ServiceGuard Manager Version A.01.00 Release Notes

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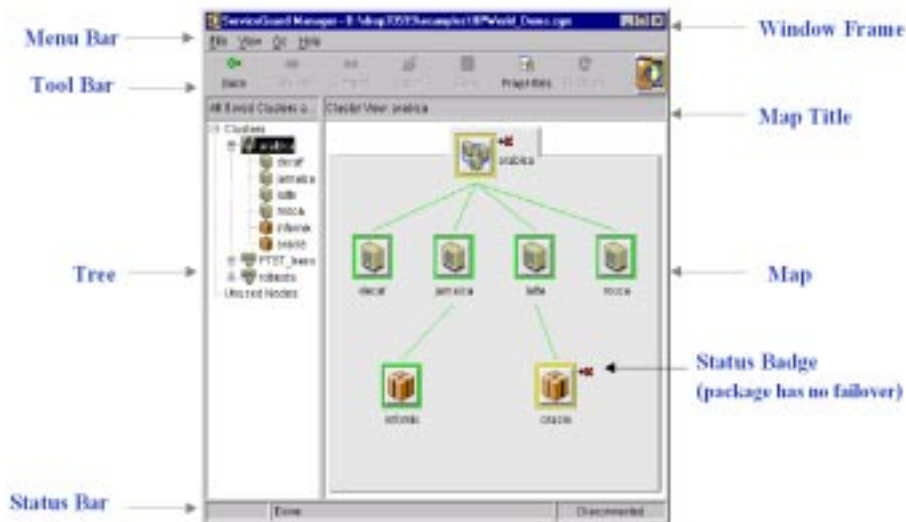
1 ServiceGuard Manager Version A.01.00 Release Notes

Announcements

ServiceGuard Manager is the graphical user interface for ServiceGuard.

What You See

Figure 1-1   **ServiceGuard Manager Interface**

With ServiceGuard Manager, you see your ServiceGuard clusters two ways.

- In the map on the right pane, you can see configuration relationships by the position of objects. You can quickly see status from the colors and symbols.

- In the tree on the left pane, you can see cluster relationships listed hierarchically.

  You can navigate through the map by clicking on items in the tree or map. The most general shows all the clusters in this map. You can also click to see only the objects directly related to a particular

cluster, node, or package.

For more detailed information, you open Properties for any cluster, node, or package.

You can save a record of your clusters. For example, you can document a newly configured cluster. If that cluster has problems later, you can open two sessions of ServiceGuard Manager, and compare cluster objects in the saved file with the current picture.

How it Works

To gather information, you connect ServiceGuard Manager to a server (any ServiceGuard node with Version A.11.12 or later).

This server goes out on its subnets, and discovers other ServiceGuard nodes. It queries them to get configuration and status information. ServiceGuard Manager uses this information to create the map, the tree list, and the property sheets.

Because Continental Clusters are always on more than one subnet, ServiceGuard Manager will see them as two clusters. To see all the cluster information, open two instances of ServiceGuard Manager, and connect to a server on each subnet.

Figure 1-2   **How ServiceGuard Manager Gathers Information**

In this diagram, ServiceGuard Manager has been installed on two systems, one with Windows and one with HP-UX. Each connects to a server (any node in a cluster with ServiceGuard A.11.12 or later installed). That server goes out and discovers all the cluster objects on its subnets that have ServiceGuard Version A.10.10 or later. Operators at both stations can see all 3 clusters in this example, since they all have installed ServiceGuard A.10.10 or later.

Nodes with the following ServiceGuard versions can be servers and do the discovering:

- ServiceGuard OPS Edition, Version A.11.12 or later

- MC/ServiceGuard Version A.11.12 or later

Cluster objects with the following ServiceGuard versions can be discovered. A cluster icon can represent any of these 4 cluster types:

- MC/ServiceGuard, Version A.10.10 or later

- ServiceGuard OPS Edition, Version A.10.10 or later

- ContinentalCluster (any version)

- MetroCluster (any version)

What's in this Version

The following version of ServiceGuard Manager is now being made available:

Product B8325BA — A.01.00 — software and license for HP-UX

Product B8341BA — A.01.00 — software and license for Windows

This is the first version of the ServiceGuard Manager, the graphical user interface for ServiceGuard products, including MC/ServiceGuard, ServiceGuard OPS Edition, MetroClusters and Continental Clusters.

