Amazon Simple Queue Service

API Reference

API Version 2012-11-05

Amazon Simple Queue Service: API Reference

Welcome

Welcome to the *Amazon Simple Queue Service API Reference.* This section describes who should read this guide, how the guide is organized, and other resources related to the Amazon Simple Queue Service (Amazon SQS).

Amazon SQS offers reliable and scalable hosted queues for storing messages as they travel between computers. By using Amazon SQS, you can move data between distributed components of your applications that perform different tasks without losing messages or requiring each component to be always available.

Helpful Links:

- Current WSDL (2012-11-05)
- Making API Requests
- Amazon SQS product page
- Using Amazon SQS Message Attributes
- Using Amazon SQS Dead Letter Queues
- Regions and Endpoints

We also provide SDKs that enable you to access Amazon SQS from your preferred programming language. The SDKs contain functionality that automatically takes care of tasks such as:

- Cryptographically signing your service requests
- Retrying requests
- Handling error responses

For a list of available SDKs, go to Tools for Amazon Web Services.

This document was last updated on May 6, 2014.

Actions

The following actions are supported:

AddPermission

Description

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

When you create a queue, you have full control access rights for the queue. Only you (as owner of the queue) can grant or deny permissions to the queue. For more information about these permissions, see Shared Queues in the *Amazon SQS Developer Guide*.

> **Note**
>
> `AddPermission` writes an Amazon SQS-generated policy. If you want to write your own policy, use SetQueueAttributes (p. 43) to upload your policy. For more information about writing your own policy, see Using The Access Policy Language in the *Amazon SQS Developer Guide*.

> **Note**
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

AWSAccountId.member.N
The AWS account number of the principal who will be 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 SQS Developer Guide*.

Type: String list

Required: Yes

ActionName.member.N
The action the client wants to allow for the specified principal. The following are valid values: `*` | `SendMessage` | `ReceiveMessage` | `DeleteMessage` | `ChangeMessageVisibility` | `GetQueueAttributes` | `GetQueueUrl`. For more information about these actions, see Understanding Permissions in the *Amazon SQS Developer Guide*.

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

Type: String list

Required: Yes

Label
The unique identification of the permission you're setting (e.g., `AliceSendMessage`). Constraints: Maximum 80 characters; alphanumeric characters, hyphens (-), and underscores (_) are allowed.

Type: String

Required: Yes

QueueUrl
> The URL of the Amazon SQS queue to take action on.
>
> Type: String
>
> Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

OverLimit
> The action that you requested would violate a limit. For example, ReceiveMessage returns this error
> if the maximum number of messages inflight has already been reached. AddPermission (p. 3)
> returns this error if the maximum number of permissions for the queue has already been reached.
>
> HTTP Status Code: 403

Examples

The following example Query request grants a SendMessage permission to the principal whose AWS
account number is 125074342641.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=AddPermission
&Label=testLabel
&AWSAccountId.1=125074342641
&ActionName.1=SendMessage
&AWSAccountId.2=125074342642
&ActionName.2=ReceiveMessage
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<AddPermissionResponse>
    <ResponseMetadata>
        <RequestId>
            9a285199-c8d6-47c2-bdb2-314cb47d599d
        </RequestId>
    </ResponseMetadata>
</AddPermissionResponse>
```

ChangeMessageVisibility

Description

Changes the visibility timeout of a specified message in a queue to a new value. The maximum allowed timeout value you can set the value to is 12 hours. This means you can't extend the timeout of a message in an existing queue to more than a total visibility timeout of 12 hours. (For more information visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide.*)

For example, let's say you have a message and its default message visibility timeout is 30 minutes. You could call ChangeMessageVisiblity with a value of two hours and the effective timeout would be two hours and 30 minutes. When that time comes near you could again extend the time out by calling ChangeMessageVisiblity, but this time the maximum allowed timeout would be 9 hours and 30 minutes.

Note

There is a 120,000 limit for the number of inflight messages per queue. Messages are inflight after they have been received from the queue by a consuming component, but have not yet been deleted from the queue. If you reach the 120,000 limit, you will receive an OverLimit error message from Amazon SQS. To help avoid reaching the limit, you should delete the messages from the queue after they have been processed. You can also increase the number of queues you use to process the messages.

Important

If you attempt to set the VisibilityTimeout to an amount more than the maximum time left, Amazon SQS returns an error. It will not automatically recalculate and increase the timeout to the maximum time remaining.

Important

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

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

ReceiptHandle
The receipt handle associated with the message whose visibility timeout should be changed. This parameter is returned by the ReceiveMessage (p. 31) action.

Type: String

Required: Yes

VisibilityTimeout
The new value (in seconds - from 0 to 43200 - maximum 12 hours) for the message's visibility timeout.

Type: Integer

Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

MessageNotInflight
The message referred to is not in flight.

HTTP Status Code: 400

ReceiptHandleIsInvalid
The receipt handle provided is not valid.

HTTP Status Code: 400

Examples

The following example Query request changes the visibility timeout for a message to 60 seconds.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=ChangeMessageVisibility
&VisibilityTimeout=60
&ReceiptHandle=MbZj6wDWli%2BJvwwJaBV%2B3dcjk2YW2vA3%2BSTFFljT
M8tJJg6HRG6PYSasuWXPJB%2BCwLj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGY
WbnLmpRCJVAyeMjeU5ZBdtcQ%2BQEauMZc8ZRv37sIW2iJKq3M9MFx1YvV11A2x/K
SbkJ0=
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd61jTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

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

ChangeMessageVisibilityBatch

Description

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.

> **Note**
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

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

Type: ChangeMessageVisibilityBatchRequestEntry (p. 47) list

Required: Yes

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `ChangeMessageVisibilityBatchResult`.

Failed
A list of BatchResultErrorEntry (p. 47) items.

Type: BatchResultErrorEntry (p. 47) list

Successful
A list of ChangeMessageVisibilityBatchResultEntry (p. 48) items.

Type: ChangeMessageVisibilityBatchResultEntry (p. 48) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

BatchEntryIdsNotDistinct
> Two or more batch entries have the same `Id` in the request.
>
> HTTP Status Code: 400

EmptyBatchRequest
> Batch request does not contain an entry.
>
> HTTP Status Code: 400

InvalidBatchEntryId
> The `Id` of a batch entry in a batch request does not abide by the specification.
>
> HTTP Status Code: 400

TooManyEntriesInBatchRequest
> Batch request contains more number of entries than permissible.
>
> HTTP Status Code: 400

Examples

ChangeMessageVisibilityBatch request changes the visibility timeout settings for two messages. You must URL encode the entire URL; however, we've URL encoded only the message body to make the example easier for you to read.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
&Action=ChangeMessageVisibilityBatch
&Version=2011-10-01
&ChangeMessageVisibilityBatchRequestEntry.1.Id=change_visibility_msg_2
&ChangeMessageVisibilityBatchRequestEntry.1.Re
ceiptHandle=gfk0T0R0waama4fVFffkjKzmhMCymjQvfTFk2LxT33G4ms5subrE0deLK
WSscPU1oD3J9zgeS4PQQ3U30qOumIE6AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6Ii
WqdM8u5imB%2BNTwj3tQRzOWdTOePjOjPcTpRxBtXix%2BEvwJOZUma9wabv%2BSw6ZHjwm
NcVDx8dZXJhVp16Bksiox%2FGrUvrVTCJRTWTLc59oHLLF8sEkKzRmGNzTDGTiV%2BYjH
fQj60FD3rVaXmzTsoNxRhKJ72uIHVMGVQiAGgBX6HGv9LDmYhPXw4hy%2FNgIg%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.1.VisibilityTimeout=45
&ChangeMessageVisibilityBatchRequestEntry.2.Id=change_visibility_msg_3
&ChangeMessageVisibilityBatchRequestEntry.2.Re
ceiptHandle=gfk0T0R0waama4fVFffkjKzmhMCymjQvfTFk2LxT33FUgBz3%2BnougdeLK
WSscPU1%2FXgx%2BxcNnjnQQ3U30qOumIE6AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6Ii
WqdM8u5imB%2BNTwj3tQRzOWdTOePjOsogjZM%2F7kzn4Ew27XLU9I%2FYaWYmKvDbq%2Fk3HK
VB9HfB43kE49atP2aWrzNL4yunG41Q4cfRRtfJdcGQGNHQ2%2Byd0Usf5qR1dZr1iDo5xk946eQat83Ax
TRP%2BY4Qi0V7FAeSLH9su9xpX6HGv9LDmYhPXw4hy%2FNgIg%3D%3D
&ChangeMessageVisibilityBatchRequestEntry.2.VisibilityTimeout=45
&SignatureMethod=HmacSHA256
&Expires=2011-10-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

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>
```

