Data Lake Insight

Billing Description

Issue 04

Date 2024-05-27

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Contents

1 Billing Overview

DLI billing includes multiple **billed items**, each with its own **billing mode**.

Figure 1-1 DLI's billing structure
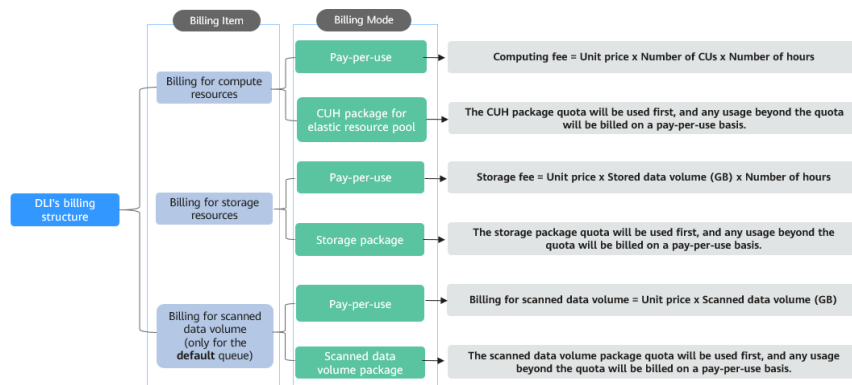
Billed Items

DLI billed items include billings for compute resources, storage resources, and scanned data volume. DLI offers a price calculator that allows you to swiftly determine the reference price for purchasing resources.

For more information about DLI billing, see **DLI Pricing Details**.

Table 1-1 DLI billed items

Billed Item	Description
Billing for compute resources	You can choose to be billed for DLI compute resources using either the following methods: ● Amount of used compute resources (CUH) ● Package

Billed Item	Description
Billing for storage resources	• Storage uses are billed based on the amount of table data stored in DLI, in GB. • Note that DLI typically compresses the original file size to 1/5 when estimating storage costs. DLI storage is billed based on the size of compressed data. • When data is stored on OBS, any charges for storage resource usage will be billed by OBS, not DLI.
Billing for scanned data	• You are billed based on the scanned data volume in each job, in GB. • Currently, only jobs submitted in the **default** queue are billed based on the scanned data volume.

☐ NOTE

- CU is the pricing unit for elastic resource pools. 1 CU consists of 1 vCPU and 4 GB memory. Queues with more CUs have better compute performance.
- Jobs submitted on the **default** queue are billed based on the scanned data volume.

Billing Modes

DLI billing modes vary depending on billed items. See **Table 1-2**.

Table 1-2 DLI billing modes

Billed Item	Billing Mode	Description
Compute resources	Pay-per-use	Pay-per-use queues or elastic resource pools are billed by CUH. Computing fee = Unit price x Number of CUs x Number of hours
	CUH	DLI allows you to purchase elastic resource pools in the form of CUH packages. The included quota will reset based on the subscription period.
Data stored in DLI tables	Pay-per-use	Storage uses are billed based on the amount of data stored in DLI, in GB. Storage fee = Unit price x Data volume (in GB) x Number of hours
	Storage package	If you purchase a storage package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every hour.

Billed Item	Billing Mode	Description
Scanned data volume	Pay-per-use	Fees for scanned data volume = Unit price x Scanned data volume (in GB)
	Scanned data volume	If you purchase a scanned data volume package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The quota included in the scanned data volume package will reset based on the subscription period.

📖 **NOTE**

- Reset by subscription period: For example, if the reset period is monthly and you purchase a package on January 5, the included free resources will reset on the fifth day of each month.
- Reset by calendar period: For example, if you purchase a package and the reset period is monthly, the included free resources will reset at 00:00:00 on the first day of each calendar month.
- Storage packages reset every hour based on the calendar period, while other packages reset based on the subscription period.

Application Scenarios

Generally, you are advised to create projects based on different service attributes.

- Development project: This project is mainly used by engineers for development and debugging. The workload is random and the data volume is small. To address this situation, you are advised to use the CUH billing mode, which can help you effectively control costs and keep resource consumption within a certain range. If you have a short-term need for exclusive resources, you can also select the dedicated resource mode when purchasing a pay-per-use queue.

- Production project: Your workload is relatively stable (developed and debugged before going online). You are advised to use the package billing mode, which is more cost-effective. In addition, for pay-per-use queues, after being idle for 1 hour (meaning there are no running jobs on the queue), the system will automatically release compute resources. When using the queue again, compute resources need to be reallocated, which may take 5–10 minutes. Using the package billing mode can save waiting time.

2 Billing for Compute Resources

2.1 Elastic Resource Pools

Billing Modes

Elastic resource pools provide compute resources for DLI jobs. Elastic resource pools support the following billing modes:

- **Pay-per-use**: Pay-per-use is a postpaid mode. **Dedicated Resource Mode** is selected by default. Resources are not released when idle.

  Dedicated resources are billed by the calendar hour based on the CUs purchased since they are created. The billing is calculated in seconds and settled hourly. Computing fee = Unit price x Number of CUs purchased x Number of hours

  Pay-per-use billing is applicable to test projects with low resource consumption, as it results in lower costs.

- **Package**: DLI enables you to buy an elastic resource pool CUH package, and you will be billed by CUH when you submit jobs in the pool after purchasing the package. You are advised to combine elastic resource pool CUH packages with pay-per-use queues.

  If you purchase an elastic resource pool CUH package, your resource usage will first be deducted from the included quota, and any additional usage beyond the package limit will be billed on a pay-per-use basis. The included quota will reset based on the subscription period. See **Package Billing** for more information on package billing.

This section describes the billing rules of pay-per-use DLI elastic resource pools.

Application Scenarios

- **Pay-per-use**: It is suitable for test projects with random jobs, small data volume, and low resource consumption, as it results in lower costs and does not require any prepayment.

- **Pay-per-use + package**: It is suitable for scenarios where the queue usage can be estimated or scenarios where resource consumption is low, such as test projects. During usage, the quota for the elastic resource pool CUH package

will be first deducted. If the usage exceeds the quota, you will be charged in pay-per-use mode.

Constraints and Limitations

- Pay-per-use dedicated elastic resource pools are billed by calendar hour since they are created. **Dedicated Resource Mode** is selected by default for pay-per-use billing for elastic resource pools.

- Elastic resource pools are billed by the second and settled hourly, with hours calculated on the hour.

- Pay-per-use elastic resource pools are billed based on the number of CUs purchased, rather than the CUs utilized to execute jobs.

- A pay-per-use elastic resource pool can be deleted one hour after it is created.

- You can combine pay-per-use with CUH packages. Your resource usage will first be deducted from the quota included in your CUH package, and any additional usage beyond the package limit will be billed on a pay-per-use basis. The quota included in an elastic resource pool CUH package will reset every month.

- If the consumption of resources in a single billing cycle is less than 1CU for an elastic resource pool, it will be rounded up to 1CU.

- The scaling in or out of an elastic resource pool starts counting time after the scaling is successfully completed, not from the time when the scaling process begins.

- After the queue is scaled out for the elastic resource pool, the system starts billing you for the added CUs.

  When there is no demand for certain CUs due to business adjustments, it is important to release them promptly; otherwise, they will continue to incur charges.

- Queues in an elastic resource pool are not charged separately; the billing is based on the elastic resource pool as a whole for the compute resources used.

Billing Rules

Billing rules for elastic resource pools vary depending on the billing mode.

Table 2-1 Billing rules for elastic resource pools

Billing Mode	Resource	Description
Pay-per-use	Elastic resource pool	Computing fee = Unit price x Number of CUs x Number of hours Pay-per-use dedicated DLI elastic resource pools are billed by the calendar hour based on the CUs purchased since they are created, regardless of whether there are any jobs running on them.

