NetIQ® AppManager® Connector for Tivoli Enterprise

Management Guide

November 2012

Contents

About this Book and the Library

The NetIQ AppManager product (AppManager) is a comprehensive solution for managing, diagnosing, and analyzing performance, availability, and health for a broad spectrum of operating environments, applications, services, 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 staff 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 guide provides information for individuals responsible for installing an AppManager module and monitoring specific applications with AppManager.

Other Information in the Library

The library provides the following information resources:

Installation Guide for AppManager

Provides complete information about AppManager pre-installation requirements and step-by-step installation procedures for all AppManager components.

User Guide for AppManager Control Center

Provides complete information about managing groups of computers, including running jobs, responding to events, creating reports, and working with Control Center. A separate guide is available for the AppManager Operator Console.

Administrator Guide for AppManager

Provides information about maintaining an AppManager management site, managing security, using scripts to handle AppManager tasks, and leveraging advanced configuration options.

Upgrade and Migration Guide for AppManager

Provides complete information about how to upgrade from a previous version of AppManager.

Management guides

Provide information about installing and monitoring specific applications with AppManager.

Help

Provides context-sensitive information and step-by-step guidance for common tasks, as well as definitions for each field on each window.

The AppManager library is available in Adobe Acrobat (PDF) format from the AppManager Documentation page of the NetIQ Web site.

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1 Introducing AppManager Connector for Tivoli Enterprise

NetIQ AppManager Connector for Tivoli Enterprise (the Connector) is a set of software components that allows Tivoli users to view AppManager events side-by-side with their Tivoli events. This chapter provides an overview of the Connector and how AppManager events are forwarded and synchronized.

1.1 What Does the Connector Do?

The Connector performs the following functions:

- ◆ Forwards selected events from AppManager to the Tivoli Enterprise Console (TEC).
- ◆ Synchronizes event status so when a Tivoli administrator changes the status of an AppManager-originated event, the event status in the AppManager repository is updated to reflect the change made in Tivoli.

   Event synchronization is optional. You can choose not to install it.

1.2 Components of AppManager and Tivoli

The Connector consists of software modules, scripts, and files that are installed on servers in AppManager and Tivoli environments. The figures below show the key servers, consoles, and data repositories in each environment.

Tivoli Environment ("Region")   AppManager Environment
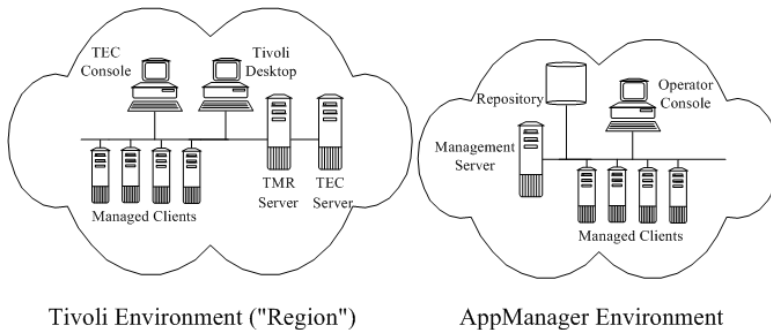
The labeled elements in the figure are as follows:

Label	Element
Tivoli Environment	
TEC Server	Tivoli Enterprise Console server

Label	Element
TMR Server	Tivoli Management Region server, the Tivoli Framework Manager
Tivoli Desktop	Console where Tivoli administrators manage the Tivoli Region
TEC Console	Console where Tivoli administrators view and respond to events
AppManager Environment	
Management server	AppManager management server that receives events from managed AppManager clients
Repository	AppManager data repository where AppManager events are stored
Operator Console	AppManager console where administrators view and respond to events

1.3 How the Connector Forwards Events

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

When a Knowledge Script job running on a managed client raises an event, the agent sends the event information to the management server. If the management server detects that the Connector is installed, the management server forwards the information to the Connector and repository.

The Connector checks whether the event falls in the event categories and severity levels configured to forward to Tivoli. If it does, the Connector translates the event information into a Tivoli-readable format and forwards it to the Tivoli Enterprise Console (TEC) server. The Connector does not forward other events.

The TEC server stores the events, which are displayed on any TECs that are connected to the TEC server.

When a managed computer raises an event in AppManager, the event is forwarded to the TEC server in the following sequence:

1 A computer, managed by an AppManager server, sends an event to the AppManager Management Service.

2 The Management Service forwards the event to the AppManager repository.

3 The Management Service forwards the event to the AppManager Connector for Tivoli Enterprise plug-in.

4 The Connector plug-in forwards events in Tivoli format directly to the TEC server.

5 The TEC server checks the validity of the event fields against the `appmanager.baroc` file, and accepts the event if there are no unexpected fields.

