# Veritas Access 7.2 Troubleshooting Guide

## Linux

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VERITAS™

# Veritas Access Troubleshooting Guide

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Veritas Technologies LLC
500 E Middlefield Road
Mountain View, CA 94043

http://www.veritas.com

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https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

# Contents

# Introduction

This chapter includes the following topics:

## About troubleshooting

Troubleshooting procedures for Veritas Access include the following types of procedures:

- Alert and log message review
- Routine maintenance tasks
- Commonly used recovery procedures
- Feature-specific problems and resolutions

Each of these procedures are described in the remaining chapters of this guide.

Some of the troubleshooting procedures in this guide require that you log in as the `support` user.

See "About the support user account" on page 8.

# General tips for the troubleshooting process

To troubleshoot a problem, it helps to consider the following:

- Check for previous occurrence.

  Check existing troubleshooting information to see if the problem has occurred before. For this type of information, a good source is the *Veritas Access Release Notes*. The release notes contain a list of known issues for Veritas Access and possible workarounds.

- Consider recent alterations.

  If a system has problems immediately after some kind of maintenance, software upgrade, or other change, the problems might be linked to those changes.

- Determine what works.

  If a system does not produce the desired end result, look for what operates properly. Identify where the problem is not and focus your efforts in other areas. Whatever components or subsystems necessary for the properly working parts to function are probably okay.

- Use your experience.

  Based on your knowledge of how a system works, think of various failures that might cause this problem to occur. Check for those failures. Start with the most likely failures based on circumstances, history, or knowledge of existing feature weaknesses.

# General techniques for the troubleshooting process

After applying some general troubleshooting tips to narrow the scope of a problem, here are some techniques to further isolate the problem:

- Swap identical parts.

  In a system with identical or parallel parts and subsystems, it is a good idea to swap components between those subsystems and see whether or not the problem moves with the swapped component. For example, if you experience Veritas Access network connection problems on one node in a cluster, you could swap Ethernet Interface cards to determine if the problem moves to the new node.

- Remove parallel components.

  If a system is composed of several parallel or redundant components that can be removed without crippling the whole system, start removing these components (one at a time) and see if things start to work. For example, in a cluster, shutdown the nodes one-by-one to see if the problem still persists.

- Divide the system into sections.

  In a system with multiple sections or stages, carefully measure the variables going in and out of each stage until you find a stage where things do not look right. For example, if you run across a problem with a replication job, check to see if the job has run successfully before and try to determine the time frame when the job started to fail.

- Monitor system behavior over time (or location).

  Display a list of services and their current status using the `Support> services show all` command.

  Set up a process (such as the `Support> traceroute` command or a series of `Support> iostat` commands) to monitor system activity over a period of time or to monitor system activity across the network. This monitoring is especially helpful to track down intermittent problems, processor activity problems, node connection problems, and so on.

# About the support user account

Generally, to access Veritas Access, you log into the management console with a Veritas Access user account. When you log in, you enter the command-line interface shell (CLISH). The command-line options depend on the role that the user account is assigned.

In some cases, the troubleshooting techniques in this guide require access to the underlying Linux command line and additional support utilities. The support user account provides access to these utilities. The support user account must be enabled (the default).

When you log in as support, you can access logs and other files that reside outside the CLISH.

**Warning:** Use caution when executing commands as the support user. The support commands are intended for advanced users who are familiar with Veritas Access features and functions. If you have any questions about using these commands, contact your Veritas Technical Support Representative for further guidance.

# Configuring the support user account

A Veritas Access user with the `Master` role can enable, disable, change the password, or check the status of the support user.

The support user account is enabled by default.

### To configure the support user account

1 To enable the support user, enter the following:

```
Admin> supportuser enable
Enabling support user.
support user enabled.
```

2 To verify that the support user is enabled:

```
Admin> supportuser status
support user status : Enabled
```

3 To change the support user password, enter the following:

```
Admin> supportuser password
Changing password for support.
Old password:
New password:
Re-enter new password:
Password changed
```

### To disable the support user account

1 To disable the support user, enter the following:

```
Admin> supportuser disable
Disabling support user.
support user disabled.
```

2 To verify that the support user is disabled:

```
Admin> supportuser status
support user status : Disabled
```

# Using the support login

When you log in as support, you can access logs and other files that reside outside the CLISH. Some of the troubleshooting techniques in this guide require that you log in as the support user.

The support user account must be enabled by an administrator with the `master` role.

See “Configuring the support user account” on page 8.

---

**Note:** The `support` account is intended for Technical Support and advanced users only.

---

**To use the support login**

1 Log in to the physical IP address of the cluster using the support account by entering:

```
support
```

Then enter the password. The default password is:

```
veritas
```

For example,

```
login as: support
support@<ip_address>'s password:
Last login: Tue Apr 26 14:53:32 2016 from 172.31.172.139
***********************************************************
*                    Veritas Access                       *
*                                                         *
*                   Enterprise Edition                    *
*       Warning: Only Veritas Access distributed          *
*     patches & RPMs can be installed on this system!     *
*    Do not delete contents of lost+found directory of    *
*    filesystems as it may contain critical temporary     *
*          Veritas Access configuration data!             *
***********************************************************

WARNING: System configured with default password. It's recommended to
change password now. Please proceed with changing the password :

Changing password for support.
New password:
Re-enter new password:
Password changed
Default password is changed successfully on all the nodes.
ACCESSRC2_01:~ #
```

2 If you need to access the CLISH, you can use the following command:

```
su - master
```

Chapter 2

# General troubleshooting procedures

This chapter includes the following topics:

## About general troubleshooting procedures

This chapter provides an overview of general troubleshooting procedures you can use to help discover and fix problems.

