Retail Deployment Guide

Microsoft Dynamics® AX 2012 Feature Pack

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Introduction

This guide provides information and resources to help you successfully deploy and configure Microsoft Dynamics® AX 2012 Feature Pack. It addresses deployment planning, hardware configuration, and software installation, and also system maintenance, best practices, and troubleshooting.

For additional information about configuring the components of Microsoft Dynamics AX 2012 Feature Pack, see the following resources:

- Retail Store Connect Technical Reference: Microsoft Dynamics AX 2012 Feature Pack
- Retail Scheduler Technical Reference: Microsoft Dynamics AX 2012 Feature Pack
- POS Technical Reference: Microsoft Dynamics AX 2012 Feature Pack
- The in-product user Help

Important

If you are upgrading from the Microsoft Dynamics AX 2009 for Retail, see the instructions in the Upgrade section of this guide. Upgrading from earlier versions of Microsoft Dynamics AX is not supported.

Who should use this guide

This guide was written for Microsoft Dynamics AX reselling partners, but it can be used by any team or individual implementing and maintaining deployments of Microsoft Dynamics AX 2012 Feature Pack.

About Microsoft Dynamics AX 2012 Feature Pack

Microsoft Dynamics AX 2012 Feature Pack provides mid-market and large retailers a complete head-office and point-of-sale (POS) solution. It can help retailers increase financial returns, improve service, manage growth, and streamline efficiencies.

Microsoft Dynamics AX 2012 Feature Pack consists of several components that are typically distributed across multiple computers and locations. The following table briefly describes each component.

Component	Function	Location
Microsoft Dynamics AX 2012 Feature Pack Headquarters	Retail Headquarters is a module for Microsoft Dynamics AX that retailers use to manage a chain of stores as one enterprise. It controls daily operations and tracks sales information for every store in the chain. Retail Headquarters includes Retail Scheduler, a feature that coordinates communication between the head office and the stores. Retail Headquarters can be used with any POS system that can receive and transmit the necessary data from Microsoft Dynamics AX. **Important** Building a custom POS solution 2012 Feature Pack Headquarters is a complex task that requires extensive planning, development, and testing.	Head office

Microsoft Dynamics AX 2012 Feature Pack Retail Store Connect	Retail Store Connect is a service that periodically shares data among Retail components that include the head office, stores, and individual POS terminals. Instances of Retail Store Connect run at each site.	Head office, stores
Store database	A store database is a specially configured Microsoft® SQL Server® database that collects and stores data from POS terminals, and shares it with the head office.	Stores
Microsoft Dynamics AX 2012 Feature Pack Retail Transaction Service	Together with Retail Store Connect and Retail Scheduler, Retail Transaction Service constitutes the communications mechanism of Microsoft Dynamics AX 2012 Feature Pack. Retail Transaction Service provides real-time, synchronous communication. It can be used to authenticate cashier logon credentials, send loyalty requests, exchange up-to-theminute physical inventory information between the head office and the stores, and more.	Stores
Microsoft Dynamics AX 2012 Feature Pack Retail POS	Retail POS provides a dynamic interface that can be customized to suit your business and store procedures. In addition, Retail POS can work offline, enabling stores to continue operating even during network interruptions. All data is automatically synchronized when the connection is restored.	Stores

Microsoft Dynamics AX 2012 Feature Pack also includes the following components:

- **Store Database Utility**

  Store Database Utility is used at the point-of-sale to create and configure the offline database, create and identify the store database, and create the configuration file used for terminal identification.

- **Microsoft Dynamics AX 2012 Feature Pack POS Plug-ins**

  Retail POS Plug-ins for customers and partners include sample code for various interfaces in the product.

About Payment Services for Microsoft Dynamics AX

By using Payment Services for Microsoft Dynamics AX, retail organizations can easily and securely accept and process credit card and debit card payments in applications, online, at the

head office, and in stores. With certification from the payment card industry (PCI), Payment Services from Microsoft Dynamics AX lets you choose from a number of payment providers, and seamlessly incorporates multiple payment options without the need for additional software or integration.

Note

Integration with Payment Services for Microsoft Dynamics AX is supported only in the United States and Canada.

Planning

Many implementation planning issues for administrators who deploy Microsoft Dynamics AX 2012 Feature Pack are covered in the general Microsoft Dynamics AX Implementation Planning Guide and are not discussed in this guide. Instead, the following planning guidance focuses on considerations that are specific to Microsoft Dynamics AX 2012 Feature Pack.

Hardware and software requirements

For the current hardware and software requirements for Microsoft Dynamics AX 2012 core components (Application Object Server [AOS], clients, and database servers) and Retail components, see Microsoft Dynamics AX 2012 System Requirements.

Deployment topologies

The following table lists the types of computers used in a typical Microsoft Dynamics AX 2012 Feature Pack deployment.

Deployment location	Types of computers
Head office	• Microsoft Dynamics AX AOS computer • Database server • Communications server • Microsoft Dynamics AX client computers
Each store	• Database server • Communications server • POS terminals

Note

For development and testing, you can install the entire Microsoft Dynamics AX 2012 Feature Pack system on a single computer. However, this is not a supported production scenario.

With the exception of the communications server, the computers at the head office are all standard in a Microsoft Dynamics AX deployment. Retail Headquarters is installed on the AOS computer and all client computers. The process for adding it to Microsoft Dynamics AX is much like the process for adding any other component to the deployment.

The head-office database server does not need to be modified at all unless the settings for Microsoft SQL Server are not compliant with the Payment Card Industry (PCI) Data Security Standard. For more information on PCI-compliant settings, see the Implementation Guide for PCI Compliance.

Retail Transaction Service and the head-office instance of Retail Store Connect are installed on the head-office communications server. If you prefer, you can have two communications servers, one for each of these applications.

Typically, head-office and store computers on which Retail Store Connect is installed also have SQL Server 2008 Express installed, but this instance of SQL Server is used only for the Retail Store Connect message database.

Retail POS is installed on each register computer. Optionally, a store database instance or an offline database may be installed on a POS computer.

Actual requirements for your deployment will vary, depending on the system configuration, and on the applications and features that you choose to install on each computer. System requirements depend on many factors, including but not limited to the following:

- The number of transactions per hour
- The number of concurrent users
- The number of remote connections to the head office
- The number of locations
- The number of programs running on each computer

Depending on the needs of your organization, a particular computer can be used for more than one of the purposes in the previous list. We recommend that you load balance across multiple computers wherever possible.

The following figures illustrate typical deployment topologies of a Microsoft Dynamics AX 2012 Feature Pack deployment.

In Figure 1, each component is hosted on a dedicated physical or virtual computer. Components that support multiple instances, such as AOS and Retail Store Connect, could be installed on additional computers for load balancing. This deployment topology is appropriate for a large retailer.

