Message Service

Quick Start

Quick Start

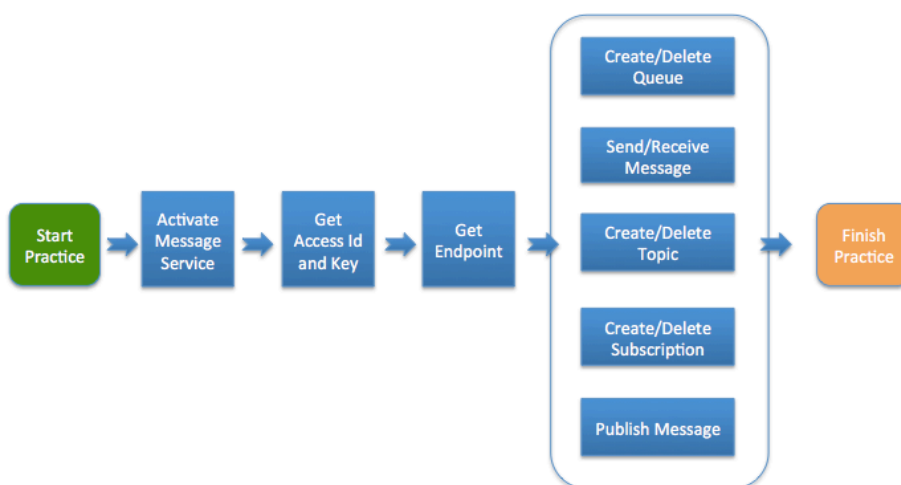## Start to Use Alibaba Cloud Message Service

Alibaba Cloud Message Service provides you with professional message middleware service which facilitate you to do system decoupling and deal with massive concurrent requests.

The document **Overview** contains the concepts you should know before using Message Service, such as the details of the 2 models (Queue and Topic) and the difference between them.

Next, you can do the operations of Queue and Topic on the Console of Message Service or in your application code with the SDK.Please refer to the Development Guide of Message Service.

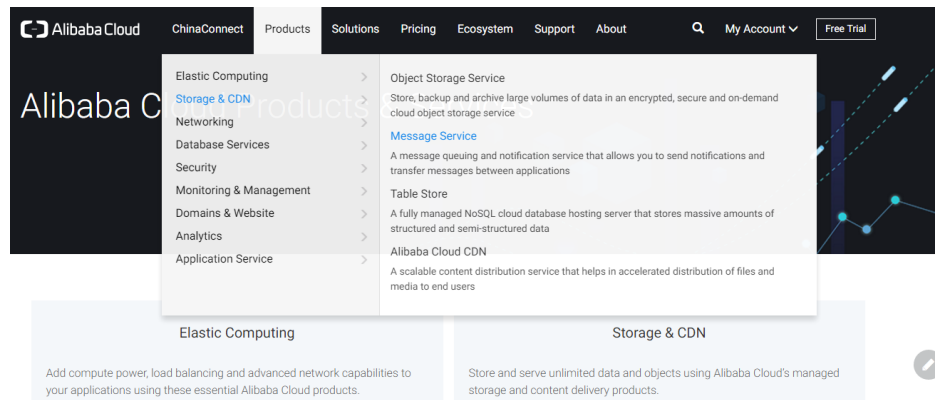This section guides you how to practice the operations of Queue or Topic on the Console of Message Service.

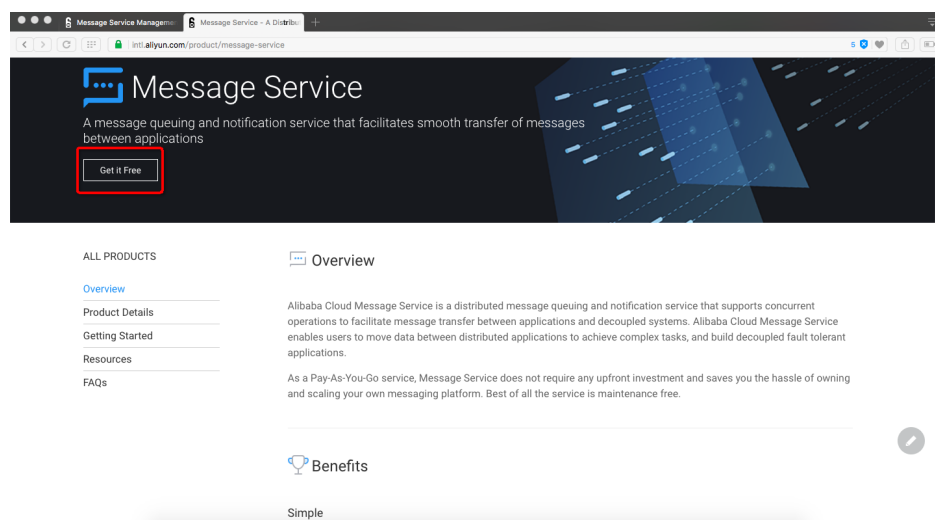
Activate Message Service

Open the homepage of Alibaba Cloud, move arrow of mouse on **Procducts -> Storage & CDN -> Message Service** and click on the **Message Service** to the home page of Message
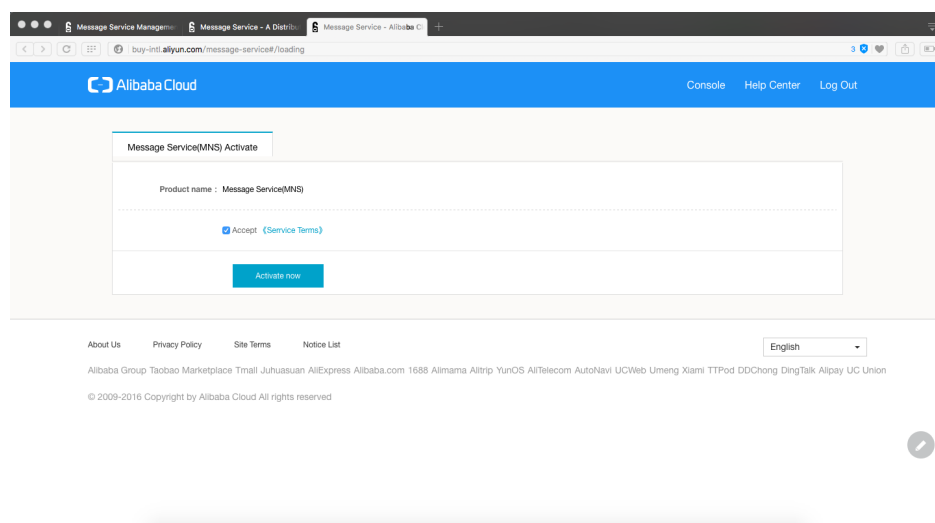
Service.

