

Message Service

Quick Start

Quick Start

Preparations

Start to Use Alibaba Cloud Message Service

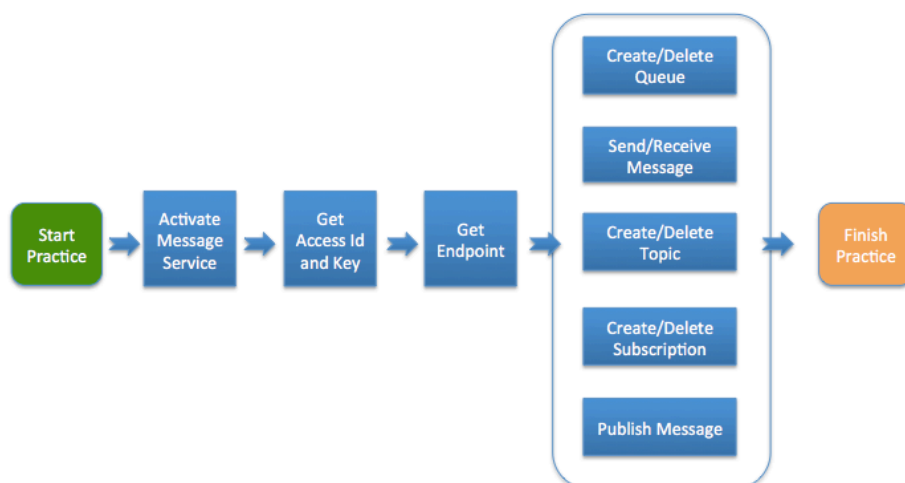
Alibaba Cloud Message Service provides you with professional message middleware service which facilitate you to do system decoupling and deal with massive concurrent requests.

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.

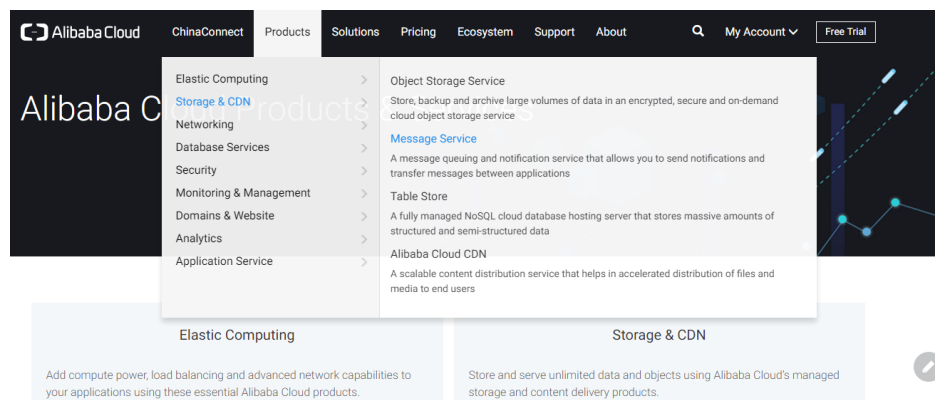
Practice Steps for Using Message Service



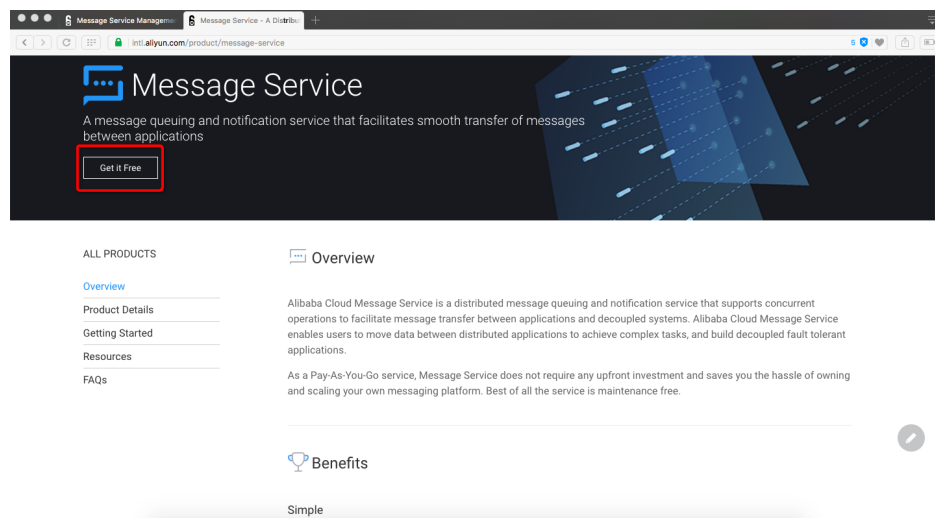
Activate Service

Activate Message Service

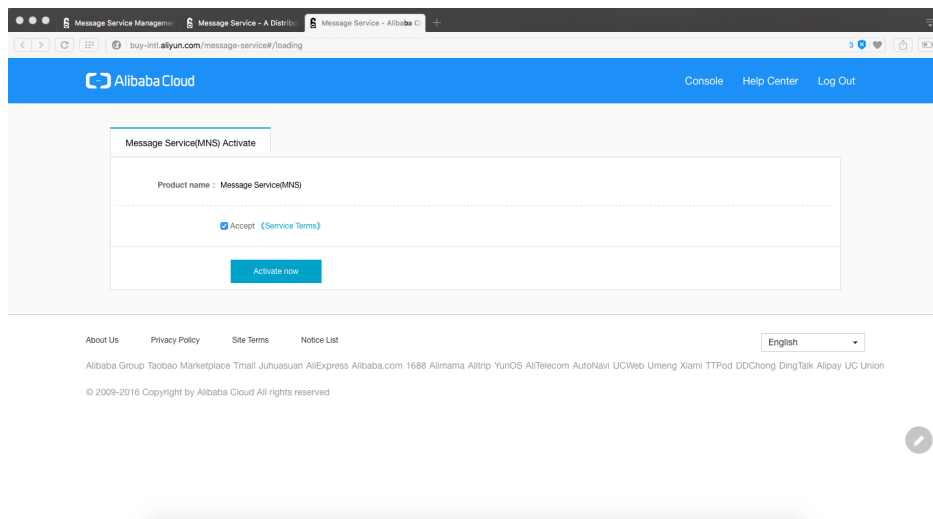
Open the homepage of Alibaba Cloud, move arrow of mouse on **Products** -> **Storage & CDN** -> **Message Service** and click on the **Message Service** to the home page of Message Service.



