

Message Notification Service

User Guide

User Guide

Overview

Alibaba Cloud Message Service (Message Service) is an auto scalable and distributed message service featuring efficiency, reliability, security, and convenience. Message Service helps application developers transfer data freely on distributed components of their applications to build a loosely coupled system.

This guide comprehensively describes usage of the queue model and topic subscription model; clarifies the use of Message Service in combination with other Alibaba Cloud services, such as RAM, Cloud Monitor, and Log Service; and provides various features and best practice cases.

Resource	Description
Alibaba Cloud Message Service quick start	Describes basic tasks of Alibaba Cloud Message Service.
Alibaba Cloud Message Service user guide (this document)	Describes core concepts of Alibaba Cloud Message Service, all functions and operation procedures, as well as O&M methods for RAM, Cloud Monitor, and Log Service.
Alibaba Cloud Message Service best practices	Describes various application scenarios and practice cases of Alibaba Cloud Message Service.
Alibaba Cloud Message Service API manual	Describes RESTful API operations supported by Alibaba Cloud Message Service and related cases.
Alibaba Cloud Message Service SDK manual	Describes calling operations and sample code of the official SDK.
Alibaba Cloud Message Service developer tools	Lists useful tools that may be used for development.

Queue

Queue Interfaces

- Queue interfaces

Interface	Function	Call mode supported
CreateQueue	Creates a queue.	Console and APIs
SetQueueAttributes	Sets attributes of a queue.	Console and APIs
GetQueueAttributes	Obtains attributes of a queue.	Console and APIs
DeleteQueue	Deletes a queue.	Console and APIs
ListQueue	Obtains a queue list.	Console and APIs

- Message interfaces

Interface	Function	Call mode supported
SendMessage	Sends a message.	Console and APIs
BatchSendMessage	Sends messages in batch.	APIs
ReceiveMessage	Consumes a message.	Console and APIs
BatchReceiveMessage	Consumes messages in batch.	APIs
DeleteMessage	Deletes a message.	Console and APIs
BatchDeleteMessage	Deletes messages in batch.	APIs
PeekMessage	Views a message.	APIs
BatchPeekMessage	Views messages in batch.	APIs
ChangeMessageVisibility	Modifies the next consumable time of a message.	APIs

For details about how to use interfaces, refer to **Console help** and **API user manual**.

Topic

Topic Interface

- Topic interfaces

Interface	Function	Call mode supported
CreateTopic	Creates a topic.	Console and APIs
SetTopicAttributes	Sets attributes of a topic.	Console and APIs
GetTopicAttributes	Obtains attributes of a topic.	Console and APIs
DeleteTopic	Deletes a topic.	Console and APIs
ListTopic	Obtains a topic list.	Console and APIs

- Subscription interfaces

Interface	Function	Call mode supported
Subscribe	Creates a subscription.	Console and APIs
SetSubscriptionAttributes	Sets attributes of a subscription.	Console and APIs
GetSubscriptionAttributes	Obtains attributes of a subscription.	Console and APIs
Unsubscribe	Deletes a subscription.	Console and APIs
ListSubscriptionByTopic	Obtains the subscription list of a topic.	Console and APIs

- Message interfaces

Interface	Function	Call mode supported
PublishMessage	Publishes a message.	Console and APIs

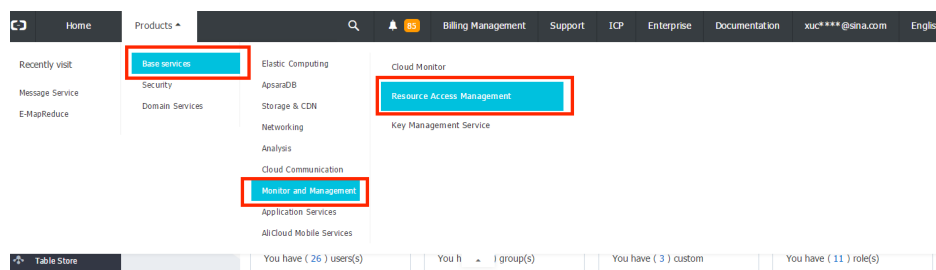
For details about how to use interfaces, refer to [Console help](#) and [API user manual](#).

Console guide

RAM user operations

Create a RAM user

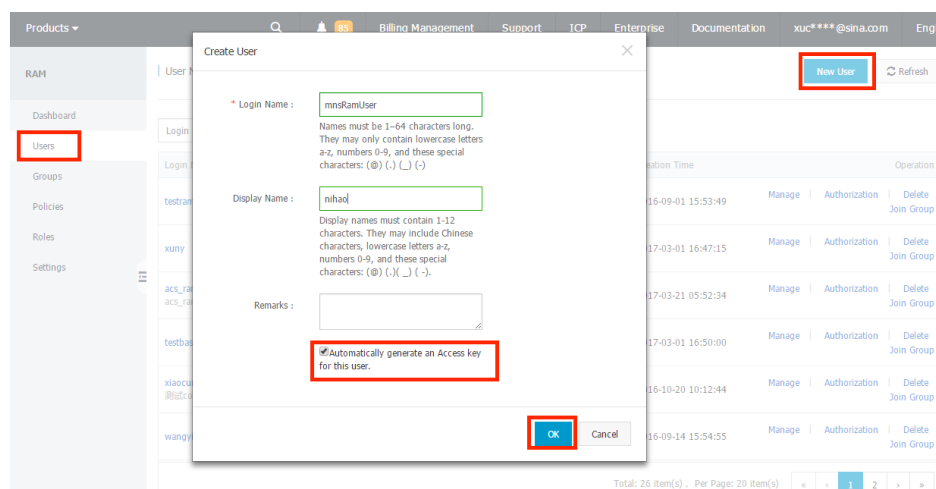
Log on to the Alibaba Cloud console, then click **Resource Access Management** from the left-side navigation bar to open the RAM console.