Click the button **Get it Free** on the page as below.

Accept Service Terms and Active Service in the Activate Page by clicking **Activate Now**.
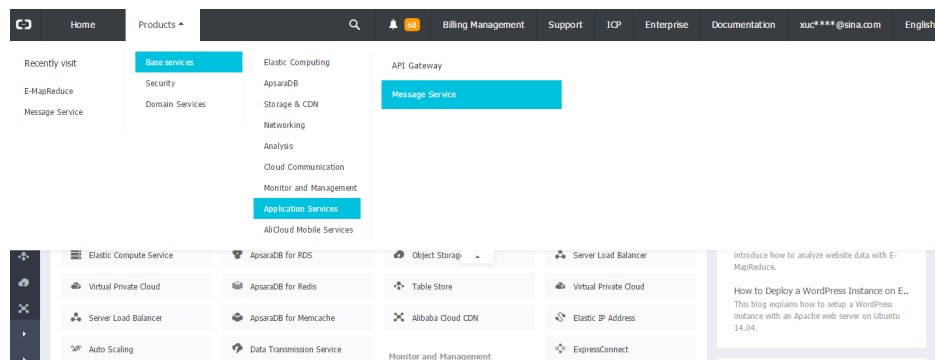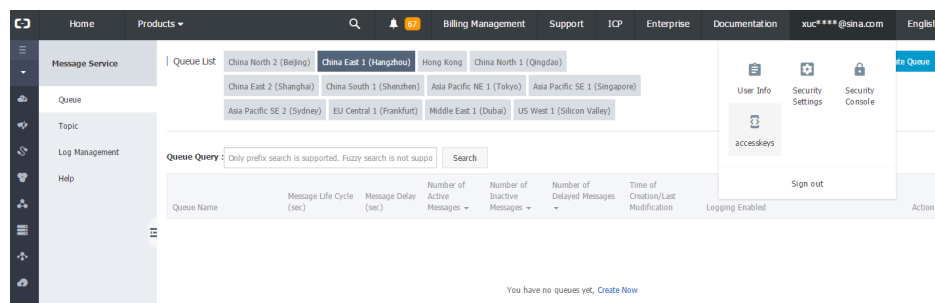
Get AccessKey

Note: Skip this step if you have already got the accesskey.

Open the home page of console of Alibaba Cloud at https://home-intl.console.aliyun.com.

Note: this page requires user to log in first and find **Message Service** by moving arrow of mouse on **Products > Base Services > Application Services> Message Service**.
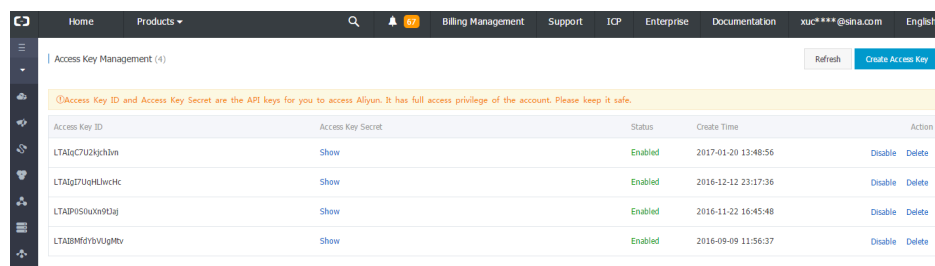

Move arrow on **Account Name** at the top right corner of website. And click **accessskeys** in the pop-up dialog.

Get the accesskey from the **Accesskey Management** website by clicking **show**.

Note: if there is not any access key, you can create a new key by clicking the button **Create Access Key**.

Get Endpoint for Accessing Message Service.

Log in console of Message Service(mns.console.aliyun.com).

Select a region and click the button **Get Endpoint** at the top right corner to get the endpoints for regions.

Note：There are 3 types of endpoints for each region: Public(access from internet), Private(access from Alibaba Cloud ECS VM) and VPC(access from Alibaba Cloud VPC).
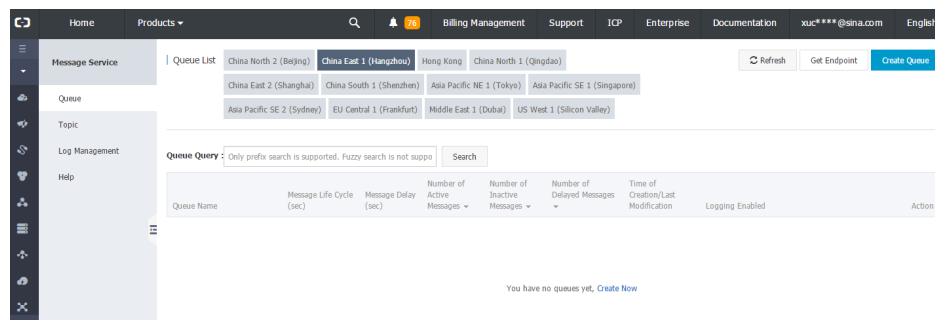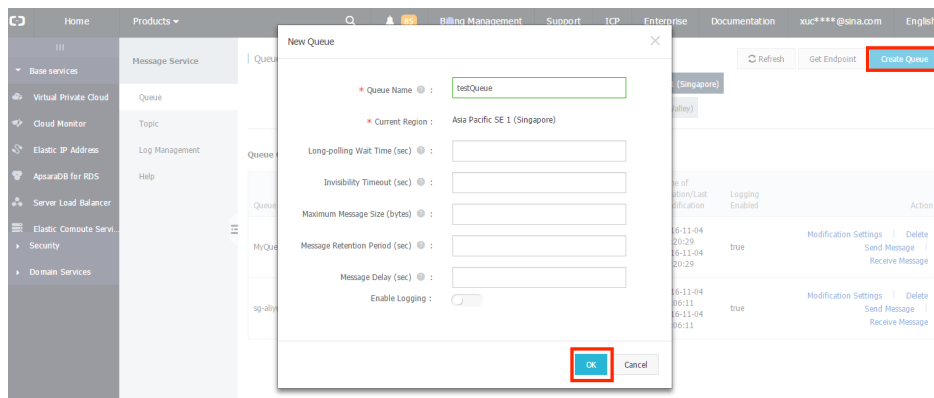

Queue Operations

Queue operations

CreateQueue

As an example, to create a queue named **MyQueue** on Alibaba Cloud MNS as follows.