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**.



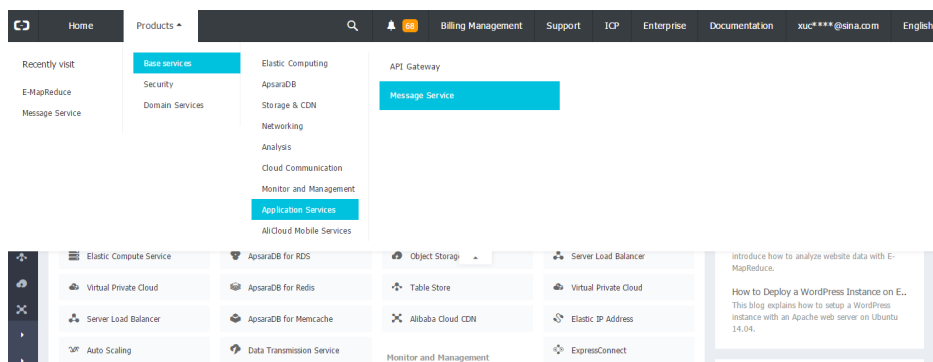
Get AccessKey

Get AccessKey

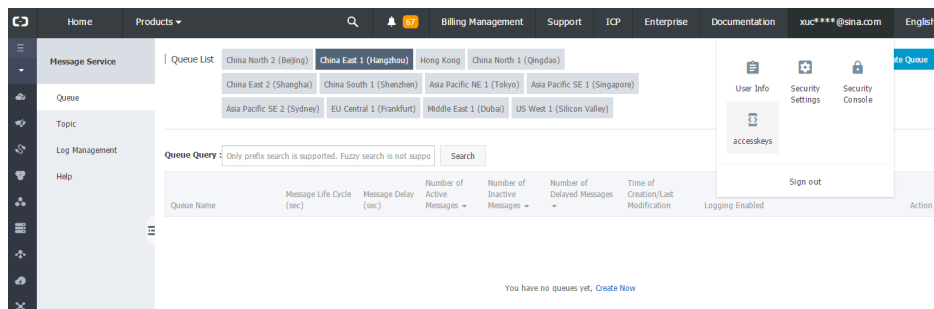
Note: Skip this step if you have already got the accesskey.

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**.

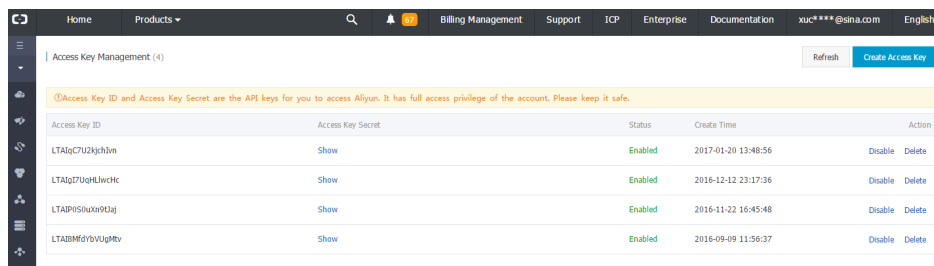


Move arrow on **Account Name** at the top right corner of website. And click **accessskeys** in the pop-up dialog.



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**.



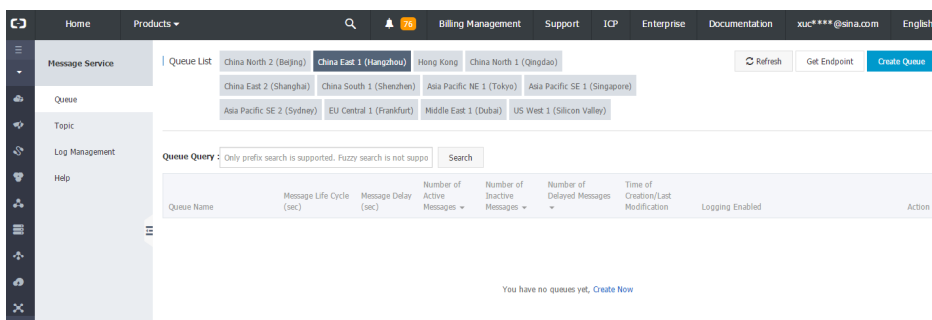
Get Endpoint

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

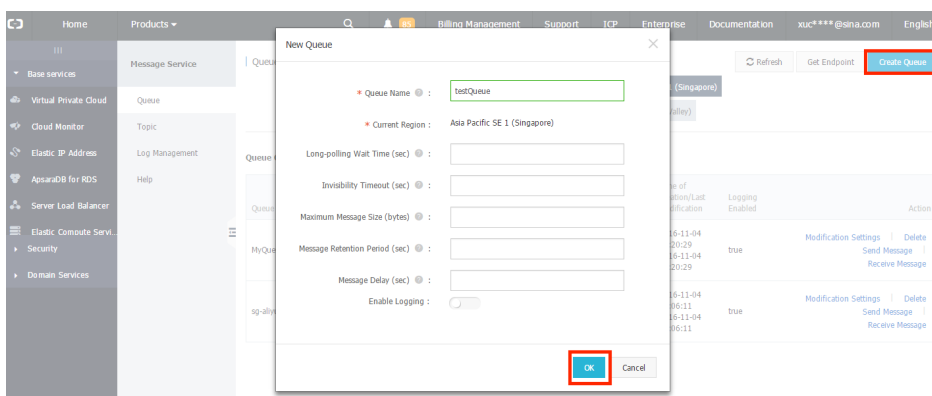
Queue operations

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.

