

Access Guide

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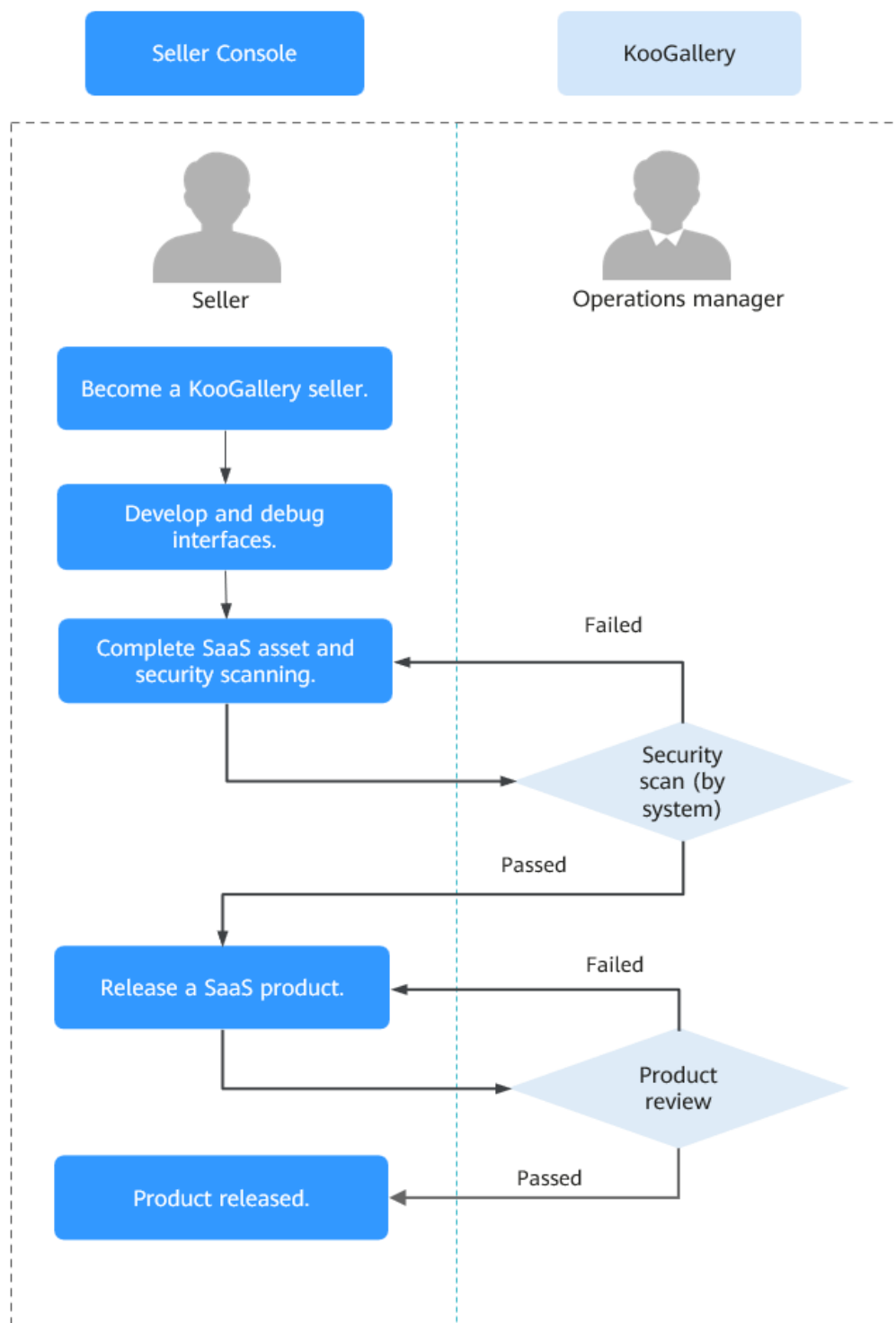
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1.1 Access Process

The following figure shows the process of SaaS products accessing KooGallery.



The process is as follows:

1. Become a KooGallery seller.
2. Prepare a production interface server and develop and debug basic interfaces.
For details, see [1.2 Interface Description](#).

3. Complete the SaaS asset and security scanning. For details, see [Managing SaaS Assets](#).
4. Release a product on the Seller Console, set the delivery method to SaaS, and enter product information.
5. Wait for KooGallery to approve the product.
6. The product is released.

1.2 Interface Description

Before releasing a SaaS product to KooGallery, develop a production interface on your server by referring to this access guide.

The following table lists the SaaS 2.0 interface specifications.

Scenario	SaaS		
	One-Time Payment	Yearly/ Monthly	Pay-per-Use
Creating an instance	Mandatory	Mandatory	Mandatory
Querying instance information	Mandatory	Mandatory	Mandatory
Updating an instance	N/A	Mandatory	Mandatory
Updating the instance status	N/A	Mandatory	Mandatory
Releasing an instance	Mandatory	Mandatory	Mandatory
Upgrading an instance	N/A	Optional	N/A
Verifying a change upon renewal	N/A	Optional	N/A

NOTE

When releasing a product, develop interfaces based on the delivery method and billing mode as listed in the preceding table.

- **Mandatory:** Development and debugging are mandatory.
- **N/A:** No development and debugging are required.
- **Optional:** For instance upgrade and verification of changes upon renewal, development and debugging are required only when a product allows specification adjustments (downgrades/upgrades) or capacity scaling (in/out). Ignore them for other cases.

SaaS 2.0 Instance Dialing Test Rules

After SaaS product release, KooGallery conducts interface address dialing tests every morning and afternoon to monitor the availability for order placement. If a dialing test fails, the system sends a notification to the email address or mobile

number bound to your account or as a direct message. Rectify the interface promptly. The following table lists the dialing test rules.

Product Status	Dialing Test
On sale	Required
Discontinued	Skipped
Withdrawn from KooGallery	Skipped

If the dialing test of an interface fails for five consecutive days, the KooGallery operations manager freezes the product transaction and hides the product from customers. According to the [Huawei Cloud KooGallery Partner Product Seller Agreement](#), if the fault is not rectified in time, KooGallery has the right to remove the product from the catalog.

Interface Calling Scenario (Order Placement)

- Instance creation: A customer purchases and pays for a product.
 - a. KooGallery calls the instance creation interface to ask you to create an instance based on the order ID.
 - b. After receiving the request, your system calls the KooGallery API for querying an order to obtain the subscription information and subscribe to the instance.
 - c. KooGallery calls the instance query interface to obtain instance information.
- Instance query: A customer queries information about an instance (**instanceId**).
 - a. After obtaining the instance ID (**instanceId**) returned by the instance creation interface, KooGallery continuously calls the instance query interface until you successfully return the instance information.
 - b. When a customer queries resource information in KooGallery, KooGallery synchronously calls the instance query interface and returns the information.
- Instance update: A customer changes trial use to commercial use, renews resources, cancels renewals, or changes specifications during renewal.

KooGallery calls the instance update interface to notify your system of the resource expiration time. Your system performs the corresponding action and returns the execution result to KooGallery.
- Instance status update: If an instance of a customer expires or the customer violates regulations, the instance will be frozen. After the instance is renewed or the violation is canceled, the instance will be unfrozen.

KooGallery calls the instance status update interface to ask your system to freeze or unfreeze the corresponding resource and return the execution result to KooGallery.

 NOTE

When a purchased product expires, the retention period starts. The retention period varies with the customer tier and can be up to 15 days long. During the retention period, the product is frozen and cannot be used. The customer can continue using the product after renewal. Therefore, you need to set a retention period to no less than 15 days for your SaaS products and retain customer data during the retention period.

- Instance release: A customer releases an instance of a purchased product (in scenarios such as no renewal upon expiration and unsubscription).
 - a. KooGallery calls the instance release interface to ask your system to release the corresponding resource and return the execution result to KooGallery.
- Instance upgrade: A customer upgrades purchased resources and pays for the upgrade order.
 - a. KooGallery calls the instance upgrade interface to ask your system to upgrade the corresponding resource.
 - b. Your system calls the KooGallery API for querying an order to obtain the upgrade information, upgrades the instance, and returns the execution result to KooGallery.
- Verification of changes upon renewal: When a customer requests to upgrade or downgrade resource specifications or scale in or scale out resources during renewal, KooGallery calls this interface to check whether your server supports such changes.

NOTICE

For details about the process, see [Setting Product Changes \(Downgrade, Scale-in, Upgrade, and Scale-out\)](#).

Interface Failure Scenarios and Retry Mechanism

If an interface fails to respond, the system sends an email to the email address bound to your KooGallery account. You can query the exception information on the **Service Interface Messages** page of the Seller Console. Handle the exceptions as soon as possible to avoid unsubscription due to order failure.

- When the instance creation interface fails to be called, KooGallery retries for 3 hours. You can click **Restart** in the **Operation** column on the right of the order on the [Service Interface Messages](#) page to retry calling. If the interface exception persists after 3 hours, the system determines that the order fails and cancels the order.
- When the instance update interface fails to be called, KooGallery retries calling in the following scenarios:
 - a. For renewals, changes from trials to commercial use, and renewal cancellation, KooGallery retries for an hour. You can query the exception information on the [Service Interface Messages](#) page. After rectifying the exception, click **Restart** in the **Operation** column on the right of the order on the [Service Interface Messages](#) page to retry calling.
 - b. For changes upon renewal, KooGallery retries for 3 hours. You can click **Restart** in the **Operation** column on the right of the order on the [Service](#)

Interface Messages page to retry calling. If the interface exception persists after 3 hours, the system determines that the order fails and cancels the order.

- When the instance status update interface fails to be called, KooGallery retries for an hour. You can query the exception information on the **Service Interface Messages** page. After rectifying the exception, click **Restart** in the **Operation** column on the right of the order on the **Service Interface Messages** page to retry calling.
- When the instance upgrade interface fails to be called, KooGallery retries for 3 hours. You can click **Restart** in the **Operation** column on the right of the order on the **Service Interface Messages** page to retry calling. If the interface exception persists after 3 hours, the system determines that the order fails and cancels the order.

NOTE

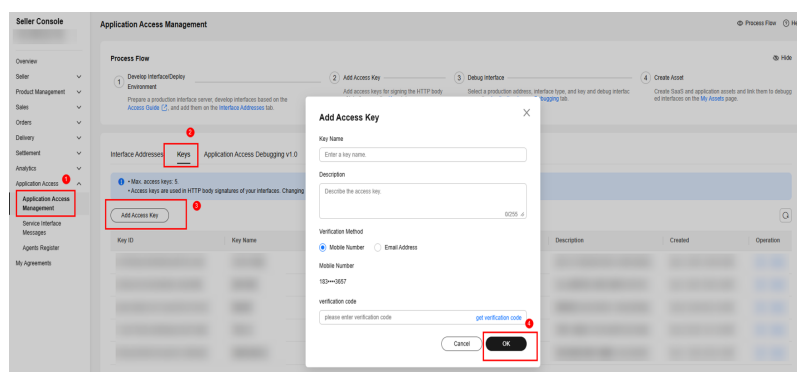
- If an interface fails to respond, an email, SMS message, or direct message will be sent to you. Check the email address and mobile number bound to your account and the Message Center on Huawei Cloud.
- If more than five orders of a product failed in a month due to interface failures or an interface fails the dialing test for five consecutive days, KooGallery will remove the product from the catalog.
- If an order is automatically canceled due to an interface failure, contact the customer at the earliest to handle the problem. If a customer can still use expired resources due to an interface failure, you shall bear the resource loss incurred.

1.3 Preparations

1.3.1 Obtaining an Access Key (Key ID)

Step 1 Go to the **Seller Console**.

Step 2 In the navigation pane, choose **Application Access > Application Access Management**. On the displayed page, click the **Keys** tab and click **Add Access Key**. After adding a key, obtain the access key.



----End

1.3.2 HTTP Body Signature

Definition

Each time KooGallery calls your interface, KooGallery generates a signature for the request based on certain rules and adds the signature to the URL as a URL parameter. After receiving the request, you need to recalculate the signature for the request body based on the same rules, compare the signature with the signature transferred by KooGallery. If they are the same, the verification succeeds. The following table lists the parameters transferred.

Parameter	Value	Description
signature	String	Encrypted signature, which is generated by signing a request based on certain rules.
timestamp	Long	UNIX timestamp, in seconds. The difference between the timestamp and the current time must not exceed 60 seconds.
nonce	String	Randomly generated by KooGallery each time an interface is called. You can cache it to defend against replay attacks.

Generation Rules

1. Sort request parameters by name (from Z to A). For example, a parameter whose name starts with **a** is placed after a parameter whose name starts with **b**.
2. Obtain the standard request character string.

```
canonicalRequest = accessKey + nonce + timestamp + Lowercase(HexEncode(HMAC_SHA256  
(RequestPayload)))
```

1. Obtain the **signature** value for the key.

```
signature = HexEncode(HMAC_SHA256(canonicalRequest))
```

Example

The following is an example of the request received by you:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?  
signature=11C4CD6279191DE931DEF5C51531DFFA9D37969F4E356B8A3A6D8DE4FB357A48&timestamp=16  
80508066618&nonce=50D83FDECAED6CCD8EF597F2A577950527928BA287D04E6036E92B2806FD17DA' -H  
'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -  
d '{"activity": "newInstance", "businessId": "87b94795-0603-4e24-8ae5-69420d60e3c8", "orderId": "CS221118181  
9B4LVS", "orderLineId": "CS2211181819B4LVS-000001", "testFlag": "1"}'
```

1.4 Basic Interfaces

1.4.1 Creating an Instance

Description

After a customer purchases and pays for a product, KooGallery calls this interface to ask you to create an instance.

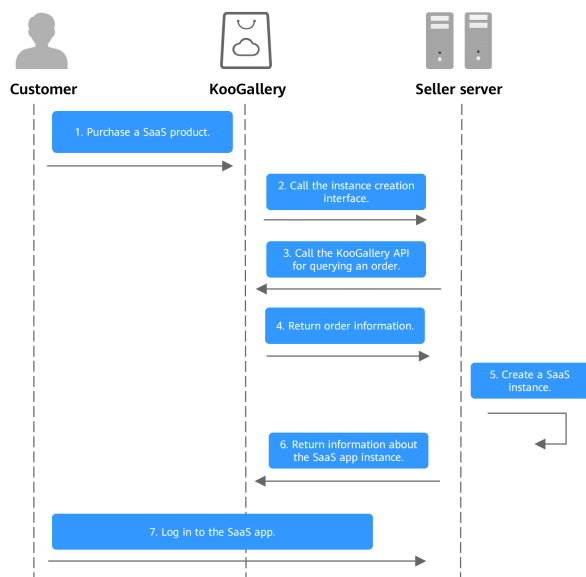
- You must return the unique ID (**instanceId**) of the order. Recommended: Use **businessId** provided by KooGallery to ensure that **instanceId** is globally unique.
- Do not block this interface. If instance creation is time-consuming, create the instance asynchronously. You can generate an instance ID first and then return a response immediately. KooGallery will use the interface for querying instance information to query the instance provisioning result.
- If pay-per-use specifications and packages are involved, develop the interface for [Pushing the Pay-per-Use Resource Usage \(New\)](#).
- For details about how to obtain order information, see [Querying an Order](#).

NOTE

KooGallery may resend a request. For the same order ID (**orderId**) and order line (**orderLineId**), your server should return the same **instanceId** without creating a SaaS instance.

In pay-per-use transactions, ensure idempotency based on the order ID (**orderId**) and product ID (**productId**).

The following figure shows the process of creating an instance.



Request Message

The following table describes the request parameters. In KooGallery, requests are generated based on the subscription mode of products released by you. You need to provide services based on requests.

Request method: POST**Body parameters**

Parameter	Mandatory	Type	Maximum Length	Description
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For new subscriptions, the value is newInstance .
orderId	Yes	String	64	KooGallery order ID.
orderLineId	Yes	String	64	KooGallery order line ID.
businessId	Yes	String	64	KooGallery business ID. The value of businessId is different for each request.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=11C4CD6279191DE931DEF5C51531DFFA9D37969F4E356B8A3A6D8DE4FB357A48&timestamp=1680508066618&nonce=50D83FDECAED6CCD8EF597F2A577950527928BA287D04E6036E92B2806FD17DA' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"newInstance","businessId":"87b94795-0603-4e24-8ae5-69420d60e3c8","orderId":"CS2211181819B4LVS","orderLineId":"CS2211181819B4LVS-000001","testFlag":"0"}'
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. ● 000000: The resource is enabled synchronously. ● 000004: The resource is enabled asynchronously. For details, see 1.7 Result Codes . NOTE Return 000004 if it takes a long time to create an instance. KooGallery will call the instance information query interface to query the instance provisioning result.
resultMsg	No	String	255	Result message.
instanceId	Yes	String	64	Instance ID, which is the unique identifier of each new purchase order you provide. Recommended: Use businessId provided by KooGallery to ensure that instanceId is globally unique. NOTE The value of businessId in each request sent by KooGallery is different. If you use businessId as instanceId , use businessId in the first request sent by KooGallery.

Example response:

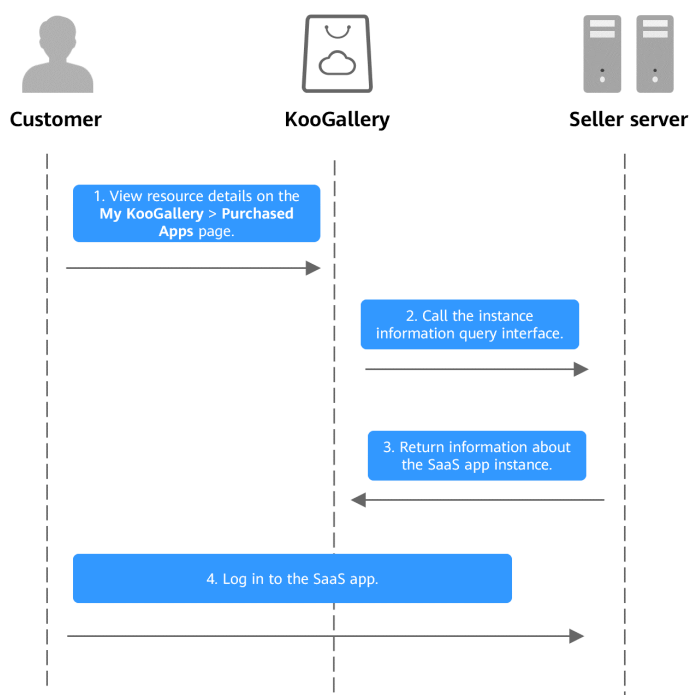
```
{  "resultCode": "000000",  "resultMsg": "success.",  "instanceId": "03pf80c2bae96vc49b80b917bea776d7"}
```

1.4.2 Querying Instance Information

Description

After you create an instance, KooGallery queries the instance information based on the instance ID.

The following figure shows the process of querying instance information.



Request Message

The following table describes the request parameters.

Request method: POST

Body parameters

Parameter	Mandator y	Type	Maximum Length	Description
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For instance query, the value is queryInstance .
instanceId	Yes	String	100	Instance IDs separated by commas (,). Up to 100 instances can be queried each time.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=9C61F188C3C2889C2DD201B00E42041BDCE4751F31E35805DE412969F0A7829C&timestamp=1680508237508&nonce=9FB42E04DF4594B1FAA50B304E647AD7154AB9B4F144A65F1168886540A8B24C' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"queryInstance","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","testFlag":"0"}'
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 1.7 Result Codes .
resultMsg	No	String	255	Result message.
info	No	InstanceInfo[]		Instance details.

The following table describes the **InstanceInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
instanceId	Yes	String	64	Instance ID.
appInfo	No	AppInfo	N/A	App instance information. After a customer purchases a product, return a login address (website address) or an address that does not require login for the customer to perform subsequent operations. NOTE You must provide customers who purchase your SaaS products with the app usage information, including the addresses, accounts, and passwords. If the usage information can be sent through SMS messages, emails, or other methods, this parameter is not required in the response. Otherwise, the app instance information must be returned in the response. You can use the memo parameter to specify usage instructions or other information if any. For details about the appInfo data structure, see the following table.

The following table describes the **applInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
frontEndUrl	Yes	String	512	Frontend URL. URL of the website that the customer can access to use the purchased product.
adminUrl	No	String	512	Management URL. URL of the backend website that the customer can access to manage the purchased product.
userName	No	String	128	Administrator account.
password	No	String	128	Initial password of the administrator.
memo	No	String	1,024	Remarks.

Example response:

```
{
  "resultCode": "000000",
  "resultMsg": "success.",
  "Info": [
    {
      "instanceId": "huaweitest123",
      "applInfo": {
        "frontEndUrl": "https://www.baidu.com",
        "userName": "zhangsan123",
        "password": "zhangsan123",
        "memo": "Test"
      }
    }
  ]
}
```

1.4.3 Updating an Instance

Description

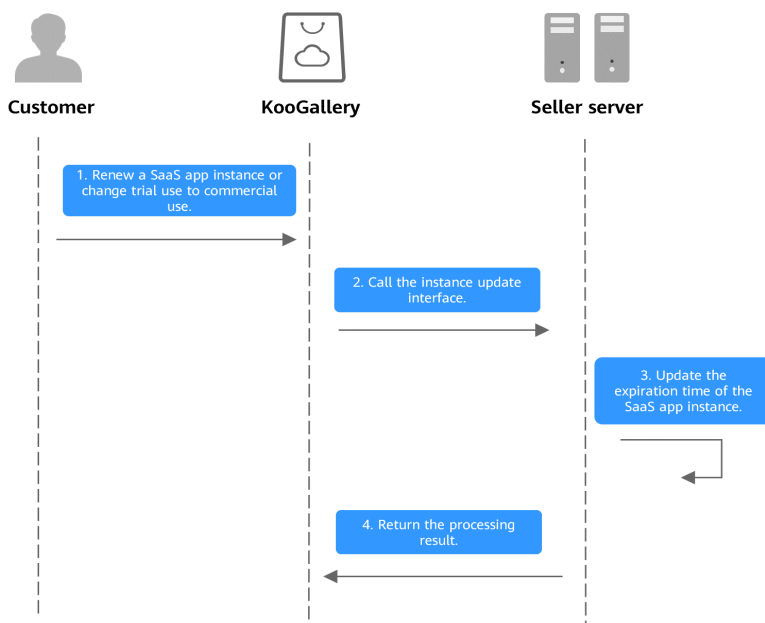
KooGallery calls this interface to update the expiration date of an instance after a customer purchases a product after trial use, renews the product, or cancels the renewal.

- When this interface is called, update the expiration date and return a notification to KooGallery.
- Ensure that this interface is normal. If the interface fails to be called, customer services may be released.

NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of updating an instance.

**Request Message**

The following table describes the request parameters.

Request method: POST

Body parameters

Parameter	Man dato ry	Type	Maxi mu m Leng th	Description
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For renewals, the value is refreshInstance .

Parameter	Mandatory	Type	Maximum Length	Description
scene	Yes	String	64	Scenario where the instance change is triggered. TRIAL_TO_FORMAL : trial use to commercial use. RENEWAL : renewal. UNSUBSCRIBE_RENEWAL_PERIOD : renewal cancellation. RENEWAL_CHANGE : change upon renewal.
orderId	Yes	String	64	KooGallery order ID. The commercial order ID is transferred when the customer purchases the product after trial use. The renewal order ID is transferred during renewal. The ID of the renewal order to be cancelled is transferred during renewal cancellation.
orderLineId	Yes	String	64	KooGallery order line ID.
instanceId	Yes	String	64	Instance ID.
productId	No	String	64	Product ID. If a customer renews a product and changes the billing cycle or a customer purchases a product after trial use, a new productId is provided.
expireTime	Yes	String	20	Expiration time. Format: yyyyMMddHHmmss
testFlag	No	String	2	Whether a request is submitted for debugging. 1: debugging request. - Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=3F6E6652B7BE26B27ABFC3D11214D04BFD8D2CF8AC21603D85620174FE8DE062&timestamp=1680509496350&nonce=8BF8496A350E37BD80E8956D39D433ED417C3FC9459DCFE7F03BFBF69B12085' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"refreshInstance","expireTime":"20221124023618256","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","orderId":"CS2211181819B4LVS","orderLineId":"CS2211181819B4LVS-000001","productId":"OFFI461867333479178240","scene":"RENEWAL","testFlag":"0"}'
```


The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 1.7 Result Codes .
resultMsg	No	String	255	Result message.

Example response:

```
{
  "resultCode":"000000",
  "resultMsg":"success."
}
```

1.4.4 Updating the Instance Status

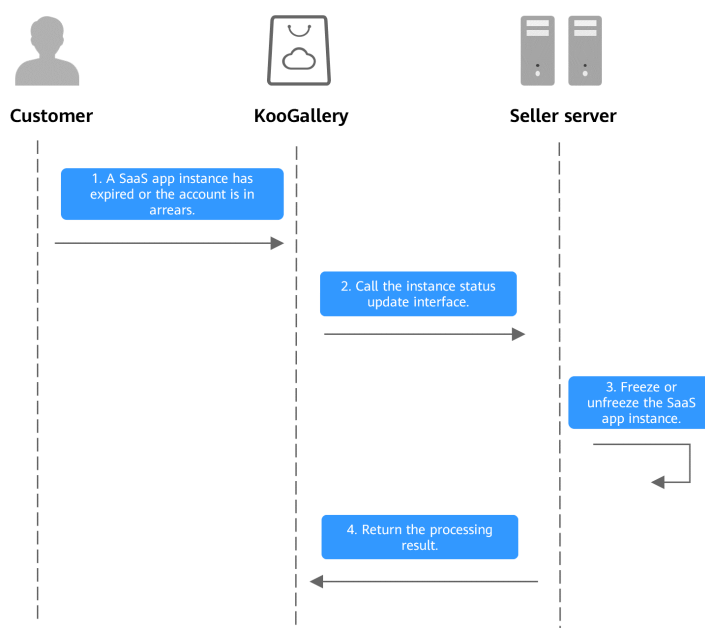
Description

After a customer purchases a yearly/monthly/daily product and the instance expires or the customer violates regulations, KooGallery calls this interface to freeze the instance.

NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of updating the instance status.



The following table describes the request parameters.

Request Message

Request method: POST

Body parameters

Parameter	Mandator y	Type	Maximum Length	Description
activity	Yes	String	32	Request ID, which is used to distinguish the scenario. For instance status updates, the value is updateInstanceSta-tus .
instanceId	Yes	String	64	Instance ID.
status	Yes	String	32	New status. ● FREEZE: frozen. ● UNFREEZE: unfrozen.
testFlag	No	String	2	Whether a request is submitted for debugging. ● 1: debugging request. ● Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=95DD9FA6A8C660C9C7F9CFDE97C42535290919BCA3F78B9A254428A692CDF26E&timestamp=1680509558159&nonce=9F26B85CAEB3A8439221BA293E9250BC5EA689225B523C291EA75CC76B469510' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"updateInstanceStatus","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","status":"FREEZE","testFlag":"1"}'
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 1.7 Result Codes .
resultMsg	No	String	255	Result message.

Example response:

```
{
  "resultCode": "000000",
  "resultMsg": "success."
}
```

1.4.5 Releasing an Instance

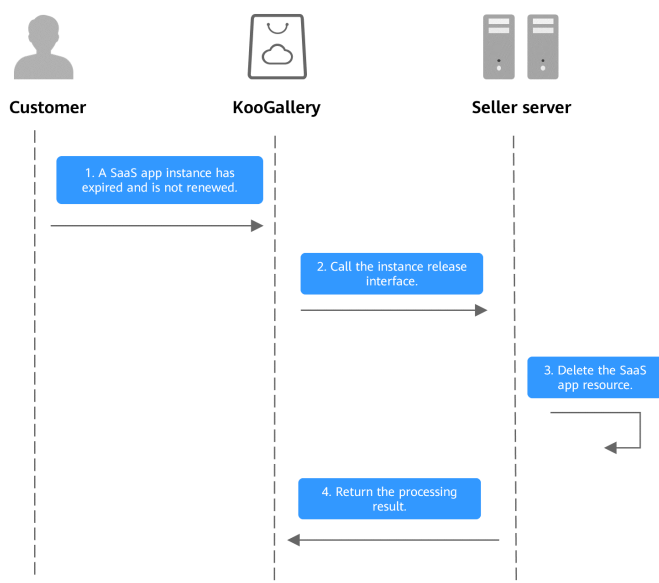
Description

When an instance of a purchased product is released (for example, the instance is not renewed upon expiration or unsubscribed from), KooGallery calls this interface to delete the instance.

NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of expiration.



Request Message

The following table describes the request parameters.

Request method: POST

Body parameters

Parameter	Mandator y	Type	Maximum Length	Description
activity	Yes	String	32	Request ID, which is used to distinguish the scenario. For expiration, the value is releaseInstance .
instanceId	Yes	String	64	Instance ID.
orderId	No	String	64	This parameter is required when an instance is released due to unsubscription.
orderLineId	No	String	64	KooGallery order line ID.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=C4E5F264C92F737DEBECB8D27D84684F38BF01D2917880202B59027CEEFC4932&timestamp=1680509885590&nonce=A49E8F86EE5BCAFBDFD3E53F1E09A29C6D9E8DACC67382EBCDD02CD55CBBB7AE' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"releaseInstance","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","orderId":"CS2211181819B4LVS","orderLineId":"CS2211181819B4LVS-000001","testFlag":"0"}'
```

Response Message

The following table describes the response parameters.

Parameter	Mandat ory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 1.7 Result Codes .
resultMsg	No	String	255	Result message.

NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

Example response:

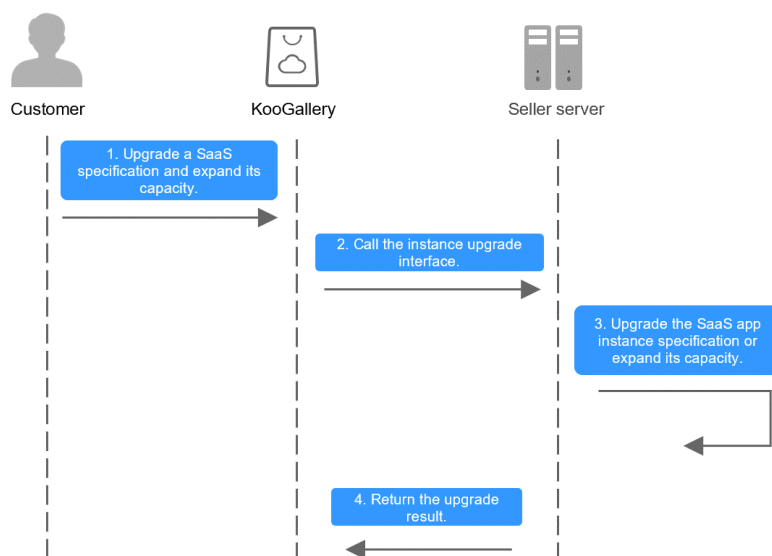
```
{
  "resultCode": "000000",
  "resultMsg": "success."
}
```

1.4.6 Upgrading an Instance

Description

A customer upgrades the specification of a purchased resource or expands its capacity. After the upgrade order is paid, KooGallery calls this interface to ask you to upgrade the resource and record the upgraded product data.

The following figure shows the process of upgrading a product.



Request Message

The following table describes the request parameters.

Request method: POST

Parameter	Mandatory	Type	Maximum Length	Description
activity	Yes	String	32	Request ID, which is used to distinguish the scenario. For upgrades, the value is upgradeInstance .
instanceId	Yes	String	64	Instance ID. NOTE The upgrade does not change instanceId .
orderId	Yes	String	64	Upgrade order ID. NOTE An order is generated for the upgrade.
orderLineId	Yes	String	64	KooGallery order line ID.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=9D49F9BF09D69F7A98B847978D6091A9ADF3B40E07AF95FEE9E5BEF5218DA407&timestamp=1680510876429&nonce=D8FE86FA6ABE90CA63A72B3256743D3D869648FE99A96354E635F032629F6C21' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"upgradeInstance","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","orderId":"CS2211181819B4LVS","orderLineId":"CS2211181819B4LVS-000001","testFlag":"0"}'
```

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 1.7 Result Codes .
resultMsg	No	String	255	Result message.

Example response:

```
{  "resultCode":"000000",  "resultMsg":"success."}
```

1.4.7 Verifying a Change upon Renewal

Description

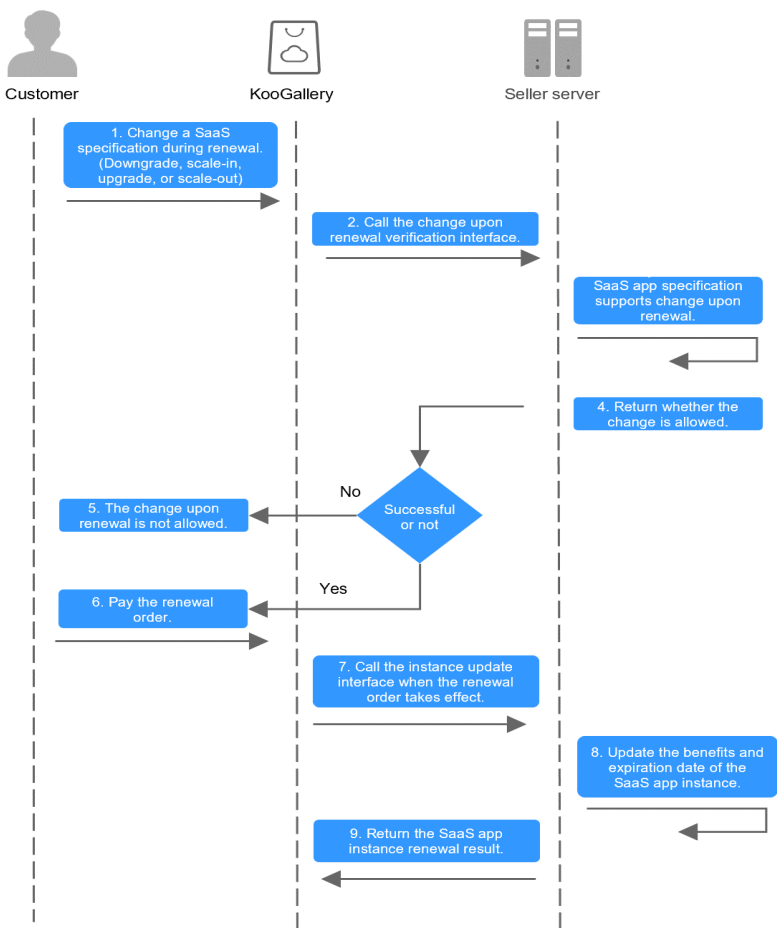
When a customer requests to upgrade or downgrade resource specifications or scale in or scale out resources during renewal, KooGallery calls this interface to check whether your server supports such changes.

Before downgrading specifications, verify resource usage. Ensure that it stays within the reduced quota to avoid data loss or service unavailability.

 NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of upgrading a product.



Request Message

The following table describes the request parameters.

Request method: POST

Body parameters

Parameter	Mandatory	Type	Maximum Length	Description
activity	Yes	String	32	Request ID, which is used to distinguish the scenario. For changes upon upgrade, the value is changeInstanceCheck .
instanceId	Yes	String	64	Instance ID.
productInfo	Yes	ProductInfo		Information about the target product.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • Not carried for non-debugging requests.

Example request:

```
curl -X POST 'https://www.isvwebsite.com/saasproduce?signature=9D49F9BF09D69F7A98B847978D6091A9ADF3B40E07AF95FEE9E5BEF5218DA407&timestamp=1680510876429&nonce=D8FE86FA6ABE90CA63A72B3256743D3D869648FE99A96354E635F032629F6C21' -H 'Accept:application/json' -H 'Content-Type:application/json;charset=utf8' -d '{"activity":"upgradeInstance","instanceId":"10e758d0-31ad-4c4b-8f1b-81d03469a10e","orderId":"CS2211181819B4LVS","orderLineId":"CS2211181819B4LVS-000001","testFlag":"1"}'
```

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see Result Codes .
resultMsg	No	String	255	Result message.

Example response:

```
{  "resultCode":"000000",  "resultMsg":"success"}
```


1.5 Interface Debugging

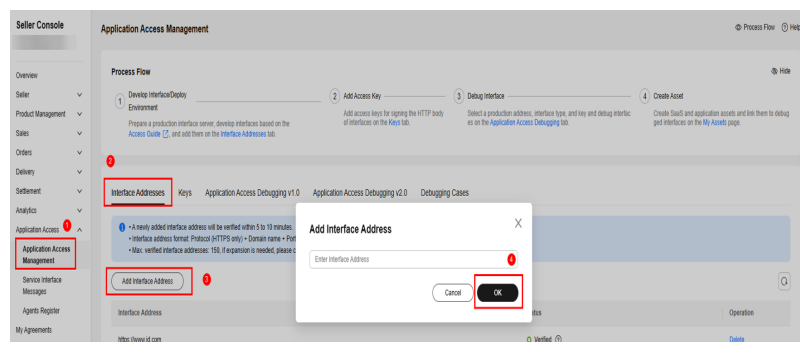
To ensure that SaaS products can be accessed, KooGallery provides a debugging page on the Seller Console. You can debug SaaS interfaces in each scenario.

The following uses the interface for creating an instance as an example.

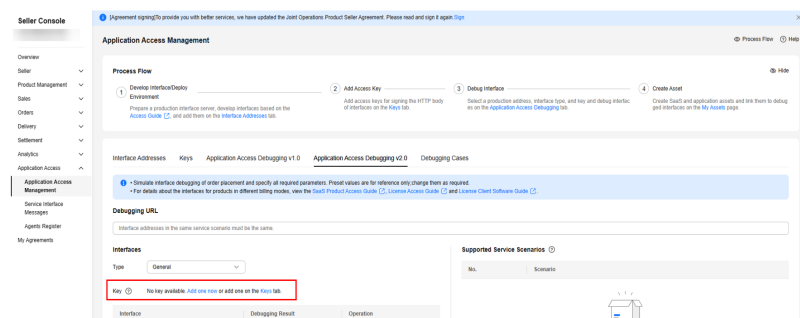
Procedure

- Step 1** Choose **Application Access > Application Access Management** in the navigation pane of the **Seller Console**, click the **Interface Addresses** tab, add an interface address, and complete the verification.

