Sun Cluster 3.1 Data Service for NetBackup Guide

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Contents

Preface

Sun Cluster 3.1 Data Service for NetBackup Guide explains how to install and configure Sun™ Cluster HA for NetBackup on your Sun Cluster nodes.

This document is intended for system administrators with extensive knowledge of Sun software and hardware. Do not use this document as a planning or presales guide. Before reading this document, you should have already determined your system requirements and purchased the appropriate equipment and software.

The instructions in this document assume knowledge of the Solaris™ operating environment and expertise with the volume manager software that is used with Sun Cluster.

UNIX Commands

This document contains information about commands that are specific to installing and configuring Sun Cluster data services. The document does *not* contain comprehensive information about basic UNIX® commands and procedures, such as shutting down the system, booting the system, and configuring devices. Information about basic UNIX commands and procedures is available from the following sources:

- Online documentation for the Solaris software environment
- Solaris operating environment man pages
- Other software documentation that you received with your system

Typographic Conventions

The following table describes the typographic changes used in this book.

TABLE P–1 Typographic Conventions

Typeface or Symbol	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories; on-screen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with on-screen computer output	`machine_name%` **`su`** `Password:`
AaBbCc123	Command-line placeholder: replace with a real name or value	To delete a file, type **`rm`** *filename*.
AaBbCc123	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in *User's Guide*. These are called *class* options. You must be *root* to do this.

Shell Prompts in Command Examples

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell prompt	`machine_name%`
C shell superuser prompt	`machine_name#`
Bourne shell and Korn shell prompt	`$`
Bourne shell and Korn shell superuser prompt	`#`

Related Documentation

Information about related Sun Cluster topics is available in the documentation that is listed in the following table.

Topic	Title	Part Number
Data service administration	*Sun Cluster 3.1 Data Service Planning and Administration Guide*	817-3305
	Sun Cluster 3.1 10/03 Data Services Collection at `http://docs.sun.com/db/coll/573.11`	
Concepts	*Sun Cluster 3.1 10/03 Concepts Guide*	817-0519
Software installation	*Sun Cluster 3.1 10/03 Software Installation Guide*	817-0518
System administration	*Sun Cluster 3.1 10/03 System Administration Guide*	817-0516
Hardware administration	*Sun Cluster 3.1 Hardware Administration Manual*	817-0168
	Sun Cluster 3.x Hardware Administration Collection at `http://docs.sun.com/db/coll/1024.1`	
Data service development	*Sun Cluster 3.1 10/03 Data Services Developer's Guide*	817-0520
Error messages	*Sun Cluster 3.1 10/03 Error Messages Guide*	817-0521
Command and function reference	*Sun Cluster 3.1 10/03 Reference Manual*	817-0522
Release information	*Sun Cluster 3.1 Data Services 10/03 Release Notes*	817-3324
	Sun Cluster 3.1 10/03 Release Notes	817-0638
	Sun Cluster 3.x Release Notes Supplement	816-3381

Accessing Sun Documentation Online

The docs.sun.com^{SM} Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is `http://docs.sun.com`.

Ordering Sun Documentation

Sun Microsystems offers select product documentation in print. For a list of documents and how to order them, see "Buy printed documentation" at http://docs.sun.com.

Help

If you have problems installing or using Sun Cluster, contact your service provider and provide the following information:

- Your name and email address (if available)
- Your company name, address, and phone number
- The model and serial numbers of your systems
- The release number of the operating environment (for example, Solaris 8)
- The release number of Sun Cluster (for example, Sun Cluster 3.0)

Use the following commands to gather information about each node on your system for your service provider.

Command	Function
prtconf -v	Displays the size of the system memory and reports information about peripheral devices
psrinfo -v	Displays information about processors
showrev –p	Reports which patches are installed
prtdiag -v	Displays system diagnostic information
scinstall -pv	Displays Sun Cluster release and package version information

Also have available the contents of the /var/adm/messages file.