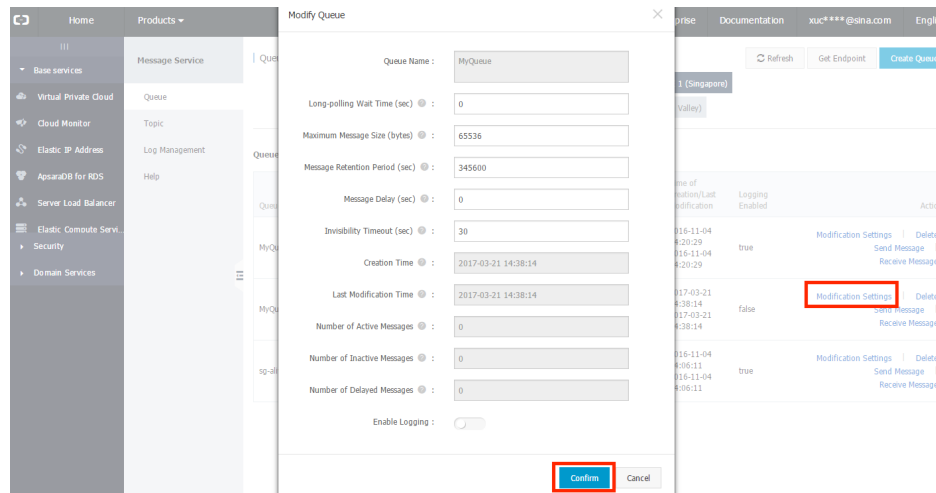


SetQueueAttributes

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

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

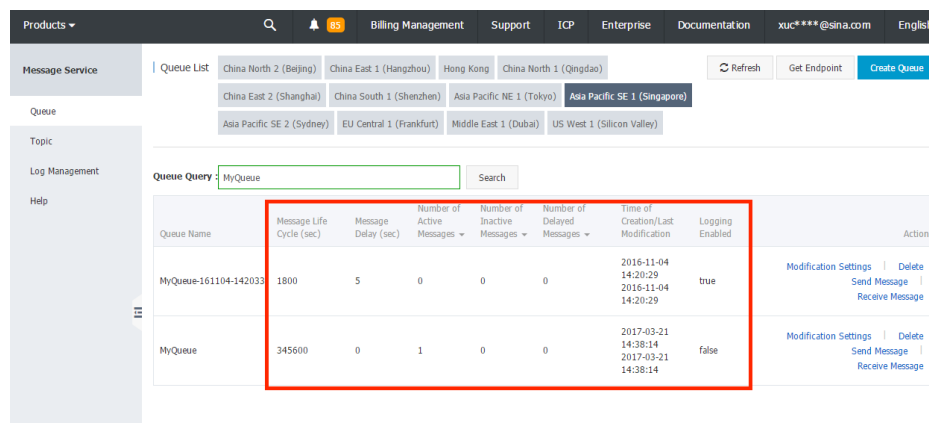
Modify attributes according to your demands on the dialog box displayed on the console, then click **OK**.



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.

Message Service | Queue List

China North 2 (Beijing) China East 1 (Hangzhou) Hong Kong China North 1 (Qingdao) Refresh Get Endpoint Create Queue

China East 2 (Shanghai) China South 1 (Shenzhen) Asia Pacific NE 1 (Tokyo) Asia Pacific SE 1 (Singapore)

Asia Pacific SE 2 (Sydney) EU Central 1 (Frankfurt) Middle East 1 (Dubai) US West 1 (Silicon Valley)

Queue Query: MyQue Search

Queue Name	Message Life Cycle (sec)	Message Delay (sec)	Number of Active Messages	Number of Inactive Messages	Number of Delayed Messages	Time of Creation/Last Modification	Logging Enabled	Action
MyQueue-161104-142033	1800	5	0	0	0	2016-11-04 14:20:29 2016-11-04 14:20:29	true	Modification Settings Delete Send Message Receive Message
MyQueue	345600	0	0	0	0	2017-03-21 14:38:14 2017-03-21 14:38:14	false	Modification Settings Delete Send Message Receive Message

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.

Products | Message Service | Queue List

Queue Query: MyQue Search

MyQueue-161104-142033 1800 5 0 0 0 2016-11-04 14:20:29 2016-11-04 14:20:29 true Modification Settings | Delete Send Message | Receive Message

MyQueue 345600 0 0 0 0 2017-03-21 14:38:14 2017-03-21 14:38:14 false Modification Settings | Delete Send Message | Receive Message

sg-allyun-misc 86400 0 0 0 0 2016-11-04 14:06:11 2016-11-04 14:06:11 true Modification Settings | Delete Send Message | Receive Message

Prompt

Warm tip: before deleting the queue / topic, please stop the request to the corresponding queue / theme to send the request pressure, otherwise the API request for the queue / theme instance will still incur costs.

