

Operations Capability

Developer Guide

Issue 16
Date 2024-05-10



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<https://www.huawei.com/en/psirt/vul-response-process>

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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 Managing Enterprise Projects.</p>	2024-05-10
<p>This issue is the fifteenth official release.</p> <p>This release incorporates the following changes:</p> <p>Added section, Key Operations Supported by Cloud Trace Service (CTS).</p> <p>Added section, Viewing Audit Logs.</p>	2023-05-30
<p>This issue is the fourteenth official release.</p> <p>This release incorporates the following change:</p> <p>Added Managing Resource Packages.</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 Managing Yearly/Monthly Orders.</p>	2021-04-28

What's New	Released On
<p>This issue is the twelfth official release. This release incorporates the following change: Modified Managing Yearly/Monthly Orders. 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 Querying Product Information. 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 Querying Product Information. Specifically, added the API for querying usage types. Modified Managing Yearly/Monthly Orders. 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 Querying Product Information:</p> <ul style="list-style-type: none"> ● API for querying cloud service types ● API for querying resource types ● API for querying resources by cloud service type 	<p>2020-11-04</p>
<p>This issue is the eighth official release. This release incorporates the following change: Modified Managing Accounts. 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 Managing Yearly/Monthly Resources. 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 Managing Yearly/Monthly Orders. 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 Managing Bills. 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 Product Management. 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 Transaction Management. 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 Invoice Management .	2020-01-15
This issue is the first official release.	2019-09-17

2 Development Scenarios

HUAWEI CLOUD provides customers with service scenarios such as product management, transaction management, bill management, and invoice management. Customers can build their own sales platforms based on the operation capabilities.

The following figure illustrates the specific scenarios.



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

A customer can query the coupons issued by partners, prices of pay-per-use and yearly/monthly products, purchase resources on a yearly or monthly basis, view and manage orders, query the package usage, and query the resource package list and resource usage.

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:

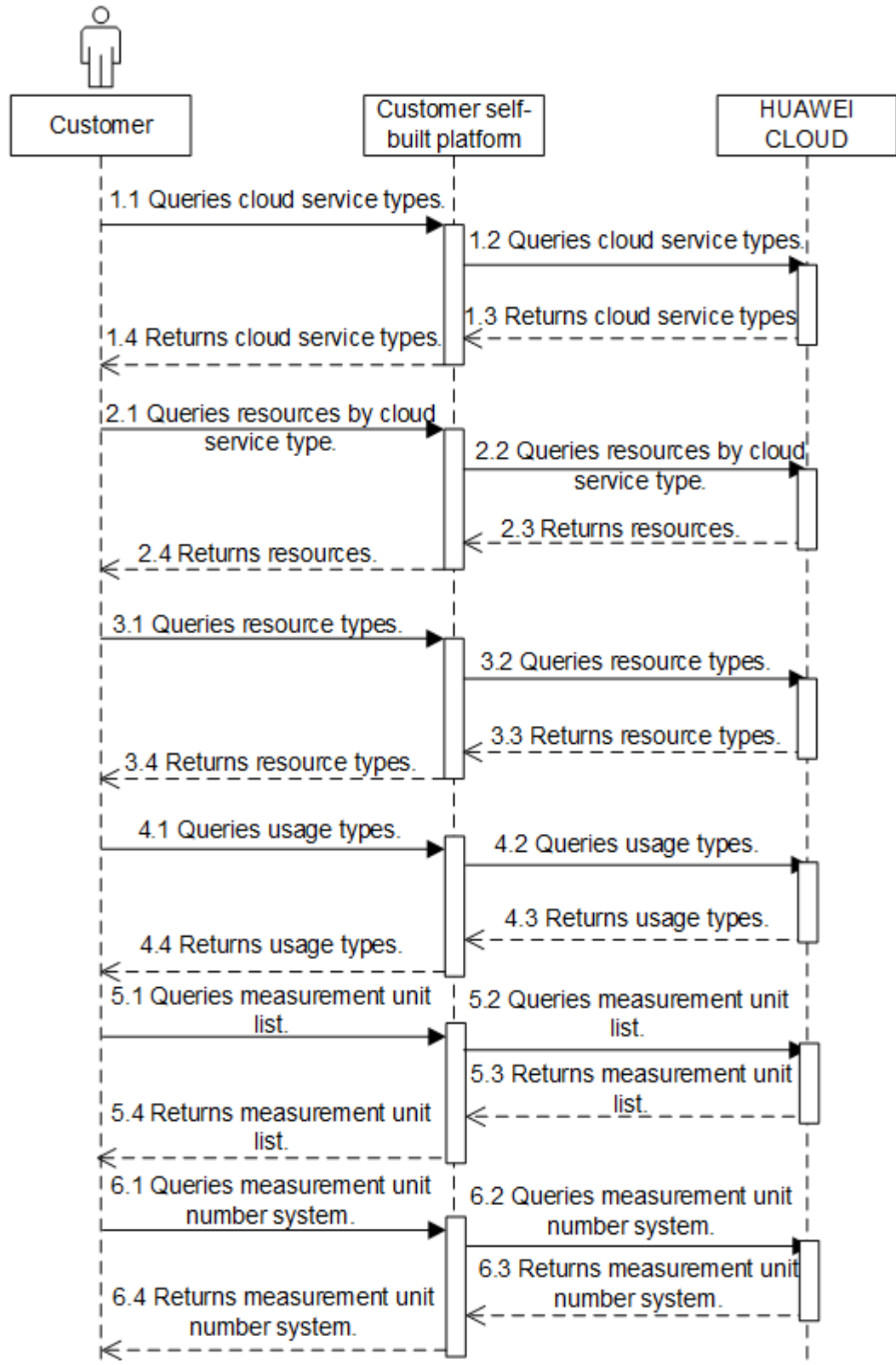
- Query the cloud service or resource type.
- Query resources by cloud service type.
- Query the usage type, measurement unit, and measurement unit number system.

