

# Cloud Server Backup Service

## FAQs

**Issue** 05  
**Date** 2019-03-22



**HUAWEI**

**Copyright © Huawei Technologies Co., Ltd. 2021. All rights reserved.**

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

## **Trademarks and Permissions**



HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

## **Notice**

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

---

# Contents

---

<b>1 About Concepts.....</b>	<b>1</b>
1.1 What Is CSBS?.....	1
1.2 What Are Full Backup and Incremental Backup?.....	1
1.3 What Is Consistent Backup?.....	2
1.4 What Are the Differences Between CSBS and VBS?.....	2
1.5 What Is a Backup Policy?.....	2
1.6 What Are the Differences Between Backup and Disaster Recovery?.....	3
1.7 What Are the Differences Between Backup and Snapshot?.....	4
1.8 Why Is the Disk Space Usage Displayed in the File System Different from the Backup Size?.....	4
<b>2 About Pricing.....</b>	<b>6</b>
2.1 How Is CSBS Billed?.....	6
2.2 How Do Yearly/Monthly Resource Packages Function When I Have Bought More Than One?.....	7
2.3 Are CSBS and VBS Resource Packages Interoperable Between CSBS and VBS?.....	7
2.4 Why Am I Charged in Pay-per-use Mode Although I Have Purchased Resource Package?.....	7
2.5 What Exactly Are the Function Package and the Storage Package?.....	7
2.6 Will the CSBS Backups Displayed on the VBS Page Be Charged Repeatedly?.....	8
2.7 How Do I Query CSBS Pay-Per-Use Billing Details?.....	8
2.8 Why Is the Fee Deducted After a Backup Is Deleted?.....	11
2.9 How Do I Disable CSBS?.....	11
2.10 How Do I Stop CSBS from Charging?.....	11
<b>3 About Backup.....</b>	<b>12</b>
3.1 Does CSBS Support Backing Up All EVS Disks on an ECS?.....	12
3.2 Do I Need to Stop the ECS Before Backing It Up?.....	12
3.3 Can an ECS with Application Systems Be Backed Up?.....	12
3.4 What Are the Minimum Backup Frequency and Maximum Number of Retained Backups Supported by CSBS?.....	13
3.5 How Can I Distinguish Automatic Backups From Manual Backups?.....	13
3.6 How Can I Configure a Backup Policy?.....	14
3.7 Can I Choose to Back Up Only Some Partitions of a Disk?.....	14
3.8 Does CSBS Support Cross-Region Backup for ECSs?.....	14
3.9 Which Types of Databases Can Be Backed Up Using Database Server Backup?.....	14
3.10 How Do I Select Among Database Server Backup, Cloud Server Backup, and Disk Backup?.....	15
3.11 How Do I Migrate ECS Data Across Regions Using CSBS?.....	16

---

3.12 Which Time Zone Is the Automatic Backup Time Based On?.....	18
3.13 What Can I Do If a Backup Cannot Be Deleted?.....	18
<b>4 About Restoration.....</b>	<b>20</b>
4.1 Do I Need to Stop the ECS Before Restoring It?.....	20
4.2 Can an ECS Be Restored Using Its Backups After It Has Been Changed?.....	20
4.3 What Can I Do If the Password Becomes to Be a Random One After I Use a Backup to Restore an ECS or Use an Image to Create an ECS?.....	20
<b>5 Others.....</b>	<b>21</b>
5.1 How Long Does CSBS Take to Back Up and Restore an ECS?.....	21
5.2 Why CSBS Backups Are Also Displayed on the VBS Console?.....	21
5.3 Is There a Quota Limit on the Number of Backups?.....	21
5.4 What Can I Do Against Exceptions in CSBS?.....	21
5.5 How Do I Handle Failed Jobs?.....	22

# 1 About Concepts

---

## 1.1 What Is CSBS?

CSBS backs up an entire ECS. It uses the consistent backup data of multiple EVS disks to restore the service data of an ECS. CSBS ensures data security and service continuity.

CSBS provides two consistent backup modes: application-consistent backup and crash-consistent backup. For details about the differences between application-consistent backup and crash-consistent backup, see [What Is Consistent Backup?](#).

## 1.2 What Are Full Backup and Incremental Backup?

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

- A full backup backs up the used capacity, that is, all data in the disk. For example, if a 100 GB disk is allocated with 40 GB data, the backup storage space occupies 40 GB, and the backup size is 40 GB.
- A subsequent incremental backup backs up data changed since the last backup. If 5 GB data changed since the last backup, only the 5 GB changed data will be backed up.

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

Suppose ECS **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.

