

# Message Service

## API Reference

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## Summary

## MNS Introduction

- MNS is an efficient, reliable, secure, convenient and elastically scalable distributed message and notification service.
- MNS can help developers to transfer data freely between distributed components of their applications to build a loosely coupled system.
- MNS ensures that a message could be consumed at least once. It allows multiple producers and consumers to operate on the same queue concurrently.
- MNS tries its best to ensure that messages are consumed in an FIFO manner. However, it cannot be ensured that you can consume messages in the order they are sent, due to some features of distributed message queues. A good practice to keep the order of messages is recording a sequence number in the messages by yourself so that they could be reordered after being consumed.

## Basic Concepts

### Account

The account is a registered user of Aliyun and it represents as an Aliyun Account ID in MNS.

### Queue Owner

An account creates a queue by using the `CreateQueue` interface , this account is the owner of this queue. The owner has permissions of all the operations for this queue. You could get the Aliyun Account ID of the queue owner from the User Center at Aliyun's website.

## Producer and Consumer

Producer: the one who sends messages to MNS.

Consumer: the one who acquires messages from MNS.

## Queue

A queue is the container of messages. Queues can be classified into normal queues and delayed queues.

If the `DelaySeconds` parameter is not specified for a message upon sending, messages sent to normal queues can be consumed immediately, and messages sent to delayed queues can be consumed after the preset delay time.

QueueURL is the URL that identifies a queue. Its format is:

`http://$AccountId.mns.<Region>.aliyuncs.com/queues/$QueueName`

- `mns.<Region>.aliyuncs.com`: indicates the access domain name of MNS. Region indicates the region of the MNS you want to access. You can select the region according to the requirement of your application.
- `AccountId`: indicates the account ID of the queue owner. Please replace it with the actual account ID when calling MNS APIs.
- `QueueName`: indicates the name of a queue. Replace it with the actual queue name when calling MNS APIs. The names of the queues belong to the same `AccountId` cannot be duplicate in the same region.

## Message

A message contains data and attributes. The `MessageId` and `ReceiptHandle` can both uniquely identify a message in a queue.

## Normal Message and Delayed Message

Messages are classified into normal messages and delayed messages. A normal message is a message that can be acquired immediately after being sent to a message queue. The delayed message is the one which would be acquired only after a delay period after being sent into a queue. The delay duration is determined by the `DelaySeconds` parameter (Refer to `SendMessage` for detail).

A normal message sent to a delayed message queue cannot be acquired before expiry of the delay period (for details, see queue-related descriptions).

## MessageId

`MessageId` is used to identify a message in a queue. Each message in one queue has a unique `MessageId`, but `MessageIds` in different message queues may be the same.

When a message is sent to an MNS queue, the `MessageId` would be generated. This ID will not change once generated and be returned in the response. `MessageId` is mainly used for data validation. If you want to delete the message, you need to use `ReceiptHandle`.

## ReceiptHandle

`ReceiptHandle` is a temporary message identifier generated by MNS when a message is consumed to distinguish from `MessageId`. If you want to delete a consumed message or change the `VisibilityTimeout` attribute value, you need to use `ReceiptHandle` to specify the message. `ReceiptHandle` can be used only once. If the status of the message identified by `ReceiptHandle` changes, the `ReceiptHandle` will become invalid, and the consumer has to get a new `ReceiptHandle` by consuming the message again.

## Message Status

When a normal message is sent to a normal queue, the initial status of the message is `Active`. After being consumed from the queue, the message is `Inactive` during the `VisibilityTimeout` period. If the message is not deleted after the `VisibilityTimeout` period expires, the message status turns to `Active` again. If the message is deleted within the `VisibilityTimeout` period, the message status changes to `Deleted`.

When a normal message is sent to a delayed queue, the initial status of the message is `Delayed`. Upon expiry of the time specified by `DelaySeconds` of the delayed queue, the message status

changes to Active.

After a delayed message is sent to a message queue (a normal message queue or a delayed message queue), the initial status of the message is Delayed. Upon expiry of the time specified by DelaySeconds, the message status changes to Active.

The maximum lifetime of a message is determined by the MessageRetentionPeriod attribute value specified during creation of the queue. Upon expiry of MessageRetentionPeriod, the message status changes to Expired, and the message will be reclaimed by the garbage collector.

The consumer can only consume messages in Active status.

## Call Methods

## Request Structure

### Service Address

Mns is deployed from more than one region, and you can choose the most appropriate one. There are both public network addresses and Aliyun private network addresses for each region to access. As follows:

Region	Public Network Address	Private Network Address
Hangzhou	mns.cn-hangzhou.aliyuncs.com	mns.cn-hangzhou-internal.aliyuncs.com
Qingdao	mns.cn-qingdao.aliyuncs.com	mns.cn-qingdao-internal.aliyuncs.com
Beijing	mns.cn-beijing.aliyuncs.com	mns.cn-beijing-internal.aliyuncs.com

### Communication Protocol

HTTP.

## Request Methods

HTTP methods, such as PUT, POST, GET and DELETE. Please refer to "Open Interface Specifications" in detail.

## Request Composition

The HTTP request sent to MNS should contain the correct request parameters, request headers and request body.

## Request Encoding

Request and response are both encoded in UTF-8.

## Common Parameters

### Common Request Headers

Parameter Name	Description	Required/Optional
Authorization	A string value consisting of MNS + space + AccessKeyId + : + signature. Please refer to the description of Signature Mechanism in detail.	Required
Content-Length	Content length of the HTTP message body	Required
Content-Type	MIME type of the request content. Only support text and xml for now.	Required
Content-MD5	MD5 of the HTTP message body	Optional
Date	Construction time of the request. Only support GMT format for now. If the difference between construction time and MNS server time exceeds 15 minutes, the request would	Required

	be regarded as invalid.	
Host	Such as \$AccountId.mns.cn-hangzhou.aliyuncs.com. You can acquire the AccountId from Aliyun's website, and acquire the MNS access address for different regions from the API document.	Required(HTTP/1.1) Optional(HTTP/1.0)
x-mns-version	Version of the MNS API protocol. The current version is 2015-06-06	Required

## Common Response Headers

Parameter Name	Description
Content-Length	Length of the response body
Connection	HTTP connection status
Date	Return time of the response, in GMT format
Server	Name of the MNS server which processed the request
x-mns-request-id	ID of the current request
x-mns-version	Version of the MNS API protocol. The current version is 2015-06-06

## Response Structure

The format of return value is unified. The returned HTTP status code like 2xx indicates a successful call. The returned HTTP status code like 4xx or 5xx indicates a failed call. The response body of the successful calls is in XML format. The returned response body in this document is formatted so that it is easier to read. The actual one is not formatted with line breaks, indentation, etc.

### Succeed

The followed return value in XML includes the information which indicated if it is successful or failed and the specific business data. As follows:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<!--Root Node-->
<Root node xmlns="http://mns.aliyuncs.com/doc/v1/">
<!--Subnode-->
</Root node>
```

## Error

Error code would be returned instead of the response body above if an error occurs. The <Error Code Table> in the appendix would help you locate the cause of the error.

When an error occurs, the HTTP status code of 4xx or 5xx will be returned. The returned message body includes the specific error code and error message. And it also contains the globally unique request ID (RequestId) which represents this request and the ID of the site you accessed for this time (HostId). If you could not find the cause of the error, you could contact Aliyun customer service and provide the HostId and RequestId to help us solve your problem as soon as possible.

## Signature Mechanism

The Access Key ID and Access Key Secret are officially issued to users by Aliyun (Users can apply and manage them on the official Aliyun website). The Access Key ID indicates the identity of the user. The Access Key Secret is the secret key used to encrypt the signature string for users and to verify the signature string on the server. It must be kept strictly confidential and should only be known to Aliyun and the user.

MNS would authenticate every request. Therefore, all requests sent to MNS must contain signature information. MNS performs symmetric encryption to authenticate the request sender with the Access Key ID and Access Key Secret. If the computed result is the same as that provided, the request would be considered as valid. Otherwise, MNS would reject the request and return HTTP Error Code 403.

The user can add an authorization head in the HTTP request to contain signature information, so as to indicate that the message authorized. And MNS requires that the signature should be contained in HTTP Header. As follows: Authorization: MNS space Access Key Id: Signature

**The signature computation method is as followed:**

