

Resource Management Service

SDK Reference

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Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

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1 SDK Overview

This document lists the SDK versions provided by Config and the addresses for obtaining the latest SDK versions.

SDK List

Table 1-1 lists the SDKs supported by Config. You can view SDK updates, obtain installation packages, and view user guides in GitHub.

Table 1-1 SDKs

Programming Language	GitHub Address	Reference
Java	huaweicloud-sdk-java-v3	Java SDK User Guide
Python	huaweicloud-sdk-python-v3	Python SDK User Guide
Go	huaweicloud-sdk-go-v3	Go SDK User Guide
NodeJs	huaweicloud-sdk-nodejs-v3	Node.js SDK User Guide
PHP	huaweicloud-sdk-php-v3	PHP SDK User Guide

2 Using the SDK to Create Rules

Overview

This example shows how to use the Java SDK to create and query Config rules.

When you create a [rule](#), you need to specify a resource scope that the rule applies to.

Prerequisites

1. You have obtained the Huawei Cloud SDK and installed the Java SDK.
2. You have a Huawei Cloud account and an access key ID (AK) and a secret access key. You can view or create an AK/SK pair in **My Credentials > Access Keys** on the Huawei Cloud console. For details, see [Access Keys](#).
3. [Config SDK](#) supports Java JDK 1.8 or later.

Installing the SDK

You can obtain and install the SDK using Maven. To use Maven, add dependencies to the **pom.xml** file. For details about SDK versions, see [SDK Center](#).

```
<dependency>
  <groupId>com.huaweicloud.sdk</groupId>
  <artifactId>huaweicloud-sdk-config</artifactId>
  <version>{sdk-version}</version>
</dependency>
```

Example Code

```
public class CreatePolicyAssignmentDemo {
    public static void main(String[] args) {
        // There will be security risks if the AK and SK used for authentication is written into code. Encrypt the
        // AK/SK and store them into the configuration file or environment variables.
        // In this example, the AK and SK are stored in environment variables. Before running this example,
        // set environment variables HUAWEICLOUD_SDK_AK and HUAWEICLOUD_SDK_SK.
        String ak = System.getenv("HUAWEICLOUD_SDK_AK");
        String sk = System.getenv("HUAWEICLOUD_SDK_SK");
        String regionId = "<region id>";
        HttpConfig config = HttpConfig.getDefaultHttpConfig();
        config.withIgnoreSSLVerification(true);

        ICredential auth = new GlobalCredentials().withAk(ak).withSk(sk);
        ConfigClient client = ConfigClient.newBuilder().withHttpConfig(config).withCredential(auth)
            .withRegion(ConfigRegion.valueOf(regionId)).build();
```

```
        CreatePolicyAssignmentsRequest createRequest = new CreatePolicyAssignmentsRequest()
            .withBody(new
PolicyAssignmentRequestBody().withPolicyAssignmentType(PolicyAssignmentRequestBody.PolicyAssignment
TypeEnum.BUILTIN)
            .withName("<Your policy_assignment_name>").withDescription("<Your
policy_assignment_description>")
            .withPolicyFilter(new PolicyFilterDefinition()).withPolicyDefinitionId("<Your
policy_definition_id>"));

        try {
            CreatePolicyAssignmentsResponse createResponse = client.createPolicyAssignments(createRequest);
            System.out.println(createResponse.toString());
            ShowPolicyAssignmentRequest showPolicyAssignmentRequest = new
ShowPolicyAssignmentRequest()
                .withPolicyAssignmentId(createResponse.getId());
            ShowPolicyAssignmentResponse showResponse =
client.showPolicyAssignment(showPolicyAssignmentRequest);
            System.out.println(showResponse.toString());
        } catch (ConnectionException | RequestTimeoutException | ServiceResponseException ex) {
            System.out.println(ex);
        }
    }
}
```

Response

```
class CreatePolicyAssignmentsResponse {
    policyAssignmentType: "policyAssignmentType"
    id: "id"
    name: "name"
    description: "description"
    policyFilter: class PolicyFilterDefinition {}
    period: "period"
    state: "state"
    created: "created"
    updated: "updated"
    policyDefinitionId: "policyDefinitionId"
    customPolicy: "customPolicy"
    parameters: {}
    createdBy: "createdBy"
}

class ShowPolicyAssignmentResponse {
    policyAssignmentType: "policyAssignmentType"
    id: "id"
    name: "name"
    description: "description"
    policyFilter: class PolicyFilterDefinition {}
    period: "period"
    state: "state"
    created: "created"
    updated: "updated"
    policyDefinitionId: "policyDefinitionId"
    customPolicy: "customPolicy"
    parameters: {}
    createdBy: "createdBy"
}
```

Reference

For more details, see [Resource Compliance Overview](#).

3 Using the SDK to Query Resource Details, Relationships, and Change Records

Overview

This example shows how to use the Java SDK to query resource details, relationships, and change records.

1. **Resource List** only displays some resource attributes. The following example shows how to [query more details about a resource](#).
2. **Associated Resources** displays [relationships between your Huawei Cloud resources](#).
3. **Resource Timeline** records [resource changes](#). A record will be added to the resource timeline when a service reports a resource attribute or relationship change to Config. Config retains resource change records for seven years by default.