Installing and Configuring Sun Cluster HA for NetBackup

This chapter describes the procedures to set up and administer Sun Cluster HA for NetBackup on Sun Cluster servers.

This chapter contains the following procedures.

- "How to Install VERITAS NetBackup" on page 12
- "How to Install Sun Cluster HA for NetBackup Packages Using the Web Start Program" on page 18
- "How to Install Sun Cluster HA for NetBackup Packages Using the `scinstall` Utility" on page 19
- "How to Register and Configure Sun Cluster HA for NetBackup" on page 20

Installing and Configuring Sun Cluster HA for NetBackup

The following table lists the sections that describe the installation and configuration tasks.

TABLE 1–1 Task Map: Installing and Configuring Sun Cluster HA for NetBackup

Task	For Instructions, Go To …
Note installation requirements and supported configurations	"Sun Cluster HA for NetBackup Overview" on page 10
Install VERITAS NetBackup	"Installing VERITAS NetBackup" on page 12

TABLE 1–1 Task Map: Installing and Configuring Sun Cluster HA for NetBackup *(Continued)*

Task	For Instructions, Go To ...
Install data service packages	"Installing Sun Cluster HA for NetBackup Packages" on page 17
Register and configure Sun Cluster HA for NetBackup	"Registering and Configuring Sun Cluster HA for NetBackup" on page 20
Configure Sun Cluster HA for NetBackup extension properties	"Configuring Sun Cluster HA for NetBackup Extension Properties" on page 22
View fault monitor information	"Fault Monitoring Sun Cluster HA for NetBackup" on page 23
(Optional) Configure Non-HA VERITAS NetBackup clients on a cluster	"(Optional) Configuring Non-HA VERITAS NetBackup Clients on a Cluster" on page 24

Sun Cluster HA for NetBackup Overview

Sun Cluster HA for NetBackup makes the VERITAS NetBackup master server highly available.

The NetBackup master server acts as the centralized administration and scheduling server. Each cluster can have only one NetBackup master server.

The master server communicates with media servers through connections to the public network. Typically, in non-clustered systems, the node that runs the master server is connected to the devices that are used for making and storing backups. However, in the Sun Cluster environment, you must attach backup devices to media servers rather than to master servers. You cannot include backup devices or media servers in the cluster.

NetBackup media servers are the machines that perform backups. Multiple media servers can exist on the local network. You can distribute workload between multiple media servers.

NetBackup clients are processes that run on nodes that are inside or outside of the cluster. The clients transfer data from the machine to be backed up to the master servers and media servers.

NetBackup also includes a NetBackup media manager, which consists of daemons that interact with the backup devices. Sun Cluster does not control the daemons.

Sun Cluster HA for NetBackup only makes the NetBackup master server highly available. VERITAS NetBackup components, agents, add-ons, and the features that use these components are not highly available. For example, online (hot) and warm backups of databases are not highly available because the database backup agents are not under the control of the Sun Cluster framework.

Installation Notes

Note the following considerations before you install VERITAS NetBackup and Sun Cluster HA for NetBackup. Figure 1–1 illustrates the configuration limitations.

- VERITAS NetBackup is a single-instance data service. You cannot run more than one instance of VERITAS NetBackup per cluster.
- You must install NetBackup master servers in a cluster.
- NetBackup clients can exist inside of a cluster or outside of a cluster.
- You cannot include NetBackup media servers and their backup devices (tape libraries, optical readers, and so on) in any cluster.
- The shared disk that is associated with the NetBackup master server should be large enough to accommodate the NetBackup administrative files and logs that accumulate over time. The size of the administrative files and logs depends upon the amount of backup activity that is required for your configuration.

Supported Configurations

The following figure illustrates the supported configuration for Sun Cluster HA for NetBackup.

You must include the NetBackup master server in a cluster. You can attach backup devices only to media servers. You cannot include backup devices and media servers in a cluster.

