WHITE PAPER

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Integrating Compaq Insight Manager with Novell ManageWise 2.1 - Update

Novell ManageWise 2.1 has been changed to include new features. These changes cause differences in the integration of ManageWise 2.1 with Compaq Insight Manager. This White Paper provides information on integrating Compaq Insight Manager with ManageWise 2.1.

*This White Paper **supplements and changes** some of the information found in the Compaq TechNote,* Integrating Compaq Insight Manager with ManageWise.

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Integrating Compaq Insight Manager with Novell ManageWise 2.1 - Update

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INTEGRATING COMPAQ INSIGHT MANAGER 3.20 AND ABOVE WITH MANAGEWISE

With the release of Insight Manager 3.20, both ManageWise and Insight Manager support Microsoft Windows 95 as a console. This allows you to run both applications on the same management console. The integration of Compaq Insight Manager 3.20 and above with ManageWise 2.1 is different from that of Compaq Insight Manager 2.61. This white paper explains the integration of Insight Manager 3.20 and above with ManageWise 2.1 and the way this integration affects what you see on the management console.

Changes from Compaq Insight Manager 2.61

Compaq Insight Manager 2.61 integrates with ManageWise 2.0 successfully. However, Compaq Insight Manager 2.61 does not integrate with ManageWise 2.1. ManageWise 2.1 contains changes that disable the integration with Compaq Insight Manager 2.61.

Compaq Insight Manager 3.20 and above should be used with ManageWise 2.1; Compaq Insight Manager 2.61 should not.

PreInstallation Considerations

ManageWise Requirements

Because both Compaq Insight Manager and ManageWise 2.1 run on a Windows 95 console, the configurations discussed in this white paper were tested only on a management console running Windows 95. When running Windows 95, ManageWise requires you to remove Microsoft's Novell Client and to install Novell's NetWare Client 32.

Before installation and integration of the new version of Insight Manager (3.20 and beyond), it is important to understand how running ManageWise with Compaq Insight Manager affects trap disposition on the management console.

IP/IPX Trap Processing Issues

Certain trap-processing issues arise when running ManageWise 2.1 and Insight Manager 3.20 or above on the same management console. This is because of the way trap processing was implemented in ManageWise 2.1 and Insight Manager 3.20.

If both applications are running simultaneously and the ManageWise application was launched first, ManageWise receives traps sent to the console's IP address, but does not receive traps sent to the console's IPX address. Insight Manager receives traps sent to the console's IPX address, but does not receive traps sent to the console's IP address.

If the Insight Manager application is launched before ManageWise, Insight Manager processes both IP and IPX traps. ManageWise, however, does not receive IP or IPX traps. If ManageWise is left running and Insight Manager is closed and restarted, the situation is as described in the preceding paragraph.

At this time, there is not a fix or a workaround for these issues. Compaq and Novell are working to solve these issues for future releases of Insight Manager and ManageWise.

Supported Clients

As mentioned above, ManageWise requires installation of Novell NetWare's Client 32 in order to

run on Windows 95. When installing Novell's NetWare Client 32, you should first remove the Microsoft Novell Client from the console. Novell's NetWare Client 32 replaces the Microsoft Novell Client on the management console. In the test environment, the following clients were installed on the management console: Novell NetWare Client 32 and the client for Microsoft Networks.

Supported Protocols

Special considerations regarding the protocols that are supported in the integration of Insight Manager and ManageWise are described in detail in the sections below. The following protocols were installed on the management console during testing:

- IPX 32-bit Protocol for Novell NetWare Client 32

- IPX/SPX-compatible Protocol

- NetBIOS Support for IPX/SPX-compatible Protocol

- TCP/IP

INSTALLING COMPAQ INSIGHT MANAGER 3.20 AND ABOVE

Exit all Windows programs and shut down existing versions of Compaq Insight Manager before you begin this procedure. Depending on your environment, Compaq Insight Manager can be installed from the Compaq Management CD, from diskettes made using Diskette Builder, or from an Integration Server. To install Compaq Insight Manager from one of these sources, follow these steps:

1. Insert the Compaq Management CD at the management console. Change to [CD DRIVE:]\INSIGHT\WIN32\ENG and run SETUP
   OR
   Insert Compaq Insight Manager Diskette #1 at the management console. Change to [diskette drive:]\ and run SETUP
   OR
   Map a drive to the Integration Server (for example: \\server name\CPQIS1\). Switch to this drive. Change directories to CPQIS\INSIGHT\WIN32\ENG\VERSION\ and run SETUP.

2. Select *Next* at the Welcome Screen.

3. Close all active Borland Database Engine (BDE) applications, then select *Next*.

4. Enter your name and your company name, then select *Next*.

5. Select *Yes* to confirm your name and company name.

6. Type the name of the directory in which you want to install Compaq Insight Manager or select the displayed default location. Select *Next* to continue.

