

# Alibaba Cloud ActionTrail API Reference

Issue: 20190411

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# Generic conventions

Table -1: Style conventions

| Style   | Description  | Example  |
|---|--|--|
|  | This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. |  <b>Danger:</b><br>Resetting will result in the loss of user configuration data.                                    |
|  | This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.  |  <b>Warning:</b><br>Restarting will cause business interruption. About 10 minutes are required to restore business. |
|  | This indicates warning information, supplementary instructions, and other content that the user must understand.                           |  <b>Notice:</b><br>Take the necessary precautions to save exported data containing sensitive information.           |
|   | This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.                       |  <b>Note:</b><br>You can use Ctrl + A to select all files.  |
| >   | Multi-level menu cascade.  | Settings > Network > Set network type  |
| <b>Bold</b>   | It is used for buttons, menus, page names, and other UI elements.  | Click <b>OK</b> .  |
| Courier font  | It is used for commands.   | Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.   |
| <i>Italics</i>  | It is used for parameters and variables.   | <code>bae log list --instanceid <i>Instance_ID</i></code>  |
| [ ] or [a b]  | It indicates that it is an optional value, and only one item can be selected.  | <code>ipconfig [-all -t]</code>  |

| Style                                 | Description  | Example                             |
|---------------------------------------|--|-------------------------------------|
| <code>{}</code> or <code>{a b}</code> | It indicates that it is a required value, and only one item can be selected. | <code>switch {stand   slave}</code> |



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# 1 List of operations by function

---

## Instance-related APIs

| API                            | Description  |
|--------------------------------|--|
| <a href="#">CreateTrail</a>    | Creates a trail that specifies the settings for delivery of log data to a Log Service Logstore (recommended) or an OSS bucket. |
| <a href="#">DescribeTrails</a> | Retrieves settings for the trail associated with the current region.   |
| <a href="#">GetTrailStatus</a> | Returns a JSON-formatted list of information about the specified trail.  |
| <a href="#">StartLogging</a>   | Enables the specified trail.   |
| <a href="#">StopLogging</a>    | Disables the specified trail.  |
| <a href="#">UpdateTrail</a>    | Updates the OSS bucket of the specified trail.   |
| <a href="#">DeleteTrail</a>    | Deletes the specified trail.   |

## Retrieval-related APIs

| API                             | Description                                    |
|---------------------------------|--|
| <a href="#">DescribeRegions</a> | Retrieves the available Alibaba Cloud regions. |
| <a href="#">LookupEvents</a>    | Retrieves events.                              |

## 2 RAM account authentication

---

This section describes the ActionTrail APIs that can be authorized to a RAM account.

Before an API is called, permissions are checked to ensure that the caller is authorized to call the API to operate specific resources.

The following table describes the API authentication rules.

| Action                            | Resource description                                      |
|-----------------------------------|---|
| <b>actiontrail:CreateTrail</b>    | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:DescribeTrails</b> | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:GetTrailStatus</b> | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:StartLogging</b>   | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:StopLogging</b>    | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:UpdateTrail</b>    | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail&gt;DeleteTrail</b> | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |
| <b>actiontrail:LookupEvents</b>   | acs : actiontrail : \${ region } :<br>\${ AccountId } : * |

## 3 Calling method

---

### 3.1 Common parameters

#### Common request parameters

Common request parameters are shared by each API.

| Name            | Type   | Required | Description   |
|-----------------|--------|----------|---|
| Format          | String | No       | The format of the response text. Currently, only the JSON format is supported.  |
| Version         | String | Yes      | The API version, in the format of <code>YYYY - MM - DD</code> . The current version is <code>2017 - 12 - 04</code> .  |
| AccessKeyId     | String | Yes      | An alphanumeric token that Alibaba Cloud issues for user authentication during API invocation.                        |
| Signature       | String | Yes      | The signature value. For more information about how to calculate the signature value, see <a href="#">Signature</a> . |
| SignatureMethod | String | Yes      | The method for calculating the signature value. Currently, HMAC-SHA1 is supported.                                    |

| Name             | Type   | Required | Description  |
|------------------|--------|----------|--|
| Timestamp        | String | Yes      | The date and time at which a request is sent. The ISO 8601 UTC time format is used. The format is YYYY-MM-DDThh:mm:ssZ. Example: 2014-05-26T12:00:00Z. |
| SignatureVersion | String | Yes      | The signature algorithm version. The current version is 1.0.   |
| SignatureNonce   | String | Yes      | A unique random number. This parameter is used to prevent replay attacks. You must use different random numbers for different requests.                |

