the rectangle and the top edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**height**
Height of rectangle in pixels.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**RemixSettings**

**channelsOut**
Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

- **Type**: integer
- **Required**: True
- **Minimum**: 1
- **Maximum**: 8

**channelMapping**

- **Type**: ChannelMapping (p. 207)
- **Required**: True

**channelsIn**
Specify the number of audio channels from your input that you want to use in your output. With remixing, you might combine or split the data in these channels, so the number of channels in your final output might be different.

- **Type**: integer
- **Required**: True
- **Minimum**: 1
Maximum: 16

**RespondToAfd (enum)**

Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to AFD values in the input.

* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio, and output display aspect ratio.

* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set AfdSignaling to (AUTO).

* Choose None to remove all input AFD values from this output.

NONE
RESPOND
PASSTHROUGH

**ScalingBehavior (enum)**

Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output (StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to allow the service to letterbox your video instead. This setting overrides any positioning value you specify elsewhere in the job.

DEFAULT
STRETCH_TO_OUTPUT

**SccDestinationFramerate (enum)**

Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized in the output. Specify a framerate that matches the framerate of the associated video. If the video framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe (FRAMERATE_29_97_NON_DROPFRAME).

FRAMERATE_23_97
FRAMERATE_24
FRAMERATE_29_97_DROPFRAME
FRAMERATE_29_97_NON_DROPFRAME

**SccDestinationSettings**

framerate

Type: string
Required: False

**SpekeKeyProvider**

resourceId

The SPEKE-compliant server uses Resource ID (ResourceId) to identify content.
Properties

systemIds

Relates to SPEKE implementation. DRM system identifiers. DASH output groups support a max of two system ids. Other group types support one system id.

- **Type**: Array of type string
- **Required**: True

url

Use URL (Url) to specify the SPEKE-compliant server that will provide keys for content.

- **Type**: string
- **Required**: True
- **Format**: uri
- **Pattern**: ^https:/\/

StaticKeyProvider

keyFormatVersions

Relates to DRM implementation. Either a single positive integer version value or a slash delimited list of version values (1/2/3).

- **Type**: string
- **Required**: False
- **Pattern**: ^\d+(\d+)*$

keyFormat

Relates to DRM implementation. Sets the value of the KEYFORMAT attribute. Must be 'identity' or a reverse DNS string. May be omitted to indicate an implicit value of 'identity'.

- **Type**: string
- **Required**: False
- **Pattern**: ^(identity|[A-Za-z]{2,6}(\.[A-Za-z0-9-]{1,63})+)$

staticKeyValue

Relates to DRM implementation. Use a 32-character hexadecimal string to specify Key Value (StaticKeyValue).

- **Type**: string
- **Required**: True
- **Pattern**: ^[A-Za-z0-9]{32}$

url

Relates to DRM implementation. The location of the license server used for protecting content.
Type: string
Required: True
Format: uri

**TeletextDestinationSettings**

**pageNumber**

Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.

Type: string
Required: False
Pattern: ^[1-8][0-9a-fA-F][0-9a-eA-E]$  

**TeletextSourceSettings**

**pageNumber**

Use Page Number (PageNumber) to specify the three-digit hexadecimal page number that will be used for Teletext captions. Do not use this setting if you are passing through teletext from the input source to output.

Type: string
Required: False
Pattern: ^[1-8][0-9a-fA-F][0-9a-eA-E]$  

**TimecodeBurnin**

**prefix**

Use Prefix (Prefix) to place ASCII characters before any burned-in timecode. For example, a prefix of "EZ-" will result in the timecode "EZ-00:00:00:00". Provide either the characters themselves or the ASCII code equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

Type: string
Required: False
Pattern: ^[ -~]+$  

**fontSize**

Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

Type: integer
Required: False
Minimum: 10
Maximum: 48

**position**

Type: string
Required: False

**TimecodeBurninPosition (enum)**

Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- TOP_CENTER
- TOP_LEFT
- TOP_RIGHT
- MIDDLE_LEFT
- MIDDLE_CENTER
- MIDDLE_RIGHT
- BOTTOM_LEFT
- BOTTOM_CENTER
- BOTTOM_RIGHT

**TimecodeConfig**

**timestampOffset**

Only applies to outputs that support program-date-time stamp. Use Time stamp offset (TimestampOffset) to overwrite the timecode date without affecting the time and frame number. To use this, you must also enable Insert program-date-time (InsertProgramDateTime) in the output settings.

Type: string
Required: False
Pattern: `^[0-9]{4}-(0[1-9]|1[0-2])-(0[1-9]|12)[0-9];[0-9]{2}\]$`

**anchor**

If you use an editing platform that relies on an anchor timecode, use Anchor Timecode (Anchor) to specify a timecode that will match the input video frame to the output video frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF). This setting ignores framerate conversion. System behavior for Anchor Timecode varies depending on your setting for Timecode source (TimecodeSource).

* If Timecode source (TimecodeSource) is set to Specified Start (specifiedstart), the first input frame is the specified value in Start Timecode (Start). Anchor Timecode (Anchor) and Start Timecode (Start) are used calculate output timecode.
* If Timecode source (TimecodeSource) is set to Start at 0 (zerobased) the first frame is 00:00:00:00.
* If Timecode source (TimecodeSource) is set to Embedded (embedded), the first frame is the timecode value on the first input frame of the input.

Type: string
Required: False
Format: timecode
Pattern: `^[01][0-9][2][0-4]:[0-9][0-9]:[0-9][0-9][0-9][0-9];[0-9]{2}\]$`

**start**

Only use when you set Timecode Source (TimecodeSource) to Specified Start (SPECIFIEDSTART). Use Start timecode (Start) to specify the timecode for the initial frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF).
Type: string  
Required: False  
Format: timecode  
Pattern: `^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]::[0-9]{2}$`

source

Type: string  
Required: False

TimecodeSource (enum)

Use Timecode source (TimecodeSource) to set how timecodes are handled within this input. To make sure that your video, audio, captions, and markers are synchronized and that time-based features, such as image inserter, work correctly, choose the Timecode source option that matches your assets. All timecodes are in a 24-hour format with frame number (HH:MM:SS:FF).

* Embedded (EMBEDDED) - Use the timecode that is in the input video. If no embedded timecode is in the source, the service will use Start at 0 (ZEROBASED) instead.

* Start at 0 (ZEROBASED) - Set the timecode of the initial frame to 00:00:00:00.

* Specified Start (SPECIFIEDSTART) - Set the timecode of the initial frame to a value other than zero. You use Start timecode (Start) to provide this value.

  EMBEDDED  
  ZEROBASED  
  SPECIFIEDSTART

TimedMetadata (enum)

If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.

  PASSTHROUGH  
  NONE

TimedMetadataInsertion

id3Insertions

Id3Insertions contains the array of Id3Insertion instances.

  Type: Array of type Id3Insertion (p. 253)  
  Required: True

TtmlDestinationSettings

stylePassthrough

Type: string  
Required: False
**TtmlStylePassthrough (enum)**

Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

- ENABLED
- DISABLED

**Type (enum)**

- SYSTEM
- CUSTOM

**UpdateJobTemplateRequest**

**settings**

- **Type**: JobTemplateSettings (p. 260)
- **Required**: False

**name**

The name of the job template you are modifying

- **Type**: string
- **Required**: True

**description**

The new description for the job template, if you are changing it.

- **Type**: string
- **Required**: False

**category**

The new category for the job template, if you are changing it.

- **Type**: string
- **Required**: False

**queue**

The new queue for the job template, if you are changing it.

- **Type**: string
- **Required**: False

**UpdateJobTemplateResponse**

**jobTemplate**

- **Type**: JobTemplate (p. 259)
**VideoCodec (enum)**

Type of video codec

- FRAME_CAPTURE
- H_264
- H_265
- MPEG2
- PRORES

**VideoCodecSettings**

**H265Settings**

- **Type**: H265Settings (p. 238)
- **Required**: False

**codec**

- **Type**: string
- **Required**: True

**proresSettings**

- **Type**: ProresSettings (p. 291)
- **Required**: False

**mpeg2Settings**

- **Type**: Mpeg2Settings (p. 279)
- **Required**: False

**H264Settings**

- **Type**: H264Settings (p. 229)
- **Required**: False

**frameCaptureSettings**

- **Type**: FrameCaptureSettings (p. 225)
- **Required**: False

**VideoDescription**

**fixedAfd**

Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAfd) to specify a four-bit AFD value which the service will write on all frames of this video output.

- **Type**: integer
Required: False
Minimum: 0
Maximum: 15

**scalingBehavior**

Type: string
Required: False

**respondToAfd**

Type: string
Required: False

**codecSettings**

Type: [VideoCodecSettings](p. 300)
Required: True

**afdSignaling**

Type: string
Required: False

**colorMetadata**

Type: string
Required: False

**timecodeInsertion**

Type: string
Required: False

**width**

Use Width (Width) to define the video resolution width, in pixels, for this output. If you don't provide a value here, the service will use the input width.

Type: integer
Required: False
Minimum: 32
Maximum: 4096

**sharpness**

Use Sharpness (Sharpness)setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.

Type: integer
Required: False
Properties

Minimum: 0
Maximum: 100

antiAlias

Type: string
Required: False

dropFrameTimecode

Type: string
Required: False

crop

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

Type: Rectangle (p. 292)
Required: False

height

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don't provide a value here, the service will use the input height.

Type: integer
Required: False
Minimum: 32
Maximum: 2160

VideoPreprocessor

timecodeBurnin

Timecode burn-in (TimecodeBurnIn)—Burns the output timecode and specified prefix into the output.
**Properties**

**Type**: TimecodeBurnin (p. 296)
**Required**: False

**noiseReducer**

Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type**: NoiseReducer (p. 285)
**Required**: False

**colorCorrector**

Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type**: ColorCorrector (p. 207)
**Required**: False

**imageInserter**

Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type**: ImageInserter (p. 253)
**Required**: False

**deinterlacer**

Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.

**Type**: Deinterlacer (p. 212)
**Required**: False

**VideoSelector**

**colorSpace**

**Type**: string
**Required**: False

**hdr10Metadata**

**Type**: Hdr10Metadata (p. 244)
**Required**: False

**programNumber**

Selects a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported.

**Type**: integer
**Required**: False
Properties

Minimum: -2147483648
Maximum: 2147483647

pid

Use PID (Pid) to select specific video data from an input file. Specify this value as an integer; the system automatically converts it to the hexadecimal value. For example, 257 selects PID 0x101. A PID, or packet identifier, is an identifier for a set of data in an MPEG-2 transport stream container.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

colorSpaceUsage

Type: string
Required: False

VideoTimecodeInsertion (enum)

Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

DISABLED
PIC_TIMING_SEI

WavSettings

cannels

Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

Type: integer
Required: False
Minimum: 1
Maximum: 8

bitDeth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

Type: integer
Required: False
Minimum: 16
Maximum: 24

sampleRate

Sample rate in Hz.
Type: integer  
Required: False  
Minimum: 8000  
Maximum: 192000

Jobs

URI

/2017-08-29/jobs

HTTP Methods

GET

Operation ID: ListJobs

Retrieve a JSON array of up to twenty of your most recently created jobs. This array includes in-process, completed, and errored jobs. This will return the jobs themselves, not just a list of the jobs. To retrieve the twenty next most recent jobs, use the nextToken string returned with the array.

Query Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>nextToken</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>maxResults</td>
<td>String</td>
<td>False</td>
<td></td>
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<tr>
<td>order</td>
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<td></td>
</tr>
<tr>
<td>queue</td>
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</tr>
</tbody>
</table>

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>ListJobsResponse (p. 317)</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 338)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 338)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 403         | ExceptionBody (p. 338) | 403: AccessDeniedException 
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process. |
| 404         | ExceptionBody (p. 338) | 404: ResourceNotFoundException 
The resource you requested does not exist. |
| 429         | ExceptionBody (p. 338) | 429: LimitExceededException 
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission. |
| 409         | ExceptionBody (p. 338) | 409: ResourceInUseException 
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing. |

**POST**

Operation ID: CreateJob

Create a new transcoding job. For information about jobs and job settings, see the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html

**Responses**

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 201         | CreateJobResponse (p. 328) | 201: CreatedResponse 
Your resource has been successfully created. |
| 400         | ExceptionBody (p. 338) | 400: BadRequestException 
The conditional request failed. The service can't process your
### Status Code | Response Model | Description
--- | --- | ---
500 | ExceptionBody (p. 338) | 500: `InternalServiceException`
The service encountered an unexpected condition and cannot fulfill your request.
403 | ExceptionBody (p. 338) | 403: `AccessDeniedException`
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the [AWS Signature Version 4](https://docs.aws.amazon.com/general/latest/gr/signature-v4-overview.html) signing process.
404 | ExceptionBody (p. 338) | 404: `ResourceNotFoundException`
The resource you requested does not exist.
429 | ExceptionBody (p. 338) | 429: `LimitExceededException`
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.
409 | ExceptionBody (p. 338) | 409: `ResourceInUseException`
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.

### Schemas

#### Request Bodies

**Example GET**

```json
{
}
```
Example POST

```json
{
"settings (p. 357)": {
  "timecodeConfig (p. 408)": {
    "timestampOffset (p. 446)": "string",
    "anchor (p. 446)": "string",
    "start (p. 447)": "string",
    "source (p. 447)": enum
  },
  "adAvailOffset (p. 408)": integer,
  "nielsenConfiguration (p. 408)": {
    "distributorId (p. 434)": "string",
    "breakoutCode (p. 434)": integer
  },
  "inputs (p. 408)": [
    {
      "audioSelectors (p. 401)": {
      },
      "audioSelectorGroups (p. 401)": {
      },
      "videoSelector (p. 401)": {
        "colorSpace (p. 452)": enum,
        "hdr10Metadata (p. 453)": {
          "redPrimaryY (p. 391)": integer,
          "greenPrimaryY (p. 391)": integer,
          "whitePointX (p. 391)": integer,
          "maxLuminance (p. 391)": integer,
          "greenPrimaryX (p. 392)": integer,
          "whitePointY (p. 392)": integer,
          "redPrimaryX (p. 392)": integer,
          "bluePrimaryX (p. 392)": integer,
          "maxFrameAverageLightLevel (p. 392)": integer,
          "bluePrimaryY (p. 392)": integer,
          "maxContentLightLevel (p. 393)": integer,
          "minLuminance (p. 393)": integer
        },
        "programNumber (p. 453)": integer,
        "pid (p. 453)": integer,
        "colorSpaceUsage (p. 453)": enum
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      "denoiseFilter (p. 401)": enum,
      "filterEnable (p. 401)": enum,
      "deblockFilter (p. 401)": enum,
      "filterStrength (p. 401)": integer,
      "programNumber (p. 402)": integer,
      "timecodeSource (p. 402)": enum,
      "captionSelectors (p. 402)": {
      },
      "fileInput (p. 402)": "string",
      "inputClippings (p. 402)": [
        {
          "startTimecode (p. 403)": "string",
          "endTimecode (p. 403)": "string"
        }
      ],
      "psiControl (p. 403)": enum
    }
  ]
}```
"outputGroups (p. 408)" : [ 
  "outputs (p. 437)" : [ 
    { 
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      "videoDescription (p. 436)" : { 
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            "parNumerator (p. 385)" : integer, 
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            "gopSizeUnits (p. 386)" : enum, 
            "hrdBufferSize (p. 386)" : integer, 
            "qualityTuningLevel (p. 386)" : enum, 
            "maxBitrate (p. 386)" : integer, 
            "bitrate (p. 386)" : integer, 
            "spatialAdaptiveQuantization (p. 386)" : enum, 
            "sampleAdaptiveOffsetFilterMode (p. 387)" : enum, 
            "temporalIds (p. 387)" : enum, 
            "slowPal (p. 387)" : enum, 
            "tiles (p. 387)" : enum, 
            "parProfile (p. 387)" : enum, 
            "alternateTransferFunctionSei (p. 387)" : enum, 
            "unregisteredSelTimecode (p. 387)" : enum, 
            "framerateControl (p. 387)" : enum, 
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            "sceneChangeDetect (p. 389)" : enum, 
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    "fadeIn (p. 405)": integer,
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    "layer (p. 406)": integer,
"height (p. 406)" : integer,
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"control (p. 359)" : enum,
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"audioTypeControl (p. 344)" : enum,
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"channelMapping (p. 443)" : {
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  "correctionGateLevel (p. 347)": integer,
  "algorithm (p. 347)": enum
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    "moovPlacement (p. 425)": enum,
    "cs1gAtom (p. 425)": enum,
    "freeSpaceBox (p. 426)": enum
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  "m3u8Settings (p. 356)": {
    "pmtPid (p. 421)": integer,
    "pcrPid (p. 421)": integer,
    "audioPids (p. 421)": [ integer
  }
]
Schemas

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"transportStreamId (p. 421)": integer,
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"pcrControl (p. 422)": enum,
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"programNumber (p. 422)": integer,
"timedMetadataPid (p. 423)": integer,
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"scte35Source (p. 423)": enum
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  ],
  "rateMode (p. 416)": enum,
  "ebpAudioInterval (p. 416)": enum,
  "fragmentTime (p. 417)": number,
  "audioFramesPerPes (p. 417)": integer,
  "maxPcrInterval (p. 417)": integer,
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  "pmtInterval (p. 417)": integer,
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  "programNumber (p. 418)": integer,
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    "nitInterval (p. 361)": integer
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  "pmtPid (p. 418)": integer,
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  "ebpPlacement (p. 418)": enum,
  "dvbSdtSettings (p. 418)": {
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    "serviceProviderName (p. 361)": "string",
    "outputSdt (p. 361)": enum
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  "segmentationMarkers (p. 420)": enum,
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  "patInterval (p. 420)": integer,
  "dvbSubPids (p. 420)": [
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  "paddingControl (p. 424)": enum,
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"csalgAtom (p. 424)" : enum,
"clapAtom (p. 424)" : enum
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"f4vSettings (p. 356)" : {
  "moovPlacement (p. 372)" : enum
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    "audioTrackType (p. 400)" : enum,
    "audioRenditionSets (p. 400)" : "string",
    "audioGroupId (p. 400)" : "string"
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  "languageDescription (p. 352)" : "string",
  "languageCode (p. 352)" : enum,
  "destinationSettings (p. 352)" : {
    "burninDestinationSettings (p. 352)" : {
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      "teletextSpacing (p. 348)" : enum,
      "yPosition (p. 348)" : integer,
      "backgroundOpacity (p. 348)" : integer,
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      "shadowOpacity (p. 349)" : integer,
      "fontResolution (p. 349)" : integer,
      "shadowYOffset (p. 349)" : integer,
      "outlineSize (p. 349)" : integer,
      "fontColor (p. 350)" : enum,
      "shadowColor (p. 350)" : enum,
      "shadowColor (p. 350)" : enum,
      "fontColor (p. 350)" : enum
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  "yPosition (p. 362)" : integer,
  "backgroundOpacity (p. 362)" : integer,
  "fontOpacity (p. 362)" : integer,
  "shadowOpacity (p. 362)" : integer,
  "fontResolution (p. 363)" : integer,
  "shadowYOffset (p. 363)" : integer,
  "outlineSize (p. 363)" : integer,
  "outlineColor (p. 363)" : enum,
  "fontColor (p. 363)" : integer,
  "shadowColor (p. 363)" : enum,
  "shadowColor (p. 363)" : enum,
  "fontColor (p. 364)" : enum
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    "minBufferTime (p. 358)": integer,
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        "systemIds (p. 444)": [ "string"
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      "url (p. 444)": "string"
    }
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  "segmentLength (p. 358)": integer,
  "segmentControl (p. 359)": enum,
  "hbbtvCompliance (p. 359)": enum
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  "destination (p. 372)": "string"
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      "systemIds (p. 444)": [ "string"
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    "url (p. 444)": "string"
  }
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"manifestEncoding (p. 433)": enum,
"destination (p. 433)": "string"
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"hlsGroupSettings (p. 438)": {
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  "timestampDeltaMilliseconds (p. 396)": integer,
  "outputSelection (p. 396)": enum,
  "captionLanguageMappings (p. 396)": [ {
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    "captionChannel (p. 394)": integer,
    "languageCode (p. 394)": enum
  } ],
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  "destination (p. 396)": "string",
  "segmentControl (p. 396)": enum,
  "timedMetadataId3Frame (p. 396)": enum,
  "timedMetadataId3Period (p. 397)": integer,
"captionLanguageSetting (p. 397)": enum,
"minSegmentLength (p. 397)": integer,
"directoryStructure (p. 397)": enum,
"programDateTime (p. 397)": enum,
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  "constantInitializationVector (p. 395)": "string",
  "staticKeyProvider (p. 395)": {
    "keyFormatVersions (p. 444)": "string",
    "keyFormat (p. 444)": "string",
    "staticKeyValue (p. 445)": "string",
    "url (p. 445)": "string"
  },
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  "spekeKeyProvider (p. 395)": {
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    "systemIds (p. 444)": [
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    ],
    "url (p. 444)": "string"
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  "adMarkers (p. 397)": [
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  "programDateTimePeriod (p. 398)": integer,
  "manifestCompression (p. 398)": enum,
  "segmentLength (p. 398)": integer,
  "manifestDurationFormat (p. 398)": enum
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"timedMetadataInsertion (p. 409)": {
  "id3Insertions (p. 448)": [
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     "timecode (p. 400)": "string"
    }
  ],
  "availBlanking (p. 409)": {
    "availBlankingImage (p. 348)": "string"
  },
  "role (p. 357)": "string",
  "clientRequestToken (p. 357)": "string",
  "jobTemplate (p. 357)": "string",
  "userMetadata (p. 357)": {
    
  },
  "queue (p. 357)": "string"
}

**Response Bodies**

**Example ListJobsResponse**

```json
{
  "nextToken (p. 414)": "string",
  "jobs (p. 414)": [
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  "settings (p. 406)": {  
    "timecodeConfig (p. 408)": {  
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      "anchor (p. 446)": "string",  
      "start (p. 447)": "string",  
      "source (p. 447)": enum  
    },  
    "adAvailOffset (p. 408)": integer,  
    "nielsenConfiguration (p. 408)": {  
      "distributorId (p. 434)": "string",  
      "breakoutCode (p. 434)": integer  
    },  
    "inputs (p. 408)": [  
      {  
        "audioSelectors (p. 401)": {  
        },  
        "audioSelectorGroups (p. 401)": {  
        },  
        "videoSelector (p. 401)": {  
          "colorSpace (p. 452)": enum,  
          "hdr10Metadata (p. 453)": {  
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            "greenPrimaryY (p. 391)": integer,  
            "whitePointX (p. 391)": integer,  
            "maxLuminance (p. 391)": integer,  
            "greenPrimaryX (p. 392)": integer,  
            "whitePointY (p. 392)": integer,  
            "redPrimaryX (p. 392)": integer,  
            "bluePrimaryX (p. 392)": integer,  
            "maxFrameAverageLightLevel (p. 392)": integer,  
            "bluePrimaryY (p. 392)": integer,  
            "maxContentLightLevel (p. 393)": integer,  
            "minLuminance (p. 393)": integer  
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          "programNumber (p. 453)": integer,  
          "pid (p. 453)": integer,  
          "colorSpaceUsage (p. 453)": enum  
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        "denoiseFilter (p. 401)": enum,  
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        "deblockFilter (p. 401)": enum,  
        "filterStrength (p. 401)": integer,  
        "programNumber (p. 402)": integer,  
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        "captionSelectors (p. 402)": {  
        },  
        "fileInput (p. 402)": "string",  
        "inputClippings (p. 402)": [  
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            "endTimecode (p. 403)": "string"  
          }  
        ],  
        "psiControl (p. 403)": enum  
      }  
    },  
    "outputGroups (p. 408)": [  
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            "extension (p. 436)": "string",  
            "videoDescription (p. 436)": {  
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              "scalingBehavior (p. 450)": enum,  
              "respondToAfd (p. 450)": enum,  
              "sourceAfd (p. 450)": enum,  
              "timecodeSource (p. 450)": enum  
            },  
            "input (p. 437)": "string",  
            "inputSelector (p. 437)": enum  
          }  
        ],  
        "outputPackage (p. 437)": "string",  
        "inputSelector (p. 437)": enum  
      }  
    ]  
  }
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  "bitrate (p. 429)": integer,
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  "quality (p. 373)": integer
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      "speed (p. 435)": integer
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  "colorCorrector (p. 452)": {
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    "brightness (p. 354)": integer,
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      "whitePointY (p. 392)": integer,
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      "bluePrimaryX (p. 392)": integer,
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      "bluePrimaryY (p. 392)": integer,
      "maxContentLightLevel (p. 393)": integer,
      "minLuminance (p. 393)": integer
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    "hue (p. 355)": integer,
    "colorSpaceConversion (p. 355)": enum
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        "layer (p. 406)": integer,
        "height (p. 406)": integer,
        "imageInserterInput (p. 406)": "string"
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  "y (p. 442)": integer,
  "height (p. 442)": integer
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  "y (p. 442)": integer,
  "height (p. 442)": integer
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    "audioTypeControl (p. 344)": enum,
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      }
    },
    "channelsIn (p. 443)": integer
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      "dialnorm (p. 341)": integer,
      "codingMode (p. 341)": enum,
      "metadataControl (p. 341)": enum,
      "lfeFilter (p. 342)": enum,
      "bitrate (p. 342)": integer,
      "bitstreamMode (p. 342)": enum,
      "sampleRate (p. 342)": integer
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      "codingMode (p. 339)": enum,
      "specification (p. 339)": enum,
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      "rawFormat (p. 339)": enum,
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      "sampleRate (p. 340)": integer,
      "audioDescriptionBroadcasterMix (p. 340)": enum
    },
    "aiffSettings (p. 344)": {
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      "bitDepth (p. 343)": integer,
      "sampleRate (p. 343)": integer
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  "metadataControl (p. 368)": enum,
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  "dynamicRangeCompressionRf (p. 368)": enum,
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  "surroundExMode (p. 368)": enum,
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  "lfeControl (p. 369)": enum,
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  "surroundMode (p. 369)": enum,
  "attenuationControl (p. 369)": enum,
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  "phaseControl (p. 369)": enum,
  "ltRtCenterMixLevel (p. 369)": number,
  "dcFilter (p. 369)": enum,
  "stereoDownmix (p. 369)": enum,
  "bitstreamMode (p. 370)": enum,
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  "loRoCenterMixLevel (p. 370)": number
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  "sampleRate (p. 425)": integer
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  "algorithmControl (p. 347)": enum,
  "peakCalculation (p. 347)": enum,
  "loudnessLogging (p. 347)": enum,
  "correctionGateLevel (p. 347)": integer,
  "algorithm (p. 347)": enum
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    "moovPlacement (p. 425)": enum,
    "cslgAtom (p. 425)": enum,
    "freeSpaceBox (p. 426)": enum
  },
  "m3u8Settings (p. 356)": {
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    "pcrPid (p. 421)": integer,
    "audioPids (p. 421)": [ integer
  ],
  "audioFramesPerPes (p. 421)": integer,
  "scte35Pid (p. 421)": integer,
  "transportStreamId (p. 421)": integer,
  "videoPid (p. 422)": integer,
  "pcrControl (p. 422)": enum,
  "privateMetadataPid (p. 422)": integer,
  "pmtInterval (p. 422)": integer,
  "patInterval (p. 422)": integer,
  "programNumber (p. 422)": integer,
  "timedMetadataPid (p. 423)": integer,
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"scte35Source (p. 423)": enum
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"m2tsSettings (p. 356)": {
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  "bitrate (p. 416)": integer,
  "segmentationTime (p. 416)": number,
  "audioPids (p. 416)": [ integer
  ]
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"fragmentTime (p. 417)": number,
"audioFramesPerPes (p. 417)": integer,
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    "userMetadata (p. 407)" : [ enum
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Example CreateJobResponse

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        "source": enum
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      "nielsenConfiguration": {
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Schemas

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"serviceProviderName (p. 361)": "string",
"outputSdt (p. 361)": enum
},
"nullPacketBitrate (p. 419)": number,
"pcrPid (p. 419)": integer,
"minEbpInterval (p. 419)": integer,
"transportStreamId (p. 419)": integer,
"pcrControl (p. 419)": enum,
"videoPid (p. 419)": integer,
"esRateInPes (p. 420)": enum,
"segmentationMarkers (p. 420)": enum,
"dvbTdtSettings (p. 420)": {
"tdtInterval (p. 365)": integer
},
"patInterval (p. 420)": integer,
"dvbSubPids (p. 420)": [ integer
]
},
"movSettings (p. 356)": {
"reference (p. 424)": enum,
"paddingControl (p. 424)": enum,
"mpeg2FourCCControl (p. 424)": enum
}
"cslgAtom (p. 424)" : enum,
"clapAtom (p. 424)" : enum
},
"f4vSettings (p. 356)" : {
  "moovPlacement (p. 372)" : enum
},
"preset (p. 436)" : "string",
"outputSettings (p. 436)" : {
  "hlsSettings (p. 439)" : {
    "iFrameOnlyManifest (p. 399)" : enum,
    "segmentModifier (p. 399)" : "string",
    "audioTrackType (p. 400)" : enum,
    "audioRenditionSets (p. 400)" : "string",
    "audioGroupId (p. 400)" : "string"
  },
  "captionDescriptions (p. 437)" : [
    {
      "captionSelectorName (p. 352)" : "string",
      "languageDescription (p. 352)" : "string",
      "languageCode (p. 352)" : enum,
      "destinationSettings (p. 352)" : {
        "burninDestinationSettings (p. 352)" : {
          "xPosition (p. 348)" : integer,
          "backgroundColor (p. 348)" : enum,
          "teletextSpacing (p. 348)" : enum,
          "yPosition (p. 348)" : integer,
          "backgroundOpacity (p. 348)" : integer,
          "fontOpacity (p. 349)" : integer,
          "shadowOpacity (p. 349)" : integer,
          "fontResolution (p. 349)" : integer,
          "shadowYOffset (p. 349)" : integer,
          "outlineSize (p. 349)" : integer,
          "fontSize (p. 350)" : integer,
          "shadowXOffset (p. 350)" : integer,
          "alignment (p. 350)" : enum,
          "shadowColor (p. 350)" : enum,
          "fontColor (p. 350)" : enum
        },
        "teletextDestinationSettings (p. 352)" : {
          "pageNumber (p. 445)" : "string"
        },
        "ttmlDestinationSettings (p. 352)" : {
          "stylePassthrough (p. 448)" : enum
        },
        "destinationType (p. 352)" : enum,
        "dvbSubDestinationSettings (p. 353)" : {
          "xPosition (p. 361)" : integer,
          "backgroundColor (p. 362)" : enum,
          "teletextSpacing (p. 362)" : enum,
          "yPosition (p. 362)" : integer,
          "backgroundOpacity (p. 362)" : integer,
          "fontOpacity (p. 362)" : integer,
          "shadowOpacity (p. 362)" : integer,
          "fontResolution (p. 363)" : integer,
          "shadowXOffset (p. 363)" : integer,
          "outlineSize (p. 363)" : integer,
          "outlineColor (p. 363)" : enum,
          "fontSize (p. 363)" : integer,
          "shadowColor (p. 364)" : enum,
          "fontWeight (p. 364)" : enum
        }
      }
    }
  }
}
"sccDestinationSettings (p. 353)": {
  "framerate (p. 444)": enum
}
],
"nameModifier (p. 437)": "string"
],
"outputGroupSettings (p. 437)": {
  "dashIsoGroupSettings (p. 438)": {
    "fragmentLength (p. 358)": integer,
    "baseUrl (p. 358)": "string",
    "minBufferTime (p. 358)": integer,
    "encryption (p. 358)": {
      "spekeKeyProvider (p. 357)": {
        "resourceId (p. 444)": "string",
        "systemIds (p. 444)": [
          "string"
        ],
        "url (p. 444)": "string"
      }
    },
    "destination (p. 358)": "string",
    "segmentLength (p. 358)": integer,
    "segmentControl (p. 359)": enum,
    "hbbtvCompliance (p. 359)": enum
  },
  "fileGroupSettings (p. 438)": {
    "destination (p. 372)": "string"
  },
  "msSmoothGroupSettings (p. 438)": {
    "fragmentLength (p. 433)": integer,
    "encryption (p. 433)": {
      "spekeKeyProvider (p. 433)": {
        "resourceId (p. 444)": "string",
        "systemIds (p. 444)": [
          "string"
        ],
        "url (p. 444)": "string"
      }
    },
    "audioDeduplication (p. 433)": enum,
    "manifestEncoding (p. 433)": enum,
    "destination (p. 433)": "string"
  },
  "type (p. 438)": enum,
  "hlsGroupSettings (p. 438)": {
    "segmentsPerSubdirectory (p. 395)": integer,
    "streamInfResolution (p. 396)": enum,
    "timestampDeltaMilliseconds (p. 396)": integer,
    "outputSelection (p. 396)": enum,
    "captionLanguageMappings (p. 396)": [
      {
        "languageDescription (p. 393)": "string",
        "captionChannel (p. 394)": integer,
        "languageCode (p. 394)": enum
      }
    ],
    "clientCache (p. 396)": enum,
    "codecSpecification (p. 396)": enum,
    "destination (p. 396)": "string",
    "segmentControl (p. 396)": enum,
    "timedMetadataId3Frame (p. 396)": enum,
    "timedMetadataId3Period (p. 397)": integer,
    "captionLanguageSetting (p. 397)": enum
"minSegmentLength (p. 397)": integer,
"directoryStructure (p. 397)": enum,
"programDateTime (p. 397)": enum,
"baseUrl (p. 397)": "string",
"encryption (p. 397)": {
  "initializationVectorInManifest (p. 394)": enum,
  "constantInitializationVector (p. 393)": "string",
  "staticKeyProvider (p. 395)": {
    "keyFormatVersions (p. 444)": "string",
    "keyFormat (p. 444)": "string",
    "staticKeyValue (p. 445)": "string",
    "url (p. 445)": "string"
  },
  "type (p. 395)": enum,
  "spekeKeyProvider (p. 395)": {
    "resourceId (p. 444)": "string",
    "systemIds (p. 444)": [
      "string"
    ],
    "url (p. 444)": "string"
  },
  "encryptionMethod (p. 395)": enum,
  "adMarkers (p. 397)": [enum],
  "programDateTimePeriod (p. 398)": integer,
  "manifestCompression (p. 398)": enum,
  "segmentLength (p. 398)": integer,
  "manifestDurationFormat (p. 398)": enum
},
"name (p. 438)": "string",
"customName (p. 438)": "string"
}],
"timedMetadataInsertion (p. 409)": {
  "id3Insertions (p. 448)": [
    {"id3 (p. 400)": "string",
     "timecode (p. 400)": "string"
    }
  ],
  "availBlanking (p. 409)": {
    "availBlankingImage (p. 348)": "string"
  }
},
"outputGroupDetails (p. 406)": [
  {"outputDetails (p. 438)": ["durationInMs (p. 437)": integer,
    "videoDetails (p. 437)": {
      "heightInPx (p. 451)": integer,
      "widthInPx (p. 452)": integer
    }
  ]}
],
"role (p. 406)": "string",
"jobTemplate (p. 407)": "string",
"timing (p. 407)": {
  "finishTime (p. 448)": "string",
  "submitTime (p. 448)": "string"}
Example ExceptionBody

```json
{
   "message (p. 371)": "string"
}
```

Properties

**AacAudioDescriptionBroadcasterMix (enum)**

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains "broadcaster mixed AD". Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

- BROADCASTER_MIXED_AD
- NORMAL

**AacCodecProfile (enum)**

AAC Profile.

- LC
- HEV1
- HEV2

**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0

---

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CODING_MODE_5_1

AacRateControlMode (enum)
Rate Control Mode.
  CBR
  VBR

AacRawFormat (enum)
Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container" for the output container.
  LATM_LOAS
  NONE

AacSettings

vbrQuality
  Type: string
  Required: False

codecProfile
  Type: string
  Required: False

codingMode
  Type: string
  Required: True

specification
  Type: string
  Required: False

bitrate
Average bitrate in bits/second. Valid values depend on rate control mode and profile.
  Type: integer
  Required: False
  Minimum: 6000
  Maximum: 1024000

rawFormat
  Type: string
  Required: False
rateControlMode

  Type: string
  Required: False

sampleRate

Sample rate in Hz. Valid values depend on rate control mode and profile.

  Type: integer
  Required: True
  Minimum: 8000
  Maximum: 96000

audioDescriptionBroadcasterMix

  Type: string
  Required: False

AacSpecification (enum)

Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.

  MPEG2
  MPEG4

AacVbrQuality (enum)

VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.

  LOW
  MEDIUM_LOW
  MEDIUM_HIGH
  HIGH

Ac3BitstreamMode (enum)

Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.

  COMPLETE_MAIN
  COMMENTARY
  DIALOGUE
  EMERGENCY
  HEARING_IMPAIRED
  MUSIC_AND_EFFECTS
  VISUALLY_IMPAIRED
  VOICE_OVER

Ac3CodingMode (enum)

Dolby Digital coding mode. Determines number of channels.

  CODING_MODE_1_0
  CODING_MODE_1_1
CODING_MODE_2_0
CODING_MODE_3_2_LFE

Ac3DynamicRangeCompressionProfile (enum)
If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.

FILM_STANDARD
NONE

Ac3LfeFilter (enum)
Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

ENABLED
DISABLED

Ac3MetadataControl (enum)
When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

FOLLOW_INPUT
USE_CONFIGURED

Ac3Settings

dynamicRangeCompressionProfile
Type: string
Required: False

dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.

Type: integer
Required: False
Minimum: 1
Maximum: 31

codingMode
Type: string
Required: False

metadataControl
Type: string
Required: False
lfeFilter
  Type: string
  Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.
  Type: integer
  Required: False
  Minimum: 64000
  Maximum: 640000

bitstreamMode
  Type: string
  Required: False

sampleRate
Sample rate in hz. Sample rate is always 48000.
  Type: integer
  Required: False
  Minimum: 48000
  Maximum: 48000

AfdSignaling (enum)
This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to
whether there are AFD values in the output video data and what those values are.
* Choose None to remove all AFD values from this output.
* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.
* Choose Auto to calculate output AFD values based on the input AFD scaler data.
  NONE
  AUTO
  FIXED

AiffSettings

cannels
Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console
will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.
  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2
bitDepth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type**: integer
- **Required**: False
- **Minimum**: 16
- **Maximum**: 24

sampleRate

Sample rate in hz.

- **Type**: integer
- **Required**: False
- **Minimum**: 8000
- **Maximum**: 192000

AncillarySourceSettings

sourceAncillaryChannelNumber

Specifies the 608 channel number in the ancillary data track from which to extract captions. Unused for passthrough.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 4

AntiAlias (enum)

Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.

- **DISABLED**
- **ENABLED**

AudioCodec (enum)

Type of Audio codec.

- **AAC**
- **MP2**
- **WAV**
- **AIFF**
- **AC3**
- **EAC3**
- **PASSTHROUGH**

AudioCodecSettings

- **codec**
  - **Type**: string
Properties

Required: True

wavSettings
  Type: WavSettings (p. 453)
  Required: False

ac3Settings
  Type: Ac3Settings (p. 341)
  Required: False

aacSettings
  Type: AacSettings (p. 339)
  Required: False

aiffSettings
  Type: AiffSettings (p. 342)
  Required: False

eac3Settings
  Type: Eac3Settings (p. 367)
  Required: False

mp2Settings
  Type: Mp2Settings (p. 424)
  Required: False

AudioDefaultSelection (enum)
When an "Audio Description":#audio_description specifies an AudioSelector or AudioSelectorGroup for which no matching source is found in the input, then the audio selector marked as DEFAULT will be used. If none are marked as default, silence will be inserted for the duration of the input.

DEFAULT
NOT_DEFAULT

AudioDescription

languageCodeControl
  Type: string
  Required: False

audioTypeControl
  Type: string
  Required: False
remixSettings

Advanced audio remixing settings.

Type: RemixSettings (p. 442)
Required: False

audioType

Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.

Type: integer
Required: False
Minimum: 0
Maximum: 255

audioSourceName

Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.

Type: string
Required: False

codecSettings

Type: AudioCodecSettings (p. 343)
Required: True

languageCode

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

Type: string
Required: False

streamName

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (eg. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

Type: string
Required: False
Pattern: ^[^\w\s]*$
audioNormalizationSettings

Advanced audio normalization settings.

Type: AudioNormalizationSettings (p. 346)
Required: False

AudioLanguageCodeControl (enum)

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode’ will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

FOLLOW_INPUT
USE_CONFIGURED

AudioNormalizationAlgorithm (enum)

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

ITU_BS_1770_1
ITU_BS_1770_2

AudioNormalizationAlgorithmControl (enum)

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.

CORRECT_AUDIO
MEASURE_ONLY

AudioNormalizationLoudnessLogging (enum)

If set to LOG, log each output's audio track loudness to a CSV file.

LOG
DONT_LOG

AudioNormalizationPeakCalculation (enum)

If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.

TRUE_PEAK
NONE

AudioNormalizationSettings

targetLkfs

Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.
Properties

**Type**: number
**Required**: False
**Format**: float
**Minimum**: -59.0
**Maximum**: 0.0

**algorithmControl**

**Type**: string
**Required**: False

**peakCalculation**

**Type**: string
**Required**: False

**loudnessLogging**

**Type**: string
**Required**: False

**correctionGateLevel**

Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.

**Type**: integer
**Required**: False
**Minimum**: -70
**Maximum**: 0

**algorithm**

**Type**: string
**Required**: False

**AudioSelectorType (enum)**

Specifies the type of the audio selector.

- **PID**
- **TRACK**
- **LANGUAGE_CODE**

**AudioTypeControl (enum)**

When set to FOLLOW_INPUT, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to BROADCASTER_MIXED_AD.

- FOLLOW_INPUT
- USE_CONFIGURED
**AvailBlanking**

**availBlankingImage**

Blanking image to be used. Leave empty for solid black. Only bmp and png images are supported.

- **Type:** string
- **Required:** False
- **Pattern:** `^(s3://)(.*?\.(bmp|BMP|png|PNG)$`

**BurninDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**backgroundColor**

- **Type:** string
- **Required:** False

**teletextSpacing**

- **Type:** string
- **Required:** False

**yPosition**

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**backgroundOpacity**

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.
Properties

**fontOpacity**
Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

**shadowOpacity**
Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

**fontResolution**
Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 96
Maximum: 600

**shadowYOffset**
Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**outlineSize**
Specifies font outline size in pixels. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Properties

**Minimum**: 0  
**Maximum**: 10

**outlineColor**

*Type*: string  
*Required*: True

**fontSize**

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False  
**Minimum**: 0  
**Maximum**: 96

**shadowXOffset**

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**alignment**

*Type*: string  
*Required*: True

**shadowColor**

*Type*: string  
*Required*: False

**fontColor**

*Type*: string  
*Required*: False

**BurninSubtitleAlignment (enum)**

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED
Properties

**BurninSubtitleBackgroundColor (enum)**

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleFontColor (enum)**

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE

**BurninSubtitleOutlineColor (enum)**

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
- WHITE
- YELLOW
- RED
- GREEN
- BLUE

**BurninSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL
CaptionDescription

captionSelectorName
Specifies which "Caption Selector" to use from each input when generating captions. The name should be of the format "Caption Selector <N>", which denotes that the Nth Caption Selector will be used from each input.

Type: string  
Required: True

languageDescription
Human readable information to indicate captions available for players (eg, English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

Type: string  
Required: False  
Pattern: ^\[\w \]*$

languageCode
Indicates the language of the caption output track.

