

# Alibaba Cloud Application Real-time Monitoring Service

**API reference**

**Issue: 20200205**

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## Document conventions

Style	Description	Example
	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 <b>Danger:</b> Resetting will result in the loss of user configuration data.
	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 <b>Warning:</b> Restarting will cause business interruption. About 10 minutes are required to restart an instance.
	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 <b>Notice:</b> If the weight is set to 0, the server no longer receives new requests.
	A note indicates supplemental instructions, best practices, tips, and other content.	 <b>Note:</b> You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings > Network > Set network type.
<b>Bold</b>	<b>Bold formatting is used for buttons, menus, page names, and other UI elements.</b>	Click <b>OK</b> .
Courier font	<b>Courier font is used for commands.</b>	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	<b>Italic formatting is used for parameters and variables.</b>	<code>bae log list --instanceid</code> <code>Instance_ID</code>
[ ] or [a b]	<b>This format is used for an optional value, where only one item can be selected.</b>	<code>ipconfig [-all -t]</code>

Style	Description	Example
<b>{}</b> or <b>{a b}</b>	<b>This format is used for a required value, where only one item can be selected.</b>	switch { <i>active</i>   <i>stand</i> }



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# 1 API overview

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The following tables list API operations available for use in Application Real-Time Monitoring Service (ARMS). For more information, see OpenAPI Explorer.

## Application monitoring

Operation	Description
<a href="#"><i>SearchTraceAppByName</i></a>	Queries the application monitoring job list.
<a href="#"><i>SearchTraceAppByPage</i></a>	Queries application monitoring jobs by page.
<a href="#"><i>ListTraceApps</i></a>	Queries all application monitoring jobs in the specified region.

## Browser monitoring

Operation	Description
<a href="#"><i>CreateRetcodeApp</i></a>	Creates a browser monitoring job.
<a href="#"><i>ListRetcodeApps</i></a>	Queries all browser monitoring jobs in the specified region.
<a href="#"><i>SearchRetcodeAppByPage</i></a>	Queries browser monitoring jobs by page.
<a href="#"><i>DeleteRetcodeApp</i></a>	Deletes a browser monitoring job.

## Alert

Operation	Description
<a href="#"><i>CreateAlertContact</i></a>	Creates an alert contact.
<a href="#"><i>SearchAlertContactGroup</i></a>	Creates an alert contact group.
<a href="#"><i>SearchAlertContactGroup</i></a>	Queries alert contact groups.
<a href="#"><i>ImportAppAlertRules</i></a>	Imports application alert rules.
<a href="#"><i>SearchAlertContact</i></a>	Queries alert contacts.

## 2 Common parameters

This topic lists the common parameters for Application Real-Time Monitoring Service (ARMS) API operations and supported regions.



### Note:

The pctowap open platform (POP) gateway provides services through the public network. Therefore, to use the API operations, you must be able to access the public network. Otherwise, a service connection failure occurs.

### Common request parameters

Parameter	Description
region	The region of the API gateway. For more information about supported regions, see <a href="#">Regions supported by ARMS</a> .
accessKeyId/accessKeySecret	<ul style="list-style-type: none"> <li>If you use an Alibaba Cloud primary account or a RAM user to call an API operation, this parameter is the accessKeyId/accessKeySecret of the Alibaba Cloud primary account or the RAM user.</li> <li>If you use a RAM role to call an API operation, this parameter is the accessKeyId/accessKeySecret in the Security Token Service (STS) token that you obtained. For more information, see <a href="#">Access control overview</a>.</li> </ul>
endpoint	The endpoint name must be consistent with the region, for example "cn-hangzhou".
productName	The product name. Set this value to ARMS.
domain	Set this value to <code>arms.[region].aliyuncs.com</code> . For example, the region China (Hangzhou) is <code>arms.cn-hangzhou.aliyuncs.com</code> .

### Regions supported by ARMS

Region	ID
China (Hangzhou)	cn-hangzhou
China (Shanghai)	cn-shanghai
China (Qingdao)	cn-qingdao

Region	ID
China (Beijing)	cn-beijing
China (Shenzhen)	cn-shenzhen
China (Zhangjiakou)	cn-zhangjiakou
China (Hong Kong)	cn-hongkong
Singapore	ap-southeast-1

**Note:**

A single IP address can call API operations up to 100 times per second.

## 3 Install ARMS SDKs

---

**Application Real-Time Monitoring Service (ARMS) provides SDKs for Java, Python, and PHP applications. This topic explains how to install the SDKs.**

Install the Java SDK

**To install the ARMS Java SDK, add the Maven dependency to the pom.xml file.**

```
<dependencies>
  <dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-arms</artifactId>
    <version>2.5.2</version>
  </dependency>
  <dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-core</artifactId>
    <version>3.5.0</version>
  </dependency>
</dependencies>
```

Install the Python SDK

**To install the ARMS Python SDK, run the following command:**

```
pip install aliyun-python-sdk-arms
```

Install the PHP SDK

**Follow these steps to install the ARMS PHP SDK.**

- 1. Run the following command to clone the PHP SDK to your local directory *aliyun-openapi-php-sdk*:**

```
git clone https://github.com/aliyun/aliyun-openapi-php-sdk
```

- 2. Copy folders *aliyun-php-sdk-arms* and *aliyun-php-sdk-core* under *aliyun-openapi-php-sdk* to your PHP project directory. The directory structure is as follows:**

## 4 Application monitoring

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### 4.1 SearchTraceAppByName

You can call this operation to query the application monitoring job list.

Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchTraceAppByName	The operation that you want to perform. Set this value to SearchTraceAppByName.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
TraceAppName	String	Yes	demo	The name of the application for which you want query the application monitoring jobs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	514078F3-3DA0-4180-95A0-D8F300CB71D2	The ID of the region.
TraceApps			The application monitoring information returned.
AppId	Long	6549	The ID of the application monitored.

Parameter	Type	Example	Description
AppName	String	3123-docker-demo	The name of the application monitored.
CreateTime	Long	1531291867000	The time when the application monitoring job was created.
Pid	String	XXXXXXXXXX XXXXXX	The PID.
RegionId	String	cn-hangzhou	The ID of the region.
Type	String	TRACE	The monitoring type.
UpdateTime	Long	1531291867000	The time when the application monitoring job was updated.
UserId	String	XXXXXXXXXXXX	The ID of the user.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/trace/SearchTraceAppByName.json?RegionId=cn-hangzhou&TraceAppName=demo
```

### Sample success response

#### XML format

```
<SearchTraceAppByName>
  <requestId>514078F3-3DA0-4180-95A0-D8F300CB71D2</requestId>
  <traceApps>
    <traceApp>
      <appId>6549</appId>
      <appName>3123-docker-demo</appName>
      <createTime>1531291867000</createTime>
      <pid>XXXXXXXXXXXXXXXXXXXX</pid>
      <regionId>cn-hangzhou</regionId>
      <type>TRACE</type>
      <updateTime>1531291867000</updateTime>
      <userId>XXXXXXXXXXXX</userId>
    </traceApp>
    <traceApp>
      <appId>10198</appId>
      <appName>13312-demo</appName>
      <createTime>1540189384000</createTime>
      <pid>XXXXXXXXXXXXXXXXXXXX</pid>
```

```

        <regionId>cn-hangzhou</regionId>
        <type>tTRACE</type>
        <updateTime>1540189384000</updateTime>
        <userId>xxxxxxxxxxxx</userId>
    </traceApp>
    <traceApp>
        <appId>128985</appId>
        <appName>dubboDemoConsumer</appName>
        <createTime>1565147950000</createTime>
        <pid>xxxxxxxxxxxxxxxx</pid>
        <regionId>cn-hangzhou</regionId>
        <type>tTRACE</type>
        <updateTime>1565147950000</updateTime>
        <userId>xxxxxxxxxxxx</userId>
    </traceApp>
</traceApps>
</SearchTraceAppByName>

```

### JSON format

