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Apsara Stack Enterprise

Developer Guide - Middleware and Enterprise Applications

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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.	 **Danger:** 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.	 **Warning:** 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.	 **Notice:** 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.	 **Note:** 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**.
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click **OK**.
Courier font	Courier font is used for commands.	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`

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

Contents

1 Enterprise Distributed Application Service (EDAS)

1.1 API Reference

1.1.1 Instructions for making POP API requests

This topic describes the process of making POP API requests, including instructions on how to obtain the SDK and a description of the initialization parameters. It also provides an example of a specific API request.

1.1.1.1 Obtain the SDK

Download the JAR package from the following version list and add the package to the project:

Version 2.14.0.private-SNAPSHOT: http://edas.oss-cn-hangzhou.aliyuncs.com/edas-pop-api/2.14.0.private-SNAPSHOT/aliyun-java-sdk-edas-2.14.0.private.jar

1.1.1.2 Common request parameters

Parameter	Description
regionId	The unique ID of the region where API Gateway is located. For more information, see the list of EDAS-supported regions.
accessKeyId/accessKeySecret	The AccessKeyId and AccessKeySecret of the account. This parameter differentiates between primary accounts and sub-accounts.
productName	The name of the product for which API requests are made. Set this parameter to EDAS.
domain	The domain of the endpoint for making API requests. The rule is as follows: edas-api.console. ${RegionId}. ${Global-Internet-Domain} edas-api.console.RegionId.{ Global-Internet-Domain}

1.1.1.3 Sub-account use instructions

Currently, API requests can be made by sub-accounts. In this case, enter the AccessKeyId and AccessKeySecret of each sub-account. In addition, sub-accounts must be authorized by primary accounts to use the corresponding resources.

1.1.1.4 Sample requests

To make API requests, start the API client, configure an endpoint, and set common parameters, such as regionId and AccessKeyId. The following is a sample API request.

```
    public static void main(String[] args) throws ClientException{
        /**
         * The endpoint used to make the API request. Set this parameter based on the list of
EDAS-supported regions and the region where your instance is located.
         */
        String regionId = "XXXXX";
        /**
         * The AccessKeyId that is created in the Alibaba Cloud console for authentication.
         */
        String accessKeyId = "XXXXXXXXXXXXXXXXX";
        /**
         * The AccessKeySecret that is created in the Alibaba Cloud console for authentica
tion.
         */
        String accessKeySecret = "XXXXXXXXXXXXXXXXX";
        /**
        * The name of the cloud product that you access through the API request. Set it to
EDAS in this example.
        */
        String productName ="Edas";
        /**
         * The domain of the endpoint. For more information, see the domains in the list of
EDAS-supported regions.
         */
        String domain ="edas-api.console.XXXXX.aliyun.com";
        // Construct an API client.
        DefaultProfile.addEndpoint(regionId,regionId,productName,domain);
        DefaultProfile defaultProfile = DefaultProfile.getProfile(regionId, accessKeyId,
accessKeySecret);
        DefaultAcsClient defaultAcsClient = new DefaultAcsClient(defaultProfile);
        defaultAcsClient.setAutoRetry(false);

        // Construct the API request for listing application deployment groups. For more
information about the input parameters, see the operation descriptions.
        String appId = "xxxxxxxxx";
        ListDeployGroupRequest request = new ListDeployGroupRequest();
        // For more information about the input parameters, see the operation descriptions.
        request.setAppId(appId);
        ListDeployGroupResponse response = defaultAcsClient.getAcsResponse(request);
        // Result parsing (If Code 200 is returned, the call is successful. If any other code is
returned, the call fails. For more information, see the error code list.)
        if (response.getCode() == 200) {
            // Parse the returned result (for more information, see the return value description
of the corresponding operation).
            List<DeployGroup> deployGroups = response.getDeployGroupList();
            if (CollectionUtils.isNotEmpty(deployGroups)) {
                for (DeployGroup deployGroup : deployGroups) {
                    System.out.println(deployGroup.getGroupName());
```

```
                System.out.println(deployGroup.getGroupId());
            }
        }
    } else {
        // Print the cause of the error.
        System.out.println(response.getMessage());
    }
}
```

1.1.2 API Reference

1.1.2.1 List of operations by function

EDAS provides the following operations:

Operation	Description
ListApplicationRequest	Retrieves the application list.
InsertApplicationRequest	Creates an application.
ScaleOutApplicationRequest	Scales out an application instance.
DeployApplicationRequest	Deploys an application.
GetChangeOrderInfoRequest	Queries the details of a change order.
ListApplicationEcu	Queries deployable Elastic Compute Units (ECUs).
GetApplicationRequest	Queries application information.
StartApplicationRequest	Starts an application.
StopApplicationRequest	Stops an application.
DeleteApplicationRequest	Deletes an application.
ListScaleOutEcuRequest	Queries the available instances when you create or scale out an application.
QueryApplicationStatusRequest	Queries an application.
ScaleInApplicationRequest	Scales in an application instance.

1.1.2.2 ListApplicationRequest

You can call this operation to query the existing applications.

Request URI

/pop/v5/app/app_list

Methods

POST

Request parameters

None.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ApplicationList	List<Application>	The list of existing applications.

- Application

Parameter	Type	Description
AppId	String	The ID of the application.
Name	String	The name of the application.
RegionId	String	The ID of the zone where the application is located.
Description	String	The description of the application.
Owner	String	The user who created the application.
InstanceCount	Integer	The total number of instances that the application has.
RunningInstanceCount	Integer	The number of running instances that the application has.
Port	Integer	The port occupied by the application.
UserId	String	The primary account ID.
SlbId	String	The ID of the intranet SLB instance used by the application.
SlbIp	String	The IP address of the intranet SLB instance used by the application.

Parameter	Type	Description
SlbPort	Integer	The port occupied by the intranet SLB instance.
ExtSlbId	String	The ID of the Internet SLB instance used by the application.
ExtSlbIp	String	The IP address of the Internet SLB instance used by the application.
ApplicationType	String	The deployment type of the application, which can be War (WAR package deployment) or FatJar (JAR package deployment). If this parameter is set to null, the application is not deployed.
ClusterType	Integer	The environment type of the application cluster. Valid values: 0 (common Docker cluster), 1 (Swarm cluster), 2 (ECS cluster), 3 (Kubernetes cluster), and 4 (automatically registered Pandora cluster).
ClusterId	String	The ID of the cluster where you queried the existing applications.
Dockerize	Boolean	Indicates whether the application is a Dockerized application.
Cpu	Integer	The number of CPU cores.
Memory	Integer	The memory size configured for the instances of the application. Unit: MB .
HealthCheckUrl	String	The URL for health check.
BuildpackId	Long	The ID of the container version.

Parameter	Type	Description
CreateTime	Long	The time when the application was created.

1.1.2.3 InsertApplicationRequest

You can call this operation to create an application.