### Example

```

http://actiontrail.cn-hangzhou.aliyuncs.com/actiontrail
? SignatureVersion=1.0
& OssBucketName=yuanch****
& Name=CreateTest
& Format=JSON
& Timestamp=2015-12-01T07%3A04%3A****
& Signature=iyEsE7vgGU Wop7Term5H M48wzJ ****
& AccessKeyId=QzW2*****C21M
& SignatureMethod=HMAC-SHA1
& Version=2017-12-04
& RoleName=aliyunactiontraildefaultrole
& Action=CreateTrail
& SignatureNonce=c69b30de-97f9-11e5-afb0-7831c1c8****
& OssKeyPrefix=

```

## Common response parameters

If the API was called successfully, the execution result is returned. If the API invocation failed, `RequestId` is returned. Currently, only the JSON format is supported.

## Example

### JSON format

```
{
  " Name ": " CreateTest ",
  " OssBucketName ": " yuanch ****",
  " OssKeyPrefix ": "",
  " RoleName ": " aliyunacti ontraildef aultrole "
}
```

## 3.2 Signature

When you send HTTP requests to Alibaba Cloud, you sign the requests so that Alibaba Cloud can identify who sent them. You sign requests with your AccessKey, which consists of an AccessKey ID and AccessKey secret. You can apply for an AccessKey for your primary account and manage it on our official site.

### Signing signature process

#### 1. Create a canonical request.

- a. Sort the parameter names by character code point in ascending order. The parameters to sort include the common request parameters and the parameter of the API to call.



**Note:**

Start with the HTTP request method GET, followed by a newline character.

- b. Then add the canonical URI parameter, followed by a newline character. The canonical URI is the URI-encoded version of the absolute path component of the

URI, which is everything in the URI from the HTTP host to the question mark character (?) that begins the query string parameters (if any).

- Do not URI-encode any of the unreserved characters that RFC 3986 defines: A-Z, a-z, 0-9, hyphen ( - ), underscore ( \_ ), period ( . ), and tilde ( ~ ).
- Percent-encode all other characters with %XY, where X and Y are hexadecimal characters (0-9 and uppercase A-F). For example, the space character must be encoded as %20
- (not using ‘+’ , as some encoding schemes do)



**Note:**

and extended UTF-8 characters must be in the form %XY%ZA%BC. For example, the space character must be encoded as %20 (not using ‘+’ , as some encoding schemes do) and extended UTF-8 characters must be in the form %XY%ZA%BC.

- Build the canonical query string by starting with the first parameter name in the sorted list.
- For each parameter, append the URI-encoded parameter name, followed by the equals sign character (=), followed by the URI-encoded parameter value. Use empty strings for parameters that have no value.

The following example shows the pseudocode to create a canonical request.

```
StringToSi   gn =
HTTPMethod  + "&" +
percentEnc   ode ("/") + "&" +
percentEnc   ode ( Canonicali zedQuerySt ring )
```

**HTTPMethod:** the method used to submit a request, such as GET  
**percentEncode ( "/" ):** the coded value for the character “/” according to the URL encoding rules described before, that is, %2F

**percentEncode(CanonicalizedQueryString):** the encoded string of the Canonicalized Query String constructed in Step 1, produced by following the URL encoding rules described in 1.b

- As defined in [RFC2104](#), the preceding signature string is used to calculate the signature into an HMAC value.



**Note:**

The key used for signature calculation is your AccessKey secret adding the ampersand “&” (ASCII:38) and it is based on hash algorithm SHA1.

3. According to Base64 encoding rules, encode the preceding HMAC value into a string. This gives you the signature value.
4. Add the obtained signature value to the request parameters as the Signature parameter to sign the request.



