

**Operations Capability**

# **Developer Guide**

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**Date** 2024-05-10



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<https://securitybulletin.huawei.com/enterprise/en/security-advisory>

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# 1 Change History

What's New	Released On
<p>This issue is the sixteenth official release.</p> <p>This release incorporates the following change:</p> <p>Added <b>Managing Enterprise Projects</b>.</p>	2024-05-10
<p>This issue is the fifteenth official release.</p> <p>This release incorporates the following changes:</p> <p>Added section, <b>Key Operations Supported by Cloud Trace Service (CTS)</b>.</p> <p>Added section, <b>Viewing Audit Logs</b>.</p>	2023-05-30
<p>This issue is the fourteenth official release.</p> <p>This release incorporates the following change:</p> <p>Added <b>Managing Resource Packages</b>.</p>	2021-06-16
<p>This issue is the thirteenth official release.</p> <p>This release incorporates the following change:</p> <p>Added the API for querying available discounts of an order in <b>Managing Yearly/Monthly Orders</b>.</p>	2021-04-28

What's New	Released On
<p>This issue is the twelfth official release. This release incorporates the following change: Modified <b>Managing Yearly/Monthly Orders</b>. Specifically, added the API for querying available discounts of an order.</p>	<p>2021-01-28</p>
<p>This issue is the eleventh official release. This release incorporates the following changes: Modified <b>Querying Product Information</b>. Specifically, added the APIs for querying the measurement units and the measurement unit number system.</p>	<p>2020-12-30</p>
<p>This issue is the tenth official release. This release incorporates the following changes: Modified <b>Querying Product Information</b>. Specifically, added the API for querying usage types. Modified <b>Managing Yearly/Monthly Orders</b>. Specifically, added the API for enabling or canceling the change from yearly/monthly to pay-per-use upon resource expiration.</p>	<p>2020-11-18</p>
<p>This issue is the ninth official release. This release incorporates the following changes: Added the following APIs in <b>Querying Product Information</b>:</p> <ul style="list-style-type: none"> <li>● API for querying cloud service types</li> <li>● API for querying resource types</li> <li>● API for querying resources by cloud service type</li> </ul>	<p>2020-11-04</p>
<p>This issue is the eighth official release. This release incorporates the following change: Modified <b>Managing Accounts</b>. Specifically, updated the APIs for querying the account balance.</p>	<p>2020-08-12</p>

What's New	Released On
<p>This issue is the seventh official release.</p> <p>This release incorporates the following change:</p> <p>Modified <b>Managing Yearly/Monthly Resources</b>. Specifically, updated the APIs for querying the amount of unsubscription orders, querying the yearly/monthly resources, and setting or canceling automatic renewal for yearly/monthly resources.</p>	<p>2020-06-30</p>
<p>This is the sixth official release.</p> <p>This release incorporates the following change:</p> <p>Modified <b>Managing Yearly/Monthly Orders</b>. Specifically, updated the APIs for querying orders and order details, paying yearly/monthly product orders, canceling orders to be paid, as well as renewing or unsubscribing from yearly/monthly resources.</p>	<p>2020-06-17</p>
<p>This issue is the fifth official release.</p> <p>This release incorporates the following change:</p> <p>Modified <b>Managing Bills</b>. Specifically, updated the descriptions of querying resource details and querying resource consumption records the API list.</p>	<p>2020-04-22</p>
<p>This issue is the fourth official release.</p> <p>This release incorporates the following change:</p> <p>Modified <b>Product Management</b>. Specifically, added the APIs for querying the price of a pay-per-use product and querying the price of a yearly/monthly product.</p>	<p>2020-03-25</p>
<p>This issue is the third official release.</p> <p>This release incorporates the following change:</p> <p>Modified <b>Transaction Management</b>. Specifically, added the API for querying the package usage in the API list.</p>	<p>2020-01-17</p>

What's New	Released On
This issue is the second official release. This release incorporates the following change: Added <b>Invoice Management</b> .	2020-01-15
This issue is the first official release.	2019-09-17



# 2 Development Scenarios

Huawei Cloud provides open APIs for scenarios, such as product management, transaction management, bill management, enterprise management, and invoice management. Customers can build their own sales platforms based on the operation capabilities.

The following figure illustrates the specific scenarios.



## NOTE

The preceding figure does not show the independent scenario. You can invoke this interface based on the site requirements.

## Product Management

Customers can query the cloud service or resource types, query resources by cloud service type, or query usage types, measurement units, and measurement unit number system on the self-built platform.

## Account Management

A customer can query its account balance. If the account balance is insufficient, the customer needs to top up the account in time.

## Transaction Management

Customers are allowed to query coupons issued by their partners, product price, package usage, resource packages, and resource package usage; purchase yearly/monthly resources; and manage orders.

## Bill Management

1. A customer can query its expenditure summary bills, which contain detailed expenditure records and can be used for reconciliation.
2. A customer can query its resource details. The resource details have a latency (a maximum of 24 hours).

3. A customer can query its usage details of each resource.

## **Enterprise Management**

1. Enterprise Project Management Service (EPS) provides a unified method to manage cloud resources and personnel by enterprise project.

## **Invoice Management**

Customers can view the invoice list on the self-built platform.