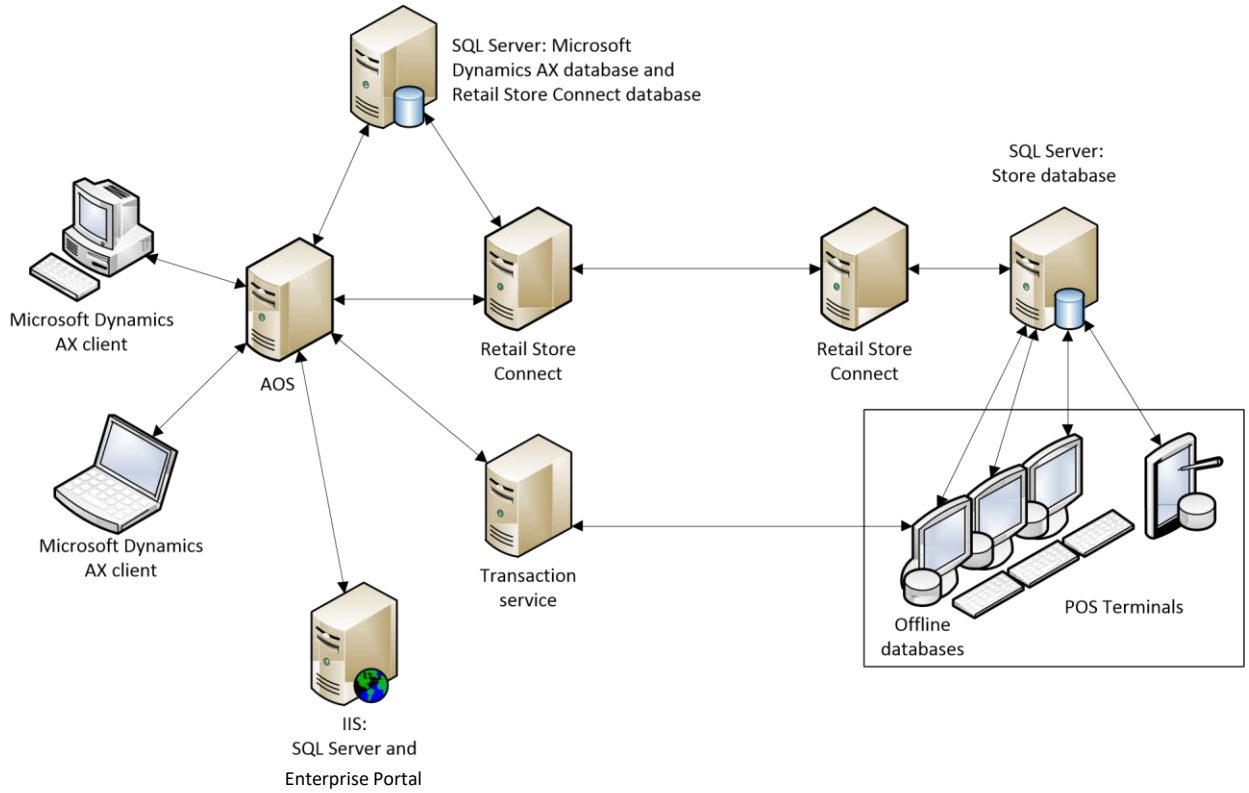

Figure 1. Hosting of Retail components on dedicated computers.

In Figure 2, the head-office Retail Store Connect instance, Retail Transaction Service, and Enterprise Portal for Microsoft Dynamics AX have been combined on a single computer. A midsized retailer might want to consolidate these services on one computer or run them on virtual machines on a single physical machine. On the store side, Retail Store Connect is installed on the same computer as the store database server.

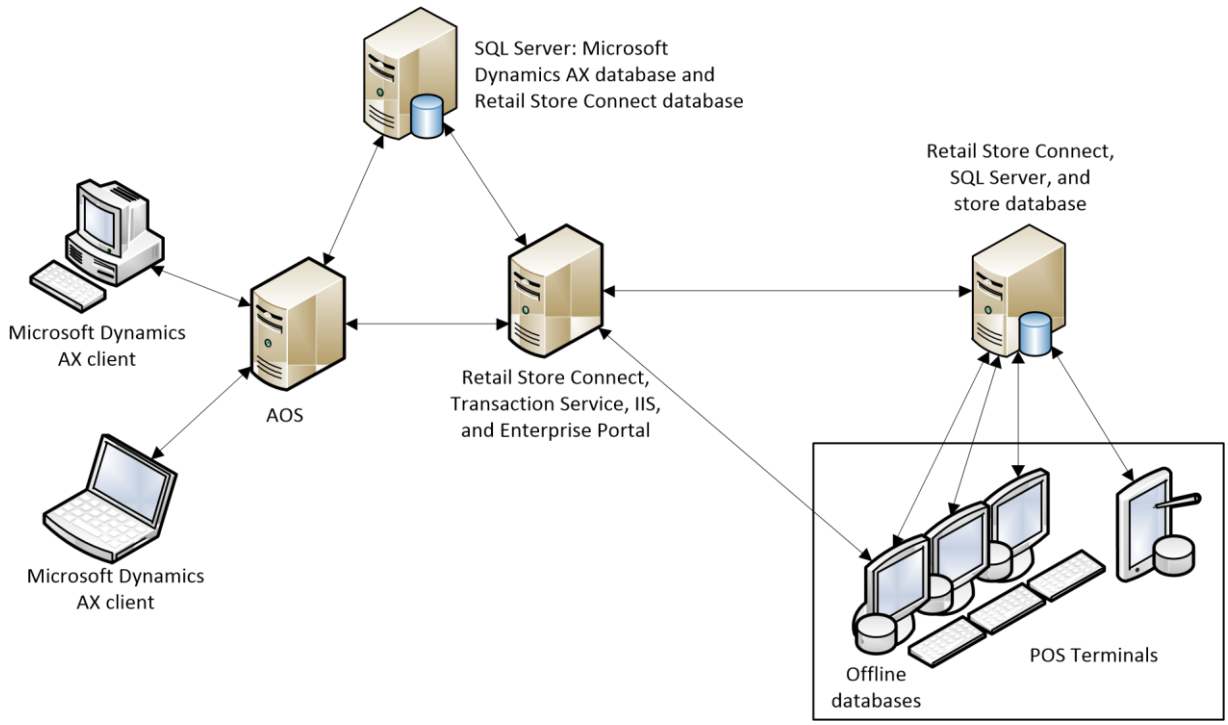

Figure 2. Shared hosting of Retail components.

Microsoft Dynamics AX 2012 Feature Pack supports two store-side database topologies, providing flexibility in the location and connectivity of POS terminals:

- POS terminals with an offline database that is synchronized with the store database when the POS terminals are connected
- POS terminals without an offline database, so that they must always be connected to the store database

Note

Multiple store databases within a single store are not supported in Microsoft Dynamics AX 2012 Feature Pack.

Note

Direct connections between a POS terminal database and the head-office database are not prohibited, but this scenario is not supported in Microsoft Dynamics AX 2012 Feature Pack.

The following figure illustrates the two supported topologies. In the **POS (always online)** topology, the POS terminal will use the store database by default, synchronizing its local database with the store database. If the store database is inaccessible, the POS terminal will use its offline database until the connection to the store database is re-established. In the **POS (portable)** topology, an offline local database is not needed and the POS terminal must always be online in order to connect with the store database.

Note

Retail Store Connect and Retail Transaction Service have been omitted from Figure 3 because they are not affected.

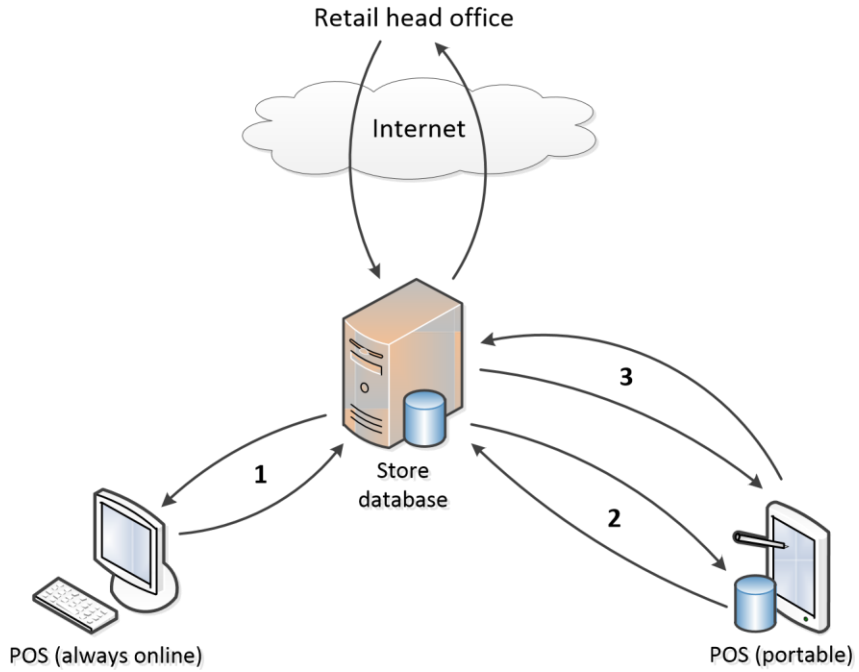

Figure 3. Supported database topologies for Retail POS terminal. 1. This POS terminal has no onboard database and must stay online so that it can communicate with the store database. 2. This example shows a portable POS terminal that has an onboard database and can be used offline. When the terminal comes back online, the onboard database will synchronize with the store database. 3. As long as the portable POS terminal is online, it communicates with the store database.

Deploy Retail components

The following procedures guide you through the configuration of each component that is specific to Microsoft Dynamics AX 2012 Feature Pack. Before attempting these procedures, see the Microsoft Dynamics AX 2012 Installation Guide for guidance about installing the core components of Microsoft Dynamics AX.