Click **Create queue**.

Specify the attributes of the queue on the displayed dialog box, then click **OK** to create the queue.
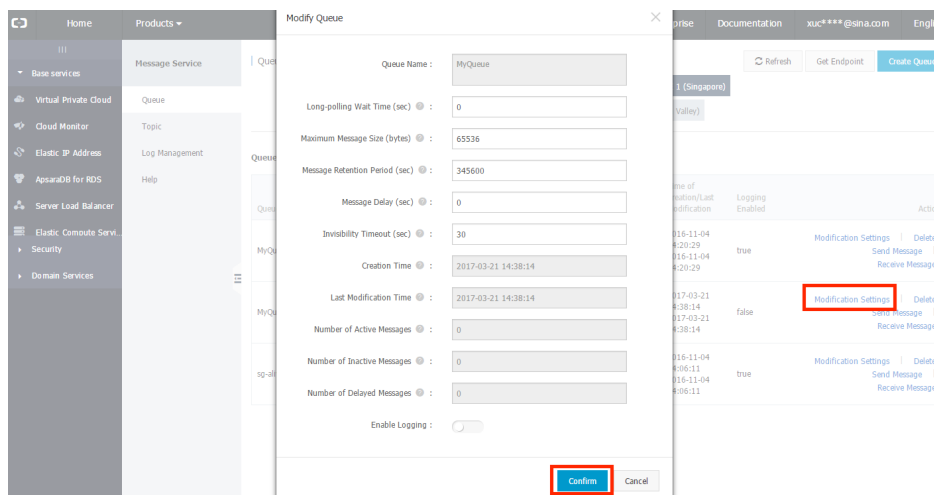
SetQueueAttributes

After **MyQueue** is created successfully, set the attributes of **MyQueue**.

Click **Modification settings** in the action list to the right of **MyQueue**.

Modify attributes according to your demands on the dialog box displayed on the console, then click **OK**.

GetQueueAttributes

After **MyQueue** is created successfully, obtain the queue attributes of **MyQueue**.

By default, basic queue attributes are displayed on the console. You can view them directly.

ListQueue

List all queues with a given prefix under an account.

Input the prefix in the Query Queue box, then click **Search**. All queues with the specified prefix are listed on the console.

DeleteQueue

After **MyQueue** is created successfully, delete **MyQueue**.

Click **Delete** to the right of **MyQueue** and click the **Delete** on dialog box to finish the deletion.
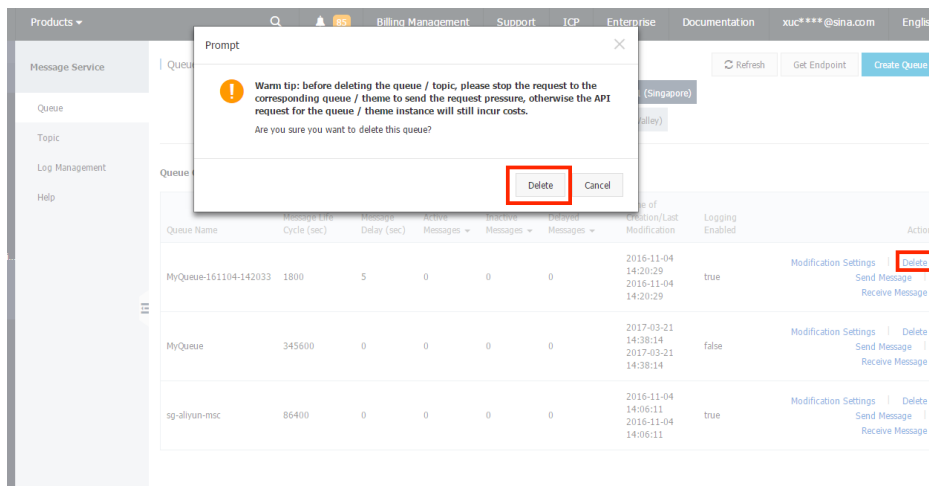
SendMessage

After **MyQueue** is created successfully, send a message to **MyQueue**.

Click **Send Message** to the right of MyQueue and input the message in the displayed dialog box, then click **Send message**.
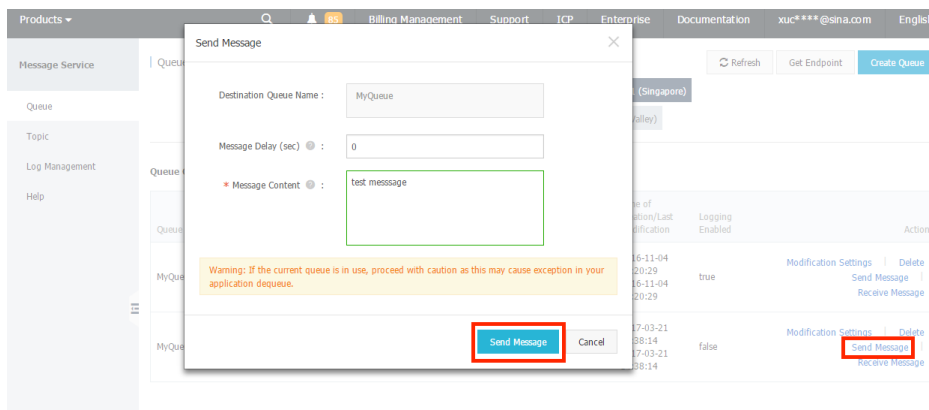
ReceiveMessage

After **MyQueue** is created successfully, get the message from **MyQueue** and compare it with the message you sent to **MyQueue**. Confirm the consistency between the 2 messages and record the returned ReceiptHandle.

Click **Receive message** to the right of **MyQueue** to check attributes of the received message displayed in dialog box.

DeleteMessage

After verifying that the message is correct, use the ReceiptHandle you obtained in the previous step to delete the received message.

