

WebSphere Business Integration Server
Express and Express Plus



WebSphere Business Integration Server Express Installation Guide for Linux

Version 4.4

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Express and Express Plus



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Note!

Before using this information and the product it supports, read the information in "Notices" on page 71.

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This edition of this document applies to IBM WebSphere Business Integration Server Express, version 4.4 and IBM WebSphere Business Integration Server Express Plus, version 4.4.

To send us your comments about this IBM WebSphere Business Integration document, e-mail doc-comments@us.ibm.com. We look forward to hearing from you.

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About this document

The products IBM(R) WebSphere(R) Business Integration Server Express and IBM WebSphere Business Integration Server Express Plus are made up of the following components: InterChange Server Express, CollaborationFoundation, and a set of software integration adapters. You can choose from among the prepackaged adapters for your business processes that span applications. The standard processes template — CollaborationFoundation — allows you to quickly create customized processes.

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

Except where noted, all the information in this guide applies to both IBM WebSphere Business Integration Server Express and IBM WebSphere Business Integration Server Express Plus. The term WebSphere Business Integration Server Express and its variants refer to both products.

Audience

This document is for consultants and system administrators who install, deploy, and administer WebSphere Business Integration Server Express or Express Plus in the Linux(TM) environment.

Related documents

The complete set of documentation available with this product describes the features and components common to all WebSphere Business Integration Server Express and Express Plus 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/wbiserverexpress/infocenter>.

Note: Important information about this product may be available in Technical Support Technotes and Flashes issued after this document was published. These can be found on the WebSphere Business Integration Support Web site, <http://www.ibm.com/software/integration/websphere/support/>. Select the component area of interest and browse the Technotes and Flashes sections.

Typographic conventions

This document uses the following conventions:

| | |
|---------------------------|--|
| <code>courier font</code> | Indicates a literal value, such as a command name, filename, information that you type, or information that the system prints on the screen. |
| bold | Indicates a new term the first time that it appears. |

| | |
|--|---|
| <i>italic</i> | Indicates a variable name or a cross-reference. When you view a PDF file, cross-references are both italic and blue. You can select a cross-reference to jump to the target information. |
| <i>italic courier</i> | Indicates a variable name within literal text. |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">boxed courier</div> | 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. Select 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(R) installations, substitute slashes (/) for backslashes. All IBM WebSphere Business Integration Server Express 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. |

New in this release

New in release 4.4

The following changes in installation have been made in this release and are reflected in this guide:

- Custom and Typical installation options
- Installation of the First Steps application
- "Quick Start" is now called "Quick Validate" and supported with embedded online documentation from First Steps
- Installation of the Web Deployment application
- Role-based access control and user-definable user name and password

New in release 4.3.1

This release adds production-mode support for the following operating systems:

- IBM OS/400 V5R2, V5R3
- Red Hat Enterprise Linux(TM) AS 3.0 Update 1
- SuSE Linux Enterprise Server 8.1 SP3
- Microsoft Windows 2003

New in release 4.3

This is the first release of this guide.

Chapter 1. Installation overview

IBM WebSphere Business Integration Server Express and Express Plus include a Graphical User Interface (GUI)-based setup program called the Launchpad that guides you step-by-step through the installation and configuration of the prerequisite and product software.

The Launchpad allows you to perform a standard or Typical installation that automatically installs a default set of components, or a Custom installation that allows you to choose which components to install. In both cases, the Launchpad detects whether your system already has other required software prerequisites installed and displays this information. Once the prerequisites are installed, the Launchpad continues to guide you until installation is complete.

This guide details each step of the installation and initial configuration processes required to get IBM WebSphere Business Integration Server Express or Express Plus operating. The major steps are as follows:

1. Make sure the system on which you plan to install this product meets the hardware and software requirements. Refer to <http://www.ibm.com/software/integration/wbiserverexpress> for specific requirements.
2. Start the Launchpad and from it, start the product installation. (Chapter 2)
3. Decide if you want a Typical or a Custom installation. Refer to Chapter 3 to find out the differences between a typical and a custom installation. The Launchpad will check for supported software prerequisites. Refer to <http://www.ibm.com/software/integration/wbiserverexpress> for a list of supported prerequisite software. Then proceed through the remainder of the Launchpad installation process. (Chapter 3)
4. Perform any additional configuration steps. (Chapter 3)
5. Start the system and perform initial administration, either through First Steps or by using Linux commands and System Manager. (Chapter 4)
6. (Optional but recommended.) Use the "Quick Validate" procedure, found in First Steps, to verify that your system is installed and operating correctly. (Chapter 5)
7. (Optional for WebSphere Business Integration Server Express Plus only) Install an application adapter from the Adapter Capacity Pack. (Chapter 6)
8. (Optional for WebSphere Business Integration Server Express Plus only) Install a collaboration from the Collaboration Capacity Pack. (Chapter 7)

Additional chapters in the guide provide information on the following:

- Chapter 8, "Manually configuring web-based tools," on page 43.
- Chapter 9, "Upgrading the system," on page 49.
- "Silently installing and uninstalling," on page 67.

Taking the next step

To begin the installation and configuration processes, proceed to Chapter 2, "Starting the Launchpad," on page 3 to learn basic Launchpad functions.

Chapter 2. Starting the Launchpad

In order to use the Launchpad GUI to lead you through installation and configuration of WebSphere Business Integration Server Express or Express Plus, you must learn its basic functions.

This chapter contains the following sections:

- “Before you start”
- “Invoking the Launchpad” on page 4
- “Taking the next step” on page 5

Before you start

Before you start the Launchpad, do the following:

- Check that your system meets the hardware requirements listed at the following Web site: <http://www.ibm.com/software/integration/wbiserverexpress>.

Note: The maximum number of physical processors that can be used with this server machine is restricted to two processors. Please refer to the product license terms for more details.

- Create a user for WebSphere Business Integration Server Express or Express Plus by following these instructions:
 1. Log in 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 user_name -p user_password`
- Check the following site for any available Fix Packs for your product: <http://www.ibm.com/software/integration/websphere/support>
- Ensure that you have root user privileges on the machine on which you will install the product. If this requirement is not met, an error message outlining the problem will appear and the Launchpad program will terminate.
- The installation instructions throughout this document assume installation from product CDs. If you are installing from ESDs obtained from Passport Advantage, do the following:
 - Refer to your Passport Advantage information for downloading instructions.
 - Extract all ESDs to the same directory on your file system and install from the machine to ensure proper installer function. Do *not* create CDs based on the ESD images and attempt to install from them. If you do, installation can fail since configuration utilities for some software prerequisites might not be packaged with the ESDs containing the actual prerequisite software.
 - Ensure that the user who untars the files is the same user who will install WebSphere Business Integration Server Express or Express Plus. The product installer will not work properly if different users perform these tasks.
- If you want the WebSphere Business Integration Server Express or Express Plus installer to install any of these features: System Monitor, Failed Event Manager, or Web Deployment, for use with the Express or Express Plus product and with WebSphere Application Server Express or WebSphere Application Server, you *must* do one of the following:

- Choose to install IBM WebSphere Application Server Express version 6 from the Launchpad "Software Prerequisites" screen in the order presented in this guide.
- Have one of the supported versions of WebSphere Application Server Express or WebSphere Application Server already installed *before* you run the WebSphere Business Integration Server Express or Express Plus installer.

Otherwise, you will have to manually configure System Monitor, Failed Event Manager, or Web Deployment, as detailed in Chapter 8, "Manually configuring web-based tools," on page 43.

For supported versions of WebSphere Application Server Express or WebSphere Application Server, refer to <http://www.ibm.com/software/integration/wbiserverexpress>. Also, refer to "Upgrading software prerequisites" on page 51.

- Ensure that you have administrator privileges to create a new database and add new users.

Invoking the Launchpad

To invoke the Launchpad, insert the CD containing the Base Components of WebSphere Business Integration Server Express or Express Plus into your computer.

To invoke the Launchpad, do the following:

1. Insert the CD containing the Base Components of WebSphere Business Integration Server Express or Express Plus into your computer.
2. Mount the CD-ROM drive, as follows:
 - On a Red Hat Linux system:
`mount /dev/cdrom /mnt/cdrom`
 - On a SuSE Linux system:
`mount /dev/cdrom /media/cdrom`
3. Run the following command to start the Launchpad:
 - On a Red Hat Linux system:
`/mnt/cdrom/start_launchpad.sh`
 - On a SuSE Linux system:
`/media/cdrom/start_launchpad.sh`

The Launchpad welcome screen appears.

Important: From this point on, throughout this document, the term *mount_point* will be used to represent the path `/mnt/cdrom` on a Red Hat Linux system; `/media/cdrom` on a SuSE Linux system.

The Launchpad welcome screen appears. Buttons on the left side of the welcome screen allow quick selection of several tasks.

The Launchpad welcome screen for the WebSphere Business Integration Server Express product differs slightly from that of the WebSphere Business Integration Server Express Plus product.

Figure 1 is an example of the Launchpad welcome screen for the WebSphere Business Integration Server Express Plus product. Note that the Express Plus version, but not the Express version, has a button called **Install Capacity Pack**. This button lets you launch the installers for the Adapter Capacity Pack and

Collaboration Capacity Pack. Installation procedures for the Adapter Capacity Pack and Collaboration Capacity Pack are described in Chapter 6, “Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 35 and Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39.



Figure 1. WebSphere Business Integration Server Express Plus Launchpad welcome screen

The buttons on the welcome screen control the following tasks:

Install Product

Leads you to install the appropriate software prerequisites based on the product components you intend to install and then installs the product components as well.

