

Cost Center

Getting Started

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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <https://www.huawei.com>

Email: support@huawei.com

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1 Getting Started with Cost Center

This section describes how to use Cost Center for cost analysis and optimization.

Confirming Your Cost Allocation Method

There are three ways to allocate cost data in Cost Center: Organization Management, Cost Tags, and Enterprise Projects. You are advised to decide which method you plan to use as early as possible. For details, see [2 Confirming Your Cost Allocation Method](#).

Using Grouping Tools to View Costs

- [Viewing Costs by Linked Account](#)
If you are using an enterprise master account, you can view your own costs and the costs of your member accounts by linked account.
- [Viewing Costs by Enterprise Project](#)
If you have enabled the Enterprise Project function, you can view your costs by enterprise project.
- [Viewing Costs by Cost Tag](#)
If you have created and activated cost tags, you can view your costs by cost tag.
- [Viewing Costs by Cost Category](#)
If **Linked Account**, **Enterprise Project**, and **Cost Tags** cannot meet your cost allocation requirements, you can use cost categories to define cost splitting rules and then view your costs based on these rules.

Making Cost Analysis to Explore Costs and Usage

Common methods for tracking cost and usage data:

- [Preconfigured Analysis Reports](#)
Cost Center comes with several report types preconfigured with commonly used data display filters. You can explore your cost and usage data through the analysis reports.
- [Custom Analysis Reports](#)

You can save your analysis results in a custom report so that you can run the same analysis again later if needed.

- **Cost Tags**
You can use cost tags to manage resources and activate them as needed to track your Huawei Cloud costs.
- **Cost Details**
Cost Center provides you with amortized cost details, which can be exported as needed for further analysis.
- **Forecasting**
Cost and usage can be forecasted based on the cost analysis.

Creating Budgets to Track Cost and Usage

- **Creating Budgets and Configuring Alerts**
After Forecasting is enabled, you can view forecasted costs and usage in the cost analyses, and set budget alerts based on the forecasting results.
- **Using Budget Reports to Track Your Budget**
You can create a budget report so that Huawei Cloud will periodically generate and email to you on a schedule that you configure.

Enabling Cost Anomaly Detection to Identify Anomalies

- **6.2 Enabling Cost Anomaly Detection to Identify Anomalies**
After you create a monitor, Cost Center applies the detection rules formulated for the monitor to identify cost anomalies and report them in a timely manner.

Changing Billing Modes to Optimize Costs

Common cost optimization options include:

- **Changing the Billing Mode from Pay-per-Use to Yearly/Monthly**
If you want to use pay-per-use products for a long term, you might want to consider changing the billing mode from pay-per-use to yearly/monthly to find cost-saving opportunities. With this option, Cost Center analyzes the usage of your pay-per-use ECS, EVS, and RDS resources and identifies places where you can save money by changing the billing mode from pay-per-use to yearly/monthly.

2 Confirming Your Cost Allocation Method

Before you start using cost management functions, confirm your cost allocation method. Your cost allocation method should reflect a mapping of Huawei Cloud expenditures onto an internal hierarchy within your enterprise, including the different financial and business units, and various applications. This facilitates your cost tracking and makes your cost data easier to understand.

There are several ways to allocate cost data in Cost Center: **Organization Management**, **Cost Tags**, and **Enterprise Project Management**. The cost data will be used by a range of Cost Center tools, including those designed for cost analysis and budget management.

You are advised to plan and activate cost tags as early as possible because they take effect only for cost data generated after tag activation.

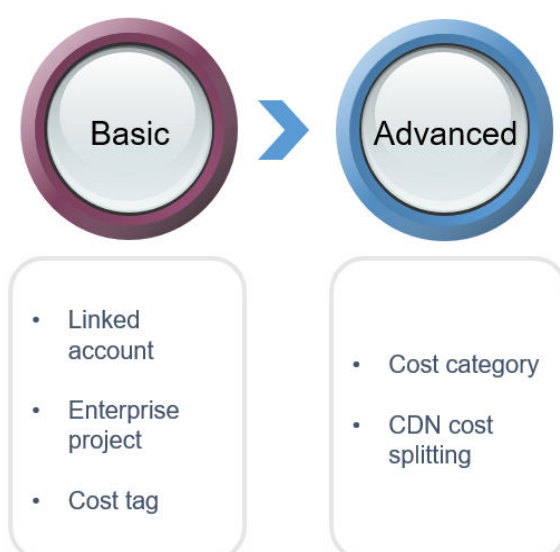
3 Using Grouping Tools to View Costs

- [3.1 Introduction](#)
- [3.2 Viewing Costs by Linked Account](#)
- [3.3 Viewing Costs by Enterprise Project](#)
- [3.4 Viewing Costs by Cost Tag](#)
- [3.5 Viewing Cost By Cost Category](#)

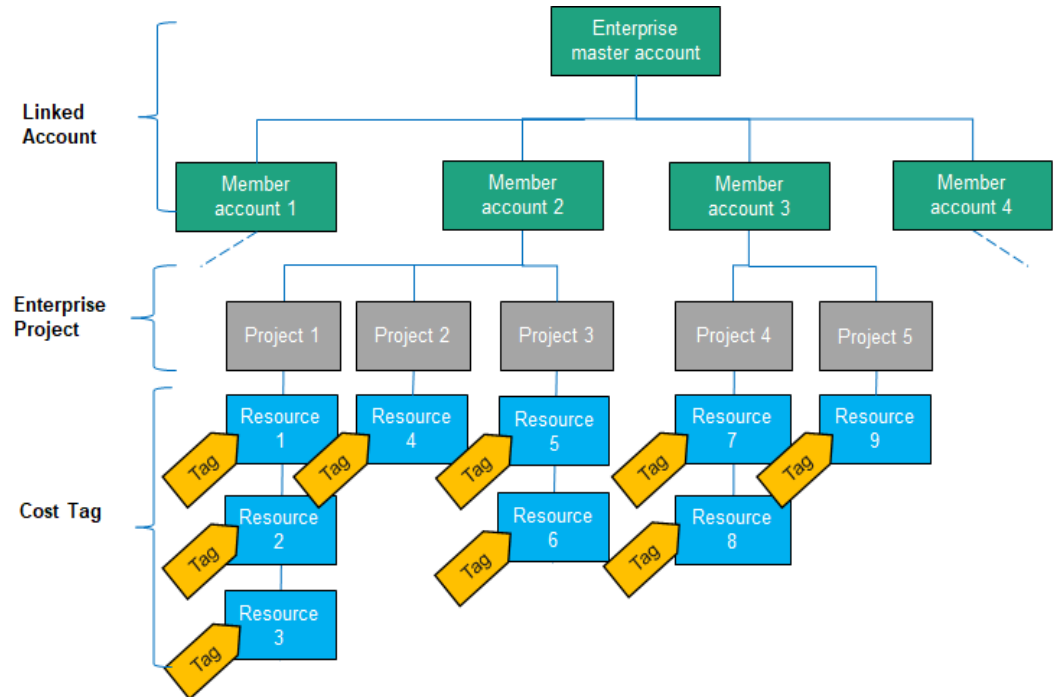
3.1 Introduction

Huawei Cloud Cost Center provides various tools for you to group your costs in different ways. You can experiment with different tools to find out which way works best for your needs.

Supported Grouping Tools



1. Basic tools: You can view your costs by linked account, enterprise project, or cost tag.



- [3.2 Viewing Costs by Linked Account](#)
- [3.3 Viewing Costs by Enterprise Project](#)
- [3.4 Viewing Costs by Cost Tag](#)

2. Advanced tools: You can also use cost categories to group and split your costs. If you have purchased monthly-settled CDN billed by traffic, you can split your CDN traffic costs by domain name.

- [3.5 Viewing Cost By Cost Category](#)

Recommendations

- **User-based cost allocation:** Costs are attributed to the actual user. For example, if you are using an enterprise member account and your master account is the payer account, then the relevant costs are still considered to be yours.
- **Amortization-based cost allocation:** Costs are amortized over a set period of time. Amortized costs reflect the amounts prepaid for yearly/monthly subscriptions and reserved instances, which are amortized on a daily basis. For example, if you purchase a one-year cloud service at \$365 USD, the amortized cost per day is \$1 USD.
- **Cost splitting:** Shared costs are split based on certain rules.
 - **Proportionally:** Your costs are allocated in proportion to the weight of each target. For example, if the cost of target B is \$800 USD and that of target C is \$200 USD, you can split costs based on a set proportion, such as B: C = 4:1. Then 80% of the costs will be allocated to target B and 20% to target C.

- Evenly: Your costs are allocated evenly across different targets.
For example, if there are two targets (A and B), then 50% of the costs will be allocated to target A and 50% to target B.
- Custom: Your costs are allocated based on a percentage you define for each target value. The percentages must add up to 100%.

Cost Allocation Details Delivered By Using Different Grouping Tools

When you view cost details by linked account, enterprise project, or cost tag, you can also obtain cost allocation details for further analysis.

Table 3-1 Grouping tools for different cost types and allocation methods

Cost Type	Allocation Method	Grouping Tool	Allocation Details
Original costs	Linked Account	Log in to Billing Center, and choose Billing > Bills > Overview . Log in to Cost Center, and access the Cost Analysis page.	Log in to Billing Center, and access the Billing > Bills > Bill Details page. Log in to Cost Center, and access the Cost Analysis page to export the monthly original cost details.
	Enterprise Project	Log in to Billing Center, and choose Billing > Bills > Overview . Log in to Cost Center, and access the Cost Analysis page.	Log in to Billing Center, and access the Billing > Bills > Bill Details page. Log in to Cost Center, and access the Cost Analysis page to export the monthly original cost details.
	Tag	Log in to Cost Center, and access the Cost Analysis page.	Log in to Billing Center, and access the Billing > Bills > Bill Details page. The details contain unstructured data of the original tags. Log in to Cost Center, and access the Cost Analysis page to export the monthly original cost details with structured data of the cost tags included.
Amortized costs	Linked Account	Log in to Cost Center, and access the Cost Analysis page.	Log in to Cost Center, and access the Cost Analysis page to export the monthly amortized cost details.
	Enterprise Project	Log in to Cost Center, and access the Cost Analysis page.	Log in to Cost Center, and access the Cost Analysis page to export the monthly amortized cost details.

Cost Type	Allocation Method	Grouping Tool	Allocation Details
	Tag	Log in to Cost Center, and access the Cost Analysis page.	Log in to Cost Center, and access the Cost Analysis page to export the monthly amortized cost details.

 **NOTE**

You can view and export bill details on the **Bill Details** page. Alternatively, you can subscribe to bill details via OBS or call relevant APIs to obtain bill details.

3.2 Viewing Costs by Linked Account

The enterprise master account can categorize the costs of its member accounts by linked account to manage the accounting of those member accounts.

Step 1: Enabling Enterprise Center

Enterprise Center allows multiple Huawei Cloud accounts to be associated with each other for accounting purposes. You can create a hierarchical organization and a master account, add member accounts to your organization and associate them with the master account, and use the master account to manage the accounting of associated member accounts. For details about how to enable Enterprise Center, see [Enabling Enterprise Center](#).