Configure Retail Headquarters

This section assumes that you have previously installed the following components of Microsoft Dynamics AX:

- AOS
- All required models

- Any optional components you have selected (including Retail Headquarters and Retail Store Connect)
- Microsoft Dynamics AX clients
- The Microsoft Dynamics AX database
- .NET Business Connector

For information about installing these components, see the Microsoft Dynamics AX 2012 Installation Guide.

Enter retail data into the database

The initialized product includes a head-office store, one terminal, and the information that is required to replicate data between the head office and the stores. All other information must be entered manually.

The procedures in this section provide an outline of the **minimum** data entry that must be completed when you deploy a Microsoft Dynamics AX 2012 system. For more information about these tasks, see the appropriate user Help.

Note

In the following procedures, we assume that standard company data—such as sales taxes—has already been set up in the Microsoft Dynamics AX company.

Before you can create records of one type, you often have to create records of another type. This is particularly true for stores, terminals, and items. If you perform the following procedures in the order shown, you will have the records that you need to satisfy many of these dependencies.

Set up retail staff

For information about entering and configuring retail staff, see the Setting up staff section of Microsoft Dynamics AX Help.

Enter data in Retail Headquarters

Complete the tasks in the following table.

Task	Location in Microsoft Dynamics AX 2012 Feature Pack
Set up parameters and number sequences. **Note** For more information about parameters and number sequences, see the documentation for Microsoft Dynamics AX 2012.	• Retail > Setup > Parameters > Retail parameters • Retail > Setup > Parameters > Retail shared parameters
Insert the default table distribution.	Retail > Setup > Retail scheduler > Table distribution > Insert default setup

Set up the records that you will need when you set up terminals: • Hardware profiles • Visual profiles • Till layouts • Other records under **POS**, according to the needs of your organization **Note** For more information about setting up hardware profiles, see "At the head office: Set up payment processing and hardware devices" in the Implementation Guide for PCI Compliance.	• Retail > Setup > POS > Profiles > Hardware profiles • Retail > Setup > POS > Profiles > Visual profiles • Retail > Setup > POS > Screen layout • Retail > Setup > POS
Set up terminals. **Note** No two registers can have the same terminal number or electronic funds transfer (EFT) register number, even if they are in different stores.	Retail > Setup > POS > POS terminals
Set up the records that you will need when you set up items, according to the requirements of your organization.	• Retail > Setup > Item • Retail > Setup > Price/discount
Set up items.	Common > Products
Set up the other records that you will need when you set up stores: • Tender types • Card types and card numbers • Functionality profiles	• Retail > Setup > Payment methods > Payment methods • Retail > Setup > Payment methods > Card types • Retail > Setup > POS > Functionality profiles
Set up stores: • Modify the existing store so that it has the correct settings. • Create additional stores.	Retail > Common > Retail channels > Retail stores

Important

The default stores, 0000 and 0001, are required for the replication of information to stores. Do not delete these stores.

Configure Retail Scheduler

For information about performing the following tasks, see the Retail Scheduler Technical Reference: Microsoft Dynamics AX 2012:

- Set up Retail Scheduler parameters.
- Set up locations.

Troubleshoot a connection

If the test of the connection results in an error, such as "Cannot connect to Store Connect," "Cannot connect to database," or "Error getting error message," try the following solutions:

- Verify that the connection information in the database profile is correct.
- Use ping, Telnet, or another network utility to verify that the head-office computer can connect to the location computer. If it cannot, make sure that the firewall on the location computer is open to the necessary ports or programs, as described in the Retail Store Connect section of this guide. If the firewall is already open, work with the network administrator to correct the network configuration.

  Note

  When the connection to a location has been successfully established with Telnet, you must close Telnet and restart the Retail Store Connect service on the location computer before attempting to retest the connection from Retail Scheduler.

- On the location computer, verify that remote connections to SQL Server are enabled, that there is a SQL Server logon with the same name as the Retail Store Connect service user, and that the SQL Server logon has db_datareader and db_datawriter access to the Retail Store Connect message database. For more information about these requirements, see the Retail Store Connect section of this guide.
- Verify that the Retail Store Connect service is running on the location computer. If it is, see whether the Retail Store Connect log contains errors.

  Note

  If logging is not turned on, turn it on, restart the Retail Store Connect service, and then check the log. For more information, see "Server debugging properties page" in the Retail Store Connect Technical Reference: Microsoft Dynamics AX 2012.

- Bypass Internet Protocol security (IPsec) for the location and in Retail Store Connect Settings (**Start** > **All Programs** > **Microsoft Dynamics AX 2012** > **Retail Store Connect** > **Retail Store Connect Settings**) on the location computer, as described in the Configure or bypass IPsec section of this guide.

Configure payment processing

For information about configuring payment processing—including instructions for setting up tender types and card types—see the Implementation Guide for PCI Compliance. Also see Setting up payment methods (Retail) in Microsoft Dynamics AX Help.

Configure head-office database server

This section assumes that you have previously installed SQL Server Reporting Services on the head-office database, and that the SQL Server settings are PCI-compliant.

Set up toolbox users

Certain features in Retail Headquarters use a Microsoft ActiveX® control that requires direct access to the head-office database. Therefore, only users with specific database permissions can access the following features:

- Till layouts
- Form layouts
- Button grids
- Item images
- Item bar codes
- Language-specific item descriptions
- Retail POS operations
- Sales tax overrides
- Payment types

For each user of Microsoft Dynamics AX that should have access to these features, complete the following steps in SQL Server Management Studio:

1. Create a new SQL Server user for the Microsoft Dynamics AX database by using Windows authentication and the user's Windows logon ID.
2. On the **Securables** page, grant the user **Delete**, **Insert**, **Select**, and **Update** permissions to the following tables:
    - RETAILBUTTONGRID
    - RETAILBUTTONGRIDBUTTONS
    - RETAILFORMLAYOUT
    - RETAILIMAGES
    - RETAILTILLLAYOUT

3. Grant the user **Select** permission to the following tables:
   - INVENTTABLE
   - INVENTTXT
   - INVENTITEMBARCODE
   - RETAILOPERATIONS
   - RETAILSALESTAXOVERRIDE
   - RETAILSALESTAXOVERRIDEGROUPMEMBER
   - RETAILSTORETABLE
   - RETAILSTORETENDERTYPETABLE

Install and configure Retail Store Connect

Retail Store Connect is a service that sends packages of information either between two databases, or between one database and another instance of Retail Store Connect.

Install Retail Store Connect

For information about installing Retail Store Connect, see the Microsoft Dynamics AX 2012 Installation Guide.

In a basic deployment, one instance of Retail Store Connect is installed at the head office, and one instance is installed at each store. In this scenario, the head-office instance communicates with AOS, and a store instance communicates with the store database.

Operations in a large organization may scale more efficiently if you install multiple Retail Store Connect instances at each site, either on a single server or on multiple servers. For more information, see the Deployment topologies section of this guide.

The following procedures can be used to configure Retail Store Connect either at the head office or in a store.

Note

- Although a single instance of Retail Store Connect can manage all communications for the organization, excessive load or network latency may degrade performance.
- Guest or temporary user accounts are not supported.

About Network Load Balancing

Microsoft Dynamics AX 2012 Feature Pack supports network load balancing (NLB) for data coming from the store to Retail Headquarters. NLB is not supported for outbound data.

NLB is an optional feature in Windows Server 2008 that load balances network traffic. For more information about NLB and how to configure it, see the Network Load Balancing article on Microsoft TechNet.

When installing Retail Store Connect, note the following:

- NLB can distribute incoming data among multiple instances of Retail Store Connect, but all instances must have the same service name.
- If IPsec is enabled, NLB is not recommended.

Set up Retail Store Connect profiles

A Retail Store Connect profile on the head-office Microsoft Dynamics AX system provides the connection string that enables Retail Headquarters to communicate with a particular instance of Retail Store Connect.

4. Click **Retail** > **Setup** > **Retail Scheduler** > **Store integration** > **Retail Store Connect profiles**.
5. Press CTRL+N to create a new Retail Store Connect profile.
6. Type the following information:
   - **Service name** – The name of the service as it was specified in the Retail Store Connect Settings (**Start** > **All Programs** > **Microsoft Dynamics AX 2012** > **Retail Store Connect** > **Retail Store Connect Settings**).
   - **Server name** – The name of the server where Retail Store Connect is installed.
   - **Port** – The port used by this instance of Retail Store Connect.
   - **Disable IPsec** – Select the check box to disable IPsec, a framework of open standards for protecting communications over Internet Protocol (IP) networks through the use of cryptographic security services.