Note:

URL encoding should be performed for the obtained signature value based on the RFC3986 rule, like in the case of other parameters, before the signature value is submitted to the RAM server as the final request parameter value.

### Example

Take `CreateTrail` as an example. The HTTP request without a signature is:

```
http://actiontrail.cn-hangzhou.aliyuncs.com/actiontrail?SignatureVersion=1.0
&OssBucketName=yuanchuang&Name=CreateTest
&Format=JSON
&Timestamp=2015-12-01T08:30:23.300Z
&AccessKeyId=testid
&SignatureMethod=HMAC-SHA1
&Version=2015-09-28
&RoleName=aliyunactiontraildefaultrole
&Action=CreateTrail
&OssKeyPrefix=
```

StringToSign is:

```
GET & %2F & AccessKeyId %3Dtestid & Action %3DCreateTrail
& Format %3DJSON & Name %3DCreateTest & OssBucketName %
3Dyuanchuang & OssKeyPrefix %3D & RoleName %3Daliyunac
tiontraildefaultrole & SignatureMethod %3DHMAC-SHA1 &
SignatureNonce %3Dce999197-9804-11e5-abfe-7831c1c8022e
& SignatureVersion %3D1.0 & Timestamp %3D2015-12-01T08:
25:30:23.300Z & Version %3D2015-09-28
```

Take the AccessKey ID as `testid`, and the AccessKey Secret as `testsecret`, then the Key used for HMAC calculation is `testsecret&`. The signature is:

```
vAeYfUeJuc tqeqQGUKFI TGnFAeo =
```

**The HTTP request encoded with the signature is:**

```
http://actiontrail.cn-hangzhou.aliyuncs.com/actiontrail
?SignatureVersion=1.0
&OssBucketName=yuanch****
&Name=CreateTest
&Format=JSON
&Timestamp=2015-12-01T08%3A23%3****
&Signature=vAeYfUeJUc tqeqQGUKFI TGnFAe ****
&AccessKeyId=testid
&SignatureMethod=HMAC-SHA1
&Version=2015-09-28
&RoleName=aliyunactiontraildefaultrole
&Action=CreateTrail
&SignatureNonce=ce999197-9804-11e5-abfe-7831c1c8 ****
&OssKeyPrefix=
```



## 4 Instance-related APIs

---

### 4.1 CreateTrail

You can call this operation to create a trail.

You can determine whether to deliver log data to a Log Service Logstore (recommended) or an OSS bucket based on business requirements.

#### Request parameters

| Name     | Type   | Required | Example     | Description  |
|----------|--------|----------|-------------|--|
| Action   | String | Yes      | CreateTrail | The operation that you want to perform. Set the value to <code>CreateTrail</code> .  |
| RegionId | String | Yes      | cn-hangzhou | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | trail-test  | The name of the trail to be created, which must be unique for an account.  |

| Name            | Type   | Required | Example                                    | Description   |
|-----------------|--------|----------|--|---|
| EventRW         | String | No       | Write                                      | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write. |
| OssBucketName   | String | Yes      | yuanchuang                                 | The OSS bucket to which the trail delivers logs. Ensure that this is an existing OSS bucket.                      |
| RoleName        | String | Yes      | aliyunactiontraildefaultrrole              | The RAM role in ActionTrail permitted by the user.  |
| OssKeyPrefix    | String | No       | at-product-account-audit-B                 | The prefix of the specified OSS bucket name. This parameter can be left empty.                                    |
| SlsProjectArn   | String | No       | acs:log:cn-shanghai::project/**            | The unique ARN of the Log Service project.  |
| SlsWriteRoleArn | String | No       | acs:ram::**:/aliyunactiontraildefaultrrole | The unique ARN of the Log Service role.   |