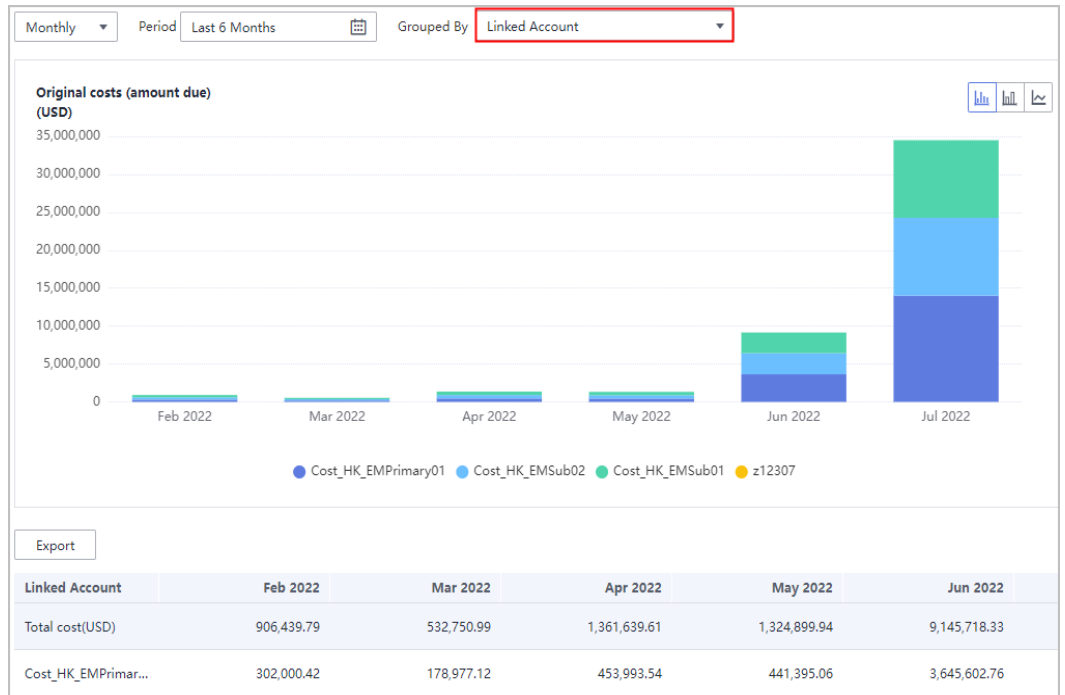
Step 2: Associating with Member Accounts

An enterprise master account associated with member accounts can manage the accounting of these member accounts. For details about how to associate a master account with member accounts, see [Associating Accounts](#).

Step 3: Viewing Costs by Linked Account

When viewing costs by linked account, you are advised to summarize cost data based on amortized costs.

- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Analysis**.
- Step 3** Set **Grouped By** to **Linked Account**.
 - Group cost data by linked account.



In this figure, the current login account is an enterprise master account, and the cost data for each linked account is displayed in the chart.

- Filter cost data by linked account.



In this figure, the chart displays the cost data for the linked account **Cost_HK_EMPrimary01**, with **Grouped By** being **Service Type**.

- View cost details by linked account.

Click **Export** to export the cost details file. In the file, you can view cost details by **Linked Account**.

	A	B	C	D	E	F	G	H
1	Month	Linked Account	PayerAc	Busines	Service	Service	Resourc	Resourc
2	Oct-22			HUAWEI Cl	hws.servi	Live	hws.resou	Live CDN
3	Oct-22			HUAWEI Cl	hws.servi	Object	St	hws.resou
4	Oct-22			HUAWEI Cl	hws.servi	Object	St	hws.resou
5	Oct-22			HUAWEI Cl	hws.servi	Object	St	hws.resou

----End

3.3 Viewing Costs by Enterprise Project

If you have already enabled the Enterprise Project function, you can view your costs by enterprise project. By default, costs are allocated based on the enterprise project selected when you place an order. Therefore, you are advised to plan your enterprise projects as early as possible.

Step 1: Enabling Enterprise Project

Complete real-name authentication, and then enable Enterprise Project. For details, see [Enabling Enterprise Project](#).

Step 2: Creating an Enterprise Project

Create an enterprise project based on your department or business needs. For details, see [Creating an Enterprise Project](#).

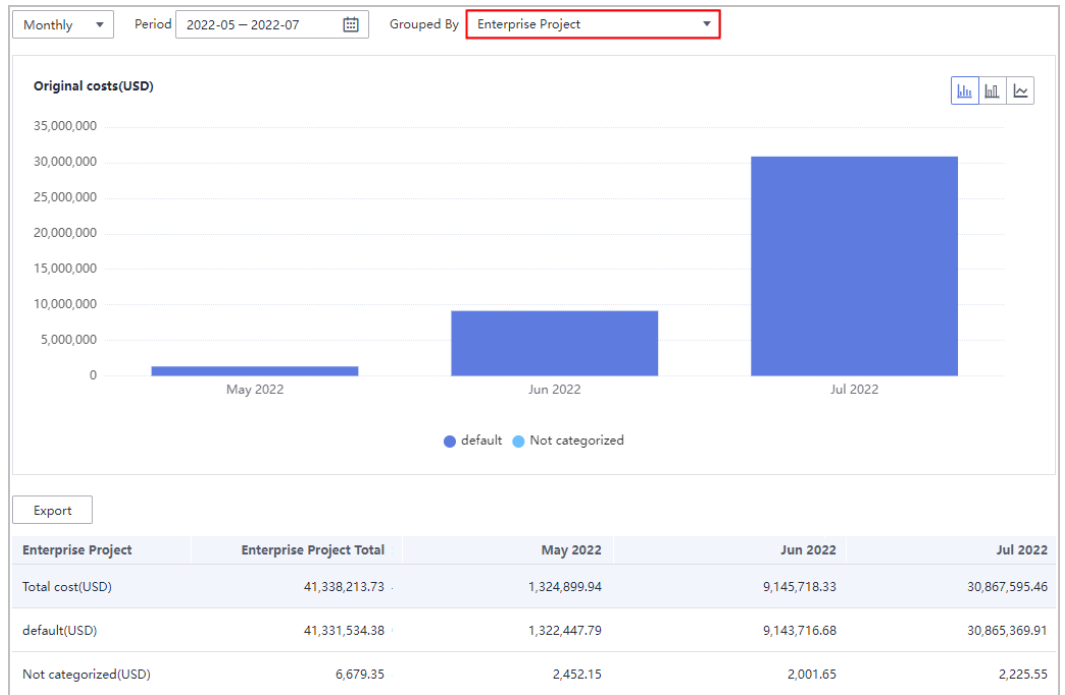
Step 3: Selecting an Enterprise Project for a New Cloud Resource

Select an enterprise project in the **Enabled** state for a newly purchased cloud resource so that the costs of that resource will be allocated based on the selected enterprise project. For details, see [Selecting an Enterprise Project for a New Cloud Resource](#).

Step 4: Viewing Costs by Enterprise Project

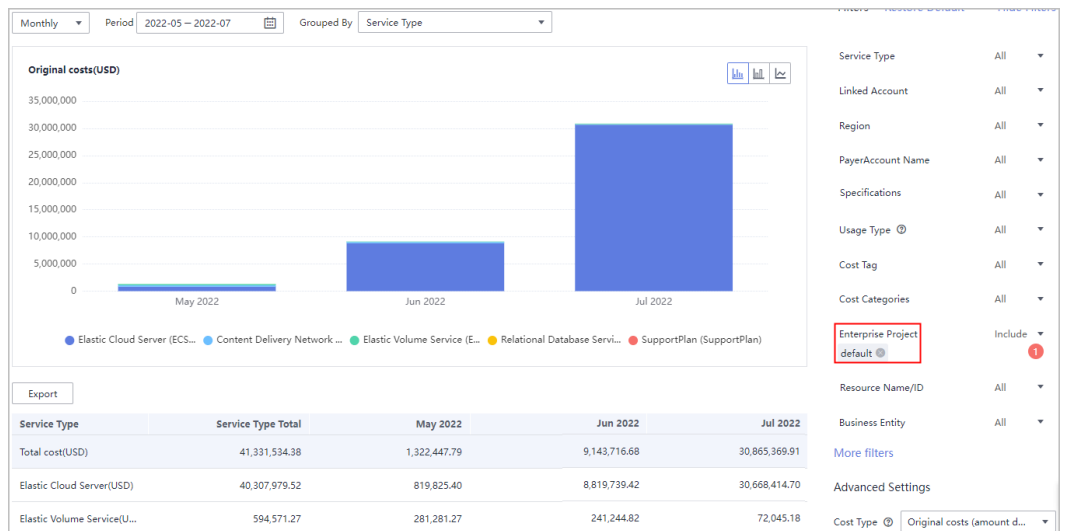
When viewing costs by enterprise project, you are advised to summarize cost data based on amortized costs.

- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Analysis**.
- Step 3** Set **Grouped By** to **Enterprise Project**.
 - Group cost data by enterprise project.



In this figure, Enterprise Project has been enabled for the current account, and the cost data for each enterprise project is displayed in the chart.

- Filter cost data by enterprise project.



In this figure, the chart displays the cost data for the enterprise project **default**, with **Grouped By** being **Service Type**.

- View cost details by enterprise project.

Click **Export** to export the cost details file for original costs or amortized costs (file name for amortized costs: *% account name %_AmortizedCostDetailByUsage_YYYY-MM*). In the file, you can view cost details by **Enterprise Project**.

	A	B	C	D	E	F	G	H	I	J
1	Month	Enterprise Project	Enterprise	Linked	PayerAccount	Business	Service	Service	Resource	Resource
2	Oct-22	Not categorized				HUAWEI	Cloud	Internet	bandwidth	
3	Oct-22	Not categorized				HUAWEI	Cloud	Internet	bandwidth	
4	Oct-22	default	0			HUAWEI	Cloud	Object	CloudStorage	
5	Oct-22	default	0			HUAWEI	Cloud	Object	CloudStorage	
6	Oct-22	default	0			HUAWEI	Cloud	Object	CloudStorage	
7	Oct-22	default	0			HUAWEI	Cloud	Object	CloudStorage	
8	Oct-22	Not categorized				HUAWEI	Cloud	Internet	bandwidth	
9	Oct-22	Not categorized				HUAWEI	Cloud	Internet	bandwidth	

----End

3.4 Viewing Costs by Cost Tag

You or Huawei Cloud assigns tags to your cloud resources so the resources can be sorted in different ways, for example, by purpose, owner, or environment. You can use cost tags to manage resources and activate them to track your Huawei Cloud costs.

There are two types of tags:

- Expenditure tags: You can add such tags when creating resources. They will appear on the **Cost Tags** page 24 hours after their associated resources have generated expenditures.
- Predefined tags (recommended): You can create such tags on the TMS console. They will appear on the **Cost Tags** page immediately after being created.

Step 1: Creating Predefined Tags

Access the TMS console. For details, see [Creating Predefined Tags](#).

Step 2: Activating Tags

For details, see [Activating Cost Tags](#). Only the activated tags can be viewed on the **Cost Analysis** and **Budgets** pages, and more.

If you activate some tags, they will be used to organize your resource costs generated thereafter. If you want to use tags to analyze the cost data generated before tag activation, export the bill details file and analyze the data based on the **Resource Tag** field in the file.

Step 3: Adding Tags to Cloud Resources

You can add predefined tags you created to cloud services. For details, see [Adding Tags to Cloud Resources](#).

Step 4: Viewing Costs by Cost Tag

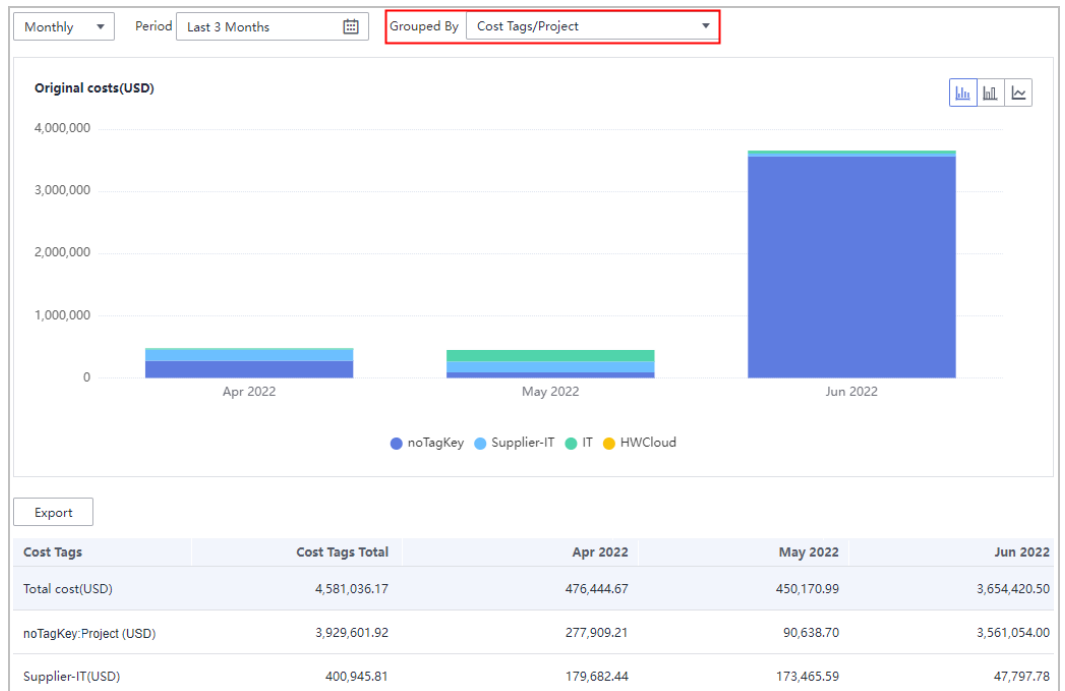
When viewing costs by cost tag, you are advised to summarize cost data based on amortized costs.

