

NetIQ® AppManager® Connector for HP OpenView Operations

Management Guide

March 2007



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Contents

	About This Guide	
	Intended Audience	5
	Conventions	6
	Other Information in the Library	6
	About Attachmate	8
Chapter 1	AppManager Connector for HP OpenView Operations	
	Integration Highlights	12
	About The Connector	13
	How an Event is Forwarded	14
Chapter 2	Planning the Connector Installation	
	System Requirements	17
	Accounts Needed to Install the Connector	18
	Installation Checklist	19
Chapter 3	Installing the Connector	
	Installing the Connector on the AppManager Management Server	22
	Configuring the AppManager Repository	28
	Installing the Connector on the HP OpenView Operations Server	32
	Updating the Connector Configuration	42
	Template Changes for Special Circumstances	43

Chapter 4	Working with AppManager Events in HP OpenView Operations	
	Working with Events in the Message Browser	52
	Working with Events in the AppManager Applications Group	53
Appendix A	Uninstalling the Connector	
Appendix B	Windows Registry Information	
	HP OpenView Operations Information	61
	Event Category Information	62
	Event Severity Information	64
	Event Forwarding Information	65

About This Guide

The NetIQ AppManager Suite (AppManager Suite) is a comprehensive solution for managing, diagnosing, and analyzing performance, availability, and server health for a broad spectrum of operating environments, applications, and server hardware.

AppManager provides system administrators with a central, easy-to-use console to view critical server and application resources across the enterprise. With AppManager, administrative staffs can monitor computer and application resources, check for potential problems, initiate responsive actions, automate routine tasks, and gather performance data for real-time and historical reporting and analysis.

Intended Audience

This management guide provides information to ensure a successful installation of NetIQ AppManager Connector for HP OpenView Operations components. This guide is intended for administrators and users who are responsible for installing, configuring, and using AppManager to monitor HP OpenView Operations.

This guide assumes you have a working knowledge of, or access to, other documentation for performing basic Windows, HP OpenView Operations, and AppManager activities. For example, you should be familiar with HP OpenView Operations terminology and functionality, AppManager components and terminology, and starting AppManager jobs.

For more information about working with AppManager, see the *NetIQ AppManager User Guide*. For more information

about configuring and maintaining an AppManager management site, see the *NetIQ AppManager Administrator Guide*.

Conventions

This guide uses consistent conventions to help you identify items throughout the documentation. The following table summarizes these conventions.

Convention	Use
Bold	<ul style="list-style-type: none">• Window and menu items• Technical terms, when introduced
<i>Italics</i>	<ul style="list-style-type: none">• Book and installation kit titles• Variable names and values• Emphasized words
Fixed Font	<ul style="list-style-type: none">• File and folder names• Commands and code examples• Text you must type• Text (output) displayed in the command-line interface

Other Information in the Library

The library provides the following information resources:

- *NetIQ AppManager Installation Guide*: Provides complete information about AppManager pre-installation requirements and step-by-step installation procedures for all AppManager components.
- *NetIQ AppManager Control Center User Guide*: Provides complete information about managing groups of computers, including running jobs, responding to events, creating reports, and working with the Control Center Console. A separate guide is available for the AppManager Operator Console.

- *NetIQ AppManager Administrator Guide*: Provides information about maintaining an AppManager management site, managing security, using scripts to handle AppManager tasks, and leveraging advanced configuration options.
- *NetIQ AppManager Upgrade and Migration Guide*: Provides complete information on how to upgrade from a previous version of AppManager.
- *Management Guides*: Provide information about installing and monitoring specific applications with AppManager.

The AppManager library is available in Adobe Acrobat (PDF) format and is located in the \Documentation folder of the AppManager installation kit.

NetIQ Online Support and Extended Support Web sites provide other resources:

- Downloads, including hotfixes, service packs, and product upgrades.
- Documentation, including white papers and the most current information about version support for the systems and applications monitored by AppManager.

Note You can access NetIQ Support without a password or registration. To access the Extended Support site, you must be a registered AppManager customer.

In addition to the AppManager documentation, you may want to consult the documentation for your Windows or UNIX operating system, or other application- or system-specific documentation for reference and conceptual information. This background information can help you get the most out of your AppManager installation.

About Attachmate

Attachmate, owned by an investment group led by Francisco Partners, Golden Gate Capital and Thoma Cressey Equity Partners, enables IT organizations to extend mission critical services and assure they are managed, secure and compliant. Attachmate's leading solutions include host connectivity, systems and security management, and PC lifecycle management. Our goal is to empower IT organizations to deliver trusted applications, manage service levels, and ensure compliance by leveraging knowledge, automation and secured connectivity. For more information, visit www.attachmate.com.

NetIQ Solutions from Attachmate

Attachmate provides a wide selection of systems and security management solutions to help you manage and secure all your essential platforms, including Windows, UNIX, Linux, and iSeries. These Knowledge-Based Service Assurance products and solutions include embedded knowledge and tools to implement industry best practices and to better ensure operational integrity, manage service levels and risk, and ensure policy compliance. Our modular, best-of-breed solutions for Performance and Availability Management, Security Management, Configuration and Vulnerability Management, and Operational Change Control integrate through an open, service-oriented architecture allowing for common reporting, analytics and dashboards. Attachmate offers the following systems and security management solutions:

- **Performance and Availability Management** These products offer rapid time-to-value solutions that enable you to align your IT operations with business priorities and optimize the delivery of your IT-based business services. This solution automates the complete IT service management lifecycle: assessment of requirements,

definition of Service Level Agreements, management of day-to-day operations, and review of operational metrics.

- **Security Management** These easy-to-install-and-deploy products provide effective protection from and response to security-related threats. This solution provides powerful features, such as real-time security event monitoring, mapping of threat indicators, policy violation alerts, and expedited incident forensics and resolution. These products reduce the time required to identify and resolve security threats.
- **Configuration and Vulnerability Management** These products allow you to quickly and easily assess vulnerabilities, manage security risks, and assure policy compliance. This powerful solution measures and enforces compliance to configuration baselines based on your corporate policies, regulations, and evolving security threats. You can use the latest security knowledge, which is updated in real time, to resolve compliance and configuration issues.
- **Operational Change Control** These products enable IT organizations to control, manage, and audit operational changes to servers, Active Directory, and Group Policy with unprecedented levels of accountability. NetIQ's Operational Change Control (OCC) solutions enable enterprise customers to meet IT compliance and operational integrity needs in the most cost-effective manner, by delegating access control, managing changes according to policy, and alerting and reporting on change activities and entitlements.

Contacting NetIQ Solutions Support

Please contact us with your questions and comments. We look forward to hearing from you.

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For other locations, see our Support Contact Information Web site at www.netiq.com/support

Support Web Site: www.netiq.com/support

AppManager Connector for HP OpenView Operations

The NetIQ AppManager Connector for HP OpenView Operations provides tight integration between the NetIQ AppManager Suite and the HP OpenView Operations framework. With the AppManager Connector in place, AppManager events are automatically formatted and forwarded to the HP OpenView Operations management server and then displayed in the HP OpenView Operations Message Browser. This integrated solution allows existing AppManager customers to consolidate management information, bringing AppManager's Windows management functionality into HP OpenView Operations.

This chapter provides an overview of the Connector and how events are forwarded. The following topics are covered:

- [“Integration Highlights” on page 12](#)
- [“About The Connector” on page 13](#)
- [“How an Event is Forwarded” on page 14](#)

Integration Highlights

Highlights of AppManager's integration with HP OpenView Operations include:

- The AppManager SmartAdapter, which is a plug-in for the AppManager management server, submits AppManager event information to the HP OpenView Operations agent. The HP OpenView Operations agent then translates the event information into the HP OpenView Operations format and forwards it to the HP OpenView Operations management server so it can be displayed in the HP OpenView Operations Message Browser.
- The AppManager SmartAdapter can intelligently filter AppManager events based on application type. For example, you might configure the SmartAdapter to forward AppManager events that were triggered on Microsoft Exchange and Microsoft SQL servers but not forward events triggered on Citrix WinFrame systems.
- Once you configure the SmartAdapter, AppManager events are automatically forwarded to the HP OpenView Operations agent and then the HP OpenView Operations management server without additional operator intervention.
- The SmartAdapter can be customized by assigning different ranges of AppManager event severity levels to the appropriate HP OpenView Operations alarm conditions and changing the format for how event information is displayed in the HP OpenView Operations Message Browser.
- From the HP OpenView Operations console, you can acknowledge, close or delete events; restart and stop existing jobs that generated an event, and create new jobs.

About The Connector

The AppManager Connector for HP OpenView Operations formats, filters, and forwards AppManager events to HP OpenView Operations.

