

Volume Backup Service User Guide

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1 Service Overview

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1.1 VBS

Volume Backup Service (VBS) provides snapshot-based data protection for Elastic Volume Service (EVS) disks.

VBS secures your data, even if an EVS disk is faulty or encounters a logical error (for example, mis-deletion, hacker attacks, and virus infection). It allows you to effortlessly back up your data, and these data backups can be used to restore data quickly.

VBS supports both full and incremental backup modes. By default, the system performs a full backup initially, and then performs incremental backups. You can use a data backup generated in either backup mode to restore the source EVS disk to the state the EVS disk was in when the backup was created.

VBS allows one-click backup and restoration for the EVS disks on servers all through its easy-to-use platform. These servers are Elastic Cloud Servers (ECSs).

1.2 VBS Functions

You can use VBS to back up and restore EVS disks. VBS provides the following functions:

- EVS disk-specific backup
- Policy-driven data backup

- Backup data management
- EVS disk restoration using data backups
- EVS disk creation using data backups

 **NOTE**

VBS provides services in multiple regions and the function rollout time in each region may be different.

1.3 VBS Billing Standards

For details about the charging, see the description about VBS in .

Pay per Use

By default, you are charged based on the service duration, which is calculated at the top of every hour, and does not include a minimum fee.

After registering a cloud service account, top up your account and then you can use VBS.

Yearly/Monthly Subscription

VBS can also be billed in yearly/monthly subscription mode. You can purchase a yearly or monthly package based on your resource usage and duration plan.

How Do I Renew the Service?

You can view your account information. You need to top up your account to pay arrears if any.

If the pay-per-use mode is used, top up your account as soon as possible after arrears. If you do not top up your account in time, you will not be able to use VBS and your VBS resources will be cleared.

For the renewal operation, see .

1.4 Related Services

Table 1-1 Related services

Interactive Function	Related Service	Reference
The VBS service provides the data backup function for EVS disks. Data backups can be used to create EVS disks.	Elastic Volume Service (EVS)	2.2 Creating a VBS Backup 3.3 Data Restoration Using a VBS Backup

Interactive Function	Related Service	Reference
Both CSBS and VBS are backup services and provide backup protection for tenant data. The backup generated by CSBS is also displayed on the VBS page. Table 1-2 describes the differences between CSBS and VBS.	Cloud Server Backup Service (CSBS)	3.1 VBS Backup Management
CTS records operations of VBS resources, facilitating query, audit, and backtracking.	Cloud Trace Service (CTS)	3.4 Viewing VBS Traces

Table 1-2 CSBS and VBS

Item	CSBS	VBS
Backup and restoration objects	All EVS disks (including system and data disks) on a single ECS	One or more specified EVS disks (system or data disks)
Recommended scenario	An entire ECS needs to be protected.	Only data disks need to be backed up, because the system disk does not contain personal data.
Advantages	All EVS disks on an ECS have consistent data. They are backed up at the same time, eliminating the problem of data inconsistency caused by backups generated at different points in time.	Data is secure while the service is cost-competitive.

1.5 Basic Concepts

Backup Policies

A backup policy, including the backup period and retention rules, can automate data backup of EVS disks. Backup policies are user specific.

1.6 Region and AZ

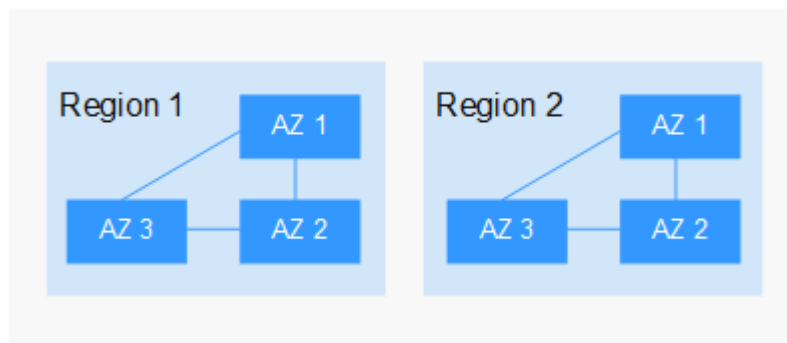
Concept

A region and availability zone (AZ) identify the location of a data center. You can create resources in a specific region and AZ.

- A region is a physical data center, which is completely isolated to improve fault tolerance and stability. The region that is selected during resource creation cannot be changed after the resource is created.
- An AZ is a physical location where resources use independent power supplies and networks. A region contains one or more AZs that are physically isolated but interconnected through internal networks. Because AZs are isolated from each other, any fault that occurs in one AZ will not affect others.

Figure 1-1 shows the relationship between regions and AZs.

Figure 1-1 Regions and AZs



Selecting a Region

Select a region closest to your target users for lower network latency and quick access.

Selecting an AZ

When deploying resources, consider your applications' requirements on disaster recovery (DR) and network latency.

- For high DR capability, deploy resources in different AZs within the same region.
- For lower network latency, deploy resources in the same AZ.