 NOTE

In extreme cases, the size of a backup is the same as the disk size. The used capacity in a full backup and the changed capacity in an incremental backup are calculated based on the data block change in a disk, not by calculating the file change in the operating system. The size of a full backup cannot be evaluated based on the file capacity in the operating system, and the size of an incremental backup cannot be evaluated based on the file size change.

## 1.3 What Is Consistent Backup?

There are three types of backup consistency:

- Inconsistent backup: During a backup, files and disks of an ECS are not backed up at the exact same time.
- Crash-consistent backup: During a backup, files and disks of an ECS are backed up at the exact same point in time, while applications such as databases are not quiesced and memory data is not backed up. Therefore, application consistency is not ensured.
- Application-consistent backup: During a backup, files and disks on the same ECS are backed up at the exact same point in time, and databases are quiesced and memory data is refreshed to ensure application consistency.

CSBS supports both application-consistent backup and crash-consistent backup. The backup function prices of the two backup types are different.

## 1.4 What Are the Differences Between CSBS and VBS?

CSBS mainly creates consistency backups online for all EVS disks of the ECS. You are advised to use CSBS in a scenario where the whole ECS, including its configurations and specifications, as well as the consistency data of multiple EVS disks, is protected, or if you want to use backups to create images and provision ECSs, in order to quickly restore the service running environment.

In comparison, VBS generally creates online backups for a single EVS disk (system or data disk) of the ECS. If the system disk does not have user-defined data, you can perform the backup only for the data disk using VBS to safeguard your data and reduce the backup costs.

CSBS backups will also be displayed on the VBS page and can be used to restore individual disks.

## 1.5 What Is a Backup Policy?

A backup policy is a set of rules for backing up data, including the policy name, policy status, execution time of backup jobs, backup period, and retention rules. The retention rules specify the retention duration and number of retained backups. After an ECS is associated with a backup policy, it can be automatically backed up according to the backup policy.

## 1.6 What Are the Differences Between Backup and Disaster Recovery?

The following table lists the main differences between backup and disaster recovery (DR).

**Table 1-1** Differences between backup and DR

Aspect	Backup	DR
Purpose	To prevent data loss It adopts the snapshot or backup techniques to generate data backups that can be used to restore data when data loss or corruption occurs.	To ensure service continuity It uses the replication techniques (such as application-layer replication, host-based replication at the I/O layer, and storage-layer replication) to construct standby service hosts and data in a remote standby center, so that the standby center can take over services as soon as the active center becomes faulty.
Scenario	It offers protection against virus attacks, accidental deletions, and software and hardware faults.	It enables failover upon software and hardware faults, as well as natural disasters, such as tsunami, fires, and earthquakes, to fast recover services. When the source AZ recovers, you can easily fail back to the source AZ.
Cost	The cost is 1 to 2% of the production system's cost.	The cost is 20 to 100% of the production system's cost, varying with the RPO/RTO requirements. For active-active DR, the service system deployed in the standby center is required to be the same as that in the active system. In this case, the cost on infrastructure doubles.

 **NOTE**

RPO is the abbreviation of Recovery Point Objective and specifies the maximum acceptable period in which data might be lost.

RTO is the abbreviation of Recovery Time Objective and specifies the maximum acceptable amount of time for restoring the entire system after a disaster happens.

## 1.7 What Are the Differences Between Backup and Snapshot?

Both backup and snapshot provide data redundancy for EVS disks to improve data reliability. [Table 1-2](#) lists the differences between them.

**Table 1-2** Differences between backup and snapshot

Technology	Saved In	Synchronization	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. CSBS provides automatic backup by configuring backup policies. Deleting an EVS disk will not clear its backups.	A backup 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. <b>NOTE</b> 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.	Data can be recovered and services can be restored by rolling back the snapshot data to original disks or creating new disks from snapshots.

## 1.8 Why Is the Disk Space Usage Displayed in the File System Different from the Backup Size?

### Symptoms

- Files are stored and backed up on a server. After a file is added or deleted, the size of the original backup does not change.



- The ECS backup size is larger than the used disk space displayed in the file system.

## Possible Causes

The possible causes are as follows:

- The metadata of the file system occupies disk space.
- The disk is formatted. For example, after the Windows operating system is formatted, if writes have been performed to all data on the disk, then the entire disk needs to be backed up. In this case, the backup software compresses all-zero data.
- The backup software monitors the I/O writes to determine which data is changed and needs to be backed up. After a file is deleted from the file system, the file is recorded as changed data and will be backed up.

# 2 About Pricing

---

## 2.1 How Is CSBS Billed?

CSBS billing items include cloud server backup function, database server backup function, backup storage, and cross-region replication.