Related APIs

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

API	API Definition
Querying the measurement unit number system	https://support.huaweicloud.com/intl/en-us/api-oc/qct_00007.html

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.

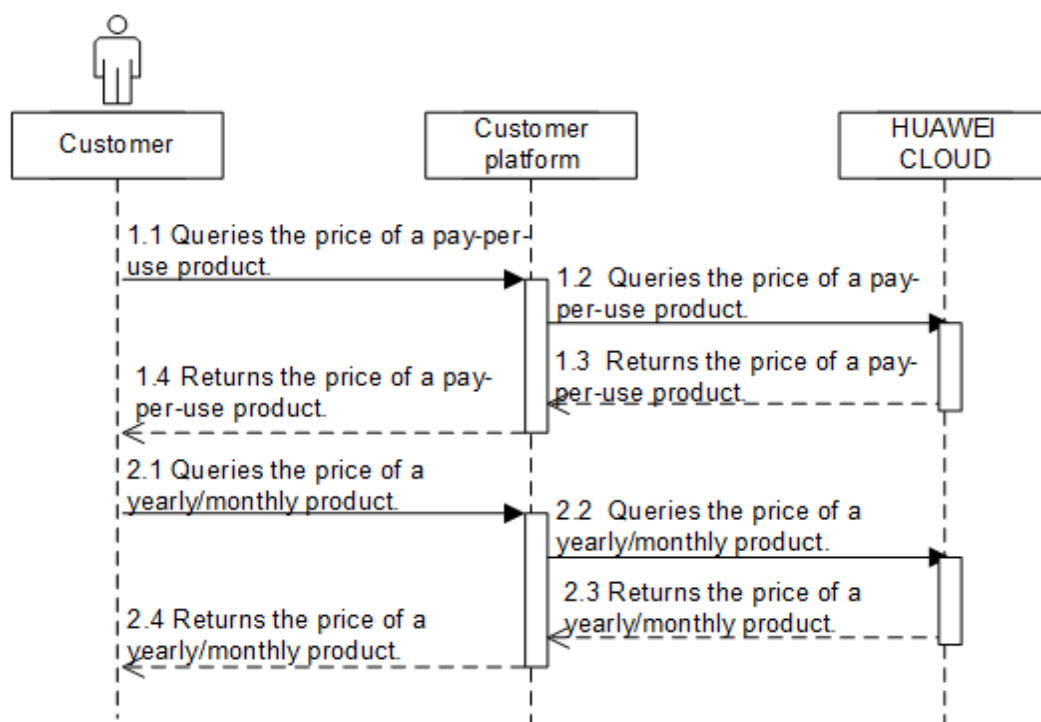
Customers can perform the following operations on the platform:

- 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	https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01001.html
Querying the Price of a Yearly/Monthly Product	https://support.huaweicloud.com/intl/en-us/api-oc/bcloud_01002.html