Type: string  
Required: False

destinationSettings

Type: CaptionDestinationSettings (p. 352)  
Required: False

CaptionDestinationSettings

burninDestinationSettings

Type: BurninDestinationSettings (p. 348)  
Required: False

teletextDestinationSettings

Type: TeletextDestinationSettings (p. 445)  
Required: False

ttmlDestinationSettings

Type: TtmlDestinationSettings (p. 448)  
Required: False

destinationType

Type: string  
Required: True
Properties

dvbSubDestinationSettings
  Type: DvbSubDestinationSettings (p. 361)
  Required: False

sccDestinationSettings
  Type: SccDestinationSettings (p. 444)
  Required: False

CaptionDestinationType (enum)
  BURN_IN
  DVB_SUB
  EMBEDDED
  SCC
  SRT
  TELETEXT
  TTML
  WEBVTT

CaptionSourceSettings

fileSourceSettings
  Type: FileSourceSettings (p. 372)
  Required: False

ancillarySourceSettings
  Type: AncillarySourceSettings (p. 343)
  Required: False

embeddedSourceSettings
  Type: EmbeddedSourceSettings (p. 371)
  Required: False

sourceType
  Type: string
  Required: True

dvbSubSourceSettings
  Type: DvbSubSourceSettings (p. 364)
  Required: False

teletextSourceSettings
  Type: TeletextSourceSettings (p. 445)
  Required: False
**CaptionSourceType (enum)**

Use Source (SourceType) to identify the format of your input captions. The service cannot auto-detect caption format.

- ANCILLARY
- DVB_SUB
- EMBEDDED
- SCC
- TTML
- STL
- SRT
- TELETEXT
- NULL_SOURCE

**ChannelMapping**

outputChannels

- **Type:** Array of type `OutputChannelMapping (p. 437)`
- **Required:** True

**ColorCorrector**

**saturation**

Saturation level.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 100

**brightness**

Brightness level.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 100

**hdr10Metadata**

- **Type:** `Hdr10Metadata (p. 391)`
- **Required:** False

**contrast**

Contrast level.

- **Type:** integer
- **Required:** False
Minimum: 1
Maximum: 100

**hue**

Hue in degrees.

- **Type**: integer
- **Required**: False
- **Minimum**: -180
- **Maximum**: 180

**colorSpaceConversion**

- **Type**: string
- **Required**: False

**ColorMetadata (enum)**

Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.

- IGNORE
- INSERT

**ColorSpace (enum)**

Specifies the color space of an input. This setting works in tandem with "Color Corrector" > color_space_conversion to determine if any conversion will be performed.

- FOLLOW
- REC_601
- REC_709
- HDR10
- HLG_2020

**ColorSpaceConversion (enum)**

Determines if colorspace conversion will be performed. If set to _None_, no conversion will be performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with differing colorspaces. An input's colorspace can be specified explicitly in the "Video Selector" > video_selector if necessary.

- NONE
- FORCE_601
- FORCE_709
- FORCE_HDR10
- FORCE_HLG_2020

**ColorSpaceUsage (enum)**

There are two sources for color metadata, the input file and the job configuration. This enum controls which takes precedence. FORCE: System will use color metadata supplied by user, if any. If the user does not supply color metadata the system will use data from the source. FALLBACK: System will use color
metadata from the source. If source has no color metadata, the system will use user-supplied color metadata values if available.

FORCE
FALLBACK

ContainerSettings

container
  Type: string
  Required: True

mp4Settings
  Type: Mp4Settings (p. 425)
  Required: False

m3u8Settings
  Type: M3u8Settings (p. 421)
  Required: False

m2tsSettings
  Type: M2tsSettings (p. 416)
  Required: False

movSettings
  Type: MovSettings (p. 424)
  Required: False

f4vSettings
  Type: F4vSettings (p. 372)
  Required: False

ContainerType (enum)
Container for this output. Some containers require a container settings object. If not specified, the default object will be created.

F4V
ISMV
M2TS
M3U8
MOV
MP4
MPD
MXF
RAW
CreateJobRequest

settings

Type: JobSettings (p. 408)
Required: True

role

Required. The IAM role you use for creating this job. For details about permissions, see the User Guide topic at the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/iam-role.html.

Type: string
Required: True

clientRequestToken

Idempotency token for CreateJob operation.

Type: string
Required: False

jobTemplate

When you create a job, you can either specify a job template or specify the transcoding settings individually

Type: string
Required: False

userMetadata

Type: object
Required: False

queue

Type: string
Required: False

CreateJobResponse

job

Type: Job (p. 406)
Required: False

DashIsoEncryptionSettings

spekeKeyProvider

Type: SpekeKeyProvider (p. 444)
Required: True
DashIsoGroupSettings

**fragmentLength**

Length of fragments to generate (in seconds). Fragment length must be compatible with GOP size and Framerate. Note that fragments will end on the next keyframe after this number of seconds, so actual fragment length may be longer. When Emit Single File is checked, the fragmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

- **Type:** integer
- **Required:** True
- **Minimum:** 1
- **Maximum:** 2147483647

**baseUrl**

A partial URI prefix that will be put in the manifest (.mpd) file at the top level BaseURL element. Can be used if streams are delivered from a different URL than the manifest file.

- **Type:** string
- **Required:** False

**minBufferTime**

Minimum time of initially buffered media that is needed to ensure smooth playout.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**encryption**

DRM settings.

- **Type:** DashIsoEncryptionSettings (p. 357)
- **Required:** False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

- **Type:** string
- **Required:** True
- **Pattern:** ^s3:/\/

**segmentLength**

Length of mpd segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer. When Emit Single File is checked, the segmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.
Properties

Type: integer  
Required: True  
Minimum: 1  
Maximum: 2147483647

segmentControl

Type: string  
Required: False

hbbtvCompliance

Type: string  
Required: False

DashIsoHbbtvCompliance (enum)

Supports HbbTV specification as indicated

- HBBTV_1_5
- NONE

DashIsoSegmentControl (enum)

When set to SINGLE_FILE, a single output file is generated, which is internally segmented using the Fragment Length and Segment Length. When set to SEGMENTED_FILES, separate segment files will be created.

- SINGLE_FILE
- SEGMENTED_FILES

DeinterlaceAlgorithm (enum)

Only applies when you set Deinterlacer (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.

- INTERPOLATE
- INTERPOLATE_TICKER
- BLEND
- BLEND_TICKER

Deinterlacer

mode

Type: string  
Required: False

control

Type: string
**Required**: False

**algorithm**

- **Type**: string
- **Required**: False

**DeinterlacerControl (enum)**

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

  - FORCE_ALL_FRAMES
  - NORMAL

**DeinterlacerMode (enum)**

Use Deinterlacer (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

  - DEINTERLACE
  - INVERSE_TELECINE
  - ADAPTIVE

**DropFrameTimecode (enum)**

Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

  - DISABLED
  - ENABLED

**DvbNitSettings**

**networkName**

The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: True

**networkId**

The numeric value placed in the Network Information Table (NIT).

- **Type**: integer
- **Required**: True
Properties

nitInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: True
Minimum: 25
Maximum: 10000

DvbSdtSettings

sdtInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: False
Minimum: 25
Maximum: 2000

serviceName
The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

Type: string
Required: False

serviceProviderName
The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

Type: string
Required: False

outputSdt

Type: string
Required: False

DvbSubDestinationSettings

xPosition
Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.
Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundColor
Type: string
Required: False

teletextSpacing
Type: string
Required: False

yPosition
Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity
Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontOpacity
Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

shadowOpacity
Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.
Properties

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 255

**fontResolution**

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

**Type**: integer  
**Required**: False  
**Minimum**: 96  
**Maximum**: 600

**shadowYOffset**

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

**Type**: integer  
**Required**: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**outlineSize**

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

**Type**: integer  
**Required**: True  
**Minimum**: 0  
**Maximum**: 10

**outlineColor**

**Type**: string  
**Required**: True

**fontSize**

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 96

**shadowXOffset**

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.
Type: integer  
**Required:** False  
**Minimum:** -2147483648  
**Maximum:** 2147483647

**alignment**

Type: string  
**Required:** True

**shadowColor**

Type: string  
**Required:** False

**fontColor**

Type: string  
**Required:** False

**DvbSubSourceSettings**

**pid**

When using DVB-Sub with Burn-In or SMPTE-TT, use this PID for the source content. Unused for DVB-Sub passthrough. All DVB-Sub content is passed through, regardless of selectors.

Type: integer  
**Required:** False  
**Minimum:** 1  
**Maximum:** 2147483647

**DvbSubtitleAlignment (enum)**

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED  
LEFT

**DvbSubtitleBackgroundColor (enum)**

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

NONE  
BLACK  
WHITE
**DvbSubtitleFontColor (enum)**

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE

**DvbSubtitleOutlineColor (enum)**

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
- WHITE
- YELLOW
- RED
- GREEN
- BLUE

**DvbSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**DvbSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**DvbTdtSettings**

**tdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** True
- **Minimum:** 1000
- **Maximum:** 30000
**Eac3AttenuationControl (enum)**

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

- ATTENUATE_3_DB
- NONE

**Eac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

- COMPLETE_MAIN
- COMMENTARY
- EMERGENCY
- HEARING_IMPAIRED
- VISUALLY_IMPAIRED

**Eac3CodingMode (enum)**

Dolby Digital Plus coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_2_0
- CODING_MODE_3_2

**Eac3DcFilter (enum)**

Activates a DC highpass filter for all input channels.

- ENABLED
- DISABLED

**Eac3DynamicRangeCompressionLine (enum)**

Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

**Eac3DynamicRangeCompressionRf (enum)**

Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
MUSIC_LIGHT
SPEECH

**Eac3LfeControl (enum)**
When encoding 3/2 audio, controls whether the LFE channel is enabled

LFE
NO_LFE

**Eac3LfeFilter (enum)**
Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

ENABLED
DISABLED

**Eac3MetadataControl (enum)**
When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

FOLLOW_INPUT
USE_CONFIGURED

**Eac3PassthroughControl (enum)**
When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.

WHEN_POSSIBLE
NO_PASSTHROUGH

**Eac3PhaseControl (enum)**
Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

SHIFT_90_DEGREES
NO_SHIFT

**Eac3Settings**

dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

*Type: integer
*Required: False
*Minimum: 1
*Maximum: 31
passthroughControl

  Type: string
  Required: False

metadataControl

  Type: string
  Required: False

bitrate

Average bitrate in bits/second. Valid bitrates depend on the coding mode.

  Type: integer
  Required: False
  Minimum: 64000
  Maximum: 640000

dynamicRangeCompressionRf

  Type: string
  Required: False

sampleRate

Sample rate in hz. Sample rate is always 48000.

  Type: integer
  Required: False
  Minimum: 48000
  Maximum: 48000

ltRtSurroundMixLevel

Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

  Type: number
  Required: False
  Format: float
  Minimum: -60.0
  Maximum: -1.5

surroundExMode

  Type: string
  Required: False

dynamicRangeCompressionLine

  Type: string
Required: False

lfeControl
Type: string
Required: False

codingMode
Type: string
Required: False

surroundMode
Type: string
Required: False

attenuationControl
Type: string
Required: False

lfeFilter
Type: string
Required: False

phaseControl
Type: string
Required: False

ltRtCenterMixLevel
Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5
-3.0 -4.5 -6.0 -60
Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: 3.0

dcFilter
Type: string
Required: False

stereoDownmix
Type: string
Required: False

bitstreamMode

Type: string
Required: False

loRoSurroundMixLevel

Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 - 3.0 - 4.5 - 6.0 - 60

Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: -1.5

loRoCenterMixLevel

Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5 - 3.0 - 4.5 - 6.0 - 60

Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: 3.0

Eac3StereoDownmix (enum)

Stereo downmix preference. Only used for 3/2 coding mode.

NOT INDICATED
LO RO
LT RT
DPL2

Eac3SurroundExMode (enum)

When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

NOT INDICATED
ENABLED
DISABLED

Eac3SurroundMode (enum)

When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

NOT INDICATED
ENABLED
DISABLED

**EmbeddedConvert608To708 (enum)**

When set to UPCONVERT, 608 data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

UPCONVERT
DISABLED

**EmbeddedSourceSettings**

**source608ChannelNumber**

Specifies the 608/708 channel number within the video track from which to extract captions. Unused for passthrough.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 4

**convert608To708**

- **Type**: string
- **Required**: False

**source608TrackNumber**

Specifies the video track index used for extracting captions. The system only supports one input video track, so this should always be set to ’1’.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 1

**ExceptionBody**

**message**

- **Type**: string
- **Required**: False

**F4vMoovPlacement (enum)**

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVE_DOWNLOAD
NORMAL

F4vSettings

moovPlacement

Type: string
Required: False

FileGroupSettings

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string
Required: True
Pattern: ^s3:\/\/[\w\d]{40}\/[\w\d]+\[/\w\d]{40}\/[\w\d\.\-]{40}/\w+$/

FileSourceConvert608To708 (enum)

If set to UPCONVERT, 608 caption data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

UPCONVERT
DISABLED

FileSourceSettings

timeDelta

Specifies a time delta in seconds to offset the captions from the source file.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

convert608To708

Type: string
Required: False

sourceFile

External caption file used for loading captions. Accepted file extensions are 'scc', 'ttml', 'dfxp', 'stl', 'srt', and 'smi'. Auto-populated when Infer External Filename is checked.

Type: string
Properties

**Required:** True
**Pattern:** ^s3:\/\/(.*?\.(scc|SCC|ttml|TTML|dfxp|DFXP|stl|STL|srt|SRT|smi|SMI)$

**FrameCaptureSettings**

**framerateDenominator**

Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each Capture.

**Type:** integer
**Required:** False
**Minimum:** 1
**Maximum:** 2147483647

**maxCaptures**

Maximum number of captures (encoded jpg output files).

**Type:** integer
**Required:** False
**Minimum:** 1
**Maximum:** 10000000

**framerateNumerator**

Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.NNNNNNN.jpg where N is the 0-based frame sequence number zero padded to 7 decimal places.

**Type:** integer
**Required:** False
**Minimum:** 1
**Maximum:** 2147483647

**quality**

JPEG Quality - a higher value equals higher quality.

**Type:** integer
**Required:** False
**Minimum:** 1
**Maximum:** 100

**H264AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

**OFF**
LOW
MEDIUM
HIGH
HIGHER
MAX

**H264CodecLevel (enum)**

H.264 Level.

AUTO
LEVEL_1
LEVEL_1_1
LEVEL_1_2
LEVEL_1_3
LEVEL_2
LEVEL_2_1
LEVEL_2_2
LEVEL_3
LEVEL_3_1
LEVEL_3_2
LEVEL_4
LEVEL_4_1
LEVEL_4_2
LEVEL_5
LEVEL_5_1
LEVEL_5_2

**H264CodecProfile (enum)**

H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

BASELINE
HIGH
HIGH_10BIT
HIGH_422
HIGH_422_10BIT
MAIN

**H264EntropyEncoding (enum)**

Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

CABAC
CAVLC

**H264FieldEncoding (enum)**

Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

PAFF
FORCE_FIELD
H264FlickerAdaptiveQuantization (enum)
Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

   DISABLED
   ENABLED

H264FramerateControl (enum)
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

   INITIALIZE_FROM_SOURCE
   SPECIFIED

H264FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.

   DUPLICATE_DROP
   INTERPOLATE

H264GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.

   DISABLED
   ENABLED

H264GopSizeUnits (enum)
Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

   FRAMES
   SECONDS

H264InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

   PROGRESSIVE
   TOP_FIELD
   BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

H264ParControl (enum)

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

INITIALIZE_FROM_SOURCE
SPECIFIED

H264QualityTuningLevel (enum)

Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

SINGLE_PASS
SINGLE_PASS_HQ
MULTI_PASS_HQ

H264RateControlMode (enum)

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

VBR
CBR

H264RepeatPps (enum)

Places a PPS header on each encoded picture, even if repeated.

DISABLED
ENABLED

H264SceneChangeDetect (enum)

Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

H264Settings

slices

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

Type: integer
Required: False
Minimum: 1
Properties

**minIInterval**
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 30

**parNumerator**
Pixel Aspect Ratio numerator.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2147483647

**flickerAdaptiveQuantization**

- **Type:** string
- **Required:** False

**gopSizeUnits**

- **Type:** string
- **Required:** False

**hrdBufferSize**
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**qualityTuningLevel**

- **Type:** string
- **Required:** False

**maxBitrate**
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.
Properties

bitrate

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

softness

Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.

framerateControl

telecine
**Properties**

- **framerateConversionAlgorithm**
  - **Type**: string
  - **Required**: False

- **codecLevel**
  - **Type**: string
  - **Required**: False

- **numberReferenceFrames**
  Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.
  - **Type**: integer
  - **Required**: False
  - **Minimum**: 1
  - **Maximum**: 6

- **temporalAdaptiveQuantization**
  - **Type**: string
  - **Required**: False

- **repeatPps**
  - **Type**: string
  - **Required**: False

- **hrdBufferInitialFillPercentage**
  Percentage of the buffer that should initially be filled (HRD buffer model).
  - **Type**: integer
  - **Required**: False
  - **Minimum**: 0
  - **Maximum**: 100

- **framerateNumerator**
  Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.
  - **Type**: integer
  - **Required**: False
  - **Minimum**: 1
  - **Maximum**: 2147483647

- **numberBFramesBetweenReferenceFrames**
  Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a
decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will
break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

fieldEncoding

Type: string
Required: False

entropyEncoding

Type: string
Required: False

framerateDenominator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as
a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateDenominator to specify the
denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When
you use the console for transcode jobs that use framerate conversion, provide the value as a decimal
number for Framerate. In this example, specify 23.976.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

gopBReference
Type: string
Required: False

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

syntax
Type: string
Required: False

rateControlMode
Type: string
Required: False

H264SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
DISABLED
ENABLED

H264SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.
DISABLED
ENABLED

H264Syntax (enum)

Produces a bitstream compliant with SMPTE RP-2027.

DEFAULT
RP2027

H264Telecine (enum)

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

NONE
SOFT
HARD

H264TemporalAdaptiveQuantization (enum)

Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

H264UnregisteredSeiTimecode (enum)

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

DISABLED
ENABLED

H265AdaptiveQuantization (enum)

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

OFF
LOW
MEDIUM
HIGH
HIGHER
MAX

H265AlternateTransferFunctionSei (enum)

Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).

DISABLED
ENABLED
H265CodecLevel (enum)

H.265 Level.

- AUTO
- LEVEL_1
- LEVEL_2
- LEVEL_2_1
- LEVEL_3
- LEVEL_3_1
- LEVEL_4
- LEVEL_4_1
- LEVEL_5
- LEVEL_5_1
- LEVEL_5_2
- LEVEL_6
- LEVEL_6_1
- LEVEL_6_2

H265CodecProfile (enum)

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as `[Profile] / [Tier]`, so "Main/High" represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

- MAIN_MAIN
- MAIN_HIGH
- MAIN10_MAIN
- MAIN10_HIGH
- MAIN_422_8BIT_MAIN
- MAIN_422_8BIT_HIGH
- MAIN_422_10BIT_MAIN
- MAIN_422_10BIT_HIGH

H265FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

- DISABLED
- ENABLED

H265FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

H265FramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.
DUPLICATE_DROP
INTERPOLATE

H265GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.
DISABLED
ENABLED

H265GopSizeUnits (enum)
Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the
GOP Size into a frame count at run time.
FRAMES
SECONDS

H265InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.
* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the
entire output having the same field polarity (top or bottom first).
* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD)
use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the
source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the
source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is
progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending
on which of the Follow options you chose.
PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

H265ParControl (enum)
Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the
input. Using the console, do this by choosing Follow source for Pixel aspect ratio.
INITIALIZE_FROM_SOURCE
SPECIFIED

H265QualityTuningLevel (enum)
Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-
quality singlepass, or high-quality multipass video encoding.
SINGLE_PASS
SINGLE_PASS_HQ
MULTI_PASS_HQ
H265RateControlMode (enum)
Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

H265SampleAdaptiveOffsetFilterMode (enum)
Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

- DEFAULT
- ADAPTIVE
- OFF

H265SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).

- DISABLED
- ENABLED

H265Settings
slices
Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 32

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- Type: integer
- Required: False
- Minimum: 0
- Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

- Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

**flickerAdaptiveQuantization**

Type: string
Required: False

**gopSizeUnits**

Type: string
Required: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**qualityTuningLevel**

Type: string
Required: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

**spatialAdaptiveQuantization**

Type: string
Properties

Required: False

sampleAdaptiveOffsetFilterMode

Type: string
Required: False

temporalIds

Type: string
Required: False

slowPal

Type: string
Required: False

tiles

Type: string
Required: False

codecProfile

Type: string
Required: False

alternateTransferFunctionSei

Type: string
Required: False

unregisteredSeiTimecode

Type: string
Required: False

framerateControl

Type: string
Required: False

telecine

Type: string
Required: False

framerateConversionAlgorithm

Type: string
Required: False
### codecLevel

**Type:** string  
**Required:** False

### numberReferenceFrames

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

**Type:** integer  
**Required:** False  
**Minimum:** 1  
**Maximum:** 6

### temporalAdaptiveQuantization

**Type:** string  
**Required:** False

### hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 100

### framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

**Type:** integer  
**Required:** False  
**Minimum:** 1  
**Maximum:** 2147483647

### numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 7

### gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

gopBReference

Type: string
Required: False

sceneChangeDetect

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647
parControl

Type: string
Required: False

rateControlMode

Type: string
Required: False

H265SlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

H265SpatialAdaptiveQuantization (enum)

Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

H265Telecine (enum)

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

NONE
SOFT
HARD

H265TemporalAdaptiveQuantization (enum)

Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

H265TemporalIds (enum)

Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbpBpb display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

DISABLED
ENABLED
H265Tiles (enum)
Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

DISABLED
ENABLED

H265UnregisteredSeiTimecode (enum)
Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

DISABLED
ENABLED

Hdr10Metadata

redPrimaryY
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

greenPrimaryY
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

whitePointX
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxLuminance
Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647
greenPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

whitePointY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

redPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

bluePrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxFrameAverageLightLevel

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

bluePrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.
Type: integer
Required: False
Minimum: 0
Maximum: 50000

**maxContentLightLevel**

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

**minLuminance**

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**HlsAdMarkers (enum)**

- ELEMENTAL
- ELEMENTAL_SCTE35

**HlsAudioTrackType (enum)**

Four types of audio-only tracks are supported: Audio-Only Variant Stream The client can play back this audio-only stream instead of video in low-bandwidth scenarios. Represented as an EXT-X-STREAM-INF in the HLS manifest. Alternate Audio, Auto Select, Default Alternate rendition that the client should try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=YES, AUTOSELECT=YES Alternate Audio, Auto Select, Not Default Alternate rendition that the client may try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=YES Alternate Audio, not Auto Select Alternate rendition that the client will not try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=NO

- ALTERNATE_AUDIO_AUTO_SELECT_DEFAULT
- ALTERNATE_AUDIO_AUTO_SELECT
- ALTERNATE_AUDIO_NOT_AUTO_SELECT
- AUDIO_ONLY_VARIANT_STREAM

**HlsCaptionLanguageMapping**

**languageDescription**

Caption language description.

Type: string
Required: False
**captionChannel**

Caption channel.

*Type: integer*
*Required: False*
*Minimum: -2147483648*
*Maximum: 2147483647*

**languageCode**

*Type: string*
*Required: False*

**HlsCaptionLanguageSetting (enum)**

Applies only to 608 Embedded output captions. Insert: Include CLOSED-CAPTIONS lines in the manifest. Specify at least one language in the CC1 Language Code field. One CLOSED-CAPTION line is added for each Language Code you specify. Make sure to specify the languages in the order in which they appear in the original source (if the source is embedded format) or the order of the caption selectors (if the source is other than embedded). Otherwise, languages in the manifest will not match up properly with the output captions. None: Include CLOSED-CAPTIONS=NONE line in the manifest. Omit: Omit any CLOSED-CAPTIONS line from the manifest.

- INSERT
- OMIT
- NONE

**HlsClientCache (enum)**

When set to ENABLED, sets #EXT-X-ALLOW-CACHE:no tag, which prevents client from saving media segments for later replay.

- DISABLED
- ENABLED

**HlsCodecSpecification (enum)**

Specification to use (RFC-6381 or the default RFC-4281) during m3u8 playlist generation.

- RFC_6381
- RFC_4281

**HlsDirectoryStructure (enum)**

Indicates whether segments should be placed in subdirectories.

- SINGLE_DIRECTORY
- SUBDIRECTORY_PER_STREAM

**HlsEncryptionSettings**

**initializationVectorInManifest**

*Type: string*


**Required**: False

**constantInitializationVector**

This is a 128-bit, 16-byte hex value represented by a 32-character text string. If this parameter is not set then the Initialization Vector will follow the segment number by default.

**Type**: string  
**Required**: False  
**Pattern**: `^[0-9a-fA-F]{32}$`

**staticKeyProvider**

**Type**: [StaticKeyProvider (p. 444)](p. 444)  
**Required**: False

**type**

**Type**: string  
**Required**: True

**spekeKeyProvider**

**Type**: [SpekeKeyProvider (p. 444)](p. 444)  
**Required**: False

**encryptionMethod**

**Type**: string  
**Required**: False

**HlsEncryptionType** (enum)

Encrypts the segments with the given encryption scheme. Leave blank to disable. Selecting 'Disabled' in the web interface also disables encryption.

- AES128
- SAMPLE_AES

**HlsGroupSettings**

**segmentsPerSubdirectory**

Number of segments to write to a subdirectory before starting a new one. directoryStructure must be SINGLE_DIRECTORY for this setting to have an effect.

**Type**: integer  
**Required**: False  
**Minimum**: 1  
**Maximum**: 2147483647
streamInfResolution

Type: string
Required: False

timestampDeltaMilliseconds

Provides an extra millisecond delta offset to fine tune the timestamps.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

outputSelection

Type: string
Required: False

captionLanguageMappings

Type: Array of type HlsCaptionLanguageMapping (p. 393)
Required: False

clientCache

Type: string
Required: False

codecSpecification

Type: string
Required: False

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

Type: string
Required: True
Pattern: ^s3:\/\/

segmentControl

Type: string
Required: False

timedMetadataId3Frame

Type: string
timedMetadataId3Period
Timed Metadata interval in seconds.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

captionLanguageSetting

Type: string
Required: False

minSegmentLength
When set, Minimum Segment Size is enforced by looking ahead and back within the specified range for a nearby avail and extending the segment size if needed.

Type: integer
Required: True
Minimum: 0
Maximum: 2147483647

directoryStructure

Type: string
Required: False

programDateTime

Type: string
Required: False

baseUrl
A partial URI prefix that will be prepended to each output in the media .m3u8 file. Can be used if base manifest is delivered from a different URL than the main .m3u8 file.

Type: string
Required: False

encryption
DRM settings.

Type: HlsEncryptionSettings (p. 394)
Required: False

adMarkers
Choose one or more ad marker types to pass SCTE35 signals through to this group of Apple HLS outputs.
**Properties**

**Type**
- Array of type string
  - **Required**: False

**programDateTimePeriod**
Period of insertion of EXT-X-PROGRAM-DATE-TIME entry, in seconds.
- **Type**: integer
  - **Required**: False
  - **Minimum**: 0
  - **Maximum**: 3600

**manifestCompression**
- **Type**: string
  - **Required**: False

**segmentLength**
Length of MPEG-2 Transport Stream segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer.
- **Type**: integer
  - **Required**: True
  - **Minimum**: 1
  - **Maximum**: 2147483647

**manifestDurationFormat**
- **Type**: string
  - **Required**: False

**HlsIFrameOnlyManifest (enum)**
When set to INCLUDE, writes I-Frame Only Manifest in addition to the HLS manifest
- **INCLUDE**
- **EXCLUDE**

**HlsInitializationVectorInManifest (enum)**
The Initialization Vector is a 128-bit number used in conjunction with the key for encrypting blocks. If set to INCLUDE, Initialization Vector is listed in the manifest. Otherwise Initialization Vector is not in the manifest.
- **INCLUDE**
- **EXCLUDE**

**HlsKeyProviderType (enum)**
Indicates which type of key provider is used for encryption.
- **SPEKE**
STATIC_KEY

**HlsManifestCompression (enum)**
When set to GZIP, compresses HLS playlist.

- GZIP
- NONE

**HlsManifestDurationFormat (enum)**
Indicates whether the output manifest should use floating point values for segment duration.

- FLOATING_POINT
- INTEGER

**HlsOutputSelection (enum)**
Indicates whether the .m3u8 manifest file should be generated for this HLS output group.

- MANIFESTS_AND_SEGMENTS
- SEGMENTS_ONLY

**HlsProgramDateTime (enum)**
Includes or excludes EXT-X-PROGRAM-DATE-TIME tag in .m3u8 manifest files. The value is calculated as follows: either the program date and time are initialized using the input timecode source, or the time is initialized using the input timecode source and the date is initialized using the timestamp_offset.

- INCLUDE
- EXCLUDE

**HlsSegmentControl (enum)**
When set to SINGLE_FILE, emits program as a single media resource (.ts) file, uses #EXT-X-BYTERANGE tags to index segment for playback.

- SINGLE_FILE
- SEGMENTED_FILES

**HlsSettings**

**iFrameOnlyManifest**

- **Type**: string
- **Required**: False

**segmentModifier**
String concatenated to end of segment filenames. Accepts "Format Identifiers":#format_identifier_parameters.

- **Type**: string
- **Required**: False
**audioTrackType**

Type: string  
Required: False

**audioRenditionSets**

List all the audio groups that are used with the video output stream. Input all the audio GROUP-IDs that are associated to the video, separate by ','.  

Type: string  
Required: False

**audioGroupId**

Specifies the group to which the audio Rendition belongs.  

Type: string  
Required: False

**HlsStreamInfResolution (enum)**

Include or exclude RESOLUTION attribute for video in EXT-X-STREAM-INF tag of variant manifest.  

INCLUDE  
EXCLUDE

**HlsTimedMetadataId3Frame (enum)**

Indicates ID3 frame that has the timecode.  

NONE  
PRIV  
TDRL

**Id3Insertion**

**id3**

Use ID3 tag (Id3) to provide a tag value in base64-encode format.  

Type: string  
Required: True  
Pattern: ^[A-Za-z0-9+/\]+={0,2}$

**timecode**

Provide a Timecode (TimeCode) in HH:MM:SS:FF or HH:MM:SS;FF format.  

Type: string  
Required: True  
Format: timecode  
Pattern: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}$
ImageInserter

insertableImages

Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.

  Type: Array of type InsertableImage (p. 404)
  Required: True

Input

audioSelectors

Use Audio selectors (AudioSelectors) to specify a track or set of tracks from the input that you will use in your outputs. You can use multiple Audio selectors per input.

  Type: object
  Required: False

audioSelectorGroups

Specifies set of audio selectors within an input to combine. An input may have multiple audio selector groups. See "Audio Selector Group":#inputs-audio_selector_group for more information.

  Type: object
  Required: False

videoSelector

  Type: VideoSelector (p. 452)
  Required: False

denoiseFilter

  Type: string
  Required: False

filterEnable

  Type: string
  Required: False

deblockFilter

  Type: string
  Required: False

filterStrength

Use Filter strength (FilterStrength) to adjust the magnitude the input filter settings (Deblock and Denoise). The range is -5 to 5. Default is 0.
Properties

**programNumber**

Use Program (programNumber) to select a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported. Default is the first program within the transport stream. If the program you specify doesn’t exist, the transcoding service will use this default.

**timecodeSource**

Use Timecode source (timecodeSource) to specify the timecode data from the input that you will use in your outputs. You can use multiple timecode sources per input.

**captionSelectors**

Use Captions selectors (CaptionSelectors) to specify the captions data from the input that you will use in your outputs. You can use multiple captions selectors per input.

**fileInput**

Use Input (fileInput) to define the source file used in the transcoding job. There can be multiple inputs in a job. These inputs are concatenated, in the order they are specified in the job, to create the output.

**inputClippings**

(InputClippings) contains sets of start and end times that together specify a portion of the input to be used in the outputs. If you provide only a start time, the clip will be the entire input from that point to the end. If you provide only an end time, it will be the entire input up to that point. When you specify more than one input clip, the transcoding service creates the job outputs by stringing the clips together in the order you specify them.
psiControl

Type: string  
Required: False

**InputClipping**

**startTimecode**

Set Start timecode (StartTimecode) to the beginning of the portion of the input you are clipping. The frame corresponding to the Start timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

Type: string  
Required: False  
Format: timecode  
Pattern: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:[0-9]{2}$

**endTimecode**

Set End timecode (EndTimecode) to the end of the portion of the input you are clipping. The frame corresponding to the End timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

Type: string  
Required: False  
Format: timecode  
Pattern: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:[0-9]{2}$

**InputDeblockFilter (enum)**

Enable Deblock (InputDeblockFilter) to produce smoother motion in the output. Default is disabled. Only manually controllable for MPEG2 and uncompressed video inputs.

ENABLED  
DISABLED

**InputDenoiseFilter (enum)**

Enable Denoise (InputDenoiseFilter) to filter noise from the input. Default is disabled. Only applicable to MPEG2, H.264, H.265, and uncompressed video inputs.

ENABLED  
DISABLED

**InputFilterEnable (enum)**

Use Filter enable (InputFilterEnable) to specify how the transcoding service applies the denoise and deblock filters. You must also enable the filters separately, with Denoise (InputDenoiseFilter) and Debloc (InputDeblockFilter).
* Auto - The transcoding service determines whether to apply filtering, depending on input type and quality.

* Disable - The input is not filtered. This is true even if you use the API to enable them in (InputDeblockFilter) and (InputDeblockFilter).

* Force - The input is filtered regardless of input type.

AUTO
DISABLE
FORCE

**InputPsiControl (enum)**

Set PSI control (InputPsiControl) for transport stream inputs to specify which data the demux process to scans.

* Ignore PSI - Scan all PIDs for audio and video.

* Use PSI - Scan only PSI data.

IGNORE_PSI
USE_PSI

**InputTimecodeSource (enum)**

Use Timecode source (InputTimecodeSource) to specify how timecode information from your input is adjusted and encoded in all outputs for the job. Default is embedded. Set to Embedded (EMBEDDED) to use the timecode that is in the input video. If no embedded timecode is in the source, will set the timecode for the first frame to 00:00:00:00. Set to Start at 0 (ZEROBASED) to set the timecode of the initial frame to 00:00:00:00. Set to Specified start (SPECIFIEDSTART) to provide the initial timecode yourself the setting (Start).

EMBEDDED
ZEROBASED
SPECIFIEDSTART

**InsertableImage**

duration

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.

**Type:** integer  
**Required:** False  
**Minimum:** -2147483648  
**Maximum:** 2147483647

fadeOut

Use Fade out (FadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don’t specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.

**Type:** integer  
**Required:** False  
**Minimum:** -2147483648
Maximum: 2147483647

**imageY**

Use Top (ImageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**fadeIn**

Use Fade in (FadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don't specify a value for Fade in, the image will appear abruptly at the Start time.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**imageX**

Use Left (ImageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**width**

Specify the Width (Width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**startTime**

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

- **Type**: string
- **Required**: False

**opacity**

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.
Properties

Type: integer  
Required: True  
Minimum: 0  
Maximum: 100

layer

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

Type: integer  
Required: True  
Minimum: 0  
Maximum: 7

height

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.

Type: integer  
Required: False  
Minimum: -2147483648  
Maximum: 2147483647

imageInserterInput

Use Image location (imageInserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

Type: string  
Required: True  
Pattern: ^s3://\/(.*\.(bmp|BMP|png|PNG|tga|TGA)$

Job

settings

Type: JobSettings (p. 408)  
Required: True

outputGroupDetails

Type: Array of type OutputGroupDetail (p. 438)  
Required: False

role

The IAM role you use for creating this job. For details about permissions, see the User Guide topic at the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/iam-role.html

Type: string
Required: True

**jobTemplate**

The job template that the job is created from, if it is created from a job template.

Type: string  
Required: False

**timing**

Type: Timing (p. 448)  
Required: False

**errorMessage**

Error message of job

Type: string  
Required: False

**errorCode**

Type: integer  
Required: False  
Format: int32

**createdAt**

The time, in Unix epoch format in seconds, when the job got created.

Type: string  
Required: False  
Format: date-time

**id**

A portion of the job's ARN, unique within your AWS Elemental MediaConvert resources

Type: string  
Required: False

**arn**

An identifier for this resource that is unique within all of AWS.

Type: string  
Required: False

**userMetadata**

Type: object
Required: False

queue

Optional. When you create a job, you can specify a queue to send it to. If you don’t specify, the job will go to the default queue. For more about queues, see the User Guide topic at http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html

Type: string
Required: False

status

Type: string
Required: False

JobSettings

timecodeConfig

Contains settings used to acquire and adjust timecode information from inputs.

Type: TimecodeConfig (p. 446)
Required: False

adAvailOffset

When specified, this offset (in milliseconds) is added to the input Ad Avail PTS time.

Type: integer
Required: False
Minimum: -1000
Maximum: 1000

nielsenConfiguration

Nielsen configuration settings

Type: NielsenConfiguration (p. 434)
Required: False

inputs

Use Inputs (inputs) to define source file used in the transcode job. There can be multiple inputs added to a job. These inputs will be concatenated together to create the output.

Type: Array of type Input (p. 401)
Required: True

outputGroups

(OutputGroups) contains one group of settings for each set of outputs that share a common package type. All unpackaged files (MPEG-4, MPEG-2 TS, Quicktime, MXF, and no container) are
grouped in a single output group as well. Required in (OutputGroups) is a group of settings that apply to the whole group. This required object depends on the value you set for (Type) under (OutputGroups)->(OutputGroupSettings). Type, settings object pairs are as follows.

* FILE_GROUP_SETTINGS, FileGroupSettings
* HLS_GROUP_SETTINGS, HlsGroupSettings
* DASH_ISO_GROUP_SETTINGS, DashIsoGroupSettings
* MS_SMOOTH_GROUP_SETTINGS, MsSmoothGroupSettings

  **Type:** Array of type OutputGroup (p. 437)
  **Required:** True

**timedMetadataInsertion**

  **Type:** TimedMetadataInsertion (p. 448)
  **Required:** False

**availBlanking**

Settings for ad avail blanking. Video can be blanked or overlaid with an image, and audio muted during SCTE-35 triggered ad avails.

  **Type:** AvailBlanking (p. 348)
  **Required:** False

**JobStatus (enum)**

A job's status can be SUBMITTED, PROGRESSING, COMPLETE, CANCELED, or ERROR.

  SUBMITTED
  PROGRESSING
  COMPLETE
  CANCELED
  ERROR

**LanguageCode (enum)**

Code to specify the language, following the specification "ISO 639-2 three-digit code":http://www.loc.gov/standards/iso639-2/

  ENG
  SPA
  FRA
  DEU
  GER
  ZHO
  ARA
  HIN
  JPN
  RUS
  POR
  ITA
URD
VIE
KOR
PAN
ABK
AAR
AFR
AKA
SQI
AMH
ARG
HYE
ASM
AVA
AVE
AYM
AZE
BAM
BAK
EUS
BEL
BEN
BIH
BIS
BOS
BRE
BUL
MYA
CAT
KHM
CHA
CHE
NYA
CHU
CHV
COR
COS
CRE
HRV
CES
DAN
DIV
NLD
DZO
ENM
EPO
EST
EWE
FAO
FIJ
FIN
FRM
FUL
NAU
NAV
NDE
NBL
NDO
NEP
SME
NOR
NOB
NNO
OCI
OJI
ORI
ORM
OSS
PLI
FAS
POL
PUS
QUE
QAA
RON
ROH
RUN
SMO
SAG
SAN
SRD
SRB
SNA
III
SND
SIN
SLK
SLV
SOM
SOT
SUN
SWA
SSW
SWE
TGL
TAH
TGK
TAM
TAT
TEL
THA
BOD
TIR
TON
TSO
TSN
TUR
Properties

- **TUK**
- **TWI**
- **UIG**
- **UKR**
- **UZB**
- **VEN**
- **VOL**
- **WLN**
- **CYM**
- **FRY**
- **WOL**
- **XHO**
- **VID**
- **YOR**
- **ZHA**
- **ZUL**
- **ORJ**
- **QPC**
- **TNG**

**ListJobsRequest**

**nextToken**

Use this string, provided with the response to a previous request, to request the next batch of jobs.

Type: string

Required: False

**maxResults**

Optional. Number of jobs, up to twenty, that will be returned at one time.

Type: integer

Required: False

Format: int32

**queue**

Provide a queue name to get back only jobs from that queue.

Type: string

Required: False

**status**

Type: string

Required: False

**order**

Type: string

Required: False
**ListJobsResponse**

**nextToken**

Use this string to request the next batch of jobs.

- **Type**: string
- **Required**: False

**jobs**

- **Type**: Array of type Job (p. 406)
- **Required**: False

**M2tsAudioBufferModel (enum)**

Selects between the DVB and ATSC buffer models for Dolby Digital audio.

- DVB
- ATSC

**M2tsBufferModel (enum)**

Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.

- MULTIPLEX
- NONE

**M2tsEbpAudioInterval (enum)**

When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_FIXED_INTERVALS
- VIDEO_INTERVAL

**M2tsEbpPlacement (enum)**

Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_AUDIO_PIDS
- VIDEO_PID

**M2tsEsRateInPes (enum)**

Controls whether to include the ES Rate field in the PES header.
**M2tsPcrControl (enum)**

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

**M2tsRateMode (enum)**

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

**M2tsScte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M2tsSegmentationMarkers (enum)**

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-I01-130118. ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

- NONE
- RAI_SEGSTART
- RAI_ADAPT
- PSI_SEGSTART
- EBP
- EBP_LEGACY

**M2tsSegmentationStyle (enum)**

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $\text{segmentation_time}$ seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $\text{segmentation_time}$ seconds. Note that EBP lookahead is a slight exception to this rule.
MAINTAIN_CADENCE
RESET_CADENCE

**M2tsSettings**

**dvbTeletextPid**
Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

Type: integer  
Required: False  
Minimum: 32  
Maximum: 8182

**bitrate**
The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 2147483647

**segmentationTime**
The length in seconds of each segment. Required unless markers is set to _none_.

Type: number  
Required: False  
Format: float  
Minimum: 0.0

**audioPids**
Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer  
Required: False

**rateMode**

Type: string  
Required: False

**ebpAudioInterval**

Type: string  
Required: False
fragmentTime

The length in seconds of each fragment. Only used with EBP markers.

- **Type:** number
- **Required:** False
- **Format:** float
- **Minimum:** 0.0

audioFramesPerPes

The number of audio frames to insert for each PES packet.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

maxPcrInterval

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 500

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

privateMetadataPid

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

pmtInterval

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000
segmentationStyle

Type: string
Required: False

audioBufferModel

Type: string
Required: False

programNumber

The value of the program number field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

dvbNitSettings

Type: DvbNitSettings (p. 360)
Required: False

tscte35Source

Type: string
Required: False

pmtPid

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

bufferModel

Type: string
Required: False

ebpPlacement

Type: string
Required: False

dvbSdtSettings

Type: DvbSdtSettings (p. 361)
nullPacketBitrate

Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.

Type: number
Required: False
Format: float
Minimum: 0.0

pcrPid

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

minEbpInterval

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.

Type: integer
Required: False
Minimum: 0
Maximum: 10000

transportStreamId

The value of the transport stream ID field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

pcrControl

Type: string
Required: False

videoPid

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.
**Properties**

**esRateInPes**
- Type: integer
- Required: False
- Minimum: 32
- Maximum: 8182

**segmentationMarkers**
- Type: string
- Required: False

**dvbTdtSettings**
- Type: `DvbTdtSettings (p. 365)`
- Required: False

**patInterval**
The number of milliseconds between instances of this table in the output transport stream.
- Type: integer
- Required: False
- Minimum: 0
- Maximum: 1000

**dvbSubPids**
Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.
- Type: Array of type integer
- Required: False

**M3u8PcrControl (enum)**
When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.
- `PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD`

**M3u8Scte35Source (enum)**
Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.
- `PASSTHROUGH
- NONE`
**M3u8Settings**

**pmtPid**
Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**pcrPid**
Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**audioPids**
Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type:** Array of type integer
- **Required:** False

**audioFramesPerPes**
The number of audio frames to insert for each PES packet.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**scte35Pid**
Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**transportStreamId**
The value of the transport stream ID field in the Program Map Table.
Properties

**videoPid**
Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 65535

**pcrControl**

- **Type**: string
- **Required**: False

**privateMetadataPid**
Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**pmtInterval**
The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 1000

**patInterval**
The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 1000

**programNumber**
The value of the program number field in the Program Map Table.

- **Type**: integer
- **Required**: False
Properties

**Minimum:** 0  
**Maximum:** 65535

**timedMetadataPid**

Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer  
- **Required:** False  
- **Minimum:** 32  
- **Maximum:** 8182

**timedMetadata**

- **Type:** string  
- **Required:** False

**scte35Source**

- **Type:** string  
- **Required:** False

**MovClapAtom (enum)**

When enabled, include 'clap' atom if appropriate for the video output settings.