- Cloud server backup function: You will be billed for the crash-consistent application and restoration functions you use on your cloud servers without databases deployed. Crash-consistent backup ensures disks on the same cloud server are backed up in the same point in time.
- Database server backup function: You will be billed for the application-consistent backup and restoration functions you use on your cloud servers with databases deployed. Application-consistent backup ensures the consistency of your database transactions during backup.
- Backup storage: You will be billed for the storage capacity used to store backup data.
- Cross-region replication: You will be billed for the traffic used to replicate backups across regions.

Pay-per-use example for cloud servers without databases deployed:

A tenant has a cloud server with 100 GB capacity. The cloud server initially has 30 GB data and 1 GB data is written to or modified in the cloud server in the following each day. The backup frequency is everyday and up to seven backups can be retained. In such a case, the initial full backup involves 30 GB data and each incremental backup involves 1 GB data. Thus, the total backup data capacity is 36 GB. The backup function fee of the cloud server is billed based on 100 GB and the backup storage fee is charged based on 36 GB.

Pay-per-use example for cloud servers with databases deployed:

A tenant has a database server with 100 GB capacity. The server initially has 30 GB data and 1 GB data is written to or modified in the server in the following each day. The backup frequency is everyday and up to seven backups can be retained. In such a case, the initial full backup involves 30 GB data and each incremental backup involves 1 GB data. Thus, the total backup data capacity is 36 GB. The backup function fee of the database server is billed based on 100 GB and the backup storage fee is charged based on 36 GB.

CSBS has two billing modes: pay per use or purchase resource packages (on a yearly/monthly basis).

For detailed prices, see the [CSBS Pricing Details](#).

## 2.2 How Do Yearly/Monthly Resource Packages Function When I Have Bought More Than One?

Your resource package's capacities are accumulative but their validity periods are independent from each other.

Even though your purchased resource package is still valid, a newly bought resource package takes effect upon its purchase, instead of waiting until the earlier one expires. During the period in which the two resource packages are both valid, the capacity you enjoy is the capacity sum of the two.

For example, if a tenant has bought two one-month 100 GB resource packages at the same time, the tenant has 200 GB backup capacity for one month. Or, if the tenant has bought a one-month 100 GB resource package and then a two-month 100 GB resource package at the same day, the tenant has 200 GB backup capacity at the first month and 100 GB backup capacity for the second month.

## 2.3 Are CSBS and VBS Resource Packages Interoperable Between CSBS and VBS?

No. CSBS resource packages can only be used to store CSBS backups. VBS resource packages are effective only for VBS.

## 2.4 Why Am I Charged in Pay-per-use Mode Although I Have Purchased Resource Package?

Possible causes are as follows:

- Function and storage packages are not purchased together. If only the function package or the storage package is purchased, the pay-per-use billing mode still takes effect.
- Both function and storage packages are purchased but the actual use exceeds the specification of either kind of the purchased resource packages.
- The resource package has expired and is not renewed in time.

You need to check you actual use and find the real cause. If you still have any questions about the billing, contact the customer service personnel.

## 2.5 What Exactly Are the Function Package and the Storage Package?

A function resource package specifies the disk capacity of ECSs to be backed up.

A storage resource package specifies the storage capacity used by backup data.

For example, a user has a 100 GB cloud server. The initial data capacity is 20 GB, and 1 GB data is written every day. Assume that the user has purchased a 100 GB function package and a 100 GB storage package for one month and configured automatic backup to be performed once a day with a retention time of 7 days. On the seventh day, the user uses the 100 GB capacity in the function package and a capacity of 26 GB (20 + 1 x 6) in the storage package.

## 2.6 Will the CSBS Backups Displayed on the VBS Page Be Charged Repeatedly?

No.

## 2.7 How Do I Query CSBS Pay-Per-Use Billing Details?

### How Do I View the Billing Items of CSBS?

For detailed billing items, see "Cloud Server Backup Service" on [Product Pricing Details](#).


**Figure 2-1** CSBS pay-per-use billing details

Billing Item	Description	Billing Factor	Price	Pricing Basis (CNY)
Cloud server backup function	Charges for the crash-consistent application and restoration functions you use on your cloud servers without databases deployed. Crash-consistent backup ensures disks on the same cloud server are backed up in the same point in time.	Disk space of cloud servers you want to back up	0.148	Price per GB-month
Database server backup function	Charges for the application-consistent backup and restoration functions you use on your cloud servers with databases deployed. Application-consistent backup ensures the consistency of your database transactions during backup.	Disk space of cloud servers you want to back up	0.400	Price per GB-month
Backup storage	Charges for the storage capacity used to store backup data.	Storage capacity used by backup data	0.120	Price per GB-month
Cross-region replication	Charges for the traffic used to replicate backups across regions.	Traffic used for replicating backups across regions	0.5	Price per GB

- After CSBS is used, bills on the backup function and backup storage are mandatory.
- Based on whether application-consistent backup is enabled, bills either on the cloud server backup function or the database server backup function will be generated. If application-consistent backup is enabled, only bills on the database server backup function are generated.
- If cross-region replication is used, the traffic used for replicating backups across regions will be billed.