Request URI

/pop/v5/changeorder/co_create_app

Methods

POST

Request parameters

- Create a common application

Parameter	Type	Required	Description
applicationName	String	Yes	The name of the application that you want to create.
buildPackId	Integer	Yes	The ID of the container version. You can call ListBuildPackRequest to query it.
ecuInfo	String	Yes	The ID of an ECU. Separate multiple ECU IDs with commas (,). You can call ListScaleOutEcuRequest to query the ECU IDs.
description	String	No	The description of the application.
healthCheckURL	String	No	The URL for health check.

- Create a Dockerized application

Parameter	Type	Required	Description
applicationName	String	Yes	The name of the application.
buildPackId	Integer	Yes	The ID of the container version. You can call ListBuildPackRequest to query it.
dockerize	Boolean	Yes	true
ecuInfo	String	Yes	The ID of an ECU. Separate multiple ECU IDs with commas (,). You can call ListScaleOutEcuRequest to query the ECU IDs.
description	String	No	The description of the application.
healthCheckURL	String	No	The URL for health check.
clusterId	String	Yes	The ID of the target cluster, which is required when a Dockerized application is created and can be retrieved by calling ListClusterRequest.
cpu	Integer	Yes	The number of CPUs. It can be left unspecified in sharing mode. In this case, the value 0 is used.

Parameter	Type	Required	Description
mem	Integer	Yes	The memory size. Unit: MB. Set this parameter based on the available memory of the ECUs.
reservedPortStr	String	No	The reserved port. Separate multiple port numbers with commas (,). (The specified port cannot be used by other applications.)

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ApplicationInfo	ApplicationInfo	The details of a created application. For more information, see the definition of ApplicationInfo.

- ApplicationInfo

Parameter	Type	Description
Appname	String	The name of the application.
AppId	String	The unique ID of the application.
Dockerize	Boolean	Indicates whether the application is a Dockerized application.
Port	String	The port number of the application.
UserId	String	The primary account the user who created the application.

Parameter	Type	Description
Owner	String	The account under which the application was created .
RegionName	String	The region where the application is located.
ChangeOrderId	String	The ID of the correspond ing change order. Use this ID to call GetChangeO rderInfoRequest to display the deployment progress.

1.1.2.4 ScaleOutApplicationRequest

You can call this operation to scale out an application.

Request URI

/pop/v5/changeorder/co_scale_out

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to scale out. You can call ListApplic ationRequest to query it.
ecuInfo	String	Yes	The ECU ID of the ECS instance that needs to be scaled out. Separate multiple ECU IDs with commas (,). You can call ListScaleO utEcuRequest to query the ECU IDs.

Parameter	Type	Required	Description
deployGroup	String	Yes	The target group to be scaled out. You can call QueryApplicationStatusRequest to query the group information.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of a change order. Call the GetChangeOrderInfoRequest operation to get the progress of scale-out.

1.1.2.5 DeployApplicationRequest

You can call this operation to deploy an application.

Request URI

/pop/v5/changeorder/co_deploy_app

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to deploy. You can call ListApplicationRequest to query it.

Parameter	Type	Required	Description
appEnv	String	No	The environment variables for deploying the application, such as [{"name":"env-key","value":"env-value"}].
packageVersion	String	Yes	The released version, which is unique for each application and is no more than 64 characters in length. We recommend that you use a timestamp.
desc	String	No	The description for deploying the application.
deployType	String	Yes	The deployment type. Set it to the fixed value "url".
warUrl	String	No	The storage path of the uploaded WAR package (we recommend OSS for storage). This parameter is required when deployType is set to url.
groupId	String	Yes	The ID of the group where the application is deployed. You can call ListDeployGroupRequest to query it. Set this parameter to all if the application is deployed in all groups.
batch	Integer	Yes	Valid values: 1 to 5. Default value: 1.

Parameter	Type	Required	Description
batchWaitTime	Integer	No	The time that a batch waits for execution. Valid values: 0 to 5. Default value: 0 (no waiting). Unit: minute.

Notice:

The application is deployed in all groups when groupId is set to all. In this case, the batch parameter is invalid. The backend deploys the application in batches based on the number of groups. If only one group exists, the application is deployed in one batch. Set groupId to a specific value if you want to deploy the application in batches when only one group exists.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of a change order. Call GetChangeOrderInfoRequest to get the deployment progress.

1.1.2.6 GetChangeOrderInfoRequest

You can call this operation to query the details of a change order.

Request URI

/pop/v5/changeorder/change_order_info

Methods

POST

Request parameters

Parameter	Type	Required	Description
changeOrderId	String	Yes	The unique ID of a change order, which is returned when every application lifecycle-related method is successfully called.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderInfo	ChangeOrderInfo	The details of a change order.

- ChangeOrderInfo:

  Basic information about a change order

Parameter	Type	Description
ChangeOrderId	String	The unique ID of a change order.
CreateUserId	String	The ID of the user who creates the change order.
Desc	String	The description of the change order.
BatchCount	Integer	The number of batches for execution.
BatchType	String	The deployment method.
Status	Integer	Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).

Parameter	Type	Description
CoType	Integer	The type of the change order.
CreateTime	String	The time when the change order was created.
PipelineInfoList	List<PipelineInfo>	The details of batch execution. For more information, see PipelineInfo.

- PipelineInfo:

  Execution information for each batch

Parameter	Type	Description
PipelineId	String	The unique ID of a batch.
PipelineName	String	The name of the batch.
PipelineStatus	Integer	Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).
StageList	List<StageInfoDTO>	The stages of each batch. For more information, see the definition of StageInfoDTO.

- StageInfoDTO:

  Execution information for a specific stage in a batch

Parameter	Type	Description
StageId	String	The ID of a stage.
StageName	Integer	The name of the stage.

Parameter	Type	Description
Status	Integer	The status of the stage. Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).
StageResultDTO	StageResultDTO	For more information about the definition of each stage, see StageResultDTO.

- StageResultDTO:

  Stage execution details include task-oriented stages of the service type and agent type

Parameter	Type	Description
InstanceDTOList	List<InstanceDTO>	The stage execution results in each ECS instance. For more information, see the definition of InstanceDTO.
ServiceStage	ServiceStage	The execution result of a service-type stage.

- ServiceStage:

  Corresponding services are called to process instances in batches during a service-type stage, for example, scaling SLB instances in and out

Parameter	Type	Description
StageId	String	The ID of a stage.
StageName	String	The name of the stage.
Status	Integer	The running status of the stage. Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).
Message	String	The execution result of the stage.

- InstanceDTO:

  Overall execution result of an agent-type task in a specific instance (for example, starting an application instance is a common agent-type task)

Parameter	Type	Description
InstanceName	String	The name of an instance.
InstanceIp	String	The IP address of the instance.
Status	Integer	Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).
InstanceStageDTOList	List<InstanceStageDTO>	The list of stage execution results in each instance.

- InstanceStageDTO:

  Execution details of a stage in a specific instance

Parameter	Type	Description
StageId	String	The ID of a stage.
StageName	String	The name of the stage.
Status	Integer	Valid values: 0 (preparation), 1 (execution in progress), 2 (execution successful), 3 (execution failed), 6 (ended), and 10 (execution failed due to a system error).