CreateQueue

Description

Creates a new queue, or returns the URL of an existing one. When you request `CreateQueue`, you provide a name for the queue. To successfully create a new queue, you must provide a name that is unique within the scope of your own queues.

> **Note**
>
> If you delete a queue, you must wait at least 60 seconds before creating a queue with the same name.

You may pass one or more attributes in the request. If you do not provide a value for any attribute, the queue will have the default value for that attribute. Permitted attributes are the same that can be set using SetQueueAttributes (p. 43).

> **Note**
>
> Use GetQueueUrl (p. 25) to get a queue's URL. GetQueueUrl (p. 25) requires only the `QueueName` parameter.

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 do not match an existing queue, `CreateQueue` returns an error.

> **Note**
>
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

Attribute.entry.N
A map of attributes with their corresponding values.

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

- `DelaySeconds` - The time in seconds that the delivery of all messages in the queue will be delayed. An integer from 0 to 900 (15 minutes). The default for this attribute is 0 (zero).
- `MaximumMessageSize` - The limit of how many bytes a message can contain before Amazon SQS rejects it. An integer from 1024 bytes (1 KiB) up to 262144 bytes (256 KiB). The default for this attribute is 262144 (256 KiB).
- `MessageRetentionPeriod` - The number of seconds Amazon SQS retains a message. Integer representing seconds, from 60 (1 minute) to 1209600 (14 days). The default for this attribute is 345600 (4 days).
- `Policy` - The queue's policy. A valid form-url-encoded policy. For more information about policy structure, see Basic Policy Structure in the *Amazon SQS Developer Guide*. For more information about form-url-encoding, see http://www.w3.org/MarkUp/html-spec/html-spec_8.html#SEC8.2.1.

- `ReceiveMessageWaitTimeSeconds` - The time for which a ReceiveMessage (p. 31) call will wait for a message to arrive. An integer from 0 to 20 (seconds). The default for this attribute is 0.
- `VisibilityTimeout` - The visibility timeout for the queue. An integer from 0 to 43200 (12 hours). The default for this attribute is 30. For more information about visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide*.

Type: String to String map

Valid Map Keys: `Policy` | `VisibilityTimeout` | `MaximumMessageSize` | `MessageRetentionPeriod` | `ApproximateNumberOfMessages` | `ApproximateNumberOfMessagesNotVisible` | `CreatedTimestamp` | `LastModifiedTimestamp` | `QueueArn` | `ApproximateNumberOfMessagesDelayed` | `DelaySeconds` | `ReceiveMessageWaitTimeSeconds` | `RedrivePolicy`

Required: No

QueueName
The name for the queue to be created.

Type: String

Required: Yes

Response Elements

The following element is returned in a structure named `CreateQueueResult`.