     Important

     IPsec should only be disabled if there are other means in place to provide secure communication channels for Retail Store Connect.
   - **Force IPV4** – Select to prevent connections using IPV6.
   - **Timeout (seconds)** – Type the time in seconds.
   - **Retail Transaction Service profile** – The name of a Retail Transaction Service profile. Retail Store Connect uses this profile to connect to Retail Transaction Service to monitor the status of jobs. If you do not want this instance of Retail Store Connect to monitor status, leave this field blank.

- **Retail Store Connect upload options** – The names of the upload options used by Retail Store Connect. If you configure upload options, you must post the configuration to Retail Store Connect and restart the service for the settings to take effect.

7. Click **Test connection** to confirm that the connection string for the selected Retail Store Connect profile is correct.

Set up an AOS profile

An AOS profile provides the connection string that enables Retail Headquarters to communicate with the head-office database.

1. Click **Setup** > **Retail Scheduler** > **Store integration** > **AOS profiles**.
2. Press CTRL+N to create a new AOS profile.
3. Type the following information:
   - **Name** – A unique name for the profile.
   - **Server name** – The name of the AOS server.
   - **Instance name** – The name of the AOS instance.
   - **TCP/IP port** – The TCP/IP port for the AOS instance.
   - **Retail Store Connect** – Select the profile for the correct instance of Retail Store Connect.
4. Click **Test connection** to confirm that the connection string for the selected AOS profile is correct.

Set up store database profiles

A database profile provides the connection string that enables Retail Headquarters to communicate with a store database.

1. Click **Setup** > **Retail Scheduler** > **Store integration** > **Database profiles**.
2. Press CTRL+N to create a new database profile. Optionally, you can click **Duplicate** to create a new profile based on a currently selected profile.
3. Enter the following information:
   - **Name** – Type a name for the profile.
   - **Version** – Select the SQL Server version for the database.
   - **Server name** – Type the name of the database server.
   - **Database name** – Type the name of the database.
   - **Encrypt database connection** – Select the check box to encrypt the database connection.

- **Retail Store Connect** – Select the profile for the correct instance of Retail Store Connect.

4. Click **Test connection** to confirm that the connection string for the selected database profile is correct.

Set up distribution locations

For information about setting up distribution locations, see Microsoft Dynamics AX 2012 Feature Pack Help and the Retail Scheduler Technical Reference: Microsoft Dynamics AX 2012.

Configure Retail Store Connect

1. Click **Start** > **All Programs** > **Microsoft Dynamics AX 2012** > **Retail Store Connect**.
2. In the Retail Store Connect Settings Wizard, in the **Server name** field, type the name of this instance of the Retail Store Connect service. By default, this is the computer name. Click **Add**.

   Tip

   To avoid confusion, use a unique name for each instance of Retail Store Connect in the organization.

3. On the **Message Database** page type the name of the SQL Server computer that will host the message database for this instance of Retail Store Connect. Then provide the name of the database. If the message database does not already exist, Retail Store Connect will attempt to create it. Click **OK**.
4. On the **Service Account** page type the user name (in the *domain\user name* format) and password for this instance of the Retail Store Connect service. Click **OK**.

   Note

   The service user account on head-office instances of Retail Store Connect must also be a Microsoft Dynamics AX user.

5. A Windows service for the new instance of Retail Store Connect is displayed in the **All Servers** field in the Retail Store Connect Settings Wizard. Do not start the service yet. Select the service, and then click **Next**.
6. Complete the rest of the wizard by using the default settings. This associates the instance of Retail Store Connect with the local message database. For more information about the settings in the wizard, see the Retail Store Connect Technical Reference: Microsoft Dynamics AX 2012.

   Note

   - If there are multiple instances of Retail Store Connect on a single computer, each must have a unique port.
   - If you want to save the packages of exchanged information so that you can view them with Retail Store Connect Pack Viewer, select the **Keep Package Files** check

box on the **Server debugging properties** page of the wizard. For more information about Pack Viewer, see the Retail Store Connect Technical Reference: Microsoft Dynamics AX 2012.

7. When the configuration is completed, close the wizard.
8. On a Microsoft Dynamics AX client computer, modify the Retail Scheduler AOS profile to use this instance of Retail Store Connect. For more information, see the Set up an AOS profile section of this guide.

Configure or bypass IPsec

Retail Store Connect requires a specific IPsec encryption and authentication configuration. This section provides instructions for setting up this minimum configuration. If you use another method to secure data transport, such as a virtual private network (VPN), you can bypass the IPsec requirement for Retail Store Connect, as described in the Bypass the IPsec requirement (with a VPN) section.

Configure IPsec (no VPN)

This procedure must be completed on every computer where Retail Store Connect is installed, including the AOS computer and all Microsoft Dynamics AX client computers.

Note

On computers that are on a domain, domain policies override the local policies described in this section. Consult the domain administrator to determine whether you have to complete this procedure.

1. Click **Start**, click **Administrative Tools**, and then click **Local Security Policy**. You can also open Local Security Policy by typing **secpol.msc** in the search or **Run** box.
2. Right-click **IP Security Policies on Local Computer**, and then click **Create IP Security Policy**.
3. In the IP Security Policy Wizard, provide the requested information. On the **Requests for Secure Communication** page, clear the **Activate the default response rule** check box. On the final page of the wizard, select the **Edit properties** check box, and then click **Finish**.
4. In the **Properties** dialog box for the policy, clear the **Use Add Wizard** check box, and then click **Add**.
5. In the **New Rule Properties** dialog box, on the **IP Filter List** tab, click **Add**.
6. In the **IP Filter List** dialog box, type a name for the filter, clear the **Use Add Wizard** check box, and then complete these steps:
   a. Click **Add**.
   b. On the **Addresses** tab, select **Any IP Address** in both boxes.

   c. On the **Protocol** tab, select **TCP**, select **From any port**, select **To this port**, and then type the port number that you specified as the server port for Retail Store Connect communications. By default, the port number is 16750.

   d. On the **Description** tab, type a name for this filter, and then click **OK**.

   e. Click **OK** twice to close the **IP Filter List** dialog box.

7. On the **IP Filter List** tab, select the new filter list.

8. In the **New Rule Properties** dialog box, on the **Filter Action** tab, clear the **Use Add Wizard** check box, and then click **Add**.

9. In the **New Filter Action Properties** dialog box, complete these steps:

   a. On the **General** tab, type a name for the filter action.

   b. On the **Security Methods** tab, select **Negotiate security**, click **Add**, select **Integrity and encryption**, and then click **OK**.

   c. Click **OK**.

10. On the **Filter Action** tab, select the new filter action.

11. In the **New Rule Properties** dialog box, on the **Authentication Methods** tab, click **Add**.

12. Select the authentication method that you want to use, specify any required settings, and then click **OK**.

13. Select the new authentication method, click **Move Up** until the new method is at the top of the list, and then click **Close**.

14. In the **New IP Security Policy Property** dialog box, click **OK**.

15. In the **Local Security Policy** console, right-click the new policy, and then click **Assign**.

Bypass the IPsec requirement (with a VPN)

If you use a method other than IPsec to secure data transport, such as a VPN, you can bypass the IPsec requirement in Retail Store Connect.

1. On the Retail Headquarters system, click **Retail** > **Setup** > **Retail scheduler** > **Store integration** > **Retail Store connect profiles**. Select the profile for which you want to bypass IPsec, select **Disable IPsec**, and then click **Close**.

2. On the Retail Store Connect computer, run Retail Store Connect Settings (**Start** > **All Programs** > **Microsoft Dynamics AX 2012** > **Retail Store Connect** > **Retail Store Connect Settings**) as an administrator, click **Next** until you reach the **Retail Store Connect Properties** page, select **Disable IPsec**, and then click **Close**.

Open the firewall

To establish communications between computers in the organization, you must open the firewall on any computer where Retail Store Connect is installed.

1. On the head-office communications server, open the firewall to SQL Server, Retail Store Connect, and Retail Transaction Service.
2. On the store communications server, open the firewall to SQL Server and Retail Store Connect.

For instructions, see the Implementation Guide for PCI Compliance.

Head-office client computers

If Retail Scheduler will be used on a Microsoft Dynamics AX client computer to run jobs and send data to stores, install Retail Store Connect on the client system.

