

WebSphere Business Integration Express and Express  
Plus for  
Item Synchronization



# Installing WebSphere Business Integration Express and Express Plus for Item Synchronization

*Version 4.3.1*



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**Note!**

Before using this information and the product it supports, read the information in "Notices" on page 47.

**6February2004**

This edition of this document applies to IBM WebSphere Business Integration Express for Item Synchronization, version 4.3.1, IBM WebSphere Business Integration Express Plus for Item Synchronization, version 4.3.1, and to all subsequent releases and modifications until otherwise indicated in new editions.

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## About this document

The products IBM(R) WebSphere(R) Business Integration Express for Item Synchronization and IBM(R) WebSphere(R) Business Integration Express Plus for Item Synchronization are made up of the following components: InterChange Server Express, the associated Toolset Express product, the Item Synchronization collaboration, and a set of software integration adapters. Together, the components provide business process integration and connectivity among leading e-business technologies and enterprise applications as well as integration with the UCCnet GLOBALregistry

This document describes how to install and set up IBM WebSphere Business Integration Express Plus for Item Synchronization and IBM WebSphere Business Integration Express for Item Synchronization systems.

**Note:** Any WebSphere Business Integration Express for Item Synchronization differences will be noted.

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## Audience

This document is for consultants and system administrators who install, deploy, and administer WebSphere Business Integration Express for Item Synchronization in the following environments:

- Microsoft Windows 2000
- Linux
- OS/400

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## Related documents

The complete set of documentation available with this product describes the features and components common to all WebSphere Business Integration Express for Item Synchronization and WebSphere Business Integration Express Plus for Item Synchronization installations, and includes reference material on specific components.

You can download, install, and view the documentation at the following site:  
<http://www.ibm.com/websphere/wbiitemsync/express/infocenter>.

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## Typographic conventions

This document uses the following conventions:

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`courier font`

Indicates a literal value, such as a command name, filename, information that you type, or information that the system prints on the screen.

**bold**  
*italic*

Indicates a new term the first time that it appears.  
Indicates a variable name or a cross-reference. When you view IBM WebSphere InterChange Server document as a PDF file, cross-references are both italic and blue. You can click on a cross-reference to jump to the target information.

*italic courier*

Indicates a variable name within literal text.

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<code>boxed courier</code>	Separates a code fragment from the rest of the text.
blue outline	A blue outline, which is visible only when you view a manual online, indicates a cross-reference hyperlink. Click inside the outline to jump to the object of the reference.
{ }	In a syntax line, curly braces surround a set of options from which you must choose only one.
[ ]	In a syntax line, brackets surround an optional parameter.
...	In a syntax line, ellipses indicate a repetition of the previous parameter. For example, <code>option[...]</code> means that you can enter multiple, comma-separated options.
\	In this document, backslashes (\) are used as the convention for directory paths. For UNIX installations, substitute slashes (/) for backslashes. All IBM WebSphere InterChange Server pathnames are relative to the directory where the product is installed on your system.
<i>ProductDir</i>	Represents the directory where the product is installed.

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## New in this release 4.3.1

IBM WebSphere Business Integration Express for Item Synchronization is a mid-market supplier solution that meets trading partner supply chain integration requirements for integrating product information with the GLOBALregistry of UCCnet. With UCCnet connectivity, suppliers can add or update item data from internal systems and allow those changes to occur throughout their trading network, reducing the time and costs associated with item management.

WebSphere Business Integration Express Plus for Item Synchronization is made up of these components:

- InterChange Server Express
- Toolset Express
- Item Synchronization Collaboration
- Adapters
- Integrated installation program

New features and improvements made in this release include the following:

- An updated Item Synchronization Collaboration that is compliant with UCCnet specification level 2.2.1
- Support for the following platforms:
  - Microsoft Windows 2000
  - OS400 V5R2 (5722-SS1)
  - Red Hat Enterprise Linux WS/ES/AS for Intel 2.1, 2.4 Kernel
  - SuSE Linux Enterprise Server 7.3, 2.4 Kernel
- The addition of a WebSphere Business Integration Express Plus for Item Synchronization version, which has the following features:
  - Supports up to 5000 Global Trade Item Numbers (GTINs) as part of the base license (additional GTINs can be purchased in multiples of 5000)
  - Includes the Adapter for mySAP.com
  - Includes the Process Designer Express tool



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# Chapter 1. Installing WebSphere Business Integration Express Plus for Item Synchronization on a Windows system

This chapter contains the following sections:

- “Installation requirements”
- “Using the Launchpad” on page 4
- “Installing WebSphere Business Integration Express Plus for Item Synchronization” on page 8
- “Installing and configuring Web-based System Monitor” on page 13
- “Upgrading” on page 15

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## Installation requirements

Before you install the IBM WebSphere Business Integration Express for Item Synchronization software, ensure that you have all the necessary prerequisites. The topics in this section give you a brief overview of the system hardware and software requirements, the supported databases, and the user accounts required to run IBM WebSphere Business Integration Express for Item Synchronization software.

Before proceeding with these instructions, check the following site for any available Fix Packs for your product:

<http://www.ibm.com/software/integration/wbiitemsync/express/support/>

This section contains the following sections:

- “Hardware requirements”
- “Software requirements” on page 2
- “Database requirements” on page 3

## Hardware requirements

IBM recommends that you run WebSphere Business Integration Express for Item Synchronization on a dedicated system. The system should have restricted access to maintain security.

Table 1 lists the minimum hardware requirements. However, the actual requirements for your system may be greater, depending on the complexity of your specific environment, throughput, and data object size. Also, the following information is for the IBM WebSphere Business Integration Express for Item Synchronization only. If you choose to run other applications on the same system, make appropriate adjustments.

*Table 1. Hardware Requirements*

Component	Minimum Required
Processor	Pentium III @ 1 GHz
Memory	512 MB
Disk space: WebSphere Business Integration Express for Item Synchronization and supporting software	40 GB

Table 1. Hardware Requirements (continued)

Component	Minimum Required
Disk space: WebSphere Business Integration Express for Item Synchronization databases	<ul style="list-style-type: none"> <li>• Repository 300-500 MB</li> <li>• Rollback 500 MB</li> <li>• Temporary 500 MB</li> </ul>

## Software requirements

The IBM WebSphere Business Integration Express for Item Synchronization system consists of IBM components and third-party components. IBM components are delivered on the product CD. Certain third-party components are also supplied by IBM and delivered on the CD. Other third-party software, such as Microsoft SQL Server, are not provided by IBM.

Table 2 lists the software requirements for the IBM WebSphere Business Integration Express for Item Synchronization.

Table 2. Software requirements for Windows

Windows	Version and patch	Comments
<b>Operating system (one of the following)</b>		
One of the following: <ul style="list-style-type: none"> <li>• Windows 2000 Professional, Server, and Advanced Server</li> </ul>	<ul style="list-style-type: none"> <li>• Service Pack 3</li> </ul>	<ul style="list-style-type: none"> <li>• Windows 2000 required for the WebSphere Business Integration Toolset 4.2.x</li> </ul>
<b>Database (required)</b>		
One of the following: <ul style="list-style-type: none"> <li>• IBM DB2 Universal Database Server and Client Building DB2 stored procedures requires a DB2 supported C or C++ compiler.</li> <li>• Microsoft SQL Server 2000</li> </ul>	<ul style="list-style-type: none"> <li>• Version 8.1, Express</li> <li>• 2000, Version 8.00.384 with Service Pack 3</li> </ul>	DB2 Express is provided with this product. DB2-supported compiler is not provided with this product.
<b>Other prerequisite software (based on required function)</b>		
IBM WebSphere MQ Server and Client	Version 5.3.0.2 with CSD3	Provided with this product
Web servers (one of the following): <ul style="list-style-type: none"> <li>• WebSphere Application Server, Express</li> <li>• Tomcat</li> </ul>	<ul style="list-style-type: none"> <li>• Version 5.0.2</li> <li>• Version 4.1.24 or 4.1.18</li> </ul>	For Web-based System Monitor
Code Control (one of the following): <ul style="list-style-type: none"> <li>• ClearCase LT</li> <li>• Concurrent Version System (CVS)</li> </ul>	<ul style="list-style-type: none"> <li>• Version 4.2</li> <li>• Version 1.11</li> </ul>	For source control in System Manager
An SMTP mail protocol e-mail system (for example, Microsoft Outlook, Microsoft Exchange, or Eudora)		For e-mail support

Table 2. Software requirements for Windows (continued)

Windows	Version and patch	Comments
Adobe Acrobat Reader 4.0 or later. IBM recommends using version 4.0.5 or later of Acrobat Reader, with Search option, so that you can take advantage of the PDF Search feature. Go to <a href="http://www.adobe.com">http://www.adobe.com</a> for the latest version of Adobe Acrobat Reader for your platform.		
One of the following browsers: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> <li>• Version 4.x</li> </ul>	Required to view documents
One of the following browsers with Adobe SVG Viewer 3.0 plugin: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• Version 6, Service Pack 1 or later</li> <li>• Version 4.7x</li> </ul>	Required to use the Web-based System Monitor
<b>Embedded components</b>		
IBM JDBC driver	Version 8.1, for Type 2 driver for DB2	For connectivity with DB2
IBM Java Development Kit	Version 1.3.1_05	Required for compiling collaborations and maps. Provided with this product.
IBM JCE	Version 1.2.1	
IBM JRE	Version 1.3.1_05	Provided with this product.

### Third-party support

IBM supports the third-party product versions that are listed in Table 2 on page 2. If you find a problem in one of the third-party product versions that is no longer supported by the third-party vendor, an upgrade to a supported version may be necessary.

## Database requirements

IBM WebSphere Business Integration Express for Item Synchronization is certified for use with IBM DB2 Express version 8.1 and Microsoft SQL Server 2000.

### SQL Server

SQL Server must be configured to meet the following minimum criteria (see for instructions):

- WebSphere Business Integration Express for Item Synchronization administrator user with table creation privileges created
- 50 MB of disk space for data files available for the repository database
- 40 user connections configured
- 50 MB of disk space available for the mapping tables (optional)
- Logging configured for Truncate Log on Checkpoint

### DB2 Server

DB2 Server must be configured to meet the following criteria:

**Note:** Building DB2 stored procedures requires a DB2 supported C or C++ compiler. For information about working with stored procedures, read the DB2 documentation.

- WebSphere Business Integration Express for Item Synchronization administrator user with database and table creation privileges created.
- 50 MB of disk space for data files available for the InterChange Server Express repository database.
- The maxappls and maxagents parameters configured with a minimum of 50 user connections each.
- The tablespace for the mapping tables (optional) configured to contain at least 50 MB of data.
- Maximum application heap size configured to be at least 2048.

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## Using the Launchpad

This section contains the following topics:

- “Installation overview”
- “Getting started”
- “Software prerequisites” on page 5
- “Database setup” on page 6

Before you perform the procedures described in this section, ensure that your system meets the prerequisites described in “Installation requirements” on page 1.

### Installation overview

This section provides a high-level view of the WebSphere Business Integration Express for Item Synchronization installation process.

The following tasks are described in detail in this guide:

1. Confirm that your system meets the minimum hardware requirements.
2. Confirm that all third-party software is installed or is available for installation as described in the installation process.
3. Run the Launchpad to confirm that your system has the prerequisite software installed. If your system is missing any of the prerequisite software, you can use Launchpad to install the missing software.
4. Install WebSphere Business Integration Express for Item Synchronization software.

### Getting started

The WebSphere Business Integration Express for Item Synchronization installation CD provides a GUI-based setup launchpad and installation program that guides you through the installation and configuration of the software. IBM WebSphere Business Integration Express for Item Synchronization Launchpad provides a graphical user interface to check software prerequisites and the database setup on your computer. Installer provides a graphical user interface to guide you through the installation of WebSphere Business Integration Express for Item Synchronization.

If you have previously installed the appropriate version of the prerequisite products, you might not need to reinstall it for use with IBM WebSphere Business Integration Express for Item Synchronization. However, you should check the configuration instructions for the specific software.

**Note:** If you have Norton AntiVirus running on your machine, you must turn it off and reboot your machine before you use the WebSphere Business Integration Express for Item Synchronization Launchpad.

To turn off Norton AntiVirus:

- Click **Start > Control Panel > Administrative Tools > Services**.
- Right click Norton AntiVirus Client.
- Click **Stop**.

To invoke the WebSphere Business Integration Express for Item Synchronization Launchpad:

1. Insert the WebSphere Business Integration Express for Item Synchronization CD.
2. At the Welcome screen, select **Software Prerequisites**.

The Software Prerequisites screen appears.

## Software prerequisites

The WebSphere Business Integration Express for Item Synchronization Launchpad checks the Windows registry to see if the prerequisite software is installed on your machine. See “Installation requirements” on page 1 for a list of the required software.

After Launchpad checks your machine for prerequisite software, Launchpad displays the prerequisite software and the status. Statuses include **Not Installed**, **Optional**, or **OK**. WebSphere Business Integration Express for Item Synchronization requires the installation of the IBM Java Development Kit 1.3.1\_05 and WebSphere MQ 5.3.0.2 CSD3. If these items are not installed, you can use the Launchpad to install them on your machine. Depending on your requirements, optional software does not have to be installed. Optional software includes Microsoft Internet Explorer 6 Service Pack 1, Netscape Navigator 4.75, Apache Tomcat 4.1.18 or 4.1.24, and IBM WebSphere Application Server Express v5.0.2. For more information on software prerequisites, see “Installation requirements” on page 1.

### Installing the Java compiler

The Java compiler that is compatible with WebSphere Business Integration Express for Item Synchronization is contained within the IBM Java Development Kit 1.3.1\_05 and is required for Java-based adapters and collaboration and mapping development.

To install the IBM Java Development Kit 1.3.1\_05:

1. From the Software Prerequisites screen, expand IBM Java Development Kit 1.3.1\_05.
2. Click **Install** to start the silent installation of IBM Java Development Kit 1.3.1\_05.
3. After IBM Java Development Kit 1.3.1\_05 silent installation, verify that the status in the Launchpad changed from **Not Installed** to **OK**.