For more information about the `appmanager.baroc` file, see Section 1.4, "Understanding Event-Forwarding Architecture," on page 11.

1.4 Understanding Event-Forwarding Architecture

You need to install two components to enable event forwarding:

◆ **AppManager Connector for Tivoli Enterprise**, installed as a plug-in to the AppManager Management Service on the Management Service host.

The Connector plug-in is the AppManager Connector for Tivoli Enterprise. The Connector is installed on the AppManager management server and forwards events in the Tivoli format directly to the TEC server. In Tivoli terms, the Connector is a "non-TME (Tivoli Management Environment) Adapter."

When configuring the Connector, you specify which events and event information the Connector forwards to Tivoli. For more information about configuring the plug-in, see Section 3.1, "Configuring the Connector Plug-In," on page 19.

◆ **The appmanager.baroc file**, installed in the current "Event Server Rule Base" on the TEC server. This file defines the information fields that an AppManager event can send to Tivoli.

The `appmanager.baroc` file specifies what fields can be in an event sent to Tivoli, by the name of the event. There are three basic types:

◆ `NetIQ_Event`. For example, `NetIQ_AMAdmin`.

◆ `NetIQ_<Category name>_Event` (inherits from `NetIQ_Event`)

◆ `NetIQ_<Category name>_<KnowledgeScript name>` (inherits from `NetIQ_<Category name>_Event`). For example, `NetIQ_AMAdmin_AgentHealth`.

The permitted fields in an event of type `NetIQ_Event` type are as follows:

◆ `jobid: INTEGER;`

◆ `eventid: INTEGER;`

◆ `ks_name: STRING;`

◆ `ksg_name: STRING;`

◆ `rp_server: STRING;`

◆ `rp_name: STRING;`

◆ `parenteventid: INTEGER;`

◆ `am_severity: INTEGER;`

◆ `cs1: STRING;`

◆ `cs2: STRING;`

◆ `cs3: STRING;`

◆ `cs4: STRING;`

◆ `ci1: INTEGER;`

◆ `ci2: INTEGER;`

◆ `ci3: INTEGER;`

◆ `ci4: INTEGER;`

These fields appear as headings in the TEC Console.

The type `NetIQ_<Category name>_Event` adds `sub_source: <Category name>` and the `NetIQ_<Category name>_<KnowledgeScript name>` adds `ks_name :<KS name>`.

It is not necessary for an event to contain every field, but the fields that are sent must be in the above lists. Tivoli rejects events if they are not in the above lists.

NOTE: Tivoli rejects events with a Category name or KnowledgeScript name that contains any characters other than A to Z, a to z, 0 to 9, or _. If you have a Knowledge Script name with characters that are not alphanumeric, you must use either the NetIQ_Event or NetIQ_<Category name>_Event event types. If you have a category with characters that are not alphanumeric in its name, you can use only the NetIQ_Event event type.

The TEC server checks the validity of the event fields against the `appmanager.baroc` file, and accepts the event if there are no unexpected fields.

If you create a new Knowledge Script Group, you must restart the AppManager management server before the new group appears in the TEC Console.

1.5 How the Connector Synchronizes Event Status

Event synchronization is an optional feature. The event synchronization process is independent of event forwarding and does not involve the Connector plug-in. When event synchronization components are installed, the synchronization process is as follows:

- The TEC Server processes the AppManager-originated event through its loaded rule base and posts it on the TEC as an open event.
- A TEC Console operator acknowledges or closes the event.
- A series of tasks are initiated, first in the TEC Server, then in the TMR Server, and finally in the Connector Synchronization Framework.
- The Synchronization Framework updates the event status in the AppManager repository.

NOTE: Synchronization only works in one direction. If an AppManager operator changes the status of an event that was previously forwarded to Tivoli, the event status is not updated in Tivoli.

Send Event components are still present as forwarded events and are a prerequisite for synchronization

You must install the Tivoli Managed Node Software before installing the Connector Synchronization Framework software.

2 Installing the Connector

This chapter describes how to plan, install, and configure NetIQ AppManager Connector for Tivoli Enterprise (the Connector).

This chapter assumes you have AppManager installed. For more information about installing AppManager or about AppManager system requirements, see the *Installation Guide for AppManager*, which is available on the AppManager Documentation page.