Install Capacity Pack

(WebSphere Business Integration Express Plus only.) Enables installation of collaborations and additional adapters beyond those available with the base product.

Install Guide

Links to a Web page that directs you to the WebSphere Business Integration Server Express Information Center, from which you can obtain all product documentation, including this installation guide.

First Steps

Launches the First Steps Application. The First Steps application is a single interface from which you can use and manage the WebSphere Business Integration Server Express or Express Plus after installation is complete.

Exit Closes the Launchpad.

Taking the next step

When you are comfortable performing the basic Launchpad GUI operations outlined in this chapter, proceed to Chapter 3, “Installing required software prerequisites and WebSphere Business Integration Server Express or Express Plus,” on page 7 for information on how to use the Launchpad to identify necessary

prerequisites, install selected prerequisites, and install WebSphere Business Integration Server Express or Express Plus.

Chapter 3. Installing required software prerequisites and WebSphere Business Integration Server Express or Express Plus

The WebSphere Business Integration Server Express or Express Plus system can determine the prerequisite software needed for your installation based on the components you plan to install. If certain items are not installed, it can install them.

Most of the components of WebSphere Business Integration Server Express or Express Plus for Linux will be installed on a Linux-based system. However, the non-web-based components from Toolset Express, which contains software tools that are required to administer the WebSphere Business Integration Express server, must be installed on a Windows client. Toolset Express contains the following:

- Administrative Tools: Flow Manager, Log Viewer, Relationship Manager, System Manager
- Development tools: Business Object Designer Express, Connector Configurator Express, Integrated Test Environment, Map Designer Express, Process Designer Express (available with WebSphere Business Integration Server Express Plus installations only), Relationship Designer Express, IBM Eclipse SDK 3.01 (IES 3.01)

The remainder of this manual discusses those components that are installed on the Linux system. For information about installing Toolset Express, refer to the *WebSphere Business Integration Server Express Installation Guide for Windows*.

The Launchpad offers two installation options: Typical and Custom.

The Typical installation automatically installs the following components on the Linux system:

- InterChange Server Express
- JText adapter
- Samples

The Typical installation also automatically detects whether you have the required prerequisite components and can install most of them for you.

The Custom installation allows you to choose which components to install. It, like the Typical installation, also detects whether the prerequisites are installed and can install them for you. See the section “Deciding which components to install (Custom installation only)” on page 8 for descriptions of available components. For further information on the Custom installation, see the section “Custom installation” on page 16.

For more information on the Typical installation option, see the section “Typical installation” on page 9.

The installation instructions throughout this chapter assume the following:

- WebSphere Business Integration Server Express or Express Plus version 4.4 is *not* already installed on your machine. If you have a previous version of the product or capacity packs installed and want to upgrade them to version 4.4, or have

installed WebSphere Business Integration Server Express V4.4 and want to upgrade to WebSphere Business Integration Server Express Plus V4.4, see Chapter 9, “Upgrading the system,” on page 49 for instructions.

- Components will be installed on a machine running a supported Linux version in a production environment. See <http://www.ibm.com/software/integration/wbiserverexpress> for a listing of which product components are supported on each of the Linux versions.
- Components that are not supported on the Linux platform but are needed to administer the InterChange Server Express, will be installed and reachable on a remote Windows machine by following the installation and configuration instructions in the *WebSphere Business Integration Server Express Installation Guide for Windows*.
- Installation is of a WebSphere Business Integration Server Express Plus system. Installation of a WebSphere Business Integration Server Express system might show slightly different screens.
- You have reviewed and understand the information in Chapter 2, “Starting the Launchpad,” on page 3 and have started the Launchpad.

This chapter contains the following sections:

- “Deciding which components to install (Custom installation only)”
- “Typical installation” on page 9
- “Custom installation” on page 16
- “Software prerequisites” on page 20
- “Using First Steps” on page 22
- “Directory structure and files” on page 24
- “Installing additional components after initial installation” on page 25
- “Uninstalling WebSphere Business Integration Server Express and Express Plus using the GUI” on page 26
- “Taking the next step” on page 27

See “Silently installing and uninstalling,” on page 67 for instructions on performing silent installation and uninstallation.

Deciding which components to install (Custom installation only)

When you are installing WebSphere Business Integration Server Express and Express Plus using the Custom installation, you can install all or some subset of product components. The installable components are selectable from the screens that appear when you select the **Custom** button from the Choose the Setup Type screen of the Launchpad or from within the response file used during silent installation.

Note: As mentioned earlier, with the Typical installation, the Launchpad automatically selects the components for installation.

The components available for installation are identical on all supported Linux versions.

The following sections describe the installable components available on a Linux system.

See the *System Administration Guide* for more detailed descriptions of the InterChange Server Express and components; the individual adapter guides for

descriptions of the adapters. All documentation is available at the following Web site: <http://www.ibm.com/websphere/wbi-server-express/infocenter>.

Components available for installation on a Linux system

During installation on a Linux system, you can choose from the following set of components:

- InterChange Server Express component
 - With InterChange Server Express, the following tools are also installed:
 - System Monitor
 - Failed Event Manager
 - Web Deployment
- A choice of adapters from the following list:
 - Adapter for e-Mail
 - Adapter for Healthcare Data Protocols
 - Adapter for HTTP
 - Adapter for iSeries
 - Adapter for JDBC
 - Adapter for JMS
 - Adapter for JText
 - Adapter for Lotus Domino
 - Adapter for SWIFT
 - Adapter for TCP/IP
 - Adapter for Web Services
 - Adapter for WebSphere Commerce
 - Adapter for WebSphere MQ
 - Adapter for XML

Note:

1. Some adapters have corresponding Object Discovery Agents (ODAs), which are installed if those adapters are selected. With any adapter selection, the following components are also installed:
 - Data Handler for EDI
 - Data Handler for XML
 2. The Adapter for COM and Adapter for Exchange are supported only on the Windows 2003 platform. However, each of these adapters can be configured as a distributed adapter to communicate with InterChange Server Express installed on a Linux platform. For information on configuring distributed adapters, see the *System Implementation Guide*.
- Samples component, which installs a preconfigured sample called System Test that you can run to verify that your installation is installed and operating correctly.

Typical installation

To begin the Typical installation, follow these steps:

1. Select **Install Product** from the welcome screen.



Figure 2. Welcome screen

The Input User screen appears.

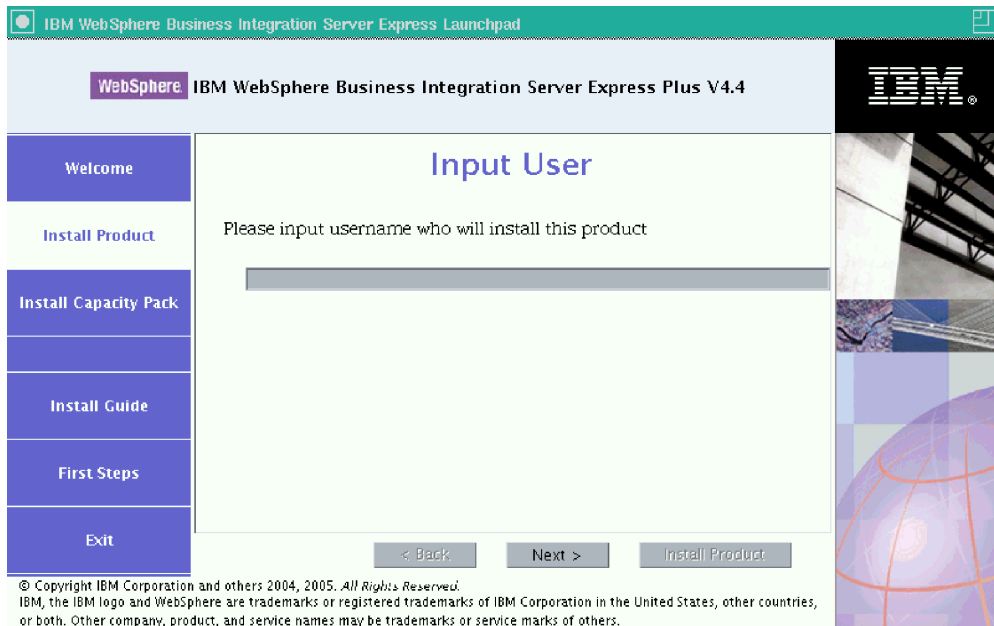


Figure 3. Input User screen

2. Type the user name of the user who will install WebSphere Business Integration Server Express or Express Plus (the user name you created by following the instructions in "Before you start" on page 3), and then select **Next**.
The Choose the Setup Type screen appears.
3. Select **Typical** from the Choose the Setup Type screen.