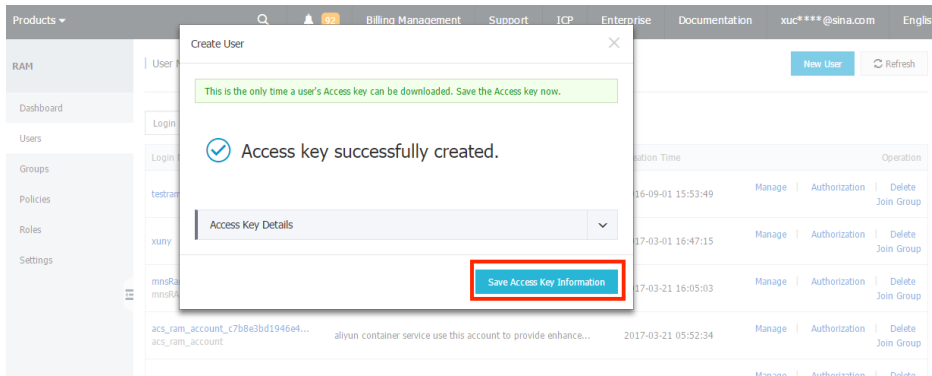
Click **Users** on the RAM console.

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.

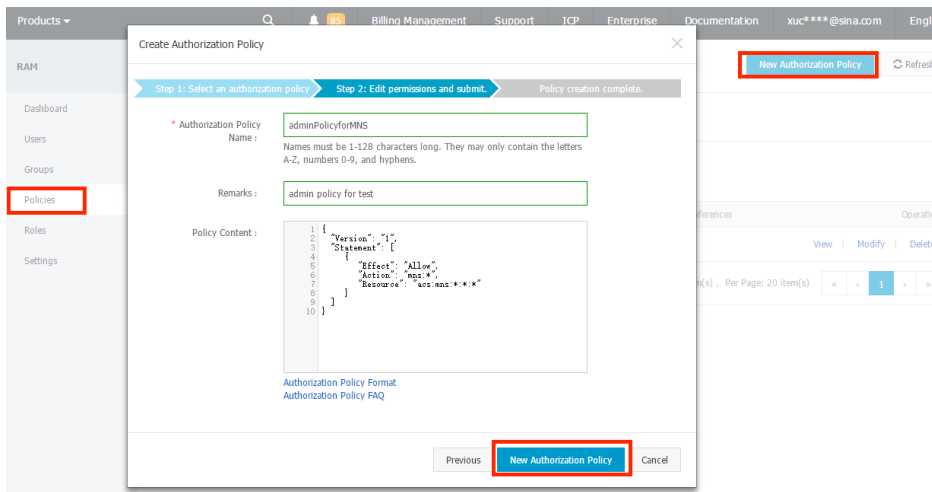


Create a RAM policy

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"
}
```

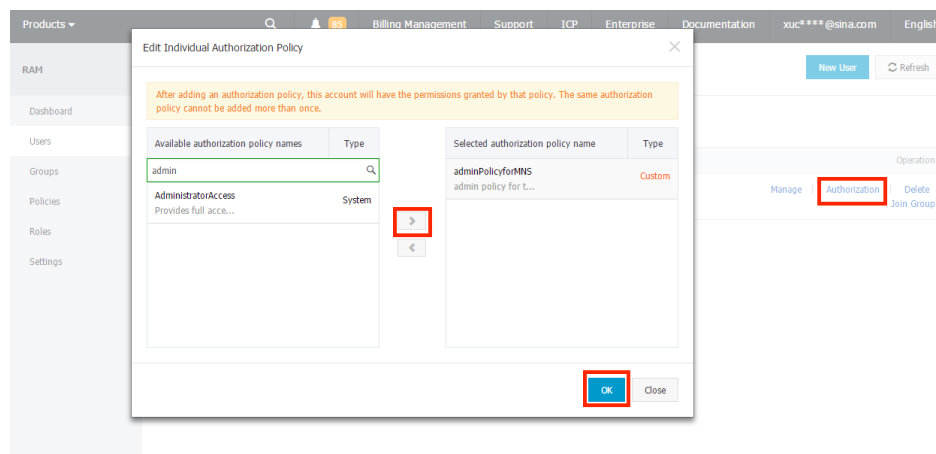
Please refer to the RAM document for more instructions of the policy format.

Authorize a RAM user With a 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:/

	y	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