```
Signature = base64(hmac-sha1(VERB + "\n"
+ CONTENT-MD5 + "\n"
+ CONTENT-TYPE + "\n"
+ DATE + "\n"
+ CanonicalizedMNSHeaders
+ CanonicalizedResource))
```



- 'VERB' indicates the HTTP method (For example: PUT)
- Content-Md5 indicates the MD5 value of the request content (Refer to 3 in "Other Issues")
- 'CONTENT-TYPE' indicates the content type of the request (Refer to 3 in "Other Issues")
- 'DATE' indicates the operation time, which cannot be left blank. (Only support the GMT format.) If the difference between the request time and MNS server time exceeds 15 minutes, MNS would regard the request as invalid, and return the HTTP Error Code 400. The related error information and error codes refer to the part 5 of this document. (For example: 'Thu, 17 Mar 2012 18:49:58 GMT')
- CanonicalizedMNSHeaders indicates a combination of fields starting with "x-mns-" in the HTTP request. (Refer to "Note" in detail.)
- CanonicalizedResource indicates the URI (uniform resource identifier) of the resource requested by HTTP. (For example: '/queues/\$queueName?metaOverride=true')

**Note:**

CanonicalizedMNSHeaders (heads starting with 'x-mns-') must comply with the following rules before the authentication:

- The head name should be changed to lower-case letters
- The heads should be sorted in ascending order
- Make sure no space before and after the colon which separates head name and value
- Each head should be followed by one '\n'. If there is no head starting with 'x-mns-', CanonicalizedMNSHeaders is set to null in signature

**Other Issues:**

1. The string used for signature is in UTF-8 format.
2. The signing method adopted is the HMAC-SHA1 method defined in [RFC 2104] (<http://www.ietf.org/rfc/rfc2104.txt>). The Key indicates the AccessKeySecret.
3. content-type and content-md5 are not necessary in the request. If the request requires signature, the null value can be denoted by '\n'.

**An request example is as followed:**

```
PUT /queues/$queueName?metaOverride=true HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
Authorization: MNS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

```
<?xml version=" 1.0" encoding=" UTF-8" ?>
<Queue xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<VisibilityTimeout >60</VisibilityTimeout>
<MaximumMessageSize>1024</MaximumMessageSize>
<MessageRetentionPeriod>120</MessageRetentionPeriod>
<DelaySeconds>30</DelaySeconds>
</Queue>
```

If the input AccessKey Id does not exist or the access key is inactive, HTTP Error code 403 (Forbidden) would be returned.

**Response example:**

```
Content-Type: text/xml
Content-Length: 314
Date: Wed, 18Mar 2012 08:04:06 GMT
x-mns-request-id: 512B2A634403E52B1956133E

<?xml version="1.0" encoding=" utf-8" ?>
<Error xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Code>AccessIDAuthError</Code>
<Message>
  AccessID authentication fail, please check your AccessID and retry.
</Message>
<RequestId>512B2A634403E52B1956133E</RequestId>
<HostId>mns.cn-hangzhou.aliyuncs.com</HostId>
</Error>
```

If Date is not contained in the head or the format is incorrect, HTTP Error code 403 (Forbidden) would be returned.

**Response example:**

```
Content-Type: text/xml
Content-Length: 274
Date: Wed, 18Mar 2012 08:04:06 GMT
x-mns-request-id: 512B2A634403E52B1956133E

<?xml version="1.0" encoding=" UTF-8" ?>
<Error xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Code>InvalidArgument</Code>
<Message>Date header is invalid or missing.</Message>
<RequestId>7E1A5CF258F535884403E533</RequestId>
<HostId>mns.cn-hangzhou.aliyuncs.com</HostId>
</Error>
```

The request time must be in 15 minutes from the current time of the MNS server, Otherwise, HTTP Error Code 408 (Timeout) would be returned.

**Return example:**

```
Content-Type: text/xml
Content-Length: 283
Date: Wed, 11 May 2011 09:01:51 GMT
x-mns-request-id: 512B2A634403E52B1956133E

<?xml version="1.0" encoding=" UTF-8" ?>
<Error xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Code> TimeExpired</Code>
<Message>
```

```
The http request you sent is expired.  
</Message>  
<RequestId>512B2A634403E52B1956133E</RequestId>  
<HostId>mns.cn-hangzhou.aliyuncs.com</HostId>  
</Error>
```

# Open Interface Specifications

## RESTful API Overview

MNS provides two kinds of interfaces: queue interfaces and message interfaces.

- Queue related operations: CreateQueue, DeleteQueue, ListQueue, GetQueueAttributes and SetQueueAttributes.
- Message related operations: SendMessage, BatchSendMessage, ReceiveMessage, BatchReceiveMessage, PeekMessage, BatchPeekMessage, DeleteMessage, BatchDeleteMessage and ChangeMessageVisibility.

## CreateQueue

### Description

This interface is used to create a new message queue.

The message queue name should be no more than 256 characters, and constituted by letters, digits, or hyphens (-), while the first character must be a letter.

### Request

A request mainly includes the following parts:

Request line

PUT /queues/\$queueName HTTP/1.1

Special Request Header

None. See "Public Request Headers"

Request Body

Request Body is in XML format, which contains the attributes of the created queue. All these attributes are optional.

Parameter Name	Description	Parameter Value
DelaySeconds	It is measured in seconds. All messages sent to the queue can be consumed until the DelaySeconds expired.	An integer between 0 and 604800 (7 days). The default value is 0
MaximumMessageSize	Maximum body length of a message sent to the queue, measured in bytes.	An integer between 1024 (1K) and 65536 (64K). The default value is 65536 (64K).
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been consumed or not.	An integer between 60 (1 minute) and 1296000 (15 days). The default value is 345600 (4 days)
VisibilityTimeout	Duration in which a message stays in Inactive status after it is consumed from the queue. Measured in seconds.	An integer between 1 and 43200 (12 hours). The default value is 30 (seconds)
PollingWaitSeconds	It is the maximum time that a ReceiveMessage request could be waiting for any incoming messages, while there are no message in the queue. Measured in seconds.	An integer between 0 and 30 seconds. The default value is 0 (seconds)

**Note:**

Once PollingWaitSeconds is set for a queue, all (Batch)ReceiveMessage requests on this queue will enter PollingWait status when there is no message in the queue. If no message is received during the entire PollingWaitSeconds period, MessageNotExist will be returned. If any new

message enters the queue during the PollingWaitSeconds period, the corresponding ReceiveMessage request will be woken up and the response is returned.

## Response

The returned message includes three parts: returned status line, HTTP header, and message body.

### - HTTP Status Code

HTTP/1.1 201 Created Different message queues with same name are not allowed for the same owner. If the queue name in the CreateQueueRequest exists in the created queues of current user, two difference ErrorCode could be returned: 204(No Content) is returned when attributes of the existing queue are same as attributes in the CreateQueueRequest, which means the queue exists; Otherwise, error 409 (Conflict) is returned.

### - Special Response Header

Parameter Name	Description
Location	The created QueueURL is returned, in the following format: http://\$AccountId.mns.<Region>.aliyuncs.com/queues/\$queueName

### - Response Body

None

## Special Error

Error Code	Error Message	Status Code
QueueAlreadyExist	The queue you want to create is already exist.	409
InvalidArgument	The value of Element should between MIN and MAX seconds/bytes.	400

### Request example:

```
PUT /queues/$queueName HTTP/1.1
```

```
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mns-version: 2015-06-06
Authorization:MNS 15B4D3461F177624206A:xQE0diMbLRpdf3YB+FIEXAMPLE=
```

```
<?xml version=" 1.0" encoding=" UTF-8" ?>
<Queue xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<VisibilityTimeout>60</VisibilityTimeout>
<MaximumMessageSize>65536</MaximumMessageSize>
<MessageRetentionPeriod>1209600</MessageRetentionPeriod>
</Queue>
```

### Return example:

```
HTTP/1.1 201 Created
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06
Location: http://$AccountId.mns.cn-hangzhou.aliyuncs.com/queues/$queueName
```

# SetQueueAttributes

## Description

This interface is used to modify attributes of a message queue.

## Request

A request mainly includes the following parts:

### Request line

```
PUT /queues/$queueName?metaoverride=true HTTP/1.1
```

### URI parameter

metaoverride=true: the attributes of the message queue will be modified

### Special Request Header

None. See "Public Request Headers"

## Request Body

Request Body is in XML format, which contains the attributes of the created queue. All these attributes are optional.