2.1 System and Account Requirements

For the latest information about supported software versions and the availability of module updates, visit the AppManager Supported Products page. Unless noted otherwise, this module supports all updates, hotfixes, and service packs for the releases listed below.

The Connector has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the repository, agent, and console computers	7.0 or later
Tivoli software	One of the following: ◆ Tivoli Enterprise Console (TEC) version 3.9 or later ◆ Tivoli Management Framework version 4.1.1 or later **NOTE**: Version 4.1.1 is required to synchronize event status. Either version 3.9 or version 4.1.1 is required to forward events.

For more information about system requirements for the AppManager agent, repository, and management server, see the *Installation Guide for AppManager.*

If you encounter problems using the Connector with a later version of your application, contact NetIQ Technical Support.

Connector installation requires the following accounts:

Server	Account Required
Microsoft Windows server that hosts the AppManager management server and the Connector synchronization framework	Valid Microsoft Windows login account with local administrator privileges.
Tivoli server which hosts the TEC and TMR servers	Tivoli administrator account with the admin authorization role.

2.2 Downloading and Unpacking the Files from the Web

1 Download the AppManager Connector for Tivoli Enterprise file from the AppManager Suite Connector Upgrades (https://www.netiq.com/Support/am/extended/connectors.asp) page onto your management server.

2 Run the download package file, `AM70_TIVOLI_70.exe`, to unpack the setup program (`AM70_TIVOLI_setup.exe`), the `AppManagerConnectorForTivoli_ReadMe.htm` file, and the

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(this document, `AppManagerConnectorForTivoli.pdf`).

2.3 Installing Connector Components on the Management Server

There are two Connector components to install on the computer that hosts the AppManager management server:

- **The Connector plug-in** (required). The Connector plug-in component forwards AppManager events to the Tivoli Enterprise Console server.

- **The Connector Synchronization Framework** (optional). The Connector Synchronization Framework is an optional component that enables event status synchronization. If you do not install it, the Connector still forwards events to Tivoli but event synchronization is not possible.

  The Synchronization Framework host must be a Tivoli Managed Node, which has the Managed Node software already installed.

  During installation, the system prompts you to enter the name and port number of the TEC server. Have this information before launching the installation program.

To install the AppManager components of the Connector:

1 Log on to the AppManager repository using administrator privileges. To synchronize event status, ensure the Tivoli Managed Node software is installed.

2 On the AppManager repository, run `AM70_Tivoli_setup.exe`, included in the package you downloaded from the Web.

3 In the **Select Features** dialog box, choose the components you want to install.
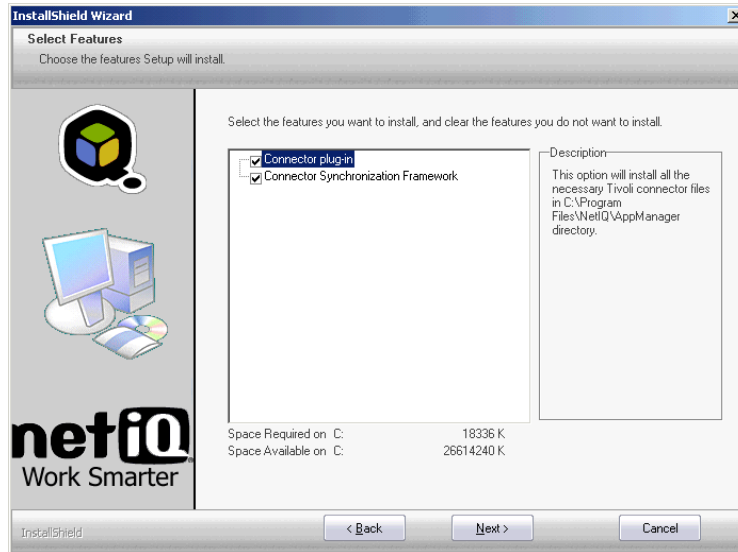
The feature options are enabled or disabled based on the following conditions:

Installation options	Selection preferences
The AppManager Management Service is not installed.	The **Connector plug-in** check box is disabled.
Tivoli Managed Node software is not installed.	The **Connector Synchronization Framework** check box is disabled.
First time installation on the AppManager management server	You must select the **Connector plug-in** check box.
Connector plug-in is already installed or you are installing the Synchronization Framework on a different host.	Select only the **Connector Synchronization Framework** check box.

NOTE: The installation is immediately terminated if neither the AppManager Management Service nor the Tivoli Managed Node software is installed on the computer where you are running the installation program.