In the Receive Message dialog box, select **Auto delete received messages**, and click **Receive message**. The current message is deleted, and the next message is obtained.
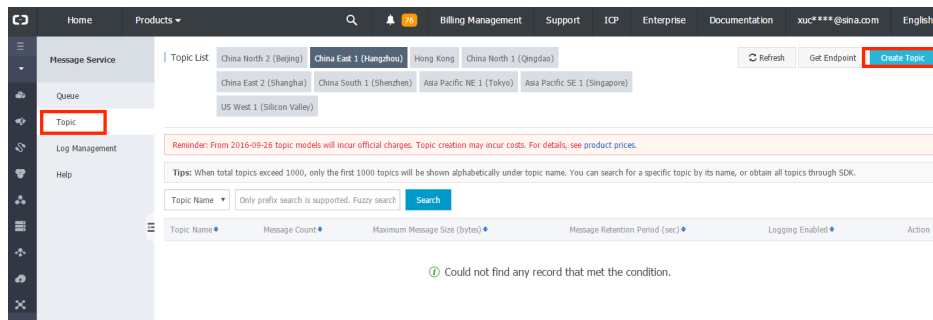

Topic Operations

To create a topic named **MyTopic** and list it as following steps.

Log in the console of Message Service(skip it if you have already logged in the console).
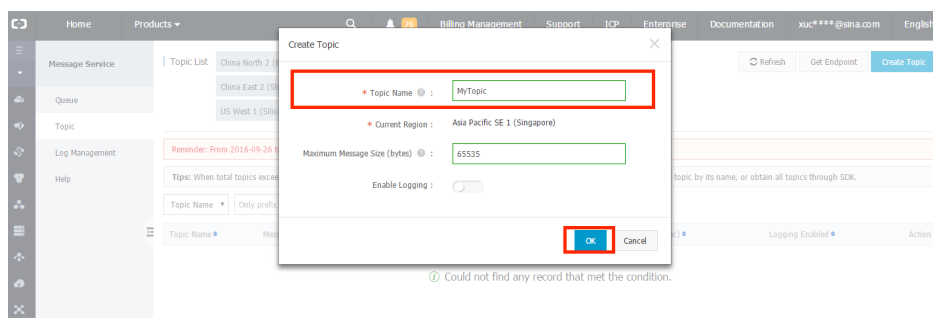
Click **Topic** at the left side bar.

Click **Create Topic** on the top right corner.

Input topic name **Mytopic** and other attributes.

Click **Ok** to create it.

Delete a topic

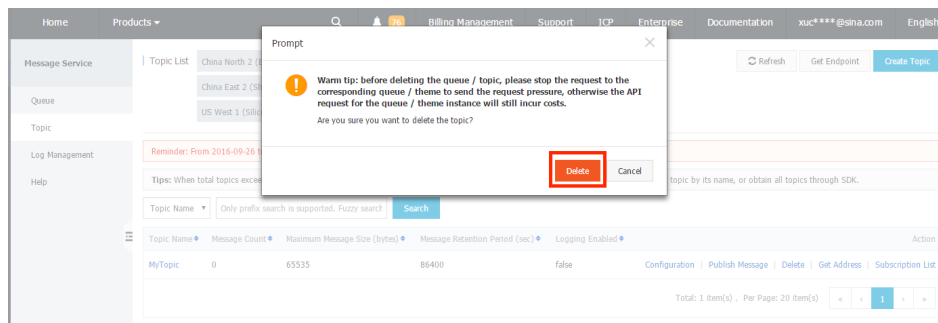To delete the topic by following two steps:

Find the topic to delete and Click the **Delete** button in the right action list of this topic.
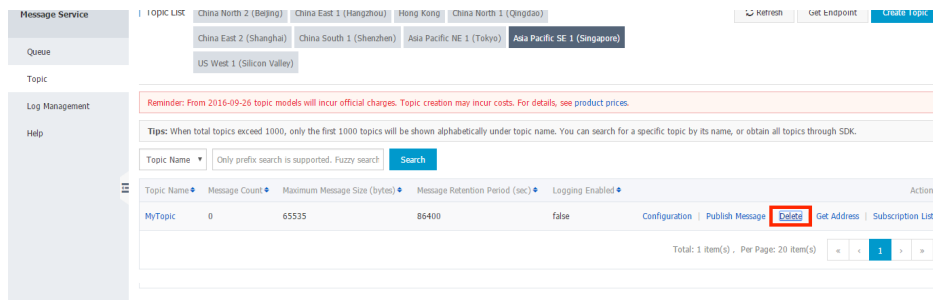
Clicking **Delete**.

Set topic properties

To set the properties of a topic by following setps:

Find the topic and click on the button **Configuration** in the action list of this topic.
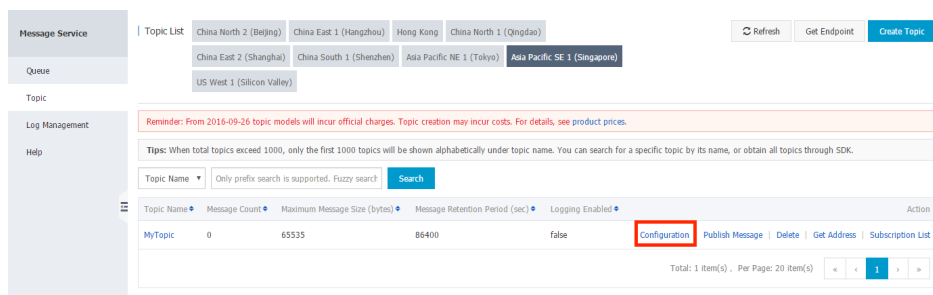
Change the properties in the pop-up dialog and click on **Confirm**.
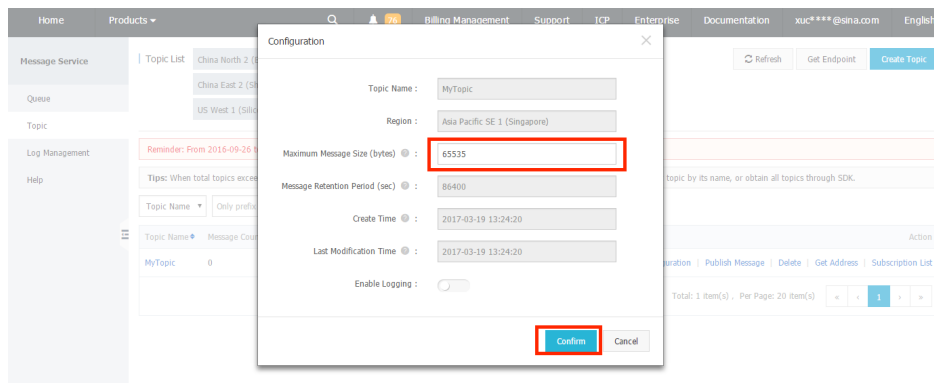
Get the subscription list

