

# Scalable File Service Turbo

## Getting Started

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# 1 Mounting and Using an SFS Turbo File System on Linux ECSs

## Scenarios

To use an SFS Turbo file system for file sharing, you need to create an SFS Turbo file system and mount it on multiple cloud servers.

This section describes how to create an NFS file system on the SFS Turbo console and mount it to Linux ECSs for file upload and download.

## Operation Process

Procedure	Description
<a href="#">Preparations</a>	Sign up for a HUAWEI ID, complete real-name authentication, enable Huawei Cloud services, and top up your account. Then, create a VPC and ECSs.
<a href="#">Step 1: Creating an SFS Turbo File System</a>	Create an SFS Turbo file system.
<a href="#">Step 2: Mounting the SFS Turbo File System</a>	Mount the SFS Turbo file system to the ECSs.
<a href="#">Step 3: Using the SFS Turbo File System</a>	Use the SFS Turbo file system for file upload and download.

## Preparations

1. Sign up for Huawei Cloud and complete real-name authentication.  
Before purchasing SFS Turbo, [sign up for a HUAWEI ID, enable Huawei Cloud services](#), and [complete real-name authentication](#).  
If you have enabled Huawei Cloud services and completed real-name authentication, skip this step.
2. Top up your account.

Ensure that your account has sufficient balance or has a valid payment method configured. For details, see [Topping Up an Account](#).

3. Check whether a VPC and ECSs need to be created.

Before creating an SFS Turbo file system, check whether a VPC and ECSs are available, and whether the ECSs are in this VPC. If they are in different VPCs, you can establish communication between SFS Turbo and ECSs using VPC peering connections. For details, see section "VPC Peering Connection".

- Create a VPC.

Create a VPC by referring to section "Creating a VPC" in the *Virtual Private Cloud User Guide*.

- Create ECSs.

Create ECSs in EU-Dublin in the created VPC by referring to section "Purchasing and Using a Linux ECS" in the *Elastic Cloud Server User Guide*.

## Step 1: Creating an SFS Turbo File System

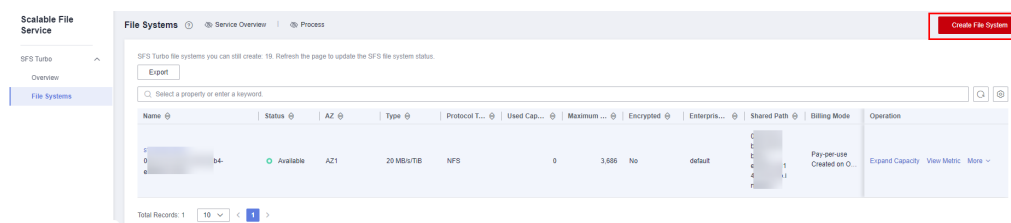
File systems are containers that store files in SFS Turbo. You need to create an SFS Turbo file system before storing data in it.

This example covers only some key parameters settings. Retain the default values for other parameters. For more information, see [Creating an SFS Turbo File System](#).

**Step 1** Log in to SFS Turbo console.

**Step 2** Select the region where the ECSs are deployed. A file system can only be mounted to an ECS when they are in the same region and VPC. Select the **EU-Dublin** region.

**Step 3** Click **Create File System**.



**Step 4** Configure the file system parameters, which are described in the following table.

Parameter	Example Value	Description
Billing Mode	Pay-per-use	Select a billing mode, <b>Yearly/Monthly</b> or <b>Pay-per-use</b> . For the detailed billing standards, see <a href="#">Product Pricing Details</a> .
Region	EU-Dublin	Region of the user. Select the region where the ECSs reside.
AZ	AZ1	An AZ is a physical location that uses independent power supply and networks. AZs in the same region can communicate with each other over an intranet.  For low network latency, you are advised to select the same AZ where the ECSs reside.