# 3 Product Management

## 3.1 Querying Product Information

### Service Object

Customers

### Scenario Description

On the self-built platform, customers can:

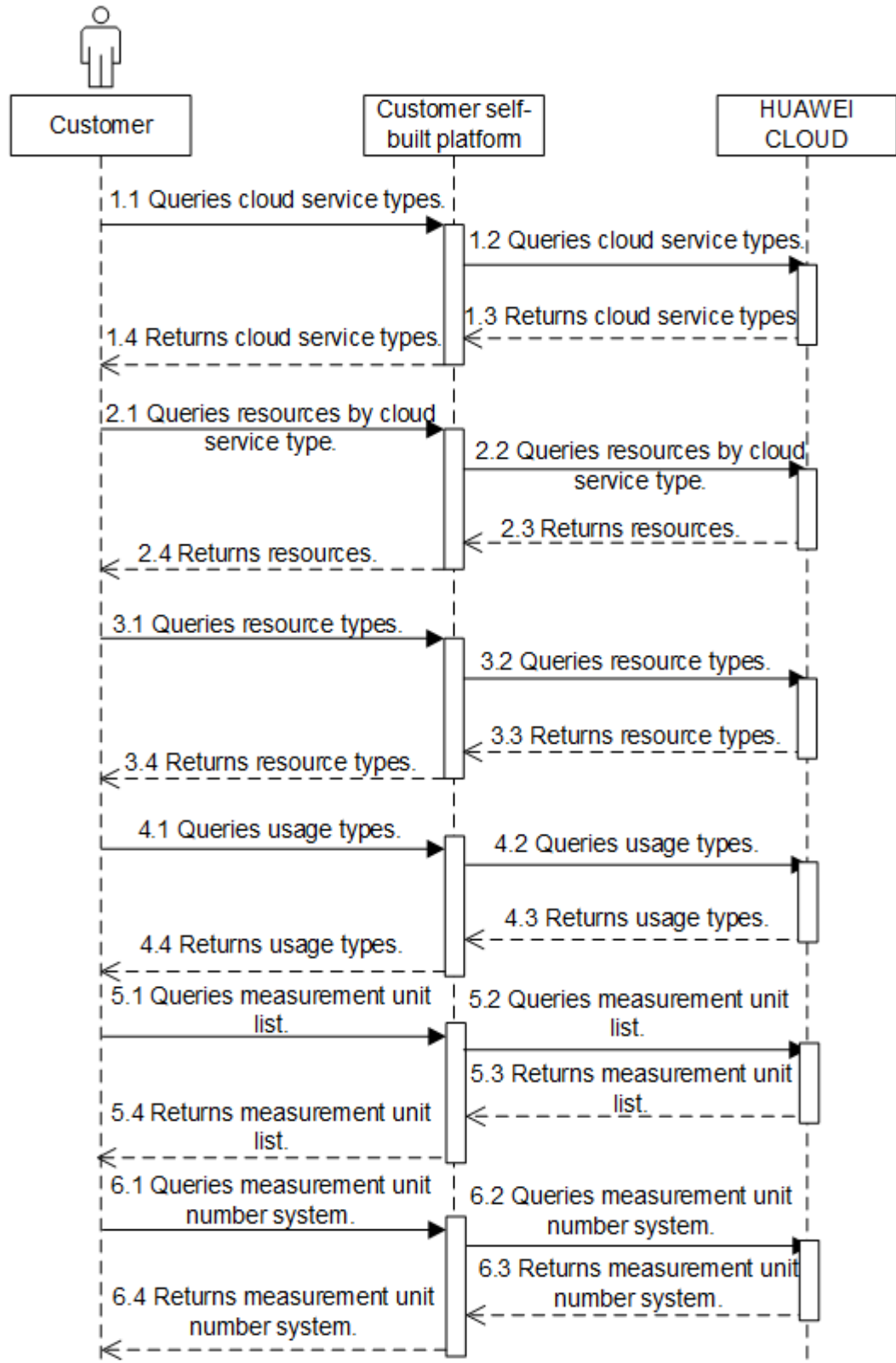
- Query the cloud service or resource type.
- Query resources by cloud service type.
- Query the usage type, measurement unit, and measurement unit number system.

### Related APIs

API	API Definition
Querying cloud service types	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0000001256679455.html">https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0000001256679455.html</a>
Querying resource types	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0000001256519451.html">https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0000001256519451.html</a>
Querying resources by cloud service type	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/qct_00003.html">https://support.huaweicloud.com/intl/en-us/api-oc/qct_00003.html</a>
Querying usage types	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/qct_00004.html">https://support.huaweicloud.com/intl/en-us/api-oc/qct_00004.html</a>
Querying measurement units	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/qct_00006.html">https://support.huaweicloud.com/intl/en-us/api-oc/qct_00006.html</a>

API	API Definition
Querying the measurement unit number system	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/qct_00007.html">https://support.huaweicloud.com/intl/en-us/api-oc/qct_00007.html</a>

## API Invoking Process



## 3.2 Querying Product Information

### Service Object

Customer

### Scenarios

The self-built platform obtains the product prices on the HUAWEI CLOUD official website based on the product catalog.

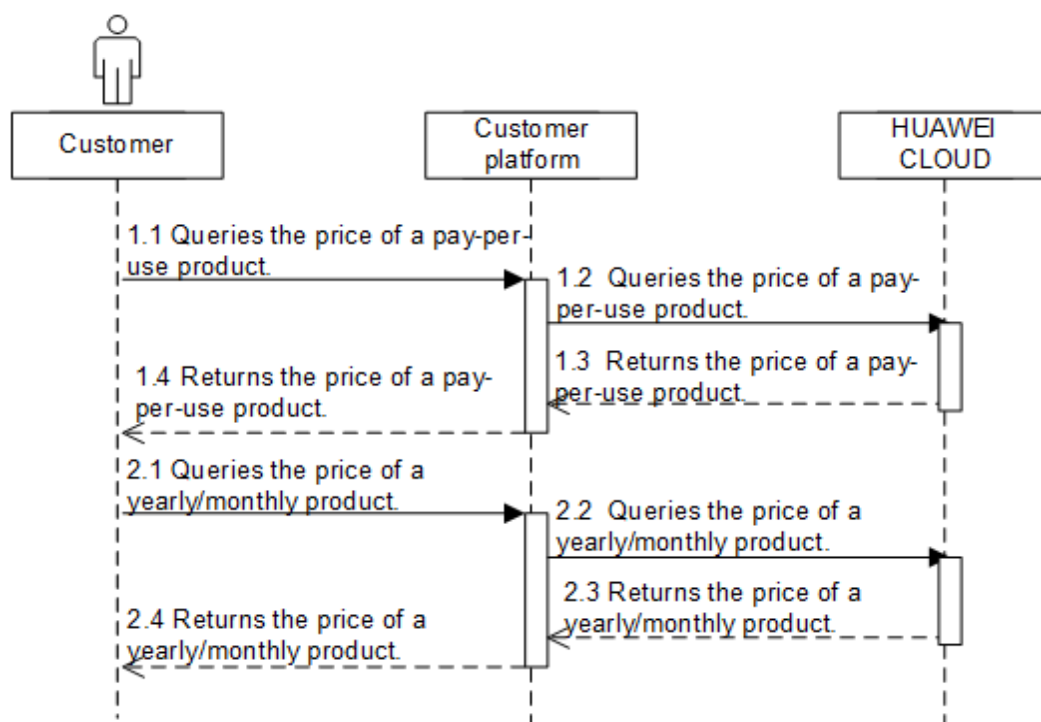
Customers can perform the following operations on the platform:

- Querying the price of a pay-per-use product by setting criteria
- Querying the subscription price of a yearly/monthly product by setting criteria

### Related APIs

API	API Definition
Querying the Price of a Pay-Per-Use Product	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01001.html">https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01001.html</a>
Querying the Price of a Yearly/Monthly Product	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01002.html">https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01002.html</a>

### API calling process



# 4 Managing Accounts

## Service Object

Customer

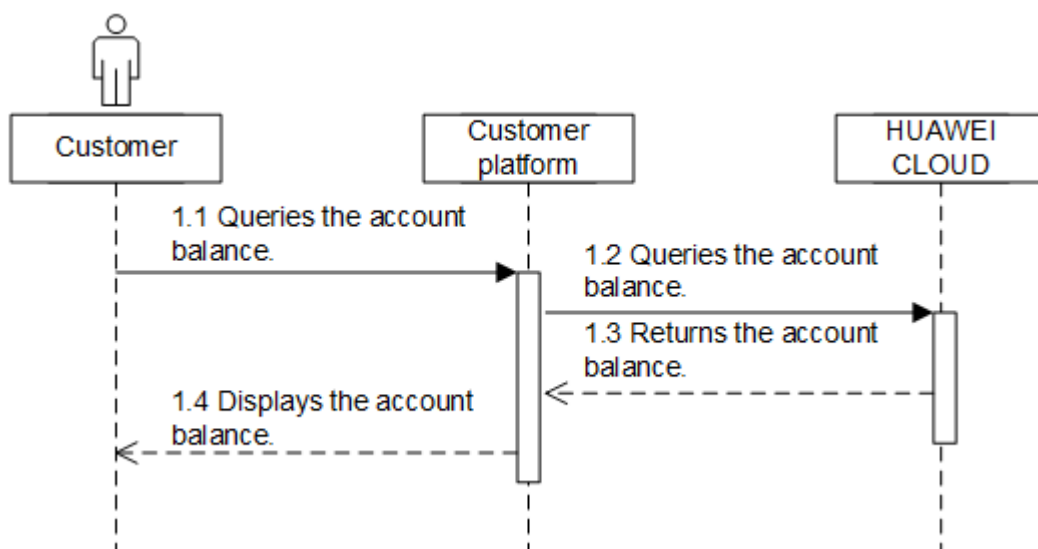
## Scenario Description

A customer can query its account balance. If the account balance is insufficient, the customer needs to top up the account in time.

## Related APIs

API	API Definition
Querying the account balance	<a href="https://support.huaweicloud.com/intl/en-us/api-occe/mac_00001.html">https://support.huaweicloud.com/intl/en-us/api-occe/mac_00001.html</a>

## API Invoking Process



## Development Suggestions

A customer can subscribe to and renew HUAWEI CLOUD services only when the account balance is sufficient. Therefore, the customer needs to top up its account in time to prevent the resources from being frozen or deleted.



# 5 Transaction Management

## 5.1 Managing Coupons

### Service Object

Customers

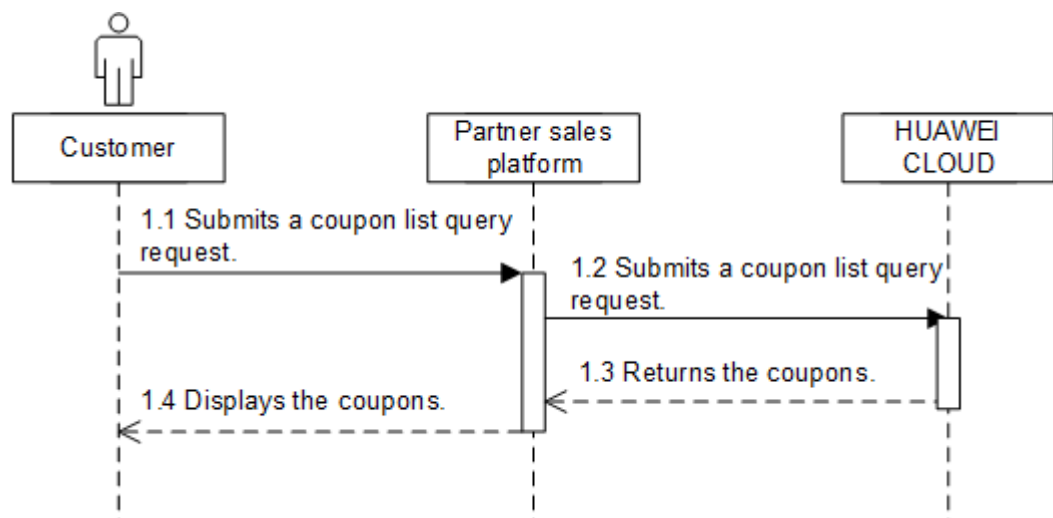
### Scenarios

Customers can query the coupons issued by their partners.