Suppose you purchase a pay-per-use queue. At the bottom of the purchase page, you will find a breakdown of the costs, which will include the CU range based on

your selected configuration and the calculated configuration fees for the purchase duration.

Billing Examples

> **NOTICE**
>
> The prices are just examples. The actual prices are those displayed on **DLI Pricing Details**.

Example: Pay-per-use dedicated elastic resource pool (including billing examples in scaling scenarios)

The billing on elastic resource pools by CUH is divided into three periods based on chronological order: the creation period, the usage period, and the deletion period. **Figure 2-1** shows the definitions of the three periods.

Figure 2-1 Billing on elastic resource pools by CUH
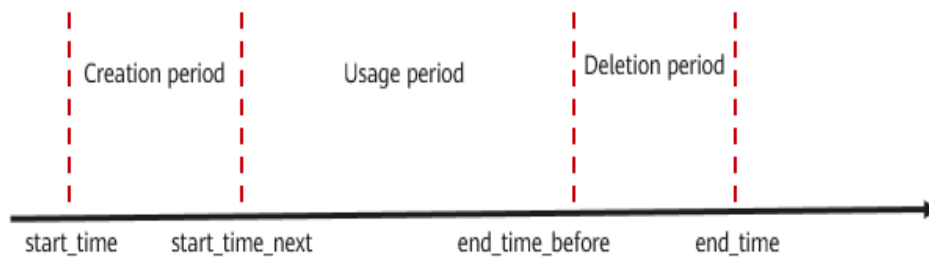
- **start_time**: time when the elastic resource pool is successfully created and in the **Available** state.

- **start_time_next**: next hour after the time when the elastic resource pool is successfully created and in the **Available** state. For example, if **start_time** is 09:45:00, the value of **start_time_next** is 10:00:00.

- **end_time**: time when the elastic resource pool is successfully deleted.

- **end_time_before**: the hour before the time when the elastic resource pool is successfully deleted. For example, if **end_time** is 14:25:00, the value of **end_time_before** is 14:00:00.

- Creation period = **start_time_next** – **start_time**

- Usage period = **end_time_before** – **start_time_next**

- Deletion period = **end_time** – **end_time_before**

Computing fee = Unit price x Number of CUs x Number of hours

The billing on the elastic resource pool by CUH differs in the three periods. For details, see the scenario description listed in **Table 2-2**.

Table 2-2 Billing on elastic resource pools by CUH

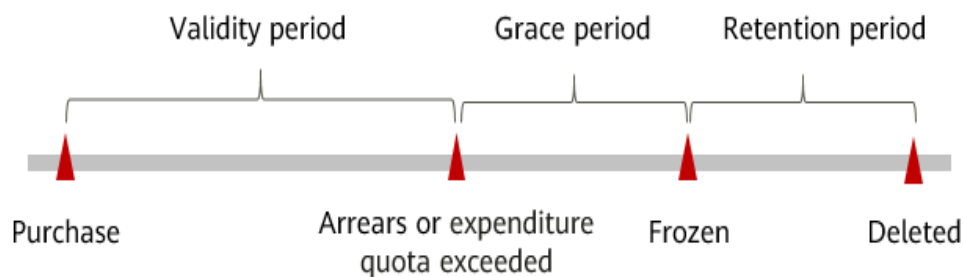| Scenario	Description	Creation Period	Usage Period	Deletion Period
Scenario 1	- A created elastic resource pool became **Available** at 09:40:00, and the next hour is 10:00:00. - The elastic resource pool is deleted at 11:40:00, and the previous hour is 11:00:00. - Throughout the entire period, there are 64 CUs allocated to the elastic resource pool, and no elastic scaling will occur during this time.	- The creation period is calculated as follows: (10:00:00 – 09:40:00) = 1/3 hours - Total CUHs = 64 CUs/3 hours = 22 CUHs (rounded up)	- The usage period is calculated as follows: (11:00:00 – 10:00:00) = 1 hour - Total CUHs = 64 CUs/1 hour = 64 CUH	- The deletion period is calculated as follows: (11:40:00 – 11:00:00) = 2/3 hours - Total CUHs = 64 CUs x 2/3 hours = 43 CUHs (rounded up)

Scenario	Description	Creation Period	Usage Period	Deletion Period
Scenario 2	- A created elastic resource pool became **Available** at 09:40:00, and the next hour is 10:00:00. - The elastic resource pool is deleted at 11:40:00, and the previous hour is 11:00:00. - The elastic resource pool starts with 64 CUs, increases to 128 CUs at 10:10:00, and then decreases back to 64 CUs at 11:10:00.	- The creation period is calculated as follows: (10:00:00 – 09:40:00) = 1/3 hours - Total CUHs = 64 CUs/3 hours = 22 CUHs (rounded up)	- The usage period is calculated as follows: Duration before scale-out = 10:10:00 – 10:00:00 = 1/6 hours Duration after scale-out = 11:00:00 – 10:10:00 = 5/6 hours - Total CUHs = (64 CUs x 1/6 hours + 128 CUs x 5/6 hours) = 118 CUHs (rounded up)	- The deletion period is calculated as follows: Duration before scale-in = 11:10:00 – 11:00:00 = 1/6 hours Duration after scale-in = 11:40:00 – 11:10:00 = 1/2 hours - Total CUHs = (128 CUs x 1/6 + 64 CUs x 1/2 hours) = 54 CUHs (rounded up)

Scenario	Description	Creation Period	Usage Period	Deletion Period
Scenario 3	● A created elastic resource pool became **Available** at 09:40:00, and the next hour is 10:00:00. ● The elastic resource pool is deleted at 10:50:00, and the previous hour is 10:00:00. ● The elastic resource pool starts with 64 CUs and increases to 128 CUs at 10:10:00.	● The creation period is calculated as follows: (10:00:00 – 09:40:00) = 1/3 hours ● Total CUHs = 64 CUs/3 hours = 22 CUHs (rounded up)	None	● The deletion period is calculated as follows: Duration before scale-in = 10:10:00 – 10:00:00 = 1/6 hours Duration after scale-in = 10:50:00 – 10:10:00 = 2/3 hours ● Total CUHs = (64 CUs x 1/6 hours + 128 CUs x 2/3 hours) = 96 CUHs (rounded up)

Impact of Arrears

Figure 2-2 shows the statuses a pay-per-use DLI queue can have throughout its lifecycle. After a DLI queue is purchased, it enters the validity period and operates properly during this period. If your account goes into arrears or exceeds the expenditure quota, the queue enters a grace period and then a retention period.

Figure 2-2 Lifecycle of a pay-per-use DLI resource

Arrears Reminder

The system deducts fees from your account balance for pay-per-use resources at the end of each billing cycle. You will be notified by email, SMS, or in-app messages when your account falls into arrears or exceeds the expenditure quota.

Impact of Arrears

Your resources enter the grace period and you cannot submit jobs in DLI, including SQL, Spark, and Flink jobs. You will need to pay for the fees incurred during the

grace period, which you can see on the **Billing & Costs** > **Billing Center** > **Overview** page of the Huawei Cloud console.

If you do not bring your account balance current before the grace period expires, your resources will enter the retention period and become frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, your resource will be released and the data cannot be restored.

📖 **NOTE**

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

Combination of Pay-per-Use and Package

DLI allows you to use package and pay-per-use together.

If you purchase an elastic resource pool CUH package, your resource usage will first be deducted from the included quota, and any additional usage beyond the package limit will be billed on a pay-per-use basis. The quota included in an elastic resource pool CUH package will reset every month.

For details about how to use a package, see **Package Billing**.

3 Billing for Storage Resources

Billing Modes

DLI's internal storage resources are utilized for storing databases and DLI tables. The available billing modes are as follows:

- **Pay-per-use**: It is a postpaid mode, which you can use to purchase data storage. Storage uses are billed based on the amount of data stored in DLI, in GB. You will be billed by calendar hour since the queue is created. Storage fee = Unit price x Data volume (in GB) x Number of hours. Storage resources are settled hourly, with hours calculated on the hour.

