

API Reference

Amazon Simple Queue Service



API Version 2012-11-05

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Amazon Simple Queue Service: API Reference

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Welcome

Welcome to the Amazon SQS API Reference.

Amazon SQS is a reliable, highly-scalable hosted queue for storing messages as they travel between applications or microservices. Amazon SQS moves data between distributed application components and helps you decouple these components.

For information on the permissions you need to use this API, see <u>Identity and access management</u> in the *Amazon SQS Developer Guide*.

You can use <u>AWS SDKs</u> to access Amazon SQS using your favorite programming language. The SDKs perform tasks such as the following automatically:

- Cryptographically sign your service requests
- Retry requests
- Handle error responses

Additional information

- Amazon SQS Product Page
- Amazon SQS Developer Guide
 - Making API Requests
 - Amazon SQS Message Attributes
 - Amazon SQS Dead-Letter Queues
- Amazon SQS in the AWS Command Line Interface
- Amazon Web Services General Reference
 - Regions and Endpoints

This document was last published on May 16, 2024.

Actions

The following actions are supported:

- AddPermission
- CancelMessageMoveTask
- ChangeMessageVisibility
- ChangeMessageVisibilityBatch
- CreateQueue
- DeleteMessage
- DeleteMessageBatch
- DeleteQueue
- GetQueueAttributes
- GetQueueUrl
- ListDeadLetterSourceQueues
- ListMessageMoveTasks
- ListQueues
- ListQueueTags
- PurgeQueue
- ReceiveMessage
- RemovePermission
- SendMessage
- SendMessageBatch
- SetQueueAttributes
- StartMessageMoveTask
- TagQueue
- UntagQueue

AddPermission

Adds a permission to a queue for a specific principal. This allows sharing access to the queue.

When you create a queue, you have full control access rights for the queue. Only you, the owner of the queue, can grant or deny permissions to the queue. For more information about these permissions, see <u>Allow Developers to Write Messages to a Shared Queue</u> in the *Amazon SQS Developer Guide*.

Note

- AddPermission generates a policy for you. You can use <u>SetQueueAttributes</u> to upload your policy. For more information, see <u>Using Custom Policies with the Amazon SQS Access Policy Language</u> in the *Amazon SQS Developer Guide*.
- An Amazon SQS policy can have a maximum of seven actions per statement.
- To remove the ability to change queue permissions, you must deny permission to the AddPermission, RemovePermission, and SetQueueAttributes actions in your IAM policy.
- Amazon SQS AddPermission does not support adding a non-account principal.

Note

Cross-account permissions don't apply to this action. For more information, see <u>Grant</u> cross-account permissions to a role and a username in the *Amazon SQS Developer Guide*.

Request Syntax

```
{
   "Actions": [ "string" ],
   "AWSAccountIds": [ "string" ],
   "Label": "string",
   "QueueUrl": "string"
}
```

AddPermission API Version 2012-11-05 3

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Actions

The action the client wants to allow for the specified principal. Valid values: the name of any action or *.

For more information about these actions, see <u>Overview of Managing Access Permissions to Your Amazon Simple Queue Service Resource</u> in the *Amazon SQS Developer Guide*.

Specifying SendMessage, DeleteMessage, or ChangeMessageVisibility for ActionName.n also grants permissions for the corresponding batch versions of those actions: SendMessageBatch, DeleteMessageBatch, and ChangeMessageVisibilityBatch.

Type: Array of strings

Required: Yes

AWSAccountIds

The AWS account numbers of the <u>principals</u> who are to receive permission. For information about locating the AWS account identification, see <u>Your AWS Identifiers</u> in the *Amazon SQS Developer Guide*.

Type: Array of strings

Required: Yes

Label

The unique identification of the permission you're setting (for example, AliceSendMessage). Maximum 80 characters. Allowed characters include alphanumeric characters, hyphens (-), and underscores ().

Type: String

Required: Yes

QueueUrl

The URL of the Amazon SQS queue to which permissions are added.

Request Parameters API Version 2012-11-05 4

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

OverLimit

The specified action violates a limit. For example, ReceiveMessage returns this error if the maximum number of in flight messages is reached and AddPermission returns this error if the maximum number of permissions for the queue is reached.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

Response Elements API Version 2012-11-05 5

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query requests grant a <u>SendMessage</u> permission to the principal whose AWS account number is 177715257436 and a <u>ReceiveMessage</u> permission to the principal whose AWS account number is 111111111111. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4</u> Requests in the *AWS General Reference*.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.AddPermission
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
```

```
"QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
"Label": "MyLabel",
"Actions": ["SendMessage", "ReceiveMessage"],
"AWSAccountIds": ["177715257436", "11111111111"]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=AddPermission
&Label=MyLabel
&AWSAccountId.1=177715257436
&ActionName.1=SendMessage
&AWSAccountId.2=111111111111
&ActionName.2=ReceiveMessage
```

Sample Response

</AddPermissionResponse>

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 8

CancelMessageMoveTask

Cancels a specified message movement task. A message movement can only be cancelled when the current status is RUNNING. Cancelling a message movement task does not revert the messages that have already been moved. It can only stop the messages that have not been moved yet.

Note

- This action is currently limited to supporting message redrive from <u>dead-letter queues</u> (<u>DLQs</u>) only. In this context, the source queue is the dead-letter queue (DLQ), while the destination queue can be the original source queue (from which the messages were driven to the dead-letter-queue), or a custom destination queue.
- Only one active message movement task is supported per queue at any given time.

Request Syntax

```
{
    "<u>TaskHandle</u>": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

TaskHandle

An identifier associated with a message movement task.

Type: String

Required: Yes

Response Syntax

```
{
```

CancelMessageMoveTask API Version 2012-11-05 9

}

```
"<u>ApproximateNumberOfMessagesMoved</u>": number
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

ApproximateNumberOfMessagesMoved

The approximate number of messages already moved to the destination queue.

Type: Long

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS

Response Elements API Version 2012-11-05 10

CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

ResourceNotFoundException

One or more specified resources don't exist.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

Example

Using AWS query protocol

The following example query cancels an existing running message move task. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4 Requests in the AWS General Reference</u>.

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

X-Amz-Date: <Date>

Content-Type: application/x-www-form-urlencoded

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive

Action=CancelMessageMoveTask

&TaskHandle=eyJ0YXNrSWQi0iJkYzE20WUwNC0wZTU1LTQ0ZDItYWE5MC1jMDgwY2ExZjM2ZjciLCJzb3VyY2VBcm4i0iJ

Sample Response

HTTP/1.1 200 OK

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 12

ChangeMessageVisibility

Changes the visibility timeout of a specified message in a queue to a new value. The default visibility timeout for a message is 30 seconds. The minimum is 0 seconds. The maximum is 12 hours. For more information, see Visibility Timeout in the Amazon SQS Developer Guide.

For example, if the default timeout for a queue is 60 seconds, 15 seconds have elapsed since you received the message, and you send a ChangeMessageVisibility call with VisibilityTimeout set to 10 seconds, the 10 seconds begin to count from the time that you make the ChangeMessageVisibility call. Thus, any attempt to change the visibility timeout or to delete that message 10 seconds after you initially change the visibility timeout (a total of 25 seconds) might result in an error.

An Amazon SQS message has three basic states:

- 1. Sent to a queue by a producer.
- 2. Received from the gueue by a consumer.
- 3. Deleted from the queue.

A message is considered to be *stored* after it is sent to a queue by a producer, but not yet received from the queue by a consumer (that is, between states 1 and 2). There is no limit to the number of stored messages. A message is considered to be *in flight* after it is received from a queue by a consumer, but not yet deleted from the queue (that is, between states 2 and 3). There is a limit to the number of in flight messages.

Limits that apply to in flight messages are unrelated to the *unlimited* number of stored messages.

For most standard queues (depending on queue traffic and message backlog), there can be a maximum of approximately 120,000 in flight messages (received from a queue by a consumer, but not yet deleted from the queue). If you reach this limit, Amazon SQS returns the OverLimit error message. To avoid reaching the limit, you should delete messages from the queue after they're processed. You can also increase the number of queues you use to process your messages. To request a limit increase, file a support request.

For FIFO queues, there can be a maximum of 20,000 in flight messages (received from a queue by a consumer, but not yet deleted from the queue). If you reach this limit, Amazon SQS returns no error messages.

ChangeMessageVisibility API Version 2012-11-05 13

Important

If you attempt to set the VisibilityTimeout to a value greater than the maximum time left, Amazon SQS returns an error. Amazon SQS doesn't automatically recalculate and increase the timeout to the maximum remaining time.

Unlike with a queue, when you change the visibility timeout for a specific message the timeout value is applied immediately but isn't saved in memory for that message. If you don't delete a message after it is received, the visibility timeout for the message reverts to the original timeout value (not to the value you set using the ChangeMessageVisibility action) the next time the message is received.

Request Syntax

```
{
   "QueueUrl": "string",
   "ReceiptHandle": "string",
   "VisibilityTimeout": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the Amazon SQS queue whose message's visibility is changed.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

ReceiptHandle

The receipt handle associated with the message, whose visibility timeout is changed. This parameter is returned by the ReceiveMessage action.

Request Syntax API Version 2012-11-05 14 Type: String

Required: Yes

VisibilityTimeout

The new value for the message's visibility timeout (in seconds). Values range: 0 to 43200.

Maximum: 12 hours.

Type: Integer

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

MessageNotInflight

The specified message isn't in flight.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

Response Elements API Version 2012-11-05 15

ReceiptHandleIsInvalid

The specified receipt handle isn't valid.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example queries request changes the visibility timeout for a message to 60 seconds. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

X-Amz-Target: AmazonSQS.ChangeMessageVisibility

X-Amz-Date: <Date>

```
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "ReceiptHandle": "AQEBaZ+j5qUoOAoxlmrCQPkBm9njMWXqemmIG6shMHCO6fV20JrQYg/
AiZ8JELwLwOu5U61W+aIX5Qzu7GGofxJuvzymr4Ph53RiR0mudj4InLSgpSspYeTRDteBye5tV/txbZDdNZxsi
+qqZA9xPnmMscKQqF6pGhnGIKrnkYG145N16GPIZv62LrIRb6mSqOn1fn0yqrvmWuuY3w2UzQbaYunJWGxpzZze21EOBtywg7G9is
+c6K9hGniddzhLkK1tHzZKjejOU4jokaiB4nmi0dF3JqLzDsQuPF0Gi8qffhEvw56n18QCbluSJScFhJYvoagGnDbwOnd9z
NGjWJ45dqWpiW3d2Ws7q",
    "VisibilityTimeout": 60
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=ChangeMessageVisibility
&VisibilityTimeout=60
&ReceiptHandle=AQEBwPTK2fT2gy97H1iyU5in9umgT+Y4I0xyKG0zpZa8iemEqoR5/
aPn0xAodmiVTzyrW7S4e8XwcWbB04XK92jIQzUpiGwRFA4D17r3G0w84Qzq/00BQe/
JaKxJw6iilafYA5fo1SJQo5Wg8xXbJHTVlJqgvTXd/
UtlByLMhWMi0JMra1UUjYiPsGtYUpLVnOaRkYSPvzRnFFYUbcqCW9lm2BijQKK6KNOZyCCfIh8TooE5i4P2L9N3o9yUHwMc
```

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- · AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- · AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 18

ChangeMessageVisibilityBatch

Changes the visibility timeout of multiple messages. This is a batch version of ChangeMessageVisibility. The result of the action on each message is reported individually in the response. You can send up to 10 ChangeMessageVisibility requests with each ChangeMessageVisibilityBatch action.

Important

Because the batch request can result in a combination of successful and unsuccessful actions, you should check for batch errors even when the call returns an HTTP status code of 200.

Request Syntax

```
{
   "Entries": [
         "Id": "string",
         "ReceiptHandle": "string",
         "VisibilityTimeout": number
      }
   ],
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Entries

Lists the receipt handles of the messages for which the visibility timeout must be changed.

Type: Array of ChangeMessageVisibilityBatchRequestEntry objects

Required: Yes

QueueUrl

The URL of the Amazon SQS queue whose messages' visibility is changed.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Syntax

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Failed

A list of BatchResultErrorEntry items.

Type: Array of BatchResultErrorEntry objects

Successful

A list of ChangeMessageVisibilityBatchResultEntry items.

Response Syntax API Version 2012-11-05 20

Type: Array of ChangeMessageVisibilityBatchResultEntry objects

Errors

For information about the errors that are common to all actions, see Common Errors.

BatchEntryIdsNotDistinct

Two or more batch entries in the request have the same Id.

HTTP Status Code: 400

EmptyBatchRequest

The batch request doesn't contain any entries.

HTTP Status Code: 400

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidBatchEntryId

The Id of a batch entry in a batch request doesn't abide by the specification.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

• The rate of requests per second exceeds the AWS KMS request quota for an account and Region.

Errors API Version 2012-11-05 21

- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

TooManyEntriesInBatchRequest

The batch request contains more entries than permissible.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

ChangeMessageVisibilityBatch request changes the visibility timeout settings for two messages. You must URL-encode the entire URL. However, in this example only the message body is URL-encoded to make the example easier to read.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.ChangeMessageVisibilityBatch
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
```

```
"Entries": [
        {
            "Id": "change_visibility_msg_1",
            "ReceiptHandle": "AQEBt7JdeB+HGhLUgVF4/Gc+AvTPvgUL
+AVpoHQPb3Gw9U6bRBxx4KYy3U5bk+hBLDGAj84UxMMTG1uhCJLMuS+5MrRkuEE0pgJr6B6J12Xk
+qstDQNsRuamy21kSzjmDWhdKNexq8mcMy8dbmSYLa
+GytNMShSzyOhrBBUbcwkTdbJPW9czNs6nR4Wb8CteMPwzYCYrYHaM/
tePfqcMwlq+d7PSXTM965g2DrTP5pF5puB00BA5MkHTkZyMkUZyENTS704HH
+uZW06+7IWUTPcBma8aFt8MY0eeDn0hBtM8SD6fcnNxHXHD0mSkE6cpA68ew5wwYkPdQ2U341SxJbNWGPEfmzCtRJKs7Mc3
+cdjfyNR3QzXiVucoqS6mmRDnVe",
            "VisibilityTimeout": 45
        },
        {
            "Id": "change_visibility_msg_2",
            "ReceiptHandle": "AQEB3LQoW7GQWgodQCEJXHjMv0/QkeCHiRldRfLC/E6RUggm
+BjpthqxfoUOUn6Vs271qmrBaufFqEmnMKqk2n1EuUBne1pe+hZcrDE8IveUUPmqkUT54FGhAAjPX3oEIryz/
XeQ/muKAuLclcZvt2Q+ZDPW8DvZqMa1RoHxOqSq+6kQ4PwgQxB+VqDYvIc/LpH0oL4PTR0BXqLPjWrzz/
knK6HTzKpqC4ESvFdJ/dkk2nvS0iqY0ly5VQknK/lv/rTU0qEYevjJSrNLIPDqZGyvqcLwbm6+yo1cW/
c9cPDiVm96gIhVkuiCZ1gtskoOtyroZVPcY71clDG2EPZJeY8akMd3u+sXEMWhiOPFs1cgWQs2ugsL
+vdwMCbsZRkXbJv7",
            "VisibilityTimeout": 45
        }
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Failed": [],
    "Successful": [
        {
            "Id": "change_visibility_msg_1"
        },
        {
            "Id": "change_visibility_msg_2"
        }
    ]
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=ChangeMessageVisibilityBatch
&ChangeMessageVisibilityBatchRequestEntry.1.Id=change_visibility_msg_2
&ChangeMessageVisibilityBatchRequestEntry.1.ReceiptHandle=gfk0T0R0waama4fVFffkjKzmhMCymjQvfTFk2
%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRz0WdT0ePj0jPcTpRxBtXix
%2BEvwJ0ZUma9wabv%2BSw6ZHjwmNcVDx8dZXJhVp16Bksiox
%2FGrUvrVTCJRTWTLc59oHLLF8sEkKzRmGNzTDGTiV
%2BYjHfQj60FD3rVaXmzTsoNxRhKJ72uIHVMGVQiAGqBX6HGv 9LDmYhPXw4hy%2FNqIg%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.1.VisibilityTimeout=45
&ChangeMessageVisibilityBatchRequestEntry.2.Id=change_visibility_msg_3
&ChangeMessageVisibilityBatchRequestEntry.2.ReceiptHandle=gfk0T0R0waama4f
 VFffkjKzmhMCymjQvfTFk2LxT33FUgBz3%2BnougdeLKWSscPU1%2FXqx%2BxcNnjnQQ3U30q
 OumIE6AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRzOWdTOePj0
 soqjZM%2F7kzn4Ew27XLU9I%2FYaWYmKvDbq%2Fk3HKVB9HfB43kE49atP2aWrzNL4yunG41Q
 4cfRRtfJdcGQGNHQ2%2Byd0Usf5qR1dZr1iDo5xk946eQat83AxTRP%2BY4Qi0V7FAeSLH9su
 9xpX6HGv9LDmYhPXw4hy%2FNqIq%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.2.VisibilityTimeout=45
```