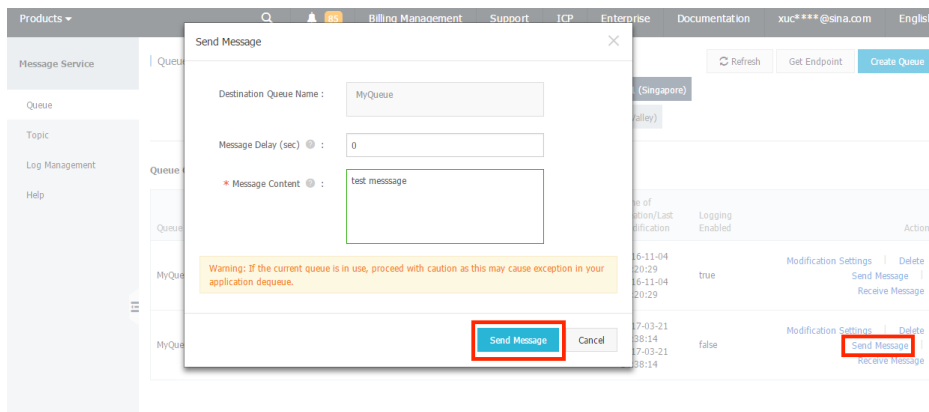
Are you sure you want to delete this queue?

Delete Cancel

SendMessage

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

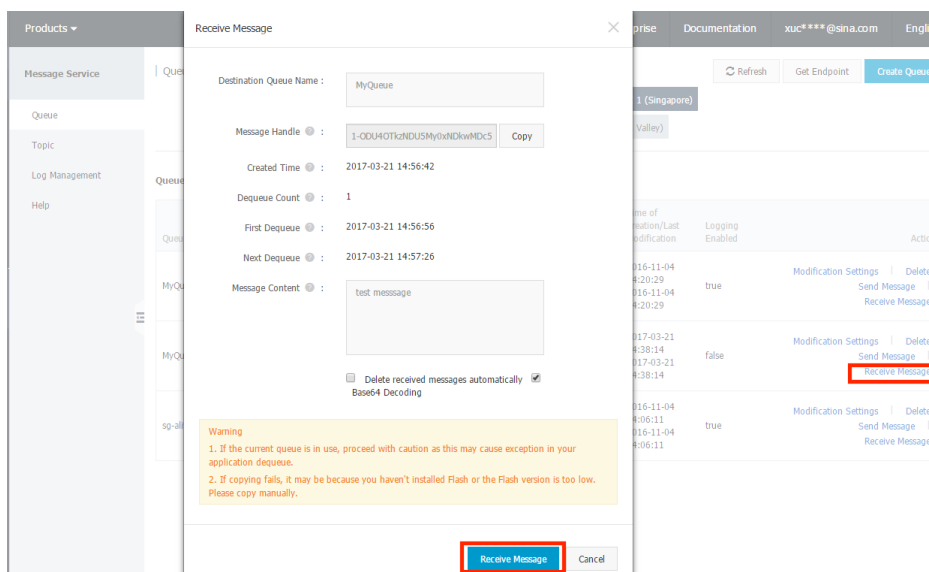
Click **Send Message** to the right of **MyQueue** and input the message in the displayed dialog box, then click **Send message**.



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.

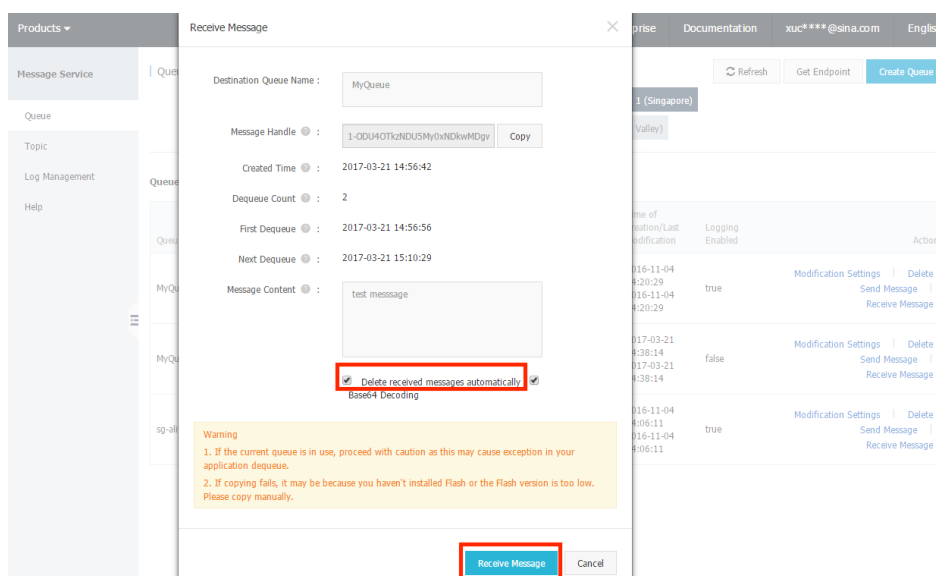
Click **Receive message** to the right of **MyQueue** to check attributes of the received message displayed in dialog box.



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

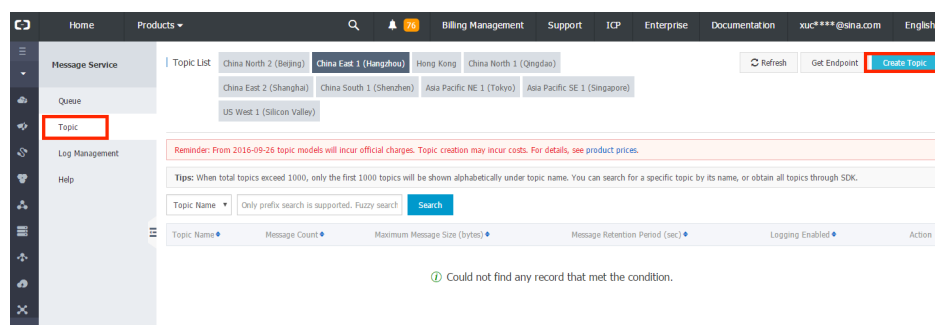
Create Topic

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).

