

Management Pack for Microsoft Dynamics® AX Retail 2012 R3 CU8

Microsoft Corporation

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# Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8

This guide explains how to use the System Center Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8.

It includes a management pack overview and monitoring scenarios for the Management Pack for Microsoft Dynamics AX Retail 2012 R3 and Dynamics AX Retail 2012 R3 CU8.

## System Requirements

The System Center Management Pack for Microsoft Dynamics AX 2012 works with the following versions of System Center Operations Manager:

* System Center Operations Manager 2007 R2
* System Center Operations Manager 2012
* System Center Operations Manager 2012 R2

You must use the latest CU for whatever version you have installed.

There are two known limitations when using the management pack with System Center Operations Manager 2007 R2. These are:

* Only two columns rather than all columns are displayed in the Results pane. You are still able to personalize results.
* Alternative logging to the Operations Manager log fails. Alternative logging occurs when for some reason the application can’t write to the Windows Application log, and so writes to the Operations Manager log instead.

For more information about Operations Manager 2007, see [Operations Manager 2007 R2](http://go.microsoft.com/fwlink/?LinkID=393727&clcid=0x409). For more information about Operations Manager 2012, see [Operations Manager](http://go.microsoft.com/fwlink/?LinkID=393283&clcid=0x409).

## Document Version

The information in this guide is for the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8, version 6.3.1000.719.

**Revision History**

| **Release Date** | **Changes** |
| --- | --- |
| March 2014 | Initial release |
| December 2014 | CU8 Update |

## Introduction

Microsoft Dynamics AX is a comprehensive business management solution for midsize and larger organizations that works with other Microsoft software to improve productivity. Microsoft Dynamics AX is built to make it easy to do business across locations and countries/regions by consolidating and standardizing processes, providing visibility across your organization, and helping simplify compliance.

Microsoft Dynamics AX for Retail provides mid-market and large retailers a complete head-office and point of sale (POS) solution with support for online and brick-and-mortar stores. It can help retailers increase financial returns, improve service, manage growth, reach customers, and streamline efficiencies. Monitoring Retail with Operations Manager can reduce the cost of managing a distributed Retail system. Operators and administrators can view information about Retail components in the environment and troubleshoot issues with them, all from a centralized console. In combination with the Management Packs for Microsoft® SQL Server®, Microsoft Windows Server®, and Microsoft SharePoint® products, the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 lets administrators proactively react to changes in the overall health of the Retail system, and correct them if necessary.

## Getting the Latest Management Pack and Documentation

You can find the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 in the System Center Operations Manager Catalog

## Getting Started

This section describes the actions you should take before you import the management pack, any steps you should take after you import the management pack, and information about customizations.

### Before You Import the Management Pack

To use the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8, your environment must include AX 2012 R3 or AX 2012 R3 CU8, the Windows PowerShell™ 2.0 command-line interface, and a [supported version](#_System_Requirements) of System Center Operations Manager.

#### Install Microsoft Dynamics AX

Install the Microsoft Dynamics AX components that you anticipate using in your production environment. However, if additional Retail components are installed after you configure monitoring, they will automatically be detected and included in Retail monitoring. You must also complete all required initialization checklist steps in the Microsoft Dynamics AX client. For information about installing Microsoft Dynamics AX 2012, see the [Microsoft Dynamics AX Installation Guide](http://go.microsoft.com/fwlink/?LinkID=163796).

#### Install and Configure Windows PowerShell 2.0

Verify that Windows PowerShell 2.0 is installed on the computers where the following components are installed:

* Application Object Server (AOS)
* Commerce Data Exchange: Async Client
* Commerce Data Exchange: Async Server
* Commerce Data Exchange: Real-time Service
* Retail Server
* Microsoft Dynamics AX for Retail POS
* Offline Sync Service and channel database
* Microsoft SharePoint Server
* Microsoft SharePoint Timer Job
* Retail Hardware Station

Windows PowerShell 2.0 is automatically installed on computers that are running Windows Server 2008 R2, Windows Server 2012, and Windows Server 2012 R2. For information about installing Windows PowerShell 2.0 manually, see [Knowledge Base article 968929: Windows Management Framework (Windows PowerShell 2.0, WinRM 2.0, and BITS 4.0)](http://go.microsoft.com/fwlink/?LinkID=393731&clcid=0x409).