Parameter	Example Value	Description
Type	125 MB/s/TiB	Select <b>125 MB/s/TiB</b> . After an SFS Turbo file system is created, its type cannot be changed. If you want to change the type, you need to create another file system. Plan the file system type in advance. For more information, see <a href="#">File System Types</a> .
Capacity (TB)	1.2	Maximum capacity of the current SFS Turbo file system. When the used capacity of the file system reaches this value, no more data can be written to the file system. You need to expand the file system capacity. The capacity of an SFS Turbo file system cannot be reduced. Set an appropriate file system capacity based on your service needs. Supported capacity range for a 125 MB/s/TiB SFS Turbo file systems: 1.2 TB to 1 PB
Enterprise Project	default	This parameter shows up only when you use an enterprise account to create an SFS Turbo file system. You can manage file systems by project.
VPC	VPC: vpc-default Subnet: subnet-default (192.168.0.0/24)	Select the VPC where the ECSs reside and select a subnet (CIDR block). To obtain the required information, log in to the ECS console and click the ECS name to go to its summary page. Click the VPC name to the right of the <b>VPC</b> field to open the VPC list and obtain the VPC and subnet information.
Name	sfs-turbo-b6a6	User-defined name of the SFS Turbo file system. The name can contain only letters, digits, underscores (_), and hyphens (-). It must start with a letter and can contain 4 to 64 characters.

**Step 5** Click **Create Now**.

**Step 6** Confirm the file system information and click **Submit**.

**Step 7** When the creation is complete, go back to the SFS Turbo file system list. If the status of the created file system is **Available**, the file system has been created. If the status is **Creation failed**, handle the failure by referring to see [Creating an SFS Turbo File System Failed](#).

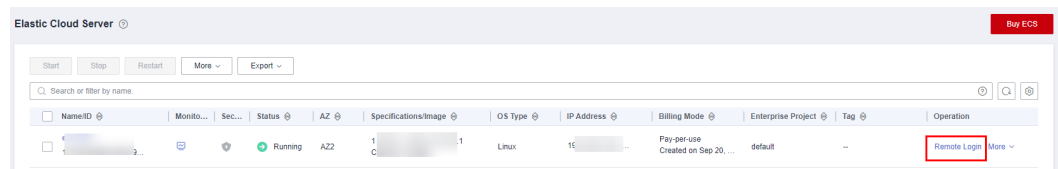
**Step 8** In the SFS Turbo file system list, take note of the shared path. It is required when the file system is mounted.

----End

## Step 2: Mounting the SFS Turbo File System

After an SFS Turbo file system is created, you need to mount it to ECSs so that they can share the file system.

**Step 1** Log in to the ECS as user **root**. You can log in to an ECS using the console or a remote access tool (such as PuTTY).



**Step 2** Install the NFS client.

### 1. Install the NFS client.

- Check whether the NFS software package is installed in the system (CentOS is used in this example).

```
rpm -qa|grep nfs
```

If not, [run the installation command](#).

```
libnfsidmap  
nfs-utils
```

```
[root@ecs-sfs-001 ~]# rpm -qa|grep nfs  
nfs-utils-2.3.3-46.el8.x86_64  
sssd-nfs-idmap-2.5.2-2.el8_5.3.x86_64  
libnfsidmap-2.3.3-46.el8.x86_64
```

- Install the client.

```
sudo yum -y install nfs-utils
```

#### NOTE

The commands require that the ECSs be connected to the Internet. Or, the installation will fail.

**Step 3** Mount the NFS file system root directory.

```
mkdir <Local path>
```

```
mount -t nfs -o vers=3,timeo=600,noresvport,nolock,tcp <Shared path> <Local path>
```

#### NOTE

If any other resources, such as a disk, have been mounted on the desired local path, create a new path. (NFS clients do not refuse repeated mounts. If there are repeated mounts, information of the last successful mount is displayed.)