### How Do I Check the Function Fee?

**Step 1** Log in to the CSBS management console.

**Step 2** Click  in the row of a backup to view its details. You can view the disk capacity in **Disk Backups**. See [Figure 2-1](#).

The function fee is billed based on the capacity sum of all disks.

**Figure 2-2** Checking the disk backup capacity

Name	Status	Created	Server Name	Server Type	Operation
autobk_3fa7	Available	Sep 25, 2018 14:25:51 GMT+08:00	ecs-4ee7	ECS	Create Image Restore More

Name	Status	Disk Name	Function	Disk Capacity (GB)	Shared
autobk_44d9_ecs-4ee7-volume-0000	Available	ecs-4ee7-volume-0000	Data Disk	40	No

**Example:**

If a user has two common servers and each server has one system disk with the capacity being 40 GB and 60 GB respectively, the function fee is billed based on 100 GB (40 GB + 60 GB).

According to the price details page, the unit price of function fee is ¥0.148/GB-month.

The function fee to be billed every month is ¥14.8 (100 GB x ¥0.148).

The function fee to be billed every hour is about ¥0.0206 (¥14.8/24/30).

If the application-consistent feature is enabled, the unit price should be changed to ¥0.4/GB-month.

----End

**How Do I Check the Storage Fee?**

- Step 1** Log in to the CSBS management console.
- Step 2** Click the **Backups** tab and then the number indicating the used storage space can be viewed in the backup overview. See **Figure 2-3**.

**Figure 2-3** Backup overview



- Step 3** In the displayed dialog box, view the storage space usage.  
**Backups** specifies the number of backups created for a server and **Total Backup Capacity (GB)** specifies the capacity used by the server's backups in total.

**Figure 2-4** Storage space usage

The screenshot shows a window titled "Storage Space Usage" with a close button (x) in the top right corner. Below the title is a "Backups" tab. There is a search bar with "Server ID" and "Exact match only" options, and a search icon. The main content is a table with the following data:

Server Name	Server ID	Server Type	Backups	Total Backup Capacity (GB)
ecs-4ee7	d30ff31a-4b45-42ef-ad61-32e59333ea56	ECS	37	5.550
no_del_CSBS	a3f02485-ec2c-4bfc-8f2c-523b173aa0d7	ECS	6	4.621
ecs-9dac	ce977aa4-35f4-48f5-8169-e8fa6ea3cde0	ECS	7	0.000
ecs-dcac	ec576e68-4619-4e6b-831f-fc1e3de072b7	ECS	3	0.000

At the bottom of the window is a red "Close" button.

Example:

If the total backup capacity of a user is 10.171 GB, as shown in [Figure 2-3](#), the storage fee is billed based on 10.171 GB.

According to the price details page, the unit price of storage fee is ¥0.12/GB-month.

The storage fee to be billed every month is ¥1.22052 (10.171 GB x ¥0.12).

The storage fee to be billed every hour is about ¥0.0017 (¥1.22052/24/30).

----End

## Are the Resources Still Saved When My Account Is in Arrears?

After your account is in arrears, backups will not be frozen. The backup service cannot be disabled. You must delete the backups to stop fee generation.

After your account is in arrears, you cannot disable the backup policy, delete the backup policy, or add tags.

If your account is in arrears, you should top up it in time. If the account is not topped up in time, resources may be deleted. Ensure that the top-up amount is greater than the outstanding amount.

## 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 billing mode is used, you should top up your account as soon as possible once you are in arrears. If you do not top up in time, you will not be able to use CSBS anymore and your CSBS resources will be cleared.

For the renewal operation, see [Manually Renewing a Resource](#).

## 2.8 Why Is the Fee Deducted After a Backup Is Deleted?

After a backup is deleted on a day, a small amount of fee is billed on that day. In this case, the fee will be deducted on the next day.

## 2.9 How Do I Disable CSBS?

To disable CSBS, perform the following operations on the CSBS console:

1. Delete all backups. For details, see [Deleting a Backup](#). A backup with an image created cannot be deleted neither manually nor automatically. To delete such a backup, delete its image first.
2. Disassociate the server or disk from the backup policy and disable all backup and replication policies. For details, see [Disassociating ECSs from a Backup Policy](#) and [Enabling and Disabling a Backup Policy](#).