QueueUrl
The URL for the created Amazon SQS queue.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

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

HTTP Status Code: 400

QueueNameExists
A queue already exists with this name. 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

The following example Query request creates a new queue named testQueue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/
?Action=CreateQueue
&QueueName=testQueue
&Attribute.1.Name=VisibilityTimeout
&Attribute.1.Value=40
&Version=2011-10-01
&SignatureMethod=HmacSHA256
&Expires=2011-10-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<CreateQueueResponse>
    <CreateQueueResult>
        <QueueUrl>
            http://&useast1-query;/123456789012/testQueue
        </QueueUrl>
    </CreateQueueResult>
    <ResponseMetadata>
        <RequestId>
            7a62c49f-347e-4fc4-9331-6e8e7a96aa73
        </RequestId>
    </ResponseMetadata>
</CreateQueueResponse>
```

DeleteMessage

Description

Deletes the specified message from the specified queue. You specify the message by using the message's `receipt handle` and not the `message ID` you received when you sent the message. Even if the message is locked by another reader due to the visibility timeout setting, it is still deleted from the queue. If you leave a message in the queue for longer than the queue's configured retention period, Amazon SQS automatically deletes it.

Note

The receipt handle is associated with a specific instance of receiving the message. If you receive a message more than once, the receipt handle you get each time you receive the message is different. When you request `DeleteMessage`, if you don't provide the most recently received receipt handle for the message, the request will still succeed, but the message might not be deleted.

Important

It is possible you will receive a message even after you have deleted it. This might happen on rare occasions if one of the servers storing a copy of the message is unavailable when you request to delete the message. The copy remains on the server and might be returned to you again on a subsequent receive request. You should create your system to be idempotent so that receiving a particular message more than once is not a problem.

Request Parameters

For information about the common parameters that all actions use, see .

QueueUrl
The URL of the Amazon SQS queue to take action on.

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 .

InvalidIdFormat
The receipt handle is not valid for the current version.

HTTP Status Code: 400

ReceiptHandleIsInvalid
The receipt handle provided is not valid.

HTTP Status Code: 400

Examples

The following example Query request deletes a message from the queue named testQueue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=DeleteMessage
&ReceiptHandle=MbZj6wDWli%2BJvwwJaBV%2B3dcjk2YW2vA3%2BSTFFljT
M8tJJg6HRG6PYSasuWXPJB%2BCwLj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGY
WbnLmpRCJVAyeMjeU5ZBdtcQ%2BQEauMZc8ZRv37sIW2iJKq3M9MFx1YvV11A2x/K
SbkJ0=
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

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

DeleteMessageBatch

Description

Deletes multiple messages. This is a batch version of DeleteMessage (p. 14). The result of the delete 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.

> **Note**
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

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

    Type: DeleteMessageBatchRequestEntry (p. 49) list

    Required: Yes

QueueUrl
    The URL of the Amazon SQS queue to take action on.

    Type: String

    Required: Yes

Response Elements

The following elements are returned in a structure named `DeleteMessageBatchResult`.

Failed
    A list of BatchResultErrorEntry (p. 47) items.

    Type: BatchResultErrorEntry (p. 47) list

Successful
    A list of DeleteMessageBatchResultEntry (p. 50) items.

    Type: DeleteMessageBatchResultEntry (p. 50) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

BatchEntryIdsNotDistinct

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

HTTP Status Code: 400

EmptyBatchRequest

Batch request does not contain an entry.

HTTP Status Code: 400

InvalidBatchEntryId

The `Id` of a batch entry in a batch request does not abide by the specification.

HTTP Status Code: 400

TooManyEntriesInBatchRequest

Batch request contains more number of entries than permissible.

HTTP Status Code: 400

Examples

The following example DeleteMessageBatch request deletes two messages. You must URL encode the entire URL; however, we've URL encoded only the message body to make the example easier for you to read.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
&Action=DeleteMessageBatch
&Version=2011-10-01
&DeleteMessageBatchRequestEntry.1.Id=msg1
&DeleteMessageBatchRequestEntry.1.ReceiptHandle=gfk0T0R0waama4fVFffkjPQrrvzM
rOg0fTFk2LxT33EuB8wR0ZCFgKWyXGWFoqqpCIiprQUEhir%2F5LeGPpYTLzjqLQxyQYaQALeS
NHb0us3uE84uujxpBhsDkZUQkjFFkNqBXn48xlMcVhTcI3YLH%2Bd%2BIqetIOHgBCZAPx6r%2B09dW
aBXei6nbK5Ygih21DCDdAwFV68Jo8DXhb3ErEfoDqx7vyvC5nCp
dwqv%2BJhU%2FTNGjNN8t51v5c%2FAXvQsAzyZVNapxUrHIt4NxRhKJ72uICcxruyE8eRXlxIVN
geNP8ZEDcw7zZU1Zw%3D%3D
&DeleteMessageBatchRequestEntry.2.Id=msg2
&DeleteMessageBatchRequestEntry.2.ReceiptHandle=gfk0T0R0waama4fVFffkjKzmhM
CymjQvfTFk2LxT33G4ms5subrE0deLKWSscPU1oD3J9zgeS4PQQ3U30qOu
mIE6AdAv3w%2F%2Fa1IXW6AqaWhGsEPaLm3Vf6IiWqdM8u5imB%2BNTwj3tQRzOWdTOePjOjPcTpRxB
tXix%2BEvwJOZUma9wabv%2BSw6ZHjwmNcVDx8dZXJhVp16Bksi
ox%2FGrUvrVTCJRTWTLc59oHLLF8sEkKzRmGNzTDGTiV%2BYjHfQj60FD3rVaXmzT
soNxRhKJ72uIHVMGVQiAGgB%2BqAbSqfKHDQtVOmJJgkHug%3D%3D
&SignatureMethod=HmacSHA256
&Expires=2011-10-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

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>
```

DeleteQueue

Description

Deletes the queue specified by the **queue URL**, regardless of whether the queue is empty. If the specified queue does not exist, Amazon SQS returns a successful response.

> **Important**
>
> Use `DeleteQueue` with care; once you delete your 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. 37) request might succeed, but after the 60 seconds, the queue and that message you sent no longer exist. Also, when you delete a queue, you must wait at least 60 seconds before creating a queue with the same name.

