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The last printing date and part number indicate the current edition. Changes incorporated in the December 2005 reprint include support for Quorum Server on HP-UX workstation systems.

### Table 1: Printing History

<table>
<thead>
<tr>
<th>Printing Date</th>
<th>Part Number</th>
<th>Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2005</td>
<td>T8467-90026</td>
<td>First Edition</td>
</tr>
<tr>
<td>December 2005</td>
<td>T8467-90026</td>
<td>First Reprint</td>
</tr>
</tbody>
</table>
1 HP Serviceguard Quorum
Server Version A.02.00
Release Notes, Fourth Edition
Announcements

This second printing of the release notes includes support for Quorum Server on HP-UX workstation systems.

Serviceguard cluster products are specialized facilities for protecting mission-critical applications from a wide variety of hardware and software failures. The HP Serviceguard Quorum Server (QS) provides arbitration services for Serviceguard clusters when a cluster partition is discovered. Should equal-sized groups of nodes become separated from each other, the Quorum Server allows one group to achieve quorum and form the cluster, while the other group is denied quorum and cannot start a cluster.

The following version of HP Serviceguard Quorum Server is now being made available:

- Product B8467BA — A.02.00 — software and license

HP Serviceguard Quorum Server A.02.00 is being released for use with Serviceguard clusters running on HP-UX 11.0 and 11i (both Integrity Servers and HP 9000 servers) and Linux (Red Hat or SuSE), and HP-UX workstation systems running on HP-UX 11.0, 11i v1, or 11i v2.

Versions of Quorum Server for each HP Serviceguard release are included on the Serviceguard Distributed Components CD (B8466BA). These Release Notes are included on that CD.

More versions of the Quorum Server, for more operating system distributions, are available free from HP's software web site:

http://software.hp.com

NOTE

B8466BA (Serviceguard Distributed Components) and B8467BA (Serviceguard Quorum Server) are not products you can order.
What’s in this Version

This version of the Quorum Server runs on both HP-UX and Linux systems, and supports multiple HP-UX and/or Linux clusters.

The Quorum Server cannot reside in the same cluster that uses it.

The Quorum Server can be configured in a package in a cluster.

The HP-UX Quorum Server runs on an HP 9000 and on Integrity servers. The Linux version runs on Compaq Proliant servers and on HP Net Servers, if the operating system is supported by HP for net servers. Complete details about supported Quorum Server configurations are found in the HP 9000 Servers Configuration Guide and in the MC/Serviceguard for Linux Cluster Configuration Guide, available through your HP representative.

Version A.02.00 adds support for the Quorum Server to run on HP-UX workstation systems, such as 700 Series and C200 that are in an environment running HP-UX 11.0, 11i v1, or 11i v2.

If the Quorum Server is not available or reachable, it will not adversely affect any clusters using that Quorum Server, unless a cluster experiences a reformation where exactly 50 percent of the cluster nodes cannot communicate with each other during that time.

You can create the Quorum Server to be a package, so it is highly available. The package must run outside the cluster that the quorum server serves. Previously, it was not supported to have two clusters hold the quorum servers for each other. Now, there is a way to do this. If you have a limited number of clusters, and want to investigate this method, see the white paper, Cross-cluster Quorum Server Configurations, posted on the internet at docs.hp.com/hpux/ha -> Quorum Server.

Version A.02.00 has several minor updates to support new versions of HP-UX and Linux. These updates do not change functionality. When you download the software, you specify the operating system and automatically get the correct version.

The install command for Linux uses the complete version name, for example A.02.00.03. Before installing, you can see the complete version in the file name; after installing, you can get it using the command `rpm -q qs`
What's in this Version

Documentation for This Version

These release notes are shipped with the Quorum Server Version A.02.00. They are found on the HP Serviceguard Distributed Components CD in the following directory:
Documentation/QuorumServer/A.02.00/ReleaseNotes

Updated versions may be available on the web at http://docs.hp.com/hpux/ha or on http://docs.hp.com/linux.

Complete information about configuring and using Quorum Server appears in the user's guide Managing Serviceguard for your Serviceguard release. (Address below.)

Further Information

The most recent versions of user's guides, release notes, and white papers about Serviceguard and related topics are available on these Hewlett-Packard web pages:
http://www.hp.com/hpux/ha (High Availability documents) and http://www.hp.com/linux (Linux-specific documents)

Support information, including current information about patches and known problems, is available from the Hewlett-Packard IT Resource Center:
http://itrc.hp.com (Americas and Asia Pacific) or http://europe.itrc.hp.com (Europe)
Compatibility Information and Installation Requirements

Read this entire document and any other Release Notes or READMEs you may have before you begin an installation.