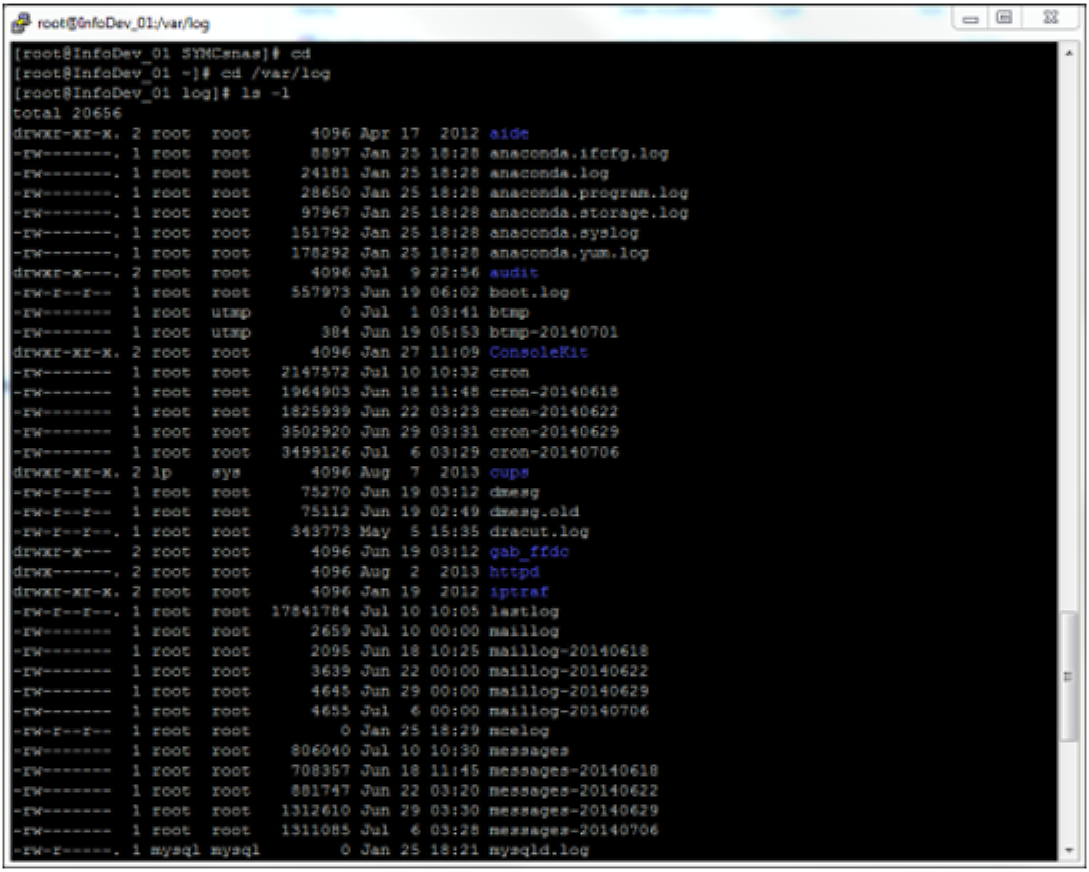
## Viewing the Veritas Access log files

In addition to the Alerts panel on the Veritas InfoScale Operations Manager console dashboard, the Veritas Access `/var/log` directory is a good place to find out more about problems that may occur.

**To view the Veritas Access log files**

1. Use the support account to login.
2. Navigate to the `/var/log` directory.

**Figure 2-1** Veritas Access log files



root@InfoDev_01:/var/log

```
[root@InfoDev_01 SYMCsnas]# cd
[root@InfoDev_01 ~]# cd /var/log
[root@InfoDev_01 log]# ls -l
total 20656
drwxr-xr-x. 2 root  root      4096 Apr 17  2012 aide
-rw-------. 1 root  root      8897 Jan 25 18:28 anaconda.ifcfg.log
-rw-------. 1 root  root     24181 Jan 25 18:28 anaconda.log
-rw-------. 1 root  root     28650 Jan 25 18:28 anaconda.program.log
-rw-------. 1 root  root     97967 Jan 25 18:28 anaconda.storage.log
-rw-------. 1 root  root    151792 Jan 25 18:28 anaconda.syslog
-rw-------. 1 root  root    178292 Jan 25 18:28 anaconda.yum.log
drwxr-x---. 2 root  root      4096 Jul  9 22:56 audit
-rw-r--r--  1 root  root    557973 Jun 19 06:02 boot.log
-rw-------  1 root  utmp         0 Jul  1 03:41 btmp
-rw-------  1 root  utmp       384 Jun 19 05:53 btmp-20140701
drwxr-xr-x. 2 root  root      4096 Jan 27 11:09 ConsoleKit
-rw-------  1 root  root   2147572 Jul 10 10:32 cron
-rw-------  1 root  root   1964903 Jun 18 11:48 cron-20140618
-rw-------  1 root  root   1825939 Jun 22 03:23 cron-20140622
-rw-------  1 root  root   3502920 Jun 29 03:31 cron-20140629
-rw-------  1 root  root   3499126 Jul  6 03:29 cron-20140706
drwxr-xr-x. 2 lp    sys       4096 Aug  7  2013 cups
-rw-r--r--  1 root  root     75270 Jun 19 03:12 dmesg
-rw-r--r--  1 root  root     75112 Jun 19 02:49 dmesg.old
-rw-r--r--. 1 root  root    343773 May  5 15:35 dracut.log
drwxr-x---  2 root  root      4096 Jun 19 03:12 gab_ffdc
drwx------. 2 root  root      4096 Aug  2  2013 httpd
drwxr-xr-x. 2 root  root      4096 Jan 19  2012 iptraf
-rw-r--r--. 1 root  root  17841784 Jul 10 10:05 lastlog
-rw-------  1 root  root      2659 Jul 10 00:00 maillog
-rw-------  1 root  root      2095 Jun 18 10:25 maillog-20140618
-rw-------  1 root  root      3639 Jun 22 00:00 maillog-20140622
-rw-------  1 root  root      4645 Jun 29 00:00 maillog-20140629
-rw-------  1 root  root      4655 Jul  6 00:00 maillog-20140706
-rw-r--r--  1 root  root         0 Jan 25 18:29 mcelog
-rw-------  1 root  root    806040 Jul 10 10:30 messages
-rw-------  1 root  root    708357 Jun 18 11:45 messages-20140618
-rw-------  1 root  root    881747 Jun 22 03:20 messages-20140622
-rw-------  1 root  root   1312610 Jun 29 03:30 messages-20140629
-rw-------  1 root  root   1311085 Jul  6 03:28 messages-20140706
-rw-r-----. 1 mysql mysql        0 Jan 25 18:21 mysqld.log
```

# About event logs

In addition to the system log, each Veritas Access feature has an associated event log. When a problem occurs, one of the quickest ways to learn more about what occurred is to examine these log files. Event logs for Veritas Access features are stored in the `/opt/SYMCsnas/log` directory.