Sample Response

```
HTTP/1.1 200 OK

<?xml version="1.0"?>

<ChangeMessageVisibilityBatchResponse xmlns="http://queue.amazonaws.com/
doc/2012-11-05/">

<ChangeMessageVisibilityBatchResult>

<ChangeMessageVisibilityBatchResultEntry>

<Id>>changeMessageVisibility_msg_2</Id>

</ChangeMessageVisibilityBatchResultEntry>

<Id>>changeMessageVisibilityBatchResultEntry>

<ChangeMessageVisibilityBatchResultEntry>

<Id>>changeMessageVisibility_msg_3</Id>

</ChangeMessageVisibilityBatchResultEntry>
```

```
</ChangeMessageVisibilityBatchResult>
    <ResponseMetadata>
        <RequestId>ca9668f7-ab1b-4f7a-8859-f15747ab17a7</RequestId>
        </ResponseMetadata>
</ChangeMessageVisibilityBatchResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- · AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 25

CreateQueue

Creates a new standard or FIFO queue. You can pass one or more attributes in the request. Keep the following in mind:

• If you don't specify the FifoQueue attribute, Amazon SQS creates a standard queue.



Note

You can't change the queue type after you create it and you can't convert an existing standard queue into a FIFO queue. You must either create a new FIFO queue for your application or delete your existing standard queue and recreate it as a FIFO queue. For more information, see Moving From a Standard Queue to a FIFO Queue in the Amazon SQS Developer Guide.

- If you don't provide a value for an attribute, the queue is created with the default value for the attribute.
- If you delete a queue, you must wait at least 60 seconds before creating a queue with the same name.

To successfully create a new queue, you must provide a queue name that adheres to the limits related to gueues and is unique within the scope of your gueues.



Note

After you create a queue, you must wait at least one second after the queue is created to be able to use the queue.

To get the gueue URL, use the GetQueueUrl action. GetQueueUrl requires only the QueueName parameter. be aware of existing queue names:

- If you provide the name of an existing queue along with the exact names and values of all the queue's attributes, CreateQueue returns the queue URL for the existing queue.
- If the queue name, attribute names, or attribute values don't match an existing queue, CreateQueue returns an error.

CreateQueue API Version 2012-11-05 26



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Request Syntax

```
{
   "Attributes": {
      "string" : "string"
   "QueueName": "string",
   "tags": {
      "string" : "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Attributes

A map of attributes with their corresponding values.

The following lists the names, descriptions, and values of the special request parameters that the CreateQueue action uses:

- DelaySeconds The length of time, in seconds, for which the delivery of all messages in the queue is delayed. Valid values: An integer from 0 to 900 seconds (15 minutes). Default: 0.
- MaximumMessageSize The limit of how many bytes a message can contain before Amazon SQS rejects it. Valid values: An integer from 1,024 bytes (1 KiB) to 262,144 bytes (256 KiB). Default: 262,144 (256 KiB).
- MessageRetentionPeriod The length of time, in seconds, for which Amazon SQS retains a message. Valid values: An integer from 60 seconds (1 minute) to 1,209,600 seconds (14 days). Default: 345,600 (4 days). When you change a queue's attributes, the change can take up to 60 seconds for most of the attributes to propagate throughout the Amazon

Request Syntax API Version 2012-11-05 27 SQS system. Changes made to the MessageRetentionPeriod attribute can take up to 15 minutes and will impact existing messages in the queue potentially causing them to be expired and deleted if the MessageRetentionPeriod is reduced below the age of existing messages.

- Policy The queue's policy. A valid AWS policy. For more information about policy structure, see Overview of AWS IAM Policies in the *IAM User Guide*.
- ReceiveMessageWaitTimeSeconds The length of time, in seconds, for which a
 <u>ReceiveMessage</u> action waits for a message to arrive. Valid values: An integer from 0 to 20
 (seconds). Default: 0.
- VisibilityTimeout The visibility timeout for the queue, in seconds. Valid values: An integer from 0 to 43,200 (12 hours). Default: 30. For more information about the visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide*.

The following attributes apply only to dead-letter queues:

- RedrivePolicy The string that includes the parameters for the dead-letter queue functionality of the source queue as a JSON object. The parameters are as follows:
 - deadLetterTargetArn The Amazon Resource Name (ARN) of the dead-letter queue to which Amazon SQS moves messages after the value of maxReceiveCount is exceeded.
 - maxReceiveCount The number of times a message is delivered to the source queue before being moved to the dead-letter queue. Default: 10. When the ReceiveCount for a message exceeds the maxReceiveCount for a queue, Amazon SQS moves the message to the dead-letter-queue.
- RedriveAllowPolicy The string that includes the parameters for the permissions for the dead-letter queue redrive permission and which source queues can specify dead-letter queues as a JSON object. The parameters are as follows:
 - redrivePermission The permission type that defines which source queues can specify the current queue as the dead-letter queue. Valid values are:
 - allowAll (Default) Any source queues in this AWS account in the same Region can specify this queue as the dead-letter queue.
 - denyAll No source queues can specify this queue as the dead-letter queue.
 - byQueue Only queues specified by the sourceQueueArns parameter can specify this queue as the dead-letter queue.
 - sourceQueueArns The Amazon Resource Names (ARN)s of the source queues that can specify this queue as the dead-letter queue and redrive messages. You can specify this

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parameter only when the redrivePermission parameter is set to byQueue. You can specify up to 10 source queue ARNs. To allow more than 10 source queues to specify deadletter queues, set the redrivePermission parameter to allowAll.

Note

The dead-letter queue of a FIFO queue must also be a FIFO queue. Similarly, the deadletter queue of a standard queue must also be a standard queue.

The following attributes apply only to server-side-encryption:

- KmsMasterKeyId The ID of an AWS managed customer master key (CMK) for Amazon SQS or a custom CMK. For more information, see Key Terms. While the alias of the AWS managed CMK for Amazon SQS is always alias/aws/sqs, the alias of a custom CMK can, for example, be alias/MyAlias . For more examples, see Keyld in the AWS Key Management Service API Reference.
- KmsDataKeyReusePeriodSeconds The length of time, in seconds, for which Amazon SQS can reuse a data key to encrypt or decrypt messages before calling AWS KMS again. An integer representing seconds, between 60 seconds (1 minute) and 86,400 seconds (24 hours). Default: 300 (5 minutes). A shorter time period provides better security but results in more calls to KMS which might incur charges after Free Tier. For more information, see How Does the Data Key Reuse Period Work?
- SqsManagedSseEnabled Enables server-side queue encryption using SQS owned encryption keys. Only one server-side encryption option is supported per queue (for example, SSE-KMS or SSE-SQS).

The following attributes apply only to FIFO (first-in-first-out) queues:

• FifoQueue – Designates a queue as FIFO. Valid values are true and false. If you don't specify the FifoQueue attribute, Amazon SQS creates a standard queue. You can provide this attribute only during queue creation. You can't change it for an existing queue. When you set this attribute, you must also provide the MessageGroupId for your messages explicitly.

For more information, see FIFO queue logic in the Amazon SQS Developer Guide.

• ContentBasedDeduplication – Enables content-based deduplication. Valid values are true and false. For more information, see Exactly-once processing in the Amazon SQS Developer Guide. Note the following:

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- Every message must have a unique MessageDeduplicationId.
 - You may provide a MessageDeduplicationId explicitly.
 - If you aren't able to provide a MessageDeduplicationId and you enable ContentBasedDeduplication for your queue, Amazon SQS uses a SHA-256 hash to generate the MessageDeduplicationId using the body of the message (but not the attributes of the message).
 - If you don't provide a MessageDeduplicationId and the queue doesn't have ContentBasedDeduplication set, the action fails with an error.
 - If the queue has ContentBasedDeduplication set, your MessageDeduplicationId overrides the generated one.
- When ContentBasedDeduplication is in effect, messages with identical content sent within the deduplication interval are treated as duplicates and only one copy of the message is delivered.
- If you send one message with ContentBasedDeduplication enabled and then another message with a MessageDeduplicationId that is the same as the one generated for the first MessageDeduplicationId, the two messages are treated as duplicates and only one copy of the message is delivered.

The following attributes apply only to high throughput for FIFO queues:

- DeduplicationScope Specifies whether message deduplication occurs at the message group or queue level. Valid values are messageGroup and queue.
- FifoThroughputLimit Specifies whether the FIFO queue throughput quota applies to the
 entire queue or per message group. Valid values are perQueue and perMessageGroupId.
 The perMessageGroupId value is allowed only when the value for DeduplicationScope
 is messageGroup.

To enable high throughput for FIFO queues, do the following:

- Set DeduplicationScope to messageGroup.
- Set FifoThroughputLimit to perMessageGroupId.

If you set these attributes to anything other than the values shown for enabling high throughput, normal throughput is in effect and deduplication occurs as specified.

For information on throughput quotas, see <u>Quotas related to messages</u> in the *Amazon SQS Developer Guide*.

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Type: String to string map

```
Valid Keys: All | Policy | VisibilityTimeout | MaximumMessageSize
| MessageRetentionPeriod | ApproximateNumberOfMessages |
ApproximateNumberOfMessagesNotVisible | CreatedTimestamp |
LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed
| DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy
| FifoQueue | ContentBasedDeduplication | KmsMasterKeyId |
KmsDataKeyReusePeriodSeconds | DeduplicationScope | FifoThroughputLimit
| RedriveAllowPolicy | SqsManagedSseEnabled
```

Required: No

QueueName

The name of the new queue. The following limits apply to this name:

- A queue name can have up to 80 characters.
- Valid values: alphanumeric characters, hyphens (-), and underscores (_).
- A FIFO queue name must end with the .fifo suffix.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

tags

Add cost allocation tags to the specified Amazon SQS queue. For an overview, see <u>Tagging Your</u> Amazon SQS Queues in the *Amazon SQS Developer Guide*.

When you use queue tags, keep the following guidelines in mind:

- Adding more than 50 tags to a queue isn't recommended.
- Tags don't have any semantic meaning. Amazon SQS interprets tags as character strings.
- Tags are case-sensitive.
- A new tag with a key identical to that of an existing tag overwrites the existing tag.

For a full list of tag restrictions, see <u>Quotas related to queues</u> in the *Amazon SQS Developer Guide*.

Request Parameters API Version 2012-11-05 31



Note

To be able to tag a queue on creation, you must have the sqs:CreateQueue and sqs:TagQueue permissions.

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Type: String to string map

Required: No

Response Syntax

```
{
   "QueueUrl": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

QueueUrl

The URL of the created Amazon SQS queue.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

Response Syntax API Version 2012-11-05 32

InvalidAttributeName

The specified attribute doesn't exist.

HTTP Status Code: 400

InvalidAttributeValue

A queue attribute value is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDeletedRecently

You must wait 60 seconds after deleting a queue before you can create another queue with the same name.

HTTP Status Code: 400

QueueNameExists

A queue with this name already exists. Amazon SQS returns this error only if the request includes attributes whose values differ from those of the existing queue.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

Errors API Version 2012-11-05 33

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query requests create a new queue named MyQueue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4 Requests in the AWS General Reference</u>.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.CreateQueue
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueName": "MyQueue",
    "Attributes": {
        "VisibilityTimeout": "40"
    },
    "tags": {
        "QueueType": "Production"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
```

```
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
        "QueueUrl":"https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue"
}
```

Example

Using AWS query protocol

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=CreateQueue
&QueueName=MyQueue
&Attribute.1.Name=VisibilityTimeout
&Attribute.1.Value=40
&Tag.Key=QueueType
&Tag.Value=Production
```

Sample Response

Example

The following example creates a delay queue which hides each message from consumers for the first 45 seconds that the message is in the queue by calling the CreateQueue action with the DelaySeconds attribute set to 45 seconds.



Note

Queue URLs and names are case-sensitive.

Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
?Action=CreateQueue
&QueueName=MyQueue
&Attribute.1.Name=DelaySeconds
&Attribute.1.Value=45
&Expires=2020-12-20T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 36

DeleteMessage

Deletes the specified message from the specified queue. To select the message to delete, use the ReceiptHandle of the message (not the MessageId which you receive when you send the message). Amazon SQS can delete a message from a queue even if a visibility timeout setting causes the message to be locked by another consumer. Amazon SQS automatically deletes messages left in a queue longer than the retention period configured for the queue.

Note

The ReceiptHandle is associated with a specific instance of receiving a message. If you receive a message more than once, the ReceiptHandle is different each time you receive a message. When you use the DeleteMessage action, you must provide the most recently received ReceiptHandle for the message (otherwise, the request succeeds, but the message will not be deleted).

For standard queues, it is possible to receive a message even after you delete it. This might happen on rare occasions if one of the servers which stores a copy of the message is unavailable when you send the request to delete the message. The copy remains on the server and might be returned to you during a subsequent receive request. You should ensure that your application is idempotent, so that receiving a message more than once does not cause issues.

Request Syntax

```
{
   "QueueUrl": "string",
   "ReceiptHandle": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the Amazon SQS queue from which messages are deleted.

DeleteMessage API Version 2012-11-05 37 Queue URLs and names are case-sensitive.

Type: String

Required: Yes

ReceiptHandle

The receipt handle associated with the message to delete.

Type: String

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidIdFormat

This error has been deprecated.

The specified receipt handle isn't valid for the current version.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

Response Elements API Version 2012-11-05 38

HTTP Status Code: 400

ReceiptHandleIsInvalid

The specified receipt handle isn't valid.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request deletes a message from the queue named MyQueue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

```
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.DeleteMessage
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "ReceiptHandle": "AQEB3LQoW7GQWgodQCEJXHjMv0/QkeCHiRldRfLC/E6RUggm
+BjpthqxfoUOUn6Vs271qmrBaufFqEmnMKqk2n1EuUBne1pe+hZcrDE8IveUUPmqkUT54FGhAAjPX3oEIryz/
XeQ/muKAuLclcZvt2Q+ZDPW8DvZqMa1RoHxOqSq+6kQ4PwgQxB+VqDYvIc/LpH0oL4PTR0BXgLPjWrzz/
knK6HTzKpqC4ESvFdJ/dkk2nvS0iqY01y5VQknK/lv/rTU0qEYevjJSrNLIPDqZGyvqcLwbm6+yo1cW/
c9cPDiVm96gIhVkuiCZ1qtskoOtyroZVPcY71clDG2EPZJeY8akMd3u+sXEMWhiOPFs1cgWQs2ugsL
+vdwMCbsZRkXbJv7"
}
```

Sample Response

```
HTTP/1.1 200 0K
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=DeleteMessage
&ReceiptHandle=AQEBMeG2RcZZrIcgBkDFb61HqL9B9tbbEHNh+4uxMIG
+CPupPjqJtRswDl0r6h0Tzgcq105i0iZNci5GS5RTnHTkD2zipM9gHfSP2tWPhY7HHsU5GCTZ
+egzS5HiEvmGZ71g71Lucdk7mes1/
WGXnmU27K26Koo9GGrB0AKTv16dync1ezCMNyrBHEMUyIWS21UTbrSj7fw93dgZSg2eWTk+thSVUB/ibOwpmj
```

- +wBN99nKQQklsZHtZd4exT1V3JHwP4kqz
- +D3C2RGn7js3nNdFpH411BH8rCTZDU8DQp9eQNHLIL6RUf1WrI8gv8L7NErGlIH4Y3wZbFE0MKilVHenfpP2G6E1MuxyM3y
- +qdlZq4m00VGIIZeMq9PPmVsLtB7u9mruLyNFraN5ihKMjzQoKqA==

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 41

DeleteMessageBatch

Deletes up to ten messages from the specified queue. This is a batch version of DeleteMessage. The result of the action on each message is reported individually in the response.