Only by using the preceding method can CSBS be disabled.

## 2.10 How Do I Stop CSBS from Charging?

1. Delete all backups. For details, see [Deleting a Backup](#). A backup with an image created cannot be deleted neither manually nor automatically. To delete such a backup, delete its image first.
2. Disassociate the server or disk from the backup policy and disable all backup policies. For details, see [Disassociating ECSs from a Backup Policy](#) and [Enabling and Disabling a Backup Policy](#).

After a backup is deleted on a day, a small amount of fee is billed on that day. In this case, the fee will be deducted on the next day. Then no fee will be charged any longer.

# 3 About Backup

---

## 3.1 Does CSBS Support Backing Up All EVS Disks on an ECS?

Yes. CSBS supports backup and restoration of all EVS disks as a whole instead of part of the EVS disks on an ECS.

## 3.2 Do I Need to Stop the ECS Before Backing It Up?

No. CSBS allows you to back up ECSs that are in use. When an ECS is running, data is written onto EVS disks on the ECS, and some newly generated data is stored in the ECS memory as cached data. During a backup process, the data in the memory will not be automatically written onto EVS disks, resulting in data inconsistency between EVS disks and their backups.

To ensure data integrity, back up the ECS during off-peak hours when no write operation is performed on the EVS disks. Before backing up applications that requires strict consistency, such as databases and email systems, you are advised to suspend all write operations. If write operations cannot be suspended, you can stop the application systems or the ECS for offline backup.

To ensure data integrity, back up the server during off-peak hours when no write operation is performed on the disks. Before backing up applications that require strict consistency, such as databases and email systems, you are advised to use application-consistent backup.

## 3.3 Can an ECS with Application Systems Be Backed Up?

Yes. CSBS supports application-consistent backup. For details about compatibility, see [Table 3-1](#). To back up applications or databases with which CSBS is incompatible with, you are advised to suspend all data write operations in advance. If write operations cannot be suspended, you can stop the application systems or the server for offline backup. Without doing these, status of the server



after restoration is similar to restart upon an unexpected power failure and log rollback will be performed on databases to keep data consistent.

**Table 3-1** Databases and operating systems that support application-consistent backup

Database Type	OS Type	Supported Version
SQLServer 2008/2012	Windows	Windows Server 2008,2008 r2,2012,2012 r2 for x86_64
SQLServer 2014/2016	Windows	Windows Server 2012,2012 r2 for x86_64
MySQL 5.5/5.6/5.7	Red Hat	Red Hat Enterprise Linux 6,7 for x86_64
	SUSE	SUSE Linux Enterprise Server 11,12 for x86_64
	CentOS	CentOS 6,7 for x86_64
	Euler	Euler OS 2.2,2.3 for x86_64
HANA 1.0/2.0	SUSE	SUSE Linux Enterprise Server 12 for x86_64

### 3.4 What Are the Minimum Backup Frequency and Maximum Number of Retained Backups Supported by CSBS?

The minimum frequency for policy-driven backup is once per hour. Manual backup can be performed at any frequency.

You can manually set the backup time (accurate to minute) in a backup policy. The backup interval must be not shorter than 1 hour.

There is no upper limit on the maximum number of retained backups. You can set it as needed.

### 3.5 How Can I Distinguish Automatic Backups From Manual Backups?

They can be distinguished by name prefix:

- Automatic backups: **autobk\_xxxx**
- Manual backups: **manualbk\_xxxx** or customized names

## 3.6 How Can I Configure a Backup Policy?

You configure your backup policy by setting the following three parameters, based on your needs:

- Backup Period
  - **By week:** specifies on which days of each week the backup job will be executed.
  - **By day:** specifies the backup interval in the unit of days.
- Execution Time

You can specify multiple execution times in a day. A maximum of 24 execution times can be set in a day. The backup interval must be not shorter than one hour.
- Retention Rule
  - **By time:** specifies the duration (such as one month or three months) of backups generated based on the policy. Expired backups will be automatically deleted.
  - **By quantity:** specifies the maximum number of retained backups. When the retained backups reach this limit, the earliest backup will be deleted each time a new backup is generated.
  - **Permanently:** Backups will not be deleted.

The deletion of a backup has no influence on the validity of backups generated later than the deleted backup.

## 3.7 Can I Choose to Back Up Only Some Partitions of a Disk?

No. The minimum granularity supported by CSBS is disks.

## 3.8 Does CSBS Support Cross-Region Backup for ECSs?

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

## 3.9 Which Types of Databases Can Be Backed Up Using Database Server Backup?

[Table 3-2](#) lists the OSs of database servers that can be backed up.