### Installing WebSphere MQ

WebSphere MQ is messaging software that enables communication between InterChange Server Express and connectors. InterChange Server Express accesses the WebSphere MQ Server as an MQI Java client or JMS.

To install IBM WebSphere MQ 5.3.0.2 CSD3:

1. From the Software Prerequisites screen, expand IBM WebSphere MQ 5.3.0.2 CSD3.
2. Click install to start the silent installation of IBM WebSphere MQ 5.3.0.2 CSD3.

**Note:** If you do not plan to install the Tool components then select the **I do not intend to install the Tools component** box. Selecting this box changes the status from **Not Installed** to **Optional** in the Launchpad and allows you to continue with the installation process.

3. After IBM WebSphere MQ 5.3.0.2 CSD3 silent installation, verify that the status in the Launchpad status changed from **Not Installed** to **OK**.

### Installing Microsoft Internet Explorer

This guide does not provide installation instructions for Microsoft Internet Explorer 6 Server Pack 1. For a description of the installation process, expand Microsoft Internet Explorer 6 Server Pack 1 and click the link to the Microsoft's Web site.

### Installing Netscape Navigator

This guide does not provide installation instructions for Netscape Navigator. For a description of the installation process, expand Netscape Navigator 4.75 and click the link to the Netscape's Web site.

### Installing Apache Tomcat

This guide does not provide installation instructions for Apache Tomcat 4.1.18 or 4.1.24. For a description of the installation process, expand Apache Tomcat 4.1.18 or 4.1.24 and click the link to the Apache Web site.

### Installing WebSphere Application Server Express

This guide does not provide installation instructions for IBM WebSphere Application Server Express v5.0.2. For a description of the installation process, expand IBM WebSphere Application Server Express v5.0.2 and click the link to the IBM Web site.

## Database setup

IBM WebSphere Business Integration Express for Item Synchronization supports both IBM DB2 Universal Database v8.1 Express and Microsoft SQL Server 2000. In order to use IBM WebSphere Business Integration Express for Item Synchronization, you must have one of the supported databases installed on your machine. You must also have administrator privileges to create a new database and add new users. If you do not have one of the supported databases on your machine, you can use Launchpad to install IBM DB2 Universal Database v8.1 Express.

### DB2 Express

**Installing IBM DB2 Universal Database v8.1 Express:** When DB2 Express is installed by the Launchpad, the DB2 Administration Server user db2admin is created with a password of p4\$\$word. The Database Setup section of the Launchpad will:

- Install DB2 Express if needed
- Configure a C compiler for DB2 Express if DB2 Express is installed
- Create a database named SMB\_DB if it does not already exist
- Create a user named smbadmin, with a password of p4\$\$word, if the user does not already exist



- Grant the appropriate authorities to the `smbadmin` user in the `SMB_DB` table

To install IBM DB2 Universal Database v8.1 Express, do the following:

1. From Launchpad, click Database Setup.  
The Database Setup screen appears.
2. Click Install IBM DB2 Universal Database v8.1 Express to start the silent installation.
3. After IBM DB2 Universal Database v8.1 Express is successfully installed, you should see a message that the database setup is complete. See “Installing WebSphere Business Integration Express Plus for Item Synchronization” on page 8 for instructions on how to install WebSphere Business Integration Express for Item Synchronization.

**Note:** If you are installing IBM DB2 Universal Database v8.1 Express on a Windows XP system, you must complete the following procedures after you restart your system.

1. Log into your system as the `db2admin` administrator.
2. Click **Start > Control Panel > User Accounts**.
3. Select the **Change the way users log on or off** option.
4. Select the **Use the Welcome Screen** option.
5. Click **Apply Options**.
6. Close the User Accounts dialog box.

**Existing IBM DB2 Universal Database v8.1:** To configure an already existing IBM DB2 Universal Database v8.1 database:

1. From Launchpad, click **Database Setup**.  
A screen appears indicating that IBM DB2 Universal Database v8.1 was found on the computer.
2. Click **Continue**.
3. Do the following at the Setup DB2 SQL Procedures Environment screen:
  - a. Type the name and path of the batch file that sets the environment variables for the compiler that DB2 uses to compile stored procedures in the **Compiler Path** field.
  - b. Either leave the **Use the default value for DB2\_SQLROUTINE\_COMPILE\_COMMAND** box selected to use the default compiler command or clear the box and type the desired compiler command in the **Compile Command** field.
4. Click **Continue**.  
After IBM Install IBM DB2 Universal Database v8.1 is successfully configured, you should see a message that the database configuration is complete. See “Installing WebSphere Business Integration Express Plus for Item Synchronization” on page 8 for instructions on how to install WebSphere Business Integration Express for Item Synchronization.

## Microsoft SQL Server 2000

This guide does not provide installation instructions for Microsoft SQL Server 2000. For a description of the installation process, see Microsoft’s Web site.

If Microsoft SQL Server 2000 is currently installed on your machine, follow the instructions in this section to configure your database.

To configure an already existing Microsoft SQL Server 2000 database:

1. From Launchpad, click **Database Setup**.  
The Currently Installed Databases screen appears.
2. Select **Use Microsoft SQL Server 2000**, then click **Continue**.  
The Microsoft SQL Server 2000 Configuration screen appears.
3. Type the name of a login that belongs to the “System Administrators” server role in the **User name** field.
4. Type the password for the user name specified in step 3 in the **Password** field.
5. Type the password for the user name specified in step 3 in the **Confirm password** field.
6. Click **Create repository database**.  
After Microsoft SQL Server 2000 is successfully configured, you should see a message that the database configuration is complete. See “Installing WebSphere Business Integration Express Plus for Item Synchronization” for instructions on how to install WebSphere Business Integration Express for Item Synchronization.

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## Installing WebSphere Business Integration Express Plus for Item Synchronization

This chapter contains the following sections:

- “Installing WebSphere Business Integration Express Plus for Item Synchronization software”
- “WebSphere Business Integration Express Plus for Item Synchronization files and directories” on page 11
- “Uninstalling WebSphere Business Integration Express Plus for Item Synchronization” on page 12

### Installing WebSphere Business Integration Express Plus for Item Synchronization software

The IBM WebSphere InterChange Server installation CD provides a GUI-based setup program that guides you through the installation of the software.

Before you perform the procedures described in this chapter, ensure that your system meets the prerequisites described in “Installation requirements” on page 1.

To start the installation process, do the following:

1. From the WebSphere Business Integration Express for Item Synchronization Launchpad, select **Install Product**.  
The Install product screen appears.

**Note:** This procedure assumes installation from a CD. If you plan to obtain the electronic download version from Passport Advantage, refer to your Passport Advantage information for those downloading instructions.



Figure 1. The Install Product screen

2. Click **Launch Product Installation**.
3. At the Welcome screen, Click **Next**.  
The License Agreement screen appears.
4. Read and accept the terms of the Software License Agreement, then click **Next**.
5. Accept the default installation location or browse for a different location, then click **Next**.  
The Setup type screen appears.

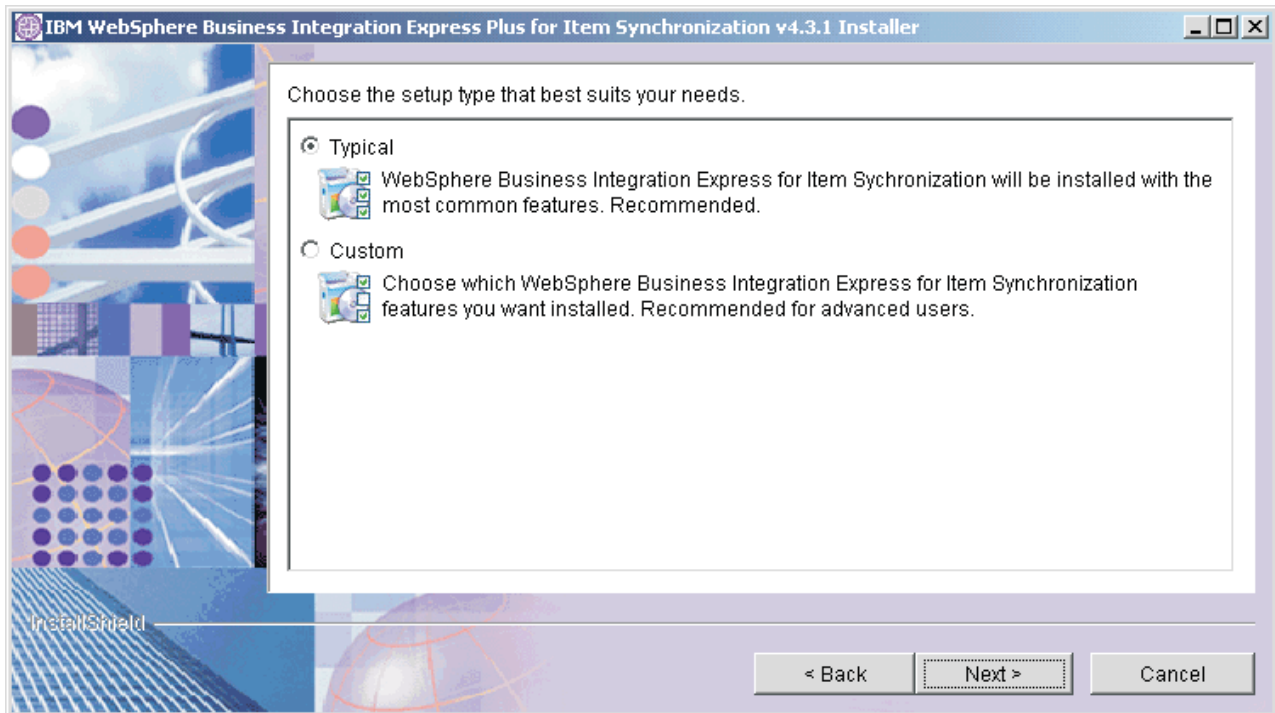


Figure 2. The Setup Type screen

6. Select the setup type and click **Next**.

You can select either a Typical setup or a Custom setup. The Websphere Business Integration Express and Express Plus for Item Synchronization solution only allows the e-mail adapter plus an additional three adapters to be installed and deployed. This means that a maximum of four adapters can be installed and deployed.

Typical setup includes:

- WebSphere Business Integration Collaboration for UCCnet Item Synchronization
- WebSphere Business Integration Toolset
- WebSphere Business Integration Adapter for JText
- WebSphere Business Integration Adapter for e-Mail

Custom setup allows you to choose which features to install. Custom setup defaults to the features installed with Typical setup. You should be familiar with with your Enterprise Resource Planning application data before selecting additional components. Custom setup is recommended for advanced users.

Custom setup allows you to select the following:

- WebSphere Business Integration Adapter for WebSphere MQ
- WebSphere Business Integration Adapter for JMS
- WebSphere Business Integration Adapter for Web Services
- WebSphere Business Integration Adapter for JDBC
- WebSphere Business Integration Adapter for XML
- WebSphere Business Integration Adapter for iSoft Peer-to-Peer Agent
- WebSphere Business Integration Adapter for mySAP.com.

**Note:** WebSphere Business Integration Adapter for mySAP.com is only available with WebSphere Business Integration Express Plus for Item Synchronization 4.3.1.

If you select Custom setup, the Feature screen will appear. Select specific features to be installed, confirm your selections, then click **Next**.

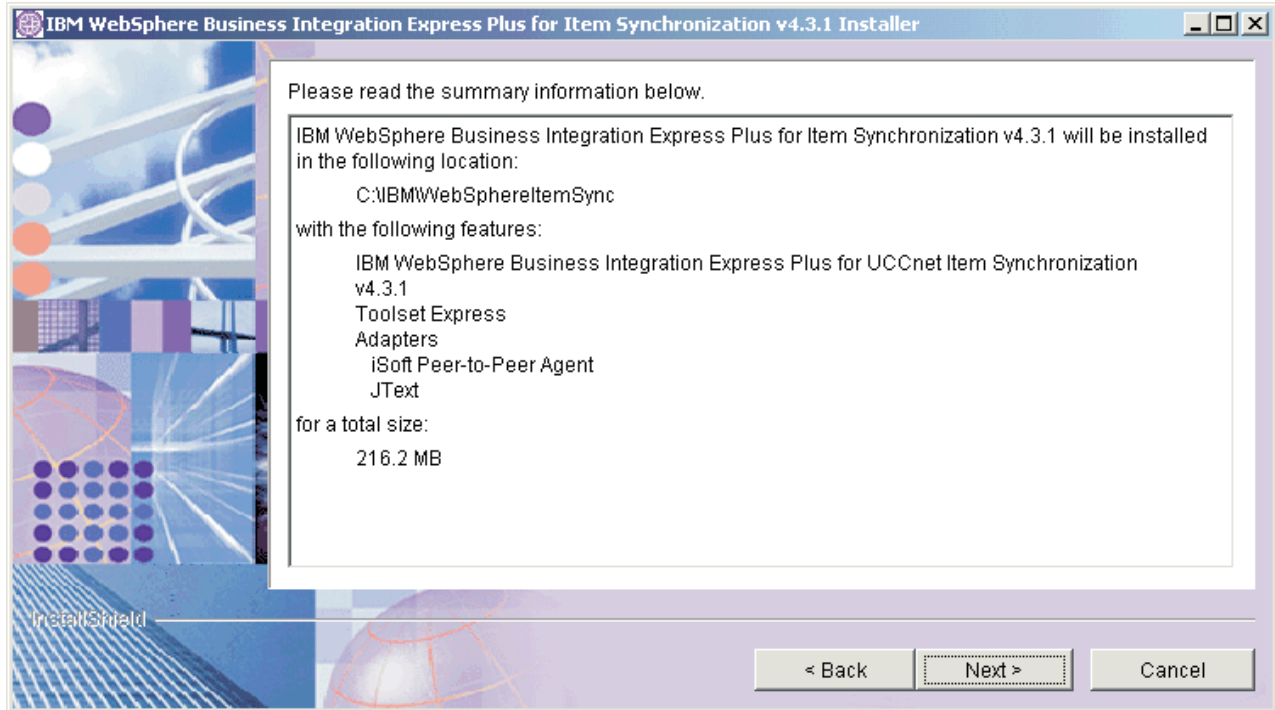


Figure 3. The Summary screen

7. If you only selected the Toolset Express for installation, then the Naming server screen appears.  
Type in the IP address of the computer where you plan to install WebSphere Business Integration Express for Item Synchronization, and then click **Next**.  
The Summary screen appears.
8. Review the features and installation location and click **Next**.  
A number of informational screens are presented. Afterwards, you will be asked to restart the computer.
9. Restart the computer.