#### Response parameters

| Name | Type   | Example    | Description            |
|------|--------|------------|------------------------|
| Name | String | trail-test | The name of the trail. |

| Name            | Type   | Example                                       | Description   |
|-----------------|--------|---|---|
| EventRW         | String | Write   | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write. |
| HomeRegion      | String | cn-hangzhou                                   | The home region of the trail.   |
| OssBucketName   | String | yuanchuang                                    | The name of the specified OSS bucket.   |
| OssKeyPrefix    | String | at-product-account-audit-B                    | The prefix of the specified OSS bucket name.  |
| RoleName        | String | aliyunactiontraildefaultrrole                 | The RAM role in ActionTrail permitted by the user.  |
| SlsProjectArn   | String | acs:log:cn-shanghai::project/**               | The unique ARN of the Log Service project.  |
| SlsWriteRoleArn | String | acs:ram::*:role/aliyunactiontraildefaultrrole | The unique ARN of the Log Service role.   |
| RequestId       | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0          | The ID of the request.  |

## Examples

### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=CreateTrail
&RegionId=cn-hangzhou
&Name=trail-test
&OssBucketName=yuanchuang
&RoleName=aliyunactiontraildefaultrrole
&OssKeyPrefix=
&<Common request parameters>
```

### Sample responses

## JSON format

```
{
  " Name ": " trail - test ",
  " HomeRegion ": " cn - hangzhou ",
  " OssBucketName ": " yuanchuang ",
  " OssKeyPrefix ": " at - product - account - audit - B ",
  " RoleName ": " aliyunacti ontraildef aultrole ",
  " SlsProject Arn ":" acs : log : cn - shanghai :: project /***",
  " SlsWriteRoleArn ":" acs : ram ::***: role / aliyunacti
ontraildef aultrole "
}
```

## Error codes

| Error code                             | Description  | HTTP status code |
|--|--|------------------|
| InvalidBucketNameException             | The error message returned when the name of the specified OSS bucket is invalid.                             | 400              |
| InvalidPrefixException                 | The error message returned when the prefix is invalid.   | 400              |
| InvalidTrailNameException              | The error message returned when the name of the specified trail is invalid.                                  | 400              |
| TrailAlreadyExistsException            | The error message returned when the specified name already exists or a trail already exists in the region.   | 400              |
| InsufficientBucketPolicyException      | The error message returned when you are not authorized to access the specified OSS bucket.                   | 403              |
| MaximumNumberOfTrailsExceededException | The error message returned when the maximum number of trails that a user can create in a region is exceeded. | 403              |

| Error code                  | Description  | HTTP status code |
|-----------------------------|--|------------------|
| BucketDoesNotExistException | The error message returned when the specified OSS bucket does not exist. | 404              |

## 4.2 DescribeTrails

You can call this operation to retrieve settings for the trail associated with the current region.

### Request parameters

| Name     | Type   | Required | Example        | Description  |
|----------|--------|----------|----------------|--|
| Action   | String | Yes      | DescribeTrails | The operation that you want to perform. Set the value to <code>DescribeTrails</code> .   |
| RegionId | String | Yes      | cn-hangzhou    | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| NameList | String | No       | abc%2cdef      | The list of trails to be retrieved, separated with commas (,).   |

| Name                       | Type   | Required | Example | Description  |
|----------------------------|--------|----------|---------|--|
| <b>IncludeShadowTrails</b> | String | No       | true    | Indicates whether shadow trails are displayed. Valid values: true and false. Default value: false. |

### Response parameters

A JSON file of `TrailList` is returned. The following table describes related parameters.

| Name                     | Type   | Example                         | Description   |
|--------------------------|--------|---------------------------------|---|
| <b>Name</b>              | String | default                         | The name of the trail.  |
| <b>EventRW</b>           | String | Write                           | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write. |
| <b>OssBucketName</b>     | String | secloud                         | The name of the specified OSS bucket.   |
| <b>OssBucketLocation</b> | String | cn-hangzhou                     | The region of the OSS bucket.   |
| <b>OssKeyPrefix</b>      | String | trail1                          | The prefix of the specified OSS bucket name.  |
| <b>RoleName</b>          | String | aliyunactiontraildefaulrole     | The role in ActionTrail.  |
| <b>SlsProjectArn</b>     | String | acs:log:cn-shanghai::project/** | The unique ARN of the Log Service project.  |

| Name            | Type   | Example   | Description                             |
|-----------------|--------|---|---|
| SlsWriteRoleArn | String | acs:ram::<*:*:role/aliyunactiontraildefaultrole | The unique ARN of the Log Service role. |
| RequestId       | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0            | The ID of the request.                  |

## Examples

### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=DescribeTrails
&RegionId=cn-hangzhou
&NameList=abc%2cdef
&<Common request parameters>
```