Parameter Name	Description	Parameter Value
DelaySeconds	It is measured in seconds. All messages sent to the queue can be consumed until the DelaySeconds expired.	An integer between 0 and 604800 (7 days). The default value is 0
MaximumMessageSize	Maximum body length of a message sent to the queue, measured in bytes.	An integer between 1024 (1K) and 65536 (64K). The default value is 65536 (64K).
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been consumed or not.	An integer between 60 (1 minute) and 1296000 (15 days). The default value is 345600 (4 days)
VisibilityTimeout	Duration in which a message stays in Inactive status after it is consumed from the queue. Measured in seconds.	An integer between 1 and 43200 (12 hours). The default value is 30 (seconds)
PollingWaitSeconds	It is the maximum time that a ReceiveMessage request could be waiting for any incoming messages, while there are no message in the queue. Measured in seconds.	An integer between 0 and 30 seconds. The default value is 0 (seconds)

## Response

The returned message includes three parts: returned status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 204 No Content

### Special Response Header

None. See "Public Return Headers"

Response Body

None

## Special Error

Error Code	Error Message	Status Code
InvalidArgument	The value of Element should between MIN and MAX seconds/bytes.	400
QueueNotExist	The queue name you provided is not exist.	404

### Request example:

```
PUT /queues/$queueName?Metaoverride=true HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<Queue xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<VisibilityTimeout >60</VisibilityTimeout>
<MaximumMessageSize>1024</MaximumMessageSize>
<MessageRetentionPeriod>120</MessageRetentionPeriod>
<DelaySeconds>30</DelaySeconds>
</Queue>
```

### Return example:

```
HTTP/1.1 204 No Content
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06
```

# GetQueueAttributes

## Description

This interface is used to acquire the attributes of a created queue. Along with the attributes which are configured in the queue creation, the creation time of the queue, the last modification time of queue attributes, and the counts of various types of messages in the queue (approximate values) are



returned.

## Request

A request mainly includes the following parts.

### Request line

GET /queues/\$queueName HTTP/1.1

### Special Request Header

None. See "Public Request Headers"

### Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 200OK

### Special Response Header

None. See "Public Return Headers"

### Response Body

The return result is in XML format. The format is: <Queue>Attribute Element List</Queue>

The attribute element list includes:

Parameter Name	Description
QueueName	Queue name
CreateTime	Creation time of the queue. It is seconds that have elapsed since 1970-1-1 0:00 till now
LastModifyTime	Last modification time of the queue attributes. It is seconds that elapse since 1970-1-1 0:00 till now
DelaySeconds	A delay time after which the message sent to the queue can be consumed, measured in seconds
MaximumMessageSize	Maximum body length of a message sent to the queue, measured in bytes
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been consumed or not
PollingWaitSeconds	It is the maximum time that a ReceiveMessage request could be waiting for any incoming messages, while there are no message in the queue. Measured in seconds.
Activemessages	Total number of active messages in the queue, which is an approximate value
InactiveMessages	Total number of inactive messages in the queue, which is an approximate value
DelayMessages	Total number of delayed messages in the queue, which is an approximate value

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404

### Request example:

```
GET /queues/$queueName HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

**Return example:**

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:145
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding="UTF-8"?>
<Queue xmlns=http://mns.aliyuncs.com/doc/v1/" >
<QueueName>$queueName </QueueName ><!--The actual Queue Name is returned ->
<CreateTime>1250700999</CreateTime >
<LastModifyTime>1250700999</LastModifyTime>
<VisibilityTimeout>60</VisibilityTimeout >
<MaximumMessageSize>65536</MaximumMessageSize>
<MessageRetentionPeriod>65536</MessageRetentionPeriod>
<DelaySeconds>30</DelaySecond>
<PollingWaitSeconds>0</PollingWaitSeconds>
<InactiveMessages>0</InactiveMessages>
<ActiveMessages>20</ActiveMessages>
< DelayMessages >0</ DelayMessages>
</Queue>
```

# DeleteQueue

## Description

This interface is used to delete a created message queue.

**Note:**

Be cautious when using this interface. Once the queue is deleted, all messages in the queue are deleted and cannot be recovered.

## Request

A request mainly includes the following parts:

Request line

```
DELETE /queues/$queueName HTTP/1.1
```

### Special Request Header

None. See "Public Request Headers"

### Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 204 No Content

### Special Response Header

None. See "Public Return Headers"

### Response Body

None

## Special Error

This operation has no special errors and involves mainly permission verification errors and parameter setting errors. For details, refer to MNS error response codes.

### Request example:

```
DELETE /queues/$queueName HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE=
```

### Return example:

```
HTTP/1.1 204 NoContent
x-mns-request-id: 512B2A634403E52B1956133E
x-mns-version: 2015-06-06
```

# ListQueue

## Description

This interface is used to list the message queues under the AccountId. Data can be acquired by page. Only the QueueURL attribute is returned. If necessary, use the GetQueueAttributes interface (see "GetQueueAttributes Interface") to acquire more message queue attributes. To acquire the list of specified message queues, specify the 'x-mns-prefix' parameter when calling this interface. All message queues with the specified prefix will be returned.

### Tip:

If the total number of message queues returned for this request exceeds the x-mns-ret-number value, NextMarker could be found in the returned XML result, which indicates the start position of the next page, and could be assigned to the x-mns-marker parameter in the next request to fetch the next page.

## Request

A request mainly includes the following parts:

Request line

```
GET /queues HTTP/1.1
```

Special Request Header

Parameter Name	Description	Required?
x-mns-marker	Start position of the next page, which is generally acquired from NextMarker returned in the previous page.	Optional
x-mns-ret-number	Maximum number of results returned for a single request, which can be an integer	Optional

	between 1 and 1000. The default value is 1000.	
x-mns-prefix	Search for the queueNames starting with this prefix.	Optional

For other request headers, see "Public Request Headers"

- Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header, and message body.

HTTP Status Code

HTTP/1.1 200 OK

Special Response Header

None. See "Public Return Headers"

Response Body

The result in XML format is returned. The top-layer element Queues contains multiple Queue elements, and the Queue elements contain QueueURL elements. QueueURL indicates the URL address of the created queue. If the number of return results exceeds the x-mns-ret-number value, the element containing NextMarker indicates the start position of the next page.

## Special Error

This operation has no special errors and involves mainly permission verification errors and parameter setting errors. For details, refer to MNS error response codes.

**Request example:**

```
GET /queues HTTP/1.1
```

```
x-mns-marker: xxxx
x-mns-ret-number:2
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE=
```

### Return example:

```
HTTP/1.1 200OK
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06
<?xml version="1.0" encoding=" UTF-8" ?>
<Queuesxmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Queue>
  < QueueURL>
    http:// $AccountId.mns.cn-hangzhou.aliyuncs.com/queues/queueName
  </ QueueURL>
</Queue>
<Queue>
< QueueURL>
  http:// $AccountId.mns.cn-hangzhou.aliyuncs.com/queues/queueName1
</ QueueURL>
</Queue>
<NextMarker> Base64 Encoded Result </NextMarker>
</Queues>
```

# SendMessage

## Description

This interface is used to send a message to the specified message queue. A common message can be consumed by the consumer immediately after being sent to a message queue. If the producer does not expect to consume the message immediately (the typical scenario is a scheduled task), he can set the `DelaySeconds` parameter when sending the message. The initial status of a message with the `DelaySeconds` value which is greater than 0 is `Delayed`. In this status, the message cannot be consumed by the consumer, it can be consumed only after the `DelaySeconds` time and the message changes to `Active` status.

### Tip:

The priority of the `DelaySeconds` parameter specified upon message sending is higher than the `DelaySeconds` attribute of the delayed message queue. That means, when the values of the two `DelaySeconds` attributes are different, the value of the `DelaySeconds` parameter specified upon

message sending takes precedence.

## Request

A request mainly includes the following parts:

### Request line

POST /queues/\$queueName/messages HTTP/1.1

### Special Request Header

None. See "Public Request Headers"

### Request Body

Request Body is in XML format. XML contains the attributes for creating message.

Parameter Name	Description	Parameter Value
MessageBody	Required. Message body	UTF-8 character set
DelaySeconds	Optional. A delay time after which a message can be consumed, measured in seconds	An integer between 0 and 604800 (7 days). The default value is 0
Priority	Optional. Priority of a specified message. A message with a higher priority is more likely to be consumed earlier	The value ranges from 1 to 16 (the value 1 indicates the highest priority). The default value is 8

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

### HTTP Status Code

HTTP/1.1 201 Created



### Special Response Header

None. See "Public Returned Headers"

### Response Body

The returned result is in XML format. The MessageId and MessageBodyMD5 sub-elements of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue.
MessageBodyMD5	MD5 value of the message body

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MalformedXML	The XML you provided was not well-formed.	400
InvalidArgument	The value of Element should be between Low and High seconds/bytes.	400

### Request example:

```
POST /queues/$queueName/messages HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 18 Mar 2012 12:00:00 GMT
Content-Length:500
Content-Type:text/xml;charset=utf-8
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

```
<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<MessageBody>Base64 Encoded Result</MessageBody>
<DelaySeconds>60</DelaySeconds>
<Priority>1</Priority>
</Message>
```

### Response example:

```
HTTP/1.1 201Created
Connnection:close
Content-Length:120
Content-Type:text/xml;charset=utf-8
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<MessageId>
  5F290C926D472878-2-14D9529A8FA-200000001
</MessageId>
<MessageBodyMD5>
  C5DD56A39F5F7BB8B3337C6D11B6D8C7
</MessageBodyMD5>
</Message>
```

# BatchSendMessage

## Description

This interface is used to send messages to the specified message queue in batches. A maximum of 16 messages can be sent in one BatchSendMessage operation. A common message can be consumed by the consumer immediately after being sent to a message queue. If the producer does not expect to consume a message immediately (the typical scenario is a scheduled task), he can set the DelaySeconds parameter when sending the message. The initial status of a message with the DelaySeconds value which is greater than 0 is Delayed. In this status, the message cannot be consumed by the consumer, it can be consumed only after the DelaySeconds time and the message changes to Active status. The priority of the DelaySeconds parameter specified upon message sending is higher than the DelaySeconds attribute of the delayed message queue. That means, when the values of the two DelaySeconds attributes are different, the value of the DelaySeconds parameter specified upon message sending takes precedence.

## Request

A request mainly includes the following parts:

Request line

```
POST /queues/$queueName/messages HTTP/1.1
```

Special Request Header

None. See "Public Request Headers"

### Request Body

Request Body is in XML format. XML contains the attributes for creating messages.

Parameter Name	Description	Parameter Value
MessageBody	Required. Message body	UTF-8 character set
DelaySeconds	Optional. A delay time after which a message can be consumed, measured in seconds	An integer between 0 and 604800 (7 days). The default value is 0
Priority	Optional. Priority of a specified message. A message with a higher priority is more likely to be consumed earlier	The value ranges from 1 to 16 (the value 1 indicates the highest priority). The default value is 8

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

### HTTP Status Code

HTTP/1.1 201 Created

### Special Response Header

None. See "Public Returned Headers"

### Response Body

The return result is in XML format. The MessageId and MessageBodyMD5 sub-elements of multiple messages are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue.
MessageBodyMD5	MD5 value of the message body

## Special Error:

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MalformedXML	The XML you provided was not well-formed.	400
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400

### Request example:

```
POST /queues/$queueName/messages HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 18 Mar 2012 12:00:00 GMT
Content-Length:500
Content-Type:text/xml;charset=utf-8
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

```
<?xml version="1.0" encoding=" UTF-8" ?>
<Messages xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Message>
  <MessageBody>Message1 Base64 Encoded Result</MessageBody>
  <DelaySeconds>60</DelaySeconds>
  <Priority>1</Priority>
</Message>
<Message>
  <MessageBody>Message2 Base64 Encoded Result</MessageBody>
  <DelaySeconds>60</DelaySeconds>
  <Priority>1</Priority>
</Message>
</Messages>
```

### Response example:

```
HTTP/1.1 201Created
Connection:close
Content-Length:120
Content-Type:text/xml;charset=utf-8
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Messages xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Message>
  <MessageId>5F290C926D472878-2-14D9529A8FA-200000001</MessageId>
  <MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
</Message>
```

```
<Message>
  <MessageId>5F290C926D472878-2-14D9529A8FA-200000002</MessageId>
  <MessageBodyMD5>377AC5283D8765C9CEE4E0EA353DFC17</MessageBodyMD5>
</Message>
</Messages>
```

# ReceiveMessage

## Description

This interface is used by the consumer to consume a message in a message queue. The ReceiveMessage operation will change the acquired message to Inactive status. The Inactive duration is determined by the VisibilityTimeout attribute of the queue (for details, see "CreateQueue Interface"). After the message is successfully consumed by the consumer, the DeleteMessage interface should be called to delete the message in the VisibilityTimeout period. Otherwise, the message will be reset to Active status, and the message can be consumed again by the consumer.

## Request

A request mainly includes the following parts:

Request line

```
GET /queues/$queueName/messages?waitseconds=10 HTTP/1.1
```

Special URI Parameter

Parameter Name	Description	Required?
waitseconds	Maximum polling waiting time <sup>①</sup> of the ReceiveMessage request, measured in seconds	Optional

### Note:

<sup>①</sup> If the ReceiveMessage request carries the waitseconds parameter, the polling waiting time of the ReceiveMessage request is specified by waitseconds. If the waitseconds parameter is not specified, the polling waiting time is specified by the PollingWaitSeconds attribute of the queue (see "CreateQueue Interface").

## Special Request Header

None. See "Public Request Headers"

## Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

## HTTP Status Code

HTTP/1.1 200 OK

## Special Response Header

None. See "Public Returned Headers"

## Response Body

The returned result is in XML format. The message body and attributes of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
ReceiptHandle	Temporary handle generated for the acquired message, which is used to delete or modify the message in Inactive status and is valid before NextVisibleTime.
MessageBody	Message body
MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue, represented in milliseconds that have elapsed since 1970-1-1 0:00
NextVisibleTime	Time when a message can be consumed again, represented in milliseconds that have

	elapsed since 1970-1-1 0:00
FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /queues/$queueName/messages HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Response example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<MessageId>5F290C926D472878-2-14D9529A8FA-200000001</MessageId>
<ReceiptHandle>1-ODU4OTkzNDU5My0xNDMyNzI3ODI3LTItOA==</ReceiptHandle>
<MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
<MessageBody>This is a test message</MessageBody>
<EnqueueTime>1250700979248</EnqueueTime>
<NextVisibleTime>1250700799348</NextVisibleTime>
<FirstDequeueTime>1250700779318</FirstDequeueTime >
<DequeueCount>1</DequeueCount >
<Priority>8</Priority>
</Message>
```

# BatchReceiveMessage

## Description

This interface is used by the consumer to consume messages in a queue in batches. A maximum of 16 messages can be acquired in one BatchReceiveMessage operation. This operation will change the acquired messages to Inactive status. The Inactive duration is determined by the VisibilityTimeout attribute of the queue (for details, see "CreateQueue Interface"). After the messages are successfully consumed by the consumer, the DeleteMessage interface should be called to delete the acquired messages in the VisibilityTimeout period. Otherwise, the acquired messages will be reset to Active status, and the messages can be consumed again by the consumer.

## Request

A request mainly includes the following parts:

Request line

```
GET /queues/$queueName/messages?numOfMessages=16&waitseconds=10 HTTP/1.1
```

Special URI Parameter

Parameter Name	Description	Required?
numOfMessages	Maximum number of messages that can be acquired for the current BatchReceiveMessage operation	Required
waitseconds	Maximum polling waiting time <sup>①</sup> of the ReceiveMessage request, measured in seconds	Optional

**Note:**

<sup>①</sup> If the BatchReceiveMessage request carries the waitseconds parameter, the polling waiting time of the BatchReceiveMessage request is specified by waitseconds. If the waitseconds parameter is not specified, the polling waiting time is specified by the PollingWaitSeconds



attribute of the queue (refer to "CreateQueue Interface").

#### Special Request Header

None. See "Public Request Headers"

#### Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

#### HTTP Status Code

HTTP/1.1 200 OK

#### Special Response Header

None. See "Public Returned Headers"

#### Response Body

The return result is in XML format. The message bodies and attributes of multiple messages are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
ReceiptHandle	Temporary handle generated for the acquired message, which is used to delete or modify the message in Inactive status and is valid before NextVisibleTime.
MessageBody	Message body
MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue,

	represented in milliseconds that have elapsed since 1970-1-1 0:00
NextVisibleTime	Time when a message can be consumed again, represented in milliseconds that have elapsed since 1970-1-1 0:00
FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /queues/$queueName/messages?numOfMessages=16 HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE
```

### Response example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Messages xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Message>
  <MessageId>5F290C926D472878-2-14D9529A8FA-200000001</MessageId>
  <ReceiptHandle>1-ODU4OTkzNDU5My0xNDMyNzI3ODI3LTIiOA==</ReceiptHandle>
  <MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979248</EnqueueTime>
  <NextVisibleTime>1250700799348</NextVisibleTime>
  <FirstDequeueTime>1250700779318</FirstDequeueTime >
  <DequeueCount>1</DequeueCount>
```

```

    <Priority>8</Priority>
  </Message>
<Message>
  <ReceiptHandle>1-ODU4OTkzNDU5My0xNDMyNzI3MjQwLkEtOA==</ReceiptHandle>
  <MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979252</EnqueueTime>
  <NextVisibleTime>1250700799350</NextVisibleTime>
  <FirstDequeueTime>1250700779330</FirstDequeueTime >
  <DequeueCount>1</DequeueCount>
  <Priority>8</Priority>
</Message>
</Messages>

```

## DeleteMessage

### Description

This interface is used to delete a consumed message. The consumer needs to use the ReceiptHandle returned by the previous consumption as the parameter to locate the message. This operation can be executed successfully only before NextVisibleTime. After NextVisibleTime expires, the message becomes Active again, the ReceiptHandle will be invalid, the deletion will fail, and a new ReceiptHandle needs to be acquired.

### Request

A request mainly includes the following parts:

#### Request line