7. Enter configuration options.

   a)   Select *Enable auto discovery of IPX servers* to enable automatic discovery of new IPX servers as they appear. The auto-discovered IPX servers will automatically be added to the Responsible Device List. The default is enabled. If you do not manage IPX servers, disable this item for better application performance.

     b)   Select *Enable auto discovery of Remote Console NVT servers* to enable discovery of remote servers through NVT (NetWare Virtual Terminal) discovery. The remotely discovered servers will automatically be added to the Responsible Device List. The default is enabled.

     c)   Enter the number of days that you want to pass before the Version Control database is considered to be out-of-date. The default is 60 days.

     d)   Select *Maintain configuration to support existing Windows 3.1 applications* to maintain your Borland Database Engine configuration for use with 16-bit applications. If you do not use 16-bit applications, disable this feature. The default is enabled.

     e)   Select *Next*.

8. Select an existing group or enter the name of the new group in which the Compaq Insight Manager program items should be placed. Select *Next.* The current settings are displayed.

9. Verify the options you have selected. Select *Back* to change any settings. Select *Next* to begin the installation and setup of Compaq Insight Manager.

10. When the installation is completed, select the Read Me file to view information on new features, then select *Finish*.

11. If you have not already installed the Insight Management Agents, do so now.

INSTALLING COMPAQ INSIGHT MANAGEMENT AGENTS

The procedure for installing the Compaq Insight Management Agents is given in the help files on the Compaq Management CD. These instructions are available by selecting the *Overview* button on the CD menu and then selecting the Compaq Insight Management Agents help topic. From here, you can access the installation instructions for the desired operating system.

This section describes the procedure for installing the Compaq Insight Management Agents for NetWare. Read the installation instructions completely before trying to install the software.

NOTE: If you have already installed the Compaq Insight Management Agents by using SmartStart, skip to the next section, "Setting up the SNMP System Description and Trap Destinations."

Installing from the Compaq Management CD

To install the Insight Agents for NetWare from the Compaq Management CD, follow these steps:

1. Insert the Compaq Management CD into the CD-ROM drive.

2. If you access the CD-ROM drive as a DOS drive, at the NetWare system console enter the following:
   LOAD [CD DRIVE]:\AGENTS\NETWARE\ENG\COMPAQ\CPQAGIN

   If you have mounted the CD as a NetWare Volume, at the NetWare system console enter the following:
   LOAD [NetWare VOL]:\AGENTS\NETWARE\ENG\COMPAQ\CPQAGIN
   The installation utility *CPQAGIN.NLM* installs and configures the Insight Agents for NetWare.

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

After the installation is completed, you must reboot the system to enable the Insight Agents for NetWare. These agents automatically start each time you reset the system.

Installing from the Compaq Integration Server

An Integration Server is a server that has been designated as a repository for operating system software, database software, drivers, management agents, and software, utilities, and patches. The Compaq Integration Server User Guide on the Compaq Management CD provides information about the setup and maintenance of an Integration Server. The following procedure details the installation of the Insight Agents for NetWare from an Integration Server.

IMPORTANT: Read this installation procedure completely before installing the software. This procedure assumes you have already copied the agents to the Integration Server.

The Compaq Integration Maintenance Utility is automatically loaded on the server during the initial SmartStart process. Alternatively, it can be installed manually by loading *CPQMAINT.NLM* from the \CIMU directory on the IntranetWare Operating System CD.

To install or update agents on an existing system from an Integration Server, follow these steps:

1. At the target system's command console, enter the following: LOAD CPQMAINT

2. From the Available Options screen, select *Product Options*. A list of products that can be updated is displayed.

3. Select *Compaq Insight Management Agents* from the list.

4. Select *Integration Server* as the source for the installation or update.

After the installation is completed, you must reboot the system to enable the Insight Agents for NetWare. These agents automatically start each time you reset the system.

Installing from Diskettes

The process for installing Insight Agents for NetWare from diskettes has three parts. They are:

- Installing Diskette Builder on a hard drive

- Creating diskettes

- Installing from diskettes

The procedure for installing the Compaq Insight Management Agents is given in the help files on the Compaq Management CD. These instructions are available by selecting the *Overview* button on the CD menu and then selecting the Compaq Insight Management Agents help topic. From here you can access the installation instructions for installing the agents from diskette.

Setting up the SNMP System Description and Trap Destinations

The next step to installing the Insight Management Agents is to update the *SNMP.CFG* and *TRAPTARG.CFG* files to match your server and network management configuration. Sample configuration files, *SNMP.CFG* and *TRAPTARG.CFG*, are in the \AGENTS\NETWARE\ENG\NOVELL\ETC directory of the Compaq Management CD. If your system does not have these files in the SYS:\ETC directory, copy the sample files to your system. Create a SYS:\ETC directory on the system, if one does not already exist.

