



Management Agents for Servers for OS2

Reference Guide

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Management Agents for Servers for OS2
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Glossary

About This Guide

This guide is designed to be used as step-by-step instructions for installation and as a reference for operation, troubleshooting, and future upgrades.

Text Conventions

This document uses the following conventions to distinguish elements of text:

Keys	Keys appear in boldface. A plus sign (+) between two keys indicates that they should be pressed simultaneously.
USER INPUT	User input appears in a different typeface and in uppercase.
<i>FILENAMES</i>	File names appear in uppercase italics.
Menu Options, Command Names, Dialog Box Names	These elements appear in initial capital letters.
COMMANDS, DIRECTORY NAMES, and DRIVE NAMES	These elements appear in uppercase.
Type	When you are instructed to <i>type</i> information, type the information without pressing the Enter key.
Enter	When you are instructed to <i>enter</i> information, type the information and then press the Enter key.

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Getting Help

If you have a problem and have exhausted the information in this guide, you can get further information and other help in the following locations.

Compaq Technical Support

You are entitled to free hardware technical telephone support for your product for as long you own the product. A technical support specialist will help you diagnose the problem or guide you to the next step in the warranty process.

In North America, call the Compaq Technical Phone Support Center at 1-800-OK-COMPAQ¹. This service is available 24 hours a day, 7 days a week.

Outside North America, call the nearest Compaq Technical Support Phone Center. Telephone numbers for world wide Technical Support Centers are listed on the Compaq website. Access the Compaq website by logging on to the Internet at

¹ For continuous quality improvement, calls may be recorded or monitored.

<http://www.compaq.com>.

Be sure to have the following information available before you call Compaq:

- Technical support registration number (if applicable)
- Product serial number (s)
- Product model name(s) and numbers(s)
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level
- Detailed, specific questions

Compaq Website

The Compaq website has information on this product as well as the latest drivers and Flash ROM images. You can access the Compaq website by logging on to the Internet at

<http://www.compaq.com>.

Compaq Authorized Reseller

For the name of your nearest Compaq Authorized Reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the Compaq website for locations and telephone numbers.

Chapter 1

Introduction

Integrated Server Management Features

PC networks are of growing importance within many businesses and organizations. As these networks become larger and more complex, two facts have become clear:

- The network and its elements are becoming indispensable to the organization.
- Maintaining minimum downtime and maximum performance for the network is crucial for overall productivity.

In response to this demanding, business-critical PC network environment, Compaq established the Server Management Technology Framework that includes integrated management features and management tools for manageable devices on the network. Manageable devices include servers, workstations, desktops, laptops, routers, switches, and hubs.

A significant aspect of any server or workstation operation is the ability to manage fault conditions, monitor performance, control security and configuration, and control remote devices. Every hardware subsystem, such as disk storage, system memory, and system processor has a robust set of management capabilities built in. The Compaq Full-Spectrum Fault Management feature prevents faults before they happen, keeps the system up and running in the unlikely event of a failure, and delivers rapid recovery to normal operation after a fault occurs.

1-2 Management Agents for Servers for OS/2

Compaq Management Agents for Servers and Compaq Insight Manager™, provide timely status reports and the means for remote control and put you in charge of integrated management features.

Compaq Management Software Architecture

The Compaq Management software architecture is similar to other network management solutions. It has a client/server architecture and is comprised of the agent software (Compaq Management Agents for Servers) and the management application software (Compaq Insight Manager).

Compaq Management Agents for Servers

Compaq Management Agents for Servers operates on devices, performing in-depth monitoring of a device's state by collecting and measuring device parameters. These parameters indicate the current state of subsystems by counting the occurrence of particular events (for example, the number of read operations performed on a disk drive) or monitoring the state of a critical function (such as whether the cooling fan is operating).

Compaq Management Agents for Servers provides information to management applications such as Compaq Insight Manager, and they can generate alarm notifications if significant changes occur in the fault or performance aspects of system operation. Information is delivered to and from Compaq Management Agents for Servers by industry-standard Simple Network Management Protocol (SNMP).

Compaq Insight Manager

Compaq Insight Manager delivers intelligent monitoring and alerting along with visual control of your Compaq hardware. In the unlikely event of a hardware failure, Compaq Insight Manager also provides a full array of remote maintenance and control features.

NOTE: To install Compaq Insight Manager on the management console, refer to the *Compaq Insight Manager User Guide*.

Chapter 2

Installing and Upgrading Compaq Management Agents for Servers for IBM OS/2

System Requirements

Compaq Management Agents for Servers for IBM OS/2 requires the hardware and software listed in Table 2-1.