API calling process



4 Managing Accounts

Service Object

Customer

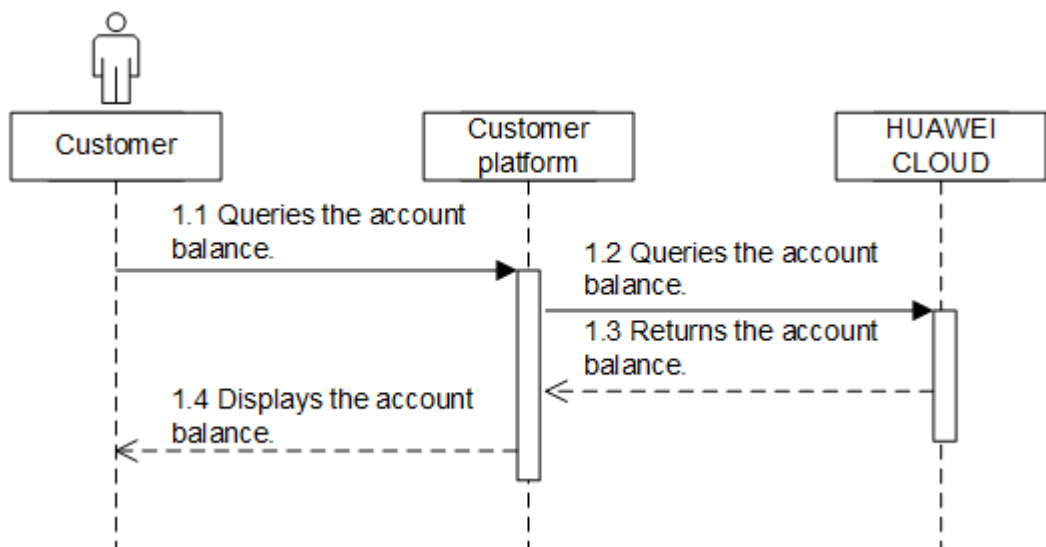
Scenario Description

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	https://support.huaweicloud.com/intl/en-us/api-occe/mac_00001.html

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

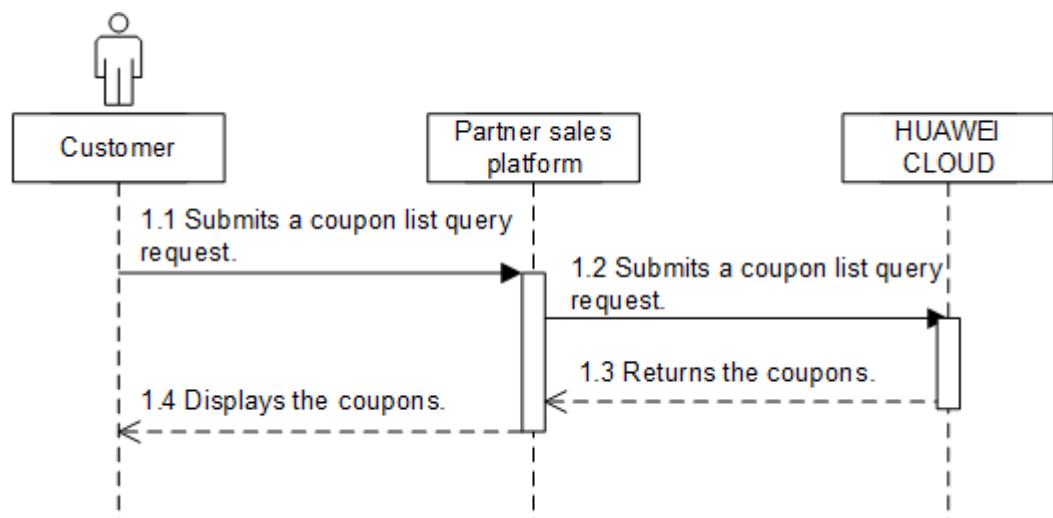
Scenarios

A customer can query the coupons issued by its associated partner.

Related APIs

API	API Definition
Querying Coupons	https://support.huaweicloud.com/intl/en-us/api-ocp/mp_02001.html