Step 1 Log in to Cost Center.

Step 2 Choose **Cost Analysis**.

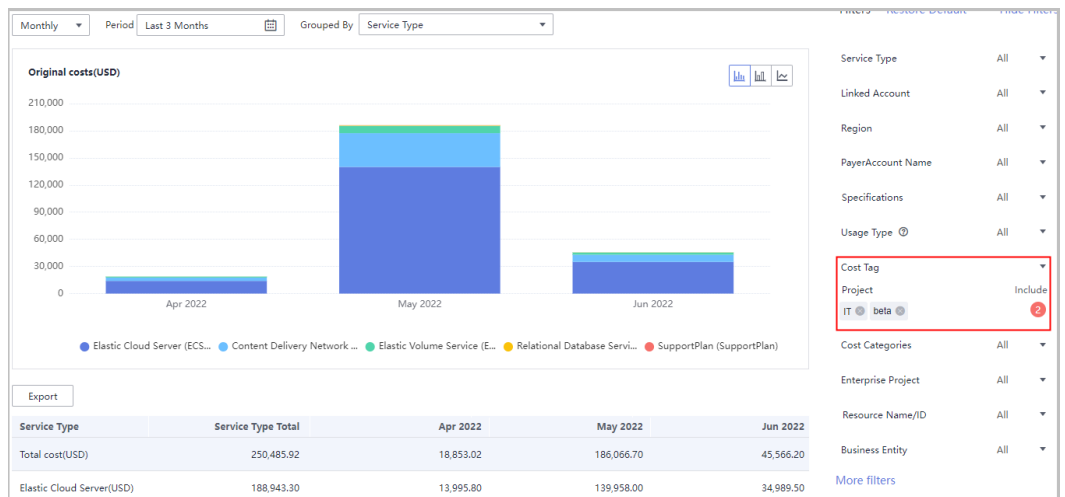
Step 3 Set Grouped By to Cost Tags.

- Group cost data by cost tag.



In this figure, the cost data for resources with the tag key **Project** is displayed in the chart.

- Filter cost data by cost tag.



In this figure, the chart displays the cost data for resources with the tag key **Project** being **IT** and **beta**, and with **Grouped By** being **Service Type**.

- View cost details by cost tag.

Click **Export** to export the cost details file for original costs or amortized costs (file name for amortized costs: % *account name* %_AmortizedCostDetailByUsage_YYYY-MM). In the file, you can view cost details by cost tag.

#	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	
1	Region	AZ	Usage	1	Usage	1	Usage	1	List	Pr	Origind	Coupons	EXPORT	EXPORT	Tag:Dep	Tag:Env	Tag:Gr
2	Global	AZ1	Traffic	size	Byte	1.05E+12	0	0	0.9	0.9	0	0	0	0	mobile	alpha	yellowDud
3	Global	AZ1	Traffic	size	Byte	2.31E+12	0	0	1.98	1.98	0	0	0	0	mobile	alpha	yellowDud
4	CN	North-AZ1	Duration	Duration	SECOND	1814400	0	0	317.52	317.52	0	0	0	0	mobile	alpha	yellowDud
5	CN	North-AZ1	Duration	Duration	SECOND	864000	0	0	151.2	151.2	0	0	0	0	mobile	alpha	yellowDud
6	CN	North-AZ1	Duration	Duration	SECOND	820800	0	0	287.28	287.28	0	0	0	0	mobile	alpha	yellowDud
7	CN	North-AZ1	Duration	Duration	SECOND	388800	0	0	136.08	136.08	0	0	0	0	mobile	alpha	yellowDud

----End

3.5 Viewing Cost By Cost Category

You can use cost categories to group costs by linked account, service type, bill type, cost tag, and enterprise project, or you can group costs based on custom rules you configured for these cost categories.

Example

You need to allocate costs among departments A, B, and C.

1. You can identify the responsible department for most of the costs by using the tags you attach to the specific resources. Suppose department A additionally deploys the CDN service, whose resources cannot be tagged. In addition, all the departments share the Cloud Phone service.

As mentioned earlier, you can use the tag key **Group** and tag values **Department A**, **Department B**, and **Department C** to group most of your costs, as shown in the following figure.



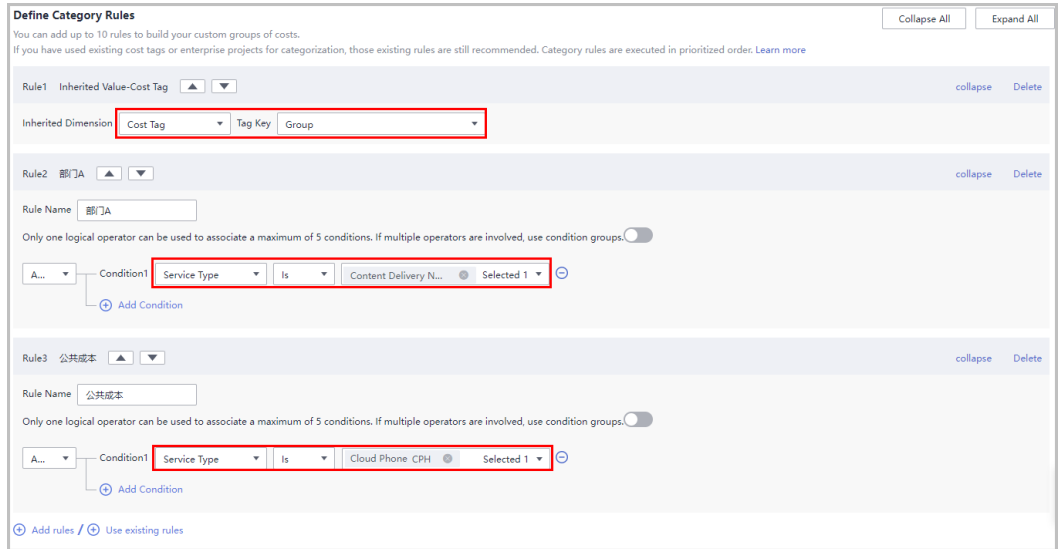
2. You need to create cost categories for further cost allocation. 48 hours after the creation, you can define cost splitting rules to split the shared cost across those departments.
 - Select **Custom** for **Allocation Method** to split the unallocated cost, with 50% allocated to Department A, 30% to Department B, and 20% to Department C.
 - Select **Custom** for **Allocation Method** to split the shared cost, with 30% allocated to Department A, 30% to Department B, and 40% to Department C.

Step 1: Creating Cost Categories

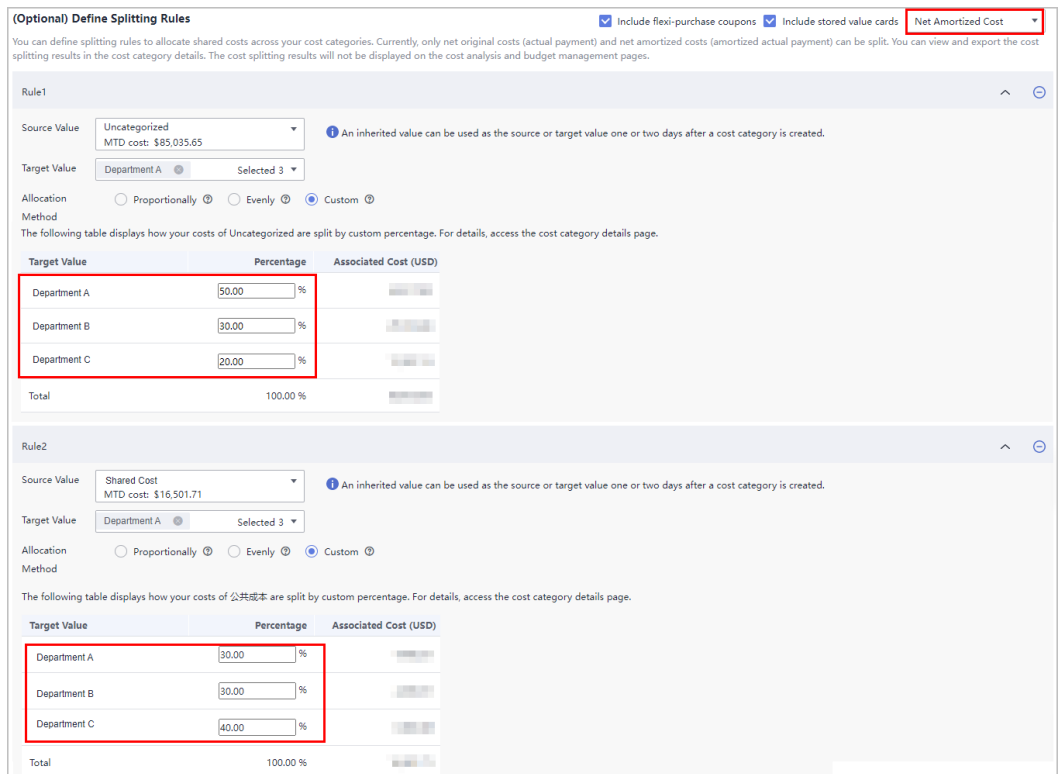
Step 1 Log in to Cost Center.

Step 2 Choose **Cost Categories**.

Step 3 Create cost categories and configure their basic rules by referring to [Example](#).



Step 4 Define cost splitting rules 48 hours after the creation, by referring to [Example](#).



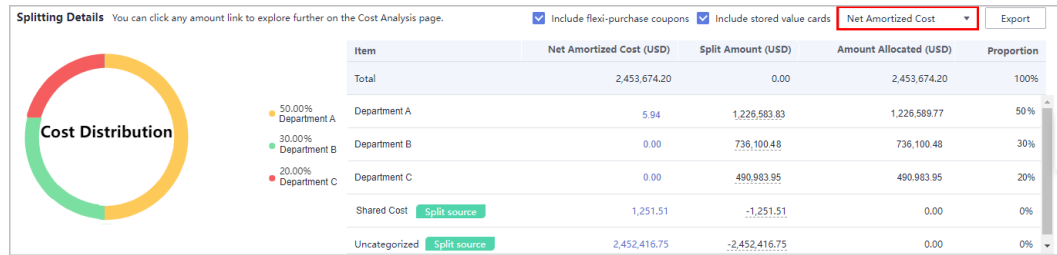
----End

Step 2: Viewing Cost Details

Step 1 Log in to Cost Center.

Step 2 Choose **Cost Categories**.

Step 3 Click the link to the name of a cost category to view the cost details.



In this figure, the net amortized cost is displayed for each proportion.

- **Net Amortized Cost:** the net amortized cost after costs are split based on defined rules
- **Split Amount:** the amount split from the shared cost. If the amount is negative, the corresponding cost is the split source.
- **Amount Allocated:** the amount actually allocated to each tag value. Amount Allocated = Net Amortized Cost + Split Amount
- **Proportion:** the percentage of an allocated cost to the total cost allocated

You can interpret the split amount for each department in the following way:

- Department A
 Net cost amortized by cost tag: \$5.94 USD
 Split amount for allocated shared cost and unallocated cost: $30\% \times 1251.51 + 50\% \times 2452416.75 = \$1,226,583.828$ USD
 Total amount allocated: $5.94 + 1,226,583.828 = \$1,226,589.768$ USD
- Department B
 Net cost amortized by cost tag: \$0 USD
 Split amount for allocated shared cost and unallocated cost: $30\% \times 1251.51 + 30\% \times 2452416.75 = \$736,100.478$ USD
 Total amount allocated: $0 + 736,100.478 = \$736,100.478$ USD
- Department C
 Net cost amortized by cost tag: \$0 USD
 Split amount for allocated shared cost and unallocated cost: $40\% \times 1251.51 + 20\% \times 2452416.75 = \$490,983.954$ USD
 Total amount allocated: $0 + 490,983.954 = \$490,983.954$ USD
- Shared cost and unallocated cost
 If they have all been split to Department A, Department B, and Department C, then the amount allocated is 0.

Step 4 View cost details by cost category.

Click **Export** to export the cost details file for original costs or amortized costs (file name for amortized costs: % *account name* %_AmortizedCostDetailByUsage_YYYY-MM). In the file, you can view cost details by cost category.

AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
Usage	Usage	Usage	Usage	Package	Usage	List P	Origin	Coupons	EXPORT	EXPORT	Tag:Deg	Tag:Em	Tag:Gr	Cost Unit:CEC
Traffic size	Byte	Byte	2.31E+12	0	0	1.98	1.98	0	0	0	mobile	alpha	yellowDu	HWCloud
Duration	Duration	SECOND	1814400	0	0	317.52	317.52	0	0	0	mobile	alpha	yellowDu	HWCloud
Duration	Duration	SECOND	820800	0	0	287.28	287.28	0	0	0	mobile	alpha	yellowDu	HWCloud
Duration	Duration	SECOND	72000	0	0	320	320	0	0	0	mobile	alpha	yellowDu	HWCloud
Duration	Duration	SECOND	1900800	0	0	47.52	47.52	0	0	0	mobile	alpha	yellowDu	HWCloud

----End

4 Performing Cost Analysis to Explore Costs and Usage

- [4.1 Introduction](#)
- [4.2 Preconfigured Analysis Reports](#)
- [4.3 Custom Analysis Reports](#)
- [4.4 Cost Tags](#)
- [4.5 Cost Details](#)
- [4.6 Forecasting](#)

4.1 Introduction

To accurately control and optimize your costs, you need a clear understanding of what parts of your enterprise incurred different costs.

Cost Center visualizes your original costs or amortized costs using various dimensions and display filters for cost analysis so that you can analyze the trends and drivers of your service usage and costs from a variety of perspectives or within different defined scopes.

- Original costs are those recorded when the expenditures are generated.
- Amortized costs are those recorded when the revenues are obtained or the costs are generated.

You can also predict your costs and usage to plan ahead.

To view more detailed cost and usage information, access **Billing Center** and choose **Billing > Bills > Bill Details**, or access Cost Analysis in Cost Center.

The following describes several common cost analysis methods:

- [4.2 Preconfigured Analysis Reports](#)
- [4.3 Custom Analysis Reports](#)
- [4.4 Cost Tags](#)

[4.5 Cost Details](#)[4.6 Forecasting](#)

4.2 Preconfigured Analysis Reports

Cost Center comes with several report types preconfigured with commonly used data display filters. These reports can be viewed but not modified.

Procedure

Choose **Reports > Analysis Reports** in Cost Center.

Cost and Usage Reports

Cost and usage reports visualize your costs across Huawei Cloud services.

Table 4-1 Cost and usage reports

Report Name	Description
Monthly Costs by Service Type	Types of services with high original costs in the last six months
Monthly Costs by Linked Account	Linked accounts with high original costs in the last six months
Daily Costs	Daily original costs over the last three months and in the following one month
Monthly Amortized Costs	Monthly trend of amortized costs in the last 6 months
Pay-Per-Use ECS Monthly Costs and Usage	Monthly original costs and usage of a pay-per-use ECS in the last six months

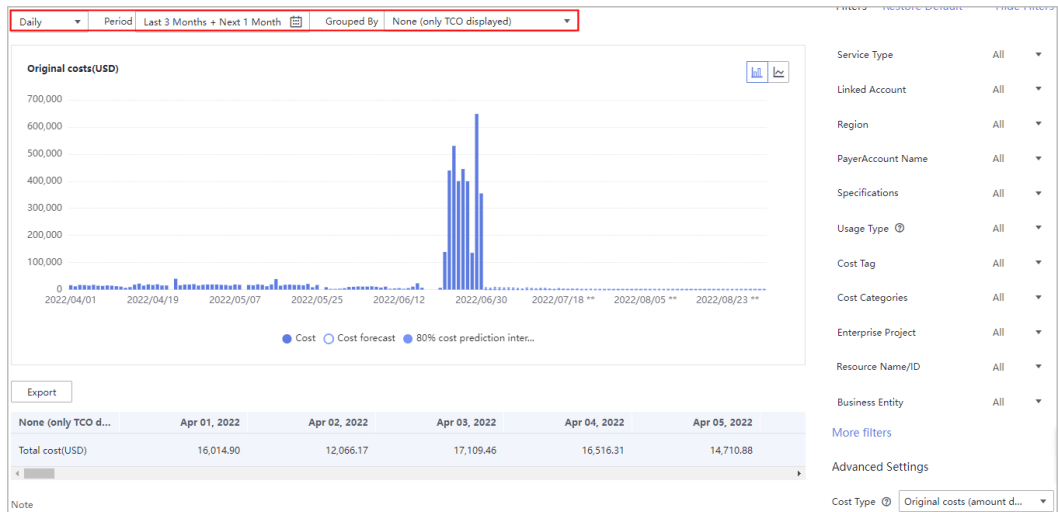
Monthly Costs by Service Type



Monthly Costs by Linked Account

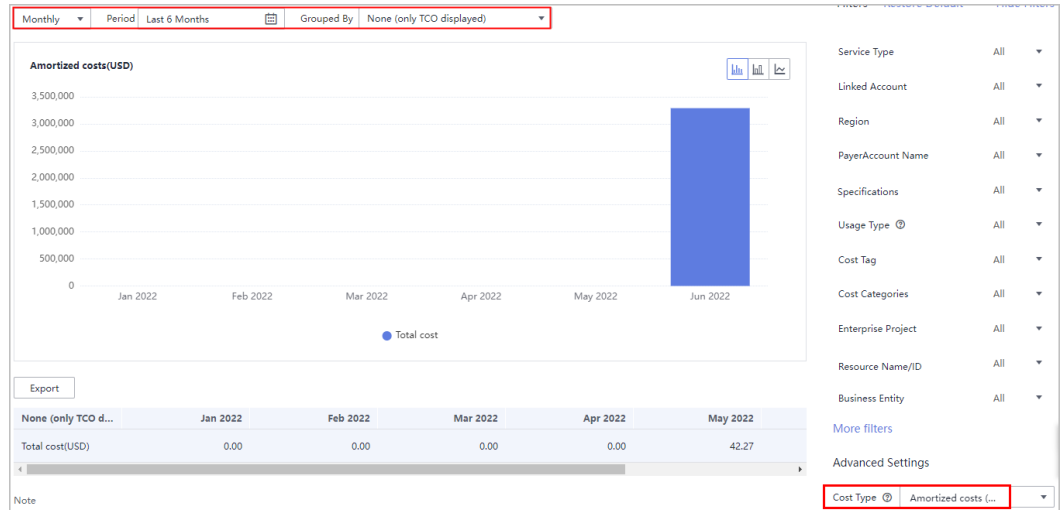


Daily Costs

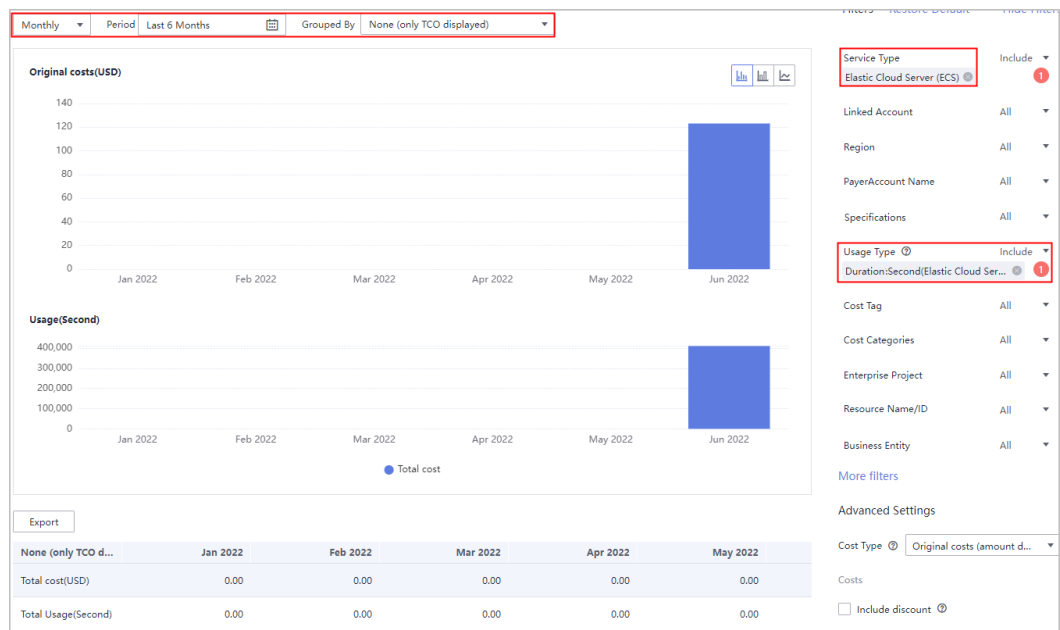


Monthly Amortized Costs

Amortized costs reflect the prepaid amounts amortized on a daily basis. For details about the amortization rules, see [Rules for Recording Amortized Costs](#). Before the billing date, amortized costs displayed are an estimate only.



Pay-Per-Use ECS Monthly Costs and Usage



Reserved Instances

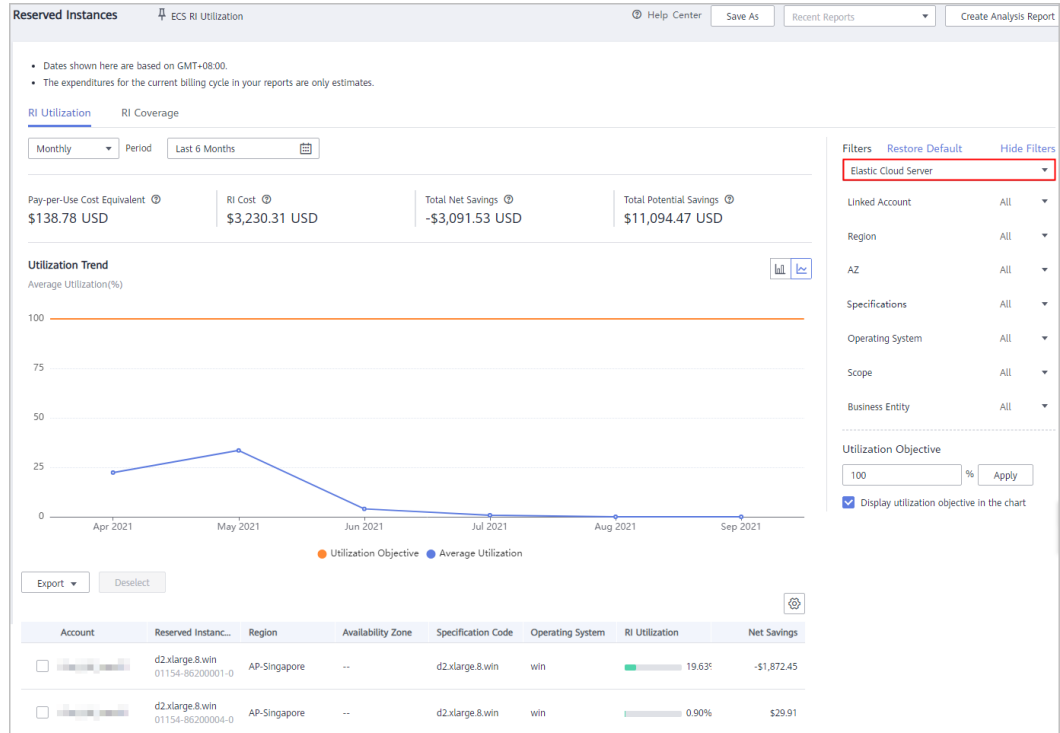
RI reports show an intuitive display of your RI utilization and coverage.