An event is an alert that a condition or activity you are monitoring with AppManager has occurred on a managed client. Events are generated by AppManager Knowledge Script jobs. For more information about jobs and events, see the *User Guide*.

The AppManager Connector consists of two components: the *AppManager SmartAdapter* and *framework integration support files*. The SmartAdapter is a plug-in for the AppManager management server. The SmartAdapter monitors events received by the AppManager management server, and then submits it to the HP OpenView Operations agent. The HP OpenView Operations agent translates the AppManager event information into the HP OpenView Operations format and automatically forwards it to the HP OpenView Operations management server. (For more information, see [“How an Event is Forwarded” on page 14.](#))

The framework integration component configures the HP OpenView Operations management server so that it can receive AppManager event information, which is displayed in the HP OpenView Operations Message Browser. The framework integration support files include configuration files for AppManager templates and message and application groups.

The SmartAdapter is functional only when attached to the AppManager management server and, therefore, must reside on the same Windows server as the AppManager management server.

The framework integration component supports HP OpenView Operations running on UNIX (Solaris or HP/UX). For system requirements, see [page 17](#).

How an Event is Forwarded

When a Knowledge Script job that is running on a managed client produces an event, the AppManager agent sends the event information to the AppManager management server. If the management server detects that the AppManager SmartAdapter is installed, the event information is forwarded to the SmartAdapter.

If the SmartAdapter determines that the event falls within the event categories and event severity levels that the SmartAdapter was configured to process, it submits the event to the HP OpenView Operations agent (which is on the same computer as the AppManager SmartAdapter and management server).

The HP OpenView Operations agent translates the event information into an HP OpenView Operations-readable format through an HP OpenView Operations template, and then forwards it to the HP OpenView Operations management server. The event is then displayed on the HP OpenView Operations Message Browser that is connected to the HP OpenView Operations management server.

Other events are not forwarded. (For example, if the SmartAdapter is configured for Microsoft SQL Server and Exchange Server events, and an event is generated by Lotus Domino, then the SmartAdapter ignores it.)

Long Messages in XML

Many AppManager 6.0 Knowledge Scripts write the long (detail) event message in an AppManager-specific XML format. If you are using such a script with an AppManager 6.0

management server, the detail message will be converted to plain text before the event message is forwarded to the HP OpenView Operations agent. If, on the other hand, you are using such a script with an AppManager 5.0.1 or earlier management server, the detail message will remain in raw, unconverted XML format.

If you write your own long message in XML format, but it is not in AppManager-specific XML, an empty string will be forwarded instead of the message.

Notes

- The SmartAdapter logs information in a file named `msadapt_ITO.log`, which can be found in the `\NetIQ\temp\NetIQ_Debug\computer` folder (for example, `c:\NetIQ\temp\NetIQ_Debug\Shasta`).
 - Events can be forwarded to HP OpenView Operations without being recorded in the AppManager repository. For information, see [“Event Forwarding Information” on page 65](#).
-

Planning the Connector Installation

This chapter describes system and account requirements, and gives an overview of the procedures for installing the AppManager Connector for HP OpenView Operations. The following topics are covered:

- [“System Requirements,”](#) below
- [“Accounts Needed to Install the Connector”](#) on page 18
- [“Installation Checklist”](#) on page 19

System Requirements

Be sure your AppManager and framework environments meet the following software requirements before you install the Connector.

- AppManager version 7.0
- HP OVO Management Server version 8.1 running on an HP/UX or Solaris computer.

For complete hardware and software system requirements for HP OpenView Operations, see your HP documentation.

- An HP OVO agent for MS Windows version 8.1 must be installed on the AppManager server.

The agent installer first runs on the HP OVO server. It requires the administrator password of the AppManager server. The AppManager server must have ftp and snmp services running.

- One of the supported operating systems: Microsoft Windows 2000 Advanced Server, Microsoft Windows Enterprise server or Microsoft Windows 2003 Standard server.

The AppManager Supported Products Web site contains up-to-date information about supported configurations; see www.netiq.com/support/am/supportedproducts.asp. Or contact NetIQ Technical Support with questions about version support.

Note For system requirements and instructions for installing the AppManager agent, repository, and management server, see the *NetIQ AppManager Installation Guide*. An online version of the guide, in Adobe Acrobat format, is included in the AppManager installation kit in the \Documentation folder.

Accounts Needed to Install the Connector

The setup program for AppManager Connector for HP OpenView Operations requires access to various administrator and user accounts. The following table lists the accounts required:

For the computer where this component resides		
Running on	Requires	
AppManager management server	Windows NT, Windows 2000 or Windows 2003	A valid Windows NT, Windows 2000 or Windows 2003 login account with Administrator privileges. The privileges can be for the local computer (required) or the Domain (optional).
HP OpenView Operations	HP/UX or Solaris	The same privileges as when HP OpenView Operations was installed: the person performing the installation must be superuser (root) and have privileges to create, read, write, and execute files within the installation folder.

Installation Checklist

Complete this checklist to ensure a successful installation of the AppManager Connector for HP OpenView Operations.

To do this	See
<input type="checkbox"/> Run the Connector setup program to install the Connector on the Windows computer where the AppManager management server resides. Note: Both the <i>AppManager SmartAdapter</i> and <i>framework integration support files</i> components must be installed on this computer.	page 22
<input type="checkbox"/> Configure the AppManager repository so it can receive event information from HP OpenView Operations.	page 28
<input type="checkbox"/> Set the PATH environment variable on the HP/UX computer where HP OpenView Operations resides to include the location of the binaries <code>opcsv</code> and <code>opccfgup1d</code> .	page 32
<input type="checkbox"/> Install the components that are required for integration on the computer where HP OpenView Operations resides. Installation involves: <ul style="list-style-type: none">• Transferring the framework integration support files from the Windows computer where the AppManager management server resides to the computer where the HP OpenView Operations management server resides.• Executing a shell script that extracts the framework integration support files and loads HP OpenView Operations-related configuration files for AppManager templates and message and application groups.• Assigning a template and pushing the template to the Windows computer.• Configuring the HP OpenView Operations Message Browser to display AppManager event information.	page 32

Installing the Connector

This chapter describes the procedures for installing the AppManager Connector for HP OpenView Operations and configuring HP OpenView Operations to receive AppManager events. The following topics are covered:

- [“Installing the Connector on the AppManager Management Server,”](#) on page 22
- [“Configuring the AppManager Repository,”](#) on page 28
- [“Installing the Connector on the HP OpenView Operations Server,”](#) on page 32
- [“Updating the Connector Configuration,”](#) on page 42
- [“Template Changes for Special Circumstances,”](#) on page 43

You must have AppManager installed before you can install AppManager Connector for HP OpenView Operations.

Installing the Connector on the AppManager Management Server

On the Windows host where the *AppManager Management Server* resides, you must use the AppManager Connector setup program to install *both* the:

- **AppManager SmartAdapter:** The Connector component that is associated with the AppManager management server and forwards events to the HP OpenView Operations agent. The HP OpenView Operations agent then formats and forwards the event information to the HP OpenView Operations management server.
- **Framework integration support files:** The Connector component that is associated with the HP OpenView Operations management server and contains HP OpenView Operations-related configuration files for AppManager templates and message and application groups.

Later, transfer the framework integration support files to the computer where HP OpenView Operations runs.

Before you run the setup program, keep in mind:

- Installation of the SmartAdapter requires that the `netiq\bin` folder be in the system path. The path to `opcapi.dll`, which is `C:\Program Files\HP OpenView\bin`, should also be in the system path. Add these folders to the Path variable and then reboot the system.
- The path to `opcapi.dll`, which is `C:\Program Files\HP OpenView\bin`, should also be in the system path.
- You need a valid Windows login account with Administrator privileges. The privileges can be for the local computer (required) or the Domain (optional).

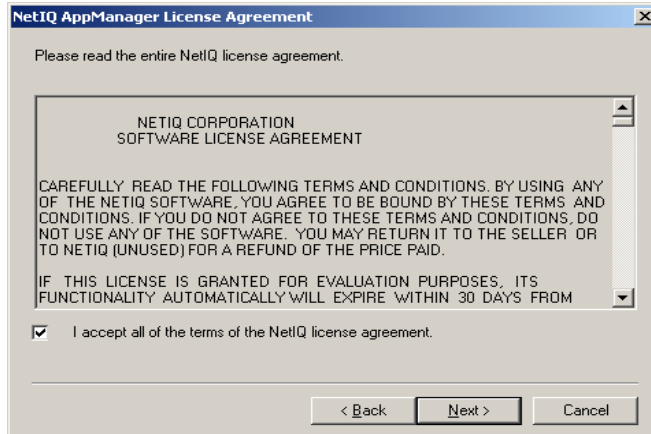
- During the installation process, the setup program stops and restarts the AppManager management service (NetIQms).