Important

Because the batch request can result in a combination of successful and unsuccessful actions, you should check for batch errors even when the call returns an HTTP status code of 200.

Request Syntax

```
{
   "Entries": [
         "Id": "string",
         "ReceiptHandle": "string"
      }
   ],
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Entries

Lists the receipt handles for the messages to be deleted.

Type: Array of DeleteMessageBatchRequestEntry objects

Required: Yes

QueueUrl

The URL of the Amazon SQS queue from which messages are deleted.

DeleteMessageBatch API Version 2012-11-05 42 Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Syntax

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Failed

A list of BatchResultErrorEntry items.

Type: Array of BatchResultErrorEntry objects

Successful

A list of <u>DeleteMessageBatchResultEntry</u> items.

Type: Array of DeleteMessageBatchResultEntry objects

Response Syntax API Version 2012-11-05 43

Errors

For information about the errors that are common to all actions, see Common Errors.

BatchEntryIdsNotDistinct

Two or more batch entries in the request have the same Id.

HTTP Status Code: 400

EmptyBatchRequest

The batch request doesn't contain any entries.

HTTP Status Code: 400

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidBatchEntryId

The Id of a batch entry in a batch request doesn't abide by the specification.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

• The rate of requests per second exceeds the AWS KMS request quota for an account and Region.

Errors API Version 2012-11-05 44

- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

TooManyEntriesInBatchRequest

The batch request contains more entries than permissible.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following examples show how a DeleteMessageBatch request deletes two messages. You must URL-encode the entire URL. However, in this example only the message body is URL-encoded to make the example easier to read. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

X-Amz-Target: AmazonSQS.DeleteMessageBatch

X-Amz-Date: <Date>

Content-Type: application/x-amz-json-1.0

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

```
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Entries": [
        {
            "Id": "msq1",
            "ReceiptHandle": "AQEBaZ+j5qUoOAoxlmrCQPkBm9njMWXqemmIG6shMHCO6fV20JrQYq/
AiZ8JELwLwOu5U61W+aIX5Qzu7GGofxJuvzymr4Ph53RiR0mudj4InLSgpSspYeTRDteBye5tV/txbZDdNZxsi
+qqZA9xPnmMscKQqF6pGhnGIKrnkYGl45Nl6GPIZv62LrIRb6mSqOn1fn0yqrvmWuuY3w2UzQbaYunJWGxpzZze21EOBtyw
g7G9is
+c6K9hGniddzhLkK1tHzZKjej0U4jokaiB4nmi0dF3JqLzDsQuPF0Gi8qffhEvw56n18QCbluSJScFhJYvoagGnDbw0nd9z
NGjWJ45dqWpiW3d2Ws7q"
        },
        {
            "Id": "msg2",
            "ReceiptHandle": "AQEB3LQoW7GQWgodQCEJXHjMvO/QkeCHiRldRfLC/E6RUggm
+BjpthqxfoUOUn6Vs271qmrBaufFqEmnMKqk2n1EuUBne1pe+hZcrDE8IveUUPmqkUT54FGhAAjPX3oEIryz/
XeQ/muKAuLclcZvt2Q+ZDPW8DvZqMa1RoHxOqSq+6kQ4PwqQxB+VqDYvIc/LpH0oL4PTR0BXqLPjWrzz/
knK6HTzKpqC4ESvFdJ/dkk2nvS0iqY0ly5VQknK/lv/rTU0gEYevjJSrNLIPDgZGyvgcLwbm6+yo1cW/
c9cPDiVm96gIhVkuiCZ1gtskoOtyroZVPcY71clDG2EPZJeY8akMd3u+sXEMWhiOPFs1cgWQs2ugsL
+vdwMCbsZRkXbJv7"
        }
    ]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Failed": [],
    "Successful": [
        {
            "Id": "msg2"
        },
        {
            "Id": "msg1"
        }
    ]
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=DeleteMessageBatch
&DeleteMessageBatchRequestEntry.1.Id=msg1
&DeleteMessageBatchRequestEntry.1.ReceiptHandle=gfk0T0R0waama4fVFffkjPQrrvzMr0g0fTFk2LxT33EuB8w
%2F5LeGPpYTLzjqLQxyQYaQALeSNHb0us3uE84uujxpBhsDkZUQkjFFkNqBXn48x1McVhTcI3YLH%2Bd
%2BIqetIOHgBCZAPx6r%2B09dWaBXei6nbK5Ygih21DCDdAwFV68Jo8DXhb3ErEfoDqx7vyvC5nCpdwqv%2BJhU
%2FTNGjNN8t51v5c%2FAXvQsAzyZVNapxUrHIt4NxRhKJ72uICcxruyE8eRXlxIVNgeNP8ZEDcw7zZU1Zw%3D
%3D
&DeleteMessageBatchRequestEntry.2.Id=msg2
&DeleteMessageBatchRequestEntry.2.ReceiptHandle=gfk0T0R0waama4fVFffkjKzmhMCymjQvfTFk2LxT33G4ms5
%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRzOWdTOePj0jPcTpRxBtXix
%2BEvwJ0ZUma9wabv%2BSw6ZHjwmNcVDx8dZXJhVp16Bksiox
%2FGrUvrVTCJRTWTLc59oHLLF8sEkKzRmGNzTDGTiV%2BYjHfQj60FD3rVaXmzTsoNxRhKJ72uIHVMGVQiAGgB
%2BqAbSqfKHDQtVOmJJqkHug%3D%3D
```

Sample Response

</DeleteMessageBatchResponse>

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 48

DeleteQueue

Deletes the queue specified by the QueueUrl, regardless of the queue's contents.



Important

Be careful with the DeleteQueue action: When you delete a queue, any messages in the queue are no longer available.

When you delete a queue, the deletion process takes up to 60 seconds. Requests you send involving that queue during the 60 seconds might succeed. For example, a SendMessage request might succeed, but after 60 seconds the queue and the message you sent no longer exist.

When you delete a queue, you must wait at least 60 seconds before creating a queue with the same name.



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide. The delete operation uses the HTTP GET verb.

Request Syntax

```
{
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the Amazon SQS queue to delete.

DeleteQueue API Version 2012-11-05 49 Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS

Response Elements API Version 2012-11-05 50

CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request deletes the specified queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed
Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.DeleteQueue
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl":"https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
```

Content-Type: application/x-amz-json-1.0

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1 Host: sqs.us-east-1.amazonaws.com
```

Content-Type: application/x-www-form-urlencoded

X-Amz-Date: <Date>

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive Action=DeleteQueue

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

See Also API Version 2012-11-05 52

- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 53

GetQueueAttributes

Gets attributes for the specified queue.



Note

To determine whether a queue is FIFO, you can check whether QueueName ends with the .fifo suffix.

Request Syntax

```
{
   "AttributeNames": [ "string" ],
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AttributeNames

A list of attributes for which to retrieve information.

The AttributeNames parameter is optional, but if you don't specify values for this parameter, the request returns empty results.



Note

In the future, new attributes might be added. If you write code that calls this action, we recommend that you structure your code so that it can handle new attributes gracefully.

The following attributes are supported:

GetQueueAttributes API Version 2012-11-05 54

Important

The ApproximateNumberOfMessagesDelayed, ApproximateNumberOfMessagesNotVisible, and

ApproximateNumberOfMessages metrics may not achieve consistency until at least 1 minute after the producers stop sending messages. This period is required for the queue metadata to reach eventual consistency.

- All Returns all values.
- ApproximateNumberOfMessages Returns the approximate number of messages available for retrieval from the queue.
- ApproximateNumberOfMessagesDelayed Returns the approximate number of messages in the queue that are delayed and not available for reading immediately. This can happen when the queue is configured as a delay queue or when a message has been sent with a delay parameter.
- ApproximateNumberOfMessagesNotVisible Returns the approximate number of messages that are in flight. Messages are considered to be in flight if they have been sent to a client but have not yet been deleted or have not yet reached the end of their visibility window.
- CreatedTimestamp Returns the time when the queue was created in seconds (epoch time).
- DelaySeconds Returns the default delay on the queue in seconds.
- LastModifiedTimestamp Returns the time when the queue was last changed in seconds (epoch time).
- MaximumMessageSize Returns the limit of how many bytes a message can contain before Amazon SQS rejects it.
- MessageRetentionPeriod Returns the length of time, in seconds, for which Amazon SQS retains a message. When you change a queue's attributes, the change can take up to 60 seconds for most of the attributes to propagate throughout the Amazon SQS system. Changes made to the MessageRetentionPeriod attribute can take up to 15 minutes and will impact existing messages in the queue potentially causing them to be expired and deleted if the MessageRetentionPeriod is reduced below the age of existing messages.
- Policy Returns the policy of the queue.

Request Parameters API Version 2012-11-05 55

- QueueArn Returns the Amazon resource name (ARN) of the gueue.
- ReceiveMessageWaitTimeSeconds Returns the length of time, in seconds, for which the ReceiveMessage action waits for a message to arrive.
- VisibilityTimeout Returns the visibility timeout for the queue. For more information about the visibility timeout, see Visibility Timeout in the Amazon SQS Developer Guide.

The following attributes apply only to dead-letter queues:

- RedrivePolicy The string that includes the parameters for the dead-letter queue functionality of the source queue as a JSON object. The parameters are as follows:
 - deadLetterTargetArn The Amazon Resource Name (ARN) of the dead-letter queue to which Amazon SQS moves messages after the value of maxReceiveCount is exceeded.
 - maxReceiveCount The number of times a message is delivered to the source queue before being moved to the dead-letter queue. Default: 10. When the ReceiveCount for a message exceeds the maxReceiveCount for a queue, Amazon SQS moves the message to the dead-letter-queue.
- RedriveAllowPolicy The string that includes the parameters for the permissions for the dead-letter queue redrive permission and which source queues can specify dead-letter queues as a JSON object. The parameters are as follows:
 - redrivePermission The permission type that defines which source queues can specify the current queue as the dead-letter queue. Valid values are:
 - allowAll (Default) Any source queues in this AWS account in the same Region can specify this queue as the dead-letter queue.
 - denyAll No source queues can specify this queue as the dead-letter queue.
 - byQueue Only queues specified by the sourceQueueArns parameter can specify this
 queue as the dead-letter queue.
 - sourceQueueArns The Amazon Resource Names (ARN)s of the source queues that can specify this queue as the dead-letter queue and redrive messages. You can specify this parameter only when the redrivePermission parameter is set to byQueue. You can specify up to 10 source queue ARNs. To allow more than 10 source queues to specify deadletter queues, set the redrivePermission parameter to allowAll.

Request Parameters API Version 2012-11-05 56



Note

The dead-letter queue of a FIFO queue must also be a FIFO queue. Similarly, the deadletter queue of a standard queue must also be a standard queue.

The following attributes apply only to server-side-encryption:

- KmsMasterKeyId Returns the ID of an AWS managed customer master key (CMK) for Amazon SQS or a custom CMK. For more information, see Key Terms.
- KmsDataKeyReusePeriodSeconds Returns the length of time, in seconds, for which Amazon SQS can reuse a data key to encrypt or decrypt messages before calling AWS KMS again. For more information, see How Does the Data Key Reuse Period Work?.
- SqsManagedSseEnabled Returns information about whether the gueue is using SSE-SQS encryption using SQS owned encryption keys. Only one server-side encryption option is supported per queue (for example, SSE-KMS or SSE-SQS).

The following attributes apply only to FIFO (first-in-first-out) queues:

 FifoQueue – Returns information about whether the queue is FIFO. For more information, see FIFO queue logic in the Amazon SQS Developer Guide.



Note

To determine whether a queue is FIFO, you can check whether QueueName ends with the .fifo suffix.

 ContentBasedDeduplication – Returns whether content-based deduplication is enabled for the queue. For more information, see Exactly-once processing in the Amazon SQS Developer Guide.

The following attributes apply only to high throughput for FIFO queues:

- DeduplicationScope Specifies whether message deduplication occurs at the message group or queue level. Valid values are messageGroup and queue.
- FifoThroughputLimit Specifies whether the FIFO queue throughput quota applies to the entire queue or per message group. Valid values are perQueue and perMessageGroupId. The perMessageGroupId value is allowed only when the value for DeduplicationScope is messageGroup.

Request Parameters API Version 2012-11-05 57 To enable high throughput for FIFO queues, do the following:

- Set DeduplicationScope to messageGroup.
- Set FifoThroughputLimit to perMessageGroupId.

If you set these attributes to anything other than the values shown for enabling high throughput, normal throughput is in effect and deduplication occurs as specified.

For information on throughput quotas, see <u>Quotas related to messages</u> in the *Amazon SQS Developer Guide*.

Type: Array of strings

```
Valid Values: All | Policy | VisibilityTimeout | MaximumMessageSize
| MessageRetentionPeriod | ApproximateNumberOfMessages |
ApproximateNumberOfMessagesNotVisible | CreatedTimestamp |
LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed
| DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy
| FifoQueue | ContentBasedDeduplication | KmsMasterKeyId |
KmsDataKeyReusePeriodSeconds | DeduplicationScope | FifoThroughputLimit
| RedriveAllowPolicy | SqsManagedSseEnabled
```

Required: No

QueueUrl

The URL of the Amazon SQS queue whose attribute information is retrieved.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Syntax

```
{
    "Attributes": {
        "string" : "string"
    }
}
```

Response Syntax API Version 2012-11-05 58

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Attributes

A map of attributes to their respective values.