Regions and Endpoints

Before you use an API to call resources, specify its region and endpoint. For more details, see [Regions and Endpoints](#).

2 Getting Started

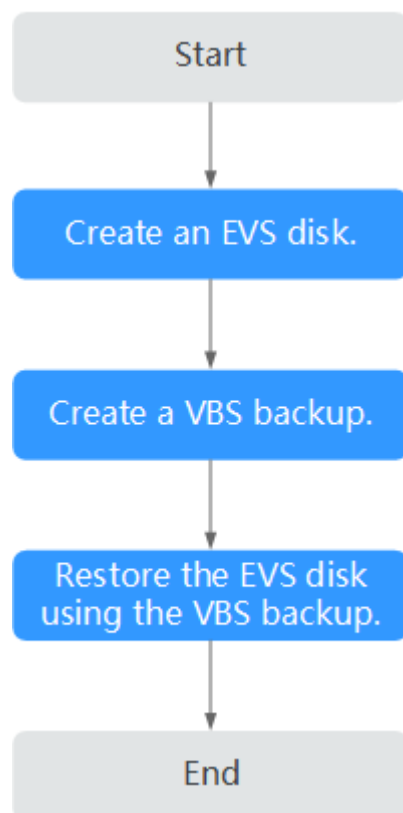
[2.1 Operation Procedure](#)

[2.2 Creating a VBS Backup](#)

2.1 Operation Procedure

Figure 2-1 shows the process for VBS related operations.

Figure 2-1 Operation procedure flowchart



 **NOTE**

Creating VBS backups includes the creation of manual backup tasks and automatic backup tasks.

To restore an EVS disk using its backup data, you can restore the backup data to the original disk or use the backup data to create a new disk.

2.2 Creating a VBS Backup

You can create backups for your EVS disks to protect the disk data through the VBS console or the EVS console.

Precautions


- An EVS disk can be backed up only when its status is **Available** or **In-use**. If you have performed operations such as expanding, attaching, detaching, or deleting an EVS disk, refresh the page first to ensure that the operation is complete and then determine whether to back up the disk.
- You are advised not to back up an EVS disk larger than 4 TB.

Create a VBS Backup (Method 1)

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the VBS page, click **Create Backup**.

Step 4 From the EVS disk list on the left, click to select the EVS disks you want to back up. Then they appear in the **Selected Disks** list on the right. You can click  in the **Operation** column to delete EVS disks that do not need to be backed up.

Step 5 Confirm that the EVS disks selected for backup are correct. Then in the **Configure Backup** area below, set **Auto Backup** or **Immediate Backup** or both.

 **NOTE**

Auto Backup: The selected EVS disks will be associated with the backup policy. If the policy is enabled, the EVS disks will be automatically backed up according to the backup policy. If the selected EVS disks have been associated with another backup policy, they will be disassociated from that backup policy first and then associated with the new backup policy.

Immediate Backup: backs up the selected EVS disks at once.

- Select **Auto Backup**: In the **Backup Policy** drop-down list, select an existing one. You can also click **Create Policy** to create a new one. For details, see [3.2 Data Backup Using a Backup Policy](#).
- Select **Immediate Backup**: Enter the backup name and description. [Table 2-1](#) describes the parameters.

Table 2-1 Parameter description

Parameter	Description	Example Value
Name	The name can only contain letters, digits, underscores (_), and hyphens (-). It cannot contain special characters or start with auto . If you select only one EVS disk to back up, the backup name ranges from 1 to 64 characters. If you select more than one EVS disk to back up, the backup name ranges from 1 to 59 characters.	disk01_backup
Description	The description consists of 0 to 64 characters and cannot contain a greater-than sign (>) or less-than sign (<).	for_test

Step 6 Click **Next**.

Step 7 Confirm the VBS backup information and click **Submit**.

Step 8 Switch back to the VBS backup list.

You can refresh the page after 10 seconds to view the backup creation status. When the **Status** of the backup changes to **Available**, the VBS backup has been successfully created.


----End

Create a VBS Backup (Method 2)

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 Locate the row that contains the target EVS disk. Click **More** in the **Operation** column and select **Back Up**.

Step 4 From the EVS disk list on the left, click to select the EVS disks you want to back up. Then they appear in the **Selected Disks** list on the right. You can click  in the **Operation** column to delete EVS disks that do not need to be backed up.

Step 5 Confirm that the EVS disks selected for backup are correct. Then in the **Configure Backup** area below, set **Auto Backup** or **Immediate Backup** or both.

 **NOTE**

Auto Backup: The selected EVS disks will be associated with the backup policy and will be automatically backed up according to the backup policy. If the selected EVS disks have been associated with another backup policy, they will be disassociated from that backup policy first and then associated with the new backup policy.

Immediate Backup: backs up the selected EVS disks at once.

- Select **Auto Backup:** In the **Backup Policy** drop-down list, select an existing one. You can also click **Create Policy** to create a new one. For details, see [3.2 Data Backup Using a Backup Policy](#).
- Select **Immediate Backup:** Enter the backup name and description. [Table 2-1](#) describes the parameters.

Step 6 Click **Next**.

