NetIQ® AppManager® Integration Adapter

Installation Guide

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This document describes how to install and configure the NetIQ AppManager Integration Adapter and how to install NetIQ Resource Management.

Contents

Overview

The NetIQ AppManager Integration Adapter allows the NetIQ Aegis product (Aegis) and other NetIQ products to communicate with AppManager repositories and Control Center repositories. The NetIQ AppManager Integration Adapter requires NetIQ Resource Management to centralize common resources such as security and services registration. This document describes how to install both products.

The NetIQ AppManager Integration Adapter also includes Aegis workflow activities specific to AppManager that Process Authors can use in the Workflow Designer.

Note

Some Aegis activities use AppManager custom properties. To ensure these activities function correctly in an AppManager 7.x or 8.x environment, configure at least one Control Center repository in the Adapter Configuration Utility after the installation process for the NetIQ AppManager Integration Adapter is complete. For more information about using the Adapter Configuration Utility, see "Configuring Additional Repositories" on page 10. For more information about Aegis activities or activity libraries, see the *Aegis Process Authoring Guide*.

NetIQ AppManager Integration Adapter Requirements

The NetIQ AppManager Integration Adapter requires the following software versions.

Component	Version
Microsoft operating system	One of the following versions: • 32-bit or 64-bit Windows Server 2003 Service Pack 2 • 32-bit or 64-bit Windows Server 2008 Service Pack 1 or 2 • Windows Server 2008 R2
AppManager	One of the following versions installed on a computer with network access to the computer where you want to install the NetIQ AppManager Integration Adapter: • 7.x with the following hotfixes and updates: — Hotfix 72794 for AppManager repositories (QDBs) — Control Center Repository (CCDB) Update (AM704_IQAM_CCDBUpdate.exe) • 8.0 (AppManager and Control Center repositories)
NetIQ Resource Management	Version 3.0 installed on a computer with network access to the NetIQ AppManager Integration Adapter.
Aegis (optional)	If you want to use Aegis to automate common AppManager tasks, Aegis version 2.2 is required on a computer with network access to the NetIQ AppManager Integration Adapter and the NetIQ Resource Management Namespace Provider.
Microsoft .NET Framework	2.0
Microsoft SQL Server Native Client	One of the following versions: • 32-bit or 64-bit SQL Server Native Client 2005 • 32-bit or 64-bit SQL Server Native Client 2008 • 32-bit SQL Server Native Client 2008 Service Pack 1 • SQL Server Native Client 2008 2008 R2 **Note** You can install this component from the SQL Server installation media by selecting the SQL Server Client Tools.

NetIQ Resource Management Requirements

NetIQ Resource Management requires the following software versions.

Component	Version
Microsoft operating system	One of the following versions: • 32-bit or 64-bit Windows Server 2003 Service Pack 2 • 32-bit or 64-bit Windows Server 2008 Service Pack 1 or 2 • Windows Server 2008 R2
Microsoft SQL Server for the database component	One of the following versions: • 32-bit or 64-bit SQL Server 2005 • 32-bit or 64-bit SQL Server 2008 • 32-bit SQL Server 2008 Service Pack 1 • SQL Server 2008 2008 R2
Microsoft .NET Framework	2.0

Ports

Ensure you open the following ports.

Port	Component	Usage
1433	NetIQ Resource Management Service computer	Port 1433 must be open on the NetIQ Resource Management Database computer and allowed out on the NetIQ Resource Management computer. Port 1433 must also be open on the NetIQ AppManager Namespace Provider computer that uses the port to communicate with AppManager and Control Center repositories.
10117	NetIQ Resource Management Namespace Provider computer	Port 10117 is used to communicate with the NetIQ Resource Management Provider service.
2219	NetIQ AppManager Namespace Provider computer	Port 2219 is used to communicate with the NetIQ AppManager Namespace Provider. By default, Aegis also uses this port for the NetIQ Aegis Namespace Provider.