1.1.2.7 ListApplicationEcu

You can call this operation query deployable ECUs.

Note:

This operation is intended to be compatible with an earlier API version and is not recommended. Instead, call ListScaleOutEcuRequest to query ECU information when creating or scaling out an application.

Request URI

/pop/v5/resource/ecu_list

Methods

POST

Request parameters

None.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
EcuInfoList	List<EcuEntity>	For more information, see the definition of EcuEntity.

- EcuEntity

Parameter	Type	Description
EcuId	String	The unique ID of an ECU. You can run dmidecode in the corresponding ECS instance to query the ECU ID .
Online	Boolean	Indicates whether the ECU is online.
DockerEnv	Boolean	Indicates whether Docker is installed.
CreateTime	Long	The time when the ECU was created.
UpdateTime	Long	The time when the ECU was updated.
HeartbeatTime	Long	The heartbeat time.
UserId	String	The associated user ID.
IpAddr	String	The intranet IP address of the ECU.
Name	String	The name of the ECU.

Parameter	Type	Description
ZoneId	String	The ID of the region where the ECU is located.
RegionId	String	The ID of the region where the ECU is located.
InstanceId	String	The ID of the ECS instance corresponding to the ECU.
VpcId	String	The ID of the VPC to which the ECU belongs.
AvailableCpu	Integer	The available CPU capacity.
AvailableMem	Integer	The available memory size.
Cpu	Integer	The total number of CPUs.
Mem	Integer	The total memory size.

1.1.2.8 GetApplicationRequest

You can call this operation to query the information about an application.

Request URI

/pop/v5/app/app_info

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application whose information you want to query.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
Application	Application	The information about the application.

- Application

Parameter	Type	Description
AppId	String	The ID of the application whose information you queried.
Name	String	The name of the application whose information you queried.
RegionId	String	The ID of the zone where the application is located.
Description	String	The description of the application whose information you queried.
Owner	String	The user who created the applicatio n.
InstanceCount	Integer	The total number of instances that the application has.
RunningInstanceCount	Integer	The number of running instances that the application has.
Port	Integer	The port occupied by the applicatio n.
UserId	String	The primary account ID.
SlbId	String	The ID of the intranet SLB instance used by the application.
SlbIp	String	The IP address of the intranet SLB instance used by the application.
SlbPort	Integer	The port occupied by the intranet SLB instance used by the applicatio n.
ExtSlbId	String	The ID of the Internet SLB instance used by the application.
ExtSlbIp	String	The IP address of the Internet SLB instance used by the application.
SlbName	String	The name of the intranet SLB instance used by the application.
ExtSlbName	String	The name of the Internet SLB instance used by the application.

Parameter	Type	Description
ApplicationType	String	The deployment type of the application, which can be War (WAR package deployment) or FatJar (JAR package deployment). If this parameter is set to null, the application is not deployed.
ClusterType	Integer	The environment type of the application cluster. Valid values : 0 (common Docker cluster), 1 (Swarm cluster), 2 (ECS cluster), 3 (Kubernetes cluster), and 4 (automatically registered Pandora cluster).
ClusterId	String	The ID of the cluster where the application's instances are located.
Dockerize	Boolean	Indicates whether the application is a Dockerized application.
Cpu	Integer	The number of CPU cores.
Memory	Integer	The memory size configured for the instances of the applciation. Unit: MB.
HealthCheckUrl	String	The URL for health check.
BuildpackId	Long	The ID of the container version.
CreateTime	Long	The time when the application was created.

1.1.2.9 StartApplicationRequest

You can call this operation to start an application.

Request URI

/pop/v5/changeorder/co_start

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to start. You can call ListApplicationRequest to query it.
eccInfo	String	No	The Elastic Compute Container (ECC) ID of the ECS instance that needs to be reset in the application. Separate multiple ECC IDs with commas (,). If this parameter is not set, all ECCs in the application are started. You can call QueryApplicationStatusRequest to query the ECC IDs.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of the change order. Call GetChangeOrderInfoRequest to get the progress of starting the application.

1.1.2.10 StopApplicationRequest

You can call this operation to stop an application.

Request URI

/pop/v5/changeorder/co_stop

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to stop. You can call ListApplicationRequest to query it.

Parameter	Type	Required	Description
eccInfo	String	No	The ECC ID of the ECS instance that needs to be reset in the application. Separate multiple ECC IDs with commas (,). If this parameter is not set, all ECCs in the application are stopped. You can call QueryApplicationStatusRequest to query the ECC IDs.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of the change order. You can call GetChangeOrderInfoRequest to get the progress of stopping the application.

1.1.2.11 DeleteApplicationRequest

You can call this operation to delete an application.

Request URI

/pop/v5/changeorder/co_delete_app

Methods

DELETE

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to delete. You can call ListApplicationRequest to query it.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of the change order, which is generated when the application to be deleted has active instances. You can call GetChangeOrderInfoRequest to get the progress of deletion. No ChangeOrderId is generated if the application to be deleted has no active instances. Determine whether the application is deleted based on the code.

1.1.2.12 ListScaleOutEcuRequest

You can call this operation to query available instances when you want to create or scale out an application.

Request URI

/pop/v5/resource/scale_out_ecu_list

Methods

GET

Request parameters

- Create a common application

Parameter	Type	Required	Description
clusterId	String	Yes	The ID of the cluster where you want to query the available instances.
instanceNum	Integer	No	The number of available instances that will be returned based on filter criteria. By default, all available instances are returned.

- Create a Dockerized application

Parameter	Type	Required	Description
clusterId	String	Yes	The ID of the cluster where you want to query the available instances.
cpu	Integer	Yes	The number of CPU cores that the returned instances must have.
mem	Integer	Yes	The available memory capacity that the returned instances must have. Unit: MB.
instanceNum	Integer	Yes	The number of available instances. This parameter is required for creating a Dockerized application.

- Scale out an application

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application that you want to scale out.
groupId	String	No	The ID of the group to which the instances to be added belong. The default group is used if this parameter is not set.
instanceNum	Integer	Yes	The number of available instances.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
EcuInfoList	List<EcuInfo>	A list of ECUs.

- EcuInfo

Parameter	Type	Description
EcuId	String	The unique ID of an ECU. You can run dmidecode in the corresponding ECS instance to query the ECU ID.
Online	Boolean	Indicates whether the ECU is currently online and controlled by EDAS.
DockerEnv	Boolean	Indicates whether Docker is installed.
CreateTime	Long	The time when the ECU was created. Unit: millisecond.
UpdateTime	Long	The time when the ECU was last modified. Unit: millisecond.
HeartbeatTime	Long	The heartbeat time. Unit: millisecond.
IpAddr	String	The intranet IP address of the ECU.
UserId	String	The name of the administrator account.