```
DELETE /queues/$queueName/messages?ReceiptHandle=<receiptHandle> HTTP/1.1
```

#### Special URI Parameter

Parameter Name	Description	Required?
ReceiptHandle	ReceiptHandle returned by the previous consumption. For details, see "ReceiveMessage Interface"	Required

#### Special Request Header

None. See "Public Request Headers"

Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

HTTP Status Code

HTTP/1.1 204 NoContent

Special Response Header

None. See "Public Returned Headers"

Response Body

None

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400
ReceiptHandleError	The receipt handle you provide is not valid.	400

**Request example:**

```
DELETE
```

```
/queues/$queueName/messages?ReceiptHandle=MbZj6wDWli+QEauMZc8ZRv37sIW2iJKq3M9Mx/KSbkJ0
HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Response example:

```
HTTP/1.1 204 NoContent
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06
```

# BatchDeleteMessage

## Description

This interface is used to delete multiple messages in a message queue in batches. A maximum of 16 messages can be deleted. A corresponding ReceiptHandle needs to be input for each message. It is recommended that this interface should be used with BatchReceiveMessage for higher efficiency. The batch operation result may contain both successful and failed sub-requests. The HTTP status code is 204 only when all sub-requests are successful. If some sub-requests failed, you need to check the error information of every sub-request in the response.

## Request

A request mainly includes the following parts:

Request line

```
DELETE /queues/$queueName/messages HTTP/1.1
```

Special URI Parameter

None

Special Request Header

None. See "Public Request Headers"

### Request Body

Request Body is in XML format. XML contains the ReceiptHandles of multiple messages.

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

### HTTP Status Code

HTTP/1.1 204 NoContent

### Special Response Header

None. See "Public Returned Headers"

### Response Body

None

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400
ReceiptHandleError	The receipt handle you provide is not valid.	400

### Request example:

```
DELETE /queues/$queueName/messages HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE
```

```
<?xml version="1.0" encoding=" UTF-8" ?>
<ReceiptHandles xmlns=" http://mns.aliyuncs.com/doc/v1/" >
  <ReceiptHandle>1-ODU4OTkzNDU5My0xNDM1MTk3NjAwLTItNg==</ReceiptHandle>
  <ReceiptHandle>1-ODU4OTkzNDU5NC0xNDM1MTk3NjAwLTItNg==</ReceiptHandle>
  <ReceiptHandle>1-ODU4OTkzNDU5NS0xNDM1MTk3NjAwLTItNg==</ReceiptHandle>
</ReceiptHandles>
```

**Response example:****Delete all messages successful**

```
HTTP/1.1 204 NoContent
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06
```

**Some messages detlete fail**

```
HTTP/1.1 404
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Errors xmlns=" http://mns.aliyuncs.com/doc/v1/" >
  <Error>
    <ErrorCode>MessageNotExist</ErrorCode>
    <ErrorMessage>Message not exist.</ErrorMessage>
    <ReceiptHandle>1-ODU4OTkzNDU5My0xNDM1MTk3NjAwLTItNg==</ReceiptHandle>
  </Error>
  <Error>
    <ErrorCode>MessageNotExist</ErrorCode>
    <ErrorMessage>Message not exist.</ErrorMessage>
    <ReceiptHandle>1-ODU4OTkzNDU5NC0xNDM1MTk3NjAwLTItNg==</ReceiptHandle>
  </Error>
</Errors>
```

# PeekMessage

## Description

This interface is used by the consumer to view a message. Different from `ReceiveMessage`, `PeekMessage` does not change the message status. If the message is acquired by `PeekMessage`, the

message is still in Active status and can be viewed or consumed. However, if the message is acquired by `ReceiveMessage`, the message changes to Inactive status and cannot be viewed or consumed within the `VisibilityTimeout` period.

## Request

A request mainly includes the following parts:

### Request line

```
GET /queues/$queueName/messages?peekonly=true HTTP/1.1
```

### URI parameter

`peekonly=true` indicates that this request is used only to view the first message in the queue and will not change the message status

### Special Request Header

None. See "Public Request Headers"

### Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

### HTTP Status Code

```
HTTP/1.1 200 OK
```

### Special Response Header

None. See "Public Returned Headers"



## Response Body

The return result is in XML format. The message body and attributes of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
MessageBody	Message body
MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue, represented in milliseconds that have elapsed since 1970-1-1 0:00
FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00. If DequeueCount is 0, it is the same as EnqueueTime of the message
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /queues/$queueName/messages?peekonly=true HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Response example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
```

```

x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding="UTF-8"?>
<Message xmlns=" http://mns.aliyuncs.com/doc/v1/" >
  <MessageId>D6D5F7C9C12D14A4-1-14D953EFC72-200000004</MessageId>
  <MessageBodyMD5>F9360F391579E71CA77BC5D50242FCF4</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979248</EnqueueTime>
  <FirstDequeueTime>1250700979348</FirstDequeueTime >
  <DequeueCount>5</DequeueCount>
  <Priority>8<Priority>
</Message>

```

## BatchPeekMessage

### Description

This interface is used by the consumer to view messages in batches. A maximum of 16 messages can be viewed at a time. Different from BatchReceiveMessage, BatchPeekMessage does not change the message status. If messages are acquired by BatchPeekMessage, the messages are still in Active status and can be viewed or consumed. However, if the messages are acquired by BatchReceiveMessage, the messages change to Inactive status and cannot be viewed or consumed within the VisibilityTimeout period.

### Request

A request mainly includes the following parts:

#### Request line

```
GET /queues/$queueName/messages?peekonly=true&numOfMessages=16 HTTP/1.1
```

#### Special URI Parameter

Parameter Name	Description	Required?
peekonly=true	Indicates that this request is used only to view the first message in the queue and will not change the message status	Required
numOfMessages	Maximum number of messages that can be viewed	Required

	for the current BatchPeekMessage operation	
--	--	--

#### Special Request Header

None. See "Public Request Headers"

#### Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

#### HTTP Status Code

HTTP/1.1 200 OK

#### Special Response Header

None. See "Public Returned Headers"

#### Response Body

The return result is in XML format. The message bodies and attributes of multiple messages are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
MessageBody	Message body
MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue, represented in milliseconds that have elapsed since 1970-1-1 0:00

FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00. If DequeueCount is 0, it is the same as EnqueueTime of the message
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /queues/$queueName/messages?peekonly=true&numOfMessages=16 HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Response example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding="UTF-8"?>
<Messages xmlns=" http://mns.aliyuncs.com/doc/v1/" >
<Message>
  <MessageId>D6D5F7C9C12D14A4-1-14D953EFC72-200000004</MessageId>
  <MessageBodyMD5>F9360F391579E71CA77BC5D50242FCF4</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979248</EnqueueTime>
  <FirstDequeueTime>1250700979348</FirstDequeueTime >
  <DequeueCount>5</DequeueCount>
  <Priority>8<Priority>
</Message>
<Message>
  <MessageId>D6D5F7C9C12D14A4-1-14D953EFC72-200000005</MessageId>
  <MessageBodyMD5>F9360F391579E71CA77BC5D50242FCF4</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979250</EnqueueTime>
```

```

<FirstDequeueTime>1250700979352</FirstDequeueTime >
<DequeueCount>5</DequeueCount>
<Priority>8<Priority>
</Message>
</Messages>

```

# ChangeMessageVisibility

## Description

This interface is used to modify the next consumable time of a message which has been consumed and is still in Inactive status. After VisibilityTimeout of the message is modified successfully, a new ReceiptHandle is returned.

## Request

A request mainly includes the following parts:

### Request line

```

PUT
/queues/$queueName/messages?receiptHandle= <receiptHandle>&visibilityTimeout= <
visibilitytimeout> HTTP/1.1

```

### URI parameter

Parameter Name	Description	Required?
ReceiptHandle	ReceiptHandle returned by the previous consumption. For details, see "ReceiveMessage Interface"	Required
VisibilityTimeout	Interval between the current time and the next consumable time, measured in seconds	Required

### Special Request Header

None. See "Public Request Headers"

Request Body

None

## Response

The returned message includes three parts: returned status line, HTTP header and message body.

HTTP Status Code

HTTP/1.1 200 OK

Special Response Header

None. See "Public Returned Headers"

Response Body

Parameter Name	Description
ReceiptHandle	Temporary handle returned after VisibilityTimeout of the message is modified, which is used to delete or modify the message in Inactive status and is valid before NextVisibleTime.
NextVisibleTime	Time when a message can be consumed again, represented in milliseconds that have elapsed since 1970-1-1 0:00.