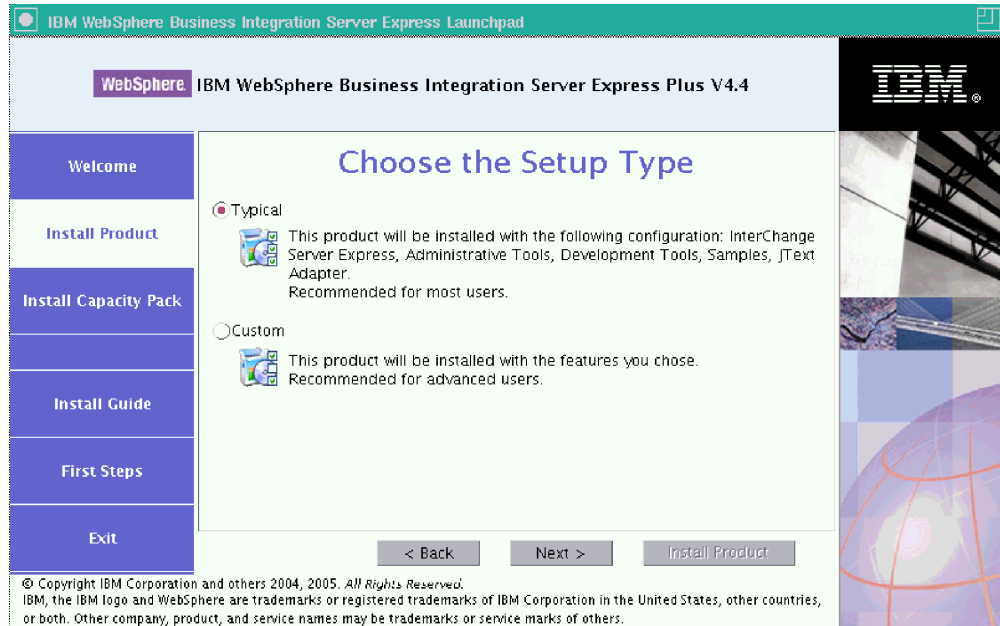


Figure 4. Choose the Setup Type screen

After you have selected Typical installation, the Software Prerequisites screen appears.

Note: IBM WebSphere Application Server - Express version 5.1.1 or higher is optional, but if you have not already installed a supported version of WebSphere Application Server Express or WebSphere Application Server and you want to use System Monitor, Failed Event Manager, or Web Deployment, you should choose to install IBM WebSphere Application Server - Express version 6 from the Software Prerequisites screen.

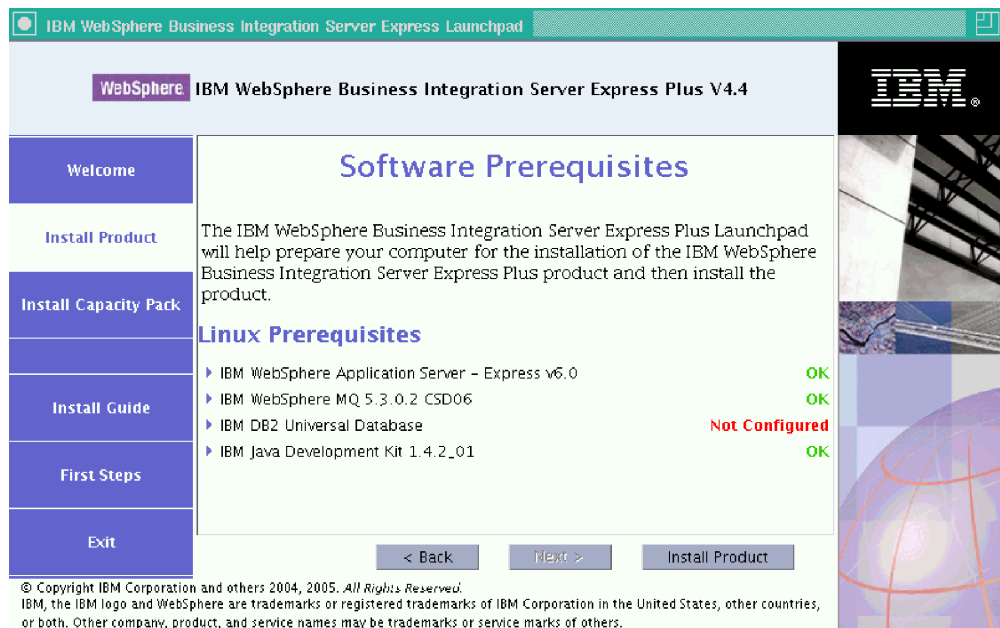


Figure 5. Software Prerequisites screen before installing selected prerequisites

4. The Launchpad displays the installation status of each prerequisite. Status values can include **Not Installed**, **Optional**, or **OK**, and for the database selection only, **Not Configured**.

If any software program you require for your system has a status of **Not Installed** or **Optional**, you can use the Launchpad to either install it or to direct you to where to obtain it.

To install a software program using Launchpad, click on the product name. An **Install** button becomes visible. Select the **Install** button to begin the installation of the program. When the installation process for the software program is complete, you will be returned to the Software Prerequisites screen and the program name will have **OK** next to it.

If you have a database installed and its status is **Not Configured**, you can use the Launchpad to configure it. Click on the database name to start configuration.

Note: If you already have earlier versions of the prerequisite software installed on this system, refer to Chapter 9, “Upgrading the system,” on page 49 for more detailed information about how the Launchpad will behave, and what you might need to do depending on the version.

For more information on the installation of software prerequisites, including why you may need to install certain prerequisites, refer to the section “Software prerequisites” on page 20.

Once the software prerequisites required for your planned installation each have a status of **OK**, select the button labeled **Install Product** located at the bottom of the screen.

The Software License Agreement screen appears.

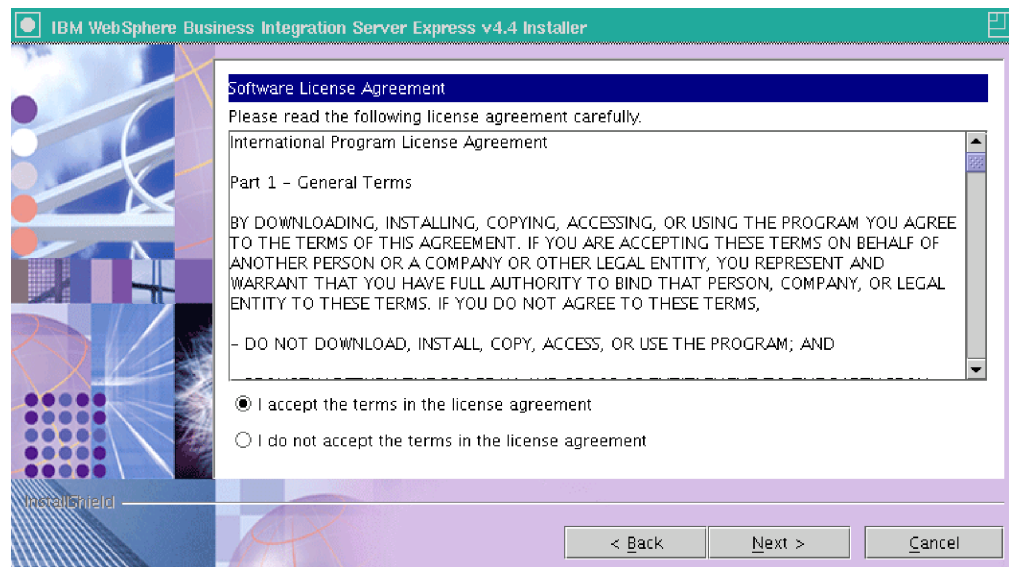


Figure 6. Software License Agreement screen

5. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

Note: If you are running the installer in a non-English locale, a button labeled **English** appears on the Software License Agreement screen. Select this button to view the software license agreement in English. The text of the

button then changes to the non-English language used for the installer. Select the button again to display the software license agreement in the non-English language used for the installer.

The Destination screen appears.

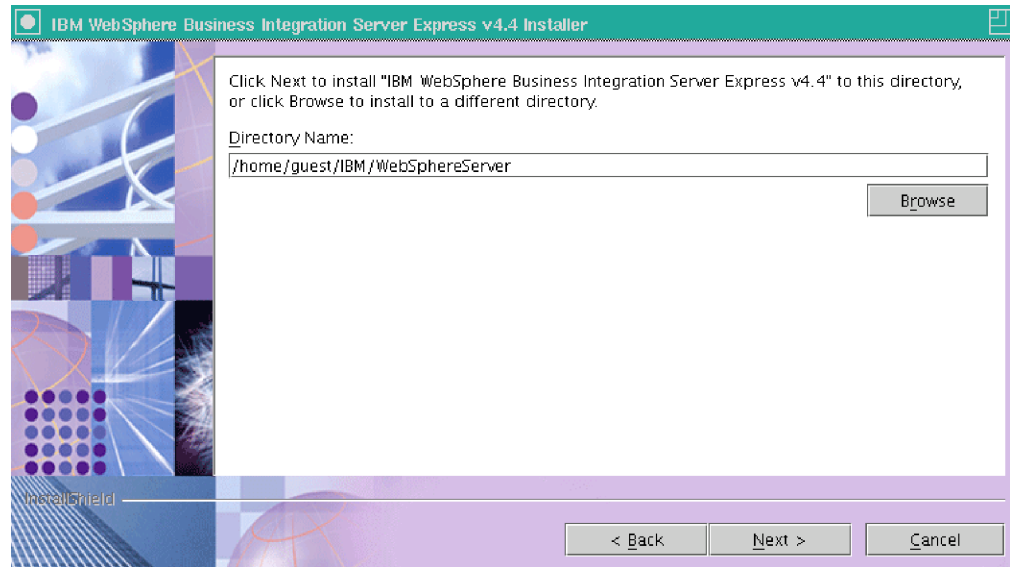


Figure 7. Destination screen

6. On the Destination screen, accept the default installation location of `Home_directory/IBM/WebSphereServer` (where *Home_directory* is the home directory of the user identified on the previous Select User screen) or browse for a different location, then select **Next**.

Note: The directory path must not contain any spaces. Throughout this document, the installation directory `Home_directory/IBM/WebSphereServer` (or the alternative path that you entered) will be referred to as *ProductDir*.

The RBAC screen appears.