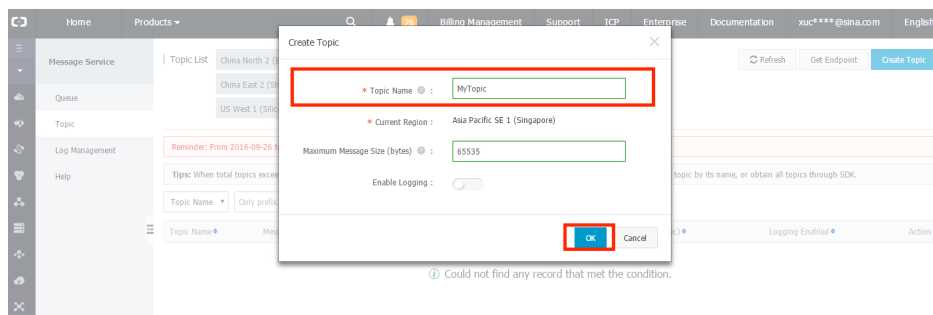
Click **Topic** at the left side bar.

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



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

Click **Ok** to create it.

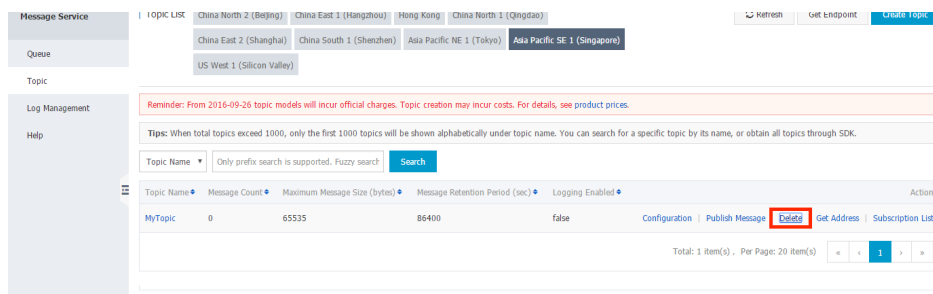


Delete a topic

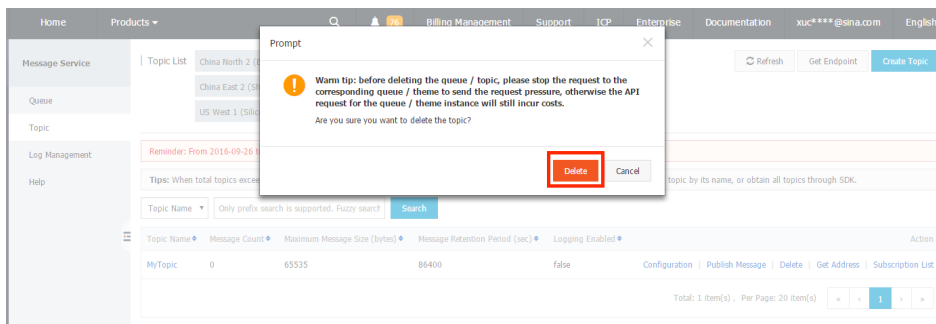
Delete a topic

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**.

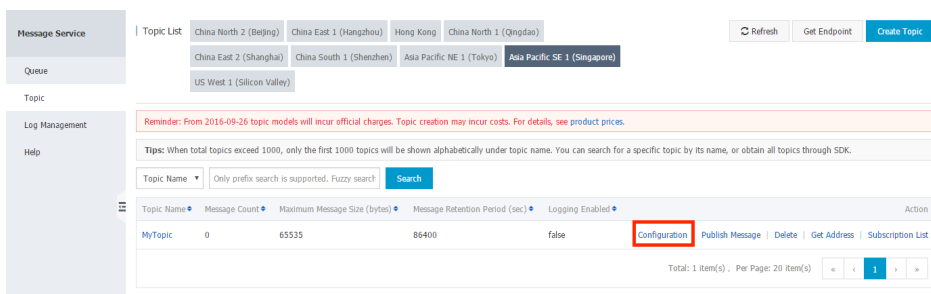


Set topic properties

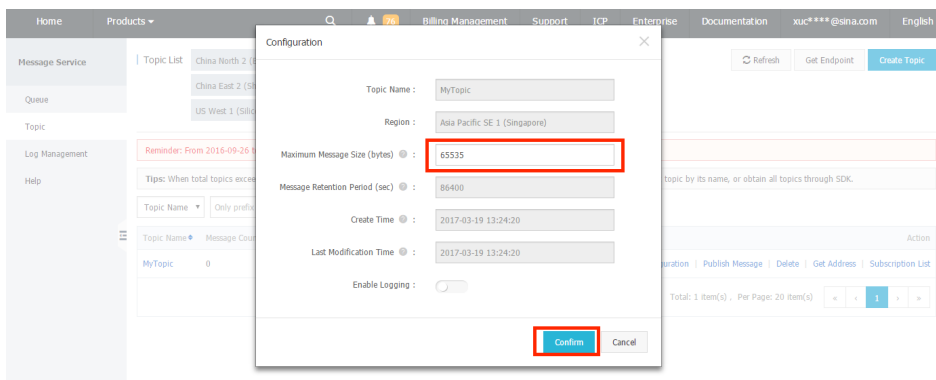
Set topic properties

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

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:

The screenshot shows the Message Service console interface. The left sidebar contains navigation links: Message Service, Queue, Topic, Log Management, and Help. The main content area is divided into two sections. The top section, 'Topic List', shows a table of topics with columns: Topic Name, Message Count, Maximum Message Size (bytes), Message Retention Period (sec), Logging Enabled, and Action. The 'MyTopic' row is highlighted, and the 'Subscription List' link in the Action column is circled in red. The bottom section, 'Subscription List', shows a table of subscriptions with columns: Subscription Name, Endpoint, Notify Strategy, Notify Content Format, Push Type, and Action. The 'MySubscription' and 'testSubscription' rows are highlighted, and the 'Get Address' link in the Action column is circled in red.