To run the setup program:

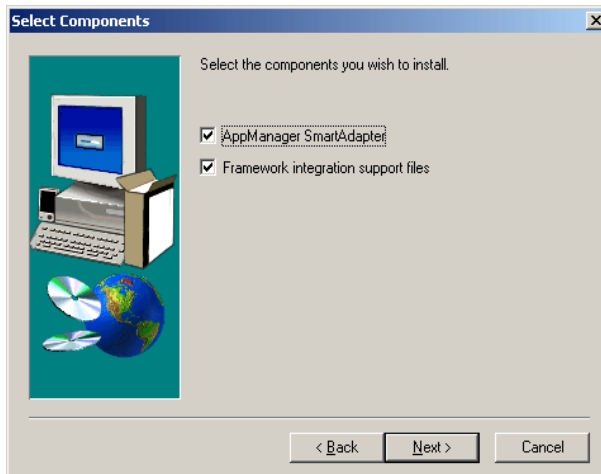
- 1 On the AppManager management server, run the **Setup.exe** program, which is located in the distribution folder you created.
- 2 At the Welcome dialog box, click **Next**.



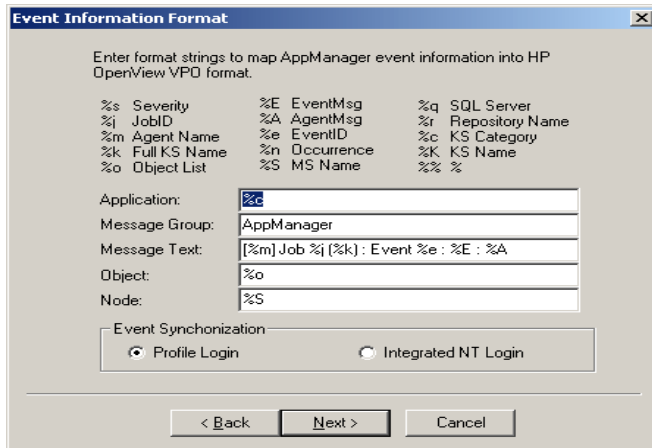
- 3 At the NetIQ AppManager License Agreement dialog box, read the license agreement, select the checkbox to accept the term of the License Agreement, and then click **Next**.



- 4 Select the components to install on this computer and click **Next**.



- 5 At the Event Information Format dialog box, enter format strings and click **Next**. These format strings will map AppManager event information into HP OpenView Operations format. The HP OpenView Operations agent formats AppManager event information using these format strings:

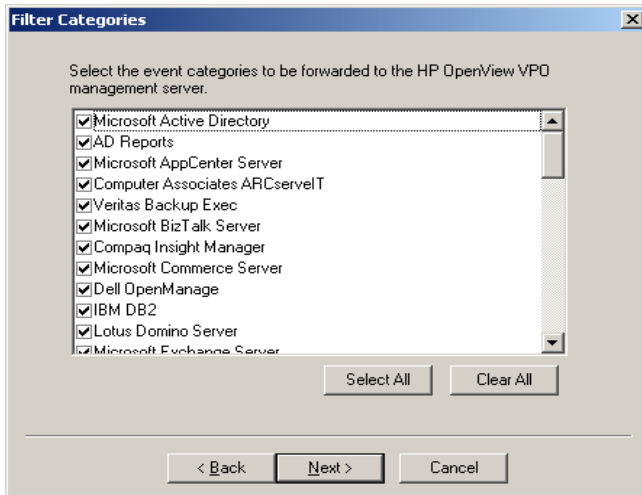


Format item	Default information
Application	Knowledge Script category, such as NT or Domino.
Message Group	The application that generated the message; in this case AppManager.
Message Text	Details about the event, including the name of the computer where the job was run, the job ID, the full name of the Knowledge Script, the event ID, and the event detail message.
Object	The resource object that the job was run on.
Node	The name of the computer where the AppManager management server resides.

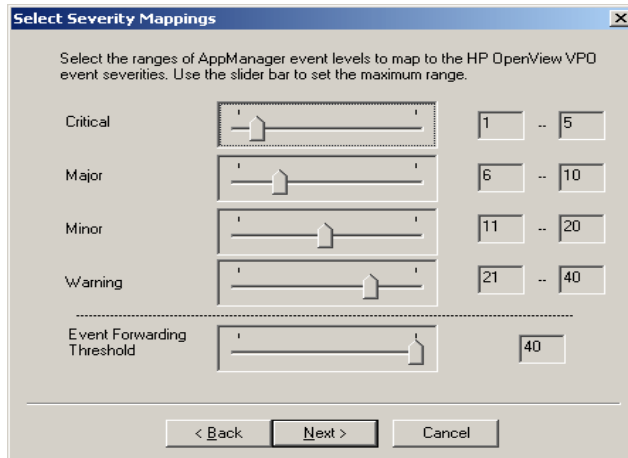
The format string consists of text and variables. Variables are preceded with the percentage sign and are case sensitive. For example, %k returns the full name of the Knowledge Script, including the KS category prefix (such as NT_MemUtil); %K returns only the KS name without the KS category prefix (such as MemUtil).

Note The templates that come with the AppManager Connector are configured with these default format strings. If you change any of the strings, especially Message Text, you'll need to update the properties of each message condition in the template that you decide to use.

- 6 At the Filter Categories dialog box, select the categories of AppManager events you want forwarded to the HP OpenView Operations management server, then click **Next**. (The event categories correspond to AppManager Knowledge Script categories.) By default, all categories are selected, which means event information for all categories will be forwarded to the HP OpenView Operations management server.

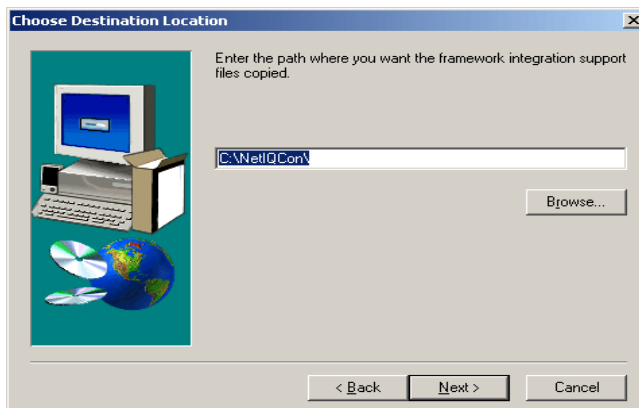


- 7 To change event severity levels, move the slider bars and click **Next**.



The alarm condition categories used by HP OpenView Operations are mapped to the AppManager severity levels (1-40).

- 8 At the Choose Destination Location dialog box, click **Browse** to specify a folder on a Windows computer to copy the framework integration support files. The default is `c:\NetIQCon`. Then click **Next**.



9 The AppManager management server must be stopped during the installation. If prompted, select **Yes** to allow the setup program stop the AppManager management server service (**NetIQms**) and finish the setup procedure.

10 When the setup program completes, click **Yes**.

Note The installation log is located at %WINDIR%\appmgr\ITO.log

Configuring the AppManager Repository

Returning event information to the AppManager repository from an operator-initiated action (such as closing an AppManager event) that was performed in the HP OpenView Operations console requires that the computer where HP OpenView Operations is running and the computer where the AppManager repository resides can communicate.

The AppManager repository is a SQL Server database. AppManager supports running SQL Server in Integrated, Mixed, or Standard security mode. Configuration requirements differ depending on the security mode you are running SQL Server in. See either "[Integrated Security Mode](#)" on this page or "[Mixed or Standard Security Mode](#)," on page 29.

Integrated Security Mode

If SQL Server is running in Integrated security mode, the AppManager management server service (**NetIQms**) must run as a Windows account with permission to access the AppManager repository.

If necessary, change the startup account for the **NetIQms** service with an existing Windows account:

- 1** Double-click **Services** in the Windows Control Panel.
- 2** Select **NetIQms** in the **Service** list.

- 3 Click **Startup**.
- 4 In the Service dialog box, select **This Account** for the **Log On As** account.
- 5 Type a **Password** and then confirm it.
- 6 Click **OK**.
- 7 When you're finished, exit the Services Control Panel.

Mixed or Standard Security Mode

If SQL Server is running in Mixed or Standard security mode, the AppManager repository is logged on to using a logon profile named `ITOPROFILE`.

You must create a `netiq.ini` file that includes the logon profile information. The `netiq.ini` file should be located in the folder specified by the `windir` system variable (for example, `c:\WINNT`) on the node where the framework integration support files component was installed.