4 Click **Next**.

5 If you selected the Connector, specify whether you want to configure the Connector now. You must configure the Connector before you can use it to forward events. For more information about configuring the plug-in, see Section 3.1, "Configuring the Connector Plug-In," on page 19.

If you chose to configure the Connector plug-in, the setup program displays the configuration utility. If you chose to configure the Connector plug-in, then the NetIQ AppManager Connector for Tivoli Configuration Utility screen is displayed. You can configure the Connector plug-in later when the installation is complete and all AppManager components are installed on the server.

2.4 Installing the Connector Components on the Tivoli Server

Connector components installed on the Tivoli server enable event status synchronization. To install Connector components, run the `install_AM_Tivoli.sh` install script on the Tivoli server. The entire installation process can take 15 to 30 minutes. The `.sh` file is extracted from the `TIV_INSTALL.tar` file, included in the installation package you downloaded from the Web.

Irrespective of the server on which you run the install script, you must know the name of the Connector host that is added to the Tivoli subscription list.

To enable the Connector to synchronize event status:

1 Install an `appmanager.rls` file into the current "Event Server Rule Base" on the TEC server. The `.rls` file contains rules for processing status changes to AppManager-originated events. This file is created by NetIQ and is installed on the TEC Server when installing the Tivoli components.

2 Add an AppManager-Tivoli task script package to the TMR server.

3 Add a NetIQ subscription list to the TMR server.

4 Add the Tivoli Managed Node software to the AppManager management server, which is the Synchronization Framework host that can access the AppManager repository.

5 Install the AppManager Connector Synchronization Framework software on a Microsoft Windows computer, which is the Synchronization Framework host.

6 Backup your Tivoli database. Although the installation does not interrupt any running Tivoli activity, you should back up your Tivoli database before installing the Tivoli components. You can perform a backup from either the Tivoli Desktop or from the command line.

From the:	Do this:
Tivoli Desktop	1. Click **Desktop > Backup**.
	2. Select the managed nodes you want to back up.
	3. Click **Start Backup**.
Command line	Use the `wbkupdb` command.
	For information on the `wbkupdb` command, see the *Tivoli Enterprise Framework Reference Manual*.

To run the install script:

1 Extract the `TIV_Install.tar` file, located in the folder in which you saved the installation package you downloaded from the Web. The install script, `install_AM_Tivoli.sh`, is extracted from the tar file. You must have administrator privileges on the computer where you are running the install program.

2 On the TEC or TMR server where you are installing the files, open a command prompt.

3 Run the `install_AM_Tivoli.sh` script.

4 To install components on a TEC server, run the script on a TEC server. To install components on a TMT server, run the install script on a TMR server.

To install the Tivoli components:

1 On Microsoft Windows computers, run `setup_env.cmd` or on UNIX computers run `setup_env.sh` from the command line on the TEC or TMR servers. You must have administrator privileges for Windows or root user privileges on UNIX where you are running the install program.

2 At the command prompt, type `bash` to choose the Bash shell.

3 Type `./install_AM_Tivoli.sh` to run the install script and install the Tivoli components.

Once the install script starts, you have the following options which update the TEC and TMR Servers:

Option	Action	Component updated on TEC server	Component installed on TMR server
1	Update the TEC server to accept NetIQ AppManager events only.	Event Server Rule Base to include the `appmanager.baroc` file	
2	Update the TEC server to accept NetIQ AppManager events and enable synchronization between Tivoli and AppManager.	Installs the `appmanager.rls` file	
3	Update the TMR server to perform synchronization.		NetIQ subscription list and the AppManager-Tivoli task script package
4	Update both the TEC and TMR servers to perform synchronization. This option can be used in lieu of the above options, provided the TEC and TMR servers are installed on the same host.	Event Server Rule Base to include the `appmanager.baroc` file Installs the `appmanager.rls` file	NetIQ subscription list and the AppManager-Tivoli task script package

For options 1 and 2 you must run the install script on the TEC server. For option 3, you must run the script on the TMR server. Option 4 is available only if the TEC server and the TMR server are running on the same computer, in which case you can run the script on that computer.