- **Package**: DLI enables you to purchase a storage package. Storage uses are billed based on the amount of data stored in DLI, in GB. You are advised to combine package with pay-per-use when purchasing a storage package.

  If you purchase a storage package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every hour. See **Package Billing** for more information on package billing.

Application Scenarios

DLI's internal storage resources are utilized for storing databases and DLI tables.

📖 **NOTE**

- Tables stored in DLI are of the **MANAGED** type.
- You can check the storage capacity of DLI table data on the **Data Management** > **Databases and Tables** page.

Constraints and Limitations

- You can use storage resources directly without the need to create them or be limited by quota constraints.

- Billing information for data storage can only be viewed on the **Bills** page. For details, see **Bills**.

- Storage uses are billed based on the amount of table data stored in DLI, in GB.

- Note that DLI typically compresses the original file size to 1/5 when estimating storage costs. DLI storage is billed based on the size of compressed data.
- When data is stored on OBS, any charges for storage resource usage will be billed by OBS, not DLI.

Billing Rules

Table 3-1 Billing rules for DLI data storage

Type	Description
Storage resource	Storage fee = Unit price x Data volume (in GB) x Number of hours
	Storage uses are billed based on the amount of data stored in DLI, in GB.

Billing Usage Period

Pay-per-use DLI data storage is billed hourly (UTC+08:00).

The billing starts when the DLI table is created and ends when the DLI table is deleted.

◫ **NOTE**

Creating a storage resource takes some time. For a pay-per-use storage resource, billing starts once the DLI table is successfully created, not when the creation process begins. You can choose **Data Management** > **Databases and Tables** to view the time when the DLI table is successfully created.

Billing Examples

NOTICE

The prices are just examples. The actual prices are those displayed on **DLI Pricing Details**.

Suppose you purchased a pay-per-use elastic resource pool (specifications: 64 CUs) at 09:59:30 on April 18, 2023, stored 1 TB of data in DLI tables, and deleted queues and the DLI tables at 11:45:46 on the same day.

- The first billing cycle runs from 09:00:00 to 10:00:00. In this billing cycle, the billing duration is one hour.
- The second billing cycle runs from 10:00:00 to 11:00:00. In this billing cycle, the billing duration is also one hour.

You need to pay for both billing cycles. **Table 3-2** lists the billing formulas.

Table 3-2 Billing formulas

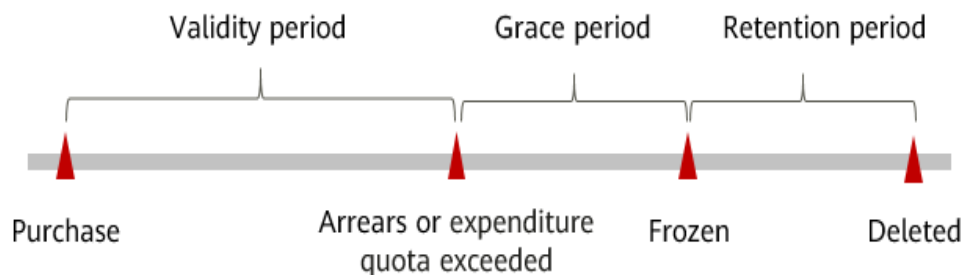| Resource Type	Billing Formula	Unit Price
Compute resource	Computing fee = Unit price x Number of CUs x Number of hours	For details, see **DLI Pricing Details**.
Storage resource	Storage fee = Unit price x Data volume (in GB) x Number of hours	For details, see **DLI Pricing Details**.

Table 3-3 Resource types

Resource Type	Billing Details	Total
Compute resource	0.0925 USD/hour; purchased CUs: 64 CUs; accumulated billing duration: 2 hours	11.84USD
Storage resource	0.023 USD/month/GB, that is, [0.023/(30 x 24)] USD/hour/GB Actual storage: 1 TB = 1,000 GB; accumulated billing duration: 2 hours	0.06 USD

Total fee: 11.9 USD

Impact of Arrears

Figure 3-1 shows the statuses a pay-per-use DLI queue can have throughout its lifecycle. After a DLI queue is purchased, it enters the validity period and operates properly during this period. If your account goes into arrears or exceeds the expenditure quota, the queue enters a grace period and then a retention period.

Figure 3-1 Lifecycle of a pay-per-use DLI resource

Arrears Reminder

The system deducts fees from your account balance for pay-per-use resources at the end of each billing cycle. You will be notified by email, SMS, or in-app messages when your account falls into arrears or exceeds the expenditure quota.

Impact of Arrears

Your resources enter the grace period and you cannot submit jobs in DLI, including SQL, Spark, and Flink jobs. You will need to pay for the fees incurred during the grace period, which you can see on the **Billing & Costs** > **Billing Center** > **Overview** page of the Huawei Cloud console.

If you do not bring your account balance current before the grace period expires, your resources will enter the retention period and become frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, your resource will be released and the data cannot be restored.

📖 **NOTE**

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

Combination of Pay-per-Use and Package

DLI allows you to use package and pay-per-use together.

If you purchase a storage package, the quota included in the package is preferentially deducted when you use storage resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every hour.

For details about how to use a package, see **Package Billing**.

4 Billing for Scanned Data

Billing by Scanned Data Volume

Billing by scanned data volume: Billing is determined by the amount of data scanned during query job execution. If the scanned byte volume is below 10 MB, it will be rounded up to 10 MB for calculation purposes.

You will not be billed for DDL statements (such as **CREATE**, **ALTER**, **DROP TABLE**), partition management statements, or failed queries.

Canceled queries are charged based on the total amount of data scanned at the time of cancellation.

Billing Modes

DLI's **default** queue is billed by the scanned data volume. The scanned data volume can be billed using the following modes:

- **Pay-per-use**: You are billed based on the scanned data volume when you submit jobs to the **default** queue. This billing mode is based on usage.

    Billing is calculated per hour from the time of creation, rounded up to the nearest hour.

    Fees for scanned data volume = Unit price x Scanned data volume (in GB)

- **Package**: DLI offers package billing for scanned data volume. If you purchase a scanned data volume package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every month.

    See **Package Billing** for more information on package billing.

This section describes the pay-per-use billing rules for scanned data volume.

Application Scenarios

DLI provides a preconfigured queue named **default** for you to try out the service. This queue can be used for job execution when you are unsure of the required queue capacity or do not have space to create a new queue. Queue resources are allocated on demand and billed based on the scanned data volume. This is

suitable for testing scenarios where resource consumption is low and pay-per-use billing is more cost-effective, without the need for any upfront payment.

Constraints and Limitations

- Only the **default** queue is billed based on the scanned data volume.
- If the scanned byte volume is below 10 MB, it will be rounded up to 10 MB for calculation purposes.
- You will not be billed for DDL statements (such as **CREATE**, **ALTER**, **DROP TABLE**), partition management statements, or failed queries.
- Canceled queries are charged based on the total amount of data scanned at the time of cancellation.
- If a computing task times out or fails, no fee is charged for the task.
- The way data is stored, including its format and whether it is compressed, directly affects the cost calculation.

  For example, if a Parquet file is one-fourth the size of the original CSV file, the data scan cost will be one-fourth of the cost of scanning the original CSV file.