```
Type: String to string map
```

```
Valid Keys: All | Policy | VisibilityTimeout | MaximumMessageSize
| MessageRetentionPeriod | ApproximateNumberOfMessages |
ApproximateNumberOfMessagesNotVisible | CreatedTimestamp |
LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed
| DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy
| FifoQueue | ContentBasedDeduplication | KmsMasterKeyId |
KmsDataKeyReusePeriodSeconds | DeduplicationScope | FifoThroughputLimit
| RedriveAllowPolicy | SqsManagedSseEnabled
```

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidAttributeName

The specified attribute doesn't exist.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

Response Elements API Version 2012-11-05 59

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request gets all the attribute values for the specified queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

```
X-Amz-Target: AmazonSQS.GetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "AttributeNames": ["All"]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Attributes": {
       "QueueArn": "arn:aws:sqs:us-east-1:5555555555555555559Queue",
        "ApproximateNumberOfMessages": "0",
        "ApproximateNumberOfMessagesNotVisible": "0",
        "ApproximateNumberOfMessagesDelayed": "0",
        "CreatedTimestamp": "1676665337",
        "LastModifiedTimestamp": "1677096375",
        "VisibilityTimeout": "60",
        "MaximumMessageSize": "12345",
        "MessageRetentionPeriod": "345600",
        "DelaySeconds": "0",
        "Policy": "{\"Version\":\"2012-10-17\",\"Id\":\"Policy1677095510157\",
\"Statement\":[{\"Sid\":\"Stmt1677095506939\",\"Effect\":\"Allow\",\"Principal
\":\"*\",\"Action\":\"sqs:ReceiveMessage\",\"Resource\":\"arn:aws:sqs:us-
east-1:555555555555555:MyQueue6\"}]}",
        "RedriveAllowPolicy": "{\"redrivePermission\":\"allowAll\"}",
        "ReceiveMessageWaitTimeSeconds": "2",
        "SqsManagedSseEnabled": "true"
    }
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=GetQueueAttributes
&AttributeName.1=All
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<GetQueueAttributesResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
    <GetQueueAttributesResult>
        <Attribute>
            <Name>QueueArn</Name>
            <Value>arn:aws:sqs:us-east-1:555555555555559Queue</Value>
        </Attribute>
        <Attribute>
            <Name>ApproximateNumberOfMessages</Name>
            <Value>5</Value>
        </Attribute>
        <Attribute>
            <Name>ApproximateNumberOfMessagesNotVisible</Name>
            <Value>0</Value>
        </Attribute>
        <Attribute>
            <Name>ApproximateNumberOfMessagesDelayed</Name>
            <Value>0</Value>
        </Attribute>
        <Attribute>
            <Name>CreatedTimestamp</Name>
            <Value>1677110910</Value>
        </Attribute>
        <Attribute>
            <Name>LastModifiedTimestamp</Name>
            <Value>1677110910</Value>
        </Attribute>
        <Attribute>
```

```
<Name>VisibilityTimeout</Name>
            <Value>40</Value>
        </Attribute>
        <Attribute>
            <Name>MaximumMessageSize</Name>
            <Value>262144</Value>
        </Attribute>
        <Attribute>
            <Name>MessageRetentionPeriod</Name>
            <Value>345600</Value>
        </Attribute>
        <Attribute>
            <Name>DelaySeconds</Name>
            <Value>0</Value>
        </Attribute>
        <Attribute>
            <Name>ReceiveMessageWaitTimeSeconds
            <Value>0</Value>
        </Attribute>
        <Attribute>
            <Name>SqsManagedSseEnabled</Name>
            <Value>true</Value>
        </Attribute>
    </GetQueueAttributesResult>
    <ResponseMetadata>
        <RequestId>1cffc414-8cb4-54a8-9519-98644ca5f987/RequestId>
    </ResponseMetadata>
</GetQueueAttributesResponse>
```

Example

The following example query request gets three attribute values for the specified queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.GetQueueAtrributes
X-Amz-Date: <Date>
```

```
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "AttributeNames": ["VisibilityTimeout", "DelaySeconds",
    "ReceiveMessageWaitTimeSeconds"]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Attributes": {
        "VisibilityTimeout": "35",
        "DelaySeconds": "45",
        "ReceiveMessageWaitTimeSeconds": "20"
    }
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=GetQueueAttributes
&AttributeName.1=VisibilityTimeout
&AttributeName.2=DelaySeconds
&AttributeName.3=ReceiveMessageWaitTimeSeconds
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<GetQueueAttributesResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
    <GetQueueAttributesResult>
        <Attribute>
            <Name>VisibilityTimeout</Name>
            <Value>35</Value>
        </Attribute>
        <Attribute>
            <Name>DelaySeconds</Name>
            <Value>45</Value>
        </Attribute>
        <Attribute>
            <Name>ReceiveMessageWaitTimeSeconds</Name>
            <Value>20</Value>
        </Attribute>
    </GetQueueAttributesResult>
    <ResponseMetadata>
        <RequestId>60462930-c7fd-5ef8-b6a0-75a20b5e17b8/RequestId>
    </ResponseMetadata>
</GetQueueAttributesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetQueueUrl

Returns the URL of an existing Amazon SQS queue.

To access a queue that belongs to another AWS account, use the QueueOwnerAWSAccountId parameter to specify the account ID of the queue's owner. The queue's owner must grant you permission to access the queue. For more information about shared queue access, see AddPermission or see Allow Developers to Write Messages to a Shared Queue in the Amazon SQS Developer Guide.

Request Syntax

```
{
    "QueueName": "string",
    "QueueOwnerAWSAccountId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueName

The name of the queue whose URL must be fetched. Maximum 80 characters. Valid values: alphanumeric characters, hyphens (-), and underscores (_).

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

QueueOwnerAWSAccountId

The AWS account ID of the account that created the queue.

Type: String

Required: No

GetQueueUrl API Version 2012-11-05 66

Response Syntax

```
{
    "QueueUrl": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

QueueUrl

The URL of the queue.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

Response Syntax API Version 2012-11-05 67

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request gets the URL for the specified queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4 Requests in the AWS General Reference</u>.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.GetQueueUrl
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueName": "MyQueue"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue"
}
```

Example

Using AWS query protocol

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=GetQueueUrl
&QueueName=MyQueue
```

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListDeadLetterSourceQueues

Returns a list of your queues that have the RedrivePolicy queue attribute configured with a dead-letter queue.

The ListDeadLetterSourceQueues methods supports pagination. Set parameter MaxResults in the request to specify the maximum number of results to be returned in the response. If you do not set MaxResults, the response includes a maximum of 1,000 results. If you set MaxResults and there are additional results to display, the response includes a value for NextToken. Use NextToken as a parameter in your next request to ListDeadLetterSourceQueues to receive the next page of results.

For more information about using dead-letter queues, see <u>Using Amazon SQS Dead-Letter Queues</u> in the *Amazon SQS Developer Guide*.

Request Syntax

```
{
    "MaxResults": number,
    "NextToken": "string",
    "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

Maximum number of results to include in the response. Value range is 1 to 1000. You must set MaxResults to receive a value for NextToken in the response.

Type: Integer

Required: No

NextToken

Pagination token to request the next set of results.

Type: String

Required: No

QueueUrl

The URL of a dead-letter queue.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Syntax

```
{
   "NextToken": "string",
   "queueUrls": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextToken

Pagination token to include in the next request. Token value is null if there are no additional results to request, or if you did not set MaxResults in the request.

Type: String

queueUrls

A list of source queue URLs that have the RedrivePolicy queue attribute configured with a dead-letter queue.

Type: Array of strings

Response Syntax API Version 2012-11-05 72

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The account Id is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Errors API Version 2012-11-05 73

Examples

The following example query request returns a list of dead letter source queues. In this example, only one source queue, MySourceQueue, is configured with a dead-letter queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signature Version 4 Requests</u> in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.ListDeadLetterSourceQueues
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "queueUrls": [
        "https://sqs.us-east-1.amazonaws.com/123456789012/MySourceQueue</QueueUrl>"
    ]
}
```

Example

Using AWS query protocol

Sample Request

POST /177715257436/MyQueue/ HTTP/1.1 Host: sqs.us-east-1.amazonaws.com

Content-Type: application/x-www-form-urlencoded

X-Amz-Date: <Date>

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive

Action=ListDeadLetterSourceQueues

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListMessageMoveTasks

Gets the most recent message movement tasks (up to 10) under a specific source queue.

Note

- This action is currently limited to supporting message redrive from <u>dead-letter queues</u> (<u>DLQs</u>) only. In this context, the source queue is the dead-letter queue (DLQ), while the destination queue can be the original source queue (from which the messages were driven to the dead-letter-queue), or a custom destination queue.
- Only one active message movement task is supported per queue at any given time.

Request Syntax

```
{
    "MaxResults": number,
    "SourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

The maximum number of results to include in the response. The default is 1, which provides the most recent message movement task. The upper limit is 10.

Type: Integer

Required: No

SourceArn

The ARN of the gueue whose message movement tasks are to be listed.

Type: String

ListMessageMoveTasks API Version 2012-11-05 76

Required: Yes

Response Syntax

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Results

A list of message movement tasks and their attributes.

Type: Array of ListMessageMoveTasksResultEntry objects

Errors

For information about the errors that are common to all actions, see **Common Errors**.

InvalidAddress

The account Id is invalid.

HTTP Status Code: 400

Response Syntax API Version 2012-11-05 77

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

ResourceNotFoundException

One or more specified resources don't exist.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

Example

Using AWS query protocol

The following example query lists the five most recent message movement tasks on MyDeadLetterQueue, which has only two tasks since it was created. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signature Version 4 Requests in the AWS General Reference.

Sample Request

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<ListMessageMoveTasksResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
   <ListMessageMoveTasksResult>
       <Result>
           <ApproximateNumberOfMessagesMoved>50</ApproximateNumberOfMessagesMoved>
           <ApproximateNumberOfMessagesToMove>0</ApproximateNumberOfMessagesToMove>
           <DestinationArn>arn:aws:sqs:us-east-1:555555555555555559
DestinationArn>
           <MaxNumberOfMessagesPerSecond>20</MaxNumberOfMessagesPerSecond>
           <StartedTimestamp>1684429053010</StartedTimestamp>
           <Status>COMPLETED</Status>
       </Result>
       <Result>
           <ApproximateNumberOfMessagesMoved>50</ApproximateNumberOfMessagesMoved>
           <ApproximateNumberOfMessagesToMove>100</ApproximateNumberOfMessagesToMove>
           <DestinationArn>arn:aws:sqs:us-east-1:55555555555555:MySourceQueue
DestinationArn>
           <MaxNumberOfMessagesPerSecond>10</MaxNumberOfMessagesPerSecond>
           <SourceArn>arn:aws:sqs:us-east-1:5555555555555555556qurceArn>
           <StartedTimestamp>1684429993999</StartedTimestamp>
           <Status>RUNNING</Status>
<TaskHandle>eyJ0YXNrSWQi0iJkYzE20WUwNC0wZTU1LTQ0ZDItYWE5MC1jMDgwY2ExZjM2ZjciLCJzb3VyY2VBcm4i0i
TaskHandle>
       </Result>
       <ResponseMetadata>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListQueues

Returns a list of your queues in the current region. The response includes a maximum of 1,000 results. If you specify a value for the optional QueueNamePrefix parameter, only queues with a name that begins with the specified value are returned.

The listQueues methods supports pagination. Set parameter MaxResults in the request to specify the maximum number of results to be returned in the response. If you do not set MaxResults, the response includes a maximum of 1,000 results. If you set MaxResults and there are additional results to display, the response includes a value for NextToken. Use NextToken as a parameter in your next request to listQueues to receive the next page of results.



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Request Syntax

```
{
   "MaxResults": number,
   ""NextToken": "string",
   "QueueNamePrefix": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

MaxResults

Maximum number of results to include in the response. Value range is 1 to 1000. You must set MaxResults to receive a value for NextToken in the response.

Type: Integer

Required: No

ListQueues API Version 2012-11-05 81

NextToken

Pagination token to request the next set of results.

Type: String

Required: No

QueueNamePrefix

A string to use for filtering the list results. Only those queues whose name begins with the specified string are returned.

Queue URLs and names are case-sensitive.

Type: String

Required: No

Response Syntax

```
{
    "NextToken": "string",
    "QueueUrls": [ "string" ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextToken

Pagination token to include in the next request. Token value is null if there are no additional results to request, or if you did not set MaxResults in the request.

Type: String

QueueUrls

A list of queue URLs, up to 1,000 entries, or the value of MaxResults that you sent in the request.

Response Syntax API Version 2012-11-05 82

Type: Array of strings

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Errors API Version 2012-11-05 83

Examples

The following example query request returns the queues whose names begin with the letter t The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.ListQueues
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueNamePrefix": "My"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "QueueUrls": [
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue1648169377027",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue1648169549830",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue1648227401019",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue1648248132466",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue1649201932174",
        "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue2"
    ]
}
```

Example

Using AWS query protocol

Sample Request

```
POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

Content-Type: application/x-www-form-urlencoded

X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=ListQueues&QueueNamePrefix=M
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<ListQueuesResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
    <ListOueuesResult>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/
MyQueue1648169377027</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/
MyQueue1648169549830</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/
MyQueue1648227401019</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/
MyQueue1648248132466</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/
MyQueue1649201932174</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue22</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue23</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue233</
QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue5</QueueUrl>
        <QueueUrl>https://sqs.us-east-1.amazonaws.com/177715257436/MyQueueTest</
QueueUrl>
    </ListOueuesResult>
    <ResponseMetadata>
        <RequestId>f525e5e2-86cd-5d1b-aee9-b992443254c0/RequestId>
    </ResponseMetadata>
</ListQueuesResponse>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListQueueTags

List all cost allocation tags added to the specified Amazon SQS queue. For an overview, see Tagging Your Amazon SQS Queues in the Amazon SQS Developer Guide.



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Request Syntax

```
{
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the queue.

Type: String

Required: Yes

Response Syntax

```
{
   "Tags": {
      "string" : "string"
}
```

ListQueueTags API Version 2012-11-05 87

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Tags

The list of all tags added to the specified queue.

Type: String to string map

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS

Response Elements API Version 2012-11-05 88

CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

This example illustrates one usage of ListQueueTags.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.ListQueueTags
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Tags": {
```

```
"QueueType": "Production"
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=ListQueueTags
```

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PurgeQueue

Deletes available messages in a queue (including in-flight messages) specified by the QueueURL parameter.

Important

When you use the PurgeQueue action, you can't retrieve any messages deleted from a queue.

The message deletion process takes up to 60 seconds. We recommend waiting for 60 seconds regardless of your queue's size.

Messages sent to the queue before you call PurgeQueue might be received but are deleted within the next minute.

Messages sent to the queue after you call PurgeQueue might be deleted while the queue is being purged.

Request Syntax

```
{
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the queue from which the PurgeQueue action deletes messages.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

PurgeQueue API Version 2012-11-05 92

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

PurgeQueueInProgress

Indicates that the specified queue previously received a PurgeQueue request within the last 60 seconds (the time it can take to delete the messages in the queue).

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS

Response Elements API Version 2012-11-05 93

CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request purges a queue named MyQueue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4 Requests in the AWS General Reference</u>.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.PurgeQueue
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
```

Content-Type: application/x-amz-json-1.0

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
Content-Type: application/x-www-form-urlencoded
X-Amz-Date: <Date>
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive

Action=PurgeQueue
```

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ReceiveMessage

Retrieves one or more messages (up to 10), from the specified queue. Using the WaitTimeSeconds parameter enables long-poll support. For more information, see Amazon SQS Developer Guide.

Short poll is the default behavior where a weighted random set of machines is sampled on a ReceiveMessage call. Thus, only the messages on the sampled machines are returned. If the number of messages in the queue is small (fewer than 1,000), you most likely get fewer messages than you requested per ReceiveMessage call. If the number of messages in the queue is extremely small, you might not receive any messages in a particular ReceiveMessage response. If this happens, repeat the request.

For each message returned, the response includes the following:

- The message body.
- An MD5 digest of the message body. For information about MD5, see RFC1321.
- The MessageId you received when you sent the message to the queue.
- The receipt handle.
- The message attributes.
- An MD5 digest of the message attributes.

The receipt handle is the identifier you must provide when deleting the message. For more information, see Queue and Message Identifiers in the *Amazon SQS Developer Guide*.

You can provide the VisibilityTimeout parameter in your request. The parameter is applied to the messages that Amazon SQS returns in the response. If you don't include the parameter, the overall visibility timeout for the queue is used for the returned messages. For more information, see Visibility Timeout in the Amazon SQS Developer Guide.

A message that isn't deleted or a message whose visibility isn't extended before the visibility timeout expires counts as a failed receive. Depending on the configuration of the queue, the message might be sent to the dead-letter queue.

ReceiveMessage API Version 2012-11-05 97



Note

In the future, new attributes might be added. If you write code that calls this action, we recommend that you structure your code so that it can handle new attributes gracefully.