**Note**: If Windows PowerShell 1.0 is already installed on the computer, you must uninstall it. For more information, see [Uninstall Previous Versions of Windows PowerShell and Windows Remote Management](http://go.microsoft.com/fwlink/?LinkID=393732&clcid=0x409).

#### Install and Configure System Center Operations Manager

Install a [supported version](#_System_Requirements) of System Center Operations Manager.

**Note**: Reporting Services for Operations Manager integrates the security of the instance of SQL Server Reporting Services with Operations Manager role-based security.

If you are planning to install Reporting Services for Operations Manager, do not install it on the same instance of Reporting Services that you are using for any other applications, such as Microsoft Dynamics AX. For more information, see [Deploying Reporting in the Multiple Server, Single Management Group Scenario](http://go.microsoft.com/fwlink/?LinkID=393734&clcid=0x409).

### Files in This Management Pack

The Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 includes the following files:

* Microsoft.Dynamics.Retail.AX2012.R2.FP.Base.mp
* Microsoft.Dynamics.Retail.AX2012.R2.FP.Monitoring.mp
* Microsoft.Dynamics.Retail.AX2012.R2.FP.Troubleshooting.mp
* EULA.rtf

### Recommended Additional Management Packs

To perform complete service-oriented monitoring of Retail for Microsoft Dynamics AX servers, you might want to download the following additional management packs:

* **System Center Management Pack for SQL Server**: <http://www.microsoft.com/en-us/download/details.aspx?id=10631>
* **SharePoint Server 2013**: <http://www.microsoft.com/en-us/download/details.aspx?id=35590>
* **System Center Management Pack for Microsoft Dynamics AX 2012**: <http://www.microsoft.com/en-us/download/details.aspx?id=26934>
* **System Center 2012 Management Pack for Microsoft Windows Server 2012 Internet Information Service 8**: <http://www.microsoft.com/en-us/download/details.aspx?id=34767>

You might also want to download one of the following, depending on the version of Windows you are using:

* **System Center Management Pack for Windows 8 Client Operating System**: <http://www.microsoft.com/en-us/download/details.aspx?id=38434>
* **System Center Management Pack for Windows Server Operating System**: <http://www.microsoft.com/en-us/download/details.aspx%3Fid%3D9296>
* **Windows Client 2000/XP/Vista/Windows 7 Operating System Management Pack for Operations Manager 2007**: <http://www.microsoft.com/en-us/download/details.aspx?id=15700>

### How to Import the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8

1. Import the management pack into System Center Operations Manager. Refer to the documentation for the version you have installed for instructions on how to do this.
2. Select the Retail management packs to import. We recommend that you select all of them, so that you can use the full range of functionality that is provided in this management pack.

The following management packs are available for Microsoft Dynamics AX:

* **Microsoft.Dynamics.Retail.AX2012.R2.FP.Base.mp** – Lets you discover Retail components in the environment.
* **Microsoft.Dynamics.Retail.AX2012.R2.FP.Monitoring.mp** – Lets you detect the status of and connectivity between Retail components. For example, you can detect whether a service is down or a server is unreachable.
* **Microsoft.Dynamics.Retail.AX2012.R2.FP.Troubleshooting.mp** – Lets you change the tracing level of Retail components and also collect event logs that you can use to diagnose issues.
1. Run the Operations Manager Discovery Wizard for advanced discovery. Refer to the documentation for the version you have installed for instructions on how to do this. Select all of the computers where Retail for Microsoft Dynamics AX components are installed. Agents will be deployed to the appropriate computers as they are discovered.
2. Enable agents to act as proxies on every computer in the SharePoint farm where you deployed Retail Online Channel:
3. Open Operations Manager and click on **Administration**.
4. Click on the **Agent Managed** folder and then select the agent.
5. Right-click the agent and select **Properties**.
6. In the Security tab, check **Allow this agent to act as a proxy**.
7. Click **OK.**
8. Configure the action accounts for the System Center agents on the Retail components. For more information, see [Security Considerations](#_Security_Considerations) later in this document.
9. After the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 is imported, create a new management pack in which you store overrides and other customizations.

### Create a New Management Pack for Customizations

Most management packs are sealed, so that you cannot change any of the original settings in the management pack file. However, you can create customizations, such as overrides or new monitoring objects, and save them to a different, unsealed management pack. As a best practice, you should create a separate management pack for each sealed management pack you want to customize. This is because in order to remove any management pack, you must first remove any others that reference it. By keeping a one-to-one correlation between the sealed management pack and a copy containing customizations, it is easier to remove the management pack at a later date without affecting the functionality of any others. It is also easier to track and update customizations to individual management packs.