**Note:** You should not delete or alter log files while troubleshooting, as it may hamper further investigation by Veritas Technical Support.

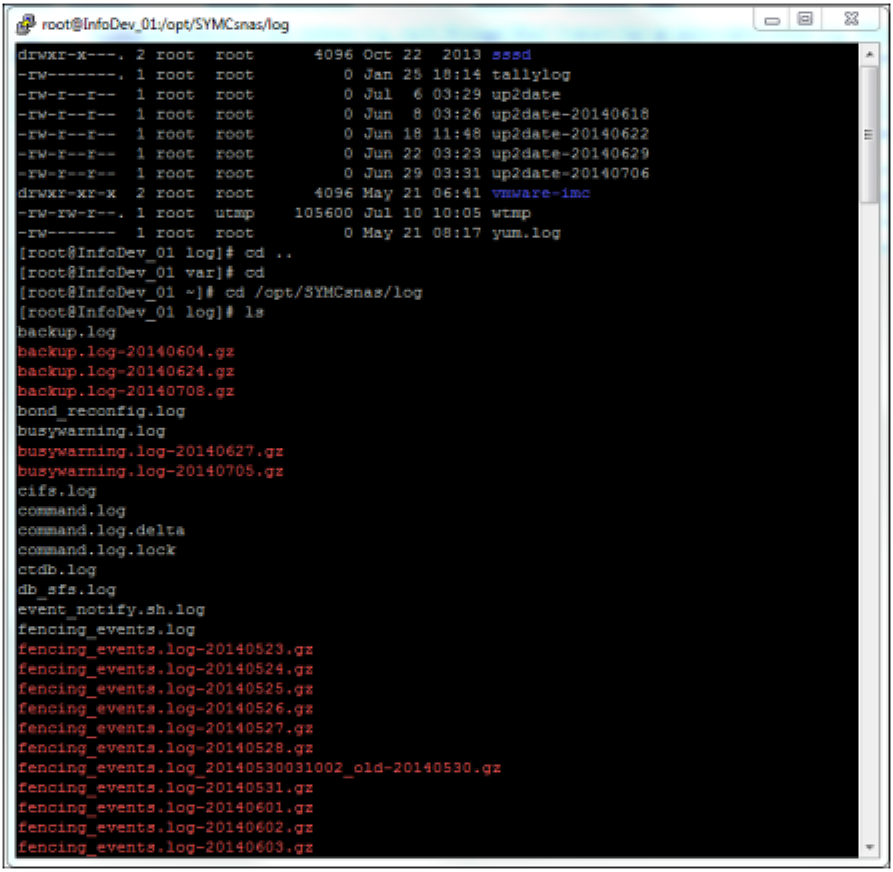
**To view the event logs:**

1. Use the support account to login.
2. Navigate to the `/opt/SYMCsnas/log` directory.

   Event logs for Veritas Access features are stored in this directory.

   For example, the `cifs.log` contains CIFS event logs.

**Figure 2-2** Veritas Access event logs



```
drwxr-x---. 2 root   root       4096 Oct 22  2013 sssd
-rw-------. 1 root   root          0 Jan 25 18:14 tallylog
-rw-r--r--  1 root   root          0 Jul  6 03:29 up2date
-rw-r--r--  1 root   root          0 Jun  8 03:26 up2date-20140618
-rw-r--r--  1 root   root          0 Jun 18 11:48 up2date-20140622
-rw-r--r--  1 root   root          0 Jun 22 03:23 up2date-20140629
-rw-r--r--  1 root   root          0 Jun 29 03:31 up2date-20140706
drwxr-xr-x  2 root   root       4096 May 21 06:41 vmware-imc
-rw-rw-r--. 1 root   utmp     105600 Jul 10 10:05 wtmp
-rw-------  1 root   root          0 May 21 08:17 yum.log
[root@InfoDev_01 log]# cd ..
[root@InfoDev_01 var]# cd
[root@InfoDev_01 ~]# cd /opt/SYMCsnas/log
[root@InfoDev_01 log]# ls
backup.log
backup.log-20140604.gz
backup.log-20140624.gz
backup.log-20140708.gz
bond_reconfig.log
busywarning.log
busywarning.log-20140627.gz
busywarning.log-20140705.gz
cifs.log
command.log
command.log.delta
command.log.lock
ctdb.log
db_sfs.log
event_notify.sh.log
fencing_events.log
fencing_events.log-20140523.gz
fencing_events.log-20140524.gz
fencing_events.log-20140525.gz
fencing_events.log-20140526.gz
fencing_events.log-20140527.gz
fencing_events.log-20140528.gz
fencing_events.log_20140530031002_old-20140530.gz
fencing_events.log-20140531.gz
fencing_events.log-20140601.gz
fencing_events.log-20140602.gz
fencing_events.log-20140603.gz
```

# About shell-activity logs

You can use the shell-activity logs to capture any command-line operations performed by the end user or the customer. The shell-activity logs help you to understand any unwanted operations done by the end user either intentionally or unintentionally.

You can find the shell-activity logs for the following at:

- Support account - `/var/log/shell_activity_log`
- CLI commands - `/opt/SYMCsnas/log/command.log`

# Setting the CIFS log level

You can set the CIFS log level for the Veritas Access cluster, and then upload the debugging information to an external server for troubleshooting.

See the `support_debug.1` man page.

See "Retrieving and sending debugging information" on page 15.

**To set the CIFS log level**

◆ Set the CIFS-related log level for the Veritas Access cluster.

```
Support> debuginfo setlog cifs loglevel
```

A valid `loglevel` ranges from `0` to `10`, `10` being the most detailed log level. It is recommended to increase the CIFS log level, reproduce the CIFS issue, and then upload debugging information for the CIFS issue.

The default log level is `2`.