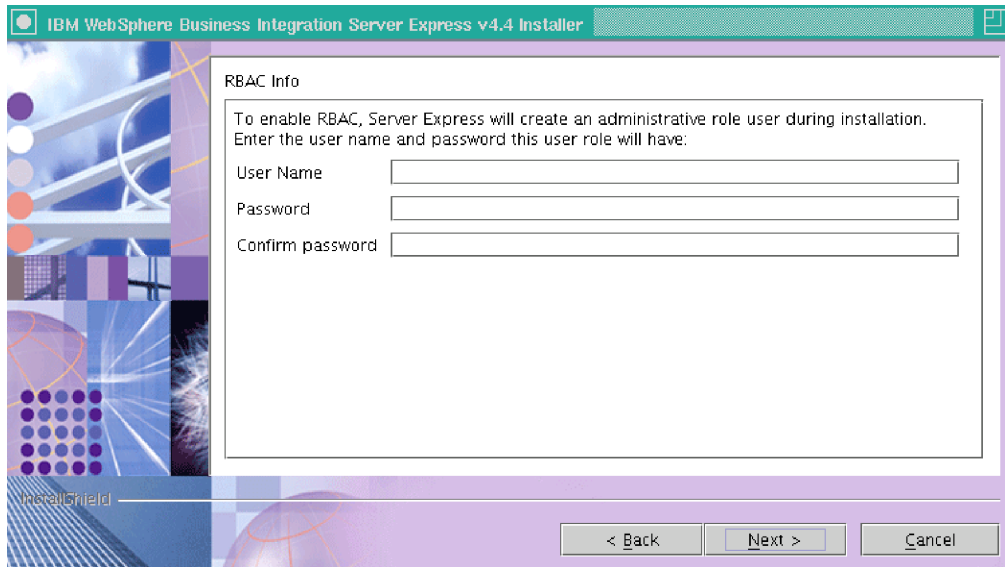


Figure 8. RBAC screen

7. To enable Role-Based Access Control (RBAC), enter a user name and password, then select **Next**.

One of the following occurs:

- If the prerequisite conditions are not met, an error message is displayed and you are forced to cancel the installation.
- If the prerequisite conditions are met, a summary screen appears.

Make note of the user name and password that you enter. You will need it later.

Note: RBAC enhances the security of server access. The user name and password provided will be used to create the server administrator role during deployment to the server. This information is stored in the `InterChangeSystem.cfg` file, with the password encrypted. Any additional roles or password changes regarding RBAC must subsequently be done through the System Manager.

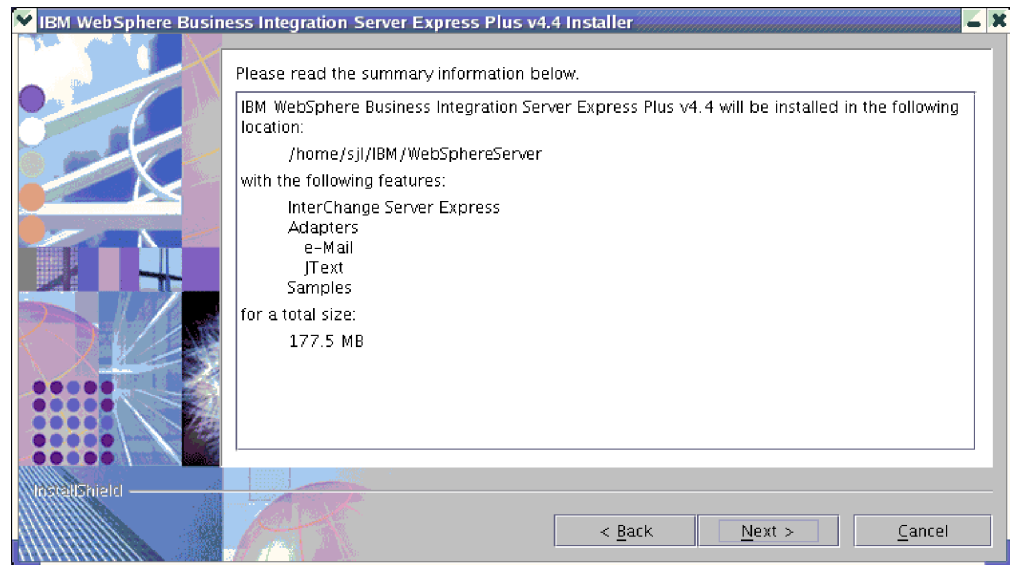


Figure 9. Summary screen

8. The summary screen provides a summary of the installation selections you have made. Read over the information to make sure it is correct, then select **Next**.

The installation process begins.

9. As the installation process begins, the installer verifies that enough disk space exists for the installation:
 - If enough space does not exist, a panel will be displayed with only the **Back** and **Cancel** buttons enabled since installation cannot be completed with the provided disk space. In this case, you must free some space on the specified drive, or change the target location altogether by revisiting the Destination screen.
 - If enough space does exist, installation and configuration begin. A number of informational screens are presented. When installation and configuration are complete, a screen appears that indicates whether the process was successful or if problems were encountered. Select **Finish** to exit the installation GUI.

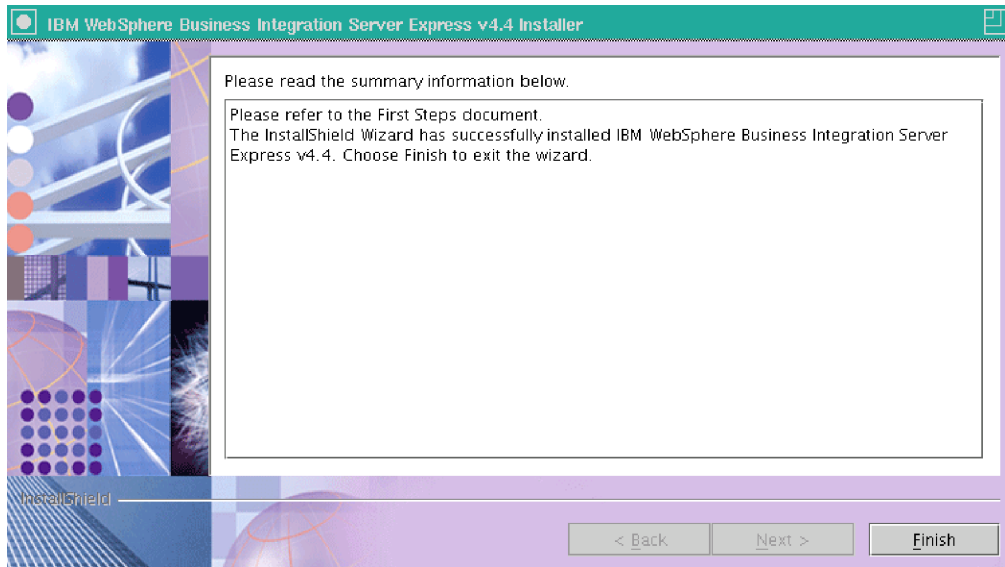


Figure 10. Post-installation summary screen

A window then appears informing you that the installation is complete and asks if you would like to launch the First Steps application. For more information on this application, refer to the section “Using First Steps” on page 22.

The installation process has completed the following:

- Installed product components.
- Configured the `InterchangeSystem.cfg` file used by the InterChange Server Express.
- Configured a queue manager for WebSphere MQ.
- Added a new system variable called `LD_ASSUME_KERNEL` to the `/etc/profile` file and set its value to 2.4.19.
- Provided platform-specific configuration and registration.
- Deployed content to the InterChange Server Express.

A log file is created during the installation process that details the installation process. It is located in the `wbi_server_exp_install_log.txt` file, which can be found in the `ProductDir/log` directory. At this point, you can view the files and directory structure of your system, as detailed in “Directory structure and files” on page 24.

Custom installation

This section describes the four component selection screens that are unique to the Custom installation. After you have navigated through these screens, see Step 4 on page 12 to complete the installation process.

Note: By some check boxes there are Help icons . Click on the icon for a description of the check box.

Selecting installation components

To communicate to the system which components you plan to install, perform the following steps:

1. Select the **Custom** radio button. The Install Server screen appears.

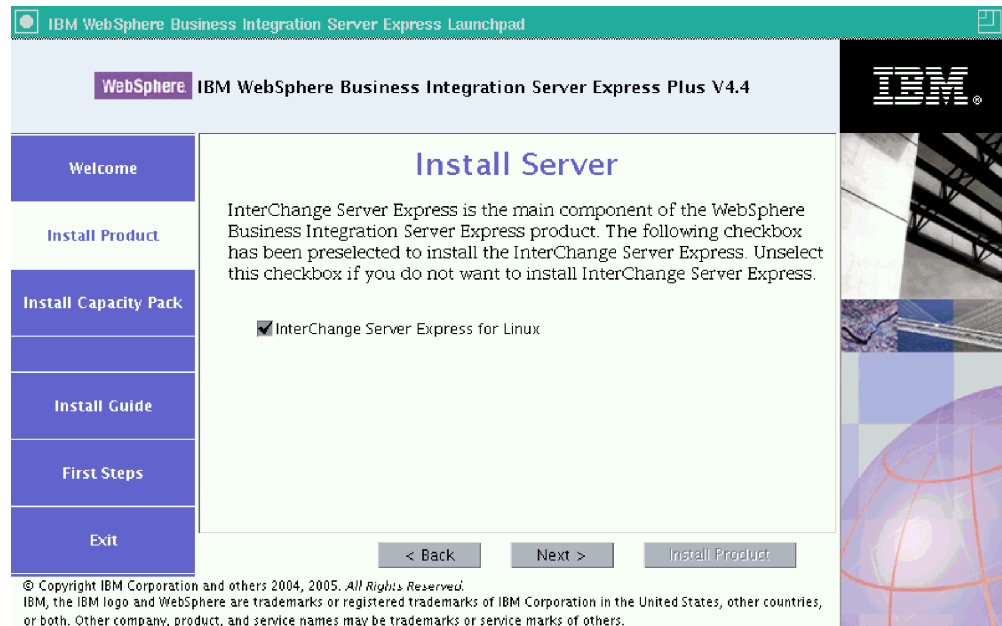


Figure 11. Install Server screen

2. On the Install Server screen, the check box beside the entry **InterChange Server Express for Linux** is selected by default. Do one of the following:
 - To install InterChange Server Express, select **Next**.
 - To *not* install InterChange Server Express, deselect the check box and select **Next**.