We reserve the right to delete queues that have had no activity for more than 30 days. For more information, see How Amazon SQS Queues Work in the *Amazon SQS Developer Guide*.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Examples

The following example Query request deletes the specified queue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=DeleteQueue
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

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

GetQueueAttributes

Description

Gets attributes for the specified queue. The following attributes are supported:

- `All` - returns all values.
- `ApproximateNumberOfMessages` - returns the approximate number of visible messages in a queue. For more information, see Resources Required to Process Messages in the *Amazon SQS Developer Guide*.
- `ApproximateNumberOfMessagesNotVisible` - returns the approximate number of messages that are not timed-out and not deleted. For more information, see Resources Required to Process Messages in the *Amazon SQS Developer Guide*.
- `VisibilityTimeout` - returns the visibility timeout for the queue. For more information about visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide*.
- `CreatedTimestamp` - returns the time when the queue was created (epoch time in seconds).
- `LastModifiedTimestamp` - returns the time when the queue was last changed (epoch time in seconds).
- `Policy` - returns the queue's policy.
- `MaximumMessageSize` - returns the limit of how many bytes a message can contain before Amazon SQS rejects it.
- `MessageRetentionPeriod` - returns the number of seconds Amazon SQS retains a message.
- `QueueArn` - returns the queue's Amazon resource name (ARN).
- `ApproximateNumberOfMessagesDelayed` - returns the approximate number of messages that are pending to be added to the queue.
- `DelaySeconds` - returns the default delay on the queue in seconds.
- `ReceiveMessageWaitTimeSeconds` - returns the time for which a ReceiveMessage call will wait for a message to arrive.
- `RedrivePolicy` - returns the parameters for dead letter queue functionality of the source queue. For more information about RedrivePolicy and dead letter queues, see Using Amazon SQS Dead Letter Queues in the *Amazon SQS Developer Guide*.

> **Note**
> Going forward, new attributes might be added. If you are writing code that calls this action, we recommend that you structure your code so that it can handle new attributes gracefully.

> **Note**
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

AttributeName.member.N
A list of attributes to retrieve information for.

Type: String list

Required: No

QueueUrl

The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Response Elements

The following element is returned in a structure named `GetQueueAttributesResult.`

Attributes

A map of attributes to the respective values.

Type: String to String map

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

InvalidAttributeName

The attribute referred to does not exist.

HTTP Status Code: 400

Examples

The following example Query requests gets all the attribute values for the specified queue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=GetQueueAttributes
&AttributeName.1=All
&Version=2012-11-05
&SignatureMethod=HmacSHA256
&Expires=2013-10-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

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-1:123456789012:qfoo</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>
```

The following example Query request gets three attribute values for the specified queue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=GetQueueAttributes
&Action=GetQueueAttributes
&Version=2012-11-05
&AttributeName.1=VisibilityTimeout
&AttributeName.2=DelaySeconds
```

```
&AttributeName.3=ReceiveMessageWaitTimeSeconds
&SignatureMethod=HmacSHA256
&Expires=2013-10-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

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>
</GetQueueAttributesResponse>
```

GetQueueUrl

Description

Returns the URL of an existing queue. This action provides a simple way to retrieve the URL of an 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 go to Shared Queues in the *Amazon SQS Developer Guide*.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

QueueName
The name of the queue whose URL must be fetched. Maximum 80 characters; alphanumeric characters, hyphens (-), and underscores (_) are allowed.

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 in a structure named `GetQueueUrlResult`.

QueueUrl
The URL for the queue.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

QueueDoesNotExist
The queue referred to does not exist.

HTTP Status Code: 400

Examples

The following example Query request gets the URL for the specified queue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/
?Action=GetQueueUrl
&QueueName=testQueue
&Version=2011-10-01
&SignatureMethod=HmacSHA256
&Expires=2011-10-24T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<GetQueueUrlResponse>
    <GetQueueUrlResult>
        <QueueUrl>
            http://&useast1-query;/123456789012/testQueue
        </QueueUrl>
    </GetQueueUrlResult>
    <ResponseMetadata>
        <RequestId>470a6f13-2ed9-4181-ad8a-2fdea142988e</RequestId>
    </ResponseMetadata>
</GetQueueUrlResponse>
```

ListDeadLetterSourceQueues

Description

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.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

QueueUrl
    The queue URL of a dead letter queue.

    Type: String

    Required: Yes

Response Elements

The following element is returned in a structure named `ListDeadLetterSourceQueuesResult`.

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

    Type: String list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

QueueDoesNotExist
    The queue referred to does not exist.

    HTTP Status Code: 400

Examples

The following example Query request returns a list of dead letter source queues. In this example only one source queue, MySourceQueue, was configured with a dead letter queue.

Sample Request

```
Action=ListDeadLetterSourceQueues
&Version=2012-11-05
```

Sample Response

```
<ListDeadLetterSourceQueuesResponse xmlns="http://queue.amazonaws.com/doc/2012-
11-05/">
    <ListDeadLetterSourceQueuesResult>
        <QueueUrl>http://sqs.us-east-1.amazonaws.com/123456789012/MySo
urceQueue</QueueUrl>
    </ListDeadLetterSourceQueuesResult>
    <ResponseMetadata>
        <RequestId>8ffb921f-b85e-53d9-abcf-d8d0057f38fc</RequestId>
    </ResponseMetadata>
</ListDeadLetterSourceQueuesResponse>
```

ListQueues

Description

Returns a list of your queues. The maximum number of queues that can be returned is 1000. If you specify a value for the optional `QueueNamePrefix` parameter, only queues with a name beginning with the specified value are returned.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

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

Type: String

Required: No

Response Elements

The following element is returned in a structure named `ListQueuesResult`.

QueueUrls
A list of queue URLs, up to 1000 entries.

Type: String list

Examples

The following example Query request returns the queues whose names begin with the letter "T".

Sample Request