Table 2-1
System Requirements

Software and Hardware	Minimum Requirements
Disk Space	3 megabytes of reserved disk space
Software	IBM OS/2 Warp Server 4.0, IBM OS/2 Warp Server 4.0 Advanced, IBM OS/2 Warp Server 4.0 Advanced SMP, OS/2 Warp 4.0, IBM OS/2 Warp Server for e Business, TCP/IP Version 2.0 or later for OS/2, and IBM SystemView Agent for OS/2 Version 1.4.2 or later

continued

2-2 Management Agents for Servers for OS/2

Table 2-1
System Requirements *continued*

Software and Hardware	Minimum Requirements
Device Drivers	Compaq Support Software Diskette (SSD) for IBM OS/2, which contains the Compaq-specific device drivers for OS/2 and Compaq OS/2 Network SSD

Compaq Management Agents for Servers for IBM OS/2 have an installation utility that installs the files necessary to execute the Management Agents. The installed files include:

- **Compaq Management Agents for Servers**—Collect the management data from the instrumented drivers.
- **Compaq SNMP Agent**—Runs under TCP/IP Version 2.0 or later for the OS/2 extensible SNMP agent platform and communicates to SNMP managers, such as Compaq Insight Manager.
- **Compaq Management Agents for Servers Configuration Utility**—Configures the Management Agents for Servers.

Preinstallation Requirements

IMPORTANT: The version of Compaq Insight Manager installed on the management console must be identical to or higher than the version of Compaq Management Agents for Servers that you are installing on your devices.

Before proceeding with the agent installation, complete the following preinstallation procedures:

1. Install TCP/IP Version 2.0 or later for OS/2 before you install the Compaq Management Agents for Servers. This product includes SNMP support running Compaq Management Agents for Servers requires that TCP/IP and SNMP support be installed on your system.

NOTE: You must install TCP/IP before you install the Compaq Management Agents. Otherwise, you will have to reinstall the Compaq Management Agents.

2. If you are running IBM OS/2 Warp version 4.0, perform the following steps:
 - a. Install the IBM SystemView Agent for OS/2 Version 1.4.2 or later.

- b. Edit the *CONFIG.SYS* file.
- c. Locate the following line:

```
LIBPATH =
```
- d. Add the following statement at the end of the line in Step c:

```
[drive letter]:\<Directory where SystemView agent is installed>\DPI\DPI_1.1
```
- e. Save the changes.
- f. Shut down and restart the machine so that the changes take effect.

NOTE: You must install the SystemView Agent before installing the Management Agents. If not, you will have to reinstall the Management Agents.

- 3. If you are running IBM OS/2 Warp Server for e business, perform the following steps:
 - a. IBM has not included SNMP files in the released Warp Server for e-business CD.
 - b. Place the SNMP and TCP/IP files in the Management CD under:

```
CD DRIVE:\agents\os2\wsebsnmp
```
 - c. Copy the SNMPCFG.ZIP file from the Management CD and unzip it to the local directory.
 - d. Open the README file, and follow the steps provided.
 - e. Run TCPINST.EXE from this directory to install the SNMP and TCP/IP files. You might see the following error:
Default Response file (A: Default.RSP not found). Please copy the default.rsp file on the management CD under:

```
CD DRIVE:\agents\os2\wsebsnmp
```


To a floppy, installation of SNMP and TCP/IP will then continue successfully.
 - f. For the SNMP and TCP/IP Installation changes to take effect.
Reboot the server.
 - g. Run TCPCFG2.EXE from OS/2 command prompt to configure the TCP/IP settings.

2-4 Management Agents for Servers for OS/2

- h. Run SNMPCFG.EXE from the OS/2 command prompt to configure the SNMP settings of Trap destination and community string. Make sure that you configure SNMP Manager Access authorization correctly (example:Community -> public,Access -> R/W, Network Address ->0.0.0.0 and Mask -> 0.0.0.0).
- i. Reboot the server.
- j. Install the Management Agents from the Management CD. These files are located under CD DRIVE:\agents\os2\eng\. Run INSTALL.EXE to install the agents.
- k. Reboot the Server, the Agents and management will start automatically.

NOTE: You must install the SNMP files before installing the Management Agents. If not, you will have to reinstall the Management Agents.

4. Install the appropriate device drivers before installing Compaq Management Agents for Servers. Compaq Management Agents for Servers for IBM OS/2 require several device drivers that are available from the IBM OS/2 SSD and the Compaq OS/2 Network SSD. Install the driver versions listed in the Compaq Management Agents for Servers for OS/2 *README* file.