Parameter	Type	Description
Name	String	The name of an available ECS instance.
ZoneId	String	The ID of the zone where the available ECS instance is located.
RegionId	String	The ID of the region where the available ECS instance is located.
VpcId	String	The ID of the VPC to which the available ECS instance belongs.
AvailableCpu	Long	The number of available CPU cores of the ECS instance.
AvailableMem	Long	The available memory of the ECS instance. Unit: MB.

1.1.2.13 QueryApplicationStatusRequest

You can call this operation to query an application.

Request URI

/pop/v5/app/app_status

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to query.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
AppInfo	Map	The information about the application.

- AppInfo

Parameter	Type	Description
Application	Application	For more information, see the definition of ApplicationEntity.
GroupList	List<Group>	For more information, see the definition of GroupEntity.
EcuList	List<Ecu>	For more information, see the definition of EcuEntity.
EccList	List<Ecc>	For more information, see the definition of EccEntity.
DeployRecordList	List<DeployRecord>	For more information , see the definition of DeployRecord.

- ApplicationEntity:

  Basic application information

Parameter	Type	Description
AppId	String	The ID of the application.
Name	String	The name of the application.
RegionId	String	The ID of the zone where the application is located.
Description	String	The description of the application.
Owner	String	The user who created the application.
InstanceCount	Integer	The number of total instances that the application has.
RunningInstanceCount	Integer	The number of running instances that the application has.
Port	Integer	The port occupied by the application.

Parameter	Type	Description
UserId	String	The primary account ID.
SlbId	String	The ID of the intranet Server Load Balancer (SLB) instance used by the application.
SlbIp	String	The IP address of the intranet SLB instance used by the application.
SlbPort	Integer	The port occupied by the intranet SLB instance used by the application.
ExtSlbId	String	The ID of the Internet SLB instance used by the application.
ExtSlbIp	String	The IP address of the Internet SLB instance used by the application.
ApplicationType	String	The deployment type of the application, which can be War (WAR package deployment) or FatJar (JAR package deployment). If this parameter is set to null, the application is not deployed.
ClusterType	Integer	The environment type of the application cluster. Valid values: 0 (common Docker cluster), 1 (Swarm cluster), 2 (ECS cluster), 3 (Kubernetes cluster), and 4 (automatically registered Pandora cluster).
ClusterId	String	The ID of the cluster where the application's instances are located.
Dockerize	Boolean	Indicates whether the application is a Dockerized application.

Parameter	Type	Description
Cpu	Integer	The number of CPU cores.
Memory	Integer	The memory size configured for the instances of the application. Unit: MB.
HealthCheckUrl	String	The URL for health check.
BuildpackId	Long	The ID of the container version.
CreateTime	Long	The time when the application was created.

- GroupEntity:

  Group information

Parameter	Type	Description
GroupId	String	The ID of a group.
GroupName	String	The name of the group.
GroupType	Integer	The type of the group. Valid values: 0 (default group), 1 (user-created group), and 2 (gray group).
AppId	String	The ID of the application you queried.
ClusterId	String	The ID of the cluster where the application's instances are located.
PackageVersionId	String	The ID of the package used for group deployment.
AppVersionId	String	(Obsoleted) The ID of a group deployment record.
CreateTime	Long	The time when the group was created.
UpdateTime	Long	The time when the group was updated.

Parameter	Type	Description
Expired	Boolean	(Hidden) The flag that indicates the deletion of the group.

- EcuEntity:

  ECU information

Parameter	Type	Description
EcuId	String	The unique ID of an ECU. You can run dmidecode in the corresponding ECS instance to query the ECU ID .
Online	Boolean	Indicates whether the ECU is online.
DockerEnv	Boolean	Indicates whether Docker is installed.
CreateTime	Long	The time when the ECU was created.
UpdateTime	Long	The time when the ECU was updated.
HeartbeatTime	Long	The heartbeat time.
UserId	String	The associated user ID.
IpAddr	String	The intranet IP address of the ECU.
Name	String	The name of the ECU.
ZoneId	String	The ID of the region where the ECU is located.
RegionId	String	The ID of the region where the ECU is located.
InstanceId	String	The ID of the ECS instance corresponding to the ECU.
VpcId	String	The ID of the VPC used.
AvailableCpu	Integer	The available CPU capacity.
AvailableMem	Integer	The available memory size.
Cpu	Integer	The total number of CPUs.

Parameter	Type	Description
Mem	Integer	The total memory size.

- EccEntity:

  ECC information

Parameter	Type	Description
EccId	String	The unique ID of the ECC.
EcuId	String	The unique ID of an ECU.
AppId	String	The unique ID of an application.
AppState	Integer	The status of the application instance (which is used by change orders). Valid values: AGENT_OFF (0), STOPPED (1), RUNNING_BUT_URL_FAILED (3), and RUNNING (7).
TaskState	Integer	The status of the most recent task in the ECS instance. Valid values: UNKNOWN (0), PROCESSING (1), SUCCESS (2), and FAILED (3).
createTime	Long	The time when the ECC was created.
updateTime	Long	The time when the ECC was updated.
Ip	String	The intranet IP address of the ECU.
VpcId	String	The ID of the VPC used.
GroupId	String	The ID of the group to which the ECC belongs.

- DeployRecord:

  DeployRecord information

Parameter	Type	Description
EccId	String	The unique ID of the ECC.
EcuId	String	The unique ID of the ECU.
DeployRecordId	String	The ID of the deployment record.
PackageVersionId	String	The ID of the package used for group deployment.
PackageMd5	String	The MD5 value of the deployment package.

Parameter	Type	Description
createTime	Long	The time when the deployment record was created.

1.1.2.14 ScaleInApplicationRequest

You can call this operation to scale in an application.

Request URI

/pop/v5/changeorder/co_scale_in

Methods

POST

Request parameters

Parameter	Type	Required	Description
appId	String	Yes	The ID of the application you want to scale in. You can call ListApplicationRequest to query it.
eccInfo	String	Yes	The ECC ID of the ECS instance that needs to be reset under the application. Separate multiple ECC IDs with commas (,). You can call QueryApplicationStatusRequest to query the ECC ID.
forceStatus	Boolean	No	Specifies whether forced scale-in is enabled. This parameter is set to true only after the ECS instance expires. In normal cases, it is not set.

Response parameters

Parameter	Type	Description
Code	Integer	The returned code.
Message	String	The returned message.
ChangeOrderId	String	The ID of the change order. Call GetChangeOrderInfoRequest to get the scale-in progress. (No ID is generated if forceStatus is set to true. Determine whether the operation is successful based on the code.)

1.2 SDK Reference

1.2.1 Call the Java SDK

1.2.1.1 Quick start

This topic describes how to obtain and use the EDAS Java SDK.

Prepare the environment

- Before using the EDAS Java SDK, you must have an authorized account as well as an AccessKey pair comprised of an AccessKeyId and an AccessKeySecret. For more information about how to view and obtain your AccessKey in the Alibaba Cloud console, see API Reference .
- Obtain the EDAS endpoint. For more information, see API Reference .
- Alibaba Cloud EDAS Java SDK supports JDK v1.6 and later.