Here is an example of an HP OpenView Operations logon profile:

```
[ITOPROFILE]
USER=FRED
PASSWORD=SCOOTER
SERVER=SHASTA
DATABASE=MY_QDB
```

where:

For:	Do this:
User	Type the user name of the SQL Server login account used to access the AppManager repository. The default SQL Server user is the administrative user, <code>sa</code> .
Password	Type the password for the SQL Server login account. If using the <code>sa</code> user, the default password is Null.

For:	Do this:
Server	Type the Windows name of the server where the AppManager repository you want to work with is installed.
Database	Type the name of the AppManager repository with which you want to work. The default AppManager repository name is QDB.

Note In creating a logon profile, consider your security requirements. Because the password is stored in plain text, it is recommended that the `netiq.ini` file have restricted read permissions. The HP OVO account used when the HP OpenView Operations agent was installed on the computer where the AppManager management server resides must have Read access.

In addition to adding the profile information to the `netiq.ini` file, the SQL user identified in the HP OpenView Operations profile must be set up in the AppManager Security Manager as an AppManager user with permission to acknowledge, close, and delete events, and start and stop jobs.

To set up the SQL user:

- 1** Start the AppManager Security Manager.
- 2** Click **Security > User Setup**.
- 3** In the AppManager User Setup dialog box, either add an existing SQL Server user to the AppManager users list or create a new SQL Server user.

Is the SQL Server user ID of the HP OpenView Operations profile user in the SQL users list?

Do this

Yes

Add the existing SQL Server user to the AppManager users list.

- 1** Select the user ID in the **SQL users** list.

- 2** Click **Add**.

Is the SQL Server user ID of the HP OpenView Operations profile user in the SQL users list?

Do this

No

Create a new SQL Server user and then add it to the AppManager users list.

Note To add a new SQL Server user, you must be logged on to the Security Manager with the SQL Server sa account.

1 Click **New SQL User**.

2 Type the **SQL user name** you want to create. (As you type, AppManager also fills in the **SQL login ID** name field.)

3 Select a valid **SQL group** for the user to belong to.

4 Type the **SQL login password** for the new SQL Server user.

5 Click **OK**.

6 Select the user ID in the **SQL users** list.

7 Click **Add**.

- 8** Make sure the AppManager user has a security role, such as the predefined **Administrator** or **Standard User** role or a custom role, that allows the following functional rights.

Rights for	Allow
Events	<ul style="list-style-type: none"> • Acknowledge and close events • Delete events
Jobs - Existing	<ul style="list-style-type: none"> • Start, stop, and close existing jobs (cannot modify job properties)

For more information about using AppManager Security Manager, see the *Administrator Guide*. An online version of this document, `administrator.pdf`, is available on the AppManager CD-ROM in the `\documentation` folder.

Now you're ready to install the framework integration support files on the computer where HP OpenView Operations is running. For more information, see [“Installing the Connector on the HP OpenView Operations Server,”](#) on page 32.

Installing the Connector on the HP OpenView Operations Server

After installing the AppManager SmartAdapter and framework integration support files on the computer where the AppManager management server resides, you must install the Connector on the computer where HP OpenView Operations runs.

Installing the Connector on a computer involves:

- Transferring the framework integration support files (`appmgr.tar` and `appmgr.sh`) from the Windows computer where the AppManager management server resides to the computer where the HP OpenView Operations management server resides.
- Executing a shell script (`appmgr.sh`) that extracts the framework integration support files from `appmgr.tar` and loads HP OpenView Operations-related configuration files for AppManager templates and message and application groups.

Note Set the `PATH` environment variable on the computer where HP OpenView Operations resides to include the location of the binaries `opcsv` and `opccfgup1d`. The `appmgr.sh` shell script must use these binaries.

- Assigning a template (which is a set of message conditions) and pushing the template to the Windows computer.
- Configuring the HP OpenView Operations Message Browser to display AppManager event information.

When installing the AppManager Connector on the computer where HP OpenView Operations is running, you need the same privileges as when HP OpenView Operations was installed: the person performing the installation must be superuser (root) and have privileges to **create, read, write,** and **execute** files within the installation folder.

During the installation process, all HP OpenView Operations **opc** services are stopped and restarted. You may want to schedule the installation script to run at a time when stopping **opc** services has the least impact.

Transferring the Framework Integration Support Files

On the Windows computer where you installed the framework integration support files, use FTP to transfer the files named **appmgr.tar** and **appmgr.sh** to the computer.

To transfer the framework integration support files:

- 1 To log on to the FTP server, at the command line, type:
ftp computer, where *computer* is the name of the computer where you will be transferring the files. Press **Enter**.
- 2 When prompted for **user**, type **root**. Press **Enter**.
- 3 When prompted for **password**, type the password for the **root** user, and press **Enter**.
- 4 Once logged on to the FTP server, navigate to the distribution folder where you previously downloaded and extracted the Connector source files. At the command line, type: **cd folder_name**, then press **Enter**.
- 5 Set the file transfer type to binary. At the command line, type: **bin**, then press **Enter**.
- 6 Transfer **appmgr.tar**. At the command line, type: **put appmgr.tar**, then press **Enter**.

- 7 Transfer `appmgr.sh`. At the command line, type: `put appmgr.sh`, then press **Enter**.

Executing the Shell Script

The installation script is written for a Korn shell. The script uploads the HP OpenView Operations-related configuration files for AppManager templates and message and application groups to HP OpenView Operations.

The script references the path on the Windows computer where you previously installed the framework integration support files.

All HP OpenView Operations `opc` services are stopped and restarted. (You might want to schedule running this script at a time when stopping `opc` services has the least impact.)

To execute the shell script:

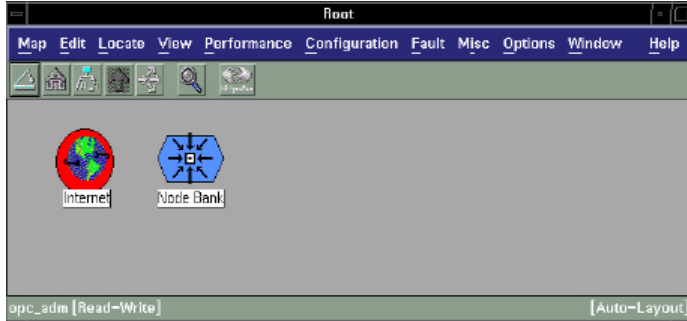
- 1 Before executing the shell script, first change the mode. On the computer, at a command line, type `chmod u+x appmgr.sh`
- 2 Log onto the HP OpenView Operations host workstation as the same user that installed HP OpenView Operations.

For example, log in as `root` (superuser).
- 3 Open a shell.
- 4 Navigate to the folder where you copied `appmgr.tar` and `appmgr.sh`.
- 5 At the command line, type `./appmgr.sh`, then press **Enter**.

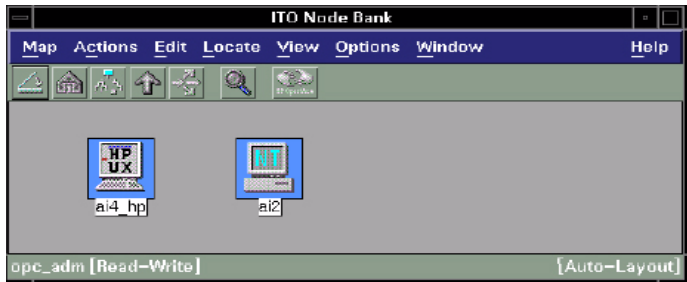
Assigning a Template

To assign a template:

- 1 On the computer, log into the HP OpenView Operations console.
- 2 In the root window, double-click the **Node Bank** icon.

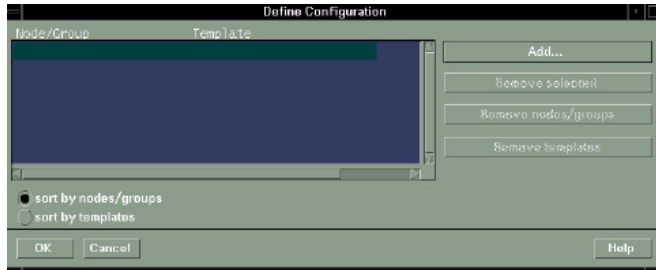


- 3 In the Node Bank window, you'll see nodes for both the UNIX and the Windows computers.

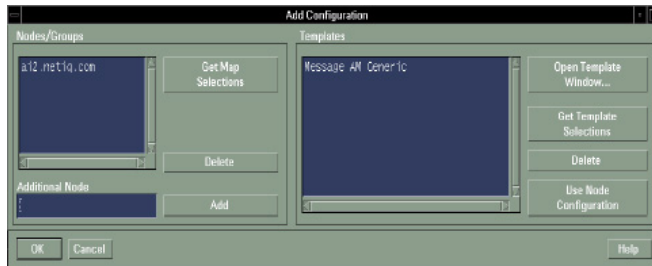


- 4 Click **Actions > Agents > Assign Templates**.