Prerequisites

1. You have obtained the Huawei Cloud SDK and installed the Java SDK.
2. You have a Huawei Cloud account and an access key ID (AK) and a secret access key. You can view or create an AK/SK pair in **My Credentials > Access Keys** on the Huawei Cloud console. For details, see [Access Keys](#).
3. [Config SDK](#) supports Java JDK 1.8 or later.

Installing the SDK

You can obtain and install the SDK using Maven. To use Maven, add dependencies to the **pom.xml** file. For details about SDK versions, see [SDK Center](#).

```
<dependency>
  <groupId>com.huaweicloud.sdk</groupId>
  <artifactId>huaweicloud-sdk-config</artifactId>
  <version>{sdk-version}</version>
</dependency>
```

Example Code

```
public class ShowResourceRelationDemo {
    public static void main(String[] args) {
```

```
// There will be security risks if the AK and SK used for authentication is written into code. Encrypt the
AK/SK and store them into the configuration file or environment variables.
// In this example, the AK and SK are stored in environment variables. Before running this example,
set environment variables HUAWEICLOUD_SDK_AK and HUAWEICLOUD_SDK_SK.
String ak = System.getenv("HUAWEICLOUD_SDK_AK");
String sk = System.getenv("HUAWEICLOUD_SDK_SK");
String regionId = "<region id>";
HttpConfig config = HttpConfig.getDefaultHttpConfig();
config.withIgnoreSSLVerification(true);

ICredential auth = new GlobalCredentials().withAk(ak).withSk(sk);
ConfigClient client = ConfigClient.newBuilder().withHttpConfig(config).withCredential(auth)
    .withRegion(ConfigRegion.valueOf(regionId)).build();

try {
    String resourceId = "<resource id>";
    // Querying resource details
    ShowResourceDetailRequest resourceDetailRequest = new ShowResourceDetailRequest()
        .withResourceId(resourceId);
    System.out.println(client.showResourceDetail(resourceDetailRequest));
    // Querying resource relationships
    ShowResourceRelationsRequest resourceRelationsRequest = new ShowResourceRelationsRequest()
        .withResourceId(resourceId)
        .withDirection(ShowResourceRelationsRequest.DirectionEnum.IN);
    System.out.println(client.showResourceRelations(resourceRelationsRequest).toString());
    // Querying resource change records
    ShowResourceHistoryRequest resourceHistoryRequest = new ShowResourceHistoryRequest()
        .withResourceId(resourceId);
    System.out.println(client.showResourceHistory(resourceHistoryRequest).toString());
} catch (ConnectionException | RequestTimeoutException | ServiceResponseException ex) {
    System.out.println(ex);
}
}
```

Response

```
class ShowResourceDetailResponse {
    id: 81fa****a864
    name: zh****ng
    provider: iam
    type: users
    regionId: global
    projectId:
    projectName:
    epId: 0
    epName: default
    checksum: 522u****e689
    created: 2023-09-18T12:56:30.000Z
    updated: 2023-09-18T12:56:30.000Z
    provisioningState: Succeeded
    state: Normal
    tags: {}
    properties: {pwd_status=false, pwd_strength=high, group_list=[f588****54c5], role_list=[],
last_login_time=2023-09-18T12:57:45Z, virtual_mfa_device=false, login_protect={enabled=false},
credentials=[], policy_list=[], access_mode=default, is_root_user=false, enabled=true}
}

class ShowResourceRelationsResponse {
    relations: [class ResourceRelation {
        relationType: contains
        fromResourceType: iam.groups
        toResourceType: iam.users
        fromResourceId: f587****54c5
        toResourceId: 81fa****a864
    }]
    pageInfo: class PageInfo {
        currentCount: 1
        nextMarker: null
    }
}
```

```
    }  
  }  
  
  class ShowResourceHistoryResponse {  
    items: [class HistoryItem {  
      domainId: 39f4****ea39  
      resourceId: 81fa****a864  
      resourceType: iam.users  
      captureTime: 2023-09-21T15:39:27.632Z  
      status: ResourceChanged.CREATE  
      relations: [class ResourceRelation {  
        relationType: isContainedIn  
        fromResourceType: iam.users  
        toResourceType: iam.groups  
        fromResourceId: 81fa****a864  
        toResourceId: b04e****8dd2  
      }]  
    }]  
    resource: class ResourceEntity {  
      id: 81fa****a864  
      name: zh****ng  
      provider: iam  
      type: users  
      regionId: global  
      projectId:  
      projectName:  
      epId: 0  
      epName: default  
      checksum: 00ce****f053  
      created: 2023-09-18T12:56:30Z  
      updated: 2023-09-18T12:56:30Z  
      provisioningState: Succeeded  
      state: null  
      tags: {}  
      properties: {pwd_status=false, pwd_strength=high, group_list=[b04e****8dd2], role_list=[],  
virtual_mfa_device=false, login_protect={enabled=false}, credentials=[], policy_list=[], access_mode=default,  
enabled=true}  
    }  
  }  
  pageInfo: class PageInfo {  
    currentCount: 1  
    nextMarker: null  
  }  
}
```

Reference

For more details, see [Viewing Resource Changes](#).