```

{
  "traceApps": [
    {
      "appName": "3123-docker-demo",
      "createTime": 1531291867000,
      "appId": 6549,
      "updateTime": 1531291867000,
      "userId": "xxxxxxxxxxxx",
      "pid": "xxxxxxxxxxxxxxxxxxxx",
      "type": "TRACE",
      "regionId": "cn-hangzhou"
    },
    {
      "appName": "13312-demo",
      "createTime": 1540189384000,
      "appId": 10198,
      "updateTime": 1540189384000,
      "userId": "xxxxxxxxxxxx",
      "pid": "xxxxxxxxxxxxxxxxxxxx",
      "type": "TRACE",
      "regionId": "cn-hangzhou"
    },
    {
      "appName": "dubboDemoConsumer",
      "createTime": 1565147950000,
      "appId": 128985,
      "updateTime": 1565147950000,
      "userId": "xxxxxxxxxxxx",
      "pid": "xxxxxxxxxxxxxxxxxxxx",
      "type": "TRACE",
      "regionId": "cn-hangzhou"
    }
  ],
  "requestId": "514078F3-3DA0-4180-95A0-D8F300CB71D2"
}

```

### Error codes

**The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).**

## 4.2 SearchTraceAppByPage

You can call this operation to query application monitoring jobs by page.

Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchTraceAppByPage	The operation that you want to perform. Set this value to SearchTraceAppByPage.
PageNumber	Integer	Yes	1	The number of the page to return.
PageSize	Integer	Yes	2	The number of entries to return on each page.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
TraceAppName	String	Yes	Demo	The name of application for which you want to query the application monitoring jobs.

Response parameters

Parameter	Type	Example	Description
PageBean			The information returned on the page that you queried.
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	2	The number of entries returned on each page.



Parameter	Type	Example	Description
TotalCount	Integer	22	The total number of entries returned.
TraceApps			The information about the application monitoring jobs.
AppId	Long	6549	The ID of the application monitored.
AppName	String	4123-docker-demo	The name of the application monitored.
CreateTime	Long	1531291867000	The time when the application monitoring job was created.
Pid	String	XXXXXXXXXX XXXXX	The PID.
RegionId	String	cn-hangzhou	The ID of the region.
Type	String	TRACE	The monitoring type.
UpdateTime	Long	1531291867000	The time when the application monitoring job was updated.
UserId	String	XXXXXXXXXXXX	The ID of the user.
RequestId	String	18B01385-A3B9-4BCF-988A-2064D77CF2C7	The ID of the request.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/trace/SearchTraceAppByPage
.json?PageNumber=1
&PageSize=2
&RegionId=cn-hangzhou
&TraceAppName=Demo
```

### Sample success response

**XML format**

```

<SearchTraceAppByPage>
  <RequestId>18B01385-A3B9-4BCF-988A-2064D77CF2C7</RequestId>
  <PageBean>
    <PageNumber>1</PageNumber>
    <PageSize>2</PageSize>
    <TotalCount>22</TotalCount>
    <TraceApps>
      <TraceApp>
        <AppId>6549</AppId>
        <AppName>4123-docker-demo</AppName>
        <CreateTime>1531291867000</CreateTime>
        <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
        <RegionId>cn-hangzhou</RegionId>
        <Type>TRACE</Type>
        <UpdateTime>1531291867000</UpdateTime>
        <UserId>xxxxxxxxxxxx</UserId>
      </TraceApp>
      <TraceApp>
        <AppId>10198</AppId>
        <AppName>132-k8s-demo</AppName>
        <CreateTime>1540189384000</CreateTime>
        <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
        <RegionId>cn-hangzhou</RegionId>
        <Type>TRACE</Type>
        <UpdateTime>1540189384000</UpdateTime>
        <UserId>xxxxxxxxxxxx</UserId>
      </TraceApp>
    </TraceApps>
  </PageBean>
</SearchTraceAppByPage>

```

**JSON format**

```

{
  "pageBean": {
    "traceApps": [
      {
        "appName": "4123-docker-demo",
        "createTime": 1531291867000,
        "appId": 6549,
        "updateTime": 1531291867000,
        "userId": "xxxxxxxxxxxx",
        "pid": "xxxxxxxxxxxxxxxxxxxx",
        "type": "TRACE",
        "regionId": "cn-hangzhou",
      },
      {
        "appName": "132-k8s-demo",
        "createTime": 1540189384000,
        "appId": 10198,
        "updateTime": 1540189384000,
        "userId": "xxxxxxxxxxxx",
        "pid": "xxxxxxxxxxxxxxxxxxxx",
        "type": "TRACE",
        "regionId": "cn-hangzhou"
      }
    ],
    "totalCount": 22,
    "pageSize": 2,
    "pageNumber": 1
  }
}

```

```

    },
    "requestId": "18B01385-A3B9-4BCF-988A-2064D77CF2C7"
  }
}

```

Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

### 4.3 ListTraceApps

You can call this operation to query all application monitoring jobs in the specified region.

Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTraceApps	The operation that you want to perform. Set this value to ListTraceApps.
RegionId	String	Yes	cn-hangzhou	The ID of the region that you want to query.

Response parameters

Parameter	Type	Example	Description
Code	Integer	200	The response code.
Message	String	true	The information returned.
RequestId	String	959C77E2-04E9-4FD4-848A-B8C1A48BEF51	The ID of the request.
Success	Boolean	true	Indicates whether the request is successful.

Parameter	Type	Example	Description
TraceApps			The list of application monitoring jobs returned.
AppId	Long	5918	The ID of the application monitored.
AppName	String	arms-pop-hz	The name of the application monitored.
CreateTime	Long	1529667762000	The time when the application monitoring job was created.
Pid	String	XXXXXXXXXX	The PID.
RegionId	String	cn-hangzhou	The ID of the region.
Type	String	TRACE	The monitoring type.
UpdateTime	Long	1529667762000	The time when the application monitoring job was updated.
UserId	String	XXXXXXXXXX XXXXXX	The ID of the user.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/trace/ListTraceApps.json?
Region=cn-hangzhou
```

### Sample success response

#### XML format

```
<o>
  <requestId type="string">959C77E2-04E9-4FD4-848A-B8C1A48BEF51</
requestId>
  <traceApps class="array">
    <e class="object">
      <appId type="number">5918</appId>
      <appName type="string">arms-pop-hz</appName>
      <createTime type="number">1529667762000</
createTime>
```

```

updateTime>      <pid type="string">xxxxxxxxxxxxxxxx</pid>
                  <regionId type="string">cn-hangzhou</regionId>
                  <type type="string">TRACE</type>
                  <updateTime type="number">1529667762000</
updateTime>
                  <userId type="string">xxxxxxxxxxxxxxxx</userId>
                </e>
                <e class="object">
                  <appId type="number">6549</appId>
                  <appName type="string">docker-demo</appName>
                  <createTime type="number">1531291867000</
createTime>
                  <pid type="string">xxxxxxxxxxxxxxxx</pid>
                  <regionId type="string">cn-hangzhou</regionId>
                  <type type="string">TRACE</type>
                  <updateTime type="number">1531291867000</
updateTime>
                  <userId type="string">xxxxxxxxxxxxxxxx</userId>
                </e>
                <e class="object">
                  <appId type="number">7451</appId>
                  <appName type="string">arms-console-hz</appName>
                  <createTime type="number">1533525518000</
createTime>
                  <pid type="string">xxxxxxxxxxxxxxxx</pid>
                  <regionId type="string">cn-hangzhou</regionId>
                  <type type="string">TRACE</type>
                  <updateTime type="number">1533525518000</
updateTime>
                  <userId type="string">xxxxxxxxxxxxxxxx</userId>
                </e>
              </traceApps>
            </o>

```

## JSON format

```

{
  "traceApps": [
    {
      "appName": "arms-pop-hz",
      "createTime": 1529667762000,
      "appId": 5918,
      "updateTime": 1529667762000,
      "userId": "xxxxxxxxxxxxxxxx",
      "pid": "xxxxxxxxxxxxxxxx",
      "type": "TRACE",
      "regionId": "cn-hangzhou"
    },
    {
      "appName": "docker-demo",
      "createTime": 1531291867000,
      "appId": 6549,
      "updateTime": 1531291867000,
      "userId": "xxxxxxxxxxxxxxxx",
      "pid": "xxxxxxxxxxxxxxxx",
      "type": "TRACE",
      "regionId": "cn-hangzhou"
    },
    {
      "appName": "arms-console-hz",
      "createTime": 1533525518000,
      "appId": 7451,
      "updateTime": 1533525518000,

```