### Related APIs

API	API Definition
Querying Coupons	<a href="https://support.huaweicloud.com/intl/en-us/api-ocp/mp_02001.html">https://support.huaweicloud.com/intl/en-us/api-ocp/mp_02001.html</a>

### API calling process



## 5.2 Managing Yearly/Monthly Orders

### Service Object

Customers

### Scenario Description

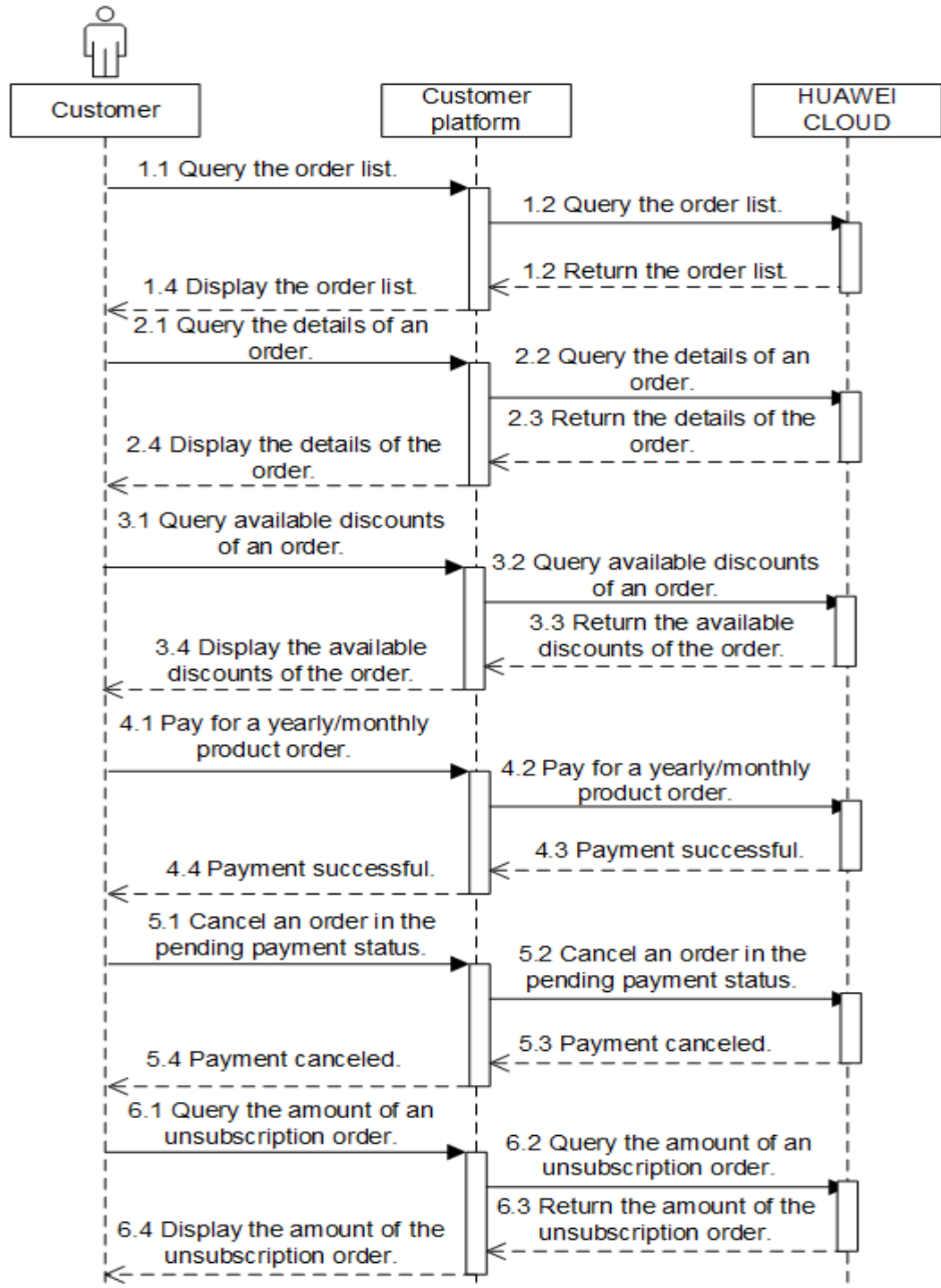
After purchasing yearly/monthly resources, a customer can perform the following operations on the self-built platform:

- Query the orders in different statuses such as pending approval, processing, canceled, completed, and pending payment.
- Pay or cancel orders in the pending payment state, and unsubscribe from yearly/monthly products in the subscribed state.
- Query the available discounts of an order.
- Query the resources and original orders where the refund of an unsubscription or degrade order is from.

### Related APIs

API	API Definition
Querying orders	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00013.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00013.html</a>
Querying order details	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00014.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00014.html</a>
Querying available discounts of an order	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00025.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00025.html</a>
Paying yearly/monthly product orders	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00030.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00030.html</a>
Canceling orders in the pending payment status	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00017.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00017.html</a>
Querying refunds for orders	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00020.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00020.html</a>

### API Invoking Process



### Development Suggestions

The prerequisite for this scenario is that the customer has purchased yearly/monthly cloud service resources.