Request Syntax

```
{
   "AttributeNames": [ "string" ],
   "MaxNumberOfMessages": number,
   "MessageAttributeNames": [ "string" ],
   "MessageSystemAttributeNames": [ "string" ],
   "QueueUrl": "string",
   "ReceiveRequestAttemptId": "string",
   "VisibilityTimeout": number,
   "WaitTimeSeconds": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

AttributeNames



Important

This parameter has been deprecated but will be supported for backward compatibility. To provide attribute names, you are encouraged to use MessageSystemAttributeNames.

A list of attributes that need to be returned along with each message. These attributes include:

- All Returns all values.
- ApproximateFirstReceiveTimestamp Returns the time the message was first received from the queue (epoch time in milliseconds).

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- ApproximateReceiveCount Returns the number of times a message has been received across all gueues but not deleted.
- AWSTraceHeader Returns the AWS X-Ray trace header string.
- SenderId
 - For a user, returns the user ID, for example ABCDEFGHI1JKLMNOPQ23R.
 - For an IAM role, returns the IAM role ID, for example ABCDE1F2GH3I4JK5LMNOP:ia123b456.
- SentTimestamp Returns the time the message was sent to the queue (epoch time in milliseconds).
- SqsManagedSseEnabled Enables server-side queue encryption using SQS owned encryption keys. Only one server-side encryption option is supported per queue (for example, SSE-KMS or SSE-SQS).
- MessageDeduplicationId Returns the value provided by the producer that calls the SendMessage action.
- MessageGroupId Returns the value provided by the producer that calls the SendMessage action. Messages with the same MessageGroupId are returned in sequence.
- SequenceNumber Returns the value provided by Amazon SQS.

Type: Array of strings

```
Valid Values: All | Policy | VisibilityTimeout | MaximumMessageSize
| MessageRetentionPeriod | ApproximateNumberOfMessages |
ApproximateNumberOfMessagesNotVisible | CreatedTimestamp |
LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed
| DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy
| FifoQueue | ContentBasedDeduplication | KmsMasterKeyId |
KmsDataKeyReusePeriodSeconds | DeduplicationScope | FifoThroughputLimit
| RedriveAllowPolicy | SqsManagedSseEnabled
```

Required: No

MaxNumberOfMessages

The maximum number of messages to return. Amazon SQS never returns more messages than this value (however, fewer messages might be returned). Valid values: 1 to 10. Default: 1.

Type: Integer

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Required: No

MessageAttributeNames

The name of the message attribute, where *N* is the index.

- The name can contain alphanumeric characters and the underscore (_), hyphen (-), and period (.).
- The name is case-sensitive and must be unique among all attribute names for the message.
- The name must not start with AWS-reserved prefixes such as AWS. or Amazon. (or any casing variants).
- The name must not start or end with a period (.), and it should not have periods in succession (..).
- The name can be up to 256 characters long.

When using ReceiveMessage, you can send a list of attribute names to receive, or you can return all of the attributes by specifying All or .* in your request. You can also use all message attributes starting with a prefix, for example bar.*.

Type: Array of strings

Required: No

MessageSystemAttributeNames

A list of attributes that need to be returned along with each message. These attributes include:

- All Returns all values.
- ApproximateFirstReceiveTimestamp Returns the time the message was first received from the queue (epoch time in milliseconds).
- ApproximateReceiveCount Returns the number of times a message has been received across all queues but not deleted.
- AWSTraceHeader Returns the AWS X-Ray trace header string.
- SenderId
 - For a user, returns the user ID, for example ABCDEFGHI1JKLMN0PQ23R.
 - For an IAM role, returns the IAM role ID, for example ABCDE1F2GH3I4JK5LMNOP:ia123b456.
- SentTimestamp Returns the time the message was sent to the queue (epoch time in milliseconds).

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- SqsManagedSseEnabled Enables server-side queue encryption using SQS owned encryption keys. Only one server-side encryption option is supported per queue (for example, SSE-KMS or SSE-SQS).
- MessageDeduplicationId Returns the value provided by the producer that calls the SendMessage action.
- MessageGroupId Returns the value provided by the producer that calls the <u>SendMessage</u> action. Messages with the same MessageGroupId are returned in sequence.
- SequenceNumber Returns the value provided by Amazon SQS.

Type: Array of strings

```
Valid Values: All | SenderId | SentTimestamp | ApproximateReceiveCount | ApproximateFirstReceiveTimestamp | SequenceNumber | MessageDeduplicationId | MessageGroupId | AWSTraceHeader | DeadLetterQueueSourceArn
```

Required: No

QueueUrl

The URL of the Amazon SQS queue from which messages are received.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

ReceiveRequestAttemptId

This parameter applies only to FIFO (first-in-first-out) queues.

The token used for deduplication of ReceiveMessage calls. If a networking issue occurs after a ReceiveMessage action, and instead of a response you receive a generic error, it is possible to retry the same action with an identical ReceiveRequestAttemptId to retrieve the same set of messages, even if their visibility timeout has not yet expired.

- You can use ReceiveRequestAttemptId only for 5 minutes after a ReceiveMessage action.
- When you set FifoQueue, a caller of the ReceiveMessage action can provide a ReceiveRequestAttemptId explicitly.

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- It is possible to retry the ReceiveMessage action with the same ReceiveRequestAttemptId if none of the messages have been modified (deleted or had their visibility changes).
- During a visibility timeout, subsequent calls with the same ReceiveRequestAttemptId return the same messages and receipt handles. If a retry occurs within the deduplication interval, it resets the visibility timeout. For more information, see Visibility Timeout in the Amazon SQS Developer Guide.

Important

If a caller of the ReceiveMessage action still processes messages when the visibility timeout expires and messages become visible, another worker consuming from the same queue can receive the same messages and therefore process duplicates. Also, if a consumer whose message processing time is longer than the visibility timeout tries to delete the processed messages, the action fails with an error.

To mitigate this effect, ensure that your application observes a safe threshold before the visibility timeout expires and extend the visibility timeout as necessary.

- While messages with a particular MessageGroupId are invisible, no more messages belonging to the same MessageGroupId are returned until the visibility timeout expires. You can still receive messages with another MessageGroupId as long as it is also visible.
- If a caller of ReceiveMessage can't track the ReceiveRequestAttemptId, no retries work until the original visibility timeout expires. As a result, delays might occur but the messages in the queue remain in a strict order.

The maximum length of ReceiveRequestAttemptId is 128 characters. ReceiveRequestAttemptId can contain alphanumeric characters (a-z, A-Z, 0-9) and punctuation (!"#\$%&'()*+, -./:;<=>?@[\]^_`{|}~).

For best practices of using ReceiveRequestAttemptId, see Using the ReceiveRequestAttemptId Request Parameter in the Amazon SQS Developer Guide.

Type: String

Required: No

VisibilityTimeout

The duration (in seconds) that the received messages are hidden from subsequent retrieve requests after being retrieved by a ReceiveMessage request.

Request Parameters API Version 2012-11-05 102 Type: Integer

Required: No

WaitTimeSeconds

The duration (in seconds) for which the call waits for a message to arrive in the gueue before returning. If a message is available, the call returns sooner than WaitTimeSeconds. If no messages are available and the wait time expires, the call does not return a message list.

Important

To avoid HTTP errors, ensure that the HTTP response timeout for ReceiveMessage requests is longer than the WaitTimeSeconds parameter. For example, with the Java SDK, you can set HTTP transport settings using the NettyNioAsyncHttpClient for asynchronous clients, or the ApacheHttpClient for synchronous clients.

Type: Integer

Required: No

Response Syntax

```
{
   "Messages": [
      {
         "Attributes": {
            "string" : "string"
         },
         "Body": "string",
         "MD50fBody": "string",
         "MD50fMessageAttributes": "string",
         "MessageAttributes": {
            "string" : {
               "BinaryListValues": [ blob ],
               "BinaryValue": blob,
               "DataType": "string",
               "StringListValues": [ "string" ],
               "StringValue": "string"
            }
```

Response Syntax API Version 2012-11-05 103

```
},
    "MessageId": "string",
    "ReceiptHandle": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Messages

A list of messages.

Type: Array of Message objects

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

KmsAccessDenied

The caller doesn't have the required KMS access.

HTTP Status Code: 400

KmsDisabled

The request was denied due to request throttling.

Response Elements API Version 2012-11-05 104

HTTP Status Code: 400

KmsInvalidKeyUsage

The request was rejected for one of the following reasons:

- The KeyUsage value of the KMS key is incompatible with the API operation.
- The encryption algorithm or signing algorithm specified for the operation is incompatible with the type of key material in the KMS key (KeySpec).

HTTP Status Code: 400

KmsInvalidState

The request was rejected because the state of the specified resource is not valid for this request.

HTTP Status Code: 400

KmsNotFound

The request was rejected because the specified entity or resource could not be found.

HTTP Status Code: 400

KmsOptInRequired

The request was rejected because the specified key policy isn't syntactically or semantically correct.

HTTP Status Code: 400

KmsThrottled

AWS KMS throttles requests for the following conditions.

HTTP Status Code: 400

OverLimit

The specified action violates a limit. For example, ReceiveMessage returns this error if the maximum number of in flight messages is reached and AddPermission returns this error if the maximum number of permissions for the queue is reached.

HTTP Status Code: 400

Errors API Version 2012-11-05 105

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request receives messages from the specified queue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see <u>Examples of Signed Signature Version 4 Requests</u> in the *AWS General Reference*.

Example

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

X-Amz-Target: AmazonSQS.ReceiveMessage

X-Amz-Date: <Date>

```
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "MaxNumberOfMessages": 5,
    "VisibilityTimeout": 15,
    "AttributeNames": ["All"]
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "Messages": [
        {
            "Attributes": {
                "SenderId": "AIDASSYFHUBOBT7F4XT75",
                "ApproximateFirstReceiveTimestamp": "1677112433437",
                "ApproximateReceiveCount": "1",
                "SentTimestamp": "1677112427387"
            },
            "Body": "This is a test message",
            "MD50fBody": "fafb00f5732ab283681e124bf8747ed1",
            "MessageId": "219f8380-5770-4cc2-8c3e-5c715e145f5e",
            "ReceiptHandle": "AQEBaZ+j5qUoOAoxlmrCQPkBm9njMWXqemmIG6shMHCO6fV20JrQYg/
AiZ8JELwLwOu5U61W+aIX5Qzu7GGofxJuvzymr4Ph53RiR0mudj4InLSgpSspYeTRDteBye5tV/txbZDdNZxsi
+qqZA9xPnmMscKQqF6pGhnGIKrnkYGl45Nl6GPIZv62LrIRb6mSqOn1fn0yqrvmWuuY3w2UzQbaYunJWGxpzZze21E0Btyw
q7G9is
+c6K9hGniddzhLkK1tHzZKjej0U4jokaiB4nmi0dF3JqLzDsQuPF0Gi8qffhEvw56n18QCbluSJScFhJYvoagGnDbw0nd9z
NGjWJ45dqWpiW3d2Ws7q"
        }
    ]
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=ReceiveMessage
&MaxNumberOfMessages=5
&VisibilityTimeout=15
&AttributeName=All
```

Sample Response

```
HTTP/1.1 200 OK
<ReceiveMessageResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
    <ReceiveMessageResult>
        <Message>
            <MessageId>60e827c3-c8a5-410a-af0e-fb43746e70b1/MessageId>
            <ReceiptHandle>AQEBwPTK2fT2gy97H1iyU5in9umgT+Y4I0xyKG0zpZa8iemEqoR5/
aPn0xAodmiVTzyrW7S4e8XwcWbB04XK92jIQzUpiGwRFA4Dl7r3GOw84Qzq/00BQe/
JaKxJw6iilafYA5fo1SJQo5Wg8xXbJHTVlJqgvTXd/
UtlByLMhWMi0JMra1UUjYiPsGtYUpLVnOaRkYSPvzRnFFYUbcqCW9lm2Bi/
jQKK6KNOZyCCfIh8TooE5i4P2L9N3o9yUHwMdv6p0nb51KaGurQ2sJwwsyhXf38ZHnVN6pWwsqQnWKYuEXpxPofxd21cLdg
ReceiptHandle>
            <MD50fBody>0e024d309850c78cba5eabbeff7cae71</MD50fBody>
            <Body>test message body 1</Body>
            <Attribute>
                <Name>SenderId</Name>
                <Value>AIDASSYFHUBOBT7F4XT75</Value>
            </Attribute>
            <Attribute>
                <Name>ApproximateFirstReceiveTimestamp</Name>
                <Value>1677112300463</Value>
            </Attribute>
            <Attribute>
                <Name>ApproximateReceiveCount</Name>
                <Value>1</Value>
            </Attribute>
            <Attribute>
                <Name>SentTimestamp</Name>
```

Example

The following example enables long polling by calling the ReceiveMessage action with the WaitTimeSeconds parameter set to 10 seconds.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.ReceiveMessage
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "WaitTimeSeconds": 10,
    "MaxNumberOfMessages": 5,
    "VisibilityTimeout": 15,
    "AttributeNames": ["All"]
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
```

Host: sqs.us-east-1.amazonaws.com

X-Amz-Date: <Date>

Content-Type: application/x-www-form-urlencoded

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive Action=ReceiveMessage &WaitTimeSeconds=10 &MaxNumberOfMessages=5 &VisibilityTimeout=15 &AttributeName=All

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 110

RemovePermission

Revokes any permissions in the queue policy that matches the specified Label parameter.

Note

- Only the owner of a queue can remove permissions from it.
- Cross-account permissions don't apply to this action. For more information, see <u>Grant</u> cross-account permissions to a role and a username in the *Amazon SQS Developer Guide*.
- To remove the ability to change queue permissions, you must deny permission to the AddPermission, RemovePermission, and SetQueueAttributes actions in your IAM policy.

Request Syntax

```
{
    "Label": "string",
    "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see **Common Parameters**.

The request accepts the following data in JSON format.

Label

The identification of the permission to remove. This is the label added using the AddPermission action.

Type: String

Required: Yes

<u>QueueUrl</u>

The URL of the Amazon SQS queue from which permissions are removed.

RemovePermission API Version 2012-11-05 111

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS

Response Elements API Version 2012-11-05 112

CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request removes the MyLabel permission from the queue named MyQueue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.RemovePermission
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Label": "MyLabel"
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
```

Content-Type: application/x-amz-json-1.0

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1 Host: sqs.us-east-1.amazonaws.com
```

X-Amz-Date: <Date>

Content-Type: application/x-www-form-urlencoded

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive

Action=RemovePermission&Label=MyLabel

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

See Also API Version 2012-11-05 114

- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 115

SendMessage

Delivers a message to the specified queue.

Important

A message can include only XML, JSON, and unformatted text. The following Unicode characters are allowed. For more information, see the W3C specification for characters. #x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFD | #x10000 to #x10FFFF Amazon SQS does not throw an exception or completely reject the message if it contains invalid characters. Instead, it replaces those invalid characters with U+FFFD before storing the message in the queue, as long as the message body contains at least one valid character.

Request Syntax

```
{
   "DelaySeconds": number,
   "MessageAttributes": {
      "string" : {
         "BinaryListValues": [ blob ],
         "BinaryValue": blob,
         "DataType": "string",
         "StringListValues": [ "string" ],
         "StringValue": "string"
      }
   },
   "MessageBody": "string",
   "MessageDeduplicationId": "string",
   "MessageGroupId": "string",
   "MessageSystemAttributes": {
      "string" : {
         "BinaryListValues": [ blob ],
         "BinaryValue": blob,
         "DataType": "string",
         "StringListValues": [ "string" ],
         "StringValue": "string"
      }
   },
   "QueueUrl": "string"
```

SendMessage API Version 2012-11-05 116 }

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

DelaySeconds

The length of time, in seconds, for which to delay a specific message. Valid values: 0 to 900. Maximum: 15 minutes. Messages with a positive DelaySeconds value become available for processing after the delay period is finished. If you don't specify a value, the default value for the queue applies.



Note

When you set FifoQueue, you can't set DelaySeconds per message. You can set this parameter only on a queue level.

Type: Integer

Required: No

MessageAttributes

Each message attribute consists of a Name, Type, and Value. For more information, see Amazon SQS message attributes in the Amazon SQS Developer Guide.

Type: String to MessageAttributeValue object map

Required: No

MessageBody

The message to send. The minimum size is one character. The maximum size is 256 KiB.



Important

A message can include only XML, JSON, and unformatted text. The following Unicode characters are allowed. For more information, see the W3C specification for characters.

Request Parameters API Version 2012-11-05 117 #x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFD | #x10000 to #x10FFFF Amazon SQS does not throw an exception or completely reject the message if it contains invalid characters. Instead, it replaces those invalid characters with U+FFFD before storing the message in the queue, as long as the message body contains at least one valid character.

Type: String

Required: Yes

MessageDeduplicationId

This parameter applies only to FIFO (first-in-first-out) queues.

The token used for deduplication of sent messages. If a message with a particular MessageDeduplicationId is sent successfully, any messages sent with the same MessageDeduplicationId are accepted successfully but aren't delivered during the 5-minute deduplication interval. For more information, see <u>Exactly-once processing</u> in the Amazon SQS Developer Guide.