Step 7 Confirm the VBS backup information and click **Submit**.

Step 8 Switch back to the VBS backup list.

You can refresh the page after 10 seconds to view the backup creation status. When the **Status** of the backup changes to **Available**, the VBS backup has been successfully created.

----**End**

3 Operation Guide

- [3.1 VBS Backup Management](#)
- [3.2 Data Backup Using a Backup Policy](#)
- [3.3 Data Restoration Using a VBS Backup](#)
- [3.4 Viewing VBS Traces](#)
- [3.5 Quotas](#)
- [3.6 VBS Operation Instances](#)

3.1 VBS Backup Management

CSBS backups of ECSs are also displayed on the VBS backup page and can be distinguished from VBS backups by **Source** in the backup details.

Searching for a VBS Backup

Step 1 Log in to the management console.

Step 2 Click **Service List**. Under **Storage**, click **Volume Backup Service**.

Step 3 Search for backups.


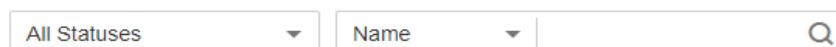

- In the upper right corner of the page, select a state to search for backups.
- You can search for backups by backup name, backup ID, or disk ID, as shown in **Figure 3-1**. Click  or press **Enter** to search.

Figure 3-1 Searching for backups



The image shows a search interface with two main components: a dropdown menu on the left and a search input field on the right. The dropdown menu is currently set to 'All Statuses' and has a downward arrow. The search input field contains the text 'Name' and has a magnifying glass icon on the right side.

Step 4 Click  in the row of a VBS backup to view its details.

 NOTE

The **Created** column in the backup list indicates the time when the backup was created.

----End

View the Status of a Backup Job

After creating backup jobs, you can view backup job status in **Job Status** above the backup list.

The backup job status can be:

- **Processing**: a backup job is being executed
- **Failed**: a backup job failed to be executed

 NOTE

- You can click the number next to **Job Status** to view details about the backup job creation. The **Created** column indicates the time when the backup job was started.
- If no backup jobs in either of the two states are displayed, **Job Status** is left blank.

Delete a VBS Backup

To delete unwanted VBS backups, ensure the backups' statuses are **Available** or **Error** and **Source** is **VBS**.

Backups whose **Source** is **CSBS** can be deleted only on the CSBS management console.

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 Locate the row that contains the target VBS backup in the backup list.

Step 4 Click **Delete** in the **Operation** column.

Step 5 In the dialog box displayed, confirm the information and click **OK**.

Step 6 Optional: To delete multiple backups in a batch, click to select them, and then click the **Delete** button above the list. In the dialog box that is displayed, confirm the deletion information and click **OK**.

----End

3.2 Data Backup Using a Backup Policy

3.2.1 Creating a Backup Policy

To implement periodic automatic backup on EVS disks, you need to create a backup policy first. Then the system will periodically perform backups according to the execution time specified in the backup policy. You can choose to use the default backup policy provided by the system or create one as needed.

The system automatically creates EVS disk data backups and deletes expired data backups only when a backup policy is created and enabled.

You can create a backup policy to associate all those EVS disks whose data needs to be periodically backed up.

 **NOTE**

- The system provides a default backup policy for associating EVS disks. This default backup policy can be enabled, disabled, edited, and executed. For details about how to execute the default backup policy, see [Executing a backup policy](#). For details about how to edit the default backup policy, see [Editing a backup policy](#).
- In addition to the default backup policy, you can create another 31 backup policies. Once there are 32 backup policies in total, the **Create Policy** button becomes unavailable and no more policies can be created.
- Deleting expired automatic data backups does not delete manual data backups.

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, click **Policies** to go to the **Policies** tab page.

The **Policies** tab page displays existing backup policies. Expand the desired backup policy to view EVS disks associated with it.

Step 4 Click **Create Backup Policy** to expand the setting items. [Table 3-1](#) describes the backup policy parameters.

Table 3-1 Parameter description

Parameter	Description	Remarks
Name	The name is a string of 1 to 64 characters consisting of letters, digits, underscores (_), and hyphens (-), and cannot start with default .	Example value: autobk_78ba
Execution Time	Detailed time for backing up data of the EVS disks associated with the backup policy. Backup can be scheduled on integral hours.	Example value: 02:00

Parameter	Description	Remarks
Backup Period	Daily: specifies the interval (every 1 to 14 days) for executing the backup job (on the hour).	<p>Example value: Every 3 days</p> <p>If you select Daily, the first backup time is irrelevant to the time when the backup policy is created. A backup policy takes effect from the month when it is created. Policies with the same Backup Period execute backup jobs at the same times. For example, if a backup policy with "Every 3 days" is created on the second date of a month, the first backup will be created on the fourth date of the month. "Every 3 days" indicates that backups will be created on the first date, fourth date, seventh date, and so on.</p> <p>To ensure stable service running, back up EVS disks during off-peak hours.</p>