In options 1 and 2, the installer imports the `appmanager.baroc` or `appmanager.rls` file into the current working rule base. Prior to importing the file, the installation script makes a backup of the current rule base and calls it CURRENT_BACKUP. You can verify that the AppManager files have been

imported by choosing to do a manual import using the Tivoli Desktop interface. This opens the **Import Into Rule Base** dialog box. If the install completed successfully, the **Rule Sets** or **Class Definitions** will include the AppManager files.
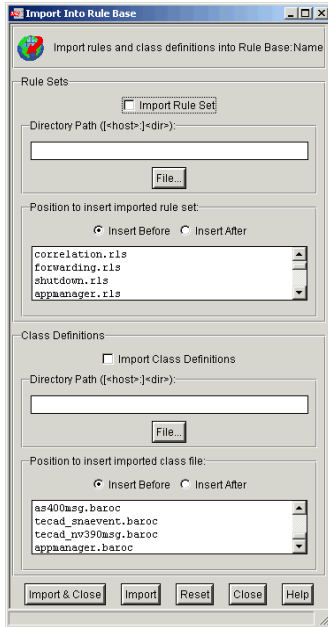
When you have finished the installation, open the Event Viewer in the TEC Console and verify that you are receiving AppManager events.

2.5   Uninstalling AppManager Components

The Connector uninstall program removes the Connector plug-in from the Microsoft Windows computer where the AppManager management server resides.

To uninstall the Connector:

1 On the AppManager management server computer where you installed the Connector, stop the NetIQ Management Service (`NetIQms`).

2 On the AppManager management server computer, navigate to the Control Panel, double-click Add/Remove Programs and select NetIQ AppManager Connector for **Tivoli**.

3 Restart the NetIQ AppManager Management Service (`NetIQms`).

2.6   Uninstalling Tivoli Components

Use the `uninstall_AM_Tivoli.sh` script to uninstall the Connector software from the TEC server and TMR server.

If the TEC server and the TMR server are on the same computer, run the uninstall script only once to remove all the Connector software.

3 Configuring the Connector

You must configure the Connector before you can send events. This chapter describes how to configure the Connector plug-in and event synchronization.

3.1 Configuring the Connector Plug-In

You configure the Connector plug-in as part of installation or later by accessing the NetIQ AppManager Connector for Tivoli Configuration Utility.

The configuration utility user interface has four tabs:

- Tivoli Configuration tab configures the name and port number of the Tivoli server.
- Category Filtering tab configures event forwarding.
- Severity Filtering tab also configures event forwarding.
- Severity Mapping tab maps AppManager event severity levels to Tivoli alarm categories.

3.1.1 Configuring Tivoli Connector Information

1 From the Start menu, click **Programs**, click **NetIQ**, click **AM2Tivoli**, and then click **Configuration Utility** to start the NetIQ AppManager Connector for Tivoli Configuration Utility.

2 In the Tivoli Configuration tab, specify the TEC server to which events should be forwarded. Choose from the following configuration settings:

Tivoli Configuration Element	Description
Tivoli Server Information	
TEC Server Name:	Hostname or IP address of the TEC server to which the AppManager events are forwarded.
TEC Port Number:	Port number for this TEC server. The default for Microsoft Windows computers is 5529. If the TEC server is running UNIX and using port mapping software, enter 0.
Additional Connector Configuration Settings	
Use Tivoli Conf File	The Connector is a Tivoli adapter. You can configure it using a Tivoli configuration file. Create the configuration file using the standard Tivoli adapter configuration rules and place it in the `...\AppManager\bin` directory. Then, check this box to use the file for configuration, rather than using the settings displayed in the **Tivoli Server Information** panel.
Enable Connector Log Data:	Logs information about Connector operations (recommended).
Strip CR/LF	Removes carriage returns and line feeds. This is enabled by default. Clear this option if you want to retain formatting.
Strip Whitespace	Strips excess white and tab spaces in the message. This is enabled by default. Clear this option if you wish to retain excess white and tab spaces in the output.
Select Class Format for Events to be sent to TEC:	Select one of the following field types: • `NetIQ_Event` • `NetIQ_<Category name>_Event` • `NetIQ_<Category name>_<KnowledgeScript name>` For more information about the `appmanager.baroc` file, see Section 1.4, "Understanding Event-Forwarding Architecture," on page 11.
Use NT Integrated Security for Event Synchronization:	If you select this option, integrated security is used. Specify your credentials in the netiq.ini file if you do not want to select this option. For more information, see Section 2.1, "System and Account Requirements," on page 13.

3 Select the configurations and click **Apply**.

3.1.2 Configuring Event Forwarding

AppManager Knowledge Scripts are grouped in more than 100 categories, according to their use. For example, the Domino category includes all the Knowledge Scripts used to monitor Lotus Domino servers and Notes mail. The AppManager event categories correspond exactly to the Knowledge Script categories so they can be mapped easily.