Topic Name	Message Count	Maximum Message Size (bytes)	Message Retention Period (sec)	Logging Enabled	Action
MyTopic	0	65535	86400	false	Configuration Publish Message Delete Get Address Subscription List

Subscription Name	Endpoint	Notify Strategy	Notify Content Format	Push Type	Action
MySubscription	http://mycallback.xxx.com/	BACKOFF_RETRY	XML	HTTP	Configuration Delete Get Address
testSubscription	http://mycallback.xxx.com	BACKOFF_RETRY	XML	HTTP	Configuration Delete Get Address

Search the subscription with prefix of its name such as **My**.

The screenshot shows the Message Service console interface. The left sidebar contains navigation links: Message Service, Queue, Topic, Log Management, and Help. The main content area is divided into two sections. The top section, 'Subscription List', shows a table of subscriptions with columns: Subscription Name, Endpoint, Notify Strategy, Notify Content Format, Push Type, and Action. The 'MySubscription' row is highlighted, and the 'Get Address' link in the Action column is circled in red. The bottom section, 'Subscription List', shows a table of subscriptions with columns: Subscription Name, Endpoint, Notify Strategy, Notify Content Format, Push Type, and Action. The 'MySubscription' row is highlighted, and the 'Get Address' link in the Action column is circled in red.

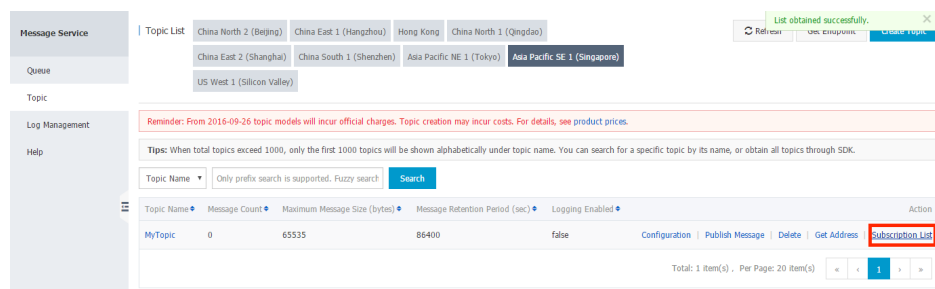
Subscription Name	Endpoint	Notify Strategy	Notify Content Format	Push Type	Action
MySubscription	http://mycallback.xxx.com/	BACKOFF_RETRY	XML	HTTP	Configuration Delete Get Address

Create a subscription

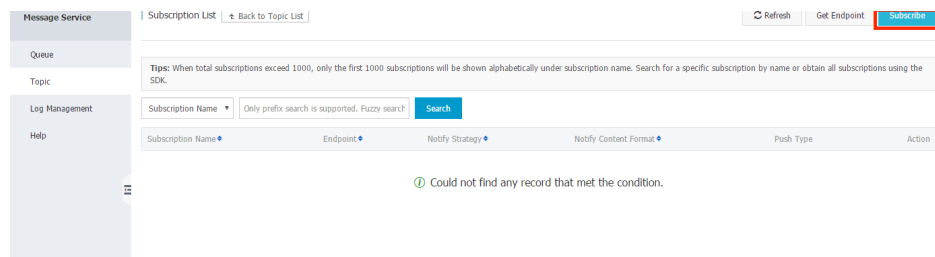
Create a subscription

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

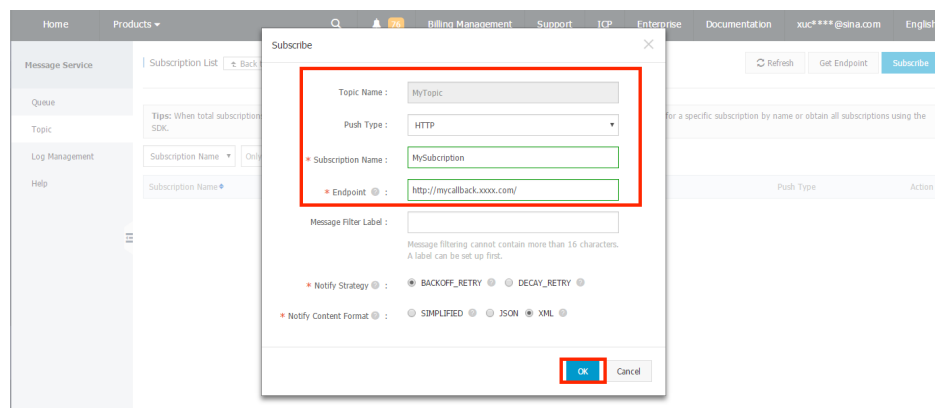
Click the **Subscription List** on the action list of **MyTopic**.



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**.