## WebSphere Business Integration Express Plus for Item Synchronization files and directories

Once WebSphere Business Integration Express for Item Synchronization is installed, you can view the file system and its contents. The directories are located under the IBM\WebSphereItemSync directory.

Table 3. WebSphere Business Integration Express for Item Synchronization directory structure

Directory name	Contents
_jvm	This directory contains the Java Virtual Machine (JVM) that is used by Installer.

Table 3. WebSphere Business Integration Express for Item Synchronization directory structure (continued)

Directory name	Contents
_uninstItemSync	This directory contains the <code>uninstaller.exe</code> file that is used to remove WebSphere Business Integration Express for Item Synchronization 4.3.
_uninstZip	This directory contains a listing of the unzipped System Manager files that are removed when the Uninstaller is run.
bin	This directory contains the executable files, <code>.dll</code> files, and <code>.bat</code> files that the InterChange Server system uses.
collaborations	This directory contains subdirectories that contain <code>.class</code> files and message files for installed collaborations.
connectors	This directory contains files specific to each adapter in the system. It also contains adapter-specific files that you may need to install in the application that the adapter supports.
DataHandlers	This directory contains the <code>.jar</code> files for data handlers that InterChange Server Express uses.
DevelopmentKits	This directory contains sample files to assist the developer in creation of various system components. Samples provided include: Server Access for EJB, Server Access for J2EE Connector Architecture, connectors (C++ and Java), and Object Discovery Agents.
DLMs	This directory contains subdirectories that contain Dynamic Loadable Modules (DLMs) and other files for InterChange Server maps.
legal	This directory contains the license files.
lib	This directory contains <code>.jar</code> files for the system.
messages	This directory contains the generated message files.
mqseries	This directory contains files specific to WebSphere MQ, including certain executable files.
ODA	This directory contains the Object Discovery Agent <code>.jar</code> and <code>.bat</code> files for each agent.
repository	This directory contains the definitions for the WebSphere Business Integration Express for Item Synchronization components.
Samples	This directory contains component definitions for benchmarking samples and sample mail files for WebSphere Business Integration Express for Item Synchronization collaborations.
src	This directory contains samples of Relationship Service APIs for cross-referencing.
Tools	This directory contains the Workbench files if selected during installation.
WBSM	This directory contains the Web-based System Monitor files.

## Uninstalling WebSphere Business Integration Express Plus for Item Synchronization

IBM provides an Uninstall program that you can use to remove your entire WBI Express for Item Synchronization installation, or select specific components for removal.

1. Click **Start > Settings > Control Panel**.

2. Double-click **Add/Remove Programs**.
3. Scroll down and select IBM WebSphere Express for Item Synchronization. Click the **Change/Remove** button.
4. The Uninstaller window appears. Click **Next**.  
The Select the features for IBM WebSphere Express for Item Synchronization you would like to uninstall window appears. The installed components appear with check marks next to them.
5. Leave any components checked that you want removed and click **Next**.
6. Click **Next** to confirm your selections.  
The Uninstaller window appears and removes the selected components.
7. Click **Finish**.

---

## Installing and configuring Web-based System Monitor

The Web-based System Monitor is a tool that allows you to monitor the IBM WebSphere InterChange Server Express system from the Web. It allows you to configure how you view data and also allows you to view historical data in addition to current data.

This section contains the following topics:

- “Installing Web-based System Monitor”
- “Configuring Tomcat to use Web-based System Monitor” on page 14

### Installing Web-based System Monitor

If you installed WebSphere Application Server Express 5.0.2, the installer will automatically install and configure Web-based System Monitor on WebSphere Application Server. The application server created by the installer is called ICSMonitor.

The installation of WebSphere Application Server Express 5.0.2 does not include a Web server.

**Note:** If you do not have a Web server currently installed and would like to install one, you can download IBM HTTP Server for free from IBM’s Web site. You will also need to install the Web server plugin for WebSphere Application Server Express. See the WebSphere Application Server Express documentation for more information.

Therefore when the installer installs Web-based System Monitor, Web-based System Monitor is configured to use a default port number, 7089. If you would like to use a different port number and you do not currently have a Web server installed, follow the procedures in this section to configure Web-based System Monitor to use a different port number.

If you have a Web server installed and you have also installed the WebSphere Application Server Express Web server plugin, you can run a script to install Web-based System Monitor. Follow the procedures in this section to install Web-based System Monitor using an installation script.

### Installing and configuring Web-based System Monitor to use a Web server

To install Web-based System Monitor using the installation script:

1. Run `WebSphereItemSync/bin/CWDashboard.bat` with the following parameters:



- Install path for WebSphere Application Server Express, e.g. C:\Program Files\IBM\WebSphere\Express502\AppServer
  - Fully qualified host name of machine you are installing in, e.g. hostname.ibm.com
  - WebSphere Business Integration installation directory, e.g. C:\IBM\WebSphereItemSync
  - Path to DB2 install java directory, e.g. C:\IBM\SQLLIB\java
  - y (for HTTP server yes)
2. Stop the ICSMonitor Application Server from the command line:  
C:\IBM\WebSphere\Express502\AppServer\bin\stopServer.bat ICSMonitor
  3. Start the Web-based System Monitor from the command line:  
C:\IBM\WebSphere\Express502\AppServer\bin\startServer.bat ICSMonitor
  4. To access Web-based System Monitor:  
http://hostname/ICSMonitor

### Configuring Web-based System Monitor to use a different port number

1. Run IBM/WebSphereItemSync/bin/CWDashboard.bat with the following parameters:
  - Install path for WebSphere Application Server Express
  - Fully qualified host name of machine you are installing in
  - WebSphere Business Integration Express for Item Synchronization install directory
  - Path to DB2 install java directory
  - n (for no HTTP server)
  - New Port number
  - New SSL port number (default is 7043)
2. Stop the ICSMonitor Application Server from the command line:  
C:\IBM\WebSphere\Express502\AppServer\bin\stopServer.bat ICSMonitor
3. Start the Web-based System Monitor from the command line:  
C:\IBM\WebSphere\Express502\AppServer\bin\startServer.bat ICSMonitor
4. To access Web-based System Monitor:  
http://hostname:portnumber//ICSMonitor

### Configuring Tomcat to use Web-based System Monitor

If you plan to use Tomcat as your application server instead of WebSphere Application Server, follow the instructions in this section to configure Tomcat to use Web-based System Monitor.

To configure Tomcat to use Web-based System Monitor:

1. Create the ICSMonitor directory under Tomcat\_home\webapps. Where Tomcat\_home is the path of the Tomcat installation in your environment.
2. Extract the WAR file contents into the ICSMonitor directory. The CWDashboard.war file will be in the \WBSM directory.
3. Copy the xerces.jar file from Tomcat\_home\webapps\ICSMonitor\WEB-INF\lib to Tomcat\_home\common\lib.
4. Rename the xercesImpl.jar file, located in the Tomcat\_home\common\endorsed directory to xercesImpl.jar.old.
5. Edit the setclasspath.bat file, located in Tomcat\_home\bin.



- a. Set the JAVA\_OPTS property as follows:

```
set JAVA_OPTS=-DDASHBOARD_HOME=<Tomcat_home>\webapps\ICSMonitor
-DDASHBOARD_URL=http://<HostName>[:PortNumber]/ICSMonitor
-DORBNamingProvider=CosNaming -Dorg.omg.CORBA.ORBClass=com.ibm.CORBA.
iop.ORB
-Dorg.omg.CORBA.ORBInitialPort=%ORB_PORT%
-Dorg.omg.CORBA.ORBInitialHost=%ORB_HOST%
-Dcom.ibm.CORBA.Debug.Output=stdout
```

where %ORB\_PORT% and %ORB\_HOST% match what is in *ProductDir/bin/CWSharedEnv.bat*, *HostName* is the name of the computer on which Web-based System Monitor is running, *PortNumber* is the port number to be used, and *Tomcat\_home* is the path and name of the Tomcat product directory.

**Note:** If *Tomcat\_home* contains spaces, use quotes around the *DASHBOARD\_HOME* value.

- b. If using DB2 for the ICS Repository, in the *setclasspath.bat* file append the path to the *db2java.zip* file to the classpath. The *db2java.zip* file is located by default under *<DB2\_Installation\_Dir>/java*.
6. Change the port number in the *Tomcat\_home\conf\server.xml* file. This step is optional.  
The default port number is 8080.
7. Start Tomcat from the command line:  
*Tomcat\_home/bin/startup.bat*

Otherwise, the *setclasspath.bat* file is not called.

---

## Upgrading

In order to upgrade the InterChange Server Express system, you must make sure that the system is in a quiescent state. This means that all in-progress events should be completed and all in-doubt transactions are resolved before backing up the environment and performing the upgrade procedure.

### Upgrading from V4.3 to V4.3.1

If you have previously installed the 4.3 release to your system, and you run the Installer to upgrade to the 4.3.1 release, the Installer does the following:

1. The Installer does not drop your existing database.
2. Installer drops your existing repository. Existing relationship tables are retained; however, repository definitions for relationship tables are temporarily removed.
3. The Installer re-creates the repository, using the repository definitions of your upgrade release.

### Upgrading from Express V4.3.1. to Express Plus 4.3.1.

If you have previously installed Express V4.3.1 to your system, and you run the Installer to upgrade to Express Plus V4.3.1, the Installer does the following:

- Installs the adapters you have selected
- Adds Process Designer Express to your toolset
- The Installer does not drop your existing database
- The Installer retains your existing repository and does not redeploy it, unless you have not previously installed the collaboration and are now installing it for

the first time as part of your upgrade. If you have not previously installed the collaboration and are selecting it now for the first time, the Installer deploys the Express Plus 4.3.1 repository.

---

## Chapter 2. Installing WebSphere Business Integration Express Plus for Item Synchronization on a Linux system

This chapter contains the following sections:

- “Installation requirements”
- “Using the Launchpad” on page 20
- “Installing WebSphere Business Integration Express Plus for Item Synchronization” on page 23
- “Installing and configuring Web-based System Monitor” on page 28
- “Upgrading” on page 30

---

### Installation requirements

Before you install the IBM WebSphere Business Integration Express for Item Synchronization software, ensure that you have all the necessary prerequisites. The topics in this chapter give you a brief overview of the system hardware and software requirements, the supported databases, and the user accounts required to run IBM WebSphere Business Integration Express for Item Synchronization software.

Before proceeding with these instructions, check the following site for any available Fix Packs for your product:

<http://www.ibm.com/software/integration/wbiitemsync/express/support/>

This chapter contains the following sections:

- “Hardware requirements”
- “Software requirements” on page 18
- “Database requirements” on page 19

### Hardware requirements

IBM recommends that you run WebSphere Business Integration Express for Item Synchronization on a dedicated system. The system should have restricted access to maintain security.

Table 4 lists the minimum hardware requirements. However, the actual requirements for your system may be greater, depending on the complexity of your specific environment, throughput, and data object size. Also, the following information is for the IBM WebSphere Business Integration Express for Item Synchronization only. If you choose to run other applications on the same system, make appropriate adjustments.

*Table 4. Hardware Requirements*

Component	Minimum Required
Processor	IBM eServer xSeries or Intel Pentium III @ 1 GHz or dual processors each with a minimum speed of 667 MHz
Memory	512 MB
Disk space: WebSphere Business Integration Express for Item Synchronization and supporting software	40 GB

Table 4. Hardware Requirements (continued)

Component	Minimum Required
Disk space: WebSphere Business Integration Express for Item Synchronization databases	<ul style="list-style-type: none"> <li>• Repository 300-500 MB</li> <li>• Rollback 500 MB</li> <li>• Temporary 500 MB</li> </ul>

## Software requirements

The IBM WebSphere Business Integration Express for Item Synchronization system consists of IBM components and third-party components. IBM components are delivered on the product CD. Certain third-party components are also supplied by IBM and delivered on the CD.

Table 5 lists the software requirements for the IBM WebSphere Business Integration Express for Item Synchronization.