```
http://sqs.us-east-1.amazonaws.com/
?Action=ListQueues
&QueueNamePrefix=t
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<ListQueuesResponse>
    <ListQueuesResult>
        <QueueUrl>
            http://sqs.us-east-1.amazonaws.com/123456789012/testQueue
        </QueueUrl>
    </ListQueuesResult>
    <ResponseMetadata>
        <RequestId>
            725275ae-0b9b-4762-b238-436d7c65a1ac
        </RequestId>
    </ResponseMetadata>
</ListQueuesResponse>
```

ReceiveMessage

Description

Retrieves one or more messages, with a maximum limit of 10 messages, from the specified queue. Long poll support is enabled by using the `WaitTimeSeconds` parameter. For more information, see Amazon SQS Long Poll in the *Amazon SQS Developer Guide*.

Short poll is the default behavior where a weighted random set of machines is sampled on a `ReceiveMessage` call. This means only the messages on the sampled machines are returned. If the number of messages in the queue is small (less than 1000), it is likely you will 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; in which case you should repeat the request.

For each message returned, the response includes the following:

- Message body
- MD5 digest of the message body. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.
- Message ID you received when you sent the message to the queue.
- Receipt handle.
- Message attributes.
- MD5 digest of the message attributes.

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

You can provide the `VisibilityTimeout` parameter in your request, which will be applied to the messages that Amazon SQS returns in the response. If you do not include the parameter, the overall visibility timeout for the queue is used for the returned messages. For more information, see Visibility Timeout in the *Amazon SQS Developer Guide.*

Note

Going forward, new attributes might be added. If you are writing 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 common parameters that all actions use, see Common Parameters (p. 57).

AttributeName.member.N
A list of attributes that need to be returned along with each message.

The following lists the names and descriptions of the attributes that can be returned:
- `All` - returns all values.
- `ApproximateFirstReceiveTimestamp` - returns the time when the message was first received (epoch time in milliseconds).
- `ApproximateReceiveCount` - returns the number of times a message has been received but not deleted.
- `SenderId` - returns the AWS account number (or the IP address, if anonymous access is allowed) of the sender.
- `SentTimestamp` - returns the time when the message was sent (epoch time in milliseconds).

Type: String list

Required: No

MaxNumberOfMessages
The maximum number of messages to return. Amazon SQS never returns more messages than this value but may return fewer. Values can be from 1 to 10. Default is 1.

All of the messages are not necessarily returned.

Type: Integer

Required: No

MessageAttributeName.member.N
The name of the message attribute, where *N* is the index. The message attribute name can contain the following characters: A-Z, a-z, 0-9, underscore (_), hyphen (-), and period (.). The name must not start or end with a period, and it should not have successive periods. The name is case sensitive and must be unique among all attribute names for the message. The name can be up to 256 characters long. The name cannot start with "AWS." or "Amazon." (or any variations in casing), because these prefixes are reserved for use by Amazon Web Services.

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 "foo.*" to return all message attributes starting with the "foo" prefix.

Type: String list

Required: No

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

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 will wait for a message to arrive in the queue before returning. If a message is available, the call will return sooner than WaitTimeSeconds.

Type: Integer

Required: No

Response Elements

The following element is returned in a structure named `ReceiveMessageResult.`

Messages
A list of messages.

Type: Message (p. 52) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

OverLimit

The action that you requested would violate a limit. For example, ReceiveMessage returns this error if the maximum number of messages inflight has already been reached. AddPermission (p. 3) returns this error if the maximum number of permissions for the queue has already been reached.

HTTP Status Code: 403

Examples

The following example Query request receives messages from the specified queue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=ReceiveMessage
&MaxNumberOfMessages=5
&VisibilityTimeout=15
&AttributeName=All;
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<ReceiveMessageResponse>
  <ReceiveMessageResult>
    <Message>
      <MessageId>
        5fea7756-0ea4-451a-a703-a558b933e274
      </MessageId>
      <ReceiptHandle>
        MbZj6wDWli+JvwwJaBV+3dcjk2YW2vA3+STFFljTM8tJJg6HRG6PYSasuWXPJB+Cw
        Lj1FjgXUv1uSj1gUPAWV66FU/WeR4mq2OKpEGYWbnLmpRCJVAyeMjeU5ZBdtcQ+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-aee4-4e84e0ae6afa
    </RequestId>
  </ResponseMetadata>
</ReceiveMessageResponse>
```

RemovePermission

Description

Revokes any permissions in the queue policy that matches the specified `Label` parameter. Only the owner of the queue can remove permissions.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

Label
> The identification of the permission to remove. This is the label added with the AddPermission (p. 3) action.

> Type: String

> Required: Yes

QueueUrl
> The URL of the Amazon SQS queue to take action on.

> Type: String

> Required: Yes

Examples

The following example Query request removes the testLabel permission on the queue named testQueue.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=RemovePermission
&Label=testLabel
&Version=2009-02-01
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<RemovePermissionResponse>
    <ResponseMetadata>
        <RequestId>
```

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

SendMessage

Description

Delivers a message to the specified queue. With Amazon SQS, you now have the ability to send large payload messages that are up to 256KB (262,144 bytes) in size. To send large payloads, you must use an AWS SDK that supports SigV4 signing. To verify whether SigV4 is supported for an AWS SDK, check the SDK release notes.

Important

The following list shows the characters (in Unicode) allowed in your message, according to the W3C XML specification. For more information, go to http://www.w3.org/TR/REC-xml/#charsets If you send any characters not included in the list, your request will be rejected.

#x9 | #xA | #xD | [#x20 to #xD7FF] | [#xE000 to #xFFFD] | [#x10000 to #x10FFFF]

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

DelaySeconds
The number of seconds (0 to 900 - 15 minutes) to delay a specific message. Messages with a positive `DelaySeconds` value become available for processing after the delay time is finished. If you don't specify a value, the default value for the queue applies.

Type: Integer

Required: No

MessageAttribute.entry.N
Each message attribute consists of a Name, Type, and Value. For more information, see Message Attribute Items.

Type: String to MessageAttributeValue (p. 53) map

Required: No

MessageBody
The message to send. String maximum 256 KB in size. For a list of allowed characters, see the preceding important note.

Type: String

Required: Yes

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `SendMessageResult`.

MD5OfMessageAttributes

An MD5 digest of the non-URL-encoded message attribute string. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

MD5OfMessageBody

An MD5 digest of the non-URL-encoded message body string. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

MessageId

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

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

InvalidMessageContents

The message contains characters outside the allowed set.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example SendMessage request sends a message containing "This is a test message" to the queue. You must URL encode the entire URL; however, we've URL encoded only the message body to make the example easier for you to read. The following example response includes the MD5 digest for "This is a test message".

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=SendMessage
&MessageBody=This+is+a+test+message
&MessageAttribute.1.Name=test_attribute_name_1
&MessageAttribute.1.Value.StringValue=test_attribute_value_1
&MessageAttribute.1.Value.DataType=String
&MessageAttribute.2.Name=test_attribute_name_2
&MessageAttribute.2.Value.StringValue=test_attribute_value_2
&MessageAttribute.2.Value.DataType=String
&Version=2012-11-05
&SignatureMethod=HmacSHA256
&Expires=2014-05-05T22%3A52%3A43PST
```

```
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<SendMessageResponse>
    <SendMessageResult>
        <MD5OfMessageBody>
            fafb00f5732ab283681e124bf8747ed1
        </MD5OfMessageBody>
        <MD5OfMessageAttributes>
      3ae8f24a165a8cedc005670c81a27295
        </MD5OfMessageAttributes>
        <MessageId>
            5fea7756-0ea4-451a-a703-a558b933e274
        </MessageId>
    </SendMessageResult>
    <ResponseMetadata>
        <RequestId>
            27daac76-34dd-47df-bd01-1f6e873584a0
        </RequestId>
    </ResponseMetadata>
</SendMessageResponse>
```