Editing the *SNMP.CFG* File

SNMP.CFG is an ASCII text file that provides the *SNMP.NLM* with server name, hardware, location, and contact information. The *SNMP.CFG* file, which is a sample, should be edited to reflect the correct information about your installation.

NOTE: The *SNMP.NLM* allows configuration of some MIB-II system identification information using the *SNMP.CFG* file. For proper configuration of the identification information, you must have the *SNMP.CFG* file in the SYS:\ETC directory when the *SNMP.NLM* is loaded.

Editing the *TRAPTARG.CFG* File

The sample *TRAPTARG.CFG* file tells the *SNMP.NLM* where to send alarm information. *TRAPTARG.CFG* is a ASCII text file that lists the addresses of management consoles that should be alerted when the Insight Management Agents detect an important event. The *TRAPTARG.CFG* file in SYS:\ETC, which is a sample, should be edited to reflect the correct information about your environment configuration. Follow the instructions provided in the *TRAPTARG.CFG* file. Be sure to place the alarm destination address under the appropriate protocol section and to indent each address at least one space.

To determine the network address of your management PC when using IPX, you can execute the USERLIST program.

For NetWare 3.1x, type: USERLIST /A

For NetWare 4.x or IntranetWare, type: NLIST USER /A

A list of PCs logged into the server is displayed with their addresses. An asterisk preceding the user name indicates the PC you are using. Both the network address and the node address given by USERLIST are needed by the file.

NOTE: If you are using Insight Manager, verify that the network address of the management PC on which Insight Manager runs is included in the *TRAPTARG.CFG* file. If you enter trap destinations into the *TRAPTARG.CFG* file, you must shut down the system and restart it for the destinations to become active.

To verify that you have the proper address configured, use the Compaq Insight Management Agent Install utility (CPQAGIN). At the system console prompt, enter the following:

LOAD CPQAGIN

Then select the *Initiate Test Trap* option. This option delivers an alarm to each configured management application.

SNMP Monitor and Control Community Strings

The final step in installing the Insight Agents is to set up SNMP community strings. SNMP defines a community to be a relationship between an SNMP agent and one or more SNMP managers. When SNMP messages are exchanged, they contain two parts:

- A community name and information to validate the sending SNMP entity as a member of an identified community

- Data

The community name defines the authentication mechanism.

Insight Agents for NetWare allows two different user communities to be specified—the monitor community and the control community. The monitor community is provided to access all SNMP

attributes with read-only access. The control community provides read/write or SET privileges.

Use *CPQAGIN.NLM* or INETCFG to configure community strings. To enable Compaq Insight Manager to perform SET operations on system parameters on a NetWare system, you must specify a control community.

NOTE: If you want read/write or SET privileges, you should use a control community name other than "public." The *public* default is the same default as in Compaq Insight Manager. If you enter a different community string, you must also enter it on the management PC that is responsible for the server. To change the community string in Insight Manager, select the *Device Setup* button from the Task List Window, or right click on the device and select *Device Setup* from the pop-up menu. This opens the Device Setup Window, on which the community string can be set. For more information on community strings, refer to the *Compaq Insight Manager User Guide.*

Community string usage is as follows:

1. Monitor Community: This community string, which has a 32-character maximum, is to be used for read-only access to the SNMP attributes. If you do not specify the MONITOR COMMUNITY parameter, the *SNMP.NLM* uses *public* as the default community string. Because there is always a MONITOR COMMUNITY string, there is always read-only access.

2. Control Community: This community string, which has a 32-character maximum, is to be used for read/write access to the SNMP attributes. If the CONTROL COMMUNITY parameter is not specified, the *SNMP.NLM* disables all read/write access.

NOTE: Community names are case-sensitive.

INSTALLING AND COMPILING THE COMPAQ MIBS INTO MANAGEWISE

This section assumes that you have the ManageWise management PC running successfully.
NOTE: If this is a new installation, your ManageWise management PC needs to complete the automatic discovery process for your network. Depending on your network, this process can take up to several hours; however, this process does not have to be completed before you integrate the MIB files.

Integrating the Compaq Insight MIB Files

Insight MIBs can integrate with a ManageWise management PC, allowing you to browse the Insight MIB (Management Information Base) on any server running the Insight Management Agents. ManageWise can also interpret Insight MIB traps that are sent by the servers running Insight Management Agents.

To integrate Insight MIB files with a ManageWise management PC, follow these steps:

1. Insert the Compaq Management CD into the CD-ROM drive of the ManageWise management PC.
    OR
    Map a drive to the Integration Server (for example: \\server name\CPQIS1\).

