

Scalable File Service

Troubleshooting

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Contents

1 Mounting a General-Purpose File System Timed Out.....	1
2 Mounting a General-Purpose File System Failed.....	4
3 General-Purpose File System Performance Was Poor.....	7
4 General-Purpose File System Automatically Unmounted.....	8
5 A Client Server Failed to Access a General-Purpose File System.....	9
6 Writing to a General-Purpose File System Failed.....	10
7 Error Message "wrong fs type, bad option" Was Displayed During File System Mounting.....	12

1 Mounting a General-Purpose File System Timed Out

Symptom

When a general-purpose file system was mounted to a cloud server using the **mount** command, message **timed out** was returned.

Possible Causes

- Cause 1: The network is not stable.
- Cause 2: The network connection is abnormal.
- Cause 3: No VPC endpoint is purchased.
- Cause 4: The DNS configuration on the server is incorrect. As a result, the domain name of the general-purpose file system cannot be resolved, and the mount fails.
- Cause 5: The server that mounts the file system runs Ubuntu18 or later.

Fault Diagnosis

Rectify network faults and mount the file system again.

Solution

- Cause 1 and Cause 2: The network is not stable or the network connection is abnormal.
Remount the file system after the network issue is addressed.
 - If the remount is successful, no further action is required.
 - If the problem persists, see the solution for cause 3.
- Cause 3: No VPC endpoint is purchased.
You can choose to manually or automatically purchase a VPC endpoint. To manually purchase a VPC endpoint, see [Creating a VPC Endpoint](#). To automatically purchase a VPC endpoint, see [Creating a General-Purpose File System](#).
 - If the remount is successful, no further action is required.

- If the problem persists, see the solution for cause 4.
- Cause 4: The DNS configuration on the server is incorrect. As a result, the domain name of the general-purpose file system cannot be resolved, and the mount fails.
 - a. Check the DNS configuration and run the `cat /etc/resolv.conf` command.
 - If no DNS is configured, configure the DNS by referring to [Configuring DNS](#).
 - If the DNS has been configured, run the following command to check whether the configuration is correct:
`nslookup <domain-name-of-the-general-purpose-file-system>`
If the resolved IP address is in the 100.x.x.x network range, the DNS configuration is correct. If the IP address is in another network range, the DNS configuration is incorrect. In this case, go to **b**.
 - b. Modify the `/etc/resolv.conf` configuration file to configure the correct tenant DNS. Specifically, run `vi /etc/resolv.conf` to edit the `/etc/resolv.conf` file. Add the DNS server IP address above the existing nameserver information. For details about DNS server IP addresses, see [What Are Huawei Cloud Private DNS Server Addresses?](#)

Figure 1-1 Configuring DNS

```
; generated by /sbin/dhclient-script
search openstacklocal
nameserver 104.214.114.114
nameserver 104.214.115.115
```

The format is as follows:

```
nameserver 100.125.1.250
```

- If the configuration succeeds, go to **c**.
- If the configuration fails, run the `lsattr /etc/resolv.conf` command. If the information shown in [Figure 1-2](#) is displayed, the file is locked.

Figure 1-2 File locked

```
[root@cloud11174-File-Share /]# lsattr /etc/resolv.conf
----i-----e- /etc/resolv.conf
```

Run `chattr -i/etc/resolv.conf` to unlock the file. Then, re-configure the DNS and go to **c**.

- c. Press **Esc**, enter `:wq`, and press **Enter** to save and exit.
- d. Set the correct tenant DNS for the subnet of the VPC where the server belongs. By default, the server inherits the DNS configuration of the VPC every time the server restarts. Changing only the server DNS configuration does not resolve the issue completely.
- e. (Optional) Restart the server.
- f. Remount the file system.

- If the remount is successful, no further action is required.
- If the problem persists, see the solution for cause 5.
- Cause 5: The server that mounts the file system runs Ubuntu18 or later.
 - a. Reconfigure the DNS by referring to [Configuring a DNS Server for Domain Name Resolution](#).
 - b. Check whether the server running Ubuntu18 or later was created from a private image.
 - If yes, go to [d](#).
 - If no, go to [c](#).
 - c. Convert the public image server to a private image server.
 - i. Create a private image based on the original public image server. For details, see [Creating an Image](#).
 - ii. Use the private image created in [c.i](#) to re-create an ECS or change to private image for the original ECS by [changing the OS](#).
 - d. Log in to the server and remount the file system.