Enter the domain name as the production address, without the path. Example: <https://console.huaweicloud.com>



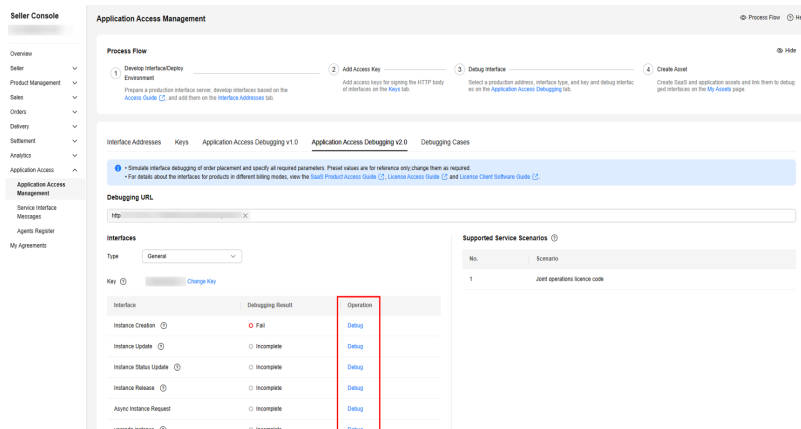
- Step 2** Bind the verified interface address to the key. For details about how to obtain the key, see [1.3.1 Obtaining an Access Key \(Key ID\)](#).



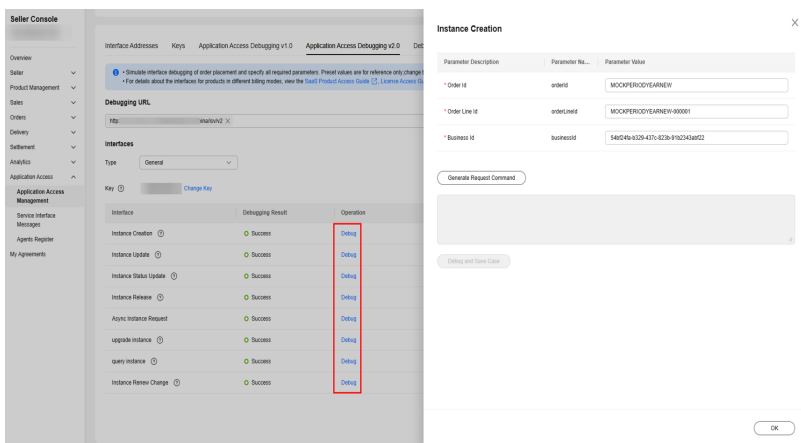
NOTE

A key is bound to an interface type. Do not change the key after binding. Changing it affects released SaaS, causing dialing test failures, order failures, and unsubscribing.

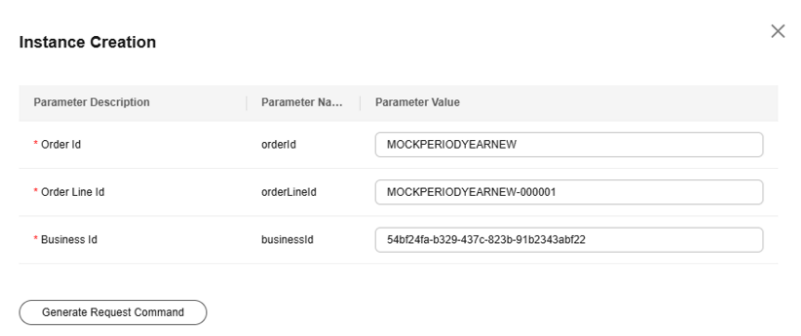
- Step 3** Enter the verified interface address and path, for example, <https://console.huaweicloud.com/test/test1>.



Step 4 Click **Debug** to debug an interface using parameters preset in your system based on the request parameter description of the interface.



Step 5 On the displayed page, enter values of preset parameters and click **Generate Request Command** to generate a request example.



Step 6 Click **Debug and Save Case**. The system calls the interface address to test the interface. If the test is successful, the system displays a message indicating debugging is successful and the case is saved. If the test fails, the error message is displayed in the lower part of the page. You can modify the interface based on the error message.

Instance Creation

Parameter Description	Parameter Na...	Parameter Value
* Order Id	orderId	MOCKPERIODYEARNEW
* Order Line Id	orderLineId	MOCKPERIODYEARNEW-000001
* Business Id	businessId	54b24fa-b329-437c-823b-91b2343abf22

Generate Request Command

```
curl -X POST 'https://api.huaweicloud.com/v2.0/china/sse/h2?signature=00EA43ACCA098C059C5721C44FDA684036ED97F496915E4D14D77467A163666E&timestamp=1758537035888&nonce=qGatUJEVkpGk9lk2ogePLADZPRhx7Cqg'-H 'Accept:application/json'-H 'Content-Type:application/json;charset=utf-8'-d '{"activity":"new/instance","businessId":"54b24fa-b329-437c-823b-91b2343abf22","orderId":"MOCKPERIODYEARNEW","orderLineId":"MOCKPERIODYEARNEW-000001","testFlag":"1"}'
```

Debug and Save Case

Interface debugged and case saved!

Debugged interfaces of this production link: Instance Creation

View and manage saved cases on the [Case Management](#) page.

Step 7 When the debugging is successful, choose **Application Access > Application Access Management** in the navigation pane, click the **Debugging Cases** tab, and view the test case.

Seller Console

Overview

Seller

Product Management

Sales

Orders

Delivery

Settlement

Analytics

Application Access

Application Access Management

Service Interface Manager

Agents Register

My Agreements

Interface Addresses

Keys

Application Access Debugging v1.0

Application Access Debugging v2.0

Debugging Cases

Debug 1.0 Scenario

Common Interface

Joint Operations SaaS Interfaces

All

Interface Address

Enter a URL

Interface Address (URL)	Interface Classification	Type	Case	Product Name	Updated	Latest Automated Test Res...	Operation
	Common Products	Initial subscription Yearly/Mo...	["name":"acceptanceTest"]...		Sep 22, 2025 11:46:00 GMT...	Successful	Debug
	Common Products	Renewal	["name":"activity","value":"re...		Sep 22, 2025 11:46:00 GMT...	Successful	Debug
	Common Products	Expiration	["name":"activity","value":"e...		Sep 22, 2025 11:46:00 GMT...	Successful	Debug
	Common Products	Upgrade	["name":"activity","value":"u...		Sep 22, 2025 11:46:00 GMT...	Successful	Debug
	Common Products	Deletion	["name":"activity","value":"d...		Sep 22, 2025 11:46:00 GMT...	Successful	Debug
	Common Products	Renewal	["name":"activity","value":"re...		Sep 22, 2025 09:42:52 GMT...	Successful	Debug
	Common Products	Deletion	["name":"activity","value":"d...		Sep 22, 2025 09:42:52 GMT...	Successful	Debug
	Common Products	Expiration	["name":"activity","value":"e...		Sep 22, 2025 09:42:52 GMT...	Successful	Debug
	Common Products	Initial subscription Yearly/Mo...	["name":"activity","value":"i...		Sep 22, 2025 09:42:52 GMT...	Successful	Debug
	Common Products	Initial subscription Pay-as-you...	["name":"activity","value":"i...		Sep 22, 2025 09:08:03 GMT...	Successful	Debug

Total Records: 14

15 < 1 2 3 4 5 6 7 >

----End

1.6 Managing SaaS Assets

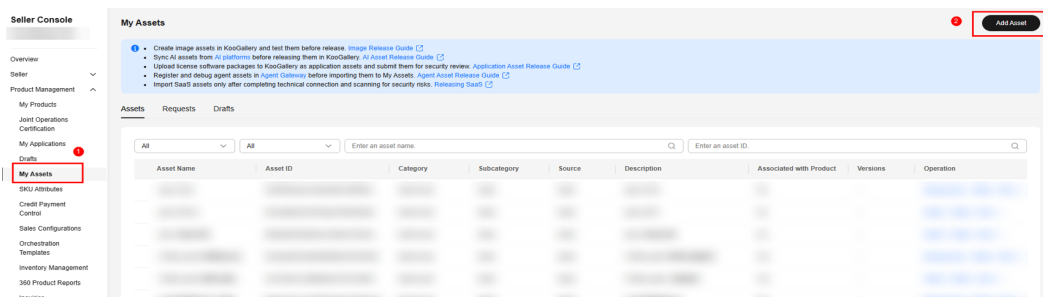
KooGallery provides a unified asset management center for you to add, modify, delete, and perform other operations on assets.

SaaS assets you added will be used for subsequent commercial SaaS release. Before releasing SaaS assets, ensure that you have developed and debugged related interfaces and that your SaaS websites (including the service frontend and management backend portal) do not have **high-risk vulnerabilities** such as XSS, SQL injection, CSRF, XXE injection, OS injection, cross-directory access, file upload vulnerabilities, sensitive information leakage, URL redirection leakage, TLS configuration defects, and web page Trojan horses.

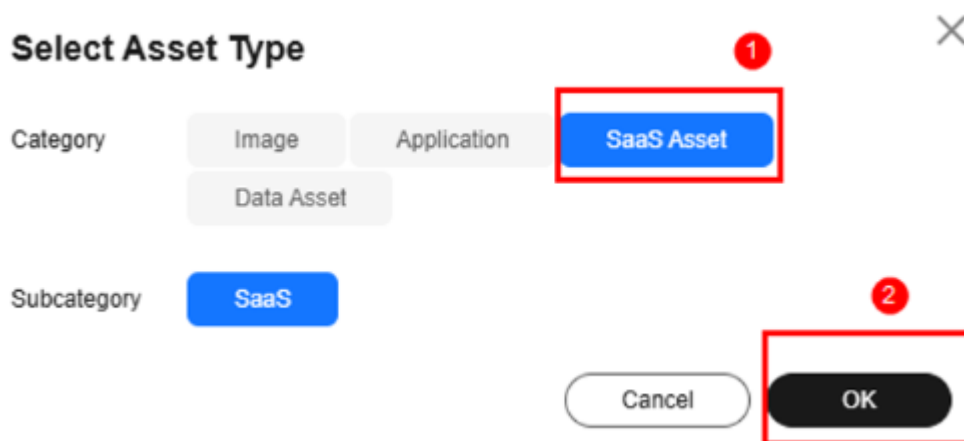
Adding a SaaS Asset

Step 1 Go to the [Seller Console](#).

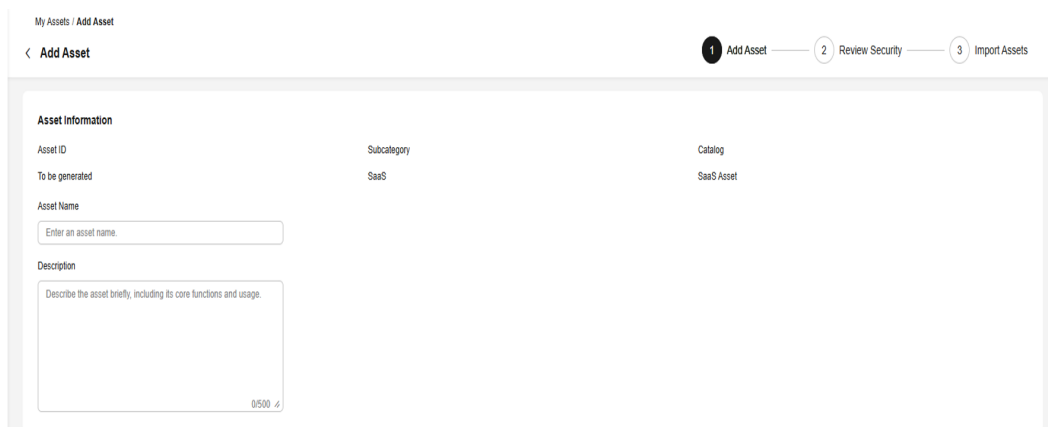
Step 2 In the navigation pane, choose **Product Management > My Assets**. On the displayed page, click **Add Asset** in the upper right corner.



Step 3 In the **Select Asset Type** dialog box, set **Category** to **SaaS Asset** and click **OK**.

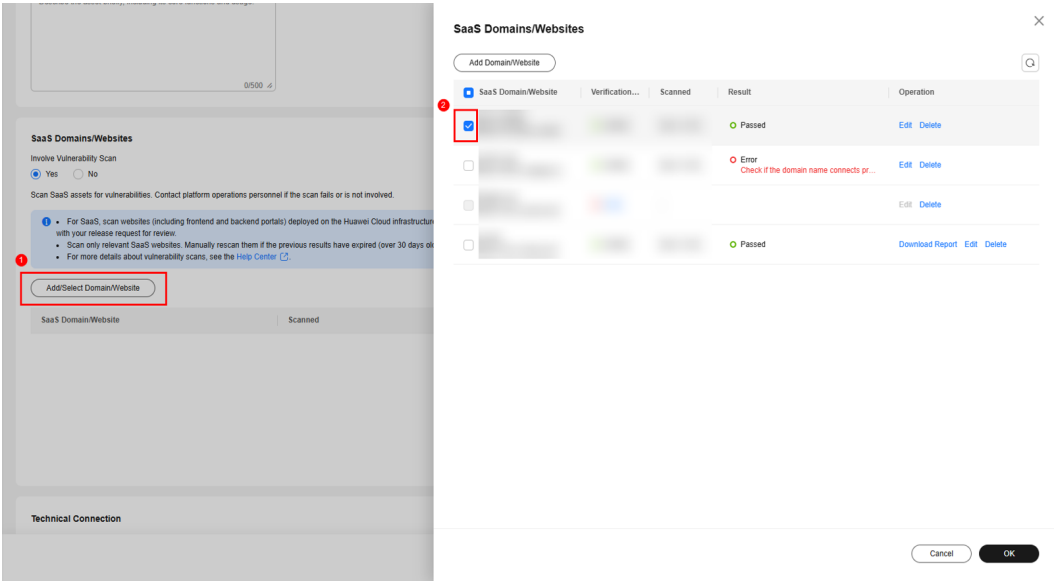


Step 4 Enter the asset information. It is recommended that the asset name be the same as the software name.

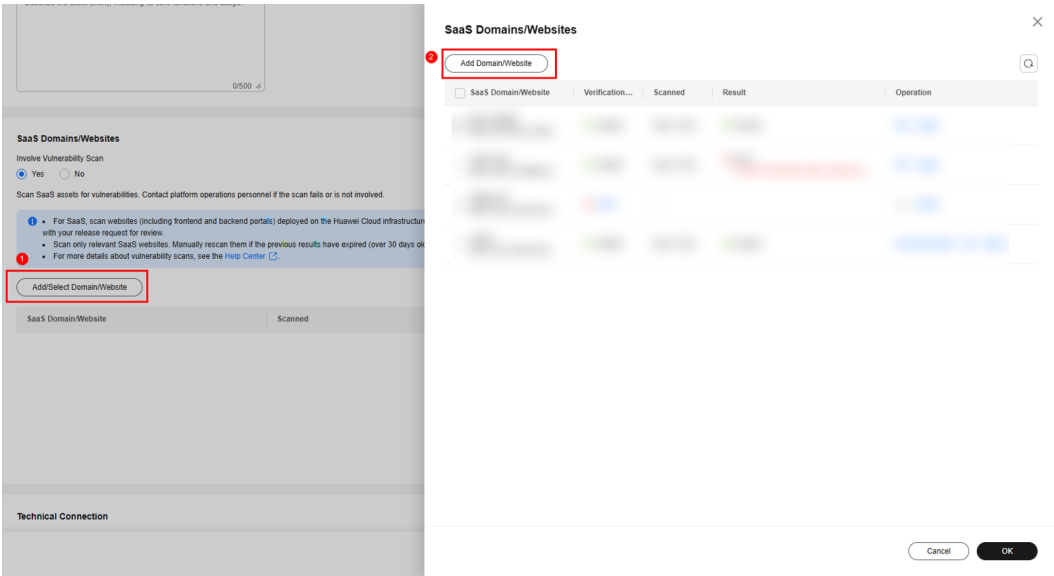


Step 5 Add a SaaS domain name or website.

- Select the SaaS domain name that has passed the security scan.



- If a domain name of SaaS to release has passed the security scan, perform the following steps:
 1. Click **Add Domain/Website**.



2. Enter basic details and click **Next**.

Add Domain/Website ×

1 Add Domain/Website — 2 Verify Domain Ownership — 3 Configure Website

Domain/Website Name

Domain Name

Add an Internet-accessible domain name that has passed verification on the [Interface Addresses](#) page.

3. Verify the domain name ownership, select **I have read and agree to the HUAWEI CLOUD Vulnerability Scan Service Agreement**, and click **Verify**.

Verify Domain ×

✓ Add Domain/Website — 2 Verify Domain Ownership — 3 Configure Website

1 Procedure

1. Download the verification file to a local directory.
2. Upload the verification file to the root directory of the website. Do not modify the file name or content.
3. Verify whether the file can be [accessed over public networks](#). [↗](#)
4. Click Verify to verify the domain.

☐ have read and agree to the HUAWEI CLOUD Vulnerability Scan Service Agreement.

 CAUTION

- The scanned SaaS domain name should match the one requested by customers.
- Do not modify the content of the downloaded verification file. Save the file to the root directory of the domain name or website.

4. Enter the website settings, select a login mode (username/password or cookies), and click **Confirm**.

Edit

Basic Info

If the website has webpages that can only be accessed after login, configure the following login methods so that the scan tool can help you detect more security issues.

Login Info

Login method 1: Username and password

Login Address

Username

Password

Confirm Password

Login method 2: Cookies

Cookie Value

Obtain Cookies

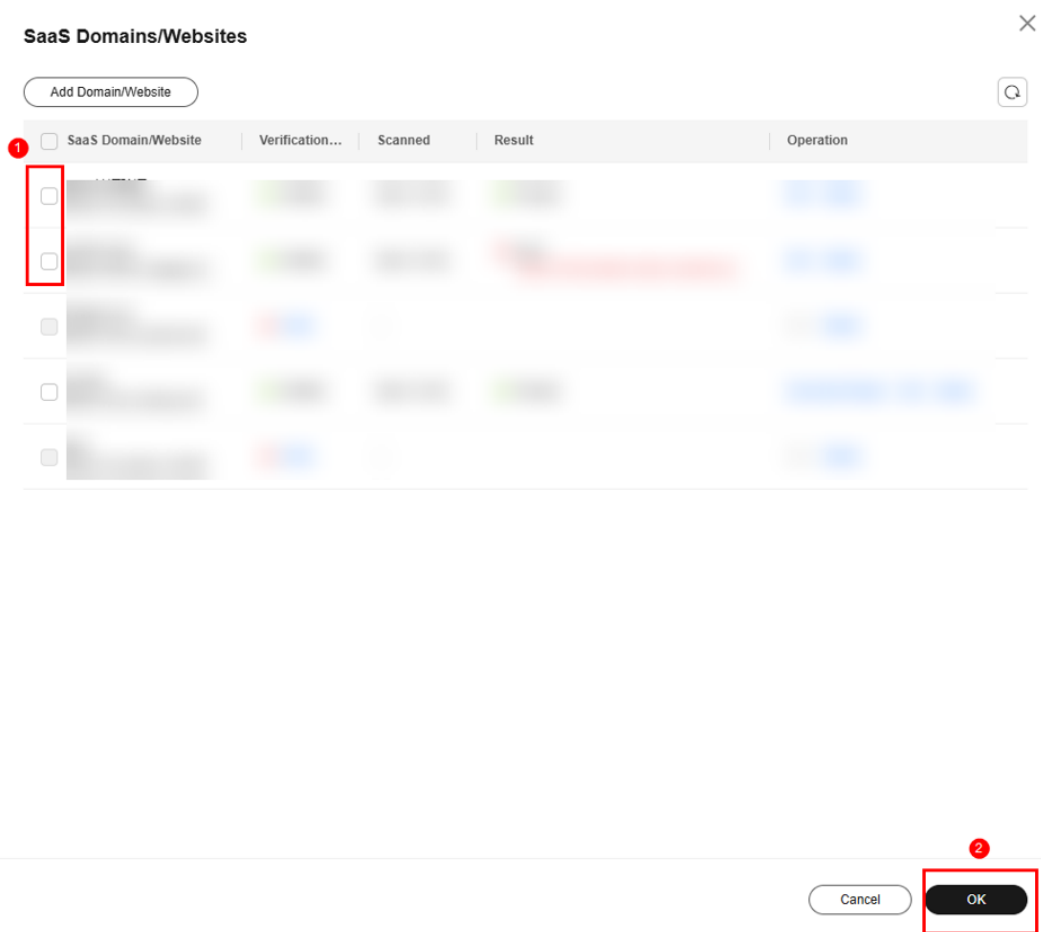
Webpage for Verification ?

Webpage Address

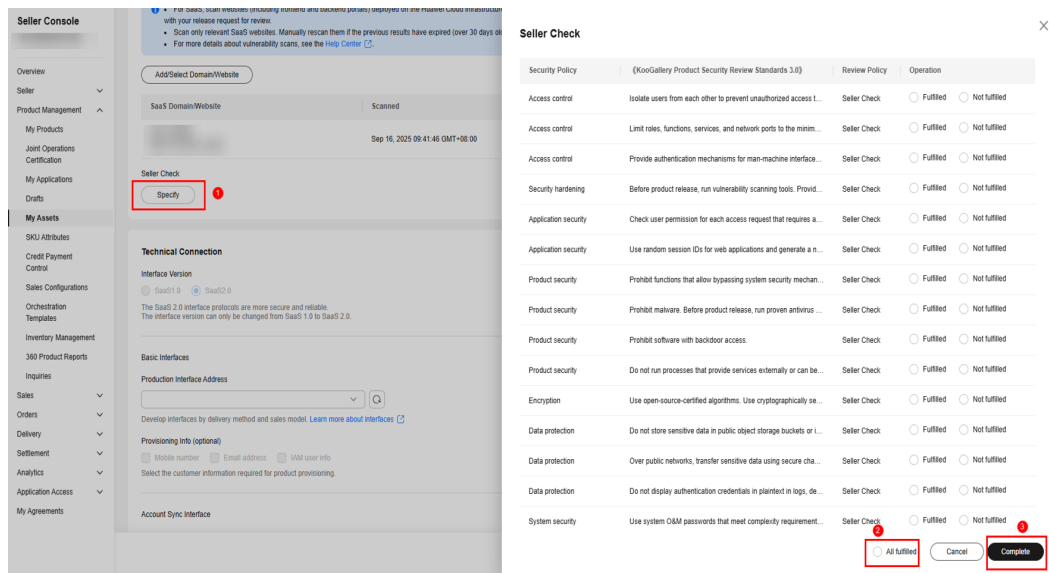
Cancel

Confirm

5. After the SaaS domain name is added, select it.



6. Perform self-check and click **Complete**.



Step 6 Add technical connection information. If no interface address is available, develop interfaces by referring to [SaaS Access Guide V2.0 \(New Products\)](#).

- Basic interfaces: required for both common and joint operations products.

Basic Interfaces

Production Interface Address

http:

Develop interfaces by delivery method and sales model. [Learn more about interfaces](#)

Debug interfaces before releasing SaaS. [Debug Now](#) [Help Documentation](#) [Case Management](#)

Interface	Debugging Result	Description
Instance Creation	Success	After a customer pays for a product, KooGallery calls this interface to ask you to create an instance.
Instance Update	Success	After a customer purchases a yearly/monthly product after trial use, renews it, or cancels a renewal, KooGallery calls this interface to update the instance expiration date.
Instance Status Update	Success	When a yearly/monthly subscription ends or has violations, KooGallery calls this interface to freeze the instance.
Instance Release	Success	When a product instance is released (for example, the instance is not renewed upon expiration or unsubscribed from), KooGallery calls this interface to delete the instance.
upgrade instance	Success	Once a customer pays for a product upgrade, KooGallery calls this interface to ask you to upgrade the specifications and record the upgraded product data.
query instance	Success	After you create an instance, KooGallery queries the instance info using the instance ID.
Instance Renew Change	Success	When a customer requests to upgrade or downgrade resource specifications during renewal, KooGallery calls this interface to check whether your server supports such changes.

- **Extension Parameters (optional):** Customers need to specify them when placing an order. Select parameters as required.

Extension Parameters (optional)

Add

Select the extended parameters that customers need to specify when they place an order.

Parameter Description	Parameter Name	Message	Operation
		Note or tips of no more than 128 characters to be displayed in the text box for parameter setting.	Delete

- **Provisioning Info (optional):** Select the sensitive customer information (mobile number, email address, or Huawei Cloud IAM user name) required for SaaS interfaces to enable the product.

Provisioning Info (optional)

☒ Mobile number ☒ Email address ☐ IAM user info

Select the customer information required for product provisioning.



WARNING

From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.

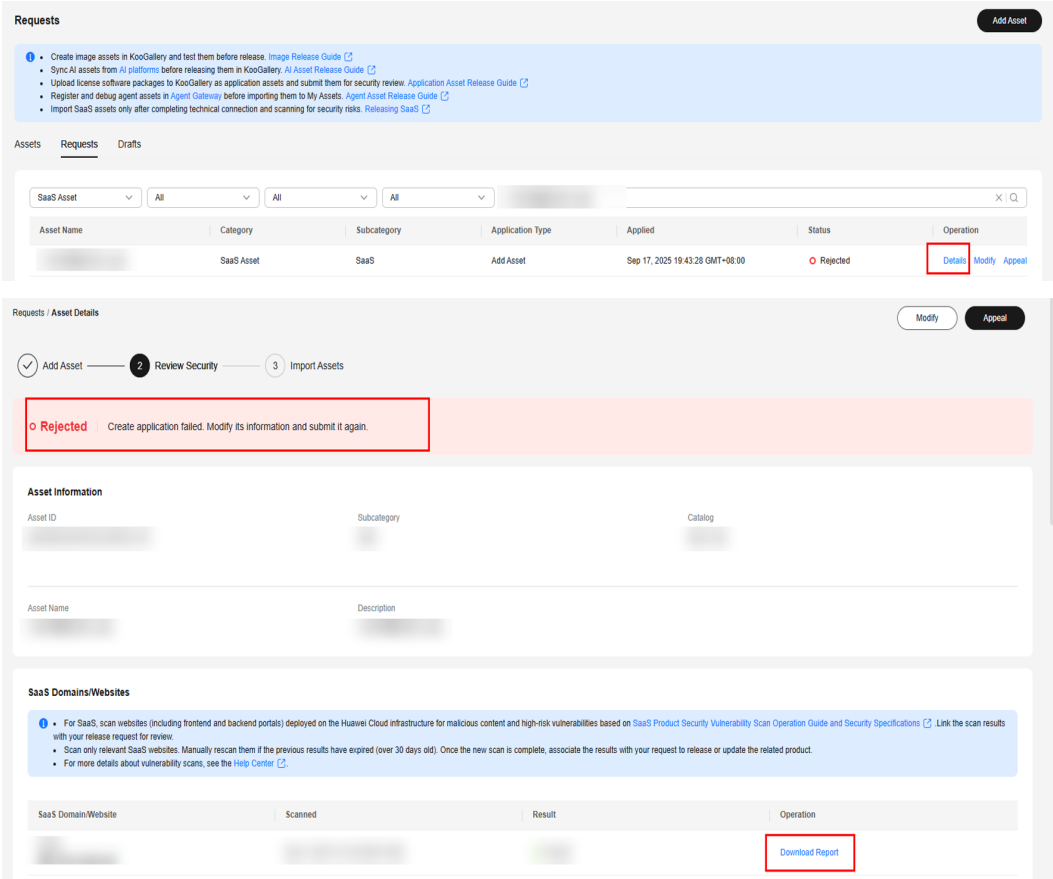
Step 7 Click **Submit for Review**. After the asset is submitted, you can [check the asset review status](#).

----End

Checking the Asset Review Status

You can check the review status on the **Requests** tab under **Product Management > My Assets**.

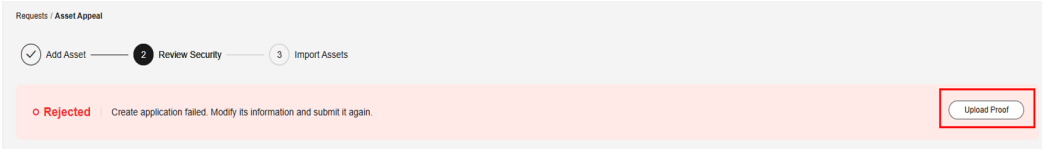
- **Approved:** You can [release the asset as a SaaS product](#).
- **Scanning:** Wait for the system to check whether it complies with [KooGallery Product Security Review Standards 3.0](#). If you have any questions, submit a service ticket to contact the customer service.
- **Rejected:** Click **Details**. On the asset details page, scroll down to **SaaS Domains/Websites** and click the security scan report to download and view it.



- If the security issues have been rectified, click **Modify**, and submit the modified asset for review again.
- If there are false positives, click **Appeal** to file an appeal.
 - i. Enter the false positive conclusion in columns F, G, and H in the downloaded *Security Scanning Report* and save it.

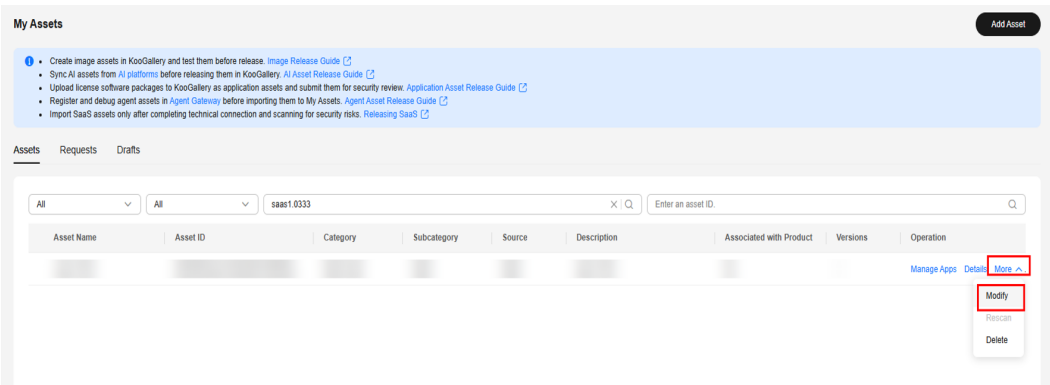
A	B	C	D	E	F	G	H	I	J
Number	Type	Detection Item	Cause of Failure	The Solution	Misreport (Filed by Merchant)	Vulnerability Analysis (Filed by Merchant)	Evidence Screenshot or Link (Filed by Merchant)	First Manager Evaluation (Decision Filed by Huawei)	Remarks (Filed by Huawei)
1	Open-source software vulnerabilities	apache zookeeper	Component version:3.6.2 File name:zookeeper-jute-3.6.2.jar File path: C2004ea075a44a92c0d9ab63875 624-csp-VIS/zookeeper-jute- 3.6.2.jar Vulnerability Name:CVE-2021- 32185 Vulnerability severity:High	You can search for the solution at the following website by vulnerability name: https://menc.info/ https://bugzilla.redhat.com/ https://security.snyk.io/	Misreport				
2	Open-source software vulnerabilities	apache zookeeper	Component version:3.6.2 File name:zookeeper-jute-3.6.2.jar File path: C2004ea075a44a92c0d9ab63875 624-csp-VIS/zookeeper-jute- 3.6.2.jar Vulnerability Name:CVE-2023- 44891 Vulnerability severity:Critical	You can search for the solution at the following website by vulnerability name: https://menc.info/ https://bugzilla.redhat.com/ https://security.snyk.io/	Misreport				

- ii. Click **Upload Proof**, upload the saved file, and click **Submit** in the lower right corner. The asset status changes to **Reviewing**. KooGallery will review the asset within three working days.

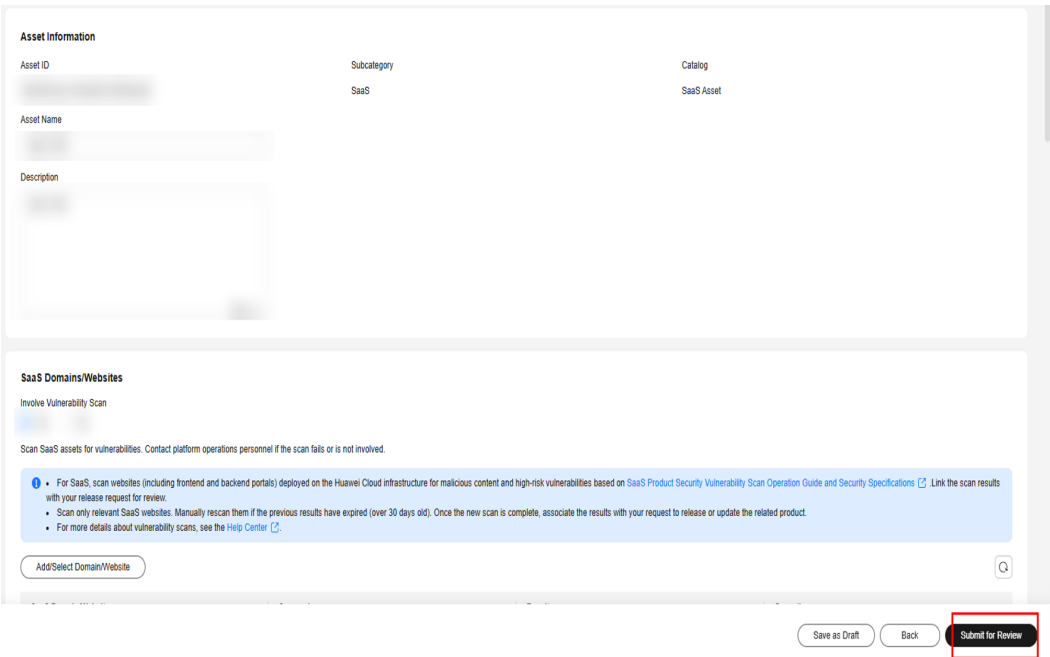


Modifying an Asset

Step 1 On the **Assets > My Assets** tab, search for the target asset and choose **More > Modify** in the **Operation** column.

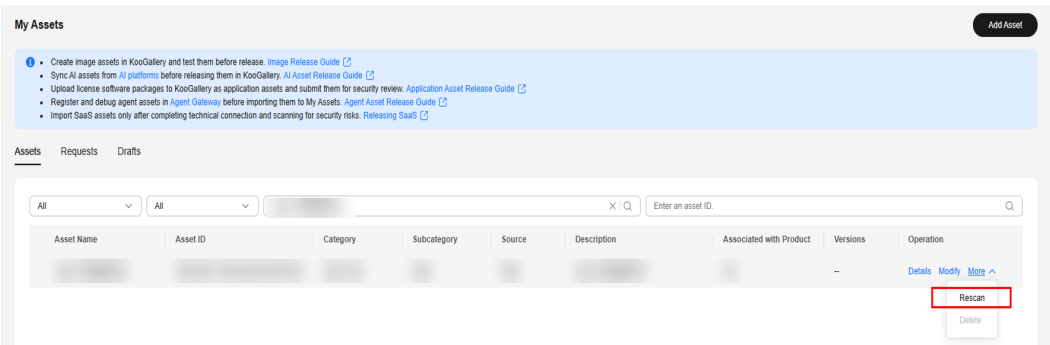


Step 2 On the **Modify Asset** page, select the information to be changed and click **Submit for Review**.



CAUTION

The scan results of a SaaS asset are valid only for 30 days. If they expire, you need to rescan the asset.

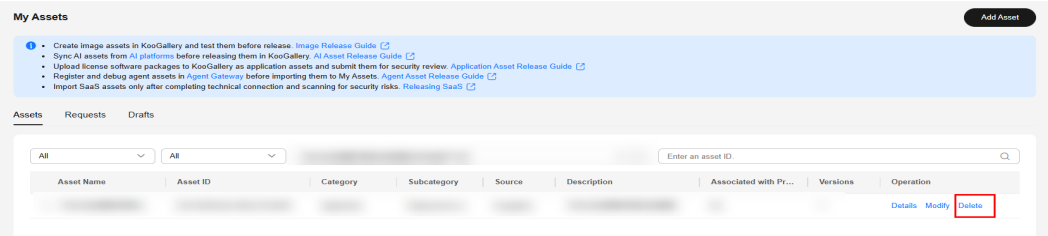


----End

Deleting an Asset

You can delete assets that are not associated with products and those in the draft box.

On the **Assets** page, click **Delete** in the **Operation** column of the asset to be deleted and confirm the deletion.



1.7 Result Codes

Module	Result Code	Description
Common	000000	Succeeded.
	000001	Authentication failed.
	000002	Invalid request parameter.
	000003	The instance ID does not exist. (This result code may be returned when the renewal, expiration, or resource release interface is called.)
	000004	The request is being processed.
	000005	Other internal errors.
Instance creation	000100	No instance resource can be allocated.
	000101	Mobile number not specified or already exists.
	000102	Email address not specified or already exists.
	000103	Product already purchased.
	000104	Internal service error.
	000105	Account has already subscribed to benefits.
	000106	Product resources sold out.
	000107	SaaS email domain already exists.

1.8 FAQ

1. Why is the following error message displayed when I debug an interface?
Call interface failed. The production interface returns an error result code.

By default, **resultCode=000000** indicates a successful call. Other codes indicate a failure. For details about error codes, see [Result Codes](#).

2. Why is the following error message displayed when I debug an interface?
Debugging failed. The interface response does not contain *{field}*.

KooGallery verifies whether a response contains these mandatory fields:

- Interface for subscribing to a product: **instanceId** and **frontEndUrl**
- Interface for querying instance information: **instanceId**. If it returns **UsageInfo**, it must also return **usageValue** and **statisticalTime**.

3. Why is the following error message displayed when I debug an interface?
Debugging failed. Parse response body failed. Example response:
`{"resultCode":"000000","resultMsg":"success."}`

KooGallery fails to parse the response. The interface does not return **resultCode** and **resultMsg**.

4. Why is the following error message displayed when I debug an interface?
Debugging fails. Invalid content-type format. Returned format: *{contentType}*. Valid format:
"application/json"

The value of **content-type** in the response must be "**application/json**". Otherwise, KooGallery will fail to parse the response body.

5. Why is the following error message displayed when I debug an interface?
Debugging failed. The production address is unreachable.

- Check whether the production address is available.
- Check whether the production address can be accessed from the Internet.
- Check whether the access is intercepted by the gateway.

6. Why is the following error message displayed when I debug an interface?
Debugging failed. Interface calling timed out for 20s.

The default timeout interval for KooGallery to call your interfaces is 20s. Calls that take longer than 20s will fail.

View logs and check whether the request reached the server. If it did, check whether the response time exceeds 20s. If it did not reach the server, contact after-sales engineers.

7. Why is the following error message displayed when I debug an interface?
Debugging failed. The interface responds with `httpCode={httpCode}`. Check server logs to locate the failure cause.

By default, **httpCode=200** indicates a successful call. Other codes indicate a failure.

8. Can KooGallery Provide the IP Address of the Forward Proxy Server So That I Can Create an Access Whitelist?

KooGallery uses dynamic IP addresses for external access, so no specific one can be provided.

1.9 KooGallery Open APIs

1.9.1 Using APIs

1.9.1.1 Usage

Huawei Cloud provides RESTful APIs.