```

    "userId":"xxxxxxxxxxxxxxxxxxxx",
    "pid":"xxxxxxxxxxxxxxxxxxxx",
    "type":"TRACE",
    "regionId":"cn-hangzhou"
  }
],
"requestId":"959C77E2-04E9-4FD4-848A-B8C1A48BEF51"
}

```

#### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 4.4 QueryMetric (Application Monitoring)

You can call this operation to query the metrics of Application Monitoring.

#### Debugging

*OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.*

#### Description

You can call `QueryMetric` to query the metrics of Application Monitoring and Browser Monitoring. This topic describes how to query the metrics of Application Monitoring.

Operation	Request	Response
QueryMetric	QueryMetricRequest	QueryMetricResponse

#### Request parameters

Request parameters include common parameters and operation-specific parameters.

#### Common request parameters

For more information about common request parameters, see [Common parameters](#).

#### Operation-specific parameters


Alibaba Cloud encapsulates all request parameters in a request, and returns a response.

Parameter	Type	Setting method	Description	Required	Remarks
StartTime	Long	setStartTime	The beginning of the time range to query.	Yes	N/A
EndTime	Long	setEndTime	The end of the time range to query.	Yes	N/A
Metric	String	setMetric	The metric to be queried.	Yes	N/A
Measures	List[String]	setMeasures	The measurement data of the metric.	Yes	N/A
Dimensions	List[String]	setDimensions	The dimension by which the data is queried.	No	N/A
Filters	List[Filter]	setFilters	The filtering condition for the query.	Yes	N/A
IntervalInSec	Integer	setIntervalInSec	The time interval between the data shards to be queried . Unit: millisecond.	No	N/A
OrderBy	String	setOrderBy	The basis of sorting.	No	N/A

Parameter	Type	Setting method	Description	Required	Remarks
Limit	Integer	setLimit	The limit to the number of returned results.	No	N/A
Order	String	setOrder	Specifies whether the data is sorted in ascending or descending order.	No	ASC specifies an ascending order, whereas DESC specifies a descending order.
SecurityToken	String	setSecurityToken	The security token generated by Security Token Service (STS) for the Resource Access Management (RAM) role.	No	You must set this parameter if you use a RAM role.

**Fields in filters**

Parameter	Type	Setting method	Description	Example
key	String	setKey	The name of the dimension.	appId
value	String	setValue	The dimension value.	11

 **Notice:**  
 To query any metric of Application Monitoring, you must add `pid` and `regionId` in filters.

**How to obtain the pid of an application**



In the left-side navigation pane, choose **Application Monitoring > Applications**. On the **Applications** page, click the name of the target application to go to the overview page of this application.

The URL in the browser address bar contains the `pid` of this application in the format of `pid=xxx`. The browser is encoded, and therefore you need to modify the `pid` of all applications except for those in Enterprise Distributed Application Service (EDAS). For example, if the `pid` in the URL is `xxx%4074xxx`, you need to replace `%40` with `@`. That is, the `pid` is modified to `xxx@74xxx`.

#### Response parameters

Response data is returned as JSON strings. You can run `QueryMetricResponse.getData()` to query the response data.

Parameter	Description	Remarks
<code>data</code>	The data point returned.	N/A

#### Queryable Application Monitoring metrics

You can call the `QueryMetric` operation to query the following metrics of Application Monitoring.



#### Note:

If you know the specific query conditions, add the value to the `filters` parameter to restrict the range of query results. If you do not know the specific query conditions, pass the dimensions in the following table to the `dimensions` parameter to obtain a list of all possible values of the dimension. For example, if you know the `ip_country_id` of a country, but do not know the `ip_region_id` of each region of this country, you can pass `ip_country_id` to the `filters` parameter and pass `ip_region_id` to the `dimensions` parameter. In this way, you can obtain the `ip_region_id` of every region of this country and can then use the specific `ip_region_id` to make a more precise query.

Metric	Description	Dimension	Measurement data
appstat.vm	Common metrics, which correspond to the JVM monitoring chart in application details, including the garbage collection (GC), heap memory, non-heap memory, and number of threads.	<ul style="list-style-type: none"> <li>• pid</li> <li>• rootIp</li> </ul>	<p>GC:</p> <ul style="list-style-type: none"> <li>• youngGcCount//number of young GC events monitored in the JVM</li> <li>• oldGcCount//number of full GC events monitored in the JVM</li> <li>• youngGcTime//total time for young GC monitored in the JVM</li> <li>• oldGcTime//total time for full GC monitored in the JVM</li> <li>• youngGcCountInstant//instantaneous value of the number of young GC events monitored in the JVM</li> <li>• oldGcCountInstant//instantaneous value of the number of full GC events monitored in the JVM</li> <li>• youngGcTimeInstant//instantaneous value of the total time for young GC monitored in the JVM</li> </ul>
18			<ul style="list-style-type: none"> <li>• oldGcTimeInstant//instantaneous</li> </ul>

Metric	Description	Dimension	Measurement data
			<p><b>Detailed information about heap memory and non-heap memory:</b></p> <ul style="list-style-type: none"><li>• <b>EdenSpace</b> //young generation - Eden space</li><li>• <b>OldGen</b>//old generation</li><li>• <b>survivorSpace</b>//young generation - survivor space</li><li>• <b>metaSpace</b></li><li>• <b>nonHeapCommitted</b>//non-heap memory</li><li>• <b>nonHeapInit</b> //initial value of non-heap memory</li><li>• <b>nonHeapMax</b>// maximum value of non-heap memory</li><li>• <b>nonHeapUsed</b>//non-heap memory usage</li><li>• <b>directUsed</b>// direct buffer</li><li>• <b>directCapacity</b>// direct buffer</li></ul>

Metric	Description	Dimension	Measurement data
			<b>Number of threads:</b> <ul style="list-style-type: none"> <li>• <b>threadCount</b></li> <li>• <b>threadNewCount</b></li> <li>• <b>threadDead lockCount</b></li> <li>• <b>threadRunn ableCount</b></li> <li>• <b>threadTerm inatedCount</b></li> <li>• <b>threadTime dWaitCount</b></li> <li>• <b>threadWait Count</b></li> <li>• <b>threadBloc kedCount</b></li> </ul>
appstat.host	Host monitoring metrics, which include the number of instances, CPU, physical memory, disk, load, network traffic (in bytes ), and number of network packets.	pidrootIp	<b>Number of instances:</b> <ul style="list-style-type: none"> <li>• <b>instanceCount</b></li> </ul> <b>CPU:</b> <ul style="list-style-type: none"> <li>• <b>systemCpuIdle// not displayed on the page - CPU idle</b></li> <li>• <b>systemCpuS ystem</b></li> <li>• <b>systemCpuUser</b></li> <li>• <b>systemCpuI oWait</b></li> </ul>

Metric	Description	Dimension	Measurement data
			<p><b>Physical memory:</b></p> <ul style="list-style-type: none"> <li>• <b>systemMemFree</b></li> <li>• <b>systemMemUsed</b></li> <li>• <b>SystemMemTotal</b>//not displayed on the page - total system memory</li> <li>• <b>systemMemBuffers</b></li> <li>• <b>SystemMemCached</b>//page cache</li> </ul> <p><b>Disk:</b></p> <ul style="list-style-type: none"> <li>• <b>systemDiskFree</b></li> <li>• <b>systemDiskUsed</b></li> <li>• <b>SystemDiskTotal</b>//not displayed on the page in the Alibaba Cloud console - total system disk</li> </ul> <p><b>Load:</b></p> <ul style="list-style-type: none"> <li>• <b>systemLoad</b></li> </ul> <p><b>Network:</b></p> <ul style="list-style-type: none"> <li>• <b>systemNetInPackets</b></li> <li>• <b>systemNetOutPackets</b></li> <li>• <b>systemNetInErrs</b></li> <li>• <b>systemNetOutErrs</b></li> <li>• <b>systemNetInBytes</b></li> <li>• <b>systemNetOutBytes</b></li> </ul>

Metric	Description	Dimension	Measurement data
appstat.database	Database call	<ul style="list-style-type: none"> <li>pid</li> <li>rpcType//call type</li> <li>endpoint//database address: localhost: 3306</li> <li>destId//database name: arms</li> </ul>	<ul style="list-style-type: none"> <li>rt//response time</li> <li>count//number of requests</li> <li>error//number of errors</li> </ul>
appstat.txn	API call	<ul style="list-style-type: none"> <li>pid</li> <li>rpcType</li> <li>rpc//interface: /demo/oracleTwo</li> </ul>	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> <li>errRate//error rate</li> </ul>
appstat.incall	Application details	<ul style="list-style-type: none"> <li>pid</li> <li>rpcType</li> <li>rootIp</li> <li>rpc</li> <li>ppid</li> </ul>	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> <li>exception</li> </ul>
appstat.exception	Exception	<ul style="list-style-type: none"> <li>pid</li> <li>rpc</li> <li>endpoint</li> <li>exceptType</li> <li>exceptInfo</li> </ul>	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> </ul>
appstat.sql	Slow SQLs	<ul style="list-style-type: none"> <li>pid</li> <li>rpc</li> <li>endpoint</li> <li>sqlId</li> </ul>	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> <li>slow</li> </ul>
appstat.mq.send	Message Queue (MQ) message sending	N/A	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> </ul>
appstat.mq.receive	MQ message receiving	N/A	<ul style="list-style-type: none"> <li>rt</li> <li>count</li> <li>error</li> </ul>

### Sample code

**The following is the sample code for calling the `QueryMetric` operation to query the data about the old generation and the Eden space of the JVM of an application:**

## 5 Browser monitoring

---

### 5.1 CreateRetcodeApp

You can call this operation to create a browser monitoring job.

Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateRetcodeApp	The operation that you want to perform. Set this value to CreateRetcodeApp.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
RetcodeAppName	String	Yes	SdkTest	The name of the application for which you want to create the browser monitoring job.
RetcodeAppType	String	Yes	web	The type of the application for which you want to create the browser monitoring job.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A5EC8221-08F2-4C95-9AF1-49FD998C647A	The ID of the request.
RetcodeAppDataBean			The returned creation information of the browser monitoring job.



Parameter	Type	Example	Description
AppId	Long	135143	The ID of the application for which you created the browser monitoring job.
Pid	String	aokcdqn3ly@a195c6d6421****	The PID.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/retcode/CreateRetcodeApp.json?RegionId=cn-hangzhou&RetcodeAppName=SdkTest&RetcodeAppType=web
```