## 5.3 Managing Yearly/Monthly Resources

### Service Object

Customers

### Scenario Description

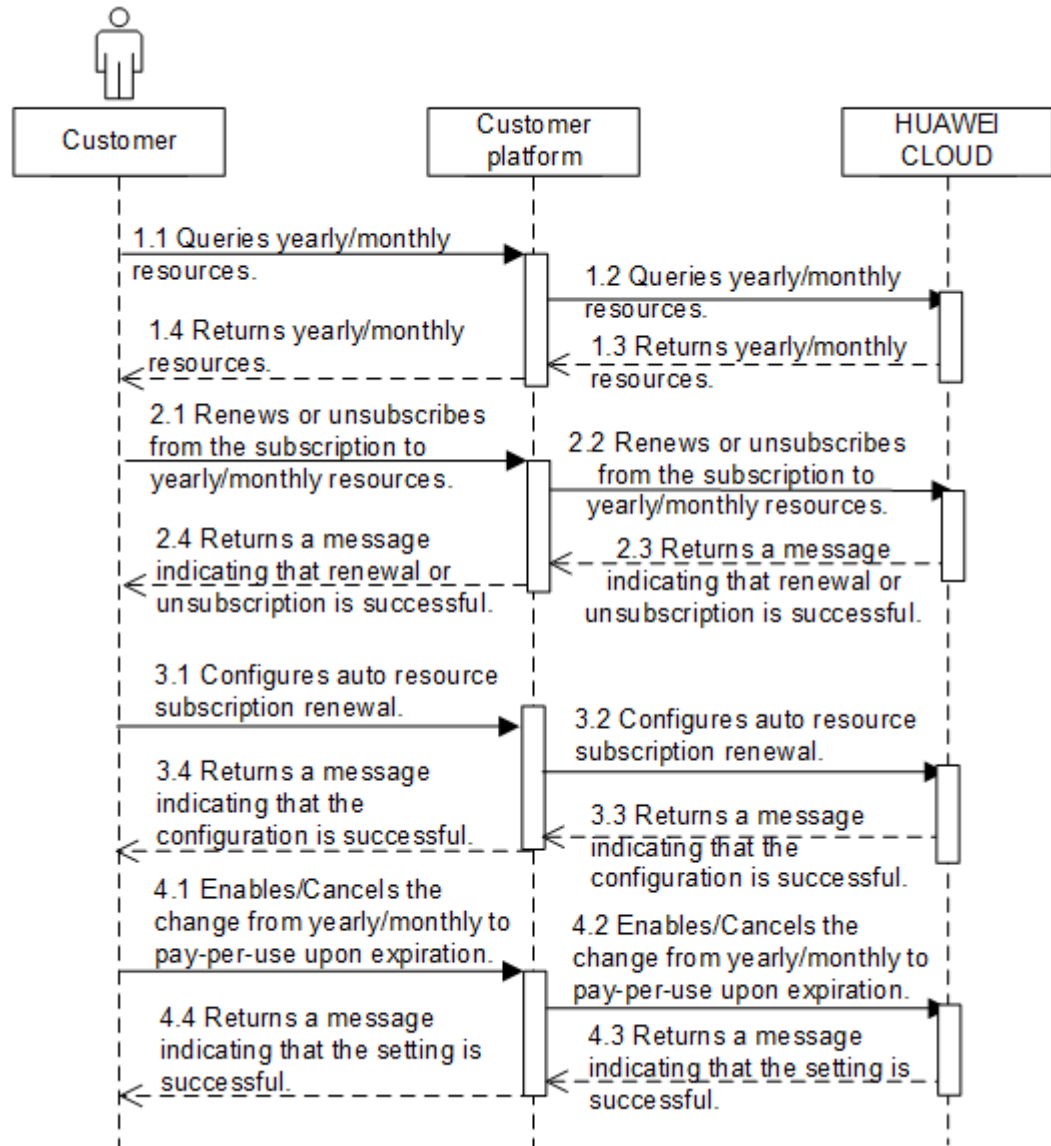
After purchasing yearly/monthly resources, a customer can perform the following operations on the self-built platform:

- Query the expiration date of orders in the completed status, and renew the subscription to orders or resources about to expire.
- Configure automatic renewal for purchased yearly/monthly resources.
- Query the resources and original orders where the refund of an unsubscription or degrade order is from.

### Related APIs

API	API Definition
Querying customer's yearly/monthly resources	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00021.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00021.html</a>
Renewing subscription to yearly/monthly resources	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00018.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00018.html</a>
Unsubscribing from yearly/monthly resources	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00019.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00019.html</a>
Enabling automatic subscription renewal for yearly/monthly resources	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00022.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00022.html</a>
Disabling automatic subscription renewal for yearly/monthly resources	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00023.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00023.html</a>
Enabling/Canceling the change from yearly/monthly to pay-per-use upon expiration	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00024.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00024.html</a>

### API Invoking Process



## Development Suggestions

- The prerequisite for this scenario is that a customer has purchased yearly/monthly cloud service resources.
- The resource IDs need to be obtained using the APIs for querying yearly/monthly resources because the management operations, such as subscribing to or unsubscribing from yearly/monthly resources, and enabling or disabling automatic subscription renewal, are performed based on resources.
- If a primary resource has attached resources and subscription to the primary resource is renewed or canceled, the system will also renew or cancel the subscription to the attached resources. An example of primary and attached resources are as follows: ECS is the primary resource, and its attached resources are EVS, VPC, EIP, and bandwidth.
- The fee of automatic subscription renewal for a product will be deducted at 03:00 seven days before the product is due. If the fee fails to deduct for the first time due to insufficient account balance, the system will attempt to

deduct the fee at 03:00 every day before the reserved product resource expires until the fee is deducted successfully.

## 5.4 Querying the Package Usage

### Service Object

Customer

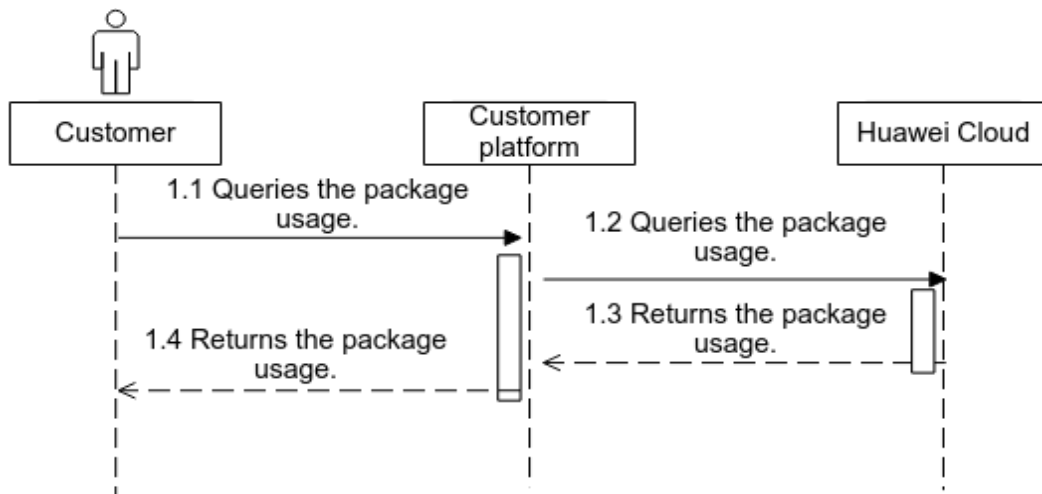
### Scenarios

A customer can view the usage details of its purchased yearly/monthly resources on the self-built platform.