Table 4-2 RI reports

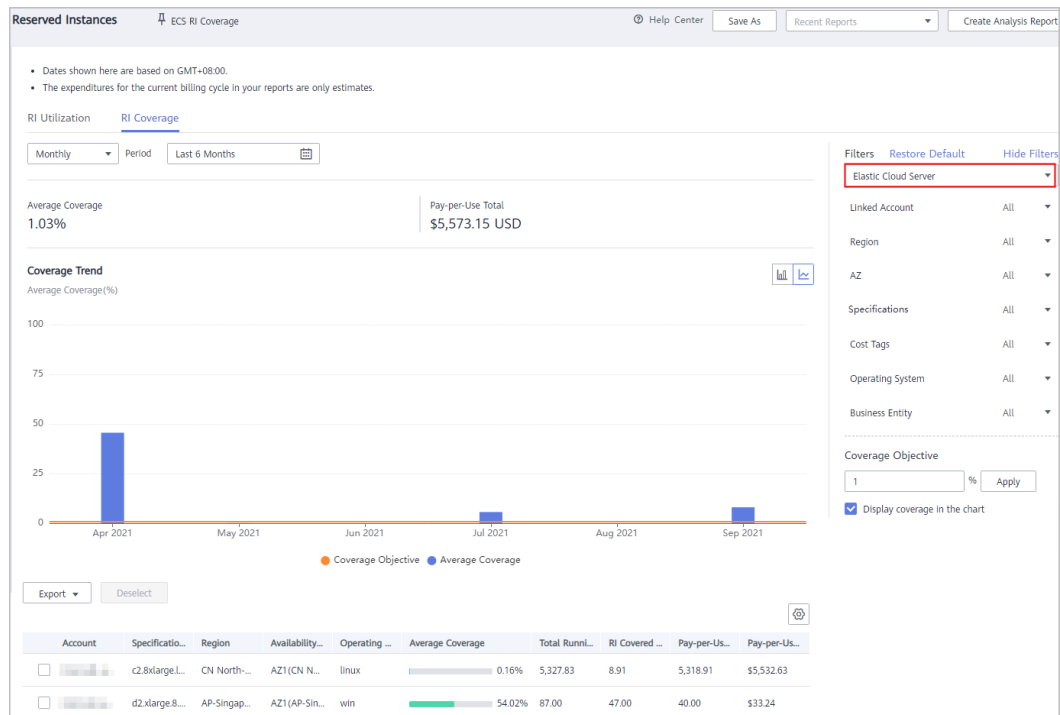
Report Name	Description
ECS RI Coverage	Combined coverage across all of your RIs, and how much of your RI usage is covered by reservations

Report Name	Description
ECS RI Utilization	Combined usage across all of your RIs, and how much you saved by using RIs

ECS RI Utilization



ECS RI Coverage



4.3 Custom Analysis Reports

You can save your analysis results in a custom report so that you can run the same analysis again later if needed. If the preconfigured reports cannot meet your requirements, you can create custom reports, which you can choose a specific period of time, the aspects measured, display filters, and cost types.

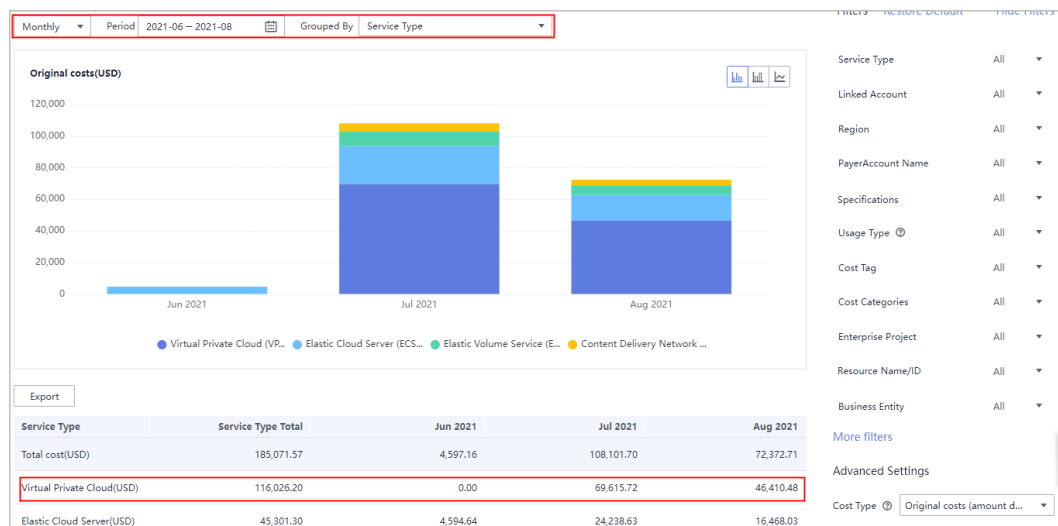
Procedure

Access the **Cost Analysis** page in Cost Center. For details, see [Viewing Cost Analysis](#).

Example

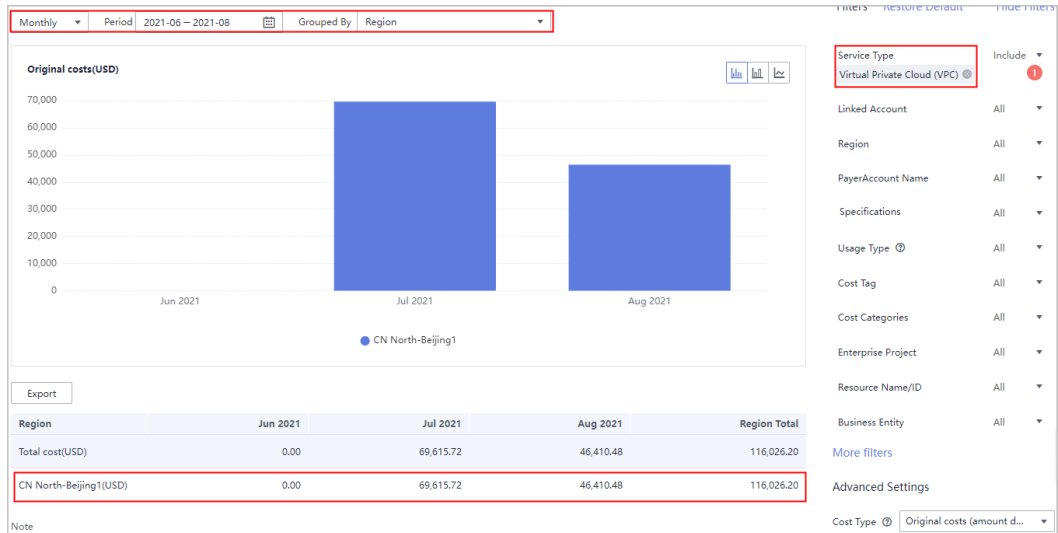
Step 1 View the monthly cost data (June to August) by service type.

In this example, VPC incurred the highest costs.

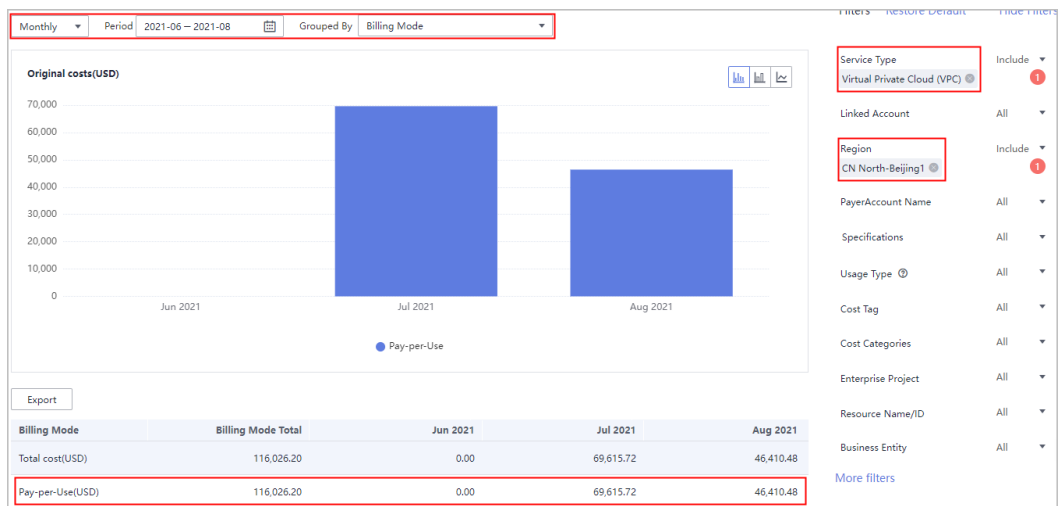


Step 2 View the VPC costs by region.

In this example, most of the costs are from the CN North-Beijing1 region.



Step 3 View the VPC costs by billing mode in a specific region (CN North-Beijing1).
In this example, most of the costs are from the pay-per-use billing mode.



Step 4 View other aspects of your cost data if needed.

NOTE

You can save the cost analyses summarized by different dimensions as custom reports.

----End

Saving a Custom Report

Step 1 Log in to Cost Center.

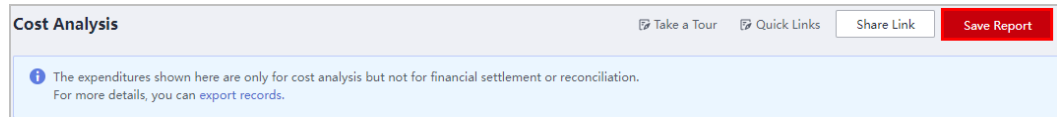
Step 2 Choose **Cost Analysis**.

Step 3 Configure filters on the **Cost Analysis** page.

For example, if you want to view the cost data of VPCs in CN North-Beijing1 grouped by billing mode, use the following configurations:

- Service Type: Virtual Private Cloud (VPC)
- Region: CN North-Beijing1
- Grouped By: Billing Mode

Step 4 Click **Save Report**.



Step 5 Set the report name to **VPC-CN North-Beijing1** and click **OK**.

----End

Using a Custom Report

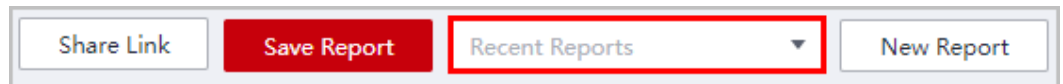
Step 1 Log in to Cost Center.

Step 2 Choose **Reports**.

Step 3 Click the link of **VPC-CN North-Beijing1**.

NOTE

You can also select **VPC-CN North-Beijing1** from the **Recent Reports** drop-down list in the upper right corner of the **Cost Analysis** page.



Step 4 Access the **Cost Analysis** page. The latest cost data is displayed based on the filter criteria in your report.

----End

4.4 Cost Tags

You or Huawei Cloud assigns tags to your cloud resources so they can be sorted in different ways, for example, by purpose, owner, or environment. You can use cost tags to manage resources and activate them to track your Huawei Cloud costs.

Step 1: Adding Tags to Cloud Resources

For details, see [Adding Tags to Cloud Resources](#). Generally, tags are displayed on the **Cost Tags** page 24 hours after they were created and the corresponding resources generated expenditures.

Step 2: Activating Tags

For details, see [Activating Cost Tags](#). Only the activated tags can be viewed on the **Cost Analysis** and **Budgets** pages.

If you activate some tags, they will be used to organize your resource costs generated thereafter. If you want to use tags to analyze the cost data generated

before tag activation, export the bill details file and analyze the data based on the **Resource Tag** field in the file.

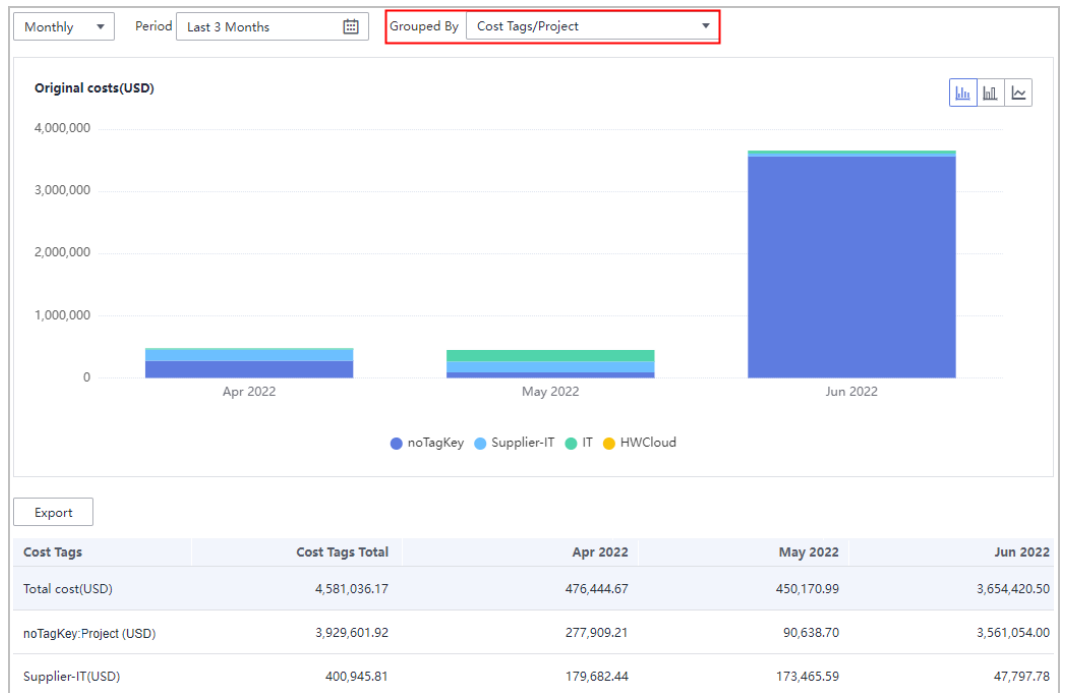
Step 3: Viewing Costs By Cost Tag

Step 1 Log in to Cost Center.