To get the subscription list of a topic(every topic includes one or more subscription) in following steps:

Find the topic **MyTopic** in the topic list, then click on **Subscription List** of the topic in the action list:
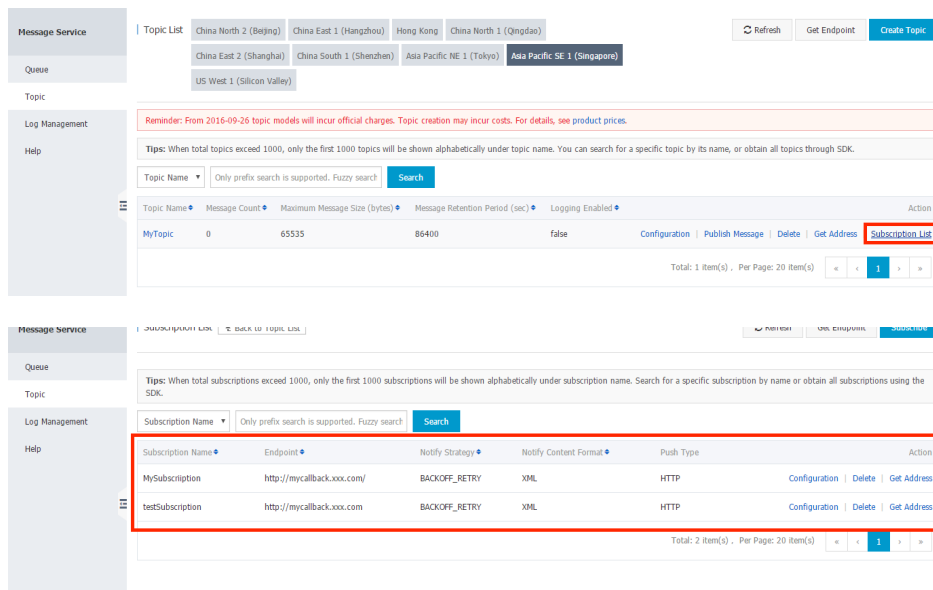
Search the subscription with prefix of its name such as **My**.
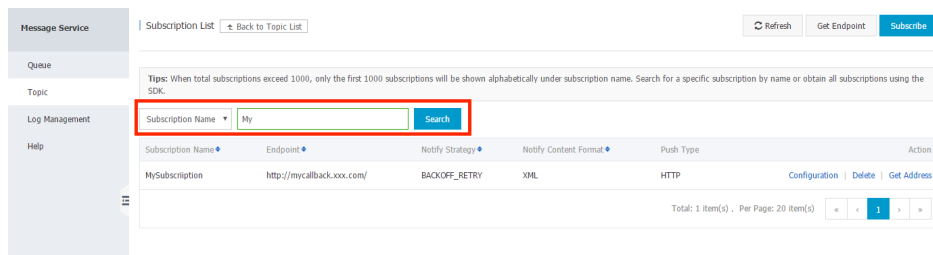
Create a subscription

To create a subscription named **MySubscription** for the topic **MyTopic** by following steps:

Click the **Subscription List** on the action list of **MyTopic**.
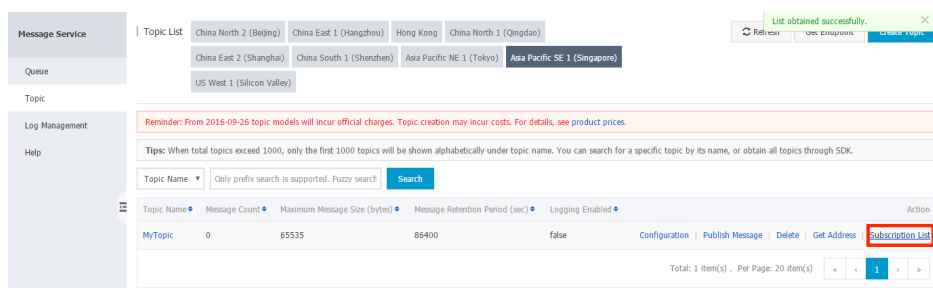
Click the button **Subscribe** at the top right corner to generate a dialog box.
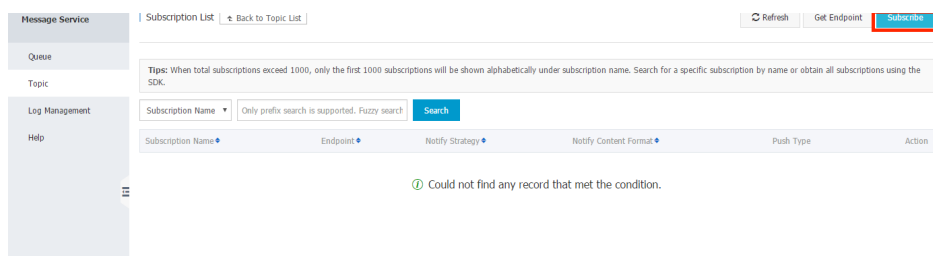
Input the subscription name **MySubscription** and set other attributes such as receiving http endpoint, retry strategies, format of message, message filter tag etc. Then Click **Ok**.
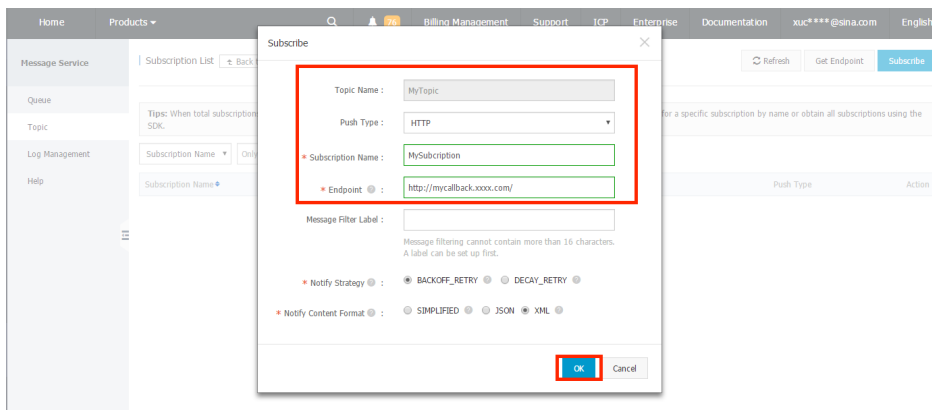
Delete a subscripton