SendMessageBatch

Description

Delivers up to ten messages to the specified queue. This is a batch version of SendMessage (p. 37). The result of the send action on each message is reported individually in the response. The maximum allowed individual message size is 256 KB (262,144 bytes).

The maximum total payload size (i.e., the sum of all a batch's individual message lengths) is also 256 KB (262,144 bytes).

If the `DelaySeconds` parameter is not specified for an entry, the default for the queue is used.

> **Important**
> The following list shows the characters (in Unicode) that are allowed in your message, according to the W3C XML specification. For more information, go to http://www.faqs.org/rfcs/rfc1321.html. If you send any characters that are not included in the list, your request will be rejected.
>
> #x9 | #xA | #xD | [#x20 to #xD7FF] | [#xE000 to #xFFFD] | [#x10000 to #x10FFFF]

> **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.

> **Note**
> Some API 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=this
```

```
&Attribute.2=that
```

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 57).

SendMessageBatchRequestEntry.member.N
A list of SendMessageBatchRequestEntry (p. 54) items.

Type: SendMessageBatchRequestEntry (p. 54) list

Required: Yes

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `SendMessageBatchResult`.

Failed
A list of BatchResultErrorEntry (p. 47) items with the error detail about each message that could not be enqueued.

Type: BatchResultErrorEntry (p. 47) list

Successful

A list of SendMessageBatchResultEntry (p. 55) items.

Type: SendMessageBatchResultEntry (p. 55) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

BatchEntryIdsNotDistinct

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

HTTP Status Code: 400

BatchRequestTooLong

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

HTTP Status Code: 400

EmptyBatchRequest

Batch request does not contain an entry.

HTTP Status Code: 400

InvalidBatchEntryId

The `Id` of a batch entry in a batch request does not abide by the specification.

HTTP Status Code: 400

TooManyEntriesInBatchRequest

Batch request contains more number of entries than permissible.

HTTP Status Code: 400

UnsupportedOperation

Error code 400. Unsupported operation.

HTTP Status Code: 400

Examples

The following example SendMessageBatch request sends two messages to the queue. You must URL encode the entire URL; however, we've URL encoded only the message body to make the example easier for you to read. The following example response includes the MD5 digest for the messages.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?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_at
```

```
tribute_value_1
&SendMessageBatchRequestEntry.2.MessageAttribute.1.Value.DataType=String
&Version=2012-11-05
&SignatureMethod=HmacSHA256
&Expires=2014-05-05T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

```
<SendMessageBatchResponse>
<SendMessageBatchResult>
    <SendMessageBatchResultEntry>
        <Id>test_msg_001</Id>
        <MessageId>0a5231c7-8bff-4955-be2e-8dc7c50a25fa</MessageId>
        <MD5OfMessageBody>0e024d309850c78cba5eabbeff7cae71</MD5OfMessageBody>
    </SendMessageBatchResultEntry>
    <SendMessageBatchResultEntry>
        <Id>test_msg_002</Id>
        <MessageId>15ee1ed3-87e7-40c1-bdaa-2e49968ea7e9</MessageId>
        <MD5OfMessageBody>7fb8146a82f95e0af155278f406862c2</MD5OfMessageBody>
       <MD5OfMessageAttributes>295c5fa15a51aae6884d1d7c1d99ca50</MD5OfMessageAt
tributes>
    </SendMessageBatchResultEntry>
</SendMessageBatchResult>
<ResponseMetadata>
    <RequestId>ca1ad5d0-8271-408b-8d0f-1351bf547e74</RequestId>
</ResponseMetadata>
</SendMessageBatchResponse>
```

SetQueueAttributes

Description

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 SQS system. Changes made to the `MessageRetentionPeriod` attribute can take up to 15 minutes.

Note
Going forward, new attributes might be added. If you are writing 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 common parameters that all actions use, see Common Parameters (p. 57).

Attribute.entry.N
A map of attributes to set.

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

- `DelaySeconds` - The time in seconds that the delivery of all messages in the queue will be delayed. An integer from 0 to 900 (15 minutes). The default for this attribute is 0 (zero).
- `MaximumMessageSize` - The limit of how many bytes a message can contain before Amazon SQS rejects it. An integer from 1024 bytes (1 KiB) up to 262144 bytes (256 KiB). The default for this attribute is 262144 (256 KiB).
- `MessageRetentionPeriod` - The number of seconds Amazon SQS retains a message. Integer representing seconds, from 60 (1 minute) to 1209600 (14 days). The default for this attribute is 345600 (4 days).
- `Policy` - The queue's policy. A valid form-url-encoded policy. For more information about policy structure, see Basic Policy Structure in the *Amazon SQS Developer Guide*. For more information about form-url-encoding, see http://www.w3.org/MarkUp/html-spec/html-spec_8.html#SEC8.2.1.
- `ReceiveMessageWaitTimeSeconds` - The time for which a ReceiveMessage call will wait for a message to arrive. An integer from 0 to 20 (seconds). The default for this attribute is 0.
- `VisibilityTimeout` - The visibility timeout for the queue. An integer from 0 to 43200 (12 hours). The default for this attribute is 30. For more information about visibility timeout, see Visibility Timeout in the *Amazon SQS Developer Guide*.
- `RedrivePolicy` - The parameters for dead letter queue functionality of the source queue. For more information about RedrivePolicy and dead letter queues, see Using Amazon SQS Dead Letter Queues in the *Amazon SQS Developer Guide*.

Type: String to String map

Valid Map Keys: `Policy | VisibilityTimeout | MaximumMessageSize | MessageRetentionPeriod | ApproximateNumberOfMessages | ApproximateNumberOfMessagesNotVisible | CreatedTimestamp | LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed | DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy`

Required: Yes

QueueUrl
The URL of the Amazon SQS queue to take action on.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 59).

InvalidAttributeName
The attribute referred to does not exist.

HTTP Status Code: 400

Examples

The following example Query request sets a policy that gives all users ReceiveMessage permission for the queue named testQueue. For more examples of policies, see Amazon SQS Policy Examples in the Amazon SQS Developer Guide.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=SetQueueAttributes
&Version=2009-02-01
&Attribute.Name=Policy
&Attribute.Value=%7B%22Version%22%3A%222008-10-17%22%2C%22Id%22
%3A%22%2F123456789012%2FtestQueue%2FSQSDefaultPolicy%22%2C%22Stat
ement%22%3A%5B%7B%22Sid%22%3A%22Queue1ReceiveMessage%22%2C%22Effe
ct%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%3Aaws%3Asqs%3Aus%2Deast%2D1%3A123456789012%3AtestQueue%22%7D%5D%7D
&Timestamp=2009-05-06T16%3A57%3A31.000Z
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&Signature=%2Bd7ZlPIdnb%2BhpEna2TgfwQjfGF8%3D
```