- Every message must have a unique MessageDeduplicationId,
 - You may provide a MessageDeduplicationId explicitly.
 - If you aren't able to provide a MessageDeduplicationId and you enable ContentBasedDeduplication for your queue, Amazon SQS uses a SHA-256 hash to generate the MessageDeduplicationId using the body of the message (but not the attributes of the message).
 - If you don't provide a MessageDeduplicationId and the queue doesn't have ContentBasedDeduplication set, the action fails with an error.
 - If the queue has ContentBasedDeduplication set, your MessageDeduplicationId overrides the generated one.
- When ContentBasedDeduplication is in effect, messages with identical content sent within the deduplication interval are treated as duplicates and only one copy of the message is delivered.
- If you send one message with ContentBasedDeduplication enabled and then another
 message with a MessageDeduplicationId that is the same as the one generated for the
 first MessageDeduplicationId, the two messages are treated as duplicates and only one
 copy of the message is delivered.

Request Parameters API Version 2012-11-05 118

Note

The MessageDeduplicationId is available to the consumer of the message (this can be useful for troubleshooting delivery issues).

If a message is sent successfully but the acknowledgement is lost and the message is resent with the same MessageDeduplicationId after the deduplication interval, Amazon SQS can't detect duplicate messages.

Amazon SQS continues to keep track of the message deduplication ID even after the message is received and deleted.

The maximum length of MessageDeduplicationId is 128 characters.

MessageDeduplicationId can contain alphanumeric characters (a-z, A-Z, 0-9) and punctuation (!"#\$%&'()*+,-./:;<=>?@[\]^_`{|}~).

For best practices of using MessageDeduplicationId, see Using the MessageDeduplicationId Property in the Amazon SQS Developer Guide.

Type: String

Required: No

MessageGroupId

This parameter applies only to FIFO (first-in-first-out) queues.

The tag that specifies that a message belongs to a specific message group. Messages that belong to the same message group are processed in a FIFO manner (however, messages in different message groups might be processed out of order). To interleave multiple ordered streams within a single queue, use MessageGroupId values (for example, session data for multiple users). In this scenario, multiple consumers can process the queue, but the session data of each user is processed in a FIFO fashion.

- You must associate a non-empty MessageGroupId with a message. If you don't provide a MessageGroupId, the action fails.
- ReceiveMessage might return messages with multiple MessageGroupId values. For each MessageGroupId, the messages are sorted by time sent. The caller can't specify a MessageGroupId.

The maximum length of MessageGroupId is 128 characters. Valid values: alphanumeric characters and punctuation $(!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~)$.

API Version 2012-11-05 119 Request Parameters

For best practices of using MessageGroupId, see Using the MessageGroupId Property in the Amazon SQS Developer Guide.

Important

MessageGroupId is required for FIFO queues. You can't use it for Standard queues.

Type: String

Required: No

MessageSystemAttributes

The message system attribute to send. Each message system attribute consists of a Name, Type, and Value.

Important

- Currently, the only supported message system attribute is AWSTraceHeader. Its type must be String and its value must be a correctly formatted AWS X-Ray trace header string.
- The size of a message system attribute doesn't count towards the total size of a message.

Type: String to MessageSystemAttributeValue object map

Valid Keys: AWSTraceHeader

Required: No

QueueUrl

The URL of the Amazon SQS queue to which a message is sent.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Request Parameters API Version 2012-11-05 120

Response Syntax

```
{
    "MD50fMessageAttributes": "string",
    "MD50fMessageBody": "string",
    "MD50fMessageSystemAttributes": "string",
    "MessageId": "string",
    "SequenceNumber": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

MD5OfMessageAttributes

An MD5 digest of the non-URL-encoded message attribute string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

MD5OfMessageBody

An MD5 digest of the non-URL-encoded message body string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

MD5OfMessageSystemAttributes

An MD5 digest of the non-URL-encoded message system attribute string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest.

Type: String

MessageId

An attribute containing the MessageId of the message sent to the queue. For more information, see Queue and Message Identifiers in the Amazon SQS Developer Guide.

Response Syntax API Version 2012-11-05 121

Type: String

SequenceNumber

This parameter applies only to FIFO (first-in-first-out) queues.

The large, non-consecutive number that Amazon SQS assigns to each message.

The length of SequenceNumber is 128 bits. SequenceNumber continues to increase for a particular MessageGroupId.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

Invalid Message Contents

The message contains characters outside the allowed set.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

KmsAccessDenied

The caller doesn't have the required KMS access.

HTTP Status Code: 400

KmsDisabled

The request was denied due to request throttling.

HTTP Status Code: 400

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KmsInvalidKeyUsage

The request was rejected for one of the following reasons:

- The KeyUsage value of the KMS key is incompatible with the API operation.
- The encryption algorithm or signing algorithm specified for the operation is incompatible with the type of key material in the KMS key (KeySpec).

HTTP Status Code: 400

KmsInvalidState

The request was rejected because the state of the specified resource is not valid for this request.

HTTP Status Code: 400

KmsNotFound

The request was rejected because the specified entity or resource could not be found.

HTTP Status Code: 400

KmsOptInRequired

The request was rejected because the specified key policy isn't syntactically or semantically correct.

HTTP Status Code: 400

KmsThrottled

AWS KMS throttles requests for the following conditions.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

• The rate of requests per second exceeds the AWS KMS request quota for an account and Region.

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- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example SendMessage request sends a message containing This is a test message to the queue. You must URL-encode the entire URL. However, in this example only the message body is URL-encoded to make the example easier to read. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SendMessage
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "MessageBody": "This is a test message",
    "MessageAttributes": {
```

```
"my_attribute_name_1": {
         "DataType": "String",
         "StringValue": "my_attribute_value_1"
},
    "my_attribute_name_2": {
         "DataType": "String",
         "StringValue": "my_attribute_value_2"
}
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: <Date>
Content-Type: application/x-amz-json-1.0
{
    "MD50fMessageAttributes": "c48838208d2b4e14e3ca0093a8443f09",
    "MD50fMessageBody": "fafb00f5732ab283681e124bf8747ed1",
    "MessageId": "219f8380-5770-4cc2-8c3e-5c715e145f5e"
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SendMessage
&MessageBody=This+is+a+test+message
&MessageAttribute.1.Name=my_attribute_name_1
&MessageAttribute.1.Value.StringValue=my_attribute_value_1
&MessageAttribute.1.Value.DataType=String
&MessageAttribute.2.Name=my_attribute_name_2
```

```
&MessageAttribute.2.Value.StringValue=my_attribute_value_2
&MessageAttribute.2.Value.DataType=String
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<SendMessageResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
    <SendMessageResult>
        <MessageId>374cec7b-d0c8-4a2e-ad0b-67be763cf97e/MessageId>
        <MD50fMessageBody>fafb00f5732ab283681e124bf8747ed1</MD50fMessageBody>
        <MD50fMessageAttributes>c48838208d2b4e14e3ca0093a8443f09/
MD50fMessageAttributes>
    </SendMessageResult>
    <ResponseMetadata>
        <RequestId>7fe4446e-b452-53f7-8f85-181e06f2dd99/RequestId>
    </ResponseMetadata>
</SendMessageResponse>
```

Example

The following example creates a message timer—applying a 45-second initial visibility delay to a single message—by calling the SendMessage action with the DelaySeconds parameter set to 45 seconds.



Note

Queue URLs and names are case-sensitive.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SendMessage
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
```

```
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "MessageBody": "This is a test message",
    "DelaySeconds": 45
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SendMessage
&MessageBody=This+is+a+test+message
&DelaySeconds=45
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- · AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 127

See Also API Version 2012-11-05 128

SendMessageBatch

You can use SendMessageBatch to send up to 10 messages to the specified queue by assigning either identical or different values to each message (or by not assigning values at all). This is a batch version of SendMessage. For a FIFO queue, multiple messages within a single batch are enqueued in the order they are sent.

The result of sending each message is reported individually in the response. Because the batch request can result in a combination of successful and unsuccessful actions, you should check for batch errors even when the call returns an HTTP status code of 200.

The maximum allowed individual message size and the maximum total payload size (the sum of the individual lengths of all of the batched messages) are both 256 KiB (262,144 bytes).

∧ Important

A message can include only XML, JSON, and unformatted text. The following Unicode characters are allowed. For more information, see the <u>W3C specification for characters</u>. #x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFD | #x10000 to #x10FFFF Amazon SQS does not throw an exception or completely reject the message if it contains invalid characters. Instead, it replaces those invalid characters with U+FFFD before storing the message in the queue, as long as the message body contains at least one valid character.

If you don't specify the DelaySeconds parameter for an entry, Amazon SQS uses the default value for the queue.

Request Syntax

SendMessageBatch API Version 2012-11-05 129

```
"DataType": "string",
               "StringListValues": [ "string" ],
               "StringValue": "string"
            }
         },
         "MessageBody": "string",
         "MessageDeduplicationId": "string",
         "MessageGroupId": "string",
         "MessageSystemAttributes": {
            "string" : {
               "BinaryListValues": [ blob ],
               "BinaryValue": blob,
               "DataType": "string",
               "StringListValues": [ "string" ],
               "StringValue": "string"
            }
         }
      }
   ],
   "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Entries

A list of SendMessageBatchRequestEntry items.

Type: Array of SendMessageBatchRequestEntry objects

Required: Yes

QueueUrl

The URL of the Amazon SQS queue to which batched messages are sent.

Queue URLs and names are case-sensitive.

Type: String

Request Parameters API Version 2012-11-05 130

Required: Yes

Response Syntax

```
{
   "Failed": [
         "Code": "string",
         "Id": "string",
         "Message": "string",
         "SenderFault": boolean
      }
   ],
   "Successful": [
         "Id": "string",
         "MD50fMessageAttributes": "string",
         "MD50fMessageBody": "string",
         "MD50fMessageSystemAttributes": "string",
         "MessageId": "string",
         "SequenceNumber": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Failed

A list of <u>BatchResultErrorEntry</u> items with error details about each message that can't be enqueued.

Type: Array of BatchResultErrorEntry objects

Successful

A list of <u>SendMessageBatchResultEntry</u> items.

Response Syntax API Version 2012-11-05 131

Type: Array of SendMessageBatchResultEntry objects

Errors

For information about the errors that are common to all actions, see Common Errors.

BatchEntryIdsNotDistinct

Two or more batch entries in the request have the same Id.

HTTP Status Code: 400

BatchRequestTooLong

The length of all the messages put together is more than the limit.

HTTP Status Code: 400

EmptyBatchRequest

The batch request doesn't contain any entries.

HTTP Status Code: 400

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidBatchEntryId

The Id of a batch entry in a batch request doesn't abide by the specification.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

KmsAccessDenied

The caller doesn't have the required KMS access.

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HTTP Status Code: 400

KmsDisabled

The request was denied due to request throttling.

HTTP Status Code: 400

KmsInvalidKeyUsage

The request was rejected for one of the following reasons:

- The KeyUsage value of the KMS key is incompatible with the API operation.
- The encryption algorithm or signing algorithm specified for the operation is incompatible with the type of key material in the KMS key (KeySpec).

HTTP Status Code: 400

KmsInvalidState

The request was rejected because the state of the specified resource is not valid for this request.

HTTP Status Code: 400

KmsNotFound

The request was rejected because the specified entity or resource could not be found.

HTTP Status Code: 400

KmsOptInRequired

The request was rejected because the specified key policy isn't syntactically or semantically correct.

HTTP Status Code: 400

KmsThrottled

AWS KMS throttles requests for the following conditions.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

API Version 2012-11-05 133 Errors

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

TooManyEntriesInBatchRequest

The batch request contains more entries than permissible.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example SendMessageBatch request sends two messages to the queue. You must URL-encode the entire URL. However, in this example only the message body is URL-encoded to make the example easier to read. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SendMessageBatch
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Entries": [
        {
            "Id": "test_msq_001",
            "MessageBody": "test message body 1"
        },
        {
            "Id": "test_msg_002",
            "MessageBody": "test message body 2",
            "DelaySeconds": 60,
            "MessageAttributes": {
                "my_attribute_name_1": {
                    "DataType": "String",
                    "StringValue": "my_attribute_value_1"
            }
        }
    ]
}
```

Sample Response

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SendMessageBatch
&SendMessageBatchRequestEntry.1.Id=test_msg_001
&SendMessageBatchRequestEntry.1.MessageBody=test%20message%20body%201
&SendMessageBatchRequestEntry.2.Id=test_msg_002
&SendMessageBatchRequestEntry.2.MessageBody=test%20message%20body%202
&SendMessageBatchRequestEntry.2.DelaySeconds=60
&SendMessageBatchRequestEntry.2.MessageAttribute.1.Name=test_attribute_name_1
&SendMessageBatchRequestEntry.2.MessageAttribute.1.Value.StringValue=test_attribute_value_1
&SendMessageBatchRequestEntry.2.MessageAttribute.1.Value.DataType=String
```

Sample Response

```
<MessageId>60e827c3-c8a5-410a-af0e-fb43746e70b1/MessageId>
            <MD50fMessageBody>0e024d309850c78cba5eabbeff7cae71</MD50fMessageBody>
        </SendMessageBatchResultEntry>
        <SendMessageBatchResultEntry>
            <Id>test_msg_00</Id>
            <MessageId>c6e7fc6a-b802-4724-be06-59833004578b/MessageId>
            <MD50fMessageBody>7fb8146a82f95e0af155278f406862c2</MD50fMessageBody>
            <MD50fMessageAttributes>ba056227cfd9533dba1f72ad9816d233</
MD50fMessageAttributes>
        </SendMessageBatchResultEntry>
    </SendMessageBatchResult>
    <ResponseMetadata>
        <RequestId>5150a701-14f7-5609-b136-fb71a0ca744a/RequestId>
    </ResponseMetadata>
</SendMessageBatchResponse>
```

Example

The following example sends multiple messages with message timers—applying a visibility delay of variable length to the messages in the batch—by calling the SendMessageBatch action without a value for DelaySeconds for the first message and with the values of 45 seconds and 2 minutes for the second and third messages.



Note

If you don't set a value for the DelaySeconds parameter, the message might still be subject to a delay if you add the message to a delay queue. For more information about using delay queues, see Amazon SQS Delay Queues in the Amazon SQS Developer Guide.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SendMessageBatch
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
```

```
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Entries": [
        {
            "Id": "test_msg_no_message_timer",
            "MessageBody": "test message body 1"
        },
        {
            "Id": "test_msg_delay_45_seconds",
            "MessageBody": "test message body 2",
            "DelaySeconds": 45
        },
        {
            "Id": "test_msg_delay_2_minutes",
            "MessageBody": "test message body 3",
            "DelaySeconds": 120
        }
    ]
}
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SendMessageBatch
&SendMessageBatchRequestEntry.1.Id=test_msg_no_message_timer
&SendMessageBatchRequestEntry.1.MessageBody=test%20message%20body%201
&SendMessageBatchRequestEntry.2.Id=test_msg_delay_45_seconds
&SendMessageBatchRequestEntry.2.MessageBody=test%20message%20body%202
&SendMessageBatchRequestEntry.2.DelaySeconds=45
&SendMessageBatchRequestEntry.3.Id=test_msg_delay_2_minutes
&SendMessageBatchRequestEntry.3.MessageBody=test%20message%20body%203
&SendMessageBatchRequestEntry.3.DelaySeconds=120
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 139

SetQueueAttributes

Sets the value of one or more queue attributes, like a policy. When you change a queue's attributes, the change can take up to 60 seconds for most of the attributes to propagate throughout the Amazon SQS system. Changes made to the MessageRetentionPeriod attribute can take up to 15 minutes and will impact existing messages in the queue potentially causing them to be expired and deleted if the MessageRetentionPeriod is reduced below the age of existing messages.

Note

- In the future, new attributes might be added. If you write code that calls this action, we recommend that you structure your code so that it can handle new attributes gracefully.
- Cross-account permissions don't apply to this action. For more information, see <u>Grant</u> cross-account permissions to a role and a username in the *Amazon SQS Developer Guide*.
- To remove the ability to change queue permissions, you must deny permission to the AddPermission, RemovePermission, and SetQueueAttributes actions in your IAM policy.