Install and configure Retail Transaction Service

Retail Transaction Service is a real-time, synchronous communication service that enables Retail POS to access data in the head-office database without requiring frequent updates of information between databases. It can also be used to authenticate credentials when cashiers log on to Retail POS, and for inventory checks, loyalty and gift card requests, and other operations that require up-to-the-minute information, such as customer orders.

Retail Transaction Service is deployed only at the head office. You must set up a Retail Transaction Service profile on the Retail Headquarters system and assign the profile to each terminal. Terminals connect to the service via the connection string in the profile.

Note

Guest or temporary user accounts are not supported.

Install Retail Transaction Service

For information about installing Retail Transaction Service, see the Microsoft Dynamics AX 2012 Installation Guide.

Set the service to run as the service user

1. Click **Start**, click **Administrative Tools**, and then click **Services** to open the services console. You can also open the console by typing **services.msc** in the search or **Run** box.
2. Right-click **Microsoft Dynamics AX 2012 Feature Pack Transaction Service**, and then click **Properties**.
3. On the **Log On** tab, select **This account**, and then specify the user account for the service. You must use an account that is also a valid Microsoft Dynamics AX user account.

4. Type and confirm the password for the user account, and then click **OK**.

Note

For more information about the user account for the service, see the Create domain user accounts section of this guide.

Set the service to start automatically

1. Click **Start**, click **Administrative Tools**, and then click **Services** to open the services console. You can also open the console by typing **services.msc** in the search or **Run** box.
2. Right-click **Microsoft Dynamics AX 2012 Feature Pack Retail Transaction Service**, and then click **Properties**.
3. In the **Startup type** box, select **Automatic (Delayed Start)**, and then click **OK**.
4. Right-click the service name, and then click **Start** to start the service.

Configure the Retail Transaction Service profile

1. On a Microsoft Dynamics AX client computer, click **Retail** > **Setup** > **POS** > **Profiles** > **Transaction Service profiles** to open the **Retail Transaction Service profile** form.
2. Do one of the following:
   - Select the profile that you want to modify.
   - On the toolbar, click **New**, and then type a name and description for the profile.
3. On the **Connection** tab, complete these steps:
   a. In the **Transaction Service location** area, type the fully qualified name or IP address of the computer where Retail Transaction Service is installed.
   b. Type the port number that Retail Transaction Service will use. By default, the port number for Retail Transaction Service is 1239, but you can change it as described in the next procedure, "Configure the port and AOS server."
   c. In the **Passphrase** box, type the passphrase for the service. The passphrase must conform to the password policy for your organization.
   d. Provide the language that is used by the AOS instance.
4. On the **Settings** tab, select **Retail Transaction Service staff** if you want to enable Retail POS to validate the operator logon through the transaction service.
5. Save the profile, and close the window.

Configure the port and AOS server

1. In the Microsoft Dynamics AX 2012 Feature Pack installation folder, open the retailtransactionservice.exe.config file.
2. For **"Port" value**, specify the port that Retail Transaction Service will listen on.
3. For **"ObjectServer" value**, specify the AOS server name in the following format: <AOS instance name>@<server name>:<port number>
4. Save the file.

Note

For troubleshooting, you can turn on default .NET logging in the .config file.

Associate the service profile with each terminal

1. Click **Retail** > **Setup** > **POS** > **POS terminals** to open the **POS terminals** list page.
2. Double-click a terminal to open the **POS terminals** information page with details for the selected terminal.
3. On the **General** tab, in the **Profiles** section, click the value displayed in the **Transaction service profile** field, which opens the **Retail Transaction Service profile** form.
4. Select the desired profile, and then click **Close**.
5. Repeat steps 2 through 4 for each additional terminal.

Note

The profile for Retail Transaction Service is downloaded to stores in the N-Terminal job.

Open the firewall

On the head-office communications server, open the firewall to Retail Transaction Service. If Retail Store Connect is installed on the same computer, also open the firewall to SQL Server and Retail Store Connect. For instructions, see the Implementation Guide for PCI Compliance.

Install POS terminals and store databases

Prepare to deploy Retail POS

If you have not already done this, complete the deployment prerequisites for the location, and install the prerequisite software for Retail POS.

Set up user accounts and the POS user group

To manage access to store computers and databases, you must create the following Windows users and user group:

- **An account for Retail Store Connect** – This account must be created only on the communications server where Retail Store Connect is installed and on computers where Retail POS databases are located. The Retail Store Connect service will run as this user.
- **An account for each store employee** – Each employee user account must be created on every register that the employee will use. The employee can use this user account to log on to Windows and start Retail POS, and then log on to Retail POS by using the employee credentials set up for the employee in Retail Headquarters.
- **A POS user group, to which all cashier user accounts on the computer are assigned** – Create this group on all computers in the store, including the communications server, by using the same name as the SQL logon that you created for the POS user group. This gives all members of the group (cashiers and the Retail Store Connect service) automatic access to the store or register database. Without this access, cashiers cannot process transactions.

  Note

  All user accounts should have strong passwords that meet the password policy for the organization.

When you create the POS user group, it inherits the rights and privileges of the Standard user group on the computer. Typically, these rights and privileges are sufficient and do not need to be modified.

For more information about setting up the SQL logon and database privileges for the POS user group, see the Create SQL logins and assign database privileges section of this guide.

Guest or temporary user accounts are not supported.

Create user accounts

1. Click **Start**, type **lusrmgr.msc** in the search or **Run** box, and then press ENTER to open Local Users and Groups.
2. Right-click the **Users** folder, and then click **New User**.
3. Type information about the user, and then click **Create**.
4. For the Retail Store Connect service user only, complete these additional steps:
   a. Right-click the user, and then click **Properties**.
   b. Clear the **User must change password at next logon** check box, select the **User cannot change password** and **Password never expires** check boxes, and then click **OK**.
5. Continue adding users. When you have finished, click **Close**.

Create the POS user group

1. Click **Start**, type **lusrmgr.msc** in the search or **Run** box, and then press ENTER to open Local Users and Groups.

2. Right-click the **Groups** folder, and then click **New Group**.
3. In the **Group name** box, type the name of the new group. Be sure to use the same name on all computers.
4. Click **Add**.
5. In the **Enter the object names to select** box, type the employee user names that you set up in the previous procedure. Separate the names by semicolons. Click **Check Names** to verify that you typed the names correctly, and then click **OK**.
6. Click **Create**, and then click **Close**.

Install the Retail POS component on terminal computers

You must install Retail POS on each register computer. You must also install Retail POS on a stand-alone database server, even if Retail POS will not be used on that computer. This is necessary to set up the database. On a communications server, you only need to install Retail POS if that computer will also be used to process transactions. For more information, see the Microsoft Dynamics AX 2012 Installation Guide.

Customize Retail POS

For information about customizing registers to meet business and cashier needs, see "Customize Retail POS" in the *Retail POS User's Guide*.

Important

Changes to some Retail POS features, such as till layouts and button grids, can also be made at the head office. When these changes are sent to the stores, they overwrite any customizations made at the store.

Configure POS on the head-office system

Complete the following procedures to configure your Retail POS deployment on the head-office system. This procedure assumes that you have previously installed Retail POS on your terminals by using the procedures in this guide and in the Microsoft Dynamics AX 2012 Installation Guide, and that you have completed the **Data upgrade checklist** on your Microsoft Dynamics AX 2012 system.

Important

Before you proceed:

- Obtain the company ID, the store ID, and the terminal numbers for all registers.
- Verify that the Windows locale of each database computer in the store is set to one of the supported locales for Microsoft Dynamics AX. Otherwise, you might encounter issues related to the collation of the Retail POS database.

7. On your head-office system, click **Retail** > **Setup** > **Parameters** > **Retail parameters** to open the **Retail Headquarters parameters** form. On the **General** tab, click **Initialize**. This step initializes configuration data for Retail Headquarters. POS operations are created. These include both legacy operations, such as tender transaction, return item, search item, and set quantity, and operations that are new in Microsoft Dynamics AX 2012, such as end shift and suspend shift. New jobs are also created. For more information, click the **Help** button in the form.

8. On your head-office system, click **Retail** > **Setup** > **Parameters** > **Retail parameters** to open the **Retail Headquarters parameters** form. On the **General** tab, click **Initialize**. This step initializes configuration data for Retail Headquarters. POS operations are created. These include both legacy operations, such as tender transaction, return item, search item, and set quantity, and operations that are new in Microsoft Dynamics AX 2012, such as end shift and suspend shift. New jobs are also created. For more information, click the **Help** button in the form.