2 Mounting a General-Purpose File System Failed

Symptom

When a general-purpose file system was mounted to a server using the **mount** command, message **access denied** was displayed on the server.

When a general-purpose file system was mounted to a server using the **mount** command and message **Connection refused** was displayed on the server, see [cause 3](#) for more information.

Possible Causes

- Cause 1: The general-purpose file system has been deleted.
- Cause 2: The server and the general-purpose file system are not in the same VPC.
- Cause 3: No VPC endpoint is purchased.
- Cause 4: The new route table does not contain the corresponding VPC endpoint.
- Cause 5: The mount point specified in the **mount** command is incorrect.
- Cause 6: The IP address used for accessing SFS is a virtual IP address.
- Cause 7: The DNS configuration on the server is incorrect.
- Cause 8: The subdirectory used for mounting is not found.

Fault Diagnosis

Take troubleshooting measures based on possible causes.

Solution

- Cause 1: The general-purpose file system has been deleted.
Log in to the SFS console and check whether the file system is deleted.
 - If yes, create a general-purpose file system or select an existing one to mount. Ensure that the server and the file system are in the same VPC.
 - If no, go to Cause 2.

- Cause 2: The server and the general-purpose file system are not in the same VPC.
Log in to the console and check whether the server and the file system are in the same VPC.
 - If yes, go to Cause 3.
 - If no, select a general-purpose file system that is in the same VPC as the server.
- Cause 3: No VPC endpoint is purchased.
You can choose to manually or automatically purchase a VPC endpoint. To manually purchase a VPC endpoint, see [Creating a VPC Endpoint](#). To automatically purchase a VPC endpoint, see [Creating a General-Purpose File System](#).
 - If the remount is successful, no further action is required.
 - If the problem persists, see the solution for cause 4.
- Cause 4: The new route table does not contain the corresponding VPC endpoint.
When a new route table is added, you need to buy a new VPC endpoint and select the new route table for the VPC endpoint.
 - If the remount is successful, no further action is required.
 - If the problem persists, see the solution for cause 5.
- Cause 5: The mount point specified in the **mount** command is incorrect.
 - a. Log in to the console and check whether the mount point specified in the **mount** command is the same as that shown on the console.
 - b. If the mount point specified in the **mount** command is incorrect, correct it and run the command again.
- Cause 6: The IP address used for accessing SFS is a virtual IP address.
Log in to the server and use the **ping** command and the server's virtual IP address to access SFS. Check whether the service is reachable.
 - If yes, the network is connected. Check other possible causes.
 - If no, the network is disconnected. Use the server's private IP address and the **ping** command to access SFS and check whether the service is reachable.

Figure 2-1 Running the ping command to access SFS

```
UM-CC_USMCCMRP_01:~ # ping -I 10.57.1.181 100.125.0.20
PING 100.125.0.20 (100.125.0.20) from 10.57.1.181 : 56(84) bytes of data.
64 bytes from 100.125.0.20: icmp_seq=1 ttl=58 time=1.50 ms
64 bytes from 100.125.0.20: icmp_seq=2 ttl=58 time=1.24 ms
64 bytes from 100.125.0.20: icmp_seq=3 ttl=58 time=1.20 ms
^C
--- 100.125.0.20 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2014ms
rtt min/avg/max/mdev = 1.203/1.317/1.507/0.138 ms
UM-CC_USMCCMRP_01:~ # ping -I 10.57.1.221 100.125.0.20
PING 100.125.0.20 (100.125.0.20) from 10.57.1.221 : 56(84) bytes of data.
```

- Cause 7: The DNS configuration on the server is incorrect.
Check whether the DNS configuration is correct.
nslookup <domain-name-of-the-general-purpose-file-system>

Check whether the resolved IP address is in the 100.x.x.x network range.

- If yes, the DNS configuration is correct. Check other possible causes.
- If no, the DNS configuration is incorrect. Reconfigure the DNS by referring to [Configuring DNS](#).