API calling process



5.2 Managing Yearly/Monthly Orders

Service Object

Customers

Scenario Description

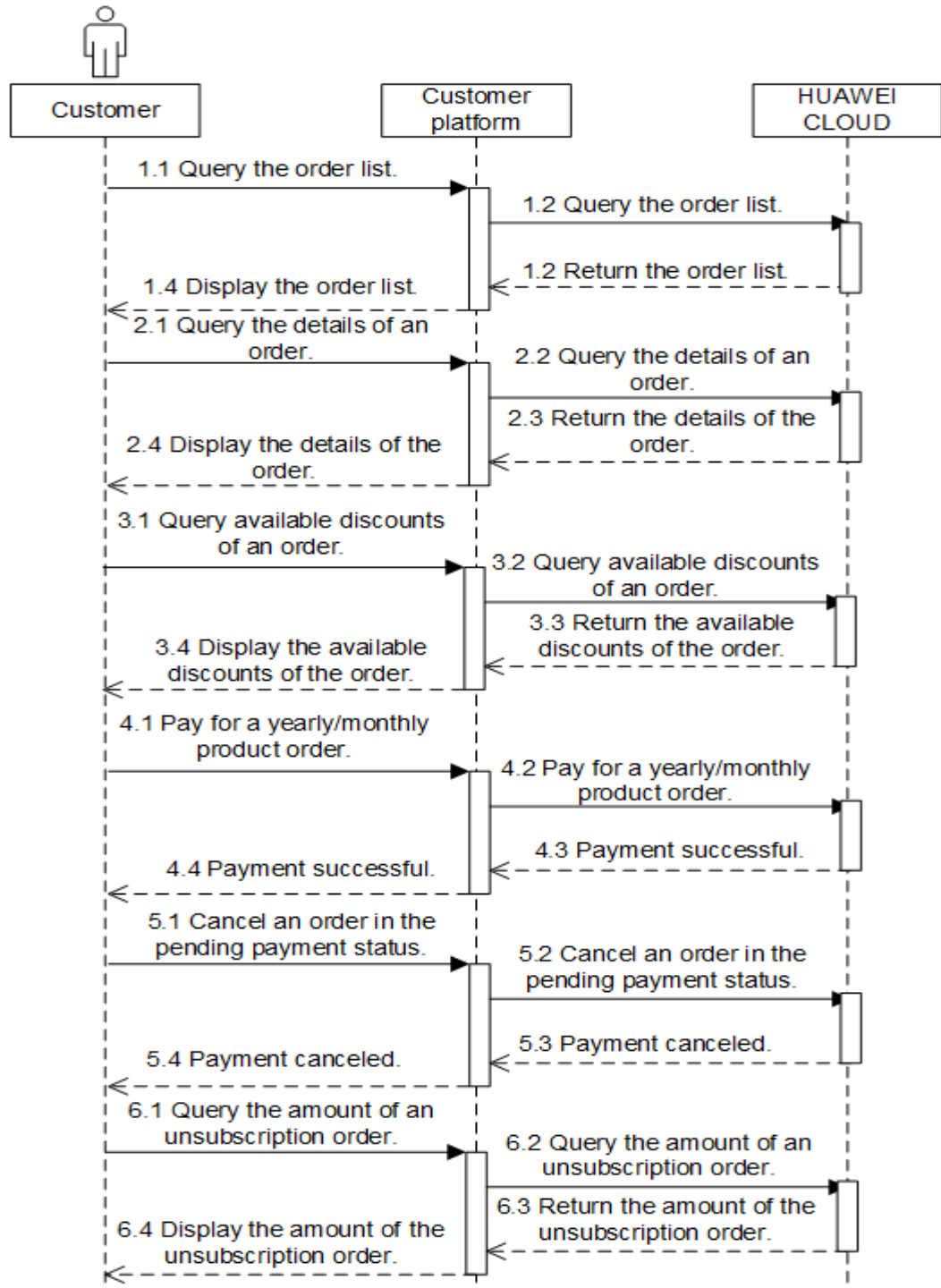
After purchasing yearly/monthly resources, a customer can perform the following operations on the self-built platform:

- 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	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00013.html
Querying order details	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00014.html
Querying available discounts of an order	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00025.html
Paying yearly/monthly product orders	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00030.html
Canceling orders in the pending payment status	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00017.html
Querying the amount of unsubscription orders	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00020.html