Table 5. Software requirements for Linux

Linux	Version and patch	Comments
<b>Operating system (one of the following)</b>		
One of the following: <ul style="list-style-type: none"> <li>• Red Hat Enterprise Linux</li> <li>• SuSE Linux Enterprise Server</li> </ul>	<ul style="list-style-type: none"> <li>• WS/ES/AS for Intel 2.1, 2.4 Kernel</li> <li>• 7.3, 2.4 Kernel</li> </ul>	
<b>Database (required)</b>		
One of the following: <ul style="list-style-type: none"> <li>• IBM DB2 Universal Database Server and Client Building DB2 stored procedures requires a DB2 supported C or C++ compiler.</li> </ul>	<ul style="list-style-type: none"> <li>• Version 8.1, Express</li> </ul>	DB2 Express is provided with this product. DB2-supported compiler is not provided with this product.
<b>Other prerequisite software (based on required function)</b>		
IBM WebSphere MQ Server and Client	Version 5.3.0.2 with CSD3	Provided with this product
Web servers (one of the following): <ul style="list-style-type: none"> <li>• WebSphere Application Server, Express</li> <li>• Tomcat</li> </ul>	<ul style="list-style-type: none"> <li>• Version 5.0.2</li> <li>• Version 4.1.24 or 4.1.18</li> </ul>	For Web-based System Monitor
Code Control (one of the following): <ul style="list-style-type: none"> <li>• ClearCase LT</li> <li>• Concurrent Version System (CVS)</li> </ul>	<ul style="list-style-type: none"> <li>• Version 4.2</li> <li>• Version 1.11</li> </ul>	For source control in System Manager
An SMTP mail protocol e-mail system (for example, Microsoft Outlook, Microsoft Exchange, or Eudora)		For e-mail support

Table 5. Software requirements for Linux (continued)

Linux	Version and patch	Comments
Adobe Acrobat Reader 4.0 or later. IBM recommends using version 4.0.5 or later of Acrobat Reader, with Search option, so that you can take advantage of the PDF Search feature. Go to <a href="http://www.adobe.com">http://www.adobe.com</a> for the latest version of Adobe Acrobat Reader for your platform.		
One of the following browsers: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> <li>• Version 4.x</li> </ul>	Required to view documents
One of the following browsers with Adobe SVG Viewer 3.0 plugin: <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• Version 6, Service Pack 1 or later</li> <li>• Version 4.7x</li> </ul>	Required to use the Web-based System Monitor
<b>Embedded components</b>		
IBM JDBC driver	Version 8.1, for Type 2 driver for DB2	For connectivity with DB2
IBM Java Development Kit	Version 1.3.1_05	Required for compiling collaborations and maps. Provided with this product.
IBM JCE	Version 1.2.1	
IBM JRE	Version 1.3.1_05	Provided with this product.

### Third-party support

IBM supports the third-party product versions that are listed in Table 5 on page 18. If you find a problem in one of the third-party product versions that is no longer supported by the third-party vendor, an upgrade to a supported version may be necessary.

## Database requirements

IBM WebSphere Business Integration Express for Item Synchronization is certified for use with IBM DB2 Express version 8.1.

### DB2 Server

DB2 Server must be configured to meet the following criteria:

**Note:** Building DB2 stored procedures requires a DB2 supported C or C++ compiler. For information about working with stored procedures, read the DB2 documentation.

- WebSphere Business Integration Express for Item Synchronization administrator user with database and table creation privileges created.
- 50 MB of disk space for data files available for the InterChange Server Express repository database.
- The maxappls and maxagents parameters configured with a minimum of 50 user connections each.
- The tablespace for the mapping tables (optional) configured to contain at least 50 MB of data.

- Maximum application heap size configured to be at least 2048.

## Creating user accounts

Before you use the Launchpad to install WebSphere Business Integration Express for Item Synchronization, you must create a user for WebSphere Business Integration Express for Item Synchronization. Follow the procedures in this section to create a new user.

To create a new user:

1. Login to your Linux system as the root user.
2. Run the following command to create a user and set the user's password:  
`/user/sbin/useradd -d HomeDirectory -g InitialGroup -G OtherGroups -m smbadmin passwd smbP4$$word`

**Note:** IBM recommends that you use *smbadmin* as the user name and *smbP4\$\$word* as the password.

---

## Using the Launchpad

This section contains the following topics:

- "Installation overview"
- "Getting started"
- "Software prerequisites" on page 21
- "Database setup" on page 22

## Installation overview

This chapter provides a high-level view of the WebSphere Business Integration Express for Item Synchronization installation process.

The following tasks are described in detail in this guide:

1. Confirm that your system meets the minimum hardware requirements.
2. Confirm that all third-party software is installed or is available for installation as described in the installation process.
3. Run the Launchpad to confirm that your system has the prerequisite software installed. If your system is missing any of the prerequisite software, you can use Launchpad to install the missing software.
4. Install WebSphere Business Integration Express for Item Synchronization software.

## Getting started

The WebSphere Business Integration Express for Item Synchronization installation CD provides a GUI-based setup launchpad and installation program that guides you through the installation and configuration of the software. IBM WebSphere Business Integration Express for Item Synchronization Launchpad provides a graphical user interface to check software prerequisites and the database setup on your computer. Installer provides a graphical user interface to guide you through the installation of WebSphere Business Integration Express for Item Synchronization.

If you have previously installed the appropriate version of the prerequisite products, you might not need to reinstall it for use with IBM WebSphere Business

Integration Express for Item Synchronization. However, you should check the configuration instructions for the specific software.

To invoke the WebSphere Business Integration Express for Item Synchronization Launchpad:

**Note:** If you are installing WebSphere Business Integration Express for Item Synchronization from an electronic software distribution, all electronic software distribution files for WebSphere MQ, DB2, and WebSphere Business Integration Express for Item Synchronization must be extracted into the same directory before you run the Installer.

1. Insert the WebSphere Business Integration Express for Item Synchronization CD.
2. Mount the CD:  
`/mnt/cdrom`
3. Run the following command to start the Launchpad:  
`/mnt/cdrom/start_launchpad.sh`
4. At the Welcome screen, select Software Prerequisites.  
The Software Prerequisites screen appears.

## Software prerequisites

The WebSphere Business Integration Express for Item Synchronization Launchpad checks the queries the RPM package database to see if the prerequisite software is installed on your machine. See “Installation requirements” on page 17 for a list of the required software.

After Launchpad checks your machine for prerequisite software, Launchpad displays the prerequisite software and the status. Statuses include **Not Installed**, **Optional**, or **OK**. WebSphere Business Integration Express for Item Synchronization requires the installation of the IBM Java Development Kit 1.3.1\_05 and WebSphere MQ 5.3.0.2 CSD3. If these items are not installed, you can use the Launchpad to install them on your machine. Depending on your requirements, optional software does not have to be installed. Optional software includes Apache Tomcat 4.1.18 or 4.1.24, and IBM WebSphere Application Server Express v5.0.2. For more information on software prerequisites, see “Installation requirements” on page 17.

### Installing the Java compiler

The Java compiler that is compatible with WebSphere Business Integration Express for Item Synchronization is contained within the IBM Java Development Kit 1.3.1\_05 and is required for Java-based adapters and collaboration and mapping development.

**Note:** If you have already installed the JDK, remove or move the following files before proceeding with the installation process: `java_sdk.sh.rpmorig`, `java_sdk.sh` and `java_jre.sh.rpmorig`, `java_jre.sh`.

To install the IBM Java Development Kit 1.3.1\_05:

1. From the Software Prerequisites screen, expand IBM Java Development Kit 1.3.1\_05.
2. Click install to start the silent installation of IBM Java Development Kit 1.3.1\_05.

3. After IBM Java Development Kit 1.3.1\_05 silent installation, verify that the status in the Launchpad changed from **Not Installed** to **OK**.

## Installing WebSphere MQ

WebSphere MQ is messaging software that enables communication between InterChange Server Express and connectors. InterChange Server Express accesses the WebSphere MQ Server as an MQI Java client or JMS.

**Note:** If you are installing from the CD and Launchpad prompts you to insert the CD for WebSphere MQ or DB2, insert the CD and make sure it is mounted successfully before you choose OK. If Launchpad does not detect the installation program, it will display an "Open" dialog box, in which you must select the location to which the CD is mounted.

To install IBM WebSphere MQ 5.3.0.2 CSD3:

1. From the Software Prerequisites screen, expand IBM WebSphere MQ 5.3.0.2 CSD3.
2. Click install to start the silent installation of IBM WebSphere MQ 5.3.0.2 CSD3.

**Note:** If you do not plan to install the Tool components then select the **I do not intend to install the Tools component** box. Selecting this box changes the status from **Not Installed** to **Optional** in the Launchpad and allows you to continue with the installation process.

3. After IBM WebSphere MQ 5.3.0.2 CSD3 silent installation, verify that the status in the Launchpad status changed from **Not Installed** to **OK**.

## Installing Apache Tomcat

This guide does not provide installation instructions for Apache Tomcat 4.1.18 or 4.1.24. For a description of the installation process, expand Apache Tomcat 4.1.18 or 4.1.24 and click the link to the Apache Web site.

## Installing WebSphere Application Server Express

This guide does not provide installation instructions for IBM WebSphere Application Server Express v5.0.2. For a description of the installation process, expand IBM WebSphere Application Server Express v5.0.2 and click the link to the IBM Web site.

## Database setup

IBM WebSphere Business Integration Express for Item Synchronization supports IBM DB2 Universal Database v8.1 Express. In order to use IBM WebSphere Business Integration Express for Item Synchronization, you must have one of the supported databases installed on your machine. You must also have administrator privileges to create a new database and add new users. If you do not have one of the supported databases on your machine, you can use Launchpad to install IBM DB2 Universal Database v8.1 Express.

### DB2 Express

**Installing IBM DB2 Universal Database v8.1 Express:** To install IBM DB2 Universal Database v8.1 Express, do the following:

1. From Launchpad, click **Database Setup**.

The Database Setup screen appears.

**Note:** If you are installing from the CD and Launchpad prompts you to insert the CD for WebSphere MQ or DB2, insert the CD and make sure it is



mounted successfully before you choose OK. If Launchpad does not detect the installation program, it will display an "Open" dialog box, in which you must select the location to which the CD is mounted.

2. Click **Install IBM DB2 Universal Database v8.1 Express** to start the silent installation.
3. After IBM DB2 Universal Database v8.1 Express is successfully installed, you should see a message that the database setup is complete. See "Installing WebSphere Business Integration Express Plus for Item Synchronization" for instructions on how to install WebSphere Business Integration Express for Item Synchronization.

**Existing IBM DB2 Universal Database v8.1:** To configure an already existing IBM DB2 Universal Database v8.1 database:

1. From Launchpad, click **Database Setup**.  
A screen appears indicating that IBM DB2 Universal Database v8.1 was found on the computer.
2. Click **Continue**.
3. Do the following at the Setup DB2 SQL Procedures Environment screen:
  - a. Type full pathname of the C/C++ compiler that DB2 uses to compile stored procedures in the **Compiler Path** field. If the compiler's executable is on the search path of commands, then you can leave this field blank.
  - b. Either leave the **Use the default value for DB2\_SQLROUTINE\_COMPILE\_COMMAND** box selected to use the default compiler command or clear the box and type the desired compiler command in the **Compile Command** field.
4. Click **Continue**.  
After IBM Install IBM DB2 Universal Database v8.1 is successfully configured, you should see a message that the database configuration is complete. See "Installing WebSphere Business Integration Express Plus for Item Synchronization" for instructions on how to install WebSphere Business Integration Express for Item Synchronization.

---

## Installing WebSphere Business Integration Express Plus for Item Synchronization

This chapter contains the following sections:

- "Installing WebSphere Business Integration Express Plus for Item Synchronization software"
- "WebSphere Business Integration for Item Synchronization files and directories" on page 26
- "Uninstalling WebSphere Business Integration Express Plus for Item Synchronization" on page 27

### Installing WebSphere Business Integration Express Plus for Item Synchronization software

The IBM WebSphere InterChange Server installation CD provides a GUI-based setup program that guides you through the installation of the software.

Before you perform the procedures described in this chapter, ensure that your system meets the prerequisites described in Chapter 1 of this Guide.

To start the installation process, do the following:

1. From the WebSphere Business Integration Express for Item Synchronization Launchpad, fill in the username of the WebSphere Business Integration Express for Item Synchronization system administrator. This account must already exist. If you have not created this user account, please create it first and then return to the Launchpad and select Install Product. See “Creating user accounts” on page 20.
2. Click **Install product**.

The Install product screen appears.

**Note:** This procedure assumes installation from CD. If you obtain your software from Passport Advantage, make sure you have downloaded it. Refer to your Passport Advantage information for those downloading instructions.

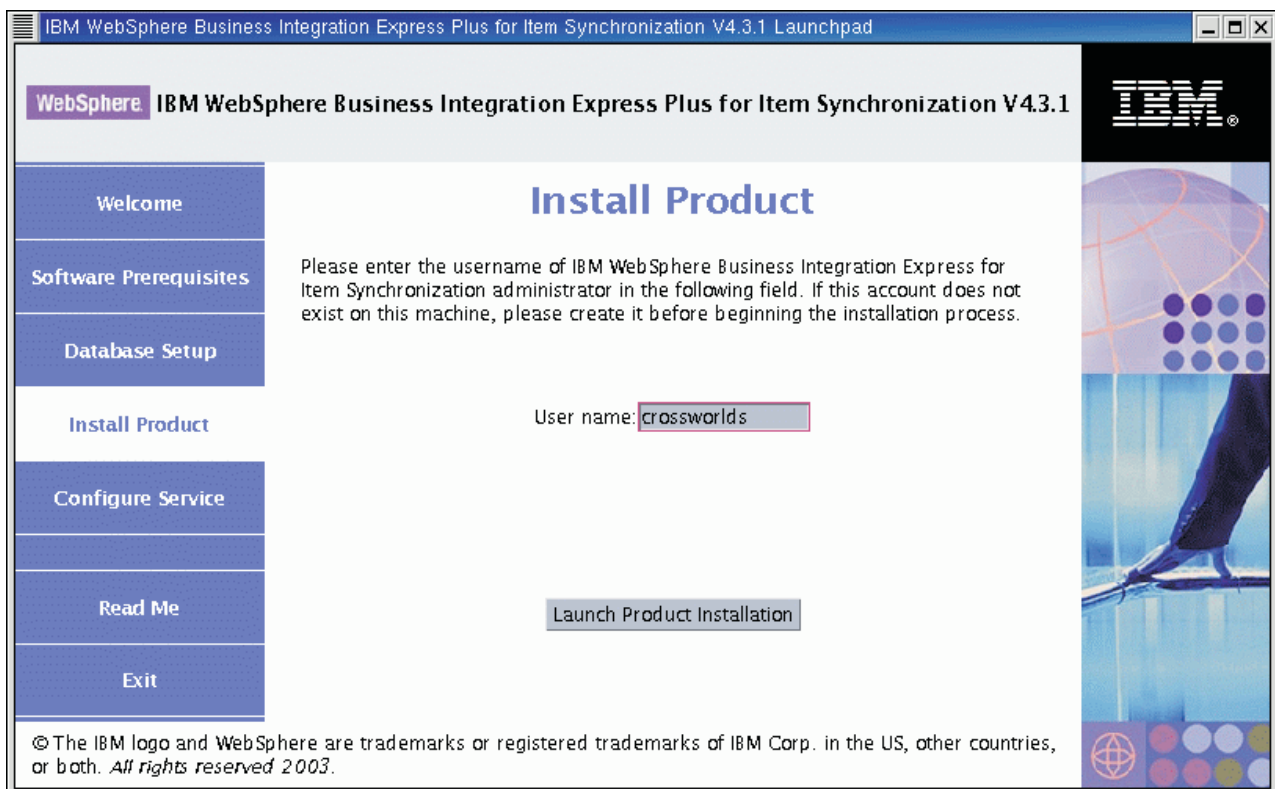


Figure 4. The Install Product screen

3. Click **Launch Product Installation**.
4. At the Welcome screen, Click **Next**.  
The License Agreement screen appears.
5. Read and accept the terms of the Software License Agreement, then click **Next**.
6. Accept the default installation location or browse for a different location, then click **Next**.  
The Setup type screen appears.