Architecture

The following graphic illustrates the NetIQ AppManager Integration Adapter and NetIQ Resource Management components installed on separate computers.
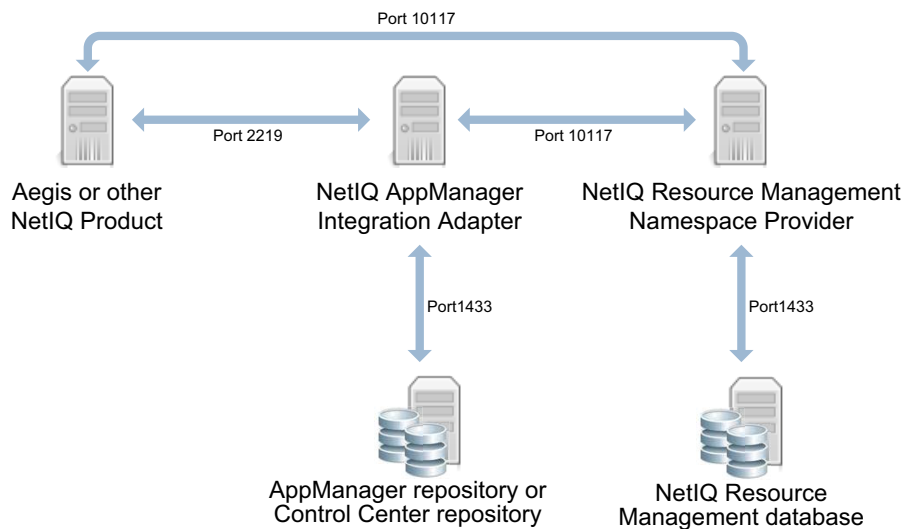
These components are defined as follows:

NetIQ Resource Management Namespace Provider

Provides centralized security and services, and a common place for AppManager computer information. You can install this component on any computer with network access to the NetIQ AppManager Integration Adapter and the NetIQ Resource Management database.

NetIQ Resource Management database

Stores AppManager security information such as AppManager users, user groups, and permission assignments. Also stores resource and resource grouping information provided by the NetIQ AppManager Integration Adapter. You can install this component on any computer.

NetIQ AppManager Integration Adapter

Communicates with AppManager repositories and NetIQ Resource Management. You can install the NetIQ AppManager Integration Adapter on any computer with network access to the NetIQ Resource Management Namespace Provider and AppManager repositories.

AppManager repository (QDB) or Control Center repository (CCDB)

The original source of AppManager data.

Additionally, if you have Aegis you install the following components:

Aegis Component: Activity Library and Templates

> Provides AppManager-related activities for use in Aegis workflows. Install this component on the Aegis Server computer.

Aegis Component: Event Renderers and Parsers

> Renders AppManager event details in the Aegis Operations Console. Install this component on the Aegis Web Server computer.

Implementation Scenarios

Consider the following possible implementation scenarios when determining where to install the NetIQ AppManager Integration Adapter:

Recommended: NetIQ AppManager Integration Adapter and NetIQ Resource Management components installed on separate computers.

> If you do not have an existing Aegis and NetIQ AppManager Integration Adapter installation, or if you want to ensure the NetIQ AppManager Integration Adapter is available to use with other NetIQ products, you can install the adapter and NetIQ Resource Management components on separate computers with network access to each other and to AppManager repositories.

> You do not need to install these components on an AppManager or Aegis computer.

NetIQ AppManager Integration Adapter and NetIQ Resource Management installed on the Aegis Server computer.

> If you have an existing Aegis and NetIQ AppManager Integration Adapter installation and want to use the existing NetIQ Aegis Namespace Provider, consider this option. The Aegis setup program automatically upgrades the NetIQ Resource Management Namespace Provider. Upgrade the adapter component with the NetIQ AppManager Integration Adapter setup program and select the option to use the existing NetIQ Aegis Namespace Provider.

> **Note**
>
> If you choose to install the NetIQ AppManager Integration Adapter on the Aegis Server computer but use a difference service, you must configure the NetIQ AppManager Integration Adapter to use a port other than the NetIQ Aegis Namespace Provider port, which is 2219 by default.

NetIQ AppManager Integration Adapter and NetIQ Resource Management components installed on a non-Aegis computer.

> You can choose to install a new service or install the adapter and NetIQ Resource Management on a non-Aegis computer. If you already had the NetIQ AppManager Integration Adapter installed on the Aegis Server computer, make a note of the configuration information and then uninstall the adapter and related components from the Aegis Server computer and Aegis Web Server computer before installing it on another computer.

> **Notes**
> - Consult the NetIQ documentation for the product you want to integrate with AppManager. The documentation might suggest a different implementation scenario.
>
> - The NetIQ AppManager Integration Adapter setup program copies a set of archive files to your installation that contain sample AppManager workflows for use in Aegis. If you want to use these workflows, you must import them into Aegis manually.