REST allocates Uniform Resource Identifiers (URIs) to dispersed resources so the resources can be located. Applications on clients use unified resource locators (URLs) to access the resources.

A URL is in the format of `https://Endpoint/uri`.

Table 1-1 describes the parameters in a URL.

Table 1-1 URL parameters

Parameter	Description
Endpoint	Entry (URL) for a web service. The KooGallery endpoint is mkt-intl.myhuaweicloud.com .
uri	Resource path, that is, the API access path. Obtain this value from the URI of the API, for example, v1.0/{partner_id}/billing/bill-mgr/push-usage-data . For the user ID parameter in the URI: partner_id is used, indicating that the API can be called only using the AK/SK or token of a partner (seller).

Huawei Cloud APIs use the HTTP transmission protocol and have the following restrictions:

1. Request and response messages are encoded using UTF-8 and in the JSON format.
2. The media type is Application/json.
3. Optional parameters do not need to be encoded in message bodies.
4. UTC time (including the time zone) is used in requests and responses. The format is `yyyyMMdd'T'HHmmss'Z'`.
HH ranges from 0 to 23, and *mm* and *ss* range from 0 to 59.

1.9.1.2 Calling

1. Obtain an AK/SK for authentication.

Request authentication is required for calling an API. After successful authentication, the authentication field is filled into the next method to request for message construction.

AK/SK authentication is used for calling APIs.

AK/SK authentication: Requests are encrypted using AK/SK pairs.

When you send requests to underlying services through API Gateway (APIG), the requests must be signed using access key ID (AK) and secret access key (SK).

- AK: access key ID, which is a unique identifier used with a secret access key to sign requests cryptographically.
- SK: secret access key. It is used together with an access key ID to identify a sender who initiates a request and to cryptographically sign requests, preventing the request from being modified.

 NOTE

- For details about how to obtain SDKs, see [Calling APIs Through App Authentication](#).
 - You can obtain an AK/SK on the [Access Keys](#) page.
2. Construct a request.
Configure the request parameters to construct a request.
 3. Initiate the request.
 4. Parse a response.

1.9.1.3 AK/SK Authentication

Generating an AK and SK

1. Register with Huawei Cloud and log in to the management console.
2. Click the username and choose **My Credentials** from the drop-down list.
3. In the navigation pane, choose **Access Keys**.
4. Click **Create Access Key**.
5. Enter the SMS or email verification code and click **OK** to download the access key. Keep the access key secure.

Signing a Request

API requests sent by third-party applications to Huawei Cloud must be authenticated using signatures.

Preparation

1. [Download the APIG signing tool](#) and decompress it.
2. Create a Java project and reference the decompressed JAR file to the dependency path.

Procedure

1. Create a **com.cloud.sdk.DefaultRequest (JAVA)** request used for signing.
2. Set the destination API URL, HTTPS method, and content of **DefaultRequest**.
3. Sign **DefaultRequest**.
 - a. Call **SignerFactory.getSigner(String serviceName, String regionName)** to obtain a signature tool instance.
 - b. Call **Signer.sign(Request<?> request, Credentials credentials)** to sign the request created in step 1.

The following code shows the details.

```
// Select the signing algorithm for signing the request.  
Signer signer = SignerFactory.getSigner(serviceName, region);  
// Sign the request. The request will change after being signed.  
signer.sign(request, new BasicCredentials(this.ak, this.sk));
```

4. Convert the request signed in the previous step to one that can be used to make an API call and copy the header of the signed request to the new request.

5. For example, for Apache HttpClient, convert **DefaultRequest** into **HttpRequestBase** and copy the header of the signed **DefaultRequest** to **HttpRequestBase**.

1.9.1.4 Constructing a Request

A request consists of three parts: a request line, request header, and request body (optional).

Request Line

A request line starts with the request method, which is followed by the uniform resource identifier (URI) and protocol version. The request method and URI are separated by a space. The request line format is as follows:

Method Request-URI HTTP-Version CRLF

- **Method:** request method. All methods are capitalized and their meanings are as follows:
 - GET: obtains the resource identified by the Request-URI.
 - POST: suffixes new data to the resource identified by the Request-URI.
 - PUT: stores a resource identified by the Request-URI.
 - DELETE: deletes the resource identified by Request-URI.
- **Request-URI:** uniform resource identifier.

NOTE

A combination of different query conditions can be added at the end of the URI by using question marks (?) and ampersands (&). The content contained in {} in the URI is the parameters of the URI, where ? is contained. The part preceding ? is the path parameter, and the part following ? is the query parameter. **HTTP-Version:** version of the HTTP protocol used by a request.

- **CRLF:** carriage return and line feed characters. CRLF is placed only at the end of a line. CR and LF must be present at the same time.

Request Header

A request header consists of several fields, each including a domain name, colon (:), and field value. For details, see [1.9.2.1 Common Request Header Fields](#).

Request Body

A request body is a JSON-based, nested *key:value* pair. The mandatory and optional fields of an HTTP request body vary depending on the URI.

1.9.1.5 Initiating a Request

You can initiate a request using the constructed request message in either of the following ways:

- cURL
cURL is a command-line tool used to perform URL operations and transmit information. It serves as an HTTP client that can send HTTP requests to the

server and receive response messages. cURL is used for API debugging. For more information about cURL, visit <https://curl.haxx.se/>.

- Encoding

You can call APIs using code to assemble, send, and process request messages.

1.9.1.6 Parsing a Response

After receiving and interpreting a request message, the server returns an HTTP response message.

A response consists of three parts: status line, response header, and response body.

Status Line

The format of the status line is as follows:

HTTP-Version Status-Code Reason-Phrase CRLF

- **HTTP-Version:** version of the HTTP protocol used by the server.
- **Status-Code:** status code in the response returned by the server.

A status code consists of three digits. The first digit defines the class of response. There are five values for the first digit:

- **1xx:** informational. The request was received, continuing process.
- **2xx:** successful. The request was successfully received, understood, and accepted.
- **3xx:** redirection. Further action needs to be taken to complete the request.
- **4xx:** client error. The request contains bad syntax or cannot be fulfilled.
- **5xx:** server error. The server failed to fulfill an apparently valid request.

- **Reason-Phrase:** text description of a status code.

Response Header

A response header usually contains the response headers listed in [1.9.1.7 Status Codes](#).

Response Body

The response body is in JSON format.

1.9.1.7 Status Codes

The following table lists HTTP response status codes.

Table 1-2 HTTP response status codes

Status Code	Message	Description
100	Continue	Continue sending requests. This temporary response is used to inform the client that some requests have been received and not rejected by the server.
101	Switching Protocols	The protocol is switched. The target protocol must be more advanced than the original one. For example, the protocol in use is switched to a later version of HTTP.
201	Created	The request for creating resources has been fulfilled.
202	Accepted	The request has been accepted for processing, but the processing has not been completed.
203	Non-Authoritative Information	The request was successful but the response has been modified by a transforming proxy.
204	No Content	The request has been fulfilled, but the HTTP response does not contain a response body. The status code is returned in response to an HTTP OPTIONS request.
205	Reset Content	The server has fulfilled the request and requires the client to reset the content.
206	Partial Content	The server has fulfilled a range GET request.
300	Multiple Choices	There are multiple options for the requested resource. The response contains a list of resource characteristics and addresses from which the user or user agent (such as a browser) can choose the most appropriate one.
301	Moved Permanently	The requested resource has been assigned with a new permanent URI. This new URI is contained in the response.
302	Found	The requested resource resides temporarily under a different URI.
303	See Other	The server is redirecting the client to a different address. The client should use a GET or POST method to obtain the resource.
304	Not Modified	The requested resource has not been modified. When the server returns this status code, no resource is returned.

Status Code	Message	Description
305	Use Proxy	The requested resource is available only through a proxy.
306	Unused	This HTTP status code is no longer used.
400	Bad Request	Invalid request. The client should not repeat this request without modification.
401	Unauthorized	The authentication information provided by the client is incorrect or invalid.
402	Payment Required	This status code is reserved for future use.
403	Forbidden	The request has been rejected. The server received and understood the request but refused to fulfill it, because the request is set to deny access. The client should not repeat this request without modification.
404	Not Found	The requested resource could not be found. The client should not repeat this request without modification.
405	Method Not Allowed	The method specified in the request is not allowed for the requested resource. The client should not repeat this request without modification.
406	Not Acceptable	The server cannot implement the request based on the content characteristics of the request.
407	Proxy Authentication Required	This status code is similar to 401, but the client must be authenticated using a proxy.
408	Request Time-out	The client does not produce a request within the time that the server was prepared to wait. The client may repeat the request without modifications at any time later.
409	Conflict	The request cannot be processed due to a conflict. The resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request.
410	Gone	The requested resource is no longer available. The requested resource has been deleted permanently.

Status Code	Message	Description
411	Length Required	The server fails to process the request which does not contain the Content-Length header field.
412	Precondition Failed	The server does not meet one of the requirements that the requester puts on the request.
413	Request Entity Too Large	The request is larger than that the server can process. The server may close the connection to prevent the client from continuously sending the request. If the server cannot process the request temporarily, the response will contain a Retry-After header field.
414	Request-URI Too Large	The Request-URI is too long for the server to process.
415	Unsupported Media Type	The server cannot process the media format in the request.
416	Requested Range Not Satisfiable	The requested range is invalid.
417	Expectation Failed	The server fails to meet the requirements of the Expect request header field.
422	Unprocessable Entity	The request is well-formed but is unable to be processed due to semantic errors.
429	Too Many Requests	The client sends too many requests to the server within a given time, exceeding the client's access frequency limit or beyond the server's processing capability. In this case, the client should retry after the time period specified in the Retry-After response header.
500	Internal Server Error	The server is able to receive the request but unable to understand it.
501	Not Implemented	The server does not support the function required to fulfill the request.
502	Bad Gateway	The server was acting as a gateway or proxy and received an invalid request from a remote server.
503	Service Unavailable	The requested service is invalid. The client should not repeat this request without modification.

Status Code	Message	Description
504	Server Timeout	The request cannot be fulfilled within a given amount of time. The response will reach the client only if the request carries a timeout parameter.
505	HTTP Version Not Supported	The server does not support the HTTP protocol version used in the request.

1.9.2 Common Parameters

1.9.2.1 Common Request Header Fields

Table 1-3 Common request header fields

Name	Description	Mandatory	Example
x-sdk-date	Time when a request is sent. The format is yyyyMMdd'T'HHmmss'Z'. The value is the current GMT time of the system.	No Mandatory for AK/SK authentication	20160629T101459Z
Authorization	Authentication information. It is the result of request signing. For details, see Signing a Request .	No Mandatory for AK/SK authentication	-
Host	Information about the requested server, in the <i>hostname[:port]</i> format. The value can be obtained from the URL of the service API. If the port number is not specified, the default port is used. The default port number for HTTPS is 443 .	No Mandatory for AK/SK authentication	mkt-intl.myhuaweicloud.com
Content-type	MIME type of the body in the request.	Yes	application/json

1.9.2.2 Common Response Header Fields

Table 1-4 Common response header fields

Name	Description	Example
Date	Standard HTTP header, which indicates the date and time when a message is sent. The value is in the format defined in RFC822.	Mon, 12 Nov 2007 15:55:01 GMT
Server	Standard HTTP header, which contains information about the software that the server uses to process requests.	Nginx
Content-Length	Standard HTTP header, which indicates the representation's data length as a decimal number of octets.	xxx
Content-Type	Standard HTTP header, which indicates the media type of the entity body sent to the recipient.	application/json

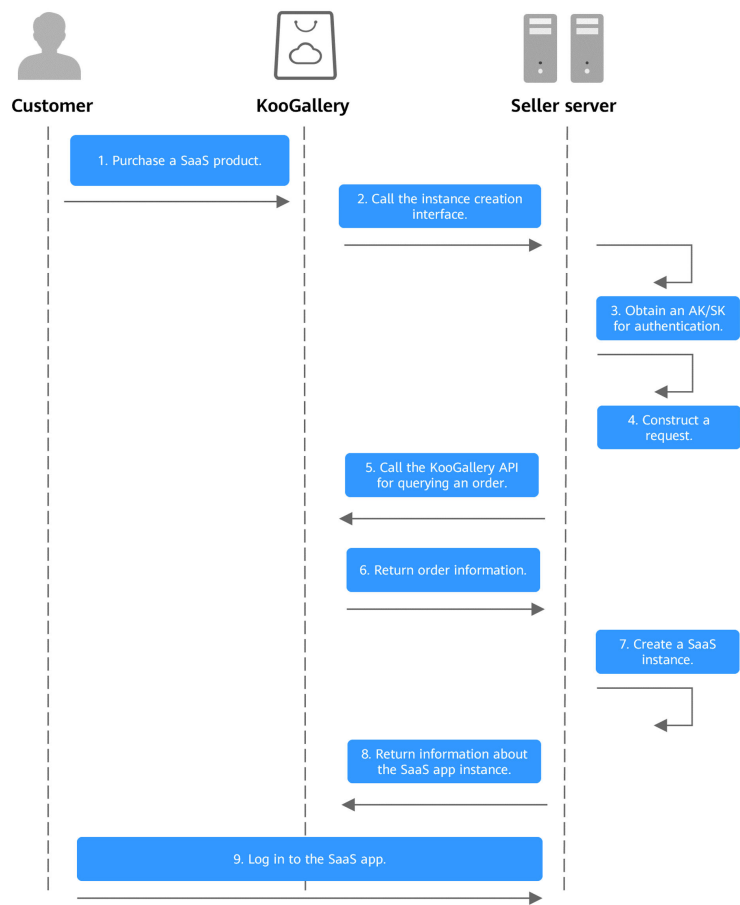
1.9.3 APIs

1.9.3.1 Querying an Order

Function

KooGallery sellers can use this API to query all order information.

API Calling Process



URI

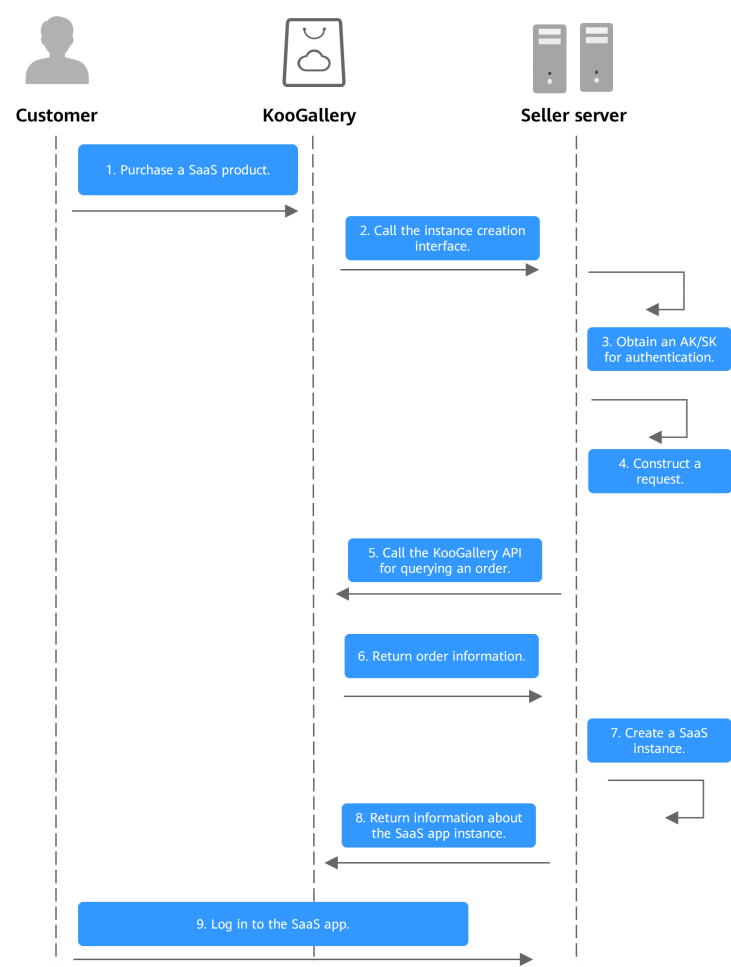
GET : <https://mkt-intl.myhuaweicloud.com/api/mkp-openapi-public/global/v1/order/query>

Table 1-5 describes the parameters.

NOTE

Only the HTTPS protocol is supported.

The following figure shows the process of querying an order.



The following table lists the order data used for debugging.

Order No.	Order Line ID	Order Type
MOCKPERIODYEARNEW	MOCKPERIODYEARNEW-000001	Subscription - Yearly/Monthly
MOCKONETIMENEW	MOCKONETIMENEW-000001	Subscription - One-time
MOCKONDEMAND	MOCKONDEMAND-000001	Subscription - Pay-per-use specification
MOCKONDEMANDPKG	MOCKONDEMANDPKG-000001	Subscription - Pay-per-use package
MOCKPERIODDAYTRIAL	MOCKPERIODDAYTRIAL-000001	Trial use
MOCKMONTYTRIALTOFORMAL	MOCKMONTYTRIALTOFORMAL-000001	Change from trial use to commercial use

Order No.	Order Line ID	Order Type
MOCKMONTYUNSUBSCRIBE	MOCKMONTYUNSUBSCRIBE-000001	Unsubscription
MOCKMONTYRENEW	MOCKMONTYRENEW-000001	Renewal
MOCKMONTYCHANGE	MOCKMONTYCHANGE-000001	Change and upgrade

Request Message

Request parameters

Request method: GET

Parameter	Mandatory	Type	Maximum Length	Description
orderId	Yes	String	64	KooGallery order ID.
orderLineId	No	String	64	KooGallery order line ID.

Notes

- Strong verification must be performed on the HTTPS certificate of mkt-intl.myhuaweicloud.com to ensure that the real KooGallery service instead of a forged KooGallery service is called.

Example request

```
GET /api/mkp-openapi-public/global/v1/order/query?
orderId=CS2207261447AUY4H&orderLineId=CS2207261447AUY4H-000001Host: Host Server Content-Type:
application/json charset=UTF-8 X-Sdk-Date: request time Authorization: authorization
```

Table 1-5 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	16	Result code. For details, see Table 1-7 .
resultMsg	Yes	String	1,024	Result message. For details, see Table 1-7 .

Parameter	Mandatory	Type	Maximum Length	Description
orderInfo	No	OrderInfo	/	Additional information. NOTE For details about the OrderInfo data structure, see the following table.

The following table describes the **OrderInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
orderId	Yes	String	64	KooGallery order ID.
orderType	Yes	String	32	Order type. The options are as follows: • NEW: new subscription. • TRIAL: trial use. • TRIAL_TO_FORMAL: commercial use after trial use. • UNSUBSCRIBE: unsubscription. • RENEW: renewal. • CHANGE: change.
createTime	Yes	DateTime	20	Time when an order is created. Format: yyyyMMddHHmmss NOTE It is not the time when the order takes effect but the time when the order is placed.
orderLine		List<OrderLine>		Order line information.
buyerInfo	No	BuyerInfo	/	Customer information.

The following table describes the **OrderLine** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
orderLineId	Yes	String	64	KooGallery order line ID.
chargingMode	Yes	String	25	Billing mode. ON_DEMAND : pay-per-use. ONE_TIME : one-time payment. PERIOD : yearly/monthly/daily. ON_DEMAND_PKG : pay-per-use package.
expireTime	No	DateTime	20	Expiration time. Format: yyyyMMddHHmmss NOTE - This parameter is required for a yearly/monthly/daily product. - This parameter is not required for a product billed by uses. This parameter is determined based on the order creation time and the subscription duration and may differ from the actual expiration time of the order. It is for reference only.
periodType	No	String	2	Period type. NOTE This parameter is only required for yearly/monthly/daily subscriptions (chargingMode is set to PERIOD). Yearly subscription: year Monthly subscription: month
extendParams	No	List<ExtendParam>	/	Extension parameters. An extension parameter is an array in the key/value format. Example: [{"name":"emailDomainName","value":"test.xxxx.com"}, {"name":"ip","value":"192.168.1.1"}] In the preceding information, emailDomainName and ip are set during product release.

Parameter	Mandatory	Type	Maximum Length	Description
periodNumber	No	integer	5	Number of periods. NOTE This parameter is only required for yearly/monthly/daily subscriptions (chargingMode is set to PERIOD). Enter a positive integer, for example, 1 , 2 , and 3 .
currency	No	String	64	Order amount. In scenarios such as subscription, renewal, and specification change, the amount is positive. In scenarios such as unsubscription and renewal cancellation, the amount is empty.
currencyAfterDiscount	No	String	25	Order transaction amount, excluding cash coupons and discounts. In scenarios such as subscription, renewal, and specification change, the amount is positive. In scenarios such as unsubscription and renewal cancellation, the amount is negative.
productInfo	Yes	List<ProductInfo>		Product information associated with the order line.

The following table describes the **ProductInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
productId	Yes	String	64	Product ID. The value of productId varies between products of different billing modes under the same skuCode. For example, when you release a product and add a new specification, an skuCode value is generated. After yearly and monthly billing prices are configured, two productId values are generated. NOTE Log in to the Seller Console. Then, choose Product Management > My Products. In the row of your product, click Details in the Operation column. On the product details page, you can view the value of this parameter.
skuCode	Yes	String	64	Specification ID. When renewing the subscription of a yearly/monthly product, a customer can change the billing mode (for example, from monthly to yearly). In this case, productId corresponding to instanceId of the instance enabled by the customer changes, but the value of skuCode does not change. NOTE Log in to the Seller Console. Then, choose Product Management > My Products. In the row of your product, click Details in the Operation column. On the product details page, you can view the value of this parameter.
linearValue	No	Integer		Linear value that the customer selected when placing the order for a product with the quantity attribute.
productName	Yes	String	64	Product name.

The following table describes the **ExtendParam** data structure.

Table 1-6 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
name	Yes	String	64	Parameter name.
value	Yes	String	64	Parameter value.

The following table describes the **BuyerInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
customerId	Yes	String	64	Customer ID.
customerName	Yes	String	64	Customer account name, for example, Sam .
customerRealName	Yes	String	64	Real customer name, for example, xxxxx Company .
customerType	Yes	integer	64	Unknown: -1 . Individual: 0 . Enterprise: 1 .
mobilePhone	No	String	64	Mobile number of the customer. NOTE You can specify whether customers must authorize you to obtain this information when you release a product.
email	No	String	64	Email address of the customer. NOTE You can specify whether customers must authorize you to obtain this information when you release a product.

Parameter	Mandatory	Type	Maximum Length	Description
userId	No	String	64	IAM user ID. NOTE You can specify whether customers must authorize you to obtain this information when you release a product. This parameter is returned only for new subscriptions (instance creation scenario). From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.
userName	No	String	64	IAM user name. NOTE You can specify whether customers must authorize you to obtain this information when you release a product. This parameter is returned only for new subscriptions (instance creation scenario). From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.

Error Codes

Table 1-7 Error codes

HTTP Status Code	resultCode	resultMsg	Description
200	MKT.0000	Success.	Request successful.
500	MKT.0999	System internal error.	Other internal errors.
500	MKT.0100	Failure of input parameter	Input parameter verification failed. Invalid value.

HTTP Status Code	resultCode	resultMsg	Description
400	MKT.0101	Invalid parameter	Invalid parameter. The parameter is not defined by the API, there are more parameters than required, or a mandatory parameter is missing.
400	MKT.0199	Request parameter error	Incorrect request parameter. Other parameter errors.
401	MKT.0150	Illegal operation	You are trying to perform an unauthorized operation. For example, the product corresponding to instanceId is not released by the seller corresponding to the AK/SK.
401	MKT.0151	No authority	Insufficient permissions to access the interface. The token does not belong to a seller.
401	MKT.0154	Illegal token	Authentication failed. Invalid token.
406	MKT.0250	Access frequency overlimit	Too many access requests.
500	MKT.9001	Instance ID not found.	The instance ID does not exist. (This result code may be returned when the renewal, expiration, or resource release interface is called.)
500	MKT.9002	Invalid usage entities.	Invalid usage entities.
500	MKT.9003	Usage records extend size limit.	Too many records. Max. records: 100.
500	MKT.9004	Record beginTime extends Limit.	The start time exceeds the validity period (last 21 days).
400	95000001	req param is invalid	Incorrect request parameter. (The regular expression, mandatory item, or length does not meet the requirements.)
405	95000002	Request method not supported	The request method is not supported.

HTTP Status Code	resultCode	resultMsg	Description
415	95000003	Content type not supported	The request body type is not supported. (Content-Type is not application/json .)
400	95000004	req message is not readable	The request body cannot be read. (It cannot be formatted in JSON).
500	MKT.9005	Order does not exist.	Requested order not found.

A failure response contains the **extra_info** parameter only when the value of **resultCode** is **MKT.0100**, **MKT.0150**, **MKT.0250**, **MKT.9001**, **MKT.9002**, **MKT.9004**, or **MKT.9005**. In addition to the parameter description, **resultMsg** in the failure response also contains the failure details. You can locate and rectify the fault based on the failure details and **extra_info** content.

Successful response example

```
HTTP/1.1 200 OK Content-Type: application/json;charset=UTF-8 Content-Length: length Date: response
time { "resultCode": "MKT.0000", "resultMsg": "Success", "orderInfo": { "orderId":
"CS2207261447AUY4H", "orderType": "NEW", "createTime": "20220726064736", "orderLine":
[ { "orderLineId": "CS2207261447AUY4H-000001", "chargingMode": "PERIOD",
"periodType": "year", "periodNumber": 1, "expireTime": "20230726155959", "productInfo":
[ { "productId": "OFFI758576253042421760", "skuCode": "da9b4d34-ee8a-4355-
a823-13e034e49986", "linearValue": 10, "productName": "Test SaaS, Test Specification, Basic
Edition, Yearly/Monthly" } ], "extendParams": [ ] } ], "buyerInfo":
{ "mobilePhone": "18699999999", "email": "123@test.com", "customerId":
"688055390f3049f283fe9f1aa90f7ds3", "customerName": "hw1235sd3123" } } }
```

Failed response example

```
HTTP/1.1 401 UnauthorizedContent-Type: application/json;charset=UTF-8Content-Length: lengthDate:
response time { "resultCode": "CBC.0150", "resultMsg": "Illegal operation. param[isvId] and
param[instanceId] do not match." }
```

1.9.3.2 Pushing the Pay-per-Use Resource Usage (New)

Description

After a customer purchases and uses pay-per-use resources in KooGallery, call this API to upload the SDRs of the customer. After obtaining the SDRs, KooGallery charges the customer for the usage.

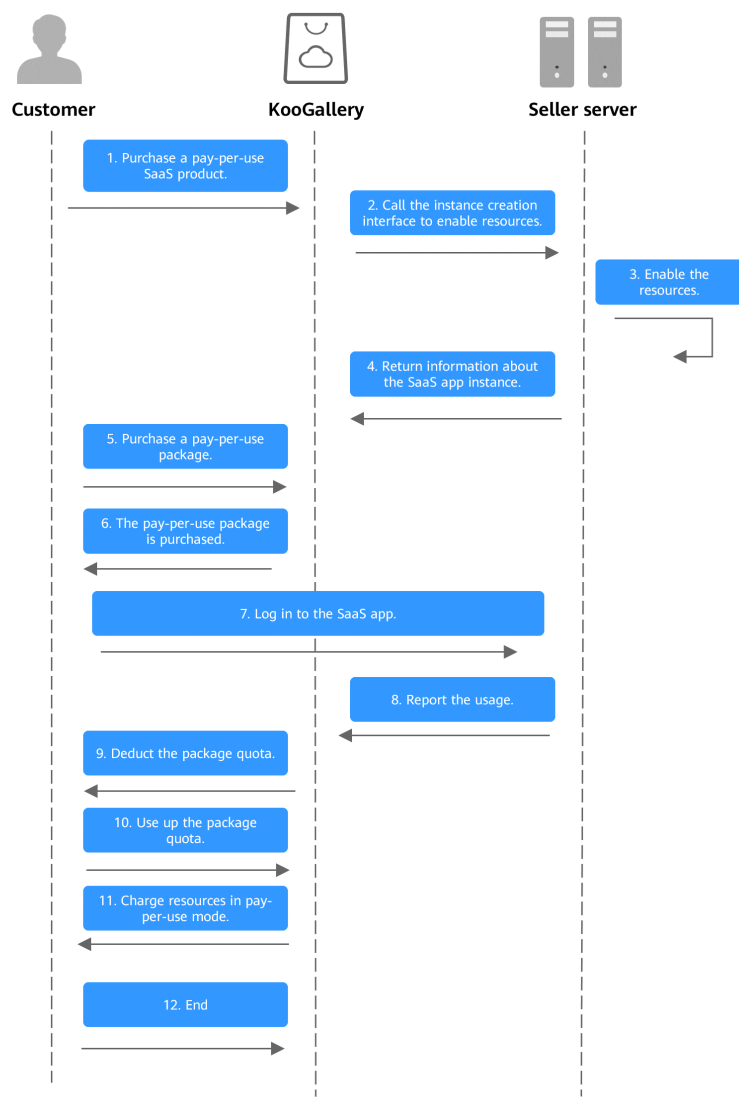
URI

POST <https://mkt-intl.myhuaweicloud.com/api/mkp-openapi-public/global/v1/isv/usage-data>

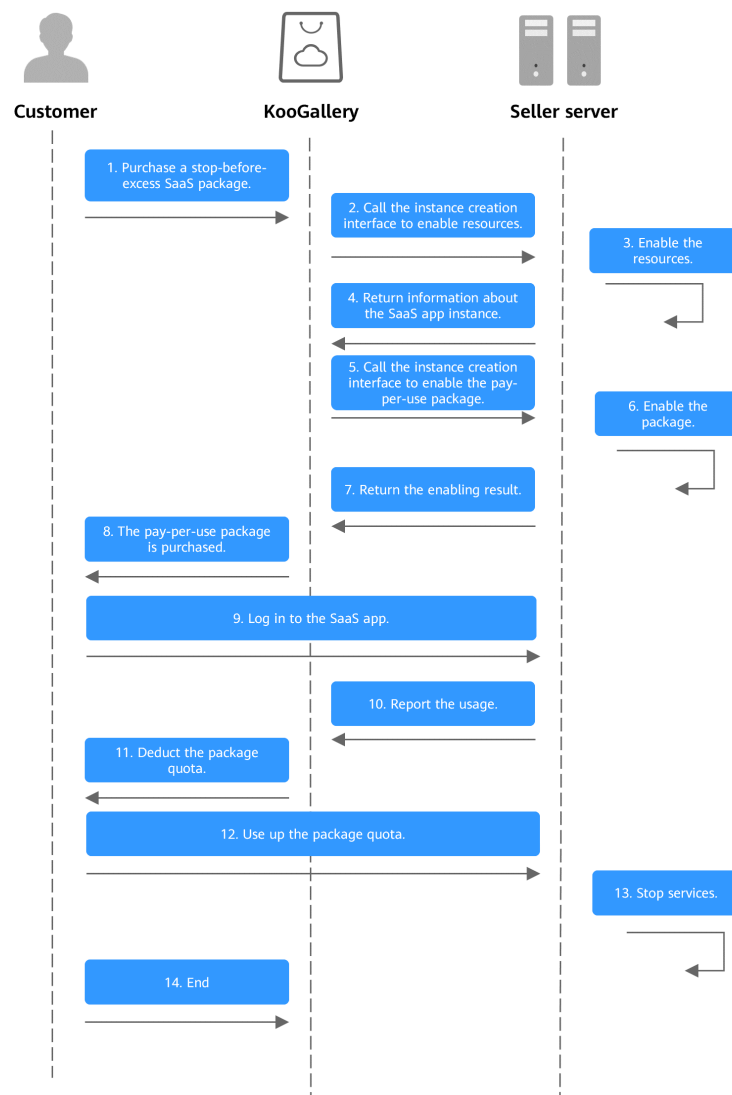
NOTE

If mkt-intl.myhuaweicloud.com is unavailable, try mkt.myhuaweicloud.cn.

1. Pay-per-use specification/package purchase and use



2. Stop-before-excess package purchase and use



Request Message

The following table describes the request parameters.

Request method: POST

Parameter	Mandatory	Type	Maximum Length	Description
signature	Yes	String	1,000	@Header API signature (base64(hmacSHA256(<i>Seller interconnection key</i>,ts={ts}&nonce={nonce}&body={body})))) The body is signed after being sorted naturally.

Parameter	Mandatory	Type	Maximum Length	Description
ts	Yes	String	20	@Header Unix timestamp when an interface request is sent, in milliseconds.
nonce	Yes	String	64	@Header Security random number.
usage_records	Yes	List<UsagePushData>	1,000	SDR list. A list contains up to 1,000 UsagePushData records.

Table 1-8 UsagePushData

Parameter	Mandatory	Type	Maximum Length	Description
instance_id	Yes	String	64	Pay-per-use instance ID. Use the instance ID returned by the pay-per-use subscription interface.
record_time	Yes	String	17	Time when a usage record is generated (UTC). Format: yyyyMMdd'T'HHmmss'Z'
begin_time	Yes	String	17	Metering start time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
end_time	Yes	String	17	Metering end time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
usage_value	Yes	Double(12,4)	20	Usage value. The value is a positive number containing up to four significant decimal places.
metering_sn	Yes	String	64	Unique SDR ID. A random code is recommended.
related_package_instance	No	String	64	This parameter is mandatory in SDRs of stop-before-excess packages. The package instance ID needs to be transferred.

Example request:

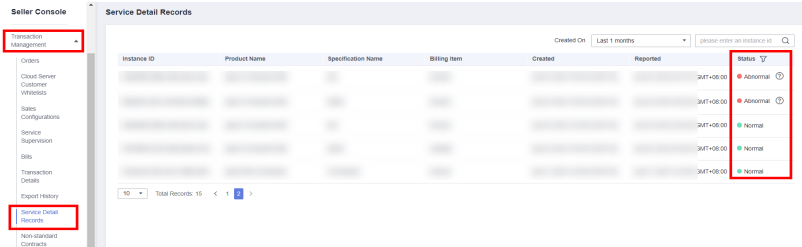
```
POST {domain}/api/mkp-openapi-public/global/v1/ispv/usage-data
Content-Type:application/json
nonce: 6c63c221-1f6b-4141-8ff4-22f5dfe82b65
```

```
ts: 1709690865879
signature: gikLslgimlscagwSamCLFJ1CFT4QprHSDHW...
{
  "usage_records": [
    {
      "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
      "record_time": "20220809T091000Z",
      "begin_time": "20220809T080000Z",
      "end_time": "20220809T090000Z",
      "usage_value": "99",
      "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfd"
    },
    {
      "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
      "record_time": "20220809T091000Z",
      "begin_time": "20220809T080000Z",
      "end_time": "20220809T090000Z",
      "usage_value": "999",
      "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfb"
    }
  ]
}
```

NOTE

1. During SDR upload, if SDR data is abnormal, no error is reported at the API layer. The backend periodically verifies and processes the uploaded data and generates available SDR data. If the backend fails to process the data, report the data again.

You can view abnormal data on the **Transaction Management > Service Detail Records** page of the Seller Console.



2. Requirements for the SDR report period:

- **Hourly billing**
Report SDRs at least once an hour. It is recommended that SDRs be reported within the first 15 minutes of the next hour after a customer uses the resources. For example, if the customer uses resources at 13:25, report SDRs between 14:00 and 14:15. In this way, the customer can be charged in time. Otherwise, the fee deduction will be delayed. If you cannot report SDRs in real time, report them within 2 hours after resource consumption.
- **Daily billing**
Report SDRs to KooGallery every hour. If you can only report SDRs once a day, report them from 00:00 to 00:15. SDRs must be reported before 01:00. Otherwise, the fee will be deducted from customers on the next day.

3. Requirements for reporting SDRs:

- **When a resource is not closed:**
 - SDR start time (**begin_time**) ≥ Resource start time
 - SDR start time (**begin_time**) ≤ SDR end time (**end_time**) ≤ SDR report time
- **When a resource is closed:**
 - SDR end time (**end_time**) ≤ Resource close time

4. The time in the reported SDRs is the UTC time.

5. If the values of **begin_time** and **end_time** in a record are the same and the record is reported for multiple times, only the first record is processed. SDRs are collected at 01:00 every day for daily billing and fifteenth minute of every hour for hourly billing. Once SDRs are collected and formal bills are generated, SDRs cannot be corrected.

Duplicate SDRs are regarded as abnormal. You can view abnormal data on the **Transaction Management > Service Detail Records** page of the Seller Console.

6. The usage push interface uses the instance ID returned by the pay-per-use subscription interface instead of that returned by the pay-per-use package subscription interface.

7. If multiple SDRs (carrying **usage_value**) of an instance (**instance_id**) are reported during an SDR period, that is, the start time (**begin_time**) and end time (**end_time**) of these SDRs are the same, the SDRs must be identified by different extended parameters (**extend_params**). Or, KooGallery returns a verification failure message.

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
error_code	Yes	String	6	Result code. For details, see 1.7 Result Codes .
error_message	No	String	255	Result message.
data	No	AbnormalUsageDataInfo		Information about abnormal SDRs.

Table 1-9 AbnormalUsageDataInfo

Parameter	Mandatory	Type	Maximum Length	Description
abnormal_usage_data	Yes	List<AbnormalUsageData>	1,000	List of abnormal SDRs.

Table 1-10 AbnormalUsageData

Parameter	Mandatory	Type	Maximum Length	Description
metering_sn	Yes	String	64	Unique SDR ID.

Parameter	Mandatory	Type	Maximum Length	Description
error_code	Yes	String	16	SDR-level error code. 001: The instance does not exist. 002: Invalid time format. 003: Abnormal usage. 004: Missing SDR ID. 005: Duplicate SDR ID. 006: The product corresponding to the instance has been removed from the catalog. 007: The SDR has expired. 009: The instance does not match the seller. 010: Duplicate SDR. 011: Invalid SDR time range. 012: The instance is not a pay-per-use resource. 013: The instance resource status is abnormal. 014: The instance resource has been closed. 015: The SDR start time is earlier than the resource enabling time. 016: The instance is being enabled. 017: In the stop-before-excess scenario, relate_pkg_instance is empty. 018: In the stop-before-excess scenario, relate_pkg_instance is invalid or does not match instance_id.
error_message	Yes	String	255	SDR error message.

Error codes

Table 1-11 AbnormalUsageData

HTTP Status Code	Error Code	Error Message	Description
200	MKT.0000	Success	Request successful.