For example, to set the CIFS log level to `10` for the Veritas Access cluster:

```
Support> debuginfo setlog cifs 10
```

# Setting the NetBackup client log levels and debugging options

You can set NetBackup client log levels as well as different debugging options, and then upload the information to an external FTP or SCP server. You can use this debugging information to send to Veritas Technical Support.

See "Retrieving and sending debugging information" on page 15.

You can find NetBackup log information by using the `Backup> show` command. See the `backup_show(1)` man page.

You can see what NetBackup log levels and debugging options have been enabled by executing the `Backup> show` command.

See the *Veritas NetBackup Administrator's Guide, Volume 1* for more information on NetBackup logging.

Valid log level values range from `1` to `5`, `5` being the most detailed. See the `support_debuginfo(1)` man page.

**To set the NetBackup client log levels**

1. Set the NetBackup database log level:

   ```
   Support> debuginfo setlog nbu database loglevel
   ```

2. Set the NetBackup global debugging log level:

   ```
   Support> debuginfo setlog nbu global loglevel
   ```

   Global logging controls the logging level for the processes that are set in the **Logging** dialog box in the NetBackup Administration Console.

**To set the NetBackup debugging options**

1. Enable the NetBackup client to perform robust logging in the cluster.

   ```
   Support> debuginfo setlog nbu enable robust
   ```

   Robust logging limits the amount of disk space that a log directory consumes.

2. Enable the NetBackup client to perform critical process logging in the cluster.

   ```
   Support> debuginfo setlog nbu enable critical
   ```

   The enable critical process option lets you automatically log critical NetBackup processes. Log directories for the critical processes are created and logging begins when this option is enabled in the **Logging** host properties in the NetBackup Administration Console.

# Retrieving and sending debugging information

You can retrieve Veritas Access debugging information from a Veritas Access node and send the information to a server using an external FTP or SCP server.

See the following article for more information on how to provide data for Veritas Technical Support:

http://www.veritas.com/docs/000097935

**To upload debugging information from a specified node to an external server**

- Upload debugging information from a specified node to an external server.

  ```
  Support> debuginfo upload nodename debug-URL module
  ```

  For example, to upload all debugging information to an FTP server:

  ```
  Support> debuginfo upload node1_1
  ftp://admin@ftp.docserver.company.com/patches/ all
  ```

  For example, to upload CIFS-related debugging information to an SCP server:

  ```
  Support> debuginfo upload node1_1
  scp://root@server.company.com:/tmp/node1_1-cifs-debuginfo.tar.gz
  ```

*nodename* Specifies the *nodename* from which to collect the debugging information.

*debug-URL* Specifies the remote file or directory for uploading debugging information.

Depending on the type of server from which you upload debugging information, use one of the following example URL formats:

```
ftp://admin@ftp.docserver.company.com/
patches/
```

```
scp://root@server.company.com:/tmp/
```

If *debug-URL* specifies a remote file, the debuginfo file is saved by that name. If *debug-URL* specifies a remote directory, the debuginfo file name displays as the following:

```
nas_debuginfo_nodename_modulename_timestamp.tar.gz
```

*module*

Specifies the values for *module*.

Supported module values are the following:

- all - use to collect all information for debugging
- generic - use to collect all debugging information except for information related to Veritas products
- cifs - use to collect CIFS-related debugging information
- nas - use to collect Veritas Access related debugging information
- netbackup - use to collect NetBackup client-related debugging information

The `Support> debuginfo` command also collects information for the `sosreport` command for Red Hat Enterprise Linux (RHEL). The `sosreport` is collected for all the loaded modules except for the `selinux` module.

Chapter 3

# Monitoring Veritas Access

This chapter includes the following topics:

## About monitoring Veritas Access operations

This chapter describes several support tasks that are useful for monitoring Veritas Access operations. Perform these monitoring tasks periodically to ensure that Veritas Access is running smoothly.

As you work with Veritas Access, keep an ongoing record of the output created by monitoring commands. This process gives you a baseline for judging normal operations and helps you to flag potential problems before they become serious.

## Monitoring processor activity

The `Support> top` command displays the dynamic real-time view of currently running tasks. It shows the resources that users and processes consume at a given time for a specified node.

### To use the top command

- To use the `Support> top` command, enter the following:

  ```
  Support> top [nodename] [iterations] [delay]
  ```

  *nodename* — Displays the resources and processes at a given time for the specified node.

  *iterations* — Specifies the number of iterations you want to run. The default is three.

  *delay* — Specifies the delay between screen updates. The default is five seconds.

  For example, to show the dynamic real-time view of tasks running on the node `access_01`, enter the following:

  ```
  Support> top access_01 1 1
  top - 16:28:27 up 1 day, 3:32, 4 users, load average: 1.00, 1.00, 1.00
  Tasks: 336 total, 1 running, 335 sleeping, 0 stopped, 0 zombie
  Cpu(s): 0.1% us, 0.1% sy, 0.0% ni, 99.7% id, 0.0% wa, 0.0% hi, 0.0% si
  Mem: 16405964k total, 1110288k used, 15295676k free, 183908k buffers
  Swap: 1052248k total, 0k used, 1052248k free, 344468k cached

  PID   USER  PR  NI  VIRT   RES  SHR  S  %CPU  %MEM   TIME+   COMMAND
  6314  root  15  0   5340  1296  792  R   3.9   0.0  0:00.02  top
  1     root  16  0    640   260  216  S   0.0   0.0  0:04.86  init
  ```

# Generating CPU and device utilization reports

### To use the iostat command

- To use the `Support> iostat cpu` command, enter the following:

```
Support> iostat cpu [nodename] [interval] [count]
```

*nodename* The name of the node from where the report is generated. The default is `console` for the Management Console.

*interval* The duration between each report in seconds. The default is 2 seconds.

*count* The number of reports generated at the `interval` entered in seconds. The default is one report.

where the *nodename* option asks for the name of the node from where the report is generated. The default is `console` for the Veritas InfoScale Operations Manager console.

For example, to generate the CPU utilization report of the console node, enter the following:

```
Support> iostat cpu access_01
Linux 2.6.16.60-0.21-smp (access_01)       02/09/16

avg-cpu:  %user   %nice  %system  %iowait  %steal   %idle
           1.86    0.07     4.53     0.13    0.00   93.40
```

### To use the iostat device command

- To use the `Support> iostat device` command, enter the following:

```
Support> iostat device [nodename] [dataunit]
[interval] [count]
```

*nodename* The *nodename* option asks for the name of the node from where the report is generated. The default is `console` for the Management Console.