Name	Status	AZ	Type	Protocol	Used Ca...	Maximum Capa...	Encrypted	Enterprise Project	Shared Path	Billing Mode	Operation
sfs-turbo-00ad	Available	AZ1	125 MB/s/TiB	NFS	0	1,228	No	default	xxx.sfsturbo.internal/	Pay-per-use Created on Dec 16, ...	Expand Capacity View Metric More

Parameter	Description
<b>vers</b>	Version of the SFS Turbo file system. Only NFSv3 is supported currently, so the value is fixed to <b>3</b> .
<b>timeo</b>	Waiting time before the NFS client retransmits a request. The unit is 0.1 second. The recommended value is <b>600</b> .
<b>noresvport</b>	Whether the NFS client uses a new TCP port when it re-establishes a network connection to the NFS server. It is strongly recommended that you specify <b>noresvport</b> , which ensures that your file system remains uninterrupted after a network reconnection or recovery.
<b>nolock</b>	Whether to use the NLM protocol to lock files on the server. If <b>nolock</b> is specified, the lock is valid only for applications on the same client. It is invalid for applications on any other clients.
<i>&lt;Shared path&gt;</i>	The type of the SFS Turbo file system is 125 MB/s/TiB, and its shared path is <i>xxx.sfsturbo.internal:/</i> . Variable <i>xxx</i> is the file system ID.
<i>&lt;Local path&gt;</i>	A local path on the ECS used to mount the SFS Turbo file system. For example, <b>/local_path</b> .

**Step 4** View the mounted SFS Turbo file system.

```
mount -l
```

If the command output contains the following information, the file system has been mounted:

```
<Shared path> on </local_path> type nfs (rw,vers=3,timeo=600,noresvport,noresvport)
```

**Step 5** (Optional) Configure the **fstab** file to configure file system auto mount upon system startup.

After a client ECS is restarted, it loses the file system mount information. You can configure auto mount in the **fstab** file to ensure that the ECS automatically mounts the file system when it restarts.

1. Open the **/etc/fstab** file.

```
vi /etc/fstab
```

At the end of the file, add the SFS Turbo file system information, for example:

```
<Shared path> </local_path> nfs vers=3,timeo=600,noresvport,noresvport,tcp 0 0
```

Replace *<Shared path>* and *</local\_path>* with actual values. You can obtain the shared path from the **Shared Path** column of the file system. Other fields are described as follows.

Parameter	Description
<i>&lt;Shared path&gt;</i>	The mount address of the SFS Turbo file system. It is used when the <b>file system root directory is mounted</b> .
<i>&lt;/local_path&gt;</i>	A directory created on the ECS for mounting the SFS Turbo file system. Set it to the local path in the <b>mount</b> command used when <b>the file system root directory is mounted</b> .
<b>nfs</b>	The file system or partition mount type.
<b>vers=3,timeo=600,noresvport,nolock,tcp</b>	Use commas (,) to separate multiple options. <ul style="list-style-type: none"><li>• <b>vers</b>: The SFS Turbo file system version. Value <b>3</b> indicates NFSv3.</li><li>• <b>timeo</b>: The waiting time before the NFS client retransmits a request. The unit is 0.1 second. The recommended value is <b>600</b>.</li><li>• <b>noresvport</b>: Whether the NFS client uses a new TCP port when it re-establishes a network connection to the NFS server. It is strongly recommended that you specify <b>noresvport</b>, which ensures that your file system remains uninterrupted after a network reconnection or recovery.</li><li>• <b>nolock</b>: Whether to use the NLM protocol to lock files on the server. If <b>nolock</b> is specified, the lock is valid only for applications on the same client. It is invalid for applications on any other clients.</li><li>• <b>tcp</b>: The TCP transmission protocol.</li></ul>
<b>0</b>	<ul style="list-style-type: none"><li>• An integer greater than <b>0</b> means to back up the SFS Turbo file system. A smaller value has a higher backup priority.</li><li>• <b>0</b> means not to back up the SFS Turbo file system.</li></ul>
<b>0</b>	<ul style="list-style-type: none"><li>• This field is set to <b>1</b> for the root directory by default. The values for other directories start from <b>2</b>, and one with a smaller integer is checked earlier than one with a larger integer.</li><li>• <b>0</b> means not to check the SFS Turbo file system.</li></ul>



- **Capacity expansion:** If your file system capacity is insufficient, you can increase the file system size by expanding capacity.