## Management Pack Rules

Management pack rules collect data from various sources, such as event logs, Simple Network Management Protocol (SNMP), and log files. That data is then stored in the Operations Manager database or a data warehouse, and can be used for reporting purposes. By default, rules included in the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 are enabled except for alerts and recovery tasks, which are disabled.

Adding more rules increases the value of the management pack. You can create the following types of rules:

* **Event rules** – Examine events that have occurred on managed servers. The agents retrieve the events and store them in the database. Logged information about errors and significant events from the monitored systems are displayed.
* **Alert rules** – Examine the alerts generated by alert event rules to determine whether a notification must be prepared. Alert rules are configured to display a notification when an alert with a severity level of Critical Error is generated.

## Security Considerations

Rules, tasks, monitors, and discoveries defined in a management pack require credentials to run on a targeted computer. They run using the account specified for the System Center agent that is on that computer. By default, this is the Operations Manager default action account. To use a different account, do the following:

1. In Operations Manager, go to **Administration** > **Device Management** > **Agent Managed**.
2. Right-click the agent for the Retail component, and then click **Properties**.
3. Modify the Run As Account information to specify a different account.

Alternatively, you can remove and re-install the agent on that Retail component, assigning a different account as the Agent Action Account.

All of the Management Pack for Retail for AX 2012 R3 CU8 monitors can run under standard privileges, except the Application Pool State monitor. This monitor has to run under NT AUTHORITY\SYSTEM or another user account that is in the administrators group. You can do either of the following:

* Increase the privileges of the assigned Agent Action Account, either in Active Directory Domain Services for domain computers or locally for workgroup computers.
* Change the assigned Agent Action Account to one with higher privileges, using one of the methods mentioned previously in this section.

## Understanding Management Pack Operations

The Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 discovers and monitors all Retail components except Retail Hardware Station and Modern POS. It provides information about component state (running or stopped) and also about connectivity between different components. You can use this information to diagnose connectivity and configuration issues.

The monitoring scenarios enabled by the management pack include the following:

* Discover and monitor Retail components
* Check connectivity between the different components
* Check status (running or not running) for each component
* Check whether the components can access system resources (such as file folders)
* Receive alerts when components change state (such as when they lose connectivity)
* Configure and review diagnostic information for components (such as tracing level and event collection)

You can also see Knowledge Base articles with in-depth descriptions for each monitor in the Operations Manager Health Explorer.

### Objects That the Management Pack Discovers

The Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 discovers the following components:

* Async Client
* Async Server
* Real-time Service
* Retail Server
* Retail POS
* Retail POS offline database
* Async Server replication jobs
* SharePoint instances associated with Retail eCommerce deployments
* Online Channel web application instance
* SharePoint Timer Job instances
* **Retail Hardware Station**

### Classes

The service model for the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 consists of classes that represent Retail for Microsoft Dynamics AX objects. System Center Operations Manager uses these classes to discover, detect the health of, and monitor each Retail component.

The service model consists of the classes in the following diagram.



### How the Health Model Rolls Up

The health model for the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 is a dynamic view of the state of each Retail component. The health model reflects the current state of the object instance and is constantly updated by monitors that run in the background.

The health of any Retail component is dependent on the health of all of its monitors. For example, in the case of the Async Client component, the health model roll-up depends on the state of the following monitors:

* Windows Service State (running or not running)
* Async Server Connectivity
* Channel Database Connectivity
* Message Database Connectivity

If any of these unit monitors indicate an issue, the health of that instance of Async Client shows as unhealthy (red).

To view the health model of any object, you can double-click the **State** column for the currently selected instance; or on the **Tasks** menu, select **Tasks**, and then select **Health Explorer**.

## Monitoring Elements Used by the Management Pack

The Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 provides discovery and monitoring functionality for managing Retail components in the environment. It does this by using alerts, tasks, events, and monitors. Each Retail component will have one or more of these elements associated with it to provide a variety of information on its state and health.

### Alerts

Alerts notify you when something of interest happens, such as when an object changes state from running to not running or a connection between components goes down.

To access alerts in Operations Manager, select the Retail component you want to see, and then select **Active Alerts**. Select an alert in the **Active Alerts** pane to see details about it in the **Alert Details** pane.