Communication between NetBackup components occurs only through connections to the public network. If failover or switchover occurs, the components under cluster control fail over or switch over to their backup nodes.
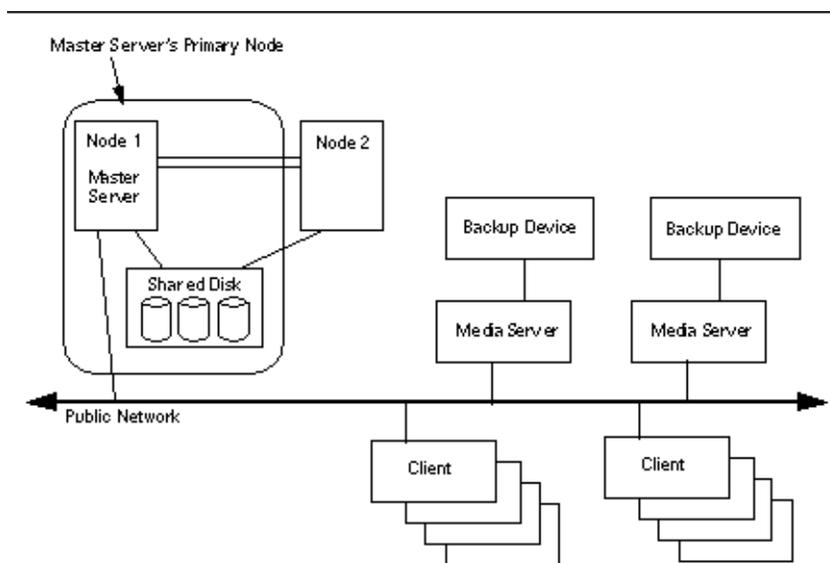
FIGURE 1–1 Sun Cluster HA for NetBackup Supported Configurations

Installing VERITAS NetBackup

After you install and configure Sun Cluster 3.1, use the following procedure and your
VERITAS documentation to install and configure VERITAS NetBackup.

▼ How to Install VERITAS NetBackup

In the examples throughout this procedure, the name *nb-master* refers to the cluster
node that masters NetBackup, and *slave-1* refers to the media server.

You must have the following information to perform this procedure.

- A list of cluster nodes that can master the data service.
- The network resource that clients use to access the data service. Normally, you set
  up this IP address when you install the cluster. See the *Sun Cluster 3.1 Concepts
  Guide* document for details on network resources.

1. Ensure that Sun Cluster is running on all of the nodes.

2. **Create a failover resource group to hold the network and application resources.**

   You can optionally select the set of nodes that the data service can run on with the -h option, as follows.

   # **scrgadm -a -g** *resource-group* [**-h** *nodelist*]

   -g *resource-group*   Specifies the name of the resource group.

   [-h *nodelist*]   Specifies an optional comma-separated list of physical node names or IDs that identify potential masters. The order here determines the order in which the nodes are considered as primary during failover. If all of the nodes in the cluster are potential masters, you do not need to use the -h option.

3. **Verify that you have added all of your network resources to the name service database.**

   You should have performed this verification during the Sun Cluster installation.

   Note – Ensure that all of the network resources are present in the server's and client's /etc/inet/hosts file to avoid any failures because of name service lookup.

   ---

4. **Add a logical host resource to the resource group.**

   # scrgadm -a -L -g resource-group -l logical-hostname

5. **Enable the failover resource group and bring the resource group online.**

   # **scswitch -Z -g** *resource-group*

   -g *resource-group*   Specifies the name of the resource group.

   -Z   Moves the resource group to the managed state, and brings the resource group online.

6. **Log on to the node that masters the logical host resource.**

7. **Execute the install script to install the VERITAS NetBackup packages from the VERITAS product CD-ROM into the /usr/openv directory.**

   phys-schost-1# **./install**

8. **When the menu appears, choose Option 1 (NetBackup).**

   This option installs both the Media Manager and the NetBackup software on the server.