Parameter	Description	Remarks
Retention Rule	<p>Backup Quantity: specifies the maximum allowed number of backups for a single EVS disk.</p> <p>NOTE Set this parameter based on the applied quota. For example, if 10 EVS disks are associated with the backup policy and this parameter is set to 10, then at least a quota of 100 backups is required. If the applied quota is smaller than 100, the backup job will fail due to the insufficient quota. To view the quota, read the related tip above the VBS backup list.</p>	<p>Example value: 6</p> <p>A more frequent backup of EVS disks creates more backups and delivers a higher level of data protection but occupies more storage space. Determine the backup frequency based on the data importance and service volume. Perform relatively frequent backup operations for important data.</p> <p>When the number of backups to be retained has exceeded the value of Backup Quantity, the system automatically deletes the earliest backups. After a backup is deleted, the other backups can still be used for restoration.</p>
Retain the first backup in this month	<p>If you select this option, the initial data backup in the current month will be retained.</p>	<p>The first backup in the current month will not be deleted. For example, if the current month is February, the first backup generated in February will not be deleted during February. The first backup generated in January, together with other backups generated in January, will be deleted in sequence.</p>
Enable	<p>You can turn on the switch (<input type="checkbox"/>) to enable the backup policy or turn off the switch (<input checked="" type="checkbox"/>) to disable the backup policy.</p>	<p>If you have disabled the backup policy or have turned off the switch (<input checked="" type="checkbox"/>), you can select the backup policy in the backup policy list and turn on the switch (<input type="checkbox"/>) to enable it.</p>

Step 5 Click **OK**.

----End

3.2.2 Associating EVS Disks with a Backup Policy or Disassociating Them from a Backup Policy


After creating a backup policy, you can associate EVS disks to the backup policy. Later, the system will back up the EVS disks automatically according to the execution times specified in the backup policy. If an EVS disk no longer needs automatic backup, you can disassociate it from the backup policy.

Procedure

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, click **Policies** to go to the **Policies** tab page.

Step 4 Select an existing backup policy and click . The list of associated EVS disks is displayed.

- Associating disks
 - a. Click **Associate**. Alternatively, click **Associate Disk** in the **Operation** column.

The **Associate Disk** dialog box is displayed listing the EVS disks.
 - b. Select the EVS disks that need to be associated with the backup policy (EVS disks in **Expansion failed**, **Restoration failed**, **Rollback failed**, **Error**, or **Deletion failed** state cannot be associated).

NOTE

You can select EVS disks that have been associated with other backup policies. However, the system will disassociate them from the relevant backup policies and then associate them with the new backup policy.

- c. Optional: In the search box above the list, select a state and specify whether to search for an EVS disk by EVS disk name, EVS disk ID, or ECS ID and enter the corresponding value to search.
- d. Confirm the selected EVS disks to add them to the **Selected Disks** list on the right.
- e. Optional: In the search box above the **Selected Disks** list, specify whether to search for an EVS disk by its name or ID and enter the corresponding value to search. If the EVS disk is displayed, it has been selected.
- f. Confirm that the correct EVS disks are selected and click **OK** to complete the association.

 NOTE

If you select a large number (greater than 40) of EVS disks, the association operation may take a long time and a dialog box is displayed asking you whether to continue the association operation. Click **OK** to continue.

- g. Ensure that the backup policy is enabled. When the point in time specified by the backup policy arrives, select the backup policy. Then on the **Backup Jobs** panel, ensure that a backup job is generated.
- h. On the VBS backup list, locate the needed backup according to **Name** (the **Backup Name** specified in the backup job). When the **Status** is **Available**, the backup job of the associated EVS disks is complete.
- Disassociating EVS disks
 - a. In the list of associated EVS disks, locate the EVS disk to be disassociated from the backup policy and click **Disassociate** in the **Operation** column. The **Disassociate Disk** dialog box is displayed.
 - b. Optional: In the list of associated EVS disks, select one or more EVS disks to be disassociated from the backup policy and click **Disassociate** above the list. The **Disassociate Disk** dialog box is displayed.
 - c. Confirm the EVS disk information and click **OK**. The **Associated Disks** panel does not display the EVS disks that are disassociated from this backup policy.

----End

3.2.3 Searching for Associated EVS Disks


To query an EVS disk from a backup policy with a large number of EVS disks associated, you can set filtering criteria to search it.

Procedure


Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, click **Policies** to go to the **Policies** tab page.

Step 4 Click  in the row of the desired policy. The list of associated EVS disks is displayed in the **Associated Disks** panel.

Step 5 In the upper right corner of the list, select a state to search for EVS disks in the state.

Step 6 (Optional) Specify whether to search for an EVS disk by its name or ID and enter the corresponding value, and click  to search.

----End

3.2.4 Viewing Backup Jobs

On the **Backup Jobs** panel of the backup policy, you can view all backup jobs of the selected backup policy. If a backup job is in the **Failed** or **Timed out** state, you can click **Back Up Again** in the **Operation** column to manually back up the EVS disk again.

In the upper right corner of the list, you can select a state from the **All statuses** drop-down list to search for backup jobs.

The **Backup Jobs** list can show policy-driven backup jobs that have been executed in the past 30 days.