Billing Rules

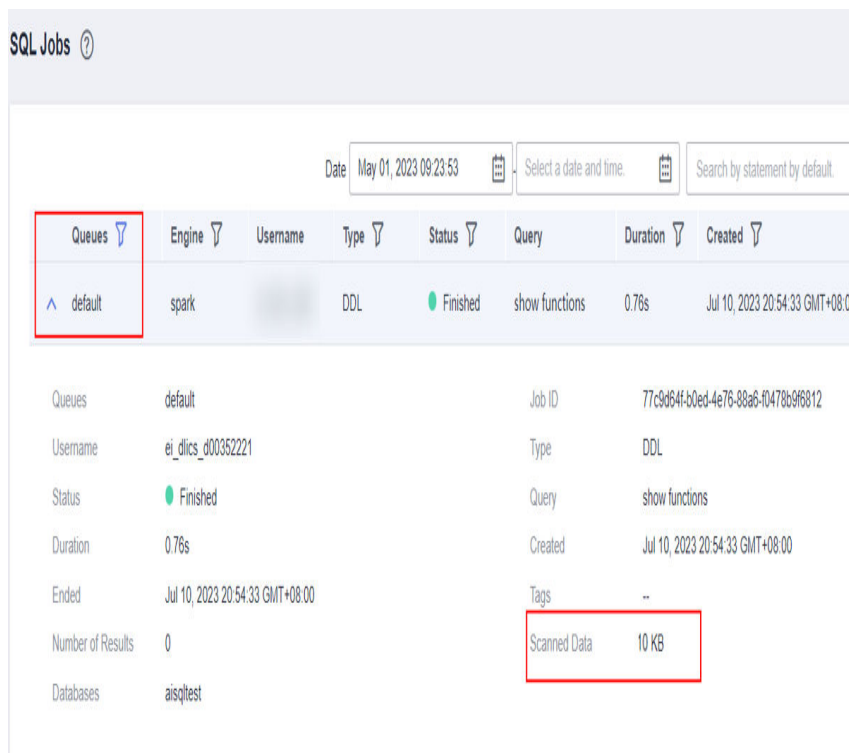**Table 4-1** Billing rules for the scanned data volume

Type	Resource	Description
Data scan	Scanned data volume	Only the **default** queue supports billing by the scanned data volume. (This queue is preset for you to try out the service.)
		Fees for scanned data volume = Unit price x Scanned data volume (in GB)
		If the scanned byte volume is below 10 MB, it will be rounded up to 10 MB for calculation purposes.

You can check the scanned data volume on the DLI console.

The following uses a SQL job as an example:

1. In the navigation pane on the left, choose **Job Management** > **SQL Jobs**.
2. On the **SQL Jobs** page displayed, filter jobs that use the **default** queue.
3. Click ⌄ to expand the job details and view its scanned data volume.

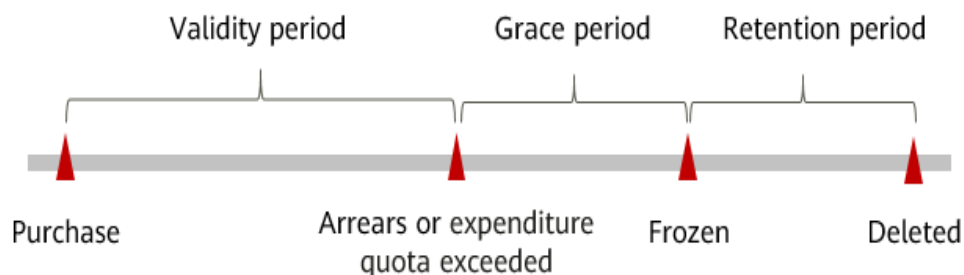**Figure 4-1** Example price

Billing Examples

> **NOTICE**
>
> The prices are just examples. The actual prices are those displayed on **DLI Pricing Details**.

For details, see the billing example for the scanned data volume on the DLI pricing details page.

Impact of Arrears

Figure 4-2 shows the statuses a pay-per-use DLI queue can have throughout its lifecycle. After a DLI queue is purchased, it enters the validity period and operates properly during this period. If your account goes into arrears or exceeds the expenditure quota, the queue enters a grace period and then a retention period.

Figure 4-2 Lifecycle of a pay-per-use DLI resource

Arrears Reminder

The system deducts fees from your account balance for pay-per-use resources at the end of each billing cycle. You will be notified by email, SMS, or in-app messages when your account falls into arrears or exceeds the expenditure quota.

Impact of Arrears

Your resources enter the grace period and you cannot submit jobs in DLI, including SQL, Spark, and Flink jobs. You will need to pay for the fees incurred during the grace period, which you can see on the **Billing & Costs** > **Billing Center** > **Overview** page of the Huawei Cloud console.

If you do not bring your account balance current before the grace period expires, your resources will enter the retention period and become frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, your resource will be released and the data cannot be restored.

📖 **NOTE**

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

Combination of Pay-per-Use and Package

DLI allows you to use package and pay-per-use together.

If you purchase a scanned data volume package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every month.

For details about how to use a package, see **Package Billing**.

5 Package Billing

Package

DLI offers discounted resource packages that are billed based on the type of package purchased.

These packages are pre-purchased quotas of resource usage for users. If the current package quota is exceeded, the excess usage will be automatically billed on a pay-per-use basis.

Package Types and Use Cases

Table 5-1 Package types and use cases

Type	Description	Application Scenario	Reset Rule
Scanned data volume	You are billed based on the scanned data volume in each job, in GB.	This type of packages applies only to the **default** queue.	The quota included in the scanned data volume package will reset based on the subscription period.
Elastic resource pool CUH	You are billed based the number of CUHs when running jobs on the queue you add to an elastic resource pool.	This type of packages is suitable for scenarios where the queue usage can be estimated or scenarios where resource consumption is low, such as test projects.	The included quota will reset based on the subscription period.

Type	Description	Application Scenario	Reset Rule
Storage package	Storage uses are billed based on the amount of data stored in DLI, in GB.	This type of packages is ideal for situations where table data is stored on DLI. For example, if tables from latency-sensitive services are saved on DLI, a storage package can be used to reduce storage costs.	The included quota will reset every hour.

☐ **NOTE**

- Reset by subscription period: For example, if the reset period is monthly and you purchase a package on January 5, the included free resources will reset on the fifth day of each month.
- Reset by calendar period: For example, if you purchase a package and the reset period is monthly, the included free resources will reset at 00:00:00 on the first day of each month.
- Storage packages reset every hour based on the calendar period, while other packages reset based on the subscription period.

Constraints and Limitations

- Packages cannot be refunded once purchased.
- Packages are bound to specific regions and can only be used in the region they are bound to, not in other regions.
- When billing, resources from the package are used first. Once the package's resources are exhausted, any excess usage is billed on a pay-per-use basis.
- After a package expires, resources will not be automatically disabled and will continue to be used on a pay-per-use basis.

Billing Examples

NOTICE

The prices are just examples. The actual prices are those displayed on **DLI Pricing Details**.

Suppose user A purchases a 4,000-CUH package with a validity of one month. Before the package is used up, any CUHs used by user A's compute resources will be deducted from the package.

If the package has 10 CUHs left and user A uses 16 CUHs, 10 CUHs will be deducted from the package, and the excess 6 CUHs will be billed on a pay-per-use basis.

- Billed item 1: fee for purchasing a package
- Billed item 2: pay-per-use fee for the excess 6 CUHs of using a queue for one hour

The following is an example of calculating the fee of a pay-per-use queue:

- 193.8 USD/month for 4,000 CUHs
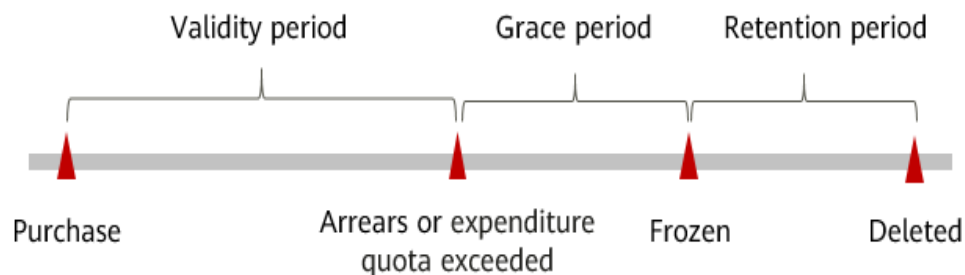- Unit price of the elastic resource pool: 0.0925 USD/hour; extra CUs: 6 CUs; duration: 1 hour

  Total fee: 193.8 + (0.0925 x 6 x 1) = 194.36 USD

For more examples, see **DLI Pricing Details**.