What Documentation is Available for This Version

These Release Notes will help you install ServiceGuard Manager.

Once you open the interface, online help is available. Start with the help topic "Using ServiceGuard Manager" for general information.

Managing MC/ServiceGuard (B3936-90045) and *Configuring OPS clusters with ServiceGuard OPS Edition* (B5158-90031) are available at http://docs.hp.com/hpux/ha. Also check the site for other information, including Release Notes for the following products:

- ContinentalClusters
- MetroCluster
- ServiceGuard, MC/ServiceGuard
- ServiceGuard OPS Edition (MC/LockManager)

Clusters for High Availability: A Primer of HP-UX Solutions, first edition (HP Press: Prentice Hall, ISBN 0-13-494758-4). This guide describes basic cluster concepts. To see information about this HP retail book, go to http://www.hp.com/hpbooks/ and click search, then enter the title.

For general information about HP-UX 11.0, see: http://www.docs.hp.com/hpux/os/#11.0:

For information about IT/Operations and Network Node Manager, refer to: http://www. docs.hp.com/hpux/network

Further Information

Additional information about ServiceGuard and related high-availability topics may be found on Hewlett-Packard's HA web page:

```
http://www.hp.com/go/ha
```

Support information is available from the Hewlett-Packard Electronic Support Center at:

```
http://us-support.external.hp.com (US and Asia Pacific)
http://europe-support.external.hp.com (Europe)
```

Compatibility Information and Installation Requirements

Before you begin an installation, read this entire document, and any other Release Notes or READMEs you may have.

System requirements

ServiceGuard Manager can be installed on a computer with one of the following operating systems:

- HP-UX, Version 11.0 or later
- Microsoft Windows 2000 Professional with ServicePack 1 or later, or NT 4.0 with Service Pack 5, or later

Hardware Requirements

On HP-UX, ServiceGuard Manager will run on the 700 Series workstations and the 800 Series servers.

On a PC, ServiceGuard Manager requires a Pentium 200 MHz or higher, and a video adapter with resolution of SVGA or higher.

Memory Requirements

Running on HP-UX, ServiceGuard Manager requires:

- 256 MB of available memory
- 65 MB of available hard disk space under /opt
- 1 MB of available hard disk space under /etc/opt/OV if OpenView is installed.
- 5 MB of available hard disk space under /var for log files.

Running on Windows, ServiceGuard Manager requires:

- 128 MB of memory
- 150 MB of virtual memory
- 25 MB of available hard disk space

- 1 MB of available hard disk space under /etc/opt/OV if OpenView is installed.

- 5 MB for log files when ServiceGuard Manager is running.

Installing Software

You can install ServiceGuard Manager on an HP-UX workstation (with or without ServiceGuard), or on a PC with Windows 2000 or Windows NT.

If a previous version of ServiceGuard Manager is already installed, uninstall it before installing the new version. See information about uninstalling in the next section.

When deciding where to install ServiceGuard Manager, consider these things:

- Which operators will use the interface?

  The ServiceGuard Manager operator needs a login account on at least one server (a node that has ServiceGuard A.11.12 or later installed). This account does not need to have root permission to view clusters.

- Which clusters will they see, and do those cluster nodes share a subnet with the servers?

  To be displayed, a ServiceGuard cluster needs to be on the same subnet as the server node, but not necessarily on the same subnet as the management station. The server searches its subnets and gathers information about clusters. It passes this information back to the management station where ServiceGuard Manager is installed.

  The server and clusters must have permission to exchange information. Include each cluster node in the `/etc/cmcluster/cmclnodelist` of all the other cluster nodes, or in the `.rhosts` file.