### Sample responses

#### JSON format

```
{
  "TrailList": [
    {
      "Name": "default",
      "OssBucketName": "secloud",
      "OssBucketLocation": "cn-hangzhou",
      "OssKeyPrefix": "trail1",
      "RoleName": "aliyunactiontraildefaultrole",
      "SlsProjectArn": "acs:log:cn-shanghai::project/
***",
      "SlsWriteRoleArn": "acs:ram::<*:*:role/aliyunacti
ontraildefaultrole"
    }
  ]
}
```

### Error codes

None.

## 4.3 GetTrailStatus

You can call this operation to retrieve a list of information about the specified trail in the JSON format.

### Request parameters

| Name     | Type   | Required | Example        | Description  |
|----------|--------|----------|----------------|--|
| Action   | String | Yes      | GetTrailStatus | The operation that you want to perform. Set the value to <code>GetTrailStatus</code> .   |
| RegionId | String | Yes      | cn-hangzhou    | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | trail-test     | The trail name, which must be unique for an account.   |

### Response parameters

| Name                | Type    | Example   | Description  |
|---------------------|---------|---|--|
| IsLogging           | Boolean | true  | Indicates whether the trail is logging API invocations.                        |
| LatestDeliveryError | String  | write sls failed, exception: the parent of sub user must be project owner, itemscount : 1 | The last time an error occurred when the trail attempted to deliver log files. |



| Name               | Type   | Example                              | Description  |
|--------------------|--------|--------------------------------------|--|
| LatestDeliveryTime | String | 1547792223000                        | The date and time of the last successful delivery of a log file. |
| StartLoggingTime   | String | Wed Dec 02 15:41:06 CST 2015         | The most recent date and time when the user enables the trail.   |
| StopLoggingTime    | String | Wed Dec 03 15:41:06 CST 2015         | The most recent date and time when the user disables the trail.  |
| RequestId          | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0 | The ID of the request.   |

## Examples

### Sample requests

```
http://actiontrail.cn - hangzhou.aliyuncs.com/?
Action=GetTrailStatus
&RegionId=cn-hangzhou
&Name=trail-test
&<Common request parameters>
```

### Sample responses

#### JSON format

```
{
  "IsLogging": true,
  "StartLoggingTime": "Wed Dec 02 15:41:06 CST 2015"
}
```

## Error codes

| Error code                | Description   | HTTP status code |
|---------------------------|---|------------------|
| InvalidTrailNameException | The error message returned when the name of the specified trail is invalid. | 400              |

| Error code             | Description   | HTTP status code |
|------------------------|---|------------------|
| TrailNotFoundException | The error message returned when the specified trail does not exist. | 404              |

## 4.4 StartLogging

You can call this operation to enable a trail.

### Request parameters

| Name     | Type   | Required | Example      | Description  |
|----------|--------|----------|--------------|--|
| Action   | String | Yes      | StartLogging | The operation that you want to perform. Set the value to <code>StartLogging</code> .   |
| RegionId | String | Yes      | cn-hangzhou  | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | trail-test   | The name of the trail to be enabled.   |

### Response parameters

| Name      | Type   | Example                              | Description            |
|-----------|--------|--------------------------------------|------------------------|
| RequestId | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0 | The ID of the request. |