### Related APIs

API	API Definition
Querying the Package Usage	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00006.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00006.html</a>

### API calling process



## 5.5 Managing Resource Packages

### Service Object

Customers

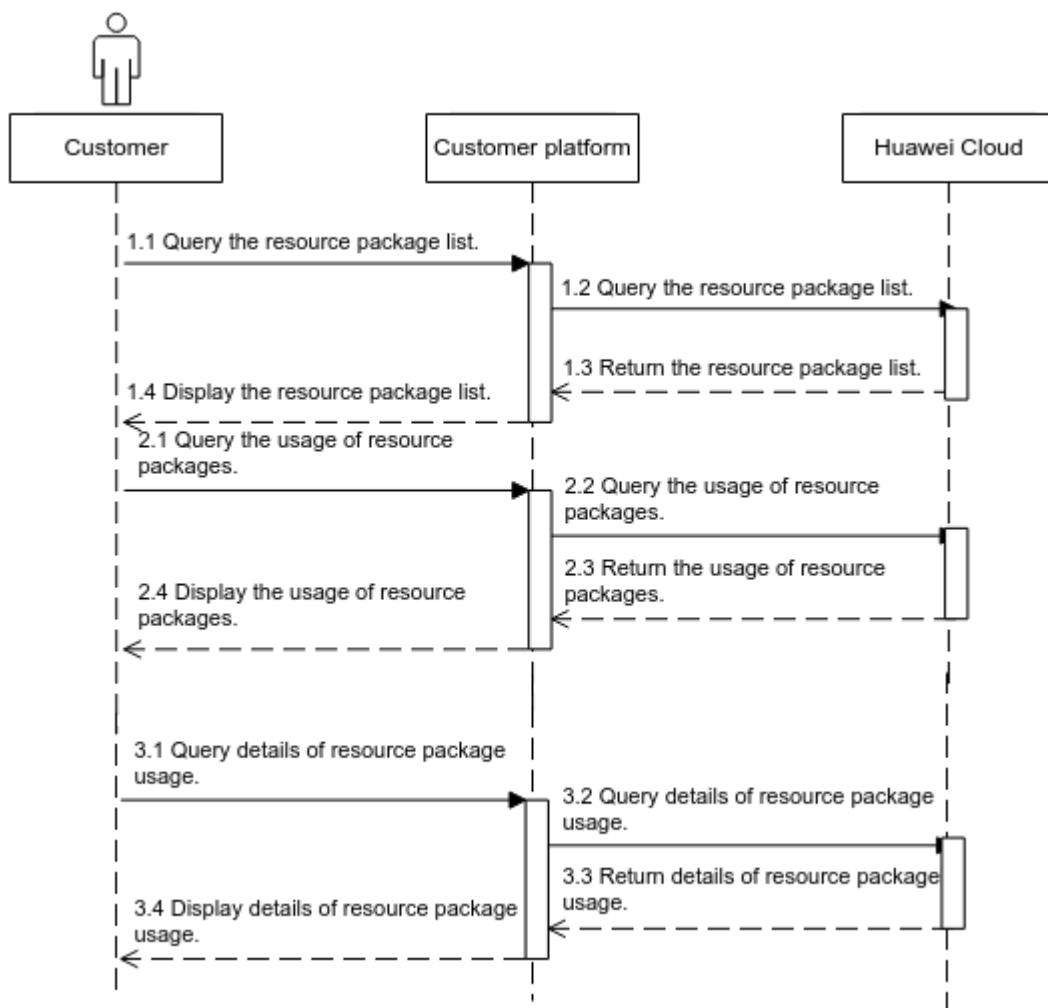
## Scenario Description

After a customer purchases a resource package, the customer can query the resource package list and resource usage on the self-built platform.

## Related APIs

API	API Definition
Querying Resource Packages	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00027.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00027.html</a>
Querying the Resource Usage	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00028.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00028.html</a>
Querying Details of Resource Usage	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00029.html">https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00029.html</a>

## API Invoking Process



## Development Suggestions

The prerequisite for this scenario is that the customer has purchased a resource package.