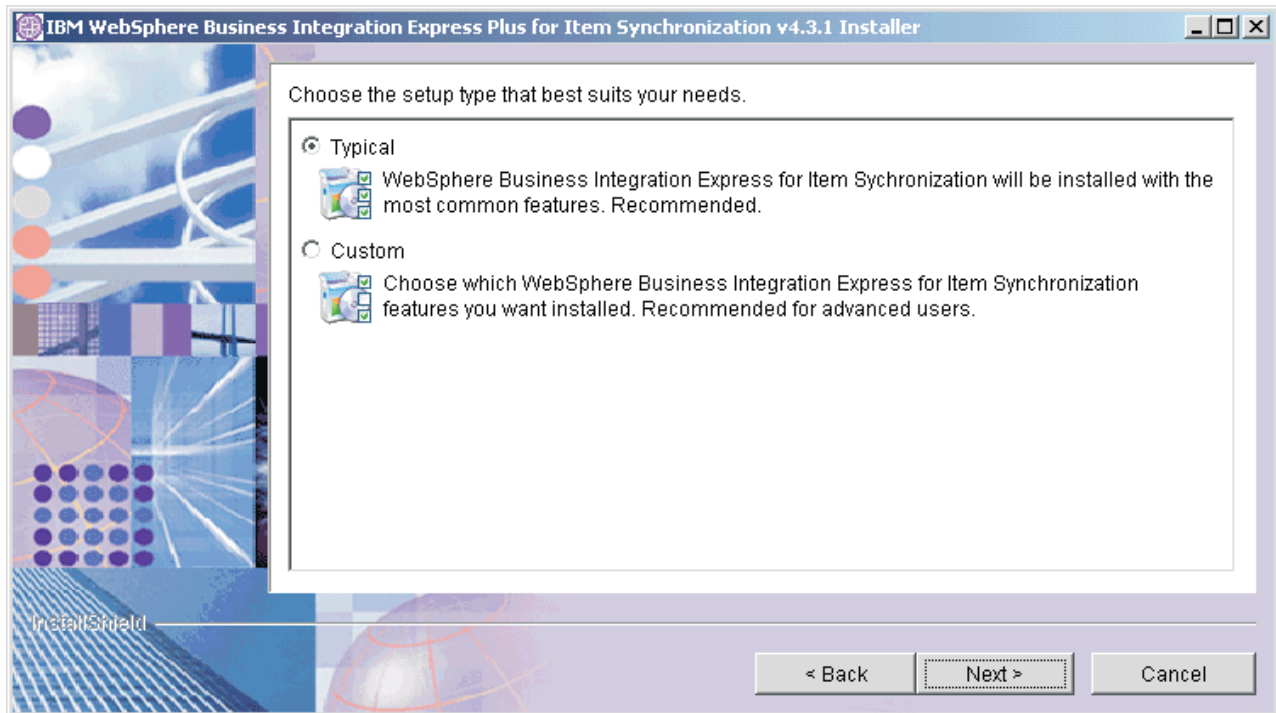


Figure 5. The Setup Type screen

7. Select the setup type and click **Next**.

You can select either a Typical setup or a Custom setup. The Websphere Business Integration Express and Express Plus for Item Synchronization solution only allows the e-mail adapter plus an additional three adapters to be installed and deployed. This means that a maximum of four adapters can be installed and deployed.

Typical setup includes:

- WebSphere Business Integration Collaboration for UCCnet Item Synchronization
- WebSphere Business Integration Toolset
- WebSphere Business Integration Adapter for e-Mail
- WebSphere Business Integration Adapter for JText

Custom setup allows you to choose which features to install. Custom setup defaults to the features installed with Typical setup. You should be familiar with with your Enterprise Resource Planning application data before selecting additional components. Custom setup is recommended for advanced users.

Custom setup allows you to select the following:

- WebSphere Business Integration Adapter for WebSphere MQ
- WebSphere Business Integration Adapter for JMS
- WebSphere Business Integration Adapter for Web Services
- WebSphere Business Integration Adapter for JDBC
- WebSphere Business Integration Adapter for XML
- WebSphere Business Integration Adapter for mySAP.com.

**Note:** WebSphere Business Integration Adapter for mySAP.com is only available with WebSphere Business Integration Express Plus for Item Synchronization 4.3.1.

If you select Custom setup, the Feature screen will appear. Select specific features to be installed, confirm your selections, then click **Next**.

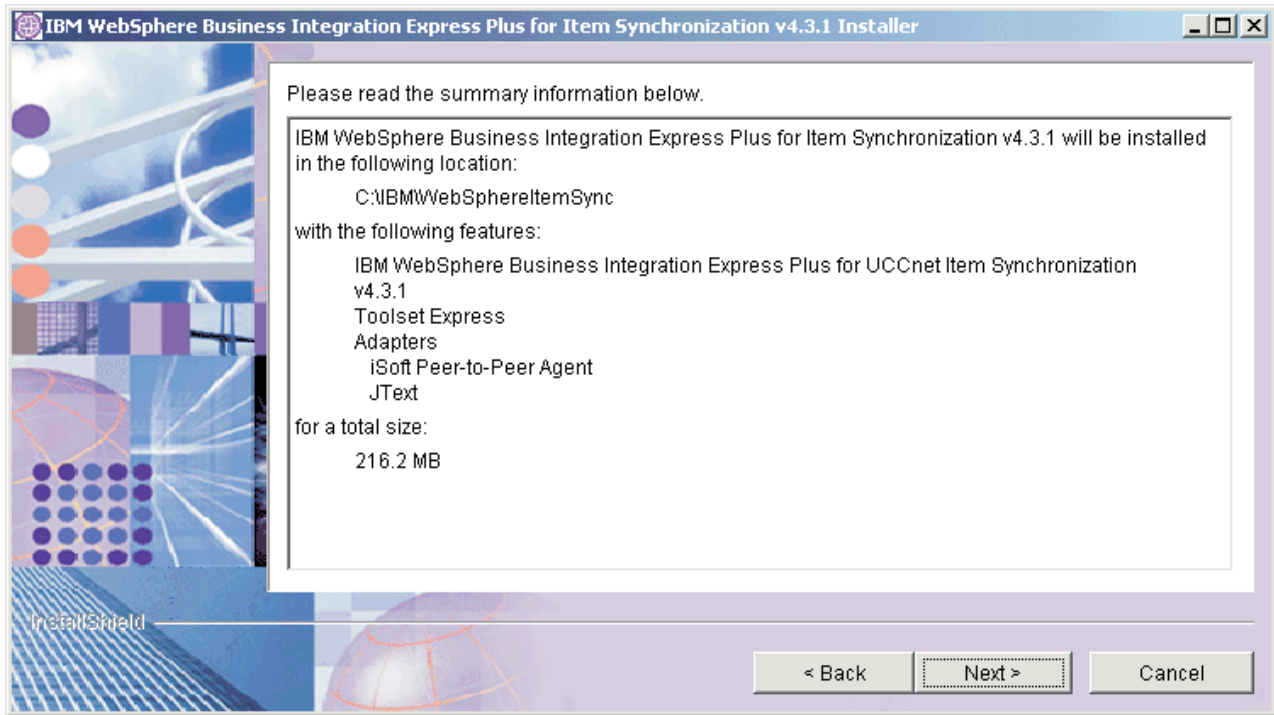


Figure 6. The Summary screen

8. If you only selected the Toolset Express for installation, then the Naming server screen appears.  
Type in the IP address of the computer where you plan to install WebSphere Business Integration Express for Item Synchronization, and then click **Next**.  
The Summary screen appears.
9. Review the features and installation location and click **Next**.  
A number of informational screens are presented. Click **Next**.

## WebSphere Business Integration for Item Synchronization files and directories

Once WebSphere Business Integration Express for Item Synchronization is installed, you can view the file system and its contents. The directories are located under the *ProdDir/IBM/WebSphereItemSync* directory.

Table 6. WebSphere Business Integration Express for Item Synchronization directory structure

Directory name	Contents
_jvm	This directory contains the Java Virtual Machine (JVM) that is used by Installer.
_uninstItemSync	This directory contains the <i>uninstaller.bin</i> file that is used to remove WebSphere Business Integration Express for Item Synchronization 4.3.
bin	This directory contains the executable files, shared object <i>.so</i> files, and shell script files that the InterChange Server Express uses.

Table 6. WebSphere Business Integration Express for Item Synchronization directory structure (continued)

Directory name	Contents
collaborations	This directory contains subdirectories that contain .class files and message files for installed collaborations.
connectors	This directory contains files specific to each adapter in the system. It also contains adapter-specific files that you may need to install in the application that the adapter supports.
DataHandlers	This directory contains the .jar files for data handlers that InterChange Server Express uses.
DevelopmentKits	This directory contains sample files to assist the developer in creation of various system components. Samples provided include: Server Access for EJB, Server Access for J2EE Connector Architecture, connectors (C++ and Java), and Object Discovery Agents.
DLMs	This directory contains subdirectories that contain Dynamic Loadable Modules (DLMs) and other files for InterChange Server maps.
legal	This directory contains the license files.
lib	This directory contains .jar files for the system.
messages	This directory contains the generated message files.
mqseries	This directory contains files specific to WebSphere MQ, including certain executable files.
ODA	This directory contains the Object Discovery Agent .jar and .sh files for each agent.
repository	This directory contains the definitions for the WebSphere Business Integration Express for Item Synchronization components.
src	This directory contains samples of Relationship Service APIs for cross-referencing.
WBSM	This directory contains the Web-based System Monitor files.

## Uninstalling WebSphere Business Integration Express Plus for Item Synchronization

IBM provides an Uninstall program that you can use to remove your entire WebSphere Business Integration Express for Item Synchronization installation, or select specific components for removal.

1. Open a command window.
2. Run the following command:  

```
ProdDir/_uninstItemSync/uninstaller.bin
```
3. The Uninstaller window appears. Click **Next**.  
 The Select the features for IBM WebSphere Express for Item Synchronization you would like to uninstall window appears. The installed components appear with check marks next to them.
4. Leave any components checked that you want removed and click **Next**.
5. Click **Next** to confirm you selections.  
 The Uninstaller window appears and removes the selected components.
6. Click **Finish**.

---

## Installing and configuring Web-based System Monitor

The Web-based System Monitor is a tool that allows you to monitor the IBM WebSphere InterChange Server Express system from the Web. It allows you to configure how you view data and also allows you to view historical data in addition to current data.

This chapter contains the following sections:

- “Installing Web-based System Monitor”
- “Configuring Tomcat to use Web-based System Monitor” on page 29

### Installing Web-based System Monitor

If you installed WebSphere Application Server Express 5.0.2, the installer will automatically install and configure Web-based System Monitor on WebSphere Application Server. The application server created by the installer is called ICSMonitor.

The installation of WebSphere Application Server Express 5.0.2 does not include a Web server.

**Note:** If you do not have a Web server currently installed and would like to install one, you can download IBM HTTP Server for free from IBM’s Web site. You will also need to install the Web server plugin for WebSphere Application Server Express. See the WebSphere Application Server Express documentation for more information.

Therefore when the installer installs Web-based System Monitor, Web-based System Monitor is configured to use a default port number, 7089. If you would like to use a different port number and you do not currently have a Web server installed, follow the procedures in this section to configure Web-based System Monitor to use a different port number.

If you have a Web server installed and you have also installed the WebSphere Application Server Express Web server plugin, you can run a script to install Web-based System Monitor. Follow the procedures in this section to install Web-based System Monitor using an installation script.

### Installing and configuring Web-based System Monitor to use a Web server

To install Web-based System Monitor using the installation script:

1. Run *ProdDir/bin/CWDashboard.sh* with the following parameters:
  - Install path for WebSphere Application Server Express, e.g.  
*/opt/IBM/WebSphere/Express502/AppServer*
  - Fully qualified host name of machine you are installing in, e.g.  
*hostname.ibm.com*
  - WebSphere Business Integration installation directory, e.g.  
*/home/crossworlds/IBM/WebSphereItemSync*
  - Path to DB2 install java directory, e.g. *opt/IBM/db2/V8.1/java*
  - *y* (for HTTP server yes)
2. Stop the ICSMonitor Application Server from the command line:  
*/opt/IBM/WebSphere/Express502/AppServer/bin/stopServer.sh ICSMonitor*
3. Start the Web-based System Monitor from the command line:  
*/opt/IBM/WebSphere/Express502/AppServer/bin/startServer.sh ICSMonitor*



- To access Web-based System Monitor:  
`http://hostname/ICSMonitor`

### Configuring Web-based System Monitor to use a different port number

- Run `ProdDir/bin/CWDashboard.sh` with the following parameters:
  - Install path for WebSphere Application Server Express
  - Fully qualified host name of machine you are installing in
  - WebSphere Business Integration Express for Item Synchronization install directory
  - Path to DB2 install java directory
  - n (for no HTTP server)
  - New Port number
  - New SSL port number (default is 7043)
- Stop the ICSMonitor Application Server from the command line:  
`/opt/IBM/WebSphere/Express502/AppServer/bin/stopServer.sh ICSMonitor`
- Start the Web-based System Monitor from the command line:  
`/opt/IBM/WebSphere/Express502/AppServer/bin/startServer.sh`
- To access Web-based System Monitor:  
`http://hostname:portnumber/ICSMonitor`

## Configuring Tomcat to use Web-based System Monitor

If you plan to use Tomcat as your application server instead of WebSphere Application Server, follow the instructions in this section to configure Tomcat to use Web-based System Monitor.