**Table 3-2** OSs that support installation of the Agent

Database Type	OS Type	Supported Version
SQL Server 2008/2012	Windows	Windows Server 2008, 2008 R2, 2012, 2012 R2 (for x86_64)
SQL Server 2014/2016/EE	Windows	Windows Server 2012, 2012 R2, and 2016 Datacenter for x86_64
MySQL 5.5/5.6/5.7	Red Hat	Red Hat Enterprise Linux 6 and 7 for x86_64
	SUSE	SUSE Linux Enterprise Server 11 and 12 for x86_64
	CentOS	CentOS 6 and 7 for x86_64
	EulerOS	EulerOS 2.2 and 2.3 for x86_64
HANA 1.0/2.0	SUSE	SUSE Linux Enterprise Server 12 for x86_64

### 3.10 How Do I Select Among Database Server Backup, Cloud Server Backup, and Disk Backup?

- Cloud server backup supports backing up certain disks or all disks on an ECS or BMS. The cost is higher than that of VBS. This backup mode is suitable for scenarios where the entire server needs to be backed up and servers need to be quickly provisioned. It is not suitable for servers deployed with databases. You can use the backup to restore data to the original server, create an image, or replicate it to another region.
- Disk backup supports backing up EVS and DSS disks. This mode features low cost and is suitable for scenarios where important data disks need to be backed up. You can use the backup to create a new disk and attach it as a data disk to a server. A disk backup can be shared among users in the same region.
- Database server backup: supports backing up servers where databases are deployed. The file or disk data in the database server is backed up at the exact same time, and databases are quiesced and memory data is refreshed to ensure application consistency. After the servers are restored using the backups, applications such as databases can be properly used. Other functions are the same as those of cloud server backup.

## 3.11 How Do I Migrate ECS Data Across Regions Using CSBS?

### Context

A user has an ECS with only one system disk in CN South-Guangzhou. To implement cross-region DR and fast service deployment in a different region, the user needs to create a same ECS with the same data in that region. In this case, CSBS is an ideal choice.

To replicate the ECS in CN South-Guangzhou to CN North-Beijing4, the user needs to back up the ECS in CN South-Guangzhou, replicates the backup to CN North-Beijing4, and uses the replicated backup to create a full-ECS image. Then the image can be used to create an ECS for cross-region migration.

### Procedure

**Step 1** Log in to the ECS console, find the target ECS, and back it up. See [Figure 3-1](#).

**Figure 3-1** Target ECS information

Name	ecs-长期-paas-h00407154	VPC	vpc-demo
Status	Stopped	Specifications	General computing   s3.medium.4   1 vCPUs   4 GB
ID	5eff3e62-e725-447f-9893-9e010ef6c136	Image	CentOS 7.6 64bit
Disks	1	NICs	1
AZ	AZ3	Obtained	May 21, 2019 10:17:37 GMT+08:00
Billing Mode	Pay-per-use	Launched	May 21, 2019 10:18:00 GMT+08:00
Agency	-   Create Agency		
Enterprise Project	default		
ECS Group	- Create ECS Group		

**Step 2** Locate the row that contains the target ECS, click **More** in the **Operation** column, and select **Create Backup**. Select **Immediate Backup**. See [Figure 3-2](#).

**Figure 3-2** Creating a backup

Configure Backup

Auto Backup  
The selected servers will be associated with the backup policy and automatically backed up. Any previously associated backup policy will no longer apply.

Immediate Backup  
The selected servers will be backed up immediately.

\* Name

Description   
0/255

Full Backup  Enable

Database Server Backup  Enable This feature is at the price of ¥0.52/GB. If it fails to be enabled, you will not be charged for it. [Pricing details](#)

**Step 3** Switch to the CSBS console page, confirm that the backup is successfully created. In the **Operation** column, choose **More** > **Cross-region Replicate**. See **Figure 3-3**. Replicate the backup to CN North-Beijing4.

**Figure 3-3** Cross-region replication

**Step 4** Switch to the CN North–Beijing4 region. Go to the CSBS console, find the replicated backup **manual\_rep\_001**. An **R** icon is displayed next to the backup name. In the **Operation** column, click **Create Image**.

Create an image using the backup. See **Figure 3-4**. The backup used to create an image can be deleted only after the image is deleted.

**Figure 3-4** Creating an image

Image Type and Source

\* Region: CN North-Beijing1

Regions are geographic areas isolated from each other. Resources are region-specific and cannot be used across regions through internal network connections. For low network latency and quick resource access, select the nearest region.