- Cause 8: The subdirectory used for mounting is not found.

Mount the root directory of the general-purpose file system. Then, create a subdirectory, unmount the file system, and [mount the file system using the created subdirectory](#).

3 General-Purpose File System Performance Was Poor

Symptom

Data was written slowly to a general-purpose file system, the file system performance cannot meet service requirements, or file transfer was slow.

Troubleshooting

Possible causes are described in order of how likely they are to occur.

If the fault persists after you have ruled out one cause, move on to the next one.

Table 3-1 Troubleshooting

Possible Causes	Solution
There are too many or too few concurrent requests.	Too many or too few concurrent requests may deteriorate the file system performance. Submit a service ticket .
The log file path contains variables.	If it takes a long time to write logs to the general-purpose file system using Nginx, do as follows: <ul style="list-style-type: none">• Delete variables from the access_log directive and use a fixed path to store log files.• Set the log file descriptor cache using the open_log_file_cache command, which improves the performance of the log path containing variables.
The local network is faulty.	Rectify the network fault.

Submitting a Service Ticket

If the problem persists, [submit a service ticket](#).

4 General-Purpose File System Automatically Unmounted

Symptom

General-purpose file system has been automatically unmounted and needs to be mounted again.

Possible Causes

Auto mount is not configured. The file system is automatically unmounted after the client server is restarted.

Solution

[Configure file system auto mount upon system startup.](#)

Submitting a Service Ticket

If the problem persists, [submit a service ticket](#).

5 A Client Server Failed to Access a General-Purpose File System

Symptom

Access from a client server to a general-purpose file system was denied. All services on the server were abnormal.

Possible Causes

The file system fails to be mounted to the server after being forcibly unmounted.

Fault Diagnosis

Take troubleshooting measures based on possible causes.

Solution

1. Restart the server.
2. Check whether the general-purpose file system can be properly mounted and accessed.
 - If yes, no further action is required.
 - If no, contact technical support.

6 Writing to a General-Purpose File System Failed

Symptom

Data failed to be written to the general-purpose file system mounted to ECSs running the same type of OS.

Possible Causes

The ECS security group configuration is incorrect. Specifically, the port used to communicate with the general-purpose file system is not enabled.

Fault Diagnosis

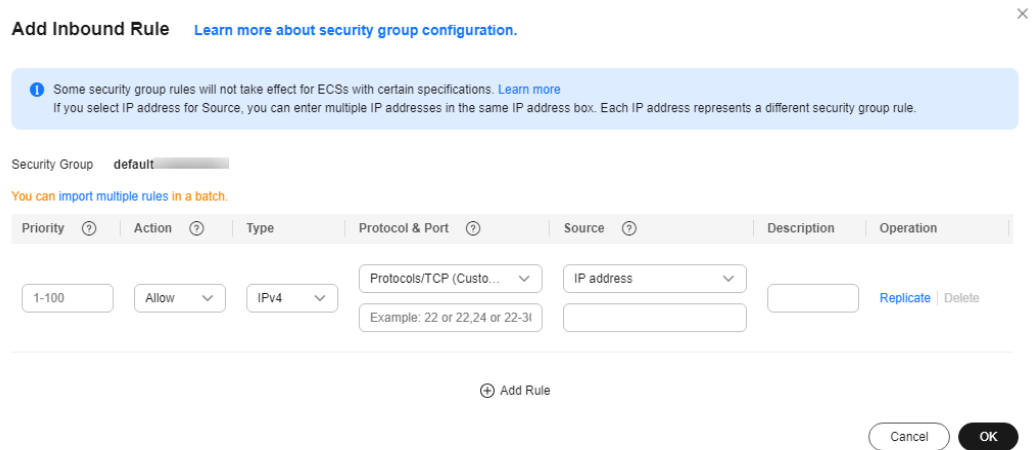
Check whether the port of the ECS is enabled and correctly configure the port on the security group console.

