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# Amazon Simple Queue Service

## API Reference

**API Version 2012-11-05**



## **Amazon Simple Queue Service: API Reference**

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# Welcome

Welcome to the *Amazon Simple Queue Service API Reference*.

Amazon Simple Queue Service (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.

**Note**

[Standard queues](#) are available in all regions. [FIFO queues](#) are available in the US East (N. Virginia), US East (Ohio), US West (Oregon), and EU (Ireland) regions.

You can use [AWS SDKs](#) 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 Simple Queue Service Developer Guide](#)
  - [Making API Requests](#)
  - [Amazon SQS Message Attributes](#)
  - [Amazon SQS Dead-Letter Queues](#)
- [Amazon SQS in the AWS CLI Command Reference](#)
- [Amazon Web Services General Reference](#)
  - [Regions and Endpoints](#)

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# Actions

The following actions are supported:

- [AddPermission](#) (p. 3)
- [ChangeMessageVisibility](#) (p. 6)
- [ChangeMessageVisibilityBatch](#) (p. 9)
- [CreateQueue](#) (p. 12)
- [DeleteMessage](#) (p. 17)
- [DeleteMessageBatch](#) (p. 19)
- [DeleteQueue](#) (p. 22)
- [GetQueueAttributes](#) (p. 24)
- [GetQueueUrl](#) (p. 29)
- [ListDeadLetterSourceQueues](#) (p. 31)
- [ListQueues](#) (p. 33)
- [ListQueueTags](#) (p. 35)
- [PurgeQueue](#) (p. 37)
- [ReceiveMessage](#) (p. 39)
- [RemovePermission](#) (p. 44)
- [SendMessage](#) (p. 46)
- [SendMessageBatch](#) (p. 51)
- [SetQueueAttributes](#) (p. 55)
- [TagQueue](#) (p. 60)
- [UntagQueue](#) (p. 62)

# 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 [Allow Developers to Write Messages to a Shared Queue](#) in the *Amazon Simple Queue Service Developer Guide*.

## Note

`AddPermission` writes an Amazon-SQS-generated policy. If you want to write your own policy, use [SetQueueAttributes \(p. 55\)](#) to upload your policy. For more information about writing your own policy, see [Using Custom Policies with the Amazon SQS Access Policy Language](#) in the *Amazon Simple Queue Service Developer Guide*.

An Amazon SQS policy can have a maximum of 7 actions.

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

## Note

Cross-account permissions don't apply to this action. For more information, see [Grant Cross-Account Permissions to a Role and a User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### ActionName.N

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 [Overview of Managing Access Permissions to Your Amazon Simple Queue Service Resource](#) in the *Amazon Simple Queue Service 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

### AWSAccountId.N

The AWS account number of the [principal](#) who is given permission. The principal must have an AWS account, but does not need to be signed up for Amazon SQS. For information about locating the AWS account identification, see [Your AWS Identifiers](#) in the *Amazon Simple Queue Service 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.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### OverLimit

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

HTTP Status Code: 403

## Example

The following example query request grants a [SendMessage \(p. 46\)](#) permission to the principal whose AWS account number is 125074342641. 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=AddPermission  
&Label=MyLabel  
&AWSAccountId.1=125074342641  
&ActionName.1=SendMessage  
&AWSAccountId.2=125074342642  
&ActionName.2=ReceiveMessage  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<AddPermissionResponse>  
  <ResponseMetadata>
```

```
<RequestId>9a285199-c8d6-47c2-bdb2-314cb47d599d</RequestId>  
</ResponseMetadata>  
</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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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 Simple Queue Service Developer Guide*.

For example, you have a message with a visibility timeout of 5 minutes. After 3 minutes, you call `ChangeMessageVisibility` with a timeout of 10 minutes. You can continue to call `ChangeMessageVisibility` to extend the visibility timeout to the maximum allowed time. If you try to extend the visibility timeout beyond the maximum, your request is rejected.

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 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 inflight messages.

Limits that apply to inflight 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 inflight 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 inflight 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.

### 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 Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 79).

### 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](#) (p. 39) action.

Type: String

Required: Yes

### VisibilityTimeout

The new value for the message's visibility timeout (in seconds). Values values: 0 to 43200. Maximum: 12 hours.

Type: Integer

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 81).

### AWS.SimpleQueueService.MessageNotInflight

The specified message isn't in flight.

HTTP Status Code: 400

### ReceiptHandleIsInvalid

The specified receipt handle isn't valid.

HTTP Status Code: 400

## Example

The following example query 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=ChangeMessageVisibility  
&VisibilityTimeout=60  
&ReceiptHandle=MbZj6wDWli%2BJvwwJaBV%2B3dcjk2YW2vA3%2BSTFF1jT  
M8tJJg6HRG6PYSasuWXPJB%2BCwLj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGY  
WbnLmpRCJVAYeMjeU5ZBdtcQ%2BQEauMZc8ZRv37sIW2iJKq3M9MFx1YvV11A2x/K  
SbkJ0=  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<ChangeMessageVisibilityResponse>
```

```
<ResponseMetadata>  
  <RequestId>6a7a282a-d013-4a59-aba9-335b0fa48bed</RequestId>  
</ResponseMetadata>  
</ChangeMessageVisibilityResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

# ChangeMessageVisibilityBatch

Changes the visibility timeout of multiple messages. This is a batch version of [ChangeMessageVisibility \(p. 6\)](#). The result of the action on each message is reported individually in the response. You can send up to 10 [ChangeMessageVisibility \(p. 6\)](#) 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.

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### **ChangeMessageVisibilityBatchRequestEntry.N**

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

Type: Array of [ChangeMessageVisibilityBatchRequestEntry \(p. 66\)](#) 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 Elements

The following elements are returned by the service.

### **BatchResultErrorEntry.N**

A list of [BatchResultErrorEntry \(p. 65\)](#) items.