# 6 Managing Bills

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## Service Object

Customer

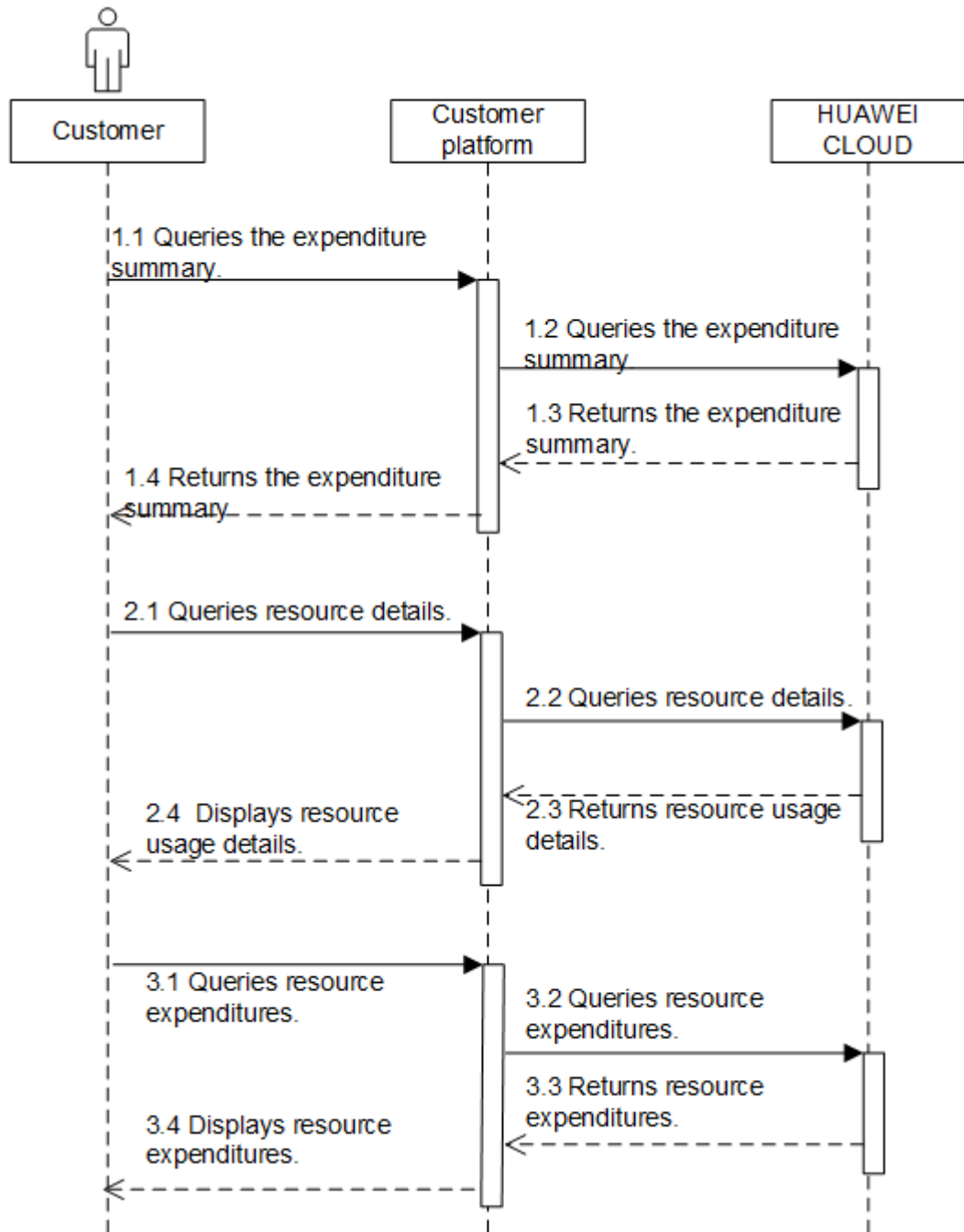
## Scenario Description

1. A customer can query its expenditure summary bills. The bills summarize consumption details by month and can be used for reconciliation. The expenditure summary contains only the data generated before 24:00 of the previous day.
2. Customers can query their usage details of each resource. The resource details have a latency (a maximum of 24 hours).
3. A customer can query its usage details of each resource.

## Related APIs

API	API Definition
Querying Summary Bills	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0109708206.html">https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0109708206.html</a>
Viewing resource usage details	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00003.html">https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00003.html</a>
Viewing resource expenditures	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00004.html">https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00004.html</a>

## API Invoking Process



# 7 Managing an Enterprise

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## 7.1 Managing Enterprise Projects

### Service Object

Customers

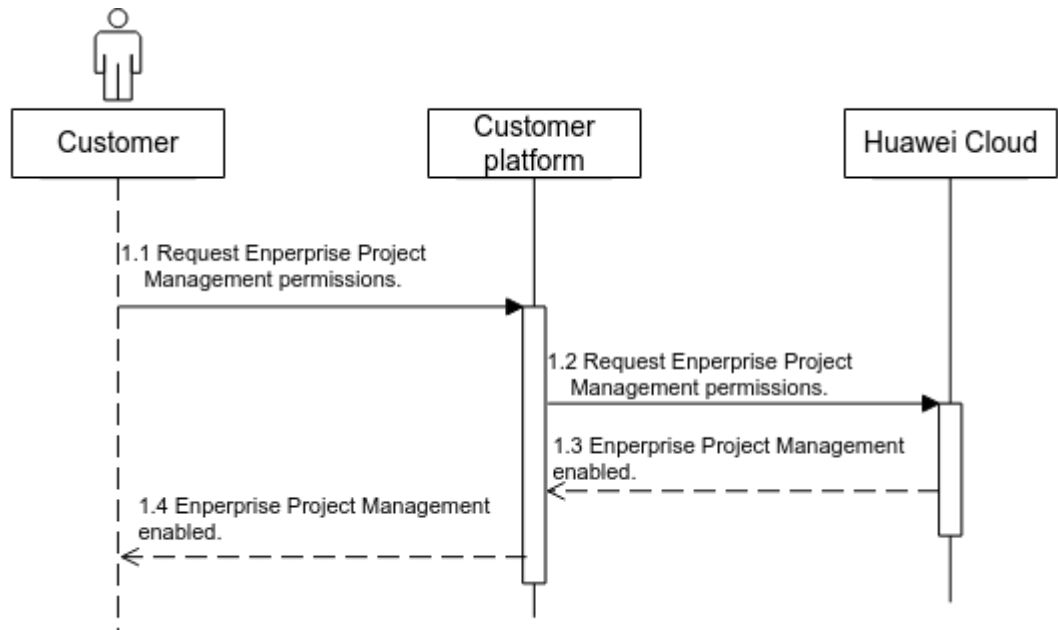
### Scenario Description

With Enterprise Project Management, you can manage cloud resources and personnel by enterprise project.

### Related APIs

API	Link
Enabling Enterprise Project Management	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/ep_00022.html">https://support.huaweicloud.com/intl/en-us/api-oc/ep_00022.html</a>