Solution

- Step 1** [Log in to the ECS console.](#)
- Step 2** Select the target ECS and go to its details page.
- Step 3** Click the **Security Groups** tab and select the target security group. Click **Manage Rule** to go to the security group console.
- Step 4** On the displayed page, click the **Inbound Rules** tab and click **Add Rule** to open the **Add Inbound Rule** page, as shown in [Figure 6-1](#). Add rules as follows:

You need to add inbound and outbound rules for the security group. For details, see [Adding a Security Group Rule](#). The inbound ports required by NFS are ports 111, 2049, and 2050.

Figure 6-1 Add Inbound Rule



Step 5 Click **OK**. Access the general-purpose file system again for verification.

----End

7 Error Message "wrong fs type, bad option" Was Displayed During File System Mounting

Symptom

The message "wrong fs type, bad option" was displayed when you run the **mount** command to mount a general-purpose file system to a Linux ECS.

Possible Causes

An NFS client is not installed on the Linux ECS. That is, the **nfs-utils** software package is not installed before you execute the **mount** command.

Fault Diagnosis

Install the required **nfs-utils** software package.

Solution

NOTE

Refer to the following steps if your clients run CentOS, Red Hat, Oracle Enterprise Linux, SUSE, EulerOS, Fedora, or openSUSE. For other OSs, see [Mounting a General-Purpose File System to Linux ECSs](#).

Step 1 Log in to the ECS and run the following command to check whether the **nfs-utils** package is installed. If no command output is returned, the package is not installed.

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

Figure 7-1 Checking whether the software package has been installed

```
mesg | tail or so.
[root@bcd ~]# rpm -qa | grep nfs
[root@bcd ~]# yum list | grep nfs
libnfsidmap.i686                0.25-15.el7                base
libnfsidmap.x86_64             0.25-15.el7                base
libnfsidmap-devel.i686        0.25-15.el7                base
libnfsidmap-devel.x86_64     0.25-15.el7                base
nfs-utils.x86_64              1:1.3.0-0.33.el7_3        updates
nfs4-acl-tools.x86_64        0.3.3-15.el7              base
nfsometer.noarch             1.7-1.el7                 base
```

Step 2 Install the nfs-utils software package.

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

Figure 7-2 Executing the installation command

```
[root@bcd ~]# yum -y install nfs-utils.x86_64
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
Resolving Dependencies
--> Running transaction check
--> Package nfs-utils.x86_64 1:1.3.0-0.33.el7_3 will be installed
--> Processing Dependency: libtirpc >= 0.2.4-0.7 for package: 1:nfs-utils-1.3.0-0.33.el7_3.x86_64
--> Processing Dependency: gssproxy >= 0.3.0-0 for package: 1:nfs-utils-1.3.0-0.33.el7_3.x86_64
```

Figure 7-3 Successful installation

```
Installed:
nfs-utils.x86_64 1:1.3.0-0.33.el7_3

Dependency Installed:
gssproxy.x86_64 0:0.4.1-13.el7          keyutils.x86_64 0:1.5.8-3.el7          libbasicobjects.x86_64 0:0.1.1-27.el7
libcollection.x86_64 0:0.6.2-27.el7      libevent.x86_64 0:2.0.21-4.el7          libini_config.x86_64 0:1.3.0-27.el7
libnfsidmap.x86_64 0:0.25-15.el7                libpath_utils.x86_64 0:0.2.1-27.el7                libref_array.x86_64 0:0.1.5-27.el7
libtalloc.x86_64 0:2.1.6-1.el7         libtevent.x86_64 0:0.9.28-1.el7        libtirpc.x86_64 0:0.2.4-0.8.el7
libverto-tevent.x86_64 0:0.2.5-4.el7     quota.x86_64 1:4.01-14.el7           quota-nls.noarch 1:4.01-14.el7
rpcbind.x86_64 0:0.2.0-38.el7         tcp_wrappers.x86_64 0:7.6-77.el7

Complete!
```

Step 3 Run the **mount** command again to mount the general-purpose file system to the ECS.

```
mount -t nfs -o vers=3,timeo=600,noresvport,nolock <mount-point> <local-path>
```

Step 4 View the mounted general-purpose file system.

```
mount -l
```

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

```
example.com:/filesystem on /local_path type nfs (rw,vers=3,timeo=600,nolock,addr=)
```

```
----End
```