- **INCLUDE**  
- **EXCLUDE**

**MovCslgAtom (enum)**

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

- **INCLUDE**  
- **EXCLUDE**

**MovMpeg2FourCCControl (enum)**

When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.

- **XDCAM**  
- **MPEG**

**MovPaddingControl (enum)**

If set to OMNEON, inserts Omneon-compatible padding

- **OMNEON**  
- **NONE**
MovReference (enum)
A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.

SELF_CONTAINED
EXTERNAL

MovSettings

reference
Type: string
Required: False

paddingControl
Type: string
Required: False

mpeg2FourCCControl
Type: string
Required: False

cslgAtom
Type: string
Required: False

clapAtom
Type: string
Required: False

Mp2Settings

channels
Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

Type: integer
Required: False
Minimum: 1
Maximum: 2

bitrate
Average bitrate in bits/second.
Type: integer
Properties

sampleRate
Sample rate in hz.
  Type: integer
  Required: False
  Minimum: 32000
  Maximum: 48000

Mp4CslgAtom (enum)
When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.
  INCLUDE
  EXCLUDE

Mp4FreeSpaceBox (enum)
Inserts a free-space box immediately after the moov box.
  INCLUDE
  EXCLUDE

Mp4MoovPlacement (enum)
If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.
  PROGRESSIVE_DOWNLOAD
  NORMAL

Mp4Settings

mp4MajorBrand
Overrides the "Major Brand" field in the output file. Usually not necessary to specify.
  Type: string
  Required: False

moovPlacement
  Type: string
  Required: False

cslgAtom
  Type: string
**Properties**

**Required: False**

**freeSpaceBox**

- **Type**: string
- **Required**: False

**Mpeg2AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH

**Mpeg2CodecLevel (enum)**

Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.

- AUTO
- LOW
- MAIN
- HIGH1440
- HIGH

**Mpeg2CodecProfile (enum)**

Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.

- MAIN
- PROFILE_422

**Mpeg2FramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**Mpeg2FramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**Mpeg2GopSizeUnits (enum)**

Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.
**FRAMES SECONDS**

**Mpeg2InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

**PROGRESSIVE**

TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

**Mpeg2IntraDcPrecision (enum)**

Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value auto, the service will automatically select the precision based on the per-frame compression ratio.

**AUTO**

INTRA_DC_PRECISION_8
INTRA_DC_PRECISION_9
INTRA_DC_PRECISION_10
INTRA_DC_PRECISION_11

**Mpeg2ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

**INITIALIZE_FROM_SOURCE**

**SPECIFIED**

**Mpeg2QualityTuningLevel (enum)**

Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.

**SINGLE_PASS**

**MULTI_PASS**

**Mpeg2RateControlMode (enum)**

Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).
VBR
CBR

Mpeg2SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).
- DISABLED
- ENABLED

Mpeg2Settings

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

gopSizeUnits

Type: string
Required: False

hrdBufferSize
Size of buffer (HRD buffer model). Five megabits can be entered as 500000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

qualityTuningLevel

Type: string
Required: False
maxBitrate
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

bitrate
Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

spatialAdaptiveQuantization

Type: string
Required: False

slowPal

Type: string
Required: False

codecProfile

Type: string
Required: False

intraDcPrecision

Type: string
Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.

Type: integer
Required: False
Minimum: 0
Maximum: 128

framerateControl

Type: string
Required: False
telecine

Type: string
Required: False

framerateConversionAlgorithm

Type: string
Required: False

codecLevel

Type: string
Required: False

temporalAdaptiveQuantization

Type: string
Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer  
Required: False  
Minimum: 0  
Maximum: 2147483647

**framerateDenominator**

Framerate denominator.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**adaptiveQuantization**

Type: string  
Required: False

**interlaceMode**

Type: string  
Required: False

**gopSize**

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number  
Required: False  
Format: float  
Minimum: 0.0

**sceneChangeDetect**

Type: string  
Required: False

**parDenominator**

Pixel Aspect Ratio denominator.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**parControl**

Type: string  
Required: False
syntax
  Type: string
  Required: False

rateControlMode
  Type: string
  Required: False

Mpeg2SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
  DISABLED
  ENABLED

Mpeg2SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.
  DISABLED
  ENABLED

Mpeg2Syntax (enum)
Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).
  DEFAULT
  D_10

Mpeg2Telecine (enum)
Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.
  NONE
  SOFT
  HARD

Mpeg2TemporalAdaptiveQuantization (enum)
Adjust quantization within each frame based on temporal variation of content complexity.
  DISABLED
  ENABLED

MsSmoothAudioDeduplication (enum)
COMBINE_DUPLICATE_STREAMS combines identical audio encoding settings across a Microsoft Smooth output group into a single audio stream.
  COMBINE_DUPLICATE_STREAMS
NONE

**MsSmoothEncryptionSettings**

**spekeKeyProvider**

- **Type:** SpekeKeyProvider (p. 444)
- **Required:** True

**MsSmoothGroupSettings**

**fragmentLength**

Use Fragment length (FragmentLength) to specify the mp4 fragment sizes in seconds. Fragment length must be compatible with GOP size and framerate.

- **Type:** integer
- **Required:** True
- **Minimum:** 1
- **Maximum:** 2147483647

**encryption**

- **Type:** MsSmoothEncryptionSettings (p. 433)
- **Required:** False

**audioDeduplication**

- **Type:** string
- **Required:** False

**manifestEncoding**

- **Type:** string
- **Required:** False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

- **Type:** string
- **Required:** True
- **Pattern:** ^s3:/\/

**MsSmoothManifestEncoding (enum)**

Use Manifest encoding (MsSmoothManifestEncoding) to specify the encoding format for the server and client manifest. Valid options are utf8 and utf16.

- **UTF8**
UTF16

**NielsenConfiguration**

**distributorId**

Use Distributor ID (DistributorID) to specify the distributor ID that is assigned to your organization by Neilsen.

* Type: string
  * Required: False

**breakoutCode**

Use Nielsen Configuration (NielsenConfiguration) to set the Nielsen measurement system breakout code. Supported values are 0, 3, 7, and 9.

* Type: integer
  * Required: False
  * Minimum: 0
  * Maximum: 9

**NoiseReducer**

**filter**

* Type: string
  * Required: True

**filterSettings**

* Type: NoiseReducerFilterSettings (p. 435)
  * Required: False

**spatialFilterSettings**

* Type: NoiseReducerSpatialFilterSettings (p. 435)
  * Required: False

**NoiseReducerFilter (enum)**

Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).

* Bilateral is an edge preserving noise reduction filter

* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters

* Conserve is a min/max noise reduction filter

* Spatial is frequency-domain filter based on JND principles.

  BILATERAL
  MEAN
GAUSSIAN
LANCZOS
SHARPEN
CONSERVE
SPATIAL

**NoiseReducerFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 3

**NoiseReducerSpatialFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 16

**postFilterSharpenStrength**
Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 3

**speed**
The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

- **Type:** integer
- **Required:** False
- **Minimum:** -2
- **Maximum:** 3

**Order (enum)**
When you request lists of resources, you can optionally specify whether they are sorted in ASCENDING or DESCENDING order. Default varies by resource.

- ASCENDING
- DESCENDING
Output

extension

Use Extension (Extension) to specify the file extension for outputs in File output groups. If you do not specify a value, the service will use default extensions by container type as follows:

- MPEG-2 transport stream, m2ts
- Quicktime, mov
- MXF container, mxf
- MPEG-4 container, mp4
- No Container, the service will use codec extensions (e.g. AAC, H265, H265, AC3)

  Type: string
  Required: False

videoDescription

(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

  Type: VideoDescription (p. 449)
  Required: False

audioDescriptions

(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.

  Type: Array of type AudioDescription (p. 344)
  Required: False

containerSettings

  Type: ContainerSettings (p. 356)
  Required: False

preset

Use Preset (Preset) to specify a preset for your transcoding settings. Provide the system or custom preset name. You can specify either Preset (Preset) or Container settings (ContainerSettings), but not both.

  Type: string
  Required: False

outputSettings

  Type: OutputSettings (p. 439)
  Required: False
captionDescriptions

(CaptionDescriptions) contains groups of captions settings. For each output that has captions, include one instance of (CaptionDescriptions). (CaptionDescriptions) can contain multiple groups of captions settings.

- **Type**: Array of type CaptionDescription (p. 352)
- **Required**: False

nameModifier

Use Name modifier (NameModifier) to have the service add a string to the end of each output filename. You specify the base filename as part of your destination URI. When you create multiple outputs in the same output group, Name modifier is required. Name modifier also accepts format identifiers. For DASH ISO outputs, if you use the format identifiers $Number$ or $Time$ in one output, you must use them in the same way in all outputs of the output group.

- **Type**: string
- **Required**: False

OutputChannelMapping

inputChannels

- **Type**: Array of type integer
- **Required**: True

OutputDetail

durationInMs

- **Type**: integer
- **Required**: False

videoDetails

- **Type**: VideoDetail (p. 451)
- **Required**: False

OutputGroup

outputs

This object holds groups of encoding settings, one group of settings per output.

- **Type**: Array of type Output (p. 436)
- **Required**: True

outputGroupSettings

- **Type**: OutputGroupSettings (p. 438)
- **Required**: True
Properties

name
Type: string
Required: False

customName
Use Custom Group Name (CustomName) to specify a name for the output group. This value is displayed on the console and can make your job settings JSON more human-readable. It does not affect your outputs. Use up to twelve characters that are either letters, numbers, spaces, or underscores.
Type: string
Required: False

OutputGroupDetail
outputDetails
Type: Array of type OutputDetail (p. 437)
Required: False

OutputGroupSettings
dashIsoGroupSettings
Type: DashIsoGroupSettings (p. 358)
Required: False

fileGroupSettings
Type: FileGroupSettings (p. 372)
Required: False

msSmoothGroupSettings
Type: MsSmoothGroupSettings (p. 433)
Required: False
type
Type: string
Required: True

hlsGroupSettings
Type: HlsGroupSettings (p. 395)
Required: False

OutputGroupType (enum)

HLS_GROUP_SETTINGS
DASH_ISO_GROUP_SETTINGS
FILE_GROUP_SETTINGS
MS_SMOOTH_GROUP_SETTINGS

**OutputSdt (enum)**

Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter "SDT Manually" means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

SDT_FOLLOW
SDT_FOLLOW_IF_PRESENT
SDT_MANUAL
SDT_NONE

**OutputSettings**

**hlsSettings**

_type_: HlsSettings (p. 399)
_required_: False

**ProresCodecProfile (enum)**

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

APPLE_PRORES_422
APPLE_PRORES_422_HQ
APPLE_PRORES_422_LT
APPLE_PRORES_422_PROXY

**ProresFramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

**ProresFramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

**ProresInterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).
Properties

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

PROGRESSIVE
  TOP_FIELD
  BOTTOM_FIELD
  FOLLOW_TOP_FIELD
  FOLLOW_BOTTOM_FIELD

ProresParControl (enum)

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).

  INITIALIZE_FROM_SOURCE
  SPECIFIED

ProresSettings

slowPal
  Type: string
  Required: False

framerateControl
  Type: string
  Required: False

telecine
  Type: string
  Required: False

framerateDenominator
  Framerate denominator.
  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

framerateConversionAlgorithm
  Type: string
Properties

Required: False

interlaceMode

Type: string
Required: False

codecProfile

Type: string
Required: False

parNumerator

Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateNumerator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

ProresSlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED
ProresTelecine (enum)

Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
HARD

Rectangle

width
Width of rectangle in pixels.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

x
The distance, in pixels, between the rectangle and the left edge of the video frame.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

y
The distance, in pixels, between the rectangle and the top edge of the video frame.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

height
Height of rectangle in pixels.

Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647

RemixSettings

channelsOut
Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

Type: integer
Required: True
Minimum: 1  
Maximum: 8

channelMapping

Type: ChannelMapping (p. 354)  
Required: True

channelsIn

Specify the number of audio channels from your input that you want to use in your output. With remixing, you might combine or split the data in these channels, so the number of channels in your final output might be different.

Type: integer  
Required: True  
Minimum: 1  
Maximum: 16

RespondToAfd (enum)

Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to AFD values in the input.

* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio, and output display aspect ratio.

* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set AfdSignaling to (AUTO).

* Choose None to remove all input AFD values from this output.

NONE  
RESPOND  
PASSTHROUGH

ScalingBehavior (enum)

Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output (StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to allow the service to letterbox your video instead. This setting overrides any positioning value you specify elsewhere in the job.

DEFAULT  
STRETCH_TO_OUTPUT

SccDestinationFramerate (enum)

Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized in the output. Specify a framerate that matches the framerate of the associated video. If the video framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe (FRAMERATE_29_97_NON_DROPFRAME).  
FRAMERATE_23_97
FRAMERATE_24
FRAMERATE_29_97_DROPFRAME
FRAMERATE_29_97_NON_DROPFRAME

SccDestinationSettings

framerate

Type: string
Required: False

SpekeKeyProvider

resourceId

The SPEKE-compliant server uses Resource ID (ResourceId) to identify content.

Type: string
Required: True
Pattern: ^\w-+\$

systemIds

Relates to SPEKE implementation. DRM system identifiers. DASH output groups support a max of two
system ids. Other group types support one system id.

Type: Array of type string
Required: True

url

Use URL (Url) to specify the SPEKE-compliant server that will provide keys for content.

Type: string
Required: True
Format: uri
Pattern: ^https:/\/

StaticKeyProvider

keyFormatVersions

Relates to DRM implementation. Either a single positive integer version value or a slash delimited list of
version values (1/2/3).

Type: string
Required: False
Pattern: ^(\d+(\d+)*)$

keyFormat

Relates to DRM implementation. Sets the value of the KEYFORMAT attribute. Must be 'identity' or a
reverse DNS string. May be omitted to indicate an implicit value of 'identity'.

444
Properties

staticKeyValue

Relates to DRM implementation. Use a 32-character hexadecimal string to specify Key Value (StaticKeyValue).

Type: string
Required: True
Pattern: ^[A-Za-z0-9]{32}$

url

Relates to DRM implementation. The location of the license server used for protecting content.

Type: string
Required: True
Format: uri

TeletextDestinationSettings

pageNumber

Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.

Type: string
Required: False
Pattern: ^[1-8][0-9a-fA-F][0-9a-eA-E]$
equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

Type: string
Required: False
Pattern: ^[ -~]+$ 

**fontSize**

Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

Type: integer
Required: False
Minimum: 10
Maximum: 48

**position**

Type: string
Required: False

**TimecodeBurninPosition (enum)**

Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- TOP_CENTER
- TOP_LEFT
- TOP_RIGHT
- MIDDLE_LEFT
- MIDDLE_CENTER
- MIDDLE_RIGHT
- BOTTOM_LEFT
- BOTTOM_CENTER
- BOTTOM_RIGHT

**TimecodeConfig**

**timestampOffset**

Only applies to outputs that support program-date-time stamp. Use Time stamp offset (TimestampOffset) to overwrite the timecode date without affecting the time and frame number. To use this, you must also enable Insert program-date-time (InsertProgramDateTime) in the output settings.

Type: string
Required: False
Pattern: ^([-0-9]{4})-([01][0-9]|1[0-2])-([01][0-9]|1[0-9]|2[0-3])$ 

**anchor**

If you use an editing platform that relies on an anchor timecode, use Anchor Timecode (Anchor) to specify a timecode that will match the input video frame to the output video frame. Use 24-hour format
with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF). This setting ignores framerate conversion. System behavior for Anchor Timecode varies depending on your setting for Timecode source (TimecodeSource).

* If Timecode source (TimecodeSource) is set to Specified Start (specifiedstart), the first input frame is the specified value in Start Timecode (Start). Anchor Timecode (Anchor) and Start Timecode (Start) are used calculate output timecode.

* If Timecode source (TimecodeSource) is set to Start at 0 (zerobased) the first frame is 00:00:00:00.

* If Timecode source (TimecodeSource) is set to Embedded (embedded), the first frame is the timecode value on the first input frame of the input.

  **Type**: string  
  **Required**: False  
  **Format**: timecode  
  **Pattern**: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:;[0-9]{2}$

  **start**

Only use when you set Timecode Source (TimecodeSource) to Specified Start (SPECIFIEDSTART). Use Start timecode (Start) to specify the timecode for the initial frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF).

  **Type**: string  
  **Required**: False  
  **Format**: timecode  
  **Pattern**: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:;[0-9]{2}$

  **source**

  **Type**: string  
  **Required**: False

**TimecodeSource (enum)**

Use Timecode source (TimecodeSource) to set how timecodes are handled within this input. To make sure that your video, audio, captions, and markers are synchronized and that time-based features, such as image inserter, work correctly, choose the Timecode source option that matches your assets. All timecodes are in a 24-hour format with frame number (HH:MM:SS:FF).

* Embedded (EMBEDDED) - Use the timecode that is in the input video. If no embedded timecode is in the source, the service will use Start at 0 (ZEROBASED) instead.

* Start at 0 (ZEROBASED) - Set the timecode of the initial frame to 00:00:00:00.

* Specified Start (SPECIFIEDSTART) - Set the timecode of the initial frame to a value other than zero. You use Start timecode (Start) to provide this value.

  EMBEDDED  
  ZEROBASED  
  SPECIFIEDSTART

**TimedMetadata (enum)**

If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.
PASSTHROUGH
NONE

**TimedMetadataInsertion**

**id3Insertions**

Id3Insertions contains the array of Id3Insertion instances.

- **Type**: Array of type `Id3Insertion (p. 400)`
- **Required**: True

**Timing**

**finishTime**

The time, in Unix epoch format, that the transcoding job finished.

- **Type**: string
- **Required**: False
- **Format**: date-time

**submitTime**

The time, in Unix epoch format, that you submitted the job.

- **Type**: string
- **Required**: False
- **Format**: date-time

**startTime**

The time, in Unix epoch format, that transcoding for the job began.

- **Type**: string
- **Required**: False
- **Format**: date-time

**TtmlDestinationSettings**

**stylePassthrough**

- **Type**: string
- **Required**: False

**TtmlStylePassthrough (enum)**

Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

- **DISABLED**
- **ENABLED**
VideoCodec (enum)

Type of video codec

- FRAME_CAPTURE
- H_264
- H_265
- MPEG2
- PRORES

VideoCodecSettings

h265Settings

- Type: H265Settings (p. 385)
- Required: False

codec

- Type: string
- Required: True

proresSettings

- Type: ProresSettings (p. 440)
- Required: False

mpeg2Settings

- Type: Mpeg2Settings (p. 428)
- Required: False

h264Settings

- Type: H264Settings (p. 376)
- Required: False

frameCaptureSettings

- Type: FrameCaptureSettings (p. 373)
- Required: False

VideoDescription

fixedAfd

Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAfd) to specify a four–bit AFD value which the service will write on all frames of this video output.

- Type: integer
- Required: False
- Minimum: 0
Maximum: 15

**scalingBehavior**

Type: string  
Required: False

**respondToAfd**

Type: string  
Required: False

**codecSettings**

Type: [VideoCodecSettings](p. 449)  
Required: True

**afdSignaling**

Type: string  
Required: False

**colorMetadata**

Type: string  
Required: False

**timecodeInsertion**

Type: string  
Required: False

**width**

Use Width (Width) to define the video resolution width, in pixels, for this output. If you don’t provide a value here, the service will use the input width.

Type: integer  
Required: False  
Minimum: 32  
Maximum: 4096

**sharpness**

Use Sharpness (Sharpness) setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 100
antiAlias

Type: string
Required: False

videoPreprocessors

Find additional transcoding features under Preprocessors (VideoPreprocessors). Enable the features at each output individually. These features are disabled by default.

Type: VideoPreprocessor (p. 452)
Required: False

position

Use Position (Position) to point to a rectangle object to define your position. This setting overrides any other aspect ratio.

Type: Rectangle (p. 442)
Required: False

dropFrameTimecode

Type: string
Required: False

crop

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

Type: Rectangle (p. 442)
Required: False

height

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don’t provide a value here, the service will use the input height.

Type: integer
Required: False
Minimum: 32
Maximum: 2160

VideoDetail

heightInPx

Height in pixels for the output

Type: integer
### Required

False

**widthInPx**

Width in pixels for the output

*Type: integer*

*Required: False*

### VideoPreprocessor

**timecodeBurnin**

Timecode burn-in (TimecodeBurnin)--Burns the output timecode and specified prefix into the output.

*Type: TimecodeBurnin (p. 445)*

*Required: False*

**noiseReducer**

Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: NoiseReducer (p. 434)*

*Required: False*

**colorCorrector**

Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: ColorCorrector (p. 354)*

*Required: False*

**imageInserter**

Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: ImageInserter (p. 401)*

*Required: False*

**deinterlacer**

Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.

*Type: Deinterlacer (p. 359)*

*Required: False*

### VideoSelector

**colorSpace**

*Type: string*
Properties

Required: False

 hdr10Metadata

 Type: Hdr10Metadata (p. 391)
 Required: False

 programNumber

 Selects a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported.

 Type: integer
 Required: False
 Minimum: -2147483648
 Maximum: 2147483647

 pid

 Use PID (Pid) to select specific video data from an input file. Specify this value as an integer; the system automatically converts it to the hexadecimal value. For example, 257 selects PID 0x101. A PID, or packet identifier, is an identifier for a set of data in an MPEG-2 transport stream container.

 Type: integer
 Required: False
 Minimum: 1
 Maximum: 2147483647

 colorSpaceUsage

 Type: string
 Required: False

 VideoTimecodeInsertion (enum)

 Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

 DISABLED
 PIC_TIMING_SEI

 WavSettings

 channels

 Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

 Type: integer
 Required: False
 Minimum: 1
Maximum: 8

**bitDepth**

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type:** integer
- **Required:** False
- **Minimum:** 16
- **Maximum:** 24

**sampleRate**

Sample rate in Hz.

- **Type:** integer
- **Required:** False
- **Minimum:** 8000
- **Maximum:** 192000

---

**A Specific Job**

**URI**

/2017-08-29/jobs/ **id**

**HTTP Methods**

**GET**

Operation ID: GetJob

Retrieve the JSON for a specific completed transcoding job.

**Path Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

**Responses**

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>GetJobResponse (p. 457)</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 467)</td>
<td>400: BadRequestException</td>
</tr>
</tbody>
</table>

The conditional request failed. The service can’t process your request because of a problem in the request. Please check your request form and syntax.
### Status Code

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>ExceptionBody (p. 467)</td>
<td>500: InternalServiceException. The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 467)</td>
<td>403: AccessDeniedException. You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody (p. 467)</td>
<td>404: ResourceNotFoundException. The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody (p. 467)</td>
<td>429: LimitExceededException. Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
<tr>
<td>409</td>
<td>ExceptionBody (p. 467)</td>
<td>409: ResourceInUseException. The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>

### DELETE

**Operation ID: CancelJob**

Permanently remove a job from a queue. Once you have canceled a job, you can't start it again. You can't delete a running job.

#### Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>
## Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 400         | ExceptionBody (p. 467) | 400: BadRequestException  
The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax. |
| 202         | CancelJobResponse (p. 467) | 202: AcceptedResponse  
Your request has been accepted. Processing has not yet begun. |
| 500         | ExceptionBody (p. 467) | 500: InternalServiceException  
The service encountered an unexpected condition and cannot fulfill your request. |
| 403         | ExceptionBody (p. 467) | 403: AccessDeniedException  
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process. |
| 404         | ExceptionBody (p. 467) | 404: ResourceNotFoundException  
The resource you requested does not exist. |
| 429         | ExceptionBody (p. 467) | 429: LimitExceededException  
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission. |
| 409         | ExceptionBody (p. 467) | 409: ResourceInUseException  
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing. |
Schemas

Request Bodies

Example GET

```json
{
  "id (p. 502)": "string"
}
```

Example DELETE

```json
{
  "id (p. 481)": "string"
}
```

Response Bodies

Example GetJobResponse

```json
{
  "job (p. 502)": {
    "settings (p. 535)": {
      "timecodeConfig (p. 536)": {
        "timestampOffset (p. 574)": "string",
        "anchor (p. 574)": "string",
        "start (p. 575)": "string",
        "source (p. 575)": enum
      },
      "adAvailOffset (p. 537)": integer,
      "nielsenConfiguration (p. 537)": {
        "distributorId (p. 562)": "string",
        "breakoutCode (p. 562)": integer
      },
      "inputs (p. 537)": [
        {
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          },
          "audioSelectorGroups (p. 530)": {
          },
          "videoSelector (p. 530)": {
            "colorSpace (p. 580)": enum,
            "hdr10Metadata (p. 580)": {
              "redPrimaryY (p. 519)": integer,
              "greenPrimaryY (p. 520)": integer,
              "whitePointX (p. 520)": integer,
              "maxLuminance (p. 520)": integer,
              "greenPrimaryX (p. 520)": integer,
              "whitePointY (p. 520)": integer,
              "redPrimaryX (p. 520)": integer,
              "bluePrimaryY (p. 521)": integer,
              "maxFrameAverageLightLevel (p. 521)": integer,
              "bluePrimaryX (p. 521)": integer,
              "maxContentLightLevel (p. 521)": integer,
              "minLuminance (p. 521)": integer
            },
            "programNumber (p. 581)": integer,
            "pid (p. 581)": integer,
          }
```
"colorSpaceUsage (p. 581)": enum,
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    "startTimecode (p. 531)": "string",
    "endTimecode (p. 532)": "string"
  }
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"outputGroups (p. 537)": [
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          "parNumerator (p. 514)": integer,
          "flickerAdaptiveQuantization (p. 514)": enum,
          "gopSizeUnits (p. 514)": enum,
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          "qualityTuningLevel (p. 515)": enum,
          "maxBitrate (p. 515)": integer,
          "bitrate (p. 515)": integer,
          "temporalAdaptiveQuantization (p. 515)": enum,
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          "slowPai (p. 515)": integer,
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      "greenPrimaryX (p. 520)": integer,
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      "bluePrimaryX (p. 521)": integer,
      "maxFrameAverageLightLevel (p. 521)": integer,
      "bluePrimaryY (p. 521)": integer,
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"minLuminance (p. 521)": integer,
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"hue (p. 484)": integer,
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"fadeIn (p. 533)": integer,
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"layer (p. 534)": integer,
"height (p. 534)": integer,
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"height (p. 570)": integer
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"inputChannels (p. 565)": [integer

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"codec (p. 473)": enum,
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"bitDepth (p. 581)": integer,
"sampleRate (p. 582)": integer
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"ac3Settings (p. 473)": {
  "dynamicRangeCompressionProfile (p. 470)": enum,
  "dialnorm (p. 471)": integer,
  "codingMode (p. 471)": enum,
  "metadataControl (p. 471)": enum,
  "lfeFilter (p. 471)": enum,
  "bitrate (p. 471)": integer,
  "bitstreamMode (p. 471)": enum,
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  "specification (p. 469)": enum,
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  "sampleRate (p. 469)": integer,
  "audioDescriptionBroadcasterMix (p. 469)": enum
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  "metadataControl (p. 496)": enum,
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  "surroundExMode (p. 497)": enum,
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  "lfeControl (p. 497)": enum,
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  "lfeFilter (p. 498)": enum,
  "phaseControl (p. 498)": enum,
  "ltRtCenterMixLevel (p. 498)": number,
  "dcFilter (p. 498)": enum,
  "stereoDownmix (p. 498)": enum,
  "bitstreamMode (p. 498)": enum,
  "loRoSurroundMixLevel (p. 498)": number,
  "loRoCenterMixLevel (p. 499)": number
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"mp2Settings (p. 473)": {
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  "bitrate (p. 552)": integer,
  "sampleRate (p. 552)": integer
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"languageCode (p. 475)": enum,
"streamName (p. 475)": "string",
"audioNormalizationSettings (p. 475)": {
  "targetLkfs (p. 476)": number,
  "algorithmControl (p. 476)": enum,
  "peakCalculation (p. 476)": enum,
  "loudnessLogging (p. 476)": enum,
"correctionGateLevel (p. 476)"": integer,
"algorithm (p. 477)"": enum
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"moovPlacement (p. 553)"": enum,
"cslgAtom (p. 553)"": enum,
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"scte35Pid (p. 549)"": integer,
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"pmtInterval (p. 550)"": integer,
"patInterval (p. 550)"": integer,
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"bitrate (p. 544)"": integer,
"segmentationTime (p. 544)"": number,
"audioPids (p. 544)"": [
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"ebpAudioInterval (p. 544)"": enum,
"fragmentTime (p. 544)"": number,
"audioFramesPerPes (p. 544)"": integer,
"maxPcrInterval (p. 545)"": integer,
"scte35Pid (p. 545)"": integer,
"privateMetadataPid (p. 545)"": integer,
"pmtInterval (p. 545)"": integer,
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"audioBufferModel (p. 545)"": enum,
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"networkName (p. 489)"": "string",
"networkId (p. 489)"": integer,
"nitInterval (p. 489)"": integer
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"scte35Source (p. 546)"": enum,
"pmtPid (p. 546)"": integer,
"bufferModel (p. 546)"": enum,
"ebpPlacement (p. 546)"": enum,
"dvbSdtSettings (p. 546)": {
"sdtInterval (p. 490)"": integer,
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"serviceProviderName (p. 490)"": "string",
"outputSdt (p. 490)"": enum
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"nullPacketBitrate (p. 546)"": number
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"minEbpInterval (p. 547)" : integer,
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"pcrControl (p. 547)" : enum,
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  "tdtInterval (p. 494)" : integer
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"patInterval (p. 548)" : integer,
"dvbSubPids (p. 548)" : [ integer
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"movSettings (p. 486)" : {
  "reference (p. 552)" : enum,
  "paddingControl (p. 552)" : enum,
  "mpeg2FourCCControl (p. 552)" : enum,
  "csigAtom (p. 552)" : enum,
  "clapAtom (p. 552)" : enum
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"f4vSettings (p. 486)" : {
  "moovPlacement (p. 500)" : enum
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"preset (p. 564)" : "string",
"outputSettings (p. 564)" : {
  "hlsSettings (p. 567)" : {
    "iFrameOnlyManifest (p. 528)" : enum,
    "segmentModifier (p. 528)" : "string",
    "audioTrackType (p. 528)" : enum,
    "audioRenditionSets (p. 528)" : "string",
    "audioGroupId (p. 528)" : "string"
  }
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"captionDescriptions (p. 564)" : [
  {
    "captionSelectorName (p. 481)" : "string",
    "languageDescription (p. 481)" : "string",
    "languageCode (p. 481)" : enum,
    "destinationSettings (p. 482)" : {
      "burninDestinationSettings (p. 482)" : {
        "xPosition (p. 477)" : integer,
        "backgroundColor (p. 477)" : enum,
        "teletextSpacing (p. 478)" : enum,
        "yPosition (p. 478)" : integer,
        "backgroundOpacity (p. 478)" : integer,
        "fontOpacity (p. 478)" : integer,
        "shadowOpacity (p. 478)" : integer,
        "fontResolution (p. 478)" : integer,
        "shadowYOffset (p. 479)" : integer,
        "outlineSize (p. 479)" : integer,
        "outlineColor (p. 479)" : enum,
        "fontSize (p. 479)" : integer,
        "shadowXOffset (p. 479)" : integer,
        "alignment (p. 479)" : enum,
        "shadowColor (p. 480)" : enum,
        "fontColor (p. 480)" : enum
      },
      "teletextDestinationSettings (p. 482)" : {
        "pageNumber (p. 573)" : "string"
      },
      "ttmlDestinationSettings (p. 482)" : {
        "stylePassthrough (p. 576)" : enum
      }
    }
  }
]
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"dvbSubDestinationSettings (p. 482)": {
  "xPosition (p. 490)": integer,
  "backgroundColor (p. 490)": enum,
  "teletextSpacing (p. 491)": enum,
  "yPosition (p. 491)": integer,
  "backgroundOpacity (p. 491)": integer,
  "fontOpacity (p. 491)": integer,
  "shadowOpacity (p. 491)": integer,
  "fontResolution (p. 491)": integer,
  "shadowXOffset (p. 492)": integer,
  "outlineSize (p. 492)": integer,
  "outlineColor (p. 492)": enum,
  "fontSize (p. 492)": integer,
  "shadowYOffset (p. 492)": integer,
  "alignment (p. 492)": enum,
  "shadowColor (p. 493)": enum,
  "fontColor (p. 493)": enum
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"sccDestinationSettings (p. 482)": {
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    "minBufferTime (p. 487)": integer,
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        "resourceId (p. 572)": "string",
        "systemIds (p. 572)": ["string"
      ],
        "url (p. 572)": "string"
      }
    },
    "destination (p. 487)": "string",
    "segmentLength (p. 487)": integer,
    "segmentControl (p. 487)": enum,
    "hbbtvCompliance (p. 488)": enum
  },
  "fileGroupSettings (p. 566)": {
    "destination (p. 500)": "string"
  },
  "msSmoothGroupSettings (p. 566)": {
    "fragmentLength (p. 561)": integer,
    "encryption (p. 561)": {
      "spekeKeyProvider (p. 561)": {
        "resourceId (p. 572)": "string",
        "systemIds (p. 572)": ["string"
      ],
        "url (p. 572)": "string"
    }
  },
  "audioDeduplication (p. 561)": enum,
  "manifestEncoding (p. 561)": enum,
  "destination (p. 561)": "string"
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  "streamInfResolution (p. 524)": enum,
  "timestampDeltaMilliseconds (p. 524)": integer,
  "outputSelection (p. 524)": enum,
  "captionLanguageMappings (p. 524)": [
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      "captionChannel (p. 522)": integer,
      "languageCode (p. 522)": enum
    }
  ],
  "clientCache (p. 525)": enum,
  "codecSpecification (p. 525)": enum,
  "destination (p. 525)": "string",
  "segmentControl (p. 525)": enum,
  "timedMetadataId3Frame (p. 525)": enum,
  "timedMetadataId3Period (p. 525)": integer,
  "captionLanguageSetting (p. 525)": enum,
  "minSegmentLength (p. 525)": integer,
  "directoryStructure (p. 526)": enum,
  "programDateTime (p. 526)": enum,
  "baseUrl (p. 526)": "string",
  "encryption (p. 526)": {
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    "constantInitializationVector (p. 523)": "string",
    "staticKeyProvider (p. 523)": {
      "keyFormatVersions (p. 572)": "string",
      "keyFormat (p. 572)": "string",
      "staticKeyId (p. 573)": "string",
      "url (p. 573)": "string"
    },
    "type (p. 523)": enum,
    "spekeKeyProvider (p. 524)": {
      "resourceId (p. 572)": "string",
      "systemIds (p. 572)": [
        "string"
      ],
      "url (p. 572)": "string"
    },
    "encryptionMethod (p. 524)": enum
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  "adMarkers (p. 526)": [enum
  ],
  "programDateTimePeriod (p. 526)": integer,
  "manifestCompression (p. 526)": enum,
  "segmentLength (p. 526)": integer,
  "manifestDurationFormat (p. 527)": enum
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"customName (p. 566)": "string"
}],
"timedMetadataInsertion (p. 537)": {
  "id3Insertions (p. 575)": [
    {
      "id3 (p. 529)": "string",
      "timecode (p. 529)": "string"
    }
  ],
  "availBlanking (p. 537)": {
    "availBlankingImage (p. 477)": "string"
  }
}
Properties

AacAudioDescriptionBroadcasterMix (enum)

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains "broadcaster mixed AD". Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

BROADCASTER_MIXED_AD
NORMAL
**AacCodecProfile (enum)**

AAC Profile.

- LC
- HEV1
- HEV2

**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_5_1

**AacRateControlMode (enum)**

Rate Control Mode.

- CBR
- VBR

**AacRawFormat (enum)**

Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container“ for the output container.

- LATM_LOAS
- NONE

**AacSettings**

**vbrQuality**

- **Type:** string
- **Required:** False

**codecProfile**

- **Type:** string
- **Required:** False

**codingMode**

- **Type:** string
- **Required:** True
specification
  Type: string
  Required: False

bitrate
Average bitrate in bits/second. Valid values depend on rate control mode and profile.
  Type: integer
  Required: False
  Minimum: 6000
  Maximum: 1024000

rawFormat
  Type: string
  Required: False

rateControlMode
  Type: string
  Required: False

sampleRate
Sample rate in Hz. Valid values depend on rate control mode and profile.
  Type: integer
  Required: True
  Minimum: 8000
  Maximum: 96000

audioDescriptionBroadcasterMix
  Type: string
  Required: False

AacSpecification (enum)
Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.
  MPEG2
  MPEG4

AacVbrQuality (enum)
VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.
  LOW
  MEDIUM_LOW
  MEDIUM_HIGH
  HIGH
**Ac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.

- COMPLETE_MAIN
- COMMENTARY
- DIALOGUE
- EMERGENCY
- HEARING_IMPAIRED
- MUSIC_AND_EFFECTS
- VISUALLY_IMPAIRED
- VOICE_OVER

**Ac3CodingMode (enum)**

Dolby Digital coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_3_2_LFE

**Ac3DynamicRangeCompressionProfile (enum)**

If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.

- FILM_STANDARD
- NONE

**Ac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

- ENABLED
- DISABLED

**Ac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED

**Ac3Settings**

**dynamicRangeCompressionProfile**

- **Type:** string
- **Required:** False
**dialnorm**

Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 31

**codingMode**

- **Type**: string
- **Required**: False

**metadataControl**

- **Type**: string
- **Required**: False

**lfeFilter**

- **Type**: string
- **Required**: False

**bitrate**

Average bitrate in bits/second. Valid bitrates depend on the coding mode.

- **Type**: integer
- **Required**: False
- **Minimum**: 64000
- **Maximum**: 640000

**bitstreamMode**

- **Type**: string
- **Required**: False

**sampleRate**

Sample rate in hz. Sample rate is always 48000.

- **Type**: integer
- **Required**: False
- **Minimum**: 48000
- **Maximum**: 48000

**AfdSignaling (enum)**

This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to whether there are AFD values in the output video data and what those values are.

* Choose None to remove all AFD values from this output.
* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.

* Choose Auto to calculate output AFD values based on the input AFD scaler data.

  - NONE
  - AUTO
  - FIXED

### AiffSettings

**channels**

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2

**bitDepth**

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type**: integer
- **Required**: False
- **Minimum**: 16
- **Maximum**: 24

**sampleRate**

Sample rate in hz.

- **Type**: integer
- **Required**: False
- **Minimum**: 8000
- **Maximum**: 192000

### AncillarySourceSettings

**sourceAncillaryChannelNumber**

Specifies the 608 channel number in the ancillary data track from which to extract captions. Unused for passthrough.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 4

### AntiAlias (enum)

Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.
DISABLED
ENABLED

AudioCodec (enum)
Type of Audio codec.
- AAC
- MP2
- WAV
- AIFF
- AC3
- EAC3
- PASSTHROUGH

AudioCodecSettings

codec
Type: string
Required: True

wavSettings
Type: WavSettings (p. 581)
Required: False

ac3Settings
Type: Ac3Settings (p. 470)
Required: False

aacSettings
Type: AacSettings (p. 468)
Required: False

aiffSettings
Type: AiffSettings (p. 472)
Required: False

eac3Settings
Type: Eac3Settings (p. 496)
Required: False

mp2Settings
Type: Mp2Settings (p. 552)
Properties

**Required**: False

**AudioDefaultSelection (enum)**

When an "Audio Description":#audio_description specifies an AudioSelector or AudioSelectorGroup for which no matching source is found in the input, then the audio selector marked as DEFAULT will be used. If none are marked as default, silence will be inserted for the duration of the input.

- DEFAULT
- NOT_DEFAULT

**AudioDescription**

**languageCodeControl**

Type: string  
**Required**: False

**audioTypeControl**

Type: string  
**Required**: False

**remixSettings**

Advanced audio remixing settings.

**Type**: RemixSettings (p. 570)  
**Required**: False

**audioType**

Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 255

**audioSourceName**

Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.

**Type**: string  
**Required**: False
Properties

**codecSettings**

Type: `AudioCodecSettings (p. 473)`
Required: True

**languageCode**

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

Type: string
Required: False

**streamName**

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (eg. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

Type: string
Required: False
Pattern: `^[\w\s]*$`

**audioNormalizationSettings**

Advanced audio normalization settings.

Type: `AudioNormalizationSettings (p. 476)`
Required: False

**AudioLanguageCodeControl (enum)**

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode' will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

FOLLOW_INPUT
USE_CONFIGURED

**AudioNormalizationAlgorithm (enum)**

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

ITU_BS_1770_1
ITU_BS_1770_2

**AudioNormalizationAlgorithmControl (enum)**

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.

CORRECT_AUDIO
MEASURE_ONLY

**AudioNormalizationLoudnessLogging (enum)**

If set to LOG, log each output's audio track loudness to a CSV file.

- LOG
- DONT_LOG

**AudioNormalizationPeakCalculation (enum)**

If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.

- TRUE_PEAK
- NONE

**AudioNormalizationSettings**

**targetLkfs**

Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -59.0
- **Maximum**: 0.0

**algorithmControl**

- **Type**: string
- **Required**: False

**peakCalculation**

- **Type**: string
- **Required**: False

**loudnessLogging**

- **Type**: string
- **Required**: False

**correctionGateLevel**

Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.

- **Type**: integer
- **Required**: False
- **Minimum**: -70
**Maximum**: 0

**algorithm**

  **Type**: string  
  **Required**: False

**AudioSelectorType (enum)**

Specifies the type of the audio selector.

  - **PID**
  - **TRACK**
  - **LANGUAGE_CODE**

**AudioTypeControl (enum)**

When set to FOLLOW_INPUT, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to BROADCASTER_MIXED_AD.

  - **FOLLOW_INPUT**
  - **USE_CONFIGURED**

**AvailBlanking**

**availBlankingImage**

Blanking image to be used. Leave empty for solid black. Only bmp and png images are supported.

  **Type**: string  
  **Required**: False  
  **Pattern**: `^(s3://)(.*?)\.(bmp|BMP|png|PNG)$`

**BurninDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

  **Type**: integer  
  **Required**: False  
  **Minimum**: 0  
  **Maximum**: 2147483647

**backgroundColor**

  **Type**: string  
  **Required**: False
teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

Type: integer
Properties

shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -96
Maximum: 600

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 10

outlineColor

Type: string
Required: True

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 96

shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

alignment

Type: string
Required: True
shadowColor

Type: string
Required: False

fontColor

Type: string
Required: False

BurninSubtitleAlignment (enum)

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED
LEFT

BurninSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

BurninSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

WHITE
BLACK
YELLOW
RED
GREEN
BLUE

BurninSubtitleOutlineColor (enum)

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

BLACK
WHITE
YELLOW
RED
GREEN
BLUE

BurninSubtitleShadowColor (enum)
Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

BurninSubtitleTeletextSpacing (enum)
Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

FIXED_GRID
PROPORTIONAL

CancelJobRequest
id

Type: string
Required: True

CancelJobResponse
CaptionDescription
captionSelectorName
Specifies which "Caption Selector":#inputs-caption_selector to use from each input when generating captions. The name should be of the format "Caption Selector <N>", which denotes that the Nth Caption Selector will be used from each input.

Type: string
Required: True

languageDescription
Human readable information to indicate captions available for players (eg, English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

Type: string
Required: False
Pattern: ^[^\s ]*$

languageCode
Indicates the language of the caption output track.
Type: string
Required: False

destinationSettings

Type: CaptionDestinationSettings (p. 482)
Required: False

CaptionDestinationSettings

burninDestinationSettings

Type: BurninDestinationSettings (p. 477)
Required: False

teletextDestinationSettings

Type: TeletextDestinationSettings (p. 573)
Required: False

ttmlDestinationSettings

Type: TtmlDestinationSettings (p. 576)
Required: False

destinationType

Type: string
Required: True

dvbSubDestinationSettings

Type: DvbSubDestinationSettings (p. 490)
Required: False

sccDestinationSettings

Type: SccDestinationSettings (p. 572)
Required: False

CaptionDestinationType (enum)

BURN_IN
DVB_SUB
EMBEDDED
SCC
SRT
TELETEXT
TTML
WEBVTT
CaptionSourceSettings

fileSourceSettings

Type: FileSourceSettings (p. 501)
Required: False

ancillarySourceSettings

Type: AncillarySourceSettings (p. 472)
Required: False

eMBEDDED

sourceType

Type: string
Required: True

dvbSubSourceSettings

Type: DvbSubSourceSettings (p. 493)
Required: False

teletextSourceSettings

Type: TeletextSourceSettings (p. 573)
Required: False

CaptionSourceType (enum)

Use Source (SourceType) to identify the format of your input captions. The service cannot auto-detect caption format.