   Note

   POS configuration is completed on each terminal using the procedures described in the Install store databases and configure POS terminals section.

Open the firewall

To establish communications between computers in the organization, you must open the firewall on specific store computers.

1. On the store communications server, open the firewall to SQL Server and Retail Store Connect.
2. On a store database server, open the firewall to SQL Server. On a register that has its own local database, you only need to open the firewall to SQL Server if Retail Store Connect is on a computer other than the register.

For instructions, see the *Implementation Guide for PCI Compliance*.

Set up OPOS hardware devices

1. Install the OPOS Common Control Objects.
2. Install the OPOS service objects from the device manufacturers.
3. Install the hardware.

4. Use the manufacturer's configuration utility (if available) to configure the hardware.

   Important

   You must use the same device name that you specify in the hardware profile for the terminal. For more information, see the *Implementation Guide for PCI Compliance*.

5. Use the manufacturer's test utility (if available) to test the hardware outside Retail POS.

Note

OPOS Common Control Objects, version 1.13, are required. After using an installation utility provided by a hardware manufacturer, confirm that the Common Control Objects have not been overwritten by an earlier version.

To help avoid performance issues, verify that you have the correct service objects for the hardware devices that are installed on the register.

Certain service objects require the installation of the Visual C++ 2008 Redistributable Package.

For information about supported devices, see the System requirements section of this guide.

Install store databases and configure POS terminals

Retail store databases are installed by using the Retail POS configuration utility. To use the utility, click **Start** > **All Programs** > **Microsoft Dynamics AX 2012** > **Retail Database Utility** > **Retail Database Utility**, which opens the **Retail POS configuration** form. A store database may be installed either on a shared database server or on a POS computer for offline use. The Retail Database Utility can also be used to configure a simple POS terminal with or without an offline database, and to create a store database on a Microsoft Dynamics AX installation where all the Retail components are on a single computer. This last scenario should be used only for development purposes.

Note

The procedures below assume that you have installed a supported version of SQL Server on the computer where you plan to run the Retail Database Utility. For a list of supported operating systems and SQL Server versions, see the System requirements section of this guide. On each computer, you must use the Microsoft Dynamics AX 2012 Feature Pack setup to install the Retail Database Utility. For more information, see the Microsoft Dynamics AX 2012 Installation Guide.

The following procedures address the scenarios in which the Retail Database Utility may be used.

Create a store database

1. On a computer that has a supported version of SQL Server installed, open the **Retail POS configuration** form as described above.
2. Select **Configure store database**.

3. Supply values in the **Store database** fields:
   - **Store database name** – Type a name for the database.
   - **Store server name** – Type the name of the server hosting the store database (typically **localhost**).
4. Select **Configure offline database**, and then provide arbitrary, or dummy, values in the **Store ID**, **Terminal ID**, and **Data area ID** fields.

   Important

   Dummy values are required in the **Identification** fields because of a known issue. When creating a shared store database, *do not* complete the **Offline database name** or **Offline server name** field. After you have used the utility to create the shared store database, you can open the utility again to designate this database as an offline database, but you cannot perform both actions at the same time.
5. (Optional.) Test the connection to the specified database server (typically **localhost**).
6. Click **Continue** to create and configure the store database.
7. Perform the tasks in the **Retail POS redeployment checklist**, which runs the deployment jobs from headquarters that populate the store database.

   Important

   The checklist must be run *before* you do any of the following:
   - Configure POS terminals, regardless of whether they have offline databases.
   - Create an offline database.
   - Log into POS on a computer that does not have an offline database.

Create an offline database on a POS terminal

For this procedure to succeed, you must have already created a store database as described above.

1. Open the **Retail POS configuration** form as described above.
2. Select **Configure store database**.
3. Supply values in the **Store database** fields:
   - **Store database name** – Type the name of an existing store database.
   - **Store server name** – Type the name of the server hosting the store database.
4. (Optional.) Test the connection.
5. Select **Configure offline database**.
6. Supply values in the **Offline database** fields:

- **Offline database name** – Type a unique name for the new offline database.
- **Offline server name** – Type the name of the computer hosting the offline database (typically **localhost**).

7. Supply values in the **Identification** fields:
   - **Store ID** – Type the ID of the store that the POS terminal is associated with. The ID must match the value provided for the store in the **Name** field of the **Retail stores** form (**Retail** > **Common** > **Retail channels** > **Retail stores**).

     Note

     The store record does not need to be created before you complete this step. However, the ID must match later when the record is created and the profile is linked. For more information, see the Setting up stores section of Microsoft Dynamics AX 2012 Help.

   - **Terminal ID** – Type a unique ID for the POS terminal, such as **Terminal 1**. The POS terminal must be listed in the **POS terminals** form (**Retail** > **Setup** > **POS** > **POS terminals**).

     Note

     The POS terminal record does not need to be created before you complete this step. However, the ID must match later when the record is created and the profile is linked. For more information, see the Setting up Retail POS section of Microsoft Dynamics AX 2012 Help.

   - **Data area ID** – Type the applicable company code.
8. Click **Continue** to create and configure the offline database.
9. On the POS computer, start the Microsoft Dynamics AX for Retail Offline Sync Service, so that the offline database can be synchronized with the shared store database.
10. To confirm that the offline database was created correctly, and that synchronization is working, verify that tracking tables have been added to the store database. Tracking tables are essentially copies of Retail tables with the suffix "_tracking". This ensures that the store database has been provisioned for synchronization. To ensure that the synch service is running, refer to the RetailOfflineSyncLog table in the store database.

Configure a POS terminal without an offline database

This procedure establishes the terminal's POS configuration. POS login requires that the terminal have access to the store database.

1. On a POS computer, open the **Retail POS configuration** form as described above.
2. Select **Configure store database**.
3. Supply values in the **Store database** fields:

- **Store database name** – Type the name of an existing store database.
- **Store server name** – Type the name of the server hosting the store database.

4. (Optional.) Test the connection.
5. Select **Configure offline database**.
6. Leave the **Offline database** fields blank.
7. Supply values in the **Identification** fields:
   - **Store ID** – Type the ID of the store that the POS terminal is associated with. The store most be listed in the **Retail stores** form at **Retail** > **Common** > **Retail Channels** > **Retail stores**.
   - **Terminal ID** – Type a unique ID for the POS terminal. The POS terminal must be listed in the **POS terminals** form at **Retail** > **Setup** > **POS** > **POS terminals**.
   - **Data area ID** – The applicable company code.
8. Click **Continue** to configure the POS terminal.

Configure a store database and a POS terminal on a single-computer Retail installation

When creating a single-computer Retail system for use as a development platform, you must run the Retail Database Utility twice, in the following order, to install both a store database and a POS terminal.

1. Install the store database as described in the procedure **Create a shared store database**.
2. Configure the POS terminal as described in the procedure **Configure a POS terminal without an offline database**.

Offline scopes

Offline *scopes* are used to organize data that is synchronized from the store database to the offline databases. The default scopes are modeled after the Retail Scheduler jobs used to synchronize data between headquarters and the stores. For example, when the A-1080 scheduler job pushes tax-related information from headquarters to the stores, the same tables are included in the offline tax scope that pushes data from the store database to the offline database.

During setup of terminals and stores in the headquarters system, offline scopes are combined into offline profiles using the **Offline profile** form at **Retail** > **Setup** > **POS** > **Profiles** > **Offline profile**. Offline profiles are assigned at the store level using the **Retail stores** form at **Retail** > **Common** > **Retail channels** > **Retail stores**.

Settings required for PCI compliance

To comply with the PCI Data Security Standard, you must enter specific settings during SQL Server 2008 setup. These are detailed in the following table.

Wizard page	Required settings
Server Configuration page, Service Accounts tab	Specify dedicated logon accounts that are not default accounts.
Database Engine Configuration page, Account Provisioning tab	Select Windows authentication. Specify SQL Server administrators, without using any default accounts.

For more information, see the Implementation Guide for PCI Compliance.

Note

If you want to use an existing instance of SQL Server 2008 anywhere in the Microsoft Dynamics AX 2012 Feature Pack deployment, you must first verify that the settings for the instance are PCI-compliant. Whenever possible, set up a new instance for Microsoft Dynamics AX 2012 Feature Pack that uses the preceding settings. For more information about setting up a new instance, see SQL Server 2008 Books Online.

Collation of Retail POS databases

The collation for each Retail POS database is based on the Windows locale. To avoid collation issues, verify that the Windows locale of each database computer in the store is set to one of the supported locales for Microsoft Dynamics AX 2012 Feature Pack.