The following example Query request sets the visibility timeout to 35 seconds for the queue named testQueue. Note: There is a 120,000 limit for the number of inflight messages per queue. Messages are inflight after they have been received by the queue, but have not yet been deleted from the queue. If you reach the 120,000 limit, you will receive an OverLimit error message from Amazon SQS. To help avoid reaching the limit, you should delete the messages from the queue after they have been processed. You can also increase the number of queues you use to process the messages.

Sample Request

```
http://sqs.us-east-1.amazonaws.com/123456789012/testQueue/
?Action=SetQueueAttributes
&Attribute.Name=VisibilityTimeout
&Attribute.Value=35
&Version=2009-02-01
```

```
&SignatureMethod=HmacSHA256
&Expires=2009-04-18T22%3A52%3A43PST
&AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE
&SignatureVersion=2
&Signature=Dqlp3Sd6ljTUA9Uf6SGtEExwUQEXAMPLE
```

Sample Response

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

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 the response is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

BatchResultErrorEntry

Description

This is used in the responses of batch API to give 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

Whether the error happened due to the sender's fault.

Type: Boolean

Required: Yes

ChangeMessageVisibilityBatchRequestEntry

Description

Encloses a receipt handle and an entry id for each message in ChangeMessageVisibilityBatch (p. 8).

Important

All of the following parameters are list parameters that 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. This is used to communicate the result. Note that the `Id`s of a batch request need to be unique within the 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

ChangeMessageVisibilityBatchResult

Description

For each message in the batch, the response contains a ChangeMessageVisibilityBatchResultEntry (p. 48) tag if the message succeeds or a BatchResultErrorEntry (p. 47) tag if the message fails.

Contents

Failed

A list of BatchResultErrorEntry (p. 47) items.

Type: BatchResultErrorEntry (p. 47) list

Required: Yes

Successful

A list of ChangeMessageVisibilityBatchResultEntry (p. 48) items.

Type: ChangeMessageVisibilityBatchResultEntry (p. 48) list

Required: Yes

ChangeMessageVisibilityBatchResultEntry

Description

Encloses the id of an entry in ChangeMessageVisibilityBatch (p. 8).

Contents

Id
Represents a message whose visibility timeout has been changed successfully.

Type: String

Required: Yes

CreateQueueResult

Description

Returns the QueueUrl element of the created queue.

Contents

QueueUrl
The URL for the created Amazon SQS queue.

Type: String

Required: No

DeleteMessageBatchRequestEntry

Description

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 that the `Id`s of a batch request need to be unique within the request.

Type: String

Required: Yes

ReceiptHandle
A receipt handle.

Type: String

Required: Yes

DeleteMessageBatchResult

Description

For each message in the batch, the response contains a DeleteMessageBatchResultEntry (p. 50) tag if the message is deleted or a BatchResultErrorEntry (p. 47) tag if the message cannot be deleted.

Contents

Failed
A list of BatchResultErrorEntry (p. 47) items.

Type: BatchResultErrorEntry (p. 47) list

Required: Yes

Successful
A list of DeleteMessageBatchResultEntry (p. 50) items.

Type: DeleteMessageBatchResultEntry (p. 50) list

Required: Yes

DeleteMessageBatchResultEntry

Description

Encloses the id an entry in DeleteMessageBatch (p. 16).

Contents

Id
Represents a successfully deleted message.

Type: String

Required: Yes

GetQueueAttributesResult

Description

A list of returned queue attributes.

Contents

Attributes
A map of attributes to the respective values.

Type: String to String map

Valid Map Keys: `Policy | VisibilityTimeout | MaximumMessageSize | MessageRetentionPeriod | ApproximateNumberOfMessages | ApproximateNumberOfMessagesNotVisible | CreatedTimestamp | LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed | DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy`

Required: No

GetQueueUrlResult

Description

For more information, see Responses in the *Amazon SQS Developer Guide*.

Contents

QueueUrl
The URL for the queue.