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400
MessageNotExist	Message not exist.	404

**Request example:**

```
PUT /queues/$queueName/messages
?receiptHandle=MbZj6wDWli+QEauMZc8ZRv37sIW2iJKq3M9Mx/KSbkJ0&visibilityTimeout=50 HTTP/1.1
Host: $AccountId.mns.cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mns-version: 2015-06-06
Authorization: MNS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

**Response example:**

```
HTTP/1.1 200OK
x-mns-request-id:512B2A634403E52B1956133E
x-mns-version: 2015-06-06

<?xml version="1.0" encoding="UTF-8" ?>
<Message xmlns="http://mns.aliyuncs.com/doc/v1/">
  <ReceiptHandle>
    TbZj6wDWli+9CEauMZc8ZRv37sIW2iJKq3M9Mx/TS1
  </ReceiptHandle >
  <NextVisibleTime>1250700979298000</NextVisibleTime>
</Message>
```

## Error Responses

### Error Response Format of MNS

If an error occurs when the user accesses MNS, MNS returns the HTTP status code 3xx, 4xx or 5xx and a message body in text/xml format.

**Example of an error message body:**

```
<?xml version="1.0" encoding="UTF-8"?>
<Error xmlns="http://mns.aliyuncs.com/doc/v1/">
  <Code>InvalidArgument</Code>
  <Message>Authorization header is invalid or missing.</Message>
  <RequestId>04bb60e3-28aa-4706-99b0-9345d834f266</RequestId>
  <HostId>mns.cn-hangzhou.aliyuncs.com</HostId>
</Error>
```

All error message bodies include the following elements:

Code: the error code returned by MNS to the user.

Message: the detailed error information provided by MNS.

RequestId: the ID that uniquely identifies the request. When you cannot solve the problem, you can seek help from MNS support engineers by offering this RequestId to them.

HostId: the ID that identifies the MNS cluster to be accessed.

For special error information elements, see the specific request descriptions.

## MNS Error Code Table

Error Code	Error Description	HTTP Status Code
AccessDenied	The OwnerId that your Access Key Id associated to is forbidden for this operation.	403
InvalidAccessKeyId	The AccessKey Id you provided is not exist.	403
InternalError	Internal error.	500
InvalidAuthorizationHeader	The Authorization header format is invalid.	400
InvalidDateHeader	The Date header format is invalid.	400
InvalidArgument	The XML you provided did not validate against our published schema, cause by Element① Element.	400
InvalidArgument	The value of Element② should between Low③ and High④ seconds/bytes.	400
InvalidDigest	The Content-MD5 you specified is invalid.	400
InvalidRequestURL	Http request URL format invalid.	400
InvalidQueryString	Http request URL contains invalid querystring item "Element⑤".	400
MalformedXML	The XML you provided was not well-formed.	400



MissingAuthorizationHeader	Authorization header is required.	400
MissingDateHeader	Date header is required.	400
MissingReceiptHandle	ReceiptHandle is required.	400
MissingVisibilityTimeout	VisibilityTimeout is required.	400
MessageNotExist	Message not exist.	404
QueueAlreadyExist	The queue you want to create is already exist.	409
QueueDeletedRecently	The queue you want to create is deleted recently.	400
InvalidQueueName	The queue name you provided is invalid. QueueName should start with alpha and contain only alpha, digit or - .	400
QueueNameLengthError	Queue name length should between 1 and 256.	400
QueueNotExist	The queue name you provided is not exist.	404
ReceiptHandleError	The receipt handle you provide is not valid.	400
SignatureDoesNotMatch	The request signature we calculated does not match the signature you provided. Check your key and signing method.	403
TimeExpired	The http request you sent is expired.	408
QpsLimitExceeded	The qps limit of the queue is exceeded ⑥	400

**Note:**

- ① and ② indicate the name of the XML element in the request content
- ③ indicates the lower limit of a parameter in MNS
- ④ indicates the upper limit of a parameter in MNS
- ⑤ indicates the QueryString element in the request URL
- ⑥ indicates that the upper limit of qps for a single MNS queue is 2k

# Historical Protocols

## RESTful API Overview

MNS provides two kinds of interfaces: queue interfaces and message interfaces.

- Queue related operations: CreateQueue, DeleteQueue, ListQueue, GetQueueAttributes and SetQueueAttributes.
- Message related operations: SendMessage, ReceiveMessage, PeekMessage, DeleteMessage and ChangeMessageVisibility.

## CreateQueue

### Description

This interface is used to create a new message queue.

The message queue name is a string of no more than 256 characters. It must start with a letter and can contain letters, digits, and hyphens (-).

### Request

A request mainly includes the following parts:

Request line

```
PUT /$queueName HTTP/1.1
```

Special Request Header

None. See "Public Request Headers"

## Request Body

Request Body is in XML format. XML contains the attributes of the created queue. All these attributes are optional attributes.

Parameter Name	Description	Parameter Value
DelaySeconds	A delay time after which all messages sent to the queue can be consumed, measured in seconds.	An integer between 0 and 604800 seconds (7 days). The default value is 0
MaximumMessageSize	Maximum message body length of a message sent to the queue, measured in bytes.	An integer between 1024 (1K) and 65536 (64K). The default value is 65536 (64K).
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been acquired or not.	An integer between 60 (1 minute) and 1296000 (15 days). The default value is 345600 (4 days)
VisibilityTimeout	Duration in which a message stays in Inactive status after it is acquired from the queue, measured in seconds.	An integer between 1 and 43200 (12 hours). The default value is 30 (seconds)
PollingWaitSeconds	Maximum waiting time of the ReceiveMessage request for the queue when there are no messages in the queue, measured in seconds.	An integer between 0 and 30 seconds. The default value is 0 (seconds)

### Note:

Once PollingWaitSeconds is set for a queue, by default, all ReceiveMessage requests for the queue enter Polling wait status if there are no messages in the queue. If there are no messages during the entire PollingWaitSeconds period, MessageNotExist is returned. If a new message enters the queue during the PollingWaitSeconds period, the corresponding ReceiveMessage request is woken up and a response is returned.

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

## HTTP Status Code

HTTP/1.1 201 Created Duplicate message queue names are not allowed for the same owner. If the name of the created message queue is the same as that of an existing message queue, and the attributes of the created message queue are the same as those of the existing message queue, error 204 (No Content) is returned; otherwise, error 409 (Conflict) is returned.

## Special Response Header

Parameter Name	Description
Location	The created QueueURL is returned, in the following format: <code>http://\$AccountId.mqs-&lt;Region&gt;.aliyuncs.com/\$queueName</code>

- Response Body

None

## Special Error

Error Code	Error Message	Status Code
QueueAlreadyExist	The queue you want to create is already exist.	409
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400

### Request example:

```
PUT /$queueName HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mqs-version: 2014-07-08
Authorization:MQS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=

<?xml version=" 1.0" encoding=" UTF-8" ?>
<Queue xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
<VisibilityTimeout>60</VisibilityTimeout>
<MaximumMessageSize>65536</MaximumMessageSize>
<MessageRetentionPeriod>1209600</MessageRetentionPeriod>
</Queue>
```

**Return example:**

```

HTTP/1.1 201 Created
x-mqs-request-id: 512B2A634403E52B1956133E
x-mqs-version: 2015-06-06
Location: http://$AccountId.mqs-cn-hangzhou.aliyuncs.com/$queueName

```

# SetQueueAttributes

## Description

This interface is used to modify attributes of a message queue.

## Request

A request mainly includes the following parts:

**Request line**

```
PUT /$queueName?metaoverride=true HTTP/1.1
```

**URI parameter**

metaoverride=true: the attributes of the message queue will be modified

**Special Request Header**

None. See "Public Request Headers"

**Request Body**

Request Body is in XML format. XML contains the attributes of the created queue. All these attributes are optional attributes.

Parameter Name	Description	Parameter Value
DelaySeconds	A delay time after which all messages sent to the queue	An integer between 0 and 604800 seconds (7 days). The

	can be consumed, measured in seconds.	default value is 0
MaximumMessageSize	Maximum message body length of a message sent to the queue, measured in bytes.	An integer between 1024(1K) and 65536(64K). The default value is 65536(64K).
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been acquired or not.	An integer between 60 (1 minute) and 1296000 (15 days). The default value is 345600 (4 days)
VisibilityTimeout	Duration in which a message stays in Inactive status after it is acquired from the queue, measured in seconds.	An integer between 1 and 43200 (12 hours). The default value is 30 (seconds)
PollingWaitSeconds	Maximum waiting time of the ReceiveMessage request for the queue when there are no messages in the queue, measured in seconds.	An integer between 0 and 30 seconds. The default value is 0 (seconds)

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

HTTP Status Code

HTTP/1.1 204 No Content

Special Response Header

None. See "Public Return Headers"

Response Body

None

## Special Error

Error Code	Error Message	Status Code
------------	---------------	-------------

InvalidArgument	The value of Element should be between Low and High seconds/bytes.	400
QueueNotExist	The queue name you provided is not exist.	404

**Request example:**