Type: Array of [BatchResultErrorEntry \(p. 65\)](#) objects

### **ChangeMessageVisibilityBatchResultEntry.N**

A list of [ChangeMessageVisibilityBatchResultEntry \(p. 67\)](#) items.

Type: Array of [ChangeMessageVisibilityBatchResultEntry \(p. 67\)](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### **AWS.SimpleQueueService.BatchEntryIdsNotDistinct**

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

HTTP Status Code: 400

### **AWS.SimpleQueueService.EmptyBatchRequest**

The batch request doesn't contain any entries.

HTTP Status Code: 400

### **AWS.SimpleQueueService.InvalidBatchEntryId**

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

HTTP Status Code: 400

### **AWS.SimpleQueueService.TooManyEntriesInBatchRequest**

The batch request contains more entries than permissible.

HTTP Status Code: 400

## Example

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.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
&Action=ChangeMessageVisibilityBatch
&ChangeMessageVisibilityBatchRequestEntry.1.Id=change_visibility_msg_2
&ChangeMessageVisibilityBatchRequestEntry.1.ReceiptHandle=gfk0T0R0waama4f
VFffkjKz mhMCymjQvfTFk2LxT33G4ms5subrE0deLKWSScPU1oD3J9zgeS4PQQ3U30qOumIE6
AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRzOWdTOePjOjPcTpR
xBtXix%2BEvwJOZUma9wabv%2BSw6ZHjwmNcVDx8dZXJhVp16Bksiox%2FGrUvrVTCJRTWTLc
59oHLLF8sEkKzRmGNzTDGTiV%2BYjhFQj60FD3rVaXmzTsoNxRhKJ72uIHVMGQVIAgGBX6HGv
9LDmYhPXw4hy%2FNgIg%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.1.VisibilityTimeout=45
&ChangeMessageVisibilityBatchRequestEntry.2.Id=change_visibility_msg_3
&ChangeMessageVisibilityBatchRequestEntry.2.ReceiptHandle=gfk0T0R0waama4f
VFffkjKz mhMCymjQvfTFk2LxT33FUGBz3%2BnougdeLKWSScPU1%2FXgx%2BxcNnJnQQ3U30q
OumIE6AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRzOWdTOePjO
sogjZM%2F7kzn4Ew27XLU9I%2FYaWYmKvDbq%2Fk3HKVB9HfB43kE49atP2aWzNL4yunG41Q
4cFRrtfJdcGQGNHQ2%2Byd0Usf5qR1dZr1iDo5xk946eQat83AxTRP%2BY4QioV7FAeSLH9su
9xpX6HGv9LDmYhPXw4hy%2FNgIg%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.2.VisibilityTimeout=45
&Expires=2020-10-18T22%3A52%3A43PST
&Version=2012-11-05
```

### Sample Response

```
<ChangeMessageVisibilityBatchResponse>
  <ChangeMessageVisibilityBatchResult>
    <ChangeMessageVisibilityBatchResultEntry>
      <Id>change_visibility_msg_2</Id>
    </ChangeMessageVisibilityBatchResultEntry>
```

```
<ChangeMessageVisibilityBatchResultEntry>
  <Id>change_visibility_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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)



## CreateQueue

Creates a new standard or FIFO queue. You can pass one or more attributes in the request. Keep the following caveats 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 Simple Queue Service 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 queues](#) and is unique within the scope of your queues.

To get the queue URL, use the [GetQueueUrl \(p. 29\)](#) action. [GetQueueUrl \(p. 29\)](#) 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.

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

### Note

Cross-account permissions don't apply to this action. For more information, see [Grant Cross-Account Permissions to a Role and a User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

**Attribute** , Attribute.N.Name (key), Attribute.N.Value (value)

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).
- `Policy` - The queue's policy. A valid AWS policy. For more information about policy structure, see [Overview of AWS IAM Policies](#) in the *Amazon IAM User Guide*.
- `ReceiveMessageWaitTimeSeconds` - The length of time, in seconds, for which a [ReceiveMessage](#) (p. 39) action waits for a message to arrive. Valid values: An integer from 0 to 20 (seconds). Default: 0.
- `RedrivePolicy` - The string that includes the parameters for the dead-letter queue functionality of the source queue. For more information about the redrive policy and dead-letter queues, see [Using Amazon SQS Dead-Letter Queues](#) in the *Amazon Simple Queue Service Developer Guide*.
  - `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. When the `ReceiveCount` for a message exceeds the `maxReceiveCount` for a queue, Amazon SQS moves the message to the dead-letter-queue.

**Note**

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

- `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 Simple Queue Service Developer Guide*.

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 [KeyId](#) 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?](#).

The following attributes apply only to [FIFO \(first-in-first-out\) queues](#):

- `FifoQueue` - Designates a queue as FIFO. Valid values: `true`, `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 Simple Queue Service Developer Guide*.

- `ContentBasedDeduplication` - Enables content-based deduplication. Valid values: `true`, `false`. For more information, see [Exactly-Once Processing](#) in the *Amazon Simple Queue Service 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.

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`

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

## Response Elements

The following element is returned 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 \(p. 81\)](#).

### **AWS.SimpleQueueService.QueueDeletedRecently**

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

HTTP Status Code: 400

### QueueAlreadyExists

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

## Examples

### Example

The following example query request creates a new 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 *Amazon Web Services General Reference*.