\* Type: System disk image, **Full-ECS image**, Data disk image

\* Source: ECS, **CSBS Backup**, Cloud Server Backup

- A CSBS backup can be used to create only one full-ECS image.
- You need to first customize and optimize the ECS used to create the CSBS backup to suit your needs. For example, you need to install Cloud-init if the ECS runs Linux and install Cloudbase-Init if the ECS runs Windows. [Learn more](#)

All statuses | Enter a name. Q C

Backup Name	Backup Status	ECS Name	Created
maunal_rep_001	Available	--	Aug 15, 2019 20:53:39 GMT+0...

Selected: maunalRep\_001  
[Create CSBS Backup](#)

Image Information

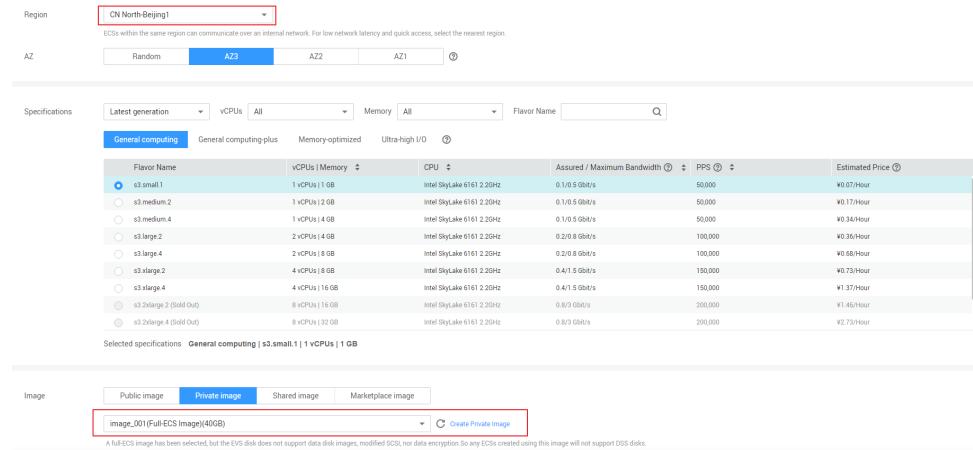
\* Name: image\_001

\* Enterprise Project: default C

**Step 5** On the Image Management Service (IMS) console page in CN North-Beijing4, locate the newly created image and click **Apply for Server** in the **Operation**

column to create a server. See **Figure 3-5**. Set other parameters based on service requirements.

**Figure 3-5** Creating a server



**Step 6** After the server is created, view the details to confirm that cross-region migration of ECS data succeeds. See **Figure 3-6**.

**Figure 3-6** Successful ECS data migration across regions

Name	ecs-whm	VPC	vpc-demo
Status	Running	Specifications	General computing   s3.small.1   1 vCPUs   1 GB
ID	eedae86b-57d6-4c66-a1b0-a7b87ffa4408	Image	image_001
Disks	1	NICs	1
AZ	AZ3	Obtained	Aug 15, 2019 20:24:28 GMT+08:00
Billing Mode	Pay-per-use	Launched	Aug 15, 2019 20:24:39 GMT+08:00
Agency	— <a href="#">Create Agency</a>		
Enterprise Project	default		
ECS Group	— <a href="#">Create ECS Group</a>		

----End

## 3.12 Which Time Zone Is the Automatic Backup Time Based On?

The automatic backup time is based on the local time zone.

## 3.13 What Can I Do If a Backup Cannot Be Deleted?

### Symptom

The **Delete** button is unavailable, or a backup fails to be deleted.

### Possible Causes

- Cause 1: The backup is being created or is being used for restoration.

- Cause 2: The backup is a cloud server backup and has been used to create an image, so that the **Delete** button for the backup is grayed out.
- Cause 3: On the **Volume Backup Service** page, the **Delete** button for a backup is grayed out, and the backup is a CSBS backup.
- Cause 4: A system exception occurs.

## Solutions

- Cause 1: The backup is being created or is being used for restoration.  
Wait until the backup is created or the restoration completes and then delete it.
  - If the backup is deleted successfully, no further action is required.
  - If the problem persists, see the solution for [cause 2](#).
- Cause 2: The backup is a cloud server backup and has been used to create an image, so that the **Delete** button for the backup is grayed out.  
Delete the image before deleting the backup.
  - If the backup is deleted successfully, no further action is required.
  - If the problem persists, see the solution for [cause 3](#).
- Cause 3: On the **Volume Backup Service** page, the **Delete** button for a backup is grayed out, and the backup is a CSBS backup.  
Go to the **Cloud Server Backup Service** page to delete the backup. After the backup is deleted, it is also removed from the **Volume Backup Service** page.
- Cause 3: A system exception occurs.  
Delete the backup again. If the problem persists, submit a [service ticket](#) to reach technical support.