### Sample success response

#### XML format

```
<o>
  <requestId type="string">A5EC8221-08F2-4C95-9AF1-49FD998C647A</requestId>
  <retcodeAppDataBean class="object">
    <appId type="number">135143</appId>
    <pid type="string">aokcdqn3ly@a195c6d6421****</pid>
  </retcodeAppDataBean>
</o>
```

#### JSON format

```
{
  "requestId": "A5EC8221-08F2-4C95-9AF1-49FD998C647A",
  "retcodeAppDataBean": {
    "appId": 135143,
    "pid": "aokcdqn3ly@a195c6d6421****"
  }
}
```

## Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 5.2 ListRetcodeApps

You can call this operation to query all browser monitoring jobs in the specified region.

Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListRetcodeApps	The operation that you want to perform. Set this value to ListRetcodeApps.
RegionId	String	Yes	cn-hangzhou	The ID of the region that you want to query.
AccessKeyId	String	No	****	This parameter can be ignored.

Response parameters

Parameter	Type	Example	Description
RequestId	String	99A663CB-8D7B-4B0D-A006-03C8EE38E7BB	The ID of the request.
RetcodeApps			The list of applications monitored.
AppId	Long	16064	The ID of the application.
AppName	String	a3	The name of the application.
Pid	String	XXXXXXXXXX XXXXXXX	The PID.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/retcode/ListRetcodeApps.json?RegionId=cn-hangzhou
```

### Sample success response

#### XML format

```
<ListRetcodeApps>
  <RequestId>99A663CB-8D7B-4B0D-A006-03C8EE38E7BB</RequestId>
  <RetcodeApps>
    <RetcodeApp>
      <AppId>16064</AppId>
      <AppName>a3</AppName>
      <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
    </RetcodeApp>
    <RetcodeApp>
      <AppId>38093</AppId>
      <AppName>ARMS page</AppName>
      <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
    </RetcodeApp>
    <RetcodeApp>
      <AppId>77494</AppId>
      <AppName>ARMS-Retcode page</AppName>
      <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
    </RetcodeApp>
    <RetcodeApp>
      <AppId>77499</AppId>
      <AppName>Test 1</AppName>
      <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
    </RetcodeApp>
    <RetcodeApp>
      <AppId>77501</AppId>
      <AppName>Browser monitoring</AppName>
      <Pid>xxxxxxxxxxxxxxxxxxxx</Pid>
    </RetcodeApp>
  </RetcodeApps>
</ListRetcodeApps>
```

#### JSON format

```
{
  "requestId": "99A663CB-8D7B-4B0D-A006-03C8EE38E7BB",
  "retcodeApps": [
    {
      "appName": "a3",
      "appId": "16064",
      "pid": "xxxxxxxxxxxxxxxxxxxx"
    },
    {
      "appName": "ARMS page",
      "appId": "38093",
      "pid": "xxxxxxxxxxxxxxxxxxxx"
    },
    {
      "appName": "ARMS-Retcode page",
```

```

    "appId":77494,
    "pid":"xxxxxxxxxxxxxxxxxxxxxxxxxxxx"
  },
  {
    "appName":"Test 1",
    "appId":77499,
    "pid":"xxxxxxxxxxxxxxxxxxxxxxxxxxxx"
  },
  {
    "appName":"Browser monitoring",
    "appId":77501,
    "pid":"xxxxxxxxxxxxxxxxxxxxxxxx"
  }
]
}

```

#### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 5.3 SearchRetcodeAppByPage

You can call this operation to query browser monitoring jobs by page.

#### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

#### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchRetcodeAppByPage	The operation that you want to perform. Set this value to <code>SearchRetcodeAppByPage</code> .
PageNumber	Integer	Yes	1	The number of the page to return.
PageSize	Integer	Yes	5	The number of entries to return on each page.
RegionId	String	Yes	cn-hangzhou	The ID of the region.

Parameter	Type	Required	Example	Description
RetcodeApp Name	String	Yes	App1	The name of the application monitored.

## Response parameters

Parameter	Type	Example	Description
PageBean			The information returned on each page.
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	2	The number of entries returned on each page.
RetcodeApps			The browser monitoring job information returned on each page .
AppId	Long	16064	The ID of the application monitored.
AppName	String	a3	The name of the application monitored.
CreateTime	Long	1545363321000	The time when the browser monitoring job was created.
Pid	String	aokcdqn3ly@ 741623b4e91****	The PID.
RegionId	String	cn-hangzhou	The ID of the region.
Type	String	RETCODE	The monitoring type.
UpdateTime	Long	1545363321000	The time when the browser monitoring job was updated.
UserId	String	XXXXXXXXXXXXXXXX	The ID of the user.

Parameter	Type	Example	Description
TotalCount	Integer	8	The total number of entries returned.
RequestId	String	626037F5-FDEB-45B0-804C-B3C92797A64E	The ID of the request.

## Examples

### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/retcode/SearchRetcodeAppByPage.json?PageNumber=1
&PageSize=5
&RegionId=cn-hangzhou
&RetcodeAppName=App1
```

### Sample success response

#### XML format

```
<SearchRetcodeAppByPage>
  <requestId>626037F5-FDEB-45B0-804C-B3C92797A64E</requestId>
  <pageBean>
    <pageNumber>1</pageNumber>
    <pageSize>2</pageSize>
    <totalCount>8</totalCount>
    <retcodeApps>
      <retcodeApp>
        <appId>16064</appId>
        <appName>a3</appName>
        <createTime>1545363321000</createTime>
        <pid>xxxxxxxxxxxxxxxxxxxx</pid>
        <regionId>cn-hangzhou</regionId>
        <type>RETCODE</type>
        <updateTime>1545363321000</updateTime>
        <userId>xxxxxxxxxxxxxxxx</userId>
      </retcodeApp>
      <retcodeApp>
        <appId>38093</appId>
        <appName>TestApp</appName>
        <createTime>1553239261000</createTime>
        <pid>xxxxxxxxxxxxxxxxxxxx</pid>
        <regionId>cn-hangzhou</regionId>
        <type>RETCODE</type>
        <updateTime>1553239261000</updateTime>
        <userId>xxxxxxxxxxxx</userId>
      </retcodeApp>
    </retcodeApps>
  </pageBean>
```

```
</SearchRetcodeAppByPage>
```