System Requirements

The Quorum Server process runs on an HP-UX or Linux system outside of the cluster for which it is providing quorum services. The Quorum Server uses TCP/IP, and it listens to connection requests from the Serviceguard nodes on port # 1238. The server maintains a special area in memory for each cluster, and when a node obtains the cluster lock, this area is marked so that other nodes will recognize the lock as “taken.” It may provide quorum services for more than one cluster. Consult the HP 9000 Servers Configuration Guide (available through your HP representative) for additional information about supported platforms.

Compatibility with Serviceguard Versions

The following table explains which Quorum Server versions are compatible with which Serviceguard versions.

Note that the IA64 version is functionally equivalent to the PA RISC version and that there is not a A.01.01 version of Quorum Server for PA RISC.

For a more complete supportability matrix, go to docs.hp.com/hpux/ha -> Quorum Server -> Supportability Matrixes and Serviceguard -> Matrixes
The earlier versions of Quorum Server (Versions 1.0 and 1.1) are not compatible with Serviceguard 11.14.02 or later. For Serviceguard versions 11.14.02 or later, use this A.02.00 version of the Quorum Server.
Memory and Disk Requirements

Memory: 7.0 MB
Disk space: 1 MB

Installing the Quorum Server

The QS software, which has to be running during cluster configuration, must be installed on a system other than the nodes on which your cluster will be running. This could be a single Linux or HP-UX system, or it could be a separate cluster.

If you are updating from an older version of Quorum Server, see instructions below for updating.

Order is important if you are updating Quorum Server and also updating Serviceguard to 11.14.02 or later. You must update Quorum Server first, before updating Serviceguard. See migration instructions, below.

NOTE

It is recommended that the node on which the QS is running be in the same subnet as the clusters for which it is providing services. This will help prevent any network delays which could affect Quorum Server operation. If you use a different subnet, you may experience network delays which may cause Quorum Server timeouts. To prevent these timeouts, you can use the QS_TIMEOUT_EXTENSION parameter in the cluster ASCII file to increase the Quorum Server timeout interval.

If the network used to connect to the Quorum Server is a cluster heartbeat network, ensure that at least one other network is also a heartbeat network so that both Quorum Server and heartbeat communication are not likely to fail at the same time.

Installing on HP-UX

Use the swinstall command to install the QS, product number B8467BA, on the system or systems where it will be running. You install the Quorum Server on a node outside the cluster (or clusters) that it serves. The only installation required on the clusters that use the Quorum Server lock is Serviceguard itself.

If you are updating from an earlier version of Quorum Server, skip to the upgrading instructions below.
You can install in one of two ways:

- To install from the HP Serviceguard Distributed Components CD:
  1. Mount the CD ROM, using /SD-CDROM as the mount directory.
  2. Run the swinstall command.
  3. When the window opens, set the Source Depot Type to Local CDROM.
  4. For the Source Depot Path, fill in the appropriate build:

     /SD-CDROM/QuorumServer/HP-UX/11.00/quorumserver.depot
     /SD-CDROM/QuorumServer/HP-UX/11.11/quorumserver.depot
     /SD-CDROM/QuorumServer/HP-UX/11.22/quorumserver.depot
     /SD-CDROM/QuorumServer/HP-UX/11.23/eng.Notice.txt

  5. A window opens with the quorum server product highlighted, for example: B8467BA A.02.00.03 Quorum Server. Select this entry, then start the install.

     Version A.02.00 has several minor updates to support new versions of HP-UX and Linux. These updates do not change functionality. When you download the software, you specify the operating system and automatically get the correct version.

- To install from the web, go to http://software.hp.com. Click “High Availability,” then select “HP Serviceguard Quorum Server for HP-UX.”

  1. Download B8467BA version A.02.00, and store it on your disk. (You can remove the depot from your disk after you finish installing.)
  2. Run the swinstall command on this depot. Select B8467BA A.02.00.03 Quorum Server.