#### Sample Request

```
https://sqs.us-east-2.amazonaws.com/  
?Action=CreateQueue  
&QueueName=MyQueue  
&Attribute.1.Name=VisibilityTimeout  
&Attribute.1.Value=40  
&Expires=2020-10-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

#### Sample Response

```
<CreateQueueResponse>  
  <CreateQueueResult>  
    <QueueUrl>https://queue.amazonaws.com/123456789012/MyQueue</QueueUrl>  
  </CreateQueueResult>  
  <ResponseMetadata>  
    <RequestId>7a62c49f-347e-4fc4-9331-6e8e7a96aa73</RequestId>  
  </ResponseMetadata>  
</CreateQueueResponse>
```

### 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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 might 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 Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

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

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

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### InvalidIdFormat

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

HTTP Status Code: 400

### ReceiptHandleInvalid

The specified receipt handle isn't valid.

HTTP Status Code: 400

## Example

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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=DeleteMessage  
&ReceiptHandle=MbZj6wDWli%2BJvwwJaBV%2B3dcjk2YW2vA3%2BSTFF1jT  
M8tJJg6HRG6PYSasuWXPJB%2BCwLj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGY  
WbnLmpRCJVAYeMjeU5ZBdtcQ%2BQEaumZc8ZRv37sIW2iJKq3M9MFx1YvV11A2x/K  
SbkJ0=  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<DeleteMessageResponse>  
  <ResponseMetadata>  
    <RequestId>b5293cb5-d306-4a17-9048-b263635abe42</RequestId>  
  </ResponseMetadata>  
</DeleteMessageResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## DeleteMessageBatch

Deletes up to ten messages from the specified queue. This is a batch version of [DeleteMessage \(p. 17\)](#). 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.

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### DeleteMessageBatchRequestEntry.N

A list of receipt handles for the messages to be deleted.

Type: Array of [DeleteMessageBatchRequestEntry \(p. 68\)](#) objects

Required: Yes

### QueueUrl

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

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

## Response Elements

The following elements are returned by the service.

### BatchResultErrorEntry.N

A list of [BatchResultErrorEntry \(p. 65\)](#) items.

Type: Array of [BatchResultErrorEntry \(p. 65\)](#) objects

### DeleteMessageBatchResultEntry.N

A list of [DeleteMessageBatchResultEntry \(p. 69\)](#) items.

Type: Array of [DeleteMessageBatchResultEntry \(p. 69\)](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).



### **AWS.SimpleQueueService.BatchEntryIdsNotDistinct**

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

HTTP Status Code: 400

### **AWS.SimpleQueueService.EmptyBatchRequest**

The batch request doesn't contain any entries.

HTTP Status Code: 400

### **AWS.SimpleQueueService.InvalidBatchEntryId**

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

HTTP Status Code: 400

### **AWS.SimpleQueueService.TooManyEntriesInBatchRequest**

The batch request contains more entries than permissible.

HTTP Status Code: 400

## Example

In the following example, 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
&Action=DeleteMessageBatch
&DeleteMessageBatchRequestEntry.1.Id=msg1
&DeleteMessageBatchRequestEntry.1.ReceiptHandle=gfk0T0R0waama4fVFffkjPQrr
vzMrOg0fTFk2LxT33EuB8wR0ZCFgKWYXGWFoqqpCIiprQUEhir%2F5LeGPpYTLzjqLQxyQYaQ
ALeSNhb0us3uE84uuixpBhsDkZUQkjFFkNqBXn48x1McVhTcI3YLH%2Bd%2BIqetIOHgBCZAP
x6r%2B09dWaBXei6nbK5Ygih21DCDdAwFV68Jo8DXhb3ErEfoDqx7vyvC5nCpdwqv%2BJhU%2
FTNGjNN8t51v5c%2FAXvQsAzyZVNapxUrHit4NxRhKJ72uICcxrUYE8eRXlxIVNgeNP8ZEDcw
7zZU1Zw%3D%3D
&DeleteMessageBatchRequestEntry.2.Id=msg2
&DeleteMessageBatchRequestEntry.2.ReceiptHandle=gfk0T0R0waama4fVFffkjKzMH
MCymjQvfTFk2LxT33G4ms5subrE0deLKWSScPU1oD3J9zgeS4PQQ3U30qOumIE6AdAv3w%2F%
2Fa1IXW6AqaWhGsEPaLm3Vf6IiwqdM8u5imB%2BNTWj3tQRzOWdT0ePjOjPcTpRxBtXix%2BE
vwJOZUma9wabv%2BSw6ZHjwmNcVDx8dZXJhVp16Bksiox%2FGrUvrVTCJRTWTLc59oHLLF8sE
kKzRmGNzTDGTiV%2BYjHfQj60FD3rVaXnzTsoNxRhKJ72uIHVMGVQiAGgB%2BqAbSqfKHDQtV
OmJJgkHug%3D%3D
&Expires=2020-10-18T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

### Sample Response

```
<DeleteMessageBatchResponse>
  <DeleteMessageBatchResult>
    <DeleteMessageBatchResultEntry>
      <Id>msg1</Id>
```

```
</DeleteMessageBatchResultEntry>
<DeleteMessageBatchResultEntry>
  <Id>msg2</Id>
</DeleteMessageBatchResultEntry>
</DeleteMessageBatchResult>
<ResponseMetadata>
  <RequestId>d6f86b7a-74d1-4439-b43f-196a1e29cd85</RequestId>
</ResponseMetadata>
</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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## DeleteQueue

Deletes the queue specified by the `QueueUrl`, regardless of the queue's contents. If the specified queue doesn't exist, Amazon SQS returns a successful response.