- 5 In the Define Configuration window, click **Add**.

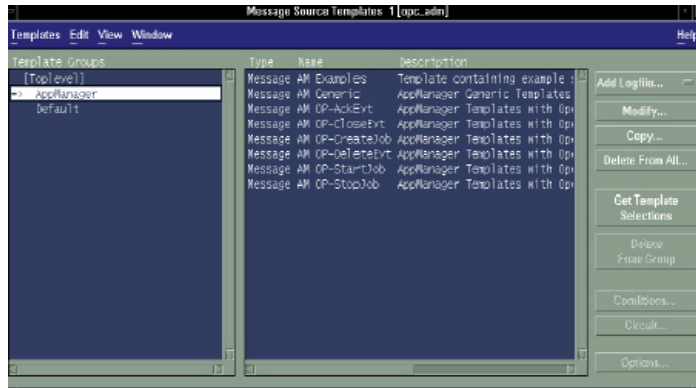


- 6 In the Add Configuration window, add the Windows node to the **Nodes/Groups** list, do one of the following:
- Type the node hostname in the **Additional Node** box, then click **Add**
 - Or, in the Node Bank window, select the node and in the Add Configuration window, click **Get Map Selections**.



- 7 To assign a template to the node, click **Open Template Window**.

- 8 In the Message Source Templates window, click AppManager in the **Template Groups** list to show the AppManager templates.



- 9 Select the template that you want to use.

Note You can only assign one template to the node.

Each template is a set of pre-formatted message conditions that can be customized.

This template	Provides
AM Generic	<p>Message conditions that allow you to view AppManager event information in the HP OpenView Operations console but do not involve an operator-initiated action (such as closing an event).</p> <p>This limited set of message conditions can be easily customized for your HP OpenView Operations environment.</p>
AM OP-AckEvt	<p>Message conditions with an operator-initiated action that acknowledges an AppManager event. The updated status information is logged in the AppManager repository.</p> <p>This set includes a message condition for each application and system that AppManager monitors.</p> <p>You might want to customize this set to include only those applications you are using AppManager to monitor.</p>

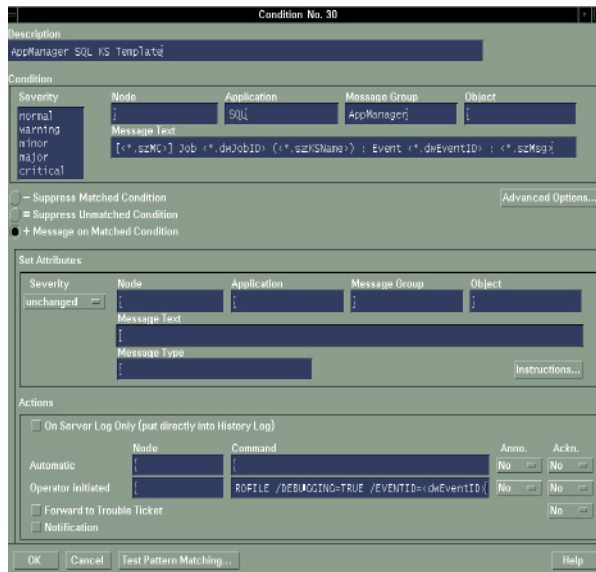
This template	Provides
AM OP-CloseEvt	<p>Message conditions with an operator-initiated action that closes an AppManager event. The updated status information is logged in the AppManager repository.</p> <p>This set includes a message condition for each application and system that AppManager monitors.</p> <p>You might want to customize this set to include only those applications you are using AppManager to monitor.</p>
AM OP-CreateJob	<p>Message conditions with an operator-initiated action that starts a new AppManager job. The job information is logged in the AppManager repository.</p> <p>This template requires that you enter the Knowledge Script name (/KSNAME=) and the Windows target computer (/TARGET=) where the AppManager agent is running.</p>
AM OP-DeleteEvt	<p>Message conditions with an operator-initiated action that closes and deletes an AppManager event. The updated status information is logged in the AppManager repository.</p> <p>This set includes a message condition for each application and system that AppManager monitors.</p> <p>You might want to customize this set to include only those applications you are using AppManager to monitor.</p>
AM OP-StartJob	<p>Message conditions with an operator-initiated action that restarts the AppManager job that generated the event. The updated status information is logged in the AppManager repository.</p> <p>This set includes a message condition for each application and system that AppManager monitors.</p> <p>You might want to customize this set to include only those applications you are using AppManager to monitor.</p>
AM OP-StopJob	<p>Message conditions with an operator-initiated action that stops the AppManager job that generated the event. The updated status information is logged in the AppManager repository.</p> <p>This set includes a message condition for each application and system that AppManager monitors.</p> <p>You might want to customize this set to include only those applications you are using AppManager to monitor.</p>

- 10** To view the set of message conditions, double-click the template in the list; or select the template and click **Conditions**.

- To edit the properties of the message condition, in the Message and Suppress Conditions window, double-click the condition in the list; or select the condition and click **Modify**.

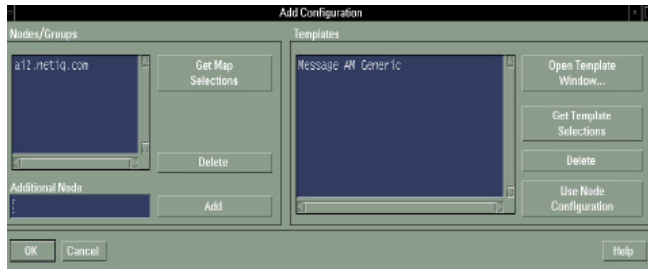


- Make the changes you want, then click **OK**.

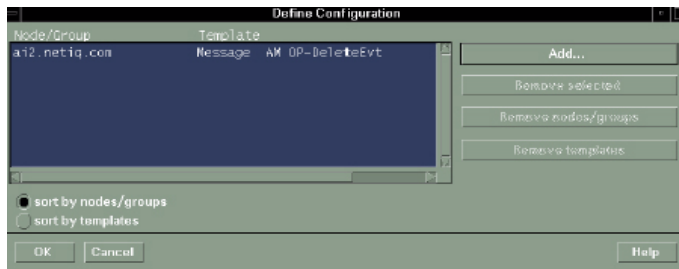


Note To change the action from operator-initiated to automatic, move the command string from the **Operator initiated Command** box to the **Automatic Command** box.

- 13 To assign the template to the node, in the Add Configuration window, click **Get Template Selections**, then click **OK**.

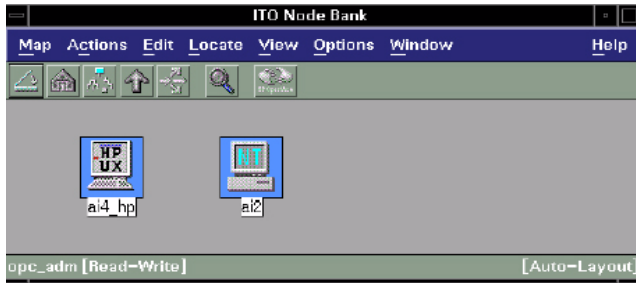


Here's how the Define Configuration window looks when the template has been assigned to the node.

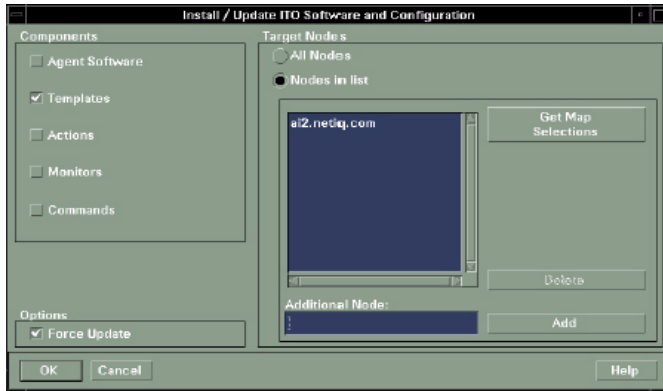


- 14 To push the assigned template to the Windows computer where the HP OpenView Operations agent resides, in the

Node Bank window, click **Actions > Agents > Install/Update Software & Configuration**.



- 15 Set the options in the Install/Update Software and Configuration window, then click **OK**.



For the	Do this
Components group	Select the Templates option and then click to select the Force Update option.
Target Nodes group	Select the Nodes in list option.
Additional Node field	Type the name of the Windows computer and then click Add .