Type: String

Required: No

ListDeadLetterSourceQueuesResult

Description

A list of your dead letter source queues.

Contents

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

Type: String list

Required: Yes

ListQueuesResult

Description

A list of your queues.

Contents

QueueUrls
A list of queue URLs, up to 1000 entries.

Type: String list

Required: No

Message

Description

An Amazon SQS message.

Contents

Attributes
`SenderId`, `SentTimestamp`, `ApproximateReceiveCount`, and/or `ApproximateFirstReceiveTimestamp`. `SentTimestamp` and `ApproximateFirstReceiveTimestamp` are each returned as an integer representing the epoch time in milliseconds.

Type: String to String map

Valid Map Keys: `Policy | VisibilityTimeout | MaximumMessageSize | MessageRetentionPeriod | ApproximateNumberOfMessages | ApproximateNumberOfMessagesNotVisible | CreatedTimestamp | LastModifiedTimestamp | QueueArn | ApproximateNumberOfMessagesDelayed | DelaySeconds | ReceiveMessageWaitTimeSeconds | RedrivePolicy`

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. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

Required: No

MessageAttributes

Each message attribute consists of a Name, Type, and Value. For more information, see Message Attribute Items.

Type: String to MessageAttributeValue (p. 53) map

Required: No

MessageId

A unique identifier for the message. Message IDs are 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

MessageAttributeValue

Description

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

Name, type, and value must not be empty or null. In addition, the message body should not be empty or null. All parts of the message attribute, including name, type, and value, are included in the message size restriction, which is currently 256 KB (262,144 bytes).

Contents

BinaryListValues

Not implemented. Reserved for future use.

Type: Blob list

Required: No

BinaryValue

Binary type attributes can store any binary data, for example, compressed data, encrypted data, or images.

Type: Blob

Required: No

DataType

Amazon SQS supports the following logical data types: String, Number, and Binary. In addition, you can append your own custom labels. For more information, see Message Attribute Data Types.

Type: String

Required: Yes

StringListValues

Not implemented. Reserved for future use.

Type: String list

Required: No

StringValue

Strings are Unicode with UTF8 binary encoding. For a list of code values, see
http://en.wikipedia.org/wiki/ASCII#ASCII_printable_characters.

Type: String

Required: No

ReceiveMessageResult

Description

A list of received messages.

Contents

Messages

A list of messages.

Type: Message (p. 52) list

Required: No

SendMessageBatchRequestEntry

Description

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

Contents

DelaySeconds

The number of seconds for which the message has to be delayed.

Type: Integer

Required: No

Id

An identifier for the message in this batch. This is used to communicate the result. Note that the Ids
of a batch request need to be unique within the request.

Type: String

Required: Yes

MessageAttributes
  Each message attribute consists of a Name, Type, and Value. For more information, see Message Attribute Items.

  Type: String to MessageAttributeValue (p. 53) map

  Required: No

MessageBody
  Body of the message.

  Type: String

  Required: Yes

SendMessageBatchResult

Description

For each message in the batch, the response contains a SendMessageBatchResultEntry (p. 55) tag if the message succeeds or a BatchResultErrorEntry (p. 47) tag if the message fails.

Contents

Failed
  A list of BatchResultErrorEntry (p. 47) items with the error detail about each message that could not be enqueued.

  Type: BatchResultErrorEntry (p. 47) list

  Required: Yes

Successful
  A list of SendMessageBatchResultEntry (p. 55) items.

  Type: SendMessageBatchResultEntry (p. 55) list

  Required: Yes

SendMessageBatchResultEntry

Description

Encloses a message ID for successfully enqueued message of a SendMessageBatch (p. 40).

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. This can be used to verify that Amazon SQS received the message batch correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

Required: No

MD5OfMessageBody

An MD5 digest of the non-URL-encoded message body string. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

Required: Yes

MessageId

An identifier for the message.

Type: String

Required: Yes

SendMessageResult

Description

The MD5OfMessageBody and MessageId elements.

Contents

MD5OfMessageAttributes

An MD5 digest of the non-URL-encoded message attribute string. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

Required: No

MD5OfMessageBody

An MD5 digest of the non-URL-encoded message body string. This can be used to verify that Amazon SQS received the message correctly. Amazon SQS first URL decodes the message before creating the MD5 digest. For information about MD5, go to http://www.faqs.org/rfcs/rfc1321.html.

Type: String

Required: No

MessageId

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

Type: String

Required: No

Common Parameters

This section lists the request parameters that all actions use. Any action-specific parameters are listed in the topic for the action.

Action

The action to be performed.

Default: None

Type: string

Required: Yes

AuthParams

The parameters that are required to authenticate a Conditional request. Contains:

- AWSAccessKeyID
- SignatureVersion
- Timestamp
- Signature

Default: None

Required: Conditional

AWSAccessKeyId

The access key ID that corresponds to the secret access key that you used to sign the request.

Default: None

Type: string

Required: Yes

Expires

The date and time when the request signature expires, expressed in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard.

Condition: Requests must include either *Timestamp* or *Expires*, but not both.

Default: None

Type: string

Required: Conditional

SecurityToken

The temporary security token that was obtained through a call to AWS Security Token Service. For a list of services that support AWS Security Token Service, go to Using Temporary Security Credentials to Access AWS in **Using Temporary Security Credentials**.

Default: None

Type: string

Required: No

Signature

The digital signature that you created for the request. For information about generating a signature, go to the service's developer documentation.

Default: None

Type: string

Required: Yes

SignatureMethod

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

Default: None

Type: string

Valid Values: `HmacSHA256 | HmacSHA1`

Required: Yes

SignatureVersion

The signature version you use to sign the request. Set this to the value that is recommended for your service.

Default: None

Type: string

Required: Yes

Timestamp

The date and time when the request was signed, expressed in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard.

Condition: Requests must include either *Timestamp* or *Expires*, but not both.

Default: None

Type: string

Required: Conditional

Version

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

Default: None

Type: string

Required: Yes

Common Errors

This section lists the common errors that all actions return. Any action-specific errors are listed in the topic for the action.

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

Throttling

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400