## Examples

### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=StartLogging
&RegionId=cn-hangzhou
&Name=trail-test
&<Common request parameters>
```

### Error codes

| Error code                 | Description  | HTTP status code |
|----------------------------|--|------------------|
| InvalidBucketNameException | The error message returned when the name of the specified OSS bucket is invalid. | 400              |
| TrailNotFoundException     | The error message returned when the specified trail does not exist.              | 404              |

## 4.5 StopLogging

You can call this operation to disable a trail.

### Request parameters

| Name   | Type   | Required | Example     | Description   |
|--------|--------|----------|-------------|---|
| Action | String | Yes      | StopLogging | The operation that you want to perform. Set the value to <code>StopLogging</code> . |

| Name     | Type   | Required | Example     | Description  |
|----------|--------|----------|-------------|--|
| RegionId | String | Yes      | cn-hangzhou | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | trail-test  | The name of the trail to be disabled.  |

### Response parameters

| Name      | Type   | Example                              | Description            |
|-----------|--------|--------------------------------------|------------------------|
| RequestId | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0 | The ID of the request. |

### Examples

#### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=StopLogging
&RegionId=cn-hangzhou
&Name=trail-test
&<Common request parameters>
```

### Error codes

| Error code                 | Description  | HTTP status code |
|----------------------------|--|------------------|
| InvalidBucketNameException | The error message returned when the name of the specified OSS bucket is invalid. | 400              |
| TrailNotFoundException     | The error message returned when the specified trail does not exist.              | 404              |

## 4.6 UpdateTrail

You can call this operation to update the Log Service Logstore or OSS bucket to which the specified trail delivers logs. This operation must be called from the API server in the home region of the trail.

### Request parameters

| Name     | Type   | Required | Example     | Description  |
|----------|--------|----------|-------------|--|
| Action   | String | Yes      | UpdateTrail | The operation that you want to perform. Set the value to <code>UpdateTrail</code> .  |
| RegionId | String | Yes      | cn-hangzhou | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | cn-hangzhou | The name of the trail to be updated.   |
| EventRW  | String | No       | Write       | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write.  |

| Name            | Type   | Required | Example  | Description  |
|-----------------|--------|----------|--|--|
| OssBucketName   | String | No       | yuanchuang   | The OSS bucket to which the trail delivers logs. Ensure that this is an existing OSS bucket. |
| RoleName        | String | No       | aliyunactiontraildefaultrole                             | The RAM role in ActionTrail permitted by the user.   |
| OssKeyPrefix    | String | No       | at-product-account-audit-B                               | The prefix of the specified OSS bucket name. This parameter can be left empty.               |
| SlsProjectArn   | String | No       | acs:log:cn-shanghai:***:project/at-product-account-audit | The unique Aliyun Resource Name (ARN) of the Log Service project.                            |
| SlsWriteRoleArn | String | No       | acs:ram:***:role/aliyunactiontraildefaultrole            | The unique ARN of the Log Service role.  |

### Response parameters

| Name    | Type   | Example    | Description   |
|---------|--------|------------|---|
| Name    | String | trail-test | The name of the trail.  |
| EventRW | String | Write      | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write. |

| Name            | Type   | Example  | Description  |
|-----------------|--------|--|--|
| HomeRegion      | String | cn-hangzhou                                    | The home region of the trail.                      |
| OssBucketName   | String | yuanchuang                                     | The name of the specified OSS bucket.              |
| OssKeyPrefix    | String | at-product-account-audit-B                     | The prefix of the specified OSS bucket name.       |
| RoleName        | String | aliyunactiontraildefaultrole                   | The RAM role in ActionTrail permitted by the user. |
| SlsProjectArn   | String | acs:log:cn-shanghai::project/***               | The unique ARN of the Log Service project.         |
| SlsWriteRoleArn | String | acs:ram::***:role/aliyunactiontraildefaultrole | The unique ARN of the Log Service role.            |
| RequestId       | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0           | The ID of the request.                             |

## Examples

### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=UpdateTrail
&RegionId=cn-hangzhou
&Name=trail-test
&OssBucketName=yuanchuang
&RoleName=aliyunactiontraildefaultrole
&OssKeyPrefix=
&<Common request parameters>
```

### Sample responses

#### JSON format

```
{
  "Name": "trail-test",
  "HomeRegion": "cn-hangzhou",
  "OssBucketName": "yuanchuang",
  "OssKeyPrefix": "",
  "RoleName": "aliyunactiontraildefaultrole",
  "SlsProjectArn": "acs:log:cn-shanghai::project/***",
```