There are three ways to install ServiceGuard Manager:

- On an HP-UX system from disk

- On a Windows system from disk

- On a Windows system by importing a file from an HP-UX installation

Installation is different for each type. Use the appropriate section below for your type of installation.

Installing ServiceGuard Manager on HP-UX

Install ServiceGuard Manager on a computer that has HP-UX Version 11.0 or later installed.

Insert the CD-ROM disk and run the SD-UX `swinstall` command for ServiceGuard Manager (B8325BA). The user interface will lead you through the installation.

On HP-UX, the ServiceGuard Manager fileset includes:

- SGMGR-UX

- SGMGR-WIN

- SGMGR-JRE (ServiceGuard Manager installs its own JRE, Java Runtime Environment', and does not use any already loaded onto the HP-UX computer.)

- ITO-UX

- NNM-UX

- SGMGR-MAN

By default, ServiceGuard Manager installs in the `/opt/sgmgr` directory. Six folders install in the ServiceGuard Manager directory:

- bin

- examples

- jre

- lib

- win

- OV (if OpenView has already been installed)

The log files are in `/var/opt/sgmgr`.

Verify that these directories have been installed. Also, enter `man sgmgr` to see that the manpage has been installed.

If you have Network Node Manager or IT/Operations installed on this computer, also see *Installing with HP OpenView*, below.

For more information about installation procedures and related issues, refer to the following manuals. These manuals can be viewed or printed from http://docs.hp.com.

- *Managing HP-UX Software with SD-UX* (B2355-90154)

- *swinstall* (1M) in the *HP-UX Reference* (B2355-90166)

Installing ServiceGuard Manager on Windows

Install ServiceGuard Manager on a computer that has Microsoft
Windows 2000 or NT 4.0 (or later) installed.

ServiceGuard Manager installs its own JRE (Java Runtime
Environment'), and can not use any already loaded onto the PC

The ServiceGuard Manager software can be installed two ways:

- From the Windows CD:

  ServiceGuard Manager is delivered on a CD for Windows. Insert the
  CD disk in the PC's drive. If the installation does not start
  automatically, run the setup.exe command.

  You can choose to install the typical or the compact installation. The
  typical installation includes an example file.

- File transfer from HP-UX:

  When ServiceGuard Manager is installed on an HP-UX computer, the
  /opt/sgmgr/win/ folder is automatically added. It contains
  sgmanager.exe, a self-extracting Install Shield file to be used on a
  PC. To move this directory from HP-UX to a folder on your PC, use
  these commands in the PC's DOS window:

  1. ftp <UX-hostname>

     to logon to an HP-UX computer that has already installed
     ServiceGuard Manager

  2. bin

     to set the transfer method to binary

  3. get /opt/sgmgr/win/sgmanager.exe

     to copy from HP-UX to PC

  4. quit

     to close ftp and return to DOS prompt. On the PC, the
     ServiceGuard Manager fileset includes two files:

     — sgmanager.exe

— README.txt

5. `sgmanager.exe`

    on the PC, to start the automatic installation

By default, ServiceGuard Manager, creates the `C:\Program Files\Hewlett-Packard\ServiceGuard Manager` folder. These 7 folders install in the ServiceGuard Manager folder:

— **bin**

— **examples**

— **jre**

— **lib**

— **log**

— **users**

— **OV**

Verify that these folders are installed. Also, verify that the name ServiceGuard Manager is listed in Start -> Programs ->, and that an SGMgr icon is on your desktop.

If you have Network Node Manager installed on this computer, see Installing with OpenView, below.

Installing with HP OpenView

When you install ServiceGuard Manager, it looks to see if you have installed OpenView NNM (Network Node Manager) Version 6.x or ITO (IT/Operations) Version 5.3 or later. (If you installed ITO, it automatically installed NNM.) ServiceGuard Manager is not supported with VPO or VPW (Vantage Point Operations or Vantage Point for Windows).

If you do have NNM Version 6.0 or later or ITO Version 5.3 orlater, the install process automatically does these things:

• Adds a button on the NNM or ITO tool bar to start ServiceGuard Manager (ServiceGuard Mgr Launcher).