*dataunit* The *dataunit* option lets you generate the report in block(s) or kilobytes(s). The default is block(s).

*interval* The duration between each report in seconds. The default is two seconds.

*count* The number of reports generated at the `interval` entered in seconds. The default is one report.

For example, to generate a device utilization report of a node, enter the following:

```
Support> iostat device access_01 Blk
Linux 2.6.16.60-0.21-smp (access_01)       02/09/16

Device:       tps   Blk_read/s   Blk_wrtn/s   Blk_read   Blk_wrtn
hda          4.82        97.81        86.11    1410626    1241992
sda          1.95        16.83         4.05     242712      58342
hdc          0.00         0.01         0.00        136          0
```

# Monitoring network traffic

Tethereal is a command-line version of Ethereal, a network protocol analyzer supported by the Linux operating system. It lets you capture packet data from a live network or read packets from a previously-saved capture file.

To help you monitor network traffic, Veritas Access provides a `Support> tethereal` command that lets you display and export network traffic data.

- The `Support> tethereal show` command displays packed data captured from a live network.
- The `Support> tethereal export` command lets you export network traffic details for further analysis.

# Exporting and displaying the network traffic details

### To use the tethereal command

- To use the `Support> tethereal export` command, enter the following:

```
Support> tethereal export url [nodename] [interface] [count]
[source]
```

*url*

Provides the location to export the network traffic details. The default file name `tethereal.log` is used if a file name is not specified in the url.

*nodename*

The name of the node from where the traffic details are generated.

*interface*

Specifies the network interface for the packet capture.

*count*

Specifies the maximum number of packets to read.

The maximum allowed file size to capture the network traffic details is 128 MB. For a very large "count" value, if the file size exceeds 128 MB, then the command stops capturing the network traffic details.

*source*

Specifies the node to filter the packets.

For example, to export the network traffic details, enter the following:

```
Support> tethereal export scp://user1@172.31.168.140:~/
Password: *******
Capturing on pubeth0 ...
Uploading network traffic details to scp://user1@172.31.168.140:~/
is completed.
```

When you export network traffic details, press the **Ctrl + C** keys to stop the capture process and upload traffic details to the URL site.

### To use the tethereal show command

- To use the `Support> tethereal show` command, enter the following:

```
Support> tethereal show [nodename] [interface] [count]
[source]
```

*nodename* The name of the node from where the traffic details are displayed.

*interface* Specifies the network interface for the packet capture.

*count* Specifies the maximum number of packets to read.

If you do not specify a count value, the network traffic continues to be displayed until you interrupt it.

*source* Specifies the node to filter the packets.

For example, the traffic details for five packets are:

```
Support> tethereal show access_01 pubeth0 5 172.31.168.140
0.000000 172.31.168.140 -> 10.209.105.147 ICMP Echo (ping) request
0.000276 10.209.105.147 -> 172.31.168.140 ICMP Echo (ping) reply
0.000473 10.209.105.147 -> 172.31.168.140 SSH Encrypted response
packet len=112
0.000492 10.209.105.147 -> 172.31.168.140 SSH Encrypted response
packet len=112
```

Chapter 4

# Common recovery procedures

This chapter includes the following topics:

## About common recovery procedures

This chapter provides some of the most-common recovery procedures you can use to troubleshoot a problem with Veritas Access.

# Restarting servers

Some configuration changes do not take effect until the associated server is restarted. Therefore, some configuration problems can be solved by stopping and restarting the associated server. For example, when you change AD Domain settings, you need to restart the CIFS server.

Table 4-1 shows commands you can use to start and stopVeritas Access servers.

**Table 4-1** Commands to start and stop servers

| Command | Definition |
|---|---|
| `Backup> start` | Starts all configured backup services. |
| `Backup> stop` | Stops all configured backup services. |
| `CIFS> server start` | Starts the CIFS server. |
| `CIFS> server stop` | Stops the CIFS server. |
| `FTP> server start` | Starts the FTP server. |
| `FTP> server stop` | Stops the FTP server. |
| `NFS> server start` | Starts the NFS server. |
| `NFS> server stop` | Stops the NFS server. |
| `Storage> iscsi start` | Starts the iSCSI initiator service. |
| `Storage> iscsi stop` | Stops the iSCSI initiator service. |

**Note:** Some commands include the `server` argument and some do not. Also, some `Support>` commands use a `service` (instead of `server`) argument. For more information on starting and stopping Veritas Access servers, see the *Veritas Access Command-Line Administrator's Guide*.

# Bringing services online

The `Support> services` command lets you bring services that are OFFLINE or FAULTED back to the ONLINE state.

**Note:** After you use the `Support> services` command, if a service is still offline or faulted, you need to contact Technical Support.

These services include:

- Backup
- Console service
- CIFS server
- FTP
- FS manager
- GUI
- IP addresses
- NIC information
- NFS server

## Using the services command

**To display the state of the services**

◆ To display the important services running on the nodes, enter the following:

```
Support> services show
                       access
Service            01        02
-------         -------- --------
nfs               ONLINE   ONLINE
cifs              ONLINE   ONLINE
ftp               ONLINE   ONLINE
iSCSIInitiator    OFFLINE  OFFLINE
gui               ONLINE   ONLINE
console           ONLINE   ONLINE
nic_pubeth0       ONLINE   ONLINE
nic_pubeth1       ONLINE   ONLINE
fs_manager        ONLINE   ONLINE
```

### To display the state of all of the services

- To display all of the services running on the nodes, enter the following:

```
Support> services showall
                       access
Service            01         02
-------         -------- --------
nfs               ONLINE   ONLINE
cifs              ONLINE   ONLINE
ftp               ONLINE   ONLINE
iSCSIInitiator    OFFLINE  OFFLINE
console           ONLINE   ONLINE
gui               ONLINE   ONLINE
nic_pubeth0       ONLINE   ONLINE
nic_pubeth1       ONLINE   ONLINE
fs_manager        ONLINE   ONLINE
10.182.107.201    ONLINE   ONLINE
10.182.107.202    ONLINE   ONLINE
10.182.107.203    ONLINE   ONLINE
10.182.107.204    ONLINE   ONLINE
/vx/fs1           ONLINE   ONLINE
```

### To fix any service fault

- To fix any service fault, enter the following:

```
Support> services autofix
Attempting to fix service faults..........done
```

### To bring a service online

- To bring a service online on the nodes, enter the following:

```
Support> services online servicename
```

where *servicename* is the name of the service you want to bring online.