Install the EDAS Java SDK

If you use Apache Maven to manage Java projects, you only need to import the JAR package to pom.xml of the project.

To use the service development kit, you must install the SDK core library and the EDAS SDK.

The version number of the SDK core library is 3.7.1 and that of the EDAS SDK is 2.14.0 private.

```
<dependencies>
    <dependency>
      <groupId>com.aliyun</groupId>
      <artifactId>aliyun-java-sdk-core</artifactId>
      <version>3.7.1</version>
```

```
        <scope>system</scope>
        <systemPath>${project.basedir}/lib/aliyun-java-sdk-core-3.7.1.jar</systemPath>
    </dependency>
    <dependency>
        <groupId>com.aliyun</groupId>
        <artifactId>aliyun-java-sdk-edas</artifactId>
        <version>2.14.0.private</version>
        <scope>system</scope>
        <systemPath>${project.basedir}/lib/aliyun-java-sdk-edas-2.14.0.private.jar</
systemPath>
    </dependency>
  </dependencies>
```

Use the EDAS Java SDK

Perform the following steps to call the EDAS Java SDK:

1. Create a DefaultAcsClient and initialize it.
2. Create an API request and set its parameters.
3. Initiate a request and return a success response or an error response after processing.

```
  public static void main(String[] args) throws ClientException{
      /**
       * The endpoint used to make the API request. Set this parameter based on the list
of EDAS-supported regions and the region where your instance is located.
       */
      String regionId = "XXXXX";
      /**
       * The AccessKeyId that is created in the Alibaba Cloud console for authentication.
       */
      String accessKeyId = "XXXXXXXXXXXXXXXXX";
      /**
       * The AccessKeySecret that is created in the Alibaba Cloud console for authentica
tion.
       */
      String accessKeySecret = "XXXXXXXXXXXXXXXXX";
      /**
      * The name of the cloud product that you access through the API request. Set it to
EDAS in this example.
       */
      String productName ="Edas";
      /**
       * The domain of the endpoint. For more information, see the domains in the list
of EDAS-supported regions.
       */
      String domain ="edas-api.console.XXXXX.aliyun.com";
      // Construct an API client.
      DefaultProfile.addEndpoint(regionId,regionId,productName,domain);
      DefaultProfile defaultProfile = DefaultProfile.getProfile(regionId, accessKeyId,
accessKeySecret);
      DefaultAcsClient defaultAcsClient = new DefaultAcsClient(defaultProfile);
      defaultAcsClient.setAutoRetry(false);

      // Construct the API request for listing application deployment groups. For more
information about the input parameters, see the operation descriptions.
      String appId = "xxxxxxxxx";
      ListDeployGroupRequest request = new ListDeployGroupRequest();
      // For more information about the input parameters, see the operation descriptio
ns.
      request.setAppId(appId);
```

```
        ListDeployGroupResponse response = defaultAcsClient.getAcsResponse(request);
        // Result parsing (If Code 200 is returned, the call is successful. If any other code is
 returned, the call fails. For more information, see the error code list.)
        if (response.getCode() == 200) {
            // Parse the returned result (for more information, see the return value
description of the corresponding operation).
            List<DeployGroup> deployGroups = response.getDeployGroupList();
            if (CollectionUtils.isNotEmpty(deployGroups)) {
                for (DeployGroup deployGroup : deployGroups) {
                    System.out.println(deployGroup.getGroupName());
                    System.out.println(deployGroup.getGroupId());
                }
            }
        } else {
            // Print the cause of the error.
            System.out.println(response.getMessage());
        }
    }
```

1.2.1.2 User manual

1.2.1.2.1 Install the EDAS Java SDK

This topic describes how to install and use the EDAS Java SDK.

The EDAS Java SDK supports JDK v1.6 and later. You can import the JAR package to install JDK.

You can click Here to download the JAR package.

You can import the JAR package to install the EDAS Java SDK regardless of whether the IDE is Eclipse or IntelliJ IDEA.

The installation method is as follows:

- Use Eclipse

  To install the EDAS Java SDK in Eclipse, perform the following operations:

  1. Copy the `aliyun-java-sdk-edas-2.14.0.private.jar` package to your project folder.
  2. In Eclipse, right-click your project and choose **Properties** from the shortcut menu.
  3. In the dialog box that appears, choose**Java Build Path** > **Libraries** > **Add JARs** to add the downloaded JAR package.
  4. Click **Apply and Close**.

- Use IntelliJ IDEA

  To install the EDAS Java SDK in IntelliJ IDEA, perform the following operations:

  1. Copy the aliyun-java-sdk-edas-2.14.0.private.jar package to your project folder.
  2. In IntelliJ IDEA, open your project and choose**File** > **Project Structure**.
  3. Click **Apply** and then **OK**.

1.2.1.2.2 Configure authentication credentials

When using the SDK to access Alibaba Cloud resources, you must provide an authorized account for identity verification.

Currently, the EDAS Java SDK supports identity verification through AccessKeyId and AccessKeySecret. For more information about how to obtain them, see API Reference .

To use AccessKeyId and AccessKeySecret as the credential, you must configure your credential when the SDK client is being initialized.

Notice:
Ensure that the code containing your AccessKeyId and AccessKeySecret is kept confidential and is not exposed (such as being uploaded to a public GitHub project). Otherwise, the information security of your Alibaba Cloud account may become compromised.

```
DefaultProfile profile = DefaultProfile.getProfile(
    "<your-region-id>",         // Your region ID.
    "<your-access-key-id>",     // The AccessKeyId of your RAM account.
    "<your-access-key-secret>"); // The AccessKeySecret of your RAM account.
```

1.2.1.2.3 Initiate a call

This topic describes how to use the EDAS Java SDK to initiate a request.

Procedure

1. Create an AcsClient.

   ```
   IAcsClient client = new DefaultAcsClient(profile);
   ```

2. Create a request.

   The request class naming convention is ${apiName}Request. **${apiName}** is the API name, such as ListApplicationRequest.

   When multiple SDKs are used, different requests may have the same name. Therefore, differentiate the requests based on the package size.

   ```
   ListApplicationRequestRequest request = new ListApplicationRequestRequest();
   ```

```
request.setPageSize(10);
```

3. Initiate a call and return a response after processing.

```
ListApplicationRequestResponse response;
try {
    response = client.getAcsResponse(request);
    for (ListApplicationRequestResponse.Instance instance:response.getInstances()) {
        System.out.println(instance.getPublicIpAddress());
    }
} catch (ServerException e) {
    e.printStackTrace();
} catch (ClientException e) {
    e.printStackTrace();
}
```

All the returned fields are deserialized into the response. You can directly call `response.getXXX()` to retrieve the response fields.

```
instanceStatus := response.getStatus()
```

However, if an exception occurs or you want to retrieve the original HTTP response, use `doAction()` to retrieve the original response.

```
HttpResponse response = client.doAction(request);
```

1.2.1.2.4 Handle exceptions

When using the Java SDK, if EDAS or the SDK client encounters an exception, the corresponding exception information is returned. An SDK client refers to either a provider or consumer that has the SDK installed. The exception information contains error details, such as error codes and error messages.