9. **Follow the prompts in the installation script.**

   The installation script adds entries to the /etc/services and /etc/inetd.conf files.

```
phys-schost-1# ./install
...
Would you like to use "phys-schost-1.somedomain.com" as the
configured name of the NetBackup server? (y/n) [y] n
...
Enter the name of the NetBackup server: nb-master
...
Is nb-master the master server? (y/n) [y] y
...
Enter the fully qualified name of a media (slave) server (q to quit)?
slave-1
```

10. Switch the NetBackup resource to the backup node

11. Repeat Step 6 through Step 10 until you install the NetBackup binaries on all the nodes that will run the NetBackup resource.

Where to Go From Here

See "Enabling NetBackup to Run on a Cluster" on page 14 to enable the NetBackup to run on a cluster.

Enabling NetBackup to Run on a Cluster

This section contains the procedure you need to enable NetBackup to run on a cluster.

▼ How to Enable NetBackup to Run on a Cluster

In the examples throughout this procedure, the name *nb-master* refers to the cluster node that masters NetBackup, and *slave-1* refers to the media server.

1. Remove the /etc/rc2.d/S77netbackup and /etc/rc0.d/K77netbackup files from each cluster node on which Sun Cluster HA for NetBackup is installed.

If you remove these files, you prevent NetBackup from starting at boot time.

2. On one node, modify the /usr/openv/netbackup/bp.conf file to specify the following information.

- SERVER = *logical-hostname-resource*

All requests to the backup server originate from the primary node. The server name equals the logical hostname resource.

■ CLIENT_NAME = *logical-hostname-resource*

On a cluster that runs Sun Cluster HA for NetBackup, the CLIENT_NAME equals *nb-master*.

Note – Use this client name to back up files in the cluster running Sun Cluster HA for NetBackup.

■ REQUIRED_INTERFACE = *logical-hostname-resource*

This entry indicates the logical interface that the NetBackup application is to use.

The resulting file should resemble the following example.

```
SERVER = nb-master
SERVER = slave-1
CLIENT_NAME = nb-master
REQUIRED_INTERFACE = nb-master
```

3. **From one node, put the NetBackup configuration files on a multihost disk.**

   Place the files on a disk that is part of a failover disk device group that NetBackup is to use.

   a. **Run the following commands from the primary node of the failover disk device group. In this example, the failover disk device group is global.**

   ```
   # mkdir /global/netbackup
   # mv /usr/openv/netbackup/bp.conf /global/netbackup
   # mv /usr/openv/netbackup/db /global/netbackup
   # mv /usr/openv/volmgr/database /global/netbackup
   # ln -s /global/netbackup/bp.conf /usr/openv/netbackup/bp.conf
   # ln -s /global/netbackup/db /usr/openv/netbackup/db
   # ln -s /global/netbackup/database /usr/openv/volmgr/database
   ```

   b. **If the directory /usr/openv/db/var and the file /usr/openv/volmgr/vm.conf exist on the node, move them to the disk that is part of the failover disk device group.**

   You must configure the NetBackup master server before you move and link /usr/openv/volmgr/vm.conf file.

   ```
   # mv /usr/openv/db/var /global/netbackup/nbdb
   # mv /usr/openv/volmgr/vm.conf /global/netbackup
   # ln -s /global/netbackup/nbdb /usr/openv/db/var
   # ln -s /global/netbackup/vm.conf /usr/openv/volmgr/vm.conf
   ```

> **Note –** Run the command `scstat -D` to identify the primary for a particular disk device group.

   c. **Run the following commands from all of the other nodes that will run the NetBackup resource.**

```
# rm -rf /usr/openv/netbackup/bp.conf
# rm -rf /usr/openv/netbackup/db
# rm -rf /usr/openv/volmgr/database
# ln -s /global/netbackup/bp.conf /usr/openv/netbackup/bp.conf
# ln -s /global/netbackup/db /usr/openv/netbackup/db
# ln -s /global/netbackup/database /usr/openv/volmgr/database
```

   d. **On all of the other nodes that will run the NetBackup resource, if the directory `/usr/openv/db/var` and the file `/usr/openv/volmgr/vm.conf` exist on the node, run the following commands:**

```
# rm -rf /usr/openv/db/var
# rm -rf /usr/openv/volmgr/vm.conf
# ln -s /global/netbackup/nbdb /usr/openv/db/var
# ln -s /global/netbackup/vm.conf /usr/openv/volmgr/vm.conf
```

> **Note –** You must configure the NetBackup master server before you remove and link `/usr/openv/volmgr/vm.conf` file.