### JSON format

```
{
  "pageBean": {
    "totalCount": 8,
    "pageSize": 2,
    "pageNumber": 1,
    "retcodeApps": [
      {
        "appName": "a3",
        "createTime": 1545363321000,
        "appId": 16064,
        "updateTime": 1545363321000,
        "userId": "xxxxxxxxxxxxxxx",
        "pid": "xxxxxxxxxxxxxxx",
        "type": "RETCODE",
        "regionId": "cn-hangzhou"
      },
      {
        "appName": "TestApp",
        "createTime": 1553239261000,
        "appId": 38093,
        "updateTime": 1553239261000,
        "userId": "xxxxxxxxxxxxxxx",
        "pid": "xxxxxxxxxxxxxxx",
        "type": "RETCODE",
        "regionId": "cn-hangzhou"
      }
    ]
  },
  "requestId": "626037F5-FDEB-45B0-804C-B3C92797A64E"
}
```

### Error codes

**The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).**

## 5.4 DeleteRetcodeApp

**You can call this operation to delete a browser monitoring job.**

### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

## Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteRetcodeApp	The operation that you want to perform. Set this value to DeleteRetcodeApp.
AppId	String	Yes	1231	The ID of the application for which you want to delete a browser monitoring job.
RegionId	String	Yes	cn-hangzhou	The ID of the region.

## Response parameters

Parameter	Type	Example	Description
Data	String	true	Indicates whether the deletion succeeded or failed.
RequestId	String	01FF8DD9-A09C-47A1-895A-B6E321BE77B6	The ID of the request.

## Examples

**Sample request**

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/retcode/DeleteRetcodeApp.json?AppId=1231&RegionId=cn-hangzhou
```

**Sample success response****XML format**

```
<o>
  <data type="string">true</data>
  <requestId type="string">01FF8DD9-A09C-47A1-895A-B6E321BE77B6</requestId>
</o>
```

**JSON format**