The following drivers provide data to the Compaq Management Agents:

- *CPQSMGT.SYS* and *CPQHLTH.EXE*—Provide system configuration data and server health information, respectively. This driver and executable are required on the following Compaq servers: ProLiant 800, ProLiant 1600, ProLiant 1850R, ProLiant 3000, ProLiant 5000, ProLiant 5500, ProLiant 6000, ProLiant 6400R, ProLiant 6500, ProLiant 7000, ProLiant DL380, ProLiant ML530, ProLiant ML370, ProLiant DL580, ProLiant ML570, and ProLiant ML350.
- *CPQHLTH.SYS* and *CPQHLTH.EXE*—Provide server health and system configuration data. This driver and executable are required on all managed servers.
- *CPQARRAY.ADD*—Provides data for Compaq Drive Array Controllers. This driver is required on servers with Compaq Drive Array Controllers.
- *CPQCISS.ADD*—Provides data for Compaq SMART Array 5300 Controllers and is required on servers with Compaq SMART Array 5300 Controllers.
- *CPQ53CX.ADD*—Provides data for Compaq Fast-Wide SCSI-2 Controllers and is required on servers with Compaq Fast-SCSI-2 Controllers.

- *CPQRIB.SYS*—Provides access to the Compaq Remote Insight Board.
- *CPQEIDE.ADD*—Provides data for Compaq EIDE controllers and is required on servers with Compaq EIDE controllers.
- *CPQB32.SYS*—Provides event-logging support and is required on all managed servers that support event logging.
- *CPQFCAL.ADD*—Provides data for Compaq FCA (Fibre Channel Array) controllers and is required on servers with Compaq FCA controllers.

NOTE: Install the device drivers from the IBM OS/2 (SSD and OS/2 Network SSD). Refer to the IBM OS/2 SSD and Network SSD README file for further details on the SSD and Network SSD installation.

Installing Management Agents

Read the installation instructions completely before installing the software.

Installing from the Compaq Management CD

To install Management Agents for Servers for IBM OS/2 from the Compaq Management CD, follow these steps:

1. Insert the Compaq Management CD into the CD-ROM drive.
2. Open an OS/2 command prompt window.
3. Change the working directory to:

```
[cd drive]:\agents\os2\eng
```

4. Enter the following command:

```
Install
```

5. Follow the instructions on the screen. If needed, press **F1** for online help.

NOTE: After you complete the installation, reboot the server to enable Management Agents for Servers for IBM OS/2. For Management Agents for Servers for IBM OS/2 to start automatically each time the server is powered up, you must log on to the network or cancel the logon when prompted.

Upgrading Management Agents

IMPORTANT: You can upgrade Management Agents for Servers for IBM OS/2 from a previous version to the current version by purchasing a volume license. To request a volume license, use the SmartStart Activation Key Order Form included with your server.

To upgrade Compaq Management Agents for Servers for IBM OS/2 from a previous version to the current version by means of the Compaq Management CD, follow these steps:

1. Insert the Compaq Management CD into the CD-ROM drive.
2. Open an OS/2 command prompt window.
3. Change the working directory to:

```
[cd drive]:\agents\os2\eng
```

4. Enter the following command:

```
INSTALL
```

5. A dialog box containing the following options is displayed:

- Update
- Remove and Reinstall

To install the appropriate files on your system, select the Update button.

6. Follow the instructions on the screen. If needed, press **F1** for online help.

To upgrade Compaq Management Agents for Servers for IBM OS/2 from a previous version to the current version by means of a diskette, follow these steps:

1. Insert the Compaq Management Agents for Servers for IBM OS/2 diskette into the diskette drive.
2. Open an OS/2 command prompt window.
3. Enter the following command:

```
[diskette drive letter]:\INSTALL
```

4. A dialog box containing the following options is displayed:

- Update

- Remove and Reinstall

To install the appropriate files on your system, select the Update button.

5. Follow the instructions on the screen. If needed, press **F1** for online help.

Installing Compaq Power Manager

Compaq Power Manager is a set of sophisticated Uninterruptible Power Supply (UPS) management software applications that comes with Compaq UPS systems. The software provides comprehensive configuration and management of Compaq UPS systems. Compaq Power Manager comes with two main components: the server component and the console component. The server component is installed at each server, while the console component is an addition to Compaq Insight Manager. Refer to the Compaq Power Manager documentation for complete information on installation and configuration of the Compaq Power Manager components.

Server Component

The server component is installed from the Compaq Management CD. You can install the Compaq Power Manager software before or after installing the Compaq Management Agents for Servers software. Compaq Power Manager is backward compatible with Compaq Management Agents for Servers. Existing Compaq Insight Manager consoles will see the same data with Compaq Power Manager as with the Compaq Management Agents for Servers.