HTTP Status Code	Error Code	Error Message	Description
500	94060001	System error!	Other internal errors.
401	94060002	Auth failed!	Input parameter verification failed. Invalid value.
400	94060004	Param invalid	Invalid parameter. The parameter is not defined by the API, there are more parameters than required, or a mandatory parameter is missing. For example, a value is invalid or there is no instance ID.
400	94060005	Time format error	Incorrect time format.
400	94060006	TimeStamp invalid	Invalid timestamp.
401	94060007	Signature invalid	Signature verification fails.
400	94060008	Replay error	Request replay error.
500	94060009	Failed to report usage data	Report SDR failed.
401	94060010	isv status invalid	Invalid seller status.
200	94060999	Failed	SDR-level error information is returned. For details, see the example response.
400	95000001	req param is invalid	Incorrect request parameter. (The regular expression, mandatory item, or length does not meet the requirements.)
405	95000002	Request method not supported	The request method is not supported.
415	95000003	Content type not supported	The request body type is not supported. (Content-Type is not application/json .)
400	95000004	req message is not readable	The request body cannot be read. (It cannot be formatted in JSON).

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

Example response:

```
{
  "error_code": "MKT.0000",
  "error_msg": "Success"
}

{
  "error_code": "94060999",
  "error_msg": "Failed",
  "data": {
    "abnormal_usage_data": [
      {
        "error_code": "005",
        "error_msg": "METERING_SN_DUPLICATE",
        "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfb"
      }
    ]
  }
}
```

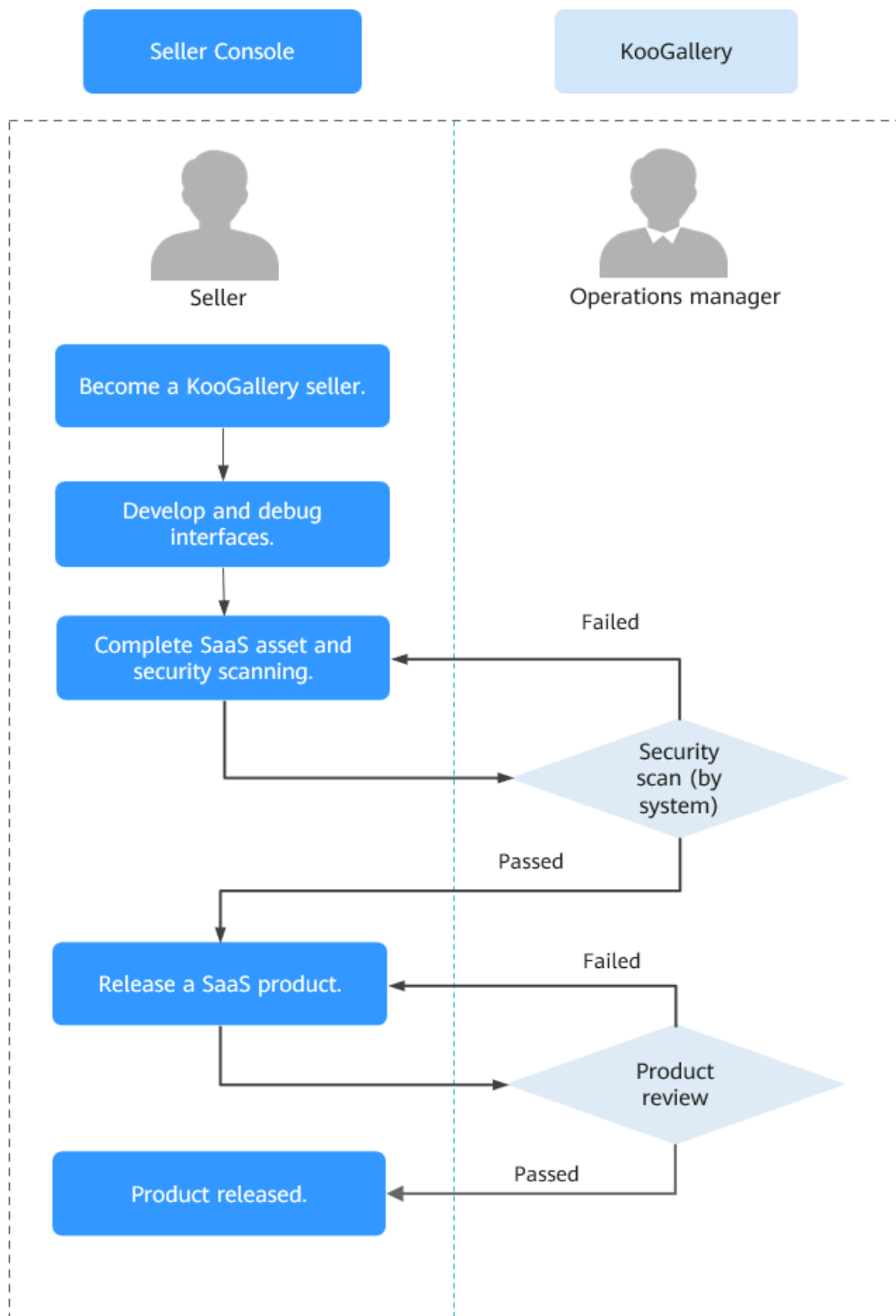
1.10 SaaS Access Example Projects V2.0

- The Spring Boot-based web project contains the sample code of the production interfaces for connecting your SaaS to release with KooGallery. For details, see the [Example Project for Connecting SaaS](#).
- The Huawei Cloud SDK-based project contains the sample code of open APIs provided by KooGallery. For details, see the [Example Project for Calling Open KooGallery APIs of SaaS 2.0](#).

2 SaaS Access Guide V1.0 (Deprecated)

- [2.1 Access Process](#)
- [2.2 Interface Functions](#)
- [2.3 Preparations](#)
- [2.4 Interface Description](#)
- [2.5 Invocation Result Codes](#)
- [2.6 Interface Debugging](#)
- [2.7 Managing SaaS Assets](#)
- [2.8 Code Example \(Java\)](#)
- [2.9 FAQ](#)

2.1 Access Process



The process is as follows:

1. Become a KooGallery seller.

2. Prepare a production interface server and develop and debug basic interfaces. For details, see [1.2 Interface Description](#).
3. Complete the SaaS asset and security scanning. For details, see [Managing SaaS Assets](#).
4. Release a product on the Seller Console, set the delivery method to SaaS, and enter product information.
5. Wait for KooGallery to approve the product.
6. The product is released.

2.2 Interface Functions

Before releasing a SaaS product to KooGallery, develop a **service interface** on the ISV server by referring to this access guide.

NOTE

- **Only one service interface for a SaaS product needs to be configured to accommodate different scenarios, including subscription, renewal, expiration, release, and upgrade.**
- If you release a yearly/monthly product, the interface will be called in the subscription, renewal, expiration, and release scenarios.
- If you release a product billed by one-time payment, the interface will be called only in the subscription and release scenarios.
- If you release a pay-per-use product, the interface will be called in the subscription, resource status change, release, and usage push scenarios.
- If the product can be upgraded, the interface will be called in the upgrade scenario.

Functions

- **Subscription:** After a customer purchases a product and pays for it successfully, KooGallery calls this interface to send you a request containing information about the product and customer. When receiving the request, the ISV server executes product subscription and informs KooGallery about the subscription result.

NOTE

When a customer clicks the **View Resource Details** button on the **Purchased Apps** page, KooGallery calls the subscription interface in real time to query the product information. Therefore, the ISV server needs to **perform idempotence processing** when processing requests. KooGallery may resend requests for **a single order**. If receiving a duplicate order, your server needs to return a success response and **the information about the successfully created app instance, rather than create a SaaS instance**.

- **Renewal:** After a customer places an order for renewal or converts a trial order to a commercial order, KooGallery calls the interface to request you to extend the service. The service interface then updates the expiration date and informs KooGallery about the update result.
- **Expiration:** When a purchased product expires, KooGallery calls the interface to send you a notification. After receiving an expiration notification, you must freeze the purchased product and inform KooGallery about the freezing result.

 NOTE

When a purchased product expires, the retention period starts. The retention period varies with the customer tier and can be up to 15 days long. During the retention period, the product is frozen and cannot be used. The customer can continue using the product after renewal. Therefore, you need to set a retention period to no less than 15 days for your SaaS products and retain customer data during the retention period.

- **Resource release:** If a customer does not renew an expired product in the retention period, or the customer has unsubscribed from the product, KooGallery releases the purchased product and calls the interface to send you a notification. Upon receiving the notification, delete the specified instances and inform KooGallery about the deletion result.
- **Upgrade:** After a customer places an order for upgrading a purchased product, KooGallery calls the interface to request you to upgrade the product. The ISV server then upgrades the product and informs KooGallery about the upgrade result. The upgrade scenario is optional.
- After a customer purchases a pay-per-use product (or package), when the instance expires, the customer violates regulations, or the customer account is in arrears, KooGallery calls this interface to freeze the instance.

Interface Failure Scenarios and Retry Mechanism

- In subscription and upgrade scenarios, if the service interface fails to respond, KooGallery will retry for 3 hours.
If the interface exception is rectified, the next call will be successful and the order will be placed successfully. If the exception persists after 3 hours, KooGallery determines that the order fails to be placed and **automatically cancels the order**.
- In the renewal scenario, if the service interface fails to respond, KooGallery will retry for an hour.
If the interface exception is rectified, the next call will be successful and the order will be placed successfully. If the exception persists after an hour, KooGallery determines that the order fails to be placed. In this case, locate and rectify the exception. **Then go to the Seller Console, locate the order on the Application Tools > Service Interface Messages page, and click Restart Debugging in the same row to call the interface again.**
- In product expiration and resource release scenarios, if the service interface fails to respond, KooGallery will retry for an hour.
If the interface exception is rectified, the next call will be successful and the order will be placed successfully. If the exception persists after an hour, KooGallery determines that the order fails to be placed. In this case, locate and rectify the exception. **Then go to the Seller Console, locate the order on the Application Tools > Service Interface Messages page, and click Restart Debugging in the same row to call the interface again.**
If a customer can still use expired resources due to an interface failure, you shall bear the resource loss incurred.

NOTE

If the service interface fails to respond, **an email, SMS message, and private message** will be sent to you. Check the email address and mobile number bound to your account and the Message Center on Huawei Cloud.

If more than five orders failed in a month due to interface failures, KooGallery will remove the product from the catalog.

If an order is automatically canceled due to an interface failure, contact the customer at the earliest to handle the problem.

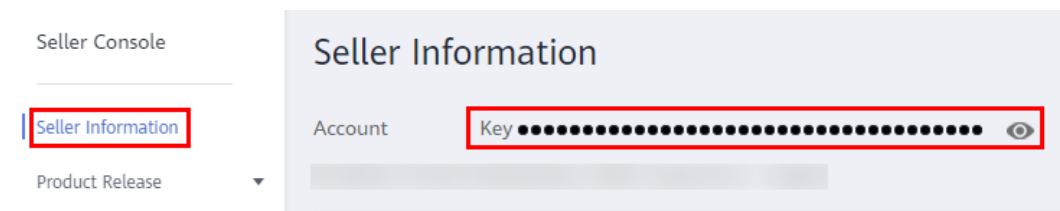
2.3 Preparations

2.3.1 Obtaining the Key

Step 1 Go to the [Seller Console](#).

Step 2 In the navigation pane, choose **Seller Info**.

On the **Seller Info** page, click the eye icon to obtain the key.



----End

2.3.2 authToken Value

Definition

The **authToken** parameter is mandatory for verifying the communication security between KooGallery and a seller. It is included in the parameters that KooGallery uses to invoke an interface of a seller.

The seller generates an **authToken** value by following the defined procedure and compares it with the **authToken** value obtained from KooGallery through the interface. If they are identical, the communication security passes the verification.

Generation Procedure

1. Obtain **all** the HTTP GET request parameters excluding the **authToken**.
2. Sort the parameter names in alphabetical order.
3. Use HMAC-SHA256 and the **Key** to encrypt the entire string of the sorted parameter names. The encryption result is adopted as the **authToken** value.

Example

A seller receives an invocation request similar to the following:

```
http://www.isvwebsite.com/saasproduce?  
p1=1&p2=2&p3=3&authToken=xxxxxxxxxxxx&timeStamp=201706211855321
```

1. Obtain all the HTTP GET request parameters p1, p2, p3, and timeStamp.
2. Sort the parameter names in alphabetical order: sort(p1, p2, p3, timeStamp). Assume that the sequence obtained by sorting is p1, p3, p2, and timeStamp.
3. Generate an authToken value by encryption:
base64_encode(HMAC_SHA256(Key+timeStamp,
p1=1&p3=3&p2=2&timeStamp=201706211855321)).

NOTE

All parameter values are URL-encoded in KooGallery. After obtaining the parameter value, the seller needs to decode them.

Example Code

For a code example, see [2.8.1 ISV Server Verifying Requests](#).

2.3.3 HTTP Body Signature

A body signature must be contained in the response of each interface. It consists of **sign_type** and **signature**.

Parameter	Value	Description
sign_type	HMAC-SHA256	Current value: HMAC-SHA-256
signature	base64_encode(HMAC_SHA256(key, httpBody))	base64_encode(HMAC_SHA256(key, httpBody)) • key: Key value • httpBody: The entire HTTP body, including the starting and ending spaces and tab characters

Example of an HTTP response header:

```
Body-Sign: sign_type="HMAC-SHA256", signature="abcd4567ed03sdfdsdfasdfsdfhfgjgkghjllhjk"
```

NOTE

The format of the header must follow the example. Quotation marks must be added to the values of the **sign_type** and **signature** parameters.

For a code example, see [2.8.2 ISV Server Signing a Response Message Body](#).

2.4 Interface Description

2.4.1 Subscription

Description

- After a customer purchases a product and pays for it successfully, KooGallery calls this interface to send you a request containing information about the product and customer. When receiving the request, the ISV server executes product subscription and informs KooGallery about the subscription result.
- A unique instance ID (**instanceId**) should be returned for the order. The instance IDs (**instanceId**) of different subscription orders must be different. Use **businessId** provided by KooGallery to ensure that **instanceId** is globally unique.

NOTE

Pay-per-use products are traded by specification. If a specification in an order has multiple pay-per-use billing items, you need to create instances for these billing items separately based on **orderId** (the same order ID) and **productId** (different product IDs). That is, in pay-per-use transactions, an order has multiple instances.

- If the interface fails to respond, KooGallery will notify you by sending an email to the email address bound to your Huawei Cloud account. The interface exception information will be displayed on the **Transaction Management > Service Interface Messages** page. Rectify the exception as soon as possible to avoid order cancellation.

If the subscription interface fails to be called, KooGallery will retry for 3 hours. If the interface exception is rectified, the next call will be successful and the order will be placed successfully. If the exception persists after 3 hours, KooGallery determines that the order fails to be placed and **automatically cancels the order**. If more than five orders failed in a month due to interface failures, KooGallery will remove the product from the catalog.

NOTE

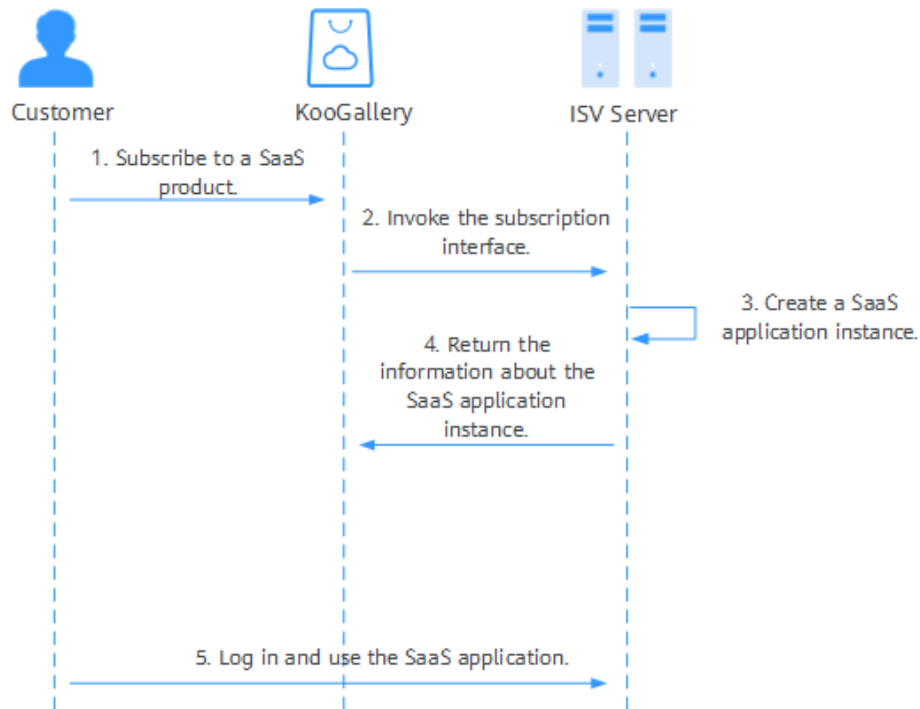
- Check the email address bound to your Huawei Cloud account and the Message Center. If you receive an email or message about an interface calling failure, rectify the exception as soon as possible.
 - KooGallery monitors interface exceptions. If subscriptions to a SaaS product frequently fail due to interface exceptions, KooGallery will remove the product from the catalog.
- **When processing an interface request, your server must ensure idempotency.**

KooGallery may resend requests for **a single order**. If receiving a duplicate order, your server needs to return a success response and **the information about the successfully created app instance, rather than create a SaaS instance**.

NOTE

In pay-per-use transactions, ensure idempotency based on the order ID (**orderId**) and product ID (**productId**).

The following figure shows the process of purchasing a product.



Request Message

The following table describes the request parameters. In KooGallery, requests are generated based on the subscription mode of products released by you. You need to provide services based on requests.

Request method: GET

Parameter	Mandatory	Type	Maximum Length	Description
authToken	Yes	String	50	Security verification token. For details about the values, see 2.3.2 authToken Value .
timeStamp	Yes	String	20	UTC timestamp when a request is initiated. Format: yyyyMMddHHmmssSSS
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For new subscriptions, the value is newInstance .
customerId	Yes	String	100	Unique ID of a customer on Huawei Cloud.
customerName	No	String	64	Customer's username on Huawei Cloud.

Parameter	Mandatory	Type	Maximum Length	Description
userId	No	String	64	Unique ID mapping the username used to log in to the system as an Identity and Access Management (IAM) user. Optional. If this parameter is required, select To create an account based on IAM username for User Authorization Required when releasing the product. From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.
userName	No	String	64	Username of the customer used to log in to the system as an IAM user. Optional. If this parameter is required, select To create an account based on IAM username for User Authorization Required when releasing the product. From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.

Parameter	Mandatory	Type	Maximum Length	Description
mobilePhone	No	String	256	Customer's mobile number. Optional. If this parameter is required, select To create an account based on phone number for User Authorization Required when releasing the product. The value is an encrypted mobile number. The mobile number encryption rules are as follows: The value consists of a 16-bit encryption initialization vector (IV) and a Base-encoded mobile number ciphertext. • iv +base64(AES_CBC(<i>accessKey</i>,<i>mobilePhone</i>)) • The number of digits to be encrypted is specified by you when you release the product. For details about the example code of mobile number decryption, see 2.8.4 ISV Server Decrypting the Mobile Number and Email Address. NOTE This parameter does not contain the country code. If a customer does not bind the mobile number, the parameter cannot be obtained.

Parameter	Mandatory	Type	Maximum Length	Description
email	No	String	256	Customer's email address. Optional. If this parameter is required, select To create an account based on email address for User Authorization Required when releasing the product. The value is an encrypted email address. The email address encryption rules are as follows: The value consists of a 16-bit encryption IV and a Base-encoded email ciphertext. • iv +base64(AES_CBC(<i>accessKey</i>,<i>email</i>)) • The number of digits to be encrypted is specified by you when you release the product. For details about the example code of email address decryption, see 2.8.4 ISV Server Decrypting the Mobile Number and Email Address.
businessId	Yes	String	64	KooGallery business ID. The value of businessId is different for each request.
orderId	Yes	String	64	KooGallery order ID.
skuCode	No	String	64	Specification ID. When renewing the subscription of a yearly/monthly product, a customer can change the billing mode (for example, from monthly to yearly). In this case, productId corresponding to instanceId of the instance enabled by the customer changes, but the value of skuCode does not change. NOTE After a product is approved and successfully released to KooGallery, you can obtain this parameter in the Seller Console. On the Product Management > My Products page, locate the product and click Details in the Operation column. The parameter can be obtained on the displayed page.

Parameter	Mandatory	Type	Maximum Length	Description
productId	Yes	String	64	Product ID. The value of productId varies between products of different billing modes under the same skuCode. For example, when you release a product and add a new specification, an skuCode value is generated. After yearly and monthly billing prices are configured, two productId values are generated. NOTE After a product is approved and successfully released to KooGallery, you can obtain this parameter in the Seller Console. On the Product Management > My Products page, locate the product and click Details in the Operation column. The parameter can be obtained on the displayed page.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0.
trialFlag	No	String	2	Whether an instance is created for a trial. • 0: no. • 1: yes. • N/A

Parameter	Mandatory	Type	Maximum Length	Description
expireTime	No	DateTime	20	Expiration time. Format: yyyyMMddHHmmss NOTE - This parameter is required for a yearly/monthly/daily product. - This parameter is required for a pay-per-use package. - This parameter is not required for a pay-per-use specification. - This parameter is not required for a product billed by uses. - The expiration time is calculated based on the order creation time and product subscription duration. It may be different from the actual expiration time of the order in the request information and is for reference only. Do not use it for other purposes.
chargingMode	No	Integer	[3]	Billing mode. 0: pay-per-use. 1: yearly/monthly/daily. 3: one-time payment. 5: pay-per-use package.
saasExtendParams	No	String	2,048	Extension parameters. These parameters are optional. The extension parameters are a JSON string carried in the url parameter in the form of urlEncode(base64(saasExtendParams)). After obtaining the value of the saasExtendParams parameter, your server needs to use base64Decode(urlDecode(saasExtendParams)) to obtain the JSON string of the extension parameters. For example, emailDomainName and extendParamName in the JSON string [{"name":"emailDomainName","value":"test.xxxx.com"}, {"name":"extendParamName","value":"extendParamValue"}] are the parameter values set during product release.

Parameter	Mandatory	Type	Maximum Length	Description
amount	No	Integer	4	Product attribute of the quantity type. This parameter is optional. Attribute name: quantity (customizable) Unit: none NOTE When customers subscribe to multi-SKU SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the quantity type attribute, they specify or modify the number or usage times. Example: 30 users
diskSize	No	Integer	4	Product attribute of the quantity type. Optional. Attribute name: disk size (customizable) Unit: GB NOTE When customers subscribe to multi-SKU SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the disk size attribute, they specify or modify the disk size. Example: 100 GB
bandWidth	No	Integer	4	Product attribute of the quantity type. Optional. Attribute name: bandwidth (customizable) Unit: Mbit/s NOTE When customers subscribe to multi-SKU SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the bandwidth attribute, they specify or modify the amount of bandwidth. Example: 20 Mbit/s

Parameter	Mandatory	Type	Maximum Length	Description
periodType	No	String	10	Period type. NOTE This parameter is only required for yearly/monthly/daily product or pay-per-use package subscriptions (the value of chargingMode is set to 1 or 5). Yearly subscription: year Monthly subscription: month Daily subscription: day If chargingMode is set to 3 or 0, do not pass this parameter.
periodNumber	No	integer	5	Number of periods. NOTE This parameter is only required for yearly/monthly/daily product or pay-per-use package subscriptions (the value of chargingMode is set to 1 or 5). Enter a positive integer, for example, 1, 2, and 3.
orderAmount	No	bigdecimal	20	Order amount. NOTE This parameter is required only for common product subscriptions. The amount is the actual payment amount, which you can check during reconciliation. The amount is greater than or equal to 0 and can contain a maximum of three decimal places. Unit: USD

Parameter	Mandatory	Type	Maximum Length	Description
provisionType	No	integer	2	Instance provisioning mode. NOTE • Provision upon subscription (By default, KooGallery calls the newInstance interface in polling mode.) • Provision after acceptance (The SaaS product involves service supervision.) 1. When a customer purchases the product, KooGallery calls the subscription interface, and you need to return the result code 000004 (request being processed) or 000000 (order created successfully). 2. After you deliver the product, KooGallery calls the subscription interface, and you need to return the result code 000000. 3. When the customer accepts the product, KooGallery calls the subscription interface and transfers the acceptance time to you. In this case, return the result code 000000.
acceptanceTime	No	String	20	Acceptance time. NOTE The value is the time when billing for the product starts. If provisionType is set to Provision after acceptance, this parameter is required. Format: yyyyMMddHHmmssSSS
startTime	No	String	20	Start time. Format: yyyyMMddHHmmss NOTE This parameter is transferred only for pay-per-use packages.

 NOTE

- On May 12, 2018, interface parameters **trialFlag** and **skuCode** were added.
 - Set these parameters for products released or product specifications added after May 12, 2018. All three values of **trialFlag** must be successfully debugged.
 - If a product was successfully released before May 12, 2018 and does not involve the free trial, the interface debugging is not required.
- On August 9, 2018, the interface for releasing SaaS products whose billing mode is **one-time** was added. If this billing mode is selected for a product release, the interface must be successfully debugged based on the *SaaS Product Access Guide*.
- On September 27, 2019, interface parameters **amount**, **diskSize**, and **bandWidth** were added for attributes of the quantity type.

If product specifications that are priced using a custom template contain attributes of the quantity type, such as number, bandwidth, and disk size, create the attributes on the product attribute management page, and navigate to the **Application Access Debugging** page to set related parameters and debug the interfaces. After the debugging is successful, you can release the product specifications.

- For details, see [2.6 Interface Debugging](#).

Example request:

```
https://isvserver.com/produceAPI?
activity=newInstance&businessId=03pf80c2bae96vc49b80b917bea776d7&customerId=3736bb8ad93b43fca80
12c64a82cec25 &expireTime=20180725000000&orderId=HWS001014ED483AA1E8&productId=
005a8781ef0c4a47a3dbfc4c1e72871e&saasExtendParams=W3sibmFtZSI6ImVtYWlsMTEiLCJ2YWx1ZSI6ImVtY
WlsMTFlbWVpDExn0seyJuYW1lIjoizW1haWwyMilsInZhbHVlIjoizW1haWwyMmVtYWlsMjliV0%3D&timeSt
amp=20170725025113409&testFlag=0&authToken=09lsS5y+KCtxBu+ON4TXv1SrjH5KVYka9sx2MauHrQU=
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Result message.
encryptType	No	String	2	Algorithm for encrypting sensitive information. 1: AES256_CBC_PKCS5Padding (default) 2: AES128_CBC_PKCS5Padding NOTE If the value of this parameter is AES256_CBC_PKCS5Padding , 1 is returned; if the value is AES128_CBC_PKCS5Padding , 2 is returned.

Parameter	Mandatory	Type	Maximum Length	Description
instanceId	No	String	64	Instance ID, which is a unique ID provided by a seller. Use businessId provided by KooGallery to ensure that instanceId is globally unique. NOTE The value of businessId in each request sent by KooGallery is different. If you use businessId as instanceId, use businessId in the first request sent by KooGallery. If instanceId is generated in other ways, for example, using a universally unique identifier (UUID), ensure that it is globally unique. Identical values of instanceId will cause a failure of enabling a SaaS app instance.
appInfo	No	AppInfo	N/A	App instance information. After a customer purchases a product, return a login address (website address) or an address that does not require login for the customer to perform subsequent operations. NOTE You must provide customers who purchase your SaaS products with the app usage information, including the addresses, accounts, and passwords. If the usage information can be sent through SMS messages, emails, or other methods, this parameter is not required in the response. Otherwise, the app instance information must be returned in the response. You can use the memo parameter to specify usage instructions or other information if any. appInfo is a JSON string. For details about its data structure, see the following table.

The following table describes the **AppInfo** data structure.

Parameter	Mandatory	Type	Maximum Length	Description
frontEndUrl	Yes	String	512	Frontend URL. URL of the website that the customer can access to use the purchased product.
adminUrl	No	String	512	Management URL. URL of the backend website that the customer can access to manage the purchased product.
userName	No	String	128	Encrypted administrator account. Account (usually an email address or mobile number) used by a customer to access the management backend of the seller after purchasing a product. The value consists of a 16-bit encryption IV and a Base-encoded username ciphertext. - iv +base64(AES_CBC(<i>accessKey</i>, <i>userName</i>)) - The account is encrypted using the key and encryption algorithm specified by encryptType. For details about the example code, see 2.8.3 ISV Server Encrypting the Username and Password After Resource Enabling.

Parameter	Mandatory	Type	Maximum Length	Description
password	No	String	128	Encrypted initial password of the administrator. Password (usually generated by you) used by a customer to access the management backend. The value consists of a 16-bit encryption IV and a Base-encoded password ciphertext. - iv +base64(AES_CBC(<i>accessKey</i>, <i>pwd</i>)) - The password is encrypted using the key and encryption algorithm specified by encryptType. For details about the example code, see 2.8.3 ISV Server Encrypting the Username and Password After Resource Enabling.
ip	No	String	64	IP address of the website.
memo	No	String	1,024	Remarks.

NOTE

- For details about how to obtain **accessKey**, see [2.3.1 Obtaining the Key](#).
- The lengths of the username and password ciphertexts are verified, which include the IVs.
- When processing an interface request, your server must ensure idempotency.
KooGallery may resend requests for a single order. If receiving a duplicate order, your server needs to return a success response and the information about the successfully created app instance, rather than create a SaaS instance.
- If a SaaS instance information (for example, the **adminUrl**) changes, call the interface again in KooGallery. When the same **orderId** is provided by KooGallery, your server returns information about the updated SaaS instance information.

For security purposes, KooGallery does not store SaaS instance information for a long time.

In the ISV production interface response messages, only the value of the **memo** parameter can include Chinese characters.

Example response:

```
{ "resultCode": "000000", "resultMsg": "success",
  "instanceId": "03pf80c2bae96vc49b80b917bea776d7", "encryptType": "1", "appInfo":
  { "frontEndUrl": "http://www.isvserver.com", "adminUrl": "http://www.isvserver.com",
    "userName": "luQg154bx766030TobyT0ghfQRx3tvVEdpwMRg==",
    "password": "7Bx4DyX7980a59T0qbhnphfCz82Uc5cZQQtExg==", "memo": "Test"  }}
```

2.4.2 Renewal

Description

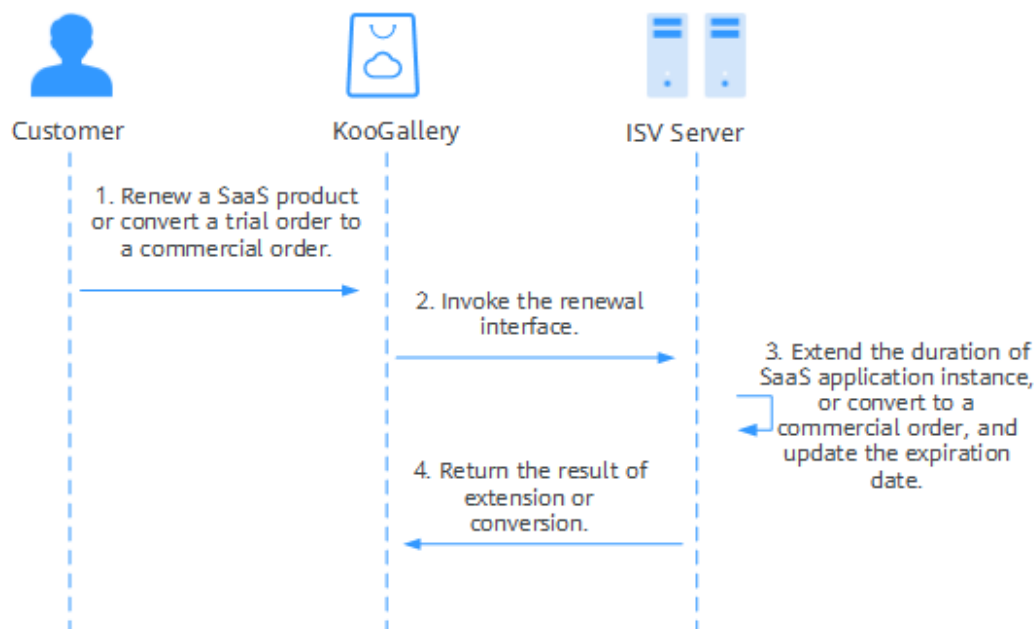
For yearly/monthly products, you must develop the renewal interface.

- After a customer places an order for renewal or converts a trial order to a commercial order, KooGallery calls the interface to request you to extend the service. The service interface then updates the expiration date and informs KooGallery about the update result.
- Ensure that the communication over the interface is normal. If the renewal fails, the service of the user may be terminated.
- If the renewal interface fails to be called, KooGallery will retry for an hour. You can view the interface exception information on the [Application Tools > Service Interface Messages](#) page. After the exception is solved, ask KooGallery to call the interface again.

NOTE

- Check the email address bound to your Huawei Cloud account. If you receive an email about an interface calling failure, rectify the exception as soon as possible.
- KooGallery monitors interface exceptions. If renewals of a SaaS product frequently fail due to interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of renewing a service.



Request Message

The following table describes the request parameters.

Request method: GET

Parameter	Mandator y	Type	Maximum Length	Description
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For renewals, the value is refreshInstance .
orderId	Yes	String	64	KooGallery order ID. NOTE A new order will be generated during the renewal or renewal cancellation and has an ID different from that of a subscription order. Use instanceId to identify the resources.
instanceId	Yes	String	64	Instance ID.
productId	No	String	64	Product ID. If a customer renews a product and changes the billing cycle or a customer converts a trial product to a commercial product, a new productId is provided.
expireTime	Yes	String	20	Expiration time. Format: yyyyMMddHHmmss
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0 .

Parameter	Mandator y	Type	Maximum Length	Description
trialToFormal	No	String	2	Whether a request is submitted to convert a trial product to a commercial product. • Parameter not passed: no • 1: yes By default, a request is not submitted to convert a trial product to a commercial product. For a request submitted to convert a trial product to a commercial product, it is regarded by default that the instance is not billed in the pay-per-use mode.
authToken	Yes	String	50	Security verification token. For details about the values, see 2.3.2 authToken Value.
timeStamp	Yes	String	20	UTC timestamp when a request is initiated. Format: yyyyMMddHHmmssSSS
periodType	No	String	10	Period type. NOTE This parameter is only required for yearly/monthly product subscriptions (the value of chargingMode is set to 1). Yearly subscription: year Monthly subscription: month

Parameter	Mandator y	Type	Maximum Length	Description
periodNum ber	No	integer	2	Number of periods. NOTE This parameter is only required for yearly/ monthly product subscriptions (the value of chargingMode is set to 1). Enter a positive integer, for example, 1, 2, and 3.
orderAmou nt	No	bigdecimal	20	Order amount. NOTE The amount is the actual payment amount, which you can check during reconciliation. 1. Renewal: The amount is 0 or a positive number containing up to three decimal places. 2. Renewal cancellation: The amount is a negative number containing up to three decimal places. Unit: USD

Example request:

```
https://isvserver.com/produceAPI?activity=refreshInstance&
expireTime=20180725000000&instanceId=03pf80c2bae96vc49b80b917bea776d7&orderId=HWS001014ED48
3AA1E8&timeStamp=20170725025113409&testFlag=0&authToken=09lsS5y+KCtXBu
+ON4TXv1SrjH5KVYka9sx2MauHrQU=
```

Response Message

The following table describes the response parameters.

Parameter	Mandator y	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Result message.

 NOTE

- When processing an interface request, your server must ensure idempotency.
- KooGallery may resend requests for a single order. When receiving a duplicate order, the ISV server needs to return a success response, rather than extend the SaaS instance again.

Example response:

```
{
  "resultCode": "000000",
  "resultMsg": "success."
}
```

2.4.3 Expiration

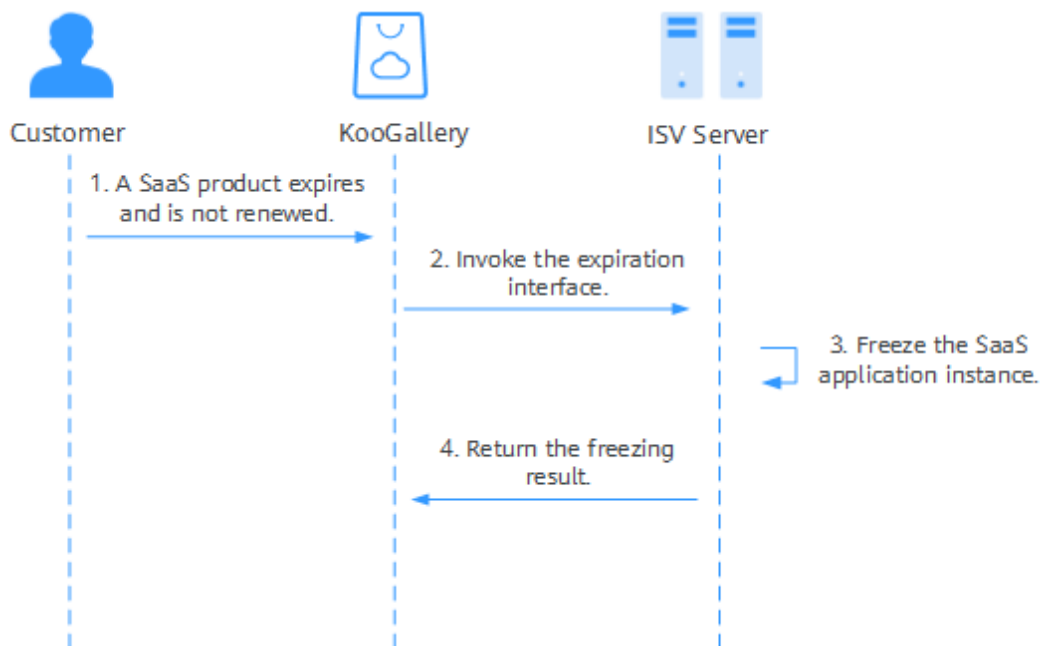
Description

- KooGallery invokes this interface when a purchased product expires. After receiving an expiration notification, you must freeze the purchased product.
- If the expiration interface fails to be called, KooGallery will retry for an hour. You can view the interface exception information on the [Application Tools > Service Interface Messages](#) page. If the interface exception is rectified, the next call will be successful. If the exception persists after an hour, KooGallery stops calling the interface. In this case, rectify the exception. Then go to the Seller Console, locate the order on the [Application Tools > Service Interface Messages](#) page, and click **Restart Debugging** in the same row to call the interface again.

 NOTE

- Check the email address bound to your Huawei Cloud account. If you receive an email about an interface calling failure, rectify the exception as soon as possible.
- KooGallery monitors interface exceptions. If freezing a SaaS product frequently fails due to interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of expiration.



Request Message

The following table describes the request parameters.

Request method: GET

Parameter	Mandator y	Type	Maximum Length	Description
activity	Yes	String	20	Interface request ID, which is used to distinguish interface request scenarios. For product expiration, the value is expireInstance .
instanceId	Yes	String	64	Instance ID.
orderId	Yes	String	64	Same as the ID of the subscription order.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0 .

Parameter	Mandatory	Type	Maximum Length	Description
authToken	Yes	String	50	Security verification token. For details about the values, see 2.3.2 authToken Value .
timeStamp	Yes	String	20	UTC timestamp when a request is initiated. Format: yyyyMMddHHmmssSSS

Example request:

```
https://isvserver.com/produceAPI?activity=expireInstance&instanceId=03pf80c2bae96vc49b80b917bea776d7
&timeStamp=20170725025113409&testFlag=0&authToken=09lsS5y+KCtXBu
+ON4TXv1SrjH5KVYka9sx2MauHrQU=
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Result message.