2. Change to the <mw>\NMS\SNMPMIBS\CURRENT directory on the drive on which ManageWise is installed (where <mw> is the directory where ManageWise is installed). For example:
    C:> CD\MW\NMS\SNMPMIBS\CURRENT

3. Copy all MIB files from the Compaq Management CD to the current directory. For example:
    COPY [CD-ROM]:\TOOLKIT\MIBS*.MIB
    OR
    Copy all MIB files from the Integration Server to the current directory. For example:
    COPY [<drive>]:\CPQIS\TOOLKIT\VERSION\MIBS*.MIB (where <drive> is the drive mapped
    to the Integration Server)

4. Start Windows and open the ManageWise console.

5. Select the *SNMP MIB Compiler* option from the Tools menu.

6. Select *Compile* to compile all the MIB files in the CURRENT directory of the ManageWise
    database.

7. Select *Exit* to exit the SNMP MIB Compiler. Do this at the end of the compile process.

This completes the MIB integration procedure for ManageWise. The *SNMP MIB Browser*,
accessed from the ManageWise Tools menu, can now be used to browse the Insight MIBs.

Configuring ManageWise Alarm Dispositions

NOTE: There are issues concerning the receipt of alarms at the management console. Read the
"IP/IPX Trap Processing Issues" section at the beginning of this document for a discussion of this
topic.

To view Compaq alarms, select the *Fault* option, followed by the *Alarm Disposition* option on the
menu bar. This opens the Alarm Disposition Table, which shows the alarms and their current
configurations.

Figure 1. Alarm Disposition Table

These alarms, or traps, have been preconfigured with Severity (critical, major, minor, warning, or
unknown) and Object State (operational, degraded, or non-operational).

Double-clicking on an alarm in the Alarm Disposition Table opens the Alarm Disposition Edit
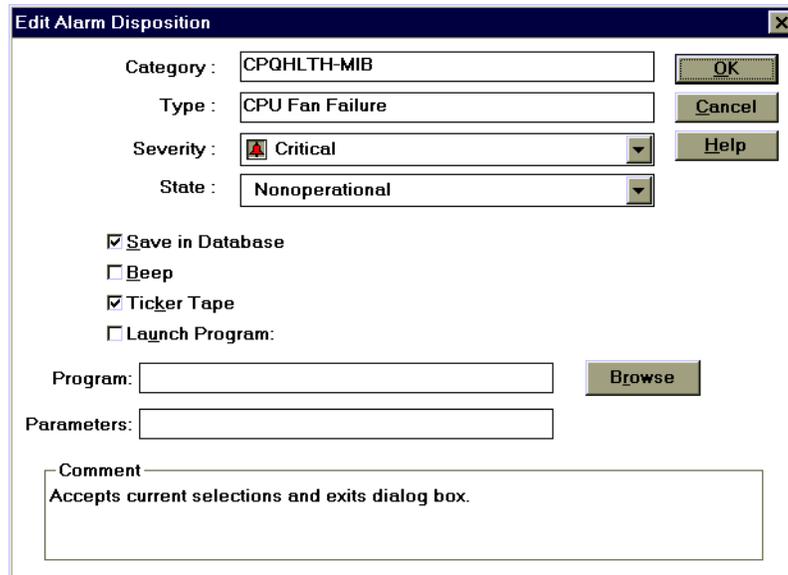Window, which allows you to configure the alarm options.

Figure 2. Edit Alarm Disposition Screen

You can, for example, launch a program for each trap or alarm. For instance, when the ManageWise management PC receives a CPQ SCSI Logical Drive Status Change alarm, it indicates a status change to the logical drive configuration. If the logical drive configuration includes fault tolerance (RAID 2, RAID 4, or RAID 5), it can still operate, but the status change requires your attention. By default, an alarm disposition appears:

- On the network management map

- In the Alarm Monitor view

Alarms that have the Save in Database option checked are also put on the Alarm Report, which is accessible from the Fault menu.

In addition to logging the alarm, you can configure the alarm options to have the management PC:

- Beep

- Display a message

- Launch an application when the alarm occurs

If you want to launch an application when an alarm occurs, select the *Program* box and type the command line for the application. The command line can contain batch or executable files.

The following are customized alarm configurations that you can specify:

- If you receive the CPQ SCSI Logical Drive Status Change alarm, you can run a batch file that contains the NetWare SEND command that sends a specific message to the ADMIN group.

- If you have a problem with a specific server, you can launch a communications application with a script to call a beeper number and leave a numeric message that indicates the problem.

You can configure each alarm differently to meet your needs. Refer to the ManageWise documentation for more information on alarm management.

When you customize alarms for your configuration, ManageWise can interpret the alarms sent by Compaq servers. You can also use the SNMP MIB Browser to build profiles to query Insight MIB objects on Compaq servers.