To delete the subscription by following steps:

Enter the subscription list of a topic and find the subscription to delete.
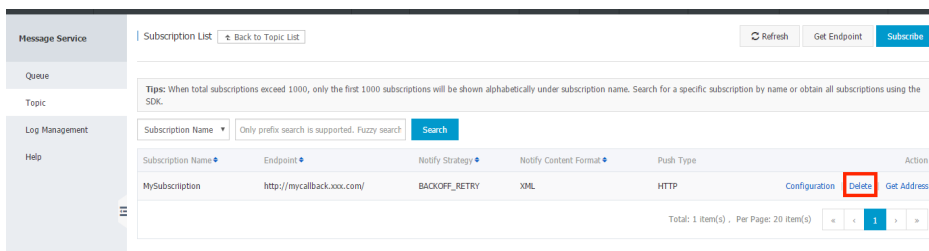
Click **Delete** button in the action list of subscription and confirm to delete in the pop-up dialog.
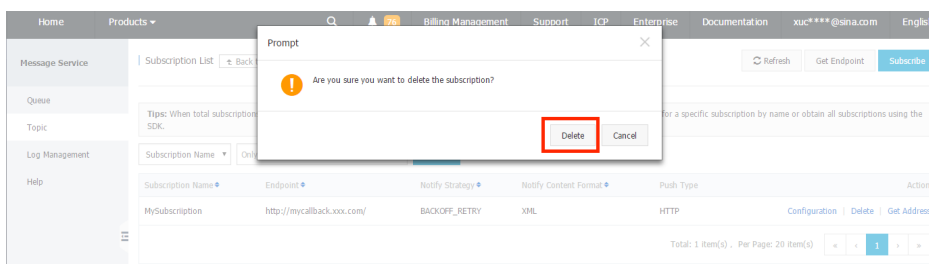

Set subscription properties

To set the properties of a subscription by following steps:

Enter the subscription list of a topic, and then click **Configuration** button.
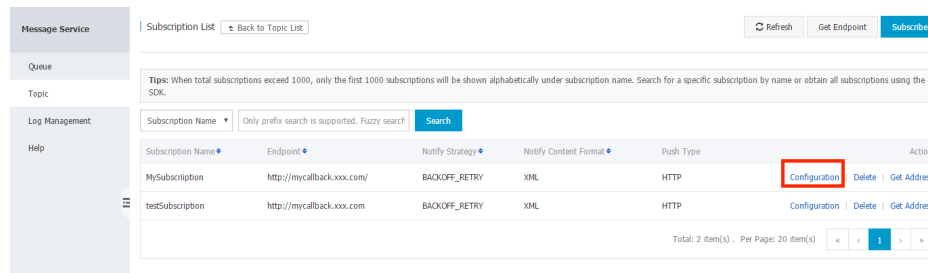
Change the properties in the pop-up dialog and click on **Confirm**.
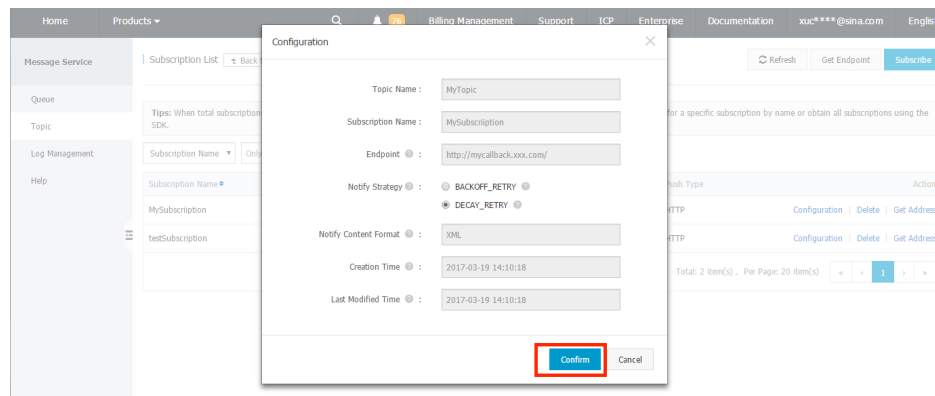
Publish a message

To publish a message to topic by following steps:

Find the topic and click **Publish Message** in the action list of this topic.
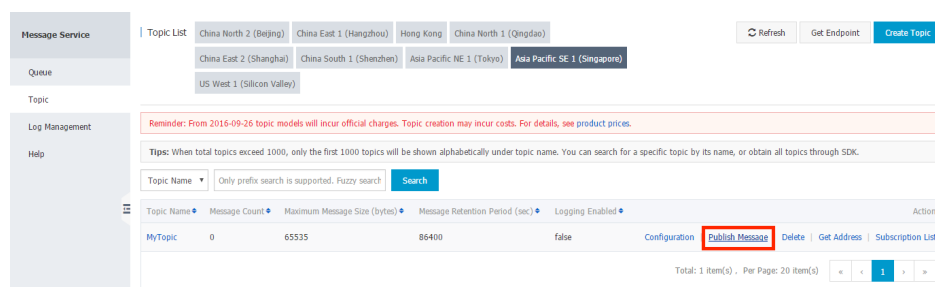
Input the content of message and set the push type filter label(optional) then click **Send Message**.
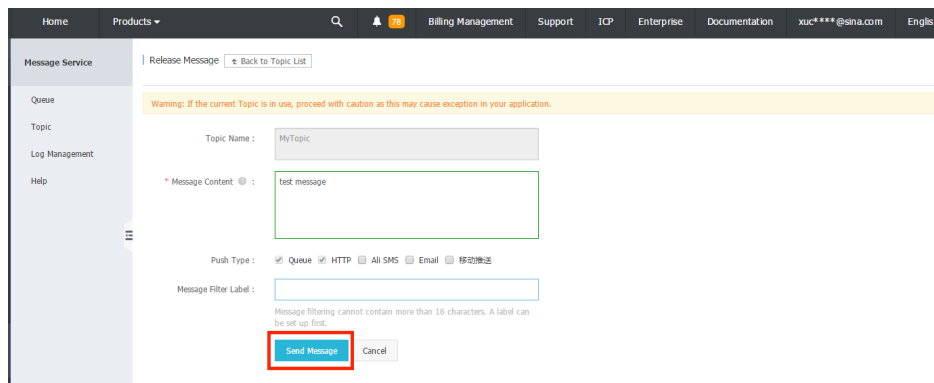
Access By RAM User