Console Component

The console component of Compaq Power Manager is an addition to Compaq Insight Manager. Install Compaq Insight Manager *before* installing the Compaq Power Manager software. When viewing UPS information on servers with the Compaq Power Manager server component installed, the Compaq Power Manager screen will be displayed. When viewing UPS information on servers without the Compaq Power Manager server component, the traditional UPS screen will be displayed.

Chapter 3

SNMP Requirements

Sending SNMP Traps to Management Applications

You can configure multiple IP addresses to allow multiple management applications to receive alarms. Compaq Management Agents for Servers generate traps (also called alarms) when a significant event occurs at the device. To ensure that Management Agents for Servers can notify your management application about significant events, you must configure the SNMP service to include the IP address of the management console.

To configure the OS/2 SNMP Agent trap destination addresses for OS/2 versions other than IBM OS/2 Warp 4.0 and IBM OS/2 Warp Server for e business, follow this procedure:

1. Start the TCP/IP Configuration notebook by double-clicking on the TCP/IP Configuration icon in the TCP/IP folder.
2. Select the SNMP tab.
3. Select the second SNMP page by clicking on the right arrow at the bottom of the screen.
4. Add, edit, or delete SNMP trap destinations using the appropriate buttons on the screen.
5. To exit, select Close from the system icon pull-down menu. At the prompt, select to save or discard the changes.
6. Shut down and restart the device for the changes to take effect.

3-2 Management Agents for Servers for OS/2

For Compaq Management Agents to work on IBM OS/2 Warp 4.0, install IBM SystemView Agent for OS/2 version 1.4.2 or later on the system. After installing the IBM SystemView Agent, make the following changes:

1. In the *CONFIG.SYS* file, append the LIBPATH statement as follows:

```
[drive letter]:\<Directory where SystemView agent is
installed>\DPI\DPI_1.1
```

Example: LIBPATH=.....; C:\SVCA\DPI\DPI_1.1

2. Install the Compaq Management Agents for Servers for OS/2.
3. Delete the following line from the *TCPEXIT.CMD* file located in the [drive letter]:\TCP\BIN directory:

```
detach snmpd -dpi tcp -dpi shm
```

To configure the OS/2 SNMP Agent trap destination addresses, follow this procedure:

1. Start the SNMP Configuration notebook by double-clicking on the OS/2 Agent Configuration icon in the IBM Agent folder.
2. Select the Community tab.
3. Add, edit, or delete SNMP trap destinations using the appropriate buttons on the screen.
4. Select OK to exit.
5. Shut down and restart the device for the changes to take effect.

For Compaq Management Agents to work on IBM OS/2 Warp Server for e-business, install SNMP files from the Management CD. IBM has not included SNMP files in the released OS/2 Warp Server for e-business CD. The SNMP and TCP/IP files have been placed in the Management CD under CD DRIVE:\agents\os2\wsebsnmp. Make the following changes to these files:

- a. Copy the SNMPINST.ZIP file from the Management CD and unzip it to a local directory.
- b. Follow the steps mentioned in the README file, which is obtained from unzipping SNMPINST.ZIP.
- c. Run TCPINST.EXE from this local directory to install the SNMP and TCP/IP files. You might see an ERROR - Default Response file (A: Default.rsp not found). Please copy the default.rsp file from the management CD found under CD DRIVE:\agents\os2\wsebsnmp, and place the file in drive A:. Installation of SNMP and TCP/IP will then continue successfully.

- d. For the SNMP and TCP/IP Installation changes to take effect. Reboot the server.
- e. Run TCPCFG2.EXE from the OS/2 command prompt to configure the TCP/IP settings.
- f. Run SNMPCFG.EXE from the OS/2 command prompt to configure the SNMP settings of Trap destination and community string. Make sure that you configure SNMP Manager Access authorization correctly (example: Community -> public, Access -> R/W, Network Address ->0.0.0.0 and Mask -> 0.0.0.0).
- g. Reboot the server.

NOTE: You must install the SNMP files before installing the Management Agents. If not, you will have to reinstall the Management Agents.

SYSCONTACT and SYSLOCATION

The environment variables required by the OS/2 SNMP Agent are:

SYSCONTACT—Specifies a contact person for the device.

SYSLOCATION—Specifies the physical location of the device.

The Compaq Management Agents for Servers for IBM OS/2 set the environment variables to the default value of “.” during installation. To change the SYSCONTACT or SYSLOCATION values, for OS/2 versions other than IBM OS/2 Warp 4.0 and IBM OS/2 Warp Server for e Business, follow this procedure:

1. Start the TCP/IP Configuration notebook by double-clicking on the TCP/IP Configuration icon in the TCP/IP folder.
2. Select the SNMP tab.
3. Modify the SYSCONTACT and SYSLOCATION fields to include a text description.
4. To exit, select Close from the system icon pull-down menu. At the prompt, select to save or discard the changes.
5. Shut down and restart the device for the changes to take effect.