```
PUT /$queueName?metaoverride=true HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<Queue xmlns="http://mqs.aliyuncs.com/doc/v1/" >
  <VisibilityTimeout >60</VisibilityTimeout>
  <MaximumMessageSize>1024</MaximumMessageSize>
  <MessageRetentionPeriod>120</MessageRetentionPeriod>
  <DelaySeconds>30</DelaySeconds>
</Queue>
```

**Return example:**

```
HTTP/1.1 204 No Content
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version:2015-06-06
```

# GetQueueAttributes

## Description

This interface is used to acquire the attributes of a created message queue. The returned attributes include the configurable attributes that are configured during creation of the message queue, the creation time of the message queue, the last modification time of the message queue attribute, and the counts of various types of messages in the message queue (approximate values).

## Request

A request mainly includes the following parts.

Request line

GET /\$queueName HTTP/1.1

#### Special Request Header

None. See "Public Request Headers"

#### Request Body

None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

#### HTTP Status Code

HTTP/1.1 200OK

#### Special Response Header

None. See "Public Return Headers"

#### Response Body

The return result is in XML format. The format is: <Queue>Attribute Element List</Queue>

The attribute element list includes:

Parameter Name	Description
QueueName	Queue name
CreateTime	Creation time of the queue, represented by seconds that have elapsed since 1970-1-1 0:00 till now
LastModifyTime	Last modification time of the queue attributes, represented by seconds that elapse



	since 1970-1-1 0:00 till now
DelaySeconds	A delay time after which all messages sent to the queue can be consumed, measured in seconds
MaximumMessageSize	Maximum message body length of a message sent to the queue, measured in bytes
MessageRetentionPeriod	Maximum lifetime of the message in the queue, measured in seconds. After the time specified by this parameter expires, the message will be deleted no matter whether it has been acquired or not
PollingWaitSeconds	Maximum waiting time of the ReceiveMessage request for the queue when there are no messages in the queue, measured in seconds
Activemessages	Total number of active messages in the queue, which is an approximate value
InactiveMessages	Total number of inactive messages in the queue, which is an approximate value
DelayMessages	Total number of delayed messages in the queue, which is an approximate value

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404

### Request example:

```
GET /$queueName HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

### Return example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:145
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version:2015-06-06
```

```
<?xml version="1.0" encoding="UTF-8"?>
<Queue xmlns=http://mqs.aliyuncs.com/doc/v1" >
<QueueName> $queueName </QueueName ><!--The actual Queue Name is returned ->
<CreateTime>1250700999</CreateTime >
<LastModifyTime>1250700999</LastModifyTime>
<VisibilityTimeout>60</VisibilityTimeout >
<MaximumMessageSize>65536</MaximumMessageSize>
<MessageRetentionPeriod>65536</MessageRetentionPeriod>
<DelaySeconds>30</DelaySecond>
<PollingWaitSeconds>0</PollingWaitSeconds>
<InactiveMessages>0</InactiveMessages>
<ActiveMessages>20</ActiveMessages>
<DelayMessages >0</DelayMessages>
</Queue>
```

# DeleteQueue

## Description

This interface is used to delete a created message queue.

### Note:

Be cautious when using this interface. Once the message queue is deleted successfully, all messages in the queue are deleted and cannot be recovered.

## Request

A request mainly includes the following parts:

Request line

```
DELETE /$queueName HTTP/1.1
```

Special Request Header

None. See "Public Request Headers"

Request Body

None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

HTTP Status Code

HTTP/1.1 204 No Content

Special Response Header

None. See "Public Return Headers"

Response Body

None

## Special Error

This operation has no special errors and involves mainly permission verification errors and parameter setting errors. For details, see error response codes.

**Request example:**

```
DELETE /$queueName HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMbLRpdf3YB+FIEXAMPLE=
```

**Return example:**

```
HTTP/1.1 204 NoContent
x-mqs-request-id: 512B2A634403E52B1956133E
x-mqs-version: 2015-06-06
```

## ListQueue

### Description

This interface is used to list the message queues under the AccountId. Data can be acquired by page. Only the QueueURL attribute is returned. If necessary, use the GetQueueAttributes interface (see "GetQueueAttributes Interface") to acquire more message queue attributes. To acquire the list of specified message queues, specify the 'x-mqs-prefix' parameter when calling this interface. All message queues with the specified prefix will be returned.

**Tip:**

If the total number of message queues returned for this request exceeds the x-mqs-ret-number value, NextMarker contained in the returned XML result indicates the start position of the next page, and this value is assigned to the x-mqs-marker parameter in the next request, to display the next page of results.

## Request

A request mainly includes the following parts:

Request line

GET / HTTP/1.1

Special Request Header

Parameter Name	Description	Required?
x-mqs-marker	Start position of the next page, which is generally acquired from NextMarker returned in the previous page.	Optional
x-mqs-ret-number	Maximum number of results returned for a single request, which can be an integer between 1 and 1000. The default value is 1000.	Optional
x-mqs-prefix	Search for the queueNames starting with this prefix.	Optional

For other request headers, see "Public Request Headers"

- Request Body

None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 200 OK

### Special Response Header

None. See "Public Return Headers"

### Response Body

The result in XML format is returned. The top-layer element Queues contains multiple Queue elements, and the Queue elements contain QueueURL elements. QueueURL indicates the URL address of the created queue. If the number of return results exceeds the x-mqs-ret-number value, the element containing NextMarker indicates the start position of the next page.

## Special Error

This operation has no special errors and involves mainly permission verification errors and parameter setting errors. For details, refer to MQS error response codes.

### Request example:

```
GET / HTTP/1.1
x-mqs-marker: xxxx
x-mqs-ret-number:2
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 08 Mar 2012 12:00:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE=
```

### Return example:

```
HTTP/1.1 200OK
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version: 2015-06-06
<?xml version="1.0" encoding=" UTF-8" ?>
<Queues xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
```

```
<Queue>
  < QueueURL>
    http:// $AccountId.mqs-cn-hangzhou.aliyuncs.com/queueName
  </ QueueURL>
</Queue>
<Queue>
  < QueueURL>
    http:// $AccountId.mqs-cn-hangzhou.aliyuncs.com/queueName1
  </ QueueURL>
</Queue>
<NextMarker> Base64 Encoded Result </NextMarker>
</Queues>
```

# SendMessage

## Description

This interface is used to send message to the specified message queue. By default, sent messages can be consumed immediately by any consumer. Sometimes the messages are not expected to be consumed immediately, such as some scheduled tasks, on this condition the producer could add DelaySeconds parameter when sending messages. The status of messages with DelaySeconds value greater than 0 is "Delayed". These messages cannot be consumed by any consumer until message status change to "Active" after DelaySeconds expired.

### Tip:

The DelaySeconds specified when sending message has higher priority than the DelaySeconds attribute of the message queue. That means, when the two DelaySeconds values are different, the DelaySeconds specified in message takes the precedence.

## Request

A request mainly includes the following parts:

Request line

POST /\$queueName/messages HTTP/1.1

Special Request Header

None. See "Public Request Headers"

### Request Body

Request Body is in XML format. XML contains the attributes of the created message.

Parameter Name	Description	Parameter Value
MessageBody	Required. Message body	UTF-8 character set
DelaySeconds	Optional. A delay time after which a message can be consumed, measured in seconds	An integer between 0 and 604800 seconds (7 days). The default value is 0
Priority	Optional. Priority of a specified message. A message with a higher priority is more likely to be consumed earlier	The value ranges from 1 to 16 (the value 1 indicates the highest priority). The default value is 8

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 201 Created

### Special Response Header

None. See "Public Return Headers"

### Response Body

The return result is in XML format. The MessageId and MessageBodyMD5 sub-elements of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue.
MessageBodyMD5	MD5 value of the message body

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MalformedXML	The XML you provided was not well-formed.	400
InvalidArgument	The value of Element should between MIN and MAX seconds/bytes.	400

### Request example:

```
POST /$queueName/messages HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 18 Mar 2012 12:00:00 GMT
Content-Length:500
Content-Type:text/xml;charset=utf-8
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

```
<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
  <MessageBody>Base64 Encoded Result</MessageBody>
  <DelaySeconds>60</DelaySeconds>
  <Priority>1</Priority>
</Message>
```

### Return header example:

```
HTTP/1.1 201Created
Connnection:close
Content-Length:120
Content-Type:text/xml;charset=utf-8
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version:2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
  <MessageId>5F290C926D472878-2-14D9529A8FA-200000001</MessageId>
  <MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
</Message>
```

## ReceiveMessage



## Description

This interface is used by the consumer to consume a message in a message queue. This `ReceiveMessage` operation will change the acquired message to Inactive status. The Inactive duration is determined by the `VisibilityTimeout` attribute of the queue (for details, see "CreateQueue Interface"). After the message is successfully consumed by the consumer, the `DeleteMessage` interface should be called to delete the message within the `VisibilityTimeout`. Otherwise, the message would be reset to Active status and consumed again by the consumer.