For example:

```
Support> services online 10.182.107.203
```

# Recovering from a non-graceful shutdown

In some cases, when a non-graceful shutdown of a node occurs (for example, during an unexpected system halt or power failure), you may receive an error message on the local node asking you to use the Linux `fsck` (file system check) command to repair files on the node.

Attempting to use the `fsck` command to repair the node is not recommended (and may not be possible). Instead, use a healthy node in the cluster to reinstall Veritas Access software on the damaged node.

**To recover a node**

1. Use the `master` account to log into Veritas Access.
2. Delete the failed node from the cluster. To delete the node, enter the following:

   ```
   Cluster> del nodename
   ```

   where *nodename* is the name of the failed node.

   For example:

   ```
   Cluster > del access_01
   ```

   **Note:** The failed node information is deleted from the cluster. When the failed node is rebooting, it will detect that it has been deleted and clean itself up.

3. After the node is deleted from the cluster, reboot the deleted node and then it is reachable using its original physical IP address (before the node had been added to the cluster).
4. Add the node back by entering the following:

   ```
   Cluster> add nodeip
   ```

   where *nodeip* is the reachable IP address of the deleted node.

   For example:

   ```
   Cluster > add 172.16.113.118
   ```

# Testing the network connectivity

You can test whether a particular host or gateway is reachable across an IP network.

### To use the ping command

◆ To use the ping command, enter the following:

```
Network> ping destination [nodename]
[devicename] [packets]
```

For example, you can ping host1 using node1:

```
Network> ping host1 node1
```

| | |
|---|---|
| *destination* | Specifies the host or gateway to send the information to.<br>The destination field can contain either a DNS name or an IP address. |
| *nodename* | Specifies the *nodename* to ping from. To ping from any node, use `any` in the *nodename* field. The *nodename* field is an optional field. If *nodename* is omitted, any node is chosen to ping from. |
| *devicename* | Specifies the device through which you ping. To ping from any device in the cluster, use the `any` variable in the `devicename` field. |
| *packets* | Specifies the number of packets that should be sent to the destination.<br>If the packets field is omitted, five packets are sent to the destination by default.<br>The packets field must contain an unsigned integer. |

# Troubleshooting with traceroute

Traceroute is a widely-available utility supported by the Linux operating system. Much like ping, traceroute is a valuable tool to determine connectivity in a network. The Veritas Access `Support> ping` command enables you to discover connections between two systems. The `Support> traceroute` command checks system connections as well, but also lists the intermediate hosts between the two systems. Users can see the routes that packets can take from one system to another. Use the `Support > traceroute` command to find the route to a remote host.. For example, you might use the `Support> traceroute` command to verify the connectivity of each node in your cluster.

# Using the traceroute command

The `Support> traceroute` command displays all of the intermediate nodes on a route between two nodes.

**To use the traceroute command**

- To use the `Support> traceroute` command, enter the following:

```
Support> traceroute destination [source]
[maxttl]
```

*destination*

The target node. To display all of the intermediate nodes that are located between two nodes on a network, enter the *destination* node.

You need to specify either an IPv4 address for an IPv4 installation or an IPv6 address for an IPv6 installation.

The accepted range for an IPv6 prefix is 0-128 integers.

*source*

Specifies the *source* node name from where you want to begin the trace.

*maxttl*

Specifies the maximum number of hops. The default is seven hops.

For example, to trace the route to the network host, enter the following:

```
Support> traceroute www.veritas.com fssClus_01 10
traceroute to www.veritas.com (23.5.150.79), 10 hops max, 60 byte packets
 1  puna-sli-core-b01-vlan329.net.symantec.com (10.209.192.2) 0.356 ms  0.354 ms 0.376 ms
 2  punb-vfpi-eng-1-aggregate2-104.net.veritas.com (10.209.186.14) 0.298 ms 0.322 ms 0.379 ms
 3  puna-spi-core-b02-vlan105.net.symantec.com (143.127.185.130) 1.851 ms  1.964 ms  1.940 ms
 4  bnrcatcore01-teng6-2.net.symantec.com (143.127.185.205)  1.902 ms 1.903 ms 1.932 ms
 5  puna-vfpi-main-1-vip.net.veritas.com (10.212.252.50) 1.886 ms 1.945 ms 1.922 ms
```

# Collecting the metasave image of a file system

You can collect a metasave image of a regular or a scale-out file system for troubleshooting file system issues. Metadata is a data structure that contains attributes about the data within a file system, but does not contain the actual data itself. You can use metadata images for tracking file system trends, such as the file size, age, and type of information in the file system.

**Note:** When using the `Support> metasave` command, the file system must be offline on all the cluster nodes to create a consistent metasave image. Bring the file system offline using the `Storage> fs offline` command before collecting the metasave image. Metasave image collection is a time consuming operation. The total time that is required depends on the amount of metadata information present in the file system. If you have a scale-out file system, it can take significantly longer to collect a metasave image. You can run other Veritas Access operations from a separate terminal while running the metasave operation.

### To collect the metasave image of a file system

- To use the `Support> metasave` command, enter the following:

```
Support> metasave [fsname] [output_location]
```

`fsname` Specifies the name of the file system for which you want to collect a metasave image of the file system.

`output_location` Specifies the directory location of the metasave image.

For a regular file system, a single metasave image is stored at the directory location specified by `output_location`.

For a scale-out file system, multiple metasave images are produced depending on the number of container file systems inside the scale-out file system. For scale-out file systems, the namespace mapping is also included in the metasave image.