Request Syntax

```
{
    "Attributes": {
        "string" : "string"
    },
        "QueueUrl": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

Attributes

A map of attributes to set.

SetQueueAttributes API Version 2012-11-05 140

The following lists the names, descriptions, and values of the special request parameters that the SetQueueAttributes action uses:

- DelaySeconds The length of time, in seconds, for which the delivery of all messages in the queue is delayed. Valid values: An integer from 0 to 900 (15 minutes). Default: 0.
- MaximumMessageSize The limit of how many bytes a message can contain before Amazon SQS rejects it. Valid values: An integer from 1,024 bytes (1 KiB) up to 262,144 bytes (256 KiB).
 Default: 262,144 (256 KiB).
- MessageRetentionPeriod The length of time, in seconds, for which Amazon SQS retains a message. Valid values: An integer representing seconds, from 60 (1 minute) to 1,209,600 (14 days). Default: 345,600 (4 days). When you change a queue's attributes, the change can take up to 60 seconds for most of the attributes to propagate throughout the Amazon SQS system. Changes made to the MessageRetentionPeriod attribute can take up to 15 minutes and will impact existing messages in the queue potentially causing them to be expired and deleted if the MessageRetentionPeriod is reduced below the age of existing messages.
- Policy The queue's policy. A valid AWS policy. For more information about policy structure, see Overview of AWS IAM Policies in the AWS Identity and Access Management User Guide.
- ReceiveMessageWaitTimeSeconds The length of time, in seconds, for which a
 <u>ReceiveMessage</u> action waits for a message to arrive. Valid values: An integer from 0 to 20
 (seconds). Default: 0.
- VisibilityTimeout The visibility timeout for the queue, in seconds. Valid values: An integer from 0 to 43,200 (12 hours). Default: 30. For more information about the visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide*.

The following attributes apply only to <u>dead-letter queues:</u>

- RedrivePolicy The string that includes the parameters for the dead-letter queue functionality of the source queue as a JSON object. The parameters are as follows:
 - deadLetterTargetArn The Amazon Resource Name (ARN) of the dead-letter queue to which Amazon SQS moves messages after the value of maxReceiveCount is exceeded.
 - maxReceiveCount The number of times a message is delivered to the source queue before being moved to the dead-letter queue. Default: 10. When the ReceiveCount for a message exceeds the maxReceiveCount for a queue, Amazon SQS moves the message to the dead-letter-queue.

Request Parameters API Version 2012-11-05 141

- RedriveAllowPolicy The string that includes the parameters for the permissions for the dead-letter queue redrive permission and which source queues can specify dead-letter queues as a JSON object. The parameters are as follows:
 - redrivePermission The permission type that defines which source queues can specify the current queue as the dead-letter queue. Valid values are:
 - allowAll (Default) Any source queues in this AWS account in the same Region can specify this queue as the dead-letter queue.
 - denyAll No source queues can specify this queue as the dead-letter queue.
 - byQueue Only queues specified by the sourceQueueArns parameter can specify this queue as the dead-letter queue.
 - sourceQueueArns The Amazon Resource Names (ARN)s of the source queues that can specify this queue as the dead-letter queue and redrive messages. You can specify this parameter only when the redrivePermission parameter is set to byQueue. You can specify up to 10 source gueue ARNs. To allow more than 10 source gueues to specify deadletter queues, set the redrivePermission parameter to allowAll.

Note

The dead-letter queue of a FIFO queue must also be a FIFO queue. Similarly, the deadletter queue of a standard queue must also be a standard queue.

The following attributes apply only to server-side-encryption:

- KmsMasterKeyId The ID of an AWS managed customer master key (CMK) for Amazon SQS or a custom CMK. For more information, see Key Terms. While the alias of the AWS-managed CMK for Amazon SQS is always alias/aws/sqs, the alias of a custom CMK can, for example, be alias/MyAlias . For more examples, see Keyld in the AWS Key Management Service API Reference.
- KmsDataKeyReusePeriodSeconds The length of time, in seconds, for which Amazon SQS can reuse a data key to encrypt or decrypt messages before calling AWS KMS again. An integer representing seconds, between 60 seconds (1 minute) and 86,400 seconds (24 hours). Default: 300 (5 minutes). A shorter time period provides better security but results in more calls to KMS which might incur charges after Free Tier. For more information, see How Does the Data Key Reuse Period Work?.

API Version 2012-11-05 142 **Request Parameters**

 SqsManagedSseEnabled – Enables server-side queue encryption using SQS owned encryption keys. Only one server-side encryption option is supported per queue (for example, SSE-KMS or SSE-SQS).

The following attribute applies only to FIFO (first-in-first-out) queues:

- ContentBasedDeduplication Enables content-based deduplication. For more information, see <u>Exactly-once processing</u> in the *Amazon SQS Developer Guide*. Note the following:
 - Every message must have a unique MessageDeduplicationId.
 - You may provide a MessageDeduplicationId explicitly.
 - If you aren't able to provide a MessageDeduplicationId and you enable ContentBasedDeduplication for your queue, Amazon SQS uses a SHA-256 hash to generate the MessageDeduplicationId using the body of the message (but not the attributes of the message).
 - If you don't provide a MessageDeduplicationId and the queue doesn't have ContentBasedDeduplication set, the action fails with an error.
 - If the queue has ContentBasedDeduplication set, your MessageDeduplicationId overrides the generated one.
 - When ContentBasedDeduplication is in effect, messages with identical content sent within the deduplication interval are treated as duplicates and only one copy of the message is delivered.
 - If you send one message with ContentBasedDeduplication enabled and then another
 message with a MessageDeduplicationId that is the same as the one generated for the
 first MessageDeduplicationId, the two messages are treated as duplicates and only one
 copy of the message is delivered.

The following attributes apply only to <u>high throughput for FIFO queues</u>:

- DeduplicationScope Specifies whether message deduplication occurs at the message group or queue level. Valid values are messageGroup and queue.
- FifoThroughputLimit Specifies whether the FIFO queue throughput quota applies to the
 entire queue or per message group. Valid values are perQueue and perMessageGroupId.
 The perMessageGroupId value is allowed only when the value for DeduplicationScope
 is messageGroup.

To enable high throughput for FIFO queues, do the following:

Request Parameters API Version 2012-11-05 143

- Set DeduplicationScope to messageGroup.
- Set FifoThroughputLimit to perMessageGroupId.

If you set these attributes to anything other than the values shown for enabling high throughput, normal throughput is in effect and deduplication occurs as specified.

For information on throughput quotas, see <u>Quotas related to messages</u> in the *Amazon SQS Developer Guide*.

Type: String to string map

```
Valid Keys: All | Policy | VisibilityTimeout | MaximumMessageSize
| MessageRetentionPeriod | ApproximateNumberOfMessages |
ApproximateNumberOfMessagesNotVisible | CreatedTimestamp |
LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed
| DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy
| FifoQueue | ContentBasedDeduplication | KmsMasterKeyId |
KmsDataKeyReusePeriodSeconds | DeduplicationScope | FifoThroughputLimit
| RedriveAllowPolicy | SqsManagedSseEnabled
```

Required: Yes

QueueUrl

The URL of the Amazon SQS queue whose attributes are set.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

Response Elements API Version 2012-11-05 144

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidAttributeName

The specified attribute doesn't exist.

HTTP Status Code: 400

InvalidAttributeValue

A queue attribute value is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

OverLimit

The specified action violates a limit. For example, ReceiveMessage returns this error if the maximum number of in flight messages is reached and AddPermission returns this error if the maximum number of permissions for the queue is reached.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."

Errors API Version 2012-11-05 145

 Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example query request sets a policy that gives all users ReceiveMessage
permission for a queue named MyQueue. For more examples of policies, see Custom Amazon
SQS Access Policy Language Examples in the Amazon SQS Developer Guide. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive {
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Attributes": {
        "Policy": "{\"Version\":\"2012-10-17\",\"Id\":\"Policy1677095510157\",
    \"Statement\":[{\"Sid\":\"Stmt1677095506939\",\"Effect\":\"Allow\",\"Principal
\":\"*\",\"Action\":\"sqs:ReceiveMessage\",\"Resource\":\"arn:aws:sqs:us-east-1:55555555555555MyQueue6\"}]}"
```

```
}
}
```

Sample Response

```
HTTP/1.1 200 0K
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: 0
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SetQueueAttributes
&Attribute.Name=Policy
&Attribute.Value=%7B%22Version%22%3A%222012-10-17%22%2C%22Id%22%3A%22UseCase1%22%2C%22Statement%22%3A%5B%7B%22Sid%22%3A%22Queue1ReceiveMessage%22%2C%22Effect
%22%3A%22Allow%22%2C%22Principal%22%3A%7B%22AWS%22%3A%22*7D%2C%22Action
%22%3A%22SQS%3AReceiveMessage%22%2C%22Resource%22%3A%22arn%3Aaws%3Asqs%3Aus-east-1%3A55555555555555553AMyQueue6%22%7D%5D%7D
```

Sample Response

Example

The following example query request sets the visibility timeout to 35 seconds for a queue named MyQueue. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Note

An Amazon SQS message has three basic states:

- 1. Sent to a queue by a producer.
- 2. Received from the queue by a consumer.
- 3. Deleted from the queue.

A message is considered to be stored after it is sent to a queue by a producer, but not yet received from the gueue by a consumer (that is, between states 1 and 2). There is no limit to the number of stored messages. A message is considered to be in flight after it is received from a queue by a consumer, but not yet deleted from the queue (that is, between states 2 and 3). There is a limit to the number of in flight messages.

Limits that apply to in flight messages are unrelated to the *unlimited* number of stored messages.

For most standard queues (depending on queue traffic and message backlog), there can be a maximum of approximately 120,000 in flight messages (received from a queue by a consumer, but not yet deleted from the queue). If you reach this limit, Amazon SQS returns the OverLimit error message. To avoid reaching the limit, you should delete messages from the queue after they're processed. You can also increase the number of queues you use to process your messages. To request a limit increase, file a support request. For FIFO gueues, there can be a maximum of 20,000 in flight messages (received from a queue by a consumer, but not yet deleted from the queue). If you reach this limit, Amazon SQS returns no error messages.

Using AWS JSON protocol (default)

Sample Request

POST / HTTP/1.1

Host: sqs.us-east-1.amazonaws.com

```
X-Amz-Target: AmazonSQS.SetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive {
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Attributes": {
        "VisibilityTimeout": "35"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: 0
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SetQueueAttributes
&Attribute.Name=VisibilityTimeout
&Attribute.Value=35
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<SetQueueAttributesResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
```

```
<ResponseMetadata>
        <RequestId>e5cca473-4fc0-4198-a451-8abb94d02c75/RequestId>
    </ResponseMetadata>
</SetQueueAttributesResponse>
```

Example

The following example sets a queue named MyDeadLetterQueue as the dead-letter queue for a queue name MySourceQueue by calling the SetQueueAttributes action with the configuration details for the dead-letter queue.



Note

Queue URLs and names are case-sensitive.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive {
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Attributes": {
       "RedrivePolicy": "{\"maxReceiveCount\":\"5\",\"deadLetterTargetArn\":
\"arn:aws:sqs:us-east-1:55555555555555559
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: 0
```

Content-Type: application/x-amz-json-1.0

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SetQueueAttributes
&Attribute.Name=RedrivePolicy
&Attribute.Value=%7B%22maxReceiveCount%22%3A%225%22%2C%20%22deadLetterTargetArn%22%3A%22arn%3Aaws%3Asqs%3Aus-east-1%3A5555555555555553AMyDeadLetterQueue%22%7D
```

Sample Response

Example

The following example enables long polling by calling the SetQueueAttributes action with the ReceiveMessageWaitTimeSeconds parameter set to 20 seconds.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
```

```
X-Amz-Target: AmazonSQS.SetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive {
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Attributes": {
        "ReceiveMessageWaitTimeSeconds": "20"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: 0
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=SetQueueAttributes
&Attribute.Name=ReceiveMessageWaitTimeSeconds
&Attribute.Value=20
```

Sample Response

```
HTTP/1.1 200 OK
<?xml version="1.0"?>
<SetQueueAttributesResponse xmlns="http://queue.amazonaws.com/doc/2012-11-05/">
```

Example

The following example changes an existing queue into a delay queue by calling the SetQueueAttributes action with the DelaySeconds attribute set to 45 seconds. Changing the DelaySeconds attribute from its default value of 0 to a positive integer less than or equal to 900 changes the queue into a delay queue.

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.SetQueueAtrributes
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive {
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Attributes": {
        "DelaySeconds": "45"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: <PayloadSizeBytes>
Date: 0
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1 Host: sqs.us-east-1.amazonaws.com
```

X-Amz-Date: <Date>

Content-Type: application/x-www-form-urlencoded

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive Action=SetQueueAttributes &Attribute.Name=DelaySeconds

&Attribute.Value=45

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 154

StartMessageMoveTask

Starts an asynchronous task to move messages from a specified source queue to a specified destination queue.

Note

- This action is currently limited to supporting message redrive from queues that are configured as <u>dead-letter queues (DLQs)</u> of other Amazon SQS queues only. Non-SQS queue sources of dead-letter queues, such as AWS Lambda or Amazon SNS topics, are currently not supported.
- In dead-letter queues redrive context, the StartMessageMoveTask the source queue is the DLQ, while the destination queue can be the original source queue (from which the messages were driven to the dead-letter-queue), or a custom destination queue.
- Only one active message movement task is supported per queue at any given time.

Request Syntax

```
{
    "DestinationArn": "string",
    "MaxNumberOfMessagesPerSecond": number,
    "SourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see **Common Parameters**.

The request accepts the following data in JSON format.

DestinationArn

The ARN of the queue that receives the moved messages. You can use this field to specify the destination queue where you would like to redrive messages. If this field is left blank, the messages will be redriven back to their respective original source queues.

Type: String

StartMessageMoveTask API Version 2012-11-05 155

Required: No

${\bf MaxNumber Of Messages Per Second}$

The number of messages to be moved per second (the message movement rate). You can use this field to define a fixed message movement rate. The maximum value for messages per second is 500. If this field is left blank, the system will optimize the rate based on the queue message backlog size, which may vary throughout the duration of the message movement task.

Type: Integer

Required: No

SourceArn

The ARN of the queue that contains the messages to be moved to another queue. Currently, only ARNs of dead-letter queues (DLQs) whose sources are other Amazon SQS queues are accepted. DLQs whose sources are non-SQS queues, such as AWS Lambda or Amazon SNS topics, are not currently supported.

Type: String

Required: Yes

Response Syntax

```
{
    "<u>TaskHandle</u>": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

TaskHandle

An identifier associated with a message movement task. You can use this identifier to cancel a specified message movement task using the CancelMessageMoveTask action.

Response Syntax API Version 2012-11-05 156

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

Resource Not Found Exception

One or more specified resources don't exist.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

Errors API Version 2012-11-05 157

HTTP Status Code: 400

Examples

Example

Using AWS query protocol

The following example query starts a message move task on a dead-letter queue MyDeadLetterQueue to its source queue, with a limit of 10 messages per second. The structure of AUTHPARAMS depends on the signature of the API request. For more information, see Examples of Signed Signature Version 4 Requests in the AWS General Reference.

Sample Request

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 159

TagQueue

Add cost allocation tags to the specified Amazon SQS queue. For an overview, see Tagging Your Amazon SQS Queues in the Amazon SQS Developer Guide.

When you use queue tags, keep the following guidelines in mind:

- Adding more than 50 tags to a gueue isn't recommended.
- Tags don't have any semantic meaning. Amazon SQS interprets tags as character strings.
- Tags are case-sensitive.
- A new tag with a key identical to that of an existing tag overwrites the existing tag.

For a full list of tag restrictions, see Quotas related to queues in the Amazon SQS Developer Guide.