## Request

A request mainly includes the following parts:

### Request line

```
GET /$queueName/messages?waitseconds=10 HTTP/1.1
```

### Special URI Parameter

Parameter Name	Description	Required?
waitseconds	Maximum polling waiting time <sup>①</sup> of the <code>ReceiveMessage</code> request, measured in seconds	Optional

### Note:

<sup>①</sup> If the `ReceiveMessage` request carries the `waitseconds` parameter, the polling waiting time of the `ReceiveMessage` request is specified by `waitseconds`. If the `waitseconds` parameter is not specified, the polling waiting time is specified by the `PollingWaitSeconds` attribute of the queue (see "CreateQueue Interface").

### Special Request Header

None. See "Public Request Headers"

### Request Body

None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 200 OK

### Special Response Header

None. See "Public Return Headers"

### Response Body

The return result is in XML format. The message body and attributes of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
ReceiptHandle	Temporary handle generated for the acquired message, which is used to delete or modify the message in Inactive status and is valid before NextVisibleTime.
MessageBody	Message body
MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue, represented in milliseconds that have elapsed since 1970-1-1 0:00
NextVisibleTime	Time when a message can be consumed again, represented in milliseconds that have elapsed since 1970-1-1 0:00
FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /$queueName/messages HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMbLRepdf3YB+FIEXAMPLE
```

### Return example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version:2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
  <MessageId>5F290C926D472878-2-14D9529A8FA-200000001</MessageId>
  <ReceiptHandle>1-ODU4OTkzNDU5My0xNDMyNzI3ODI3LTIiOA==</ReceiptHandle>
  <MessageBodyMD5>C5DD56A39F5F7BB8B3337C6D11B6D8C7</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979248</EnqueueTime>
  <NextVisibleTime>1250700799348</NextVisibleTime>
  <FirstDequeueTime>1250700779318</FirstDequeueTime >
  <DequeueCount>1</DequeueCount >
  <Priority>8</Priority>
</Message>
```

## DeleteMessage

### Description

This interface is used to delete a consumed message. A valid ReceiptHandle, acquired in a previous consumption, is needed for locating the message to delete. This delete operation can be executed successfully only before NextVisibleTime. After NextVisibleTime expires, the message becomes Active

again, and the ReceiptHandle will be invalid which will cause the deletion to fail.

## Request

A request mainly includes the following parts:

Request line

```
DELETE/$queueName/messages?receiptHandle=<receiptHandle> HTTP/1.1
```

Special URI Parameter

Parameter Name	Description	Required?
ReceiptHandle	ReceiptHandle returned in the previous consumption. For details, see "ReceiveMessage Interface"	Required

- Special Request Header None. See "Public Request Headers"
- Request Body None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

HTTP Status Code

```
HTTP/1.1 204 NoContent
```

Special Response Header

None. See "Public Return Headers"

Response Body

None

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400
ReceiptHandleError	The receipt handle you provide is not valid.	400

### Request example:

```
DELETE
/$queueName/messages?receiptHandle=MbZj6wDWli+QEauMZc8ZRv37sIW2iJKq3M9Mx/KSbkJOHTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Return example:

```
HTTP/1.1 204 NoContent
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version: 2015-06-06
```

## PeekMessage

### Description

This interface is used by the consumer to view a message. Different from `ReceiveMessage`, `PeekMessage` does not change the message status. If the message is acquired by `PeekMessage`, the message is still in Active status and can be viewed or consumed. However, if the message is acquired by `ReceiveMessage`, the message changes to Inactive status and cannot be viewed or consumed within the `VisibilityTimeout` period.

### Request

A request mainly includes the following parts:

Request line

GET /\$queueName/messages?peekonly=true HTTP/1.1

#### URI parameter

peekonly=true indicates that this request is used only to view the first message in the queue and will not change the message status

#### Special Request Header

None. See "Public Request Headers"

#### Request Body

None

## Response

The returned message includes three parts: return status line, HTTP header, and message body.

#### HTTP Status Code

HTTP/1.1 200 OK

#### Special Response Header

None. See "Public Return Headers"

#### Response Body

The return result is in XML format. The message body and attributes of the message are returned.

Parameter Name	Description
MessageId	Message ID, which is unique in one queue
MessageBody	Message body

MessageBodyMD5	MD5 value of the message body
EnqueueTime	Time when a message is sent to the queue, represented in milliseconds that have elapsed since 1970-1-1 0:00
FirstDequeueTime	Time when a message is consumed for the first time, represented in milliseconds that have elapsed since 1970-1-1 0:00. If DequeueCount is 0, it is the same as EnqueueTime of the message
DequeueCount	Total consumption times of a message
Priority	Priority of a message

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
MessageNotExist	Message not exist.	404

### Request example:

```
GET /$queueName/messages?peekonly=true HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mqs-version: 2014-07-08
Authorization: MQS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

### Return example:

```
HTTP/1.1 200 OK
Connection:close
Content-Type=text/xml;charset=utf-8
Content-Length:500
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version: 2015-06-06

<?xml version="1.0" encoding="UTF-8"?>
<Message xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
  <MessageId>D6D5F7C9C12D14A4-1-14D953EFC72-200000004</MessageId>
  <MessageBodyMD5>F9360F391579E71CA77BC5D50242FCF4</MessageBodyMD5>
  <MessageBody>This is a test message</MessageBody>
  <EnqueueTime>1250700979248</EnqueueTime>
  <FirstDequeueTime>1250700979348</FirstDequeueTime >
  <DequeueCount>5</DequeueCount>
  <Priority>8<Priority>
</Message>
```

# ChangeMessageVisibility

## Description

This interface is used to modify the next consumable time of a consumed message while it is still in Inactive status. After modifying the VisibilityTimeout, a new ReceiptHandle is returned.

## Request

A request mainly includes the following parts:

Request line

```
PUT
/$queueName/messages?receiptHandle=<receiptHandle>&visibilityTimeout=<visibility
timeout> HTTP/1.1
```

URI parameter

Parameter Name	Description	Required?
ReceiptHandle	ReceiptHandle returned after the previous consumption. For details, see "ReceiveMessage Interface"	Required
VisibilityTimeout	Interval between the current time and the next consumable time, measured in seconds	Required

Special Request Header

None. See "Public Request Headers"

Request Body

None



## Response

The returned message includes three parts: return status line, HTTP header, and message body.

### HTTP Status Code

HTTP/1.1 200 OK

### Special Response Header

None. See "Public Return Headers"

### Response Body

Parameter Name	Description
ReceiptHandle	Temporary handle returned after VisibilityTimeout of the message is modified, which is used to delete or modify the message while it is still in Inactive status before NextVisibleTime.
NextVisibleTime	Time when a message can be consumed again, represented in milliseconds that have elapsed since 1970-1-1 0:00.

## Special Error

Error Code	Error Message	Status Code
QueueNotExist	The queue name you provided is not exist.	404
InvalidArgument	The value of Element should between Low and High seconds/bytes.	400
MessageNotExist	Message not exist.	404

### Request example:

```
PUT /queueName/messages
?receiptHandle=MbZj6wDWli+QEauMZc8ZRv37sIW2iJKq3M9Mx/KSbkJ0&visibilityTimeout=50 HTTP/1.1
Host: $AccountId.mqs-cn-hangzhou.aliyuncs.com
Date: Wed, 28 May 2012 22:32:00 GMT
x-mqs-version: 2014-07-08
```

```
Authorization: MQS 15B4D3461F177624206A:xQE0diMblRepdf3YB+FIEXAMPLE
```

**Return example:**

```
HTTP/1.1 200OK
x-mqs-request-id:512B2A634403E52B1956133E
x-mqs-version: 2015-06-06

<?xml version="1.0" encoding=" UTF-8" ?>
<Message xmlns=" http://mqs.aliyuncs.com/doc/v1/" >
  <ReceiptHandle>TbZj6wDWli+9CEauMZc8ZRv37sIW2iJKq3M9Mx/TS1</ReceiptHandle >
  <NextVisibleTime>1250700979298000</NextVisibleTime>
</Message>
```