You can configure the AppManager Connector to forward events based on event category and event severity.

To configure the categories and severities for event forwarding:

1 On the Category Filtering tab, determine which categories of AppManager events are forwarded to Tivoli. By default, all AppManager category levels are forwarded. When you are finished filtering categories, the left-hand pane contains only event categories that should be forwarded to Tivoli.

2 To prevent AppManager from forwarding categories to Tivoli, highlight your selections and use the arrow key to move selections to the right-hand pane. Make your selections and click **Apply**.

3 On the Severity Filtering tab, determine which AppManager severity levels should not be forwarded to Tivoli. By default, all AppManager severity levels are forwarded. When you are finished filtering severity levels, the left-hand pane contains only contain event severity levels that should be forwarded to Tivoli.

4 To prevent AppManager from forwarding categories to Tivoli, highlight your selections and use the arrow key to move selections to the right-hand pane. Make your selections and click **Apply**.

3.1.3 Mapping AppManager Event Severity Levels to Tivoli Alarm Categories

You must map AppManager event severity levels to Tivoli alarm categories. An alarm is raised in Tivoli for events that have a high severity level. All AppManager events that are not mapped to a Tivoli severity level are forwarded as **Harmless** severity. If you do not map the severity levels, all events are forwarded as Harmless and do not raise any alarms. Hence, it is important that you map the severity levels for all events for which you want alarm notifications.

To map AppManager Event Severity levels to Tivoli Alarm Categories:

1 Map the AppManager severity levels (1-40) to one of five Tivoli alarm categories. By default the mappings are:

AppManager severity level	Tivoli severity level
Severe: AppManager events with a severity level of 1-10.	**Fatal**
Warning: AppManager events with a severity level of 11 - 20.	**Critical**
Informational: AppManager events with a severity level of 21 - 30.	**Minor**
Diagnostic: AppManager events with a severity level of 31 - 34.	**Warning**
Diagnostic: AppManager events with a severity level of 35 - 40.	**Harmless**

2 To change event severity levels, first select one or more of the AppManager severity levels from the left-hand pane, then select the Tivoli severity from the right-hand pane. The final event severity mapping displays in the lower pane. Make your selections and click the Map Severity button. Click **Apply**.

3.2 Configuring Event Synchronization

This section describes how to configure the Connector if you choose to use event synchronization. For more information about event synchronization, see Section 1.5, "How the Connector Synchronizes Event Status," on page 12.

To configure event synchronization, update the following files:

- ◆ Category filtering file
- ◆ BAROC file

3.2.1 Updating the Category Filtering File

To configure event status synchronization the Category Filtering File must be updated if you have added new script categories to the AppManager Connector.

To update the Category Filtering file:

1 From the Start menu, click **Programs**, click **NetIQ**, click **AM2Tivoli**, and then click **Configuration Utility** to start the NetIQ AppManager Connector for Tivoli Configuration Utility. Alternatively, you can double-click `AM_Tivoli_Config.exe,` which is available in the `Program Files\NetIQ\AppManager\bin` directory.
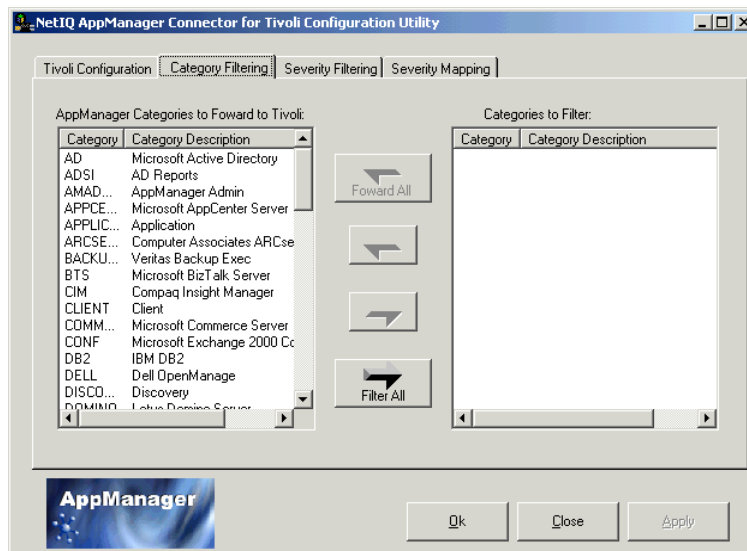
2 Select the Category Filtering tab.

3 The categories listed under Category and Category Description are obtained from the `adpt.xml` file. If the AppManager Connector has been updated with new script categories, this file is obsolete.