     Version A.02.00 has several minor updates to support new versions of HP-UX and Linux. These updates do not change functionality. When you download the software, you specify the operating system and automatically get the correct version.
The QS executable file, \texttt{qs}, is installed in the /\texttt{usr/lbin} directory. When the installation is complete, you need to create an authorization file on the server where the QS will be running to allow specific host systems to obtain quorum services. The \textit{required} pathname for this file is /\texttt{etc/cmcluster/qs\_authfile}. Enter into the file the names of all cluster nodes that will access quorum services from this Quorum Server. Use one line per node, as in the following example:

\begin{verbatim}
ftsys9.localdomain.com
ftsys10.localdomain.com
\end{verbatim}

To allow access by all nodes, enter a plus sign (+).

Also, create a directory for the QS log file. The recommended pathnames are in Table 1-3 on page 15. (You may need to create the directory.)

**Installing on Linux**

Version A.02.00 has several minor updates to support new versions of HP-UX and Linux. These updates do not change functionality. When you download the software, you specify the operating system and automatically get the correct version.

The install command for Linux uses the complete version name, for example A.02.00.03. Before installing, you can see the complete version in the file name; after installing, you can get it using the command \texttt{rpm -q qs}

To install your software on Red Hat Linux or SuSE Linux, mount the distribution CD, change into the Quorum Server directory, and then to the appropriate directory for your operating system. You will see the complete product number on the file. Run the \texttt{rpm} command for that product name, for example, for A.02.00.03, you would enter:

\begin{verbatim}
# cd /mnt/cdrom/QuorumServer/Linux/ 
(Red Hat) # rpm -i qs-A.02.00.03-0.product.redhat.i386.rpm 
(SuSE) # rpm -i qs-A.02.00.03-0.product.suse.i386.rpm
\end{verbatim}

The Quorum Server executable file, \texttt{qs}, is installed on Red Hat in the /\texttt{usr/local/qs/bin} directory, and on SuSE in the /\texttt{opt/qs/bin} directory.
When the installation is complete, you need to create an authorization file on the server where the QS will be running to allow specific host systems to obtain quorum services. The required pathname for this file is:

**Red Hat:** `/usr/local/qs/conf/qs_authfile`

**SuSE:** `/opt/qs/conf/qs_authfile`

Enter into the file the names of all cluster nodes that will access cluster services from this Quorum Server. Use one line per node, as in the following example:

```plaintext
ftsys9.localdomain.com
ftsys10.localdomain.com
```

To allow access by all nodes, enter a plus sign (+).

Also, create a directory for the QS log file. The recommended pathnames are in Table 1-3 on page 15. (You may need to create the directory.)

### Creating a Package for the Quorum Server

You can run the Quorum Server as a package in another cluster. A QS package running on one cluster can provide quorum services for up to 50 clusters, if the total number of nodes in all clusters cannot exceed 100.

Previously, it was not supported to have two clusters hold the quorum servers for each other. Now, there is a way to do this. If you have a limited number of clusters, and want to investigate this method, see the white paper, *Cross-cluster Quorum Server Configurations*, posted on the internet at docs.hp.com/hpux/ha -> Quorum Server.

To configure the Quorum Server into a package with QS as the monitored service, use the following procedure:

1. Install the Quorum Server software on all nodes, as described above.

2. In the configuration directory (`$SGCONF`), create a subdirectory for the QS package, then change into it:

   ```bash
   # mkdir qs-pkg
   # cd qs-pkg
   ```

3. Create a package ASCII file by using the cmmakepkg command:

   ```bash
   # cmmakepkg -P qs-pkg.config
   ```
4. Edit the file using the parameters in the following table.

**Table 1-2** Package ASCII File Parameters for qs-pkg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACKAGE_NAME</td>
<td>qs-pkg</td>
</tr>
<tr>
<td>PACKAGE_TYPE</td>
<td>FAILOVER</td>
</tr>
<tr>
<td>FAILOVER_POLICY</td>
<td>CONFIGURED_NODE</td>
</tr>
<tr>
<td>FAILBACK_POLICY</td>
<td>MANUAL</td>
</tr>
<tr>
<td>NODE_NAME</td>
<td>*</td>
</tr>
<tr>
<td>AUTO_RUN</td>
<td>YES</td>
</tr>
<tr>
<td>LOCAL_LAN_FAILOVER_ALLOWED</td>
<td>YES</td>
</tr>
<tr>
<td>NODE_FAIL_FAST_ENABLED</td>
<td>NO</td>
</tr>
<tr>
<td>RUN_SCRIPT</td>
<td>$SGCONF/qs-pkg/qs-pkg.ctl</td>
</tr>
<tr>
<td>RUN_SCRIPT_TIMEOUT</td>
<td>NO_TIMEOUT</td>
</tr>
<tr>
<td>HALT_SCRIPT</td>
<td>$SGCONF/qs-pkg/qs-pkg.ctl</td>
</tr>
<tr>
<td>HALT_SCRIPT_TIMEOUT</td>
<td>NO_TIMEOUT</td>
</tr>
<tr>
<td>SERVICE_NAME</td>
<td>qs</td>
</tr>
<tr>
<td>SERVICE_FAIL_FAST_ENABLED</td>
<td>NO</td>
</tr>
<tr>
<td>SERVICE_HALT_TIMEOUT</td>
<td>10</td>
</tr>
<tr>
<td>SUBNET</td>
<td>Specify your subnet here.</td>
</tr>
</tbody>
</table>