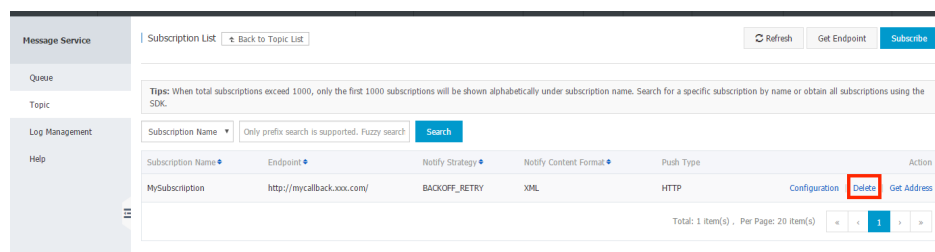


Delete a subscripton

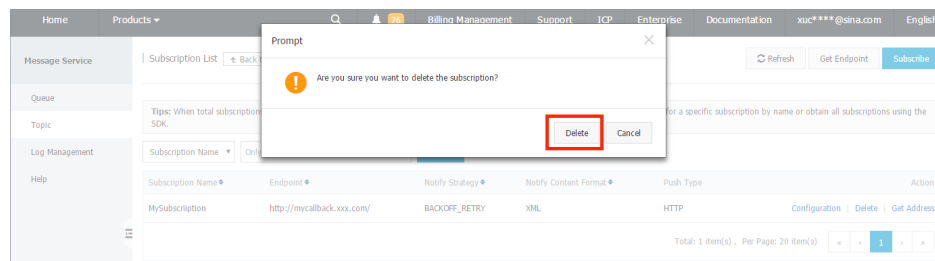
Delete a subscripton

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.

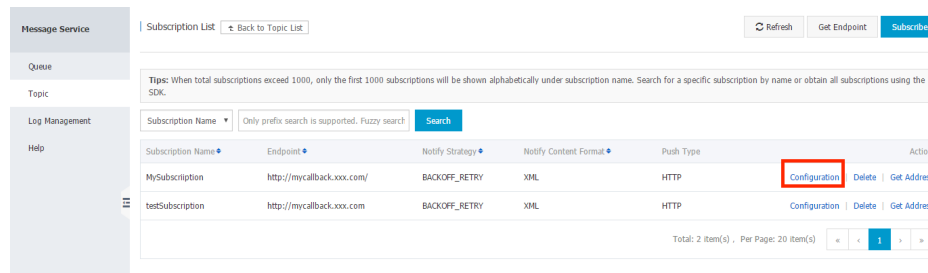


Set subscription properties

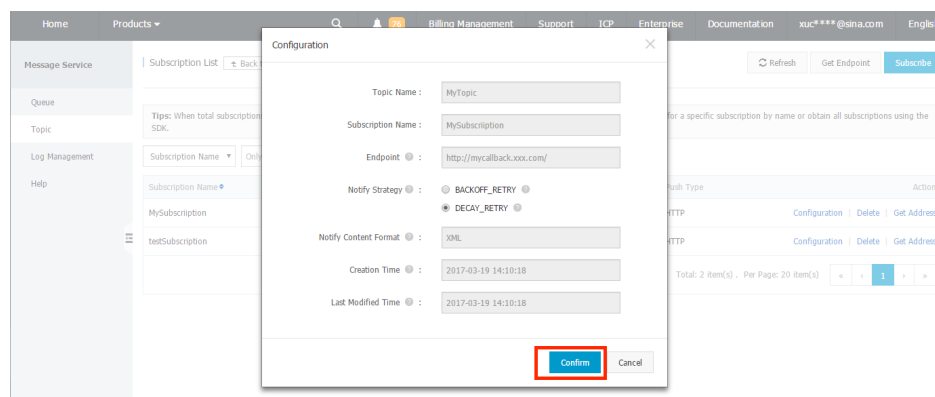
Set subscription properties

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**.

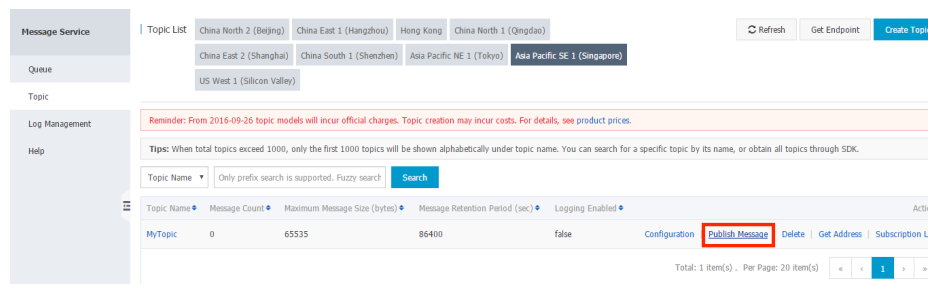


Publish a message

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**.

The screenshot shows the 'Release Message' interface in the Message Service console. It includes a warning banner, a 'Back to Topic List' link, and a form with the following fields:

- Topic Name:** MyTopic
- Message Content:** test message
- Push Type:** Queue (selected), HTTP, All SMS, Email, 移动推送
- Message Filter Label:** (empty)

A red box highlights the **Send Message** button at the bottom right of the form.