Updating the Connector Configuration

After installing the Connector on a Windows computer, you can change the configuration options for event categories, event severity levels, and the format that event information appears in within the HP OpenView Operations console. Updating the Connector configuration only applies to the Connector SmartAdapter, which is installed on the computer where the AppManager management server resides.

On the Windows computer where the AppManager management server resides, go to **Start > Programs > NetIQ > AppManager > Tools & Utilities > Connector for HP OpenView Configuration**.

Make the changes you want for event categories, event severity levels, and event information formatting. For more information, see the previous section.

Notes

- The configuration utility automatically stops and then restarts the AppManager management server service (NetIQms).
 - To install the Connector for the first time, follow the instructions in [“Installing the Connector on the AppManager Management Server,”](#) on page 22 and [“Installing the Connector on the HP OpenView Operations Server,”](#) on page 32.
 - You will need to reboot the management server (ms) host if the ms runs under the system account and an agent has been added. This is to ensure that the path is correct for the ms and the Connector to access the HP OPC API.
-

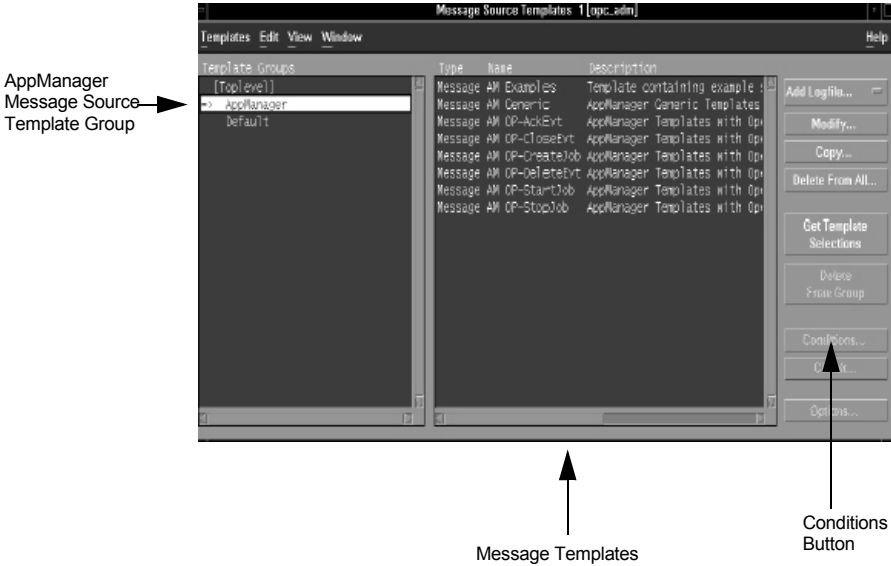
Template Changes for Special Circumstances

If you create your own Knowledge Script categories, or if you use Windows-only (integrated) login for the synchronization features to access the AppManager repository, you will need to create new templates or modify existing ones.

Making new templates for new KS categories

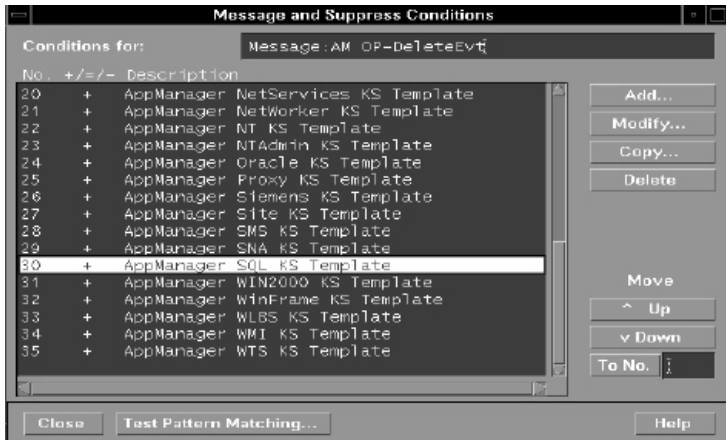
If you create your own KS categories, you will need to manually create HP OpenView templates for them:

- 1 Open the HP OVO **Message Source Template** dialog box:



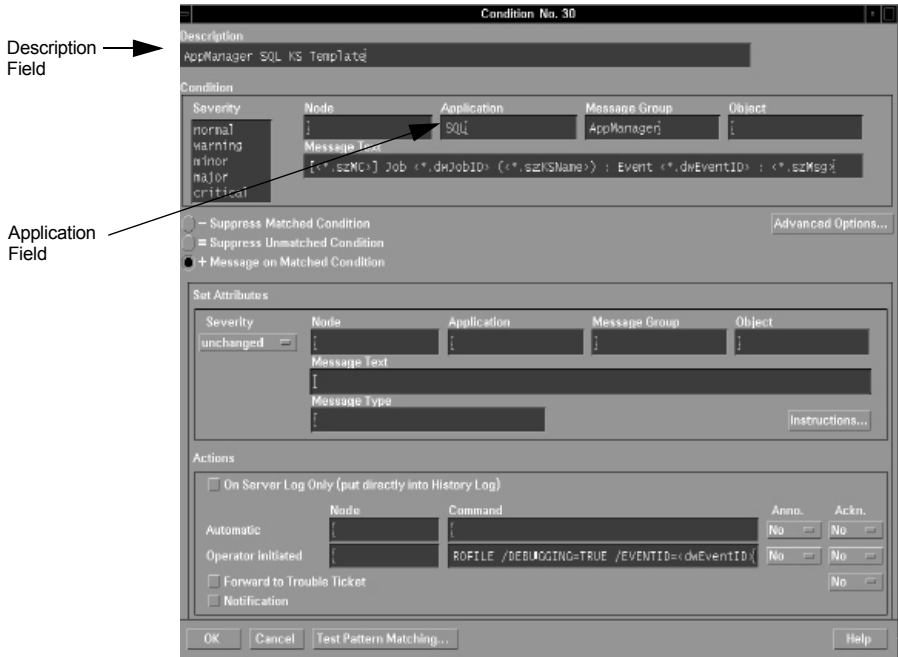
- 2 Highlight the **AppManager Message Source Template Group** on the left, as shown.

- 3 Highlight one of the Message Templates in the right-hand text box, and click the **Conditions** button to open the **Message and Suppress Conditions** dialog box.



Highlight the dummy condition **AppManager Conf KS Template** (not shown) and click the **Copy** button. This will open the **Condition No. xx** dialog box.

- In the **Condition No. xx** dialog box, modify the **Description** and **Application** fields with the name (prefix) of your new KS category:



Click **OK** to save the new template. It will be added automatically as a new condition with the **Description** that you supplied.

- Repeat steps 3 and 4 for *every one* of the Message Templates listed in the right-hand text box in **Message Source Template** dialog box.
- Using the normal OVO procedure, update the modified template on the Connector host.

Using Integrated Security for AppManager Repository

By default, the AppManager repository is accessed by a SQL Server with mixed mode security and the Connector framework takes advantage of this to allow each message template to log into the AppManager repository with a logon profile named `ITOPROFILE`. If you want to use integrated (Windows-only) security, however, this will not work and you must do the following:

- 1 Make sure that the HP OVO agent service is running under a domain account.
- 2 Make sure that the same domain account has appropriate access rights to the AppManager repository.
- 3 On the Connector host computer (MS host), launch the Connector for HP OpenView Operation Configuration wizard and select **Integrated NT Login** at the **Event Information Format** screen.

Event Information Format

Enter format strings to map AppManager event information into HP OpenView VPO format.