### Tasks

Tasks let you modify settings for a Retail component in your environment, such as changing the tracing level or starting the application pool. All Retail components except Async Server Replication Job, SharePoint Timer Job instances, and SharePoint Web Applications have tasks associated with them. To access tasks, on the **Tasks** menu, select the tasks associated with the component. For Async Client and Async Server, this menu option will appear as **Commerce Data Exchange: <Component Name> Tasks**. For all other components that have tasks, this menu option will appear as **<Component Name> Tasks**.

### Events

The management pack collects events about the functioning of the associated Retail component, such as whether it has experienced a service failure. Most informational events are not collected. All Retail components except Async Server Replication Job have tasks associated with them.

To access events in Operations Manager, select the Retail component you want to see, and then select **Events**. Select an event in the **Events** pane to see details about it in the **Details** pane.

### Monitors

Monitors report on the availability of Retail components, such as their state and connectivity.

To access monitors in Operations Manager, do the following:

1. Select the Retail component you want to see, and then select **<Component Name> Instances**.
2. Double-click the **State** column of an instance to open Health Explorer.
3. To see all monitor groups, click the **Close** button to close the scope message that appears in the left pane.
4. Expand the **Availability** group to see the individual monitors.
5. Click a monitor to see more information about it. The **Knowledge** pane will give you a Knowledge Base article containing details about the monitor. The **State Change Events** pane will show events that affect this monitor.

## Key Monitoring Scenarios

Use the Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 to discover and monitor the Retail components in your environment.

### Windows Computer Tasks

Some tasks affecting Retail components are set at the Windows computer level. The computer-level tasks used with Retail components are as follows.

#### Create Retail Monitoring Event Source

This task creates a Retail monitoring event source.

1. In Operations Manager, navigate to **Windows Computers**.
2. Click an instance to select it.
3. In the **Tasks** pane on the right, click **Create Retail Monitoring Event Source**.
4. Select the task target, provide credentials if necessary, then click **Run**.

#### Enable/Disable Retail Monitoring Script Logging

These are two paired tasks to enable or disable Retail monitoring scripts from logging informational events to the event log. Error events will still be logged.

1. In Operations Manager, navigate to **Windows Computers**.
2. Click an instance to select it.
3. In the **Tasks** pane on the right, click **Enable Retail Monitoring Script logging** or **Disable Retail Monitoring Script logging**.
4. Select the task target, provide credentials if necessary, then click **Run**.

#### Set Event Log Search Timeframe for Discovery of <Retail Component>

Sets the timeframe in seconds for searching the event log for the indicated component.

1. In Operations Manager, navigate to **Windows Computers**.
2. Click an instance to select it.
3. In the Tasks pane on the right, click **Set Event Log Search Timeframe for Discovery of <Retail Component>**.
4. Select the task target.
5. Click **Override**.
6. In the **New Value** section, type in the values you want for the **Time Frame in Seconds** and **Maximum Processing Time** parameters, then click **Override**.
7. Provide credentials if necessary, then click **Run.**

### Retail Component Monitors

The Management Pack for Microsoft Dynamics AX Retail 2012 R3 CU8 offers the following monitors for Retail components:

**Retail Monitoring Details**

### Retail Component Tasks

Some Retail components also have tasks associated with them. The tasks used with Retail components are as follows.

#### Set Diagnostics Tracing Level

This task is used by the following components:

* Async Client
* Async Server
* Real-time Service
* Retail POS
* Retail Server
* Retail Hardware Station

By default, components log only warnings and errors, because logging creates performance overhead and also consumes disk space. However, when diagnosing specific issues, you might want to temporarily increase the verbosity of the events that are logged in order to get more details about what is happening on the system. After the issue has been resolved, you will typically change the tracing level of the component back to the original level. The tracing level can be changed remotely, and changes do not require a restart of the components in order to take effect.

**Change the tracing level**

1. In Operations Manager, navigate to **<Component Name> Instances**.
2. Click an instance to select it.
3. In the **Tasks** pane on the right, click **Set Diagnostics Tracing Level**.
4. Read the **Task description** that describes how to override the default tracing level, including what the other valid tracing levels are.
5. Click **Override**.
6. In the **New Value** section, type in the new tracing level, and then click **OK**. Note that the tracing values are case-sensitive.

#### Start <Component Name> Service

This task is used by Async Client and Retail POS Offline Service. It lets you change the service name or computer name for a service.