Note: If you choose to install InterChange Server Express, the Administrative tools are implicitly installed.
The Install Adapters screen appears.

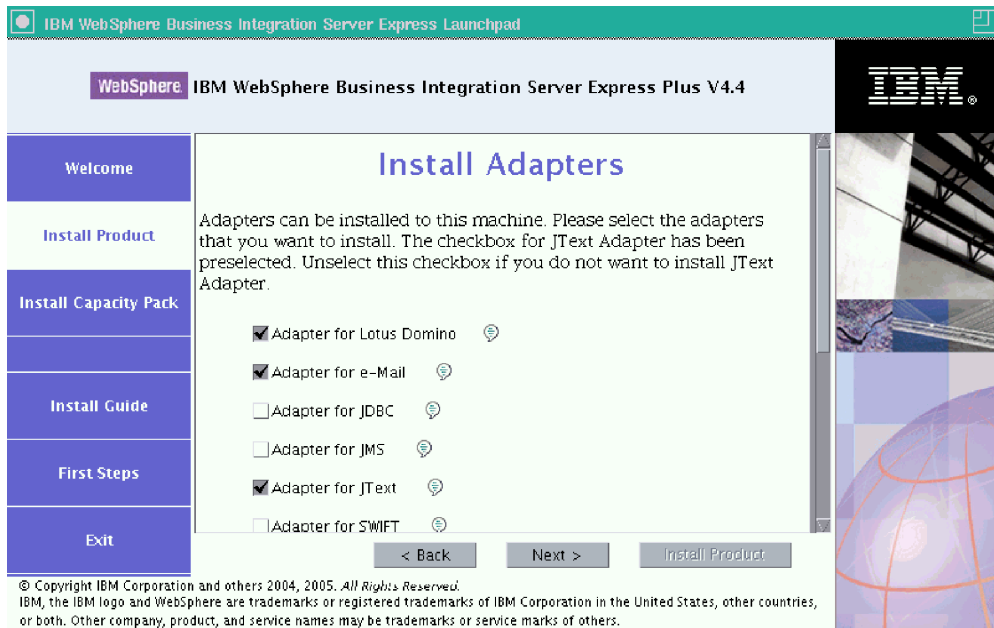


Figure 12. Install Adapters screen

3. On the Install Adapters screen, select the adapters you want to install. Select **Next**.

The Install Samples screen appears.

Note: The Adapter for JText is selected by default because it is required to run the System Test sample, which is part of the Samples component and is required to complete the Quick Validate process to verify the installation. For more information about Quick Validate, refer to Chapter 5, “Verifying the installation,” on page 33.

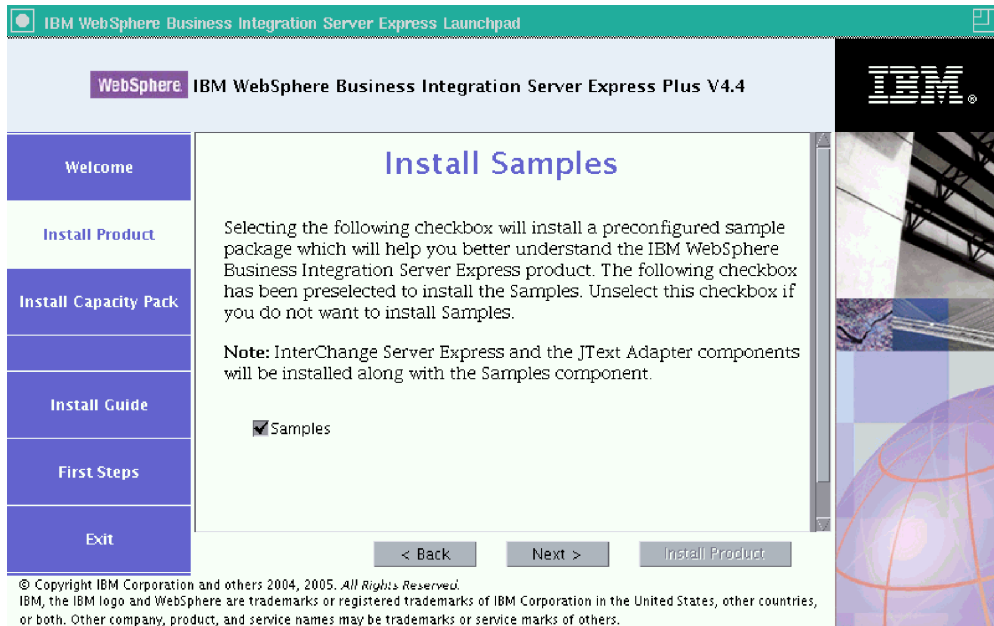


Figure 13. Install Samples screen

4. On the Install Samples screen, the check box beside the entry **Samples** is preselected by default. The samples are required for the Quick Validate process you can use to verify your system's installation.
 - To install the Samples component, select **Next**.

Note: The Samples component requires installation of the InterChange Server Express and the JText Adapter. Therefore, when you elect to install the Samples component, the InterChange Server Express and the JText Adapter are installed as well, regardless of whether you elected to install them in previous screens.

- To *not* install the Samples component, deselect the check box and select **Next**.

The Software Prerequisites screen appears.

For more information on the Software Prerequisites screen, refer to Step 4 on page 12. Follow the rest of the installation process as described in that section.

Note: If you are planning on using a remote IBM DB2 Universal Database, refer to "Installing the database with the Launchpad" on page 21.

Additional Custom installation information

During the Custom installation process, after you have selected the installation location from the Destination screen one of the following occurs:

- If you chose to install InterChange Server Express, the RBAC screen appears.
- If you did not select to install the InterChange Server Express component, the Name Server Configuration screen appears.

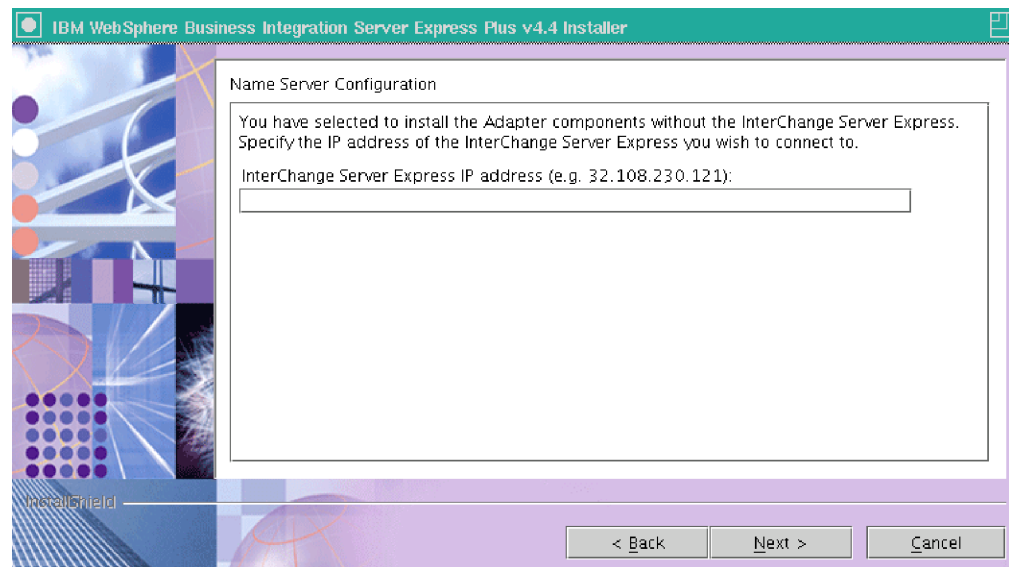


Figure 14. Name Server Configuration screen

On the Name Server Configuration screen, type the IP address of the computer on which you have installed or plan to install the InterChange Server Express component, and then select **Next** to begin the installation process.

The ORB_HOST key in the *ProductDir/bin/CWSharedEnv.sh* file contains the value of the IP address entered in this screen. Changing this value changes the location of where the WebSphere Business Integration Server Express and Express Plus looks for the InterChange Server Express.

Once you have completed this process, the RBAC screen will appear. Continue with the installation instructions as indicated in Step 7 on page 14.

Software prerequisites

For the Typical installation, it has already been determined whether these components are required or optional. For the Custom installation, the software prerequisites needed are based on the components you are installing. It identifies whether any or all are installed on your system, and posts the results of its analysis on the Software Prerequisites screen.

Table 1 lists the software prerequisites. The list that appears on your screen might contain all or some of the items, depending on which installation options you choose.