• Sends ServiceGuard events to be logged in the OpenView Event Log. The ServiceGuard subagent is responsible for notifying the management station when status or configuration changes. By default, it is installed in `/usr/lbin/cmsnmpd`.

- Adds ServiceGuard messages to the ITO Message Browser if assigned, and in the NNM Alarm Browser.

- Modifies the Event Configuration Tool so you can set up automatic actions and filter ServiceGuard messages.

- Lets you configure the data collection to get historical MIB data from network nodes, including data stored in ServiceGuard MIB objects. The ServiceGuard subagent services the ServiceGuard MIB objects. By default, it is installed in `/usr/lbin/cmsnmpd`.

Then the installation process looks to see if you have ITO Version 5.30 or laterer. Then it checks to see if you have ClusterView.

If you do have ClusterView installed, only the launcher will be installed. No files will be overwritten.

If you do not have ClusterView, but you do have ITO, tools are added to the ITO Tool Bank, ready for an OpenView administrator to assign them. These tools are listed below.

Assign these tools carefully. Some require root access to the ServiceGuard nodes, and some can grant it indirectly.

- ServiceGuard Mgr launcher: You can launch ServiceGuard Manager from OpenView. ServiceGuard Manager is independent of OpenView. It does not use the OV daemons or object database to discover the configuration or status of clusters. Instead, it gets information by connecting to ServiceGuard Version A.11.12 or greater; then ServiceGuard goes out on its subnets and gathers the information.

- Installs these ITO Tools to work on a selected cluster node:

  — HA Info Tools:

    — Query Cluster Conf: uses `cmquerycl` to gather configuration information

    — Scan Cluster: uses `cmscancl` to display information about cluster configuration, LAN cards, disks, and filesystems.

    — View Cluster Binary Config: uses `cmviewconf` to see an ASCII extraction of the binary configuration file.

    — View Cluster Config: uses `cmviewcl` to see cluster configuration and status of running clusters.

    — View System Log: opens `vi` editor to view `/var/adm/syslog/syslog.log`

- HA Admin Tools:

  - Cluster Admin: opens SAM to the ServiceGuard cluster administration section

  - Cluster Config: opens SAM to the ServiceGuard cluster configuration section

  - Package Admin: opens SAM to the ServiceGuard package administration section

  - Package Config: opens SAM to the ServiceGuard package configuration section

  - Run Cluster: uses the `cmruncl` command to start a cluster from the node you selected

  - Halt Cluster: uses the `sghaltcl` command (a variant of the `cmhaltcl` command) to halt the cluster of the node you selected

  - Run Node: uses the `cmrunnode` command to join the selected node to its cluster

  - Halt Node: uses the `cmhaltnode` command to make the selected node inactive in its cluster

- Net Diag Tools:

  - View Interface Config: displays LAN interface configuration parameters

  - LAN Diag and Admin: launches the program `lanadmin`, which adminsters and tests the local area network.

  - Scan LAN interfaces: uses `lanscan` to display information about each LAN device that has software support on the system.

  - IP Interface Stat: uses `netstat` to display statistics for network interfaces and protocols, as well as the contents of various network-related data structures. (Choose options to filter output.)

- LVM tools:

  - View Logical Volumes: displays the logical volumes currently configured

  - View Volume Groups: uses `vgdisplay` to show information

about the volume groups configured.

Uninstalling ServiceGuard Manager

Uninstalling from HP-UX

On HP-UX, uninstall ServiceGuard Manager by running this command:
`swremove B8325BA`

After uninstalling ServiceGuard Manager, check the log directory (by default, `/var/opt/sgmgr/`). Remove all files (`rm -r /var/opt/sgmgr/`).

Uninstalling from a PC

On Windows, there are two ways to uninstall ServiceGuard:

• From the Start menu, choose Programs -> ServiceGuard Manager -> Uninstall.

• From the Start menu, choose Settings -> Control Panel -> Add/Remove Programs. Select ServiceGuard Manager from the list.

After uninstalling ServiceGuard Manager, delete the `C:\Program Files\Hewlett-Packard\ServiceGuard Manager\log` folder.