Among the errors returned by the EDAS Java SDK, you do not need to handle the SDK errors. Instead, you need only to handle EDAS-related exceptions based on the error messages.

- `ServerException` is the error message for EDAS.
- `ClientException` is the error message for the SDK client.

For example, if the following exception occurs, you can modify the AccessKeyId based on the error message.

```
com.aliyuncs.exceptions.ClientException: InvalidAccessKeyId.NotFound : Specified
access key is not found.
```

If you need to handle SDK exceptions, develop your code by referring to the following example:

```
try {
    FooResponse response = client.getAcsResponse(request);
    // Handles the response.
```

```
    //...
}catch (ServerException e){
    // You can add your own exception handling logic here.
    // For example, print the error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
    // If the problem persists, you can open a ticket with the request ID included.
    System.out.println("ResponseId=" + e.getRequestId());
} catch (ClientException e) {
    // You can add your own exception handling logic here.
    // For example, print the error message.
    System.out.println("ErrorCode=" + e.getErrCode());
    System.out.println("ErrorMessage=" + e.getErrMsg());
}
```

1.2.1.2.5 Errors and troubleshooting

This topic describes how to troubleshoot common errors you may encounter during the use of SDKs.

Error code	Error message	Cause	Solution
SDK.CanNotResolveEndpoint	Can not resolve endpoint, please check the user guide	The SDK cannot automatically obtain the endpoint of the called service in the specified region.	Check whether the provided region ID and endpoint are correct. After you have obtained the correct endpoint, you can run the following code to set the endpoint: `DefaultProfile.addEndpoint("your-region-id", "your-region-id", "product", "endpoint"");`
SDK.JsonUnmarshalError	Failed to unmarshal response	The SDK response fails to be deserialized. In most cases, the cause is that the structure of the response received by the SDK does not conform to the API metadata, such as mismatched fields or incorrect formatting.	You can use the client.doAction (request) method to retrieve the original HTTP response.

Error code	Error message	Cause	Solution
SDK.TimeoutError	The request timed out 4 times(3 for retry), perhaps we should have the threshold raised a little?	The request times out and all retry attempts fail.	In scenarios such as low network quality, we recommend that you increase the timeout period or the maximum number of retries.
SDK.ServerError : InvalidProtocol .NeedSsl	Your request is denied as lack of ssl protect .Recommend :https://error-center.aliyun.com/status/search?Keyword=InvalidProtocol.NeedSsl&source=PopGw	The API only accepts HTTPS requests but not HTTP requests.	Before sending a request, add the following code: `request.setProtocol(ProtocolType.HTTPS)`

1.2.2 Call the EDAS Python SDK

1.2.2.1 Quick start

This topic describes how to obtain and use the EDAS Python SDK.

Prepare the environment

- Before using the EDAS Python SDK, you must have an authorized account and an AccessKey pair that comprises an AccessKeyId and an AccessKeySecret. For more information about how to view and obtain your AccessKey in the Alibaba Cloud console, see API Reference .
- Obtain the EDAS endpoint. For more information, see API Reference .

Install the EDAS Python SDK

To install the EDAS Python SDK, perform the following operations:

1. Install the SDK core library.
   - If you are using Python 2.x, run the following command to install the Alibaba Cloud SDK core library:

     ```
     pip install aliyun-python-sdk-core
     ```
   - If you are using Python 3.x, run the following command to install the Alibaba Cloud SDK core library:

     ```
     pip install aliyun-python-sdk-core-v3
     ```
2. Install the EDAS Python SDK.

   The following is an example command for installing the EDAS Python SDK:

   ```
   pip install aliyun-python-sdk-edas
   ```

Call the EDAS Python SDK

Perform the following steps to call the EDAS Python SDK:

1. Create a client instance. When creating the client instance, you must obtain the Region ID, AccessKeyId, and AccessKeySecret.
2. Create an API request and set its parameters.
3. Initiate a request and return a success response or an error response after processing.

```
#! /usr/bin/env python
#coding=utf-8

from aliyunsdkcore import client
from aliyunsdkcore.profile import region_provider
from aliyunsdkecs.request.v20140526 import DescribeInstancesRequest

# global config
region_id = 'xxxxx'
secret_id = 'xxxxx'
secret_key = 'xxxxx'

# product config
product_name = 'Edas'
endpoint = 'edas.example.com'

# create client
region_provider.modify_point(product_name, region_id, endpoint) clt =
client.AcsClient(secret_id, secret_key, region_id)

# setup request
request = DescribeInstancesRequest.DescribeInstancesRequest()
request.set_accept_format('json')

# get response
response = clt.do_action_with_exception(request)
```

```
print response
```

1.2.2.2 User manual

1.2.2.2.1 Install the EDAS Python SDK

This topic describes how to install and use the EDAS Python SDK.

The EDAS Python SDK supports Python V2.6.x, 2.7.x, 3.x, and later. It can be installed in the following methods:

- Use pip (recommended)

  Run the following commands to install the EDAS Python SDK through pip:

  ```
  pip install aliyun-python-sdk-core # Install the Alibaba Cloud SDK core library.
  pip install aliyun-python-sdk-edas # Install the EDAS SDK.
  ```

  Note:

  If you are using Python V3.x, modify `pip install aliyun-python-sdk-core` to `pip install aliyun-python-sdk-core-v3`.

- Install from GitHub

  Run the following commands to install the EDAS Python SDK from GitHub:

  ```
  git clone https://github.com/aliyun/aliyun-openapi-python-sdk.git
  # Install the SDK core library.
  cd aliyun-python-sdk-core
  python setup.py install
  # Install the EDAS SDK.
  cd aliyun-python-sdk-edas
  python setup.py install
  ```

- Use the source code

  1. Download the SDK package and decompress it.
  2. You can use one of the following methods to install the SDK package:

     - Modify sys.path and add the directory that you want to search for, that is, the directory where the SDK package is decompressed. Example:

       ```
       >>> import sys
       >>> sys.path.append('/Users/michael/my_py_scripts')
       ```

       Note:

This modification goes into effect only in the current session.

- Configure the environment variable PYTHONPATH, and add the directory that you want to decompress the SDK package to. The content of this environment variable is automatically added to the module search path.

  The configuration of the environment variable PYTHONPATH is similar to that of the environment variable Path.
- Place the decompressed SDK package into the project. You can then use the EDAS Python SDK directly in the project.

1.2.2.2.2 Configure authentication credentials

When using SDKs to access Alibaba Cloud resources, you must provide an authorized Alibaba Cloud account for identity verification.

Currently, the EDAS Python SDK supports identity verification through the combination of AccessKeyId and AccessKeySecret. For more information about how to obtain them, see API Reference .