### 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 \(p. 46\)](#) 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 User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

The URL of the Amazon SQS queue to delete.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

## Example

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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=DeleteQueue  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

## Sample Response

```
<DeleteQueueResponse>
  <ResponseMetadata>
    <RequestId>6fde8d1e-52cd-4581-8cd9-c512f4c64223</RequestId>
  </ResponseMetadata>
</DeleteQueueResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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.

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### AttributeName.N

A list of attributes for which to retrieve information.

### 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:

- `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.
- `Policy` - Returns the policy of the queue.
- `QueueArn` - Returns the Amazon resource name (ARN) of the queue.
- `ReceiveMessageWaitTimeSeconds` - Returns the length of time, in seconds, for which the `ReceiveMessage` action waits for a message to arrive.
- `RedrivePolicy` - Returns the string that includes the parameters for dead-letter queue functionality of the source queue. For more information about the `redrive` policy and dead-letter

queues, see [Using Amazon SQS Dead-Letter Queues](#) in the *Amazon Simple Queue Service Developer Guide*.

- `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. When the `ReceiveCount` for a message exceeds the `maxReceiveCount` for a queue, Amazon SQS moves the message to the dead-letter-queue.
- `VisibilityTimeout` - Returns the visibility timeout for the queue. For more information about the visibility timeout, see [Visibility Timeout](#) in the *Amazon Simple Queue Service Developer Guide*.

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?](#).

The following attributes apply only to [FIFO \(first-in-first-out\) queues](#):

- `FifoQueue` - Returns whether the queue is FIFO. For more information, see [FIFO Queue Logic](#) in the *Amazon Simple Queue Service 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 Simple Queue Service 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`

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 Elements

The following element is returned by the service.

**Attribute** , Attribute.N.Name (key), Attribute.N.Value (value)

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

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### InvalidAttributeName

The specified attribute doesn't exist.

HTTP Status Code: 400

## Examples

### Example

The following example query requests 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=GetQueueAttributes  
&AttributeName.1=All  
&Expires=2020-10-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<GetQueueAttributesResponse>  
  <GetQueueAttributesResult>  
    <Attribute>  
      <Name>ReceiveMessageWaitTimeSeconds</Name>  
      <Value>2</Value>  
    </Attribute>  
    <Attribute>  
      <Name>VisibilityTimeout</Name>  
      <Value>30</Value>  
    </Attribute>  
    <Attribute>  
      <Name>ApproximateNumberOfMessages</Name>  
      <Value>0</Value>  
    </Attribute>  
    <Attribute>  
      <Name>ApproximateNumberOfMessagesNotVisible</Name>  
      <Value>0</Value>  
    </Attribute>
```

```
<Attribute>
  <Name>CreatedTimestamp</Name>
  <Value>1286771522</Value>
</Attribute>
<Attribute>
  <Name>LastModifiedTimestamp</Name>
  <Value>1286771522</Value>
</Attribute>
<Attribute>
  <Name>QueueArn</Name>
  <Value>arn:aws:sqs:us-east-2:123456789012:MyQueue</Value>
</Attribute>
<Attribute>
  <Name>MaximumMessageSize</Name>
  <Value>8192</Value>
</Attribute>
<Attribute>
  <Name>MessageRetentionPeriod</Name>
  <Value>345600</Value>
</Attribute>
</GetQueueAttributesResult>
<ResponseMetadata>
  <RequestId>1ea71be5-b5a2-4f9d-b85a-945d8d08cd0b</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 *Amazon Web Services General Reference*.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
?Action=GetQueueAttributes
&Action=GetQueueAttributes
&AttributeName.1=VisibilityTimeout
&AttributeName.2=DelaySeconds
&AttributeName.3=ReceiveMessageWaitTimeSeconds
&Expires=2020-10-18T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

## Sample Response

```
<GetQueueAttributesResponse>
  <GetQueueAttributesResult>
    <Attribute>
      <Name>VisibilityTimeout</Name>
      <Value>30</Value>
    </Attribute>
    <Attribute>
      <Name>DelaySeconds</Name>
      <Value>0</Value>
    </Attribute>
    <Attribute>
      <Name>ReceiveMessageWaitTimeSeconds</Name>
      <Value>2</Value>
    </Attribute>
  </GetQueueAttributesResult>
</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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

# 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 \(p. 3\)](#) or see [Allow Developers to Write Messages to a Shared Queue](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### 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

## Response Elements

The following element is returned 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 \(p. 81\)](#).

### AWS.SimpleQueueService.NonExistentQueue

The specified queue doesn't exist.

HTTP Status Code: 400

## Example

The following example Qquery request gets the URL 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/  
?Action=GetQueueUrl  
&QueueName=MyQueue  
&Expires=2020-10-24T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<GetQueueUrlResponse>  
  <GetQueueUrlResult>  
    <QueueUrl>https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue</QueueUrl>  
  </GetQueueUrlResult>  
  <ResponseMetadata>  
    <RequestId>470a6f13-2ed9-4181-ad8a-2fdea142988e</RequestId>  
  </ResponseMetadata>  
</GetQueueUrlResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## ListDeadLetterSourceQueues

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

For more information about using dead-letter queues, see [Using Amazon SQS Dead-Letter Queues](#) in the *Amazon Simple Queue Service Developer Guide*.

### Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 79).

#### QueueUrl

The URL of a dead-letter queue.

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

### Response Elements

The following element is returned by the service.

#### QueueUrl.N

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

Type: Array of strings

### Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 81).

#### AWS.SimpleQueueService.NonExistentQueue

The specified queue doesn't exist.

HTTP Status Code: 400

### Example

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 [Examples of Signed Signature Version 4 Requests](#) in the *Amazon Web Services General Reference*.

#### Sample Request

```
?Action=ListDeadLetterSourceQueues
```

```
&Expires=2020-12-12T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

## Sample Response

```
<ListDeadLetterSourceQueuesResponse xmlns="https://queue.amazonaws.com/doc/2012-11-05/">  
  <ListDeadLetterSourceQueuesResult>  
    <QueueUrl>https://sqs.us-east-2.amazonaws.com/123456789012/MySourceQueue</QueueUrl>  
  </ListDeadLetterSourceQueuesResult>  
  <ResponseMetadata>  
    <RequestId>8ffb921f-b85e-53d9-abc-f-d8d0057f38fc</RequestId>  
  </ResponseMetadata>  
</ListDeadLetterSourceQueuesResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## ListQueues

Returns a list of your queues. The maximum number of queues that can be returned is 1,000. If you specify a value for the optional `QueueNamePrefix` parameter, only queues with a name that begins with the specified value are returned.

