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Integrating Compaq Insight Manager with Novell ManageWise 2.5 - Update

Novell ManageWise 2.5 includes new features. This White Paper provides information on integrating Compaq Insight Manager with ManageWise 2.5.

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 2.5 - Update

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WHAT'S NEW

This paper contains new information concerning the integration of Compaq Insight Manager with ManageWise 2.5. With Insight Manager 3.50, it is possible to add launch support for Insight Manager to ManageWise. This launch support works with Insight Manager 3.20 and above, however, the files necessary to perform the integration are in the Systems Management Toolkit on the Compaq Management CD version 3.50 or later. These files are not available on earlier versions of the Management CD. The integration of ManageWise with Insight Manager is explained below. See the section entitled "Adding Launch Support to ManageWise" for information on how to add launch support for Insight Manager to ManageWise 2.5.

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 2.5 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 2.5. 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 and 2.5 successfully, but it does not integrate with ManageWise 2.1. ManageWise 2.1 contains changes that disable integration with Compaq Insight Manager 2.61, and therefore the products should not be used together. Refer to the *Integrating Compaq Insight Manager with ManageWise* Technote for more information on integration with ManageWise 2.0.

Compaq Insight Manager 3.20 or above can also be used with ManageWise 2.5. This paper only discusses Compaq Insight Manager 3.20 and above.

PreInstallation Considerations

ManageWise Requirements

Because both Compaq Insight Manager and ManageWise only run together 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 2.5 requires you to install the IntranetWare Client v2.2 for Windows 95.

Before installation and integration of a new version of Insight Manager (3.20 and above), 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 2.5 and Insight Manager 3.20 and above on the same management console. This occurs because of the way trap processing was implemented in the two applications.

If both applications are running simultaneously and ManageWise 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 the same as described in the preceding paragraph.

At this time, there is no fix or workaround for these issues. Compaq and Novell are working to resolve these issues for future releases of Insight Manager and ManageWise.

Supported Clients

As mentioned above, ManageWise 2.5 requires installation of the IntranetWare Client v2.2 on the Windows 95 management console. In the test environment, the following clients were installed on the management console: Novell IntranetWare Client v2.2 and the client for Microsoft Networks.

Supported Protocols

Special considerations regarding the protocols 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 IntranetWare Client
- 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 or from an Integration Server. To install Compaq Insight Manager from one of these sources, follow these steps:

- Insert the Compaq Management CD at the management console. Change to [CD DRIVE:]\INSIGHT\WIN32\ENG and run SETUP
 - 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. 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. 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

IMPORTANT: 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.

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.

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:

 $LOAD\ [NetWare\ VOL]: AGENTS \setminus ENG \setminus COMPAQ \setminus CPQAGIN \\ The installation\ utility\ CPQAGIN.NLM\ installs\ and\ configures\ the\ Insight\ Agents\ for\ NetWare.$

3. Follow the instructions on the screen. Press F1 for online help, if needed.

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, 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.

Setting up the SNMP System Description and Trap Destinations

The next step in installing the Insight Management Agents is updating 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 an 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, along 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 and restart the system 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 setting up SNMP community strings. SNMP defines a community as 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, 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 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:

- Monitor Community: This community string, which has a 32-character maximum, is 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.
- Control Community: This community string, which has a 32-character maximum, is 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: The ManageWise console does not need to be running Compaq Insight Manager for you to perform this integration.

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 Management Information Base (MIB) files.

Integrating the Compag Insight MIB Files

Insight MIBs can integrate with a ManageWise management PC, allowing you to browse the Insight MIB 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:

- 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\).
- 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:
 - $C\!:> CD\backslash MW\backslash NMS\backslash SNMPMIBS\backslash CURRENT$
- 3. Copy all MIB files from the Compaq Management CD to the current directory. For example: COPY [CD-ROM]:\TOOLKIT\MIBS*.MIB
 - 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.

- 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.

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. These issues only apply if ManageWise and Compaq Insight Manager are running on the same management console.

To view Compaq alarms, select the *Fault* option, followed by the *Alarm Disposition* option on the menu bar. This opens the Alarm Disposition Table shown in Figure 1, which shows the alarms and their current configurations.

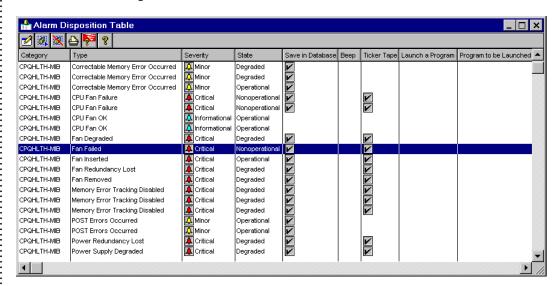


Figure 1. Alarm Disposition Table

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 an alarm in the Alarm Disposition Table opens the Alarm Disposition Edit Window shown in Figure 2, which allows you to configure the alarm options.

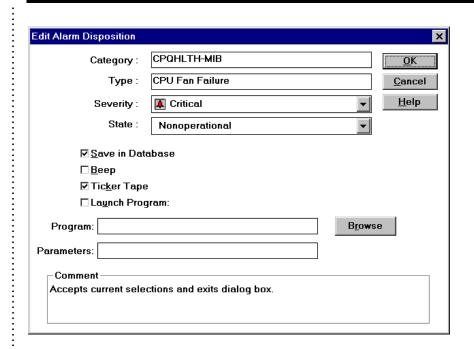


Figure 2. Edit Alarm Disposition Screen

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 cause the management PC to:

- 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 examples of 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.