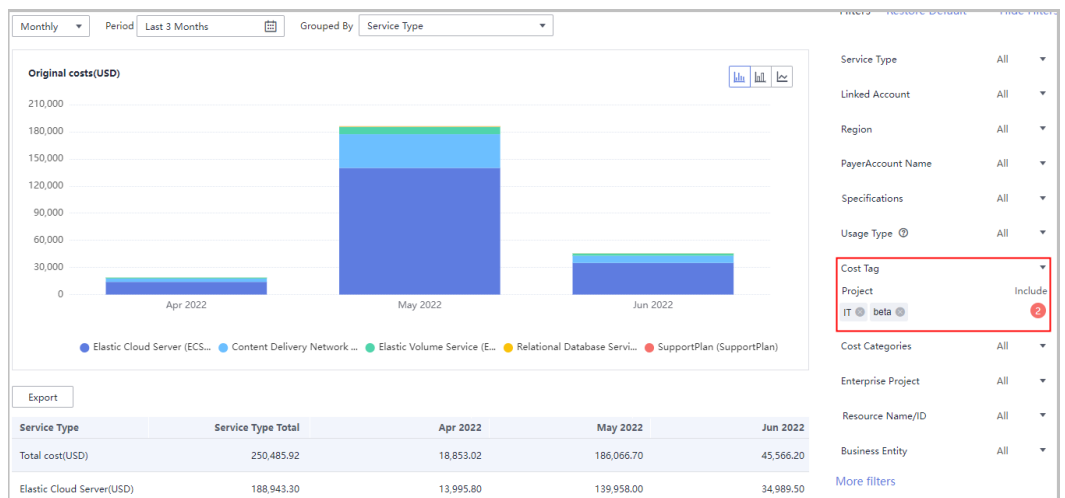
Step 2 Choose **Cost Analysis**.

Step 3 Set **Grouped By** to **Cost Tags**.

- Cost data grouped by cost tag



- Cost data filtered by cost tag



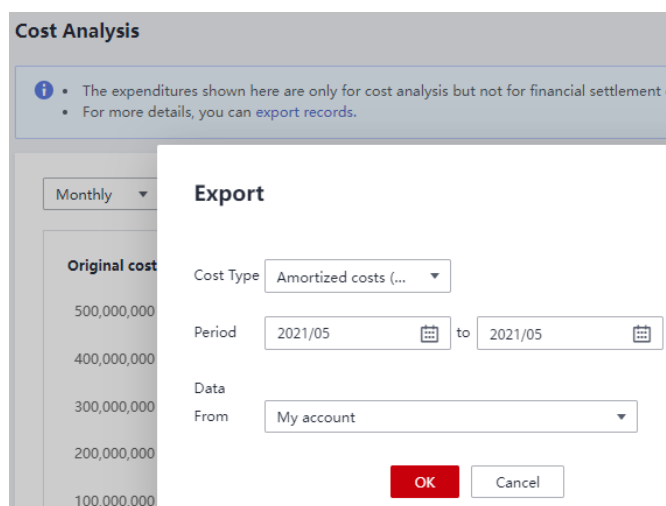
----End

4.5 Cost Details

Cost Center provides you with cost details from the last 18 months, which can be exported as needed.

Step 1: Exporting Cost Details

- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Analysis**.
- Step 3** Click **export records**.
- Step 4** Select the cost type and specify the period, and click **OK**.



----End

Step 2: Obtaining the Exported File

- Step 1** Log in to Cost Center.
- Step 2** Choose **Export History**.
- Step 3** Click **Download** under the **Operation** column in the row of the exported file.

File Name	Created On	Description	Status	Operation
CostDetail_2021-05_2021100808...	Oct 08, 2021 16:46:47 GMT+08:00	Cost Details May 2021	Completed	Download

----End

Step 3: Viewing Cost Details

For details about the fields, see [Fields in Exported Amortized Cost Details](#) and [Fields in Exported Original Cost Details](#).

Month	Enterprise	EnterpriseLinked	Account	Service	Resource	Resource	Product	IBilling	Bill	Type	Order No.	Start Time	End Time	Billing Cycle	Resource	Resource	Specific	Specific	Region	Region	
May-21	Not categorized	Cost_HK_Cost_HK_aws.serviElastic	Chws.resouCloud	Bos00032a68f1	Expenditu	CS21041704/17/20204/18/2021	18:00:00	GMT+08:00	01154-96d2	xlarge	S	disk	Integr=south	AP-S							
May-21	Not categorized	Cost_HK_Cost_HK_aws.serviElastic	Chws.resouCloud	Bos00032a68f1	Expenditu	CS21050704/17/20204/18/2021	18:00:00	GMT+08:00	01154-97d2	xlarge	2	xlarge	disk	Integr=south	AP-S						
May-21	default	0	Cost_HK_Cost_HK_aws.serviElastic	Chws.resouCloud	Bos00301-30CYearly/R	Expenditu	CS21050705/07/20206/07/202	May-21							54cb4796	aws.servic2	xlarge	General	Com=south	CM	S
May-21	default	0	Cost_HK_Cost_HK_aws.serviElastic	Chws.resouCloud	Bos00301-30CYearly/R	Expenditu	CS21050705/07/20206/07/202	May-21							491b25e4	aws.servic2	xlarge	General	Com=south	CM	S
May-21	default	0	Cost_HK_Cost_HK_aws.serviElastic	Chws.resouCloud	Bos00301-30CYearly/R	Expenditu	CS21050705/07/20206/07/202	May-21							03866ce6	aws.servic2	xlarge	General	Com=south	CM	S

4.6 Forecasting

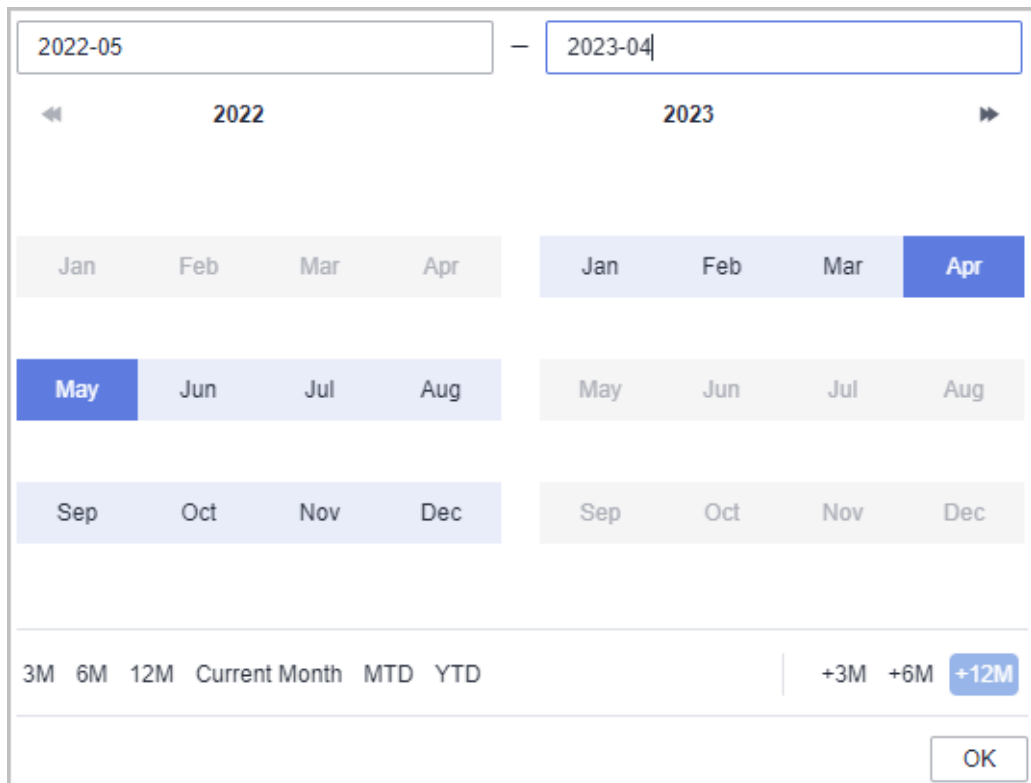
Forecasting is based on your historical costs and usage on Huawei Cloud. After Forecasting is enabled, you can view forecasted costs and usage.

Example

Suppose that you want to view the forecasted cost and usage data in next 12 months. As forecasts are only a best guess estimate of future costs, the forecasted billing amounts may differ from your actual expenditures for each billing cycle. For details, see [Cost and Usage Forecasting](#).

Viewing Forecasted Data

- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Analysis**.
- Step 3** Set **Period** to **+12M**.



Step 4 Click **OK**. The following page is displayed:



The white bar represents the forecasted cost data for the next few months (including the current month). **Forecasted Total** indicates the total forecasted cost in the following 12 months.

----End

5 Enabling Forecasting and Creating Budgets to Track Cost and Usage

[5.1 Introduction](#)

[5.2 Creating Budgets and Configuring Alerts](#)

[5.3 Using Budget Reports to Track Your Budget](#)

5.1 Introduction

You can create different types of budgets on the **Budgets** page of Cost Center to track your costs against the budgeted amount you specified and send alerts to the recipients you configured if the thresholds you defined are reached. You can also create budget reports and Huawei Cloud will periodically generate and send to the recipients you configured on a schedule you set.

The following describes common methods that use budgets to track costs and usage:

- [5.2 Creating Budgets and Configuring Alerts](#)
- [5.3 Using Budget Reports to Track Your Budget](#)

5.2 Creating Budgets and Configuring Alerts

You can set budget thresholds and configure alerts to track your daily, monthly, quarterly, and yearly costs or your resource usage.

Example

Suppose that you want to create a monthly budgeted amount of \$1,200 USD for pay-per-use ECSs, and to receive an alert if the forecasted amount exceeds 80% of the budgeted amount.

NOTE

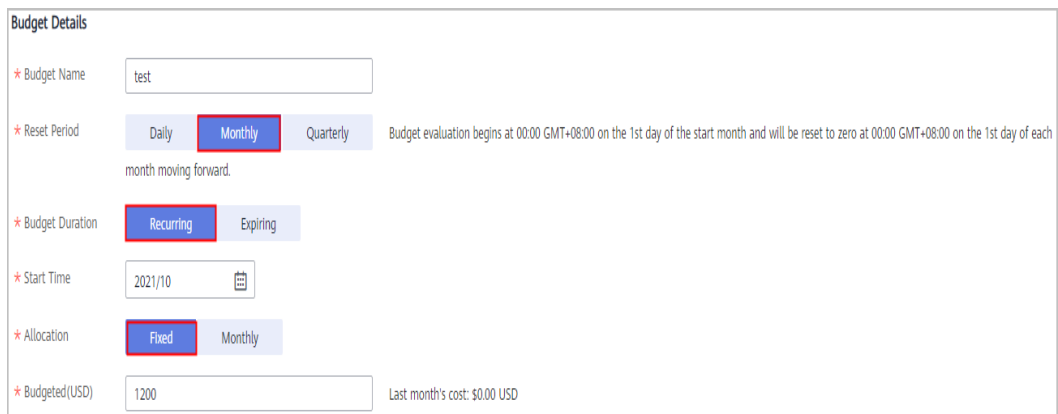
Enable forecasting before creating a forecasting-based budget. For details, see [Forecasting](#).