Uninstalling an OpenView Installation

To remove changes made by ServiceGuard Manager to Network Node Manager or IT/Operations, remove the following:

• If you have NNM only (not ITO):

1. Remove event templates: Go to the NNM or ITO menu and select Options -> Event Configuration. From the list, delete the following event groups:

— hpEMSTraps

— hpmcMgmt Traps

— hpmcSGTraps

2. Remove SGMgr MIBs: Go to the NNM or ITO menu and select Options -> Load/Unload MIBs:SNMP. Unload the following MIBs:

— hp-cluster

— hp-sgcluster

- If you have ITO:

  1. Remove messaging: Go to the Message Group Bank, and delete Message Group HA.

  2. Remove templates and monitors: Open the Message Source Templates window. By default, the following are visible on the top level. Remove them:

     — Syslog

     — SG_check_cmsnmpd

     — EMS SNMP Traps

     — HA Cluster SNMP Traps

  3. Remove Application Tools from the Application Bank: From the Application Bank, remove these tool groups:

     — HA Info

     — HA Admin

     — LVM

     — Net Diag

Setting up ServiceGuard Manager

Making a Highly Available Connection

You can create a ServiceGuard package that will keep your connection
highly available. If there is a failure in the connection, you will see the
"Connection Dropped" message flash momentarily, but ServiceGuard will
maintain your connection.

ServiceGuard Manager gets its information by connecting to the Object
Manager, a component of ServiceGuard A.11.12 or later. The Object
Manager discovers other ServiceGuard objects on its subnets. It collects
status and configuration information to send back to ServiceGuard
Manager.

To set up the highly-available connection, follow these steps:

1. Create the package in a cluster with ServiceGuard A.11.12 or later.
   See "Creating the Package Configuration" chapter in the
   ServiceGuard manual. All ServiceGuard manuals are posted on the
   web at http://docs.hp.com/ha and you can view or print them there.

   a. When naming the package, choose one that your users will
      recognize, such as Clus3Srvr. The first time a user opens
      ServiceGuard Manager they will see the Connect dialog box. They
      can type this name in for Server. After that, the name will appear
      in a list every time that user opens ServiceGuard Manager.

   b. Get an IP address to use as the package's relocatable address. You
      can use nslookup to be sure the package name and IP address are
      correctly associated in your DNS table.

   c. Make only these two modifications to the package configuration
      file template, and leave the defaults for the other fields:

      • List the package nodes. For high-availability, it is best to list all
        the nodes in the cluster.

      • For the run and halt scripts pathname, specify the control
        script name and path for the run and halt script. (The default
        path is in the documentation.)

   d. Open the control script template. Make just two modifications.
      These will allow the connection between your client (ServiceGuard

Manager station) and the server (ServiceGuard A.11.12 cluster):

- Insert the IP address associated with your package (the package's relocatable address).

- Insert the address of the subnet.

Assigning and Configuring New OpenView ITO tools

When you install ServiceGuard Manager, it checks to see if you have OpenView ITO installed. If you do, it checks to see if you have the tools listed in "Installing with HP OpenView" above. If you do not have those tools, it installs them for you.

The ITO tools are installed like other OpenView applications: SD control scripts place the files on the system and register both the back end and the front end with OpenView. The OpenView configuration is customized for user opc_adm only. The ITO Administrator is responsible for assigning access privileges and responsibilities.

Follow these steps to replace current OpenView configuration with the default configuration that came with the ServiceGuard Manager package:

1. Exit all ITO user sessions.

2. Stop the ITO server process with the /opt/OV/bin/ovstop opc command.

3. Go to /opt/sgmgr/OV and untar the configurations files in with the tar -xvf ito-ux.tar command.

4. Go to /opt/OV/bin/OpC and upload the new configuration with the opccfgupld -replace -subentity /opt/sgmgr/OV/SGOpC command.

5. Stop and restart the ITO package with the /opt/OV/bin/OpC/opcsv -stop and /opt/OV/bin/OpC/opcsv -start commands.

Launching ServiceGuard Manager

You can launch ServiceGuard Manager from HP-UX, from Windows, and from HP OpenView.