```

    "SlsWriteRoleArn": "acs:ram::*:role/aliyunactiontrail:defaultrole"
  }

```

### Error codes

| Error code                        | Description  | HTTP status code |
|-----------------------------------|--|------------------|
| InvalidBucketNameException        | The error message returned when the name of the specified OSS bucket is invalid.           | 400              |
| InvalidPrefixException            | The error message returned when the prefix is invalid.                                     | 400              |
| InvalidTrailNameException         | The error message returned when the name of the specified trail is invalid.                | 400              |
| InsufficientBucketPolicyException | The error message returned when you are not authorized to access the specified OSS bucket. | 403              |
| BucketDoesNotExistException       | The error message returned when the specified OSS bucket does not exist.                   | 404              |
| TrailNotFoundException            | The error message returned when the specified trail does not exist.                        | 404              |



## 4.7 DeleteTrail

You can call this operation to delete a trail.

### Request parameters

| Name     | Type   | Required | Example     | Description  |
|----------|--------|----------|-------------|--|
| Action   | String | Yes      | DeleteTrail | The operation that you want to perform. Set the value to <code>DeleteTrail</code> .  |
| RegionId | String | Yes      | cn-hangzhou | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Name     | String | Yes      | my-test     | The name of the trail to be deleted.   |

### Response parameters

| Name      | Type   | Example                              | Description            |
|-----------|--------|--------------------------------------|------------------------|
| RequestId | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0 | The ID of the request. |

### Examples

#### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=DeleteTrail
&RegionId=cn-hangzhou
&Name=my-test
```

&< Common request parameters >

### Error codes

| Error code                       | Description   | HTTP status code |
|----------------------------------|---|------------------|
| <b>InvalidTrailNameException</b> | The error message returned when the name of the specified trail is invalid. | 400              |
| <b>TrailNotFoundException</b>    | The error message returned when the specified trail does not exist.         | 404              |

## 5 Retrieval-related APIs

### 5.1 DescribeRegions

You can call this operation to retrieve the Alibaba Cloud regions available for you.

For more information, see [Regions and zones](#).

#### Request parameters

| Name     | Type   | Required | Example         | Description   |
|----------|--------|----------|-----------------|---|
| Action   | String | Yes      | DescribeRegions | The operation that you want to perform. Set the value to DescribeRegions. |
| RegionId | String | Yes      | cn-hangzhou     | The ID of the region where the instance is located.                       |

#### Response parameters

| Name      | Type   | Example                              | Description            |
|-----------|--------|--------------------------------------|------------------------|
| RegionId  | String | cn-shanghai                          | The ID of the region.  |
| RequestId | String | 145318BE-DEE1-4C57-AA7C-5BE7D34A6AE0 | The ID of the request. |

#### Examples

##### Sample requests

```
https://ecs.cn-hangzhou.aliyuncs.com/?
Action=DescribeRegions
&RegionId=cn-hangzhou
&<Common request parameters>
```

##### Sample responses

**XML format**

```
< DescribeRegionsResponse >
  < RequestId > 38EC7366 - F5A9 - 46B1 - BDB1 - 0FDC2E2963 97 </
  RequestId >
  < Regions >
    < Region >
      < RegionId > cn - shanghai </ RegionId >
    </ Region >
    < Region >
      < RegionId > cn - qingdao </ RegionId >
    </ Region >
  </ Regions >
</ DescribeRegionsResponse >
```

**JSON format**

```
{
  "RequestId ":" 38EC7366 - F5A9 - 46B1 - BDB1 - 0FDC2E2963 97 ",
  "Regions ":{
    "Region ":[
      {
        "RegionId ":" cn - shanghai ",
      },
      {
        "RegionId ":" cn - qingdao ",
      }
    ]
  }
}
```

**Error codes**

None.

## 5.2 LookupEvents

You can call this operation to retrieve events captured by ActionTrail.