3-4 *Management Agents for Servers for OS/2*

To change SYSCONTACT or SYSLOCATION for IBM OS/2 Warp 4.0 and IBM OS/2 Warp Server for e Business, follow this procedure:

1. Start the SNMP Configuration notebook by double-clicking on the OS/2 Agent Configuration icon in the IBM SystemView Agent folder.
2. Select the MIB Variables tab.
3. Modify the contact name and location fields to include a text description.
4. Click OK to exit.
5. Shut down and restart the device for the changes to take effect.

Chapter 4

Using Compaq Management Agents for Servers for IBM OS/2

Management Agents Components

Compaq Management Agents for Servers for IBM OS/2 are installed as executable files and Dynamic Link Libraries (DLLs) in the OS/2 operating system. When you start OS/2, the agents (cpqmgmt.exe and cpqnic.exe) start automatically. The OS/2 SNMP Agent must be started *before* the Compaq Management Agents for Servers.

For operating systems other than IBM OS/2 Warp 4.0 and IBM OS/2 Warp Server for e Business, the OS/2 SNMP Agent is part of the OS/2 TCP/IP version 2.0 or later product. For IBM OS/2 Warp 4.0, the OS/2 SNMP Agent is a part of the IBM SystemView Agent for OS/2. For IBM OS/2 Warp Server for e Business, the OS/2 SNMP files are located on the Management CD.

4-2 Management Agents for Servers for OS/2

Compaq Management Agents for Servers for IBM OS/2 consist of the components listed in Table 4-1.

Component	Description
Compaq Management Agents Program (<i>CPQMGMT.EXE</i> , <i>CPQNIC.EXE</i> , and supporting DLLs)	Runs as executable programs under OS/2. Collects information at periodic intervals and makes the collected data available to the Compaq SNMP.
Compaq Management Agents initialization file (<i>CPQMGMT.INI</i>)	Contains configuration settings for the Compaq Management Agents.
Compaq SNMP Agent (<i>CPQSNMP.DLL</i>)	Registers as an extension agent under the TCP/IP Version 2.0 or later for the OS/2 SNMP agent platform. The Compaq SNMP Agent contains support for the Compaq Insight Management MIBs.
Compaq Management Agents Logfile (<i>CPQMGMT.LOG</i>)	Contains significant events reported by the Compaq Management Agents. It is created in the directory where the Compaq Management Agents are installed.
Compaq Management Agents Configuration Utility (<i>CPQIACFG.EXE</i>)	This application configures the Compaq Management Agents.

Compaq Management Agents for Servers provide the following:

- System information
- Drive array information
- SCSI information
- Host information
- Threshold support
- Remote Insight information
- IDE information
- FCA information

■ NIC information

Details about the specific information collected by Compaq Management Agents for Servers are given in the following sections.

NOTE: Support for Compaq UPS systems has been removed from Compaq Management Agents for Servers. This support is now included in the Compaq Power Manager. See the Compaq Power Manager documentation located on the Compaq Management CD for more information about installing and configuring the agents

System Information

Compaq Management Agents for Servers for IBM OS/2 collect system information pertaining to device health data from the device driver, ISA, EISA, and PCI configuration information. The Compaq SNMP Agent reports this data to the SNMP management application.

Drive Array Information

Compaq Management Agents for Servers for IBM OS/2 collect drive array information (from the Compaq drive arrays at a user-determined interval) about faults, performance, and configurations. You can set the collection time interval by running the Compaq Management Agents for Servers Configuration Utility (*CPQIACFG.EXE*). Management Service settings are common to all the agents.

When the interval elapses, the agent gathers the management data from the drive array subsystem, and the Compaq SNMP Agent reports the data to the SNMP management application.

SCSI Information

Compaq Management Agents for Servers for IBM OS/2 collect SCSI information pertaining to faults, performance, and configurations. This information is collected from Compaq SCSI subsystems at a configurable interval. You can set the collection time by running the Compaq Management Agents for Servers Configuration Utility (*CPQIACFG.EXE*). Management Service settings are common to all the agents.

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When the interval elapses, the agent gathers the management data from the SCSI drivers, and the Compaq SNMP Agent reports the data to the SNMP management application.

Host Information

Compaq Management Agents for Servers for IBM OS/2 periodically collect host information about file systems, processor utilization, open programs, and version control. You can set the collection time interval by running the Compaq Management Agents for Servers Configuration Utility (*CPQIACFG.EXE*). Management Service settings are common to all the agents.