Launching ServiceGuard Manager from HP-UX

To launch ServiceGuard manager in HP-UX, go to the directory (by default, /opt/sgmgr/bin) and enter sgmgr plus any options you want. To see the full command, enter man sgmgr. The options are also listed below in *sgmgr Command Syntax*.

You can also create a script or alias that includes the options you want.

Launching ServiceGuard Manager from Windows

Here are 3 ways to launch ServiceGuard Manager in Windows:

- From the *Start* menu, select Programs -> ServiceGuard Manager. This launches the simple command, with no options. If you want to open a live connection, it will discover all the clusters on the subnets.

- Open a *DOS* window and enter the SGMgr command at the prompt. You can also enter options, as listed below in *sgmgr Command Syntax*. To limit the clusters to discover, for example, enter:

  "C:\Program Files\Hewlett Packard\ServiceGuard Manager\bin\SGMgr.exe" -c clus2 -c clus3

  It is best to put quotes around command and file path names; Windows allows spaces and other characters that could cause parsing errors.

- By default, a SGMgr shortcut icon is placed on your desktop. Double-click it to launch the program. When installed, it has the simple command without options, but you can modify it:

  1. Right-click on the icon, then choose Properties from the popup menu.

  2. Add options to the command in "Target." The options are listed

below in *sgmgr Command Syntax*. For example, to open the saved example file 4clusters.sgm, the target should say: "C:\Program Files\Hewlett Packard\ServiceGuard Manager\SGMgr.exe" -f "C:\Program Files\Hewlett Packard\ServiceGuard Manager\examples\4clusters.sgm"

It is best to put quotes around commands and file paths, as in this example. Windows allows spaces and other characters that could cause parsing errors.

Launching ServiceGuard Manager from HP OpenView

Within OpenView, you can launch SGMgr from the menu bar. You can also double-click the SGMgr icon.

sgmgr Command Syntax

The basic command to launch ServiceGuard Manager is sgmgr in HP-UX, and SGMgr.exe in Windows. These options are available:

- To open a saved (static) file:

  — The -f <filename> option opens a saved (.sgm) file. Enter the pathname of the saved file, in quotes. This option is not used with any other options. If it is not specified, the user can choose to enter it after the program launches.

- To open a server connection and see a map that you can update:

  — The -c <clustername> option specifies the clusters you want to discover and see in your map.

  If you want to use the -c option to limit clusters, you must specify it in the command line *before* ServiceGuard Manager is launched. By default, all the clusters on the server's subnets will be discovered and displayed. Limiting discovery saves time and makes the display easier to read.

  — The -s <servername> option specifies a node with ServiceGuard A.11.12 or later. Your ServiceGuard Manager session will connect to this node. The Object Manager, part of the ServiceGuard software on that node, will discover the other clusters on its subnet, and report the information back. If a server is not specified before launch, the user will be prompted to enter one after the

interface opens.

— The -l <username> option specifies the logon name of the user. If it is not specified, the user will be prompted to enter it after the program launches.

— If you specify the -l option, you may also specify the -p <password> option to specify the user's password. If it is not specified, the user will be prompted to enter it after the program launches.

Getting Started

When the interface opens, you have a chance to choose Connect or Open. To get acquainted with the program, you can open the supplied Example file.

Once you are comfortable with the interface, you can Connect to your own clusters to see current configuration and status. Use Open to see saved files of your cluster, for example to compare a current map with a map saved for benchmark documentation. When troubleshooting, you can save a file and send it to HP support or your own consultants.

Once you have a map in place, open Help. From the Help window's Table of Contents in the left pane, open Getting Started. Look at the Map Legend topic to interpret the colors, Right click on a Tree or Map object, and choose "Properties of <object>" from the popup menu. Each tab in Properties has its own Help button.

It is a good idea to save a record of each of your clusters. This will help you plan maintenance and modifications. It will acquaint new operators with your setup. It can be used as a benchmark when troubleshooting later.