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

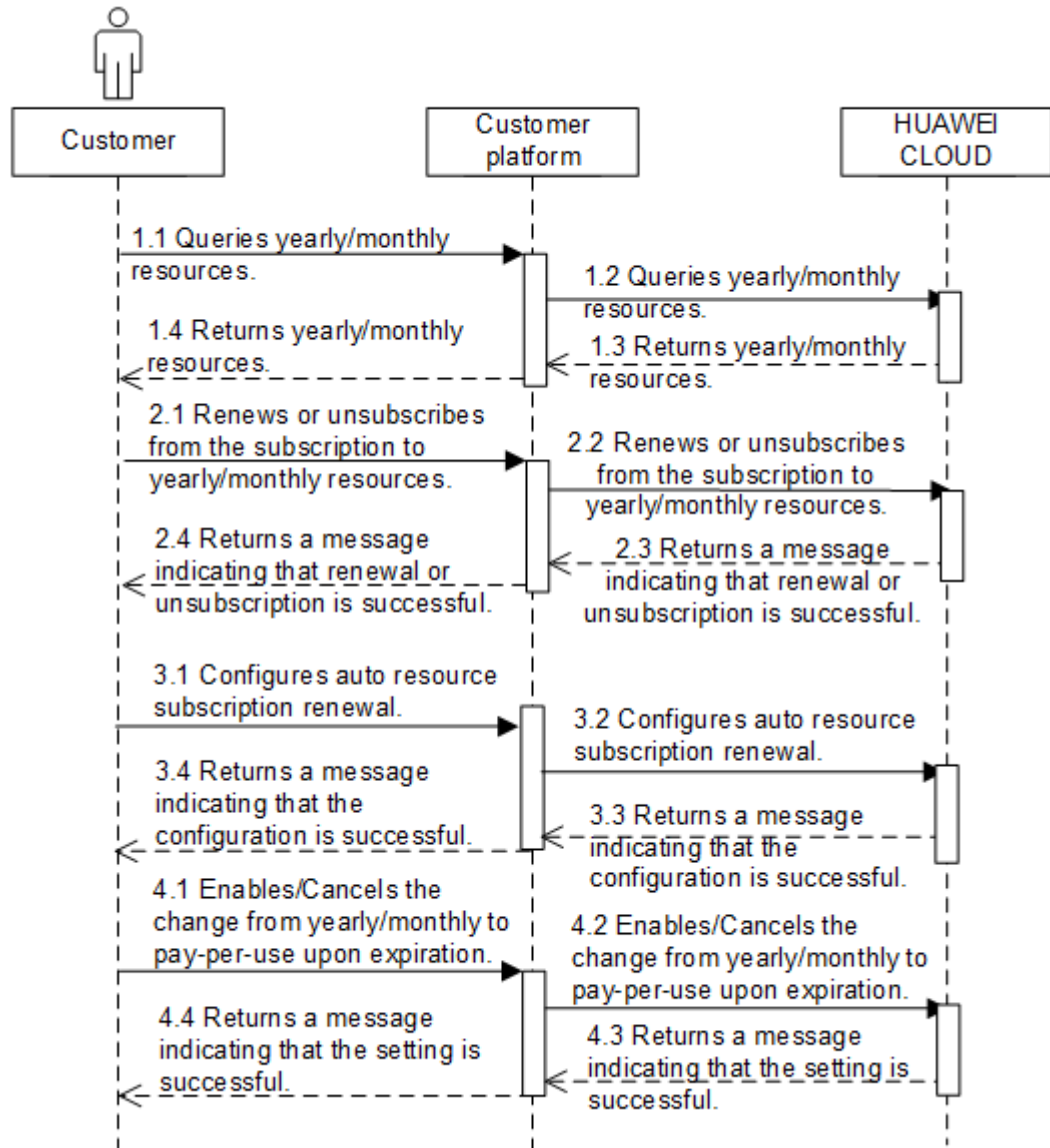
After purchasing yearly/monthly resources, a customer can perform the following operations on the self-built platform:

- 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	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00021.html
Renewing subscription to yearly/monthly resources	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00018.html
Unsubscribing from yearly/monthly resources	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00019.html
Enabling automatic subscription renewal for yearly/monthly resources	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00022.html
Disabling automatic subscription renewal for yearly/monthly resources	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00023.html
Enabling/Canceling the change from yearly/monthly to pay-per-use upon expiration	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00024.html

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

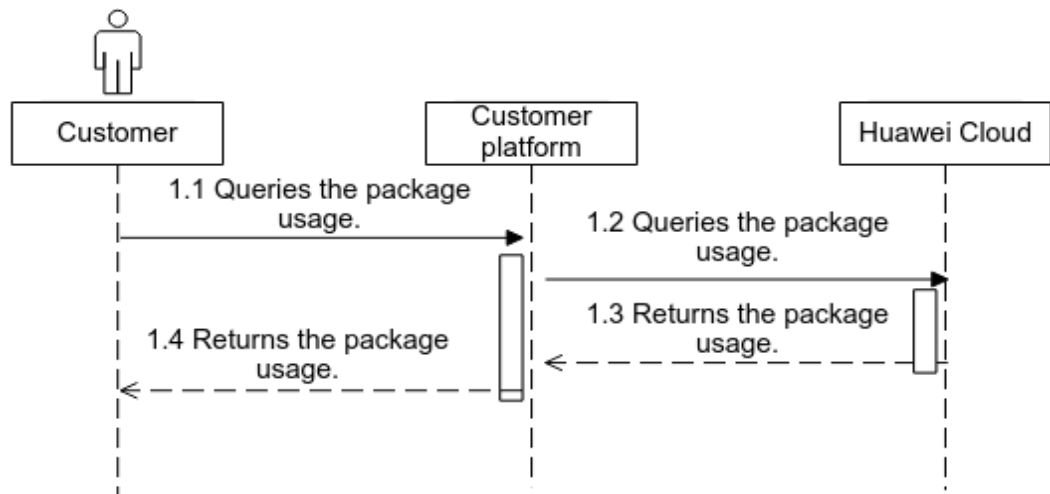
Scenarios

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	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00006.html