### Note

Cross-account permissions don't apply to this action. For more information, see [Grant Cross-Account Permissions to a Role and a User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### 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 Elements

The following element is returned by the service.

### QueueUrl.N

A list of queue URLs, up to 1,000 entries.

Type: Array of strings

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

## Example

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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/  
?Action=ListQueues  
&QueueNamePrefix=M  
&Expires=2020-04-18T22%3A52%3A43PST
```

```
&Version=2012-11-05  
&AUTHPARAMS
```

## Sample Response

```
<ListQueuesResponse>  
  <ListQueuesResult>  
    <QueueUrl>https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue</QueueUrl>  
  </ListQueuesResult>  
  <ResponseMetadata>  
    <RequestId>725275ae-0b9b-4762-b238-436d7c65a1ac</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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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 Simple Queue Service 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.
- Tagging actions are limited to 5 TPS per AWS account. If your application requires a higher throughput, file a [technical support request](#).

For a full list of tag restrictions, see [Limits Related to Queues](#) in the *Amazon Simple Queue Service 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 User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

The URL of the queue.

Type: String

Required: Yes

## Response Elements

The following element is returned by the service.

**Tag** , Tag.N.Key (key), Tag.N.Value (value)

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 \(p. 81\)](#).



## Example

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=ListQueueTags  
&Expires=2020-10-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<ListQueueTagsResponse>  
  <ListQueueTagsResult>  
    <Tag>  
      <Key>QueueType</Key>  
      <Value>Production</Value>  
    </Tag>  
    <Tag>  
      <Key>Owner</Key>  
      <Value>Developer123</Value>  
    </Tag>  
  </ListQueueTagsResult>  
  <ResponseMetadata>  
    <RequestId>a1b2c3d4-e567-8901-23f4-g5678901hi23</RequestId>  
  </ResponseMetadata>  
</ListQueueTagsResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## PurgeQueue

Deletes the messages in a queue 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 Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

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

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### AWS.SimpleQueueService.NonExistentQueue

The specified queue doesn't exist.

HTTP Status Code: 400

### AWS.SimpleQueueService.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: 403

## Example

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 [Examples of Signed Signature Version 4 Requests](#) in the *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
```

```
?Action=PurgeQueue
&Expires=2020-12-12T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

## Sample Response

```
<PurgeQueueResponse>
  <ResponseMetadata>
    <RequestId>6fde8d1e-52cd-4581-8cd9-c512f4c64223</RequestId>
  </ResponseMetadata>
</PurgeQueueResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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 Long Polling](#) in the *Amazon Simple Queue Service 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 Simple Queue Service 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 Simple Queue Service 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.

### 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 Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### AttributeName.N

A list of `s` 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 from the queue but not deleted.
- `SenderId`
  - For an IAM user, returns the IAM user ID, for example `ABCDEFGHI1JKLMNOPQ23R`.
  - For an IAM role, returns the IAM role ID, for example `ABCDE1F2GH3I4JK5LMNOP:i-a123b456`.

- `SentTimestamp` - Returns the time the message was sent to the queue ([epoch time](#) in milliseconds).
- `MessageDeduplicationId` - Returns the value provided by the producer that calls the [SendMessage](#) (p. 46) action.
- `MessageGroupId` - Returns the value provided by the producer that calls the [SendMessage](#) (p. 46) 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`

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

Required: No

### **MessageAttributeName.N**

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

### **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, you can 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.
- If a caller of the `ReceiveMessage` action doesn't provide a `ReceiveRequestAttemptId`, Amazon SQS generates a `ReceiveRequestAttemptId`.
- You can 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 Simple Queue Service 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 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 Simple Queue Service 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.

Type: Integer

Required: No

### WaitTimeSeconds

The duration (in seconds) for which the call waits for a message to arrive in the queue 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 returns successfully with an empty list of messages.

Type: Integer

Required: No

## Response Elements

The following element is returned by the service.

### Message.N

A list of messages.

Type: Array of [Message \(p. 70\)](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### OverLimit

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

HTTP Status Code: 403

## Examples

### Example

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 [Examples of Signed Signature Version 4 Requests](#) in the *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=ReceiveMessage  
&MaxNumberOfMessages=5  
&VisibilityTimeout=15  
&AttributeName=All  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<ReceiveMessageResponse>  
  <ReceiveMessageResult>  
    <Message>  
      <MessageId>5fea7756-0ea4-451a-a703-a558b933e274</MessageId>  
      <ReceiptHandle>  
        MbZj6wDWli+JvwwJaBV+3dcjk2YW2vA3+STFF1jTM8tJJg6HRG6PYSasuWXPJB+Cw  
        Lj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGYWbnLmpRCJVAyeMjeU5ZBdteQ+QE  
        auMzc8ZRv37sIW2iJKq3M9MFx1YvV11A2x/KSbkJ0=  
      </ReceiptHandle>
```

```
<MD5OfBody>fafb00f5732ab283681e124bf8747ed1</MD5OfBody>
<Body>This is a test message</Body>
<Attribute>
  <Name>SenderId</Name>
  <Value>195004372649</Value>
</Attribute>
<Attribute>
  <Name>SentTimestamp</Name>
  <Value>1238099229000</Value>
</Attribute>
<Attribute>
  <Name>ApproximateReceiveCount</Name>
  <Value>5</Value>
</Attribute>
<Attribute>
  <Name>ApproximateFirstReceiveTimestamp</Name>
  <Value>1250700979248</Value>
</Attribute>
</Message>
</ReceiveMessageResult>
<ResponseMetadata>
  <RequestId>b6633655-283d-45b4-ae4-4e84e0ae6afa</RequestId>
</ResponseMetadata>
</ReceiveMessageResponse>
```

## Example

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

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
?Action=ReceiveMessage
&WaitTimeSeconds=10
&MaxNumberOfMessages=5
&VisibilityTimeout=15
&AttributeName=All;
&Expires=2020-04-18T22%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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)



## 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 [Grant Cross-Account Permissions to a Role and a User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### Label

The identification of the permission to remove. This is the label added using the [AddPermission \(p. 3\)](#) action.