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Request Syntax

```
{
   "QueueUrl": "string",
   "Tags": {
      "string" : "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the queue.

TagQueue API Version 2012-11-05 160 Type: String

Required: Yes

Tags

The list of tags to be added to the specified queue.

Type: String to string map

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."

Response Elements API Version 2012-11-05 161

 Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

This example illustrates one usage of TagQueue.

Example

Using AWS JSON protocol (default)

Sample Request

```
POST / HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Target: AmazonSQS.TagQueue
X-Amz-Date: <Date>
Content-Type: application/x-amz-json-1.0
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
{
    "QueueUrl": "https://sqs.us-east-1.amazonaws.com/177715257436/MyQueue/",
    "Tags": {
        "QueueType": "Production"
    }
}
```

Sample Response

```
HTTP/1.1 200 OK x-amzn-RequestId: <requestId>
```

```
Content-Length: 0
Date: <Date>
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
Host: sqs.us-east-1.amazonaws.com
X-Amz-Date: <Date>
Content-Type: application/x-www-form-urlencoded
Authorization: <AuthParams>
Content-Length: <PayloadSizeBytes>
Connection: Keep-Alive
Action=TagQueue
&Tag.Key=QueueType
&Tag.Value=Production
```

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

See Also API Version 2012-11-05 163

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 164

UntagQueue

Remove cost allocation tags from the specified Amazon SQS queue. For an overview, see Tagging Your Amazon SQS Queues in the Amazon SQS Developer Guide.



Note

Cross-account permissions don't apply to this action. For more information, see Grant cross-account permissions to a role and a username in the Amazon SQS Developer Guide.

Request Syntax

```
{
   "QueueUrl": "string",
   "TagKeys": [ "string" ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

The request accepts the following data in JSON format.

QueueUrl

The URL of the queue.

Type: String

Required: Yes

TagKeys

The list of tags to be removed from the specified queue.

Type: Array of strings

Required: Yes

UntagQueue API Version 2012-11-05 165

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see Common Errors.

InvalidAddress

The accountId is invalid.

HTTP Status Code: 400

InvalidSecurity

When the request to a queue is not HTTPS and SigV4.

HTTP Status Code: 400

QueueDoesNotExist

The specified queue doesn't exist.

HTTP Status Code: 400

RequestThrottled

The request was denied due to request throttling.

- The rate of requests per second exceeds the AWS KMS request quota for an account and Region.
- A burst or sustained high rate of requests to change the state of the same KMS key. This
 condition is often known as a "hot key."
- Requests for operations on KMS keys in a AWS CloudHSM key store might be throttled at a lower-than-expected rate when the AWS CloudHSM cluster associated with the AWS CloudHSM key store is processing numerous commands, including those unrelated to the AWS CloudHSM key store.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

Response Elements API Version 2012-11-05 166

HTTP Status Code: 400

Examples

The following examples illustrate one usage of UntagQueue.

Example

Using AWS JSON protocol (default)

Sample Request

Sample Response

```
HTTP/1.1 200 OK
x-amzn-RequestId: <requestId>
Content-Length: 0
Date: <Date>
Content-Type: application/x-amz-json-1.0
```

Example

Using AWS query protocol

Sample Request

```
POST /177715257436/MyQueue/ HTTP/1.1
```

```
Host: sqs.us-east-1.amazonaws.com
```

X-Amz-Date: <Date>

Content-Type: application/x-www-form-urlencoded

Authorization: <AuthParams>

Content-Length: <PayloadSizeBytes>

Connection: Keep-Alive

Action=UntagQueue &TagKey=QueueType

Sample Response

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 168

Data Types

The Amazon Simple Queue Service API contains several data types that various actions use. This section describes each data type in detail.



Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- BatchResultErrorEntry
- ChangeMessageVisibilityBatchRequestEntry
- ChangeMessageVisibilityBatchResultEntry
- DeleteMessageBatchRequestEntry
- DeleteMessageBatchResultEntry
- ListMessageMoveTasksResultEntry
- Message
- MessageAttributeValue
- MessageSystemAttributeValue
- SendMessageBatchRequestEntry
- SendMessageBatchResultEntry

BatchResultErrorEntry

Gives a detailed description of the result of an action on each entry in the request.

Contents

Code

An error code representing why the action failed on this entry.

Type: String

Required: Yes

Id

The Id of an entry in a batch request.

Type: String

Required: Yes

SenderFault

Specifies whether the error happened due to the caller of the batch API action.

Type: Boolean

Required: Yes

Message

A message explaining why the action failed on this entry.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

• AWS SDK for C++

BatchResultErrorEntry API Version 2012-11-05 170

- AWS SDK for Java V2
- AWS SDK for Ruby V3

See Also API Version 2012-11-05 171

ChangeMessageVisibilityBatchRequestEntry

Encloses a receipt handle and an entry ID for each message in ChangeMessageVisibilityBatch.

Contents

Id

An identifier for this particular receipt handle used to communicate the result.



Note

The Ids of a batch request need to be unique within a request.

This identifier can have up to 80 characters. The following characters are accepted: alphanumeric characters, hyphens(-), and underscores (_).

Type: String

Required: Yes

ReceiptHandle

A receipt handle.

Type: String

Required: Yes

VisibilityTimeout

The new value (in seconds) for the message's visibility timeout.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ChangeMessageVisibilityBatchResultEntry

Encloses the Id of an entry in ChangeMessageVisibilityBatch.

Contents

Id

Represents a message whose visibility timeout has been changed successfully.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMessageBatchRequestEntry

Encloses a receipt handle and an identifier for it.

Contents

Id

The identifier for this particular receipt handle. This is used to communicate the result.



Note

The Ids of a batch request need to be unique within a request.

This identifier can have up to 80 characters. The following characters are accepted: alphanumeric characters, hyphens(-), and underscores (_).

Type: String

Required: Yes

ReceiptHandle

A receipt handle.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMessageBatchResultEntry

Encloses the Id of an entry in DeleteMessageBatch.

Contents

Id

Represents a successfully deleted message.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListMessageMoveTasksResultEntry

Contains the details of a message movement task.

Contents

ApproximateNumberOfMessagesMoved

The approximate number of messages already moved to the destination queue.

Type: Long

Required: No

${\bf Approximate Number Of Messages To Move}$

The number of messages to be moved from the source queue. This number is obtained at the time of starting the message movement task and is only included after the message movement task is selected to start.

Type: Long

Required: No

DestinationArn

The ARN of the destination queue if it has been specified in the StartMessageMoveTask request. If a DestinationArn has not been specified in the StartMessageMoveTask request, this field value will be NULL.

Type: String

Required: No

FailureReason

The task failure reason (only included if the task status is FAILED).

Type: String

Required: No

MaxNumberOfMessagesPerSecond

The number of messages to be moved per second (the message movement rate), if it has been specified in the StartMessageMoveTask request. If a MaxNumberOfMessagesPerSecond has not been specified in the StartMessageMoveTask request, this field value will be NULL.

Type: Integer

Required: No

SourceArn

The ARN of the gueue that contains the messages to be moved to another gueue.

Type: String

Required: No

StartedTimestamp

The timestamp of starting the message movement task.

Type: Long

Required: No

Status

The status of the message movement task. Possible values are: RUNNING, COMPLETED, CANCELLING, CANCELLED, and FAILED.

Type: String

Required: No

TaskHandle

An identifier associated with a message movement task. When this field is returned in the response of the ListMessageMoveTasks action, it is only populated for tasks that are in RUNNING status.

Type: String

Required: No

Contents API Version 2012-11-05 178

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Message

An Amazon SQS message.

Contents

Attributes

A map of the attributes requested in <u>ReceiveMessage</u> to their respective values. Supported attributes:

- ApproximateReceiveCount
- ApproximateFirstReceiveTimestamp
- MessageDeduplicationId
- MessageGroupId
- SenderId
- SentTimestamp
- SequenceNumber

ApproximateFirstReceiveTimestamp and SentTimestamp are each returned as an integer representing the <u>epoch time</u> in milliseconds.

```
Type: String to string map
```

```
Valid Keys: All | SenderId | SentTimestamp | ApproximateReceiveCount | ApproximateFirstReceiveTimestamp | SequenceNumber | MessageDeduplicationId | MessageGroupId | AWSTraceHeader | DeadLetterQueueSourceArn
```

Required: No

Body

The message's contents (not URL-encoded).

Type: String

Required: No

Message API Version 2012-11-05 180

MD5OfBody

An MD5 digest of the non-URL-encoded message body string.

Type: String

Required: No

MD5OfMessageAttributes

An MD5 digest of the non-URL-encoded message attribute string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

Required: No

MessageAttributes

Each message attribute consists of a Name, Type, and Value. For more information, see Amazon SQS message attributes in the Amazon SQS Developer Guide.

Type: String to MessageAttributeValue object map

Required: No

MessageId

A unique identifier for the message. A MessageIdis considered unique across all AWS accounts for an extended period of time.

Type: String

Required: No

ReceiptHandle

An identifier associated with the act of receiving the message. A new receipt handle is returned every time you receive a message. When deleting a message, you provide the last received receipt handle to delete the message.

Type: String

Required: No

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See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MessageAttributeValue

The user-specified message attribute value. For string data types, the Value attribute has the same restrictions on the content as the message body. For more information, see SendMessage.

Name, type, value and the message body must not be empty or null. All parts of the message attribute, including Name, Type, and Value, are part of the message size restriction (256 KiB or 262,144 bytes).

Contents

DataType

Amazon SQS supports the following logical data types: String, Number, and Binary. For the Number data type, you must use StringValue.

You can also append custom labels. For more information, see <u>Amazon SQS Message Attributes</u> in the *Amazon SQS Developer Guide*.

Type: String

Required: Yes

BinaryListValues

Not implemented. Reserved for future use.

Type: Array of Base64-encoded binary data objects

Required: No

BinaryValue

Binary type attributes can store any binary data, such as compressed data, encrypted data, or images.

Type: Base64-encoded binary data object

Required: No

StringListValues

Not implemented. Reserved for future use.

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Type: Array of strings

Required: No

StringValue

Strings are Unicode with UTF-8 binary encoding. For a list of code values, see <u>ASCII Printable</u> Characters.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MessageSystemAttributeValue

The user-specified message system attribute value. For string data types, the Value attribute has the same restrictions on the content as the message body. For more information, see SendMessage.

Name, type, value and the message body must not be empty or null.

Contents

DataType

Amazon SQS supports the following logical data types: String, Number, and Binary. For the Number data type, you must use StringValue.

You can also append custom labels. For more information, see <u>Amazon SQS Message Attributes</u> in the *Amazon SQS Developer Guide*.

Type: String

Required: Yes

BinaryListValues

Not implemented. Reserved for future use.

Type: Array of Base64-encoded binary data objects

Required: No

BinaryValue

Binary type attributes can store any binary data, such as compressed data, encrypted data, or images.

Type: Base64-encoded binary data object

Required: No

StringListValues

Not implemented. Reserved for future use.

Type: Array of strings

Required: No

StringValue

Strings are Unicode with UTF-8 binary encoding. For a list of code values, see <u>ASCII Printable</u> Characters.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SendMessageBatchRequestEntry

Contains the details of a single Amazon SQS message along with an Id.

Contents

Id

An identifier for a message in this batch used to communicate the result.



Note

The Ids of a batch request need to be unique within a request.

This identifier can have up to 80 characters. The following characters are accepted: alphanumeric characters, hyphens(-), and underscores (_).

Type: String

Required: Yes

MessageBody

The body of the message.

Type: String

Required: Yes

DelaySeconds

The length of time, in seconds, for which a specific message is delayed. Valid values: 0 to 900. Maximum: 15 minutes. Messages with a positive DelaySeconds value become available for processing after the delay period is finished. If you don't specify a value, the default value for the queue is applied.



Note

When you set FifoQueue, you can't set DelaySeconds per message. You can set this parameter only on a queue level.

Type: Integer

Required: No

MessageAttributes

Each message attribute consists of a Name, Type, and Value. For more information, see Amazon SQS message attributes in the Amazon SQS Developer Guide.

Type: String to MessageAttributeValue object map

Required: No

MessageDeduplicationId

This parameter applies only to FIFO (first-in-first-out) queues.

The token used for deduplication of messages within a 5-minute minimum deduplication interval. If a message with a particular MessageDeduplicationId is sent successfully, subsequent messages with the same MessageDeduplicationId are accepted successfully but aren't delivered. For more information, see Exactly-once processing in the Amazon SQS Developer Guide.

- Every message must have a unique MessageDeduplicationId,
 - You may provide a MessageDeduplicationId explicitly.
 - If you aren't able to provide a MessageDeduplicationId and you enable ContentBasedDeduplication for your queue, Amazon SQS uses a SHA-256 hash to generate the MessageDeduplicationId using the body of the message (but not the attributes of the message).
 - If you don't provide a MessageDeduplicationId and the queue doesn't have ContentBasedDeduplication set, the action fails with an error.
 - If the queue has ContentBasedDeduplication set, your MessageDeduplicationId overrides the generated one.
- When ContentBasedDeduplication is in effect, messages with identical content sent within the deduplication interval are treated as duplicates and only one copy of the message is delivered.
- If you send one message with ContentBasedDeduplication enabled and then another
 message with a MessageDeduplicationId that is the same as the one generated for the
 first MessageDeduplicationId, the two messages are treated as duplicates and only one
 copy of the message is delivered.

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Note

The MessageDeduplicationId is available to the consumer of the message (this can be useful for troubleshooting delivery issues).

If a message is sent successfully but the acknowledgement is lost and the message is resent with the same MessageDeduplicationId after the deduplication interval, Amazon SQS can't detect duplicate messages.

Amazon SQS continues to keep track of the message deduplication ID even after the message is received and deleted.

The length of MessageDeduplicationId is 128 characters. MessageDeduplicationId can contain alphanumeric characters (a-z, A-Z, 0-9) and punctuation (!"#\$%&'()*+,-./:;<=>? @[\]^_`{|}~).

For best practices of using MessageDeduplicationId, see Using the MessageDeduplicationId Property in the Amazon SQS Developer Guide.

Type: String

Required: No

MessageGroupId

This parameter applies only to FIFO (first-in-first-out) queues.

The tag that specifies that a message belongs to a specific message group. Messages that belong to the same message group are processed in a FIFO manner (however, messages in different message groups might be processed out of order). To interleave multiple ordered streams within a single queue, use MessageGroupId values (for example, session data for multiple users). In this scenario, multiple consumers can process the queue, but the session data of each user is processed in a FIFO fashion.

- You must associate a non-empty MessageGroupId with a message. If you don't provide a MessageGroupId, the action fails.
- ReceiveMessage might return messages with multiple MessageGroupId values. For each MessageGroupId, the messages are sorted by time sent. The caller can't specify a MessageGroupId.

The length of MessageGroupId is 128 characters. Valid values: alphanumeric characters and punctuation (!"#\$%&'()*+, - ./:; <=>?@[\]^_`{|}~).

Contents API Version 2012-11-05 189 For best practices of using MessageGroupId, see Using the MessageGroupId Property in the Amazon SQS Developer Guide.



MessageGroupId is required for FIFO queues. You can't use it for Standard queues.

Type: String

Required: No

MessageSystemAttributes

The message system attribute to send Each message system attribute consists of a Name, Type, and Value.

Important

- Currently, the only supported message system attribute is AWSTraceHeader. Its type must be String and its value must be a correctly formatted AWS X-Ray trace header string.
- The size of a message system attribute doesn't count towards the total size of a message.

Type: String to MessageSystemAttributeValue object map

Valid Keys: AWSTraceHeader

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

• AWS SDK for Ruby V3

SendMessageBatchResultEntry

Encloses a MessageId for a successfully-enqueued message in a SendMessageBatch.

Contents

Id

An identifier for the message in this batch.

Type: String

Required: Yes

MD5OfMessageBody

An MD5 digest of the non-URL-encoded message body string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

Required: Yes

Messageld

An identifier for the message.

Type: String

Required: Yes

MD5OfMessageAttributes

An MD5 digest of the non-URL-encoded message attribute string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

Required: No

MD5OfMessageSystemAttributes

An MD5 digest of the non-URL-encoded message system attribute string. You can use this attribute to verify that Amazon SQS received the message correctly. Amazon SQS URL-decodes the message before creating the MD5 digest. For information about MD5, see RFC1321.

Type: String

Required: No

SequenceNumber

This parameter applies only to FIFO (first-in-first-out) queues.

The large, non-consecutive number that Amazon SQS assigns to each message.

The length of SequenceNumber is 128 bits. As SequenceNumber continues to increase for a particular MessageGroupId.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see <u>Signing AWS API requests</u> in the *IAM User Guide*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: access_key/YYYYMMDD/region/service/aws4_request.

For more information, see Create a signed AWS API request in the IAM User Guide.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Elements of an AWS API request signature in the *IAM User Guide*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see AWS services that work with IAM in the IAM User Guide.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see <u>Create a signed AWS API request</u> in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 403

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400