NOTE

- When processing an interface request, your server must ensure idempotency.
- KooGallery may resend requests for a single order. When receiving a duplicate order with the same **instanceId** value, your server needs to return a success response, rather than freeze the instance again.

Example response:

```
{
  "resultCode": "000000",
  "resultMsg": "success."
}
```

2.4.4 Resource Release

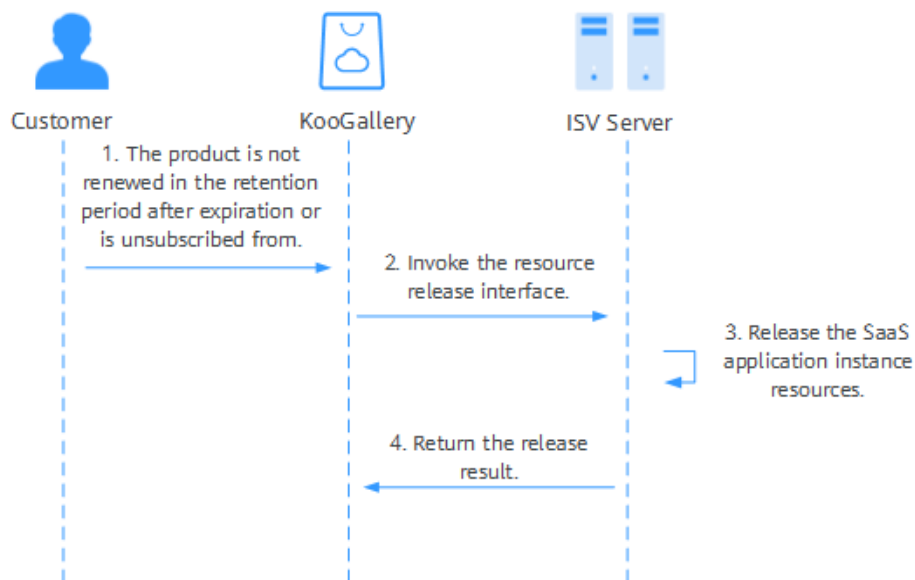
Description

- KooGallery calls this interface to request you to delete a purchased product and sends you a notification. You must delete the instance of the purchased product after receiving the product deletion notification.
- If a customer does not renew an expired product in the retention period, or the customer has unsubscribed from the product, KooGallery releases the purchased product resources.
- If the resource release interface fails to be called, KooGallery will retry for an hour. You can view the interface exception information on the [Application Tools > Service Interface Messages](#) page. If the interface exception is rectified, the next call will be successful. If the exception persists after an hour, KooGallery stops calling the interface. In this case, rectify the exception. Then go to the Seller Console, locate the order on the [Application Tools > Service Interface Messages](#) page, and click **Restart Debugging** in the same row to call the interface again.

NOTE

- Check the email address bound to your Huawei Cloud account. If you receive an email about an interface calling failure, rectify the exception as soon as possible.
- KooGallery monitors interface exceptions. If releasing resources of a SaaS product frequently fails due to interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of releasing resources.



Request Message

The following table describes the request parameters.

Request method: GET

Parameter	Mandatory	Type	Maximum Length	Description
activity	Yes	String	20	Interface request ID, which is used to distinguish interface request scenarios. For resource release, the value is releaseInstance .
instanceId	Yes	String	64	Instance ID.
orderId	Yes	String	64	Same as the ID of the subscription order.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0 .
authToken	Yes	String	50	Security verification token. For details about the values, see 2.3.2 authToken Value .
timeStamp	Yes	String	20	UTC timestamp when a request is initiated. Format: yyyyMMddHHmmssSSS
orderAmount	No	bigdecimal	20	Order amount. NOTE The amount is the actual payment amount, which you can check during reconciliation. The amount is greater than or equal to 0 and can contain a maximum of three decimal places. Unit: USD

Example request:

```
https://isvserver.com/produceAPI?
activity=releaseInstance&instanceId=03pf80c2bae96vc49b80b917bea776d7
&timeStamp=20170725025113409&testFlag=0&authToken=09lsS5y+KCtXBu
+ON4TXv1SrjH5KVYka9sx2MauHrQU=
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Result message.

NOTE

- When processing an interface request, your server must ensure idempotency.
- KooGallery may resend requests for a single order. When receiving a duplicate order with the same **instanceId** value, your server needs to return a success response, rather than release the instance again.

Example response:

```
{  
  "resultCode": "000000",  
  "resultMsg": "success."  
}
```

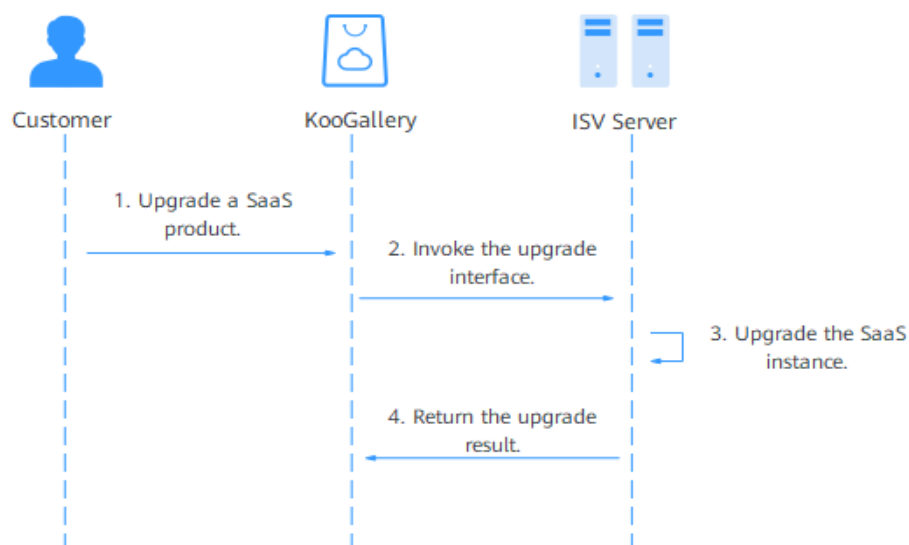
2.4.5 Upgrade

Description

After a customer has successfully paid for an order for upgrading a purchased product, KooGallery calls this interface to request you to upgrade the product. The ISV server needs to upgrade the product and return a notification to KooGallery.

For details about the upgrade rules, see [Upgrade and Billing Rules](#).

The following figure shows the process of upgrading a product.



Request Message

The following table describes the request parameters.

Request method: GET

Parameter	Mandatory	Type	Maximum Length of Characters	Description
authToken	Yes	String	50	Security verification token. For details about the value, see 2.3.2 authToken Value .
activity	Yes	String	20	Interface request ID, which is used to distinguish interface request scenarios. For upgrades, the value is upgrade .
instanceId	Yes	String	64	Instance ID. NOTE The upgrade does not change instance ID .
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0 .
orderId	Yes	String	64	Upgrade order ID. NOTE A new order will be generated during the upgrade and has an ID different from that of a subscription order. Use instanceId to identify the resources.

Parameter	Mandator y	Type	Maximu m Length of Characte rs	Description
skuCode	Yes	String	64	Product specification ID after the upgrade. NOTE A specification with custom attributes will change if the customer selects other attribute values during the upgrade. As a result, the skuCode changes. If the customer only expands the capacity by linearly increasing the attribute value, for example, from 10 users to 20 users, the skuCode does not change.
productId	Yes	String	64	Product ID after the upgrade. The value of productId varies according to the skuCode . If the customer only expands the capacity, the value of productId does not change.
timeStamp	Yes	String	20	Time (UTC time) when a request is initiated. Format: yyyyMMddHHmmssSSS
amount	No	Integer	4	Product attribute of the quantity type. This parameter is optional. Attribute name: quantity (customizable) Unit: none NOTE When customers subscribe to SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the quantity type attribute, they specify or modify the number or usage times. Example: 30 users

Parameter	Mandator y	Type	Maximu m Length of Characte rs	Description
diskSize	No	Integer	4	Product attribute of the quantity type. This parameter is optional. Attribute name: disk size (customizable) Unit: GB NOTE When customers subscribe to SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the disk size attribute, they specify or modify the disk size. Example: 100 GB
bandWidth	No	Integer	4	Product attribute of the quantity type. This parameter is optional. Attribute name: bandwidth (customizable) Unit: Mbit/s NOTE When customers subscribe to SaaS products (billing mode: yearly/monthly or one-time) with specifications that contain the bandwidth attribute, they specify or modify the amount of bandwidth. Example: 20 Mbit/s

Example request:

```
http://isvserver.com/produceAPI?
activity=upgrade&amount=6456&instanceId=huaweitest123456&orderId=CS1906666688ABCDE&productId=0
0301-666688-0-0&saasExtendParams=W3sibmFtZSI6ImlkTnVtliwidmFsdWUiOiZNTU1NTU1NTU2NTYifS
x7Im5hbWUiOiI1c2VyTmFtZSI6ImlkTnVtliwidmFsdWUiOiZNTU1NTU1NTU2NTYifS
MjNAaHVhd2VpLmNvbSJ9XQ==&skuCode=d0abcd12-1234-5678-
ab90-11ab012aaaa1&testFlag=1&timeStamp=20191216013757582&authToken=a3Bl
+C93xv3ENgm40ngyYvQnYcTS/pgY5ugl20wtzGg=
```

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length of Characters	Description
resultCode	Yes	String	6	Invocation result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Invocation result description.

NOTE

When processing an interface request, the ISV server must ensure idempotence.

KooGallery may resend requests for a single order. When receiving a duplicate order with the same **orderId** value, the ISV server needs to return a success response, rather than upgrade the instance again.

Example response:

```
{
  "resultCode":"000000",
  "resultMsg":"success."
}
```

2.4.6 Resource Status Change

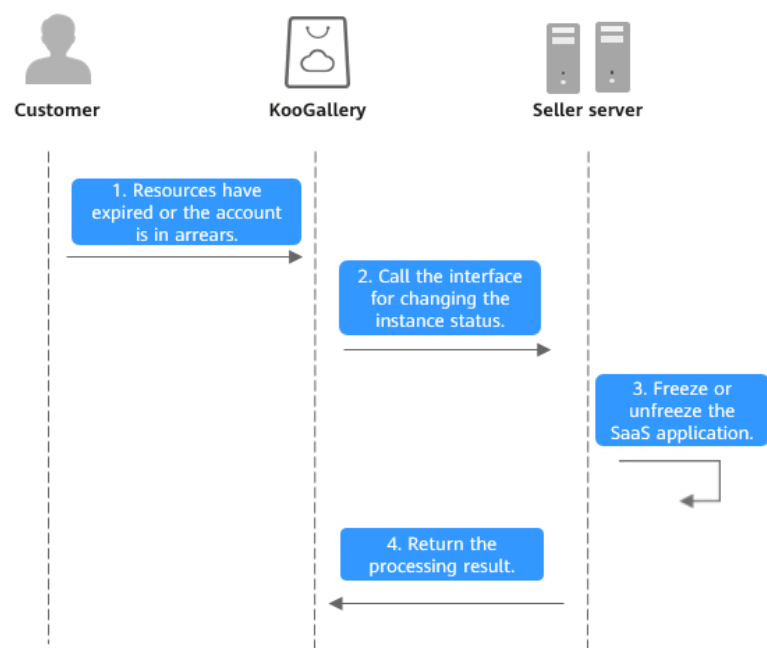
Description

After a customer purchases a pay-per-use product (or package), when the instance expires or the customer violates regulations, KooGallery calls this interface to freeze the instance.

NOTE

- If you receive an email indicating that the interface fails to be called in your email address of customer service or that one bound to your KooGallery account, handle the exception in a timely manner.
- KooGallery monitors interface exceptions. If a product has frequent interface exceptions, KooGallery will remove the product from the catalog.

The following figure shows the process of changing the resource status.



Request Message

The following table describes the request parameters.

Request method: GET

Paramet er	Manda tory	Type	Maxim um Length of Charac ters	Description
authToke n	Yes	String	50	Security verification token. For details about the value, see 2.3.2 authToken Value .
activity	Yes	String	32	Interface request ID, which is used to distinguish interface request scenarios. For resource status changes, the value is instanceStatus .
instancel d	Yes	String	64	Instance ID. CAUTION Use the instance ID returned by the pay- per-use billing interface.
instance Status	Yes	String	32	New status. ● FREEZE: frozen. ● NORMAL: unfrozen

Parameter	Mandatory	Type	Maximum Length of Characters	Description
timeStamp	Yes	String	20	Time (UTC time) when a request is initiated. Format: yyyyMMddHHmmssSSS
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0 .

Example request:

Freezing an instance: [https://example.isv.com?](https://example.isv.com?activity=instanceStatus&instanceId=huaweitest123456&instanceStatus=FREEZE&testFlag=1&timeStamp=20230327070251713&authToken=pqlrW7%2BPHC%2F1JE%2BMEjKxC94GGJreoS6PZHd982auw2o%3D)

activity=instanceStatus&instanceId=huaweitest123456&instanceStatus=FREEZE&testFlag=1&timeStamp=20230327070251713&authToken=pqlrW7%2BPHC%2F1JE%2BMEjKxC94GGJreoS6PZHd982auw2o%3D

Unfreezing an instance: [https://example.isv.com?](https://example.isv.com?activity=instanceStatus&instanceId=huaweitest123456&instanceStatus=NORMAL&testFlag=1&timeStamp=20230327070251713&authToken=pqlrW7%2BPHC%2F1JE%2BMEjKxC94GGJreoS6PZHd982auw2o%3D)

activity=instanceStatus&instanceId=huaweitest123456&instanceStatus=NORMAL&testFlag=1&timeStamp=20230327070251713&authToken=pqlrW7%2BPHC%2F1JE%2BMEjKxC94GGJreoS6PZHd982auw2o%3D

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length of Characters	Description
resultCode	Yes	String	6	Invocation result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Invocation result description.

Example response:

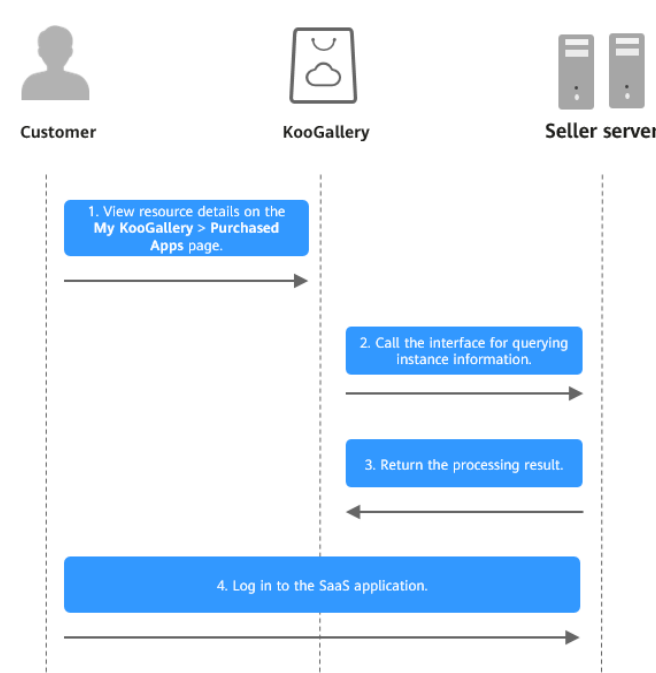
```
{
  "resultCode": "000000",
  "resultMsg": "success."
}
```

2.4.7 Instance Query

Description

- This API is optional for yearly/monthly/one-time products, but it is mandatory for pay-per-use specifications and packages.
- When a customer queries the instance information of a purchased pay-per-use product, you need to return the usage in real time.
- If a customer queries a pay-per-use package, you need to return the package usage through this API.

The following figure shows the process of querying instance information.



Request Message

The following table describes the request parameters.

Request method: GET

Parameter	Mandatory	Type	Maximum Length	Description
authToken	Yes	String	50	Security verification token. For details about the value, see 2.3.2 authToken Value .
activity	Yes	String	20	Request ID, which is used to distinguish the scenario. For instance query, the value is queryInstance .

Parameter	Mandatory	Type	Maximum Length	Description
timestamp	Yes	String	20	UTC timestamp when a request is initiated. Format: yyyyMMddHHmmssSSS
instanceId	Yes	String	64	Instance IDs separated by commas (,). Up to 100 instances can be queried each time.
testFlag	No	String	2	Whether a request is submitted for debugging. • 1: debugging request. • 0: non-debugging request. The default value is 0.

Example request:

```
https://example.isv.com?activity=queryInstance&instanceId=ebc28eb6-4606-4098-b4bd-c201c99a0654%2Cfe28e27e-1157-4105-8592-24cc9488db10%2C92df74e4-163e-4e0b-a206-d9800d33881b&testFlag=1&timestamp=20230327065233980&authToken=Eh%2F3Ud%2BR1j3d%2FwOui5CAcvRipM8IuribvgkXfJAsTfE%3D
```

Response Message

The following table describes the response parameters.

Table 2-1 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
resultCode	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
resultMsg	No	String	255	Result message.

Parameter	Mandatory	Type	Maximum Length	Description
encryptType	No	String	3	Algorithm for encrypting sensitive information. 1: AES256_CBC_PKCS5Padding (default) 2: AES128_CBC_PKCS5Padding NOTE If AES256_CBC_PKCS5Padding is used, the return value is 1 . If AES128_CBC_PKCS5Padding is used, the return value is 2 .
info	No	Instance Info[]	/	Instance details.

The following table describes the **InstanceInfo** data structure.

Table 2-2 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
instanceId	Yes	String	64	Instance ID.

Parameter	Mandatory	Type	Maximum Length	Description
applInfo	No	AppInfo	N/A	App instance information. After a customer purchases a product, return a login address (website address) or an address that does not require login for the customer to perform subsequent operations. NOTE You must provide customers who purchase your SaaS products with the app usage information, including the addresses, accounts, and passwords. If the usage information can be sent through SMS messages, emails, or other methods, this parameter is not required in the response. Otherwise, the app instance information must be returned in the response. You can use the memo parameter to specify usage instructions or other information if any. For details about the applInfo data structure, see the following table.
usageInfo	No	UsageInfo[]	N/A	Usage information associated with an app instance. This parameter is required for pay-per-use specifications and packages. For pay-per-usage packages, the usage information of all billing items associated with the packages needs to be returned.

The following table describes the **AppInfo** data structure.

Table 2-3 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
frontEndUrl	Yes	String	512	Frontend URL. URL of the website that the customer can access to use the purchased product.

Parameter	Mandatory	Type	Maximum Length	Description
adminUrl	No	String	512	Management URL. URL of the backend website that the customer can access to manage the purchased product.
userName	No	String	128	Encrypted administrator account. Account (usually an email address or mobile number) used by a customer to access the management backend. The value consists of a 16-bit encryption IV and a Base-encoded username ciphertext. <code>iv+base64(AES_CBC(<i>accessKey</i>,<i>userName</i>))</code> The account is encrypted using the key and encryption algorithm specified by encryptType . For details about the example code, see 2.8.3 ISV Server Encrypting the Username and Password After Resource Enabling .
password	No	String	128	Encrypted initial password of the administrator. Password (usually generated by you) used by a customer to access the management backend. The value consists of a 16-bit encryption IV and a Base-encoded password ciphertext. <code>iv+base64(AES_CBC(<i>accessKey</i>,<i>pwd</i>))</code> The password is encrypted using the key and encryption algorithm specified by encryptType . For details about the example code, see 2.8.3 ISV Server Encrypting the Username and Password After Resource Enabling .
memo	No	String	1,024	Remarks.

The following table describes the **UsageInfo** data structure.

Table 2-4 Response parameters

Parameter	Mandatory	Type	Maximum Length	Description
relatedInstanceId	No	String	64	ID of the associated pay-per-use instance. When a customer queries the usage of resources in a pay-per-use package, the resource instance IDs also need to be returned. For example, if a package has 100 SMS messages and 50 MMS messages, UsageInfo and relatedInstanceId values of the two message types are returned.
usageValue	Yes	Double(12,4)	20	Usage value, with up to four decimal places. For pay-per-use specifications, the value is the accumulated resource usage. For pay-per-use packages, the value is the used package quota.
statisticalTime	Yes	String	20	UTC time when usage statistics are collected. Format: yyyyMMddHHmmssSSS
dashboardUrl	No	String	512	URL of the dashboard for viewing usage details. After purchasing a pay-per-use specification or pay-per-usage package, customers can view the usage information on this dashboard.

Example response:

```
{
  "resultCode" : "000000",
  "resultMsg" : "success.",
  "encryptType" : "1",
  "info" : [{
    "instanceId" : "ebc28eb6-4606-4098-b4bd-c201c99a0654",
    "applInfo" : {
      "frontEndUrl" : "https://www.baidu.com",
      "adminUrl" : "https://www.baidu.com/admin",
      "userName" : "huawei",
      "password" : "huawei123456",
      "memo" : "Test"
    },
    "usageInfo" : [{
      "relatedInstanceId" : "ebc28eb6-4606-4098-b4bd-c201c99a0654",
      "usageValue" : "0.12",
      "statisticalTime" : "20221101025113409",
      "dashboardUrl" : "https://www.baidu.com/dashboard"
    }
  ]
}, {
  "instanceId" : "fe28e27e-1157-4105-8592-24cc9488db10",
  "applInfo" : {
```

```

        "frontEndUrl" : "https://www.baidu.com",
        "adminUrl" : "https://www.baidu.com/admin",
        "userName" : "huawei",
        "password" : "huawei123456",
        "memo" : "Test"
    },
    "usageInfo" : [{
        "relatedInstanceId" : "fe28e27e-1157-4105-8592-24cc9488db10",
        "usageValue" : "2042",
        "statisticalTime" : "20221101025113409",
        "dashboardUrl" : "https://www.baidu.com/dashboard"
    }
    ], {
    "instanceId" : "92df74e4-163e-4e0b-a206-d9800d33881b",
    "appInfo" : {
        "frontEndUrl" : "https://www.baidu.com",
        "adminUrl" : "https://www.baidu.com/admin",
        "userName" : "huawei",
        "password" : "huawei123456",
        "memo" : "Test"
    },
    "usageInfo" : [{
        "relatedInstanceId" : "ebc28eb6-4606-4098-b4bd-c201c99a0654",
        "usageValue" : "3309",
        "statisticalTime" : "20221101025113409",
        "dashboardUrl" : "https://www.baidu.com/dashboard"
    }
    ], {
        "relatedInstanceId" : "fe28e27e-1157-4105-8592-24cc9488db10",
        "usageValue" : "3309",
        "statisticalTime" : "20221101025113409",
        "dashboardUrl" : "https://www.baidu.com/dashboard"
    }
    ]
    }
}

```

2.4.8 Pay-per-Use Resource Usage Push

2.4.8.1 Usage Push (New)

Description

After a customer purchases and uses pay-per-use resources in KooGallery, call this interface to upload the service detail records (SDRs) of the customer. After obtaining the SDRs, KooGallery charges the customer for the usage.

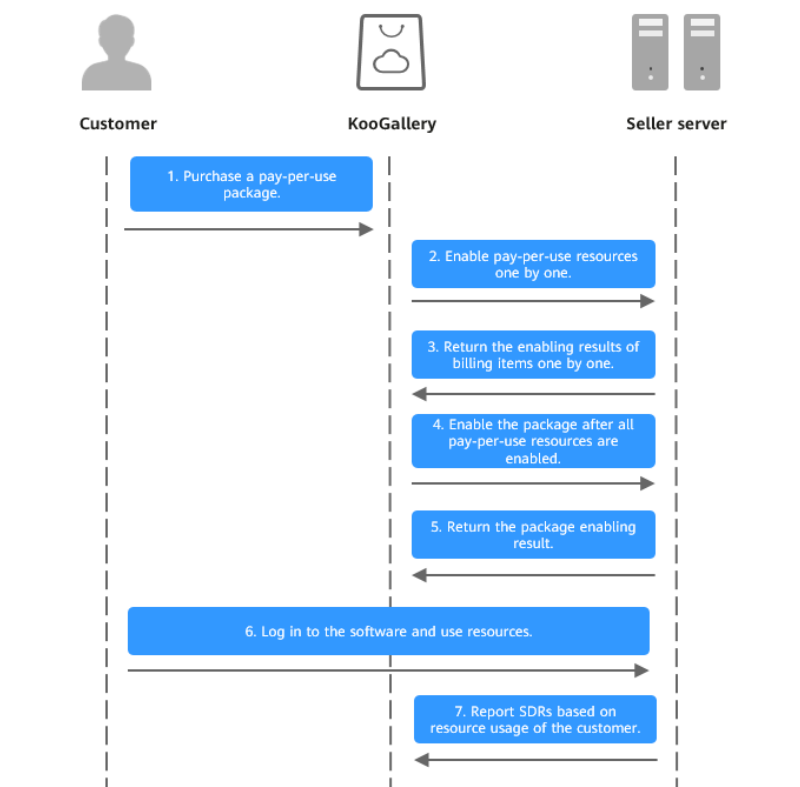
NOTE

For details about how to obtain SDKs, see [Calling APIs Through App Authentication](#).

You can obtain an AK/SK on the [Access Keys](#) page.

URI

POST <https://mkt-intl.myhuaweicloud.com/api/mkp-openapi-public/global/v1/isv/usage-data> (public network)



Request Message

The following table describes the request parameters.

Request method: POST

Parameter	Mandatory	Type	Maximum Length	Description
signature	Yes	String	1,000	@Header Interface signature (base64(hmacSHA256(Seller interconnection key,ts={ts}&nonce={nonce}&body={body})))) The body is signed after being sorted naturally.
ts	Yes	String	20	@Header Unix timestamp when an interface request is sent, in milliseconds.
nonce	Yes	String	64	@Header Security random number.

Parameter	Mandatory	Type	Maximum Length	Description
usage_records	Yes	List<UsagePushData>	1,000	SDR list. A list contains up to 1,000 UsagePushData records.

Table 2-5 UsagePushData

Parameter	Mandatory	Type	Maximum Length	Description
instance_id	Yes	String	64	Instance ID. Use the instance ID returned by the pay-per-use subscription interface.
record_time	Yes	String	17	Time when a usage record is generated (UTC). Format: yyyyMMdd'T'HHmmss'Z'
begin_time	Yes	String	17	Metering start time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
end_time	Yes	String	17	Metering end time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
usage_value	Yes	String	20	Usage value. The value is a positive number containing up to four significant decimal places.
metering_sn	Yes	String	64	Unique SDR ID. A random code is recommended.
related_package_instance	No	String	64	This parameter is mandatory in SDRs of stop-before-excess packages. The package instance ID needs to be transferred.

Example request:

```

Post {domain}/api/mkp-openapi-public/global/v1/issv/usage-data
Content-Type:application/json
nonce: 6c63c221-1f6b-4141-8ff4-22f5dfe82b65
ts: 1709690865879
signature: gikLslgimlscagwSamCLFJ1CFT4QprHSDHW...
{
  "usage_records": [
    {
      "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
      "record_time": "20220809T091000Z",
      "begin_time": "20220809T080000Z",

```

```

        "end_time": "20220809T090000Z",
        "usage_value": "99",
        "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfd"
    },
    {
        "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
        "record_time": "20220809T091000Z",
        "begin_time": "20220809T080000Z",
        "end_time": "20220809T090000Z",
        "usage_value": "999",
        "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfb"
    }
]
}

```

NOTE

1. During SDR upload, if SDR data is abnormal, no error is reported at the interface layer. The backend periodically verifies and processes the uploaded data and generates available SDR data. If the backend fails to process the data, report the data again.

You can view abnormal data on the [Transaction Management > Service Detail Records](#) page of the Seller Console.

2. Requirements for the SDR report period:

- **Hourly billing**

Report service detail records (SDRs) at least once an hour. It is recommended that SDRs be reported within the first 15 minutes of the next hour after a customer uses the resources. For example, if the customer uses resources at 13:25, report SDRs between 14:00 and 14:15. In this way, the customer can be charged in time. Otherwise, the fee deduction will be delayed. If you cannot report SDRs in real time, report them within 2 hours after resource consumption.

- **Daily billing**

Report SDRs to KooGallery every hour. If you can only report SDRs once a day, report them from 00:00 to 00:15. SDRs must be reported before 01:00. Otherwise, the fee will be deducted from customers on the next day.

3. Requirements for reporting SDRs:

- **When a resource is not closed:**

- SDR start time (**begin_time**) ≥ Resource start time
- SDR start time (**begin_time**) ≤ SDR end time (**end_time**) ≤ SDR report time

- **When a resource is closed:**

- SDR end time (**end_time**) ≤ Resource close time

4. The time in the reported SDRs is the UTC time.

5. If the values of **begin_time** and **end_time** in a record are the same and the record is reported for multiple times, only the first record is processed. SDRs are collected at 01:00 every day for daily billing and fifteenth minute of every hour for hourly billing. Once SDRs are collected and formal bills are generated, SDRs cannot be corrected.

Duplicate SDRs are regarded as abnormal. You can view abnormal data on the [Transaction Management > Service Detail Records](#) page of the Seller Console.

6. The usage push interface uses the instance ID returned by the pay-per-use subscription interface instead of that returned by the pay-per-use package subscription interface.

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
error_code	Yes	String	6	Result code. For details, see 2.5 Invocation Result Codes .
error_message	No	String	255	Result message.
data	No	Abnormal UsageDataInfo		Information about abnormal SDRs.

Table 2-6 AbnormalUsageDataInfo

Parameter	Mandatory	Type	Maximum Length	Description
abnormal_usage_data	Yes	List<Abnormal UsageData>	1,000	List of abnormal SDRs.

Table 2-7 AbnormalUsageData

Parameter	Mandatory	Type	Maximum Length	Description
metering_sn	Yes	String	64	Unique ID of an SDR.

Parameter	Mandatory	Type	Maximum Length	Description
error_code	Yes	String	16	SDR-level error code. 001: The instance does not exist. 002: Invalid time format. 003: Abnormal usage. 004: Missing SDR ID. 005: Duplicate SDR ID. 006: The product corresponding to the instance has been removed from the catalog. 007: The SDR has expired. 009: The instance does not match the seller. 010: Duplicate SDR. 011: Invalid SDR time range. 012: The instance is not a pay-per-use resource. 013: The instance resource status is abnormal. 014: The instance resource has been closed. 015: The SDR start time is earlier than the resource enabling time. 016: The instance is being enabled. 017: In the stop-before-excess scenario, relate_pkg_instance is empty. 018: In the stop-before-excess scenario, relate_pkg_instance is invalid or does not match instance_id .
error_message	Yes	String	255	SDR error message.

Error Code

Table 2-8 AbnormalUsageData

HTTP Status Code	Error Code	Error Message	Description
200	MKT.0000	Success	Request successful.

HTTP Status Code	Error Code	Error Message	Description
500	94060001	System error!	Other internal errors.
401	94060002	Auth failed!	Input parameter verification failed. Invalid value.
400	94060004	Param invalid	Invalid parameter. The parameter is not defined by the interface, there are more parameters than required, or a mandatory parameter is missing. For example, a value is invalid or there is no instance ID.
400	94060005	Time format error	Incorrect time format.
400	94060006	TimeStamp invalid	Invalid timestamp.
401	94060007	Signature invalid	Signature verification fails.
400	94060008	Replay error	Request replay error.
500	94060009	Failed to report usage data	Report SDR failed.
401	94060010	Isv status invalid	Invalid seller status.
200	94060999	Failed	SDR-level error information is returned. For details, see the example response.

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

Example response:

```
{
  "error_code": "MKT.0000",
  "error_msg": "Success"
}

{
  "error_code": "94060999",
  "error_msg": "Failed",
  "data": {
    "abnormal_usage_data": [
      {
        "error_code": "005",
        "error_msg": "METERING_SN_DUPLICATE",
        "metering_sn": "6c75c177b5fe4b8cbb6fc2aa33facfb"
      }
    ]
  }
}
```

```
}  
}
```

2.4.8.2 Usage Push (Old)

Description

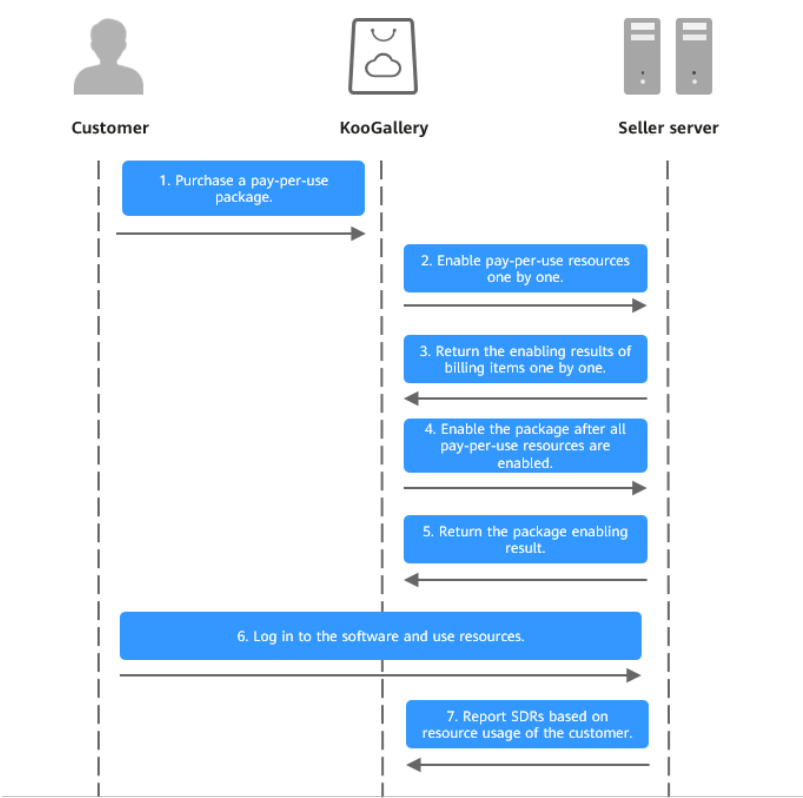
After a customer purchases and uses pay-per-use resources in KooGallery, call this interface to upload the SDRs of the customer. After obtaining the SDRs, KooGallery charges the customer for the usage.

NOTE

For details about how to obtain SDKs, see [Calling APIs Through App Authentication](#).
You can obtain an AK/SK on the [Access Keys](#) page.

URI

POST <https://mkt-intl.myhuaweicloud.com/rest/marketplace/v1/isv/usage-data>
(public network)



Request Message

The following table describes the request parameters.

Request method: POST

Parameter	Mandatory	Type	Maximum Length	Description
usage_records	Yes	List<UsagePushData>	1,000	SDR list. A list contains up to 1,000 UsagePushData records.

Table 2-9 UsagePushData

Parameter	Mandatory	Type	Maximum Length	Description
instance_id	Yes	String	64	Pay-per-use instance ID. Use the instance ID returned by the pay-per-use subscription interface.
product_id	Yes	String	64	ID of the product corresponding to the instance.
record_time	Yes	String	17	Time when a usage record is generated (UTC). Format: yyyyMMdd'T'HHmmss'Z'
begin_time	Yes	String	17	Metering start time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
end_time	Yes	String	17	Metering end time (UTC). Format: yyyyMMdd'T'HHmmss'Z'
usage_value	Yes	Double(12,4)	20	Usage value. The value is a positive number containing up to four significant decimal places.
relate_package_instance	No	String	64	Package instance ID. This parameter is required in SDRs of stop-before-excess packages.

Example request:

```
{
  "usage_records": [
    {
      "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
      "record_time": "20220809T091000Z",
      "begin_time": "20220809T080000Z",
      "end_time": "20220809T090000Z",
      "usage_value": "99"
    },
    {
      "instance_id": "7f141bf1-aec8-4859-8323-fb3a8ad50721",
      "record_time": "20220809T091000Z",
      "begin_time": "20220809T080000Z",

```

```
"end_time": "20220809T090000Z",  
"usage_value": "999"  
}  
]  
}
```

NOTE

1. During SDR upload, if SDR data is abnormal, no error is reported at the interface layer. The backend periodically verifies and processes the uploaded data and generates available SDR data. If the backend fails to process the data, report the data again.
You can view abnormal data on the [Transaction Management > Service Detail Records](#) page of the Seller Console.
2. Requirements for the SDR report period:
 - **Hourly billing**
Report SDRs at least once an hour. It is recommended that SDRs be reported within the first 15 minutes of the next hour after a customer uses the resources. For example, if the customer uses resources at 13:25, report SDRs between 14:00 and 14:15. In this way, the customer can be charged in time. Otherwise, the fee deduction will be delayed. If you cannot report SDRs in real time, report them within 2 hours after resource consumption.
 - **Daily billing**
Report SDRs to KooGallery every hour. If you can only report SDRs once a day, report them from 00:00 to 00:15. SDRs must be reported before 01:00. Otherwise, the fee will be deducted from customers on the next day.
3. Requirements for reporting SDRs:
 - **When a resource is not closed:**
 - SDR start time (**begin_time**) ≥ Resource start time
 - SDR start time (**begin_time**) ≤ SDR end time (**end_time**) ≤ SDR report time
 - **When a resource is closed:**
 - SDR end time (**end_time**) ≤ Resource close time
4. The time in the reported SDRs is the UTC time.
5. If the values of **begin_time** and **end_time** in a record are the same and the record is reported for multiple times, only one record is processed. SDRs are collected at 01:00 every day for daily billing and fifteenth minute of every hour for hourly billing. Once SDRs are collected and formal bills are generated, SDRs cannot be corrected.
- 6. The usage push interface uses the instance ID returned by the pay-per-use subscription interface instead of that returned by the pay-per-use package subscription interface.

Response Message

The following table describes the response parameters.

Parameter	Mandatory	Type	Maximum Length	Description
error_code	Yes	String	6	Result code. For details, see the following error codes.
error_message	No	String	255	Result message.

The following table describes the error codes.

HTTP Status Code	Error Code	Error Message	Description
200	MKT.0000	Success.	Request successful.
500	MKT.0999	System internal error.	Other internal errors.
500	MKT.0100	Failure of input parameter	Input parameter verification failed. Invalid value.
400	MKT.0101	Invalid parameter	Invalid parameter. The parameter is not defined by the interface, there are more parameters than required, or a mandatory parameter is missing.
400	MKT.0102	Invalid body sign	Failed to verify the signature of the request body.
400	MKT.0199	Request parameter error	Incorrect request parameter.
401	MKT.0150	Illegal operation	You are trying to perform an unauthorized operation. For example, the product corresponding to instance_id is not released by the seller corresponding to the AK/SK.
401	MKT.0151	No authority	Insufficient permissions to access the API. The token does not belong to a seller.
401	MKT.0154	Illegal token	Authentication failed. Invalid token.
500	MKT.9001	Instance ID not found.	The instance ID does not exist. (This result code may be returned when the renewal, expiration, or resource release interface is called.)
500	MKT.9002	Invalid usage entities.	Invalid usage entities.
500	MKT.9003	Usage records extend size limit.	Too many records. Max. records: 1,000.
500	MKT.9004	Record beginTime extends Limit.	The start time exceeds the validity period (last 21 days).

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

Example response:

```
{
  "error_code": "MKT.0000",
  "error_msg": "success"
}
```

2.5 Invocation Result Codes

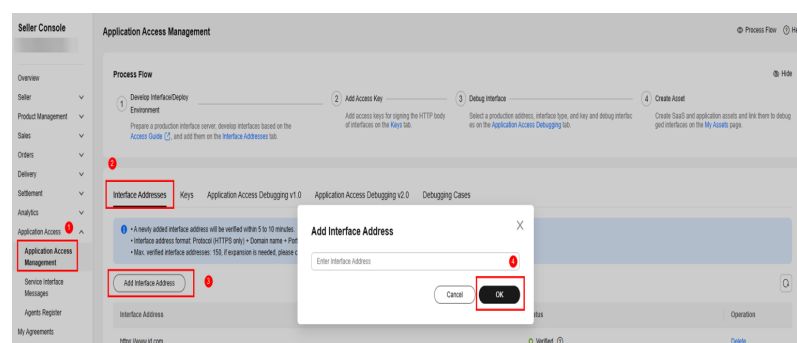
Module	Result Code	Description
Common	000000	Succeeded.
	000001	Authentication failed.
	000002	Invalid request parameter.
	000003	The instance ID does not exist. (This result code may be returned when the renewal, expiration, or resource release interface is called.)
	000004	The request is being processed.
	000005	Other internal errors.
Subscription	000100	No instance resource can be allocated.

2.6 Interface Debugging

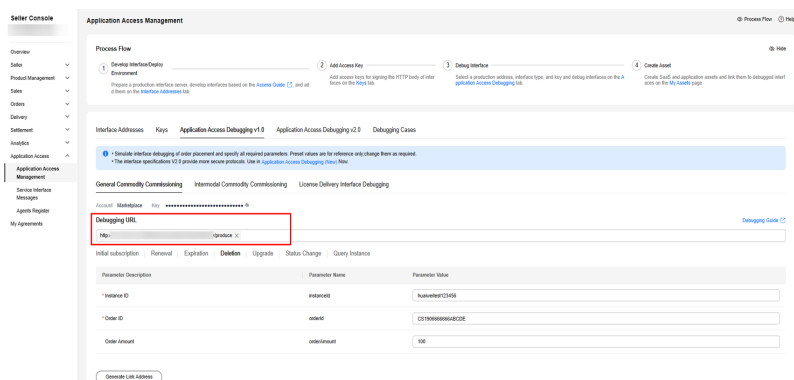
Procedure

Step 1 Choose **Application Access > Application Access Management** in the navigation pane of the Seller Console, click the **Interface Addresses** tab, add an interface address, and complete the verification.

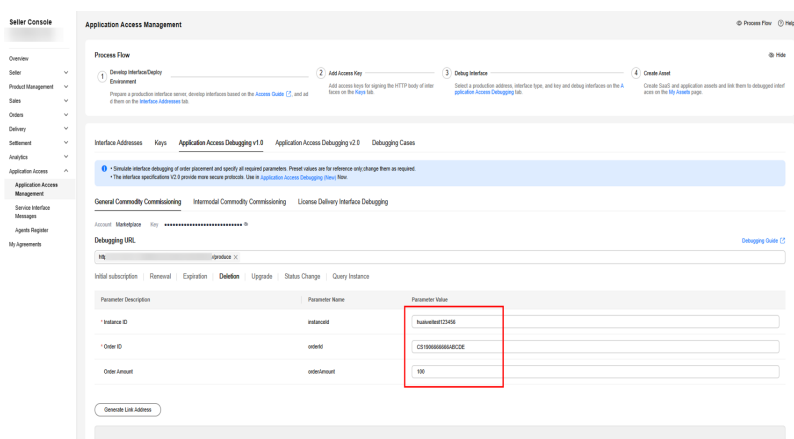
Enter the domain name as the production address, without the path. Example: <https://console.huaweicloud.com>



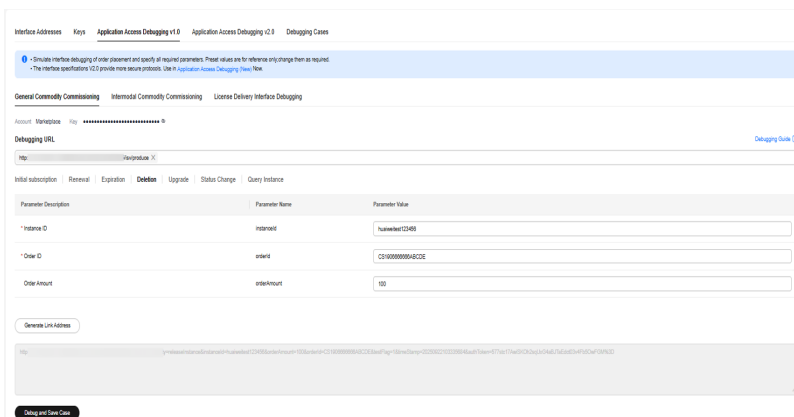
Step 2 Enter the verified interface address and path, for example, `https://console.huaweicloud.com/test/test1`.



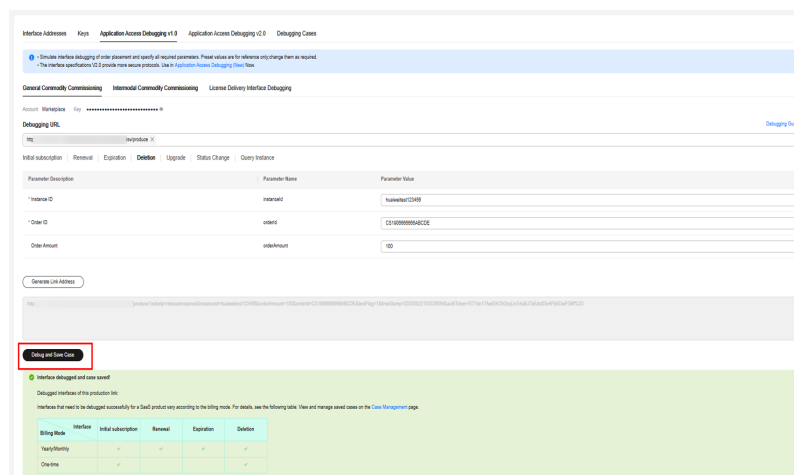
Step 3 Click **Debug** to debug an interface using parameters preset in your system based on the request parameter description of the interface.



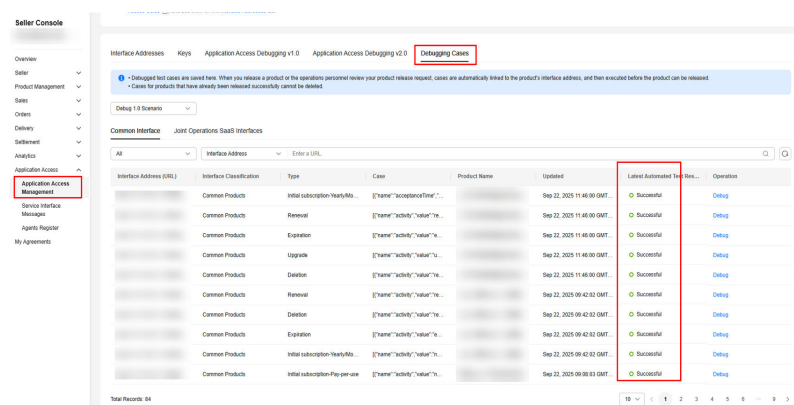
Step 4 Click **Generate Link Address** to generate a request example.



Step 5 Click **Debug and Save Case**. The system calls the interface address to test the interface. If the test is successful, the system displays a message indicating debugging is successful and the case is saved. If the test fails, the error message is displayed in the lower part of the page. You can modify the interface based on the error message.



Step 6 When the debugging is successful, choose **Application Access > Application Access Management** in the navigation pane, click the **Debugging Cases** tab, and view the test case.



NOTE

- Interfaces can be repeatedly called.
- Interfaces must support idempotence.

----End

2.7 Managing SaaS Assets

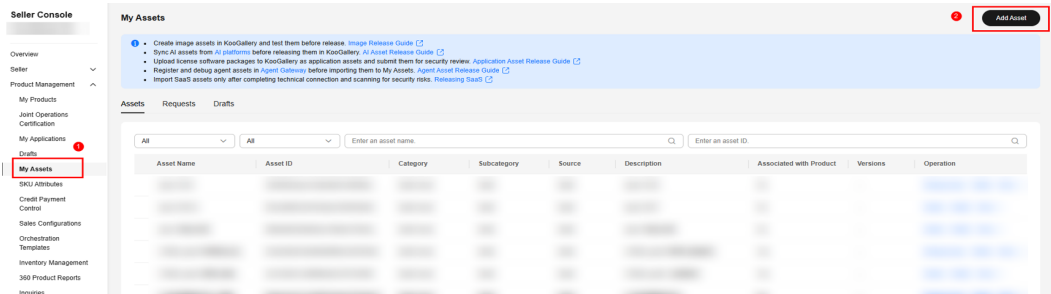
KooGallery provides a unified asset management center for you to add, modify, delete, and perform other operations on assets.

SaaS assets you added will be used for subsequent commercial SaaS release. Before releasing SaaS assets, ensure that you have developed and debugged related interfaces and that your SaaS websites (including the service frontend and management backend portal) do not have **high-risk vulnerabilities** such as XSS, SQL injection, CSRF, XXE injection, OS injection, cross-directory access, file upload vulnerabilities, sensitive information leakage, URL redirection leakage, TLS configuration defects, and web page Trojan horses.

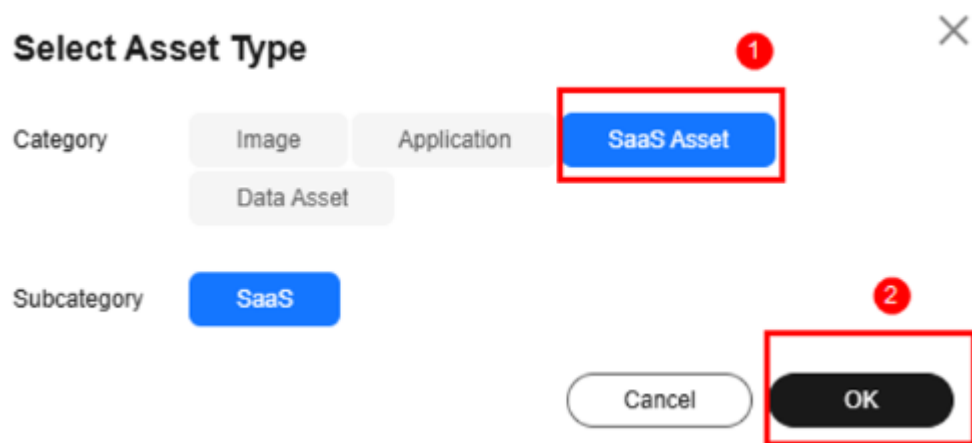
Adding a SaaS Asset

Step 1 Go to the [Seller Console](#).

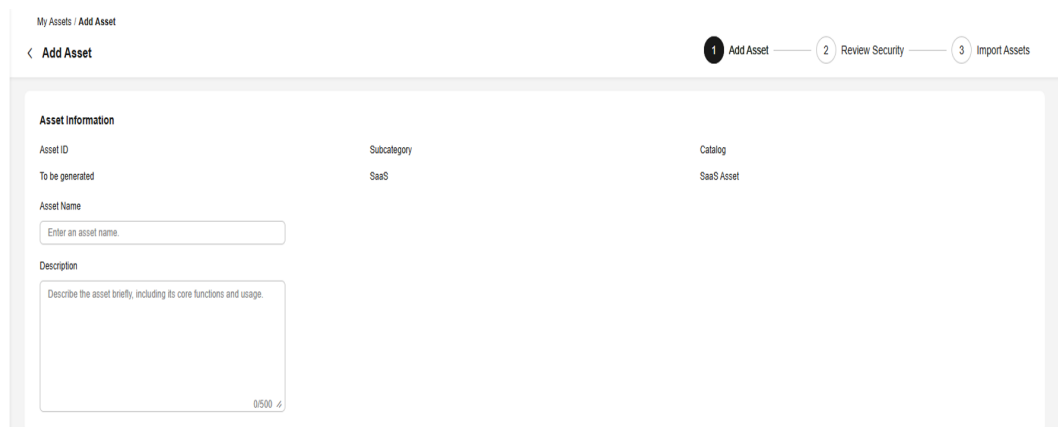
Step 2 In the navigation pane, choose **Product Management > My Assets**. On the displayed page, click **Add Asset** in the upper right corner.



Step 3 In the **Select Asset Type** dialog box, set **Category** to **SaaS Asset** and click **OK**.

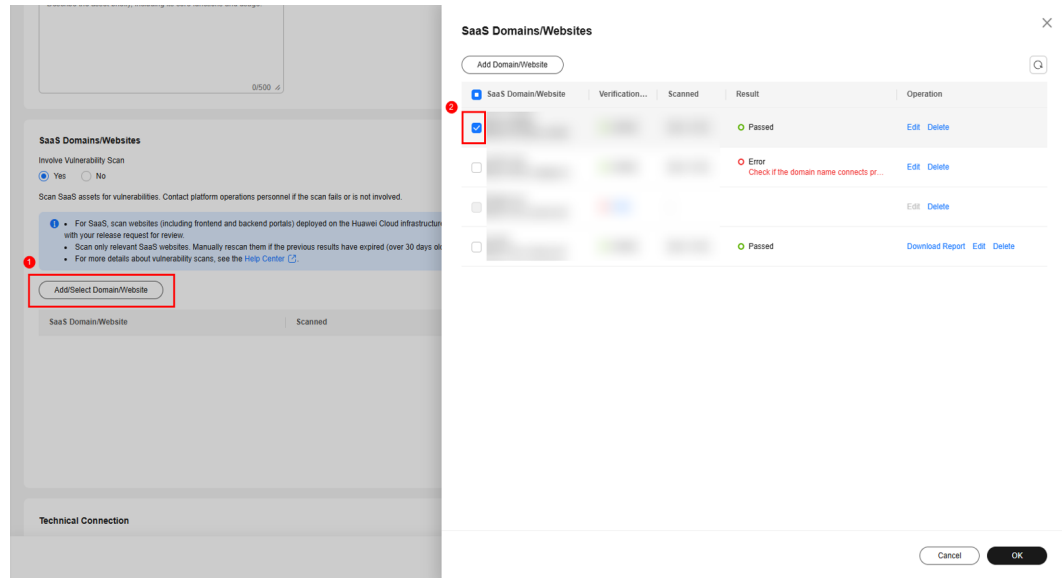


Step 4 Enter the asset information. It is recommended that the asset name be the same as the software name.



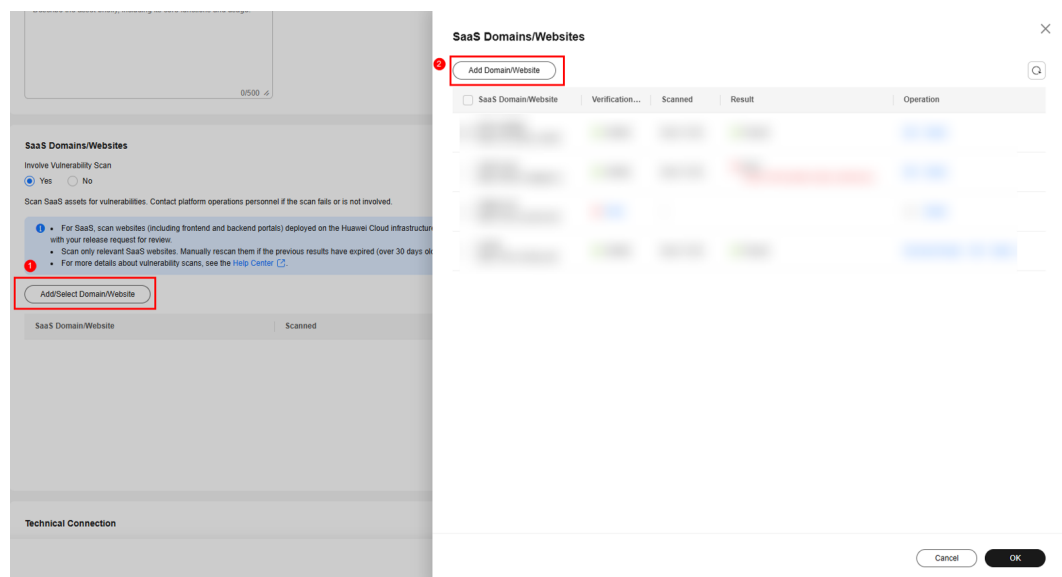
Step 5 Add a SaaS domain name or website.

- Select the SaaS domain name that has passed the security scan.



- If a domain name of SaaS to release has passed the security scan, perform the following steps:

1. Click **Add Domain/Website**.



2. Enter basic details and click **Next**.

Add Domain/Website ×

1 Add Domain/Website — 2 Verify Domain Ownership — 3 Configure Website

Domain/Website Name

Domain Name

Add an Internet-accessible domain name that has passed verification on the [Interface Addresses](#) page.

Cancel Next

3. Verify the domain name ownership, select **I have read and agree to the HUAWEI CLOUD Vulnerability Scan Service Agreement**, and click **Verify**.

Verify Domain ×

✓ Add Domain/Website — 2 Verify Domain Ownership — 3 Configure Website

1 Procedure

1. Download the verification file to a local directory.
2. Upload the verification file to the root directory of the website. Do not modify the file name or content.
3. Verify whether the file can be [accessed over public networks](#). [↗](#)
4. Click Verify to verify the domain.

☐ have read and agree to the HUAWEI CLOUD Vulnerability Scan Service Agreement.

Cancel Previous Verify

 CAUTION

- The scanned SaaS domain name should match the one requested by customers.
- Do not modify the content of the downloaded verification file. Save the file to the root directory of the domain name or website.

4. Enter the website settings, select a login mode (username/password or cookies), and click **Confirm**.

Edit

Basic Info

If the website has webpages that can only be accessed after login, configure the following login methods so that the scan tool can help you detect more security issues.

Login Info

Login method 1: Username and password

Login Address

Username

Password

Confirm Password

Login method 2: Cookies

Cookie Value

Obtain Cookies

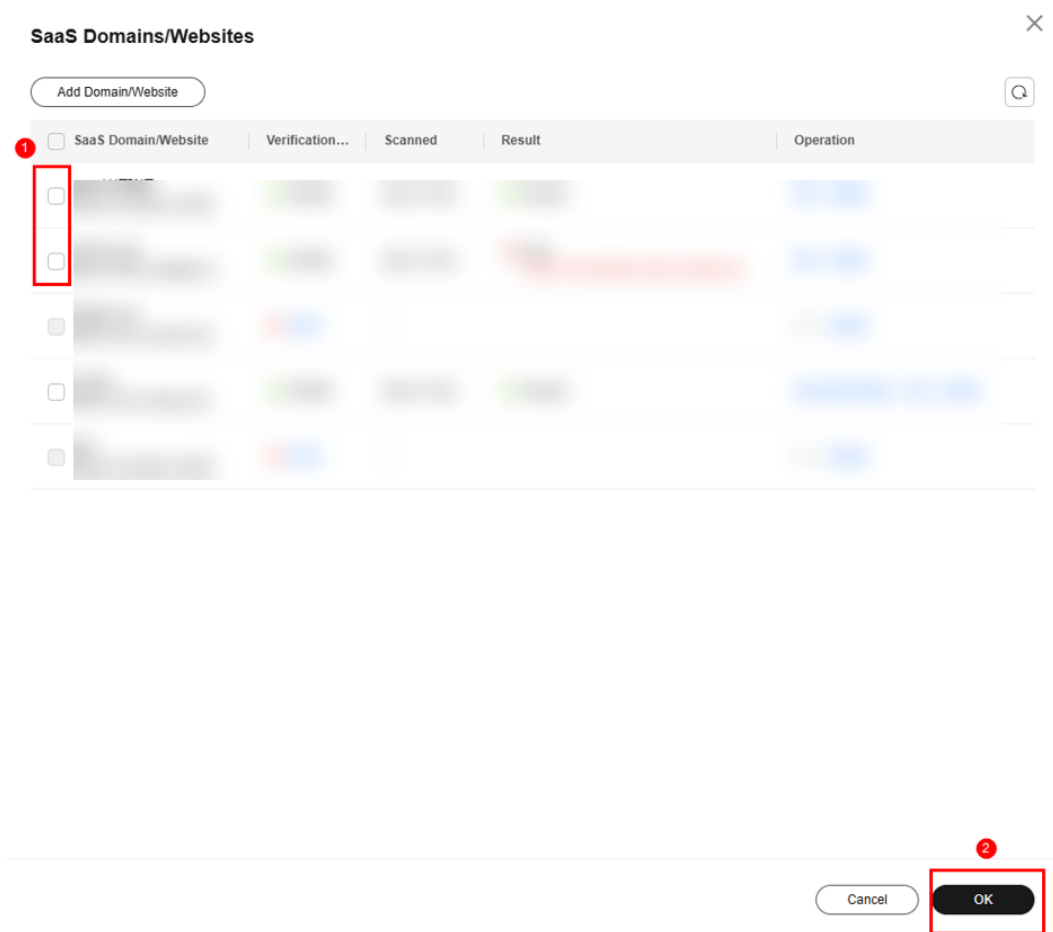
Webpage for Verification

Webpage Address

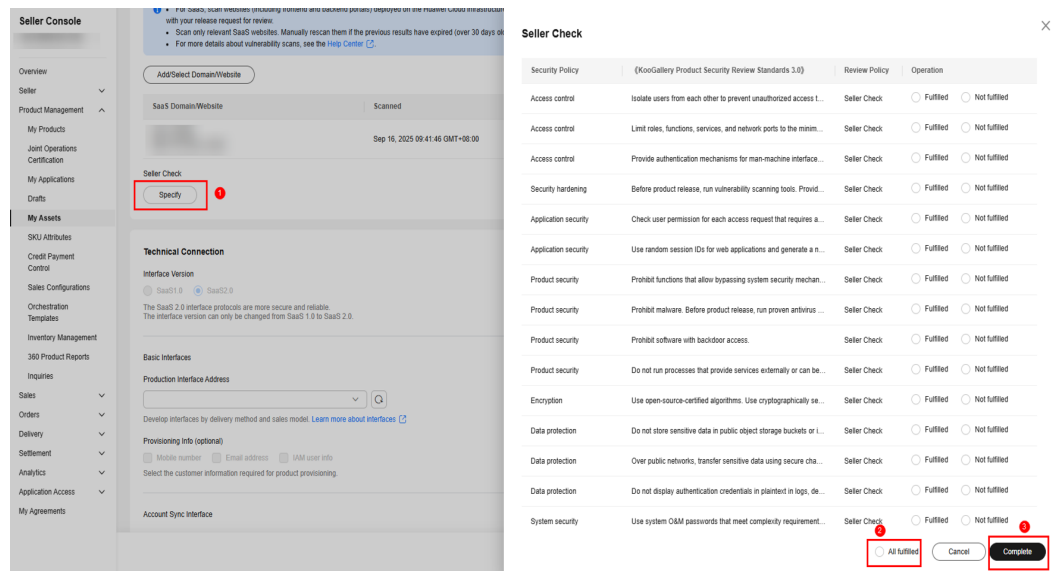
Cancel

Confirm

- After the SaaS domain name is added, select it.



6. Perform self-check and click **Complete**.



Step 6 Add technical connection information. If no interface address is available, develop interfaces by referring to [SaaS Access Guide V2.0 \(New Products\)](#).

- Basic interfaces: required for both common and joint operations products.

Basic Interfaces

Production Interface Address

http:

Develop interfaces by delivery method and sales model. [Learn more about interfaces](#)

Debug interfaces before releasing SaaS. [Debug Now](#) [Help Documentation](#) [Case Management](#)

Interface	Debugging Result	Description
Instance Creation	Success	After a customer pays for a product, KooGallery calls this interface to ask you to create an instance.
Instance Update	Success	After a customer purchases a yearly/monthly product after trial use, renews it, or cancels a renewal, KooGallery calls this interface to update the instance expiration date.
Instance Status Update	Success	When a yearly/monthly subscription ends or has violations, KooGallery calls this interface to freeze the instance.
Instance Release	Success	When a product instance is released (for example, the instance is not renewed upon expiration or unsubscribed from), KooGallery calls this interface to delete the instance.
upgrade instance	Success	Once a customer pays for a product upgrade, KooGallery calls this interface to ask you to upgrade the specifications and record the upgraded product data.
query instance	Success	After you create an instance, KooGallery queries the instance info using the instance ID.
Instance Renew Change	Success	When a customer requests to upgrade or downgrade resource specifications during renewal, KooGallery calls this interface to check whether your server supports such changes.

- **Extension Parameters (optional):** Customers need to specify them when placing an order. Select parameters as required.

Extension Parameters (optional)

Select the extended parameters that customers need to specify when they place an order.

Parameter Description	Parameter Name	Message	Operation
		Note or tips of no more than 128 characters to be displayed in the text box for parameter setting.	Delete

- **Provisioning Info (optional):** Select the sensitive customer information (mobile number, email address, or Huawei Cloud IAM user name) required for SaaS interfaces to enable the product.

Provisioning Info (optional)

☒ Mobile number ☒ Email address ☐ IAM user info

Select the customer information required for product provisioning.



WARNING

From October 25, 2025, new SaaS assets no longer support the transfer of Huawei Cloud IAM user information through APIs. The existing SaaS assets are not affected.

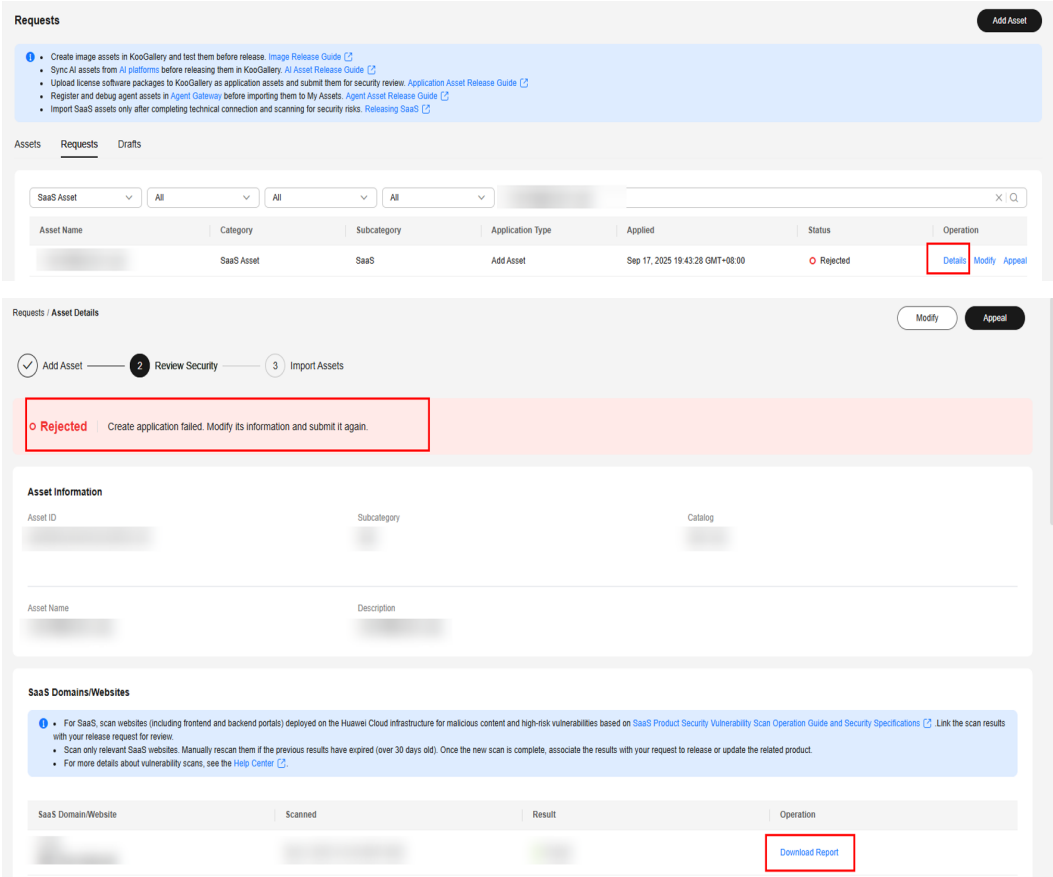
Step 7 Click **Submit for Review**. After the asset is submitted, you can [check the asset review status](#).

----End

Checking the Asset Review Status

You can check the review status on the **Requests** tab under **Product Management > My Assets**.

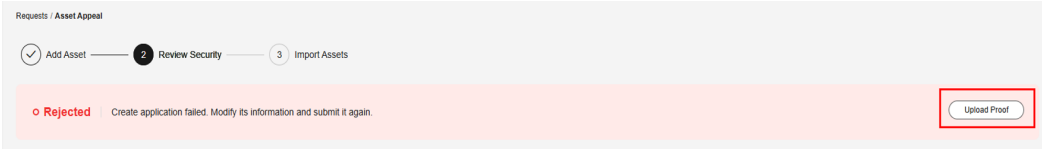
- **Approved:** You can [release the asset as a SaaS product](#).
- **Scanning:** Wait for the system to check whether it complies with [KooGallery Product Security Review Standards 3.0](#). If you have any questions, submit a service ticket to contact the customer service.
- **Rejected:** Click **Details**. On the asset details page, scroll down to **SaaS Domains/Websites** and click the security scan report to download and view it.



- If the security issues have been rectified, click **Modify**, and submit the modified asset for review again.
- If there are false positives, click **Appeal** to file an appeal.
 - i. Enter the false positive conclusion in columns F, G, and H in the downloaded *Security Scanning Report* and save it.

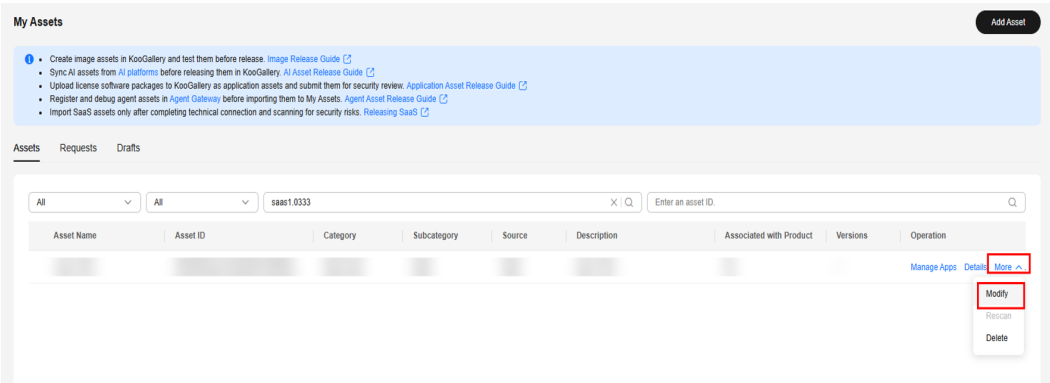
A	B	C	D	E	F	G	H	I	J
Number	Type	Detection Item	Cause of Failure	The Solution	Misreport (Filed by Merchant)	Vulnerability Analysis (Filed by Merchant)	Evidence Screenshot or Link (Filed by Merchant)	First Manager Evaluation (Decision Filed by Huawei)	Remarks (Filed by Huawei)
1	Open-source software vulnerabilities	apache zookeeper	Component version:3.6.2 File name:zookeeper-jute-3.6.2.jar File path: C20094a075a44a92c0d9ab63875 624-csp-VIS/zookeeper-jute- 3.6.2.jar Vulnerability Name: CVE-2021- 37455 Vulnerability severity:High	You can search for the solution at the following website by vulnerability name: https://menc.info/ https://bugzilla.redhat.com/ https://security.snyk.io/	Misreport				
2	Open-source software vulnerabilities	apache zookeeper	Component version:3.6.2 File name:zookeeper-jute-3.6.2.jar File path: C20094a075a44a92c0d9ab63875 624-csp-VIS/zookeeper-jute- 3.6.2.jar Vulnerability Name: CVE-2023- 44891 Vulnerability severity:Critical	You can search for the solution at the following website by vulnerability name: https://menc.info/ https://bugzilla.redhat.com/ https://security.snyk.io/	Misreport				

- ii. Click **Upload Proof**, upload the saved file, and click **Submit** in the lower right corner. The asset status changes to **Reviewing**. KooGallery will review the asset within three working days.

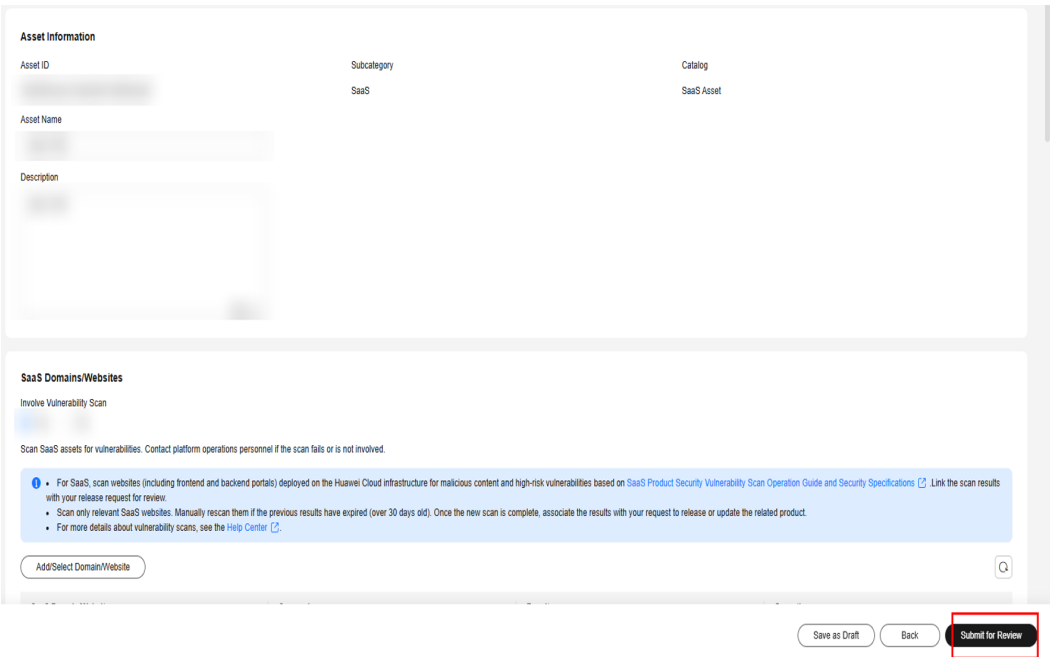


Modifying an Asset

- Step 1** On the **Assets > My Assets** tab, search for the target asset and choose **More > Modify** in the **Operation** column.

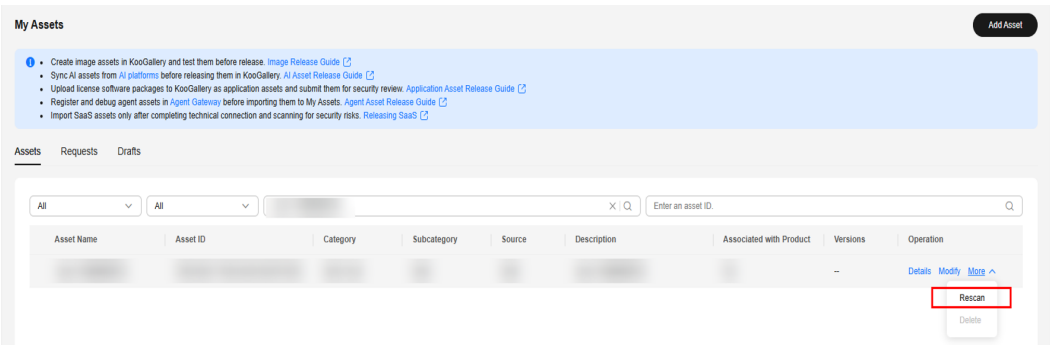


Step 2 On the **Modify Asset** page, select the information to be changed and click **Submit for Review**.



CAUTION

The scan results of a SaaS asset are valid only for 30 days. If they expire, you need to rescan the asset.

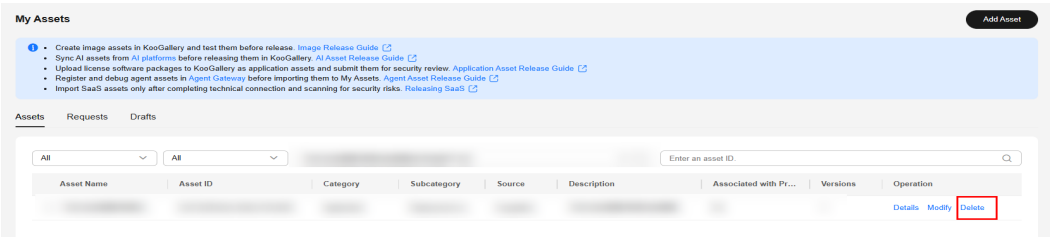


----End

Deleting an Asset

You can delete assets that are not associated with products and those in the draft box.

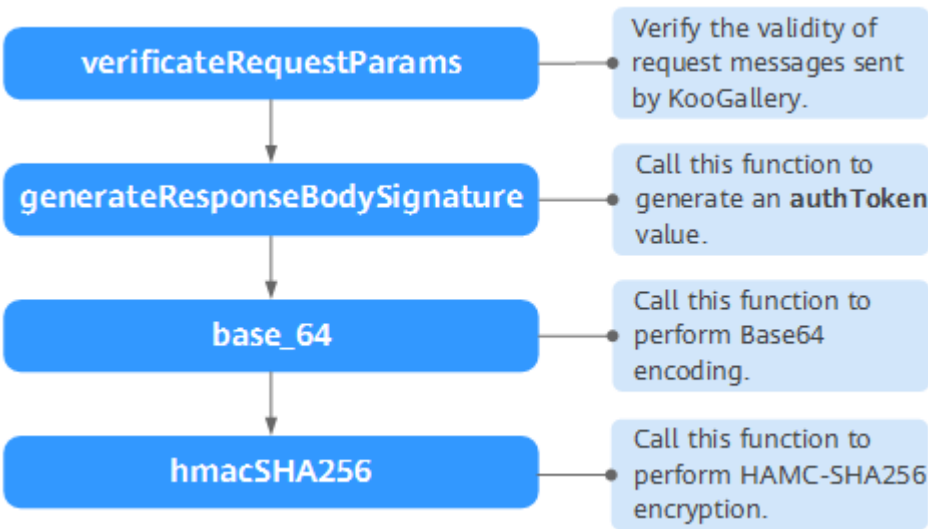
On the **Assets** page, click **Delete** in the **Operation** column of the asset to be deleted and confirm the deletion.



2.8 Code Example (Java)

2.8.1 ISV Server Verifying Requests

The following figure shows the overall process of code invocation for request verification.