Type: String

Required: Yes

### QueueUrl

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

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

## Example

The following example query request removes the `testLabel` 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=RemovePermission  
&Label=MyLabel  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

## Sample Response

```
<RemovePermissionResponse>
  <ResponseMetadata>
    <RequestId>f8bdb362-6616-42c0-977a-ce9a8bcce3bb</RequestId>
  </ResponseMetadata>
</RemovePermissionResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## 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:

`#x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFF | #x10000 to #x10FFFF`

Any characters not included in this list will be rejected. For more information, see the [W3C specification for characters](#).

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### 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

**MessageAttribute** , `MessageAttribute.N.Name` (key), `MessageAttribute.N.Value` (value)

Each message attribute consists of a `Name`, `Type`, and `Value`. For more information, see [Amazon SQS Message Attributes](#) in the *Amazon Simple Queue Service Developer Guide*.

Type: String to [MessageAttributeValue \(p. 72\)](#) object map

Required: No

### MessageBody

The message to send. The maximum string size is 256 KB.

#### Important

A message can include only XML, JSON, and unformatted text. The following Unicode characters are allowed:

`#x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFF | #x10000 to #x10FFFF`

Any characters not included in this list will be rejected. For more information, see the [W3C specification for characters](#).

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 [Exactly-Once Processing](#) in the *Amazon Simple Queue Service 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.

**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 Simple Queue Service 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 (!"#\$%&'()\*+,-./:;<=>?@[\\]^\_`{|}~).

For best practices of using `MessageGroupId`, see [Using the MessageGroupId Property](#) in the *Amazon Simple Queue Service Developer Guide*.

**Important**

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

Type: String

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

## Response Elements

The following elements are returned 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 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

**MessageId**

An attribute containing the `MessageId` of the message sent to the queue. For more information, see [Queue and Message Identifiers](#) in the *Amazon Simple Queue Service Developer Guide*.

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 \(p. 81\)](#).

### **AWS.SimpleQueueService.UnsupportedOperation**

Error code 400. Unsupported operation.

HTTP Status Code: 400

### **InvalidMessageContents**

The message contains characters outside the allowed set.

HTTP Status Code: 400

## Examples

### Example

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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?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  
&Expires=2020-05-05T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

### Sample Response

```
<SendMessageResponse>  
  <SendMessageResult>  
    <MD5OfMessageBody>fab00f5732ab283681e124bf8747ed1</MD5OfMessageBody>  
    <MD5OfMessageAttributes>3ae8f24a165a8cedc005670c81a27295</MD5OfMessageAttributes>  
    <MessageId>5fea7756-0ea4-451a-a703-a558b933e274</MessageId>  
  </SendMessageResult>  
  <ResponseMetadata>  
    <RequestId>27daac76-34dd-47df-bd01-1f6e873584a0</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.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=SendMessage  
&MessageBody=This+is+a+test+message  
&DelaySeconds=45  
&Expires=2020-12-18T22%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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

# SendMessageBatch

Delivers up to ten messages to the specified queue. This is a batch version of [SendMessage \(p. 46\)](#). 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 KB (262,144 bytes).

## Important

A message can include only XML, JSON, and unformatted text. The following Unicode characters are allowed:

`#x9 | #xA | #xD | #x20 to #xD7FF | #xE000 to #xFFFF | #x10000 to #x10FFFF`

Any characters not included in this list will be rejected. For more information, see the [W3C specification for characters](#).

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

Some actions take lists of parameters. These lists are specified using the `param.n` notation. Values of `n` are integers starting from 1. For example, a parameter list with two elements looks like this:

```
&Attribute.1=first
```

```
&Attribute.2=second
```

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

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

Queue URLs and names are case-sensitive.

Type: String

Required: Yes

### SendMessageBatchRequestEntry.N

A list of [SendMessageBatchRequestEntry \(p. 74\)](#) items.

Type: Array of [SendMessageBatchRequestEntry \(p. 74\)](#) objects

Required: Yes

## Response Elements

The following elements are returned by the service.

### BatchResultErrorEntry.N

A list of [BatchResultErrorEntry \(p. 65\)](#) items with error details about each message that can't be enqueued.



Type: Array of [BatchResultErrorEntry](#) (p. 65) objects

#### **SendMessageBatchResultEntry.N**

A list of [SendMessageBatchResultEntry](#) (p. 77) items.

Type: Array of [SendMessageBatchResultEntry](#) (p. 77) objects

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 81).

#### **AWS.SimpleQueueService.BatchEntryIdsNotDistinct**

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

HTTP Status Code: 400

#### **AWS.SimpleQueueService.BatchRequestTooLong**

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

HTTP Status Code: 400

#### **AWS.SimpleQueueService.EmptyBatchRequest**

The batch request doesn't contain any entries.

HTTP Status Code: 400

#### **AWS.SimpleQueueService.InvalidBatchEntryId**

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

HTTP Status Code: 400

#### **AWS.SimpleQueueService.TooManyEntriesInBatchRequest**

The batch request contains more entries than permissible.

HTTP Status Code: 400

#### **AWS.SimpleQueueService.UnsupportedOperation**

Error code 400. Unsupported operation.