When the interval elapses, the agent gathers the management data from the system, and the Compaq SNMP Agent reports that data to the SNMP management application.

Threshold Support

The Threshold Support Agent allows you to set alarms on monitored items by using a management application, such as the Compaq Insight Manager. For example, a management console can monitor the system processor utilization or file system utilization.

The Threshold Support Agent periodically checks the monitored item. When the monitored item crosses the threshold that the management application has defined, the Threshold Support Agent sends an alarm to the management console.

Remote Insight Information

The Remote Insight Agent collects configuration and fault information from the Compaq Remote Insight Board option at a configurable interval. This agent also allows Compaq traps to be forwarded via the Remote Insight Board. Additionally, this agent supports pass-through SNMP for Compaq Insight Manager, which allows the remaining Compaq agent data to be retrieved through a Point-to-Point Protocol (PPP) connection with the Remote Insight Board.

IDE Information

The IDE Information Agent collects fault, performance, and configuration information for Compaq IDE subsystems at a configurable interval. You can set the collection time interval by running the Compaq Management Agents for Servers Configuration Utility (*CPQIACFG.EXE*). Management Service settings are common to all the agents.

When the interval lapses, the agent gathers the management data from the IDE driver. The Compaq SNMP Agent reports the data to the SNMP management application.

FCA Information

The FCA (Fibre Channel Array) Information Agent collects fault, performance, and configuration information for Compaq FCA subsystems at a configurable interval. You can configure the collection time interval by running the Compaq Management Agents for Servers Configuration Utility (*CPQIACFG.EXE*). Management Service settings are common to all the agents.

When the interval expires, the agent gathers the management data from the FCA driver. The Compaq SNMP Agent reports the data to the SNMP management application.

Network Interface Card Information

The Network Interface Card (NIC) Information Agent collects fault, performance, and configuration information for Compaq NIC subsystems at a configurable interval.

When the interval expires, the agent gathers the management data from the NIC driver. The Compaq SNMP Agent reports the data to the SNMP management application.

Compaq SNMP Agent

The Compaq SNMP Agent supports Compaq Insight Management Information Bases (MIBs) under the OS/2 environment. The Compaq SNMP Agent is an extension agent designed to fit into the existing extensible SNMP agent platform.

The Compaq SNMP Agent provides Compaq Insight Manager, and other management applications with Insight MIB variables through the SNMP protocol. Although the Compaq SNMP Agent is designed to fit into the extensible SNMP agent platform, it is an integral part of Compaq's overall management architecture.

NOTE: Copies of the Insight MIBs are available on the Compaq Insight Management MIBs diskette and the Compaq Management CD ([CD DRIVE]\TOOLKIT\MIBS directory). Refer to Appendix B, "Set and Set Threshold Parameters," in the *Compaq Insight Manager User Guide* help file for parameters that support the set and set threshold operation.

Compaq Management Agents for Servers Configuration Utility

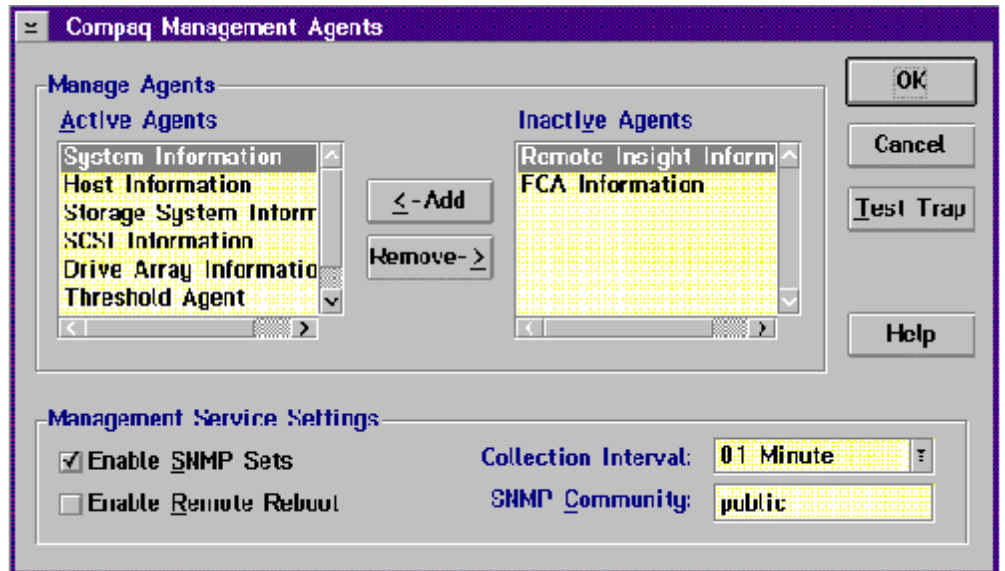


Figure 4-1. Compaq Management Agents for Servers Configuration Utility screen

The Compaq Management Agents for Servers Configuration Utility provides the following configuration capabilities:

- Activate or deactivate management agents—Add or remove Management Agents by highlighting the agent and selecting the appropriate button.
- Generate an SNMP Test Trap—Test the current SNMP setup by selecting the Test Trap button to send a trap.
- Enable/Disable SNMP Set—Allows a management console to modify a limited number of hardware-related parameters. The Insight MIBs define the monitored items that may be modified by the management console.