For example, to collect the metasave image of file system `testfs`, and store it under `/tmp/meta_out_dir`, enter the following:

```
Support> metasave testfs /tmp/meta_out_dir
Collecting metasave image of file system testfs. This may take some time...
SUCCESS: Metasave image of testfs collected successfully. Image is stored at /tmp/meta_out_dir.
```

# Replacing an Ethernet interface card

In some cases, you may need to replace an Ethernet interface card on a node. This section describes the steps to replace the card.

**Note:** This procedure works for replacing an existing Ethernet interface card. It does not work for adding an Ethernet interface card to the cluster. If the Ethernet interface card you add needs a new device driver, install the new device driver before installing the Ethernet interface card on the node.

**To replace an Ethernet interface card**

1 Use the `Cluster> shutdown` command to shut down the node.

For example:

```
Cluster> shutdown access_03
Stopping Cluster processes on access_03.......done
Sent shutdown command to access_03
```

2 Use the `Cluster> del` command to delete the node from the cluster.

For example:

```
Cluster> del access_03
```

3 Install the replacement Ethernet interface card on the node.

4 Turn on the node.

5 Make sure that the Ethernet interface card is active and online.

6 Use the `Cluster> add` command to add the node back into the cluster.

For example:

```
Cluster> add 172.16.113.118
```

For details on the `Cluster> add` and `Upgrade>` commands that are described in this section, see the *Veritas Access Command-Line Administrator's Guide*.

# Speeding up replication

In some cases, a replication job may not proceed as fast as expected. In this situation, you may need to resynchronize the replication job.

## About synchronizing a replication job

The first time a replication job is run, Veritas Access makes a full copy of the data from the source location to the destination. Subsequent jobs (triggered manually or through a schedule) only copy incremental changes.

In certain rare cases, data is already present at the destination, but the replication cannot make the incremental changes. Examples of this situation include:

- When replication has not been run for several days or weeks, and the changes that are tracked by the VxFS file change log have been overwritten (or possibly corrupted). This log is required for replication.

- When a replication job is temporarily disabled and started again, the next job run triggers a full copy of the data.
- When some changes have been made to the replication definition. For example, an earlier replication consisted of `fs1/folder1`, but you want to replicate data in `fs1/folder2` also. Because `fs1/folder2` requires a full copy, `fs1/folder1` is copied once again, even though only incremental changes are needed.
- When the direction of the replication has to be reversed from destination to source. Even though most data is present at both the destination and the source, anytime you create a new job at the destination, a full copy is triggered automatically for the first replication.
- If an administrator accidentally deletes the internal database for replications and no backup is available, creating a new job (even for an existing configuration) triggers a full copy.

In these cases, instead of waiting to initiate a full copy, you can use the `Replication> job sync` command to leverage the existing data at the destination and avoid requiring a full copy. The `Replication> job sync` command returns the replication job to a well-defined state and incremental replication can be used.

After you sync a job, the job is re-enabled, and you can use the standard job trigger or set the replication frequency to trigger incremental replication.

**Note:** Synchronization is only supported on enabled jobs. If you are not able to resume from a failed job, and you want to use the `Replication> job sync` command to recover from this state, follow these steps. First, disable the job, then enable the job again. Then, use the `Replication> job sync` command to synchronize the job.

**Note:** Synchronization can not be performed on a paused replication job. If synchronization is performed on a paused job that has been aborted or stopped, the last recovery point objective (RPO) for the paused job is not available.

## Synchronizing a replication job

**To synchronize an enabled replication job**

- To synchronize an enabled replication job, enter the following:

  ```
  Replication> job sync job_name
  ```

  | | |
  |---|---|
  | *job_name* | Specify the name of the replication job you want to synchronize. |

  For example:

  ```
  Replication> job sync job14
  ```

# Uninstalling a patch release or software upgrade

Often a problem occurs because of a known product defect. Once the defect is fixed, you can install a patch release or software upgrade to fix the issue.

When you install a patch release or software upgrade:

- Before you start the installation, use the `System> config export` command to save a copy of your configuration. After the upgrade, you can use the `System> config import` command to restore your configuration.
- To upgrade with minimal downtime, you need to obtain a set of temporary VIP and IP addresses to use during the upgrade. Alternatively, you can upgrade without using temporary VIP and IP addresses, but the downtime increases.

For details on upgrading Veritas Access, refer to the *Veritas Access Installation Guide*.

Chapter 5

# Troubleshooting Veritas Access installation and configuration issues

This chapter includes the following topics:

## Viewing the installation logs

If a problem occurs during installation, it can be helpful to view entries in the installation logs to help pinpoint problems.

**To view the Veritas Access installation logs**

**1** During Veritas Access installation and configuration, you can access installer logs in a temporary folder under `/var/tmp`.

**2** After Veritas Access installation and configuration, you can view a copy of the installation logs in the following locations:

| | |
|---|---|
| Veritas Access post-installation logs | `/opt/VRTS/install/logs/installaccess-`*`timestamp`*<br>This directory is located on the node from which the installer is triggered (the driver node). It contains the Veritas Access specific installation logs.<br>For example:<br>`/opt/VRTS/install/logs/installaccess-201602021544AsJ` |
| Veritas Access service group configuration logs | `/opt/SYMCsnas/log/Install.log`<br>This directory contains the Veritas Access specific configuration logs.<br>For example:<br>`/opt/SYMCsnas/log/Install.log.201407030655` |
| Veritas Access network installation and configuration logs | `/opt/SYMCsnas/log/install_network.log`<br>This directory contains the Veritas Access network configuration logs.<br>For example:<br>`/opt/SYMCsnas/log/install_network.log.201407030655` |

# Installation fails and does not complete

Some common reasons for installation failures include:

- Limited memory. You must have at least 32 GB of memory to install Veritas Access software on a node.
- Single core (single CPU)
  You must have at least two nodes in a cluster (or a dual-CPU system) to install Veritas Access.
- Missing required operating system packages
  You can use yum to install the missing required operating system packages, or manually install the missing required packages.

See the *Veritas Access Installation Guide* for more information.

- Gateway access

  The Veritas Access node must be able to reach the default gateway using the public network. Verify with your network administrator that the gateway is reachable.