**Request parameters**

| Name   | Type   | Required | Example      | Description  |
|--------|--------|----------|--------------|--|
| Action | String | Yes      | LookupEvents | The operation that you want to perform. Set the value to <code>LookupEvents</code> . |

| Name        | Type   | Required | Example                              | Description  |
|-------------|--------|----------|--------------------------------------|--|
| RegionId    | String | Yes      | cn-hangzhou                          | The ID of the region where the instance is located. For more information about the latest list of Alibaba Cloud regions, see <a href="#">DescribeRegions</a> . |
| Event       | String | No       | AD9CD9DA-EC2D-4EB7-A817-C0442A94**** | The ID of the event to be retrieved.   |
| Request     | String | No       | AD9CD9DA-EC2D-4EB7-A817-C0442A94**** | The ID of the request.   |
| EventType   | String | No       | ConsoleSignin                        | The type of the event to be retrieved, such as <code>ApiCall</code> .  |
| ServiceName | String | No       | AsaSub                               | The name of the cloud service referenced by the event, such as <code>Ecs</code> .  |
| EventName   | String | No       | ConsoleSignin                        | The name of the event to be retrieved, such as <code>CreateInstance</code> .   |

| Name         | Type   | Required | Example                    | Description  |
|--------------|--------|----------|----------------------------|--|
| User         | String | No       | yanjie.wyj                 | The name of the user referenced by the event, such as the RAM account.   |
| ResourceType | String | No       | Instance                   | The type of the resource referenced by the event, such as <code>Database</code> .  |
| ResourceName | String | No       | i-bp14664y88<br>udkt45xrsh | The name of the resource referenced by the event, such as <code>rdsxxxxxx</code> .   |
| EventRW      | String | No       | Write                      | Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write.  |
| NextToken    | String | No       | 20                         | The token used to obtain the next page of results after a previous API invocation. This token must be passed in with the same parameters that were specified in the original invocation. |

| Name       | Type    | Required | Example              | Description   |
|------------|---------|----------|----------------------|---|
| MaxResults | Integer | No       | 20                   | The maximum number of results to be returned. Valid values: 0 to 50.  |
| StartTime  | String  | No       | 2014-05-26T12:00:00Z | <p>The start time of events to be retrieved.</p> <ul style="list-style-type: none"> <li>• Only events within the last seven days can be retrieved.</li> <li>• The events within the last seven days are retrieved by default.</li> <li>• The ISO 8601 UTC time format is used. The format is<br/> YYYY - MM<br/> - DDThh :<br/> mm : ssZ .</li> </ul> |

| Name    | Type   | Required | Example              | Description   |
|---------|--------|----------|----------------------|---|
| EndTime | String | No       | 2019-01-18Y06:51:13Z | <p>The end time of events to be retrieved.</p> <ul style="list-style-type: none"> <li>• Only events within the last seven days can be retrieved.</li> <li>• The events within the last seven days are retrieved by default.</li> <li>• The ISO 8601 UTC time format is used. The format is<br/>           YYYY - MM<br/>           - DDThh :<br/>           mm : ssZ .</li> </ul> |

### Response parameters

| Name      | Type   | Example              | Description   |
|-----------|--------|----------------------|---|
| Events    |        |                      | The list of events returned based on the specified retrieval attributes.  |
| NextToken | String | 1                    | The token used to obtain the next page of results. This parameter is not returned when there are no more results to return. |
| StartTime | String | 2016-01-05T09:11:36Z | The start time of the events retrieved.   |



| Name      | Type   | Example                              | Description                           |
|-----------|--------|--------------------------------------|---------------------------------------|
| EndTime   | String | 2016-01-12T09:11:06Z                 | The end time of the events retrieved. |
| RequestId | String | FD79665A-CE8B-49D4-82E6-5EE2E0E791DD | The ID of the request.                |

## Examples

### Sample requests

```
http://actiontrail.cn-hangzhou.aliyuncs.com/?
Action=LookupEvents
&RegionId=cn-hangzhou
&<Common request parameters>
```

### Sample responses

#### JSON format

```
{
  "EndTime": "2016-01-12T09:11:06Z",
  "Events": [],
  "StartTime": "2016-01-05T09:11:36Z"
}
```

## Error codes

| Error code                | Description  | HTTP status code |
|---------------------------|--|------------------|
| InvalidTimeRangeException | The error message returned when the start time is later than the end time.       | 400              |
| InvalidParameterValue     | The error message returned when the value of the specified parameter is invalid. | 400              |