API calling process



5.5 Managing Resource Packages

Service Object

Customers

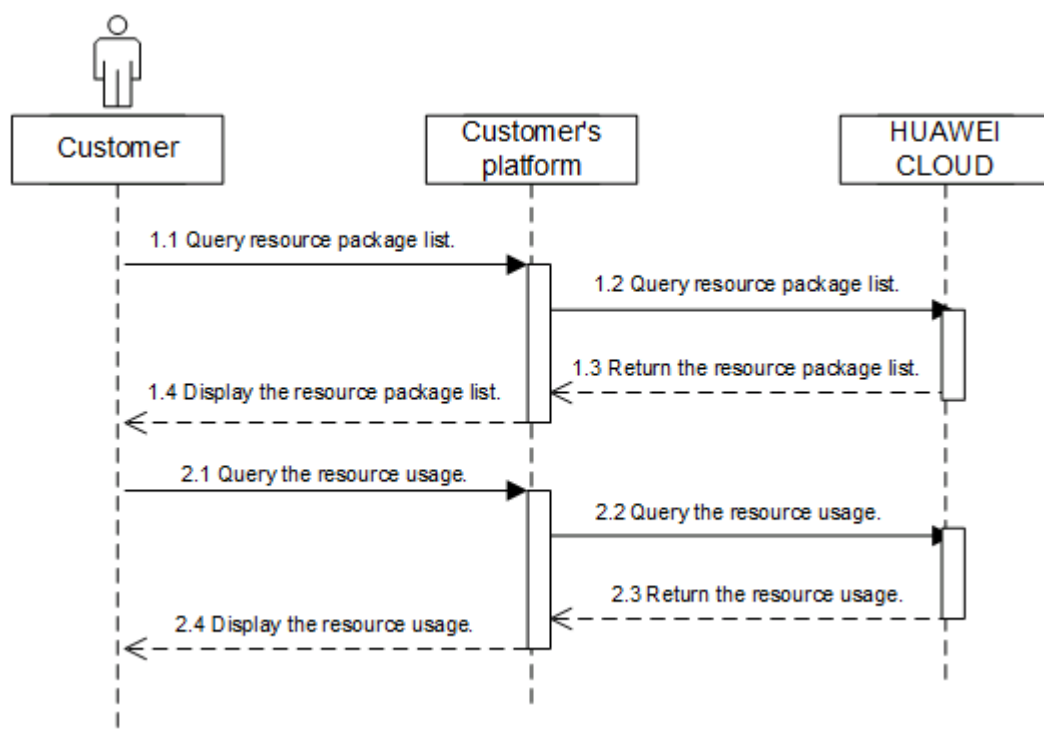
Scenario Description

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	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00027.html
Querying the Resource Usage	https://support.huaweicloud.com/intl/en-us/api-oc/api_order_00028.html