NOTE: Copies of these MIBs are available on the Compaq Insight Management MIBs diskette and the Compaq Management CD ([CD DRIVE]:\TOOLKIT\MIBS directory). Refer to Appendix B, "Set and Set Threshold Parameters," in the *Compaq Insight Manager User Guide* help file for parameters that support the set and set threshold operation.

- Enable/disable Remote Reboot—Allows a management console to reboot the system remotely. The Compaq Management Agents for Servers gracefully shutdown the operating system and then reboot the system.
- Set Data Collection Interval—Sets the collection time by selecting a collection interval from the available choices. This setting controls the interval at which the Compaq Management Agents for Servers collect data.
- Set SNMP Community String—The SNMP community string is a case-sensitive string used by the Compaq Management Agents for Servers to register with the OS/2 SNMP Agent. The values in this variable must consist of a valid community string and be configured in the OS/2 SNMP Agent. The default value is public.

Chapter 5

Troubleshooting

Troubleshooting Procedures

The topics in this chapter describe troubleshooting procedures for Compaq Management Agents for Servers for IBM OS/2. If you experience problems with your installation, verify that you have installed the Compaq drivers from the IBM OS/2 Support Software Diskette (SSD) *before* you install the Compaq Management Agents for Servers. If you have already installed the Compaq Management Agents for Servers, you must *install* the drivers and then reinstall the Compaq Management Agents for Servers.

Next, examine the Compaq Management Agents for Servers log file (*CPQMGMT.LOG*) to verify that you have correctly installed the Compaq Management Agents for Servers. This file is located in the directory where the Compaq Management Agents for Servers are installed. The default directory is C:\CPQAGENT\CPQMGMT.LOG.

Device Not Manageable

A black indicator is displayed for the unmanageable device on the device list.

SOLUTION:

1. Verify that TCP/IP Version 2.0 or later for OS/2 and the OS/2 SNMP Agents are installed and running.
2. Verify that the Compaq Management Agents for Servers for IBM OS/2 are installed and running.

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3. Verify that the management console community string matches the server community string.

To set the community string on the management console, select the Server Setup button from the Task List window. This opens the Server Setup window where the community string can be set. For more information, refer to the section covering community strings in the *Compaq Insight Manager User Guide*.

NOTE: Community strings are case-sensitive.

Missing Drive Array Physical Drive Information

This situation could be the result of drives that are not initialized. The Compaq drive array device driver, *CPQARRAY.ADD*, can only provide complete information on Compaq drive arrays when the drives are properly initialized. All drives currently shipped with Compaq servers are initialized in the factory. However, if you purchased the computer system before this service was provided, or if you replaced a drive due to a hardware failure, these drives may not be initialized.

SOLUTION:

1. Shut down OS/2 on the monitored device.
2. Insert the Compaq Diagnostics diskette into the diskette drive of the monitored device.
3. Restart the monitored device.
4. Select the Test Computer option from the Main Program menu.
5. Select the View Device List option in the next screen.
6. The Diagnostics Utility initializes the physical drive attached to the Compaq drive arrays.

Disk Subsystem Button in the Disk Storage Window Grayed Out

This situation could be the result of the Compaq Drive Array device driver not being loaded.

SOLUTION:

1. Load the Compaq Drive Array device driver, *CPQARRAY.ADD*, if you have a Compaq Drive Array Controller in your monitored device.
2. Refer to the IBM OS/2 Support Software Diskette (SSD) for details on loading the Compaq Drive Array driver.
3. If the Compaq Drive Array device driver was installed after the Compaq Management Agents for Servers software, run the Compaq Management Agents for Servers Configuration Utility and verify that the Drive Array Information Agent is enabled.

SCSI Adapter Button Grayed Out

This situation could be the result of the device driver not being loaded.

SOLUTION:

1. Load the Compaq 32-bit SCSI-2 device driver, *CPQ53CX.ADD*, if a Fast-Wide SCSI-2 Controller is in your monitored device. Refer to the OS/2 (SSD) for details about loading the Compaq 32-Bit SCSI-2 device driver. If the SCSI device is located on a SCSI controller that does not support SNMP, such as the Compaq 6260 Controller, the button will remain grayed out.
2. If the Compaq 32-bit SCSI-2 device driver was installed after the Compaq Management Agents for Servers software, run the Compaq Management Agents for Servers Configuration Utility and verify that the SCSI Information Agent is enabled.