Installation Overview

The following table provides an overview of tasks to install and configure the NetIQ AppManager Integration Adapter.

	Steps	For more information, see…
☐	1. Configure the minimum rights and privileges for the Run As account.	"Ensuring Minimum Rights and Privileges" on page 7
☐	2. Install the NetIQ Resource Management Namespace Provider.	"Installing the NetIQ Resource Management Namespace Provider" on page 8
☐	3. Install the NetIQ AppManager Integration Adapter.	"Installing the NetIQ AppManager Integration Adapter" on page 9
☐	4. *If you are integrating with Aegis and you did not install the adapter on the Aegis Server computer*, install the Aegis activity library and templates on the Aegis Server computer.	"Installing Aegis Components" on page 10
☐	5. *If you are integrating with Aegis*, install the Event Renderers and Parsers on the Aegis Web Server computer.	"Installing Aegis Components" on page 10
☐	6. Configure the adapter to connect to additional repositories.	"Configuring Additional Repositories" on page 10
☐	7. Verify the installation was successful.	"Verifying a Successful Installation with Aegis" on page 11

Ensuring Minimum Rights and Privileges

When you install NetIQ Resource Management and the NetIQ AppManager Integration Adapter, you specify the following account credentials:

NetIQ AppManager Integration Adapter Namespace Provider service account

Specify an account with local administrator privileges.

NetIQ Resource Management Namespace Provider service account

Specify an account with local administrator privileges.

Aegis service account (Aegis only)

If integrating with Aegis, specify the Aegis service account to install Aegis components. This account must also have administrative privileges on the computer where you install the NetIQ AppManager Integration Adapter.

Control Center repository (CCDB) logon account

> Specify an account with administrator privileges to the CCDB. The logon account allows NetIQ Resource Management and the NetIQ AppManager Integration Adapter to communicate with the specified CCDB.

> **Note**
> The CCDB account that the NetIQ AppManager Integration Adapter uses should have the same access to all QDBs integrated by the Control Center instance.

AppManager repository (QDB) logon account

> Specify an account with administrator privileges to the QDB. The logon account allows NetIQ Resource Management and the NetIQ AppManager Integration Adapter to communicate with the specified QDB.

> You can configure additional CCDBs and QDBs using the Adapter Configuration Utility after installation. For more information about configuring additional repository connections, see "Configuring Additional Repositories" on page 10.

Installing the NetIQ Resource Management Namespace Provider

You can run the setup program where you want to install the NetIQ Resource Management Namespace Provider service and choose a local or remote location where you want to install the NetIQ Resource Management database.

Note
The Aegis 2.2 setup program upgrades the NetIQ Resource Management Namespace Provider to version 3.0. If you upgraded to Aegis 2.2, you should not install a new instance of the NetIQ Resource Management Namespace Provider.

To install the NetIQ Resource Management Namespace Provider:

1. Log on to the computer where you want to install the NetIQ Resource Management Namespace Provider with a local administrator account.

2. Run the NetIQ Resource Management Namespace Provider setup program (`NetIQResourceManagement.msi`) located in the NetIQ AppManager installation kit in the `Setup\Setup Files` folder.

3. Follow the instructions in the setup program.

Installing the NetIQ AppManager Integration Adapter

The following steps guide you through the process of installing the NetIQ AppManager Integration Adapter.

To install the NetIQ AppManager Integration Adapter:

1. Log on to the computer with a local administrator account.

2. Run the setup program in one of the following ways:

    - Run the NetIQ AppManager Integration Adapter setup program (`NetIQAppManagerIntegrationAdapter.msi`) located in the AppManager installation kit in the `Installer` folder under the subfolder appropriate for your locale.

    - *If you are installing AppManager 8,* run the NetIQ AppManager setup program (`Setup.exe`) in the AppManager installation kit, and then start the AppManager installation. On the Welcome page, select the option **NetIQ AppManager Integration Adapter** and any other AppManager component you want to install, and then follow the instructions in the setup program until the NetIQ AppManager Integration Adapter setup program begins.

3. Accept the license agreement.

4. *If you are installing the NetIQ AppManager Integration Adapter on the Aegis Server or Aegis Web Server computer,* select the following options on the Select Components window:

    - NetIQ AppManager Integration Adapter
    - Aegis Components > Activity Library and Templates (install on Aegis Server computer)
    - Aegis Components > Event Renderer and Parser (install on Aegis Web Server computer)

5. *If you are installing the NetIQ AppManager Integration Adapter on a computer other than the Aegis Server or Aegis Web Server computer,* select **NetIQ AppManager Integration Adapter** on the Select Components window.