RAM operations

Create RAM User

Log on to the Alibaba Cloud console, then click **Resource Access Management** from the left-side navigation bar to open the RAM console.
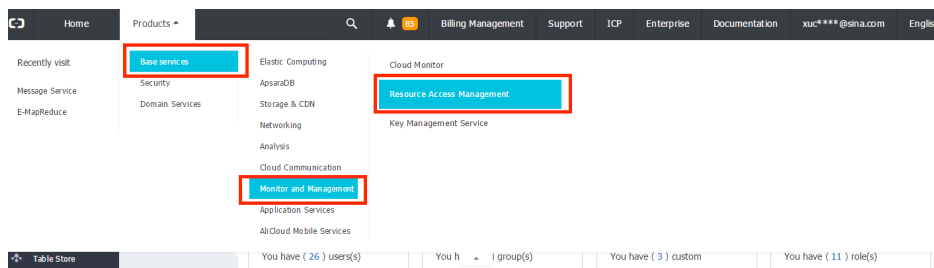
Click **Users** on the RAM console.

Click **New user** on the User Management page.

Input a login name and other details, tick on **Automatically generate an Access key for this User**, then click **OK**.
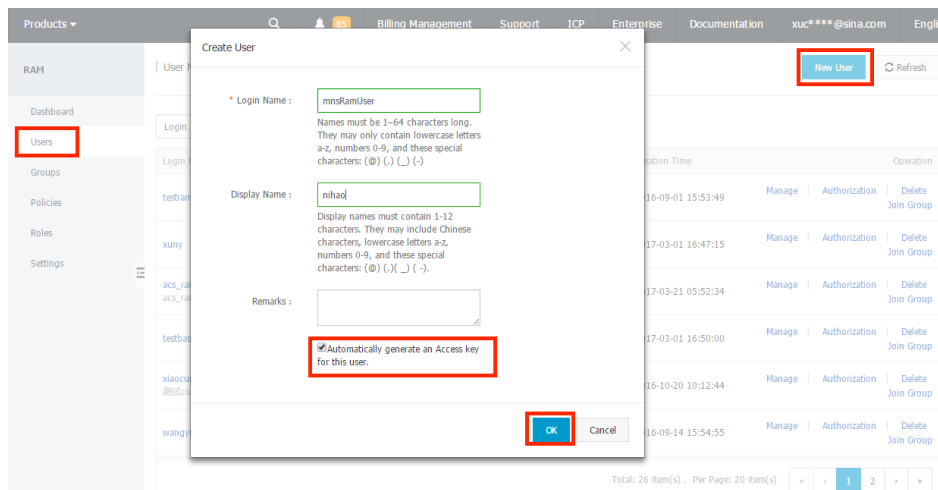
Click **Save Access Key Information** to download the AK file.
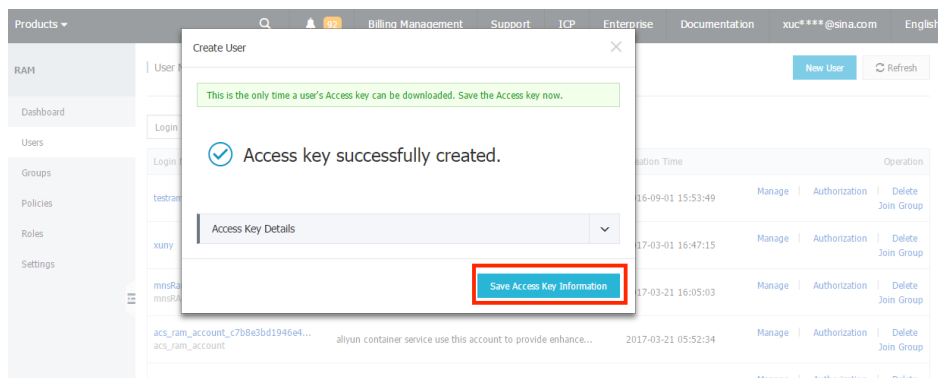
Create RAM Policy

Click through **policies > custom policy > New Authorization Policy** on the RAM console.

Select **Blank Template** in the pop-up dialog.

Edit the policy and fill in the Remarks，then click **New Authorization Policy**.
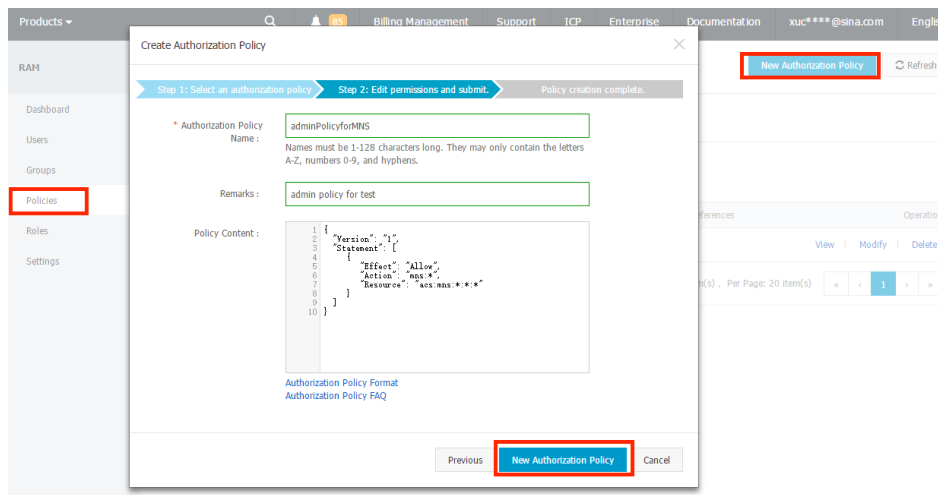
A sample policy for Message Service:

```
   {
"Statement": [
{
"Action": "mns:*",
"Effect": "Allow",
"Resource": "acs:mns:*:*:*"
}
],
"Version": "1"
}
```

Please refer to the RAM document for more instructions of the policy format.