```
/**
 * Verify the validity of requests.
 * @param request --HTTP requests
 * @param accessKey --Access key
 * @param encryptLength --Length of the encrypted content
 * @return --Verification result
 */
public static boolean verificateRequestParams(javax.servlet.http.HttpServletRequest request,
String accessKey,int encryptLength)
{
    // Resolve the URL.
    Map<String, String[]> paramsMap = request.getParameterMap();
    String timeStamp = null;
    String authToken = null;
    String[] timeStampArray = paramsMap.get("timeStamp");
    if (null != timeStampArray && timeStampArray.length > 0)
    {
        timeStamp = timeStampArray[0];
    }
    String[] authTokenArray = paramsMap.remove("authToken");
    if (null != authTokenArray && authTokenArray.length > 0)
    {
        authToken = authTokenArray[0];
    }

    // Sort the remaining parameters and combine them to form the encrypted
    content.
    Map<String, String[]> sortedMap = new TreeMap<String, String[]>();
    sortedMap.putAll(paramsMap);
    StringBuffer strBuffer = new StringBuffer();
    Set<String> keySet = sortedMap.keySet();
    Iterator<String> iter = keySet.iterator();
    while (iter.hasNext())
    {
        String key = iter.next();
        String value = sortedMap.get(key)[0];
        strBuffer.append("&").append(key).append("=").append(value);
    }

    // Rectify the message body by removing the ampersand (&) before the first
    parameter.
```

```
String reqParams = strBuffer.toString().substring(1);
String key = accessKey + timeStamp;
String signature = null;
try
{
    signature = generateResponseBodySignature(key, reqParams);
}
catch (InvalidKeyException | NoSuchAlgorithmException
| IllegalStateException | UnsupportedEncodingException e)
{
    // TODO Auto-generated catch block
}
return authToken.equals(signature);
}
```

```
/**
 * Generate an example signature demo of an HTTP response body.
 * @param key --Access key obtained on the Seller Console. Log in to the Seller
 * Console to view the access key.
 * @param body --HTTP response message body
 * @return --Encryption result
 * @throws InvalidKeyException
 * @throws NoSuchAlgorithmException
 * @throws IllegalStateException
 * @throws UnsupportedEncodingException
 */
public static String generateResponseBodySignature(String key, String body)
throws InvalidKeyException, NoSuchAlgorithmException,
IllegalStateException, UnsupportedEncodingException
{
    return base_64(hmacSHA256(key, body));
}
```

```
/**
 *
 * HMAC-SHA256 encryption algorithm
 * @param macKey --Key
 * @param macData --Encryption content, that is, the response message body
 * @return --Ciphertext
 * @throws NoSuchAlgorithmException
 * @throws InvalidKeyException
 * @throws IllegalStateException
 * @throws UnsupportedEncodingException
 */
public static byte[] hmacSHA256(String macKey, String macData)
throws NoSuchAlgorithmException, InvalidKeyException,
IllegalStateException, UnsupportedEncodingException
{
    SecretKeySpec secret =
    new SecretKeySpec(macKey.getBytes(), "HmacSHA256");
    Mac mac = Mac.getInstance("HmacSHA256");
    mac.init(secret);
    byte[] doFinal = mac.doFinal(macData.getBytes("UTF-8"));
    return doFinal;
}
```

```
/**
 *
 * Convert the byte array into a string.
 * @param bytes --Byte array
 * @return --String
 */
public static String base_64(byte[] bytes)
{
    return new String(Base64.encodeBase64(bytes));
}
```

2.8.2 ISV Server Signing a Response Message Body

Code Invocation

```
/**
 * Demo of generating a signature of an HTTP response body
```

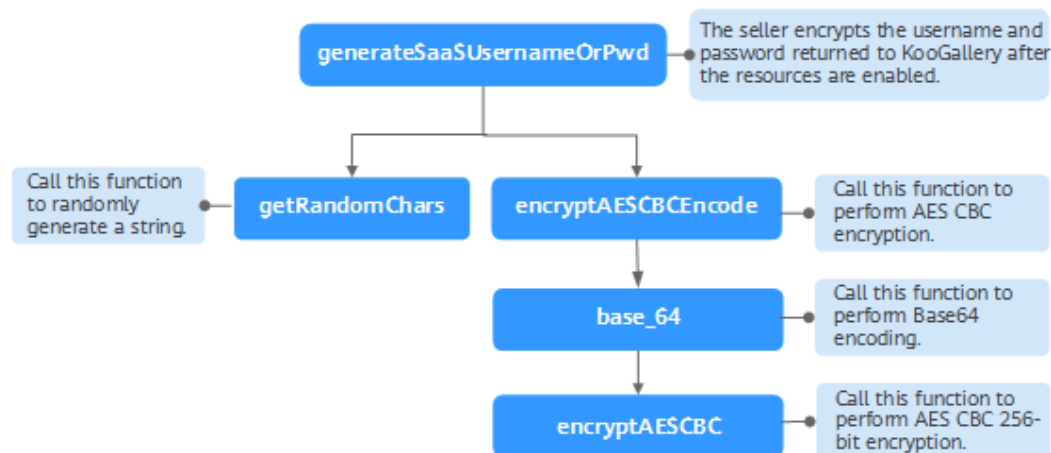
```

* @param key --Access key obtained on the Seller Console. Log in to the Seller Console to view the access key.
* @param body --HTTP response message body
* @return --Encryption result
* @throws InvalidKeyException
* @throws NoSuchAlgorithmException
* @throws IllegalStateException
* @throws UnsupportedEncodingException
*/
public static String generateResponseBodySignature(String key, String body)
throws InvalidKeyException, NoSuchAlgorithmException,
IllegalStateException, UnsupportedEncodingException
{
    return base_64(hmacSHA256(key, body));
}

```

2.8.3 ISV Server Encrypting the Username and Password After Resource Enabling

The following figure shows the overall process of code invocation.



```
/**
 * Encrypt the username and password returned after the resources are released.
 * @param key --Key
 * @param str --Original content
 * @param encryptLength --Length of the encrypted content
 * @return --Encryption result
 */
public static String generateSaaSUsernameOrPwd(String key, String str, int
encryptLength)
{
    String iv = getRandomChars(16);
    String afterEncryptStr = "";
    try
    {
        afterEncryptStr = encryptAESCBCEncode(str, key, iv, encryptLength);
    }
    catch (InvalidKeyException | NoSuchAlgorithmException
    | NoSuchPaddingException | InvalidAlgorithmParameterException
    | IllegalBlockSizeException | BadPaddingException e)
    {
        //TODO: Troubleshooting
    }
    System.out
.println(afterEncryptStr);
    return iv + afterEncryptStr;
}
```



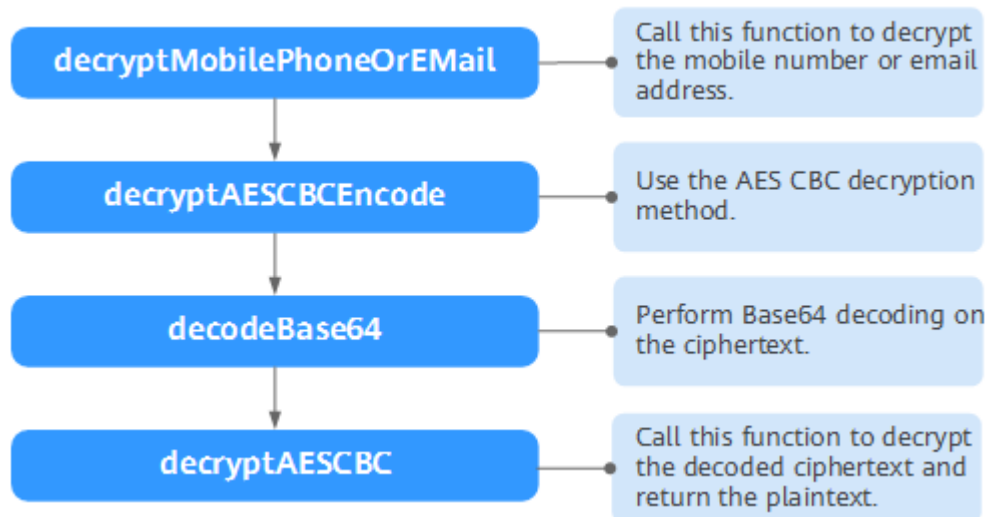
```
/**
 * Randomly generate a string.
 * @param length --Length of the randomly generated string
 * @return --Random string
 */
public static String getRandomChars(int length)
{
    String randomChars = "";
    SecureRandom random = new SecureRandom();
    for (int i = 0; i < length; i++)
    {
        // Randomly choose letters and digits.
        if (random.nextInt(2) % 2 == 0)
        {
            // Specify whether uppercase or lowercase letters are output.
            int letterIndex = random.nextInt(2) % 2 == 0 ? 65 : 97;
            randomChars += (char) (random.nextInt(26) + letterIndex);
        }
        else
        {
            randomChars += String.valueOf(random.nextInt(10));
        }
    }
    return randomChars;
}
```

```
/**
 * AES CBC encryption
 * @param content --Content to be encrypted
 * @param key --Encryption key
 * @param iv --IV
 * @param encryptLength --Only lengths of 128 bits and 256 bits are supported.
 * @return --Encryption result
 * @throws BadPaddingException
 * @throws IllegalBlockSizeException
 * @throws InvalidAlgorithmParameterException
 * @throws NoSuchPaddingException
 * @throws NoSuchAlgorithmException
 * @throws InvalidKeyException
 */
public static String encryptAESCBCEncode(String content, String key,
String iv, int encryptLength)
throws InvalidKeyException, NoSuchAlgorithmException,
NoSuchPaddingException, InvalidAlgorithmParameterException,
IllegalBlockSizeException, BadPaddingException
{
    if (StringUtils.isEmpty(content) || StringUtils.isEmpty(key)
|| StringUtils.isEmpty(iv))
    {
        return null;
    }
    return base_64(
        encryptAESCBC(content.getBytes(), key.getBytes(), iv.getBytes(),
        encryptLength));
}
```

```
/**
 *
 * AES CBC 256-bit encryption
 * @param content --Byte array of the encrypted content
 * @param keyBytes --Encrypted byte array
 * @param iv --Byte array of the encrypted IV
 * @param encryptLength --Only lengths of 128 bits and 256 bits are supported.
 * @return --Decrypted byte content
 * @throws NoSuchAlgorithmException
 * @throws NoSuchPaddingException
 * @throws InvalidKeyException
 * @throws InvalidAlgorithmParameterException
 * @throws IllegalBlockSizeException
 * @throws BadPaddingException
 */
public static byte[] encryptAESCBC(byte[] content, byte[] keyBytes,
byte[] iv, int encryptLength)
throws NoSuchAlgorithmException, NoSuchPaddingException,
InvalidKeyException, InvalidAlgorithmParameterException,
IllegalBlockSizeException, BadPaddingException
{
    KeyGenerator keyGenerator = KeyGenerator.getInstance("AES");
    SecureRandom secureRandom = SecureRandom.getInstance("SHA1PRNG");
    secureRandom.setSeed(keyBytes);
    keyGenerator.init(encryptLength, secureRandom);
    SecretKey key = keyGenerator.generateKey();
    Cipher cipher = Cipher.getInstance("AES/CBC/PKCS5Padding");
    cipher.init(Cipher.ENCRYPT_MODE, key, new IvParameterSpec(iv));
    byte[] result = cipher.doFinal(content);
    return result;
}
```

2.8.4 ISV Server Decrypting the Mobile Number and Email Address

The following figure shows the code invocation.



```
/**
 *
 * Decrypt a mobile number or an email address.
 * @param key --Key
 * @param str --Ciphertext
 * @param encryptLength --Length of the encrypted content
 * @return --Decryption result
 */
public static String decryptMobilePhoneOrEmail(String key, String str, int
encryptLength)
{
    if(null != str && str.length() > 16)
    {
        String iv = str.substring(0, 16);
        String encryptStr = str.substring(16);
        String result = null;
        try
        {
            result = decryptAESCBCDecode(encryptStr,
            key,
            iv,
            encryptLength);
        }
        catch (InvalidKeyException | NoSuchAlgorithmException
        | NoSuchPaddingException | InvalidAlgorithmParameterException
        | IllegalBlockSizeException | BadPaddingException e)
        {
            //TODO: Troubleshooting
        }
        return result;
    }
    return null;
}
```

```
/**
 * Decrypt AES-CBC-encrypted content.
 * @param content --Original content
 * @param key --Key
 * @param iv --IV
 * @return --Decryption result
 * @throws BadPaddingException
 * @throws IllegalBlockSizeException
 * @throws InvalidAlgorithmParameterException
 * @throws NoSuchPaddingException
 * @throws NoSuchAlgorithmException
 * @throws InvalidKeyException
 */
public static String decryptAESCBCEncode(String content, String key,
String iv, int encryptType) throws InvalidKeyException, NoSuchAlgorithmException,
NoSuchPaddingException, InvalidAlgorithmParameterException,
IllegalBlockSizeException, BadPaddingException
{
    if (StringUtils.isEmpty(content) || StringUtils.isEmpty(key)
    || StringUtils.isEmpty(iv))
    {
        return null;
    }
    return new String(decryptAESCBC(Base64.decodeBase64(content.getBytes()),
key.getBytes(),
iv.getBytes(),encryptType));
}

public static byte[] decryptAESCBC(byte[] content, byte[] keyBytes,
byte[] iv, int encryptType) throws NoSuchAlgorithmException,
NoSuchPaddingException, InvalidKeyException, InvalidAlgorithmParameterEx-
ception, IllegalBlockSizeException, BadPaddingException
{
    KeyGenerator keyGenerator = KeyGenerator.getInstance("AES");
    SecureRandom secureRandom = SecureRandom.getInstance("SHA1PRNG");
    secureRandom.setSeed(keyBytes);
    keyGenerator.init(encryptType, secureRandom);
    SecretKey key = keyGenerator.generateKey();
    Cipher cipher = Cipher.getInstance("AES/CBC/PKCS5Padding");
    cipher.init(Cipher.DECRYPT_MODE, key, new IvParameterSpec(iv));
    byte[] result = cipher.doFinal(content);
}
```

```
return result;  
}
```

2.8.5 Java Code Example

```
package com.huawei.cbc.cbcmarketplacecommentsservice.ability.jsonutils;  
  
import java.io.UnsupportedEncodingException;  
import java.security.InvalidAlgorithmParameterException;  
import java.security.InvalidKeyException;  
import java.security.NoSuchAlgorithmException;  
import java.security.SecureRandom;  
import java.util.HashMap;  
import java.util.Iterator;  
import java.util.Map;  
import java.util.Set;  
import java.util.TreeMap;  
  
import javax.crypto.BadPaddingException;  
import javax.crypto.Cipher;  
import javax.crypto.IllegalBlockSizeException;  
import javax.crypto.KeyGenerator;  
import javax.crypto.Mac;  
import javax.crypto.NoSuchPaddingException;  
import javax.crypto.SecretKey;  
import javax.crypto.spec.IvParameterSpec;  
import javax.crypto.spec.SecretKeySpec;  
  
import org.apache.commons.codec.binary.Base64;  
import org.apache.commons.lang.StringUtils;  
  
public class EncryptTest {  
    // Encoding format  
    private static final String CHARSET = "UTF-8";
```

```

// If encryptType is set to AES256_CBC_PKCS5Padding, 1 is transferred. If
encryptType is set to AES128_CBC_PKCS5Padding, 2 is transferred.

private static final String ENCRYPT_TYPE_256 = "1";

// Key displayed on the Seller Information page (Replace xxxxxxxx with the actual
key.)

private static final String ACCESS_KEY = "xxxxxxx";

public static void main(String args[]) throws Exception {

// -----Request verification-----

// Convert the request into a map and simulate the operation of obtaining
parameters from the request (request.getParameterMap())

Map<String, String[]> paramsMap = getTestUrlMap();

// Encryption type. The value can be AES256_CBC_PKCS5Padding (256-bit
encryption) or AES128_CBC_PKCS5Padding (128-bit encryption).

System.out.println("Request verification:" + verificateRequestParams(paramsMap,
ACCESS_KEY, 256));

// Mobile number and password to be encrypted

String needEncryptStr = "15905222222";

String encryptStr = generateSaaSUsernameOrPwd(needEncryptStr, ACCESS_KEY,
ENCRYPT_TYPE_256);

System.out.println("Mobile number and password to be encrypted:"+ encryptStr);

// Decryption

String decryptStr = decryptMobilePhoneOrEMail(ACCESS_KEY, encryptStr,
ENCRYPT_TYPE_256);

System.out.println("Mobile number and password to be decrypted:"+ decryptStr);

// Body signature

String needEncryptBody =

"{\"resultCode\":\"00000\",\"resultMsg\":\"Purchase succeeded\",\"encryptType
\":\"1\",\"instanceId\":\"000bd4e1-5726-4ce9-8fe4-fd081a179304\",\"appInfo
\":{\"userName\":\"3LQvu8363e5O4zqwYnXyJGWz8y+GAcu0rpM0wQ==
\",\"password\":\"RY31aEnR5GMCFmt3iG1hW7UF1HK09MuAL2sgxA==\"}}";

String encryptBody = generateResponseBodySignature(ACCESS_KEY,
needEncryptStr);

System.out.println("Body signature:"+ encryptBody);

}

private static Map<String, String[]> getTestUrlMap() {

```



```
// Original request: http://bzapic.natappfree.cc?
activity=newInstance&businessId=61e834ba-7b97-4418-b8f7-
e5345137278c&customerId=68cbc86abc2018ab880d92f36422fa0e&expireTime=20
200727153156&orderId=CS1906666666ABCDE&productId=00301-666666-0--0&tes
tFlag=1&timeStamp=20200727073711903&authToken=Gzbfjf9LHRBcl3bFVi+
+sLinCNOBF6qa7is1fvjEgYQ=

Map<String, String[]> paramsMap = new HashMap<String, String[]>();

paramsMap.put("activity", new String[] {"newInstance"});

paramsMap.put("businessId", new String[] {"61e834ba-7b97-4418-b8f7-
e5345137278c"});

paramsMap.put("customerId", new String[]
{"68cbc86abc2018ab880d92f36422fa0e"});

paramsMap.put("expireTime", new String[] {"20200727153156"});

paramsMap.put("orderId", new String[] {"CS1906666666ABCDE"});

paramsMap.put("productId", new String[] {"00301-666666-0--0"});

paramsMap.put("testFlag", new String[] {"1"});

paramsMap.put("timeStamp", new String[] {"20200727073711903"});

paramsMap.put("authToken", new String[] {"Gzbfjf9LHRBcl3bFVi+
+sLinCNOBF6qa7is1fvjEgYQ="});

return paramsMap;
}

/**
 * Verify the validity of the request.
 *
 * @param accessKey Access key
 * @param encryptLength Length of the encrypted content
 * @return Verification result
 */
public static boolean verificateRequestParams(Map<String, String[]> paramsMap,
String accessKey,
int encryptLength) {
String timeStamp = null;
String authToken = null;
String[] timeStampArray = paramsMap.get("timeStamp");

if (null != timeStampArray && timeStampArray.length > 0) {
timeStamp = timeStampArray[0];

```

```
}  
String[] authTokenArray = paramsMap.get("authToken");  
if (null != authTokenArray && authTokenArray.length > 0) {  
    authToken = authTokenArray[0];  
}  
  
// Sort the remaining parameters and combine them to form the encrypted  
content.  
Map<String, String[]> sortedMap = new TreeMap<String, String[]>();  
sortedMap.putAll(paramsMap);  
sortedMap.remove("authToken");  
StringBuffer strBuffer = new StringBuffer();  
Set<String> keySet = sortedMap.keySet();  
Iterator<String> iter = keySet.iterator();  
while (iter.hasNext()) {  
    String key = iter.next();  
    String value = sortedMap.get(key)[0];  
    strBuffer.append("&").append(key).append("=").append(value);  
}  
  
// Rectify the message body by removing the ampersand (&) before the first  
parameter.  
String reqParams = strBuffer.toString().substring(1);  
String key = accessKey + timeStamp;  
String signature = null;  
try {  
    signature = generateResponseBodySignature(key, reqParams);  
} catch (InvalidKeyException | NoSuchAlgorithmException | IllegalStateException  
| UnsupportedEncodingException e) {  
    // TODO Auto-generated catch block  
}  
return authToken.equals(signature);  
}  
  
public static String generateResponseBodySignature(String key, String body)  
throws InvalidKeyException, NoSuchAlgorithmException, IllegalStateException,  
UnsupportedEncodingException {
```

```
        return base_64(hmacSHA256(key, body));
    }

    public static byte[] hmacSHA256(String macKey, String macData) {
        try {
            try {
                SecretKeySpec secret = new SecretKeySpec(macKey.getBytes(CHARSET),
                    "HmacSHA256");
                Mac mac = Mac.getInstance("HmacSHA256");
                mac.init(secret);
                return mac.doFinal(macData.getBytes(CHARSET));
            } catch (UnsupportedEncodingException e) {
            } catch (InvalidKeyException e) {
            }
        } catch (NoSuchAlgorithmException e) {
        }
        return new byte[0];
    }

    // Body signature
    public static String generateSaaSUsernameOrPwd(String isvBody, String
        decryptAccessKey, String sEncryptType) {
        String iv = getRandomChars(16);
        int iEncryptType = 0;
        try {
            iEncryptType = Integer.parseInt(sEncryptType);
        } catch (NumberFormatException exception) {
            iEncryptType = 1;
        }
        int encryptType;
        if (1 == iEncryptType) {
            encryptType = 256;
        } else {
            encryptType = 128;
        }
    }
```

```
String isvEncryptBody = encryptAESCBCEncode(isvBody, decryptAccessKey, iv,
encryptType);

return iv + isvEncryptBody;
}

/**
 * AES CBC 256-bit encryption
 *
 * @param content Content to be encrypted
 * @param key Encryption key
 * @param iv Encrypted salt value
 * @return Encryption result
 */
public static String encryptAESCBCEncode(String content, String key, String iv, int
encryptType) {
    if (StringUtils.isEmpty(content) || StringUtils.isEmpty(key) ||
        StringUtils.isEmpty(iv)) {
        return null;
    }

    try {
        byte[] encrypContent =
            encryptAESCBC(content.getBytes(CHARSET), key.getBytes(CHARSET),
                iv.getBytes(CHARSET), encryptType);

        if (null != encrypContent) {
            return base_64(encrypContent);
        } else {
            return null;
        }
    } catch (UnsupportedEncodingException e) {
        return null;
    }
}

public static byte[] encryptAESCBC(byte[] content, byte[] keyBytes, byte[] iv, int
encryptType) {
```

```
try {
    KeyGenerator keyGenerator = KeyGenerator.getInstance("AES");
    SecureRandom secureRandom = SecureRandom.getInstance("SHA1PRNG");
    secureRandom.setSeed(keyBytes);
    keyGenerator.init(encryptType, secureRandom);
    SecretKey key = keyGenerator.generateKey();
    Cipher cipher = Cipher.getInstance("AES/CBC/PKCS5Padding");
    cipher.init(Cipher.ENCRYPT_MODE, key, new IvParameterSpec(iv));
    return cipher.doFinal(content);
} catch (Exception e) {
}
return null;
}

public static String base_64(byte[] bytes) {
    try {
        return new String(Base64.encodeBase64(bytes), CHARSET);
    } catch (UnsupportedEncodingException e) {
        return null;
    }
}

static String decryptMobilePhoneOrEmail(String accessKey, String encryptStr,
String sEncryptType) {
    String iv = encryptStr.substring(0, 16);
    int iEncryptType = 1;
    try {
        iEncryptType = Integer.parseInt(sEncryptType);
    } catch (NumberFormatException exception) {
        exception.printStackTrace();
    }
    int encryptType;
    if (1 == iEncryptType) {
        encryptType = 256;
    } else {
```

```
encryptType = 128;
}
String decryptBody = null;
try {
    decryptBody = decryptAESCBCEncode(encryptStr.substring(16), accessKey, iv,
    encryptType);
} catch (Exception e) {
    e.printStackTrace();
    return decryptBody;
}
return decryptBody;
}

public static String decryptAESCBCEncode(String content, String key, String iv, int
encryptType)
throws InvalidKeyException, NoSuchAlgorithmException, NoSuchPaddingException,
InvalidAlgorithmParameterException, IllegalBlockSizeException,
BadPaddingException {
    if (StringUtils.isEmpty(content) || StringUtils.isEmpty(key) ||
    StringUtils.isEmpty(iv)) {
        return null;
    }
    return new
    String(decryptAESCBC(org.apache.commons.codec.binary.Base64.decodeBase64(co
    ntent.getBytes()),
    key.getBytes(), iv.getBytes(), encryptType));
}

public static byte[] decryptAESCBC(byte[] content, byte[] keyBytes, byte[] iv, int
encryptType)
throws NoSuchAlgorithmException, NoSuchPaddingException, InvalidKeyException,
InvalidAlgorithmParameterException, IllegalBlockSizeException,
BadPaddingException {
    KeyGenerator keyGenerator = KeyGenerator.getInstance("AES");
    SecureRandom secureRandom = SecureRandom.getInstance("SHA1PRNG");
    secureRandom.setSeed(keyBytes);
    keyGenerator.init(encryptType, secureRandom);
```

```
SecretKey key = keyGenerator.generateKey();
Cipher cipher = Cipher.getInstance("AES/CBC/PKCS5Padding");
cipher.init(Cipher.DECRYPT_MODE, key, new IvParameterSpec(iv));
byte[] result = cipher.doFinal(content);
return result;
}

/**
 * Obtain a random character string.
 *
 * @param length Character string length
 * @return
 * @author d00420944
 */
public static String getRandomChars(int length) {
    StringBuffer randomCharsBuf = new StringBuffer(1024);

    SecureRandom random = new SecureRandom();
    for (int i = 0; i < length; i++) {
        // Randomly choose letters and digits.
        if (random.nextInt(2) % 2 == 0) {
            // Specify whether uppercase or lowercase letters are output.
            int letterIndex = random.nextInt(2) % 2 == 0 ? 65 : 97;
            randomCharsBuf.append((char) (random.nextInt(26) + letterIndex));
        } else {
            randomCharsBuf.append(String.valueOf(random.nextInt(10)));
        }
    }

    String randomChars = randomCharsBuf.toString();

    return randomChars;
}
```

2.9 FAQ

1. Why is the following error message displayed when I debug the service interface?

Debugging failed. The production interface response does not contain Body-Sign or the Body-Sign format is incorrect.

- KooGallery fails to obtain the **Body-Sign** message header. Add **Body-Sign** to the response of the interface. For details, see [HTTP Body Signature](#). You must return the **Body-Sign** header, which is case sensitive. Otherwise, the debugging fails, for example, when **Body-sign** is returned.
- KooGallery fails to obtain the values of **sign_type** and **signature** from the **Body-Sign** header. Check whether the value format is incorrect.

Correct format:

```
sign_type="HMAC-SHA256", signature="*****"
```

If the quotation marks (") are missing, KooGallery cannot retrieve the two values and displays this error message.

2. Why is the following error message displayed when I debug an interface?

Call interface failed. The production interface returns an error result code.

By default, **resultCode=000000** indicates a successful call. Other codes indicate a failure. For details about error codes, see [Result Codes](#).

3. Why is the following error message displayed when I debug an interface?

Debugging failed. The interface response does not contain {field}.

KooGallery verifies whether a response contains these mandatory fields:

- Interface for subscribing to a product: **instanceId** and **frontEndUrl**
- Interface for querying instance information: **instanceId**. If it returns **UsageInfo**, it must also return **usageValue** and **statisticalTime**.

4. Why is the following error message displayed when I debug an interface?

Debugging failed. The length of {field} is invalid.

KooGallery verifies the length of response field values. For example, the value of **frontEndUrl** returned by the subscription interface can contain up to 512 characters. For details about the length limits, see [Interface Description](#).

5. Why is the following error message displayed when I debug an interface?

Debugging failed. Parse response body failed. Example response:

```
{"resultCode":"000000","resultMsg":"success."}
```

KooGallery fails to parse the response. The interface does not return **resultCode** and **resultMsg**.

6. Why is the following error message displayed when I debug an interface?

Debugging fails. Invalid content-type format. Returned format: {contentType}. Valid format: "application/json"

The value of **content-type** in the response must be **"application/json"**. Otherwise, KooGallery will fail to parse the response body.

7. Why is the following error message displayed when I debug an interface?

Debugging failed. The production address is unreachable.

- Check whether the production address is available.
- Check whether the production address can be accessed from the Internet.
- Check whether the access is intercepted by the gateway.

8. Why is the following error message displayed when I debug an interface?

Debugging failed. Interface calling timed out for 20s.

The default timeout interval for KooGallery to call your interfaces is 20s. Calls that take longer than 20s will fail.

View logs and check whether the request reached the server. If it did, check whether the response time exceeds 20s. If it did not reach the server, contact after-sales engineers.

9. Why is the following error message displayed when I debug an interface?
Debugging failed. The interface responds with `httpCode={httpCode}`. Check server logs to locate the failure cause.

By default, **httpCode=200** indicates a successful call. Other codes indicate a failure.

10. Why is the error message "Failed to verify the HTTP Body signature. Expected signature value: *****" displayed when I debug the service interface?

This is because the HTTP body content changes after the signature is obtained and before the message is sent. The possible causes of the change include attribute sequence changes, a blank space added, and a newline character added (\n is added to some output streams). Troubleshoot the issue based on the causes.

11. When the **verificateRequestParams** method is invoked, **authToken** and **signature** are inconsistent, and plus signs (+) become spaces. What should I do?

Invoke **URLDecoder.decode()** to decrypt **authToken** and **signature**.

12. Why can't a SaaS product customer view the username and password of the product when they click **Manage** on the **My KooGallery Apps > Purchased Apps** page?

Possible causes are as follows:

- When the instance is enabled, some parameters failed the verification. For example, the length of the password is incorrect. The length of the password ciphertext must not exceed the limit defined in this guide.
- KooGallery failed to decrypt the username and password. Sellers must use the method provided by KooGallery to encrypt sensitive information. If a seller uses a different programming language, check whether the ciphertext generated using the current language is the same as the ciphertext generated using the code provided by KooGallery. If they are the same, check whether the **encryptType** parameter for encrypting and decrypting sensitive information is correctly transferred to KooGallery. If the algorithm is AES256_CBC_PKCS5Padding, the value must be **1**. If the algorithm is AES128_CBC_PKCS5Padding, the value must be **2**.

13. Why is the **authToken** generated by encrypting the request parameters provided by KooGallery different from the **authToken** provided by KooGallery?

Parameters in a requested URL are URL-encoded and cannot be directly used to generate the **authToken**. Decode each parameter first, and use the decoded parameters to generate the **authToken**. A customer's mobile number and email address remain as ciphertext after being decoded and do not need to be decrypted again.

14. Does the restriction on the username and password lengths apply to the plaintext or ciphertext?

It applies to the ciphertext (including the IV). Sometimes the instance of a product is successfully enabled but the username and password lengths fail

the KooGallery verification. As a result, the status of the product is displayed as **Enabling** on the **My Orders** page. To prevent this issue, verify the lengths of the encrypted username and password.

15. After a customer purchases and pays a SaaS product, KooGallery still fails to enable the instance by invoking the subscription interface of the seller when the number of invocation times reaches the maximum. What do I enable the instance?

Identify why the instance fails to be enabled and fix the problem. Then, log in to the Seller Center, choose **Application Tools > Service Interface Messages** in the navigation pane, and click **Restart Debugging** on the right.

16. After I debug the subscription interface on the **Application Access Debugging** page, do I need to do anything else that should be done?

To ensure that smooth subsequent service processes such as renewal, expiration, and release, debug all of the subscription, renewal, expiration, and release interfaces before releasing a SaaS product to KooGallery.

17. When releasing a SaaS product, where can I specify the algorithm sensitive information encryption performed during application access debugging?

On the SaaS product release page, after you select **User Authorization Required**, the algorithm for encrypting sensitive information is displayed. By default, **AES256_CBC_PKCS5Padding** is selected. You can choose another encryption algorithm as required.

18. What can I do if the subscription interface is successfully debugged but it cannot be invoked when a customer purchases a product?

- a. Log in to the Seller Console, choose **Application Tools > Application Access Debugging** in the navigation pane. Use the actual request sent by KooGallery to the customer and the actual message body returned to KooGallery to debug the subscription interface on the **Application Access Debugging** page.
- b. If the debugging is successful, choose **Application Tools > Service Interface Messages** in the navigation pane of the Seller Console and click **Restart Debugging** on the right of the corresponding record. Otherwise, contact the operations manager.

19. Can multiple production system API URLs be provided for different scenarios (subscription, renewal, expiration, and release) when a product is released?

No. Currently, only one production system API URL can be configured for a product during release.

3 Automatic Deployment and Access Guide

[3.1 Introduction](#)

[3.2 Image Access Process](#)

[3.3 Automatic Deployment](#)

[3.4 Associating an Image Asset with an Automatic Deployment Template](#)

[3.5 Releasing Images](#)

[3.6 Purchasing and Using an Image](#)

3.1 Introduction

Huawei Cloud KooGallery allows automatic deployment for **images**.

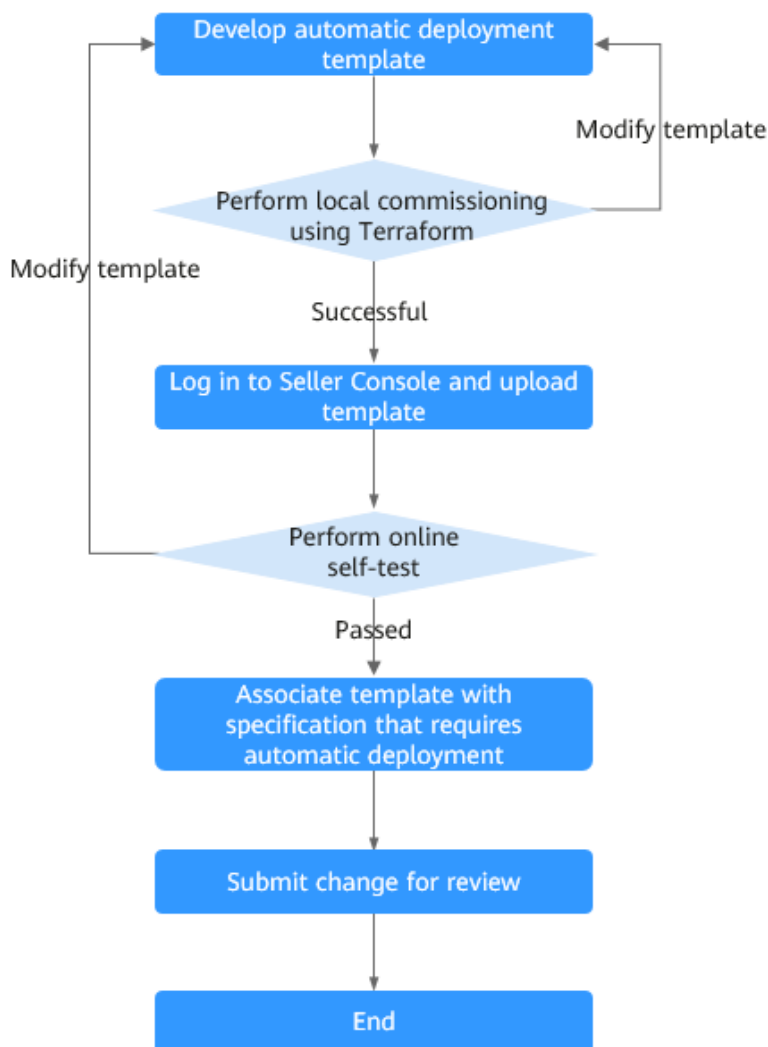
You can develop automatic deployment templates for applications released to KooGallery. After purchasing an application, customers can deploy it on the cloud with one click. Automatic deployment improves the purchase and deployment efficiency of customers and reduces delivery costs of sellers.

Prerequisites

You have become a seller of Huawei Cloud KooGallery. For details about how to register as a seller, see [Registration Process](#).

3.2 Image Access Process

The following figure shows the access process of images with automatic deployment.



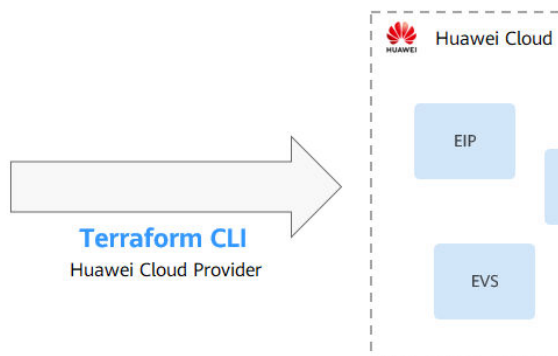
3.3 Automatic Deployment

3.3.1 Developing an Automatic Deployment Template

You can develop automatic deployment templates on Terraform. **Terraform** is an open-source automatic resource orchestration tool. The following figure shows the process of using Terraform to manage cloud resources. Before developing a template, install and configure Terraform by referring to [Getting Started with Terraform](#) and use Terraform to create a Huawei Cloud VPC. In addition, learn how to create resource stacks, create execution plans, and delete resource stacks using [Huawei Cloud Resource Formation Service \(RFS\)](#).