%s	Severity	%E	EventMsg	%q	SQL Server
%j	JobID	%A	AgentMsg	%r	Repository Name
%m	Agent Name	%e	EventID	%c	KS Category
%k	Full KS Name	%n	Occurrence	%K	KS Name
%o	Object List	%S	MS Name	%%	%

Application:

Message Group:

Message Text:

Object:

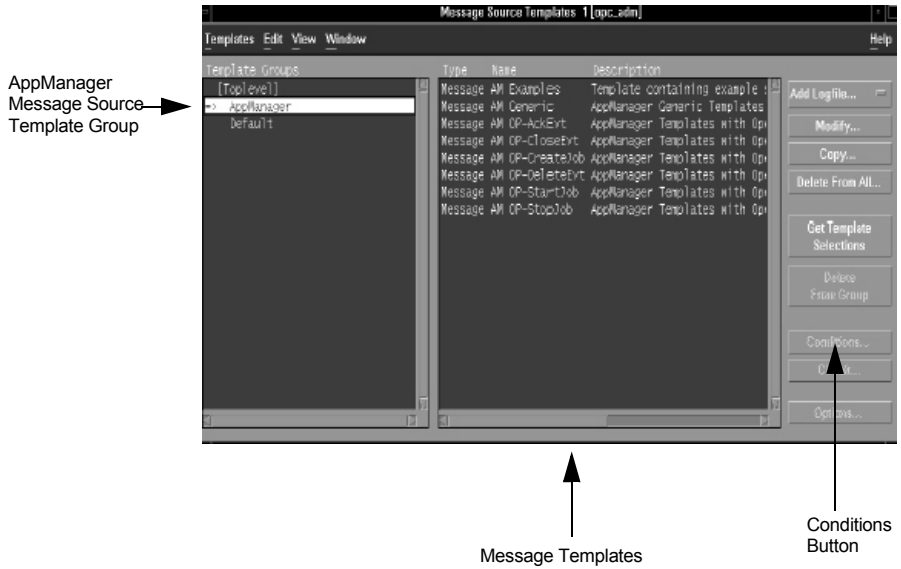
Node:

Event Synchronization

Profile Login Integrated NT Login

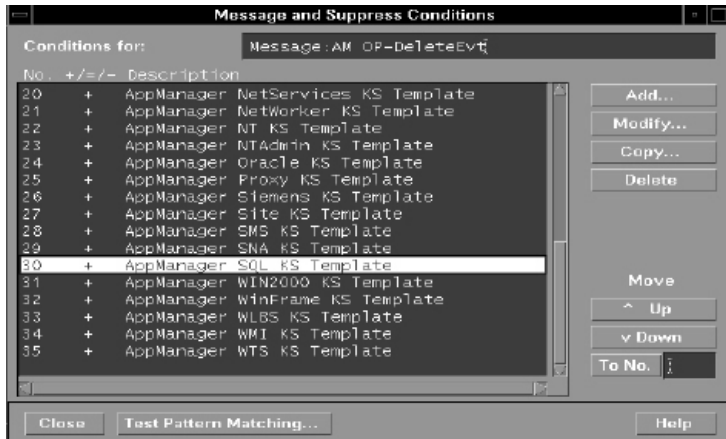
< Back Next > Cancel

4 Open the HP OVO **Message Source Template** dialog box:

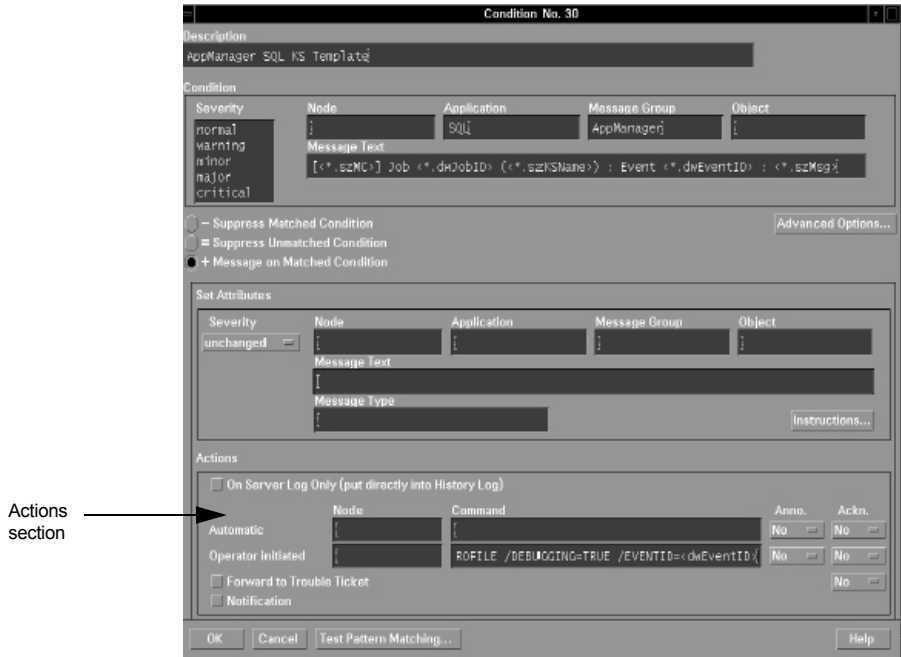


5 Highlight the AppManager Message Source Template Group on the left, as shown.

- 6 Highlight one of the Message Templates in the right-hand text box, and click the **Conditions** button to open the **Message and Suppress Conditions** dialog box.



- In the **Message and Suppress Conditions** dialog box, highlight one of the listed templates and click the **Modify** button. This will open the **Condition No. xx** dialog box.



- Modify the **Command** (either **Automatic** or **Operator initiated**) in the **Actions** section of the **Condition No. xx** dialog box by replacing `/PROFILE=ITOPROFILE` with `/MACHINE=QDB_SQL_Server_Name /NTLOGIN=TRUE/`

Note There must be a space following `QDB_SQL_Server_Name`.

Click **OK**.

- Repeat steps 7 and 8 for *every one* of the templates listed in the **Message and Suppress Conditions** dialog box.

- 10 Repeat steps 7 to 9 for *every one* of the Message Templates listed in the right-hand text box in **Message Source Template** dialog box.
- 11 Using the normal OVO procedure, update the modified template on the Connector host.

Working with AppManager Events in HP OpenView Operations

This chapter describes how to perform an action (such as acknowledge an event or stop a job that generated an event) on an AppManager event displayed in the HP OpenView Operations console.

In the HP OpenView Operations Message Browser, the action that can be performed on an event is limited to the action associated with the template you selected.

To perform an action that is not associated with the template, use the NetIQ AppManager Application group.

The following topics are covered:

- [“Working with Events in the Message Browser” on page 52](#)
- [“Working with Events in the AppManager Applications Group” on page 53](#)

Working with Events in the Message Browser

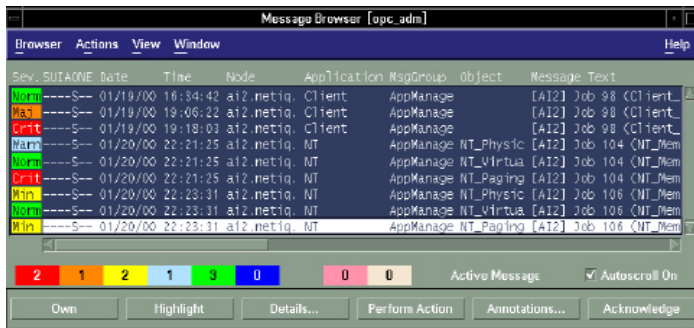
When you configure HP OpenView Operations to receive AppManager events, you select a template. The template consists of a set of message conditions. The message conditions in the AM Generic template do not involve any automatic or operator-initiated actions. There are other templates that cover these actions:

- Acknowledging events
- Closing events
- Deleting events
- Starting an existing job
- Stopping an existing job
- Creating a new job

By default, the actions are specified as operator-initiated.

For more information about templates, see [“Assigning a Template” on page 35](#).

AppManager events are displayed in the HP OpenView Operations Message Browser.



If you are using one of the templates with an operator-initiated action (for example, AM OP-AckEvt), select an AppManager event in the list and click **Perform Action**. In this example, the event is acknowledged and the updated status information is logged into the AppManager repository and then displayed in the AppManager Operator Console and/or Operator Web Console.

Notes

- To change the action from operator-initiated to automatic, see [page 40](#).
 - If you acknowledge an event by clicking the **Acknowledge** button, the event is removed from Message Browser.
-

If you want to perform an operator-initiated action that is not associated with the template you are using (for example, you want to close an event but you are using the AM Generic or AM OP-AckEvt template), you can perform the action through the NetIQ AppManager Applications group. For more information see the next section.

Working with Events in the AppManager Applications Group

To manually perform an operator-initiated action on an event, you first need to get some identifying information for the action. For example, to acknowledge, close, or delete an event, get the event ID; to stop or start a job, get the job ID. To create a new job, you must enter the Knowledge Script name and the target Windows computer where the AppManager agent is running.

- 1 In the Message Browser, either double-click the event message in the list, or right-click the event message and then click **Details**.

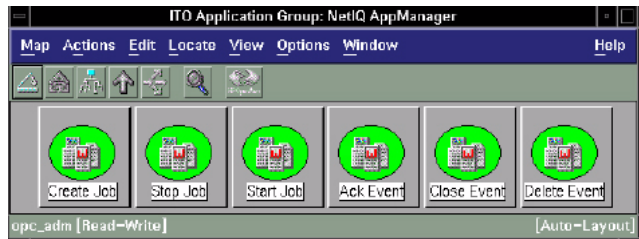


- 2 In the Message Details window, find the identifying information you need (such as an event ID or job ID) in the **Message Text** box, then click **Close**.
- 3 In the Message Browser window, click **Window > Application Bank**.