Table 1. Possible software prerequisites

| Prerequisite | Description |
|---|---|
| Java Development Kit 1.4.2 | Needed for collaboration and mapping development. |
| WebSphere MQ 5.3.0.2 CSD06 or a higher CSD level | Required for every installation of WebSphere Business Integration Server Express and Express Plus. |
| IBM DB2(R) Universal Database(TM) Express or Enterprise version 8.1 with Fix Pack 5 (FP5) or higher and 8.2 | Required to store the server's content. |
| WebSphere Application Server version 5.1.1 or higher | Needed if you plan to install System Monitor, Failed Event Manager, or Web Deployment. For more information, see Chapter 8, "Manually configuring web-based tools," on page 43. |
| Tomcat 4.1.24 and 4.1.27 | Only needed if you plan to install System Monitor, Failed Event Manager, or Web Deployment but not use WebSphere Application Server version 5.1.1 or higher. For more information, see Chapter 8, "Manually configuring web-based tools," on page 43. |
| Web browser on remote machine | Required if you plan to use System Monitor, Failed Event Manager, or Web Deployment. |

If you previously installed the appropriate database version, make sure that it is configured correctly, as indicated in the section "Database installation and configuration" on page 21.

If you already have earlier versions of the prerequisite software installed on this system, refer to Chapter 9, "Upgrading the system," on page 49 for more detailed information about how the Launchpad will behave, and what you might need to do depending on the version.

Database installation and configuration

This section provides additional information you may need when installing or configuring a database. If you use Launchpad to install the database it is automatically configured as required with WebSphere Business Integration Server Express or Express Plus.

Database requirements

WebSphere Business Integration Server Express and Express Plus support IBM DB2 Universal Database (UDB) Express or Enterprise version 8.1 with FP5 or higher and 8.2. IBM DB2 Express or Enterprise must be configured to meet the following criteria:

- WebSphere Business Integration Server Express or Express Plus 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 `maxapps` 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.

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

Installing the database with the Launchpad

The information below will help you with installing a database using Launchpad.

- If no supported database is installed, a button is offered to launch installation of an IBM DB2 UDB version 8.2 Express.

If you are performing a Custom installation, you have the option of selecting to use a local or remote database. If you want to use a local database, follow these steps:

1. Select **Using local Database** and then **Continue**.
2. Create a user name and password on the following screen, and select **Continue**.

The Launchpad then installs and configures the database.

If you want to use a remote database, follow these steps:

1. Select **Using Remote Database** and then **Continue**.
2. Enter the user name and password used on the remote database and select **Continue**.

Note: Before you can use a remote database, you must have a valid DB2 client installed, and you must already be connected to the remote database using the alias `SMB_DB`.

The Launchpad then verifies that a connection can be made to the remote `SMB_DB` database. If it cannot, you will receive an error message and the option to change the information you provided. If it can, the Launchpad then configures the database.

- If IBM DB2 Express or Enterprise version 8.1 FP5 or higher or 8.2 is already installed, a button is offered to launch configuration of the existing installation.

- After IBM DB2 Express or Enterprise is successfully configured, you will see a message that the database configuration is complete. The configuration process does the following:
 - Create the following DB2 users:
 - db2inst1
 - db2fenc1
 - dasusr1
 - Creates a database named SMB_DB.
 - Grants the appropriate authorities to the user name you selected when configuring or installing the database.

Installing a Web browser on a remote machine

A Web browser is required if you intend to install System Monitor, Failed Event Manager, and Web Deployment. This browser must exist and be reachable on a remote machine running on a Windows platform. For a list of supported web browsers, refer to <http://www.ibm.com/software/integration/wbiserverexpress>.

Using First Steps

The First Steps application is a single interface from which you can use and manage WebSphere Business Integration Server Express or Express Plus.

First Steps can be launched from the Launchpad, the CD, or configured to open when the computer is started. If WebSphere Business Integration Server Express or Express Plus has not been installed at the point when First Steps is launched, then most of the First Steps functionality will be disabled and you will be directed to first install the product.

This section contains information on the uses of this application and a breakdown of its various components.

Welcome

The welcome screen is opened by default when the First Steps application is launched. This screen has a check box for specifying if First Steps should be launched the next time the computer is rebooted. The check box is selected by default. If you uncheck the check box, you must manually start First Steps by issuing the `ProductDir/bin/first_steps.sh` command after your computer has been started. This check box will be disabled if First Steps is launched from the CD and WebSphere Business Integration Server Express or Express Plus is not yet installed on the machine.



Figure 15. First Steps welcome screen

Quick Validate

Clicking this brings up the Quick Validate online help, which guides you through validating that the installation completed successfully.

Start Server or Stop Server

Clicking this either stops or starts the InterChange Server Express. If you are stopping the server, you will be prompted for your InterChange Server Express user name and password.



Figure 16. Start Server screen

Product Information

Clicking this launches a web browser to a URL for the WebSphere Business Integration Information Center.

Exit

Clicking this exits the First Steps application.

Directory structure and files

After WebSphere Business Integration Server Express or Express Plus is installed, you can view the resulting file system and its contents. The directories are located by default under the `Home_directory/IBM/WebSphereServer` directory, which is referred to as *ProductDir* throughout this document.

Note: The particular files and directories that appear in *ProductDir* depend on the components selected during installation. The files and directories in your installation might differ from the ones listed below.

Table 2. Directory structure of WebSphere Business Integration Server Express and Express Plus installations

| Directory name | Contents |
|---|--|
| <ul style="list-style-type: none"> • <code>_uninstWBIServerExp4.4</code> (in WebSphere Business Integration Server Express installations) • <code>_uninstWBIServerExpPlus4.4</code> (in WebSphere Business Integration Server Express Plus installations) | This directory contains the Java Virtual Machine (JVM) and the executable file that is used to remove WebSphere Business Integration Server Express or Express Plus. |
| <code>_uninstZip</code> | This directory contains a listing of all files unzipped during installation. |

Table 2. Directory structure of WebSphere Business Integration Server Express and Express Plus installations (continued)

| Directory name | Contents |
|-----------------|--|
| AdapterJRE | This directory contains the IBM Java Runtime Environment (JRE) files used by the adapters. |
| bin | This directory contains the executable and .sh files that the system uses. |
| 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 file for the data handler that the system 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 Express maps. |
| FirstSteps | Contains the First Steps files along with the Quick Validate files. |
| jre | This directory contains the IBM Java Runtime Environment (JRE) files. |
| legal | This directory contains the license files. |
| lib | This directory contains .jar files for the system. |
| log | This directory contains various log files. |
| 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 system components. |
| Samples | This directory contains component definitions for benchmarking samples and sample mail files for collaborations. |
| src | This directory contains samples of Relationship Service APIs for cross-referencing. |
| templates | This directory contains the start_connName.sh file. |
| WBFEM | This directory contains the Failed Event Manager files. |
| wbiart | This directory contains the file pertaining to the adapter runtime. |
| WBSM | This directory contains the System Monitor files. |
| WBWD | This directory contains the Web Deployment files. |

Installing additional components after initial installation

After you have installed WebSphere Business Integration Server Express or Express Plus, you can later install additional components. To do this, select the **Install Product** button from the left panel of the Launchpad. The Launchpad then offers screens from which you can select components to install, as detailed in “Custom

installation” on page 16. If you have already installed some components from a particular screen, the screen appears but the check boxes beside components that are already installed are disabled.

Important: The user who installs the additional components must be the same user who installed the product. Problems with permissions can result if the same user does not perform both tasks.

The Launchpad determines whether additional software prerequisites are required based on your new selections and leads you through their installation as well as the installation of the new WebSphere Business Integration Server Express or Express Plus components.

Uninstalling WebSphere Business Integration Server Express and Express Plus using the GUI

IBM provides an uninstallation GUI program that lets you remove your entire WebSphere Business Integration Server Express or Express Plus installation, or select specific components for removal. The uninstaller program does not uninstall the software prerequisites. You have to do this manually, according to the instructions provided with the specific prerequisite.

Important: The user who uninstalls the product must be the same user who installed the product. Problems with permissions can result if the same user does not perform both tasks.

To run the uninstallation GUI, do the following:

1. Enter one of the following commands to launch the uninstallation GUI, depending on whether you have installed WebSphere Business Integration Server Express or Express Plus:
 - *ProductDir/_uninstWBIServerExp4.4/uninstaller.bin* on WebSphere Business Integration Server Express systems.
 - *ProductDir/_uninstWBIServerExpPlus4.4/uninstaller.bin* on WebSphere Business Integration Server Express Plus systems.

The uninstallation welcome screen appears.

2. On the uninstallation welcome screen, select **Next**.
The uninstallation feature screen appears. The installed components appear with checks next to them.
3. On the uninstallation feature screen, leave any components selected that you want to be removed and select **Next**.
A pre-uninstallation summary screen appears.
4. On the pre-uninstallation summary screen, select **Next** to confirm your selections. The uninstaller removes the selected components.
The post-uninstallation finish screen appears.
5. On the post-uninstallation finish screen, select **Finish** to exit the uninstallation GUI.

Note: You might need to manually delete the *Home_directory/IBM/WebSphereServer* directory.

Taking the next step

After you have successfully installed your software prerequisites and WebSphere Business Integration Server Express or Express Plus, proceed to Chapter 4, “Starting and administering the WebSphere Business Integration Server Express or Express Plus system,” on page 29.

By first following the instructions in Chapter 4, “Starting and administering the WebSphere Business Integration Server Express or Express Plus system,” on page 29 and then Chapter 5, “Verifying the installation,” on page 33, even if you plan to install an Adapter or Collaboration Capacity Pack for a WebSphere Business Integration Server Express Plus installation, you will verify that your base system is installed and operating properly before you install additional components.

Chapter 4. Starting and administering the WebSphere Business Integration Server Express or Express Plus system

To start your system, you must launch the InterChange Server Express component of WebSphere Business Integration Server Express or Express Plus. To efficiently manage the system, you must launch the System Manager tool on a connected Windows machine and register the InterChange Server Express with the System Manager. The System Manager is supported only on Windows 2003 and Windows XP platforms.