Authorize RAM User With Policy

Click **Users** on the left-side bar on the RAM console.

Find the RAM user, click **Authorization** in the right action list.

Find the policy in pop-up dialog, and select it to right list, then click **OK**.
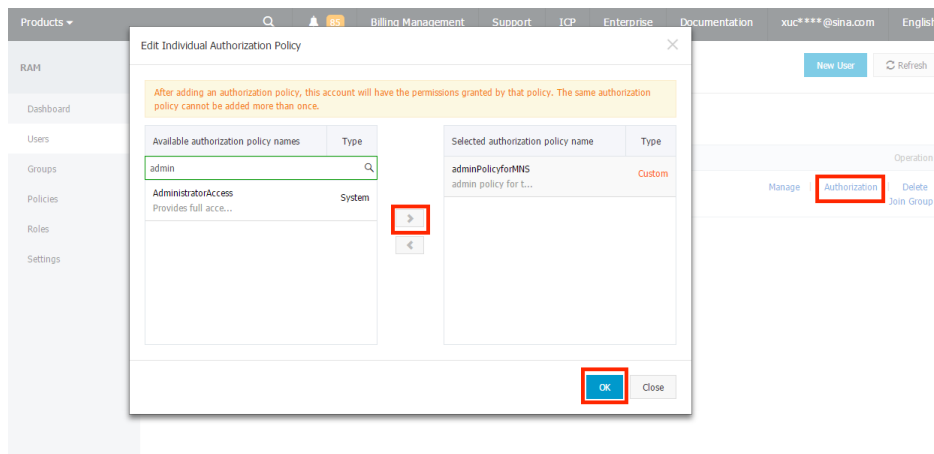
Test to access MNS by RAM user. Here is python SDK for example:

> i. Download the latest version of Python SDK.
>
> ii. Set sample.cfg Config file with AK() and the endpoint.
>
> iii. Run **$python sample.py**.
>
> iv. The RAM user can access the Message Service if there is no error.

Policy Samples

Sample 1: Add limitation on source IP for accessing Message Service.

Message Service allows access from 42.120.88.0/24 and 42.120.66.0/24.

```
{
"Statement": [
{
"Action": "mns:*",
"Effect": "Allow",
"Resource": "acs:mns:*:*:*"
}
],
"Version": "1",
"Condition":{
"IpAddress": {
"acs:SourceIp": ["42.120.88.0/24", "42.120.66.0/24"]
}
}
}
```

Sample2: Deny the source IP.

Message Service denies any operations which are not from source IP **42.120.88.0/24**.

```
{
"Statement": [
{
"Action": "mns:*",
"Effect": "Deny",
"Resource": "acs:mns:*:*:*"
}
],
"Version": "1",
"Condition":{
"NotIpAddress": {
"acs:SourceIp": ["42.120.88.0/24"]
}
}
}
```

Sample3: Readonly for RAM user.

Only query queue/topic operations are allowed.

```
{
"Version": "1",
"Statement": [
{
"Effect": "Allow",
"Action": [
"mns:ListQueue",
"mns:ListTopic",
"mns:GetQueueAttributes",
"mns:GetTopicAttributes"
],
"Resource": "acs:mns:*:*:*"
}
]
}
```

APIs to Policy Action Mapping

Message Service API	Policy Action	Resource
ListQueue	mns:ListQueue	acs:mns:$region:$accountid:/queues
CreateQueue	mns:CreateQueue	acs:mns:$region:$accountid:/queues/$queueName
DeleteQueue	mns:DeleteQueue	acs:mns:$region:$accountid:/queues/$queueName
SetQueueAttributes	mns:SetQueueAttributes	acs:mns:$region:$accountid:/queues/$queueName
GetQueueAttributes	mns:GetQueueAttributes	acs:mns:$region:$accountid:/

		queues/$queueName
SendMessage/BatchSendMessage	mns:SendMessage	acs:mns:$region:$accountid:/queues/$queueName/messages
ReceiveMessage/BatchReceiveMessage	mns:ReceiveMessage	acs:mns:$region:$accountid:/queues/$queueName/messages
DeleteMessage	mns:DeleteMessage	acs:mns:$region:$accountid:/queues/$queueName/messages
PeekMessage/BatchPeekMessage	mns:PeekMessage	acs:mns:$region:$accountid:/queues/$queueName/messages
ChangeMessageVisibility	mns:ChangeMessageVisibility	acs:mns:$region:$accountid:/queues/$queueName/messsages
ListTopic	mns:ListTopic	acs:mns:$region:$accountid:/topics
CreateTopic	mns:CreateTopic	acs:mns:$region:$accountid:/topics/$topicName
DeleteTopic	mns:DeleteTopic	acs:mns:$region:$accountid:/topics/$topicName
SetTopicAttributes	mns:SetTopicAttributes	acs:mns:$region:$accountid:/topics/$topicName
GetTopicAttributes	mns:GetTopicAttributes	acs:mns:$region:$accountid:/topics/$topicName
ListSubscriptionByTopic	mns:ListSubscriptionByTopic	acs:mns:$region:$accountid:/topics/$topicName/subscriptions
Subscribe	mns:Subscribe	acs:mns:$region:$accountid:/topics/$topicName/subscriptions/$subscriptionName
Unsubscribe	mns:Unsubscribe	acs:mns:$region:$accountid:/topics/$topicName/subscriptions/$subscriptionName
SetSubscriptionAttributes	mns:SetSubscriptionAttributes	acs:mns:$region:$accountid:/topics/$topicName/subscriptions/$subscriptionName
GetSubscriptionAttributes	mns:GetSubscriptionAttributes	acs:mns:$region:$accountid:/topics/$topicName/subscriptions/$subscriptionName
PublishMessage	mns:PublishMessage	acs:mns:$region:$accountid:/topics/$topicName/messages