Where to Go From Here

See "Verifying the NetBackup Installation and Configuration" on page 16 to verify the NetBackup installation and configuration.

Verifying the NetBackup Installation and Configuration

This section contains the procedure you need to verify the NetBackup installation and configuration.

▼ How to Verify the NetBackup Installation and Configuration

Use this procedure to verify the NetBackup installation and configuration. This procedure does not verify that your application is highly available because you have not installed your data service yet.

1. **Start the NetBackup application manually.**

2. **Did your NetBackup application start without error?**
   - If yes, this step completes this procedure.
   - If no, you need to install and configure NetBackup again.

Where to Go From Here

See "Installing Sun Cluster HA for NetBackup Packages" on page 17 to register Sun Cluster HA for NetBackup and configure the cluster for the data service.

Installing Sun Cluster HA for NetBackup Packages

If you did not install the Sun Cluster HA for NetBackup packages during your initial Sun Cluster installation, perform this procedure to install the packages. Perform this procedure on each cluster node where you are installing the Sun Cluster HA for NetBackup packages. To complete this procedure, you need the Sun Cluster Agents CD-ROM.

If you are installing more than one data service simultaneously, perform the procedure in "Installing the Software" in *Sun Cluster 3.1 10/03 Software Installation Guide*.

Install the Sun Cluster HA for NetBackup packages by using one of the following installation tools:

- The Web Start program
- The `scinstall` utility

Note – The Web Start program is *not* available in releases earlier than Sun Cluster 3.1 Data Services 10/03.

▼ How to Install Sun Cluster HA for NetBackup Packages Using the Web Start Program

You can run the Web Start program with a command-line interface (CLI) or with a graphical user interface (GUI). The content and sequence of instructions in the CLI and the GUI are similar. For more information about the Web Start program, see the `installer`(1M) man page.

1. **On the cluster node where you are installing the Sun Cluster HA for NetBackup packages, become superuser.**

2. **(Optional) If you intend to run the Web Start program with a GUI, ensure that your `DISPLAY` environment variable is set.**

3. **Load the Sun Cluster Agents CD-ROM into the CD-ROM drive.**

   If the Volume Management daemon `vold`(1M) is running and configured to manage CD-ROM devices, it automatically mounts the CD-ROM on the `/cdrom/scdataservices_3_1_vb` directory.

4. **Change to the Sun Cluster HA for NetBackup component directory of the CD-ROM.**

   The Web Start program for the Sun Cluster HA for NetBackup data service resides in this directory.

   ```
   # cd /cdrom/scdataservices_3_1_vb/\
   components/SunCluster_HA_NetBackup_3.1
   ```

5. **Start the Web Start program.**

   ```
   # ./installer
   ```

6. **When you are prompted, select the type of installation.**

   - To install only the C locale, select Typical.
   - To install other locales, select Custom.

7. **Follow instructions on the screen to install the Sun Cluster HA for NetBackup packages on the node.**

   After the installation is finished, the Web Start program provides an installation summary. This summary enables you to view logs that the Web Start program created during the installation. These logs are located in the `/var/sadm/install/logs` directory.

8. **Exit the Web Start program.**

9. **Unload the Sun Cluster Agents CD-ROM from the CD-ROM drive.**

   a. **To ensure that the CD-ROM is not being used, change to a directory that does *not* reside on the CD-ROM.**

   b. **Eject the CD-ROM.**

      `# eject cdrom`

Where to Go From Here

See "Registering and Configuring Sun Cluster HA for NetBackup" on page 20 to register Sun Cluster HA for NetBackup and configure the cluster for the data service.