Impact of Arrears

Figure 5-1 shows the statuses a pay-per-use DLI queue can have throughout its lifecycle. After a DLI queue is purchased, it enters the validity period and operates properly during this period. If your account goes into arrears or exceeds the expenditure quota, the queue enters a grace period and then a retention period.

Figure 5-1 Lifecycle of a pay-per-use DLI resource

Arrears Reminder

The system deducts fees from your account balance for pay-per-use resources at the end of each billing cycle. You will be notified by email, SMS, or in-app messages when your account falls into arrears or exceeds the expenditure quota.

Impact of Arrears

Your resources enter the grace period and you cannot submit jobs in DLI, including SQL, Spark, and Flink jobs. You will need to pay for the fees incurred during the grace period, which you can see on the **Billing & Costs** > **Billing Center** > **Overview** page of the Huawei Cloud console.

If you do not bring your account balance current before the grace period expires, your resources will enter the retention period and become frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, your resource will be released and the data cannot be restored.

📖 **NOTE**

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

Combination of Pay-per-Use and Package

DLI allows you to use package and pay-per-use together.

If you purchase a package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis.

For details about pay-per-use billing, see **Elastic Resource Pools**, **Billing for Storage Resources**, and **Billing for Scanned Data**.

6 Billing Examples

Billing Scenario

User A of a company requests an elastic resource pool with 4,000 CUs and stores 1 TB of data in a DLI table. The following billing analysis is given to help the company choose a proper billing mode.

> **NOTICE**
>
> - DLI supports SQL, Flink, and Spark jobs. When it comes to billing, SQL jobs are charged for both storage and compute resources, whereas Flink and Spark jobs are only charged for compute resources.
> - The prices are just examples. The actual prices are those displayed on **DLI Pricing Details**.
> - For more examples, see **DLI Pricing Details**.

Billing Analysis

The table below describes the details of pay-per-use billing and package billing.

> **NOTICE**
>
> Unit prices in this example are used for reference only. The prices shown here are only estimates. As unit prices change from time to time, the prices shown here will differ from actual ones. For details, see the data released on the Huawei Cloud official website.

Billing Mode	Formula	Payment Period	Cost
Pay-per-use (dedicated)	Computing fee = Unit price x Number of CUs x Number of hours	1 month	Computing fee: 0.0925 (unit price for an elastic resource pool: 0.0925 USD/hour) x 4,000 (CUs) x 24 x 30 (hours) = 266,400 USD/month
	Storage fee = Unit price x Data volume (in GB) x Number of hours		Storage fee: 0.023 USD/month/GB x 1,000 (stored data size, in GB) = 23 USD/month
	Total		**Total cost: 266,423 USD/month**
Package	Computing fee: fixed based on the CUH package	1 month	Computing cost: 314.5 USD/month
	Storage fee: If you purchase a storage package, the quota included in the package is preferentially deducted when you use storage resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every hour.		Storage cost: 23 USD/month
	Total		**Total cost: 337.5 USD/month**

As shown in the table above, resource packages can help you save money. The longer the subscription term, the greater the savings.

7 Renewing Subscriptions

Renewal is only applicable to yearly/monthly resources. Pay-per-use resources can continue running as long as there is enough balance in your account.

If pay-per-use resources are in arrears, see **Arrears**.

<div style="text-align: right">

8 Bills

</div>

To learn about the usage and billing information of a DLI resource during a specific period, choose **Billing Center** > **Billing** on the management console.

Bill Generation

Transaction records for package subscriptions are generated immediately after being paid for.

The usage of pay-per-use resources is reported to the billing system at a fixed interval. Pay-per-use resources can be settled by hour, day, or month based on usage type. For details, see the billing description of related resources.

DLI's queues, elastic resource pools, data storage, and scanned data volume that are billed on a pay-per-use basis are settled by hour.

The fee deduction time of pay-per-use resources may be later than the settlement period. For example, if a queue (settled by hour) is deleted at 08:30:00, the fees generated during 08:00:00 to 09:00:00 are usually deducted at around 10:00:00. On the Billing Center, choose **Billing** > **Transactions and Detailed Bills** and click the **Transaction Bills** tab. **Expenditure Time** indicates the time when a pay-per-use product is used.

Viewing the Bill for a Specified Queue or Elastic Resource Pool

The DLI console does not display the IDs of queues or elastic resource pools. To query bills of DLI queues or elastic resource pools, perform the following steps:

1. Obtain the resource name from the DLI console.

2. Choose **Resources** > **My Resources** on the top menu to view the resource ID based on the resource name. (The resource name is not unique. You are advised to use the resource name to query the specified resource ID and then view the bill.)

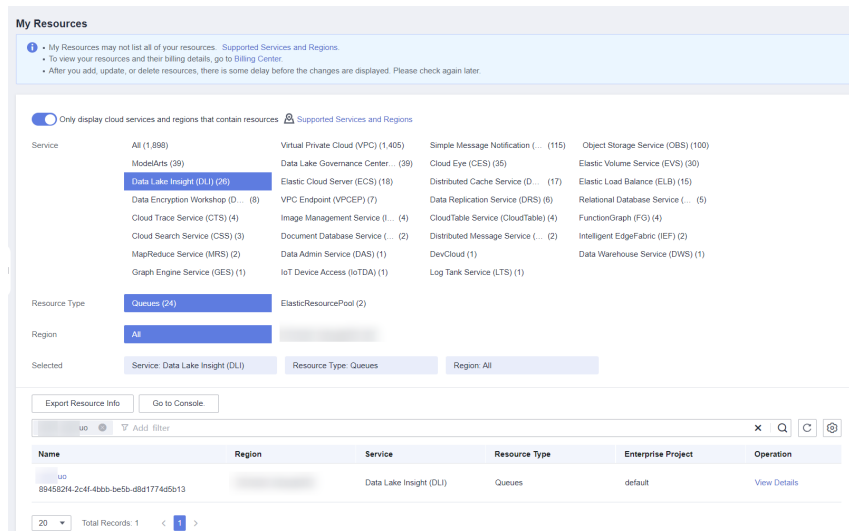3. View the resource bills in the Billing Center based on the resource ID.

The procedure is as follows:

Step 1 Obtain the resource ID.

1. Log in to the management console and choose **Analytics** > **Data Lake Insight**.

2. In the navigation pane on the left, choose **Resources** > **Resource Pool**. In the resource pool list, view and record the resource name.

3. On the DLI's top menu bar, choose **Resources** > **My Resources**.

   The **My Resources** page is displayed.

4. Enter the instance name obtained in **Step 1.3**, and click the 🔍 icon to search for the resource.

Figure 8-1 Searching for a resource by name

5. Copy the resource ID.

Figure 8-2 Copying the instance ID
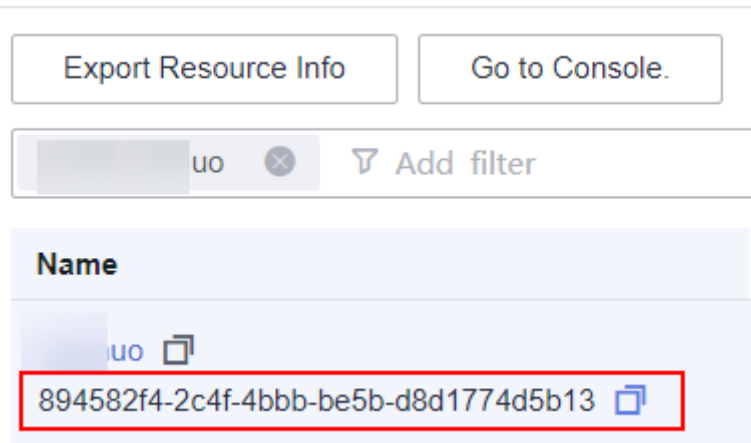
Step 2 View the resource bills in the Billing Center based on the resource ID.