HTTP Status Code: 400

## Examples

### Example

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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
```

```
?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
&Expires=2020-05-05T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

## Sample Response

```
<SendMessageBatchResponse>
<SendMessageBatchResult>
  <SendMessageBatchResultEntry>
    <Id>test_msg_001</Id>
    <MessageId>0a5231c7-8bff-4955-be2e-8dc7c50a25fa</MessageId>
    <MD5OfMessageBody>0e024d309850c78cba5eabbef7cae71</MD5OfMessageBody>
  </SendMessageBatchResultEntry>
  <SendMessageBatchResultEntry>
    <Id>test_msg_002</Id>
    <MessageId>15ee1ed3-87e7-40c1-bdaa-2e49968ea7e9</MessageId>
    <MD5OfMessageBody>7fb8146a82f95e0af155278f406862c2</MD5OfMessageBody>
    <MD5OfMessageAttributes>295c5fa15a51aae6884d1d7c1d99ca50</MD5OfMessageAttributes>
  </SendMessageBatchResultEntry>
</SendMessageBatchResult>
<ResponseMetadata>
  <RequestId>ca1ad5d0-8271-408b-8d0f-1351bf547e74</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. (You can use `SendMessageBatch` to send up to 10 messages by assigning either identical or different values to each message (or by not assigning values at all).

### 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 Simple Queue Service Developer Guide*.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/
?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
&Expires=2020-12-18T22%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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## SetQueueAttributes

Sets the value of one or more queue attributes. 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.

### 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 [Grant Cross-Account Permissions to a Role and a User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 79).

**Attribute** , Attribute.N.Name (key), Attribute.N.Value (value)

A map of attributes to set.

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).
- `Policy` - The queue's policy. A valid AWS policy. For more information about policy structure, see [Overview of AWS IAM Policies](#) in the *Amazon IAM User Guide*.
- `ReceiveMessageWaitTimeSeconds` - The length of time, in seconds, for which a [ReceiveMessage](#) (p. 39) action waits for a message to arrive. Valid values: an integer from 0 to 20 (seconds). Default: 0.
- `RedrivePolicy` - The string that includes the parameters for the dead-letter queue functionality of the source queue. For more information about the redrive policy and dead-letter queues, see [Using Amazon SQS Dead-Letter Queues](#) in the *Amazon Simple Queue Service Developer Guide*.
  - `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. When the `ReceiveCount` for a message exceeds the `maxReceiveCount` for a queue, Amazon SQS moves the message to the dead-letter-queue.

### Note

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

- `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 Simple Queue Service Developer Guide*.

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 [KeyId](#) 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?](#).

The following attribute applies only to [FIFO \(first-in-first-out\) queues](#):

- `ContentBasedDeduplication` - Enables content-based deduplication. For more information, see [Exactly-Once Processing](#) in the *Amazon Simple Queue Service 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.

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`

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

## **Errors**

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

### InvalidAttributeName

The specified attribute doesn't exist.

HTTP Status Code: 400

## Examples

### Example

The following example query request sets a policy that gives all users [ReceiveMessage](#) (p. 39) permission for a queue named MyQueue. For more examples of policies, see [Custom Amazon SQS Access Policy Language Examples](#) in the *Amazon Simple Queue Service 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 *Amazon Web Services General Reference*.

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=SetQueueAttributes  
&Attribute.Name=Policy  
&Attribute.Value=%7B%22Version%22%3A%222012-11-05%22%2C%22Id%22%3A%22%2F123456789012%2FMyQueue%2FSQSDefaultPolicy%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%22%7D%2C%22Action%22%3A%22SQS%3AReceiveMessage%22%2C%22Resource%22%3A%22arn%3Aaws%3Asqs%3Aus%2Deast%2D1%3A123456789012%3AtestQueue%22%7D%5D%7D  
&Timestamp=2015-12-06T16%3A57%3A31.000Z  
&Version=2012-11-05  
&AUTHPARAMS
```

### 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 *Amazon Web Services 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 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 inflight messages. Limits that apply to inflight 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 inflight 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 inflight 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.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=SetQueueAttributes  
&Attribute.Name=VisibilityTimeout  
&Attribute.Value=35  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

## Sample Response

```
<SetQueueAttributesResponse>  
  <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.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MySourceQueue/  
?Action=SetQueueAttributes  
&Attribute.1.Value=%7B%22maxReceiveCount%22%3A%225%22%2C+%22deadLetterTargetArn%22%3A%22arn%3Aaws%3Asqs%3Aus-east-2%3A123456789012%3A%22MyDeadLetterQueue%22%7D  
&Attribute.1.Name=RedrivePolicy  
&Version=2012-11-05
```

## Sample Response

```
<SetQueueAttributesResponse xmlns="https://queue.amazonaws.com/doc/2012-11-05/">  
  <ResponseMetadata>  
    <RequestId>40945605-b328-53b5-aed4-1cc24a7240e8</RequestId>  
  </ResponseMetadata>  
</SetQueueAttributesResponse>
```

## Example

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

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=SetQueueAttributes  
&Attribute.Name=ReceiveMessageWaitTimeSeconds  
&Attribute.Value=20  
&Expires=2020-04-18T22%3A52%3A43PST  
&Version=2012-11-05  
&AUTHPARAMS
```

## 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.

## Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=SetQueueAttributes  
&DelaySeconds=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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)



## TagQueue

Add cost allocation tags to the specified Amazon SQS queue. For an overview, see [Tagging Your Amazon SQS Queues](#) in the *Amazon Simple Queue Service 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.
- Tagging actions are limited to 5 TPS per AWS account. If your application requires a higher throughput, file a [technical support request](#).

For a full list of tag restrictions, see [Limits Related to Queues](#) in the *Amazon Simple Queue Service 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 User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

The URL of the queue.

Type: String

Required: Yes

**Tag** , Tag.N.Key (key), Tag.N.Value (value)

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

Type: String to string map

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

## Example

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=TagQueue
```

```
&Tag.Key=QueueType
&Tag.Value=Production
&Expires=2020-10-18T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

## Sample Response

```
<TagQueueResponse>
  <ResponseMetadata>
    <RequestId>a1b2c3d4-e567-8901-23f4-g5678901hi23</RequestId>
  </ResponseMetadata>
</TagQueueResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

## UntagQueue

Remove cost allocation tags from the specified Amazon SQS queue. For an overview, see [Tagging Your Amazon SQS Queues](#) in the *Amazon Simple Queue Service 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.
- Tagging actions are limited to 5 TPS per AWS account. If your application requires a higher throughput, file a [technical support request](#).