# Excluding PCI IDs from the cluster

During the initial Veritas Access software installation on the first node, you can exclude certain PCI IDs in your cluster to reserve them for future use. You may want to exclude additional PCD IDs when you add additional nodes to the cluster. You can add the PCI IDs to the exclusion list. The interface cards for which PCI ID's have been added in the PCI exclusion list are not used as private or public interfaces for the subsequent cluster node install. During a new node install, the remaining PCI bus interfaces are searched and added as public or private interfaces.

The `Network> pciexclusion` command can be used with different options:

- The `Network> pciexclusion show` command displays the PCI IDs that have been selected for exclusion. It also provides information about whether it has been excluded or not by displaying y(yes) or n(no) symbols corresponding to the node name. If the node is in the INSTALLED state, it displays the UUID of the node.
- The `Network> pciexclusion add` *`pcilist`* command allows an administrator to add specific PCI ID(s) for exclusion. These values must be provided before the installation. The command excludes the PCI from the second node installation.

  *pcilist* is a comma-separated list of PCI IDs.
- The `Network> pciexclusion delete` *`pci`* command allows an administrator to delete a given PCI ID from exclusion. This command must be used before the installation for it to take effect. The command is effective for the next node install

  The *PCI* ID bits format is hexadecimal (XXXX:XX:XX.X).

To use the `Network> pciexclusion` command, enter the following:

```
Network> pciexclusion show
PCI ID       EXCLUDED    NODENAME/UUID
------       --------    -------------

Network> pciexclusion add FFFF:FF:00.0
ACCESS pciexclusion SUCCESS V-288-1363 Given PCI ID FFFF:FF:00.0 has been
added for exclusion
```

```
Network> pciexclusion add FFFF:FF:00.1
ACCESS pciexclusion SUCCESS V-288-1363 Given PCI ID FFFF:FF:00.0 has been
added for exclusion

Network> pciexclusion show
PCI ID       EXCLUDED    NODENAME/UUID
------       --------    -------------
0000:0e:00.0 y           ACCESS_1
0000:0e:00.0 y           a79a7f43-9fe2-4eeb-aa1f-27a70e7a0820
0000:04:00:1 n

Network> pciexclusion delete ffff:ff:00.1
ACCESS pciexclusion SUCCESS V-288-1363 Given PCI ID FFFF:FF:00.0 has been
added for exclusion ACCESS pciexclusion SUCCESS V-288-1364 Given PCI ID
ffff:ff:00.1 has been deleted from exclusion list

Network> pciexclusion show
PCI ID             EXCLUDED      NODENAME/UUID
------             --------      -------------
ffff:ff:00.0        n
Network>
```

# Cannot repair the Red Hat Enterprise Linux operating system if you need to run a file system check

You cannot perform a `fsck` (file system check) if the Red Hat Enterprise Linux operating system partition is corrupted, and you need to restart the node. While trying to restart the node, the operating system prompts for the `root` user password to run the file system check.

Consult the Red Hat Enterprise Linux documentation for the solution to this issue.

https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/3/html/System_Administration_Guide/s1-rescuemode-boot.html

# How to find the management console IP?

**To identify which node is the console IP (management console IP)**

1. Identify which node is the management console IP.

   ```
   # hares - state | grep -I console
   ```

2. Use a Secure Shell (ssh) to access the management console (only one node has the management console).
3. On the management console, log on to the CLISH using the following command:

   ```
   su - master
   ```

# Troubleshooting Veritas Access CIFS issues

This chapter includes the following topics:

## User access is denied on a CTDB directory share

In some cases, users or groups may be denied access to a CTDB directory share even though the correct ACL is set for the share. This issue can occur when the parent directory has an ACL that prevents access for these users or groups.

This behavior is expected. To enable access:

- Make sure the root-level directory (the parent directory) is added as a CIFS share.
- To allow access, apply the same ACL settings to the parent directory as you applied to the original CTDB directory share.

Chapter 7

# Troubleshooting Veritas Access GUI startup issues

This chapter includes the following topics:

- Resolving GUI startup issues

## Resolving GUI startup issues

Veritas Access GUI accessibility issues occur if specific ports are inaccessible. Ports might be turned off on the node or on the network switch. Veritas selectively opens ports at the network switch.

**To use the Veritas Access GUI after installing Veritas Access**

1. Obtain the console virtual IP address by using the `Network> ip addr show` command.
2. Use the console IP with the port number 14161 to access the Veritas Access GUI.

   Example:

   ```
   https://console IP address:14161
   ```

3. Log on to the Veritas Access GUI using the `support` user name and password.

If this does not work, verify the GUI set up.

**To verify the GUI set up**

1. Check the `/opt/SYMCsnas/log/ isagui_config.log` file to verify that the GUI is properly configured.

   If there are any problems during the configuration, the problems are reported in this log file.

2. You need to allow ports 5634 and 14161 to be accessible remotely.

3. Open these ports by executing the following commands.

   You must log on as the `root` user.

   ```
   # /etc/init.d/iptables save
   # /etc/init.d/iptables stop
   ```

4. Turn off the firewall on start up:

   ```
   # chkconfig iptables off
   ```

   The commands work if there is no network switch-based firewall in the environment. Otherwise you need to contact the network administrator to open these ports.

5. Ports must be opened before the GUI is configured. Otherwise you should rerun the GUI configuration. Before you rerun the GUI configuration, try connecting the browser to the management console.

6. You can verify if a port is accessible by running the following command:

   ```
   telnet hostname/ipaddress 14161
   ```

   If the port is not opened or not listened to, the connection waits forever. Try connecting with a random port that is not open. You see a difference in behavior.

7. Restart if the web server is not running.

   ```
   service vamgmt forcestop

   service vamgmt start

   ps -ef | grep node
   ```

   After running the `ps -ef | grep node` command, the results should show:

```
/opt/SYMCsnas/isagui/ext_modules/node /opt/SYMCsnas/isagui/application/server.js development
```

8. You should be able to connect to the GUI and be able to log on.

9 If data is not properly discovered or not seen in the GUI, run the following commands:

```
Export EXTRA_LOG=1
```

```
/opt/SYMCsnas/pysnas/bin/isagui_cluster_perf.py --full
```

10 If there are any errors, check the log file.

```
/opt/SYMCsnas/log/isagui_cluster_perf.log
```

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