API Invoking Process



Development Suggestions

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

6 Managing Bills

Service Object

Customer

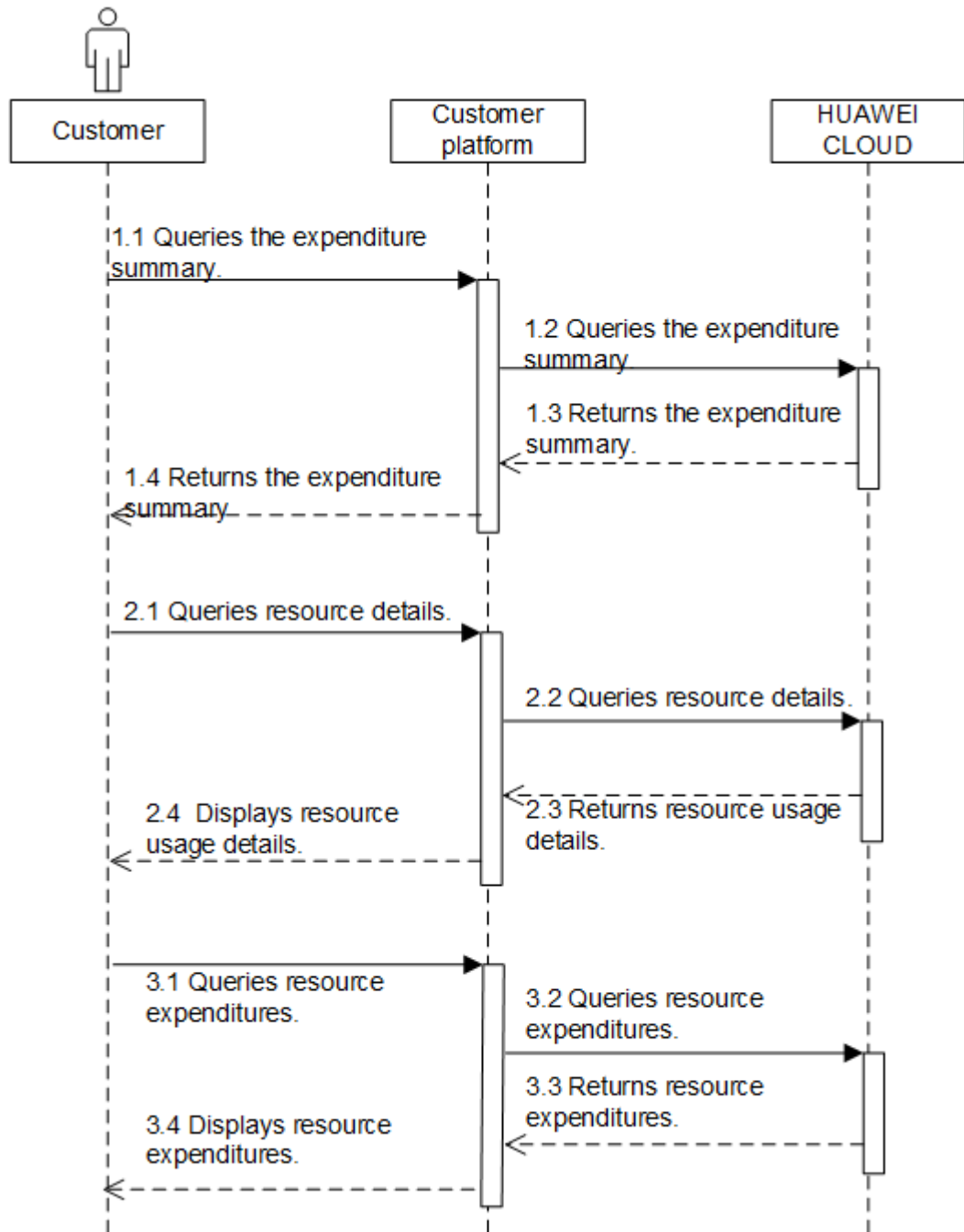
Scenario Description

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	https://support.huaweicloud.com/intl/en-us/api-oc/en-us_topic_0109708206.html
Viewing resource usage details	https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00003.html
Viewing resource expenditures	https://support.huaweicloud.com/intl/en-us/api-oc/mbc_00004.html