Note: You can perform the tasks described in this chapter from either the First Steps application or the Windows Start menu. This chapter describes how to start various components using Linux commands and System Manager. Starting them from First Steps is also acceptable.

This chapter contains the following sections:

- “Starting WebSphere Business Integration Server Express or Express Plus”
- “Setting up InterChange Server Express” on page 30
- “Taking the next step” on page 32

Starting WebSphere Business Integration Server Express or Express Plus

To start WebSphere Business Integration Server Express or Express Plus, do the following:

1. Start the WebSphere MQ queue manager and listener by entering the following commands:

```
/opt/mqm/bin/strmqm WebSphereICS.queue.manager  
/opt/mqm/bin/runmqtsr -t TCP -p 1414 -m WebSphereICS.queue.manager
```

Note: To process business objects larger than 4 MB in WebSphere MQ, you must change the default value for the **Maximum Message Length** property of the queue manager, queue, and channel you want to use. To change these values, do the following:

- a. Enter the following commands:

```
ALTER QMGR MAXMSGL(104857600)  
ALTER QLOCAL(queue_name) MAXMSGL(104857600)  
DEFINE CHANNEL(channel_name) CHLTYPE(SVRCONN) TRPTYPE(TCP) \\  
MAXMSGL(104857600)
```

- b. Shut down and restart WebSphere MQ.

2. Enter the following command to start the InterChange Server Express and Persistent Naming Server:

```
ProductDir/bin/ics_manager -start
```

To verify that the server is running and ready, in the InterChangeSystem.log file in *ProductDir*, check for the following message:

```
InterChange Server "WebSphereICS" is ready
```

Setting up InterChange Server Express

To efficiently manage InterChange Server Express, you must register it with and connect to it through System Manager. The following sections describe how to perform these tasks:

- “Starting System Manager on the remote Windows machine”
- “Registering InterChange Server Express with System Manager”
- “Connecting to InterChange Server Express” on page 31
- “Changing the InterChange Server Express password” on page 31
- “Restarting InterChange Server Express” on page 31

Starting System Manager on the remote Windows machine

System Manager is the GUI to InterChange Server Express and the repository. It runs only on Windows XP and Windows 2003 platforms.

To start System Manager, on the remote Windows machine, select **Start > Programs > IBM WebSphere Business Integration Express > Toolset Express > Administrative > System Manager**.

Note: The System Manager perspective should appear by default. If it does not, select **Window > Open Perspective > Other** in the IBM Eclipse SDK menu bar, and then double-click **System Manager** to start System Manager.

Registering InterChange Server Express with System Manager

System Manager can manage instances of InterChange Server Express. You must register any instance you want to manage with System Manager. After you register the server, its name always appears in System Manager, unless you remove it.

To register an InterChange Server Express instance, follow these steps:

1. Ensure that the Windows client hosting the System Manager can access the Name Server correctly by checking that the ORB_HOST property in the *ProductDir\bin\CWSharedEnv.bat* file is set to the IP address of the machine running the InterChange Server Express. If it is not, set this value by entering the following on a command line on the Windows client:

```
set ORB_HOST=IP_address
```

Note: Alternatively, you can set `ORB_HOST=machine_name` and then add the line `IP_address machine_name` to the `%windir%\system32\drivers\etc\hosts` file. In this example, *IP_address* is the IP address of the machine hosting the InterChange Server Express; *machine_name* is the name of the machine hosting the InterChange Server Express.

2. Ensure that the Name Server can correctly retrieve by name the InterChange Server Express on the Linux machine by checking the `/etc/hosts` file on the Linux machine for entries similar to
ip_address localhost.localdomain localhost
3. In System Manager, right-click **InterChange Server Instances** in the left pane, then select **Register Server**.
4. In the **Register new server** dialog box, browse for or enter the name of the InterChange Server Express.

Note: Select the **Test Server** check box if you intend to use the server in an integrated test environment. An integrated test environment communicates only with servers that are registered as local test servers.

5. Type the user name and password and select the **Save User ID and Password** check box. This has to be the same user name and password you entered at the RBAC screen during the Launchpad installation process.
6. Select **OK**.

The server name appears in the left pane of the System Manager window. If it does not, expand the InterChange Server Instances folder.

Connecting to InterChange Server Express

Verify that the registered InterChange Server Express is running by connecting to it. To connect to InterChange Server Express using System Manager, follow these steps:

1. In the System Manager, right-click the name of the InterChange Server Express in the left pane and select **Connect**.
2. Select **OK** on the Server User ID and Password confirmation screen.

Tip: If the icon beside the name of the InterChange Server Express in the left pane of System Manager is green in color, the InterChange Server Express is already connected to System Manager.

Changing the InterChange Server Express password

InterChange Server Express is protected by a password that only the InterChange Server Express administrator knows. The password was created on the RBAC screen during installation. If you want to change the password for security reasons, you can do so after setting up the system.

To change an InterChange Server Express password, follow these steps:

1. In System Manager, right-click the InterChange Server Express name in the left pane, then select **Reset Password**.
2. In the dialog that opens, select the user name, type the old password, the new password, re-enter the new password to confirm it, and then select **OK**.

Restarting InterChange Server Express

For password changes to take effect, you must shut down InterChange Server Express, then restart it by doing the following:

1. In System Manager, right-click the running InterChange Server Express name in the left pane and select **Shut Down**.
2. On the Shut Down Server dialog box, either shut down the server gracefully, after allowing it to finish current work, or shut it down immediately, without performing cleanup.
Select **Gracefully**, then select **OK**.

Note: Select **Immediately** only when you must shut down the server without waiting.

3. Restart InterChange Server Express by entering the following command:
`ProductDir/bin/ics_manager -start`
4. Connect to InterChange Server Express by right-clicking the InterChange Server Express name in System Manager. In the dialog that opens, enter the user name and password for the server and select **OK**.

Taking the next step

Your installation of WebSphere Business Integration Server Express or Express Plus is complete. Do one of the following:

- If you installed the Samples component during installation of WebSphere Business Integration Server Express or Express Plus and want to verify that your installation is installed and operating correctly, proceed to Chapter 5, “Verifying the installation,” on page 33.
- If you did not install the Samples component during installation of WebSphere Business Integration Server Express or Express Plus, do one of the following:
 - If you do not need to install optional Adapter or Collaboration Capacity Packs for a WebSphere Business Integration Server Express Plus installation, proceed to the *System Implementation Guide* for information on configuring the adapters that you chose during installation.
 - If you need to install an optional Adapter Capacity Pack, proceed to Chapter 6, “Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 35.
 - If you need to install an optional Collaboration Capacity Pack, proceed to Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39.
- If you installed WebSphere Business Integration Server Express V4.4 and are upgrading to Express Plus V4.4, refer to the information in Chapter 9, “Upgrading the system,” on page 49.

Chapter 5. Verifying the installation

If you installed the Samples component during installation of WebSphere Business Integration Server Express or Express Plus, you have a sample called System Test with which you can verify the operation of your installed system.

This chapter contains the following sections:

- “Quick Validate”
- “Taking the next step”

Quick Validate

To verify that your system is installed and operating properly, run the System Test sample. Instructions on running the sample are available from the Quick Validate online help, available by selecting the **Quick Validate** button from First Steps.

Note: It is recommended that you run the System Test sample *before* you install Adapter or Collaboration Capacity Packs.

After successfully running the sample, return to this section and review the information in “Taking the next step.”

Taking the next step

Your installation of WebSphere Business Integration Server Express or Express Plus is complete and verified. Do one of the following:

- If you do not need to install optional Adapter or Collaboration Capacity Packs for a WebSphere Business Integration Server Express Plus installation, proceed to the *System Implementation Guide* for information on configuring the adapters that you chose during installation.
- If you need to install an optional Adapter Capacity Pack for a WebSphere Business Integration Server Express Plus installation, proceed to Chapter 6, “Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 35.
- If you need to install an optional Collaboration Capacity Pack for a WebSphere Business Integration Server Express Plus installation, proceed to Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39.
- If you installed WebSphere Business Integration Server Express V4.3.1 and are upgrading to Express Plus V4.3.1, refer to the information in Chapter 9, “Upgrading the system,” on page 49.

Chapter 6. Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus

The Launchpad provides a way to launch the GUI installer that leads you through installation of an application adapter from the Adapter Capacity Pack. A second GUI is available to uninstall the product. Silent installation and uninstallation are also possible.

This chapter contains the following sections:

- “Installing an Adapter Capacity Pack using the GUI”
- “Uninstalling the Adapter Capacity Pack using the GUI” on page 37
- “Taking the next step” on page 37

See “Silently installing and uninstalling,” on page 67 for instructions on performing silent installation and uninstallation.

Installing an Adapter Capacity Pack using the GUI

To successfully install an application adapter from the Adapter Capacity Pack, you and your system must meet the following prerequisites:

- WebSphere Business Integration Server Express must not be installed on the same machine on which you are installing the adapter. (Adapters supplied with Adapter Capacity Packs can be used only with an existing WebSphere Business Integration Server Express Plus installation.)
- If the adapter will not be installed on the same machine as InterChange Server Express, an installation of WebSphere MQ 5.3.0.2 CSD06 Client for Linux must exist on the same machine on which the adapter will be installed.

The installation GUI supplied with the Adapter Capacity Pack installs only one adapter at a time (thus, you must run the Adapter Capacity Pack installer separately for each adapter you want to install). For a list of adapters, refer to the section “Deciding which adapter to install” on page 36.