ANCILLARY
DVB_SUB
EMBEDDED
SCC
TTML
STL
SRT
TELETEXT
NULL_SOURCE

ChannelMapping

outputChannels

Type: Array of type OutputChannelMapping (p. 565)
**Required**: True

**ColorCorrector**

**saturation**

Saturation level.

Type: integer

**Required**: False

Minimum: 1

Maximum: 100

**brightness**

Brightness level.

Type: integer

**Required**: False

Minimum: 1

Maximum: 100

**hdr10Metadata**

Type: [Hdr10Metadata](p. 519)

**Required**: False

**contrast**

Contrast level.

Type: integer

**Required**: False

Minimum: 1

Maximum: 100

**hue**

Hue in degrees.

Type: integer

**Required**: False

Minimum: -180

Maximum: 180

**colorSpaceConversion**

Type: string

**Required**: False

**ColorMetadata (enum)**

Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.
ColorSpace (enum)

Specifies the colorspace of an input. This setting works in tandem with "Color Corrector":.#color_corrector
> color_space_conversion to determine if any conversion will be performed.

FOLLOW
REC_601
REC_709
HDR10
HLG_2020

ColorSpaceConversion (enum)

Determines if colorspace conversion will be performed. If set to _None_, no conversion will be
performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with
differing colorspaces. An input's colorspace can be specified explicitly in the "Video Selector":.#inputs-
video_selector if necessary.

NONE
FORCE_601
FORCE_709
FORCE_HDR10
FORCE_HLG_2020

ColorSpaceUsage (enum)

There are two sources for color metadata, the input file and the job configuration. This enum controls
which takes precedence. FORCE: System will use color metadata supplied by user, if any. If the user does
not supply color metadata the system will use data from the source. FALLBACK: System will use color
metadata from the source. If source has no color metadata, the system will use user-supplied color
metadata values if available.

FORCE
FALLBACK

ContainerSettings

container

Type: string
Required: True

mp4Settings

Type: Mp4Settings (p. 553)
Required: False

m3u8Settings

Type: M3u8Settings (p. 548)
**Required**: False

**m2tsSettings**

*Type*: [M2tsSettings](p. 543)

*Required*: False

**movSettings**

*Type*: [MovSettings](p. 552)

*Required*: False

**f4vSettings**

*Type*: [F4vSettings](p. 500)

*Required*: False

**ContainerType** (enum)

Container for this output. Some containers require a container settings object. If not specified, the default object will be created.

- F4V
- ISMV
- M2TS
- M3U8
- MOV
- MP4
- MPD
- MXF
- RAW

**DashIsoEncryptionSettings**

**spekeKeyProvider**

*Type*: [SpekeKeyProvider](p. 572)

*Required*: True

**DashIsoGroupSettings**

**fragmentLength**

Length of fragments to generate (in seconds). Fragment length must be compatible with GOP size and Framerate. Note that fragments will end on the next keyframe after this number of seconds, so actual fragment length may be longer. When Emit Single File is checked, the fragmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

*Type*: integer

*Required*: True

*Minimum*: 1
**baseUrl**

A partial URI prefix that will be put in the manifest (.mpd) file at the top level BaseURL element. Can be used if streams are delivered from a different URL than the manifest file.

- **Type:** string
- **Required:** False

**minBufferTime**

Minimum time of initially buffered media that is needed to ensure smooth playout.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**encryption**

DRM settings.

- **Type:** DashIsoEncryptionSettings (p. 486)
- **Required:** False

**destination**

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

- **Type:** string
- **Required:** True
- **Pattern:** ^s3:\\[/\[/

**segmentLength**

Length of mpd segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer. When Emit Single File is checked, the segmentation is internal to a single output file and it does not cause the creation of many output files as in other output types.

- **Type:** integer
- **Required:** True
- **Minimum:** 1
- **Maximum:** 2147483647

**segmentControl**

- **Type:** string
- **Required:** False
**hbbtvCompliance**

*Type:* string  
*Required:* False

**DashIsoHbbtvCompliance (enum)**

Supports HbbTV specification as indicated

- HBBTV_1_5
- NONE

**DashIsoSegmentControl (enum)**

When set to SINGLE_FILE, a single output file is generated, which is internally segmented using the Fragment Length and Segment Length. When set to SEGMENTED_FILES, separate segment files will be created.

- SINGLE_FILE
- SEGMENTED_FILES

**DeinterlaceAlgorithm (enum)**

Only applies when you set Deinterlacer (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.

- INTERPOLATE
- INTERPOLATE_TICKER
- BLEND
- BLEND_TICKER

**Deinterlacer**

**mode**

*Type:* string  
*Required:* False

**control**

*Type:* string  
*Required:* False

**algorithm**

*Type:* string  
*Required:* False

**DeinterlacerControl (enum)**

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to
FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

FORCE_ALL_FRAMES
NORMAL

**DeinterlacerMode (enum)**

Use Deinterlace (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

DEINTERLACE
INVERSE_TELECINE
ADAPTIVE

**DropFrameTimecode (enum)**

Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

DISABLED
ENABLED

**DvbNitSettings**

**networkName**

The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: True

**networkId**

The numeric value placed in the Network Information Table (NIT).

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 65535

**nitInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: True
- **Minimum**: 25
Maximum: 10000

**DvbSdtSettings**

**sdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type**: integer
- **Required**: False
- **Minimum**: 25
- **Maximum**: 2000

**serviceName**

The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**serviceProviderName**

The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**outputSdt**

- **Type**: string
- **Required**: False

**DvbSubDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**backgroundColor**

- **Type**: string
- **Required**: False
teletextSpacing

    Type: string
    Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

    Type: integer
    Required: False
    Minimum: 0
    Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

    Type: integer
    Required: False
    Minimum: 0
    Maximum: 255

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

    Type: integer
    Required: True
    Minimum: 0
    Maximum: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

    Type: integer
    Required: False
    Minimum: 0
    Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

    Type: integer
Required: False
Minimum: 96
Maximum: 600

shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: True
Minimum: 0
Maximum: 10

outlineColor

Type: string
Required: True

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 96

shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

alignment

Type: string
Required: True
shadowColor

  Type: string
  Required: False

fontColor

  Type: string
  Required: False

DvbSubSourceSettings

pid

When using DVB-Sub with Burn-In or SMPTE-TT, use this PID for the source content. Unused for DVB-Sub passthrough. All DVB-Sub content is passed through, regardless of selectors.

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

DvbSubtitleAlignment (enum)

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

  CENTERED
  LEFT

DvbSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

  NONE
  BLACK
  WHITE

DvbSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

  WHITE
  BLACK
  YELLOW
  RED
  GREEN
  BLUE
DvbSubtitleOutlineColor (enum)

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

BLACK
WHITE
YELLOW
RED
GREEN
BLUE

DvbSubtitleShadowColor (enum)

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

DvbSubtitleTeletextSpacing (enum)

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

FIXED_GRID
PROPORTIONAL

DvbTdtSettings

tdtInterval

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: True
Minimum: 1000
Maximum: 30000

Eac3AttenuationControl (enum)

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

ATTENUATE_3_DB
NONE

Eac3BitstreamMode (enum)

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

COMPLETE_MAIN
Eac3CodingMode (enum)
Dolby Digital Plus coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_2_0
- CODING_MODE_3_2

Eac3DcFilter (enum)
Activates a DC highpass filter for all input channels.

- ENABLED
- DISABLED

Eac3DynamicRangeCompressionLine (enum)
Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

Eac3DynamicRangeCompressionRf (enum)
Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

- NONE
- FILM_STANDARD
- FILM_LIGHT
- MUSIC_STANDARD
- MUSIC_LIGHT
- SPEECH

Eac3LfeControl (enum)
When encoding 3/2 audio, controls whether the LFE channel is enabled.

- LFE
- NO_LFE

Eac3LfeFilter (enum)
Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.
ENABLED
DISABLED

**Eac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED

**Eac3PassthroughControl (enum)**

When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.

- WHEN_POSSIBLE
- NO_PASSTHROUGH

**Eac3PhaseControl (enum)**

Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

- SHIFT_90_DEGREES
- NO_SHIFT

**Eac3Settings**

dialnorm

Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 31

**passthroughControl**

- **Type**: string
- **Required**: False

**metadataControl**

- **Type**: string
- **Required**: False

**bitrate**

Average bitrate in bits/second. Valid bitrates depend on the coding mode.
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Properties

**Type**: integer
**Required**: False
**Minimum**: 64000
**Maximum**: 640000

**dynamicRangeCompressionRf**

**Type**: string
**Required**: False

**sampleRate**

Sample rate in hz. Sample rate is always 48000.

**Type**: integer
**Required**: False
**Minimum**: 48000
**Maximum**: 48000

**lRtSurroundMixLevel**

Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

**Type**: number
**Required**: False
**Format**: float
**Minimum**: -60.0
**Maximum**: -1.5

**surroundExMode**

**Type**: string
**Required**: False

**dynamicRangeCompressionLine**

**Type**: string
**Required**: False

**lfeControl**

**Type**: string
**Required**: False

**codingMode**

**Type**: string
**Required**: False

**surroundMode**

**Type**: string
Properties

- **Required**: False

  **attenuationControl**
  - **Type**: string
  - **Required**: False

  **lfeFilter**
  - **Type**: string
  - **Required**: False

  **phaseControl**
  - **Type**: string
  - **Required**: False

  **ltRtCenterMixLevel**
  - **Description**: Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5 -3.0 -4.5 -6.0 -60
  - **Type**: number
  - **Required**: False
  - **Format**: float
  - **Minimum**: -60.0
  - **Maximum**: 3.0

  **dcFilter**
  - **Type**: string
  - **Required**: False

  **stereoDownmix**
  - **Type**: string
  - **Required**: False

  **bitstreamMode**
  - **Type**: string
  - **Required**: False

  **loRoSurroundMixLevel**
  - **Description**: Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60
  - **Type**: number
  - **Required**: False
  - **Format**: float
  - **Minimum**: -60.0
  - **Maximum**: -1.5
**IoRoCenterMixLevel**
Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -60.0
- **Maximum**: 3.0

**Eac3StereoDownmix (enum)**
Stereo downmix preference. Only used for 3/2 coding mode.

- NOT_INDICATED
- LO_RO
- LT_RT
- DPL2

**Eac3SurroundExMode (enum)**
When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

- NOT_INDICATED
- ENABLED
- DISABLED

**Eac3SurroundMode (enum)**
When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

- NOT_INDICATED
- ENABLED
- DISABLED

**EmbeddedConvert608To708 (enum)**
When set to UPCONVERT, 608 data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.

- UPCONVERT
- DISABLED

**EmbeddedSourceSettings**

**source608ChannelNumber**
Specifies the 608/708 channel number within the video track from which to extract captions. Unused for passthrough.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 4
convert608To708
Type: string
Required: False

source608TrackNumber
Specifies the video track index used for extracting captions. The system only supports one input video track, so this should always be set to '1'.
Type: integer
Required: False
Minimum: 1
Maximum: 1

ExceptionBody

message
Type: string
Required: False

F4vMoovPlacement (enum)
If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVE_DOWNLOAD
NORMAL

F4vSettings

moovPlacement
Type: string
Required: False

FileGroupSettings

destination
Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.
Type: string
Required: True
Pattern: ^s3:\/\(/

FileSourceConvert608To708 (enum)
If set to UPCONVERT, 608 caption data is both passed through via the "608 compatibility bytes" fields of the 708 wrapper as well as translated into 708. 708 data present in the source content will be discarded.
UPCONVERT
DISABLED

FileSourceSettings

timeDelta

Specifies a time delta in seconds to offset the captions from the source file.

  Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647

convert608To708

  Type: string
  Required: False

sourceFile

External caption file used for loading captions. Accepted file extensions are 'scc', 'ttml', 'dfxp', 'stl', 'srt', and 'smi'. Auto-populated when Infer External Filename is checked.

  Type: string
  Required: True
  Pattern: ^\(s3:\//\//\(.*\)\.(scc|SCC|ttml|TTML|dfxp|DFXP|stl|STL|srt|SRT|smi|SMI)\)$

FrameCaptureSettings

framerateDenominator

Frame capture will encode the first frame of the output stream, then one frame every 
framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each 
Capture.

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

maxCaptures

Maximum number of captures (encoded jpg output files).

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 10000000
framerateNumerator

Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.NNNNNNN.jpg where N is the 0-based frame sequence number zero padded to 7 decimal places.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

quality

JPEG Quality - a higher value equals higher quality.

Type: integer
Required: False
Minimum: 1
Maximum: 100

GetJobRequest

id

Type: string
Required: True

GetJobResponse

job

Type: Job (p. 535)
Required: False

H264AdaptiveQuantization (enum)

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

OFF
LOW
MEDIUM
HIGH
HIGHER
MAX

H264CodecLevel (enum)

H.264 Level.

AUTO
LEVEL_1
LEVEL_1_1
LEVEL_1_2
LEVEL_1_3
LEVEL_2
LEVEL_2_1
LEVEL_2_2
LEVEL_3
LEVEL_3_1
LEVEL_3_2
LEVEL_4
LEVEL_4_1
LEVEL_4_2
LEVEL_5
LEVEL_5_1
LEVEL_5_2

H264CodecProfile (enum)

H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

BASELINE
HIGH
HIGH_10BIT
HIGH_422
HIGH_422_10BIT
MAIN

H264EntropyEncoding (enum)

Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

CABAC
CAVLC

H264FieldEncoding (enum)

Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

PAFF
FORCE_FIELD

H264FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

DISABLED
ENABLED

H264FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED
H264FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.

   DUPLICATE_DROP
   INTERPOLATE

H264GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.

   DISABLED
   ENABLED

H264GopSizeUnits (enum)
Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the
GOP Size into a frame count at run time.

   FRAMES
   SECONDS

H264InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the
total output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD)
use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the
source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the
source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is
progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending
on which of the Follow options you chose.

   PROGRESSIVE
   TOP_FIELD
   BOTTOM_FIELD
   FOLLOW_TOP_FIELD
   FOLLOW_BOTTOM_FIELD

H264ParControl (enum)
Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the
input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

   INITIALIZE_FROM_SOURCE
   SPECIFIED

H264QualityTuningLevel (enum)
Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-
quality singlepass, or high-quality multipass video encoding.

   SINGLE_PASS
   SINGLE_PASS_HQ
MULTI_PASS_HQ

H264RateControlMode (enum)
Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

VBR
CBR

H264RepeatPps (enum)
Places a PPS header on each encoded picture, even if repeated.

DISABLED
ENABLED

H264SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

H264Settings

slices
Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

Type: integer
Required: False
Minimum: 1
Maximum: 32

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

Type: integer
Properties

Required: False
Minimum: 1
Maximum: 2147483647

flickerAdaptiveQuantization

Type: string
Required: False

gopSizeUnits

Type: string
Required: False

hrdBufferSize

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

qualityTuningLevel

Type: string
Required: False

maxBitrate

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

bitrate

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

spatialAdaptiveQuantization

Type: string
Required: False
slowPal
  Type: string
  Required: False

codecProfile
  Type: string
  Required: False

unregisteredSeiT imecode
  Type: string
  Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
  Type: integer
  Required: False
  Minimum: 0
  Maximum: 128

d framerateControl
  Type: string
  Required: False

telecine
  Type: string
  Required: False

d framerateConversionAlgorithm
  Type: string
  Required: False

codecLevel
  Type: string
  Required: False

numberReferenceFrames
Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.
  Type: integer
  Required: False
  Minimum: 1
Maximum: 6

temporalAdaptiveQuantization

Type: string
Required: False

repeatPps

Type: string
Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

fieldEncoding

Type: string
Required: False

entropyEncoding
Type: string
Required: False

framerateDenominator
When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateDenominator to specify the denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When you use the console for transcode jobs that use framerate conversion, provide the value as a decimal number for Framerate. In this example, specify 23.976.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization
Type: string
Required: False

interlaceMode
Type: string
Required: False

gopSize
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

gopBReference
Type: string
Required: False

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

parControl
Type: string  
Required: False

syntax
Type: string  
Required: False

rateControlMode
Type: string  
Required: False

H264SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

   DISABLED  
   ENABLED

H264SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.

   DISABLED  
   ENABLED

H264Syntax (enum)
Produces a bitstream compliant with SMPTE RP-2027.

   DEFAULT  
   RP2027

H264Telecine (enum)
This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine.  
   - Hard: produces 29.97i output from 23.976 input.  
   - Soft: produces 23.976; the player converts this output to 29.97i.

   NONE  
   SOFT
HARD

H264TemporalAdaptiveQuantization (enum)
Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

H264UnregisteredSeiTimecode (enum)
Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

DISABLED
ENABLED

H265AdaptiveQuantization (enum)
Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

OFF
LOW
MEDIUM
HIGH
HIGHER
MAX

H265AlternateTransferFunctionSei (enum)
Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).

DISABLED
ENABLED

H265CodecLevel (enum)
H.265 Level.

AUTO
LEVEL_1
LEVEL_2
LEVEL_2_1
LEVEL_3
LEVEL_3_1
LEVEL_4
LEVEL_4_1
LEVEL_5
LEVEL_5_1
LEVEL_5_2
LEVEL_6
LEVEL_6_1
LEVEL_6_2
H265CodecProfile (enum)

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as [Profile] / [Tier], so "Main/High" represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

- MAIN_MAIN
- MAIN_HIGH
- MAIN10_MAIN
- MAIN10_HIGH
- MAIN_422_8BIT_MAIN
- MAIN_422_8BIT_HIGH
- MAIN_422_10BIT_MAIN
- MAIN_422_10BIT_HIGH

H265FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

- DISABLED
- ENABLED

H265FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

H265FramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

H265GopBReference (enum)

If enable, use reference B frames for GOP structures that have B frames > 1.

- DISABLED
- ENABLED

H265GopSizeUnits (enum)

Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

H265InterlaceMode (enum)

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.
* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

**H265ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**H265QualityTuningLevel (enum)**

Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

- SINGLE_PASS
- SINGLE_PASS_HQ
- MULTI_PASS_HQ

**H265RateControlMode (enum)**

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

**H265SampleAdaptiveOffsetFilterMode (enum)**

Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

- DEFAULT
- ADAPTIVE
- OFF

**H265SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

- DISABLED
H265Settings

slices

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

Type: integer
  Required: False
  Minimum: 1
  Maximum: 32

minIInterval

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
  Required: False
  Minimum: 0
  Maximum: 30

parNumerator

Pixel Aspect Ratio numerator.

Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

flickerAdaptiveQuantization

Type: string
  Required: False

gopSizeUnits

Type: string
  Required: False

hrdBufferSize

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Properties

**Required**: False

**qualityTuningLevel**

- **Type**: string
- **Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

- **Type**: integer
- **Required**: False
- **Minimum**: 1000
- **Maximum**: 2147483647

**spatialAdaptiveQuantization**

- **Type**: string
- **Required**: False

**sampleAdaptiveOffsetFilterMode**

- **Type**: string
- **Required**: False

**temporalIds**

- **Type**: string
- **Required**: False

**slowPal**

- **Type**: string
- **Required**: False

**tiles**

- **Type**: string
Required: False

codecProfile
  Type: string
  Required: False

alternateTransferFunctionSei
  Type: string
  Required: False

unregisteredSeiTImecode
  Type: string
  Required: False

framerateControl
  Type: string
  Required: False

telecine
  Type: string
  Required: False

framerateConversionAlgorithm
  Type: string
  Required: False

codecLevel
  Type: string
  Required: False

numberReferenceFrames
  Number of reference frames to use. The encoder may use more than requested if using B-frames and/or
  interlaced encoding.
  Type: integer
  Required: False
  Minimum: 1
  Maximum: 6

temporalAdaptiveQuantization
  Type: string
  Required: False
**hrdBufferInitialFillPercentage**

Percentage of the buffer that should initially be filled (HRD buffer model).

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 100

**framerateNumerator**

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2147483647

**numberBFramesBetweenReferenceFrames**

Number of B-frames between reference frames.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 7

**gopClosedCadence**

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**framerateDenominator**

Framerate denominator.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2147483647

**adaptiveQuantization**

- **Type:** string
  - **Required:** False

**interlaceMode**

- **Type:** string
Required: False

gopSize
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
  Type: number
  Required: False
  Format: float
  Minimum: 0.0

gopBReference
  Type: string
  Required: False

sceneChangeDetect
  Type: string
  Required: False

parDenominator
Pixel Aspect Ratio denominator.
  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

parControl
  Type: string
  Required: False

rateControlMode
  Type: string
  Required: False

H265SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
  DISABLED
  ENABLED

H265SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.
  DISABLED
  ENABLED
**H265Telecine (enum)**

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

- NONE
- SOFT
- HARD

**H265TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- DISABLED
- ENABLED

**H265TemporalIds (enum)**

Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbPbPb display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

- DISABLED
- ENABLED

**H265Tiles (enum)**

Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

- DISABLED
- ENABLED

**H265UnregisteredSeiT Imecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- DISABLED
- ENABLED

**Hdr10Metadata**

**redPrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
**Maximum**: 50000

**greenPrimaryY**
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**whitePointX**
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**maxLuminance**
Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**greenPrimaryX**
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**whitePointY**
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**redPrimaryX**
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.
Properties

bluePrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxFrameAverageLightLevel

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

bluePrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxContentLightLevel

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

minLuminance

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

HlsAdMarkers (enum)

ELEMENTAL
ELEMENTAL_SCTE35

HlsAudioTrackType (enum)

Four types of audio-only tracks are supported: Audio-Only Variant Stream The client can play back this audio-only stream instead of video in low-bandwidth scenarios. Represented as an EXT-X-STREAM-INF in the HLS manifest. Alternate Audio, Auto Select, Default Alternate rendition that the client should try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=YES, AUTOSELECT=YES Alternate Audio, Auto Select, Not Default Alternate rendition that the client may try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=YES Alternate Audio, not Auto Select Alternate rendition that the client will not try to play back by default. Represented as an EXT-X-MEDIA in the HLS manifest with DEFAULT=NO, AUTOSELECT=NO

ALTERNATE_AUDIO_AUTO_SELECT_DEFAULT
ALTERNATE_AUDIO_AUTO_SELECT
ALTERNATE_AUDIO_NOT_AUTO_SELECT
AUDIO_ONLY_VARIANT_STREAM

HlsCaptionLanguageMapping

languageDescription

Caption language description.

Type: string
Required: False

captionChannel

Caption channel.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

languageCode

Type: string
Required: False

HlsCaptionLanguageSetting (enum)

Applies only to 608 Embedded output captions. Insert: Include CLOSED-CAPTIONS lines in the manifest. Specify at least one language in the CC1 Language Code field. One CLOSED-CAPTION line is added for each Language Code you specify. Make sure to specify the languages in the order in which they appear in the original source (if the source is embedded format) or the order of the caption selectors (if the source is other than embedded). Otherwise, languages in the manifest will not match up properly with the
output captions. None: Include CLOSED-CAPTIONS=NONE line in the manifest. Omit: Omit any CLOSED-CAPTIONS line from the manifest.

- INSERT
- OMIT
- NONE

**HlsClientCache (enum)**

When set to ENABLED, sets #EXT-X-ALLOW-CACHE:no tag, which prevents client from saving media segments for later replay.

- DISABLED
- ENABLED

**HlsCodecSpecification (enum)**

Specification to use (RFC-6381 or the default RFC-4281) during m3u8 playlist generation.

- RFC_6381
- RFC_4281

**HlsDirectoryStructure (enum)**

Indicates whether segments should be placed in subdirectories.

- SINGLE_DIRECTORY
- SUBDIRECTORY_PER_STREAM

**HlsEncryptionSettings**

**initializationVectorInManifest**

- Type: string
- Required: False

**constantInitializationVector**

This is a 128-bit, 16-byte hex value represented by a 32-character text string. If this parameter is not set then the Initialization Vector will follow the segment number by default.

- Type: string
- Required: False
- Pattern: ^[0-9a-fA-F]{32}$

**staticKeyProvider**

- Type: StaticKeyProvider (p. 572)
- Required: False

**type**

- Type: string
- Required: True
Properties

spekeKeyProvider

Type: SpekeKeyProvider (p. 572)
Required: False

egressionMethod

Type: string
Required: False

HlsEncryptionType (enum)

Encrypts the segments with the given encryption scheme. Leave blank to disable. Selecting 'Disabled' in the web interface also disables encryption.

AES128
SAMPLE_AES

HlsGroupSettings

segmentsPerSubdirectory

Number of segments to write to a subdirectory before starting a new one. directoryStructure must be SINGLE_DIRECTORY for this setting to have an effect.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

streamInfResolution

Type: string
Required: False

timestampDeltaMilliseconds

Provides an extra millisecond delta offset to fine tune the timestamps.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

outputSelection

Type: string
Required: False

captionLanguageMappings

Type: Array of type HlsCaptionLanguageMapping (p. 522)
Required: False
clientCache
  Type: string
  Required: False

codecSpecification
  Type: string
  Required: False

destination
Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.
  Type: string
  Required: True
  Pattern: ^s3://\/

segmentControl
  Type: string
  Required: False

timedMetadataId3Frame
  Type: string
  Required: False

timedMetadataId3Period
Timed Metadata interval in seconds.
  Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647

captionLanguageSetting
  Type: string
  Required: False

minSegmentLength
When set, Minimum Segment Size is enforced by looking ahead and back within the specified range for a nearby avail and extending the segment size if needed.
  Type: integer
  Required: True
  Minimum: 0
Properties

Maximum: 2147483647

directoryStructure

Type: string
Required: False

programDateTime

Type: string
Required: False

baseUrl

A partial URI prefix that will be prepended to each output in the media .m3u8 file. Can be used if base manifest is delivered from a different URL than the main .m3u8 file.

Type: string
Required: False

encryption

DRM settings.

Type: HlsEncryptionSettings (p. 523)
Required: False

adMarkers

Choose one or more ad marker types to pass SCTE35 signals through to this group of Apple HLS outputs.

Type: Array of type string
Required: False

programDateTimePeriod

Period of insertion of EXT-X-PROGRAM-DATE-TIME entry, in seconds.

Type: integer
Required: False
Minimum: 0
Maximum: 3600

manifestCompression

Type: string
Required: False

segmentLength

Length of MPEG-2 Transport Stream segments to create (in seconds). Note that segments will end on the next keyframe after this number of seconds, so actual segment length may be longer.
**manifestDurationFormat**

Type: string
Required: False

**HlsFrameOnlyManifest (enum)**

When set to INCLUDE, writes I-Frame Only Manifest in addition to the HLS manifest

- INCLUDE
- EXCLUDE

**HlsInitializationVectorInManifest (enum)**

The Initialization Vector is a 128-bit number used in conjunction with the key for encrypting blocks. If set to INCLUDE, Initialization Vector is listed in the manifest. Otherwise Initialization Vector is not in the manifest.

- INCLUDE
- EXCLUDE

**HlsKeyProviderType (enum)**

Indicates which type of key provider is used for encryption.

- SPEKE
- STATIC_KEY

**HlsManifestCompression (enum)**

When set to GZIP, compresses HLS playlist.

- GZIP
- NONE

**HlsManifestDurationFormat (enum)**

Indicates whether the output manifest should use floating point values for segment duration.

- FLOATING_POINT
- INTEGER

**HlsOutputSelection (enum)**

Indicates whether the .m3u8 manifest file should be generated for this HLS output group.

- MANIFESTS_AND_SEGMENTS
SEGMENTS_ONLY

**HlsProgramDateTime (enum)**

Includes or excludes EXT-X-PROGRAM-DATE-TIME tag in .m3u8 manifest files. The value is calculated as follows: either the program date and time are initialized using the input timecode source, or the time is initialized using the input timecode source and the date is initialized using the timestamp_offset.

- INCLUDE
- EXCLUDE

**HlsSegmentControl (enum)**

When set to SINGLE_FILE, emits program as a single media resource (.ts) file, uses #EXT-X-BYTERANGE tags to index segment for playback.

- SINGLE_FILE
- SEGMENTED_FILES

**HlsSettings**

**iFrameOnlyManifest**

- Type: string
- Required: False

**segmentModifier**

String concatenated to end of segment filenames. Accepts "Format Identifiers":#format_identifier_parameters.

- Type: string
- Required: False

**audioTrackType**

- Type: string
- Required: False

**audioRenditionSets**

List all the audio groups that are used with the video output stream. Input all the audio GROUP-IDs that are associated to the video, separate by ",".

- Type: string
- Required: False

**audioGroupId**

Specifies the group to which the audio Rendition belongs.

- Type: string
- Required: False
HlsStreamInfResolution (enum)
Include or exclude RESOLUTION attribute for video in EXT-X-STREAM-INF tag of variant manifest.

    INCLUDE
    EXCLUDE

HlsTimedMetadataId3Frame (enum)
Indicates ID3 frame that has the timecode.

    NONE
    PRIV
    TDRL

Id3Insertion

id3
Use ID3 tag (id3) to provide a tag value in base64-encode format.

    Type: string
    Required: True
    Pattern: ^[A-Za-z0-9+\-\s]+={0,2}$

timecode
Provide a Timecode (TimeCode) in HH:MM:SS:FF or HH:MM:SS;FF format.

    Type: string
    Required: True
    Format: timecode
    Pattern: ^([0-9][0-9]|[0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9]:[0-9]{2}$

ImageInserter

insertableImages
Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.

    Type: Array of type InsertableImage (p. 533)
    Required: True

Input

audioSelectors
Use Audio selectors (AudioSelectors) to specify a track or set of tracks from the input that you will use in your outputs. You can use mutiple Audio selectors per input.

    Type: object
    Required: False
audioSelectorGroups

Specifies set of audio selectors within an input to combine. An input may have multiple audio selector groups. See "Audio Selector Group". See inputs-audio_selector_group for more information.

  Type: object
  Required: False

videoSelector

  Type: VideoSelector (p. 580)
  Required: False

denoiseFilter

  Type: string
  Required: False

filterEnable

  Type: string
  Required: False

deblockFilter

  Type: string
  Required: False

filterStrength

Use Filter strength (FilterStrength) to adjust the magnitude the input filter settings (Deblock and Denoise). The range is -5 to 5. Default is 0.

  Type: integer
  Required: False
  Minimum: -5
  Maximum: 5

programNumber

Use Program (programNumber) to select a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported. Default is the first program within the transport stream. If the program you specify doesn't exist, the transcoding service will use this default.

  Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647

timecodeSource

  Type: string
  Required: False
captionSelectors

Use Captions selectors (CaptionSelectors) to specify the captions data from the input that you will use in your outputs. You can use multiple captions selectors per input.

**Type:** object  
**Required:** False

fileInput

Use Input (fileInput) to define the source file used in the transcoding job. There can be multiple inputs in a job. These inputs are concatenated, in the order they are specified in the job, to create the output.

**Type:** string  
**Required:** True  
**Pattern:** ^s3:/[^/]+/[^/]+[^/]+([^/]+)[mM][vV][pP][eE][gG][aA][vV][iI][mM][pP][tT][mM][kK][vV][mM][oO][vV][mM][tT][sS][mM][pP][eE][gG][mM][xX][fF][sS][tT]|264|h264|m4v|m2t|m2ts|aav|m2v|m2ts|mp4|mp4v|mp4vts|webm|vorbis|3gp|3gpp|mxf|divx|xvid|h264|mkv|mov|movp|mp4|mpt|mpeg2|h264|m4v|o[hH]|w[vW]|asf|vob|3gp|3gpp|mxf|divx|xvid|h264|m2s|m2t|wmv|"^s3:/[^/]+/[^/]+[^/]+([^/]+)[mM][vV][pP][eE][gG][aA][vV][iI][mM][pP][tT][mM][kK][vV][mM][oO][vV][mM][tT][sS][mM][pP][eE][gG][mM][xX][fF][sS][tT]|264|h264|m4v|m2t|m2ts|aav|m2v|m2ts|mp4|mp4v|mp4vts|webm|vorbis|3gp|3gpp|mxf|divx|xvid|h264|m2s|m2t|wmv|"$^

inputClippings

(inputClippings) contains sets of start and end times that together specify a portion of the input to be used in the outputs. If you provide only a start time, the clip will be the entire input from that point to the end. If you provide only an end time, it will be the entire input up to that point. When you specify more than one input clip, the transcoding service creates the job outputs by stringing the clips together in the order you specify them.

**Type:** Array of type InputClipping  
**Required:** False

psiControl

**Type:** string  
**Required:** False

InputClipping

startTimecode

Set Start timecode (StartTimecode) to the beginning of the portion of the input you are clipping. The frame corresponding to the Start timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:05:00.

**Type:** string  
**Required:** False  
**Format:** timecode  
**Pattern:** ^([01][0-9][0-5][0-9]):[0-5][0-9]:[0-5][0-9][0-9][0-9][0-9][0-9]$
**endTimecode**

Set End timecode (EndTimecode) to the end of the portion of the input you are clipping. The frame corresponding to the End timecode value is included in the clip. Start timecode or End timecode may be left blank, but not both. When choosing this value, take into account your setting for Input timecode source. For example, if you have embedded timecodes that start at 01:00:00:00 and you want your clip to begin five minutes into the video, use 01:00:00:05.

- **Type:** string
- **Required:** False
- **Format:** timecode
- **Pattern:** `^[01][0-9]|2[0-4]::[0-5][0-9][0-9][0-9]|;[0-9]{2}$`

**InputDeblockFilter (enum)**

Enable Deblock (InputDeblockFilter) to produce smoother motion in the output. Default is disabled. Only manually controllable for MPEG2 and uncompressed video inputs.

- ENABLED
- DISABLED

**InputDenoiseFilter (enum)**

Enable Denoise (InputDenoiseFilter) to filter noise from the input. Default is disabled. Only applicable to MPEG2, H.264, H.265, and uncompressed video inputs.

- ENABLED
- DISABLED

**InputFilterEnable (enum)**

Use Filter enable (InputFilterEnable) to specify how the transcoding service applies the denoise and deblock filters. You must also enable the filters separately, with Denoise (InputDenoiseFilter) and Deblock (InputDeblockFilter).

- * Auto - The transcoding service determines whether to apply filtering, depending on input type and quality.
- * Disable - The input is not filtered. This is true even if you use the API to enable them in (InputDeblockFilter) and (InputDeblockFilter).
- * Force - The input is filtered regardless of input type.

- AUTO
- DISABLE
- FORCE

**InputPsiControl (enum)**

Set PSI control (InputPsiControl) for transport stream inputs to specify which data the demux process to scans.

- * Ignore PSI - Scan all PIDs for audio and video.
- * Use PSI - Scan only PSI data.
USE_PSI

**InputTimecodeSource (enum)**

Use Timecode source (`InputTimecodeSource`) to specify how timecode information from your input is adjusted and encoded in all outputs for the job. Default is embedded. Set to Embedded (EMBEDDED) to use the timecode that is in the input video. If no embedded timecode is in the source, will set the timecode for the first frame to 00:00:00:00. Set to Start at 0 (ZEROBASED) to set the timecode of the initial frame to 00:00:00:00. Set to Specified start (SPECIFIEDSTART) to provide the initial timecode yourself the setting (Start).

- EMBEDDED
- ZEROBASED
- SPECIFIEDSTART

**InsertableImage**

**duration**

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**fadeOut**

Use Fade out (FadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don’t specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**imageY**

Use Top (ImageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**fadeIn**

Use Fade in (FadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don’t specify a value for Fade in, the image will appear abruptly at the Start time.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
**Maximum:** 2147483647

**imageX**

Use Left (ImageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

- **Type:** integer
- **Required:** True
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**width**

Specify the Width (Width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**startTime**

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

- **Type:** string
- **Required:** False

**opacity**

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 100

**layer**

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 7

**height**

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.
**Properties**

**Type**: integer  
**Required**: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**imagelnterterInput**

Use Image location (imageInserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

**Type**: string  
**Required**: True  
**Pattern**: `( s3 : / / ) ( .* ? ) \.( bmp | BMP | png | PNG | tga | TGA )`$\$

**Job**

**settings**

**Type**: JobSettings (p. 536)  
**Required**: True

**outputGroupDetails**

**Type**: Array of type OutputGroupDetail (p. 566)  
**Required**: False

**role**

The IAM role you use for creating this job. For details about permissions, see the User Guide topic at the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/iam-role.html

**Type**: string  
**Required**: True

**jobTemplate**

The job template that the job is created from, if it is created from a job template.

**Type**: string  
**Required**: False

**timing**

**Type**: Timing (p. 576)  
**Required**: False

**errorMessage**

Error message of job

**Type**: string  
**Required**: False
errorCode

Type: integer
Required: False
Format: int32

createdAt

The time, in Unix epoch format in seconds, when the job got created.

Type: string
Required: False
Format: date-time

id

A portion of the job's ARN, unique within your AWS Elemental MediaConvert resources

Type: string
Required: False

arn

An identifier for this resource that is unique within all of AWS.

Type: string
Required: False

userMetadata

Type: object
Required: False

queue

Optional. When you create a job, you can specify a queue to send it to. If you don’t specify, the job will go to the default queue. For more about queues, see the User Guide topic at http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html

Type: string
Required: False

status

Type: string
Required: False

JobSettings

timecodeConfig

Contains settings used to acquire and adjust timecode information from inputs.

Type: TimecodeConfig (p. 574)
AdAvailOffset

When specified, this offset (in milliseconds) is added to the input Ad Avail PTS time.

- **Type:** integer
- **Required:** False
- **Minimum:** -1000
- **Maximum:** 1000

NielsonConfiguration

Nielsen configuration settings

- **Type:** NielsonConfiguration (p. 562)
- **Required:** False

Inputs

Use Inputs (inputs) to define source file used in the transcode job. There can be multiple inputs added to a job. These inputs will be concatenated together to create the output.

- **Type:** Array of type Input (p. 529)
- **Required:** True

OutputGroups

(OutputGroups) contains one group of settings for each set of outputs that share a common package type. All unpackaged files (MPEG-4, MPEG-2 TS, Quicktime, MXF, and no container) are grouped in a single output group as well. Required in (OutputGroups) is a group of settings that apply to the whole group. This required object depends on the value you set for (Type) under (OutputGroups)->(OutputGroupSettings). Type, settings object pairs are as follows.

- **FILE_GROUP_SETTINGS,** FileGroupSettings
- **HLS_GROUP_SETTINGS,** HlsGroupSettings
- **DASH_ISO_GROUP_SETTINGS,** DashIsoGroupSettings
- **MS_SMOOTH_GROUP_SETTINGS,** MsSmoothGroupSettings

- **Type:** Array of type OutputGroup (p. 565)
- **Required:** True

TimedMetadataInsertion

- **Type:** TimedMetadataInsertion (p. 575)
- **Required:** False

AvailBlanking

Settings for ad avail blanking. Video can be blanked or overlaid with an image, and audio muted during SCTE-35 triggered ad avails.
**Type:** `AvailBlanking` (p. 477)  
**Required:** False

**JobStatus (enum)**

A job’s status can be SUBMITTED, PROGRESSING, COMPLETE, CANCELED, or ERROR.

- SUBMITTED
- PROGRESSING
- COMPLETE
- CANCELED
- ERROR

**LanguageCode (enum)**

Code to specify the language, following the specification "ISO 639-2 three-digit code":http://www.loc.gov/standards/iso639-2/

- ENG
- SPA
- FRA
- DEU
- GER
- ZHO
- ARA
- HIN
- JPN
- RUS
- POR
- ITA
- URD
- VIE
- KOR
- PAN
- ABK
- AAR
- AFR
- AKA
- SQI
- AMH
- ARG
- HYE
- ASM
-AVA
- AVE
- AYM
- AZE
- BAM
- BAK
- EUS
- BEL
- BEN
IPK
GLE
JAV
KAL
KAN
KAU
KAS
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LIN
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LUB
LTZ
MKD
MLG
MSA
MAL
MLT
GLV
MRI
MAR
MAH
MON
NAU
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Properties

QPC
TNG

**M2tsAudioBufferModel (enum)**

Selects between the DVB and ATSC buffer models for Dolby Digital audio.

- **DVB**
- **ATSC**

**M2tsBufferModel (enum)**

Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.

- **MULTIPLEX**
- **NONE**

**M2tsEbpAudioInterval (enum)**

When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- **VIDEO_AND_FIXED_INTERVALS**
- **VIDEO_INTERVAL**

**M2tsEbpPlacement (enum)**

Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- **VIDEO_AND_AUDIO_PIDS**
- **VIDEO_PID**

**M2tsEsRateInPes (enum)**

Controls whether to include the ES Rate field in the PES header.

- **INCLUDE**
- **EXCLUDE**

**M2tsPcrControl (enum)**

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

- **PCR_EVERY_PES_PACKET**
- **CONFIGURED_PCR_PERIOD**
**M2tsRateMode (enum)**

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

**M2tsScte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M2tsSegmentationMarkers (enum)**

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-I01-130118. ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

- NONE
- RAI_SEGSTART
- RAI_ADAPT
- PSI_SEGSTART
- EBP
- EBP_LEGACY

**M2tsSegmentationStyle (enum)**

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $segmentation_time seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $segmentation_time seconds. Note that EBP lookahead is a slight exception to this rule.

- MAINTAIN_CADENCE
- RESET_CADENCE

**M2tsSettings**

**dvbTeletextPid**

Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
Properties

Required: False
Minimum: 32
Maximum: 8182

**bitrate**

The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically
determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**segmentationTime**

The length in seconds of each segment. Required unless markers is set to _none_.

Type: number
Required: False
Format: float
Minimum: 0.0

**audioPids**

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are
accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or
hexadecimal values.

Type: Array of type integer
Required: False

**rateMode**

Type: string
Required: False

**ebpAudioInterval**

Type: string
Required: False

**fragmentTime**

The length in seconds of each fragment. Only used with EBP markers.

Type: number
Required: False
Format: float
Minimum: 0.0

**audioFramesPerPes**

The number of audio frames to insert for each PES packet.
Properties

Type  integer  
Required  False  
Minimum  0  
Maximum  2147483647

maxPcrInterval

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.

Type  integer  
Required  False  
Minimum  0  
Maximum  500

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type  integer  
Required  False  
Minimum  32  
Maximum  8182

privateMetadataPid

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type  integer  
Required  False  
Minimum  32  
Maximum  8182

pmtInterval

The number of milliseconds between instances of this table in the output transport stream.

Type  integer  
Required  False  
Minimum  0  
Maximum  1000

segmentationStyle

Type  string  
Required  False

audioBufferModel

Type  string  
Required  False
programNumber

The value of the program number field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

dvbNitSettings

Type: DvbNitSettings (p. 489)
Required: False

scte35Source

Type: string
Required: False

pmtPid

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

bufferModel

Type: string
Required: False

ebpPlacement

Type: string
Required: False

dvbSdtSettings

Type: DvbSdtSettings (p. 490)
Required: False

nullPacketBitrate

Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.

Type: number
Required: False
Format: float
Properties

Minimum: 0.0

pcrPid

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

minEbpInterval

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.

Type: integer
Required: False
Minimum: 0
Maximum: 10000

transportStreamId

The value of the transport stream ID field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

pcrControl

Type: string
Required: False

videoPid

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

esRateInPes

Type: string
Required: False
Properties

**segmentationMarkers**

Type: string  
Required: False

**dvbTdtSettings**

Type: DvbTdtSettings (p. 494)  
Required: False

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 1000

**dvbSubPids**

Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer  
Required: False

**M3u8PcrControl (enum)**

When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

**M3u8Scte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M3u8Settings**

**pmtPid**

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer  
Required: False
pcrPid

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

**Type:** integer  
**Required:** False  
**Minimum:** 32  
**Maximum:** 8182

audioPids

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

**Type:** Array of type integer  
**Required:** False

audioFramesPerPes

The number of audio frames to insert for each PES packet.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 2147483647

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

**Type:** integer  
**Required:** False  
**Minimum:** 32  
**Maximum:** 8182

transportStreamId

The value of the transport stream ID field in the Program Map Table.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 65535

videoPid

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.
Properties

**Type**: integer  
**Required**: False  
**Minimum**: 32  
**Maximum**: 8182

**pcrControl**

**Type**: string  
**Required**: False

**privateMetadataPid**

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

**Type**: integer  
**Required**: False  
**Minimum**: 32  
**Maximum**: 8182

**pmtInterval**

The number of milliseconds between instances of this table in the output transport stream.