▼ How to Install Sun Cluster HA for NetBackup Packages Using the `scinstall` Utility

1. **Load the Sun Cluster Agents CD-ROM into the CD-ROM drive.**

2. **Run the `scinstall` utility with no options.**
   This step starts the `scinstall` utility in interactive mode.

3. **Choose the menu option, Add Support for New Data Service to This Cluster Node.**
   The `scinstall` utility prompts you for additional information.

4. **Provide the path to the Sun Cluster Agents CD-ROM.**
   The utility refers to the CD as the "data services cd."

5. **Specify the data service to install.**
   The `scinstall` utility lists the data service that you selected and asks you to confirm your choice.

6. **Exit the `scinstall` utility.**

7. **Unload the CD from the drive.**

Where to Go From Here

See "Registering and Configuring Sun Cluster HA for NetBackup" on page 20 to register Sun Cluster HA for NetBackup and configure the cluster for the data service.

Registering and Configuring Sun Cluster HA for NetBackup

Use the procedures in this section to register and configure Sun Cluster HA for NetBackup as a failover data service.

To configure a data service, you must create resource groups and resources for your application. See *Sun Cluster 3.1 Data Services Installation and Configuration Collection* and the *Sun Cluster 3.1 Concepts Guide* document for details on resources and resource groups.

▼ How to Register and Configure Sun Cluster HA for NetBackup

This procedure describes how to use the scrgadm(1M) command to register and configure Sun Cluster HA for NetBackup.

Note – Other options also enable you to register and configure the data service. See "Tools for Data Service Resource Administration" in *Sun Cluster 3.1 Data Service Planning and Administration Guide* for details about these options.

Note – Perform this procedure on one cluster member.

---

1. **Become superuser on a cluster member.**

2. **Run the `scrgadm` command to register the resource types for the data service.**
   Register SUNW.netbackup_master as the resource type.

   ```
   # scrgadm -a -t SUNW.netbackup_master
   ```

   -t SUNW.netbackup_master   Specifies the predefined resource type name for your data service.

3. **Create a NetBackup resource in the resource group.**

   ```
   # scrgadm -a -j resource -g resource-group -t SUNW.netbackup_master
   ```

4. **Ensure that netbackup processes are stopped on all nodes.**

5. **Run the `scswitch`(1M) command to complete the following tasks.**

   - Enable the resource and fault monitoring.
   - Move the resource group into a managed state.
   - Bring the resource group online.

   # **scswitch -Z -g** *resource-group*

   -Z   Moves the resource group to the managed state, and brings the resource
   group online.

Example – Registering Sun Cluster HA for NetBackup

The following example shows how to register Sun Cluster HA for NetBackup on a
two-node cluster.

Cluster Information
Node names: phys-schost-1, phys-schost-2
Resource Type: SUNW.netbackup_master
Logical hostname resource: nb-master
Resource group: NB-RG (failover resource group)
Netbackup Resources: test-scnb

(Register the NetBackup resource type.)
scrgadm -a -t SUNW.netbackup_master

(Add the failover resource group to contain all the resources.)
scrgadm -a -g NB-RG -h phys-schost-1,phys-schost-2

(Add the network resource to the resource group.)
scrgadm -a -L -g NB-RG -l nb-master

(Add the NetBackup resource to the resource group.)
scrgadm -a -j test-scnb -g NB-RG -t SUNW.netbackup_master

(Bring the resource group online.)
scswitch -Z -g NB-RG

Configuring Sun Cluster HA for NetBackup Extension Properties

This section describes the Sun Cluster HA for NetBackup extension properties. Typically, you use the command line `scrgadm -x` *parameter=value* to configure the extension properties when you create the resource. See "Standard Properties" in *Sun Cluster 3.1 Data Service Planning and Administration Guide*for details on all of the Sun Cluster properties.

Table 1–2 describes the extension properties that you can set for the NetBackup resource. You can update some extension properties dynamically. You can update others, however, only when you create the resource. In the following table, the Tunable field indicates when you can update each property.