API Invoking Process



7 Managing an Enterprise

7.1 Managing Enterprise Projects

Service Object

Customers

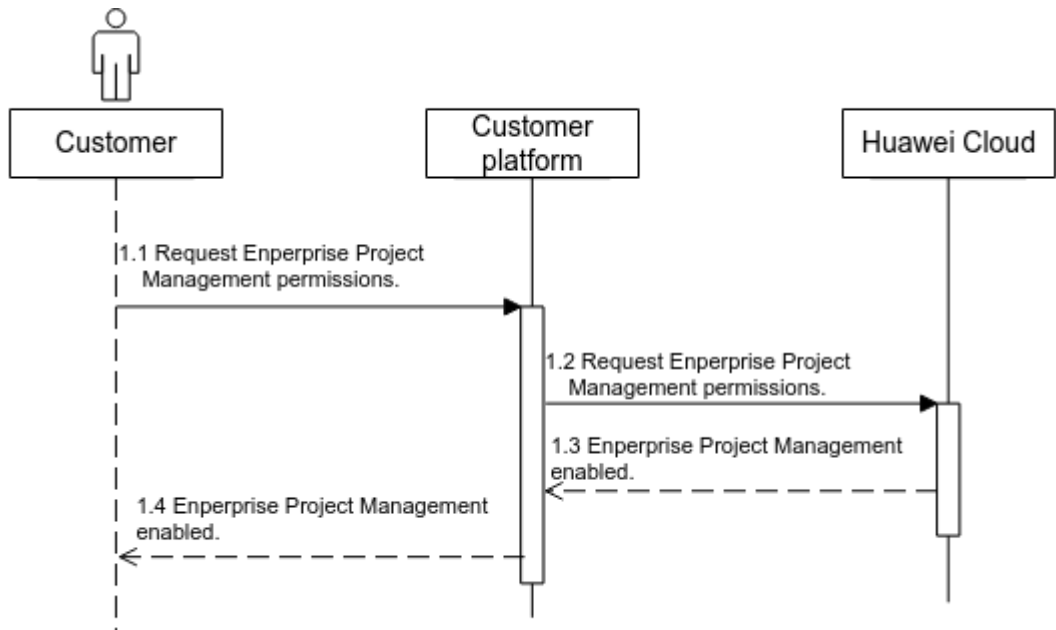
Scenario Description

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

Related APIs

API	Link
Enabling Enterprise Project Management	https://support.huaweicloud.com/intl/en-us/api-oc/ep_00022.html

Invoking Process



8 Invoice Management

8.1 Managing Invoices

Service Object

Customer

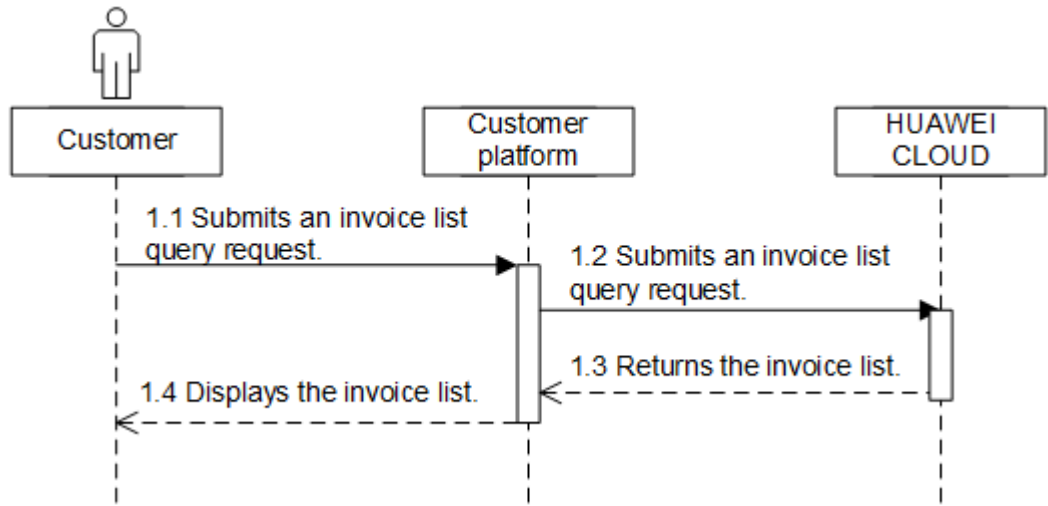
Scenario Description

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

Related APIs

API	API Definition
Querying the invoice list	https://support.huaweicloud.com/intl/en-us/api-oc/miv_01005.html

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.	https://bss-intl.myhuaweicloud.com
My Account	Common customers can view with basic account information, perform user authentication, configure preferences, and view their privileges and recommended operation management pages.	https://account-intl.huaweicloud.com/usercenter/#/accountindex/accountInfo
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.	https://account-intl.huaweicloud.com/usercenter
Console	Common customers can log in to the HUAWEI CLOUD management console to view, purchase, and use HUAWEI CLOUD services.	https://console-intl.huaweicloud.com/console/

Environment	Description	Address
My Credential	The My Credential page centrally displays customers' security credentials and enables users to manage their credentials. On the My Credential 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).	https://console-intl.huaweicloud.com/iam/#/myCredential

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
Querying enterprise member accounts	businessUnit	listEnterpriseSubCustomers
Canceling orders in the pending payment status	order	cancelCustomerOrder
Paying a yearly/monthly order	order	payCustomerOrderV3
Renewing subscription to yearly/monthly resources	subscription	renewResources

Operation	Resource Type	Event
Unsubscribing from yearly/monthly resources	subscription	unsubscribeResources
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	businessUnit	openEnterpriseProjectAuth
Creating an enterprise member account	businessUnit	createSubCustomerV2
A master account allocates money to a member account.	businessUnitFinance	transferEnterpriseMultiAccount
A master account withdraws money from a member account.	businessUnitFinance	retrieveEnterpriseMultiAccount


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**, **Search By**, **Operator**, and **Trace Status**

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	View Trace
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](#).