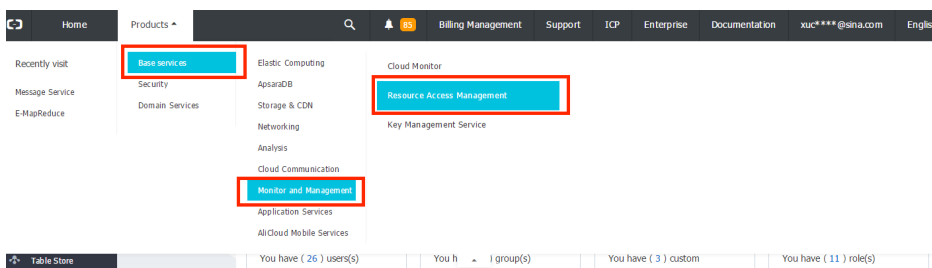
Access By RAM User

RAM operations

RAM operations

Create RAM User

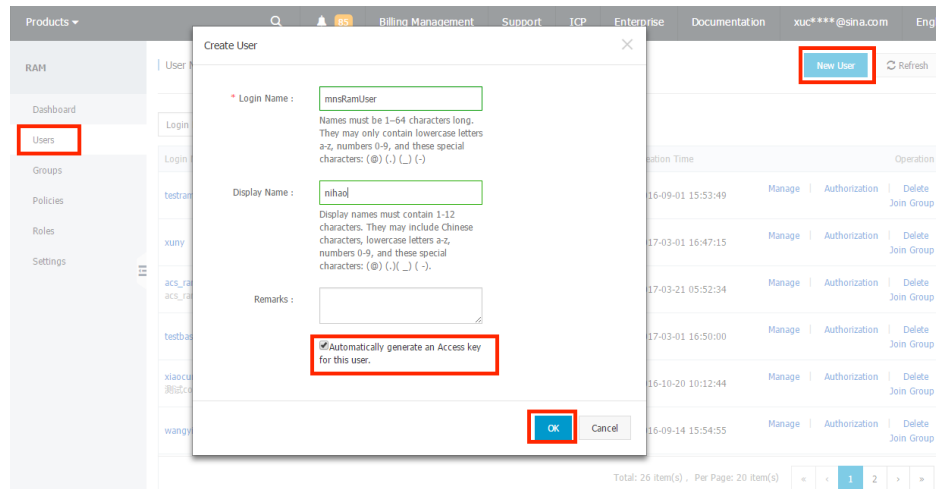
Log on to the Alibaba Cloud console, then click **Resource Access Management** from the left-side navigation bar to open the RAM console.



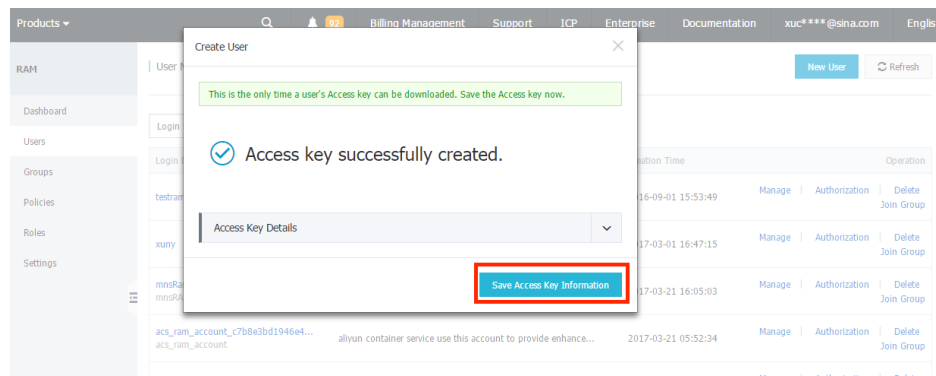
Click **Users** on the RAM console.

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.

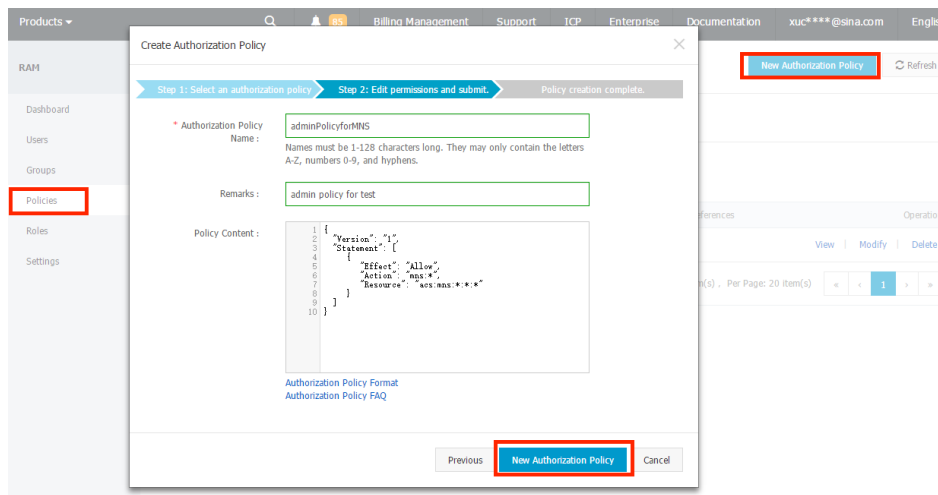


Create RAM Policy

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"
}
```

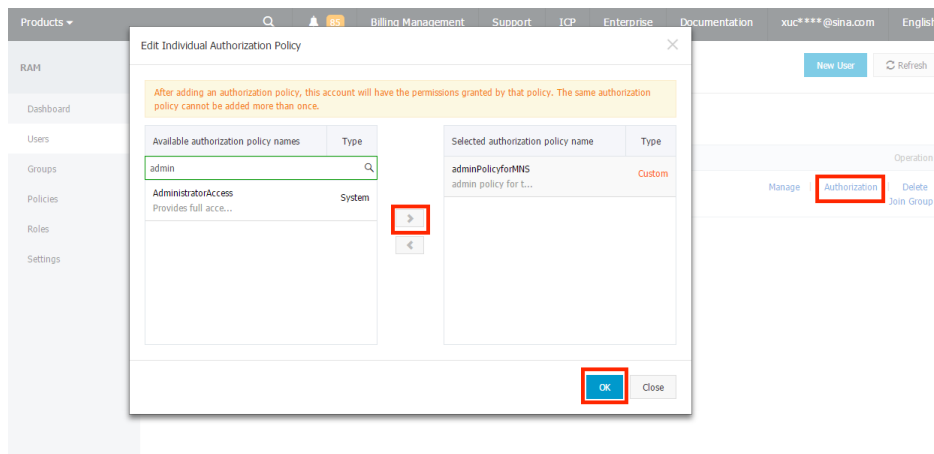
Please refer to the RAM document for more instructions of the policy format.

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/messages
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