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 1000

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 1000

**programNumber**

The value of the program number field in the Program Map Table.

**Type**: integer  
**Required**: False  
**Minimum**: 0  
**Maximum**: 65535

**timedMetadataPid**

Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

**Type**: integer
Properties

**timedMetadata**
- **Type:** string
- **Required:** False

**scte35Source**
- **Type:** string
- **Required:** False

**MovClapAtom (enum)**
When enabled, include 'clap' atom if appropriate for the video output settings.
- **Include**
- **Exclude**

**MovCslgAtom (enum)**
When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.
- **Include**
- **Exclude**

**MovMpeg2FourCCControl (enum)**
When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.
- **XDCAM**
- **MPEG**

**MovPaddingControl (enum)**
If set to OMNEON, inserts Omneon-compatible padding
- **OMNEON**
- **NONE**

**MovReference (enum)**
A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.
- **SELF_CONTAINED**
- **EXTERNAL**
MovSettings

reference

Type: string
Required: False

paddingControl

Type: string
Required: False

mpeg2FourCCControl

Type: string
Required: False

cslgAtom

Type: string
Required: False

clapAtom

Type: string
Required: False

Mp2Settings

channels

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

Type: integer
Required: False
Minimum: 1
Maximum: 2

bitrate

Average bitrate in bits/second.

Type: integer
Required: False
Minimum: 32000
Maximum: 384000

sampleRate

Sample rate in hz.
Type: integer
Required: False
Minimum: 32000
Maximum: 48000

Mp4CslgAtom (enum)
When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

INCLUDE
EXCLUDE

Mp4FreeSpaceBox (enum)
Inserts a free-space box immediately after the moov box.

INCLUDE
EXCLUDE

Mp4MoovPlacement (enum)
If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVE_DOWNLOAD
NORMAL

Mp4Settings

mp4MajorBrand
Overrides the "Major Brand" field in the output file. Usually not necessary to specify.

Type: string
Required: False

moovPlacement

Type: string
Required: False

cslgAtom

Type: string
Required: False

freeSpaceBox

Type: string
Required: False
**Mpeg2AdaptiveQuantization (enum)**
Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH

**Mpeg2CodecLevel (enum)**
Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.

- AUTO
- LOW
- MAIN
- HIGH1440
- HIGH

**Mpeg2CodecProfile (enum)**
Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.

- MAIN
- PROFILE_422

**Mpeg2FramerateControl (enum)**
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**Mpeg2FramerateConversionAlgorithm (enum)**
When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**Mpeg2GopSizeUnits (enum)**
Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

**Mpeg2InterlaceMode (enum)**
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.
* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

\[
\begin{align*}
\text{PROGRESSIVE} \\
\text{TOP\_FIELD} \\
\text{BOTTOM\_FIELD} \\
\text{FOLLOW\_TOP\_FIELD} \\
\text{FOLLOW\_BOTTOM\_FIELD}
\end{align*}
\]

\text{Mpeg2IntraDcPrecision (enum)}

Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value auto, the service will automatically select the precision based on the per-frame compression ratio.

\[
\begin{align*}
\text{AUTO} \\
\text{INTRA\_DC\_PRECISION\_8} \\
\text{INTRA\_DC\_PRECISION\_9} \\
\text{INTRA\_DC\_PRECISION\_10} \\
\text{INTRA\_DC\_PRECISION\_11}
\end{align*}
\]

\text{Mpeg2ParControl (enum)}

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

\[
\begin{align*}
\text{INITIALIZE\_FROM\_SOURCE} \\
\text{SPECIFIED}
\end{align*}
\]

\text{Mpeg2QualityTuningLevel (enum)}

Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.

\[
\begin{align*}
\text{SINGLE\_PASS} \\
\text{MULTI\_PASS}
\end{align*}
\]

\text{Mpeg2RateControlMode (enum)}

Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).

\[
\begin{align*}
\text{VBR} \\
\text{CBR}
\end{align*}
\]

\text{Mpeg2SceneChangeDetect (enum)}

Scene change detection (inserts I-frames on scene changes).
**DISABLED**
**ENABLED**

**Mpeg2Settings**

**minIInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 30

**parNumerator**

Pixel Aspect Ratio numerator.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

**gopSizeUnits**

- **Type**: string
- **Required**: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**qualityTuningLevel**

- **Type**: string
- **Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

**spatialAdaptiveQuantization**

Type: string
Required: False

**slowPal**

Type: string
Required: False

**codecProfile**

Type: string
Required: False

**intraDcPrecision**

Type: string
Required: False

**softness**

Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.

Type: integer
Required: False
Minimum: 0
Maximum: 128

**framerateControl**

Type: string
Required: False

**telecine**

Type: string
**Required**: False

**framerateConversionAlgorithm**

*Type*: string  
*Required*: False

**codecLevel**

*Type*: string  
*Required*: False

**temporalAdaptiveQuantization**

*Type*: string  
*Required*: False

**hrdBufferInitialFillPercentage**

Percentage of the buffer that should initially be filled (HRD buffer model).

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 100

**framerateNumerator**

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

*Type*: integer  
*Required*: False  
*Minimum*: 1  
*Maximum*: 2147483647

**numberBFramesBetweenReferenceFrames**

Number of B-frames between reference frames.

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 7

**gopClosedCadence**

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

*Type*: integer  
*Required*: False  
*Minimum*: 0
Maximum: 2147483647

framerateDenominator
Framerate denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization
Type: string
Required: False

interlaceMode
Type: string
Required: False

gopSize
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

syntax
Type: string
Properties

**Required**: False

rateControlMode

- **Type**: string
- **Required**: False

**Mpeg2SlowPal (enum)**

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

- DISABLED
- ENABLED

**Mpeg2SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

- DISABLED
- ENABLED

**Mpeg2Syntax (enum)**

Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).

- DEFAULT
- D_10

**Mpeg2Telecine (enum)**

Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

- NONE
- SOFT
- HARD

**Mpeg2TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- DISABLED
- ENABLED

**MsSmoothAudioDeduplication (enum)**

COMBINE_DUPLICATE_STREAMS combines identical audio encoding settings across a Microsoft Smooth output group into a single audio stream.

- COMBINE_DUPLICATE_STREAMS
- NONE
MsSmoothEncryptionSettings

spekeKeyProvider

    Type: SpekeKeyProvider (p. 572)
    Required: True

MsSmoothGroupSettings

fragmentLength

Use Fragment length (FragmentLength) to specify the mp4 fragment sizes in seconds. Fragment length must be compatible with GOP size and framerate.

    Type: integer
    Required: True
    Minimum: 1
    Maximum: 2147483647

encryption

    Type: MsSmoothEncryptionSettings (p. 561)
    Required: False

audioDeduplication

    Type: string
    Required: False

manifestEncoding

    Type: string
    Required: False

destination

Use Destination (Destination) to specify the S3 output location and the output filename base. Destination accepts format identifiers. If you do not specify the base filename in the URI, the service will use the filename of the input file. If your job has multiple inputs, the service uses the filename of the first input file.

    Type: string
    Required: True
    Pattern: ^s3:\/\/

MsSmoothManifestEncoding (enum)

Use Manifest encoding (MsSmoothManifestEncoding) to specify the encoding format for the server and client manifest. Valid options are utf8 and utf16.

    UTF8
    UTF16
NielsenConfiguration

**distributorId**

Use Distributor ID (DistributorID) to specify the distributor ID that is assigned to your organization by Nielsen.

* **Type:** string
  * **Required:** False

**breakoutCode**

Use Nielsen Configuration (NielsenConfiguration) to set the Nielsen measurement system breakout code. Supported values are 0, 3, 7, and 9.

* **Type:** integer
  * **Required:** False
  * **Minimum:** 0
  * **Maximum:** 9

NoiseReducer

**filter**

* **Type:** string
  * **Required:** True

**filterSettings**

* **Type:** NoiseReducerFilterSettings (p. 563)
  * **Required:** False

**spatialFilterSettings**

* **Type:** NoiseReducerSpatialFilterSettings (p. 563)
  * **Required:** False

**NoiseReducerFilter (enum)**

Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).

* Bilateral is an edge preserving noise reduction filter
* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters
* Conserve is a min/max noise reduction filter
* Spatial is frequency-domain filter based on JND principles.

  BILATERAL
  MEAN
  GAUSSIAN
LANCzos
SHARPEN
CONSERVE
SPATIAL

**NoiseReducerFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

**NoiseReducerSpatialFilterSettings**

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 16

**postFilterSharpenStrength**
Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

**speed**
The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

- **Type**: integer
- **Required**: False
- **Minimum**: -2
- **Maximum**: 3

**Output**

**extension**
Use Extension (Extension) to specify the file extension for outputs in File output groups. If you do not specify a value, the service will use default extensions by container type as follows:
* MPEG-2 transport stream, m2ts
* Quicktime, mov
* MXF container, mxf
* MPEG-4 container, mp4
* No Container, the service will use codec extensions (e.g. AAC, H265, H265, AC3)

  Type: string  
  Required: False

**videoDescription**

(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

  Type: VideoDescription (p. 577)  
  Required: False

**audioDescriptions**

(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.

  Type: Array of type AudioDescription (p. 474)  
  Required: False

**containerSettings**

  Type: ContainerSettings (p. 485)  
  Required: False

**preset**

Use Preset (Preset) to specify a preset for your transcoding settings. Provide the system or custom preset name. You can specify either Preset (Preset) or Container settings (ContainerSettings), but not both.

  Type: string  
  Required: False

**outputSettings**

  Type: OutputSettings (p. 567)  
  Required: False

**captionDescriptions**

(CaptionDescriptions) contains groups of captions settings. For each output that has captions, include one instance of (CaptionDescriptions). (CaptionDescriptions) can contain multiple groups of captions settings.
Properties

**Type**: Array of type `CaptionDescription (p. 481)`  
**Required**: False

**nameModifier**

Use Name modifier (NameModifier) to have the service add a string to the end of each output filename. You specify the base filename as part of your destination URI. When you create multiple outputs in the same output group, Name modifier is required. Name modifier also accepts format identifiers. For DASH ISO outputs, if you use the format identifiers $Number$ or $Time$ in one output, you must use them in the same way in all outputs of the output group.

**Type**: string  
**Required**: False

**OutputChannelMapping**

**inputChannels**

**Type**: Array of type integer  
**Required**: True

**OutputDetail**

**durationInMs**

**Type**: integer  
**Required**: False

**videoDetails**

**Type**: `VideoDetail (p. 579)`  
**Required**: False

**OutputGroup**

**outputs**

This object holds groups of encoding settings, one group of settings per output.

**Type**: Array of type `Output (p. 563)`  
**Required**: True

**outputGroupSettings**

**Type**: `OutputGroupSettings (p. 566)`  
**Required**: True

**name**

**Type**: string
Properties

Required: False

customName

Use Custom Group Name (CustomName) to specify a name for the output group. This value is displayed on the console and can make your job settings JSON more human-readable. It does not affect your outputs. Use up to twelve characters that are either letters, numbers, spaces, or underscores.

Type: string
Required: False

OutputGroupDetail

outputDetails

Type: Array of type OutputDetail (p. 565)
Required: False

OutputGroupSettings

dashIsoGroupSettings

Type: DashIsoGroupSettings (p. 486)
Required: False

fileGroupSettings

Type: FileGroupSettings (p. 500)
Required: False

msSmoothGroupSettings

Type: MsSmoothGroupSettings (p. 561)
Required: False

type

Type: string
Required: True

hlsGroupSettings

Type: HlsGroupSettings (p. 524)
Required: False

OutputGroupType (enum)

HLS_GROUP_SETTINGS
DASH_ISO_GROUP_SETTINGS
FILE_GROUP_SETTINGS
MS_SMOOTH_GROUP_SETTINGS
**OutputSdt (enum)**

Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter "SDT Manually" means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

- SDT_FOLLOW
- SDT_FOLLOW_IF_PRESENT
- SDT_MANUAL
- SDT_NONE

**OutputSettings**

**hlsSettings**

- **Type**: HlsSettings (p. 528)
- **Required**: False

**ProresCodecProfile (enum)**

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

- APPLE_PRORES_422
- APPLE_PRORES_422_HQ
- APPLE_PRORES_422_LT
- APPLE_PRORES_422_PROXY

**ProresFramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresFramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**ProresInterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is
progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

**ProresParControl (enum)**

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresSettings**

**slowPal**
- Type: string
- Required: False

**framerateControl**
- Type: string
- Required: False

**telecine**
- Type: string
- Required: False

**framerateDenominator**

Framerate denominator.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 2147483647

**framerateConversionAlgorithm**

- Type: string
- Required: False

**interlaceMode**

- Type: string
Properties

Required: False

codecProfile

Type: string
Required: False

parNumerator
Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateNumerator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

ProresSlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

ProresTelecine (enum)

Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.
NONE
HARD

**Rectangle**

**width**

Width of rectangle in pixels.

*Type*: integer  
*Required*: True  
*Minimum*: -2147483648  
*Maximum*: 2147483647

**x**

The distance, in pixels, between the rectangle and the left edge of the video frame.

*Type*: integer  
*Required*: True  
*Minimum*: -2147483648  
*Maximum*: 2147483647

**y**

The distance, in pixels, between the rectangle and the top edge of the video frame.

*Type*: integer  
*Required*: True  
*Minimum*: -2147483648  
*Maximum*: 2147483647

**height**

Height of rectangle in pixels.

*Type*: integer  
*Required*: True  
*Minimum*: -2147483648  
*Maximum*: 2147483647

**RemixSettings**

**channelsOut**

Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

*Type*: integer  
*Required*: True  
*Minimum*: 1  
*Maximum*: 8
channelMapping

  Type: ChannelMapping (p. 483)
  Required: True

channelsIn

Specify the number of audio channels from your input that you want to use in your output. With remixing, you might combine or split the data in these channels, so the number of channels in your final output might be different.

  Type: integer
  Required: True
  Minimum: 1
  Maximum: 16

RespondToAfd (enum)

Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to AFD values in the input.

* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio, and output display aspect ratio.

* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set AfdSignaling to (AUTO).

* Choose None to remove all input AFD values from this output.

  NONE
  RESPOND
  PASSTHROUGH

ScalingBehavior (enum)

Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output (StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to allow the service to letterbox your video instead. This setting overrides any positioning value you specify elsewhere in the job.

  DEFAULT
  STRETCH_TO_OUTPUT

SccDestinationFramerate (enum)

Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized in the output. Specify a framerate that matches the framerate of the associated video. If the video framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe (FRAMERATE_29_97_NON_DROPFRAME).

  FRAMERATE_23_97
  FRAMERATE_24
  FRAMERATE_29_97_DROPFRAME
  FRAMERATE_29_97_NON_DROPFRAME
SccDestinationSettings

framerate

  Type: string
  Required: False

SpekeKeyProvider

resourceld

The SPEKE-compliant server uses Resource ID (Resourceld) to identify content.

  Type: string
  Required: True
  Pattern: ^[\w-]+$

systemIds

Relates to SPEKE implementation. DRM system identifiers. DASH output groups support a max of two system ids. Other group types support one system id.

  Type: Array of type string
  Required: True

url

Use URL (Url) to specify the SPEKE-compliant server that will provide keys for content.

  Type: string
  Required: True
  Format: uri
  Pattern: ^https:\/\/

StaticKeyProvider

keyFormatVersions

Relates to DRM implementation. Either a single positive integer version value or a slash delimited list of version values (1/2/3).

  Type: string
  Required: False
  Pattern: ^(d+(/d+)*)$

keyFormat

Relates to DRM implementation. Sets the value of the KEYFORMAT attribute. Must be 'identity' or a reverse DNS string. May be omitted to indicate an implicit value of 'identity'.

  Type: string
  Required: False
  Pattern: ^([A-Za-z]{2,6}(\.?[A-Za-z0-9-]{1,63})+)$
**Properties**

**staticKeyValue**

Relates to DRM implementation. Use a 32-character hexadecimal string to specify Key Value (StaticKeyValue).

- **Type:** string
- **Required:** True
- **Pattern:** ^[A-Za-z0-9]{32}$

**url**

Relates to DRM implementation. The location of the license server used for protecting content.

- **Type:** string
- **Required:** True
- **Format:** uri

**TeletextDestinationSettings**

**pageNumber**

Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.

- **Type:** string
- **Required:** False
- **Pattern:** ^[1-8][0-9a-fA-F][0-9a-eA-E]$  

**TeletextSourceSettings**

**pageNumber**

Use Page Number (PageNumber) to specify the three-digit hexadecimal page number that will be used for Teletext captions. Do not use this setting if you are passing through teletext from the input source to output.

- **Type:** string
- **Required:** False
- **Pattern:** ^[1-8][0-9a-fA-F][0-9a-eA-E]$  

**TimecodeBurnin**

**prefix**

Use Prefix (Prefix) to place ASCII characters before any burned-in timecode. For example, a prefix of "EZ-" will result in the timecode "EZ-00:00:00:00". Provide either the characters themselves or the ASCII code equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

- **Type:** string
- **Required:** False
- **Pattern:** ^[\ -~]+$  

573
# Properties

## fontSize

Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

**Type:** integer  
**Required:** False  
**Minimum:** 10  
**Maximum:** 48

## position

**Type:** string  
**Required:** False

**TimecodeBurninPosition (enum)**

Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- TOP_CENTER
- TOP_LEFT
- TOP_RIGHT
- MIDDLE_LEFT
- MIDDLE_CENTER
- MIDDLE_RIGHT
- BOTTOM_LEFT
- BOTTOM_CENTER
- BOTTOM_RIGHT

## TimecodeConfig

### timestampOffset

Only applies to outputs that support program-date-time stamp. Use Time stamp offset (TimestampOffset) to overwrite the timecode date without affecting the time and frame number. To use this, you must also enable Insert program-date-time (InsertProgramDateTime) in the output settings.

**Type:** string  
**Required:** False  
**Pattern:** ^([0-9]{4})-(0[1-9]|1[0-2])-(0[1-9]|12)\([0-9]\)3[01]#  

### anchor

If you use an editing platform that relies on an anchor timecode, use Anchor Timecode (Anchor) to specify a timecode that will match the input video frame to the output video frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS:FF). This setting ignores framerate conversion. System behavior for Anchor Timecode varies depending on your setting for Timecode source (TimecodeSource).

* If Timecode source (TimecodeSource) is set to Specified Start (specifiedstart), the first input frame is the specified value in Start Timecode (Start). Anchor Timecode (Anchor) and Start Timecode (Start) are used calculate output timecode.

* If Timecode source (TimecodeSource) is set to Start at 0 (zerobased) the first frame is 00:00:00:00.

* If Timecode source (TimecodeSource) is set to Embedded (embedded), the first frame is the timecode value on the first input frame of the input.
Properties

Type: string  
Required: False  
Format: timecode  
Pattern: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}$

start

Only use when you set Timecode Source (TimecodeSource) to Specified Start (SPECIFIEDSTART). Use Start timecode (Start) to specify the timecode for the initial frame. Use 24-hour format with frame number, (HH:MM:SS:FF) or (HH:MM:SS;FF).

Type: string  
Required: False  
Format: timecode  
Pattern: ^([01][0-9]|2[0-4]):[0-5][0-9]:[0-5][0-9][;][0-9]{2}$

source

Type: string  
Required: False

TimecodeSource (enum)

Use Timecode source (TimecodeSource) to set how timecodes are handled within this input. To make sure that your video, audio, captions, and markers are synchronized and that time-based features, such as image inserter, work correctly, choose the Timecode source option that matches your assets. All timecodes are in a 24-hour format with frame number (HH:MM:SS:FF).

* Embedded (EMBEDDED) - Use the timecode that is in the input video. If no embedded timecode is in the source, the service will use Start at 0 (ZEROBASED) instead.

* Start at 0 (ZEROBASED) - Set the timecode of the initial frame to 00:00:00:00.

* Specified Start (SPECIFIEDSTART) - Set the timecode of the initial frame to a value other than zero. You use Start timecode (Start) to provide this value.

EMBEDDED  
ZEROBASED  
SPECIFIEDSTART

TimedMetadata (enum)

If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.

PASSTHROUGH  
NONE

TimedMetadataInsertion

Id3Insertions contains the array of Id3Insertion instances.
Type: Array of type Id3Insertion (p. 529)
Required: True

Timing

finishTime
The time, in Unix epoch format, that the transcoding job finished

Type: string
Required: False
Format: date-time

submitTime
The time, in Unix epoch format, that you submitted the job.

Type: string
Required: False
Format: date-time

startTime
The time, in Unix epoch format, that transcoding for the job began.

Type: string
Required: False
Format: date-time

TtmlDestinationSettings

stylePassthrough

Type: string
Required: False

TtmlStylePassthrough (enum)
Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

ENABLED
DISABLED

VideoCodec (enum)
Type of video codec

FRAME_CAPTURE
H_264
H_265
**VideoCodecSettings**

**h265Settings**
- **Type:** H265Settings (p. 514)
- **Required:** False

**codec**
- **Type:** string
- **Required:** True

**proresSettings**
- **Type:** ProresSettings (p. 568)
- **Required:** False

**mpeg2Settings**
- **Type:** Mpeg2Settings (p. 556)
- **Required:** False

**h264Settings**
- **Type:** H264Settings (p. 505)
- **Required:** False

**frameCaptureSettings**
- **Type:** FrameCaptureSettings (p. 501)
- **Required:** False

**VideoDescription**

**fixedAfd**
Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAfd) to specify a four-bit AFD value which the service will write on all frames of this video output.
- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 15

**scalingBehavior**
- **Type:** string
**Properties**

- **Required**: False

- **respondToAfd**
  - **Type**: string
  - **Required**: False

- **codecSettings**
  - **Type**: VideoCodecSettings (p. 577)
  - **Required**: True

- **afdSignaling**
  - **Type**: string
  - **Required**: False

- **colorMetadata**
  - **Type**: string
  - **Required**: False

- **timecodeInsertion**
  - **Type**: string
  - **Required**: False

- **width**
  - Use Width (Width) to define the video resolution width, in pixels, for this output. If you don't provide a value here, the service will use the input width.
  - **Type**: integer
  - **Required**: False
  - **Minimum**: 32
  - **Maximum**: 4096

- **sharpness**
  - Use Sharpness (Sharpness) setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.
  - **Type**: integer
  - **Required**: False
  - **Minimum**: 0
  - **Maximum**: 100

- **antiAlias**
  - **Type**: string
  - **Required**: False
**videoPreprocessors**

Find additional transcoding features under Preprocessors (VideoPreprocessors). Enable the features at each output individually. These features are disabled by default.

- **Type**: VideoPreprocessor (p. 580)
- **Required**: False

**position**

Use Position (Position) to point to a rectangle object to define your position. This setting overrides any other aspect ratio.

- **Type**: Rectangle (p. 570)
- **Required**: False

**dropFrameTimecode**

- **Type**: string
- **Required**: False

**crop**

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

- **Type**: Rectangle (p. 570)
- **Required**: False

**height**

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don’t provide a value here, the service will use the input height.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 2160

**VideoDetail**

**heightInPx**

Height in pixels for the output

- **Type**: integer
- **Required**: False

**widthInPx**

Width in pixels for the output

- **Type**: integer
Required: False

**VideoPreprocessor**

**timecodeBurnin**
Timecode burn-in (TimecodeBurnIn)--Burns the output timecode and specified prefix into the output.

*Type: TimecodeBurnin (p. 573)*
*Required: False*

**noiseReducer**
Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: NoiseReducer (p. 562)*
*Required: False*

**colorCorrector**
Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: ColorCorrector (p. 484)*
*Required: False*

**imageInserter**
Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

*Type: ImageInserter (p. 529)*
*Required: False*

**deinterlacer**
Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.

*Type: Deinterlacer (p. 488)*
*Required: False*

**VideoSelector**

**colorSpace**

*Type: string*
*Required: False*

**hdr10Metadata**

*Type: Hdr10Metadata (p. 519)*
*Required: False*
programNumber

Selects a specific program from within a multi-program transport stream. Note that Quad 4K is not currently supported.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

pid

Use PID (Pid) to select specific video data from an input file. Specify this value as an integer; the system automatically converts it to the hexadecimal value. For example, 257 selects PID 0x101. A PID, or packet identifier, is an identifier for a set of data in an MPEG-2 transport stream container.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

colorSpaceUsage

Type: string
Required: False

VideoTimecodeInsertion (enum)

Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

DISABLED
PIC_TIMING_SEI

WavSettings

channels

Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

Type: integer
Required: False
Minimum: 1
Maximum: 8

bitDepth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

Type: integer
Required: False
Minimum: 16
Maximum: 24

**sampleRate**
Sample rate in Hz.
- **Type:** integer
- **Required:** False
- **Minimum:** 8000
- **Maximum:** 192000

**Presets**

**URI**

/2017-08-29/presets

**HTTP Methods**

**GET**

Operation ID: ListPresets

Retrieve a JSON array of up to twenty of your presets. This will return the presets themselves, not just a list of them. To retrieve the next twenty presets, use the nextToken string returned with the array.

**Query Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>listBy</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>nextToken</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>maxResults</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>order</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
</tbody>
</table>

**Responses**

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>ListPresetsResponse (p. 592)</td>
<td>200: OkRresponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 606)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 606)</td>
<td>500: InternalServiceException</td>
</tr>
</tbody>
</table>
POST

Operation ID: CreatePreset

Create a new preset. For information about job templates see the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>CreatePresetResponse</td>
<td>Your resource has been successfully created.</td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 400         | ExceptionBody (p. 606) | 400: BadRequestException  
The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax. |
| 500         | ExceptionBody (p. 606) | 500: InternalServiceException  
The service encountered an unexpected condition and cannot fulfill your request. |
| 403         | ExceptionBody (p. 606) | 403: AccessDeniedException  
You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process. |
| 404         | ExceptionBody (p. 606) | 404: ResourceNotFoundException  
The resource you requested does not exist. |
| 429         | ExceptionBody (p. 606) | 429: LimitExceededException  
Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission. |
| 409         | ExceptionBody (p. 606) | 409: ResourceInUseException  
The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing. |
### Schemas

#### Request Bodies

**Example GET**

```json
{
  "nextToken (p. 661)": "string",
  "maxResults (p. 661)": integer,
  "category (p. 662)": "string",
  "listBy (p. 662)": enum,
  "order (p. 662)": enum
}
```