# 4 About Restoration

---

## 4.1 Do I Need to Stop the ECS Before Restoring It?

The system shuts down the ECS before restoring ECS data, and automatically starts up the ECS after the restoration is complete.

If you deselect **Start the server immediately after restoration**, you need to manually start the ECS after the restoration is complete.

## 4.2 Can an ECS Be Restored Using Its Backups After It Has Been Changed?

Yes. If an ECS has been backed up and changed such as adding, deleting, or expanding EVS disks, its backups can still be used to restore data. You are advised to back up data again after the change.

If you have added an EVS disk after backup, using the backup to restore data will not change the data on the EVS disk.

If you have deleted an EVS disk after backup, using the backup to restore data will not include the data on the EVS disk.

## 4.3 What Can I Do If the Password Becomes to Be a Random One After I Use a Backup to Restore an ECS or Use an Image to Create an ECS?

For details about how to reset the password, see section [Resetting the Password for Logging In to an ECS](#) in the *Elastic Cloud Server User Guide*.



# 5 Others

---

## 5.1 How Long Does CSBS Take to Back Up and Restore an ECS?

The initial backup for an ECS is a full backup and subsequent backup operations are all incremental backups. Therefore, the initial backup takes a long time and subsequent incremental operations take shorter times. For example, a full backup of a 100 GB ECS takes approximately 30 minutes, and an incremental backup of 15 GB takes approximately 6 minutes.

A restoration of 100 GB data also takes approximately 30 minutes.

## 5.2 Why CSBS Backups Are Also Displayed on the VBS Console?

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

## 5.3 Is There a Quota Limit on the Number of Backups?

Yes.

Quotas exist to prevent resource overuse. If you need to create more backups, submit a service ticket to apply for higher CSBS quotas.

## 5.4 What Can I Do Against Exceptions in CSBS?



Exceptions in CSBS are mainly abnormal states of server backups. Take the measures described in the following table to handle these exceptions.

**Table 5-1** Troubleshooting suggestions

State	Handling Suggestion
Error	Delete the backup in the <b>Error</b> state and create another one.
Deletion failed	Delete it again. If the deletion still fails, contact technical support.

## 5.5 How Do I Handle Failed Jobs?


### Context

- After a backup job fails, a backup whose status is **Error** is generated, and a message is displayed on the **Backup Jobs** tab page of **Job Status**. Click the question mark  next to the message to view details.
- After a restoration job fails, a message is displayed on the **Restoration Jobs** tab page of **Job Status**. Click  next to the message to view details.

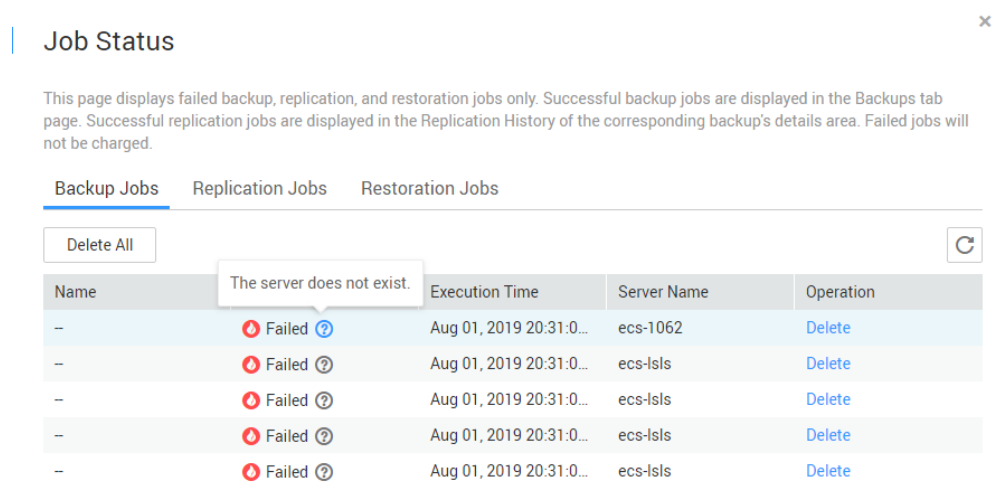
### Procedure

**Step 1** Log in to the CSBS management console.

1. Log in to the management console.
2. Under Storage > **Cloud Server Backup Service**.

**Step 2** Click the **Backups** tab and then click  next to **Job Status**.

**Step 3** On the **Backup Jobs** tab page, view the cause of the failed job. See the following figure.



**Step 4** On the **Restoration Jobs** tab page, view the cause of the failed job.

**Step 5** Optional: Click **Delete** in the row of the failed job to delete the job. Alternatively, click **Delete All** in the upper left corner to delete all failed jobs.

----End