Create SQL logons and assign database privileges

On the head-office communications server, create a SQL logon with the same name as the Retail Store Connect domain user. The head-office instance of Retail Store Connect will use this logon to access the Retail Store Connect message database. Therefore, the logon must have read and write (db_datareader and db_datawriter) access privileges on the message database.

On each store computer where SQL Server 2008 is installed, including the store communications server, create a SQL Server logon with the same name as the POS user group. This logon automatically provides all members of the POS user group (that is, all cashiers) access to the store or register database. This logon must have read and write (db_datareader and db_datawriter) access privileges on the store databases and the Retail Store Connect message database.

1. In SQL Server Management Studio, expand the **Security** folder, right-click **Logins**, and then click **New Login**.

2. On the **General** page, click **Search** to locate and select the user account that you want to use for this SQL Server logon.
3. On the **User Mapping** page, select the check box for the database to which you want to grant access, and then, under **Default Schema**, click the **Browse** button.
4. In the **Select Schema** dialog box, click the **Browse** button.
5. In the **Browse for Objects** dialog box, select the check box for the **[dbo]** object, and then click **OK**.
6. In the **Select Schema** dialog box, click **OK**.
7. In the **Database role membership for** box, select the appropriate database, select the check boxes for the **db_datareader** and **db_datawriter** privileges, and then click **OK**.

Enable remote connections in SQL Server and start the server

Any instance of SQL Server 2008 that can be accessed from a remote computer must be set up to accept remote connections. This includes any store database server, the store communications server (to enable registers to access the Retail Store Connect message database), and any computer on which a Retail Store Connect message database is installed without Retail Store Connect.

1. In SQL Server Management Studio, right-click the correct instance name, and then click **Properties**.
2. On the **Connections** page, select the **Allow remote connections to this server** check box, and then click **OK**.
3. In SQL Server Configuration Manager, expand **SQL Server Network Configuration**, click the protocols module for the correct instance, right-click **TCP/IP**, and then click **Enable**.
4. To verify that the service for the instance is started, right-click the service name, and then click **Start**. To configure a service to start automatically, right-click the service name, click **Properties**, and then, in the **Start Mode** box on the **Service** tab, select **Automatic**.

Upgrade

The upgrade process for Microsoft Dynamics AX 2012 Feature Pack is based on the Microsoft Dynamics AX 2012 upgrade framework, and uses procedures common to both Retail and nonRetail deployments of Microsoft Dynamics AX. Before attempting an upgrade, administrators will need to be familiar with the Microsoft Dynamics AX 2012 Upgrade Guide and the regularly updated upgrade documentation on TechNet.

Supported upgrade paths

Microsoft Dynamics AX supports two direct upgrade paths for customers who want to upgrade to Microsoft Dynamics AX 2012 Feature Pack from previous versions, as shown in Figure 4.

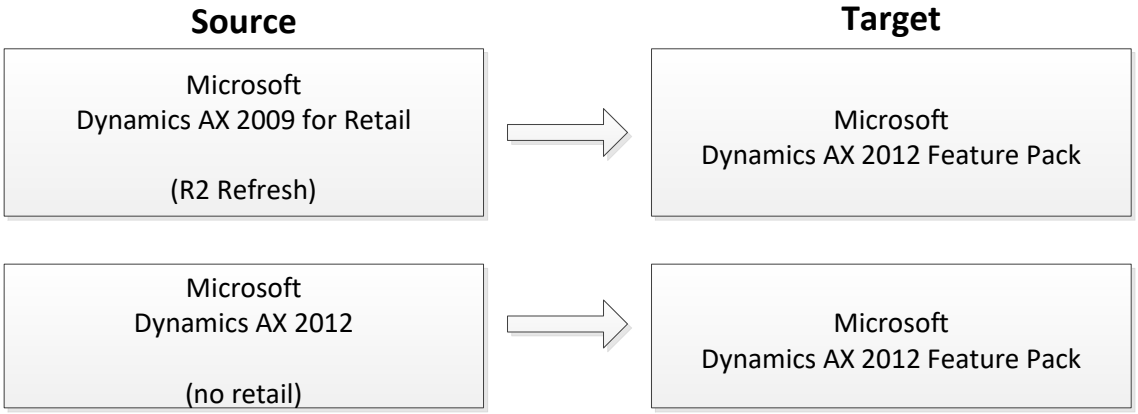

Figure 4. Supported upgrade paths to Microsoft Dynamics AX 2012 Feature Pack.

The terms *source* and *target* refer to stages of the Microsoft Dynamics AX 2012 upgrade framework. The upgrade framework reduces the downtime formerly associated with data upgrade. Upgrade administrators and business application experts can now preprocess most of an upgrade on the existing (and live) production Microsoft Dynamics AX system—the source system. While this work is in progress, the target Microsoft Dynamics AX 2012 system is installed and configured on a separate computer—the target system. Finally, during a relatively brief downtime window, prepared data is copied from the source system and upgraded on the target system.

Note

Direct upgrade from Microsoft Dynamics AX [2009] for Retail R1 to Microsoft Dynamics AX 2012 Feature Pack is not supported. Customers who want to perform this upgrade must first upgrade to Microsoft Dynamics AX [2009] for Retail R2 Refresh, which is a supported source version for upgrade to Microsoft Dynamics AX 2012 Feature Pack. For information about performing this preliminary upgrade, see the upgrade section of the Deployment and installation Guide: Microsoft Dynamics AX [2009] for Retail.

Retail Headquarters upgrade

Scenario 1: Upgrade Microsoft Dynamics AX [2009] for Retail R2 Refresh to Microsoft Dynamics AX 2012 Feature Pack

The Microsoft Dynamics AX 2012 source-to-target upgrade model defines the phases of a Retail Headquarters upgrade from Microsoft Dynamics AX [2009] for Retail R2 Refresh. Figure 5 illustrates the workflow involved in this scenario.

Figure 5. Upgrading from Microsoft Dynamics AX [2009] for Retail R2 Refresh to Microsoft Dynamics AX 2012 Feature Pack.

For complete documentation of this process and step-by-step procedures for successfully completing it, see the Microsoft Dynamics AX 2012 Upgrade Guide. The guide includes information about the steps specific to Microsoft Dynamics AX 2012 Feature Pack that are included as part of the general Microsoft Dynamics AX 2012 upgrade process.

Scenario 2: Upgrade Microsoft Dynamics AX 2012 to Microsoft Dynamics AX 2012 Feature Pack

The procedure for upgrading from the non-Retail version of Microsoft Dynamics AX 2012 to the Retail version is an example of a minor version upgrade in Microsoft Dynamics AX 2012. There is no source-to-target workflow. Instead, the installation of a new model file on the existing system triggers the opening of the **Software update checklist** on restart.

Figure 6 illustrates the workflow required for a single-system upgrade.

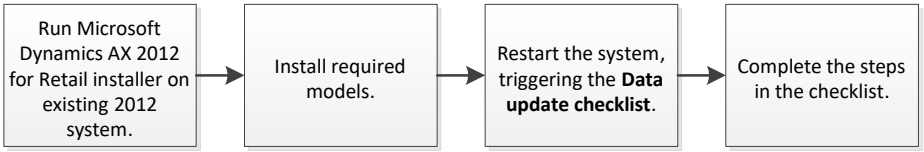

Figure 6. Adding Retail functionality to a non-Retail installation of Microsoft Dynamics AX 2012.

The minor version upgrade installs a new model onto the existing system—in this case, the OneFPK model, which contains the additional framework and applications that support Retail Headquarters functionality.

For documentation of this process and step-by-step procedures for successfully completing it, see the topic "Perform minor-version upgrade" in the Microsoft Dynamics AX 2012 Upgrade Guide.

Retail POS upgrade and redeployment

Retail POS terminals from Microsoft Dynamics AX 2009 for Retail must be completely replaced as part of the upgrade process to Microsoft Dynamics AX 2012 Feature Pack. While the head-office Microsoft Dynamics AX system is being upgraded, new Microsoft Dynamics AX 2012 POS terminals must be installed on each register computer at any store that you plan to redeploy. Before installing any new POS terminals, see the Hardware and software requirements section of this guide.

Before the legacy POS systems are discarded, all transaction data must be uploaded to the head office. An upgrade is performed, and stores and terminals are defined on the Microsoft Dynamics AX 2012 system, which also calculates transaction seeds and replication counter values for the POS terminals. When the new POS terminals are ready, the head office pushes calculated seeds and counter values to each redeployed terminal.