For policy-driven backup jobs executed more than 30 days ago, you can check whether they are successful on the VBS backup list:

1. If a backup was generated at the specified point in time more than 30 days ago and it is in the **Available** state, the backup job is successful.
2. If the expected backup is not displayed, the existing number of backups has not reached the maximum allowed value and you have not deleted it, or the backup is displayed but it is in the **Error** state, the backup job has failed.

NOTE

For **Failed** backup jobs that were completed in the last date, the management console can report alarms to tenants through email and text message (if tenants have registered their email addresses and mobile phone numbers).

3.2.5 (Optional) Other Operations with Backup Policies

You can edit, enable, execute, and delete backup policies.

Step 1 Log in to the console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, click **Policies** to go to the **Policies** tab page.

- Editing a backup policy
 - a. In the **Operation** column of the backup policy that you want to modify, click **Edit**. The **Edit Backup Policy** dialog box is displayed.
 - b. Modify the backup policy parameters. [Table 3-1](#) describes the parameters.
 - c. Click **OK**.

- Enabling a backup policy

In the **Operation** column of the backup policy you want to enable, click **Edit**.

On the displayed page, click  to turn on this option.

Alternatively, you can choose **More > Enable** in the **Operation** column for the backup policy.

After the backup policy is successfully enabled, and the system will automatically execute periodic backup jobs based on policy settings.

- Executing a backup policy

 **NOTE**

Before performing this operation, check whether EVS disks are associated with the backup policy. If not, associate EVS disks with the backup policy first.

- a. When the backup policy is associated with EVS disks, select the backup policy, and choose **More > Execute** in the **Operation** column.
A confirmation dialog box is displayed.
- b. Confirm the backup policy parameter information and click **OK**.
On the **Backup Jobs** panel, view all the backup jobs executed based on this backup policy.

- Deleting a backup policy

 **NOTE**

After a backup policy is deleted, the backup data that has already been generated by the backup policy is still available.

- a. Select the backup policy that you want to delete, and choose **More > Delete** in the **Operation** column. The **Delete Backup Policy** dialog box is displayed.
- b. Confirm the deletion information and click **OK**.

----End

3.3 Data Restoration Using a VBS Backup

You can use VBS backups to restore EVS disks to a given point in time or create EVS disks. Data on the EVS disks is equivalent to the backup data.

Restore an EVS Disk Using a VBS Backup

You can use a VBS backup to restore an EVS disk to the time when the backup was created.

Before restoring the disk data, stop the server to which the EVS disk is attached and detach the EVS disk from the server. After the EVS disk data is restored, attach the EVS disk to the server and start the server.

NOTICE

- If a server disk has been backed up and the operating system was changed after the backup, the backup may not be able to restore the disk because of the disk ID change. In this case, you can use the backup to create a new disk and mount the new disk as a data disk to the server.
-

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, if the **Status** of the VBS backup is **Available**, click **Restore Disk** in the **Operation** column.

Step 4 Click **OK** as prompted. Then, check whether the data is restored successfully.

You can refresh the page after 10 seconds to view the data restoration status. When the **Status** of the backup changes back to **Available**, the restoration has been successfully completed.

----End

Creating an EVS Disk Using a VBS Backup

You can use a VBS backup to create an EVS disk. After the EVS disk is created, the data on the new disk is the same as that in the VBS backup.

Step 1 Log in to the management console.

Step 2 Click . Under **Storage**, click **Volume Backup Service**.

Step 3 On the **Volume Backup Service** page, confirm that the **Status** of the VBS backup is **Available** and click **Create Disk** in the **Operation** column.

Step 4 Set the disk parameters.

NOTE

For details about these parameters, see the parameter description table in section in the *Elastic Volume Service User Guide*.

Note the following items when setting disk parameters:

- You can choose the same AZ to which the owning EVS disk of the backup data belongs, or you can choose a different AZ.
- The capacity of the newly created EVS disk cannot be smaller than that of the source EVS disk of the backup data.

If it is larger than the backup capacity, initialize the incremental disk space. For details, see section *Initializing an EVS Disk (Linux)* in the *Elastic Volume Service User Guide*.

- You can create a disk of any type regardless of the backup's disk type.
- Batch creation is not supported when using backup data to create EVS disks. You can create only one EVS disk at a time.

Step 5 Click **Buy Now**.

NOTE

You can choose **Pay-per-use** or **Yearly/Monthly** as your **Billing Mode**. Fees you should pay vary depending on the billing mode you choose. The following steps use billing mode **Yearly/Monthly** as an example.

Step 6 Confirm the VBS backup information and click **Submit**.

Step 7 Pay the fees as prompted and click **OK**.

Step 8 Switch back to the **Elastic Volume Service** page. Check whether the EVS disk is successfully created.

It takes more than 10 minutes to create an EVS disk using a VBS backup.

During EVS disk creation, the four intermediate states **Creating**, **Available**, **Restoring**, and **Available** will be displayed in sequence. If the state changes from

Creating to Available, the EVS disk is successfully created. If the state changes from **Restoring** to **Available**, backup data is successfully restored to the created EVS disk.