```
{
  "requestId": "01FF8DD9-A09C-47A1-895A-B6E321BE77B6",
```



```
"data": "true"
}
```

#### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 5.5 QueryMetric (Browser Monitoring)

You can call this operation to query the metrics of Browser Monitoring.

#### Debugging

*OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.*

#### Description

You can call `QueryMetric` to query the metrics of Application Monitoring and Browser Monitoring. This topic describes how to query the metrics of Browser Monitoring.

Operation	Request	Response
QueryMetric	QueryMetricRequest	QueryMetricResponse

#### Request parameters

Request parameters include common parameters and operation-specific parameters.

##### Common request parameters

For more information about common request parameters, see [Common parameters](#).

##### Operation-specific parameters

Alibaba Cloud encapsulates all request parameters in a request, and returns a response.

Parameter	Type	Setting method	Description	Required	Remarks
startTime	Long	setStartTime	The beginning of the time range to query.	Yes	N/A
endTime	Long	setEndTime	The end of the time range to query.	Yes	N/A
metric	String	setMetric	The metric to be queried.	Yes	N/A
measures	List[String]	setMeasures	The measurement data of the metric.	Yes	N/A
dimensions	List[String]	setDimensions	The dimension by which the data is queried.	No	N/A
filters	List[Filter]	setFilters	The filtering condition for the query.	Yes	N/A
intervalInSec	Integer	setIntervalInSec	The time interval between the data shards to be queried.	No	N/A
orderBy	String	setOrderBy	The basis of sorting.	No	N/A
limit	Integer	setLimit	The limit to the number of returned results.	No	N/A

Parameter	Type	Setting method	Description	Required	Remarks
<b>order</b>	String	<b>setOrder</b>	Specifies whether the data is sorted in ascending or descending order.	No	ASC specifies ascending order, whereas DESC specifies descending order.
<b>securityToken</b>	String	<b>setSecurityToken</b>	The security token generated by Security Token Service (STS) for the Resource Access Management (RAM) role.	No	You must set this parameter if you use a RAM role.

### Fields in filters

Parameter	Type	Setting method	Description	Example
<b>key</b>	String	<b>setKey</b>	The name of the dimension.	<b>appId</b>
<b>value</b>	String	<b>setValue</b>	The dimension value.	<b>11</b>



#### Notice:

To query any metric of Application Monitoring, you must add **pid** in filters.

### How to obtain the pid of an application

In the left-side navigation pane, click **Browser Monitoring**. On the **Browser Monitoring** page, click the name of the target application to go to the overview page of this application.

The URL in the browser address bar contains the pid of this application in the format of pid=xxx. The browser is encoded, and therefore you need to modify the pid of all applications except for those in Enterprise Distributed Application Service (EDAS). For example, if the pid in the URL is xxx%4074xxx, you need to replace %40 with @. That is, the pid is modified to xxx@74xxx.

#### Response parameters

Response data is returned as JSON strings. You can run `QueryMetricResponse.getData()` to query the response data.

Parameter	Description	Remarks
data	The data point returned.	N/A

#### Queryable Browser Monitoring metrics

You can call the `QueryMetric` operation to query the following metrics of Browser Monitoring.



#### Note:

If you know the specific query conditions, add the value to the `filters` parameter to restrict the range of query results. If you do not know the specific query conditions, pass the dimensions in the following table to the `dimensions` parameter to obtain a list of all possible values of the dimension. For example, if you know the `ip_country_id` of a country, but do not know the `ip_region_id` of each region of this country, you can pass `ip_country_id` to the `filters` parameter and pass `ip_region_id` to the `dimensions` parameter. In this way, you can obtain the `ip_region_id` of every region of this country and can then use the specific `ip_region_id` to make a more precise query.

Metric	Description	Dimension	Measurement data
webstat.session	Session tracing	N/A	<ul style="list-style-type: none"> <li>• page</li> <li>• sid</li> <li>• browser</li> <li>• load</li> <li>• date</li> <li>• browser_version</li> </ul>

Metric	Description	Dimension	Measurement data
<b>webstat.index</b>	<b>Overview</b>	<ul style="list-style-type: none"> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr (screen resolution)</li> </ul>	<ul style="list-style-type: none"> <li>• pv</li> <li>• uv</li> </ul>
<b>webstat.satisfy</b>	<b>Satisfaction</b>	<ul style="list-style-type: none"> <li>• page</li> <li>• ip_country_id</li> <li>• Ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• satisfy</li> </ul>
<b>webstat.url</b>	<b>Access URL</b>	<ul style="list-style-type: none"> <li>• page</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• pv</li> <li>• uv</li> </ul>
<b>webstat.speed</b>	<b>Page speed</b>	<ul style="list-style-type: none"> <li>• page</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• avg_fpt</li> <li>• avg_ready</li> <li>• avg_load</li> <li>• avg_dns</li> <li>• avg_tcp</li> <li>• avg_ssl</li> <li>• avg_ttfb</li> <li>• avg_trans</li> <li>• avg_dom</li> <li>• avg_res</li> <li>• avg_tti</li> </ul>

Metric	Description	Dimension	Measurement data
<b>webstat.stable</b>	<b>Error rate ranking</b>	<ul style="list-style-type: none"> <li>• page</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• rate</li> <li>• pv</li> </ul>
<b>webstat.errcate</b>	<b>Error message ranking</b>	<ul style="list-style-type: none"> <li>• msg</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• count</li> </ul>
<b>webstat.api</b>	<b>API call success rate</b>	<ul style="list-style-type: none"> <li>• api</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• rate</li> <li>• pv</li> </ul>
<b>webstat.apimsg</b>	<b>API message clustering</b>	<ul style="list-style-type: none"> <li>• msg</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• count</li> </ul>

Metric	Description	Dimension	Measurement data
<b>webstat.apicost</b>	<b>Response time for successful API calls</b>	<ul style="list-style-type: none"> <li>• api</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• count</li> <li>• avg_time</li> </ul>
<b>webstat.apifailtime</b>	<b>Response time for failed API calls</b>	<ul style="list-style-type: none"> <li>• api</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• count</li> <li>• avg_time</li> </ul>
<b>webstat.sum</b>	<b>Custom statistics: sum</b>	<ul style="list-style-type: none"> <li>• key</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• sum_val</li> <li>• count</li> <li>• uv</li> </ul>
<b>webstat.avg</b>	<b>Custom statistics: average</b>	<ul style="list-style-type: none"> <li>• key</li> <li>• ip_country_id</li> <li>• ip_region_id</li> <li>• detector_browser</li> <li>• detector_device</li> <li>• detector_os</li> <li>• sr</li> </ul>	<ul style="list-style-type: none"> <li>• avg_val</li> <li>• count</li> </ul>

## Sample code

**The following is the sample code for calling the `QueryMetric` operation to query the page view (PV) and the unique visitor (UV) on the Overview page of Browser Monitoring:**



## 6 Common API operations

---

### 6.1 QueryDataSet (drill-down datasets)

You can call this operation to query data in a drill-down dataset.

#### Debugging

*OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.*

#### Description

You can call `QueryDataSet` to query the data in a drill-down dataset of Application Real-Time Monitoring Service (ARMS).

Operation	Request	Response
QueryDataSet	QueryDataSetRequest	QueryDataSetResponse

#### Request parameters

Request parameters include common parameters and operation-specific parameters.

#### Common request parameters

For more information about common request parameters, see [Common parameters](#).

#### Operation-specific parameters

Alibaba Cloud encapsulates all request parameters in a request, and returns a response. `QueryDataSetRequest` contains the following parameters:

Parameter	Type	Setting method	Description	Required	Remarks
<code>datasetId</code>	Long	<code>setDatasetId</code>	The ID of the dataset to be queried.	Yes	N/A

Parameter	Type	Setting method	Description	Required	Remarks
<b>minTime</b>	<b>Long</b>	<b>setMinTime</b>	The beginning of the time range to query.	<b>Yes</b>	<b>N/A</b>
<b>maxTime</b>	<b>Long</b>	<b>setMaxTime</b>	The end of the time range to query.	<b>Yes</b>	<b>N/A</b>
<b>intervalInSec</b>	<b>Integer</b>	<b>setIntervalInSec</b>	The time interval between the data shards to be queried.	<b>Yes</b>	<b>N/A</b>
<b>measures</b>	<b>List[String]</b>	<b>setMeasures</b>	The list of metrics to be queried.	<b>No</b>	The list can contain up to three elements . If this parameter is left unspecified , data of all metrics is returned.

Parameter	Type	Setting method	Description	Required	Remarks
<b>dimensions</b>	<b>List[Dimension]</b>	<b>setDimensions</b>	The list of dimensions by which the data is queried.	No	A parameter for querying data in a drill-down dataset. It is a compound parameter . The list can contain up to three elements. For more information about the definition of dimensions , see the following table.
<b>orderByKey</b>	<b>String</b>	<b>setOrderByKey</b>	The basis of sorting.	No	N/A
<b>limit</b>	<b>Integer</b>	<b>setLimit</b>	The limit to the number of returned results.	No	N/A
<b>reduceTail</b>	<b>Boolean</b>	<b>setReduceTail</b>	Specifies whether to aggregate all data beyond the limit.	No	N/A

Parameter	Type	Setting method	Description	Required	Remarks
<b>securityToken</b>	String	<b>setSecurityToken</b>	The security token generated by Security Token Service (STS) for the Resource Access Management (RAM) role.	No	You must set this parameter if you use a RAM role.

### Fields in dimensions

Parameter	Type	Setting method	Description	Remarks
<b>key</b>	String	<b>setKey</b>	The name of the dimension.	For example, region.
<b>value</b>	String	<b>setValue</b>	The dimension value.	For example, Beijing.
<b>type</b>	String	<b>setType</b>	The type of the dimension value.	The type can be STATIC, ALL, or DISABLED.

- To select all values under a dimension, set `type` to ALL and set `value` to null.
- To select a specific dimension value under a dimension, set `type` to STATIC that means a static value, and set `value` to the entered dimension value.
- If you do not want to select a dimension, ignore this dimension or set `type` to DISABLED.

### Response parameters

Response data is returned as JSON strings. You can run `ARMSQueryDataSetResponse.getData()` to query the response data.

`ARMSQueryDataSetResponse` contains the following parameters:

Parameter	Description	Remarks
<b>dimensions</b>	<b>The dimension value of the time series data.</b>	<b>If this parameter is set to ALL, multiple dimensions are available.</b>
<b>measures</b>	<b>The metrics in the data point.</b>	N/A
<b>resultSize</b>	<b>The number of all data points returned.</b>	N/A
<b>dimData</b>	<b>Multiple records of time series data.</b>	N/A

### Examples

- 1. If you do not select any dimensions, a summary of all data is displayed.**
- 2. Select the first dimension, and set the dimension value to an empty string ("") and the dimension type to ALL. The data grouped by the first dimension is returned.**
- 3. Select the first dimension. Set the dimension value to a fixed value, such as hangzhou, and set the dimension type to STATIC, which means a static value. The data for hangzhou is returned based on the first dimension.**
- 4. Select the list of metrics to be queried. Data of only the specified metrics is returned.**

Related concepts

[Common parameters](#)

## 6.2 QueryDataset (common datasets)

**You can call this operation to query data in a common dataset.**

### Debugging

*OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.*

### Description

**You can call QueryDataSet to query the data in a common dataset of Application Real-Time Monitoring Service (ARMS).**

Operation	Request	Response
QueryDataSet	QueryDataSetRequest	QueryDataSetResponse

Request parameters

**Request parameters include common parameters and operation-specific parameters.**

**Common request parameters**

For more information about common request parameters, see [Common parameters](#).

**Operation-specific parameters**

Alibaba Cloud encapsulates all request parameters in a request, and returns a response. QueryDataSetRequest contains the following parameters:

Parameter	Type	Setting method	Description	Required	Remarks
datasetId	Long	setDatasetId	The ID of the dataset to be queried.	Yes	N/A
minTime	Long	setMinTime	The beginning of the time range to query.	Yes	N/A
maxTime	Long	setMaxTime	The end of the time range to query.	Yes	N/A
intervalInSec	Integer	setIntervalInSec	The time interval between the data shards to be queried.	Yes	N/A

Parameter	Type	Setting method	Description	Required	Remarks
measures	List[String]	setMesures	The list of metrics to be queried.	No	The list can contain up to three elements . If this parameter is left unspecified , data of all metrics is returned.
requiredDims	List[Dimension]	setRequiredDims	The required dimensions for querying a common dataset.	No	Required when the required dimensions are configured.
optionalDims	List[Dimension]	setOptionalDims	The optional dimensions for querying a dataset.	No	N/A
orderByKey	String	setOrderByKey	The basis of sorting.	No	N/A
limit	Integer	setLimit	The limit to the number of returned results.	No	N/A
reduceTail	Boolean	setReduceTail	Specifies whether to aggregate all data beyond the limit.	No	N/A

Parameter	Type	Setting method	Description	Required	Remarks
<b>securityToken</b>	String	setSecurityToken	The security token generated by Security Token Service (STS) for the Resource Access Management (RAM) role.	No	You must set this parameter if you use a RAM role.

#### Fields in RequiredDims and OptionalDims

Parameter	Type	Setting method	Description	Remarks
<b>key</b>	String	setKey	The name of the dimension.	For example, region.
<b>value</b>	String	setValue	The dimension value.	For example, Beijing.
<b>type</b>	String	setType	The type of the dimension value.	The type can be STATIC, ALL, or DISABLED.

- To select all values under a dimension, set `type` to `ALL` and set `value` to `null`.
- To select a specific dimension value under a dimension, set `type` to `STATIC` that means a static value, and set `value` to the entered dimension value.
- If you do not want to select a dimension, ignore this dimension or set `type` to `DISABLED`.

#### Response parameters

Response data is returned as JSON strings. You can run `QueryDataSetResponse.getData()` to query the response data. `QueryDataSetResponse` contains the following parameters:

Parameter	Description
<b>measures</b>	The metrics in the data point.



Parameter	Description
<b>resultSize</b>	<b>The number of all data points returned.</b>
<b>dimData</b>	<b>Multiple records of time series data.</b>

#### Examples

- 1. If you do not select any dimensions, a summary of all data is displayed.**
- 2. Check if you have configured the required dimensions. If you have configured the required dimensions, you must set the parameters related to these required dimensions when running queries. Otherwise, your queries cannot be run.**
- 3. Select the list of metrics to be queried. Data of only the specified metrics is returned.**

Related concepts

[Common parameters](#)

# 7 Alerts

---

## 7.1 CreateAlertContact

You can call this operation to create an alert contact.

### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAlertContact	The operation that you want to perform. Set this value to CreateAlertContact.
ContactName	String	Yes	JohnDoe	The name of the alert contact that you want to create.
DingRobotWebhookUrl	String	Yes	123456	The DingTalk Chatbot address of the contact.
Email	String	Yes	john DOE@example.com	The email address of the contact.
PhoneNum	String	Yes	1381111****	The phone number of the contact.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
SystemNoc	Boolean	Yes	true	Specifies whether to receive system alerts.

## Response parameters

Parameter	Type	Example	Description
ContactId	String	6258	The ID of the alert contact that you created.
RequestId	String	C21AB7CF-B7AF-410F-BD61-82D1567F65F8	The ID of the request.

## Examples

**Sample request**

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/alert/CreateAlertContact.json?ContactName=JohnDoe&DingRobotWebhookUrl=123456&Email=johndoe@example.com&PhoneNum=1381111****&RegionId=cn-hangzhou&SystemNoc=true&<Common request parameters>
```