4 Use the File Creation Tool to regenerate a new `adpt.xml` file which is updated with the latest category list.

3.2.2 Generating a Category Filtering File

You must generate a Category Filtering File if you have added new script categories to the AppManager Connector.

To generate a new category list:

1 Run the File Creation Tool (`NQConnector.exe`).

2 Select **Update Adpt.xml file**.

3 Specify the location of the `adpt.xml` file. By default, the file is in the following location:

    C:\Program Files\NetIQ\AppManager\bin\adpt.xml.

4 Select the **Create updated Tivoli Baroc file** checkbox.

5 Browse to the directory where you want to save the updated BAROC file.

6 Select **All possible KSs & their categories** to choose all Knowledge Scripts and their categories or **All Tivoli configured KSs & their categories** to select only the Tivoli Knowledge Scripts and their categories to be included in the BAROC file.

7 Enter your credentials for logging onto the AppManager repository. If the Microsoft SQL Server for the AppManager repository is running in Integrated (Windows only) mode, then leave the **User Name** and **Password** fields blank.

8 Click **OK**.

9 Select the new Knowledge Script category that you want to add to the `adpt.xml` file and click **OK**.

10 In the **NetIQ Connector File Creation Tool** window, click **OK** and then click **Exit**.

The old `adpt.xml` file is saved as `adpt.xml_bk`.

3.2.3 Updating the Tivoli BAROC File

The File Creation Tool generates an `appmanager.baroc` file that contains specifications for the three field types, including a specification for every category (the `NetIQ_<Category name>_Event` type) and every Knowledge Script (the `NetIQ_<Category name>_<KnowledgeScript name>` type) that are in the AppManager repository. For more information, see Section 1.4, "Understanding Event-Forwarding Architecture," on page 11.

The following table explains the effect of the changes to the categories or Knowledge Scripts based on the event type on the Tivoli server:

Event type	Changes made in the AppManager repository	Impact
NetIQ_Event	Either to the categories or the Knowledge Scripts	No impact
NetIQ_<Category name>_Event	To the Categories	Generate a new appmanager.baroc file
NetIQ_<Category name>_<KnowledgeScript name>	To the Knowledge Scripts	Generate a new appmanager.baroc file

NOTE: Tivoli rejects events with a Category name or KnowledgeScript name that contains any characters other than A to Z, a to z, 0 to 9, or _. If you have a Knowledge Script with characters that are not alphanumeric in its name, you must use either the NetIQ_Event or NetIQ_<Category name>_Event event types. If you have a category with characters that are not alphanumeric in its name, you can use only the NetIQ_Event event type.

To generate a new appmanager.baroc file:

1 Run the File Creation Tool (`NQConnector.exe`) at the command prompt on the Tivoli server.

2 Select the **Create updated Tivoli Baroc file** checkbox.

  If you add new categories to a Knowledge Script in the AppManager repository, you must update the `adpt.xml` file before creating the Tivoli BAROC file. If the `adpt.xml` file is not updated, the new categories are not included in the Tivoli BAROC file.

3 Browse for the directory where you want the new `appmanager.baroc` file. The default is the directory from which you are running the File Creation Tool.

4 Enter your credentials for logging onto the AppManager repository. If the Microsoft SQL Server for the AppManager repository is running in Integrated (Windows only) mode, then leave the **User Name** and **Password** fields blank.

5 Click **OK**.

To update the appmanager.baroc file on your TEC Server:

1 Logon with administrator privileges on the computer where you are updating the `appmanager.baroc` file.

2 Enter the following command to remove the baroc file from the rule base:

    wrb -delrbclass appmanager.baroc *rule_base*.

3 Use the following command to import the new baroc file into the rule base:

    wrb -imprbclass appmanager.baroc *rule_base*.

A AppManager Event Information

This appendix provides information about NetIQ event classes and structure, and where the AppManager BAROC (Basic Recorder of Objects in C) and rules files are installed.

A.1 NetIQ Event Classes

When the AppManager management server forwards an AppManager event, it uses the NetIQ event class that corresponds with the AppManager Knowledge Script that generated the event.

You can use NetIQ event classes to build rules to tailor the Tivoli environment for sophisticated event correlation.

NetIQ_Event is a member of the TEC event class and has a subclass for every major AppManager Knowledge Script category, such as NT, SQL, and Exchange.