To configure Tomcat to use Web-based System Monitor:

- Create the ICSMonitor directory under `Tomcat_home/webapps`. Where `Tomcat_home` is the path of the Tomcat installation in your environment.
- Extract the WAR file contents into the ICSMonitor directory. The `CWDashboard.war` file will be in the `ProdDir/WBSM` directory.
- Copy the `xerces.jar` file from `Tomcat_home/webapps/ICSMonitor/WEB-INF/lib` to `Tomcat_home/common/lib`.
- Rename the `xercesImpl.jar` file, located in the `Tomcat_home/common/endorsed` directory to `xercesImpl.jar.old`.
- Edit the `catalina.sh` file, located in `Tomcat_home/bin`.

```
if ["$1" = "start"]; then      ..... else      "$_RUNJAVA" $JAVA_OPTS
$CATALINA_OPTS \            -Djava.endorsed.dirs="$JAVA_ENDORSED_DIRS"
-classpath "$CLASSPATH" \    -Dcatalina.base="$CATALINA_BASE" \
-Dcatalina.home="$CATALINA_HOME" \
-Djava.io.tmpdir="$CATALINA_TMPDIR" \ //append next lines
-DDASHBOARD_HOME="$CATALINA_HOME"/webapps/ICSMonitor \
-DDASHBOARD_URL="http://Hostname:8080/ICSMonitor"
\                            //Don't use "localhost" here
-DORBNamingProvider=CosNaming \
-Dorg.omg.CORBA.ORBClass=com.ibm.CORBA.iop.ORB \
-Dorg.omg.CORBA.ORBInitialPort=$ORB_PORT$ \
-Dorg.omg.CORBA.ORBInitialHost=$ORB_HOST$ \
-Dcom.ibm.CORBA.Debug.Output=stdout \
org.apache.catalina.startup.Bootstrap "$@" start \ >>
"$CATALINA_BASE"/logs/catalina.out 2>&1 &
```

Where `${ORB_PORT}` and `${ORB_HOST}` match what is in `ProductDir/bin/CWSharedEnv.sh`, `HostName` is the name of the computer on which Web-based System Monitor is running, `PortNumber` is the port number to be used, and `Tomcat_home` is the path and name of the Tomcat product directory.

**Note:** If `CATALINA_HOME` contains spaces, use quotes around the `DASHBOARD_HOME` value.

6. If you are using DB2 for the ICS Repository, in the `setclasspath.sh` file append the path to the `db2java.zip` file to the classpath. The `db2java.zip` file is located by default under `<DB2_Installation_Dir>/java`.
7. Change the port number in the `Tomcat_home/conf/server.xml` file. This step is optional.  
The default port number is 8080.
8. Start Tomcat from the command line:  
`Tomcat_home/bin/startup.sh`

Otherwise, the `catalina.sh` file is not called.

---

## Upgrading

In order to upgrade the InterChange Server Express system, you must make sure that the system is in a quiescent state. This means that all in-progress events should be completed and all in-doubt transactions are resolved before backing up the environment and performing the upgrade procedure.

**Note:** Note: When you upgrade your release on the Windows platform, you need only run the upgrade Installer once. However, if you upgrade your release on other platforms, you must run the Installer twice -- first run the Installer on the platform to which you are performing the upgrade, and then run the Installer on the Windows client, to reinstall the toolset to your Windows client.

### Upgrading from Express V4.3.1. to Express Plus 4.3.1.

If you have previously installed Express V4.3.1 to your system, and you run the Installer to upgrade to Express Plus V4.3.1, the Installer does the following:

- Installs the adapters you have selected
- Adds Process Designer Express to your toolset (you must run the Installer on the Windows client, as noted above)
- The Installer does not drop your existing database
- The Installer retains your existing repository and does not redeploy it, unless you have not previously installed the collaboration and are now installing it for the first time as part of your upgrade. If you have not previously installed the collaboration and are selecting it now for the first time, the Installer deploys the Express Plus 4.3.1 repository.



---

## Chapter 3. Installing WebSphere Business Integration Express Plus for Item Synchronization for an OS/400 system

Before you install the IBM WebSphere Business Integration Express for Item Synchronization software, ensure that you have all the necessary prerequisites. The topics in this chapter give you a brief overview of the system hardware and software requirements, the supported databases, and the user accounts required to run IBM WebSphere Business Integration Express for Item Synchronization software.

This chapter contains the following sections:

- “Installation requirements”
- “Using the Launchpad” on page 35
- “Installing WebSphere Business Integration Express Plus for Item Synchronization” on page 39
- “Upgrading” on page 45

---

### Installation requirements

Before you install the IBM WebSphere Business Integration Express for Item Synchronization software, ensure that you have all the necessary prerequisites. The topics in this chapter give you a brief overview of the system hardware and software requirements, the supported databases, and the user accounts required to run IBM WebSphere Business Integration Express for Item Synchronization software.

Before proceeding with these instructions, check the following site for any available Fix Packs for your product:

<http://www.ibm.com/software/integration/wbiitemsync/express/support/>

This chapter contains the following sections:

- “Hardware requirements”
- “Software requirements” on page 32
- “Database requirements” on page 34

### Hardware requirements

IBM recommends that you run WebSphere Business Integration Express for Item Synchronization on a dedicated system. The system should have restricted access to maintain security.

Table 7 on page 32 lists the minimum hardware requirements. However, the actual requirements for your system may be greater, depending on the complexity of your specific environment, throughput, and data object size. Also, the following information is for the IBM WebSphere Business Integration Express for Item Synchronization only. If you choose to run other applications on the same system, make appropriate adjustments.

Table 7. Hardware Requirements

Component	Minimum Required
Processor	An IBM AS/400e Server with a minimum processor Commercial Processing Workload (CPW) rating of 450
Memory	1 GB
Disk space: WebSphere Business Integration Express for Item Synchronization and supporting software	40 GB
Disk space: WebSphere Business Integration Express for Item Synchronization databases	<ul style="list-style-type: none"> <li>• Repository 300-500 MB</li> <li>• Rollback 500 MB</li> <li>• Temporary 500 MB</li> </ul>

## Software requirements

The IBM WebSphere Business Integration Express for Item Synchronization system consists of IBM components and third-party components. IBM components are delivered on the product CD. Certain third-party components are also supplied by IBM and delivered on the CD.

Table 8 lists the software requirements for the IBM WebSphere Business Integration Express for Item Synchronization.

Table 8. Software requirements for OS400

OS/400	Version and patch	Comments
<b>Operating system (one of the following)</b>		
IBM OS/400, which includes:	<ul style="list-style-type: none"> <li>• V5R2M0 or higher (5722-SS1)</li> </ul>	

Table 8. Software requirements for OS400 (continued)

OS/400	Version and patch	Comments
<ul style="list-style-type: none"> <li>• DB2 Universal Database for iSeries V5R2M0</li> <li>• Host Servers (5722SS1 option 12) You can start the host servers by using the Start Host Server (STRHOSTSVR) command by typing STRHOSTSVR *ALL on the OS/400 command line. The QSERVER subsystem must be running on the iSeries system.</li> <li>• QShell Interpreter (5722-SS1, Option 30)</li> <li>• Digital Communication Manager (5722-SS1, Option 34)</li> <li>• IBM Java Developer Kit, Version 1.3 (5722JV1 option 5)</li> <li>• IBM Java Developer Kit, Version 1.4 (5722JV1 option 6)</li> <li>• IBM Toolbox for Java (5722JC1)</li> <li>• IBM HTTP Server Powered by Apache (5722DG1)</li> <li>• Crypto Access Provider 128-Bit for AS/400 (5722AC3)</li> <li>• o TCP/IP Connectivity Utilities (5722TC1)</li> <li>• Other software products included on OS400 V5R2 distribution media</li> </ul> <p>In addition, if you want to use the web based System Monitor function, you need one of the following:</p> <ul style="list-style-type: none"> <li>• IBM WebSphere Application Server - Express Version 5.0 (5722IWE), or</li> <li>• WebSphere Application Server Version 5.0 (5733WS5)</li> </ul>		<ul style="list-style-type: none"> <li>• You can start the host servers by using the Start Host Server () command by typing STRHOSTSVR *ALL on the OS/400 command line. <b>Note:</b> The QSERVER subsystem must be running on the iSeries system.</li> </ul>
<b>Database (required)</b>		
<p>One of the following:</p> <ul style="list-style-type: none"> <li>• IBM DB2 Universal Database Server and Client Building DB2 stored procedures requires a DB2 supported C or C++ compiler.</li> <li>• Microsoft SQL Server 2000</li> </ul>	<ul style="list-style-type: none"> <li>• Version 8.1, Express</li> <li>• 2000, Version 8.00.384 with Service Pack 3</li> </ul>	<p>DB2 Express is provided with this product. DB2-supported compiler is also provided with this product. DB2 can be used on the client machine if you are loading the Tools components.</p> <p>SQL can be used on the client machine if you are loading the Tools components.</p>
<b>Other prerequisite software (based on required function)</b>		
IBM WebSphere MQ Server and Client	Version 5.3.0.2 with CSD5	Provided with this product
<p>Web application servers (one of the following):</p> <ul style="list-style-type: none"> <li>• WebSphere Application Server, Express</li> <li>• WebSphere Application Server</li> </ul>	<ul style="list-style-type: none"> <li>• Version 5.0 for iSeries</li> <li>• Version 5.0 for iSeries</li> </ul>	For Web-based System Monitor

Table 8. Software requirements for OS/400 (continued)

OS/400	Version and patch	Comments
Code Control (one of the following):  <ul style="list-style-type: none"> <li>• ClearCase LT</li> <li>• Concurrent Version System (CVS)</li> </ul>	<ul style="list-style-type: none"> <li>• Version 4.2</li> <li>• Version 1.11</li> </ul>	For source control in System Manager
An SMTP mail protocol e-mail system (for example, Microsoft Outlook, Microsoft Exchange, or Eudora)		For e-mail support
Crypto Access Provider 128-Bit for AS/400		
IBM HTTP Server Powered by Apache		
Adobe Acrobat Reader 4.0 or later. IBM recommends using version 4.0.5 or later of Acrobat Reader, with Search option, so that you can take advantage of the PDF Search feature. Go to <a href="http://www.adobe.com">http://www.adobe.com</a> for the latest version of Adobe Acrobat Reader for your platform.		
One of the following browsers:  <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> <li>• Version 4.x</li> </ul>	Required to view documents
One of the following browsers with Adobe SVG Viewer 3.0 plugin:  <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer</li> <li>• Netscape Navigator</li> </ul>	<ul style="list-style-type: none"> <li>• Version 6, Service Pack 1 or later</li> <li>• Version 4.7x</li> </ul>	Required to use the Web-based System Monitor
<b>Embedded components</b>		
IBM JDBC driver	Version 8.1, for Type 2 driver for DB2	For connectivity with DB2
IBM Java Development Kit IBM Java Development Kit	Version 1.3.1_05 Version 1.4	Required for compiling collaborations and maps. Provided with this product.
IBM JCE	Version 1.2.1	
IBM JRE	Version 1.3.1_05	Provided with this product.

### Third-party support

IBM supports the third-party product versions that are listed in Table 8 on page 32. If you find a problem in one of the third-party product versions that is no longer supported by the third-party vendor, an upgrade to a supported version may be necessary.

### Database requirements

IBM WebSphere Business Integration Express for Item Synchronization is certified for use with IBM DB2 Express version 8.1 and Microsoft SQL Server 2000.

**Note:** OS/400 comes with DB2 already installed. You only need IBM DB2 Express version 8.1 or Microsoft SQL Server 2000 installed on your Windows client if you plan to load tools.

## SQL Server

SQL Server must be configured to meet the following minimum criteria (see for instructions):

- WebSphere Business Integration Express for Item Synchronization administrator user with table creation privileges created
- 50 MB of disk space for data files available for the repository database
- 40 user connections configured
- 50 MB of disk space available for the mapping tables (optional)
- Logging configured for Truncate Log on Checkpoint

## DB2 Server

DB2 Server must be configured to meet the following criteria:

**Note:** Building DB2 stored procedures requires a DB2 supported C or C++ compiler. For information about working with stored procedures, read the DB2 documentation.

- 50 MB of disk space for data files available for the InterChange Server Express repository database.

---

## Using the Launchpad

This chapter contains the following sections:

- “Installation overview”
- “Getting Started”
- “Software prerequisites” on page 36

### Installation overview

This chapter provides a high-level view of the WebSphere Business Integration Express for Item Synchronization installation process.

The following tasks are described in detail in this guide:

1. Confirm that your system meets the minimum hardware requirements.
2. Confirm that all third-party software is installed or is available for installation as described in the installation process.
3. Run the Launchpad to confirm that your system has the prerequisite software installed. If you are missing any prerequisite software, please install the missing software before proceeding with the WebSphere Business Integration Express for Item Synchronization installation process.
4. Install WebSphere Business Integration Express for Item Synchronization software.

### Getting Started

The WebSphere Business Integration Express for Item Synchronization installation CD contains software that is loaded on your OS/400 system (via a remote install from a windows client) and also contains software that is loaded on a windows client. The Tools components only run on a Windows client. They do not run on an OS/400 system, so you will need to use a Windows client for this purpose. Also, some menu shortcuts are created on your Windows client to start the WebSphere Business Integration Express for Item Synchronization applications on the OS/400. These shortcuts are helpful when performing the initial setup and deployment of the product.

If you have previously installed the appropriate version of the prerequisite products, you might not need to reinstall it for use with IBM WebSphere Business Integration Express for Item Synchronization. However, you should check the configuration instructions for the specific software.