**Sample success response****XML format**

```
<CreateAlertContact>
  <RequestId>C21AB7CF-B7AF-410F-BD61-82D1567F65F8</RequestId>
  <ContactId>6258</ContactId>
</CreateAlertContact>
```

**JSON format**

```
{
  "contactId": "6258",
  "requestId": "C21AB7CF-B7AF-410F-BD61-82D1567F65F8"
}
```

## Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 7.2 CreateAlertContactGroup

You can call this operation to create an alert contact group.

### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAlertContactGroup	The operation that you want to perform. Set this value to <code>CreateAlertContactGroup</code> .
ContactGroupName	String	Yes	TestGroup	The name of the alert contact group that you want to create.
ContactIds	String	Yes	1234212343	The alert contact ID. If multiple contact IDs are available, separate them with spaces.
RegionId	String	Yes	cn-hangzhou	The ID of the region.

### Response parameters

Parameter	Type	Example	Description
ContactGroupId	String	4466	The ID of the alert contact group that you created.
RequestId	String	E9354A61-9535-4CB3-8E1B-C12E177D2450	The ID of the request.

### Examples

#### Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/alert/CreateAlertContactGroup.json?ContactGroupName=TestGroup&ContactIds=1234212343&RegionId=cn-hangzhou
```

### Sample success response

#### XML format

```
<CreateAlertContactGroup>
  <RequestId>E9354A61-9535-4CB3-8E1B-C12E177D2450</RequestId>
  <ContactGroupId>4466</ContactGroupId>
</CreateAlertContactGroup>
```

#### JSON format

```
{
  "requestId": "E9354A61-9535-4CB3-8E1B-C12E177D2450",
  "contactGroupId": "4466"
}
```

#### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 7.3 SearchAlertContactGroup

You can call this operation to query alert contact groups.

#### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

#### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchAlertContactGroup	The operation that you want to perform. Set this value to <code>SearchAlertContactGroup</code> .
ContactGroupName	String	Yes	TestGroup	The name of the alert contact group that you want to query.
RegionId	String	Yes	cn-hangzhou	The ID of the region.

## Response parameters

Parameter	Type	Example	Description
<b>ContactGroups</b>			<b>Information about the alert contact groups that you queried.</b>
<b>ContactGroupId</b>	Long	746	<b>The ID of the alert contact group.</b>
<b>ContactGroupName</b>	String	TestGroup	<b>The name of the alert contact group.</b>
<b>CreateTime</b>	Long	1529668855000	<b>The time when the alert contact group was created.</b>
<b>UpdateTime</b>	Long	1529668855000	<b>The time when the alert contact group was updated.</b>
<b>UserId</b>	String	xxxxxxxxxxx	<b>The ID of the user.</b>
<b>RequestId</b>	String	620BC657-3D59-4DC9-A5CE-D09CE3834C1D	<b>The ID of the request.</b>

## Examples

**Sample request**

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/alert/SearchAlertContactGroup.json?Region=hangzhou
&ContactGroupName=TestGroup
```

**Sample success response****XML format**

```
<SearchAlertContactGroup>
  <requestId>620BC657-3D59-4DC9-A5CE-D09CE3834C1D</requestId>
  <contactGroups>
    <contactGroup>
      <contactGroupId>746</contactGroupId>
      <contactGroupName>TestGroup1</contactGroupName>
      <createTime>1529668855000</createTime>
      <updateTime>1529668855000</updateTime>
      <userId>xxxxxxxxxxx</userId>
    </contactGroup>
    <contactGroup>
      <contactGroupId>3849</contactGroupId>
```

```

        <contactGroupName>TestGroup2</contactGroupName>
        <createTime>1561428915000</createTime>
        <updateTime>1561428915000</updateTime>
        <userId>xxxxxxxxxxx</userId>
    </contactGroup>
</contactGroups>
</SearchAlertContactGroup>

```

### JSON format

```

{
  "contactGroups": [
    {
      "createTime": 1529668855000,
      "updateTime": 1529668855000,
      "contactGroupName": "TestGroup1",
      "userId": "xxxxxxxxxxx",
      "contactGroupId": 746
    },
    {
      "createTime": 1561428915000,
      "updateTime": 1561428915000,
      "contactGroupName": "TestGroup2",
      "userId": "xxxxxxxxxxx",
      "contactGroupId": 3849
    }
  ],
  "requestId": "620BC657-3D59-4DC9-A5CE-D09CE3834C1D"
}

```

### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 7.4 ImportAppAlertRules

You can call this operation to import application alert rules.

### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportAppAlertRules	The operation that you want to perform. Set this value to <code>ImportAppAlertRules</code> .

Parameter	Type	Required	Example	Description
ContactGroupIds	String	Yes	1234	The ID of the alert contact group.
Pids	String	Yes	xxxxxxxxx	The PIDs.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
TemplateAlertId	String	Yes	324324234	The ID of the alert template.
IsAutoStart	Boolean	No	true	Specifies whether the rule automatically starts to apply.

## Response parameters

Parameter	Type	Example	Description
Data	String	399363 399364	The data returned.
RequestId	String	A5EC8221-08F2-4C95-9AF1-49FD998C647A	The ID of the request.