For a full list of tag restrictions, see [Limits Related to Queues](#) in the *Amazon Simple Queue Service 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 User Name](#) in the *Amazon Simple Queue Service Developer Guide*.

## Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 79\)](#).

### QueueUrl

The URL of the queue.

Type: String

Required: Yes

### TagKey.N

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

Type: Array of strings

Required: Yes

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 81\)](#).

## Example

### Sample Request

```
https://sqs.us-east-2.amazonaws.com/123456789012/MyQueue/  
?Action=TagQueue
```

```
&TagKey=QueueType
&Expires=2020-10-18T22%3A52%3A43PST
&Version=2012-11-05
&AUTHPARAMS
```

## Sample Response

```
<UntagQueueResponse>
  <ResponseMetadata>
    <RequestId>a1b2c3d4-e567-8901-23f4-g5678901hi23</RequestId>
  </ResponseMetadata>
</UntagQueueResponse>
```

## 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](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

# 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](#) (p. 65)
- [ChangeMessageVisibilityBatchRequestEntry](#) (p. 66)
- [ChangeMessageVisibilityBatchResultEntry](#) (p. 67)
- [DeleteMessageBatchRequestEntry](#) (p. 68)
- [DeleteMessageBatchResultEntry](#) (p. 69)
- [Message](#) (p. 70)
- [MessageAttributeValue](#) (p. 72)
- [SendMessageBatchRequestEntry](#) (p. 74)
- [SendMessageBatchResultEntry](#) (p. 77)

# 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

### Message

A message explaining why the action failed on this entry.

Type: String

Required: No

### SenderFault

Specifies whether the error happened due to the producer.

Type: Boolean

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# ChangeMessageVisibilityBatchRequestEntry

Encloses a receipt handle and an entry id for each message in [ChangeMessageVisibilityBatch](#) (p. 9).

## Important

All of the following list parameters must be prefixed with `ChangeMessageVisibilityBatchRequestEntry.n`, where `n` is an integer value starting with 1. For example, a parameter list for this action might look like this:

```
&ChangeMessageVisibilityBatchRequestEntry.1.Id=change_visibility_msg_2
```

```
&ChangeMessageVisibilityBatchRequestEntry.1.ReceiptHandle=your_receipt_handle
```

```
&ChangeMessageVisibilityBatchRequestEntry.1.VisibilityTimeout=45
```

## 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

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# ChangeMessageVisibilityBatchResultEntry

Encloses the Id of an entry in [ChangeMessageVisibilityBatch](#) (p. 9).

## 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)



# DeleteMessageBatchRequestEntry

Encloses a receipt handle and an identifier for it.

## Contents

### Id

An 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

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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# DeleteMessageBatchResultEntry

Encloses the Id of an entry in [DeleteMessageBatch](#) (p. 19).

## 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# Message

An Amazon SQS message.

## Contents

**Attribute** , Attribute.N.Name (key), Attribute.N.Value (value)

A map of the attributes requested in [ReceiveMessage \(p. 39\)](#) to their respective values.

Supported attributes:

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

`ApproximateFirstReceiveTimestamp` and `SentTimestamp` are each returned as an integer representing the [epoch time](#) in milliseconds.

Type: String to string map

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

Required: No

### Body

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

Type: String

Required: No

### 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

**MessageAttribute** , MessageAttribute.N.Name (key), MessageAttribute.N.Value (value)

Each message attribute consists of a `Name`, `Type`, and `Value`. For more information, see [Amazon SQS Message Attributes](#) in the *Amazon Simple Queue Service Developer Guide*.

Type: String to [MessageAttributeValue](#) (p. 72) object map

Required: No

### **MessageId**

A unique identifier for the message. A `MessageId` is 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

## 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# 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 \(p. 46\)](#).

`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 KB or 262,144 bytes).

## Contents

### BinaryListValue.N

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

### 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 [Amazon SQS Message Attributes](#) in the *Amazon Simple Queue Service Developer Guide*.

Type: String

Required: Yes

### StringListValue.N

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 [ASCII Printable 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# SendMessageBatchRequestEntry

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

## Contents

### 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

### 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

**MessageAttribute** , `MessageAttribute.N.Name` (key), `MessageAttribute.N.Value` (value)

Each message attribute consists of a `Name`, `Type`, and `Value`. For more information, see [Amazon SQS Message Attributes](#) in the *Amazon Simple Queue Service Developer Guide*.

Type: String to [MessageAttributeValue](#) (p. 72) object map

Required: No

### MessageBody

The body of the message.

Type: String

Required: Yes

### 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 Simple Queue Service 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.

**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 Simple Queue Service 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 (!"#\$%&'()\*+,-./:;<=>?@[\\]^\_`{|}~).

For best practices of using `MessageGroupId`, see [Using the MessageGroupId Property](#) in the *Amazon Simple Queue Service Developer Guide*.

**Important**

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



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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# SendMessageBatchResultEntry

Encloses a `MessageId` for a successfully-enqueued message in a [SendMessageBatch](#) (p. 51).

## Contents

### Id

An identifier for the message in this batch.

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

### MD5OfMessageBody

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: Yes

### MessageId

An identifier for the message.

Type: String

Required: Yes

### 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 Go](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

# 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 [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

## 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 [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

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'THHMMSS'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 [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

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 Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, 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 [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

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

**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