1. On the top menu bar, choose **Billing & Costs** > **Bills**.

2. Choose **Transactions and Detailed Bills** and click the **Bill Details** tab. On the tab page displayed, select **Resource ID** as the filter condition, paste the resource ID obtained in **Step 1.5**, and click 🔍 to search for the bill of the resource.

By default, bill details are displayed by resource name/ID and billing cycle. However, you can choose different statistical dimensions or periods. For details, see **Usage Details**.

----End

Viewing the Bill for a Data Storage Resource

The DLI console does not show data storage details, but you can check the bills for DLI data storage resource in the Billing Center.

1. On the top menu bar, choose **Billing & Costs** > **Bills**.

2. Choose **Transactions and Detailed Bills** > **Bill Details**, select **DLI storage** as the filter criterion, and click 🔍 to search for the bills for DLI data storage resources.

   By default, bill details are displayed by usage and billing cycle. However, you can choose different statistical dimensions or periods. For details, see **Usage Details**.

Figure 8-3 Querying bills for data storage resources
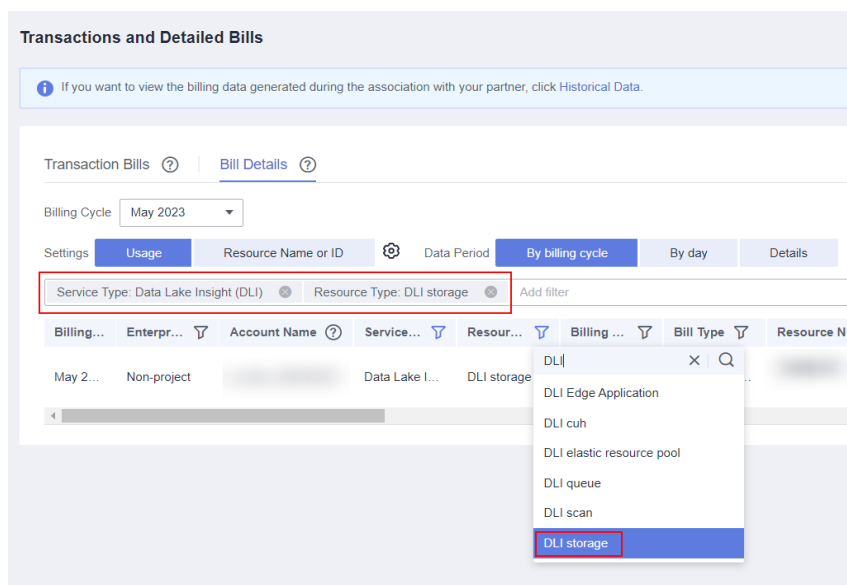
Viewing the Bill for Scanned Data Volume

DLI's **default** queue is billed based on the scanned data volume. Fees for scanned data volume are calculated as follows: Fees for scanned data volume = Unit price x Scanned data volume (in GB). See **How Do I View a Job's Scanned Data Volume?**.

You can query the bill for the scanned data volume in the Billing Center.

1. On the top menu bar, choose **Billing & Costs** > **Bills**.

2. Choose **Transactions and Detailed Bills** > **Bill Details**, select **DLI scan** as the filter criterion, and click 🔍 to search for the bills for DLI scanned data volume.

By default, bill details are displayed by usage and billing cycle. However, you can choose different statistical dimensions or periods. For details, see **Usage Details**.

Figure 8-4 Querying the bill for scanned data volume
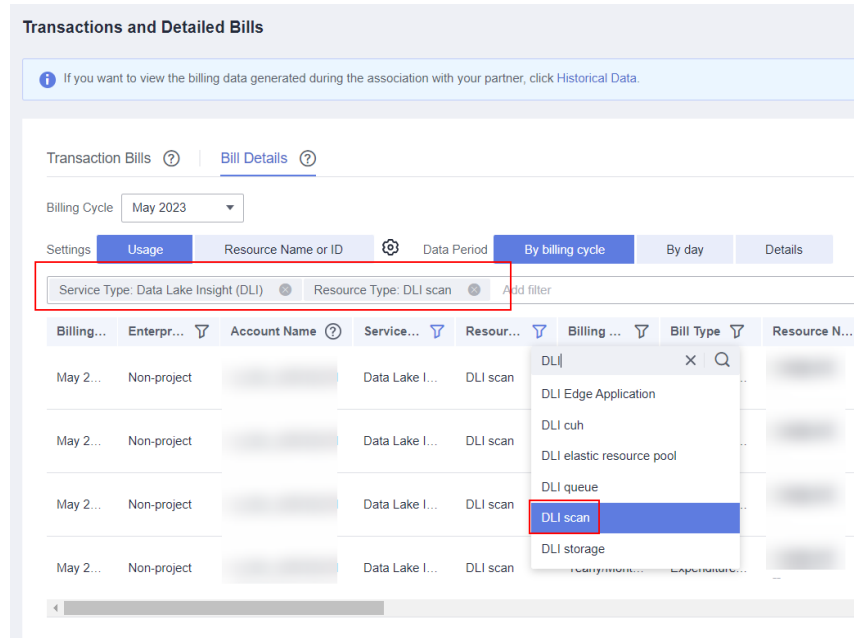
9 Arrears

If your account balance is less than the amount due on your bill when using DLI, your account will be considered in arrears. This may affect the normal operation of your cloud service resources, so top up your account promptly.
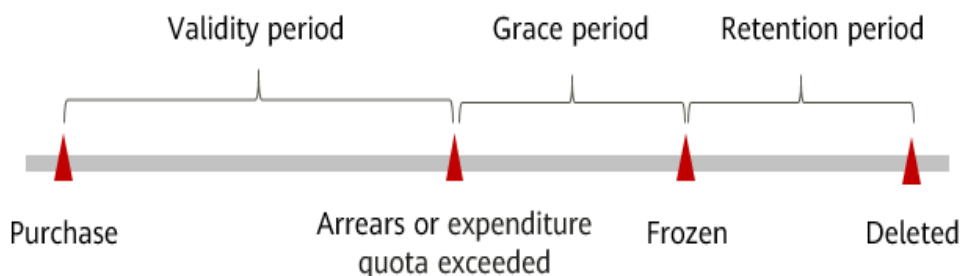
Arrears Reason

- Exceeded package limit resulting in additional charges, but the account balance is insufficient to cover the extra fees. Refer to **Why Am I Still Being Billed on a Pay-per-Use Basis After I Purchased a Package?** to identify the reason for the additional charges and choose the correct package or ensure that the account balance is sufficient.
- No package purchased, and the account balance is insufficient in the pay-per-use mode.

Impact of Arrears

Figure 9-1 shows the statuses a pay-per-use DLI queue can have throughout its lifecycle. After a DLI queue is purchased, it enters the validity period and operates properly during this period. If your account goes into arrears or exceeds the expenditure quota, the queue enters a grace period and then a retention period.

Figure 9-1 Lifecycle of a pay-per-use DLI resource

Arrears Reminder

The system deducts fees from your account balance for pay-per-use resources at the end of each billing cycle. You will be notified by email, SMS, or in-app messages when your account falls into arrears or exceeds the expenditure quota.

Impact of Arrears

Your resources enter the grace period and you cannot submit jobs in DLI, including SQL, Spark, and Flink jobs. You will need to pay for the fees incurred during the grace period, which you can see on the **Billing & Costs** > **Billing Center** > **Overview** page of the Huawei Cloud console.