**Note:** If you have Norton AntiVirus running on your machine, you must turn it off and reboot your machine before you use the WebSphere Business Integration Express for Item Synchronization Launchpad.

To turn off Norton AntiVirus:

- Click **Start > Control Panel > Administrative Tools > Services**.
- Right click **Norton AntiVirus Client**.
- Click **Stop**.

**Note:** Host server jobs and TCP/IP must be running on your OS/400 system before starting the Launchpad. Host server jobs are started with the STRHOSTSVR CL command on OS/400. TCP/IP is started using the STRTCP CL command on OS/400.

To invoke the WebSphere Business Integration Express for Item Synchronization Launchpad:

1. Insert the WebSphere Business Integration Express for Item Synchronization for OS/400 CD.

**Note:** WebSphere Business Integration Express for Item Synchronization is remotely installed from a windows client, so the CD is inserted into a windows client CD drive.

2. The OS/400 Information panel appears. Enter the OS/400 system name, user ID, and password. The OS/400 user ID must be of user type (user class) \*SEC0FR and have \*USRCLS special authority.
3. At the Welcome screen, select **Software prerequisites**.  
The Software Prerequisites screen appears.

## Software prerequisites

The WebSphere Business Integration Express for Item Synchronization Launchpad checks the Windows registry to see if the prerequisite software is installed on your machine. It also checks your OS/400 system for the prerequisite OS/400 licensed programs and options. See “Installation requirements” on page 31 for a list of the required software.

After Launchpad checks your machine for prerequisite software, Launchpad displays the prerequisite software and the status. Statuses include **Not Installed**, **Optional**, or **OK**. WebSphere Business Integration Express for Item Synchronization requires the installation of the following client prerequisite software:

- IBM Java Development Kit 1.3.1\_05
- Microsoft Internet Explorer 6 Service Pack 1 or later (optional)
- WebSphere MQ 5.3.0.2 CSD3 client
- Netscape Navigator 4.75 (optional)

WebSphere Business Integration Express for Item Synchronization also requires the installation of the following AS/400e prerequisite software:

- IBM Java Development Kit 1.3
- IBM Java Development Kit 1.4
- WebSphere MQ 5.3.0.2 CSD5 client
- IBM Toolbox for Java
- QShell Interpreter
- AS/400e Utilities, Digital Certificate Manager, and Crypto Access Provider
- WebSphere Application Server 5.0.2 for OS/400
- IBM HTTP Server for OS/400

If WebSphere MQ is not installed, you can use the Launchpad to install it on your machine. If you need to install any other prerequisite software, you will need to locate the appropriate CD and load it into your OS/400 system CD ROM drive and perform the necessary installations. For more information on software prerequisites, see “Installation requirements” on page 31.

### Installing the Java compiler

The Java compiler that is compatible with WebSphere Business Integration Express for Item Synchronization is contained within the IBM Java Development Kit 1.3.1\_05 and is required for Java-based adapters and collaboration and mapping development.

To install the IBM Java Development Kit 1.3.1\_05:

1. From the Software Prerequisites screen, expand IBM Java Development Kit 1.3.1\_05.
2. Click **Install** to start the silent installation of IBM Java Development Kit 1.3.1\_05.

**Note:** If you do not plan to compile adapters, collaborations, or maps, then select the **I do not plan to compile collaborations or maps** box. Selecting this box changes the status from **Not Installed** to **Optional** in the Launchpad and allows you to continue with the installation process.

3. After IBM Java Development Kit 1.3.1\_05 silent installation, verify that the status in the Launchpad changed from **Not Installed** to **OK**.

### Installing WebSphere MQ

WebSphere MQ is messaging software that enables communication between InterChange Server Express and connectors. InterChange Server Express accesses the WebSphere MQ Server as an MQI Java client or JMS.

To install IBM WebSphere MQ 5.3.0.2 CSD3:

1. From the Software Prerequisites screen, expand IBM WebSphere MQ 5.3.0.2 CSD3.
2. Click **Install** to start the silent installation of IBM WebSphere MQ 5.3.0.2 CSD3.

**Note:** If you do not plan to install the Tool components then select the **I do not intend to install the Tools component** box. Selecting this box changes the status from **Not Installed** to **Optional** in the Launchpad and allows you to continue with the installation process.

3. After IBM WebSphere MQ 5.3.0.2 CSD3 silent installation, verify that the status in the Launchpad status changed from **Not Installed** to **OK**.



## Installing Microsoft Internet Explorer

This guide does not provide installation instructions for Microsoft Internet Explorer 6 Service Pack 1. For a description of the installation process, expand Microsoft Internet Explorer 6 Service Pack 1 and click the link to the Microsoft's Web site.

## Installing Netscape Navigator

This guide does not provide installation instructions for Netscape Navigator. For a description of the installation process, expand Netscape Navigator 4.75 and click the link to the Netscape's Web site.

## OS/400 prerequisites

If you are installing on an OS/400 platform, there is additional prerequisite software. You will need to install IBM WebSphere MQ v5.3 CSD5, IBM Java Developer Kit version 1.3, IBM Java Developer Kit version 1.4, IBM Toolbox for Java, QShell Interpreter, OS/400 Utilities Digital Certificate Manager, Cryptographic Access Provider, WebSphere Application Server v5.0.2 or WebSphere Application Server Express v5.0.2, and IBM HTTP Server for OS/400.

You can use the Launchpad to install Websphere MQ on your OS/400 system and your Windows client. All other OS/400 prerequisite software must be installed using the OS/400 CD ROM.

### Installing IBM WebSphere MQ V5.3 CSD5 server:

**Note:** If your OS/400 system already has MQSeries 5.2 or WebSphere MQ 5.3 installed, but does not have CSD5 installed, please refer to the MQSeries or WebSphere MQ documentation for instructions on how to upgrade to WebSphere MQ 5.3 CSD5.

To install IBM WebSphere MQ 5.3.0.2 CSD5:

1. From the Software Prerequisites screen, expand IBM WebSphere MQ 5.3.0.2 CSD5.
2. Click **install** to start the remote installation of IBM WebSphere MQ 5.3.0.2 CSD5.
3. After the IBM WebSphere MQ 5.3.0.2 CSD5 remote installation, click **Continue**. Verify that the status in the Launchpad changed from **Not Installed** to **OK**.

**Installing IBM Java Developer Kit 1.3:** This guide does not provide installation instructions for IBM Java Developer Kit 1.3. For a description of the installation process, expand IBM Java Developer Kit 1.3 and click the link to the OS/400 information Center. This is not shipped with this product. It is loaded using the OS/400 system CDs you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722JV1 Option 5.

**Installing IBM Java Developer Kit 1.4:** This guide does not provide installation instructions for IBM Java Developer Kit 1.4. For a description of the installation process, expand IBM Java Developer Kit 1.4 and click the link to the OS/400 Information Center. This is not shipped with this product. It is loaded using the OS/400 system CDs you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722JV1 Option 6.

**Installing IBM Toolbox for Java 1.3:** This guide does not provide installation instructions for IBM Toolbox for Java 1.3. For a description of the installation process, expand IBM Toolbox for Java 1.3 and click the link to the OS/400 Information Center. This is not shipped with this product. It is loaded using the



OS/400 system CDs you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722JC1.

**Installing QShell Interpreter:** This guide does not provide installation instructions for QShell Interpreter. For a description of the installation process, expand QShell Interpreter and click the link to the OS/400 Information Center. This is not shipped with this product. It is loaded using the system CDs you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722SS1 Option 30.

**Installing OS/400 Utils DCM and Cryptographic Access Provider:** This guide does not provide installation instructions for OS400 Utilities Digital Certificate Manager (DCM) and Cryptographic Access Provider. For a description of the installation process, expand OS400Utils DCM and Cryptographic Access Provider and click the link to the OS/400 Information Center. This is not shipped with this product. They are loaded using the system CDs you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722AC3.

**Installing WebSphere Application Server V5.0.2:** This guide does not provide installation instructions for WebSphere Application Server v5.0. For a description of the installation process, expand WebSphere Application Server v5.0.2 and click the link to the OS/400 Information Center. This product can use either WebSphere Application Server V5.0 or WebSphere Application Server Express V5. This is not shipped with this product. It is loaded using the OS/400 CDs for these products. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5733WS5 or 5722IWE.

**Installing IBM HTTP Server for OS/400:** This guide does not provide installation instructions for IBM HTTP Server for OS/400. For a description of the installation process, expand IBM HTTP Server for OS/400e and click the link to the OS/400 Information Center. This is not shipped with this product. It is loaded using the OS/400 system CD's you received with OS/400. Load the CD into the OS/400 CD drive and perform an OS/400 licensed program installation of product 5722DG1.

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## Installing WebSphere Business Integration Express Plus for Item Synchronization

This chapter contains the following sections:

- “Installing WebSphere Business Integration Express Plus for Item Synchronization software”
- “Before starting InterChange Server for the first time (for both Express and Express Plus versions)” on page 42
- “WebSphere Business Integration Express Plus for Item Synchronization files and directories” on page 43
- “Uninstalling WebSphere Business Integration Express Plus for Item Synchronization” on page 44

### Installing WebSphere Business Integration Express Plus for Item Synchronization software

The IBM WebSphere InterChange Server installation CD provides a GUI-based setup program that guides you through the installation of the software.

Before you perform the procedures described in this chapter, ensure that your system meets the “Installation requirements” on page 31.

To start the installation process, do the following:

1. From the WebSphere Business Integration Express for Item Synchronization Launchpad, select **Install Product**.

The Install product screen appears.

**Note:** This procedure assumes installation from a CD. If you plan to obtain the electronic download version from Passport Advantage, refer to your Passport Advantage information for those downloading instructions.

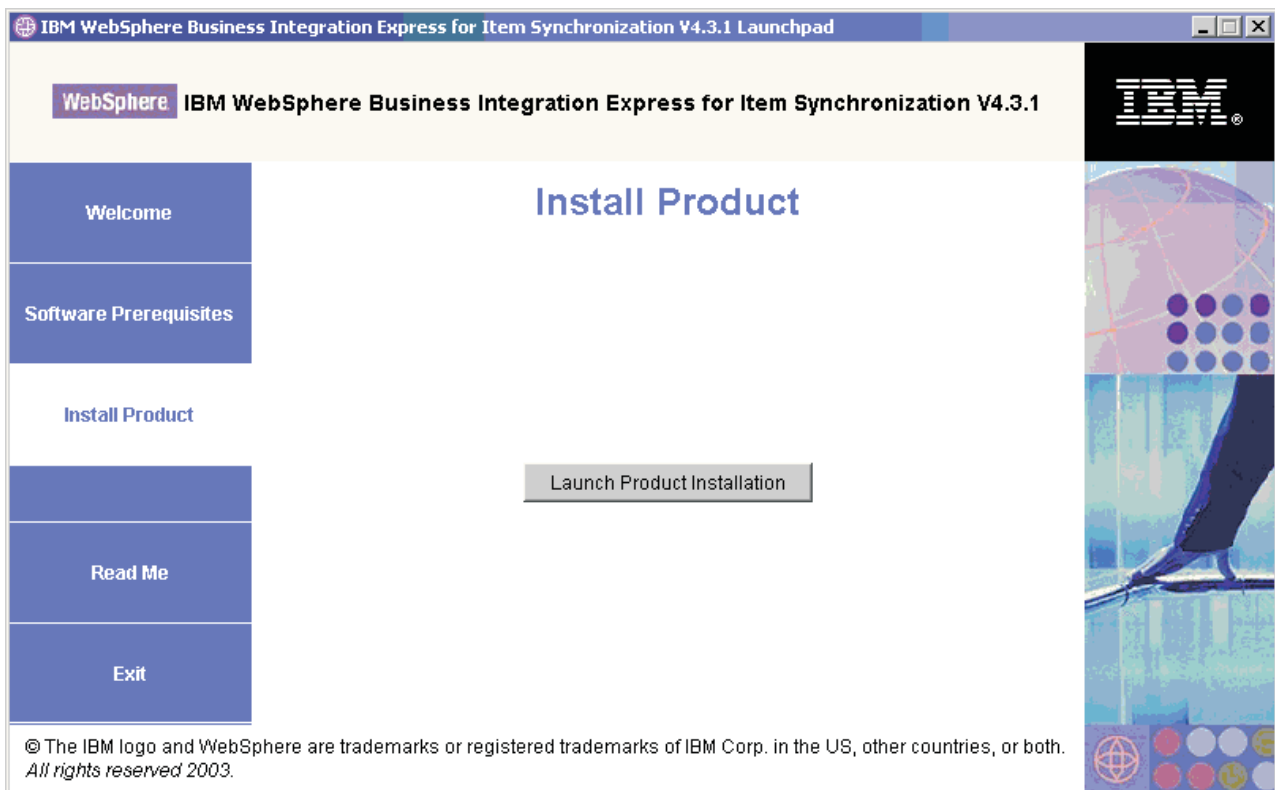


Figure 7. The Install Product screen

2. Click **Launch Product Installation**.
3. At the Welcome screen, Click **Next**.  
The License Agreement screen appears.
4. Read and accept the terms of the Software License Agreement, then click **Next**.
5. Accept the default installation location or browse for a different location, then click **Next**.  
The Setup type screen appears.