5. Create a control script in the same directory:

```
# cmmakepkg -s qs-pkg.ctl
```

6. Edit the file using the parameters in the following table.

**Table 1-3** Package Control Script Parameters for qs-pkg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP[0]</td>
<td>IP address to be used when accessing the Quorum Server</td>
</tr>
</tbody>
</table>
Running the Quorum Server and Specifying a Log File

The Quorum Server must be running during the following cluster operations:

- when the cmquerycl command is issued.
- when the cmapplyconf command is issued.
- when there is a cluster re-formation.

By default, Quorum Server run-time messages go to stdout and stderr. It is suggested that you create a directory, then redirect stdout and stderr to a file in this directory, for example, /var/adm/qs/qs.log. Recommended pathnames are in Table 1-3 on page 15.

You must have root permission to execute the Quorum Server. On a single system, configure the Quorum Server to start up any time the system on which it is installed restarts or reboots. Do this by creating an entry like the following in the /etc/inittab file:

- For HP-UX:
  
  `qs:345:respawn:/usr/lbin/qs >> /var/adm/qs/qs.log 2>&1`

### Table 1-3 Package Control Script Parameters for qs-pkg (Continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBNET[0]</td>
<td>Specify your subnet here</td>
</tr>
<tr>
<td>SERVICE_NAME[0]</td>
<td>qs</td>
</tr>
<tr>
<td>SERVICE_CMD[0]</td>
<td>(&gt;&gt; Redirect file in this example shows recommended log pathnames)</td>
</tr>
<tr>
<td></td>
<td>HP-UX: /usr/lbin/qs &gt;&gt; /var/adm/qs/qs.log 2&gt;&amp;1</td>
</tr>
<tr>
<td></td>
<td>Linux:</td>
</tr>
<tr>
<td></td>
<td>Red Hat: /usr/local/qs/bin/qs &gt;&gt; /var/log/qs/qs.log 2&gt;&amp;1</td>
</tr>
<tr>
<td></td>
<td>SuSE: /opt/qs/bin/qs &gt;&gt; /var/log/qs/qs.log 2&gt;&amp;1</td>
</tr>
<tr>
<td>SERVICE_RESTART</td>
<td>“-R”</td>
</tr>
</tbody>
</table>

7. Run the cluster and start the quorum server package.
For Red Hat Linux (all in one line):

```
qs:345:respawn:/usr/local/qs/bin/qs >> /var/log/qs/qs.log 2>&1
```

For SuSE Linux:

```
qs:345:respawn:/opt/qs/bin/qs >> /var/log/qs/qs.log 2>&1
```

Start the Quorum Server as follows:

```
# init q
```

When the command is complete, the prompt appears.

Verify the Quorum Server is running by checking the `qs.log` file.
(Recommended log pathnames are in Table 1-3 on page 15.)

For HP-UX, enter:

```
# cat /var/adm/qs/qs.log
```

For Linux, enter:

```
# cat /var/log/qs/qs.log
```

The log should contain entries like the following indicating the Quorum Server has started:

```
Oct 04 12:25:06:0:main:Starting Quorum Server
Oct 04 12:25:09:0:main:Server is up and waiting for connections at port 1238
```

**Considerations for Setting Quorum Server Polling Interval (Serviceguard A.11.16 and greater)**

Serviceguard probes the Quorum Server at intervals determined by the `QS_POLLING_INTERVAL` parameter in the cluster configuration. The default value for the quorum probe interval, `QS_POLLING_INTERVAL`, is 5 minutes and the minimum value is 10 seconds.