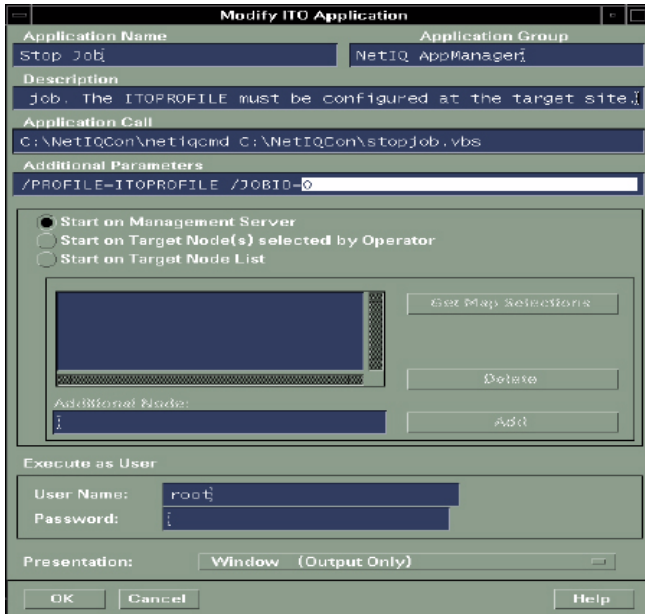
- 4 In the Applications Bank window, double-click the **NetIQ AppManager** icon.



- 5 In the NetIQ AppManager Application Group window, right-click the icon of the action you want to perform and then click **Modify**.



6 Set the options in the Modify Application window.



- In the **Additional Parameters** box, enter the event ID (EVENTID=), job ID (/JOBID=), or, if creating a new job, the Knowledge Script name (/KSNAME=) and target Windows computer (/TARGET=) Use parameter /NTLOGIN=TRUE if you want access to the QDB to be made via the account that the OpenView Agent is running under. Please note that the account must have permission to access the QDB.

Note: The Connector will attempt to access the QDB based on the setting of the Windows registry key: HKLM\Software\NetIQ\AppManager\4.0\NetIQms\Integration\ITO\Config\AMLogin . If the value is set to 1, it will use the Integrated NT Account (the account that the OVO Agent - or whomever launched the script -- is running under). If the value is anything other than 1, or if the key does not exist, it will use a NetIQ Profile file

(NetIQ.ini) *regardless* of whether the flag /NTLOGIN is set. The Profile file is discussed in Chapter 3.

- Select **Start on Target Node List**.
- Add the Windows node to the **Additional Node** box: either type the node hostname in the box and then click **Add**; or, in the Node Bank window, select the node and in the Modify Application window, click **Get Map Selections**.

7 Click **OK**.

8 To run the action, in the NetIQ AppManager Application Group window, either double-click the action icon, or right-click the icon and then click **Execute**.

Uninstalling the Connector

The Connector uninstall program removes the AppManager SmartAdapter component from the Windows computer where the AppManager management server resides.

To uninstall the Connector:

- 1 Stop the NetIQ AppManager Management Service (**NetIQms**) on the computer where you installed the Connector.
- 2 On the Windows computer where the AppManager management server resides, go to **Start > Settings > Control Panel**.
- 3 Double-click **Add/Remove Programs**, and select **NetIQ AppManager Connector for HP OpenView Operations**.
- 4 Restart the NetIQ AppManager Management Service (**NetIQms**).

Appendix B

Windows Registry Information

This appendix describes the information that the AppManager Connector for HP OpenView Operations writes to the Windows registry. The following topics are covered:

- [“HP OpenView Operations Information,”](#) below
- [“Event Category Information”](#) on page 62
- [“Event Severity Information”](#) on page 64
- [“Event Forwarding Information”](#) on page 65

Note Windows registry information is given for informational purposes only.

HP OpenView Operations Information

Information about the AppManager Connector for HP OpenView Operations is stored in the following key:

HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManager\4.0\NetIQms\Integration\ITO\Config

The key contains the following entries:

Entry	Description
ITO Application	Format string that controls how information appears in the Application column in HP OpenView Operations Message Browser. The default information is the Knowledge Script category, such as NT or Domino.
ITO Event	Sets the SmartAdapter to on (1) or off (0).

Entry	Description
ITO Message Group	Format string that controls how information appears in the Message Group column in the HP OpenView Operations Message Browser. The default information is AppManager.
ITO Message Text	Format string that controls how information appears in the Message Text column in the HP OpenView Operations Message Browser. The default information includes details about the event, including the name of the computer where the job was run, the job ID, the full name of the Knowledge Script, the event ID, and the event detail message.
ITO Nodename	Format string that controls how information appears in the Node column in the HP OpenView Operations Message Browser. The default information is the resource object that the job was run on.
ITO Object	Format string that controls how information appears in the Object column in the HP OpenView Operations Message Browser. The default information the name of the computer where the AppManager management server resides.

Event Category Information

Event categories correspond to AppManager Knowledge Script categories, such as IIS for Microsoft Internet Information Server or AMAdmin for AppManager administrative tasks.

Event category information is stored in the following key:
`HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManager\4.0\NetIQms\Integration\ITO\Filter`

The key contains an entry for each Knowledge Script category (such as `WINFRAME` for Citrix WinFrame). During Setup, selecting a category sets the `DWORD` value to `00000001`; deselecting a category sets the `DWORD` value to `00000000`. If the `DWORD` value is `00000001`, the Connector will send an event generated by a Knowledge Script job in that category to the HP OpenView Operations management server; if the `DWORD` value is `00000000`, an event would not be sent.

In the example that follows, events generated on Citrix WinFrame by a WinFrame Knowledge Script will be forwarded to the HP OpenView Operations management server; events generated on Compaq Insight Manager by a CIM Knowledge Script would not.

Entry	Description
ARCSERVE=dword:00000001	Computer Associates ARCServeIT
WINFRAME=dword:00000001	Citrix WinFrame
CIM=dword:00000000	Compaq Insight Manager
DELL=dword:00000001	Dell OpenManage
HPNS=dword:00000001	HP TopTools for Servers
NETFINITY=dword:00000001	IBM Netfinity Manager
NETWORKER=dword:00000001	Legato NetWorker
DOMINO=dword:00000001	Lotus Domino
MSCS=dword:00000001	Microsoft Cluster Server/Service
EXCH=dword:00000001	Microsoft Exchange Server
IIS=dword:00000001	Microsoft Internet Information Services
MSMQ=dword:00000001	Microsoft Message Queue Server/Service
WLBS=dword:00000001	Microsoft Network Load Balancing Service
PROXY=dword:00000001	Microsoft Proxy Server
SITE=dword:00000001	Microsoft Site Server
SNA=dword:00000001	Microsoft SNA Server
SQL=dword:00000001	Microsoft SQL Server
SMS=dword:00000001	Microsoft Systems Management Server
WTS=dword:00000001	Microsoft Terminal Server/Citrix MetaFrame
MTS=dword:00000001	Microsoft Transaction Server/Service
WBEM=dword:00000001	Microsoft WMI Service
ORACLE=dword:00000001	Oracle RDBMS Server
SIEMENS=dword:00000001	Siemens ServerView
BACKUPEXEC=dword:00000001	Veritas Backup Exec

Entry	Description
GENERAL=dword:00000001	Generic monitoring tasks
NETSERVICES=dword:00000001	Windows NT network services
NT=dword:00000001	Microsoft Windows NT Server
NTADMIN=dword:00000001	Windows NT administrative tasks
APPL=dword:00000001	Custom applications
AMADMIN=dword:00000001	AppManager administrative tasks
DISCOVERY=dword:00000001	Discovery jobs
OTHER=dword:00000001	Custom Knowledge Scripts that you have created that do not fall into any of the standard categories.

Event Severity Information

Event severity information is stored in the following key:

HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManager\4.0\NetIQms\Integration\ITO\Severity

The key contains an entry for each severity level:

Entry	Description
CRITICAL=dword:00000005	AppManager events with a severity level of 1 - 5.
MAJOR=dword:0000000a	AppManager events with a severity level of 6- 10.
MINOR=dword:00000014	AppManager events with a severity level of 11-20.
WARNING=dword:0000001e	AppManager events with a severity level of 21-30.

Note AppManager events with a severity level greater than 30 are assigned a Normal alarm condition in HP OpenView Operations.

Event Forwarding Information

Events can be forwarded to HP OpenView Operations without recording them in the AppManager repository; events can also be forwarded, recorded in the repository, and automatically acknowledged.

Event forwarding information is stored in the following key:
`HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\NetIQms\RecordEvents`

Set the DWORD value to:

- 0 - To forward events without recording them in the AppManager repository.
- 1 - (Default) To forward events and record them in the AppManager repository.
- 2 - To forward events, record them in the repository, and automatically acknowledge them.