## Examples

## Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/alert/ImportAppAlertRules.json?ContactGroupIds=1234
&Pids=xxxxxxxxx
&RegionId=cn-hangzhou
&TemplateAlertId=324324234
```

## Sample success response

## XML format

```
<ImportAppAlertRules>
  <RequestId>A5EC8221-08F2-4C95-9AF1-49FD998C647A</RequestId>
  <Data>399363 399364</Data>
</ImportAppAlertRules>
```

## JSON format

```
{
  "requestId": "A5EC8221-08F2-4C95-9AF1-49FD998C647A",
```



```
"data": "399363 399364"
}
```

### Error codes

The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).

## 7.5 SearchAlertContact

You can call this operation to query alert contacts.

### Debugging

*Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.*

### Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SearchAlertContact	The operation that you want to perform. Set this value to SearchAlertContact.
ContactName	String	Yes	JohnDoe	The name of the contact that you want to query.
CurrentPage	String	Yes	1	The number of the page to return.
Email	String	Yes	johndoe@example.com	The email address of the contact.
PageSize	String	Yes	5	The number of entries to return on each page.
Phone	String	Yes	12312312312	The phone number of the contact.
RegionId	String	Yes	cn-hangzhou	The ID of the region.

## Response parameters

Parameter	Type	Example	Description
PageBean			The information returned on each page.
Contacts			The information about the contact that you queried.
ContactId	Long	6258	The ID of the alert contact.
ContactName	String	JohnDoe	The name of the alert contact.
CreateTime	Long	1565671490000	The time when the contact was created.
DingRobot	String	123456	The DingTalk Chatbot address of the contact.
Email	String	johndoe@example.com	The email address of the contact.
Phone	String	1381111****	The phone number of the contact.
SystemNoc	Boolean	false	Indicates whether system information has been synchronized.
UpdateTime	Long	1565671490000	The time when the contact was updated.
UserId	String	XXXXXXXXXXXXXX	The ID of the user.
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	10	The number of entries returned on each page.
TotalCount	Integer	2	The total number of entries returned.

Parameter	Type	Example	Description
RequestId	String	6D01BD42-26B6-4C12-8AEF-1ACE9CBD2A39	The ID of the request.

## Examples

## Sample request

```
http://arms.cn-hangzhou.aliyun-inc.com:8099/alert/SearchAlertContact.json?ContactName=JohnDoe
&CurrentPage=1
&Email=johndoe@example.com
&PageSize=5
&Phone=12312312312
&RegionId=cn-hangzhou
```

## Sample success response

## XML format

```
<o>
  <pageBean class="object">
    <contacts class="array">
      <e class="object">
        <contactId type="number">6258</contactId>
        <contactName type="string">JohnDoe</
contactName>
        <createTime type="number">1565671490000</
createTime>
        <dingRobot type="string"></dingRobot>
        <email type="string"></email>
        <phone type="string">1381111****</phone>
        <systemNoc type="boolean">>false</systemNoc
>
        <updateTime type="number">1565671490000</
updateTime>
        <userId type="string">xxxxxxxxxxxx</
userId>
      </e>
      <e class="object">
        <contactId type="number">6259</contactId>
        <contactName type="string">JaneDoe</
contactName>
        <createTime type="number">1565671814000</
createTime>
        <dingRobot type="string"></dingRobot>
        <email type="string"></email>
        <phone type="string">1382222****</phone>
        <systemNoc type="boolean">>false</systemNoc
>
        <updateTime type="number">1565671814000</
updateTime>
        <userId type="string">xxxxxxxxxxxx</
userId>
      </e>
    </contacts>
```

```
<pageNumber type="number">1</pageNumber>
<pageSize type="number">10</pageSize>
<totalCount type="number">2</totalCount>
</pageBean>
<requestId type="string">6D01BD42-26B6-4C12-8AEF-1ACE9CBD2A39</
requestId>
</o>
```

### JSON format

```
{
  "pageBean": {
    "totalCount": 2,
    "pageSize": 10,
    "pageNumber": 1,
    "contacts": [
      {
        "createTime": 1565671490000,
        "phone": "1381111****",
        "contactId": 6258,
        "dingRobot": "",
        "updateTime": 1565671490000,
        "email": "",
        "contactName": "JohnDoe",
        "userId": "xxxxxxxxxxxx",
        "systemNoc": false
      },
      {
        "createTime": 1565671814000,
        "phone": "1382222****",
        "contactId": 6259,
        "dingRobot": "",
        "updateTime": 1565671814000,
        "email": "",
        "contactName": "JaneDoe",
        "userId": "xxxxxxxxxxxx",
        "systemNoc": false
      }
    ]
  },
  "requestId": "6D01BD42-26B6-4C12-8AEF-1ACE9CBD2A39"
}
```

### Error codes

**The operation returns only common errors. For more information about errors that are common to all operations, see [API Error Center](#).**

## 8 Appendix

---

### 8.1 Call API operations by using the internal network

This topic describes how to configure Alibaba Cloud DNS PrivateZone (PrivateZone). In this way, an Elastic Compute Service (ECS) instance in a Virtual Private Cloud (VPC) that has no access to the Internet can initiate API requests by using the Alibaba Cloud internal network.

#### Context

Application Real-Time Monitoring Service (ARMS) provides public network endpoints. However, if your ECS instance does not have a public bandwidth package or a public IP address, this ECS instance cannot initiate an API request by using tools such as Alibaba Cloud Command-line Interface (CLI) or corresponding SDKs. Alibaba Cloud provides PrivateZone to ensure that your ECS instance can send API requests over the Alibaba Cloud internal network. You can associate PrivateZone with the VPC in the region to which your ECS instance belongs.

#### Instructions

- You can configure PrivateZone only for regions that contain VPC-type ECS instances. You cannot configure PrivateZone across multiple regions.
- We recommend that you use a custom image that is deployed with Alibaba Cloud CLI or SDK to create an ECS instance. Otherwise, the ECS instance cannot load related dependencies without public network access.
- The following table describes the endpoints that support PrivateZone. Make sure that you use an endpoint listed in the table.

Alibaba Cloud region	Region ID	CNAME record	Public network endpoint
China (Hangzhou)	cn-hangzhou-b	popunify-vpc.cn-hangzhou.aliyuncs.com	arms.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	popunify-vpc.cn-shanghai.aliyuncs.com	arms.cn-shanghai.aliyuncs.com

Alibaba Cloud region	Region ID	CNAME record	Public network endpoint
China (Qingdao)	cn-qingdao	popunify-vpc.cn-qingdao.aliyuncs.com	arms.cn-qingdao.aliyuncs.com
China (Beijing)	cn-beijing	popunify-vpc.cn-beijing.aliyuncs.com	arms.cn-beijing.aliyuncs.com
China (Shenzhen)	cn-shenzhen	popunify-vpc.cn-shenzhen.aliyuncs.com	arms.cn-shenzhen.aliyuncs.com
China (Zhangjiakou)	cn-zhangjiakou	popunify-vpc.cn-zhangjiakou.aliyuncs.com	arms.cn-zhangjiakou.aliyuncs.com
China (Hong Kong)	cn-hongkong	popunify-vpc.cn-hongkong.aliyuncs.com	arms.cn-hongkong.aliyuncs.com
Singapore (Singapore)	ap-southeast-1	popunify-vpc.ap-southeast-1.aliyuncs.com	arms.ap-southeast-1.aliyuncs.com

#### Procedure

1. Log on to the [Alibaba Cloud DNS console](#).
2. In the left-side navigation pane, click PrivateZone. On the PrivateZone page, click Add Zone on the All Zones tab.
3. In the Add PrivateZone dialog box, set the following two parameters as required, and then click OK.
  - **Zone Name:** Enter an endpoint that is provided by ARMS and supports PrivateZone. In this example, enter `arms.cn-hangzhou.aliyuncs.com`.
  - **Subdomain recursive resolution proxy:** If you select this option, when you query the subdomain names that are not configured in the zone namespace in the VPC, PrivateZone will recursively resolve the subdomain names on the Internet, and use the recursive resolution result as the DNS response to your query. Then PrivateZone returns this response to the VPC.
4. On the PrivateZone page, click the All Zones tab. On the All Zones tab, find the created private zone in the zone list, and click Configure in the Actions column.

5. On the Resolution Settings page, click the Resolution Settings tab. On the Resolution Settings tab, click Add Record.
6. In the Add Record dialog box, set the following parameters, and then click OK.
  - Record Type: Select CNAME from the drop-down list.
  - Resource Records: Enter @ to resolve the @.example.com domain name.
  - Record Value: Enter the CNAME record of the corresponding region. For more information, see [Instructions](#).
  - TTL Value: The time-to-live (TTL) value. In this example, select 1 minute(s).
7. On the PrivateZone page, find the created private zone, and click Bind VPC in the Actions column.
8. In the Bind VPC dialog box, select the same region as the created private zone, select the VPC where your ECS instance is located, and then click OK. You can select multiple VPCs.

## Results

After you associate the VPC with the created private zone, you can log on to your ECS instance to check whether this ECS instance can access the endpoint of the corresponding region. For more information, see [#unique\\_28](#).

Take `arms.cn-hangzhou.aliyuncs.com` as an example. Run the `ping` command to test the status of packet sending and receiving.

```
ping arms.cn-hangzhou.aliyuncs.com
```