    For more information about installing Aegis components, see .

6. Review and install all prerequisites. In some cases, you can install prerequisite software on a separate computer. For more information, click **Details** next to each prerequisite.

7. *If the setup program detects the NetIQ Aegis Namespace Provider,* specify whether you want to use the existing provider or create a NetIQ AppManager Namespace Provider.

8. *If you are installing a new NetIQ AppManager Namespace Provider,* either because the setup program did not detect an existing service or because you chose to install a new service in the previous step, provide the logon credentials for the NetIQ AppManager Integration Adapter service account.

9. Specify the NetIQ Resource Management computer and NetIQ Resource Management Namespace Provider service account information.

10. *If you are installing Aegis Activity Library and Templates,* specify the Aegis service account information.

11. On the NetIQ AppManager Control Center Repository Connection page, provide the CCDB connection information. Optionally, you can skip this page and configure one or more CCDBs after installation using the Adapter Configuration Utility. For more information about configuring additional repository connections, see .

12. On the NetIQ AppManager Repository Connection page, provide the QDB connection information. Optionally, you can skip this page and configure one or more QDBs after installation using the Adapter Configuration Utility. For more information about configuring additional repository connections, see "Configuring Additional Repositories" on page 10.

13. Review the Installation Summary, then click **Install**.

Installing Aegis Components

The NetIQ AppManager Integration Adapter includes the following Aegis components:

- **Event Renderer and Parser**, which you install on the Aegis Web Server computer to provide rendering functionality for the layout of AppManager event details in the Aegis Operations Console.

- **Activity Library and Templates**, which you install on the Aegis Server computer to provide AppManager activities for use in Aegis workflows.

To install the Event Renderer and Parser:

1. Log on to the Aegis Web Server computer with a local administrator account.

2. Run the setup program. For more information, see "Installing the NetIQ AppManager Integration Adapter" on page 9.

3. Accept the license agreement.

4. On the Select Components window, select **Aegis Components > Event Renderers and Parsers**.

5. Follow the remaining instructions in the setup program.

To install the Activity Library and Templates:

1. Log on to the Aegis Server computer with a local administrator account.

2. Run the setup program. For more information, see "Installing the NetIQ AppManager Integration Adapter" on page 9.

3. Accept the license agreement.

4. On the Select Components window, select **Aegis Components > Activity Library and Templates**.

5. Follow the remaining instructions in the setup program.

Configuring Additional Repositories

When the installation is complete, you can configure additional CCDBs and QDBs with the NetIQ AppManager Integration Adapter Configuration Utility.

To configure an additional repository:

1. Log on to the NetIQ AppManager Integration Adapter computer with a local administrator account.

2. In the NetIQ program group, start the utility using one of the following methods:

- If you chose to use the existing NetIQ Aegis Namespace Provider, click
Aegis > NetIQ Aegis Adapter Configuration.

- If you chose to install a new service, click **NetIQ > NetIQ AppManager
Integration Adapter > NetIQ AppManager Integration Adapter Configuration**.

3. In the left pane, expand NetIQ AppManager Integration Adapter, and then click one of the following:

- Control Center Repositories - version 8.x or version 7.x with the Control Center Repository (CCDB) Update (`AM704_IQAM_CCDBUpdate.exe`) applied

- AppManager Repositories - version 8.x or version 7.x with Hotfix 72794 applied

4. On the Edit menu, click **New Entry**.

5. Provide the appropriate information, and then click **Test Repository Connection**.

6. Click **Save All**.

7. Click **Close**.

8. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ Aegis Namespace Provider,* restart the NetIQ Aegis Namespace Provider.

9. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ AppManager Namespace Provider,* restart the NetIQ AppManager Namespace Provider.

Verifying a Successful Installation with Aegis

You can verify a successful installation of the NetIQ AppManager Integration Adapter with Aegis in the following ways:

- Verifying the data source in the Aegis Configuration Console
- Verifying new event types in the Aegis Configuration Console
- Verifying the AppManager Integration Adapter service on a computer where Aegis is not installed

Verifying the Data Source

Aegis imports the AppManager repositories you specified during installation and configuration as data sources and all related computers as resources.

To verify a successful adapter installation:

1. Start the Aegis Configuration Console.

   For more information about starting the Configuration Console, see the *Administrator Guide for Aegis*.