If you do not bring your account balance current before the grace period expires, your resources will enter the retention period and become frozen. You cannot perform any operations on the pay-per-use resources during this period.

If you do not bring your account balance current before the retention period ends, your resource will be released and the data cannot be restored.

📖 NOTE

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

Avoiding and Handling Arrears

Top up your account in a timely manner after your account falls into arrears.

For details about how to top up your account, see **Topping Up an Account**.

For details about expenditure quotas, see **Expenditure Quota**.

If DLI resources, such as queues and elastic resource pools, are no longer used, you can delete them to avoid further fee deduction.

To avoid account arrears, set up **Balance Alert** on the Billing Center's **Overview** page. This way, the system will send you an SMS or email notification whenever your spending drops below the threshold you specify.

If your account falls into arrears, top up it promptly to ensure that your available balance is greater than zero. If your resource usage is relatively stable, you can purchase a package to offset the corresponding resource costs and save on usage expenses. For more information, refer to **Package Billing**.

10 Billing Termination

Pay-per-Use Resources

For pay-per-use resources:

- If you no longer need pay-per-use elastic resources and want to stop being billed for them, simply delete them.

- Pay-per-use data storage resources incur charges only when DLI tables are stored. If you no longer need these resources and want to stop being billed, simply delete them.

- Pay-per-use scanned data volume is only billed based on the scanned data volume when jobs are executed on the **default** queue. Billing stops once the job is completed.

📖 **NOTE**

Even after deleting pay-per-use resources, billing information may still appear on your account. This is because the system typically deducts fees from the previous billing cycle within one hour of usage. For example, if you delete hourly billed resources at 08:30:00, fees incurred between 08:00:00 and 09:00:00 are usually deducted around 10:00:00.

Searching for Resources from Bills and Stopping Billing (Pay-per-Use Compute Resources)

To find DLI resources using their ID, follow these steps:

1. Obtain the resource ID from the Billing Center.
2. Use the resource ID to find the resource name in the Billing Center.
3. Use the resource name to locate the resource on the DLI console.
4. To stop billing, delete the resource.

The procedure is as follows:

Step 1 Obtain the resource ID from the Billing Center.

1. Log in to the management console. On the top menu bar, choose **Billing & Costs** > **Bills**.

   The **Bills** page is displayed.

2. Choose **Transactions and Detailed Bills** > **Bill Details** and copy the resource ID.

Step 2 Find the resource name using the resource ID.

The DLI console does not display resource IDs for queues or elastic resource pools. After obtaining the resource ID from the Billing Center, you will also need to search for the resource name on the **My Resources** page. Follow these operations:

1. On the DLI's top menu bar, choose **Resources** > **My Resources**.
   The **My Resources** page is displayed.

2. Select **Resource ID** from the search criteria drop-down list box, enter a resource ID, click $\bigcirc$ to search for resource information, and record the region where the resource is located. Copy the resource name as instructed in **Figure 10-1**.

Figure 10-1 Searching for a resource name
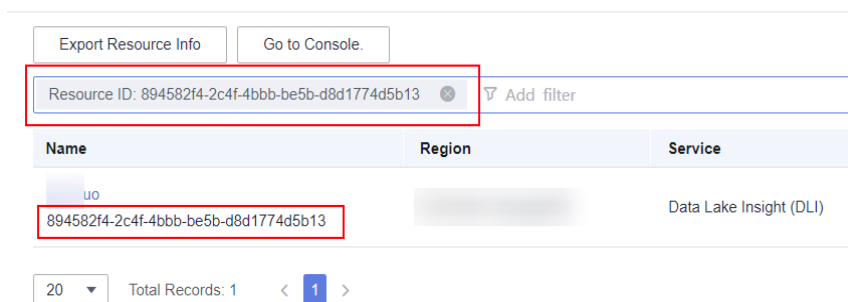
Step 3 Use the resource ID to locate the resource on the DLI console and delete the resource.

1. On the management console, choose **Analytics** > **Data Lake Insight** and switch to the region where the resource is located.

2. Choose **Resources** > **Queue Management** or **Resource Pool**.

3. Enter a resource name in the search box and click $\bigcirc$ to find the resource.

Figure 10-2 Searching for a resource

4. View details about the queue or elastic resource pool, and select the appropriate operation based on the type of the compute resource.

   If you are no longer using a pay-per-use elastic resource pool, you can stop billing by deleting the resource pool.

□ NOTE

Even after deleting pay-per-use resources, billing information may still appear on your account. This is because the system typically deducts fees from the previous billing cycle within one hour of usage. For example, if you delete hourly billed resources at 08:30:00, fees incurred between 08:00:00 and 09:00:00 are usually deducted around 10:00:00.

----End

11 Billing FAQ

11.1 What Billing Modes Does DLI Offer?

DLI billing modes vary depending on billed items. See **Table 11-1**.

Table 11-1 DLI billing modes

Billed Item	Billing Mode	Description
Compute resources	Pay-per-use	Pay-per-use queues or elastic resource pool resources are billed by CUH. Computing fee = Unit price x Number of CUs x Number of hours
	CUH	There are two types of CUH packages: ● Queue CUH The included quota will reset based on the subscription period.
Storage resources	Pay-per-use	Storage uses are billed based on the amount of data stored in DLI, in GB. Storage fee = Unit price x Data volume (in GB) x Number of hours
	Storage package	If you purchase a storage package, the quota included in the package is preferentially deducted when you use storage resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The included quota will reset every hour.
Scanned data volume	Pay-per-use	Fees for scanned data volume = Unit price x Scanned data volume (in GB)

Billed Item	Billing Mode	Description
	Scanned data volume	If you purchase a scanned data volume package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis. The quota included in the scanned data volume package will reset based on the subscription period.

For details about how to create a queue, see **Creating a Queue**.

For details about the billing modes, see **Billing**.

For pricing details, see **DLI Pricing Details**.

11.2 When Is a Data Lake Queue Idle?

An idle queue means that there are no SQL job, Flink job, or Spark job running on the queue.

If no job is running within a natural hour, the queue in that natural hour is idle. You will not be charged during idle hours for a pay-per-use queue.

The computing resources of a pay-per-use queue are released after the queue is idle for one hour. When the queue is used again, the computing resources need to be reallocated, which may take 5 to 10 minutes.

Usage is billed by the hour, with any usage less than one hour being rounded up to one hour. The number of hours is calculated on the hour.

For example, if a queue is used during 12:10:00 to 12:30:00 or 12:10:00 to 12:55:00, the user is charged for one hour.

For details about the billing modes, see **Billing**.

11.3 How Do I Troubleshoot DLI Billing Issues?

If you feel that the billing is incorrect when you use DLI, perform the following steps:

SQL Job

1. Log in to the DLI management console.
2. In the navigation pane on the left, choose **Job Management** > **SQL Jobs**.
3. View the job details to be confirmed and check whether the following operations are performed within the fee deduction period:
   a. Use the self-created queue.
   b. Executed SQL jobs.

- If queues in a pay-per-use elastic resource pool are used to run jobs, you are billing based on CUH by default.

  For DLI pricing details, see **Data Lake Insight Pricing Details**.

- If you used the **default** queue to execute jobs, you are billed based on the scanned data volume.

  For DLI pricing details, see **Data Lake Insight Pricing Details**.

- If you did not run any jobs during the billing period, check if the billing is due to storing a large amount of data. For details, see **Data Storage**.

Spark Job

In the navigation pane on the left, choose **Job Management** > **Spark Jobs**.

- If queues in a pay-per-use elastic resource pool are used to run jobs, you are billed based on CUH.

  For DLI pricing details, see **Data Lake Insight Pricing Details**.

- If you did not run any jobs during the billing period, check if the billing is due to storing a large amount of data. For details, see **Data Storage**.