**Change the parameters for a service**

1. In Operations Manager, navigate to **<Component Name> Instances**.
2. Click an instance to select it.
3. In the **Tasks** pane on the right, click **Start <Component Name> Service**.
4. Click **Override**.
5. In the **New Value** section, type the new service name or computer name, as appropriate, and then click **OK**.

#### Start <Component Name> Server Application Pool

This task is used by Async Server, Real-time Service, and Retail Server and Retail Hardware Station. It lets you change the maximum processing time for an application pool.

**Change the parameters for an application pool**

1. In Operations Manager, navigate to **<Component Name> Instances**.
2. Click an instance to select it.
3. In the **Tasks** pane on the right, click **Start <Component Name> Application Pool**.
4. Click **Override**.
5. In the **New Value** section, type the new maximum processing time, and then click **OK**.

#### Set Event Severity for Log Level

This task is used by SharePoint instances. It is essentially the same as the Set Diagnostics Tracing Level task described earlier.

### Discover Retail Components

1. Open the System Center Operations Manager Console.
2. On the **Monitoring** tab, expand the **Microsoft Dynamics AX 2012 R3 CU8 Retail** node. The following Retail component folders appear:
* Async Client
* Async Server
* Async Server Replication Job
* Real-time Service
* Retail Server
* Retail POS
* Retail POS Offline Service
* SharePoint
* SharePoint
* Timer Job
* Web Application
* Retail Hardware Station
1. Expand a component, and then click **<Component Name> Instances** to see whether any instances for that component have been discovered.

### Async Client Monitoring

#### Monitors

* **Windows Service State** – Monitors the state of the Async Client Windows service.
* **Async Server Connectivity** – Monitors the connection between Async Client and Async Server.
* **Channel Database Connectivity** – Monitors the connection between Async Client and the channel database.
* **Message Database Connectivity** – Monitors the connection between Async Client and the message database.

#### Tasks

* [Set Diagnostics Tracing Level](#_Set_Diagnostics_Tracing)
* [Start Async Client Windows Service](#_Start_<Component_Name>)

### Async Server Monitoring

#### Monitors

* **Application Pool State** – Is the roll-up monitor for all other monitors running against this object. If the state is unknown, either monitoring has not begun for this object or there are no monitors defined.
* **Certificate Status** – Monitors whether the certificate chain associated with an instance of Async Server is about to expire. This means that one of the certificates in the certificate trust chain is about to expire. If a certificate expires, Async Server clients will not be able to connect to it.
* **Download Folder Accessibility** – Monitors accessibility of the download folder from Async Server.
* **Message Database Connectivity** – Monitors the connection between Async Server and the head-office message database.
* **Upload Folder Accessibility** – Monitors accessibility of the upload folder from Async Server.

#### Tasks

* [Set Diagnostics Tracing Level](#_Set_Diagnostics_Tracing)
* [Start Sync Service Server Application Pool](#_Start_<Component_Name>_1)

#### Known Issues

Monitoring for an Async Server component might sometimes be inaccurate when there is more than one file storage provider for different data groups. This is because there is only one monitor per Async Server for monitoring file storage providers. If there are multiple data groups, but they use the same file storage provider, then monitoring remains accurate.

Specifically, the following sequence of events will cause a monitor to provide a false positive:

1. File Storage Provider 1 becomes unavailable (for example, the computer hosting the file share loses power).
2. An error event is raised by the monitoring instrumentation, and the Operations Manager monitor turns red.
3. A request for File Storage Provider 2, which is still functional, is received.
4. Since that connection to a file storage provider succeeds, a success event is logged.
5. The same Operations Manager monitor that was red due to the error on File Storage Provider 1 receives the success event, and turns green since File Storage Provider 2 is operational. This is a false positive, since File Storage Provider 1 is still unavailable. Until the next request for File Storage Provider 1 is processed, the monitor will be inaccurate.

### Async Server Replication Jobs Monitoring

#### Monitors

* **Replication Job State** – Checks on the state of replication jobs and indicates if a connectivity error has occurred.

### Real-time Service Monitoring

#### Monitors

* **.NET Business Connector Connectivity** – Monitors the connection between Real-time Service and Microsoft Dynamics AX using .NET Business Connector.
* **Application Pool State** – Monitors the status of the application pool for Real-time Service. If you receive an alert from this monitor, action is required in order to bring the application pool back to an operational state.
* **Certificate Status** – Monitors whether the certificate chain associated with an instance of Real-time Service is about to expire. This means that one of the certificates in the certificate trust chain is about to expire. If a certificate expires, Real-time Service clients will not be able to connect to it.