Drive Array or SCSI Adapter Button Does Not Appear in the Disk Storage Window

This situation could be the result of a monitored device that is not properly configured.

SOLUTION:

Run the Compaq System Configuration Utility to configure your system properly.

SNMP Traps or Alarms not Received

This situation could be the result of the device driver not being loaded.

SOLUTION:

1. Start the TCP/IP Configuration notebook by double-clicking the TCP/IP Configuration icon in the TCP/IP folder.
2. Select the SNMP tab.
3. Select the second SNMP page by clicking the right arrow at the bottom of the screen.
4. Verify that the Trap Destination IP address of the management console is in the trap destination list.

For IBM OS/2 Warp 4.0 and IBM OS/2 Warp Server for e Business:

1. Start the SNMP Configuration notebook by double-clicking on the OS/2 Agent Configuration icon in the IBM SystemView Agent folder.
2. Select the Communities tab.
3. Verify that the Trap Destination IP address of the management console is in the trap destination list.

Unable to Create Thresholds

This situation could be the result of the device driver not being loaded.

SOLUTION:

1. Run the Compaq Management Agents for Servers Configuration Utility and verify that the Enable SNMP Sets box is checked.
2. Verify that the values used to create the threshold are valid.

NOTE: The default setting for the threshold poll interval is 30 seconds. Any attempt to set the query interval lower than 30 seconds will fail.

Glossary

Automatic Server Recovery (ASR)

A server feature that automatically restarts your server after a critical hardware or software error occurs. If a critical error occurs, the server records the error in the Server Health Logs, reboots the system, and pages you (if you installed a modem at the server).

Client

A computer connected to a server on the network.

Community String

The SNMP Community String is similar to a password, offering a limited amount of protection for SNMP data.

Compaq Management Agents for Servers

Software that can query a manageable server and provide information in response to SNMP requests for data.

Compaq Utilities

Compaq Utilities have the capability to set up or modify your system and include various diagnostic programs.

Corrected Memory Log

This log contains a list of corrected memory errors.

Desktop Management

A feature of Compaq Insight Manager that allows you to monitor Compaq PCs being used as clients.

In-band

Refers to the capacity to deliver information through existing network hardware. Synonymous with “on the network.”

Logical Drive

In a Compaq Drive Array, multiple physical drives connected to the same controller are combined to create logical drives. The logical drive uses all of the available physical drive capacity as if it were a larger drive subsystem. By combining several physical drives, special fault tolerance and performance features can be used.

Managed Device

A device managed by a management console. Devices include servers, clients, routers, switches, and hubs. Servers and clients cannot be managed devices unless they have Compaq Management Agents installed.

Management Information Base (MIB)

The document or file that defines all manageable variables and traps known to the management agent and management application.

Management Console

The PC, workstation or server that is running Compaq Insight Manager.

Monitored Item

The item that Compaq Insight Manager manages or monitors, or the information that Compaq Insight Manager collects.

NetWare Peripheral Architecture (NWPA)

The goal of the NetWare Peripheral Architecture (NWPA) is to provide NetWare Version 3.12, 4.x, and IntranetWare customers with broader and more reliable driver support for host adapters and storage devices.

Network Interface Controller (NIC)

An adapter card installed in a PC, workstation, or server that allows the PC or workstation to communicate with other devices connected to the same network. This term usually implies that a local area network (LAN) adapter card is used.

NetWare Loadable Module (NLM)

Used to refer to executables that run under the Novell NetWare operating system.

Out-of-band

Refers to the capacity to deliver information by means of a modem. Synonymous with “off the network.”

Physical Drive

In a Compaq Array Controller, multiple physical drives connected to the same controller are combined to create logical drives. The logical drive uses all of the available physical drive capacity as if it were a larger drive subsystem. By combining several physical drives, special fault tolerance and performance features can be used.

Point-to-Point Protocol (PPP)

A standard defined by the Internet Engineering Task Force. PPP provides a standard method for transporting multiple protocols over a point-to-point link.

Simple Network Management Protocol (SNMP)

SNMP defines a set of commands that a management application uses to retrieve or change the values of items that a management agent makes available.

Threshold

A preset limit that produces an alarm when reached or exceeded.

Trap

A trap is an indicator of a change or an error condition. Also called an alarm.

Uninterruptible Power Supply (UPS)

A battery that supplies continuous power to a computer system in the event of a power failure.