TABLE 1–2 Sun Cluster HA for NetBackup Extension Properties

Name/Data Type	Description
`Start_command` (string)	The command that starts the NetBackup application. **Default:** `/opt/SUNWscnb/master/bin/start.netbackup` **Range:** None **Tunable:** Never
`Stop_command` (string)	The command that stops the NetBackup application. **Default:** `/opt/SUNWscnb/master/bin/stop.netbackup` **Range:** None **Tunable:** Never
`Monitor_retry_count` (integer)	The number of Process Monitor Facility (PMF) restarts that is allowed for the fault monitor. **Default:** 4 **Range:** Minimum = 1 **Tunable:** Any time

TABLE 1–2 Sun Cluster HA for NetBackup Extension Properties   *(Continued)*

Name/Data Type	Description
`Monitor_retry_interval` (integer)	The time (in minutes) for the fault monitor to restart. **Default:** 2 **Range:** Minimum = 2 **Tunable:** Any time
`Probe_timeout` (string)	The time (in seconds) that is used to calculate the time that the fault monitor waits for a successful probe of the processes. At startup, NetBackup's `START` method multiplies the number of daemons by the value of `Probe_timeout` to compute the time that the daemons need to start. If the value of `Probe_timeout` is set to the default value, and there is only one daemon, the `START` method waits 60 seconds before monitoring starts. **Default:** 60 **Range:** Minimum = 1 **Tunable:** Any time

Fault Monitoring Sun Cluster HA for NetBackup

Depending on the installed version of NetBackup, NetBackup application startup starts one of the following sets of daemons:

- `vmd`, `bprd`, and `bpdbm`
- `vmd`, `bprd`, `bpdbm`, `bpjobd`, and `nbdbd`

Sun Cluster HA for NetBackup can work with either of these two sets of daemons. The Sun Cluster HA for NetBackup fault monitor monitors either of these two sets of processes. While the `START` method runs, the fault monitor waits until the daemons are online before monitoring the application. The `Probe_timeout` extension property specifies the amount of time that the fault monitor waits.

After the daemons are online, the fault monitor uses `kill (pid, 0)` to determine whether the daemons are running. If any daemon is not running, the fault monitor initiates the following actions, in order, until all of the probes are running successfully.

1. Restarts the resource on the current node.
2. Restarts the resource group on the current node.
3. Fails over the resource group to the next node on the resource group's nodelist.

All process IDs (PIDs) are stored in a temporary file, `/var/run/.netbackup_master`.

(Optional) Configuring Non-HA VERITAS NetBackup Clients on a Cluster

Optionally, you can configure NetBackup clients on a cluster that **will not run** Sun Cluster HA for NetBackup. To do so, use one of the following methods.

- **Configure each node as a separate NetBackup client –** You can use any of the nodes to backup files on the cluster file system. You can use a particular node's NetBackup client name to backup files that are local to that node.

- **Configure one logical hostname resource as the NetBackup client –** You cannot configure multiple logical hostname resources on a cluster as NetBackup clients. Furthermore, if you have configured a logical hostname resource as the NetBackup client, you cannot configure any nodes that are potential primaries for that logical hostname as NetBackup clients.

  To configure one logical hostname resource as a NetBackup client, perform the following steps.

  1. On all of the potential primary nodes for the logical hostname resource, modify the file `/usr/openv/netbackup/bp.conf` so that `CLIENT_NAME` equals *logical-hostname-resource*, as follows.

     CLIENT_NAME = *logical-hostname-resource*

  2. On all of the potential primary nodes for the logical hostname resource, add the following entry to the `/usr/openv/netbackup/bp.conf` file.

     REQUIRED_INTERFACE = *logical-hostname-resource*

     Note – If `REQUIRED_INTERFACE` already exists, modify the entry to equal *logical-hostname-resource*.

     If the name of the logical hostname resource is `schost-1`, for example, the modified file should contain the following entries.

```
SERVER = nb-master
SERVER = slave-1
CLIENT_NAME = schost-1
REQUIRED_INTERFACE = schost-1
```

Index