2. In the Navigation pane, click **Resources**.

3. In the left pane, click **Adapter Resource Hierarchies**.

4. Select the **AppManager Adapter** node.

5. Expand the appropriate adapter (CCDB or QDB), and then click the data source named for the AppManager repository you specified during installation.

6. Ensure the computers associated with the repository display as resources.

Verifying New Event Types

The NetIQ AppManager Integration Adapter setup program installs new event types you can use to create triggers and triggering event definitions.

To verify successful addition of the new event types:

1. Start the Aegis Configuration Console.

   For more information about starting the Configuration Console, see the *Administrator Guide for Aegis*.

2. In the Navigation pane, click **Administration**.

3. In the left pane, click **Triggering Event Definitions**.

4. In the Event Definitions View Tasks list, click **Create New Event Definition**.

5. On the Create Triggering Event Definition window, click **<event type>**.

6. Ensure the following are in the list of available event types:

   - `AppManager.Deployment Task State Change Event`
   - `AppManager.Event`
   - `AppManager.Job Cancel Event`
   - `AppManager.Job Finish Status Event`
   - `AppManager.State Change Event`

After verifying a successful installation, NetIQ Corporation recommends you build a simple workflow with one of the activities in the NetIQ AppManager Activities library. For more information about building workflows, see the *Aegis Process Authoring Guide*.

Verifying the AppManager Integration Adapter Service

You can verify the AppManager Integration Adapter service on the computer where it is installed.

To verify the AppManager Integration Adapter service:

1. Open the Windows Services tool.

2. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ Aegis Namespace Provider,* verify the NetIQ Aegis Namespace Provider service is running.

3. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ AppManager Namespace Provider,* verify the NetIQ AppManager Namespace Provider service is running.

Aegis Workflow Activities Overview

The activities in the NetIQ AppManager Activities library allow Aegis to perform the following types of tasks, among others:

- Find, update, and create AppManager events
- Start, stop, create, delete, and check the status of AppManager jobs
- Check AppManager performance
- Create management groups and server groups

You can see all available activities by looking at the NetIQ AppManager Activities library in the Aegis Workflow Designer. For more information about each activity, see the Help.

Recovering from an Extended Outage

If the NetIQ AppManager Integration Adapter is down for an extended period of time, you can clear the NetIQ AppManager Integration Adapter event queue of all events to avoid flooding Aegis with old AppManager events.

To clear the NetIQ AppManager Integration Adapter event queue after an extended outage:

1. Log on to the NetIQ AppManager Integration Adapter computer with a local administrator account.

2. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ Aegis Namespace Provider,* stop the NetIQ Aegis Namespace Provider service.

3. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ AppManager Namespace Provider,* stop the NetIQ AppManager Namespace Provider service.

4. Open the Registry Editor.

   Warning
   Be careful when editing your Windows Registry. If there is an error in your Registry, your computer may become nonfunctional. If an error occurs, you can restore the Registry to its state when you last successfully started your computer. For more information, see the help provided by the Windows Registry Editor.

5. Locate the QDBs key, which could be in one of the following locations:

   - `HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AegisIQConnect73\Providers\IQAM`
   - `HKEY_LOCAL_MACHINE\Software\NetIQ\AegisIQConnect73\Providers\state\IQAM`
   - `HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManagerIntegrationAdapterService\Providers\IQAM`

   Notes
   - On a 64-bit computer the QDBs key could be `HKEY_LOCAL_MACHINE\Software\WOW6432Node\NetIQ\...`
   - Under QDBs, each repository connected to the adapter has a subkey, represented by `hostname#instancename#qdb`. You must modify each repository's subkey.

6. In the left pane, click the subkey.

7. In the right pane, select the following values:

- `LastPublishedCancelJobTime`
- `LastPublishedEventID`
- `LastPublishedFinishedJobTime`
- `LastStateChangeID`

8. On the Edit menu, click **Delete**.

9. Close the Registry Editor.

10. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ Aegis Namespace Provider,* restart the NetIQ Aegis Namespace Provider service.

11. *If the NetIQ AppManager Integration Adapter is configured to use the NetIQ AppManager Namespace Provider,* restart the NetIQ AppManager Namespace Provider service.

Uninstalling the NetIQ AppManager Integration Adapter

You can uninstall the NetIQ AppManager Integration Adapter with the Windows Add/Remove Programs tool.