Step 1: Creating a Budget

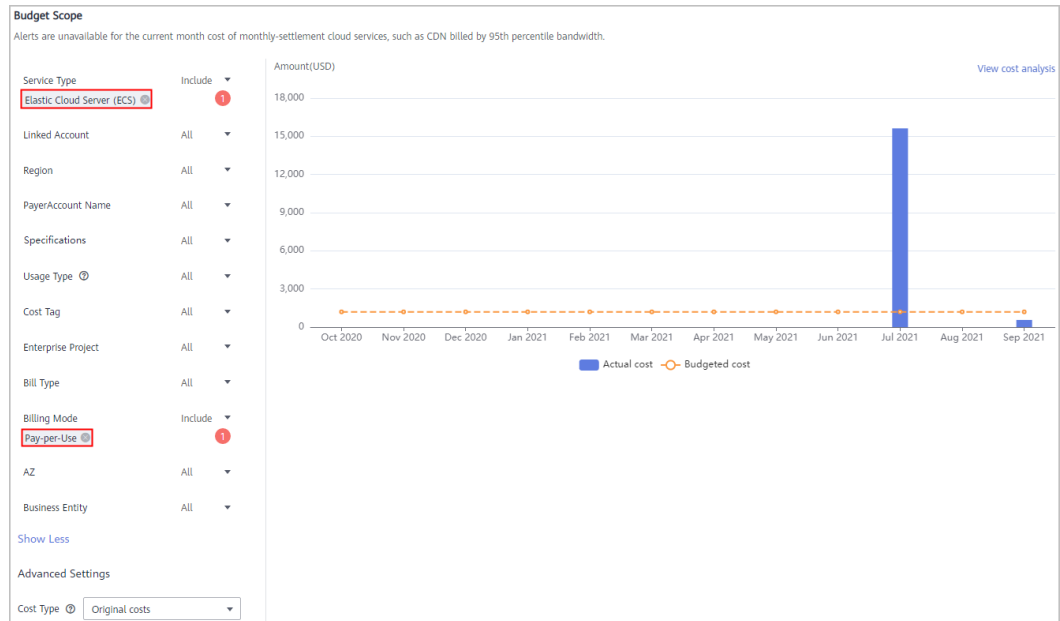
- Step 1** Log in to Cost Center.
- Step 2** Choose **Budgets**.
- Step 3** Click **Create Budget**.
- Step 4** Select **Cost budget** and click **Next**.



Step 5 Configure budget details.



Step 6 Define the budget scope and click **Next**.



Step 7 Set alert thresholds and recipients, and click **Next**.

(Optional) Alert Thresholds

Thresholds: Forecasted > 80 (% of budgeted amount)

+ Add threshold

Recipients: + Select From Contacts

Previous **Next** Cancel

- **Actual cost >:** If the actual cost reaches a certain amount or a certain percentage of a budgeted amount, an alert will be reported.
- **Forecasted >:** If the forecasted cost reaches a certain amount or a certain percentage of a budgeted amount, an alert will be reported.

Step 8 Confirm your budget settings and click **Save**.

----End

Step 2: Viewing Alerts

If your forecasted cost exceeds the alert threshold (80% of the budgeted amount), an alert is generated. The following two options are available:

- SMS on the recipient's mobile phone
- Email in the recipient's mailbox

Dear [redacted],

Your Cost Budget (budget name: [redacted]) has exceeded the budget threshold 80% (\$960.00 USD) for the current period.

By Oct 03, 2021 11:58:53 GMT+08:00, your budget information is as follows:

Budget Name	Budget Type	Reset Period	Actual	Budgeted	Budget Threshold
[redacted]	Cost Budget	Monthly	\$ 960.49USD	\$1200.00 USD	> 80%(\$960.00 USD)

For details, access the Cost Center at the HUAWEI CLOUD official website www.huaweicloud.com/intl.

Thank you for using HUAWEI CLOUD.

Upon receiving the alert, you can view your budget details:

Log in to Cost Center. Then, choose **Budgets**, and click the budget name link to view the budget details.

View cost analysis by performing the following step:

On the **View Budget** page, click **View cost analysis** to view the cost analyses of data in the last 12 months.

5.3 Using Budget Reports to Track Your Budget

You can create a budget report so that Huawei Cloud will periodically generate and send to you on a schedule that you configure.

Example

Suppose that you want to create a monthly budgeted amount of \$1,200 USD for pay-per-use ECSs, and to receive an alert if the forecasted amount exceeds 80% of the budgeted amount.

NOTE

Enable forecasting before creating a forecasting-based budget. For details, see [Forecasting](#).

Step 1: Creating a Budget

For details, see [Step 1: Creating a Budget](#).

Step 2: Creating a Budget Report

Step 1 Log in to Cost Center.

Step 2 Choose **Reports > Budget Reports**.

Step 3 Click **Create Budget Report** in the upper right corner of the page.

Step 4 Specify the report name, include the budget created in [Step 1: Creating a Budget](#), and click **Next**.

Step 5 Set the delivery frequency, select the report recipients, and click **Next**.

NOTE

A maximum of 50 contacts can be selected for each alert. If you want to add or modify the recipient information, go to the **Recipient Management** page in the Message Center.

Step 6 Confirm your budget report information and click **Save**.

----End

Step 3: Viewing the Budget Status

- View the SMS on the recipient's mobile phone.
- Access the recipient's mailbox and view the budget report.

6 Enabling Cost Anomaly Detection to Identify Anomalies

[6.1 Introduction](#)

[6.2 Enabling Cost Anomaly Detection to Identify Anomalies](#)

6.1 Introduction

Cloud costs are variable and cloud resources are scalable. After enterprises migrate their services to Huawei Cloud, one of the challenges they face is how to monitor unexpected expenditure spikes. Cost Center provides Cost Anomaly Detection to help you detect cost anomalies in a timely manner and analyze and track these anomalies when they occur.

6.2 Enabling Cost Anomaly Detection to Identify Anomalies

Cost Anomaly Detection uses machine learning to analyze your historical pay-per-use and yearly/monthly expenditures, establish a specific expenditure model for you, and identify root causes for cost surprises based on forecasted amounts. With simple steps, Cost Anomaly Detection helps you quickly take action based on detected cost anomalies to keep to your original plan.

Example

Suppose you want to track anomalies in all your pay-per-use and yearly/monthly expenditures. The following detection rules apply:

- Pay-per-use expenditures: AI algorithms are used to intelligently identify unexpected expenditure spikes based on machine learning.
- Yearly/monthly expenditures: A cost anomaly is identified if the actual growth rate has increased by a certain percent over the previous billing cycle. Actual growth rate = (Actual cost for the current month - Cost for the previous month)/Cost for the previous month

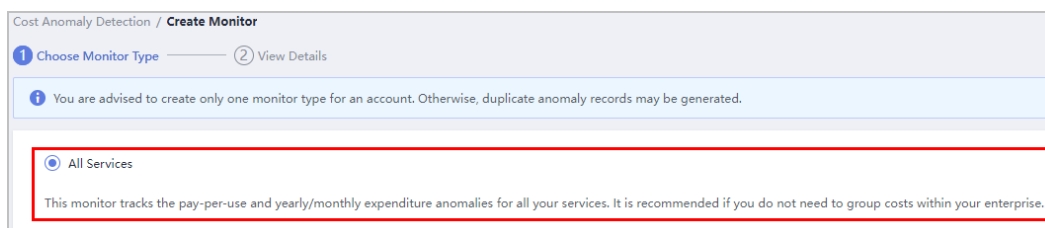
For example, you can set the percent to 10%.

 **NOTE**

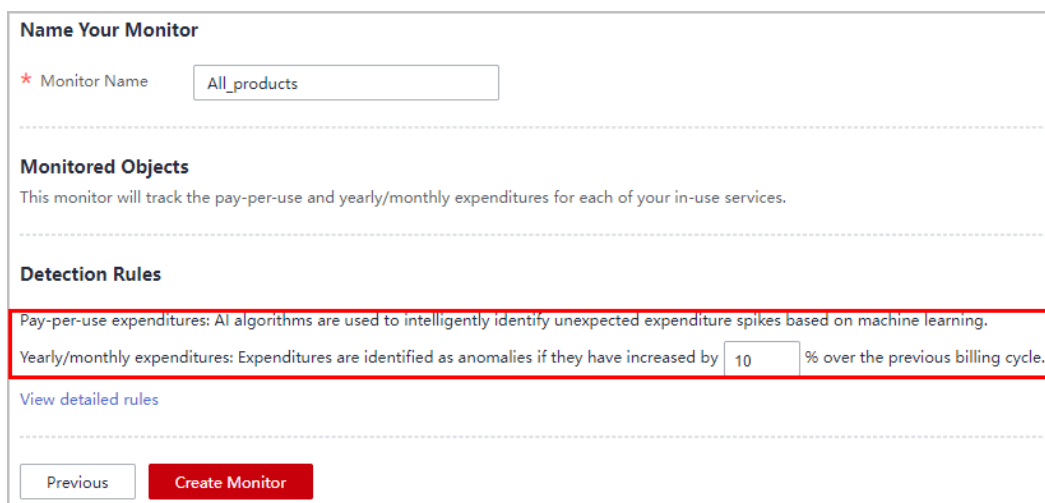
You can create monitors to monitor your costs by linked account, cost tag as needed.

Step 1: Creating a Monitor

- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Anomaly Detection**.
- Step 3** Click **Create Monitor**.
- Step 4** Select **All Services**.



- Step 5** Configure detection rules.

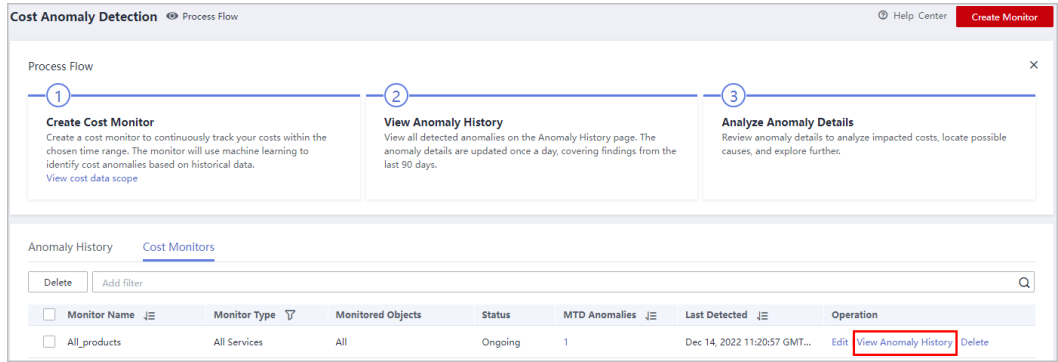


----End

Step 2: Viewing Anomaly History

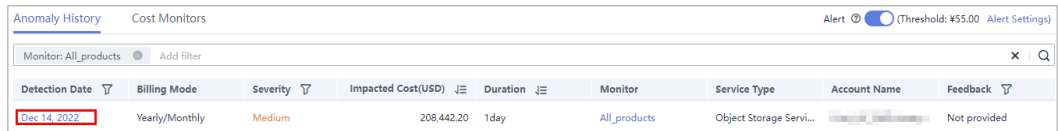
- Step 1** Log in to Cost Center.
- Step 2** Choose **Cost Anomaly Detection > Cost Monitors**.
- Step 3** View the cost anomalies reported. In the example shown in the following figure, one MTD anomaly has been reported.

To view all reported anomalies, click **View Anomaly History** in the **Operation** column of the monitor.

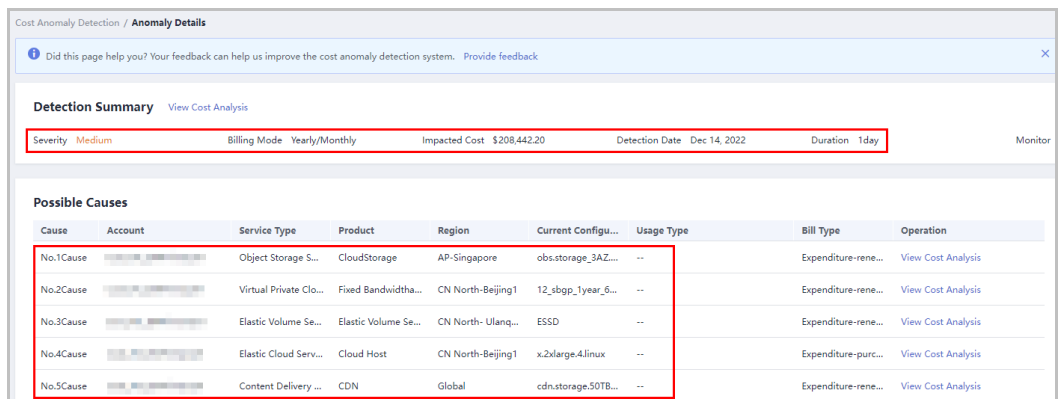


Step 4 View the anomaly details. In this example, a cost anomaly in a yearly/monthly subscription was detected on Dec. 14, 2022. The impact of this anomaly was \$208,442.2 USD, mainly involving Object Storage Service (OBS).