Figure 7 illustrates the Retail POS redeployment process. For simplicity, communication components are omitted, and only one POS terminal is shown.

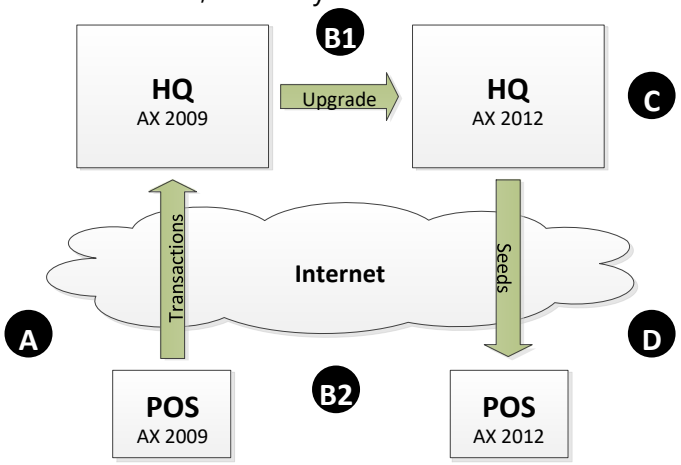

Figure 7. Upgrade workflow consisting of the following phases:

A. Upload transactions from Retail POS to the Microsoft Dynamics AX 2009 source system (HQ). Final transactions must be posted before the source system enters single-user mode, at which point Retail POS is unusable until the upgrade is completed.

B. At the head office (B1), perform a standard upgrade to Microsoft Dynamics AX 2012. At a store (B2), install Retail POS for Microsoft Dynamics AX 2012.

C. On the configured Microsoft Dynamics AX 2012 system, configure stores and POS terminal instances, and calculate seeds and counters for the uploaded transactions.

D. Download master data and seed values to the new POS systems.

Prepare for Retail POS redeployment

Complete the following procedures to prepare for Retail POS redeployment. You must configure both the head-office system and the individual POS terminals. This procedure assumes that you have previously installed Retail POS on your terminals by using the procedures in this guide and in the Microsoft Dynamics AX 2012 Installation Guide, and that you have completed the **Data upgrade checklist** on your Microsoft Dynamics AX 2012 system.

Note

Installation of Microsoft Dynamics AX 2012 Feature Pack POS on a system where an older POS version is installed may fail. We recommend removing the older version of POS before attempting a new installation.

1. Perform the steps described in the section Configure POS on the head-office system.
2. Perform the steps described in the section Install store databases and configure POS terminals.
3. On your head-office system, click **Retail** > **Setup** > **Retail scheduler** > **Store integration** > **Database profiles** to open the **Database profiles** form. One profile is required for each store. The form displays existing database profiles from Microsoft Dynamics AX 2009. If you want to keep these existing profiles, they need to be revalidated. Create new profiles as needed, or change the settings of the existing profiles to reflect the new computers and databases. Validate each profile by clicking **Test connection**. For more information, click the **Help** button in the form.

   For more information, see the section Set up store database profiles.
4. On your head-office system, click **Retail** > **Setup** > **Retail scheduler** > **Distribution locations** to open the **Distribution locations** form. The form displays a list of distribution locations. Assign the correct database profile for each location.

   Note

   Do not assign AOS profiles if they are displayed on the **Connection profile** menu. This is a known issue.

   For more information about setting up distribution locations, see Microsoft Dynamics AX 2012 Feature Pack Help and the Retail Scheduler Technical Reference: Microsoft Dynamics AX 2012.
5. On your head-office system, click **Retail** > **Setup** > **Retail scheduler** > **Store integration** > **AOS profiles** to open the **AOS profiles** form. This form displays the existing AOS profile from Microsoft Dynamics AX 2009. The values in this profile must be updated to point to a current AOS computer. For more information, click the **Help** button in the form.

   For more information, see the section Set up an AOS profile.
6. On your head-office system, click **Retail** > **Setup** > **Retail scheduler** > **Store integration** > **Retail Store Connect profiles** to open the **Retail Store Connect profiles** form. These profiles enable data to be synchronized between Retail Headquarters and stores. The form displays the existing Retail Store Connect profiles from Microsoft Dynamics AX 2009. If you want to keep these existing profiles, they need to be revalidated. Create new profiles as needed, or change the settings of the existing profiles to reflect the new computers and databases. For more information, click the **Help** button in the form.

   For more information, see the section Set up Retail Store Connect profiles.
7. On your head-office system, click **Retail** > **Setup** > **POS** > **Profiles** > **Transaction Service profiles** to open the **Retail Transaction Service profile** form. These profiles enable queries and data to be passed directly between Retail Headquarters and POS terminals. The form displays existing Retail Transaction Service profiles from Microsoft Dynamics AX 2009. If you

want to keep these existing profiles, they need to be revalidated. Create new profiles as needed, or change the settings of the existing profiles to reflect the new computers and databases. For more information, click the **Help** button in the form.

For more information, see the section Configure the Retail Transaction Service profile.

8. On your head-office system, click **Retail** > **Setup** > **Parameters** > **Retail shared parameters** to open the **Retail shared parameters** form. On the **General** tab, assign a value in the **Exchange rate type** field.

   Important

   Without completion of this step, items will be displayed with a price of zero after POS redeployment.

Redeploy Retail POS

Redeployment of the POS terminals is performed on the head-office Microsoft Dynamics AX 2012 system where Retail Headquarters is installed. After you have completed the following procedure, batch jobs will be scheduled to download necessary data to the store databases, and to initialize transaction counts on the POS terminals.

The **Retail POS redeployment checklist** contains the tasks required for redeployment. You can use the checklist to redeploy all your stores at once, or you can deploy some stores now and return to the checklist later to redeploy additional stores.

1. Click **System administration** > **Setup** > **Checklists** > **Retail POS redeployment checklist** to open the **Retail POS redeployment checklist**.
2. Click the **Select stores to redeploy** task to open the **Retail stores to deploy** form. The form initially displays any existing stores from Microsoft Dynamics AX 2009. You can delete or reconfigure these stores as needed, and add new stores.

   Before upgrade, each POS terminal stored transaction numbers as a basis for assigning new transactions IDs. Because old transaction data is not downloaded to POS terminals after upgrade, redeployed terminals must be supplied with seed values. Seed values for each POS terminal must be calculated by Retail Headquarters based on the last posted transactions before upgrade. As new stores and terminals are added, you can run this procedure again to assign seeds.

   Complete the following steps for each store and POS terminal:

   a. In the **Store number** field, select a store.

   b. In the **Terminal number** field, select a POS terminal.

   c. Click **Calculate POS seed**. The generated values can be overridden manually if necessary.

   d. Repeat steps **a** through **c** until all terminals in all stores have been assigned seeds.

e. When you have finished, click **Close**.

3. Optional: Click the **Reset replication counters** task to reset all replication counters to 0. Replication counters track data replication jobs so that data is not copied unnecessarily. A value of 0 means that all data will be replicated when the first post-upgrade batch job runs.

4. Click the **Create pre-actions** task to create pre-actions that will be used by A-jobs during data replication. Whereas N-jobs send replicated data from Microsoft Dynamics AX to all stores, A-jobs save system and network load by sending only relevant data from Microsoft Dynamics AX to specific stores. Pre-actions are created based on the dependency hierarchy accessible in the **Table distribution** form.

5. Click the **Convert pre-actions to action jobs** task to create the A-job records to push data to particular stores.

   Note

   This task may take a relatively long time to be completed.

6. Click the **Schedule batch job** task to open the **Retail deployment batch job** form. Retail POS redeployment is carried out by using the Microsoft Dynamics AX batch framework. You can use the form to manually configure jobs and check their status, either selecting the DATAUPDATE batch group, which is created by the upgrade framework and begins running before the upgrade is even complete, or you can select the default empty batch group, which needs to be assigned a batch server before it will work.

7. If you click the **Cleanup tasks** task, the setup data created by the preceding checklist tasks is deleted. This is required for redeployment of additional stores. For example, if you schedule and run batch jobs to redeploy stores A and B, you will need to perform this task before you can redeploy store C.

   Even though this task is labeled “Required,” you can postpone it until all batch jobs are completed successfully. In this way, you can re-run a currently configured batch job without repeating all the checklist tasks.