**Example POST**

```json
{
  "settings (p. 623)": {
    "videoDescription (p. 684)": {
      "fixedAfd (p. 692)": integer,
      "scalingBehavior (p. 692)": enum,
      "respondToAfd (p. 692)": enum,
      "codecSettings (p. 692)": {
        "h265Settings (p. 691)": {
          "slices (p. 647)": integer,
          "minIInterval (p. 648)": integer,
          "parNumerator (p. 648)": integer,
          "flickerAdaptiveQuantization (p. 648)": enum,
          "gopSizeUnits (p. 648)": enum,
          "hrdBufferSize (p. 648)": integer,
          "qualityTuningLevel (p. 648)": enum,
          "maxBitrate (p. 648)": integer,
          "bitrate (p. 649)": integer,
          "spatialAdaptiveQuantization (p. 649)": enum,
          "sampleAdaptiveOffsetFilterMode (p. 649)": enum,
          "temporalIds (p. 649)": enum,
          "slowPal (p. 649)": enum,
          "tiles (p. 649)": enum,
          "codecProfile (p. 649)": enum,
          "alternateTransferFunctionSei (p. 649)": enum,
          "unregisteredSeiTimecode (p. 649)": enum,
          "framerateControl (p. 650)": enum,
          "telecine (p. 650)": enum,
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Response Bodies

Example ListPresetsResponse

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Example CreatePresetResponse

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    "audioPids (p. 665)": [integer
      ],
    "rateMode (p. 665)": enum,
    "ebpAudioInterval (p. 665)": enum,
    "fragmentTime (p. 665)": number,
    "audioFramesPerPes (p. 665)": integer,
    "maxPcrInterval (p. 665)": integer,
    "scte35Pid (p. 665)": integer,
    "privateMetadataPid (p. 665)": integer,
    "pmtInterval (p. 666)": integer,
    "segmentationStyle (p. 666)": enum,
    "audioBufferModel (p. 666)": enum,
    "programNumber (p. 666)": integer,
    "dvbNitSettings (p. 666)": {
      "networkName (p. 625)": "string",
      "networkId (p. 625)": integer,
    }
  }
}
"nitInterval (p. 625)" : integer,
"scte35Source (p. 666)" : enum,
"pmtPid (p. 667)" : integer,
"bufferModel (p. 667)" : enum,
"ebpPlacement (p. 667)" : enum,
"dvbSdtSettings (p. 667)" : {
  "sdtInterval (p. 625)" : integer,
  "serviceName (p. 625)" : "string",
  "serviceProviderName (p. 625)" : "string",
  "outputSdt (p. 626)" : enum
},
"nullPacketBitrate (p. 667)" : number,
"pcrPid (p. 667)" : integer,
"minEbpInterval (p. 667)" : integer,
"transportStreamId (p. 668)" : integer,
"pcrControl (p. 668)" : enum,
"videoPid (p. 668)" : integer,
"esRateInPes (p. 668)" : enum,
"segmentationMarkers (p. 668)" : enum,
"dvbTdtSettings (p. 668)" : {
  "tdtInterval (p. 630)" : integer
},
"patInterval (p. 668)" : integer,
"dvbSubPids (p. 669)" : [integer]
},
"movSettings (p. 622)" : {
  "reference (p. 672)" : enum,
  "paddingControl (p. 672)" : enum,
  "mpeg2FourCCControl (p. 672)" : enum,
  "cslgAtom (p. 673)" : enum,
  "clapAtom (p. 673)" : enum
},
"f4vSettings (p. 622)" : {
  "moovPlacement (p. 635)" : enum
},
"captionDescriptions (p. 684)" : [
  {
    "languageDescription (p. 619)" : "string",
    "languageCode (p. 619)" : enum,
    "destinationSettings (p. 619)" : {
      "burninDestinationSettings (p. 620)" : {
        "xPosition (p. 615)" : integer,
        "backgroundColor (p. 616)" : enum,
        "teletextSpacing (p. 616)" : enum,
        "yPosition (p. 616)" : integer,
        "backgroundOpacity (p. 616)" : integer,
        "fontOpacity (p. 616)" : integer,
        "shadowOpacity (p. 617)" : integer,
        "fontResolution (p. 617)" : integer,
        "shadowYOffset (p. 617)" : integer,
        "outlineSize (p. 617)" : integer,
        "outlineColor (p. 617)" : enum,
        "fontSize (p. 617)" : integer,
        "shadowXOffset (p. 618)" : integer,
        "alignment (p. 618)" : enum,
        "shadowColor (p. 618)" : enum,
        "fontColor (p. 618)" : enum
      },
      "teletextDestinationSettings (p. 620)" : {
        "pageNumber (p. 689)" : "string"
      },
      "ttmlDestinationSettings (p. 620)" : {
        "pageNumber (p. 689)" : "string"
      }
    }
  }
}
"stylePassthrough (p. 691)": enum
),
"destinationType (p. 620)": enum,
"dvbSubDestinationSettings (p. 620)": {
  "xPosition (p. 626)": integer,
  "backgroundColor (p. 626)": enum,
  "teletextSpacing (p. 626)": enum,
  "yPosition (p. 626)": integer,
  "backgroundOpacity (p. 626)": integer,
  "fontOpacity (p. 627)": integer,
  "shadowOpacity (p. 627)": integer,
  "fontResolution (p. 627)": integer,
  "shadowYOffset (p. 627)": integer,
  "outlineSize (p. 627)": integer,
  "outlineColor (p. 628)": enum,
  "fontSize (p. 628)": integer,
  "shadowXOffset (p. 628)": integer,
  "alignment (p. 628)": enum,
  "shadowColor (p. 628)": enum,
  "fontColor (p. 628)": enum
},
"sccDestinationSettings (p. 620)": {
  "framerate (p. 689)": enum
}
}

Example ExceptionBody

{
  "message (p. 635)": "string"
}

Properties

AacAudioDescriptionBroadcasterMix (enum)

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains “broadcaster mixed AD”. Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

BROADCASTER_MIXED_AD
NORMAL
**AacCodecProfile (enum)**

AAC Profile.

- LC
- HEV1
- HEV2

**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_5_1

**AacRateControlMode (enum)**

Rate Control Mode.

- CBR
- VBR

**AacRawFormat (enum)**

Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container" for the output container.

- LATM_LOAS
- NONE

**AacSettings**

**vbrQuality**

- **Type:** string
  - **Required:** False

**codecProfile**

- **Type:** string
  - **Required:** False

**codingMode**

- **Type:** string
  - **Required:** True
specification
Type: string
Required: False

bitrate
Average bitrate in bits/second. Valid values depend on rate control mode and profile.
Type: integer
Required: False
Minimum: 6000
Maximum: 1024000

rawFormat
Type: string
Required: False

rateControlMode
Type: string
Required: False

sampleRate
Sample rate in Hz. Valid values depend on rate control mode and profile.
Type: integer
Required: True
Minimum: 8000
Maximum: 96000

audioDescriptionBroadcasterMix
Type: string
Required: False

AacSpecification (enum)
Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.
MPEG2
MPEG4

AacVbrQuality (enum)
VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.
LOW
MEDIUM_LOW
MEDIUM_HIGH
HIGH
**Ac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.

- COMPLETE_MAIN
- COMMENTARY
- DIALOGUE
- EMERGENCY
- HEARING_IMPAIRED
- MUSIC_AND_EFFECTS
- VISUALLY_IMPAIRED
- VOICE_OVER

**Ac3CodingMode (enum)**

Dolby Digital coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_3_2_LFE

**Ac3DynamicRangeCompressionProfile (enum)**

If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.

- FILM_STANDARD
- NONE

**Ac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

- ENABLED
- DISABLED

**Ac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

- FOLLOW_INPUT
- USE_CONFIGURED

**Ac3Settings**

**dynamicRangeCompressionProfile**

- **Type**: string
- **Required**: False
dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.

Type: integer
Required: False
Minimum: 1
Maximum: 31

codingMode
Type: string
Required: False

metadataControl
Type: string
Required: False

lfeFilter
Type: string
Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.

Type: integer
Required: False
Minimum: 64000
Maximum: 640000

bitstreamMode
Type: string
Required: False

sampleRate
Sample rate in hz. Sample rate is always 48000.

Type: integer
Required: False
Minimum: 48000
Maximum: 48000

AfdSignaling (enum)
This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to whether there are AFD values in the output video data and what those values are.

* Choose None to remove all AFD values from this output.
Properties

* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.

* Choose Auto to calculate output AFD values based on the input AFD scaler data.

    NONE
    AUTO
    FIXED

## AiffSettings

### channels

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

    Type: integer
    Required: False
    Minimum: 1
    Maximum: 2

### bitDepth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

    Type: integer
    Required: False
    Minimum: 16
    Maximum: 24

### sampleRate

Sample rate in hz.

    Type: integer
    Required: False
    Minimum: 8000
    Maximum: 192000

### AntiAlias (enum)

Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.

    DISABLED
    ENABLED

### AudioCodec (enum)

Type of Audio codec.

    AAC
    MP2
    WAV
    AIFF
    AC3
EAC3
PASSTHRUW

AudioCodecSettings

codec

Type: string
Required: True

wavSettings

Type: WavSettings (p. 695)
Required: False

ac3Settings

Type: Ac3Settings (p. 609)
Required: False

aacSettings

Type: AacSettings (p. 607)
Required: False

aiFFSettings

Type: AiffSettings (p. 611)
Required: False

eac3Settings

Type: Eac3Settings (p. 632)
Required: False

mp2Settings

Type: Mp2Settings (p. 673)
Required: False

AudioDescription

languageCodeControl

Type: string
Required: False

audioTypeControl

Type: string
Required: False
remixSettings

Advanced audio remixing settings.

**Type:** RemixSettings (p. 688)  
**Required:** False

audioType

Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 255

audioSourceName

Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":::#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":::#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.

**Type:** string  
**Required:** False

codecSettings

**Type:** AudioCodecSettings (p. 612)  
**Required:** True

languageCode

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

**Type:** string  
**Required:** False

streamName

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (eg. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

**Type:** string  
**Required:** False  
**Pattern:** ^\w\s*$
**audioNormalizationSettings**

Advanced audio normalization settings.

*Type: AudioNormalizationSettings (p. 614)*

*Required: False*

**AudioLanguageCodeControl (enum)**

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

FOLLOW_INPUT
USE_CONFIGURED

**AudioNormalizationAlgorithm (enum)**

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

ITU_BS_1770_1
ITU_BS_1770_2

**AudioNormalizationAlgorithmControl (enum)**

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.

CORRECT_AUDIO
MEASURE_ONLY

**AudioNormalizationLoudnessLogging (enum)**

If set to LOG, log each output's audio track loudness to a CSV file.

LOG
DONT_LOG

**AudioNormalizationPeakCalculation (enum)**

If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.

TRUE_PEAK
NONE

**AudioNormalizationSettings**

targetLkfs

Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.
**Properties**

**Type**: number  
**Required**: False  
**Format**: float  
**Minimum**: -59.0  
**Maximum**: 0.0

**algorithmControl**

**Type**: string  
**Required**: False

**peakCalculation**

**Type**: string  
**Required**: False

**loudnessLogging**

**Type**: string  
**Required**: False

**correctionGateLevel**

Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.

**Type**: integer  
**Required**: False  
**Minimum**: -70  
**Maximum**: 0

**algorithm**

**Type**: string  
**Required**: False

**AudioTypeControl (enum)**

When set to FOLLOW_INPUT, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to BROADCASTER_MIXED_AD.

FOLLOW_INPUT  
USE_CONFIGURED

**BurninDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is
not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

**backgroundColor**

- **Type**: string
- **Required**: False

**teletextSpacing**

- **Type**: string
- **Required**: False

**yPosition**

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**backgroundOpacity**

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 255

**fontOpacity**

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 255
shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
  Required: False
  Minimum: 0
  Maximum: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

Type: integer
  Required: False
  Minimum: 96
  Maximum: 600

shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
  Required: True
  Minimum: 0
  Maximum: 10

outlineColor

Type: string
  Required: True

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

Type: integer
  Required: False
  Minimum: 0
  Maximum: 96
shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

alignment

- **Type**: string
- **Required**: True

shadowColor

- **Type**: string
- **Required**: False

fontColor

- **Type**: string
- **Required**: False

BurninSubtitleAlignment (enum)

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- CENTERED
- LEFT

BurninSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

BurninSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
**BurninSubtitleOutlineColor (enum)**

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
- WHITE
- YELLOW
- RED
- GREEN
- BLUE

**BurninSubtitleShadowColor (enum)**

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

**BurninSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**CaptionDescriptionPreset**

**languageDescription**

Human readable information to indicate captions available for players (eg, English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

Type: string

Required: False

Pattern: ^\[\w\ ]*$

**languageCode**

Indicates the language of the caption output track.

Type: string

Required: False

**destinationSettings**

Type: CaptionDestinationSettings (p. 620)
Properties

CaptionDestinationSettings

burninDestinationSettings
  Type: BurninDestinationSettings (p. 615)
  Required: False

teletextDestinationSettings
  Type: TeletextDestinationSettings (p. 689)
  Required: False

ttmlDestinationSettings
  Type: TtmlDestinationSettings (p. 691)
  Required: False

destinationType
  Type: string
  Required: True

dvbSubDestinationSettings
  Type: DvbSubDestinationSettings (p. 626)
  Required: False

sccDestinationSettings
  Type: SccDestinationSettings (p. 689)
  Required: False

CaptionDestinationType (enum)
  BURN_IN
  DVB_SUB
  EMBEDDED
  SCC
  SRT
  TELETEXT
  TTML
  WEBVTT

ChannelMapping

outputChannels
  Type: Array of type OutputChannelMapping (p. 682)
  Required: True
ColorCorrector

saturation

Saturation level.

Type: integer
Required: False
Minimum: 1
Maximum: 100

brightness

Brightness level.

Type: integer
Required: False
Minimum: 1
Maximum: 100

hdr10Metadata

Type: Hdr10Metadata (p. 653)
Required: False

contrast

Contrast level.

Type: integer
Required: False
Minimum: 1
Maximum: 100

hue

Hue in degrees.

Type: integer
Required: False
Minimum: -180
Maximum: 180

colorSpaceConversion

Type: string
Required: False

ColorMetadata (enum)

Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.

IGNORE
ColorSpaceConversion (enum)

Determines if colorspace conversion will be performed. If set to _None_, no conversion will be performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with differing colorspaces. An input's colorspace can be specified explicitly in the "Video Selector".#inputs-video_selector if necessary.

- NONE
- FORCE_601
- FORCE_709
- FORCE_HDR10
- FORCE_HLG_2020

ContainerSettings

container

Type: string
Required: True

mp4Settings

Type: Mp4Settings (p. 674)
Required: False

m3u8Settings

Type: M3u8Settings (p. 669)
Required: False

m2tsSettings

Type: M2tsSettings (p. 664)
Required: False

movSettings

Type: MovSettings (p. 672)
Required: False

f4vSettings

Type: F4vSettings (p. 635)
Required: False

ContainerType (enum)

Container for this output. Some containers require a container settings object. If not specified, the default object will be created.
CreatePresetRequest

settings

Type: PresetSettings (p. 684)
Required: True

name

The name of the preset you are creating.

Type: string
Required: True

description

Optional. A description of the preset you are creating.

Type: string
Required: False

category

Optional. A category for the preset you are creating.

Type: string
Required: False

CreatePresetResponse

preset

Type: Preset (p. 683)
Required: False

DeinterlaceAlgorithm (enum)

Only applies when you set Deinterlacer (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.
Deinterlacer

mode

Type: string
Required: False

control

Type: string
Required: False

algorithm

Type: string
Required: False

DeinterlacerControl (enum)

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

  FORCE_ALL_FRAMES
  NORMAL

DeinterlacerMode (enum)

Use Deinterlacer (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

  DEINTERLACE
  INVERSE_TELECINE
  ADAPTIVE

DropFrameTimecode (enum)

Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

  DISABLED
  ENABLED
**DvbNitSettings**

**networkName**

The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

- **Type:** string
- **Required:** True

**networkId**

The numeric value placed in the Network Information Table (NIT).

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 65535

**nitInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** True
- **Minimum:** 25
- **Maximum:** 10000

**DvbSdtSettings**

**sdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 25
- **Maximum:** 2000

**serviceName**

The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type:** string
- **Required:** False

**serviceProviderName**

The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type:** string
Properties

outputSdt

Type: string
Required: False

DvbSubDestinationSettings

xPosition

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundColor

Type: string
Required: False

teletextSpacing

Type: string
Required: False

yPosition

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

Type: integer
Properties

fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 255

shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 255

fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 96
- **Maximum**: 600

shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
Maximum: 10

**outlineColor**

Type: string  
Required: True

**fontSize**

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 96

**shadowXOffset**

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

Type: integer  
Required: False  
Minimum: -2147483648  
Maximum: 2147483647

**alignment**

Type: string  
Required: True

**shadowColor**

Type: string  
Required: False

**fontColor**

Type: string  
Required: False

**DvbSubtitleAlignment (enum)**

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED
DvbSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

DvbSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

WHITE
BLACK
YELLOW
RED
GREEN
BLUE

DvbSubtitleOutlineColor (enum)

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

BLACK
WHITE
YELLOW
RED
GREEN
BLUE

DvbSubtitleShadowColor (enum)

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

DvbSubtitleTeletextSpacing (enum)

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

FIXED_GRID
PROPORTIONAL
DvbTdtSettings

tdtInterval

The number of milliseconds between instances of this table in the output transport stream.

  Type: integer
  Required: True
  Minimum: 1000
  Maximum: 30000

Eac3AttenuationControl (enum)

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

  ATTENUATE_3_DB
  NONE

Eac3BitstreamMode (enum)

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

  COMPLETE_MAIN
  COMMENTARY
  EMERGENCY
  HEARING_IMPAIRED
  VISUALLY_IMPAIRED

Eac3CodingMode (enum)

Dolby Digital Plus coding mode. Determines number of channels.

  CODING_MODE_1_0
  CODING_MODE_2_0
  CODING_MODE_3_2

Eac3DcFilter (enum)

Activates a DC highpass filter for all input channels.

  ENABLED
  DISABLED

Eac3DynamicRangeCompressionLine (enum)

Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

  NONE
  FILM_STANDARD
  FILM_LIGHT
  MUSIC_STANDARD
MUSIC_LIGHT
SPEECH

**Eac3DynamicRangeCompressionRf (enum)**

Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

NONE
FILM_STANDARD
FILM_LIGHT
MUSIC_STANDARD
MUSIC_LIGHT
SPEECH

**Eac3LfeControl (enum)**

When encoding 3/2 audio, controls whether the LFE channel is enabled

LFE
NO_LFE

**Eac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

ENABLED
DISABLED

**Eac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

FOLLOW_INPUT
USE_CONFIGURED

**Eac3PassthroughControl (enum)**

When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.

WHEN_POSSIBLE
NO_PASSTHROUGH

**Eac3PhaseControl (enum)**

Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

SHIFT_90 DEGREES
NO_SHIFT
**Eac3Settings**

**dialnorm**
Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

*Type*: integer  
*Required*: False  
*Minimum*: 1  
*Maximum*: 31

**passthroughControl**

*Type*: string  
*Required*: False

**metadataControl**

*Type*: string  
*Required*: False

**bitrate**
Average bitrate in bits/second. Valid bitrates depend on the coding mode.

*Type*: integer  
*Required*: False  
*Minimum*: 64000  
*Maximum*: 640000

**dynamicRangeCompressionRf**

*Type*: string  
*Required*: False

**sampleRate**
Sample rate in hz. Sample rate is always 48000.

*Type*: integer  
*Required*: False  
*Minimum*: 48000  
*Maximum*: 48000

**ltRtSurroundMixLevel**
Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

*Type*: number  
*Required*: False  
*Format*: float  
*Minimum*: -60.0
Maximum: -1.5

**surroundExMode**

Type: string
Required: False

**dynamicRangeCompressionLine**

Type: string
Required: False

**lfeControl**

Type: string
Required: False

**codingMode**

Type: string
Required: False

**surroundMode**

Type: string
Required: False

**attenuationControl**

Type: string
Required: False

**lfeFilter**

Type: string
Required: False

**phaseControl**

Type: string
Required: False

**ltRtCenterMixLevel**

Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

Type: number
Required: False
Format: float
Minimum: -60.0
Maximum: 3.0
Properties

**dcFilter**
Type: string  
Required: False

**stereoDownmix**
Type: string  
Required: False

**bitstreamMode**
Type: string  
Required: False

**loRoSurroundMixLevel**
Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60
Type: number  
Required: False  
Format: float  
Minimum: -60.0  
Maximum: -1.5

**loRoCenterMixLevel**
Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5 -3.0 -4.5 -6.0 -60
Type: number  
Required: False  
Format: float  
Minimum: -60.0  
Maximum: 3.0

**Eac3StereoDownmix (enum)**
Stereo downmix preference. Only used for 3/2 coding mode.

- NOT_INDICATED
- LO_RO
- LT_RT
- DPL2

**Eac3SurroundExMode (enum)**
When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

- NOT_INDICATED
- ENABLED
- DISABLED
**Eac3SurroundMode (enum)**

When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

- NOT_INDICATED
- ENABLED
- DISABLED

**ExceptionBody**

- **message**
  
  Type: string
  Required: False

**F4vMoovPlacement (enum)**

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

- PROGRESSIVE_DOWNLOAD
- NORMAL

**F4vSettings**

- **moovPlacement**
  
  Type: string
  Required: False

**FrameCaptureSettings**

- **framerateDenominator**
  
  Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each Capture.

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

- **maxCaptures**
  
  Maximum number of captures (encoded jpg output files).

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 10000000
framerateNumerator

Frame capture will encode the first frame of the output stream, then one frame every framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.NNNNNNNN.jpg where N is the 0-based frame sequence number zero padded to 7 decimal places.

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 2147483647

quality

JPEG Quality - a higher value equals higher quality.

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 100

H264AdaptiveQuantization (enum)

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH
- HIGHER
- MAX

H264CodecLevel (enum)

H.264 Level.

- AUTO
- LEVEL_1
- LEVEL_1_1
- LEVEL_1_2
- LEVEL_1_3
- LEVEL_2
- LEVEL_2_1
- LEVEL_2_2
- LEVEL_3
- LEVEL_3_1
- LEVEL_3_2
- LEVEL_4
- LEVEL_4_1
- LEVEL_4_2
- LEVEL_5
- LEVEL_5_1
- LEVEL_5_2
H264CodecProfile (enum)
H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

BASELINE
HIGH
HIGH_10BIT
HIGH_422
HIGH_422_10BIT
MAIN

H264EntropyEncoding (enum)
Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

CABAC
CAVLC

H264FieldEncoding (enum)
Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

PAFF
FORCE_FIELD

H264FlickerAdaptiveQuantization (enum)
Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

DISABLED
ENABLED

H264FramerateControl (enum)
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

H264FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

H264GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.

DISABLED
ENABLED
H264GopSizeUnits (enum)
Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

H264InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
- FOLLOW_BOTTOM_FIELD

H264ParControl (enum)
Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

H264QualityTuningLevel (enum)
Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

- SINGLE_PASS
- SINGLE_PASS_HQ
- MULTI_PASS_HQ

H264RateControlMode (enum)
Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

H264RepeatPps (enum)
Places a PPS header on each encoded picture, even if repeated.
DISABLED
ENABLED

**H264SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

**H264Settings**

**slices**

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

*Type*: integer  
*Required*: False  
*Minimum*: 1  
*Maximum*: 32

**minIInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 30

**parNumerator**

Pixel Aspect Ratio numerator.

*Type*: integer  
*Required*: False  
*Minimum*: 1  
*Maximum*: 2147483647

**flickerAdaptiveQuantization**

*Type*: string  
*Required*: False

**gopSizeUnits**

*Type*: string
**Properties**

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**qualityTuningLevel**

- **Type:** string
- **Required:** False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

- **Type:** integer
- **Required:** False
- **Minimum:** 1000
- **Maximum:** 2147483647

**spatialAdaptiveQuantization**

- **Type:** string
- **Required:** False

**slowPal**

- **Type:** string
- **Required:** False

**codecProfile**

- **Type:** string
- **Required:** False
unregisteredSeiTimecode
Type: string
Required: False

softness
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
Type: integer
Required: False
Minimum: 0
Maximum: 128

framerateControl
Type: string
Required: False

telecine
Type: string
Required: False

framerateConversionAlgorithm
Type: string
Required: False

codecLevel
Type: string
Required: False

numberReferenceFrames
Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.
Type: integer
Required: False
Minimum: 1
Maximum: 6

temporalAdaptiveQuantization
Type: string
Required: False

repeatPps
Type: string
Required: False
hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

fieldEncoding

Type: string
Required: False

entropyEncoding

Type: string
Required: False

framerateDenominator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateDenominator to specify the denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When you use the console for transcode jobs that use framerate conversion, provide the value as a decimal number for Framerate. In this example, specify 23.976.
Properties

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization
Type: string
Required: False

interlaceMode
Type: string
Required: False

gopSize
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

gopBReference
Type: string
Required: False

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

syntax
Type: string
**Properties**

**Required**: False

**rateControlMode**

*Type*: string

*Required*: False

**H264SlowPal (enum)**

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

- **DISABLED**
- **ENABLED**

**H264SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

- **DISABLED**
- **ENABLED**

**H264Syntax (enum)**

Produces a bitstream compliant with SMPTE RP-2027.

- **DEFAULT**
- **RP2027**

**H264Telecine (enum)**

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - Hard: produces 29.97i output from 23.976 input. - Soft: produces 23.976; the player converts this output to 29.97i.

- **NONE**
- **SOFT**
- **HARD**

**H264TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- **DISABLED**
- **ENABLED**

**H264UnregisteredSeiTimecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- **DISABLED**
ENABLED

**H265AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH
- HIGHER
- MAX

**H265AlternateTransferFunctionSei (enum)**

Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).

- DISABLED
- ENABLED

**H265CodecLevel (enum)**

H.265 Level.

- AUTO
- LEVEL_1
- LEVEL_2
- LEVEL_2_1
- LEVEL_3
- LEVEL_3_1
- LEVEL_4
- LEVEL_4_1
- LEVEL_5
- LEVEL_5_1
- LEVEL_5_2
- LEVEL_6
- LEVEL_6_1
- LEVEL_6_2

**H265CodecProfile (enum)**

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as [Profile] / [Tier], so "Main/High" represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

- MAIN_MAIN
- MAIN_HIGH
- MAIN10_MAIN
- MAIN10_HIGH
- MAIN_422_8BIT_MAIN
- MAIN_422_8BIT_HIGH
- MAIN_422_10BIT_MAIN
- MAIN_422_10BIT_HIGH
**H265FlickerAdaptiveQuantization (enum)**

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

- DISABLED
- ENABLED

**H265FramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**H265FramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**H265GopBReference (enum)**

If enable, use reference B frames for GOP structures that have B frames > 1.

- DISABLED
- ENABLED

**H265GopSizeUnits (enum)**

Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

**H265InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- PROGRESSIVE
- TOP_FIELD
- BOTTOM_FIELD
- FOLLOW_TOP_FIELD
**H265ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**H265QualityTuningLevel (enum)**

Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

- SINGLE_PASS
- SINGLE_PASS_HQ
- MULTI_PASS_HQ

**H265RateControlMode (enum)**

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

**H265Sample AdaptiveOffsetFilterMode (enum)**

Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

- DEFAULT
- ADAPTIVE
- OFF

**H265SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

- DISABLED
- ENABLED

**H265Settings**

**slices**

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 32
**minIInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 30

**parNumerator**

Pixel Aspect Ratio numerator.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

**flickerAdaptiveQuantization**

- **Type**: string
- **Required**: False

**gopSizeUnits**

- **Type**: string
- **Required**: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**qualityTuningLevel**

- **Type**: string
- **Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type**: integer
- **Required**: False
Minimum: -2147483648
Maximum: 2147483647

**bitrate**
Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

**spatialAdaptiveQuantization**
Type: string
Required: False

**sampleAdaptiveOffsetFilterMode**
Type: string
Required: False

**temporalIds**
Type: string
Required: False

**slowPal**
Type: string
Required: False

**tiles**
Type: string
Required: False

**codecProfile**
Type: string
Required: False

**alternateTransferFunctionSei**
Type: string
Required: False

**unregisteredSeiTimecode**
Type: string
**Required**: False

**framerateControl**

Type: string  
Required: False

**telecine**

Type: string  
Required: False

**framerateConversionAlgorithm**

Type: string  
Required: False

**codecLevel**

Type: string  
Required: False

**numberReferenceFrames**

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 6

**temporalAdaptiveQuantization**

Type: string  
Required: False

**hrdBufferInitialFillPercentage**

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer  
Required: False  
Minimum: 0  
Maximum: 100

**framerateNumerator**

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer  
Required: False  
Minimum: 1
Properties

Maximum: 2147483647

`numberBFramesBetweenReferenceFrames`
Number of B-frames between reference frames.

  Type: integer
  Required: False
  Minimum: 0
  Maximum: 7

`gopClosedCadence`
Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

  Type: integer
  Required: False
  Minimum: 0
  Maximum: 2147483647

`framerateDenominator`
Framerate denominator.

  Type: integer
  Required: False
  Minimum: 1
  Maximum: 2147483647

`adaptiveQuantization`

  Type: string
  Required: False

`interlaceMode`

  Type: string
  Required: False

`gopSize`
GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

  Type: number
  Required: False
  Format: float
  Minimum: 0.0

`gopBReference`

  Type: string
  Required: False
sceneChangeDetect

- **Type**: string
- **Required**: False

parDenominator

Pixel Aspect Ratio denominator.

- **Type**: integer
- **Required**: False
- **Minimum**: 1
- **Maximum**: 2147483647

parControl

- **Type**: string
- **Required**: False

rateControlMode

- **Type**: string
- **Required**: False

H265SlowPal (enum)

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

- **DISABLED**
- **ENABLED**

H265SpatialAdaptiveQuantization (enum)

Adjust quantization within each frame based on spatial variation of content complexity.

- **DISABLED**
- **ENABLED**

H265Telecine (enum)

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output: Progressive, Interlaced, Hard Telecine or Soft Telecine. - **NONE**
- **SOFT**
- **HARD**

H265TemporalAdaptiveQuantization (enum)

Adjust quantization within each frame based on temporal variation of content complexity.
### H265TemporalIds (enum)

Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbPbPb display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

#### Properties

- **DISABLED**
- **ENABLED**

### H265Tiles (enum)

Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

#### Properties

- **DISABLED**
- **ENABLED**

### H265UnregisteredSeiTimecode (enum)

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

#### Properties

- **DISABLED**
- **ENABLED**

### Hdr10Metadata

#### redPrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

#### greenPrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

#### whitePointX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.
maxLuminance
Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

greenPrimaryX
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

whitePointY
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

redPrimaryX
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

bluePrimaryX
HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000
**maxFrameAverageLightLevel**

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 65535

**bluePrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 50000

**maxContentLightLevel**

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.

- **Type:** integer
- **Required:** True
- **Minimum:** 0
- **Maximum:** 65535

**minLuminance**

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 2147483647

**ImageInserter**

**insertableImages**

Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.

- **Type:** Array of type InsertableImage (p. 655)
- **Required:** True

**InsertableImage**

**duration**

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.
**fadeOut**

Use Fade out (fadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don’t specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**imageY**

Use Top (imageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**fadeIn**

Use Fade in (fadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don’t specify a value for Fade in, the image will appear abruptly at the Start time.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**imageX**

Use Left (imageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**width**

Specify the Width (width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648

---

656
Maximum: 2147483647

**startTime**

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

- **Type**: string
- **Required**: False

**opacity**

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 100

**layer**

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

- **Type**: integer
- **Required**: True
- **Minimum**: 0
- **Maximum**: 7

**height**

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.

- **Type**: integer
- **Required**: False
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**imageInserterInput**

Use Image location (imageInserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

- **Type**: string
- **Required**: True
- **Pattern**: ^(s3://)(.*)\.(bmp|BMP|png|PNG|tga|TGA)$

**LanguageCode (enum)**

ENG
SPA
FRA
DEU
GER
ZHO
ARA
HIN
JPN
RUS
POR
ITA
URD
VIE
KOR
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ABK
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AFR
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ListPresetsRequest

nextToken

Use this string, provided with the response to a previous request, to request the next batch of presets.

Type: string
Required: False

maxResults

Optional. Number of presets, up to twenty, that will be returned at one time

Type: integer
Required: False
**Format**
int32

category
Optionally, specify a preset category to limit responses to only presets from that category.

- **Type**: string
- **Required**: False

listBy

- **Type**: string
- **Required**: False

order

- **Type**: string
- **Required**: False

**ListPresetsResponse**

presets

- **Type**: Array of type Preset (p. 683)
- **Required**: False

nextToken

Use this string to request the next batch of presets.

- **Type**: string
- **Required**: False

**M2tsAudioBufferModel (enum)**

Selects between the DVB and ATSC buffer models for Dolby Digital audio.

- DVB
- ATSC

**M2tsBufferModel (enum)**

Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.

- MULTIPLEX
- NONE

**M2tsEbpAudioInterval (enum)**

When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video
EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_FIXED_INTERVALS
- VIDEO_INTERVAL

**M2tsEbpPlacement (enum)**

Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

- VIDEO_AND_AUDIO_PIDS
- VIDEO_PID

**M2tsEsRateInPes (enum)**

Controls whether to include the ES Rate field in the PES header.

- INCLUDE
- EXCLUDE

**M2tsPcrControl (enum)**

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

**M2tsRateMode (enum)**

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

**M2tsScte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M2tsSegmentationMarkers (enum)**

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-
ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

- NONE
- RAI_SEGSTART
- RAI_ADAPT
- PSI_SEGSTART
- EBP
- EBP_LEGACY

### M2tsSegmentationStyle (enum)

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $segmentation\_time$ seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $segmentation\_time$ seconds. Note that EBP lookahead is a slight exception to this rule.

- MAINTAIN\_CADENCE
- RESET\_CADENCE

### M2tsSettings

#### dvbTeletextPid

Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

#### bitrate

The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

#### segmentationTime

The length in seconds of each segment. Required unless markers is set to _none_.

- **Type**: number
- **Required**: False
- **Format**: float
Minimum: 0.0

audioPids

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer
Required: False

rateMode

Type: string
Required: False

ebpAudioInterval

Type: string
Required: False

fragmentTime

The length in seconds of each fragment. Only used with EBP markers.

Type: number
Required: False
Format: float
Minimum: 0.0

audioFramesPerPes

The number of audio frames to insert for each PES packet.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

maxPcrInterval

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 500

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.
Properties

privateMetadataPid
Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

pmtInterval
The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000

segmentationStyle

- **Type:** string
- **Required:** False

audioBufferModel

- **Type:** string
- **Required:** False

programNumber
The value of the program number field in the Program Map Table.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 65535

dvbNitSettings

- **Type:** DvbNitSettings (p. 625)
- **Required:** False

scte35Source

- **Type:** string
- **Required:** False
### Properties

**pmtPid**
Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**bufferModel**

- **Type**: string
- **Required**: False

**ebpPlacement**

- **Type**: string
- **Required**: False

**dvbSdtSettings**

- **Type**: DvbSdtSettings (p. 625)
- **Required**: False

**nullPacketBitrate**

Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: 0.0

**pcrPid**
Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**minEbpInterval**

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.
**transpToStramId**

The value of the transport stream ID field in the Program Map Table.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 10000

**videoPid**

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**esRateInPes**

- **Type:** string
- **Required:** False

**segmentationMarkers**

- **Type:** string
- **Required:** False

**dvbTdtSettings**

- **Type:** `DvbTdtSettings (p. 630)`
- **Required:** False

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000
**Properties**

**dvbSubPids**
Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

- **Type**: Array of type integer
- **Required**: False

**M3u8PcrControl (enum)**
When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.

- PCR_EVERY_PES_PACKET
- CONFIGURED_PCR_PERIOD

**M3u8Scte35Source (enum)**
Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M3u8Settings**

**pmtPid**
Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**pcrPid**
Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 8182

**audioPids**
Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.
Properties

audioFramesPerPes

The number of audio frames to insert for each PES packet.

  Type: integer  
  Required: False  
  Minimum: 0  
  Maximum: 2147483647

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

  Type: integer  
  Required: False  
  Minimum: 32  
  Maximum: 8182

transportStreamId

The value of the transport stream ID field in the Program Map Table.

  Type: integer  
  Required: False  
  Minimum: 0  
  Maximum: 65535

videoPid

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

  Type: integer  
  Required: False  
  Minimum: 32  
  Maximum: 8182

pcrControl

  Type: string  
  Required: False

privateMetadataPid

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

  Type: integer  
  Required: False
Minimum: 32
Maximum: 8182

**pmtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 1000

**programNumber**

The value of the program number field in the Program Map Table.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 65535

**timedMetadataPid**

Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

- **Type:** integer
- **Required:** False
- **Minimum:** 32
- **Maximum:** 8182

**timedMetadata**

- **Type:** string
- **Required:** False

**scte35Source**

- **Type:** string
- **Required:** False

**MovClapAtom (enum)**

When enabled, include 'clap' atom if appropriate for the video output settings.
MovCslgAtom (enum)

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

MovMpeg2FourCCControl (enum)

When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.

MovPaddingControl (enum)

If set to OMNEON, inserts Omneon-compatible padding

MovReference (enum)

A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.

MovSettings

reference

Type: string
Required: False

paddingControl

Type: string
Required: False

mpeg2FourCCControl

Type: string
Required: False
cslgAtom

Type: string
Required: False

clapAtom

Type: string
Required: False

Mp2Settings

channels

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

Type: integer
Required: False
Minimum: 1
Maximum: 2

bitrate

Average bitrate in bits/second.

Type: integer
Required: False
Minimum: 32000
Maximum: 384000

sampleRate

Sample rate in hz.

Type: integer
Required: False
Minimum: 32000
Maximum: 48000

Mp4CslgAtom (enum)

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

INCLUDE
EXCLUDE

Mp4FreeSpaceBox (enum)

Inserts a free-space box immediately after the moov box.

INCLUDE
EXCLUDE
**Mp4MoovPlacement (enum)**

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

- PROGRESSIVE_DOWNLOAD
- NORMAL

**Mp4Settings**

**mp4MajorBrand**

Overrides the "Major Brand" field in the output file. Usually not necessary to specify.

*Type*: string  
*Required*: False

**moovPlacement**

*Type*: string  
*Required*: False

**cslgAtom**

*Type*: string  
*Required*: False

**freeSpaceBox**

*Type*: string  
*Required*: False

**Mpeg2AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH

**Mpeg2CodecLevel (enum)**

Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.

- AUTO
- LOW
- MAIN
- HIGH1440
- HIGH

**Mpeg2CodecProfile (enum)**

Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.
Properties

**PROFILE_422**

**Mpeg2FramerateControl (enum)**
Using the API, set FramerateControl to `INITIALIZE_FROM_SOURCE` if you want the service to use the framerate from the input. Using the console, do this by choosing `INITIALIZE_FROM_SOURCE` for Framerate.

- `INITIALIZE_FROM_SOURCE`
- `SPECIFIED`

**Mpeg2FramerateConversionAlgorithm (enum)**
When set to `INTERPOLATE`, produces smoother motion during framerate conversion.

- `DUPLICATE_DROP`
- `INTERPOLATE`

**Mpeg2GopSizeUnits (enum)**
Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- `FRAMES`
- `SECONDS`

**Mpeg2InterlaceMode (enum)**
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of “top field first” and “bottom field first”. If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

- `PROGRESSIVE`
- `TOP_FIELD`
- `BOTTOM_FIELD`
- `FOLLOW_TOP_FIELD`
- `FOLLOW_BOTTOM_FIELD`

**Mpeg2IntraDcPrecision (enum)**
Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value `auto`, the service will automatically select the precision based on the per-frame compression ratio.

- `AUTO`
- `INTRA_DC_PRECISION_8`
- `INTRA_DC_PRECISION_9`
Mpeg2ParControl (enum)
Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

INITIALIZE_FROM_SOURCE
SPECIFIED

Mpeg2QualityTuningLevel (enum)
Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.

SINGLE_PASS
MULTI_PASS

Mpeg2RateControlMode (enum)
Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).

VBR
CBR

Mpeg2SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

Mpeg2Settings

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

Type: integer
Required: False
Minimum: 0
Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

gopSizeUnits

Type: string
Required: False

hrdBufferSize

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

qualityTuningLevel

Type: string
Required: False

maxBitrate

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

bitrate

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer
Required: False
Minimum: 1000
Maximum: 2147483647

spatialAdaptiveQuantization

Type: string
Required: False

slowPal

Type: string
Required: False
Properties

**codecProfile**
Type: string  
Required: False

**intraDcPrecision**
Type: string  
Required: False

**softness**
Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.
Type: integer  
Required: False  
Minimum: 0  
Maximum: 128

**framerateControl**
Type: string  
Required: False

**telecine**
Type: string  
Required: False

**framerateConversionAlgorithm**
Type: string  
Required: False

**codecLevel**
Type: string  
Required: False

**temporalAdaptiveQuantization**
Type: string  
Required: False

**hrdBufferInitialFillPercentage**
Percentage of the buffer that should initially be filled (HRD buffer model).
Type: integer  
Required: False  
Minimum: 0  
Maximum: 100
framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.

Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

sceneChangeDetect
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

syntax
Type: string
Required: False

rateControlMode
Type: string
Required: False

Mpeg2SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
DISABLED
ENABLED

Mpeg2SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.
DISABLED
ENABLED

Mpeg2Syntax (enum)
Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).
DEFAULT
D_10
Mpeg2Telecine (enum)

Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
SOFT
HARD

Mpeg2TemporalAdaptiveQuantization (enum)

Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

NoiseReducer

filter

Type: string
Required: True

filterSettings

Type: NoiseReducerFilterSettings (p. 682)
Required: False

spatialFilterSettings

Type: NoiseReducerSpatialFilterSettings (p. 682)
Required: False

NoiseReducerFilter (enum)

Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).

* Bilateral is an edge preserving noise reduction filter
* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters
* Conserve is a min/max noise reduction filter
* Spatial is frequency-domain filter based on JND principles.

BILATERAL
MEAN
GAUSSIAN
LANCZOS
SHARPEN
CONSERVE
SPATIAL
NoiseReducerFilterSettings

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

NoiseReducerSpatialFilterSettings

**strength**
Relative strength of noise reducing filter. Higher values produce stronger filtering.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 16

postFilterSharpenStrength
Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

speed
The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

- **Type**: integer
- **Required**: False
- **Minimum**: -2
- **Maximum**: 3

Order (enum)
When you request lists of resources, you can optionally specify whether they are sorted in ASCENDING or DESCENDING order. Default varies by resource.

- ASCENDING
- DESCENDING

OutputChannelMapping

**inputChannels**

- **Type**: Array of type integer
- **Required**: True
**OutputSdt (enum)**

Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter “SDT Manually” means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

- SDT_FOLLOW
- SDT_FOLLOW_IF_PRESENT
- SDT_MANUAL
- SDT_NONE

**Preset**

**settings**

Type: PresetSettings (p. 684)

Required: True

**lastUpdated**

The timestamp in epoch seconds when the preset was last updated.

Type: string

Required: False

Format: date-time

**createdAt**

The timestamp in epoch seconds for preset creation.

Type: string

Required: False

Format: date-time

**name**

A name you create for each preset. Each name must be unique within your account.

Type: string

Required: True

**description**

An optional description you create for each preset.

Type: string

Required: False

**category**

An optional category you create to organize your presets.
Properties

Type: string  
Required: False

type

Type: string  
Required: False

arn

An identifier for this resource that is unique within all of AWS.

Type: string  
Required: False

PresetListBy (enum)

Optional. When you request a list of presets, you can choose to list them alphabetically by NAME or chronologically by CREATION_DATE. If you don’t specify, the service will list them by name.

NAME  
CREATION_DATE  
SYSTEM

PresetSettings

videoDescription

(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

Type: VideoDescription (p. 692)  
Required: False

audioDescriptions

(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.

Type: Array of type AudioDescription (p. 612)  
Required: False

containerSettings

Type: ContainerSettings (p. 622)  
Required: False

captionDescriptions

Caption settings for this preset. There can be multiple caption settings in a single output.
ProresCodecProfile (enum)

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

APPLE_PRORES_422
APPLE_PRORES_422_HQ
APPLE_PRORES_422_LT
APPLE_PRORES_422_PROXY

ProresFramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

ProresFramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

ProresInterlaceMode (enum)

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

ProresParControl (enum)

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).
INITIALIZE_FROM_SOURCE
SPECIFIED

ProresSettings

slowPal
Type: string
Required: False

framerateControl
Type: string
Required: False

telecine
Type: string
Required: False

framerateDenominator
Framerate denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateConversionAlgorithm
Type: string
Required: False

interlaceMode
Type: string
Required: False

codecProfile
Type: string
Required: False

parNumerator
Pixel Aspect Ratio numerator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl
Type: string
Required: False

parDenominator
Pixel Aspect Ratio denominator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateNumerator
When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

ProresSlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.
DISABLED
ENABLED

ProresTelecine (enum)
Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.
NONE
HARD

Rectangle

width
Width of rectangle in pixels.
Type: integer
Required: True
Minimum: -2147483648
Maximum: 2147483647
x
The distance, in pixels, between the rectangle and the left edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

y
The distance, in pixels, between the rectangle and the top edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

height
Height of rectangle in pixels.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**RemixSettings**

channelsOut
Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

- **Type**: integer
- **Required**: True
- **Minimum**: 1
- **Maximum**: 8

channelMapping

- **Type**: ChannelMapping (p. 620)
- **Required**: True

channelsIn
Specify the number of audio channels from your input that you want to use in your output. With remixing, you might combine or split the data in these channels, so the number of channels in your final output might be different.

- **Type**: integer
- **Required**: True
- **Minimum**: 1
- **Maximum**: 16
**RespondToAfd (enum)**

Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to AFD values in the input.

* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio, and output display aspect ratio.
* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set AfdSignaling to (AUTO).
* Choose None to remove all input AFD values from this output.

NONE  
RESPOND  
PASSTHROUGH

**ScalingBehavior (enum)**

Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output (StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to allow the service to letterbox your video instead. This setting overrides any positioning value you specify elsewhere in the job.

DEFAULT  
STRETCH_TO_OUTPUT

**SccDestinationFramerate (enum)**

Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized in the output. Specify a framerate that matches the framerate of the associated video. If the video framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe (FRAMERATE_29_97_NON_DROPFRAME).

FRAMERATE_23_97  
FRAMERATE_24  
FRAMERATE_29_97_DROPFRAME  
FRAMERATE_29_97_NON_DROPFRAME

**SccDestinationSettings**

framerate

* **Type:** string  
* **Required:** False

**TeletextDestinationSettings**

pageNumber

Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.
TimecodeBurnin

**prefix**

Use Prefix (Prefix) to place ASCII characters before any burned-in timecode. For example, a prefix of "EZ-" will result in the timecode "EZ-00:00:00:00". Provide either the characters themselves or the ASCII code equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

  - **Type**: string
  - **Required**: False
  - **Pattern**: `^[1-8][0-9a-fA-F][0-9a-eA-E]$`

**fontSize**

Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

  - **Type**: integer
  - **Required**: False
  - **Minimum**: 10
  - **Maximum**: 48

**position**

  - **Type**: string
  - **Required**: False

**TimecodeBurninPosition (enum)**

Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- **TOP_CENTER**
- **TOP_LEFT**
- **TOP_RIGHT**
- **MIDDLE_LEFT**
- **MIDDLE_CENTER**
- **MIDDLE_RIGHT**
- **BOTTOM_LEFT**
- **BOTTOM_CENTER**
- **BOTTOM_RIGHT**

**TimedMetadata (enum)**

If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.

- **PASSTHROUGH**
NONE

**TtmlDestinationSettings**

`stylePassthrough`

*Type*: string
*Required*: False

**TtmlStylePassthrough (enum)**

Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

- ENABLED
- DISABLED

**Type (enum)**

- SYSTEM
- CUSTOM

**VideoCodec (enum)**

Type of video codec

- FRAME_CAPTURE
- H_264
- H_265
- MPEG2
- PRORES

**VideoCodecSettings**

**h265Settings**

*Type*: `H265Settings` (p. 647)
*Required*: False

**codec**

*Type*: string
*Required*: True

**proresSettings**

*Type*: `ProresSettings` (p. 686)
*Required*: False

**mpeg2Settings**

*Type*: `Mpeg2Settings` (p. 676)
**Properties**

**h264Settings**

*Type: H264Settings (p. 639)*

*Required: False*

**frameCaptureSettings**

*Type: FrameCaptureSettings (p. 635)*

*Required: False*

**VideoDescription**

**fixedAfd**

Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAfd) to specify a four-bit AFD value which the service will write on all frames of this video output.

*Type: integer*

*Required: False*

*Minimum: 0*

*Maximum: 15*

**scalingBehavior**

*Type: string*

*Required: False*

**respondToAfd**

*Type: string*

*Required: False*

**codecSettings**

*Type: VideoCodecSettings (p. 691)*

*Required: True*

**afdSignaling**

*Type: string*

*Required: False*

**colorMetadata**

*Type: string*

*Required: False*

**timecodeInsertion**

*Type: string*
**Properties**

**Required**: False

**width**

Use Width (Width) to define the video resolution width, in pixels, for this output. If you don't provide a value here, the service will use the input width.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
- **Maximum**: 4096

**sharpness**

Use Sharpness (Sharpness) setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 100

**antiAlias**

- **Type**: string
- **Required**: False

**videoPreprocessors**

Find additional transcoding features under Preprocessors (VideoPreprocessors). Enable the features at each output individually. These features are disabled by default.

- **Type**: VideoPreprocessor (p. 694)
- **Required**: False

**position**

Use Position (Position) to point to a rectangle object to define your position. This setting overrides any other aspect ratio.

- **Type**: Rectangle (p. 687)
- **Required**: False

**dropFrameTimecode**

- **Type**: string
- **Required**: False

**crop**

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input
source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

**Type:** Rectangle (p. 687)
**Required:** False

### height

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don’t provide a value here, the service will use the input height.

**Type:** integer
**Required:** False
**Minimum:** 32
**Maximum:** 2160

---

**VideoPreprocessor**

### timecodeBurnin

Timecode burn-in (TimecodeBurnin)—Burns the output timecode and specified prefix into the output.

**Type:** TimecodeBurnin (p. 690)
**Required:** False

### noiseReducer

Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type:** NoiseReducer (p. 681)
**Required:** False

### colorCorrector

Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type:** ColorCorrector (p. 621)
**Required:** False

### imageInserter

Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

**Type:** ImageInserter (p. 655)
**Required:** False

### deinterlacer

Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.
Type: Deinterlacer (p. 624)
Required: False

VideoTimecodeInsertion (enum)

Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

DISABLED
PIC_TIMING_SEI

WavSettings

channels

Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

Type: integer
Required: False
Minimum: 1
Maximum: 8

bitDepth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

Type: integer
Required: False
Minimum: 16
Maximum: 24

sampleRate

Sample rate in Hz.

Type: integer
Required: False
Minimum: 8000
Maximum: 192000

A Specific Preset

URI

/2017-08-29/presets/ name
HTTP Methods

GET

Operation ID: GetPreset

Retrieve the JSON for a specific preset.

Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>GetPresetResponse</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody</td>
<td>403: AccessDeniedException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody</td>
<td>404: ResourceNotFoundException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody</td>
<td>429: LimitExceededException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests.</td>
</tr>
</tbody>
</table>
### Status Code | Response Model | Description
--- | --- | ---
409 | ExceptionBody (p. 721) | For example, you may be hitting your account limits for preset creation or job submission.

409: ResourceInUseException

The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.

---

**PUT**

Operation ID: UpdatePreset

Modify one of your existing presets.

#### Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

#### Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>UpdatePresetResponse (p. 714)</td>
<td>200: OkRresponse</td>
</tr>
</tbody>
</table>
| 400 | ExceptionBody (p. 721) | 400: BadRequestException

The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 500 | ExceptionBody (p. 721) | 500: InternalServiceException

The service encountered an unexpected condition and cannot fulfill your request.

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
</table>
| 403 | ExceptionBody (p. 721) | 403: AccessDeniedException

You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.
## DELETE

Operation ID: DeletePreset

Permanently delete a preset you have created.

### Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

### Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>ExceptionBody (p. 721)</td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>202</td>
<td>DeletePresetResponse (p. 721)</td>
<td>Your request has been accepted. Processing has not yet begun.</td>
</tr>
</tbody>
</table>
## Status Code

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>ExceptionBody (p. 721)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>403</td>
<td>ExceptionBody (p. 721)</td>
<td>403: AccessDeniedException</td>
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<tr>
<td></td>
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<tr>
<td>404</td>
<td>ExceptionBody (p. 721)</td>
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<td>The resource you requested does not exist.</td>
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<td>429</td>
<td>ExceptionBody (p. 721)</td>
<td>429: LimitExceededException</td>
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<tr>
<td></td>
<td></td>
<td>Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
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<tr>
<td>409</td>
<td>ExceptionBody (p. 721)</td>
<td>409: ResourceInUseException</td>
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<tr>
<td></td>
<td></td>
<td>The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>

## Schemas

### Request Bodies

**Example GET**