To view details about cost anomalies and the analyses of potential root causes, click the hyperlink of a specific detection date.



Step 5 View the top 5 services that may cause the anomaly.



----End

Step 3: Analyzing Causes of Cost Anomalies

Step 1 Access the **Anomaly Details** page, click **View Cost Analysis** in the **Operation** column of a possible cause.

Cost Anomaly Detection / Anomaly Details

Did this page help you? Your feedback can help us improve the cost anomaly detection system. [Provide feedback](#)

Detection Summary [View Cost Analysis](#)

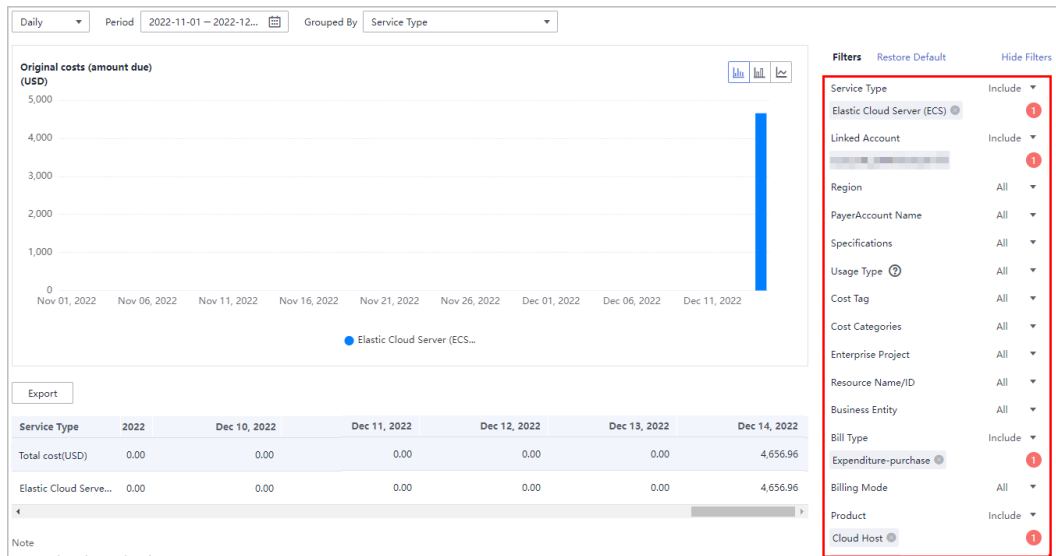
Severity **Medium** Billing Mode Yearly/Monthly Impacted Cost \$208,442.20 Detection Date Dec 14, 2022 Duration 1day Monitor

Possible Causes

Cause	Account	Service Type	Product	Region	Current Configu...	Usage Type	Bill Type	Operation
No.1Cause		Object Storage S...	CloudStorage	AP-Singapore	obs.storage_3AZ...	--	Expenditure-rene...	View Cost Analysis
No.2Cause		Virtual Private Clo...	Fixed Bandwidtha...	CN North-Beijing1	12_sbgp_1year_6...	--	Expenditure-rene...	View Cost Analysis
No.3Cause		Elastic Volume Se...	Elastic Volume Se...	CN North-Ulanq...	ESSD	--	Expenditure-rene...	View Cost Analysis
No.4Cause		Elastic Cloud Serv...	Cloud Host	CN North-Beijing1	x2xlarge.4linux	--	Expenditure-purc...	View Cost Analysis
No.5Cause		Content Delivery ...	CDN	Global	cdn.storage.50TB...	--	Expenditure-rene...	View Cost Analysis

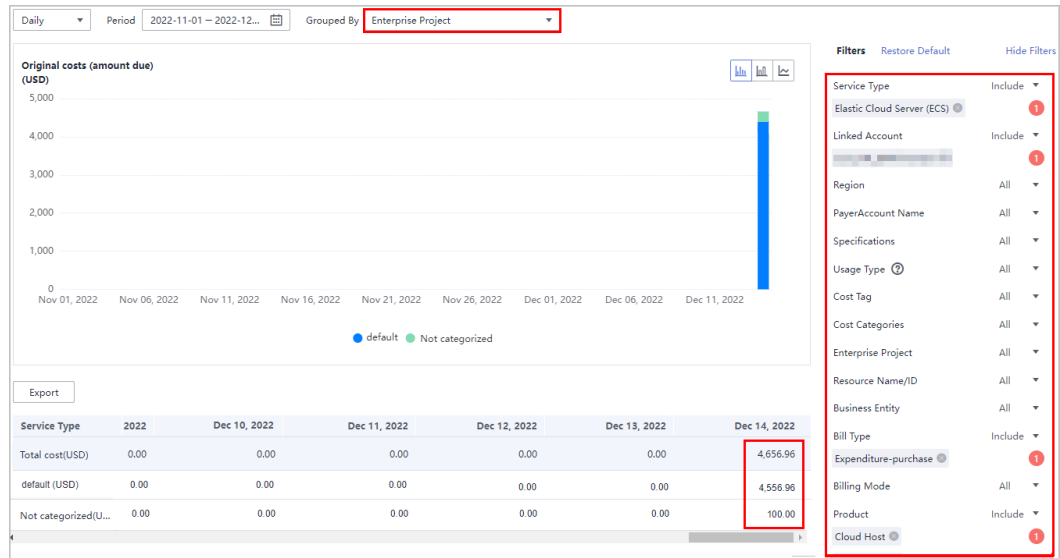
Step 2 Navigate to the **Cost Analysis** page. Selected filters are automatically displayed.

In this example, a new purchase order line was generated for Elastic Cloud Server (ECS) on Nov. 14, 2022, costing \$4,656.96 USD. You need to check whether the new purchase was identified as an anomaly.



Step 3 Group costs by **Enterprise Project** to view those enterprise projects involving cost anomalies.

In the new ECS purchase on Nov. 14, 2022, costs not involving any enterprise project were \$4,556.96 USD, and non-categorized costs were \$100 USD.



----End

7 Changing Billing Modes to Optimize Costs

[7.1 Introduction](#)

[7.2 Evaluating Cost Optimization Option of Changing the Billing Mode from Pay-per-Use to Yearly/Monthly](#)

7.1 Introduction

The expenditures on cloud resources mainly depend on the unit price and resource usage. You can use advanced billing modes (such as yearly/monthly) to lower the unit price.

Cost Center analyzes the usage of pay-per-use resources and reserved instances and provides cost optimization options to reduce your Huawei Cloud costs.

Common cost optimization options include:

- [7.2 Evaluating Cost Optimization Option of Changing the Billing Mode from Pay-per-Use to Yearly/Monthly](#)

7.2 Evaluating Cost Optimization Option of Changing the Billing Mode from Pay-per-Use to Yearly/Monthly

Currently, only ECS, EVS, and RDS service costs can be optimized by changing the billing mode from pay-per-use to 1-month or 1-year subscription.

Procedure

Log in to Cost Center, and choose **Billing Mode > Yearly/Monthly**. For details, see [Yearly/Monthly Subscriptions](#).

Viewing Pay-per-Use Resources Suitable for 1-Month Subscription

Set **Subscription Term** to **1-month** to view the amortized costs of all ECS, EVS, and RDS resources whose costs can be optimized by changing the billing mode from pay-per-use to 1-month subscription.

The screenshot shows the AWS Cost Explorer interface. At the top, filters are set to 'Last 30 days' for Data From, '1-month' for Subscription Term, and 'All' for Service Type. Below the filters, a summary shows 'Monthly Savings' of \$270.79, calculated as 'Estimated monthly expenditures before optimization' (\$477.79) minus 'Monthly amortized costs after optimization' (\$207.00). Underneath, there is a section for 'Applicable Resources' with a search bar and a table of resources. The table has columns for Linked Account, Service Type, Resource Name/ID, Usage, Estimated Monthly Cost, Subscription Term, Monthly Amortized Cost, Estimated Monthly Savings, and Operation. One resource is listed: Elastic Volume Service with Resource Name/ID 0c257dc3300d2ce27f0c01..., Usage 5,356,800.0..., Estimated Monthly Cost 158.41, Subscription Term 1 month, Monthly Amortized Cost 69.00, Estimated Monthly Savings 89.41, and Operation Pay-per-Use to Yearly/Monthly.

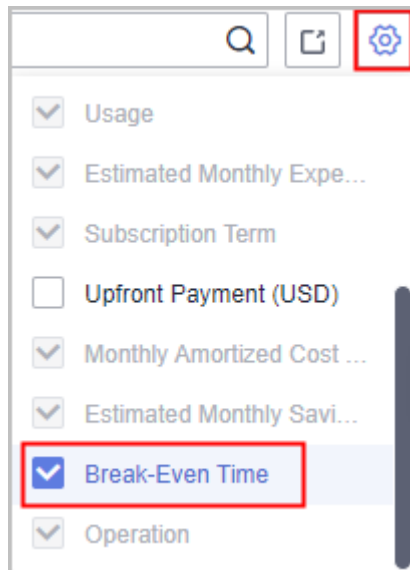
As shown in this figure, the monthly savings (730 hours/month) after the optimization are \$270.79 USD.

You can optimize the costs for the applicable resources by performing the following steps:

1. Click **Pay-per-Use to Yearly/Monthly** in the **Operation** column of an applicable resource to access its console.
2. Choose **More > Change Billing Mode** in the **Operation** column from the drop-down list.
3. Confirm the resource information as prompted, select the required duration, and pay for the order.

NOTE

1. You can select **Break-Even Time** from the **Customize Column** drop-down list.



2. If the monthly savings are high and the break-even time is short, this cost optimization option is recommended.

Viewing Pay-per-Use Resources Suitable for 1-Year Subscription

Set **Subscription Term** to **1-year** to view the amortized costs of all ECS, EVS, and RDS resources whose costs can be optimized by changing the billing mode from pay-per-use to 1-year subscription.

The screenshot shows the AWS Cost Explorer interface with the following details:

- Data From:** Last 30 days
- Subscription Term:** 1-year
- Service Type:** All
- Monthly Savings:** Pay-per-use to yearly/monthly for all applicable resources. The calculation is: \$305.29 = \$477.79 (Estimated monthly expenditures before optimization) - \$172.50 (Monthly amortized costs after optimization).
- Applicable Resources:** The following resources are for your reference only. Consider your own needs before changing the billing mode from pay-per-use to yearly/monthly.

Linked Account	Service Type	Resource Name/ID	Usage	Estimated Monthly ...	Subscrip...	Monthly Amorti...	Estimated Monthl...	Operation
	Elastic Volume Service ...	0c257dc33000d2ce2f70c01...	5,356,800.0...	158.41	1 year	57.50	100.91	Pay-per-Use to Yearly/Monthly

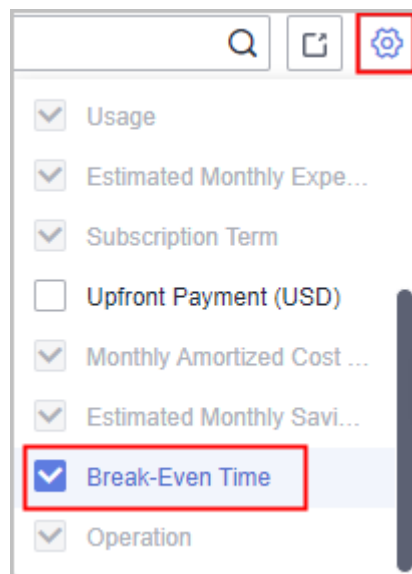
As shown in this figure, the monthly savings (730 hours/month) after the optimization are \$305.29 USD.

You can optimize the costs for the applicable resources by performing the following steps:

1. Click **Pay-per-Use to Yearly/Monthly** in the **Operation** column of an applicable resource to access its console.
2. Choose **More > Change Billing Mode** in the **Operation** column from the drop-down list.
3. Confirm the resource information as prompted, select the required duration, and pay for the order.

NOTE

1. You can select **Break-Even Time** from the **Customize Column** drop-down list.



2. If the monthly savings are high and the break-even time is short, this cost optimization option is recommended.