Flink Job

1. In the navigation pane on the left, choose **Job Management** > **Flink Jobs**.

   - If queues in a pay-per-use elastic resource pool are used to run jobs, you are billed based on CUH.

     For DLI pricing details, see **Data Lake Insight Pricing Details**.

   - If you did not run any jobs during the billing period, check if the billing is due to storing a large amount of data. For details, see **Data Storage**.

Data Storage

1. In the navigation pane on the left, choose **Data Management** > **Databases and Tables**.

2. Check whether the created database contains data stored in DLI.

   a. Click the name of the database to be viewed. The **Table Management** page is displayed.

   b. Check whether the **Data Location** of the corresponding table is DLI.

      If you have data stored in DLI, you are billed based on the amount of data stored.

      For DLI pricing details, see **Data Lake Insight Pricing Details**.

   If no problem is found after checking the preceding items, you can submit a service ticket. Service support personnel will help you check the problem.

11.4 Why Am I Still Being Billed on a Pay-per-Use Basis After I Purchased a Package?

Symptom

Even though you bought a DLI package, you are still being billed for resource usage based on pay-per-use.

Troubleshooting

DLI offers discounted resource packages.

These packages are pre-purchased quotas of resource usage for users. If the current package quota is exceeded, the excess usage will be automatically billed on a pay-per-use basis.

You are advised to locate the fault in the following sequence:

Possible Cause	Solution
No package purchased	See **Checking If You Have Purchased a Package**.
Package quota used up	See **Checking If You Have Exceeded Your Package Limit**.
Not all billed items covered by the purchased package	See **Checking If There Are Any Billed Items Not Covered by Your Package**.

Troubleshoot the issue by ruling out the causes described here, one by one.

Checking If You Have Purchased a Package

Table 11-2 lists the package types supported by DLI.

Fees deducted for different packages are different. For details, see **Package Billing**. Check whether you have purchased a package that covers the pay-per-use billed items.

If no, it is normal that you are billed for resource usage based on pay-per-use. If yes, refer to **Checking If You Have Exceeded Your Package Limit**.

Table 11-2 Package types and use cases

Type	Description	Use Case	Reset Rule
Scanned data volume	You are billed based on the scanned data volume in each job, in GB.	This type of packages applies only to the **default** queue.	The quota included in the scanned data volume package will reset based on the subscription period.
Queue CUH	Usage is billed by the hour, with any usage less than one hour being rounded up to one hour. You are billed by CUH when submitting jobs to your self-built queues or elastic resource pools.	This type of packages is suitable for scenarios where the queue usage can be estimated or scenarios where resource consumption is low, such as test projects.	The quota included in a queue CUH package will reset based on the subscription period.
Elastic resource pool CUH	You are billed based the number of CUHs when running jobs on the queue you add to an elastic resource pool.	This type of packages is suitable for scenarios where the queue usage can be estimated or scenarios where resource consumption is low, such as test projects.	The included quota will reset based on the subscription period.
Storage package	Storage uses are billed based on the amount of data stored in DLI, in GB.	This type of packages is ideal for situations where table data is stored on DLI. For example, if tables from latency-sensitive services are saved on DLI, a storage package can be used to reduce storage costs.	The included quota will reset every hour.

Checking If You Have Exceeded Your Package Limit

If you exceed the purchased package limit for the month, the excess will automatically be billed on a pay-per-use basis. See **How Do I View the Usage of a Package?**.

If your package limit has already been exceeded, pay-per-use charges are expected. If not, refer to **Checking If There Are Any Billed Items Not Covered by Your Package**.

Checking If There Are Any Billed Items Not Covered by Your Package

DLI billed items include billings for compute resources, stored data volume, and scanned data volume.

If the purchased package does not cover the billed items that are being used, pay-per-use charges are expected:

For example, if you apply for a queue in DLI to run jobs and store data in DLI tables, but only purchase a queue CUH package, then the DLI tables will be billed on a pay-per-use basis.

11.5 How Do I View the Usage of a Package?

After purchasing a package, you can check its usage and details at any time as you use it.

Procedure

1. Log in to the Huawei Cloud Billing Center.
2. Choose **Resource Packages**. On the **Resource Packages** tab, click the name or ID of the target resource package to view its details.

Figure 11-1 Viewing the resource usage of a package
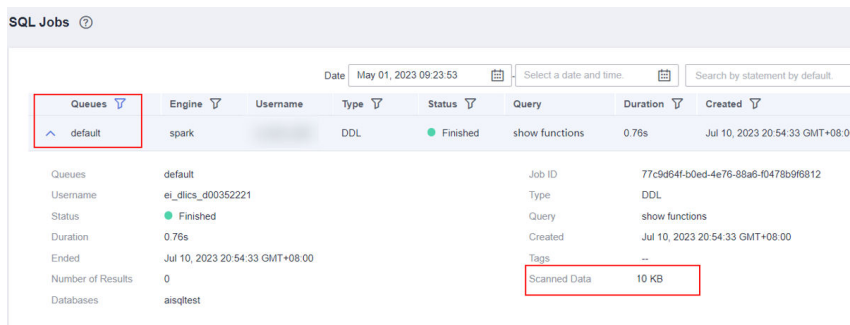

11.6 How Do I View a Job's Scanned Data Volume?

1. Log in to the DLI management console.
2. In the navigation pane on the left, choose **Job Management** > **SQL Jobs**.
3. Filter the job that runs on the **default** queue and view the job.
4. Click ⌄ to expand the job and view its scanned data volume.

Figure 11-2 Viewing a job's scanned data volume

11.7 Would a Pay-Per-Use Elastic Resource Pool Not Be Billed if No Job Is Submitted for Execution?

For a pay-per-use elastic resource pool, **Dedicated Resource Mode** is selected by default. The resource pool is billed by the calendar hour since it is created. Even though there are no jobs running in the pool, you are still being billed.

Elastic resource pools incur charges by the CUs purchased. The billing is calculated in seconds and settled hourly. A pay-per-use elastic resource pool can be deleted one hour after it is created.

11.8 Do I Need to Pay Extra Fees for Purchasing a Queue Billed Based on the Scanned Data Volume?

Billing based on the volume of scanned data is applicable to the default queue. When the default queue is used, you are billed by the volume of scanned data.

You can select pay-per-use (by CUH) or package billing for a queue that you purchase.

For details about the billing modes, see **Billing**.

11.9 How Is the Usage Beyond the Package Limit Billed?

If you purchase a package, the quota included in the package is preferentially deducted when you use resources. If you exceed the package limit, you will be billed on a pay-per-use basis.

A package must be used together with the reset period. For example, if the reset period is monthly and you purchase a package on January 5, the included free resources will reset on the fifth day of each month.

11.10 What Are the Actual CUs, CU Range, and Specifications of an Elastic Resource Pool?

- Actual CUs: number of CUs that can be allocated in the elastic resource pool.
- CU range: CU settings are used to control the maximum and minimum CU ranges for elastic resource pools to avoid unlimited resource scaling.
  - The total minimum CUs of all queues in an elastic resource pool must be no more than the minimum CUs of the pool.
  - The maximum CUs of any queue in an elastic resource pool must be no more than the maximum CUs of the pool.
  - An elastic resource pool should at least ensure that all queues in it can run with the minimum CUs and should try to ensure that all queues in it can run with the maximum CUs.
- Specifications: The minimum CUs selected during elastic resource pool purchase are elastic resource pool specifications.

A Change History

Release Date	What's New
2024-05-27	This issue is the fourth official release. Modified **How Do I Troubleshoot DLI Billing Issues?**
2024-04-18	This issue is the third official release. Taken offline the content related to billing for queues.
2023-12-07	This issue is the second official release. Added the constraints and limitations on the billing based on the scanned data volume to **Billing for Scanned Data**.
2023-12-05	This issue is the first official release.