----End

3.4 Viewing VBS Traces

Scenarios

CTS records operations of VBS resources, facilitating query, audit, and backtracking.

Prerequisites

You have enabled CTS and the tracker is running properly. For details about how to enable CTS, see section "Enabling CTS" in the *Cloud Trace Service User Guide*.

Key Operations Recorded by CTS

Table 3-2 VBS operations that can be recorded by CTS

Operation	Resource Type	Trace
Creating a backup	vbs	bksCreateBackup
Deleting a backup	vbs	bksDeleteBackup
Restoring a backup	vbs	bksRestoreBackup
Associating a backup policy	autobackup	addPolicyResource
Disassociating a backup policy	autobackup	deletePolicyResource
Executing a backup policy	autobackup	actionPolicy
Creating a backup policy	autobackup	createPolicy
Deleting a backup policy	autobackup	deletePolicy
Modifying a backup policy	autobackup	modifyPolicy
Creating a backup scheduled by a backup policy	autobackup	scheduleCreateBackup

Operation	Resource Type	Trace
Automatically deleting a backup scheduled by a backup policy	autobackup	scheduleDeleteBackup
Batch adding or modifying tags of a backup policy	autobackup	batchAddPolicyTag
Batch deleting tags of a backup policy	autobackup	batchDeletePolicyTag

Viewing CTS Traces


- Step 1** Log in to the management console.
- Step 2** Click **Service List**. Under **Management & Deployment**, click **Cloud Trace Service**.
- Step 3** In the navigation pane on the left, choose **Trace List**.
- Step 4** On the trace list page, click **Filter**. In the displayed box, specify **Trace Source**, **Resource Type**, and **Search By**, and click **Query** to query the specified traces.

For details about other operations, see section "Querying Real-Time Traces" in the *Cloud Trace Service User Guide*.

----End

Disabling or Enabling a Tracker

This section describes how to disable an existing tracker on the CTS console. After the tracker is disabled, the system will stop recording operations, but you can still view existing operation records.

- Step 1** Log in to the management console.
- Step 2** In the upper left corner of the page, click  and select the desired region and project.
- Step 3** Click **Service List**. Under **Management & Deployment**, click **Cloud Trace Service**.
- Step 4** Click **Tracker** in the left pane.
- Step 5** Click **Disable** on the right of the tracker information.
- Step 6** Click **OK**.
- Step 7** After the tracker is disabled, its status changes from **Disable** to **Enable**. To enable the tracker again, click **Enable** and then click **OK**. The system will start recording operations again.

----End


3.5 Quotas

What Is Quota?

Quotas can limit the number or amount of resources available to users, such as the maximum number of ECSs or EVS disks that can be created.

If the existing resource quota cannot meet your service requirements, you can apply for a higher quota.

How Do I View My Quotas?

1. Log in to the management console.
2. In the upper right corner of the page, click  .
The **Service Quota** page is displayed.
3. View the used and total quota of each type of resources on the displayed page.
If a quota cannot meet service requirements, apply for a higher quota.

How Do I Apply for a Higher Quota?

The system does not support online quota adjustment.

If you need to adjust a quota, contact the operations administrator.

3.6 VBS Operation Instances

This section explains how to use VBS to ensure data security in different scenarios, its limitations, and its typical operations.

Scenarios

VBS applies to the following scenarios:

- Hardware faults
Production storage devices on the cloud platform have faults.
- Software faults
System faults cause data losses (for example, the system malfunctions and the system incorrectly delivers resource deletion commands) and application system faults on a user's guest OSs.
- User misoperations
User misoperations cause data loss and system bootup failures.

Requirements and Limitations

- EVS disks cannot be restored in a batch.
- If you use data backups to create an EVS disk, the new EVS disk cannot be used as a system disk.

EVS Disk Data Backup

VBS works only on EVS disks. For details, see [2.2 Creating a VBS Backup](#).

EVS Disk Data Restoration

You can use a VBS backup to restore an EVS disk to the time when the backup was created.

Before restoring the disk data, stop the server to which the EVS disk is attached and detach the EVS disk from the server. After the restoration is complete, re-attach the EVS disk and start the server. For details, see [3.3 Data Restoration Using a VBS Backup](#).

Creating an EVS Disk Using a VBS Backup

After an EVS disk is created using a data backup, the initial data of the new EVS disk is the same as the initial backup data. For details, see [Creating an EVS Disk Using a VBS Backup](#).