To use AccessKeyId and AccessKeySecret as the credential, you must configure your credential when the SDK client is being initialized.

Notice:
Ensure that the code containing your AccessKeyId and AccessKeySecret is kept confidential and is not exposed (such as being uploaded to a public GitHub project). Otherwise, the information security of your Alibaba Cloud account may become compromised.

```
clt = client.AcsClient(secret_id, secret_key, region_id)
```

1.2.2.2.3 Initiate a call

This topic describes how to use the EDAS Python SDK to initiate a request.

Procedure

1. Import the EDAS Python SDK.

```
from aliyunsdkcore import client
from aliyunsdkcore.profile import region_provider
from aliyunsdkedas.request.v20170801 import ListAliyunRegionRequest
```

2. Create an AcsClient.

```
client.region_provider.modify_point(product_name, region_id, endpoint)
```

```
clt = client.AcsClient(secret_id, secret_key, region_id)
```

3. Create a request object.

```
request = DescribeInstancesRequest.DescribeInstancesRequest()
request.set_accept_format('json')
```

4. Initiate a call and return a response after processing.

```
response = clt.do_action_with_exception(request)

print response
```

1.2.2.2.4 Set HTTPS requests

The EDAS Python SDK allows you to initiate API requests over HTTP and HTTPS.

When using the EDAS Python SDK, you can specify a protocol, either HTTP or HTTPS, for specific requests, or set a global protocol for all requests.

Note:

If you specify a protocol for a service, the specified protocol takes precedence.

Add OpenSSL support

The HTTPS protocol for the EDAS Python SDK is dependent on the OpenSSL support in Python. To use the EDAS Python SDK to send HTTPS requests, you must add the OpenSSL dependency for Python.

Run the `python -c "import ssl"` command to make sure that the OpenSSL dependency is added. If the error message

`ImportError: No module named ssl` is not displayed, then the OpenSSL dependency has been added.

If OpenSSL is not available, run the following command to install it:

```
pip install pyopenssl
```

Set the protocol to HTTP or HTTPS for a request

Call an API over HTTPS by referring to the following sample code:

```
request = CreateInstanceRequest.CreateInstanceRequest()
request.set_protocol_type("https")
```

```
# Valid values: "https" or "http".
```

Set a default protocol for all requests globally

The following code provides an example of how to set a default protocol for all requests globally:

```
import aliyunsdkcore.request
aliyunsdkcore.request.set_default_protocol_type("https")
# Create a request and call client.do_action_with_exception() to send the request.
```

1.2.2.2.5 Handle exceptions

When using the Python SDK, if EDAS or the SDK client encounters an exception, the corresponding exception information is returned. An SDK client refers to either a provider or consumer that has the SDK installed. The exception information contains error details, such as error codes and error messages.

Among the errors returned by the EDAS Python SDK, you do not need to handle the SDK errors. Instead, you need only to handle EDAS-related exceptions based on the error messages.

- `ServerException` is the error message for EDAS.
- `ClientException` is the error message for the SDK client.

For example, if the following exception occurs, you can modify the AccessKeyId based on the error message.

```
aliyunsdkcore.acs\_exception.exceptions.ServerException: HTTP Status: 404 Error:
InvalidAccessKeyId.NotFound Specified access key is not found.
```

If you need to handle SDK exceptions, develop your code by referring to the following example:

```
try:
    response = client.do_action_with_exception(request)
except ServerException as e:
    # You can add your own exception handling logic here.
    # For example, print the error message.
    print e.get_http_status()
    print e.get_error_code()
```

```
print e.get_error_msg()
```

1.2.2.2.6 Errors and troubleshooting

This topic describes how to troubleshoot common errors you may encounter during the use of SDKs.

Error code	Error message	Cause	Solution
SDK.InvalidRegionId	Can not find endpoint to access.	The SDK cannot automatically obtain the endpoint of the called service in the specified region.	Check whether the provided region ID and endpoint are correct. Use the following code to set the endpoint: `from aliyunsdkcore.profile import region_provider region_provider.modify_point('product_name' 'region_id', 'endpoint')`
SDK.TimeoutError	—	The request times out and all retry attempts fail.	In scenarios such as low network quality, we recommend that you increase the timeout period or the maximum number of retries.
SDK.ServerError: InvalidProtocol.NeedSsl	Your request is denied as lack of ssl protect .Recommend :https://error-center.aliyun.com/status/search?Keyword=InvalidProtocol.NeedSsl&source=PopGw	The API only accepts HTTPS requests but not HTTP requests.	Before sending a request, add the following code: `request.set_protocol_type('https')`

1.2.3 Obtain the SDK source code

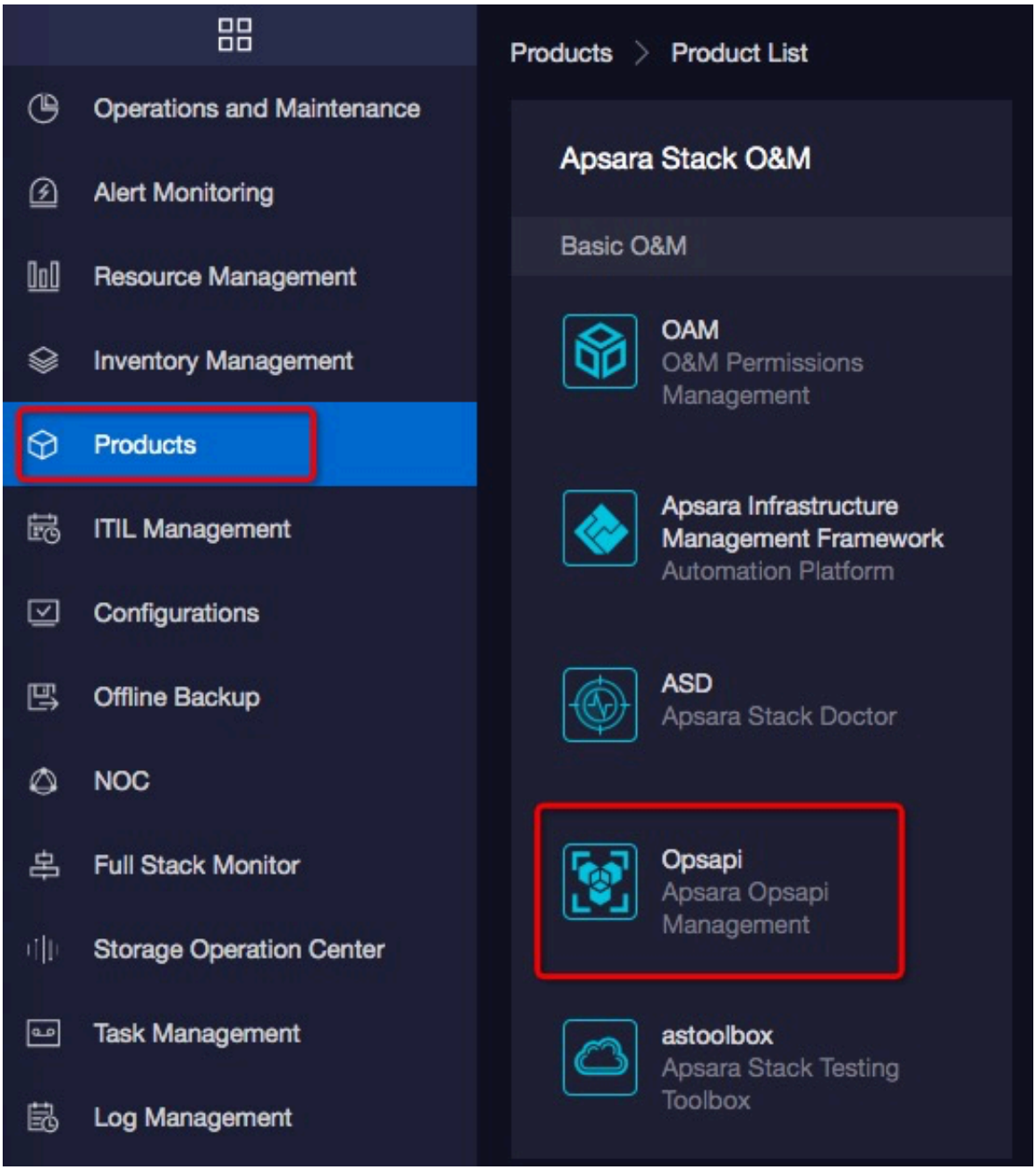
You can use the SDK tool to customize the SDK language as needed.