If the quorum server process goes down while its node is still up, the Serviceguard cluster nodes can detect the halt in the quorum server process. Serviceguard will try to re-connect to the quorum server every 10 seconds until the quorum server is back up and the connection is successful. If the quorum server is needed as a tie-breaker during this downtime, the cluster will halt.
However, Serviceguard cannot immediately detect the loss of connection to the process if the quorum server's node goes down. Serviceguard will continue to poll at the configured interval. It will not discover that the quorum server connection is down until the next polling is done. If a cluster reformation starts before the next polling has occurred, Serviceguard assumes the quorum server is down. Because it requires the quorum server as a tie-breaker, it will halt the cluster. Even if the quorum server came back up before or during reformation, Serviceguard can not know the quorum server is up until the next polling.

The minimum value for the polling interval is 10 seconds. Reducing the QS_POLLING_INTERVAL means Serviceguard will detect the quorum server node failures sooner, but you will also increase the load on the quorum server due to more frequent polling. If you set a low interval, you may have to reduce the number of clusters and/or nodes using the quorum server in order to reduce the load. The need to reduce the number of supported nodes/clusters is especially relevant with the SGeFF (Serviceguard Extension for Faster Failover) product, where the lock acquisition time value is also set very low. Very low settings should be carefully tested to fine-tune all timing parameters, and the tests should be done with the cluster working in an environment that imitates the actual production environment.

**Quorum Server Parameters in Cluster Configuration**

You need to configure the Quorum Server in the cluster configuration ASCII file. Use a command like the following to obtain a cluster ASCII file that includes Quorum Server parameters:

```
# cmquerycl -q <QS_Host> -n <Node1> -n <Node2> -C <ClusterName>.config
```

The ASCII file will contain the QS_HOST, QS_POLLING_INTERVAL, and QS_TIMEOUT_EXTENSION parameters in the cluster configuration ASCII file. The default QS timeout is calculated by the system based on Serviceguard parameters, including the NODE_TIMEOUT and HEARTBEAT_INTERVAL. If you experience Quorum Server time-outs, you can either increase these parameters or use the QS_TIMEOUT_EXTENSION parameter in the cluster configuration ASCII file to increase the Quorum Server timeout value. This will extend the amount of time SG will allow to access the QS node.
NOTE

Increasing these values will impact the failover time accordingly.

Refer to “Installing the Quorum Server” on page 11 for more information about identifying the Quorum Server during cluster configuration.

Updating the Authorization File

The Quorum Server reads the authorization file at startup.

In HP-UX, the authorization file is /etc/cmcluster/qs_authfile.

In Linux Red Hat, it is /usr/local/qs/conf/qs_authfile. In Linux SuSE, it is /opt/qs/conf/qs_authfile.

If you modify this file, you need to run the following command to force a re-read of the file:

- For HP-UX: # /usr/lbin/qs -update
- For Linux:
  - Red Hat: # /usr/local/qs/bin/qs -update
  - SuSE: # /opt/qs/bin/qs -update

De-Installing Quorum Server (HP-UX)

To deinstall your software, run the HP-UX swremove command, as follows:

# swremove B8467BA

De-Installing Quorum Server (Linux)

To deinstall your software, run the Linux rpm -e command, as follows:

# rpm -e qs

(HP-UX) Updating the Quorum Server from A.01.00 or A.01.01

An update from an older version of the Quorum Server to Version A.02.00 can be done while the cluster is running.
The Quorum Server update must be done before you update Serviceguard to Version 11.14.02 or later.

1. Comment out the QS entry in /etc/inittab, and run the following command:
   
   # /sbin/init q

2. De-install the existing Quorum Server:
   
   # swremove B8467BA

3. Install Quorum Server A.02.00:
   
   # swinstall B8467BA

4. Un-comment any Quorum Server entry you made in the /etc/inittab file.

5. Start the Quorum Server:
   
   # /sbin/init q

(Red Hat Linux) Updating the Quorum Server from A.01.00

1. Remove the Quorum Server entry in /etc/inittab and run the following command:
   
   # init q

2. De-install the existing Quorum Server. For example:
   
   # rpm -e qs-A.01.00
   
   This command will remove the file /var/log/qs/qs.log. If this is your log file, you may want to save it before running this command.

3. Install Quorum Server A.02.00. For example:
   
   # rpm -i qs-A.02.00.03-0.product.redhat.i386.rpm
   
   De-installing A.02.00 may not remove the log file.