4 FAQs

- [4.1 Does VBS Support Simultaneous Backup of All EVS Disks on a Server?](#)
- [4.2 Do I Need to Stop the Server Before Backing Up EVS Disks on a Server Using VBS?](#)
- [4.3 Does VBS Support Cross-Region Backup and Restoration?](#)
- [4.4 Do I Need to Stop the Server Before Restoring EVS Disk Data with a VBS Backup?](#)
- [4.5 What Is the Charging Mode of EVS Disks Created with a VBS Backup?](#)
- [4.6 Why Are CSBS Backups Displayed on the VBS Backup Page?](#)
- [4.7 Can a VBS Backup of a System Disk Be Used to Restore the System Disk of an ECS?](#)
- [4.8 Can I Use a VBS Backup to Restore an EVS Disk Whose Capacity Has Been Expanded?](#)
- [4.9 Is There a Quota Limit on the Number of Backups?](#)
- [4.10 What Can I Do In Case of Exceptions in VBS?](#)
- [4.11 Can a Disk Only Be Associated With One Policy?](#)
- [4.12 What Are Full Backup and Incremental Backup?](#)
- [4.13 What Are the Differences Between Backups and Snapshots?](#)
- [4.14 Why Is the Remaining Space Not Changed After a Backup Is Deleted?](#)

4.1 Does VBS Support Simultaneous Backup of All EVS Disks on a Server?

Yes. Users can create a backup policy and associate the backup policy with multiple EVS disks. Then the backup policy can be executed to back up the multiple EVS disks at the same time.

4.2 Do I Need to Stop the Server Before Backing Up EVS Disks on a Server Using VBS?

VBS can back up EVS disks that are in use. When a server is running, data is written into the EVS disks on the server, and some newly generated data is cached in the server memory. During a backup task, data in the memory will not be automatically written into disks, so the disk data and their backups may be inconsistent.

To ensure data integrity, you are advised to back up disks during off-peak hours when no data is written into the disks, or stop all data write operations on the disks before the backup. If you have high requirements on backup data integrity, you can stop the server (cached data is written to disks) and then back up the disks.

4.3 Does VBS Support Cross-Region Backup and Restoration?

No. Currently VBS supports only backup and restoration within a region but not across regions.

4.4 Do I Need to Stop the Server Before Restoring EVS Disk Data with a VBS Backup?

Yes. Before restoring the EVS disk data using a VBS backup, you must stop the server to which the EVS disk is attached, and detach the EVS disk from the server. After the EVS disk data is restored, attach the EVS disk to the server and start the server.

4.5 What Is the Charging Mode of EVS Disks Created with a VBS Backup?

EVS disks created using a VBS backup are billed in pay per use or yearly/monthly mode.

4.6 Why Are CSBS Backups Displayed on the VBS Backup Page?

CSBS backups of ECSs are also displayed on the VBS backup page and can be distinguished from VBS backups by **Source** in the backup details.

To use CSBS to back up a server is to back up every disk of the server. These disk backups are displayed on the VBS backup list and can be directly used to restore disks.

Backups whose **Source** is **CSBS** can be deleted only on the CSBS page.

4.7 Can a VBS Backup of a System Disk Be Used to Restore the System Disk of an ECS?

Yes. You can restore the system disk using a VBS backup. Before restoring the system disk, you must detach it from the ECS.

You can also use a VBS backup of the system disk to create new EVS disks. However, newly created EVS disks cannot be used as system disks.

4.8 Can I Use a VBS Backup to Restore an EVS Disk Whose Capacity Has Been Expanded?

Yes. After restoration, the capacity of the expanded EVS disk goes back to the original capacity before expansion. If you want to use the capacity added to the disk, you need to attach the restored disk to an ECS, log in to the ECS, and then manually modify the file system configuration. For detailed operations, see sections about post-expansion operations on EVS disks in the *Elastic Volume Service User Guide*.

4.9 Is There a Quota Limit on the Number of Backups?

Yes, there is a quota limit.


However you can follow this procedure to request to increase this limit.

What Is Quota?

Quotas can limit the number or amount of resources available to users, such as the maximum number of ECSs or EVS disks that can be created.

If the existing resource quota cannot meet your service requirements, you can apply for a higher quota.

How Do I View My Quotas?

1. Log in to the management console.
2. In the upper right corner of the page, click  .
The **Service Quota** page is displayed.
3. View the used and total quota of each type of resources on the displayed page.
If a quota cannot meet service requirements, apply for a higher quota.

How Do I Apply for a Higher Quota?

The system does not support online quota adjustment.

If you need to adjust a quota, contact the operations administrator.

4.10 What Can I Do In Case of Exceptions in VBS?

Exceptions in VBS mainly include abnormal states of VBS backups and backup jobs. Take the following measures to handle these exceptions.

Table 4-1 Measures in case of abnormal VBS backup states

State	Handling Suggestion
Error	Delete the VBS backups in the Error state and re-create them.
Deletion failed	Contact the administrator and do not perform any operation on the backup data before related personnel respond. If you want a quick response, contact the administrator immediately upon discovering the problem.

Table 4-2 Measures in case of abnormal VBS backup job states

State	Handling Suggestion
Timed out	<ol style="list-style-type: none"> In the Backup Name column of the backup job list, check whether the backup name is displayed. <ul style="list-style-type: none"> If yes, locate the backup on the VBS backup list according to the backup name. Check whether the backup is in the Available state. If it is in the Available state, the backup job is successful and no further actions are required. If no, click Back Up Again in the Operation column to perform a manual backup operation. If no, click Back Up Again in the Operation column to perform a manual backup operation. If the problem persists, contact the administrator and do not perform any operation on the backup data before related personnel respond. If you want a quick response, contact the administrator immediately upon discovering the problem.