Prerequisites

- You have obtained the URL of the Apsara Stack Operations console. The URL of the Apsara Stack Operations console is in the following format: http://${region-id}.aso.${intranet-domain-id}.com.
- We recommend that you use the Google Chrome browser.

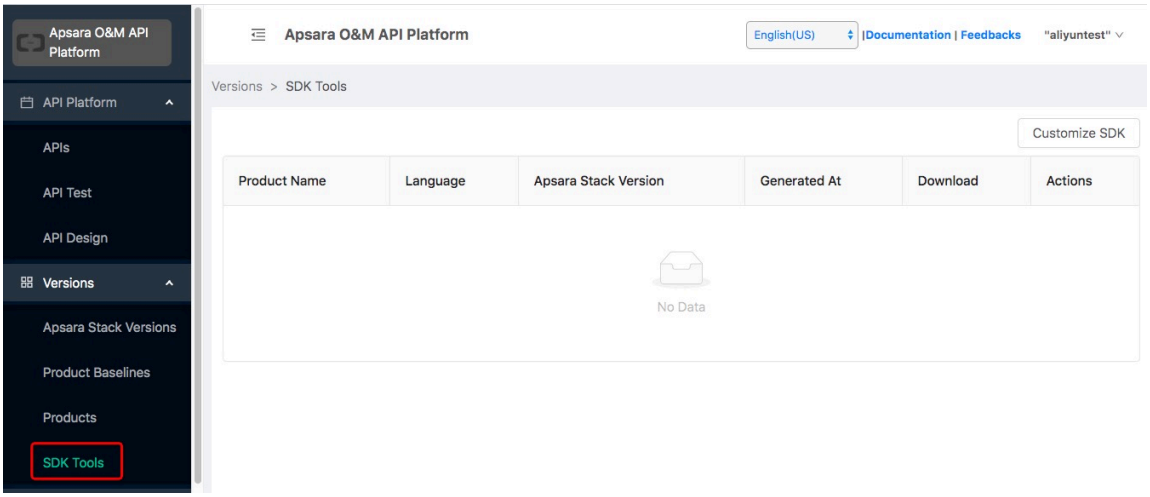
Procedure

1. Log on to the Apsara Stack Operations console.
   a) In the address bar of the browser, enter the URL of the Apsara Stack Operations console: http://${region-id}.aso.${intranet-domain-id}.com. Then, press the Enter key.
   b) Enter the username and password of your account.
   c) Click **Log On** to access the **Apsara Stack Operations console**.
2. Log on to the Apsara O&M API Platform. In the left-side navigation pane, choose **Products** > **Opsapi** to go to the **Apsara O&M API Platform console**.



3. Download the SDK source code package.

   a) In the left-side navigation pane, choose **Versions** > **SDK Tools**.

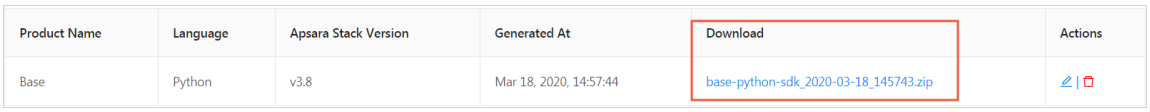


   b) In the right-side corner of the SDK Tools page, click **Customize SDK**.

   c) In the **Customize Apsara Stack SDK** dialog box that appears, select an Apsara Stack version, a service, a server version, an SDK version, an API version, and an SDK language.

   d) Click **Create SDK**.

   e) Click the file name in the **Download** column corresponding to the service name to download the SDK package.



1.3 Obtain an AccessKey pair

You can obtain an AccessKey pair in the Apsara Stack Cloud Management (ASCM) console.

Obtain the AccessKey pair of an organization

To obtain the AccessKey pair of an organization, perform the following operations:

1. Log on to the ASCM console as an administrator.
2. In the top navigation bar, click **Enterprise**.
3. In the left-side navigation pane of the **Enterprise** page, click **Organizations**.
4. In the Organizations structure, click the icon on the right of the organization to be added.
5. Choose **AccessKey** from the shortcut menu.

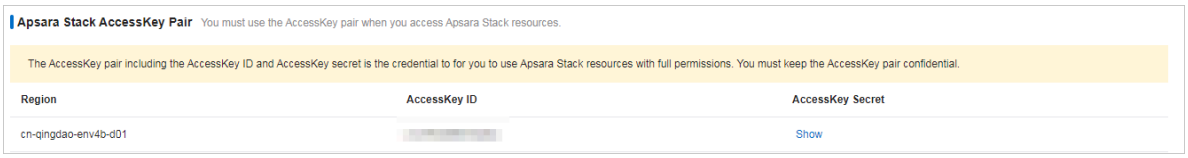
6. In the AccessKey dialog box that appears, view the AccessKey pair of the organization.

> **Note:**
> An AccessKey pair is automatically allocated to a level-1 organization. Subordinate organizations use the same AccessKey pair as their level-1 organization.

Obtain the AccessKey pair of a personal account

To obtain the AccessKey pair of a personal account, perform the following operations:

1. Log on to the ASCM console as an administrator.
2. In the upper-right corner of the homepage, move the pointer over the user profile picture and click **User Information**.
3. In the **Apsara Stack AccessKey Pair** section of the User Information page, view your AccessKey pair.



> **Note:**
> The AccessKey pair is made up of the AccessKey ID and AccessKey secret. These credentials provide you full permissions on Apsara Stack resources. You must keep the AccessKey pair confidential.