There are Help topics about troubleshooting clusters and ServiceGuard Manager itself.

Patches and Fixes in this Version

This section lists patches that are required and defects that have been fixed in this version.

Required and Recommended Patches

No patches are required for ServiceGuard Manager itself.

ServiceGuard Manager installs its own JRE (Java Runtime Environment'), and can not use any already loaded onto the HP-UX computer. The following table lists HP-UX patches required or recommended for the Java Runtime Environment that is included with ServiceGuard Manager Version A.01.00.

NOTE   All of these patches are included in HP-UX 11.11. Only earlier versions of HP-UX need these patches.

Table 1-1   **Patches for JRE' Needed on HP-UX Versions Earlier than A. 11.11**

Patch	Dependencies
PHCO_19666	
PHCO_20765	
PHCO_20882	
PHKL_18543	dependencies: PHKL_21532, PHCO_19047, PHKL_21392, PHKL_20674
PHKL20016	
PHKL20202	
PHSS_16587	
PHSS_17535	
PHSS_20275	

Table 1-1　　　　　　**Patches for JRE' Needed on HP-UX Versions Earlier than A. 11.11**

Patch	Dependencies
PHSS_20864	dependencies: PHNE_20094 and PHSS_20863
PHSS_21493	

The list of patches is subject to change without notice. Contact your HP support representative for up-to-the-moment information. Patches can be superseded or withdrawn at any time, so always be sure to check the status of any patch before downloading it.

Known Problems and Workarounds

JAGad23570: Occasional Java problems on multi-processor systems.

• See JAGad27878, below

JAGad27873: Problem on NT multi-processor systems.

• See JAGad27878, below

JAGad27878 Infrequent reliability problems on Windows 2000 and Windows NT multiprocessor systems

• *What is the problem?* On multiprocessor systems (particularly 6-way MP) systems, after more than 24 hours of continuous operation under heavy stress.

• *What is the workaround?* Exit ServiceGuard Manager and restart.

JAGad02782 Shortcuts with alt keys do not work on HP-UX

• *What is the problem?* Short cut keys do not work reliably.

• *What is the workaround?* Use the mouse to select menu items.

JAGad26758 The tree doesn't reflect changes to nodes after refresh.

• *What is the problem?* Changes to nodes aren't always shown on tree after refresh.

• *What is the workaround?* Exit ServiceGuard Manager and restart.

JAGad15448 ServiceGuard Manager hang on refresh+stop

- *What is the problem?* After 48 continuous hours of operation under very heavy stress, repeatedly clicking refresh then stop will hang the program.

- *What is the workaround?* Exit ServiceGuard Manager and restart.

JAGad15067 Map missing lines

- *What is the problem?* On both NT and HP-UX, a refresh may redraw the map without connecting lines. This happens very rarely, and fixes at the next refresh.

- *What is the workaround?* Click the Refresh button.

JAGad32013 Deleted node not visible after reconnect

- *What is the problem?* If you delete a node from a cluster and press refresh, the Tree List will move the node from the Cluster to the Unused Nodes list, as expected.

  However, if you disconnect from the server and then make a new (re)connection, the node will disappear from the tree lists.

- *What is the workaround?* Realize that non-member nodes will disappear if these two things are true:

  — You are making a new server connection, and so the server is making a new discovery.

  — You are using the -c option, and so the server is only collecting information about objects in the named cluster.

JAGad12170 Java exceptions

- *What is the problem?* When the Help button or a menu item is pressed in Java SDK* with versions earlier than 1.3, you may see many exceptions on your standard out display. These do not seem to impact the display of help information.

- *What is the workaround?* Ignore these exceptions.

  * Java and JavaHelp are trademarks of Sun Microsystems, Inc.

Software Availability in Native Languages

ServiceGuard Manager Version A.01.00 interface does *not* provide Native Language Support. However, separate language versions of documentation are available. Specify the following options with the part number:

- ABO: Documentation in traditional Chinese
- AB1: Documentation in Korean
- AB2: Documentation in simplified Chinese
- ABA: Documentation in American English
- ABJ: Documentation in Japanese

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