```json
{
    "name (p. 750)": "string"
}
```
Example PUT

```json
{
    "settings (p. 804)": {
        "videoDescription (p. 797)": {
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            "scalingBehavior (p. 806)": enum,
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                    "parNumerator (p. 762)": integer,
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                    "gopSizeUnits (p. 763)": enum,
                    "hrdBufferSize (p. 763)": integer,
                    "qualityTuningLevel (p. 763)": enum,
                    "maxBitrate (p. 763)": integer,
                    "bitrate (p. 763)": integer,
                    "spatialAdaptiveQuantization (p. 763)": enum,
                    "sampleAdaptiveOffsetFilterMode (p. 764)": enum,
                    "temporalIds (p. 764)": enum,
                    "slowPal (p. 764)": enum,
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            }
        }
    }
}
```
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      "bluePrimaryX (p. 769)": integer,
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  "bitstreamMode (p. 748)": enum,
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  "loRoCenterMixLevel (p. 748)": number
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  "algorithmControl (p. 730)": enum,
  "peakCalculation (p. 730)": enum,
  "loudnessLogging (p. 730)": enum,
  "correctionGateLevel (p. 730)": integer,
  "algorithm (p. 730)": enum
}
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    "moovPlacement (p. 787)": enum,
    "csigAtom (p. 787)": enum,
    "freeSpaceBox (p. 787)": enum
  },
  "m3u8Settings (p. 737)": {
    "pmtPid (p. 782)": integer,
    "pcrPid (p. 783)": integer,
    "audioPids (p. 783)": [ integer
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"m2tsSettings (p. 737)": {
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  "programNumber (p. 780)": integer,
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    "networkId (p. 739)": integer,
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  "patInterval (p. 782)": integer,
  "dvbSubPids (p. 782)": [
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  ],
},
"movSettings (p. 737)": {
  "reference (p. 786)": enum,
  "paddingControl (p. 786)": enum,
  "mpeg2FourCCControl (p. 786)": enum,
  "csigAtom (p. 786)": enum,
"clapAtom (p. 786)" : enum,
"f4vSettings (p. 737)" : {
  "moovPlacement (p. 749)" : enum
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"captionDescriptions (p. 798)" : [
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        "backgroundColor (p. 731)" : enum,
        "teletextSpacing (p. 731)" : enum,
        "yPosition (p. 731)" : integer,
        "backgroundOpacity (p. 731)" : integer,
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        "fontResolution (p. 732)" : integer,
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        "fontSize (p. 732)" : integer,
        "shadowXOffset (p. 732)" : integer,
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        "shadowColor (p. 733)" : enum,
        "fontColor (p. 733)" : enum
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      "teletextDestinationSettings (p. 735)" : {
        "pageNumber (p. 803)" : "string"
      },
      "ttmlDestinationSettings (p. 735)" : {
        "stylePassthrough (p. 804)" : enum
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      "dvbSubDestinationSettings (p. 735)" : {
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        "fontOpacity (p. 741)" : integer,
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        "fontResolution (p. 741)" : integer,
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        "fontSize (p. 742)" : integer,
        "shadowXOffset (p. 742)" : integer,
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        "shadowColor (p. 742)" : enum,
        "fontColor (p. 742)" : enum
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      "sccDestinationSettings (p. 735)" : {
        "framerate (p. 802)" : enum
      }
    }
  }
],
"name (p. 804)" : "string",
"description (p. 804)" : "string",
"category (p. 804)" : "String"
Example DELETE

{  
  "name (p. 739)" : "string"
}

Response Bodies

Example GetPresetResponse

{  
  "preset (p. 750)" : {  
    "settings (p. 796)" : {  
      "videoDescription (p. 797)" : {  
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        "scalingBehavior (p. 806)" : enum,  
        "respondToAfd (p. 806)" : enum,  
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          "h265Settings (p. 805)" : {  
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            "parNumerator (p. 762)" : integer,  
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            "gopSizeUnits (p. 763)" : enum,  
            "hrdBufferSize (p. 763)" : integer,  
            "qualityTuningLevel (p. 763)" : enum,  
            "maxBitrate (p. 763)" : integer,  
            "bitrate (p. 763)" : integer,  
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            "sampleAdaptiveOffsetFilterMode (p. 764)" : enum,  
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            "slowPal (p. 764)" : enum,  
            "tiles (p. 764)" : enum,  
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            "unregisteredSeiTimecode (p. 764)" : enum,  
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            "gopBReference (p. 766)" : enum,  
            "sceneChangeDetect (p. 766)" : enum,  
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            "rateControlMode (p. 767)" : enum  
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            "telecine (p. 799)" : enum,  
            "framerateDenominator (p. 799)" : integer,  
            "framerateConversionAlgorithm (p. 799)" : enum  
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        "proresProfile (p. 807)" : sequence,  
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        "audioDescription (p. 798)" : {  
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      },  
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  "height (p. 801)": integer
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  "height (p. 801)": integer
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  }
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    "codingMode (p. 725)": enum,
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"sampleRate (p. 725)"": integer
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"specification (p. 722)"": enum,
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"rawFormat (p. 723)"": enum,
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"freeSpaceBox (p. 787)": enum
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"programNumber (p. 784)": integer,
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"scte35Source (p. 785)": enum
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"audioBufferModel (p. 779)": enum,
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  "nitInterval (p. 739)": integer
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Example UpdatePresetResponse

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    }
  }
]
Example DeletePresetResponse

{
}

Example ExceptionBody

{
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}

Properties

AacAudioDescriptionBroadcasterMix (enum)

Choose BROADCASTER_MIXED_AD when the input contains pre-mixed main audio + audio description (AD) as a stereo pair. The value for AudioType will be set to 3, which signals to downstream systems that this stream contains "broadcaster mixed AD". Note that the input received by the encoder must contain pre-mixed audio; the encoder does not perform the mixing. When you choose BROADCASTER_MIXED_AD, the encoder ignores any values you provide in AudioType and FollowInputAudioType. Choose NORMAL when the input does not contain pre-mixed audio + audio description (AD). In this case, the encoder will use any values you provide for AudioType and FollowInputAudioType.

BROADCASTER_MIXED_AD
NORMAL

AacCodecProfile (enum)

AAC Profile.

LC
HEV1
HEV2
**AacCodingMode (enum)**

Mono (Audio Description), Mono, Stereo, or 5.1 channel layout. Valid values depend on rate control mode and profile. "1.0 - Audio Description (Receiver Mix)" setting receives a stereo description plus control track and emits a mono AAC encode of the description track, with control data emitted in the PES header as per ETSI TS 101 154 Annex E.

- AD_RECEIVER_MIX
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_5_1

**AacRateControlMode (enum)**

Rate Control Mode.

- CBR
- VBR

**AacRawFormat (enum)**

Enables LATM/LOAS AAC output. Note that if you use LATM/LOAS AAC in an output, you must choose "No container" for the output container.

- LATM_LOAS
- NONE

**AacSettings**

**vbrQuality**

- **Type:** string
- **Required:** False

**codecProfile**

- **Type:** string
- **Required:** False

**codingMode**

- **Type:** string
- **Required:** True

**specification**

- **Type:** string
- **Required:** False

**bitrate**

Average bitrate in bits/second. Valid values depend on rate control mode and profile.
Type: integer  
Required: False  
Minimum: 6000  
Maximum: 1024000

**rawFormat**

Type: string  
Required: False

**rateControlMode**

Type: string  
Required: False

**sampleRate**

Sample rate in Hz. Valid values depend on rate control mode and profile.

Type: integer  
Required: True  
Minimum: 8000  
Maximum: 96000

**audioDescriptionBroadcasterMix**

Type: string  
Required: False

**AacSpecification (enum)**

Use MPEG-2 AAC instead of MPEG-4 AAC audio for raw or MPEG-2 Transport Stream containers.

MPEG2  
MPEG4

**AacVbrQuality (enum)**

VBR quality level. Only used if the rate control mode (AacRateControlMode) is VBR.

LOW  
MEDIUM_LOW  
MEDIUM_HIGH  
HIGH

**Ac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted AC-3 stream. See ATSC A/52-2012 for background on these values.

COMPLETE_MAIN  
COMMENTARY  
DIALOGUE  
EMERGENCY
HEARING_IMPAIRED
MUSIC_AND_EFFECTS
VISUALLY_IMPAIRED
VOICE_OVER

Ac3CodingMode (enum)
Dolby Digital coding mode. Determines number of channels.
- CODING_MODE_1_0
- CODING_MODE_1_1
- CODING_MODE_2_0
- CODING_MODE_3_2_LFE

Ac3DynamicRangeCompressionProfile (enum)
If set to FILM_STANDARD, adds dynamic range compression signaling to the output bitstream as defined in the Dolby Digital specification.
- FILM_STANDARD
- NONE

Ac3LfeFilter (enum)
Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.
- ENABLED
- DISABLED

Ac3MetadataControl (enum)
When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.
- FOLLOW_INPUT
- USE_CONFIGURED

Ac3Settings
dynamicRangeCompressionProfile
Type: string
Required: False

dialnorm
Sets the dialnorm for the output. If blank and input audio is Dolby Digital, dialnorm will be passed through.
Type: integer
Required: False
Minimum: 1
Maximum: 31

codingMode
Type: string
Required: False

metadataControl
Type: string
Required: False

lfeFilter
Type: string
Required: False

bitrate
Average bitrate in bits/second. Valid bitrates depend on the coding mode.
Type: integer
Required: False
Minimum: 64000
Maximum: 640000

bitstreamMode
Type: string
Required: False

sampleRate
Sample rate in hz. Sample rate is always 48000.
Type: integer
Required: False
Minimum: 48000
Maximum: 48000

AfdSignaling (enum)
This setting only applies to H.264 and MPEG2 outputs. Use Insert AFD signaling (AfdSignaling) to whether there are AFD values in the output video data and what those values are.
* Choose None to remove all AFD values from this output.
* Choose Fixed to ignore input AFD values and instead encode the value specified in the job.
* Choose Auto to calculate output AFD values based on the input AFD scaler data.

NONE
AUTO
FIXED
**AiffSettings**

**channels**
Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2

**bitDepth**
Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

- **Type:** integer
- **Required:** False
- **Minimum:** 16
- **Maximum:** 24

**sampleRate**
Sample rate in hz.

- **Type:** integer
- **Required:** False
- **Minimum:** 8000
- **Maximum:** 192000

**AntiAlias (enum)**
Enable Anti-alias (AntiAlias) to enhance sharp edges in video output when your input resolution is much larger than your output resolution. Default is enabled.

- DISABLED
- ENABLED

**AudioCodec (enum)**
Type of Audio codec.

- AAC
- MP2
- WAV
- AIFF
- AC3
- EAC3
- PASSTHROUGH

**AudioCodecSettings**

**codec**

- **Type:** string
Required: True

**wavSettings**

Type: WavSettings (p. 809)

Required: False

**ac3Settings**

Type: Ac3Settings (p. 724)

Required: False

**aacSettings**

Type: AacSettings (p. 722)

Required: False

**aiffSettings**

Type: AiffSettings (p. 726)

Required: False

**eac3Settings**

Type: Eac3Settings (p. 746)

Required: False

**mp2Settings**

Type: Mp2Settings (p. 786)

Required: False

**AudioDescription**

**languageCodeControl**

Type: string

Required: False

**audioTypeControl**

Type: string

Required: False

**remixSettings**

Advanced audio remixing settings.

Type: RemixSettings (p. 801)

Required: False
**audioType**

Applies only if Follow Input Audio Type is unchecked (false). A number between 0 and 255. The following are defined in ISO-IEC 13818-1: 0 = Undefined, 1 = Clean Effects, 2 = Hearing Impaired, 3 = Visually Impaired Commentary, 4-255 = Reserved.

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 255

**audioSourceName**

Specifies which audio data to use from each input. In the simplest case, specify an "Audio Selector":#inputs-audio_selector by name based on its order within each input. For example if you specify "Audio Selector 3", then the third audio selector will be used from each input. If an input does not have an "Audio Selector 3", then the audio selector marked as "default" in that input will be used. If there is no audio selector marked as "default", silence will be inserted for the duration of that input. Alternatively, an "Audio Selector Group":#inputs-audio_selector_group name may be specified, with similar default/silence behavior. If no audio_source_name is specified, then "Audio Selector 1" will be chosen automatically.

- **Type:** string
- **Required:** False

**codecSettings**

- **Type:** AudioCodecSettings (p. 726)
- **Required:** True

**languageCode**

Indicates the language of the audio output track. The ISO 639 language specified in the 'Language Code' drop down will be used when 'Follow Input Language Code' is not selected or when 'Follow Input Language Code' is selected but there is no ISO 639 language code specified by the input.

- **Type:** string
- **Required:** False

**streamName**

Used for Microsoft Smooth Streaming and Apple HLS outputs. Indicates the name displayed by the player (eg. English, or Director Commentary). Alphanumeric characters, spaces, and underscore are legal.

- **Type:** string
- **Required:** False
- **Pattern:** `^[\w\s]*$`

**audioNormalizationSettings**

Advanced audio normalization settings.

- **Type:** AudioNormalizationSettings (p. 729)
- **Required:** False
**AudioLanguageCodeControl (enum)**

Choosing FOLLOW_INPUT will cause the ISO 639 language code of the output to follow the ISO 639 language code of the input. The language specified for languageCode' will be used when USE_CONFIGURED is selected or when FOLLOW_INPUT is selected but there is no ISO 639 language code specified by the input.

- FOLLOW_INPUT
- USE_CONFIGURED

**AudioNormalizationAlgorithm (enum)**

Audio normalization algorithm to use. 1770-1 conforms to the CALM Act specification, 1770-2 conforms to the EBU R-128 specification.

- ITU_BS_1770_1
- ITU_BS_1770_2

**AudioNormalizationAlgorithmControl (enum)**

When enabled the output audio is corrected using the chosen algorithm. If disabled, the audio will be measured but not adjusted.

- CORRECT_AUDIO
- MEASURE_ONLY

**AudioNormalizationLoudnessLogging (enum)**

If set to LOG, log each output's audio track loudness to a CSV file.

- LOG
- DONT_LOG

**AudioNormalizationPeakCalculation (enum)**

If set to TRUE_PEAK, calculate and log the TruePeak for each output's audio track loudness.

- TRUE_PEAK
- NONE

**AudioNormalizationSettings**

**targetLkfs**

Target LKFS(loudness) to adjust volume to. If no value is entered, a default value will be used according to the chosen algorithm. The CALM Act (1770-1) recommends a target of -24 LKFS. The EBU R-128 specification (1770-2) recommends a target of -23 LKFS.

- **Type:** number
- **Required:** False
- **Format:** float
- **Minimum:** -59.0
- **Maximum:** 0.0
algorithmControl
  Type: string
  Required: False

peakCalculation
  Type: string
  Required: False

loudnessLogging
  Type: string
  Required: False

correctionGateLevel
  Content measuring above this level will be corrected to the target level. Content measuring below this level will not be corrected. Gating only applies when not using real_time_correction.

  Type: integer
  Required: False
  Minimum: -70
  Maximum: 0

algorithm
  Type: string
  Required: False

AudioTypeControl (enum)
  When set to FOLLOW_INPUT, if the input contains an ISO 639 audio_type, then that value is passed through to the output. If the input contains no ISO 639 audio_type, the value in Audio Type is included in the output. Otherwise the value in Audio Type is included in the output. Note that this field and audioType are both ignored if audioDescriptionBroadcasterMix is set to BROADCASTER_MIXED_AD.

    FOLLOW_INPUT
    USE_CONFIGURED

BurninDestinationSettings

xPosition
  Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: False
  Minimum: 0
Maximum: 2147483647

**backgroundColor**

*Type*: string  
*Required*: False

**teletextSpacing**

*Type*: string  
*Required*: False

**yPosition**

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 2147483647

**backgroundOpacity**

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 255

**fontOpacity**

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: True  
*Minimum*: 0  
*Maximum*: 255

**shadowOpacity**

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

*Type*: integer  
*Required*: False  
*Minimum*: 0  
*Maximum*: 255
fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: False
  Minimum: 96
  Maximum: 600

shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647

outlineSize

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: True
  Minimum: 0
  Maximum: 10

outlineColor

  Type: string
  Required: True

fontSize

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: False
  Minimum: 0
  Maximum: 96

shadowXOffset

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

  Type: integer
  Required: False
  Minimum: -2147483648
  Maximum: 2147483647
alignment

Type: string
Required: True

shadowColor

Type: string
Required: False

fontColor

Type: string
Required: False

BurninSubtitleAlignment (enum)
If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

CENTERED
LEFT

BurninSubtitleBackgroundColor (enum)
Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

NONE
BLACK
WHITE

BurninSubtitleFontColor (enum)
Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

WHITE
BLACK
YELLOW
RED
GREEN
BLUE

BurninSubtitleOutlineColor (enum)
Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.
BurninSubtitleShadowColor (enum)

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

BurninSubtitleTeletextSpacing (enum)

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

CaptionDescriptionPreset

languageDescription

Human readable information to indicate captions available for players (e.g., English, or Spanish). Alphanumeric characters, spaces, and underscore are legal.

- Type: string
- Required: False
- Pattern: ^\[\w\ ]*$

languageCode

Indicates the language of the caption output track.

- Type: string
- Required: False

destinationSettings

- Type: CaptionDestinationSettings (p. 734)
- Required: False

CaptionDestinationSettings

burninDestinationSettings

- Type: BurninDestinationSettings (p. 730)
Required: False

teletextDestinationSettings

Type: TeletextDestinationSettings (p. 803)
Required: False

ttmlDestinationSettings

Type: TtmlDestinationSettings (p. 804)
Required: False

destinationType

Type: string
Required: True

dvbSubDestinationSettings

Type: DvbSubDestinationSettings (p. 740)
Required: False

sccDestinationSettings

Type: SccDestinationSettings (p. 802)
Required: False

CaptionDestinationType (enum)

BURN_IN
DVB_SUB
EMBEDDED
SCC
SRT
TELETEXT
TTML
WEBVTT

ChannelMapping

outputChannels

Type: Array of type OutputChannelMapping (p. 796)
Required: True

ColorCorrector

saturation

Saturation level.

Type: integer
brightness

Brightness level.

Type: integer
Required: False
Minimum: 1
Maximum: 100

hdr10Metadata

Type: Hdr10Metadata (p. 768)
Required: False

contrast

Contrast level.

Type: integer
Required: False
Minimum: 1
Maximum: 100

hue

Hue in degrees.

Type: integer
Required: False
Minimum: -180
Maximum: 180

colorSpaceConversion

Type: string
Required: False

ColorMetadata (enum)

Enable Insert color metadata (ColorMetadata) to include color metadata in this output. This setting is enabled by default.

IGNORE
INSERT

ColorSpaceConversion (enum)

Determines if colorspace conversion will be performed. If set to _None_, no conversion will be performed. If _Force 601_ or _Force 709_ are selected, conversion will be performed for inputs with
differing color spaces. An input's colorspace can be specified explicitly in the "Video Selector":#inputs-video_selector if necessary.

   NONE
   FORCE_601
   FORCE_709
   FORCE_HDR10
   FORCE_HLG_2020

**ContainerSettings**

*container*

  *Type:* string  
  *Required:* True

**mp4Settings**

  *Type:* Mp4Settings (p. 787)  
  *Required:* False

**m3u8Settings**

  *Type:* M3u8Settings (p. 782)  
  *Required:* False

**m2tsSettings**

  *Type:* M2tsSettings (p. 777)  
  *Required:* False

**movSettings**

  *Type:* MovSettings (p. 786)  
  *Required:* False

**f4vSettings**

  *Type:* F4vSettings (p. 749)  
  *Required:* False

**ContainerType (enum)**

Container for this output. Some containers require a container settings object. If not specified, the default object will be created.

   F4V
   ISMv
   M2TS
   M3U8
   MOV
   MP4
   MPD
Properties

MXF
RAW

DeinterlaceAlgorithm (enum)

Only applies when you set Deinterlacer (DeinterlaceMode) to Deinterlace (DEINTERLACE) or Adaptive (ADAPTIVE). Motion adaptive interpolate (INTERPOLATE) produces sharper pictures, while blend (BLEND) produces smoother motion. Use (INTERPOLATE_TICKER) OR (BLEND_TICKER) if your source file includes a ticker, such as a scrolling headline at the bottom of the frame.

INTERPOLATE
INTERPOLATE_TICKER
BLEND
BLEND_TICKER

Deinterlacer

mode

Type: string
Required: False

control

Type: string
Required: False

algorithm

Type: string
Required: False

DeinterlacerControl (enum)

- When set to NORMAL (default), the deinterlacer does not convert frames that are tagged in metadata as progressive. It will only convert those that are tagged as some other type. - When set to FORCE_ALL_FRAMES, the deinterlacer converts every frame to progressive - even those that are already tagged as progressive. Turn Force mode on only if there is a good chance that the metadata has tagged frames as progressive when they are not progressive. Do not turn on otherwise; processing frames that are already progressive into progressive will probably result in lower quality video.

FORCE_ALL_FRAMES
NORMAL

DeinterlacerMode (enum)

Use Deinterlacer (DeinterlaceMode) to choose how the service will do deinterlacing. Default is Deinterlace. - Deinterlace converts interlaced to progressive. - Inverse telecine converts Hard Telecine 29.97i to progressive 23.976p. - Adaptive auto-detects and converts to progressive.

DEINTERLACE
INVERSE_TELECINE
ADAPTIVE
DeletePresetRequest

name

Type: string
Required: True

DeletePresetResponse

DropFrameTimecode (enum)
Applies only to 29.97 fps outputs. When this feature is enabled, the service will use drop-frame timecode on outputs. If it is not possible to use drop-frame timecode, the system will fall back to non-drop-frame. This setting is enabled by default when Timecode insertion (TimecodeInsertion) is enabled.

DISABLED
ENABLED

DvbNitSettings

networkName
The network name text placed in the network_name_descriptor inside the Network Information Table. Maximum length is 256 characters.

Type: string
Required: True

networkId
The numeric value placed in the Network Information Table (NIT).

Type: integer
Required: True
Minimum: 0
Maximum: 65535

nitInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: True
Minimum: 25
Maximum: 10000

DvbSdtSettings

sdtInterval
The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: False
Properties

Minimum: 25
Maximum: 2000

**serviceName**

The service name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**serviceProviderName**

The service provider name placed in the service_descriptor in the Service Description Table. Maximum length is 256 characters.

- **Type**: string
- **Required**: False

**outputSdt**

- **Type**: string
- **Required**: False

**DvbSubDestinationSettings**

**xPosition**

Specifies the horizontal position of the caption relative to the left side of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the left of the output. If no explicit x_position is provided, the horizontal caption position will be determined by the alignment parameter. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647

**backgroundColor**

- **Type**: string
- **Required**: False

**teletextSpacing**

- **Type**: string
- **Required**: False

**yPosition**

Specifies the vertical position of the caption relative to the top of the output in pixels. A value of 10 would result in the captions starting 10 pixels from the top of the output. If no explicit y_position is
provided, the caption will be positioned towards the bottom of the output. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 2147483647

### backgroundOpacity

Specifies the opacity of the background rectangle. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 255

### fontOpacity

Specifies the opacity of the burned-in captions. 255 is opaque; 0 is transparent. All burn-in and DVB-Sub font settings must match.

**Type:** integer  
**Required:** True  
**Minimum:** 0  
**Maximum:** 255

### shadowOpacity

Specifies the opacity of the shadow. 255 is opaque; 0 is transparent. Leaving this parameter blank is equivalent to setting it to 0 (transparent). All burn-in and DVB-Sub font settings must match.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 255

### fontResolution

Font resolution in DPI (dots per inch); default is 96 dpi. All burn-in and DVB-Sub font settings must match.

**Type:** integer  
**Required:** False  
**Minimum:** 96  
**Maximum:** 600

### shadowYOffset

Specifies the vertical offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels above the text. All burn-in and DVB-Sub font settings must match.
Properties

**outlineSize**

Specifies font outline size in pixels. This option is not valid for source captions that are either 608/ embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

```
Type: integer
Required: True
Minimum: 0
Maximum: 10
```

**outlineColor**

```
Type: string
Required: True
```

**fontSize**

A positive integer indicates the exact font size in points. Set to 0 for automatic font size selection. All burn-in and DVB-Sub font settings must match.

```
Type: integer
Required: False
Minimum: 0
Maximum: 96
```

**shadowXOffset**

Specifies the horizontal offset of the shadow relative to the captions in pixels. A value of -2 would result in a shadow offset 2 pixels to the left. All burn-in and DVB-Sub font settings must match.

```
Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647
```

**alignment**

```
Type: string
Required: True
```

**shadowColor**

```
Type: string
Required: False
```

**fontColor**

```
Type: string
```
Required: False

DvbSubtitleAlignment (enum)

If no explicit x_position or y_position is provided, setting alignment to centered will place the captions at the bottom center of the output. Similarly, setting a left alignment will align captions to the bottom left of the output. If x and y positions are given in conjunction with the alignment parameter, the font will be justified (either left or centered) relative to those coordinates. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- CENTERED
- LEFT

DvbSubtitleBackgroundColor (enum)

Specifies the color of the rectangle behind the captions. All burn-in and DVB-Sub font settings must match.

- NONE
- BLACK
- WHITE

DvbSubtitleFontColor (enum)

Specifies the color of the burned-in captions. This option is not valid for source captions that are STL, 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- WHITE
- BLACK
- YELLOW
- RED
- GREEN
- BLUE

DvbSubtitleOutlineColor (enum)

Specifies font outline color. This option is not valid for source captions that are either 608/embedded or teletext. These source settings are already pre-defined by the caption stream. All burn-in and DVB-Sub font settings must match.

- BLACK
- WHITE
- YELLOW
- RED
- GREEN
- BLUE

DvbSubtitleShadowColor (enum)

Specifies the color of the shadow cast by the captions. All burn-in and DVB-Sub font settings must match.

- NONE
**DvbSubtitleTeletextSpacing (enum)**

Controls whether a fixed grid size or proportional font spacing will be used to generate the output subtitles bitmap. Only applicable for Teletext inputs and DVB-Sub/Burn-in outputs.

- FIXED_GRID
- PROPORTIONAL

**DvbTdtSettings**

**tdtInterval**

The number of milliseconds between instances of this table in the output transport stream.

- **Type:** integer
- **Required:** True
- **Minimum:** 1000
- **Maximum:** 30000

**Eac3AttenuationControl (enum)**

If set to ATTENUATE_3_DB, applies a 3 dB attenuation to the surround channels. Only used for 3/2 coding mode.

- ATTENUATE_3_DB
- NONE

**Eac3BitstreamMode (enum)**

Specifies the "Bitstream Mode" (bsmod) for the emitted E-AC-3 stream. See ATSC A/52-2012 (Annex E) for background on these values.

- COMPLETE_MAIN
- COMMENTARY
- EMERGENCY
- HEARING_IMPAIRED
- VISUALLY_IMPAIRED

**Eac3CodingMode (enum)**

Dolby Digital Plus coding mode. Determines number of channels.

- CODING_MODE_1_0
- CODING_MODE_2_0
- CODING_MODE_3_2

**Eac3DcFilter (enum)**

Activates a DC highpass filter for all input channels.

- ENABLED
DISABLED

**Eac3DynamicRangeCompressionLine (enum)**

Enables Dynamic Range Compression that restricts the absolute peak level for a signal.

NONE
FILM_STANDARD
FILM_LIGHT
MUSIC_STANDARD
MUSIC_LIGHT
SPEECH

**Eac3DynamicRangeCompressionRf (enum)**

Enables Heavy Dynamic Range Compression, ensures that the instantaneous signal peaks do not exceed specified levels.

NONE
FILM_STANDARD
FILM_LIGHT
MUSIC_STANDARD
MUSIC_LIGHT
SPEECH

**Eac3LfeControl (enum)**

When encoding 3/2 audio, controls whether the LFE channel is enabled

LFE
NO_LFE

**Eac3LfeFilter (enum)**

Applies a 120Hz lowpass filter to the LFE channel prior to encoding. Only valid with 3_2_LFE coding mode.

ENABLED
DISABLED

**Eac3MetadataControl (enum)**

When set to FOLLOW_INPUT, encoder metadata will be sourced from the DD, DD+, or DolbyE decoder that supplied this audio data. If audio was not supplied from one of these streams, then the static metadata settings will be used.

FOLLOW_INPUT
USE_CONFIGURED

**Eac3PassthroughControl (enum)**

When set to WHEN_POSSIBLE, input DD+ audio will be passed through if it is present on the input. This detection is dynamic over the life of the transcode. Inputs that alternate between DD+ and non-DD+ content will have a consistent DD+ output as the system alternates between passthrough and encoding.
WHEN_POSSIBLE
NO_PASSTHROUGH

Eac3PhaseControl (enum)

Controls the amount of phase-shift applied to the surround channels. Only used for 3/2 coding mode.

- SHIFT_90_DEGREES
- NO_SHIFT

Eac3Settings

dialnorm

Sets the dialnorm for the output. If blank and input audio is Dolby Digital Plus, dialnorm will be passed through.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 31

passthroughControl

- Type: string
- Required: False

metadataControl

- Type: string
- Required: False

bitrate

Average bitrate in bits/second. Valid bitrates depend on the coding mode.

- Type: integer
- Required: False
- Minimum: 64000
- Maximum: 640000

dynamicRangeCompressionRf

- Type: string
- Required: False

sampleRate

Sample rate in hz. Sample rate is always 48000.

- Type: integer
- Required: False
- Minimum: 48000
Maximum: 48000

**LtRtSurroundMixLevel**
Left total/Right total surround mix level. Only used for 3/2 coding mode. Valid values: -1.5 -3.0 -4.5 -6.0 -60

* Type: number
  * Required: False
  * Format: float
  * Minimum: -60.0
  * Maximum: -1.5

**surroundExMode**

* Type: string
  * Required: False

**dynamicRangeCompressionLine**

* Type: string
  * Required: False

**lfeControl**

* Type: string
  * Required: False

**codingMode**

* Type: string
  * Required: False

**surroundMode**

* Type: string
  * Required: False

**attenuationControl**

* Type: string
  * Required: False

**lfeFilter**

* Type: string
  * Required: False

**phaseControl**

* Type: string
  * Required: False
**ltRtCenterMixLevel**

Left total/Right total center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -60.0
- **Maximum**: 3.0

**dcFilter**

- **Type**: string
- **Required**: False

**stereoDownmix**

- **Type**: string
- **Required**: False

**bitstreamMode**

- **Type**: string
- **Required**: False

**loRoSurroundMixLevel**

Left only/Right only surround mix level. Only used for 3/2 coding mode. Valid values: -1.5, -3.0, -4.5, -6.0, -60

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -60.0
- **Maximum**: -1.5

**loRoCenterMixLevel**

Left only/Right only center mix level. Only used for 3/2 coding mode. Valid values: 3.0, 1.5, 0.0, -1.5, -3.0, -4.5, -6.0, -60

- **Type**: number
- **Required**: False
- **Format**: float
- **Minimum**: -60.0
- **Maximum**: 3.0

**Eac3StereoDownmix (enum)**

Stereo downmix preference. Only used for 3/2 coding mode.

- **NOT_INDICATED**
- **LO_RO**
Properties

LT_RT
DPL2

**Eac3SurroundExMode (enum)**
When encoding 3/2 audio, sets whether an extra center back surround channel is matrix encoded into the left and right surround channels.

- NOT_INDICATED
- ENABLED
- DISABLED

**Eac3SurroundMode (enum)**
When encoding 2/0 audio, sets whether Dolby Surround is matrix encoded into the two channels.

- NOT_INDICATED
- ENABLED
- DISABLED

**ExceptionBody**

**message**

- **Type**: string
- **Required**: False

**F4vMoovPlacement (enum)**
If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

- PROGRESSIVE_DOWNLOAD
- NORMAL

**F4vSettings**

**moovPlacement**

- **Type**: string
- **Required**: False

**FrameCaptureSettings**

**framerateDenominator**
Frame capture will encode the first frame of the output stream, then one frame every \(\text{framerateDenominator}/\text{framerateNumerator}\) seconds. For example, settings of \(\text{framerateNumerator} = 1\) and \(\text{framerateDenominator} = 3\) (a rate of 1/3 frame per second) will capture the first frame, then 1 frame every 3s. Files will be named as filename.n.jpg where n is the 0-based sequence number of each Capture.

- **Type**: integer
**maxCaptures**

Maximum number of captures (encoded jpg output files).

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 2147483647

**framerateNumerator**

Frame capture will encode the first frame of the output stream, then one frame every  
framerateDenominator/framerateNumerator seconds. For example, settings of framerateNumerator = 1 and framerateDenominator = 3 (a rate of 1/3 frame per second) will capture the first frame, then 1  
frame every 3s. Files will be named as \text{filename.NNNNNNN.jpg} where N is the 0-based frame sequence  
number zero padded to 7 decimal places.

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 2147483647

**quality**

JPEG Quality - a higher value equals higher quality.

*Type:* integer  
*Required:* False  
*Minimum:* 1  
*Maximum:* 100

**GetPresetRequest**

**name**

*Type:* string  
*Required:* True

**GetPresetResponse**

**preset**

*Type:* Preset (p. 796)  
*Required:* False

**H264AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.
OFF
LOW
MEDIUM
HIGH
HIGHER
MAX

H264CodecLevel (enum)

H.264 Level.

AUTO
LEVEL_1
LEVEL_1_1
LEVEL_1_2
LEVEL_1_3
LEVEL_2
LEVEL_2_1
LEVEL_2_2
LEVEL_3
LEVEL_3_1
LEVEL_3_2
LEVEL_4
LEVEL_4_1
LEVEL_4_2
LEVEL_5
LEVEL_5_1
LEVEL_5_2

H264CodecProfile (enum)

H.264 Profile. High 4:2:2 and 10-bit profiles are only available with the AVC-I License.

BASELINE
HIGH
HIGH_10BIT
HIGH_422
HIGH_422_10BIT
MAIN

H264EntropyEncoding (enum)

Entropy encoding mode. Use CABAC (must be in Main or High profile) or CAVLC.

CABAC
CAVLC

H264FieldEncoding (enum)

Choosing FORCE_FIELD disables PAFF encoding for interlaced outputs.

PAFF
FORCE_FIELD
H264FlickerAdaptiveQuantization (enum)
Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

DISABLED
ENABLED

H264FramerateControl (enum)
Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use
the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for
Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

H264FramerateConversionAlgorithm (enum)
When set to INTERPOLATE, produces smoother motion during framerate conversion.

DUPLICATE_DROP
INTERPOLATE

H264GopBReference (enum)
If enable, use reference B frames for GOP structures that have B frames > 1.

DISABLED
ENABLED

H264GopSizeUnits (enum)
Indicates if the GOP Size in H264 is specified in frames or seconds. If seconds the system will convert the
GOP Size into a frame count at run time.

FRAMES
SECONDS

H264InterlaceMode (enum)
Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the
entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD)
use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the
source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the
source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is
progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending
on which of the Follow options you chose.

PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

**H264ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

INITIALIZE_FROM_SOURCE
SPECIFIED

**H264QualityTuningLevel (enum)**

Use Quality tuning level (H264QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

SINGLE_PASS
SINGLE_PASS_HQ
MULTI_PASS_HQ

**H264RateControlMode (enum)**

Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

VBR
CBR

**H264RepeatPps (enum)**

Places a PPS header on each encoded picture, even if repeated.

DISABLED
ENABLED

**H264SceneChangeDetect (enum)**

Scene change detection (inserts I-frames on scene changes).

DISABLED
ENABLED

**H264Settings**

**slices**

Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

*Type:* integer
*Required:* False
*Minimum:* 1
**Properties**

**minInterval**

Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- **Type:** integer
- **Required:** False
- **Minimum:** 0
- **Maximum:** 30

**parNumerator**

Pixel Aspect Ratio numerator.

- **Type:** integer
- **Required:** False
- **Minimum:** 1
- **Maximum:** 2147483647

**flickerAdaptiveQuantization**

- **Type:** string
- **Required:** False

**gopSizeUnits**

- **Type:** string
- **Required:** False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

**qualityTuningLevel**

- **Type:** string
- **Required:** False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.
Type: integer  
Required: False  
Minimum: -2147483648  
Maximum: 2147483647

bitrate

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

Type: integer  
Required: False  
Minimum: 1000  
Maximum: 2147483647

spatialAdaptiveQuantization

Type: string  
Required: False

slowPal

Type: string  
Required: False

codecProfile

Type: string  
Required: False

unregisteredSeiTImecode

Type: string  
Required: False

softness

Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 128

framerateControl

Type: string  
Required: False

telecine

Type: string
Required: False

framerateConversionAlgorithm

 Type: string
 Required: False

codecLevel

 Type: string
 Required: False

numberReferenceFrames

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

 Type: integer
 Required: False
 Minimum: 1
 Maximum: 6

temporalAdaptiveQuantization

 Type: string
 Required: False

repeatPps

 Type: string
 Required: False

hrdBufferInitialFillPercentage

Percentage of the buffer that should initially be filled (HRD buffer model).

 Type: integer
 Required: False
 Minimum: 0
 Maximum: 100

framerateNumerator

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

 Type: integer
 Required: False
 Minimum: 1
 Maximum: 2147483647

numberBFramesBetweenReferenceFrames

Number of B-frames between reference frames.
Type: integer  
Required: False  
Minimum: 0  
Maximum: 7

gopClosedCadence

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 2147483647

fieldEncoding

Type: string  
Required: False

entropyEncoding

Type: string  
Required: False

framerateDenominator

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, $24000 / 1001 = 23.976$ fps. Use FramerateDenominator to specify the denominator of this fraction. In this example, use 1001 for the value of FramerateDenominator. When you use the console for transcode jobs that use framerate conversion, provide the value as a decimal number for Framerate. In this example, specify 23.976.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

adaptiveQuantization

Type: string  
Required: False

interlaceMode

Type: string  
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.
Type: number
Required: False
Format: float
Minimum: 0.0

**gopBReference**

Type: string
Required: False

**sceneChangeDetect**

Type: string
Required: False

**parDenominator**

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

**parControl**

Type: string
Required: False

**syntax**

Type: string
Required: False

**rateControlMode**

Type: string
Required: False

**H264SlowPal (enum)**

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

**H264SpatialAdaptiveQuantization (enum)**

Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

**H264Syntax (enum)**

Produces a bitstream compliant with SMPTE RP-2027.

- DEFAULT
- RP2027

**H264Telecine (enum)**

This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output:
- Progressive
- Interlaced
- Hard Telecine
- Soft Telecine

- **NONE**
- **SOFT**
- **HARD**

**H264TemporalAdaptiveQuantization (enum)**

Adjust quantization within each frame based on temporal variation of content complexity.

- **DISABLED**
- **ENABLED**

**H264UnregisteredSeiTimecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- **DISABLED**
- **ENABLED**

**H265AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- **OFF**
- **LOW**
- **MEDIUM**
- **HIGH**
- **HIGHER**
- **MAX**

**H265AlternateTransferFunctionSei (enum)**

Enables Alternate Transfer Function SEI message for outputs using Hybrid Log Gamma (HLG) Electro-Optical Transfer Function (EOTF).

- **DISABLED**
- **ENABLED**
H265CodecLevel (enum)

H.265 Level.

AUTO
LEVEL_1
LEVEL_2
LEVEL_2_1
LEVEL_3
LEVEL_3_1
LEVEL_4
LEVEL_4_1
LEVEL_5
LEVEL_5_1
LEVEL_5_2
LEVEL_6
LEVEL_6_1
LEVEL_6_2

H265CodecProfile (enum)

Represents the Profile and Tier, per the HEVC (H.265) specification. Selections are grouped as [Profile] / [Tier], so "Main/High" represents Main Profile with High Tier. 4:2:2 profiles are only available with the HEVC 4:2:2 License.

MAIN_MAIN
MAIN_HIGH
MAIN10_MAIN
MAIN10_HIGH
MAIN_422_8BIT_MAIN
MAIN_422_8BIT_HIGH
MAIN_422_10BIT_MAIN
MAIN_422_10BIT_HIGH

H265FlickerAdaptiveQuantization (enum)

Adjust quantization within each frame to reduce flicker or 'pop' on I-frames.

DISABLED
ENABLED

H265FramerateControl (enum)

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

INITIALIZE_FROM_SOURCE
SPECIFIED

H265FramerateConversionAlgorithm (enum)

When set to INTERPOLATE, produces smoother motion during framerate conversion.
DUPLICATE_DROP
INTERPOLATE

**H265GopBReference (enum)**

If enable, use reference B frames for GOP structures that have B frames > 1.

* DISABLED
  * ENABLED

**H265GopSizeUnits (enum)**

Indicates if the GOP Size in H265 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

* FRAMES
  * SECONDS

**H265InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

* PROGRESSIVE
  * TOP_FIELD
  * BOTTOM_FIELD
  * FOLLOW_TOP_FIELD
  * FOLLOW_BOTTOM_FIELD

**H265ParControl (enum)**

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

* INITIALIZE_FROM_SOURCE
  * SPECIFIED

**H265QualityTuningLevel (enum)**

Use Quality tuning level (H265QualityTuningLevel) to specify whether to use fast single-pass, high-quality singlepass, or high-quality multipass video encoding.

* SINGLE_PASS
  * SINGLE_PASS_HQ
  * MULTI_PASS_HQ
H265RateControlMode (enum)
Rate control mode. CQ uses constant quantizer (qp), ABR (average bitrate) does not write HRD parameters.

- VBR
- CBR

H265SampleAdaptiveOffsetFilterMode (enum)
Specify Sample Adaptive Offset (SAO) filter strength. Adaptive mode dynamically selects best strength based on content.

- DEFAULT
- ADAPTIVE
- OFF

H265SceneChangeDetect (enum)
Scene change detection (inserts I-frames on scene changes).

- DISABLED
- ENABLED

H265Settings

slices
Number of slices per picture. Must be less than or equal to the number of macroblock rows for progressive pictures, and less than or equal to half the number of macroblock rows for interlaced pictures.

- Type: integer
- Required: False
- Minimum: 1
- Maximum: 32

minIInterval
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

- Type: integer
- Required: False
- Minimum: 0
- Maximum: 30

parNumerator
Pixel Aspect Ratio numerator.

- Type: integer
**Properties**

**Required**: False
**Minimum**: 1
**Maximum**: 2147483647

**flickerAdaptiveQuantization**

_Type_: string
**Required**: False

**gopSizeUnits**

_Type_: string
**Required**: False

**hrdBufferSize**

Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

_Type_: integer
**Required**: False
**Minimum**: -2147483648
**Maximum**: 2147483647

**qualityTuningLevel**

_Type_: string
**Required**: False

**maxBitrate**

Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

_Type_: integer
**Required**: False
**Minimum**: -2147483648
**Maximum**: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

_Type_: integer
**Required**: False
**Minimum**: 1000
**Maximum**: 2147483647

**spatialAdaptiveQuantization**

_Type_: string
Properties

Required: False

**sampleAdaptiveOffsetFilterMode**

Type: string
Required: False

**temporalIds**

Type: string
Required: False

**slowPal**

Type: string
Required: False

**tiles**

Type: string
Required: False

**codecProfile**

Type: string
Required: False

**alternateTransferFunctionSei**

Type: string
Required: False

**unregisteredSeiTimecode**

Type: string
Required: False

**framerateControl**

Type: string
Required: False

**telecine**

Type: string
Required: False

**framerateConversionAlgorithm**

Type: string
Required: False
**codecLevel**

Type: string  
Required: False

**numberReferenceFrames**

Number of reference frames to use. The encoder may use more than requested if using B-frames and/or interlaced encoding.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 6

**temporalAdaptiveQuantization**

Type: string  
Required: False

**hrdBufferInitialFillPercentage**

Percentage of the buffer that should initially be filled (HRD buffer model).

Type: integer  
Required: False  
Minimum: 0  
Maximum: 100

**framerateNumerator**

Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**numberBFramesBetweenReferenceFrames**

Number of B-frames between reference frames.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 7

**gopClosedCadence**

Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

** framerateDenominator**

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

**adaptiveQuantization**

Type: string
Required: False

**interlaceMode**

Type: string
Required: False

**gopSize**

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

**gopBReference**

Type: string
Required: False

**sceneChangeDetect**

Type: string
Required: False

**parDenominator**

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647
parControl

Type: string
Required: False

rateControlMode

Type: string
Required: False

H265SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

H265SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

H265Telecine (enum)
This field applies only if the Streams > Advanced > Framerate (framerate) field is set to 29.970. This field works with the Streams > Advanced > Preprocessors > Deinterlacer field (deinterlace_mode) and the Streams > Advanced > Interlaced Mode field (interlace_mode) to identify the scan type for the output:
- Soft: produces 23.976; the player converts this output to 29.97i.

NONE
SOFT
HARD

H265TemporalAdaptiveQuantization (enum)
Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

H265TemporalIds (enum)
Enables temporal layer identifiers in the encoded bitstream. Up to 3 layers are supported depending on GOP structure: I- and P-frames form one layer, reference B-frames can form a second layer and non-reference b-frames can form a third layer. Decoders can optionally decode only the lower temporal layers to generate a lower frame rate output. For example, given a bitstream with temporal IDs and with b-frames = 1 (i.e. IbPbPb display order), a decoder could decode all the frames for full frame rate output or only the I and P frames (lowest temporal layer) for a half frame rate output.

DISABLED
ENABLED
**H265Tiles (enum)**

Enable use of tiles, allowing horizontal as well as vertical subdivision of the encoded pictures.

- DISABLED
- ENABLED

**H265UnregisteredSeiTimecode (enum)**

Inserts timecode for each frame as 4 bytes of an unregistered SEI message.

- DISABLED
- ENABLED

**Hdr10Metadata**

**redPrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**greenPrimaryY**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**whitePointX**

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 50000

**maxLuminance**

Nominal maximum mastering display luminance in units of 0.0001 candelas per square meter.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 2147483647
greenPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

whitePointY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

redPrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

bluePrimaryX

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.

Type: integer
Required: False
Minimum: 0
Maximum: 50000

maxFrameAverageLightLevel

Maximum average light level of any frame in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

bluePrimaryY

HDR Master Display Information comes from the color grader and the color grading tools. Range is 0 to 50,000, each increment represents 0.00002 in CIE1931 color coordinate.
Properties

**maxContentLightLevel**

Maximum light level among all samples in the coded video sequence, in units of candelas per square meter.

Type: integer
Required: True
Minimum: 0
Maximum: 65535

**minLuminance**

Nominal minimum mastering display luminance in units of 0.0001 candelas per square meter

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

**ImageInserter**

**insertableImages**

Image to insert. Must be 32 bit windows BMP, PNG, or TGA file. Must not be larger than the output frames.

Type: Array of type InsertableImage (p. 770)
Required: True

**InsertableImage**

**duration**

Use Duration (Duration) to set the time, in milliseconds, for the image to remain on the output video.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647

**fadeOut**

Use Fade out (FadeOut) to set the length, in milliseconds, of the inserted image fade out. If you don't specify a value for Fade out, the image will disappear abruptly at the end of the inserted image duration.

Type: integer
Required: False
Minimum: -2147483648
Maximum: 2147483647
imageY

Use Top (ImageY) to set the distance, in pixels, between the inserted image and the top edge of the video frame. Required for BMP, PNG and TGA input.

- **Type:** integer
- **Required:** True
- **Minimum:** -2147483648
- **Maximum:** 2147483647

fadeOut

Use Fade in (FadeIn) to set the length, in milliseconds, of the inserted image fade in. If you don't specify a value for Fade in, the image will appear abruptly at the Start time.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

imageX

Use Left (ImageX) to set the distance, in pixels, between the inserted image and the left edge of the frame. Required for BMP, PNG and TGA input.

- **Type:** integer
- **Required:** True
- **Minimum:** -2147483648
- **Maximum:** 2147483647

width

Specify the Width (Width) of the inserted image. Use a value that is less than or equal to the video resolution width. Leave this setting blank to use the native width of the image.

- **Type:** integer
- **Required:** False
- **Minimum:** -2147483648
- **Maximum:** 2147483647

startTime

Use Start time (StartTime) to specify the video timecode when the image is inserted in the output. This must be in timecode format (HH:MM:SS:FF)

- **Type:** string
- **Required:** False

opacity

Use Opacity (Opacity) to specify how much of the underlying video shows through the inserted image. 0 is transparent and 100 is fully opaque. Default is 50.

- **Type:** integer
- **Required:** True
**Properties**

**Minimum**: 0  
**Maximum**: 100

**layer**

Use Layer (Layer) to specify how overlapping inserted images appear. Images with higher values of layer appear on top of images with lower values of layer.

**Type**: integer  
**Required**: True  
**Minimum**: 0  
**Maximum**: 7

**height**

Specify the Height (Height) of the inserted image. Use a value that is less than or equal to the video resolution height. Leave this setting blank to use the native height of the image.

**Type**: integer  
**Required**: False  
**Minimum**: -2147483648  
**Maximum**: 2147483647

**imagelntserterInput**

Use Image location (imagelntserterInput) to specify the Amazon S3 location of the image to be inserted into the output. Use a 32 bit BMP, PNG, or TGA file that fits inside the video frame.

**Type**: string  
**Required**: True  
**Pattern**: ^(s3://)[^/]+\.(bmp|BMP|png|PNG|tga|TGA)$

**LanguageCode (enum)**

Code to specify the language, following the specification "ISO 639-2 three-digit code":http://www.loc.gov/standards/iso639-2/

- ENG
- SPA
- FRA
- DEU
- GER
- ZHO
- ARA
- HIN
- JPN
- RUS
- POR
- ITA
- URD
- VIE
- KOR
- PAN
- ABK
- AAR
AFR
AKA
SQI
AMH
ARG
HYE
ASM
AVA
AVE
AYM
AZE
BAM
BAK
EUS
BEL
BEN
BIH
BIS
BOS
BRE
BUL
MYA
CAT
KHM
CHA
CHE
NYA
CHU
CHV
COR
COS
CRE
HRV
CES
DAN
DIV
NLD
DZO
ENM
EPO
EST
EWE
FAO
FIJ
FIN
FRM
FUL
GLA
GLG
LUG
KAT
ELL
GRN
GUJ
HAT
HAU
HEB
HER
HMO
HUN
ISL
IDO
IBO
IND
INA
ILE
IKU
IPK
GLE
JAV
KAL
KAN
KAU
KAS
KAZ
KIK
KIN
KIR
KOM
KON
KUA
KUR
LAO
LAT
LAV
LIM
LIN
LIT
LUB
LTZ
MKD
MLG
MSA
MAL
MLT
GLV
MRI
MAR
MAH
MON
NAU
NAV
NDE
NBL
NDO
NEP
SME
NOR
NOB
NNO
OCI
OJI
ORI
ORM
OSS
PLI
FAS
POL
PUS
QUE
QAA
RON
ROH
RUN
SMO
SAG
SAN
SRD
SRB
SNA
III
SND
SIN
SLK
SLV
SOM
SOT
SUN
SWA
SSW
SWE
TGL
TAH
TGK
TAM
TAT
TEL
THA
BOD
TIR
TON
TSO
TSN
TUR
TUK
TWI
UIG
UKR
UZB
VEN
VOL
WLN
CYM
FRY
WOL
XHO
VID
YOR
ZHA
ZUL
M2tsAudioBufferModel (enum)

Selects between the DVB and ATSC buffer models for Dolby Digital audio.

DVB
ATSC

M2tsBufferModel (enum)

Controls what buffer model to use for accurate interleaving. If set to MULTIPLEX, use multiplex buffer model. If set to NONE, this can lead to lower latency, but low-memory devices may not be able to play back the stream without interruptions.

MULTIPLEX
NONE

M2tsEbpAudioInterval (enum)

When set to VIDEO_AND_FIXED_INTERVALS, audio EBP markers will be added to partitions 3 and 4. The interval between these additional markers will be fixed, and will be slightly shorter than the video EBP marker interval. When set to VIDEO_INTERVAL, these additional markers will not be inserted. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

VIDEO_AND_FIXED_INTERVALS
VIDEO_INTERVAL

M2tsEbpPlacement (enum)

Selects which PIDs to place EBP markers on. They can either be placed only on the video PID, or on both the video PID and all audio PIDs. Only applicable when EBP segmentation markers are is selected (segmentationMarkers is EBP or EBP_LEGACY).

VIDEO_AND_AUDIO_PIDS
VIDEO_PID

M2tsEsRateInPes (enum)

Controls whether to include the ES Rate field in the PES header.

INCLUDE
EXCLUDE

M2tsPcrControl (enum)

When set to PCR_EVERY_PES_PACKET, a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This is effective only when the PCR PID is the same as the video or audio elementary stream.

PCR_EVERY_PES_PACKET
CONFIGURED_PCR_PERIOD
**M2tsRateMode (enum)**

When set to CBR, inserts null packets into transport stream to fill specified bitrate. When set to VBR, the bitrate setting acts as the maximum bitrate, but the output will not be padded up to that bitrate.

- VBR
- CBR

**M2tsScte35Source (enum)**

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

- PASSTHROUGH
- NONE

**M2tsSegmentationMarkers (enum)**

Inserts segmentation markers at each segmentation_time period. rai_segstart sets the Random Access Indicator bit in the adaptation field. rai_adapt sets the RAI bit and adds the current timecode in the private data bytes. psi_segstart inserts PAT and PMT tables at the start of segments. ebp adds Encoder Boundary Point information to the adaptation field as per OpenCable specification OC-SP-EBP-I01-130118. ebp_legacy adds Encoder Boundary Point information to the adaptation field using a legacy proprietary format.

- NONE
- RAI_SEGSTART
- RAI_ADAPT
- PSI_SEGSTART
- EBP
- EBP_LEGACY

**M2tsSegmentationStyle (enum)**

The segmentation style parameter controls how segmentation markers are inserted into the transport stream. With avails, it is possible that segments may be truncated, which can influence where future segmentation markers are inserted. When a segmentation style of "reset_cadence" is selected and a segment is truncated due to an avail, we will reset the segmentation cadence. This means the subsequent segment will have a duration of $segmentation_time seconds. When a segmentation style of "maintain_cadence" is selected and a segment is truncated due to an avail, we will not reset the segmentation cadence. This means the subsequent segment will likely be truncated as well. However, all segments after that will have a duration of $segmentation_time seconds. Note that EBP lookahead is a slight exception to this rule.

- MAINTAIN_CADENCE
- RESET_CADENCE

**M2tsSettings**

**dvbTeletextPid**

Packet Identifier (PID) for input source DVB Teletext data to this output. Can be entered as a decimal or hexadecimal value.

- **Type**: integer
Properties

**Required**: False
**Minimum**: 32
**Maximum**: 8182

**bitrate**

The output bitrate of the transport stream in bits per second. Setting to 0 lets the muxer automatically determine the appropriate bitrate. Other common values are 3750000, 7500000, and 15000000.

**Type**: integer
**Required**: False
**Minimum**: 0
**Maximum**: 2147483647

**segmentationTime**

The length in seconds of each segment. Required unless markers is set to `none`.

**Type**: number
**Required**: False
**Format**: float
**Minimum**: 0.0

**audioPids**

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

**Type**: Array of type integer
**Required**: False

**rateMode**

**Type**: string
**Required**: False

**ebpAudioInterval**

**Type**: string
**Required**: False

**fragmentTime**

The length in seconds of each fragment. Only used with EBP markers.

**Type**: number
**Required**: False
**Format**: float
**Minimum**: 0.0

**audioFramesPerPES**

The number of audio frames to insert for each PES packet.
maxPcrInterval

Maximum time in milliseconds between Program Clock References (PCRs) inserted into the transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 2147483647

scte35Pid

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

privateMetadataPid

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

pmtInterval

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 1000

segmentationStyle

Type: string
Required: False

audioBufferModel

Type: string
Required: False
programNumber

The value of the program number field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

dvbNitSettings

Type: DvbNitSettings (p. 739)
Required: False

tscte35Source

Type: string
Required: False

pmtPid

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

bufferModel

Type: string
Required: False

ebpPlacement

Type: string
Required: False

dvbSdtSettings

Type: DvbSdtSettings (p. 739)
Required: False

nullPacketBitrate

Value in bits per second of extra null packets to insert into the transport stream. This can be used if a downstream encryption system requires periodic null packets.

Type: number
Required: False
Format: float
Minimum: 0.0

pcrPid

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

minEbpInterval

When set, enforces that Encoder Boundary Points do not come within the specified time interval of each other by looking ahead at input video. If another EBP is going to come in within the specified time interval, the current EBP is not emitted, and the segment is "stretched" to the next marker. The lookahead value does not add latency to the system. The Live Event must be configured elsewhere to create sufficient latency to make the lookahead accurate.

Type: integer
Required: False
Minimum: 0
Maximum: 10000

transportStreamId

The value of the transport stream ID field in the Program Map Table.

Type: integer
Required: False
Minimum: 0
Maximum: 65535

pcrControl

Type: string
Required: False

videoPid

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32
Maximum: 8182

esRateInPes

Type: string
Required: False
segmentationMarkers

Type: string
Required: False

dvbTdtSettings

Type: DvbTdtSettings (p. 744)
Required: False

patInterval

The number of milliseconds between instances of this table in the output transport stream.

Type: integer
Required: False
Minimum: 0
Maximum: 1000

dvbSubPids

Packet Identifier (PID) for input source DVB Subtitle data to this output. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

Type: Array of type integer
Required: False

M3u8PcrControl (enum)

When set to PCR_EVERY_PES_PACKET a Program Clock Reference value is inserted for every Packetized Elementary Stream (PES) header. This parameter is effective only when the PCR PID is the same as the video or audio elementary stream.

    PCR_EVERY_PES_PACKET
    CONFIGURED_PCR_PERIOD

M3u8Scte35Source (enum)

Enables SCTE-35 passthrough (scte35Source) to pass any SCTE-35 signals from input to output. This is only available for certain containers.

    PASSTHROUGH
    NONE

M3u8Settings

pmtPid

Packet Identifier (PID) for the Program Map Table (PMT) in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
Required: False
Minimum: 32  
Maximum: 8182

**pcrPid**

Packet Identifier (PID) of the Program Clock Reference (PCR) in the transport stream. When no value is given, the encoder will assign the same value as the Video PID. Can be entered as a decimal or hexadecimal value.

**Type:** integer  
**Required:** False  
**Minimum:** 32  
**Maximum:** 8182

**audioPids**

Packet Identifier (PID) of the elementary audio stream(s) in the transport stream. Multiple values are accepted, and can be entered in ranges and/or by comma separation. Can be entered as decimal or hexadecimal values.

**Type:** Array of type integer  
**Required:** False

**audioFramesPerPes**

The number of audio frames to insert for each PES packet.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 2147483647

**scte35Pid**

Packet Identifier (PID) of the SCTE-35 stream in the transport stream. Can be entered as a decimal or hexadecimal value.

**Type:** integer  
**Required:** False  
**Minimum:** 32  
**Maximum:** 8182

**transportStreamId**

The value of the transport stream ID field in the Program Map Table.

**Type:** integer  
**Required:** False  
**Minimum:** 0  
**Maximum:** 65535

**videoPid**

Packet Identifier (PID) of the elementary video stream in the transport stream. Can be entered as a decimal or hexadecimal value.
**pcrControl**

Type: string  
Required: False

**privateMetadataPid**

Packet Identifier (PID) of the private metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer  
Required: False  
Minimum: 32  
Maximum: 8182

**pmtInterval**

The number of milliseconds between instances of this table in the output transport stream.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 1000

**patInterval**

The number of milliseconds between instances of this table in the output transport stream.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 1000

**programNumber**

The value of the program number field in the Program Map Table.

Type: integer  
Required: False  
Minimum: 0  
Maximum: 65535

**timedMetadataPid**

Packet Identifier (PID) of the timed metadata stream in the transport stream. Can be entered as a decimal or hexadecimal value.

Type: integer
<table>
<thead>
<tr>
<th>Properties</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required: False</td>
<td>Minimum: 32</td>
</tr>
<tr>
<td>Maximum: 8182</td>
<td></td>
</tr>
</tbody>
</table>

**timedMetadata**
- **Type**: string
- **Required**: False

**scte35Source**
- **Type**: string
- **Required**: False

**MovClapAtom (enum)**
  - When enabled, include 'clap' atom if appropriate for the video output settings.
    - **INCLUDE**
    - **EXCLUDE**

**MovCslgAtom (enum)**
  - When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.
    - **INCLUDE**
    - **EXCLUDE**

**MovMpeg2FourCCControl (enum)**
  - When set to XDCAM, writes MPEG2 video streams into the QuickTime file using XDCAM fourcc codes. This increases compatibility with Apple editors and players, but may decrease compatibility with other players. Only applicable when the video codec is MPEG2.
    - **XDCAM**
    - **MPEG**

**MovPaddingControl (enum)**
  - If set to OMNEON, inserts Omneon-compatible padding
    - **OMNEON**
    - **NONE**

**MovReference (enum)**
  - A value of 'external' creates separate media files and the wrapper file (.mov) contains references to these media files. A value of 'self_contained' creates only a wrapper (.mov) file and this file contains all of the media.
    - **SELF_CONTAINED**
    - **EXTERNAL**
**MovSettings**

*reference*

  *Type: string*
  *Required: False*

*paddingControl*

  *Type: string*
  *Required: False*

*mpeg2FourCCControl*

  *Type: string*
  *Required: False*

*cslgAtom*

  *Type: string*
  *Required: False*

*clapAtom*

  *Type: string*
  *Required: False*

**Mp2Settings**

*channels*

Set Channels to specify the number of channels in this output audio track. Choosing Mono in the console will give you 1 output channel; choosing Stereo will give you 2. In the API, valid values are 1 and 2.

  *Type: integer*
  *Required: False*
  *Minimum: 1*
  *Maximum: 2*

*bitrate*

Average bitrate in bits/second.

  *Type: integer*
  *Required: False*
  *Minimum: 32000*
  *Maximum: 384000*

*sampleRate*

Sample rate in hz.
Properties

Type: integer
Required: False
Minimum: 32000
Maximum: 48000

Mp4CslgAtom (enum)

When enabled, file composition times will start at zero, composition times in the 'ctts' (composition time to sample) box for B-frames will be negative, and a 'cslg' (composition shift least greatest) box will be included per 14496-1 amendment 1. This improves compatibility with Apple players and tools.

INCLUDE
EXCLUDE

Mp4FreeSpaceBox (enum)

Inserts a free-space box immediately after the moov box.

INCLUDE
EXCLUDE

Mp4MoovPlacement (enum)

If set to PROGRESSIVE_DOWNLOAD, the MOOV atom is relocated to the beginning of the archive as required for progressive downloading. Otherwise it is placed normally at the end.

PROGRESSIVE_DOWNLOAD
NORMAL

Mp4Settings

mp4MajorBrand

Overrides the "Major Brand" field in the output file. Usually not necessary to specify.

Type: string
Required: False

moovPlacement

Type: string
Required: False

cslgAtom

Type: string
Required: False

freeSpaceBox

Type: string
Required: False
**Mpeg2AdaptiveQuantization (enum)**

Adaptive quantization. Allows intra-frame quantizers to vary to improve visual quality.

- OFF
- LOW
- MEDIUM
- HIGH

**Mpeg2CodecLevel (enum)**

Use Level (Mpeg2CodecLevel) to set the MPEG-2 level for the video output.

- AUTO
- LOW
- MAIN
- HIGH1440
- HIGH

**Mpeg2CodecProfile (enum)**

Use Profile (Mpeg2CodecProfile) to set the MPEG-2 profile for the video output.

- MAIN
- PROFILE_422

**Mpeg2FramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**Mpeg2FramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**Mpeg2GopSizeUnits (enum)**

Indicates if the GOP Size in MPEG2 is specified in frames or seconds. If seconds the system will convert the GOP Size into a frame count at run time.

- FRAMES
- SECONDS

**Mpeg2InterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.
* Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

* Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.