ADDING LAUNCH SUPPORT TO MANAGEWISE

Requirements

Insight Manager 3.20 and above can be integrated with ManageWise 2.5 to allow launching of Insight Manager to a node on the network map.

In order for this integration to work, the management console must be running ManageWise 2.5. In addition, you must have the Systems Management Toolkit from the 3.50 or later version of the Compaq Management CD. This version includes two files that are necessary to perform the integration: *CIMLOAD.EXE* and *COMPAQ.OLF*.

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. These issues only apply if ManageWise and Compaq Insight Manager are running on the same management console.

Installing Launch Support

When the above requirements have been met, the following steps can be taken to install launch support for Compaq Insight Manager into ManageWise. This assumes that ManageWise and Insight Manager are already installed on the management console.

- 1. Copy the file CIMLOAD.EXE from the \TOOLKIT\MW directory on the Compaq Management CD to the <mw>\NMS\BIN directory (where <mw> is the directory where ManageWise is installed).
- 2. Copy the file COMPAQ.OLF from the \TOOLKIT\MW directory on the Compaq Management CD to the <mw>\NMS\OLF directory.
- Close all ManageWise components and execute the following command: n-olfi.exe –f compaq.olf
 This runs the OLF introducer and adds the definition of a Compaq server to the ManageWise database.
- 4. Edit objects on the network map with the ManageWise *Database Object Editor* to add Compaq Server as an available service. Alternatively, you may backup and delete the database, then rediscover the network. This will show Compaq servers on the map with the Compaq server icon.

When these steps have been completed, you will be able to launch Insight Manager from ManageWise.

Launching Compaq Insight Manager from ManageWise

This section describes how to launch Compaq Insight Manager when running it with ManageWise.

NOTE: Compaq Insight Manager can only be launched from ManageWise if the integration described in the previous section has been performed.

After you integrate Insight Manager with ManageWise, you can launch Insight Manager using the Compaq server icon, the NetWare server icon, or the Insight Manager option located under the Tools menu.

Launching Insight Manager Using the Compaq Server Icon

To launch Insight Manager using the Compaq server icon, follow these steps:

- 1. Select a Compaq managed server icon from the ManageWise network management map, as shown in Figure 3.
- 2. Click again to launch Insight Manager to the designated Compaq server.

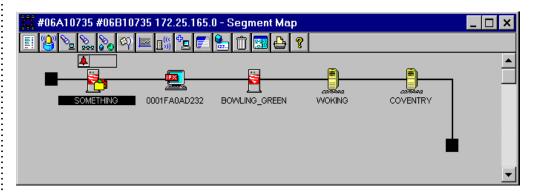


Figure 3. Network Segment Map.

Launching Insight Manager Using the NetWare Server Icon

To launch Insight Manager from ManageWise using the NetWare server icon, follow these steps:

- 1. Select the NetWare server icon located on the network management map shown in Figure 3. This opens the Open Service window shown in Figure 4. This window displays the services available for the selected node.
- 2. Select the Compaq server icon in the Manageable Services list and click the Open button to launch Insight Manager.

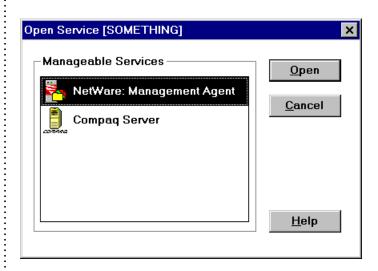


Figure 4. Open Service Window.

Launching Insight Manager Using the Server Configuration Window

To launch Insight Manager from ManageWise using the Server Configuration Window, follow these steps:

- 1. Select the NetWare server icon located on the network management map shown in Figure 3. This opens the Open Service window shown in Figure 4. This window displays the services available for the selected node.
- 2. Select *Netware: Management Agent* from the Manageable Services list. This opens the Server Configuration Window shown in Figure 5.
- 3. Select the Compaq server icon in the list to launch Insight Manager.



Figure 5. Server Configuration Window.

Launching Insight Manager Using the Tools Menu

To launch Insight Manager from ManageWise using the Tools menu, follow these steps:

1. Select the designated server located on the network management map shown in Figure 3.

2. Select the Insight Manager option from the Tools menu. This launches Insight Manager.

DE-INSTALLING COMPAQ INSIGHT MANAGER

Insight Manager can be removed from the management console by selecting the Add/Remove Programs option in the Control Panel. Removing Insight Manager from a console with ManageWise installed does not affect ManageWise unless you have manually installed launch support for Compaq Insight Manager. If launch support was not installed, you can simply remove Insight Manager from the management console.

If launch support was installed, Insight Manager will be shown as available even after it has been removed from the management console. In this case, you should remove Insight Manager and the launch support from the management console.

To remove Compaq Insight Manager launch integration from ManageWise, perform the following steps:

- 1. Open the NMS.INI file in the Windows directory on the management console.
- 2. Find the [map] section of the file.
- 3. Remove the entry CPQCIM from the Modules line in the [map] section.
- 4. Remove the entry CPQCIM from the RunModules line in the [map] section.
- 5. Find the [netexplorer] section of the file.
- 6. Remove the entry COMPAQ from the RuleFiles line in the [netexplorer] section.
- 7. Restart the management console.

These steps prevent servers from being discovered as Compaq Servers. However, servers that have already been discovered as Compaq servers will still be shown as Compaq servers after Insight Manager is removed. You can edit these servers on the ManageWise map using the ManageWise *Database Object Editor* and remove Compaq Server as an available service. If this is done, these servers will no longer be shown with the Compaq server icon.

Alternatively, you may backup and delete the database, then rediscover the network. Servers will not be discovered as Compaq servers because ManageWise no longer has the definition of a Compaq server.