4. Add an entry like the following to the /etc/inittab file (all in one line):
   
   qs:2345:respawn:/usr/local/qs/bin/qs>>/var/log/qs/qs.log 2>&1
(Since the Quorum Server is now a real-time process, you no longer need to use the “nice” option.)

5. Re-start the Quorum Server:

   # init q

**Replacing a Failed Quorum Server System**

Use the following procedure to replace a defective Quorum Server system. If you use this procedure, you do not need to change the configuration of any cluster nodes.

1. Remove the old Quorum Server system from the network.

2. Set up the new system and configure it with the old Quorum Server’s IP address and hostname.

3. Install and configure the Quorum Server software on the new system. Be sure to include in the new QS authorization file on all of the nodes that were configured for the old Quorum Server.

   In HP-UX, the authorization file is `/etc/cmcluster/qs_authfile`.

   In Linux Red Hat, the authorization file is `/usr/local/qs/conf/qs_authfile`.

   In Linux SuSE, the authorization file is `/opt/qs/conf/qs_authfile`.

   Refer to the `qs(1)` man page for details about configuring the QS authorization file.

4. Start the Quorum Server as follows:

   - Edit the `/etc/inittab` file to add the Quorum Server entries, as shown in “Running the Quorum Server and Specifying a Log File” on page 16 above.
   - Use the `init q` command to run the Quorum Server.

   Refer to the `qs(1)` man page for more details.

5. All nodes in all clusters that were using the old Quorum Server will connect to the new Quorum Server. Use the `cmviewcl -v` command from any cluster that is using the Quorum Server to verify that the nodes in that cluster have connected to the QS.
6. The Quorum Server log file on the new Quorum Server will show a log message like the following for each cluster that uses the Quorum Server:

Request for lock /sg/<ClusterName> succeeded. New lock owners: N1, N2

7. To check that the Quorum Server has been correctly configured and to verify the connectivity of a node to the Quorum Server, you can execute the following command from your cluster nodes as follows:

    # cmquerycl -q <QSHostName> -n <Node1> -n <Node2> ...

The command will output an error message if the specified nodes cannot communicate with the Quorum Server.

---

NOTE

While the old Quorum Server is down and the new one is being set up, these things can happen:

- These three commands will not work: cmquerycl -q, cmapplyconf -C, and cmcheckconf -C.
- If there is a node or network failure that creates a 50-50 membership split, the Quorum Server will not be available as a tie-breaker, and the cluster will fail.

---

WARNING

Make sure that the old system does not re-join the network with the old IP address.
Patches, Fixes, and Known Problems in this Version

This section describes patches that are required, defects that have been fixed in version A.02.00 of Quorum Server, and known problems.

Patches

There are no patches required for version A.02.00 at the time of publication. Contact your Hewlett-Packard support representative for up-to-the-moment information. Patches can be created, superseded, or withdrawn at any time without notice. An updated list of patches is available on the Hewlett-Packard IT Resource Center site:
http://itrc.hp.com (Americas and Asia Pacific) or http://europe.itrc.hp.com (Europe)

Fixed in Quorum Server Version A.02.00.03

- JAGaf20516 - Confusing messages in the qs.log file “Checking on device” and “Could not open Lock LUN” For example:

Dec 03 15:39:08:0: Checking on device
Dec 03 15:39:08:0: Could not open cluster lock LUN : No such file or directory
Dec 03 15:39:08:0: Until it is fixed, a single failure could
dec 03 15:39:08:0: cause all nodes in the cluster to crash.

The Quorum Server log incorrectly displayed error messages about other cluster lock devices. These messages no longer appear.

Known Problems and Workarounds

There are no known problems with HP Serviceguard Quorum Server A.02.00 at the time of publication. Contact your Hewlett-Packard support representative for up-to-the-moment information. Patches can be created, superseded, or withdrawn at any time without notice. An updated list of patches is available on the Hewlett-Packard IT Resource Center site: http://itrc.hp.com (Americas and Asia Pacific) or http://europe.itrc.hp.com (Europe)
Software Availability in Native Languages

HP Serviceguard Quorum Server Version A.02.00 does not provide Native Language Support. However, separate native language versions of documentation are available as a part of product B8467BA with the following options:

- ABA: English
- ABJ: Japanese
- AB0: Traditional Chinese
- AB1: Korean
- AB2: Simplified Chinese

The translated versions of these release notes are provided on the Distributed Components CD.