```
PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD
```

Mpeg2IntraDcPrecision (enum)

Use Intra DC precision (Mpeg2IntraDcPrecision) to set quantization precision for intra-block DC coefficients. If you choose the value auto, the service will automatically select the precision based on the per-frame compression ratio.

```
AUTO
INTRA_DC_PRECISION_8
INTRA_DC_PRECISION_9
INTRA_DC_PRECISION_10
INTRA_DC_PRECISION_11
```

Mpeg2ParControl (enum)

Using the API, enable ParFollowSource if you want the service to use the pixel aspect ratio from the input. Using the console, do this by choosing Follow source for Pixel aspect ratio.

```
INITIALIZE_FROM_SOURCE
SPECIFIED
```

Mpeg2QualityTuningLevel (enum)

Use Quality tuning level (Mpeg2QualityTuningLevel) to specify whether to use single-pass or multipass video encoding.

```
SINGLE_PASS
MULTI_PASS
```

Mpeg2RateControlMode (enum)

Use Rate control mode (Mpeg2RateControlMode) to specify whether the bitrate is variable (vbr) or constant (cbr).

```
VBR
CBR
```

Mpeg2SceneChangeDetect (enum)

Scene change detection (inserts I-frames on scene changes).
DISABLED
ENABLED

**Mpeg2Settings**

**minIInterval**
Enforces separation between repeated (cadence) I-frames and I-frames inserted by Scene Change Detection. If a scene change I-frame is within I-interval frames of a cadence I-frame, the GOP is shrunk and/or stretched to the scene change I-frame. GOP stretch requires enabling lookahead as well as setting I-interval. The normal cadence resumes for the next GOP. This setting is only used when Scene Change Detect is enabled. Note: Maximum GOP stretch = GOP size + Min-I-interval - 1

  * **Type:** integer
  * **Required:** False
  * **Minimum:** 0
  * **Maximum:** 30

**parNumerator**
Pixel Aspect Ratio numerator.

  * **Type:** integer
  * **Required:** False
  * **Minimum:** 1
  * **Maximum:** 2147483647

**gopSizeUnits**

  * **Type:** string
  * **Required:** False

**hrdBufferSize**
Size of buffer (HRD buffer model). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

  * **Type:** integer
  * **Required:** False
  * **Minimum:** -2147483648
  * **Maximum:** 2147483647

**qualityTuningLevel**

  * **Type:** string
  * **Required:** False

**maxBitrate**
Maximum bitrate in bits/second (for VBR mode only). Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m.

  * **Type:** integer
Properties

**Required**: False
**Minimum**: -2147483648
**Maximum**: 2147483647

**bitrate**

Average bitrate in bits/second. Required for VBR, CBR, and ABR. Five megabits can be entered as 5000000 or 5m. Five hundred kilobits can be entered as 500000 or 0.5m. For MS Smooth outputs, bitrates must be unique when rounded down to the nearest multiple of 1000.

**Type**: integer
**Required**: False
**Minimum**: 1000
**Maximum**: 2147483647

**spatialAdaptiveQuantization**

**Type**: string
**Required**: False

**slowPal**

**Type**: string
**Required**: False

**codecProfile**

**Type**: string
**Required**: False

**intraDcPrecision**

**Type**: string
**Required**: False

**softness**

Softness. Selects quantizer matrix, larger values reduce high-frequency content in the encoded image.

**Type**: integer
**Required**: False
**Minimum**: 0
**Maximum**: 128

**framerateControl**

**Type**: string
**Required**: False

**telecine**

**Type**: string
Required: False

framerateConversionAlgorithm
Type: string
Required: False

codecLevel
Type: string
Required: False

temporalAdaptiveQuantization
Type: string
Required: False

hrdBufferInitialFillPercentage
Percentage of the buffer that should initially be filled (HRD buffer model).
Type: integer
Required: False
Minimum: 0
Maximum: 100

framerateNumerator
Framerate numerator - framerate is a fraction, e.g. 24000 / 1001 = 23.976 fps.
Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

numberBFramesBetweenReferenceFrames
Number of B-frames between reference frames.
Type: integer
Required: False
Minimum: 0
Maximum: 7

gopClosedCadence
Frequency of closed GOPs. In streaming applications, it is recommended that this be set to 1 so a decoder joining mid-stream will receive an IDR frame as quickly as possible. Setting this value to 0 will break output segmenting.
Type: integer
Required: False
Minimum: 0
Properties

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

adaptiveQuantization

Type: string
Required: False

interlaceMode

Type: string
Required: False

gopSize

GOP Length (keyframe interval) in frames or seconds. Must be greater than zero.

Type: number
Required: False
Format: float
Minimum: 0.0

sceneChangeDetect

Type: string
Required: False

parDenominator

Pixel Aspect Ratio denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

parControl

Type: string
Required: False

syntax

Type: string
Required: False
rateControlMode

Type: string
Required: False

Mpeg2SlowPal (enum)
Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED
ENABLED

Mpeg2SpatialAdaptiveQuantization (enum)
Adjust quantization within each frame based on spatial variation of content complexity.

DISABLED
ENABLED

Mpeg2Syntax (enum)
Produces a Type D-10 compatible bitstream (SMPTE 356M-2001).

DEFAULT
D_10

Mpeg2Telecine (enum)
Only use Telecine (Mpeg2Telecine) when you set Framerate (Framerate) to 29.970. Set Telecine (Mpeg2Telecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE
SOFT
HARD

Mpeg2TemporalAdaptiveQuantization (enum)
Adjust quantization within each frame based on temporal variation of content complexity.

DISABLED
ENABLED

NoiseReducer

filter

Type: string
Required: True

filterSettings

Type: NoiseReducerFilterSettings (p. 795)
**spatialFilterSettings**

- **Type:** NoiseReducerSpatialFilterSettings (p. 795)
- **Required:** False

**NoiseReducerFilter (enum)**

Use Noise reducer filter (NoiseReducerFilter) to select one of the following spatial image filtering functions. To use this setting, you must also enable Noise reducer (NoiseReducer).

* Bilateral is an edge preserving noise reduction filter
* Mean (softest), Gaussian, Lanczos, and Sharpen (sharpest) are convolution filters
* Conserve is a min/max noise reduction filter
* Spatial is frequency-domain filter based on JND principles.

  - BILATERAL
  - MEAN
  - GAUSSIAN
  - LANCZOS
  - SHARPEN
  - CONSERVE
  - SPATIAL

**NoiseReducerSpatialFilterSettings**

- **strength**
  - Relative strength of noise reducing filter. Higher values produce stronger filtering.
  - **Type:** integer
  - **Required:** False
  - **Minimum:** 0
  - **Maximum:** 3

**postFilterSharpenStrength**

Specify strength of post noise reduction sharpening filter, with 0 disabling the filter and 3 enabling it at maximum strength.
**speed**

The speed of the filter, from -2 (lower speed) to 3 (higher speed), with 0 being the nominal value.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 3

**OutputChannelMapping**

**inputChannels**

- **Type**: Array of type integer
- **Required**: True

**OutputSdt (enum)**

Selects method of inserting SDT information into output stream. "Follow input SDT" copies SDT information from input stream to output stream. "Follow input SDT if present" copies SDT information from input stream to output stream if SDT information is present in the input, otherwise it will fall back on the user-defined values. Enter "SDT Manually" means user will enter the SDT information. "No SDT" means output stream will not contain SDT information.

- SDT_FOLLOW
- SDT_FOLLOW_IF_PRESENT
- SDT_MANUAL
- SDT_NONE

**Preset**

**settings**

- **Type**: PresetSettings (p. 797)
- **Required**: True

**lastUpdated**

The timestamp in epoch seconds when the preset was last updated.

- **Type**: string
- **Required**: False
- **Format**: date-time

**createdAt**

The timestamp in epoch seconds for preset creation.
Properties

name
A name you create for each preset. Each name must be unique within your account.

    Type: string
    Required: True

description
An optional description you create for each preset.

    Type: string
    Required: False

category
An optional category you create to organize your presets.

    Type: string
    Required: False

type

    Type: string
    Required: False

arn
An identifier for this resource that is unique within all of AWS.

    Type: string
    Required: False

PresetSettings

videoDescription
(VideoDescription) contains a group of video encoding settings. The specific video settings depend on the video codec you choose when you specify a value for Video codec (codec). Include one instance of (VideoDescription) per output.

    Type: VideoDescription (p. 806)
    Required: False

audioDescriptions
(AudioDescriptions) contains groups of audio encoding settings organized by audio codec. Include one instance of (AudioDescriptions) per output. (AudioDescriptions) can contain multiple groups of encoding settings.
**Properties**

**Type**: Array of type AudioDescription (p. 727)

**Required**: False

**containerSettings**

- **Type**: ContainerSettings (p. 737)
- **Required**: False

**captionDescriptions**

Caption settings for this preset. There can be multiple caption settings in a single output.

- **Type**: Array of type CaptionDescriptionPreset (p. 734)
- **Required**: False

**ProresCodecProfile (enum)**

Use Profile (ProResCodecProfile) to specify the type of Apple ProRes codec to use for this output.

- APPLE_PRORES_422
- APPLE_PRORES_422_HQ
- APPLE_PRORES_422_LT
- APPLE_PRORES_422_PROXY

**ProresFramerateControl (enum)**

Using the API, set FramerateControl to INITIALIZE_FROM_SOURCE if you want the service to use the framerate from the input. Using the console, do this by choosing INITIALIZE_FROM_SOURCE for Framerate.

- INITIALIZE_FROM_SOURCE
- SPECIFIED

**ProresFramerateConversionAlgorithm (enum)**

When set to INTERPOLATE, produces smoother motion during framerate conversion.

- DUPLICATE_DROP
- INTERPOLATE

**ProresInterlaceMode (enum)**

Use Interlace mode (InterlaceMode) to choose the scan line type for the output.

- Top Field First (TOP_FIELD) and Bottom Field First (BOTTOM_FIELD) produce interlaced output with the entire output having the same field polarity (top or bottom first).

- Follow, Default Top (FOLLOW_TOP_FIELD) and Follow, Default Bottom (FOLLOW_BOTTOM_FIELD) use the same field polarity as the source. Therefore, behavior depends on the input scan type. If the source is interlaced, the output will be interlaced with the same polarity as the source (it will follow the source). The output could therefore be a mix of "top field first" and "bottom field first". If the source is progressive, the output will be interlaced with "top field first" or "bottom field first" polarity, depending on which of the Follow options you chose.
PROGRESSIVE
TOP_FIELD
BOTTOM_FIELD
FOLLOW_TOP_FIELD
FOLLOW_BOTTOM_FIELD

ProresParControl (enum)

Use (ProresParControl) to specify how the service determines the pixel aspect ratio. Set to Follow source (INITIALIZE_FROM_SOURCE) to use the pixel aspect ratio from the input. To specify a different pixel aspect ratio: Using the console, choose it from the dropdown menu. Using the API, set ProresParControl to (SPECIFIED) and provide for (ParNumerator) and (ParDenominator).

INITIALIZE_FROM_SOURCE
SPECIFIED

ProresSettings

slowPal

Type: string
Required: False

framerateControl

Type: string
Required: False

telecine

Type: string
Required: False

framerateDenominator

Framerate denominator.

Type: integer
Required: False
Minimum: 1
Maximum: 2147483647

framerateConversionAlgorithm

Type: string
Required: False

interlaceMode

Type: string
Required: False
**codecProfile**

Type: string  
Required: False

**parNumerator**

Pixel Aspect Ratio numerator.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**parControl**

Type: string  
Required: False

**parDenominator**

Pixel Aspect Ratio denominator.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**framerateNumerator**

When you use the API for transcode jobs that use framerate conversion, specify the framerate as a fraction. For example, 24000 / 1001 = 23.976 fps. Use FramerateNumerator to specify the numerator of this fraction. In this example, use 24000 for the value of FramerateNumerator.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 2147483647

**ProresSlowPal (enum)**

Enables Slow PAL rate conversion. 23.976fps and 24fps input is relabeled as 25fps, and audio is sped up correspondingly.

DISABLED  
ENABLED

**ProresTelecine (enum)**

Only use Telecine (ProresTelecine) when you set Framerate (Framerate) to 29.970. Set Telecine (ProresTelecine) to Hard (hard) to produce a 29.97i output from a 23.976 input. Set it to Soft (soft) to produce 23.976 output and leave conversion to the player.

NONE  
HARD
Rectangle

**width**

Width of rectangle in pixels.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**x**

The distance, in pixels, between the rectangle and the left edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**y**

The distance, in pixels, between the rectangle and the top edge of the video frame.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

**height**

Height of rectangle in pixels.

- **Type**: integer
- **Required**: True
- **Minimum**: -2147483648
- **Maximum**: 2147483647

RemixSettings

**channelsOut**

Specify the number of channels in this output after remixing. Valid values: 1, 2, 4, 6, 8

- **Type**: integer
- **Required**: True
- **Minimum**: 1
- **Maximum**: 8

**channelMapping**

- **Type**: ChannelMapping (p. 735)
- **Required**: True
channelsIn
Specify the number of audio channels from your input that you want to use in your output. With
remixing, you might combine or split the data in these channels, so the number of channels in your final
output might be different.

Type: integer
Required: True
Minimum: 1
Maximum: 16

RespondToAfd (enum)
Use Respond to AFD (RespondToAfd) to specify how the service changes the video itself in response to
AFD values in the input.
* Choose Respond to clip the input video frame according to the AFD value, input display aspect ratio,
and output display aspect ratio.
* Choose Passthrough to include the input AFD values. Do not choose this when AfdSignaling is set
to (NONE). A preferred implementation of this workflow is to set RespondToAfd to (NONE) and set
AfdSignaling to (AUTO).
* Choose None to remove all input AFD values from this output.

NONE
RESPOND
PASSTHROUGH

ScalingBehavior (enum)
Applies only if your input aspect ratio is different from your output aspect ratio. Enable Stretch to output
(StretchToOutput) to have the service stretch your video image to fit. Leave this setting disabled to
allow the service to letterbox your video instead. This setting overrides any positioning value you specify
elsewhere in the job.

DEFAULT
STRETCH_TO_OUTPUT

SccDestinationFramerate (enum)
Set Framerate (SccDestinationFramerate) to make sure that the captions and the video are synchronized
in the output. Specify a framerate that matches the framerate of the associated video. If the video
framerate is 29.97, choose 29.97 dropframe (FRAMERATE_29_97_DROPFRAME) only if the video
has video_insertion=true and drop_frame_timecode=true; otherwise, choose 29.97 non-dropframe
(FRAMERATE_29_97_NON_DROPFRAME).

FRAMERATE_23_97
FRAMERATE_24
FRAMERATE_29_97_DROPFRAME
FRAMERATE_29_97_NON_DROPFRAME

SccDestinationSettings
framerate

Type: string
**Required**: False

**TeletextDestinationSettings**

**pageNumber**
Set pageNumber to the Teletext page number for the destination captions for this output. This value must be a three-digit hexadecimal string; strings ending in -FF are invalid. If you are passing through the entire set of Teletext data, do not use this field.

*Type*: string  
*Required*: False  
*Pattern*: `^[1-8][0-9a-fA-F][0-9a-eA-E]$`

**TimecodeBurnin**

**prefix**
Use Prefix (Prefix) to place ASCII characters before any burned-in timecode. For example, a prefix of "EZ-" will result in the timecode "EZ-00:00:00:00". Provide either the characters themselves or the ASCII code equivalents. The supported range of characters is 0x20 through 0x7e. This includes letters, numbers, and all special characters represented on a standard English keyboard.

*Type*: string  
*Required*: False  
*Pattern*: `^[ -~]+$`

**fontSize**
Use Font Size (FontSize) to set the font size of any burned-in timecode. Valid values are 10, 16, 32, 48.

*Type*: integer  
*Required*: False  
*Minimum*: 10  
*Maximum*: 48

**position**

*Type*: string  
*Required*: False

**TimecodeBurninPosition (enum)**
Use Position (Position) under Timecode burn-in (TimecodeBurnIn) to specify the location the burned-in timecode on output video.

- TOP_CENTER
- TOP_LEFT
- TOP_RIGHT
- MIDDLE_LEFT
- MIDDLE_CENTER
- MIDDLE_RIGHT
- BOTTOM_LEFT
- BOTTOM_CENTER
- BOTTOM_RIGHT
TimedMetadata (enum)
If PASSTHROUGH, inserts ID3 timed metadata from the timed_metadata REST command into this output. Only available for certain containers.

PASSTHROUGH
NONE

TtmlDestinationSettings

stylePassthrough
- **Type**: string
- **Required**: False

TtmlStylePassthrough (enum)
Pass through style and position information from a TTML-like input source (TTML, SMPTE-TT, CFF-TT) to the CFF-TT output or TTML output.

ENABLED
DISABLED

Type (enum)
- **SYSTEM**
- **CUSTOM**

UpdatePresetRequest

settings
- **Type**: PresetSettings (p. 797)
- **Required**: False

name
The name of the preset you are modifying.
- **Type**: string
- **Required**: True

description
The new description for the preset, if you are changing it.
- **Type**: string
- **Required**: False

category
The new category for the preset, if you are changing it.
**UpdatePresetResponse**

`preset`

- **Type:** `Preset (p. 796)`
- **Required:** False

**VideoCodec (enum)**

Type of video codec

- FRAME_CAPTURE
- H_264
- H_265
- MPEG2
- PRORES

**VideoCodecSettings**

**h265Settings**

- **Type:** `H265Settings (p. 762)`
- **Required:** False

```code`
codec
```
- **Type:** string
- **Required:** True

**proresSettings**

- **Type:** `ProresSettings (p. 799)`
- **Required:** False

**mpeg2Settings**

- **Type:** `Mpeg2Settings (p. 790)`
- **Required:** False

**h264Settings**

- **Type:** `H264Settings (p. 753)`
- **Required:** False

**frameCaptureSettings**

- **Type:** `FrameCaptureSettings (p. 749)`
Properties

**Required**: False

### VideoDescription

#### fixedAfd

Applies only if you set AFD Signaling(AfdSignaling) to Fixed (FIXED). Use Fixed (FixedAf) to specify a four-bit AFD value which the service will write on all frames of this video output.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 15

#### scalingBehavior

- **Type**: string
- **Required**: False

#### respondToAfd

- **Type**: string
- **Required**: False

#### codecSettings

- **Type**: VideoCodecSettings (p. 805)
- **Required**: True

#### afdSignaling

- **Type**: string
- **Required**: False

#### colorMetadata

- **Type**: string
- **Required**: False

#### timecodeInsertion

- **Type**: string
- **Required**: False

#### width

Use Width (Width) to define the video resolution width, in pixels, for this output. If you don't provide a value here, the service will use the input width.

- **Type**: integer
- **Required**: False
- **Minimum**: 32
Properties

**Maximum**: 4096

**sharpness**

Use Sharpness (Sharpness) setting to specify the strength of anti-aliasing. This setting changes the width of the anti-alias filter kernel used for scaling. Sharpness only applies if your output resolution is different from your input resolution, and if you set Anti-alias (AntiAlias) to ENABLED. 0 is the softest setting, 100 the sharpest, and 50 recommended for most content.

- **Type**: integer
- **Required**: False
- **Minimum**: 0
- **Maximum**: 100

**antiAlias**

- **Type**: string
- **Required**: False

**videoPreprocessors**

Find additional transcoding features under Preprocessors (VideoPreprocessors). Enable the features at each output individually. These features are disabled by default.

- **Type**: VideoPreprocessor (p. 808)
- **Required**: False

**position**

Use Position (Position) to point to a rectangle object to define your position. This setting overrides any other aspect ratio.

- **Type**: Rectangle (p. 801)
- **Required**: False

**dropFrameTimecode**

- **Type**: string
- **Required**: False

**crop**

Applies only if your input aspect ratio is different from your output aspect ratio. Use Input cropping rectangle (Crop) to specify the video area the service will include in the output. This will crop the input source, causing video pixels to be removed on encode. Do not use this setting if you have enabled Stretch to output (stretchToOutput) in your output settings.

- **Type**: Rectangle (p. 801)
- **Required**: False

**height**

Use the Height (Height) setting to define the video resolution height for this output. Specify in pixels. If you don’t provide a value here, the service will use the input height.
**Properties**

<table>
<thead>
<tr>
<th>Type</th>
<th>Required</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>integer</td>
<td>False</td>
<td>32</td>
<td>2160</td>
</tr>
</tbody>
</table>

**VideoPreprocessor**

**timecodeBurnin**

Timecode burn-in (TimecodeBurnIn)--Burns the output timecode and specified prefix into the output.

- **Type**: TimecodeBurnin (p. 803)
- **Required**: False

**noiseReducer**

Enable the Noise reducer (NoiseReducer) feature to remove noise from your video output if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

- **Type**: NoiseReducer (p. 794)
- **Required**: False

**colorCorrector**

Enable the Color corrector (ColorCorrector) feature if necessary. Enable or disable this feature for each output individually. This setting is disabled by default.

- **Type**: ColorCorrector (p. 735)
- **Required**: False

**imageInserter**

Enable the Image inserter (ImageInserter) feature to include a graphic overlay on your video. Enable or disable this feature for each output individually. This setting is disabled by default.

- **Type**: ImageInserter (p. 770)
- **Required**: False

**deinterlacer**

Use Deinterlacer (Deinterlacer) to produce smoother motion and a clearer picture.

- **Type**: Deinterlacer (p. 738)
- **Required**: False

**VideoTimecodeInsertion (enum)**

Enable Timecode insertion to include timecode information in this output. Do this in the API by setting (VideoTimecodeInsertion) to (PIC_TIMING_SEI). To get timecodes to appear correctly in your output, also set up the timecode configuration for your job in the input settings. Only enable Timecode insertion when the input framerate is identical to output framerate. Disable this setting to remove the timecode from the output. Default is disabled.

- **DISABLED**
- **PIC_TIMING_SEI**
WavSettings

channels

Set Channels to specify the number of channels in this output audio track. With WAV, valid values 1, 2, 4, and 8. In the console, these values are Mono, Stereo, 4-Channel, and 8-Channel, respectively.

Type: integer  
Required: False  
Minimum: 1  
Maximum: 8

bitDepth

Specify Bit depth (BitDepth), in bits per sample, to choose the encoding quality for this audio track.

Type: integer  
Required: False  
Minimum: 16  
Maximum: 24

sampleRate

Sample rate in Hz.

Type: integer  
Required: False  
Minimum: 8000  
Maximum: 192000

Queues

URI

/2017-08-29/queues

HTTP Methods

GET

Operation ID: ListQueues

Retrieve a JSON array of up to twenty of your queues. This will return the queues themselves, not just a list of them. To retrieve the next twenty queues, use the nextToken string returned with the array.

Query Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>listBy</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>nextToken</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
<tr>
<td>maxResults</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
</tbody>
</table>
## HTTP Methods

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>order</td>
<td>String</td>
<td>False</td>
<td></td>
</tr>
</tbody>
</table>

## Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>ListQueuesResponse (p. 812)</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 813)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can’t process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 813)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 813)</td>
<td>403: AccessDeniedException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You don’t have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody (p. 813)</td>
<td>404: ResourceNotFoundException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody (p. 813)</td>
<td>429: LimitExceededException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
<tr>
<td>409</td>
<td>ExceptionBody (p. 813)</td>
<td>409: ResourceInUseException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service could not complete your request because there is a conflict with the current state of the resource. For example, you</td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>201</td>
<td>CreateQueueResponse (p. 813)</td>
<td>201: CreatedResponse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Your resource has been successfully created.</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 813)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
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<td>404</td>
<td>ExceptionBody (p. 813)</td>
<td>404: ResourceNotFoundException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody (p. 813)</td>
<td>429: LimitExceededException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests.</td>
</tr>
</tbody>
</table>

POST

Operation ID: CreateQueue

Create a new transcoding queue. For information about job templates see the User Guide at http://docs.aws.amazon.com/mediaconvert/latest/ug/what-is.html

Responses
### Schemas

#### Request Bodies

**Example GET**

```json
{
  "nextToken (p. 814)": "string",
  "maxResults (p. 814)": integer,
  "listBy (p. 814)": enum,
  "order (p. 814)": enum
}
```

**Example POST**

```json
{
  "name (p. 813)": "string",
  "description (p. 813)": "string"
}
```

#### Response Bodies

**Example ListQueuesResponse**

```json
{
  "queues (p. 814)": [
    {
      "lastUpdated (p. 815)": "string",
      "createdAt (p. 815)": "string",
      "name (p. 815)": "string",
      "description (p. 815)": "string",
      "arn (p. 815)": "string",
      "type (p. 815)": enum,
      "status (p. 815)": enum
    },
    
  "nextToken (p. 814)": "string"
}
```
Example CreateQueueResponse

```
{
  "queue (p. 813)": {
    "lastUpdated (p. 815)": "string",
    "createdAt (p. 815)": "string",
    "name (p. 815)": "string",
    "description (p. 815)": "string",
    "arn (p. 815)": "string",
    "type (p. 815)": enum,
    "status (p. 815)": enum
  }
}
```

Example ExceptionBody

```
{
  "message (p. 813)": "string"
}
```

Properties

CreateQueueRequest

**name**

The name of the queue you are creating.

*Type:* string  
*Required:* True

**description**

Optional. A description of the queue you are creating.

*Type:* string  
*Required:* False

CreateQueueResponse

**queue**

*Type:* Queue (p. 815)  
*Required:* False

ExceptionBody

**message**

*Type:* string  
*Required:* False
ListQueuesRequest

nextToken

Use this string, provided with the response to a previous request, to request the next batch of queues.

Type: string
Required: False

maxResults

Optional. Number of queues, up to twenty, that will be returned at one time.

Type: integer
Required: False
Format: int32

listBy

Type: string
Required: False

order

Type: string
Required: False

ListQueuesResponse

queues

Type: Array of type Queue (p. 815)
Required: False

nextToken

Use this string to request the next batch of queues.

Type: string
Required: False

Order (enum)

When you request lists of resources, you can optionally specify whether they are sorted in ASCENDING or DESCENDING order. Default varies by resource.

ASCENDING
DESCENDING
Queue

lastUpdated

The timestamp in epoch seconds when the queue was last updated.

  Type: string
  Required: False
  Format: date-time

createdAt

The timestamp in epoch seconds for queue creation.

  Type: string
  Required: False
  Format: date-time

name

A name you create for each queue. Each name must be unique within your account.

  Type: string
  Required: True

description

An optional description you create for each queue.

  Type: string
  Required: False

arn

An identifier for this resource that is unique within all of AWS.

  Type: string
  Required: False

type

  Type: string
  Required: False

status

  Type: string
  Required: False

QueueListBy (enum)

Optional. When you request a list of queues, you can choose to list them alphabetically by NAME or chronologically by CREATION_DATE. If you don't specify, the service will list them by creation date.
QueueStatus (enum)

Queues can be ACTIVE or PAUSED. If you pause a queue, jobs in that queue will not begin. Jobs running when a queue is paused continue to run until they finish or error out.

ACTIVE
PAUSED

Type (enum)

SYSTEM
CUSTOM

A Specific Queue

URI

/2017-08-29/queues/ name

HTTP Methods

GET

Operation ID: GetQueue

Retrieve the JSON for a specific queue.

Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
</tbody>
</table>

Responses

<table>
<thead>
<tr>
<th>Status Code</th>
<th>Response Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>GetQueueResponse (p. 820)</td>
<td>200: OkResponse</td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 821)</td>
<td>400: BadRequestException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The conditional request failed. The service can't process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 821)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 821)</td>
<td>403: AccessDeniedException. You don't have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
</tr>
<tr>
<td>404</td>
<td>ExceptionBody (p. 821)</td>
<td>404: ResourceNotFoundException. The resource you requested does not exist.</td>
</tr>
<tr>
<td>429</td>
<td>ExceptionBody (p. 821)</td>
<td>429: LimitExceededException. Too many requests have been sent in too short of a time. The service limits the rate at which it will accept requests. For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
<tr>
<td>409</td>
<td>ExceptionBody (p. 821)</td>
<td>409: ResourceInUseException. The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>

**PUT**

Operation ID: UpdateQueue

Modify one of your existing queues.

**Path Parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>String</td>
<td>True</td>
<td></td>
</tr>
<tr>
<td>Status Code</td>
<td>Response Model</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>UpdateQueueResponse (p. 821)</td>
<td>200: OkResponse</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>ExceptionBody (p. 821)</td>
<td>400: BadRequestException</td>
<td>The conditional request failed. The service can’t process your request because of a problem in the request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 821)</td>
<td>500: InternalServiceException</td>
<td>The service encountered an unexpected condition and cannot fulfill your request.</td>
</tr>
<tr>
<td>403</td>
<td>ExceptionBody (p. 821)</td>
<td>403: AccessDeniedException</td>
<td>You don’t have permissions for this action with the credentials you sent. Please check your authorization credentials. You should be sending credentials using the AWS Signature Version 4 signing process.</td>
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<td>ExceptionBody (p. 821)</td>
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<td>The service could not complete your request because there is a conflict with the current state of the resource. For example, you may be trying to delete a Queue that has jobs processing.</td>
</tr>
</tbody>
</table>
DELETE

Operation ID: DeleteQueue

Permanently delete a queue you have created.

Path Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
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<td></td>
</tr>
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<tr>
<td></td>
<td></td>
<td>process your request because of a problem in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>request. Please check your request form and syntax.</td>
</tr>
<tr>
<td>202</td>
<td>DeleteQueueResponse (p.</td>
<td>202: AcceptedResponse</td>
</tr>
<tr>
<td></td>
<td>822)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Your request has been accepted. Processing has</td>
</tr>
<tr>
<td></td>
<td></td>
<td>not yet begun.</td>
</tr>
<tr>
<td>500</td>
<td>ExceptionBody (p. 821)</td>
<td>500: InternalServiceException</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The service encountered an unexpected condition and</td>
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<td>cannot fulfill your request.</td>
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<td>For example, you may be hitting your account limits for preset creation or job submission.</td>
</tr>
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</table>

**Schemas**

**Request Bodies**

**Example GET**

```json
{
   "name (p. 821)": "string"
}
```

**Example PUT**

```json
{
   "name (p. 823)": "string",
   "description (p. 823)": "string",
   "status (p. 823)": enum
}
```

**Example DELETE**

```json
{
   "name (p. 821)": "string"
}
```

**Response Bodies**

**Example GetQueueResponse**

```json
{
   "queue (p. 822)": {
      "lastUpdated (p. 822)": "string",
      "createdAt (p. 822)": "string",
      "name (p. 822)": "string",
      "description (p. 822)": "string",
      "arn (p. 822)": "string",
      "type (p. 822)": enum,
      "status (p. 822)": enum
   }
}
```
Example UpdateQueueResponse

```json
{
  "queue (p. 823)": {
    "lastUpdated (p. 822)": "string",
    "createdAt (p. 822)": "string",
    "name (p. 822)": "string",
    "description (p. 822)": "string",
    "arn (p. 822)": "string",
    "type (p. 822)": enum,
    "status (p. 822)": enum
  }
}
```

Example DeleteQueueResponse

```json
{
}
```

Example ExceptionBody

```json
{
  "message (p. 821)": "string"
}
```

Properties

DeleteQueueRequest

name

- Type: string
- Required: True

DeleteQueueResponse

ExceptionBody

message

- Type: string
- Required: False

GetQueueRequest

name

- Type: string
- Required: True
GetQueueResponse

queue
  Type: Queue (p. 822)
  Required: False

Queue

lastUpdated
The timestamp in epoch seconds when the queue was last updated.
  Type: string
  Required: False
  Format: date-time

createdAt
The timestamp in epoch seconds for queue creation.
  Type: string
  Required: False
  Format: date-time

name
A name you create for each queue. Each name must be unique within your account.
  Type: string
  Required: True

description
An optional description you create for each queue.
  Type: string
  Required: False

arn
An identifier for this resource that is unique within all of AWS.
  Type: string
  Required: False

type
  Type: string
  Required: False

status
  Type: string
QueueStatus (enum)

Queues can be ACTIVE or PAUSED. If you pause a queue, jobs in that queue will not begin. Jobs running when a queue is paused continue to run until they finish or error out.

- ACTIVE
- PAUSED

Type (enum)

- SYSTEM
- CUSTOM

UpdateQueueRequest

name

The name of the queue you are modifying.

- Type: string
- Required: True

description

The new description for the queue, if you are changing it.

- Type: string
- Required: False

status

- Type: string
- Required: False

UpdateQueueResponse

queue

- Type: Queue (p. 822)
- Required: False
Document History

The following table describes important changes to this documentation.

- **API version**: latest
- **Latest documentation update**: February, 2018

<table>
<thead>
<tr>
<th>Change</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>New AWS Elemental MediaConvert service release</td>
<td>Initial documentation for the AWS Elemental MediaConvert service.</td>
<td>November 27, 2017</td>
</tr>
</tbody>
</table>
AWS Glossary

For the latest AWS terminology, see the AWS Glossary in the AWS General Reference.