```
resource "huaweicloud_ecs_instance_v1" "basic" {  
  name      = "server_1"  
  image_id  = "ad091b52-742f-469e-8f3c-fd81cadf0743"  
  flavor    = "s1.medium"  
  vpc_id    = "8eed4fc7-e5e5-44a2-b5f2-23b3e5d46235"  
  
  nics {  
    network_id = "55534eaa-533a-419d-9b40-ec427ea7195a"  
  }  
  
  availability_zone = "cn-north-1a"  
  key_name          = "KeyPair-test"  
  security_groups   = ["default"]  
}
```

Infrastructure as Code



Terraform allows you to describe an application or even an entire data center in configuration files. You can use Terraform to easily create, manage, delete, and version Huawei Cloud resources. For details about Huawei Cloud resources that can be orchestrated by Terraform, see [HuaweiCloud Provider](#).

3.3.2 Testing an Automatic Deployment Template

Procedure

- Step 1** Install Terraform and use environment variables to configure authentication information for Terraform. For details, see [Getting Started with Terraform](#). If your device runs Windows, run the following commands to set environment variables:

```
set HW_REGION_NAME=cn-north-4 [C(1)]  
set HW_ACCESS_KEY=your ak  
set HW_SECRET_KEY=your sk
```

- Step 2** Open the command line interface (CLI), go to the template directory, run the following commands, and enter the configuration information as prompted:

```
terraform init [C(1)]  
terraform plan  
terraform apply
```

- Step 3** Log in to the Huawei Cloud console and view the created cloud service.

----End

NOTICE

The cloud resources created in this example are charged. If you do not need these resources, run the **terraform destroy** command to delete them in a timely manner.

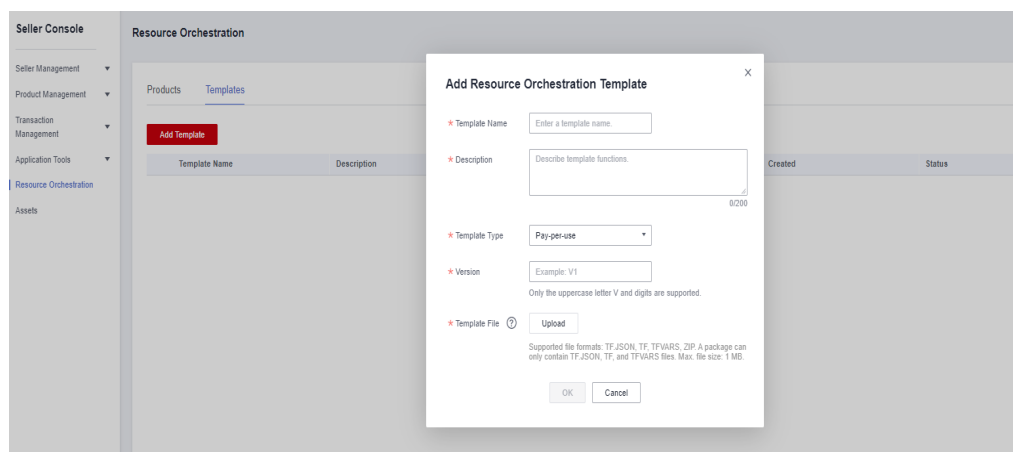
3.4 Associating an Image Asset with an Automatic Deployment Template

Prerequisites

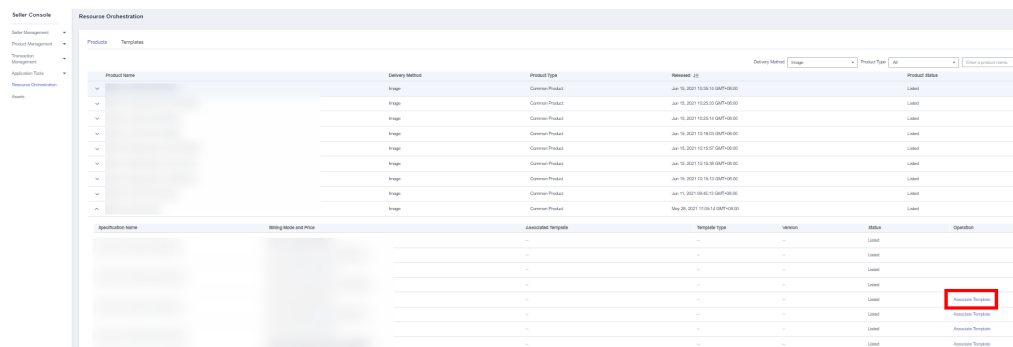
An image product has been released. For details about how to create a private image and release an image product, see [Image Release Guide](#) of Huawei Cloud KooGallery.

Procedure

- Step 1** Log in to the [KooGallery homepage](#) using a Huawei Cloud account that has enabled resource orchestration and click **Seller Console** on the top to access the [Seller Console](#).
- Step 2** In the navigation pane, choose **Resource Orchestration**. Click the **Templates** tab and click **Add Template**. Enter the template name, description, and version number, and upload a template file. Click **OK** to create the automatic deployment template.



- Step 3** On the **Resource Orchestration** page, click the **Products** tab, locate the specification to be associated with a resource template, and click **Associate Template** in the **Operation** column.



**CAUTION**

Different specifications of a product can be associated with different resource orchestration templates.

Step 4 Select the automatic deployment template to be associated and click **OK**.

----End

3.5 Releasing Images

Prerequisites

Before releasing an image product, [create a private image](#) and [release it as an asset](#). Currently, system disk images created using public images provided by Huawei Cloud in the Bangkok, Hong Kong (China), Johannesburg, Mexico City, Santiago, Sao Paulo, and Singapore regions can be released to KooGallery on the Huawei Cloud International website. Ensure that the ECSs of private images are deployed in these regions.

Procedure

Step 1 Go to the Seller Console.

Step 2 In the navigation pane, choose **Product Management > My Products**.

Step 3 Click **Release New Product** on the upper right of the page.

The **Product Release** page is displayed.

Step 4 Select a sales type, set **Delivery Method** to **Image**, select a pricing mode, and click **Add Details**.

Release Product

×

Sales Type

Common productJoint Operations Product

Delivery Method

Image

Professional Services

SaaS

API

License

Images are created by sellers using HUAWEI CLOUD public system disk images. Customers can use an image to create an ECS that has the same system environment as the image. Images integrate the software environment and functions of an operating system and integrate application software with cloud resources, enabling customers to use cloud hosts out of the box.
[Learn how](#) [to release products.](#)

Application Type

ECS image

Pricing Mode

Paid imageFree image

CancelAdd Details

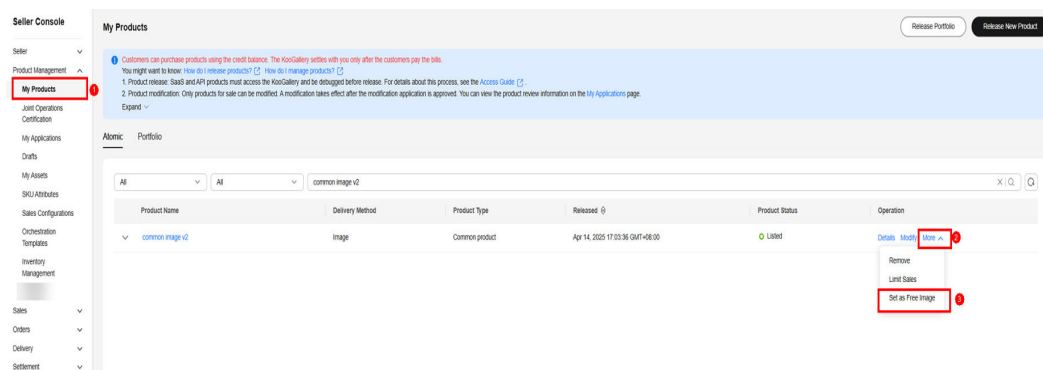
Issue 01 (2025-11-26)

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CAUTION

- To release a \$0 USD image, set **Pricing Mode** to **Free image**. Customer accounts that have a credit balance can now use free images.
- An image priced by vCPUs cannot be released as a free image.
- You can change **Pricing Mode** of existing \$0 USD images to **Free image** by following these steps:
 - In the navigation pane, choose **Product Management > My Products**. In the row of the image, click **More > Set as Free Image** in the **Operation** column.



- The price of this image will be fixed. Click **OK** to confirm it.

Information

Once approved, prices of all images under this product will be fixed to 0. Continue?

Cancel

OK

Step 5 Click **Next**.

The **Product Details** page is displayed.

Step 6 Enter the product information (including **Overview**, **Description**, and **Highlights**), and describe customer cases as instructed.

✓ Basic Information

2 Enter Product Details

3 Enter Qualification Information

4 Enter Service Information

Product Details

★ Overview

1

1/1,000 ↗

Enter a product overview containing 1 to 1000 characters. The overview will be displayed on the KooGallery catalog and the product details page.

★ Description

0/5,000 ↗

Provide details about your product, including core functions and services. They will be presented on the product details page. They must contain 1000 to 5000 characters.
1. When multiple offering specifications are released, the function modules and service contents of each offering specification must be added to the offering description.
2. Do not include price-related descriptions in the product description.
3. Do not include commercial description, such as contract signing.

★ Highlights

+ Add

Add some product highlights.

5 highlights are recommended (500 characters limit).

Customer Case

+ Add

Describe any use cases in detail, including the background and product benefits to customers.

Previous

Next

NOTE

- For details about parameters, see [Release Requirements](#).
- You can drag the lower right corner of the **Description** text box to resize it.
- You can hover the mouse pointer over the customer case you have added, and then you can delete or edit the case.

Step 7 Click **Next**.

The **Qualification Information** page is displayed.

Step 8 Set **End User License Agreement**, **After-Sales Support**, **User Guide**, **Software Copyright Certificate**, and **Open-Source Software Notice** as instructed.

Basic Information — Enter Product Details — **3 Enter Qualification Information** — 4 Enter Service Information

Qualification Information

★ End User License Agreement

0/200,000 ↗

End User License Agreement (EULA) is an agreement signed between you and your KooGallery end user. To better serve your KooGallery end users and avoid legal disputes, you are advised to specify, in the EULA, your services and commitments, SLA, conditions of use, after-sales services and support, consumer rights protection, personal information and data protection, and your legal obligations (200,000 characters limit).

1. The name of the commodity shall be consistent with the name of the published commodity.
2. The name of the service provider in the EULA must be consistent with that of the issuing company.
3. The EULA should contain the user privacy agreement. [↗ CommonProductServiceAgreement-englishname](#)

★ User Guide

Upload File

Maximum file size: 20 MB.

Supported file types: ZIP, DOC, DOCX, PDF, PPT, PPTX.

Describe how to log in to the product management platform and use your product in the user guide. For an image product, specify the ports to open and describe how to log in to the ECS on which the image is deployed and use the image.

★ Software Copyright Certificate

☒ Available ☐ None

Upload File

Upload the software copyright certificate or any other sales qualification certificates.

Supported file size: 20 MB

Supported file types: ZIP, DOC, DOCX, PDF, PPT, PPTX

For a product involving software, upload the software copyright certificate that matches the product name.

★ Open-Source Software Notice

☒ Available ☐ N/A

Upload File

Declare the open-source software usage of the product in the Open-Source Software Notice. If no open-source software is used, select N/A. For terms related to open-source software, see [HUAWEI CLOUD KooGallery Seller Agreement](#) and [OpenSourceLicenseStatement](#).

Supported file size: 20 MB

Supported file types: ZIP, DOC, DOCX, PDF, PPT, PPTX

After-Sales Support

★ Time

8:00–18:00 from Monday to Friday; 11:00–18:00 fr

+ Add

★ Hotline

Enter a fixed-line phone number or mobile number.

+ Add

★ Email Address

Enter an email address.

★ Content

0/300 ↗

Previous

Next

NOTE

• End User License Agreement

The EULA is an online agreement entered into between you and customers. It takes effect when customers select it during order placement. It cannot contain any unfilled content and cannot be stamped. You can drag the lower right corner of the **End User License Agreement** text box to resize it.

• After-Sales Support

Add the time zone to the end of the service time, for example, **(GMT+08:00)**.

Ensure that your hotline and email address are reachable and you can provide after-sales services as required. If customers purchasing this product cannot contact your company or they do not receive any reply from you after sending emails for multiple times, KooGallery will remove the product from the catalog.

Ensure that you can provide after-sales hotline and email services in English.

• User Guide

Describe how to log in to the management platform and use the product after the product is purchased in the user guide.

For an image product, specify the ports to be opened and how to log in to the management platform and use the image after the image is purchased and deployed on a Huawei Cloud ECS.

• Software Copyright Certificate

Upload a software copyright certificate that matches your product. The uploaded certificate will be reviewed by Huawei Cloud KooGallery to confirm whether your product meets the release requirements. The certificate is only for review and will not be displayed on the product details page.

Step 9 Click **Next**.

The **Service Information** page is displayed.

Step 10 Set **Service Information**, **Product Specifications**, **More Tax Info**, **Sales Regions**, and **SEO Information** as instructed.

Service Information

★ Public Product ☒ Yes ☐ No

The product URL will be different if you select Yes or No for this parameter. If you select No to make this product available to specific customers, provide them with the URL on the product details page.
Select Yes to allow users to purchase the product on the frontend page of the KooGallery. Select No to hide the product from the frontend page of the KooGallery and to allow users to purchase the product using the product URL you provide. You can click Details on the My Products page to view the URL of a product.
Select No when releasing a SaaS product. After the product is released, the KooGallery will test the subscription process and use of the product. After the test is complete, the product will be sold publicly.

★ Product Category

★ Seller Agreement

★ Revenue Sharing Rule Seller revenue = Transaction price x 80 %

★ Confirm After Service ☐ Yes ☒ No

[Provisioning](#)

Product Specifications

Max. 50 specifications.

Specification 1

*

Specification Name

Enter a maximum of 50 characters. Specification names are visible to users on the product details and expenditure details pages.

*

Image Asset

Select Asset

*

Pricing Template

Simple template

*

Billing Mode

Pay-per-use

Monthly

Yearly

Billing Mode	Unit Price
Pay-per-use	USD/hour
Monthly	USD/month
Yearly	USD/year

Add

NOTE

- If you set **Public Product** to **No**, the product will be hidden from KooGallery frontend page and search results. Customers can access and purchase the product only by using the product URL you provide. To obtain the URL of such a product, choose **Product Management > My Products**. In the same row of the product, click **Details** in the **Operation** column. The URL is displayed in the **Service Information** area on the product details page.
- If no images are available when you add product specifications in the **Product Specifications** area, [release an image asset](#). Currently, system disk images created using public images provided by Huawei Cloud in the AF-Johannesburg, AP-Bangkok, AP-Singapore, CN-Hong Kong, LA-Mexico City1, LA-Mexico City2, LA-Santiago, and LA-Sao Paulo1 regions can be released to KooGallery on the Huawei Cloud International website.
- **Pricing Template:** You can select a simple template or vCPU-based template. Both templates support pay-per-use, monthly, and yearly billing.
 - **Simple template:** Specifications are billed on a yearly/monthly basis or by uses. Their prices are fixed.

* Billing Mode ☐ Pay-per-use ☐ Monthly ☐ Yearly

Billing Mode	Unit Price
Pay-per-use	USD/hour
Monthly	USD/month
Yearly	USD/year

- **vCPU template:** Specifications are billed by the number of vCPUs. After releasing the product, you can change the prices of vCPU tiers, but cannot delete the vCPU tiers.

* Pricing Template vCPU template ⓘ

ECS Filter None

* Billing Mode ☐ Pay-per-use ☐ Monthly ☐ Yearly

vCPUs	Price
☐ 1 vCPU	USD/hour USD/month USD/year
☐ 2 vCPUs	USD/hour USD/month USD/year
☐ 4 vCPUs	USD/hour USD/month USD/year
☐ 8 vCPUs	USD/hour USD/month USD/year
☐ 12 vCPUs	USD/hour USD/month USD/year

- Private images of the following types cannot be released to KooGallery: shared images, encrypted images, released images, Full-ECS images, and private images that are made based on external shared images or market images.
- An image product can be released in multiple regions. You can select multiple regions in the **Product Specifications** area.
- The size of the image package you want to upload cannot exceed 128 GB. Otherwise, the release will fail.
- **After a private image is released to KooGallery, the product price attribute is assigned to the private image and the image is locked. You cannot use the image to install or deploy a VM or release a new product. To use the image after product release, you must purchase it from KooGallery. Exercise caution when releasing a private image to KooGallery.**
- Fill in the SEO information by referring to the [instructions](#) to facilitate entry addition of third-party search engines such as Google.

Step 11 Click Preview.

The product details page is displayed.

Step 12 Confirm the configuration and click **Submit**.

The message "Are you sure you want to submit the product information?" is displayed.

Step 13 Click **Yes**.

The message "Product release information submitted successfully." is displayed.

 NOTE

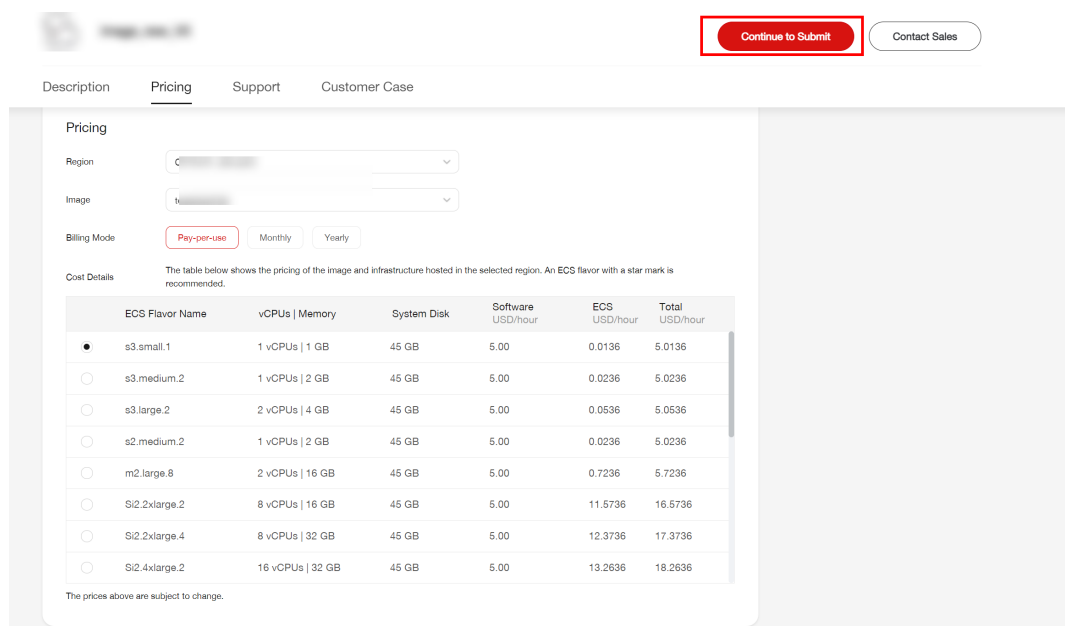
- You can upload a maximum of 100 documents or software of 10 GB in total to the Seller Console in a single day.
- When releasing a product, you can click **Save Draft** to save the product information before submission. You can choose **Product Management > My Applications** or **Product Release > Drafts** to view the draft information.
- Huawei Cloud KooGallery will review the product information you submitted within three business days. The review result will be sent to the email address bound to your Huawei Cloud account. The product will be available on KooGallery upon approval from KooGallery.

----End

3.6 Purchasing and Using an Image

KooGallery images can be deployed in quick or customized provisioning mode. The purchase and usage modes vary depending on the deployment mode.

Log in to [KooGallery homepage](#) using your Huawei Cloud account and search for the image product you want. Click the product to go to the details page, view the product information, select the desired specification, and click **Continue to Submit**. On the displayed page, purchase the product based on either of the following provisioning modes.



The screenshot shows the KooGallery pricing page. At the top right, there are two buttons: "Continue to Submit" (highlighted with a red box) and "Contact Sales". Below these are tabs for "Description", "Pricing" (selected), "Support", and "Customer Case". The "Pricing" section includes dropdowns for "Region" and "Image", and radio buttons for "Billing Mode" (Pay-per-use, Monthly, Yearly). A note states: "The table below shows the pricing of the image and infrastructure hosted in the selected region. An ECS flavor with a star mark is recommended." Below this is a table with the following data:

	ECS Flavor Name	vCPUs Memory	System Disk	Software USD/hour	ECS USD/hour	Total USD/hour
☒	s3.small.1	1 vCPUs 1 GB	45 GB	5.00	0.0136	5.0136
☐	s3.medium.2	1 vCPUs 2 GB	45 GB	5.00	0.0236	5.0236
☐	s3.large.2	2 vCPUs 4 GB	45 GB	5.00	0.0536	5.0536
☐	s2.medium.2	1 vCPUs 2 GB	45 GB	5.00	0.0236	5.0236
☐	m2.large.8	2 vCPUs 16 GB	45 GB	5.00	0.7236	5.7236
☐	Si2.2xlarge.2	8 vCPUs 16 GB	45 GB	5.00	11.5736	16.5736
☐	Si2.2xlarge.4	8 vCPUs 32 GB	45 GB	5.00	12.3736	17.3736
☐	Si2.4xlarge.2	16 vCPUs 32 GB	45 GB	5.00	13.2636	18.2636

At the bottom of the table, it says: "The prices above are subject to change."

Quick Provisioning

Step 1 Click **Buy**.

Step 2 On the displayed page, perform the following operations:

1. Confirm the selected ECS instance.

ECS Configuration
Select a flavor.

ECS Type ? General computing vCPUs ? Select vCPUs Memory ? Select Memory Enter Flavor Name Q

	ECS Type	Flavor Name	vCPUs	Memory(GiB)	CPU	Assured / Maximum Bandwidth(Gbit/s)	Packets Per Second(PPS)
☐	General computing	s2m.8u.6g	8	6	Intel SkyLake 6161...	0.8 / 3	200,000
☒	General computing	s3.small.1	1	1	Intel SkyLake 6161...	0.1 / 0.5	50,000
☐	General computing	s3.medium.2	1	2	Intel SkyLake 6161...	0.1 / 0.5	50,000
☐	General computing	s3.large.2	2	4	Intel SkyLake 6161...	0.2 / 0.8	100,000
☐	General computing	s6.small.1	1	1	Intel Cascade Lake...	0.1 / 0.8	100,000
☐	General computing	s6.medium.2	1	2	Intel Cascade Lake...	0.1 / 0.8	100,000
☐	General computing	s6.medium.4	1	4	Intel Cascade Lake...	0.1 / 0.8	100,000
☐	General computing	s6.large.05	2	1	Intel Cascade Lake...	0.2 / 1.5	150,000
☐	General computing	s6.large.1	2	2	Intel Cascade Lake...	0.2 / 1.5	150,000
☐	General computing	s6.large.2	2	4	Intel Cascade Lake...	0.2 / 1.5	150,000

10 Total Records: 54 < 1 2 3 4 5 6 >

Selected specifications General computing s3.small.1 1vCPUs 1GiB

2. Select a network and security group.

Configure Network

* Network ? Select VPC Q Create VPC

Select subnet Q

* Security Group ? de... Q Create Security Group

Similar to a firewall, a security group logically controls network access.
Ensure that the selected security group allows access to port 22 (SSH-based Linux login), 3389 (Windows login), and ICMP (ping operation).

Security Group Rules Q

NOTE

You can select a security group recommended by the seller from the drop-down list or click **Create Security Group** to create one.

3. Set a login credential, that is, the ECS login password.

Login Mode ?

* Password Enter a password Q

Keep the password secure. If you forget the password, you can log in to the ECS console and change it.

* Confirm Password Enter the password again Q

4. Read and agree to the agreements.

* **Terms and Conditions**

I have read and agree to the agreements below.

☐ Image Disclaimer, Huawei Cloud KooGallery Joint Operation Products User Agreement, image_showcase Terms of Service Support

NOTE

- You can view the fees of the cloud resources and image at the bottom of the page.
- If you select yearly or monthly billing, fees will be automatically deducted when the resources are created.

Step 3 Click **Quickly Enable** to deploy the image. The ECS console is displayed. You can view the created ECS.

----End

Customized Provisioning

Step 1 On the displayed page, click **Customize Config**.

Step 2 On the **Buy ECS** page, select a billing mode, confirm the selected specification and image, and click **Next**.

ECS Type	Flavor Name	vCPUs	Memory	CPU	Assured / Maximum Bandwidth	Packets Per Second
General computing s6	s6.medium.4	1 vCPUs	4 GiB	Intel Cascade Lake 2.6GHz	0.1 / 0.8 Gbit/s	100,000 PPS
General computing s6	s6.large.2	2 vCPUs	4 GiB	Intel Cascade Lake 2.6GHz	0.2 / 1.5 Gbit/s	150,000 PPS
General computing s6	s6.large.4	2 vCPUs	8 GiB	Intel Cascade Lake 2.6GHz	0.2 / 1.5 Gbit/s	150,000 PPS
General computing s6	s6.xlarge.2	4 vCPUs	8 GiB	Intel Cascade Lake 2.6GHz	0.35 / 2 Gbit/s	250,000 PPS
General computing s6	s6.xlarge.4	4 vCPUs	16 GiB	Intel Cascade Lake 2.6GHz	0.35 / 2 Gbit/s	250,000 PPS
General computing s6	s6.2xlarge.2	8 vCPUs	16 GiB	Intel Cascade Lake 2.6GHz	0.75 / 3 Gbit/s	500,000 PPS
General computing s6	s6.2xlarge.4	8 vCPUs	32 GiB	Intel Cascade Lake 2.6GHz	0.75 / 3 Gbit/s	500,000 PPS

Step 3 On the **Configure Network** page, select a network, security group, and Elastic IP (EIP), and click **Next**.

Buy ECS

1 Configure Basic Settings

2 Configure Network

3 Configure Advanced Settings

4 Confirm

Network

Automatically assign IP address

Available private IP addresses: 250

Create VPC

Extension NIC

⊕ Add NIC

 NICs you can still add: 1

Security Group

Create Security Group

Similar to a firewall, a security group logically controls network access.

Security Group Rules

^

Inbound Rules

Outbound Rules

Security Group Name	Protocol & Port	Type	Source	Description
Sys-FullAccess	All	IPv6	::0	--
	All	IPv4	Sys-FullAccess	--
	All	IPv6	Sys-FullAccess	--
	All	IPv4	0.0.0.0/0	--

EIP

⊕ Not required

⊖ Use existing

⊖ Auto assign

An ECS without an EIP cannot access the Internet. However, it can still be used as a service ECS deployed in a cluster or on a private network.

Quantity

-

1

+

1 month

ECS Price \$70.37 USD + Image Price \$155.00 USD

Previous

Next: Configure Advanced Settings

Step 4 On the **Configure Advanced Settings** page, set the ECS name and password, and click **Next**.

Buy ECS

1 Configure Basic Settings

2 Configure Network

3 Configure Advanced Settings

4 Confirm

ECS Name

Allow duplicate name

If multiple ECSs are created at the same time, the system automatically adds a hyphen followed by a four-digit incremental number to the end of each ECS name. For example, if you enter ecs and there is no existing ECS in the system, the first ECS's name will be ecs-0001. If an ECS with the name ecs-0010 already exists, the name of the first new ECS will be ecs-0011.

Login Mode

Password

Key pair

For SSH login to a Linux ECS in password login mode, you must click Remote Login to log in to the ECS and enable SSH login before using SSH. Learn how to enable SSH login. For a Windows ECS in password login mode, you must click Remote Login to log in to the ECS before changing its password.

Username

root

Password

Confirm Password

Auto Recovery

⊕ Enable (Free of charge)

If the physical server running the ECSs becomes faulty, the system will automatically migrate the ECSs to other physical servers. During this process, the ECSs will be restarted.

ECS Group (Optional)

⊕ Add affinity

--Select ECS group--

Create ECS Group

Advanced Options

⊖ Configure now

Quantity

-

1

+

1 month

ECS Price \$70.37 USD + Image Price \$155.00 USD

Previous

Next: Confirm

Step 5 On the **Confirm** page, confirm the configuration, set the required duration and quantity, read and agree to the agreements, and click **Submit**.

Buy ECS

1 Configure Basic Settings

2 Configure Network

3 Configure Advanced Settings

4 Confirm

Note:

The primary network interface does not have an EIP bound, and the ECS cannot access the Internet.

Configuration

Basic

Billing Mode: Yearly/Monthly

Specifications: General computing | s6.large.2 | 4 vCPUs | 8 GiB

Region: Dublin

Image: System Disk

AZ: A2Z

High IO: 40 GiB

Network

VPC:

EIP: No EIP bound to the primary network interface

Security Group: Sys-FullAccess

Primary NIC:

Advanced

ECS Name:

ECS Group: --

Login Mode: Password

Auto Recovery: Enable

Enterprise Project

--Select--

Create Enterprise Project

Required Duration

1

2

3

4

5

6

7

8

9 months

1 year

⊖ Auto-renew

⊖ Deduction rule and Renewal duration

Quantity

-

1

+

You can create a maximum of 2,048 ECSs. You can create a maximum of 500 ECSs at a time. Learn how to increase quota.

ECS Price \$70.37 USD + Image Price \$155.00 USD

Previous

Submit

Step 6 On the displayed page, select a payment method and click **Pay Now**.

----End

Template-based Provisioning

Step 1 Read and agree to related agreements and click **Enable via Template**.

Buy [redacted]

1 Select Service 2 Configure

Basic Information

Location [redacted]
Region [redacted]

Template Settings

Template Name	Template ID	Template Description
[redacted]	[redacted]	[redacted]

Terms and Conditions

I have read and agree to the agreements below.

- ☒ Partner Product User Agreement [\[redacted\]](#)
- ☒ Huawei Cloud KooGallery Partner Products User Agreement [\[redacted\]](#)
- ☒ test-01 Service Support Terms [\[redacted\]](#)

Enable via Template **Customize Config**

Step 2 On the deployment page, configure resource information.

1. Confirm the template information and click **Next**.

1 Select Template 2 Configure Parameters 3 Configure Stack 4 Confirm Configurations

Creation Mode Existing Templates Visual Designer

Template Source Private Templates URL Upload Template

A stack is created using a template. The template must contain the deployment code file which file name extension is .tf or .json.

Template URL https://mktg-cn-cn-north-7.obs.cn-north-7.ulampai

The URL must contain at least the deployment code file, and the file size cannot exceed 1 MB.

Next

2. Set cloud service passwords and modify settings as required. After the configuration is complete, click **Next**. A dialog box is displayed, asking you to enable encryption. Click **OK**.

Stack Name:

Description:

Configure Parameters

Parameter	Value	Type	Description
* admin_password		string	the admin password of ecs.
* flavor_name	8U32G	string	flavor for ECS
vpc_cidr	192.168.0.0/16	string	Specifies the range of available subnets in the VPC. The value ranges from 10.0.0.0/8 to 10.255.255.0/24...
vpc_subnet_cidr	192.168.10.0/24	string	Specifies the network segment on which the subnet resides. The value must be in CIDR format and with...
vpc_subnet_gateway_ip	192.168.10.1	string	Specifies the gateway of the subnet. The value must be a valid IP address in the subnet segment. Chang...
* charging_mode	postPaid	string	Specifies the charging mode of the disk. The valid values are as follows:prePaid: the yearly/monthly billin...
period_unit	month	string	The period unit of the pre-paid purchase.Valid values are month and year. This parameter is mandatory if...
period	1	number	The period number of the pre-paid purchase. If period_unit is set to month , the value ranges from 1 to 9...

Previous Next

3. On the **Configure Stack** page, configure an IAM agency and click **Next**.

Agency: huaweicloud

mkp_rfs_agency_trust Agency

Auto-Rollback: ☐ If auto-rollback is enabled, the stack automatically rolls back to the previous successful resource status when the operation fails. After the stack is created, you can modify the stack configurations on its details page.

Deletion Protection: ☐ Deletion protection prevents the stack from being deleted accidentally. You can modify it on the stack details page.

NOTE

You can skip agency configuration and click **Next** to deploy resources using your account permissions.

4. On the **Confirm Configurations** page, check the configured parameters. If the parameters are correct, click **Create Execution Plan**. In the displayed dialog box, click **OK**.

✓ Select Template

✓ Configure Parameters

✓ Configure Stack

4 Confirm Configurations

ⓘ RFS is free of charge, but the resources in the stack are not. Currently, you need to create an execution plan (free of charge) to obtain the estimated price.

Template Info

Stack Namemkp_stack_20250911_180...Description--

Parameters

Parameter Name	Value	Type	Description
Subnet	*****	string	Subnet ID
Subnet	8U32G	string	Subnet
Subnet	192.168.0.0/16	string	Subnets in the VPC. The value ranges from 10.0.0.0/8 to 10.255.255.0/24, 172.16.0.0/...
Subnet	192.168.10.0/24	string	in which the subnet resides. The value must be in CIDR format and within the CIDR bl...
Subnet	way_ip192.168.10.1	string	net. The value must be a valid IP address in the subnet segment. Changing this create...
Subnet	postPaid	string	he disk. The valid values are as follows:prePaid: the yearly/monthly billing mode,postP...
Subnet	month	string	urchase.Valid values are month and year. This parameter is mandatory if charging_mo...
Subnet	1	number	id purchase. If period_unit is set to month , the value ranges from 1 to 9. If period_unit ...

Stack Settings

IAM Permission(Provider) huaweicloud, (Agency) mkp_rfs_agency_trustAuto-RollbackDisabledDeletion ProtectionDisabledAgency

Estimated fee: You can obtain the estimated fee after creating an execution plan (free of charge).

PreviousCreate Execution Plan

Create Execution Plan

ⓘ To preview your resource billing information, you can create an execution plan.

* Execution Plan Name

Description

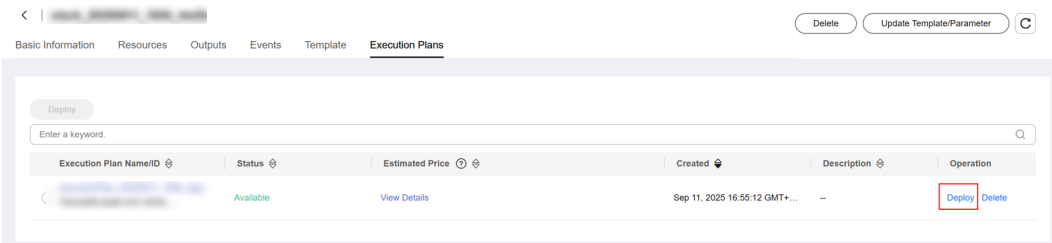
Enter a description of the execution plan.

0/255

OK

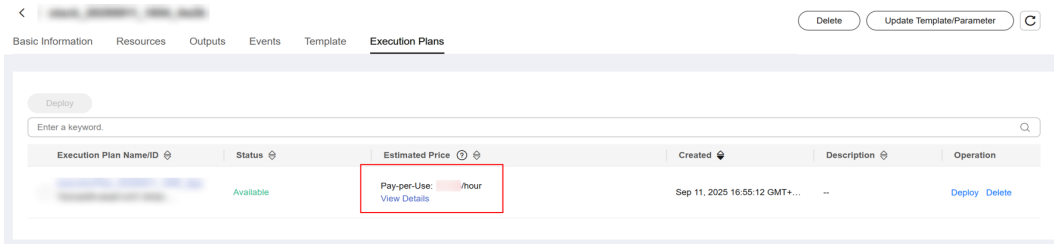
Cancel

Step 3 On the **Execution Plans** tab, ensure that the account balance is sufficient and click **Deploy**.



NOTE

Click **View Details** under **Estimated Price** to check resource fee details. For yearly/monthly resources, the system deducts fees after they are created. (Ensure that your account balance is sufficient. Otherwise, resource creation will fail.)



Price Details

This price is an estimate and may differ from the final price. [Pricing Details](#). Price inquiry is not supported for some resources. Go to [Price Calculator](#) to calculate the fees.

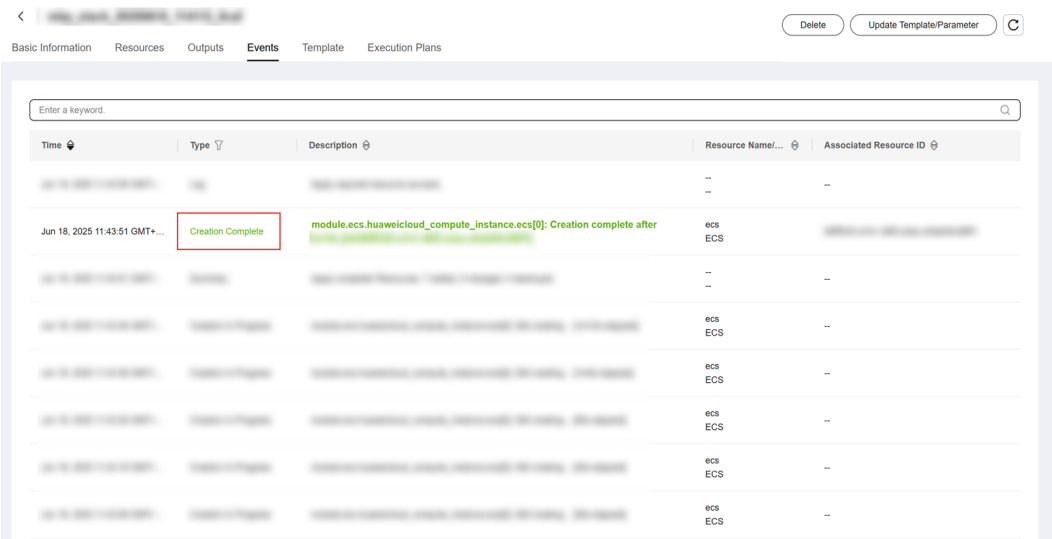
Total price Estimate

Pay-per-Use [Export Price List](#)

Cloud Prod...	Logical Name	Region	Q...	Original Price	Discount Details	Estimated Sale Price
Elastic Cloud Serv	ecs	CN North-Be...	1			
Elastic IP	eip	CN North-Be...	1			

Close

Step 4 After the deployment is successful, check the **Events** and **Resources** tabs. If the software package is used for website development, a website address is generated.



Basic InformationResourcesOutputsEventsTemplateExecution Plans

Enter a keyword.

Cloud Product Name	Physical Resource Name/ID	Logical Name	Resource Type	Resource Status
Elastic Cloud Server		ecs	huaweicloud_compute_instance	Creation Complete

NOTE

- After the deployment is successful, if the server no longer needs to access the Internet, you can disable the bound EIP on the resource service console.
- If the deployment fails, contact the seller.
- After the deployment is successful, use the product according to the user guide provided by the seller.

Step 5 Use the product according to the user guide provided by the seller.

----End