These are the available NetIQ event classes:

This NetIQ event class:	Corresponds to this AppManager Knowledge Script category:
NetIQ_AD	Microsoft Active Directory
NetIQ_ADSI	AD reports
NetIQ_AMAdmin	AppManager administration
NetIQ_AppCenter	Microsoft AppCenter Server
NetIQ_Application	Applications
NetIQ_ARCserve	Computer Associates ARCserveIT
NetIQ_BackupExec	Veritas Backup Exec
NetIQ_BTS	Microsoft BizTalk Server
NetIQ_CIM	Compaq Insight Manager
NetIQ_Commerce	Microsoft Commerce Server
NetIQ_Conf	Microsoft Exchange 2000 Conferencing Server
NetIQ_DB2	IBM DB2
NetIQ_DELL	Dell OpenManage
NetIQ_Discovery	Discovery
NetIQ_Domino	Lotus Domino
NetIQ_Exchange	Microsoft Exchange Server
NetIQ_FW1	Checkpoint Firewall-1

This NetIQ event class:	Corresponds to this AppManager Knowledge Script category:
NetIQ_General	General
NetIQ_HPNS	HP TopTools/NetServer
NetIQ_IIS	Microsoft Internet Information Server
NetIQ_ISA	Microsoft Internet Security and Acceleration Server
NetIQ_MFXP	Citrix MetaFrame XP
NetIQ_MQSeries	IBM MQSeries
NetIQ_MSCS	Microsoft Cluster Server
NetIQ_MSMQ	Microsoft Message Queue Server
NetIQ_MTS	Microsoft Transaction Server
NetIQ_NetBackUp	Veritas NetBackUp
NetIQ_NetBackUpUNIX	Veritas NetBackUp for UNIX
NetIQ_Netfinity	IBM Netfinity Manager
NetIQ_NetfinityDir	IBM Netfinity Director
NetIQ_NetServices	Network Services
NetIQ_NetShield	McAfee NetShield
NetIQ_NetWorker	Legato NetWorker
NetIQ_NT	Windows NT
NetIQ_NTAdmin	Windows NT administration
NetIQ_Oracle	Oracle RDBMS Server
NetIQ_Proxy	Microsoft Proxy Server
NetIQ_RDB	Report database
NetIQ_QDB	QDB reports
NetIQ_SAP	SAP
NetIQ_ScanMailExch	TrendMicro ScanMail for Exchange
NetIQ_Siemens	Siemens ServerView
NetIQ_Site	Microsoft Site Server
NetIQ_SMS	Microsoft System Management Server
NetIQ_SNA	Microsoft SNA Server
NetIQ_SQL	Microsoft SQL Server
NetIQ_UNIX	UNIX Server Resources
NetIQ_WBEM	Microsoft Web-Based Enterprise Management
NetIQ_WebServices	Web Services
NetIQ_Win2000	Microsoft Windows 2000 Server

This NetIQ event class:	Corresponds to this AppManager Knowledge Script category:
NetIQ_WinFrame	Citrix WinFrame Server
NetIQ_WLBS	Microsoft Network Load Balancing Service
NetIQ_WMI	Microsoft WMI Services
NetIQ_WTS	Microsoft Terminal Server
NetIQ_Other	All others

The event class name that appears in the Tivoli Enterprise Console is in the format
NetIQ_<*KS_category*>_<*KS_name*>. For example, an event generated by the
General_URLConnectivity Knowledge Script produces an event class named
NetIQ_General_URLConnectivity. You can change the event class format in the Microsoft Windows
NT Registry.

Event class information is stored in the BAROC file.

A.2 NetIQ Event Structure

Each AppManager event is made up of slots and corresponding values. Some slots are provided by
AppManager, others by the base TEC event. The structure of a NetIQ event is as follows:

Slot	Value
source	AppManager
sub_source	Event category (for example, NT, General, SQL)
origin	Name of the computer where the AppManager agent is located.
sub_origin	Internal name of the object in the AppManager Operator Console TreeView pane
adapter_host	Name of the computer where the AppManager management server that received the event is located
severity	Mapped severity level
msg	Detailed event message
eventid	Event identifier
parent eventid	Parent event identifier
jobid	Job identifier
ks_name	Name of Knowledge Script that generated the event
rp_name	Name of the AppManager repository
rp_server	Name of the computer where the AppManager repository is located
kissed	Knowledge Script Group (KSG) identifier
ksg_name	Name of KSG group (if any) that the script is a member of. **NOTE**: To place the ksg_name field for a newly created KSG in the Tuvalu Attribute List, you must stop and restart the AppManager management server service where the Connector is installed.

Slot	Value
am_severity	AppManager severity level