State	Handling Suggestion
Failed	<ol style="list-style-type: none"> <li data-bbox="555 297 1417 495">1. Above the VBS backup list, you can see messages indicating the backup usage. If the backup quantity quota is not sufficient to support your new backups, submit a service ticket to apply for a higher quota. Then click Back Up Again in the Operation column of the Backup Jobs list to perform a manual backup operation. <li data-bbox="555 510 1430 674">2. In the EVS list, check whether the EVS disk to be backed up is in the Available or In-use state. If no, after the EVS disk restores to the Available or In-use state, click Back Up Again in the Operation column of the Backup Jobs list to perform a manual backup operation. <li data-bbox="555 689 1422 853">3. In the VBS backup list, check whether the EVS disk is in the Disk Name column and the backup state is Creating. If yes, after the backup restores to the Available state, click Back Up Again in the Operation column of the Backup Jobs list to perform a manual backup operation. <li data-bbox="555 869 1409 1097">4. For other circumstances, click Back Up Again in the Operation column of the Backup Jobs list to perform a manual backup operation. If the backup job state is still abnormal, contact the administrator, and do not perform any operation on the backup data before related personnel respond. If you want a quick response, contact the administrator immediately upon discovering the problem.

4.11 Can a Disk Only Be Associated With One Policy?

Yes. If an EVS disk you select to be associated with the target policy has been associated with another one, the system will disassociate it from the original policy and then associate it with the target one.

4.12 What Are Full Backup and Incremental Backup?

After an initial full backup, an ECS continues to be backed up incrementally by default.

- The initial full backup covers data on every disk of the ECS. If a 100 GB disk contains 40 GB data, the initial backup consumes 40 GB backup space.
- Subsequent incremental backup backs up data changed since the last backup. If 5 GB data is changed since the last backup, only the 5 GB changed data will be backed up.

VBS allows you to use any backup (no matter it is a full or incremental one) to restore the data of the entire EVS disk. By virtue of this, manual or automatic deletion of a backup will not affect the restoration function.

Suppose EVS disk **X** has backups **A**, **B**, and **C** (in time sequence) and every backup involves data changes. If backup **B** is deleted, you can still use backup **A** or **C** to restore data.

4.13 What Are the Differences Between Backups and Snapshots?

Both backups and snapshots provide data redundancy for EVS disks to improve data reliability. [Table 4-3](#) lists the differences between them.

Table 4-3 Differences between backups and snapshots

Technology	Saved In	Synchronizati on	DR Range	Service Recovery
Backup	Backup data is stored in OBS, instead of EVS disks. This realizes data restoration upon EVS disk data loss or corruption.	A backup is the data copy of an EVS disk at a given point in time. VBS provides automatic backup by configuring backup policies. Deleting an EVS disk will not clear its backups.	A snapshot and its source EVS disk reside in the same AZ.	Data can be recovered and services can be restored by restoring the backup data to original disks or creating new disks from backups, ensuring superb data reliability.
Snapshot	Snapshot data is stored with EVS disk data. NOTE Creation of and rollback to snapshots are faster than creation of and restoration from backups, because the latter requires data migration that consumes extra time.	A snapshot is the state of an EVS disk at a specific point in time. When you delete an EVS disk, the snapshots of the EVS disk are also deleted.	A snapshot and its source EVS disk reside in the same AZ.	You can use a snapshot to roll back its original EVS disk or create an EVS disk for data restoration and service recovery.

4.14 Why Is the Remaining Space Not Changed After a Backup Is Deleted?

This situation appears because the deletion operations are asynchronous. After a backup is deleted, no fee will be generated. The underlying backup data will be

deleted gradually based on the backup size within three days. After the underlying backup data is deleted, the remaining space will change accordingly.

5 Troubleshooting Cases

Symptom

Failed to attach EVS disks despite following the procedure: Create EVS disks using the same VBS backup (XFS file system backup) and attach them to the same server (to which multiple EVS disks with XFS file system backup have been attached). Running the **mount** command to attach EVS disks fails.

Possible Causes

The superblock of an EVS disk (with XFS file systems) stores a universally unique identifier (UUID) about the file system. If a server has multiple disks (with XFS file systems), multiple UUIDs will exist on the server. Multiple disks may have the same UUID, which can cause the file system mounting to fail.

Fault Diagnosis

When attaching an EVS disk, use parameters without UUID control or reallocate a new UUID to ensure that each UUID is unique.

Procedure

Step 1 Log in to the server to which EVS disks failed to be attached.

Step 2 Resolve the problem in either of the following ways:

- Use a parameter without UUID when attaching an EVS disk: Run **mount -o nouuid /dev/Device name /Mount path**, for example:
mount -o nouuid /dev/sda6 /mnt/aa
- Reallocate a new UUID: Run **xfstool -U generate /dev/Device name**.

NOTE

Because setting a parameter without UUID requires you to execute the command every time, you are advised to reallocate a new UUID.

----End

A Change History

Released On	Description
2018-08-15	This issue is the first official release.