#### Tasks

* [Set Diagnostics Tracing Level](#_Set_Diagnostics_Tracing)
* [Start Real-time Service Application Pool](#_Start_<Component_Name>_1)

### Retail POS Monitoring

#### Retail POS Instances

##### Monitors

* **Channel Database Connectivity** – Monitors the connection between Retail POS and the channel database.
* **Offline Database Connectivity** – Monitors the connection between Retail POS and the offline database.
* **Real-time Service Connectivity** – Monitors the connection between Retail POS and Microsoft Dynamics AX through Real-time Service.

##### Tasks

* [Set Diagnostics Tracing Level](#_Set_Diagnostics_Tracing)

#### Retail POS Offline Service Instances

You will see a folder for **Retail POS Offline Service Instances** under the **Retail POS Instances** folder.

### Retail Server Monitoring

#### Monitors

* **Application Pool State** – Monitors the status of the application pool for Retail Server. If you receive an alert from this monitor, action is required in order to bring the application pool back to an operational state.
* **Certificate Expiration Status** – Monitors whether the certificate chain associated with an instance of Retail Server is about to expire. This means that one of the certificates in the certificate trust chain is about to expire. If a certificate expires, Retail Server clients will not be able to connect to it.
* **Channel Database Connectivity** – Monitors the connection between Retail Server and the channel database.
* **Real-time Service Connectivity** – Monitors the connection between Retail Server and Microsoft Dynamics AX through Real-time Service.

#### Tasks

* [Set Diagnostics Tracing Level](#_Set_Diagnostics_Tracing)
* [Start Retail Server Application Pool](#_Start_<Component_Name>_1)

### Retail Hardware Station Monitoring

Retail Hardware Station monitoring is only applicable when monitoring Microsoft Dynamics AX Retail AX 2012 R3 CU8 and above. When used with prior versions, this functionality is not enabled.

#### Monitors

* **Application Pool State** - Monitors the status of the application pool for Retail Hardware Station. If you receive an alert from this monitor, action is required in order to bring the application pool back to an operational state.
* **Certificate Expiration Status** - Monitors whether the certificate chain associated with an instance of Retail Hardware Station is about to expire. This means that one of the certificates in the certificate trust chain is about to expire. If a certificate expires, Retail Modern POS clients will not be able to connect to that instance of Retail Hardware Station.
* **Retail Server connectivity status** - Pro-actively monitors connectivity to the corresponding Retail Server. If connectivity is disrupted, Retail Hardware Station will be unable to renew its authentication token with Retail Server and Retail Modern POS instances will be unable to use this instance of Retail Hardware Station.

#### Tasks

Set Diagnostics Tracing Level

Start Retail Hardware Station Application Pool

### SharePoint Monitoring

#### SharePoint Instances

##### Monitors

* **Channel Database Connectivity** – Monitors the connection between SharePoint Server and the channel database.
* **Real-time Service Connectivity** – Monitors the connection between SharePoint Server and Microsoft Dynamics AX through Real-time Service.

##### Tasks

* [Set Event Severity for Log Level](#_Set_Event_Severity)

#### Timer Job Instances

##### Monitors

* **Channel Database Connectivity** – Rolls up health from SharePoint Server Channel Database Connectivity monitor instances that detect connectivity issues with the channel database. Navigate through the Health Explorer unit monitors that have the warning or critical state to see the state change information and specific information that can help you troubleshoot issues.
* **Real-time Service Connectivity** – Rolls up health from SharePoint Server Real-time Service Connectivity monitor instances that detect connectivity issues with Real-time Service. Navigate through the Health Explorer unit monitors that have the warning or critical state to see the state change information and specific information that can help you troubleshoot issues.

#### Web Application Instances

##### Monitors

* **Channel Database Connectivity** – Rolls up health from SharePoint Server Channel Database Connectivity monitor instances that detect connectivity issues with the channel database. Navigate through the Health Explorer unit monitors that have the warning or critical state to see the state change information and specific information that can help you troubleshoot issues.
* **Real-time Service Connectivity** – Rolls up health from SharePoint Server Real-time Service Connectivity monitor instances that detect connectivity issues with Real-time Service. Navigate through the Health Explorer unit monitors that have the warning or critical state to see the state change information and specific information that can help you troubleshoot issues.