## Invoking Process



# 8 Invoice Management

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## 8.1 Managing Invoices

### Service Object

Customer

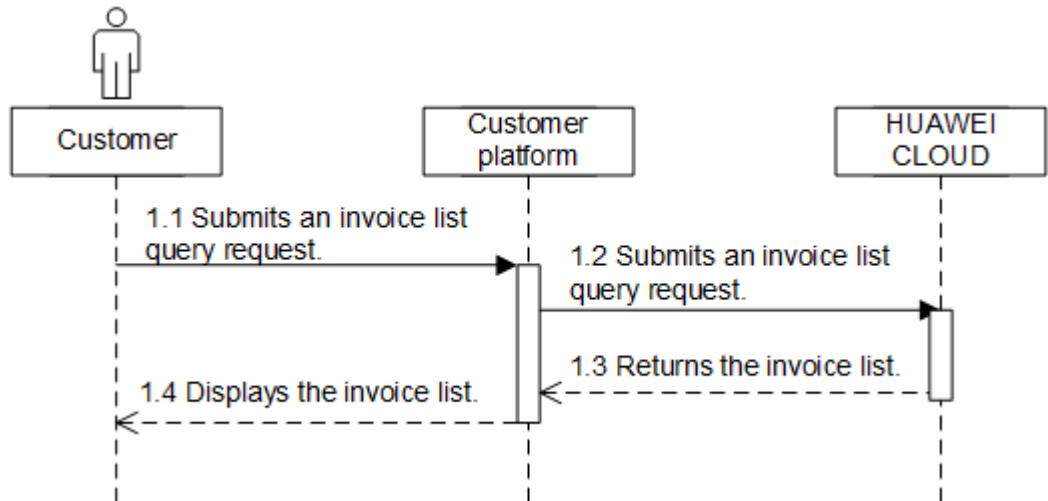
### Scenario Description

On the customers' self-built platform, the invoice list can be viewed.

### Related APIs

API	API Definition
Querying the invoice list	<a href="https://support.huaweicloud.com/intl/en-us/api-oc/miv_01005.html">https://support.huaweicloud.com/intl/en-us/api-oc/miv_01005.html</a>

### API Invoking Process



# 9 Appendix

## 9.1 HUAWEI CLOUD Environment and Address

Environment	Description	Address
CBC request address	Indicates the path (endpoint) provided by CBC to access the customer operation capability. The customer adds the address and the URI of a specific API to access the API.	<a href="https://bss-intl.myhuaweicloud.com">https://bss-intl.myhuaweicloud.com</a>
My Account	Common customers can view with basic account information, perform user authentication, configure preferences, and view their privileges and recommended operation management pages.	<a href="https://account-intl.huaweicloud.com/usercenter/#/accountindex/accountInfo">https://account-intl.huaweicloud.com/usercenter/#/accountindex/accountInfo</a>
Billing Center	HUAWEI CLOUD provides the operation management UI for common customers to recharge, renew, view orders, view financial information, view vouchers and discounts, apply for contracts, issue invoices, and perform unsubscription and changes.	<a href="https://account-intl.huaweicloud.com/usercenter">https://account-intl.huaweicloud.com/usercenter</a>
Console	Common customers can log in to the HUAWEI CLOUD management console to view, purchase, and use HUAWEI CLOUD services.	<a href="https://console-intl.huaweicloud.com/console/">https://console-intl.huaweicloud.com/console/</a>

Environment	Description	Address
My Credential	The <b>My Credential</b> page centrally displays customers' security credentials and enables users to manage their credentials. On the <b>My Credential</b> page, customers can view the project ID and account name, change the verified mobile number and email address, change the password, and manage access keys (AK/SK).	<a href="https://console-intl.huaweicloud.com/iam/#/myCredential">https://console-intl.huaweicloud.com/iam/#/myCredential</a>

## 9.2 Network Connectivity Test Method

You can run the command (`curl -kv https://apigw-external-lb-waf.ap-southeast-3.myhuaweicloud.com`) to test connectivity through a proxy or a public IP. If the returned result includes a line starting with **connected to**, the new IP is accessible.



# 10 Auditing

## 10.1 Key Operations Supported by Cloud Trace Service (CTS)

### Scenarios

Cloud Trace Service (CTS) is provided by Huawei Cloud that enables you to records actions supported by the customer operations capability APIs for later query, auditing, and backtracking.

### Prerequisites

You have enabled CTS.

### Supported Operations

**Table 10-1** Operations supported by CTS

Operation	Resource Type	Event
Querying expenditure records	billDetail	queryResFeeRecords
Viewing bill details	billDetail	queryResRecordsDetail
Canceling orders in the pending payment status	order	cancelCustomerOrder
Paying a yearly/monthly order	order	payCustomerOrderV3
Renewing subscription to yearly/monthly resources	subscription	renewResources
Unsubscribing from yearly/monthly resources	subscription	unsubscribeResources

Operation	Resource Type	Event
Enabling automatic renewal for yearly/monthly resources	subscription	setResourcesAutorenew
Disabling automatic renewal for yearly/monthly resources	subscription	cancelResourcesAutoRenew
Enabling/Canceling the change from yearly/monthly to pay-per-use upon expiration	subscription	updatePeriodToOnDemand
Enabling the Enterprise Project	billing	openEnterpriseProjectAuth
Querying the Invoice List	invoice	queryInvoiceIntlList


## 10.2 Viewing Audit Logs

### Scenarios

Operations performed in the last seven days are recorded by CTS.

This section describes how to view the operation records on the CTS console.

### Procedure

1. Log in to the management console.
2. Click  in the upper left corner and select your region and project.
3. Choose **Service List > Management & Governance > Cloud Trace Service**.
4. Choose **Trace List** in the navigation pane.
5. In the upper right corner, select a time range from **Last 1 hour**, **Last 1 day**, and **Last 1 week**, or select **Customize** to specify a time range as needed. And specify filter criteria as needed. The following filter criteria are available:

- **Trace Type**, **Trace Source**, **Resource Type**, and **Search By**.

If you select **Resource ID** in the drop-down list of **Search By**, you need to enter a specific resource ID.

- Select a specific operator in the drop-down list of **Operator**.
- Select trace status from **All trace status**, **Normal**, **Warning**, and **Incident**.
- 

6. Expand the trace to view details.

**Figure 10-1** Trace details

Trace Name	Resource Type	Trace Source	Resource ID	Resource Name	Trace Status	Operator	Operation Time	Operation
createTracker	tracker	CTS		system	normal		Feb 02, 2019 19:22:43 GMT+08:00	<a href="#">View Trace</a>

Trace ID	dbee5100-26dc-11e9-bb00-286ed488cbe2	Source IP Address	
Trace Type	ConsoleAction	Generated	Feb 02, 2019 19:22:43 GMT+08:00

7. Locate a trace and click **View Trace** in the **Operation** column.  
For details about CTS, see [Cloud Trace Service User Guide](#).