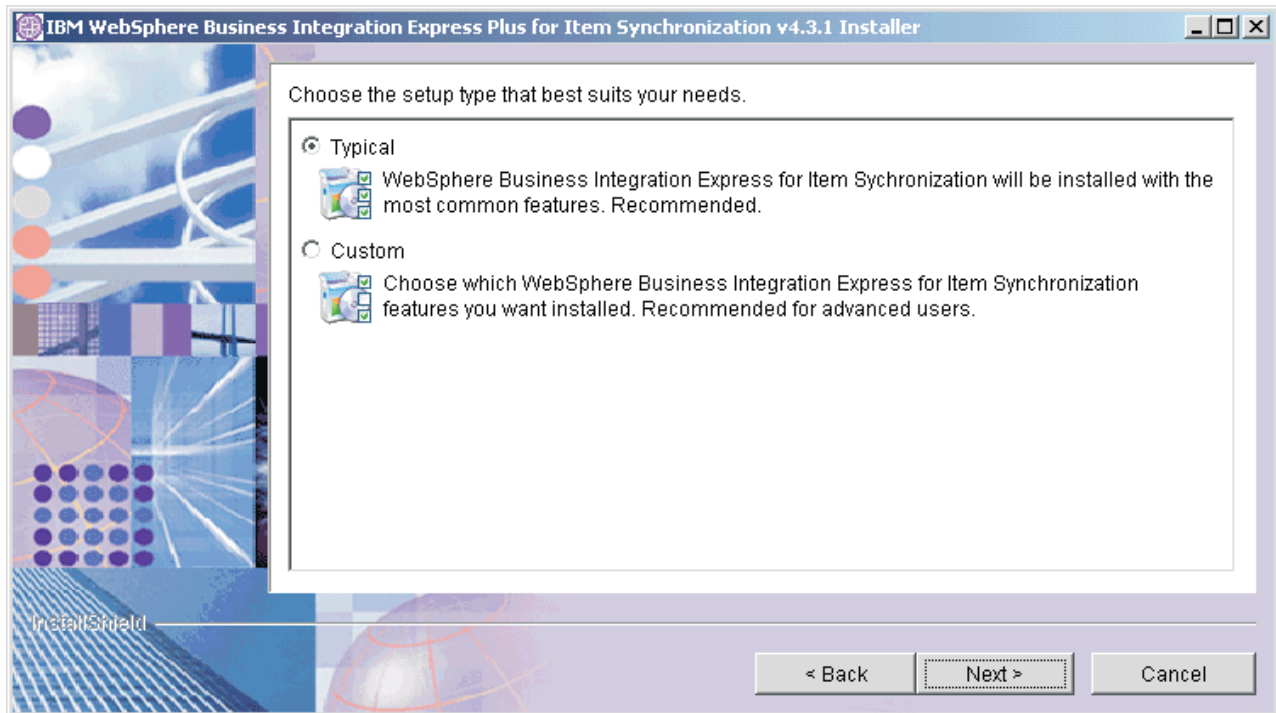


Figure 8. The Setup Type screen

6. Select the setup type and click **Next**.

You can select either a Typical setup or a Custom setup. The Websphere Business Integration Express and Express Plus for Item Synchronization solution only allows the e-mail adapter plus an additional three adapters to be installed and deployed. This means that a maximum of four adapters can be installed and deployed.

Typical setup includes:

- WebSphere Business Integration Collaboration for UCCnet Item Synchronization
- WebSphere Business Integration Toolset
- WebSphere Business Integration Adapter for e-Mail
- WebSphere Business Integration Adapter for JText

Custom setup allows you to choose which features to install. Custom setup defaults to the features installed with Typical setup. You should be familiar with your Enterprise Resource Planning application data before selecting additional components. Custom setup is recommended for advanced users.

Custom setup allows you to select the following:

- WebSphere Business Integration Adapter for WebSphere MQ
- WebSphere Business Integration Adapter for JMS
- WebSphere Business Integration Adapter for Web Services
- WebSphere Business Integration Adapter for JDBC
- WebSphere Business Integration Adapter for XML
- WebSphere Business Integration Adapter for mySAP.com.

**Note:** WebSphere Business Integration Adapter for mySAP.com is only available with WebSphere Business Integration Express Plus for Item Synchronization 4.3.1.

If you select Custom setup, the Feature screen will appear. Select specific features to be installed, confirm your selections, then click **Next**.

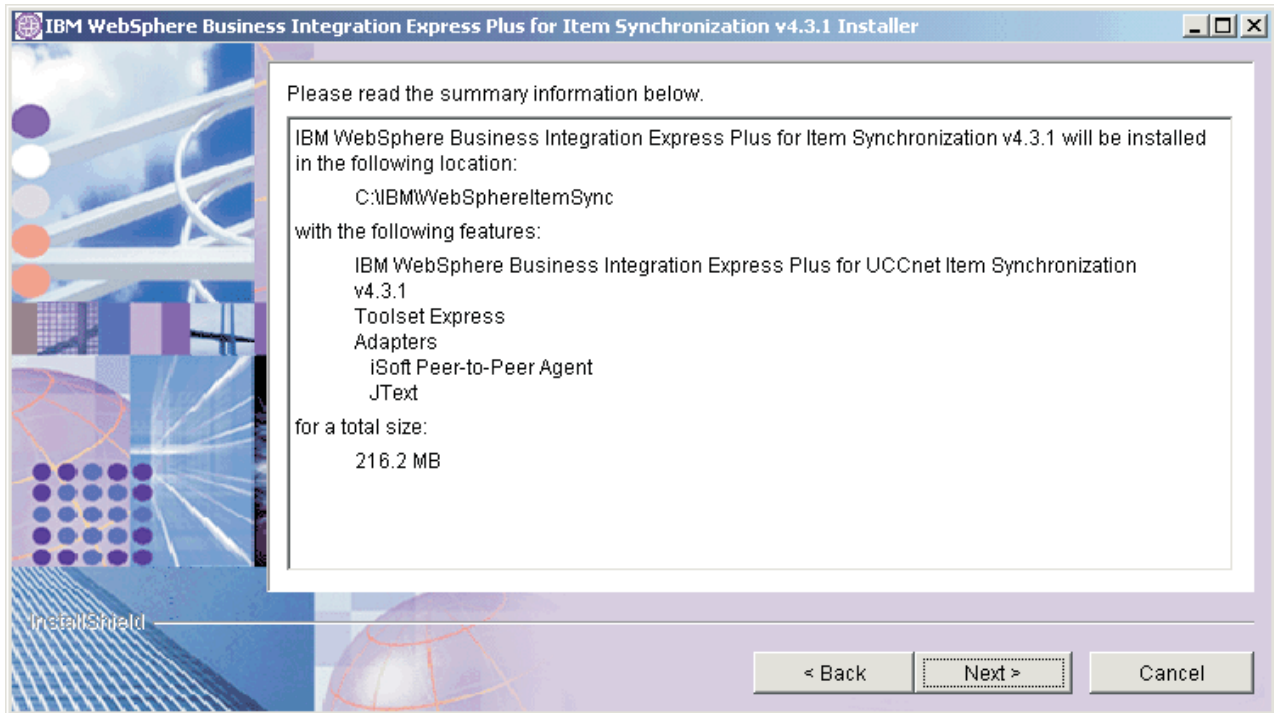


Figure 9. The Summary screen

7. If you selected any tools, you will be prompted for an HTTP port, SSL port, and a WebSphere Port Block. Use the following command to check for available ports on your system:

```
netstat *cnn
```

**Note:** The WebSphere Block Port field needs the first port number for an available block of 12 consecutive ports.

The Summary screen appears.

8. Review the features and installation location and click **Next**.  
A number of informational screens are presented. Click **Next**.

## Before starting InterChange Server for the first time (for both Express and Express Plus versions)

After installing WebSphere Business Integration Express for Item Synchronization on your OS/400 system, you must perform the following steps before you start InterChange Server for the first time:

1. Sign on to OS/400 with a user profile that has \*SECADM authority.
2. Run the following, which is case-sensitive. Type it exactly as shown.  
CL command: STRSEU SRCFILE(QWEBBIICS/QWEBBIICS) SRCMBR(QWEBBISTR)

**Note:** Make the following changes, then press F3 followed by Enter to save the changes.

- a. Change line 8 to be the following, making sure -design is in lower case:  
DCL VAR(&DESIGN) TYPE(\*CHAR) LEN(10) VALUE('-design ')

b. After line 16 add the following lines:

```

/*****
/* START THE MQ QUEUE MANAGER */
*****/
ADDLIB QMQM
STRMQM MQMNAME(QWEBBIICS.QUEUE.MANAGER)
MONMSG MSGID(CPF0000) EXEC(GOTO AGAIN1)
GOTO NEXT1
AGAIN1: ADDLIB QSYS2924
STRMQM MQMNAME(QWEBBIICS.QUEUE.MANAGER)
NEXT1:

```

3. Run CL Command: CRTCLPGM PGM(QWEBBIICS/QWEBBISTR) SRCFILE(QWEBBIICS/QWEBBIICS) AUT(\*EXCLUDE) REPLACE(\*YES)
4. Run CL Command: CHGOBJOWN OBJ(QWEBBIICS/QWEBBISTR) OBJTYPE(\*PGM) NEWOWN(QWEBBIICS) CUROWNAUT(\*REVOKE)
5. Run CL Command: CHGOWN OBJ('/QIBM/UserData/WebBIICS/logs') NEWOWN(QWEBBIICS)
6. Run CL Command: ENDSBS SBS(QWEBBIICS) OPTION(\*IMMED)
7. Run CL Command: STRSBS SBS(QWEBBIICS/QWEBBIICS)
8. Wait about 5 minutes for the InterChange Server to come up.
9. Run CL Command: QSH
10. Run QShell command: cd /QIBM/UserData/WebBIICS
11. Run QShell command: bin/deploy.sh QWEBBIICS -cleanServer
12. Press F3 to exit QSH.

## WebSphere Business Integration Express Plus for Item Synchronization files and directories

Once WebSphere Business Integration Express for Item Synchronization is installed, you can view the file system and its contents. The server files and adapter files are loaded onto the OS/400 machine in the root file system in the /QIBM/ProdData/WebBIICS and /QIBM/UserData/WebBIICS directories.

The client directories are located under the IBM\WebSphereItemSync directory and they contain the files listed in Table 3.

*Table 9. WebSphere Business Integration Express for Item Synchronization directory structure*

Directory name	Contents
_jvm	This directory contains the Java Virtual Machine (JVM) that is used by Installer.
_uninstItemSync	This directory contains the uninstaller.exe file that is used to remove WebSphere Business Integration Express for Item Synchronization 4.3.
a_unistWinClientItemSync	This directory contains the uninstaller.exe file that is used to remove OS/400 files for WebSphere Business Integration Express for Item Synchronization 4.3.
_uninstZip	This directory contains a listing of the unzipped System Manager files that are removed when the Uninstaller is run.
bin	This directory contains the executable files, .dll files, and .bat files that the InterChange Server system uses.
collaborations	This directory contains subdirectories that contain .class files and message files for installed collaborations.

Table 9. WebSphere Business Integration Express for Item Synchronization directory structure (continued)

Directory name	Contents
connectors	This directory contains files specific to each adapter in the system. It also contains adapter-specific files that you may need to install in the application that the adapter supports.
DataHandlers	This directory contains the .jar files for data handlers that InterChange Server Express uses.
DevelopmentKits	This directory contains sample files to assist the developer in creation of various system components. Samples provided include: Server Access for EJB, Server Access for J2EE Connector Architecture, connectors (C++ and Java), and Object Discovery Agents.
DLMs	This directory contains subdirectories that contain Dynamic Loadable Modules (DLMs) and other files for InterChange Server maps.
legal	This directory contains the license files.
lib	This directory contains .jar files for the system.
messages	This directory contains the generated message files.
mqseries	This directory contains files specific to WebSphere MQ, including certain executable files.
ODA	This directory contains the Object Discovery Agent .jar and .bat files for each agent.
repository	This directory contains the definitions for the WebSphere Business Integration Express for Item Synchronization components.
Samples	This directory contains component definitions for benchmarking samples and sample mail files for WebSphere Business Integration Express for Item Synchronization collaborations.
src	This directory contains samples of Relationship Service APIs for cross-referencing.
Tools	This directory contains the Workbench files if selected during installation.
WBSM	This directory contains the Web-based System Monitor files.

## Installing WebSphere Business Integration Express Toolset

Once you have completed this installation, you will need to install WebSphere Business Integration Express for Item Synchronization on your Windows client. The Toolset component only runs on a Windows client and is required to complete the configuration necessary to use the product. See Chapter 1, "Installing WebSphere Business Integration Express Plus for Item Synchronization on a Windows system," on page 1 for instructions. In order to use the toolset, select the same installation options you used during the OS/400 installation.

## Uninstalling WebSphere Business Integration Express Plus for Item Synchronization

IBM provides an Uninstall program that you can use to remove your entire Websphere Business Integration Express for Item Synchronization installation, or select specific components for removal.

1. Click **Start > Settings > Control Panel**.
2. Double-click **Add/Remove Programs**.



3. Scroll down and select IBM WebSphere Express for Item Synchronization. Click the **Change/Remove** button.
4. The Uninstaller window appears. Click **Next**.  
The Select the features for IBM WebSphere Express for Item Synchronization you would like to uninstall window appears. The installed components appear with check marks next to them.
5. Leave any components checked that you want removed and click **Next**.
6. Click **Next** to confirm your selections.  
The Uninstaller window appears and removes the selected components.
7. Click **Finish**.

---

## Upgrading

In order to upgrade the InterChange Server Express system, you must make sure that the system is in a quiescent state. This means that all in-progress events should be completed and all in-doubt transactions are resolved before backing up the environment and performing the upgrade procedure.

**Note:** Note: When you upgrade your release on the Windows platform, you need only run the upgrade Installer once. However, if you upgrade your release on other platforms, you must run the Installer twice -- first run the Installer on the platform to which you are performing the upgrade, and then run the Installer on the Windows client, to reinstall the toolset to your Windows client.

### Upgrading from Express V4.3.1. to Express Plus 4.3.1.

If you have previously installed Express V4.3.1 to your system, and you run the Installer to upgrade to Express Plus V4.3.1, the Installer does the following:

- Installs the adapters you have selected
- Adds Process Designer Express to your toolset (you must run the Installer on the Windows client, as noted above)
- The Installer does not drop your existing database
- The Installer retains your existing repository and does not redeploy it, unless you have not previously installed the collaboration and are now installing it for the first time as part of your upgrade. If you have not previously installed the collaboration and are selecting it now for the first time, the Installer deploys the Express Plus 4.3.1 repository.





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