To invoke the Launchpad to launch the installation GUI, do the following:

1. Select the button labeled **Install Capacity Pack** from the left column of the Launchpad.

The Install Capacity Pack screen appears with two buttons.

2. Select **Install Adapter Capacity Pack** to launch the GUI to install an application adapter from the Adapter Capacity Pack.

The Input User screen appears.

3. On the Input User screen, type the name of the user who will install the Adapter Capacity Pack, and then select **Install Products**. A dialog appears, which requests that you insert the appropriate CD into the machine.

The welcome screen appears.

4. At the welcome screen, select **Next**.

The Software License Agreement screen appears.

5. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

The installer checks that the prerequisites listed at the beginning of this section have been met. If any have not been met, it forces you to cancel the installation by selecting the **Cancel** button. If all prerequisites have been met, the feature screen appears.

6. On the feature screen, select one adapter from the list of available adapters, by selecting the radio button beside its name, then select **Next**. For more information about which adapter to select, see the section “Deciding which adapter to install.”

One of the following screens appears:

- If the InterChange Server Express is installed on the local machine, a pre-installation summary screen appears. In this case, proceed to Step 9.
- If the InterChange Server Express exists on a remote machine, the Server IP Address Configuration screen appears. In this case, proceed to Step 7.

7. On the Server IP Address Configuration screen, type the IP address of the computer on which you have installed InterChange Server Express. If the InterChange Server Express is on an OS/400 or i5/OS system, select the check box beside the entry **InterChange Server Express is on OS/400**, then select **Next**.

One of the following screens appear:

- If you selected the check box beside the entry InterChange Server Express is on OS/400 or i5/OS, the Server Name Configuration screen appears. In this case, proceed to Step 8.
- If you did not select the check box beside the entry InterChange Server Express is on OS/400 or i5/OS, proceed to Step 9.

8. On the Server Name Configuration screen, do the following:
 - a. Type the name of the InterChange Server Express instance on the OS/400 or i5/OS system. (The default is QWBIDFT44. If you created a different name for your instance, type it instead.)
 - b. Type the ORB port number. (The default is 14500. If you used a different port number, type it instead.)

Then select **Next**.

A pre-installation summary screen appears.

9. On the pre-installation summary screen, review your selection and installation location and select **Next**.

The installer verifies that enough disk space exists for the installation. Installation then proceeds, as follows:

- If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and free some space on the specified drive.
- If enough space does exist, installation and configuration begin. A post-installation summary screen appears, which indicates if the process was successful or if problems were encountered.

10. On the post-installation summary screen, select **Finish** to exit the installation GUI.

Deciding which adapter to install

Running the Adapter Capacity Pack installer allows you to choose one adapter component from the following:

- Adapter for eMatrix

- Adapter for mySAP.com
- Adapter for Oracle Applications
- Adapter for WebSphere Commerce

Note: Some adapters have corresponding Object Discovery Agents (ODAs), which are installed if those adapters are selected. With any adapter selection, the following components are also installed:

- XML Data Handler
- Adapter Framework

For descriptions of individual adapters, see the adapter documentation at the following Web site: <http://www.ibm.com/websphere/wbi/serverexpress/infocenter>.

Uninstalling the Adapter Capacity Pack using the GUI

IBM provides an uninstallation GUI program that lets you remove your Adapter Capacity Pack installation.

To run the uninstallation GUI, do the following:

1. Enter the following command to launch the uninstallation GUI:
`ProductDir/_uninstAdapterCP4.4/uninstall.bin`
 The uninstallation welcome screen appears.
2. On the uninstallation welcome screen, select **Next**.
 The uninstallation feature screen appears. The installed components appear with checks next to them.
3. On the uninstallation feature screen, leave any components selected that you want to be removed and select **Next**.
 A pre-uninstallation summary screen appears.
4. On the pre-uninstallation summary screen, select **Next**.
 The uninstaller removes the selected components and a post-uninstallation summary screen appears.
5. On the post-uninstallation summary screen, select **Finish** to exit the uninstallation GUI.

Taking the next step

Do one of the following, depending on whether you plan to install a collaboration from the Collaboration Capacity Pack:

- If you need to install a collaboration from the Collaboration Capacity Pack, proceed to Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39.
- If you do not need to install a collaboration from the Collaboration Capacity Pack, proceed to the *System Implementation Guide* for information on configuring the adapters that you chose during installation of WebSphere Business Integration Server Express Plus and this Adapter Capacity Pack.

Chapter 7. Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus

Installing an optional collaboration from the Collaboration Capacity Pack allows use of *one* collaboration group with a WebSphere Business Integration Server Express Plus installation. (Collaborations from the Collaboration Capacity Packs cannot be used with WebSphere Business Integration Server Express installations.) Only one collaboration from the Collaboration Capacity Pack can be installed for use with one WebSphere Business Integration Server Express Plus installation.

The Launchpad provides a way to launch the GUI installer that leads you through installation of a collaboration from the Collaboration Capacity Pack. A second GUI is available to uninstall the product. Silent installation and uninstallation are also possible.

This chapter contains the following sections:

- “Installing the Collaboration Capacity Pack using the GUI”
- “Uninstalling the Collaboration Capacity Pack using the GUI” on page 41
- “Taking the next step” on page 42

See “Silently installing and uninstalling,” on page 67 for instructions on performing silent installation and uninstallation.

Installing the Collaboration Capacity Pack using the GUI

To successfully install a collaboration from the Collaboration Capacity Pack, you and your system must meet the following prerequisites:

- You must have WebSphere Business Integration Server Express Plus installed on the machine on which you are installing a collaboration from the Collaboration Capacity Pack (a collaboration from the Collaboration Capacity Pack cannot be installed with a WebSphere Business Integration Server Express installation).
- A collaboration from the Collaboration Capacity Pack must be installed on the same machine on which the InterChange Server Express is installed.
- You cannot have an existing Collaboration Capacity Pack installation on the machine.
- The InterChange Server Express component must *not* be running.

The Collaboration Capacity Pack installation GUI installs the selected collaboration group and deploys the installed content to the InterChange Server Express.

To invoke the Launchpad to launch this installation GUI, do the following:

1. Select the button labeled **Install Capacity Pack** from the Launchpad.
The Install Capacity Pack screen appears with two buttons.
2. Select **Install Collaboration Capacity Pack** to launch the GUI to install a collaboration from the Collaboration Capacity Pack. The Launchpad first checks if the InterChange Server Express component of WebSphere Business Integration Server Express Plus is installed on the local machine. It then acts, as follows:
 - If the InterChange Server Express component is not installed on the local machine, a warning dialog alerts you that installation can fail. Select **Cancel**

- to cancel the installation or **Install** to continue the installation. If you elect to continue the installation, the welcome screen appears.
- If the InterChange Server Express component is installed on the local machine, the welcome screen appears.
3. At the welcome screen, select **Next**.
The Software License Agreement screen appears.
 4. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.
The installer checks that the prerequisites listed at the beginning of this section have been met. If any have not been met, it forces you to cancel the installation by selecting the **Cancel** button. If all prerequisites have been met, the feature screen appears.
 5. On the feature screen, select one collaboration group from the list of available collaboration groups, by selecting the radio button beside its name, then select **Next**. For more information on the collaboration groups selectable from this screen, see “Deciding which collaboration group to install.”
The RBAC Info screen appears.
 6. On RBAC Info screen, you are asked to indicate whether you have role-based access control enabled. Perform one of the following options:
 - If you do, select the radio button next to **Yes**, and fill out the user name and password information that you created during the installation process. Then select **Next**.
 - If you do not, select the radio button next to **No** and select **Next**.A pre-installation summary screen appears.
 7. On the pre-installation summary screen, review your selection and installation location and select **Next**.
The installer verifies that enough disk space exists for the installation. Installation then proceeds, as follows:
 - If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and free some space on the specified drive.
 - If enough space does exist, installation and configuration begin. When installation and configuration are complete, a post-installation summary screen appears, which indicates if the process was successful or if problems were encountered.
 8. On the post-installation summary screen, select **Finish** to exit the installation GUI.

Deciding which collaboration group to install

Installing a collaboration from the Collaboration Capacity Pack allows you to choose one collaboration group from the following:

- Collaborations for Customer Relationship Management V1.0
- Collaborations for Financials and Human Resources V1.0
- Collaborations for Order Management V1.0
- Collaborations for Procurement V1.0

Each collaboration group is made up of several individual collaborations, as follows:

- Collaborations for Customer Relationship Management V1.0

- Collaboration for Contact Manager
- Collaboration for Contract Sync
- Collaboration for Customer Manager
- Collaboration for Customer Credit Manager
- Collaboration for Installed Product
- Collaboration for Billing Inquiry
- Collaboration for Vendor Manager
- Collaborations for Financials and Human Resources V1.0
 - Collaboration for AR Invoice Sync
 - Collaboration for Department Manager
 - Collaboration for Employee Manager
 - Collaboration for GL Movement
 - Collaboration for Invoice Generation
- Collaborations for Order Management V1.0
 - Collaboration for ATP To Sales Order
 - Collaboration for Available To Promise
 - Collaboration for Item Manager
 - Collaboration for Price List Manager
 - Collaboration for Sales Order Processing
 - Collaboration for Order Billing Status
 - Collaboration for Order Delivery Status
 - Collaboration for Order Status
 - Collaboration for Return Billing Status
 - Collaboration for Return Delivery Status
 - Collaboration for Return Status
 - Collaboration for Contact Manager
 - Collaboration for Customer Manager
 - Collaboration for Trading Partner Order Management
- Collaborations for Procurement V1.0
 - Collaboration for Inventory Level Manager
 - Collaboration for Inventory Movement
 - Collaboration for BOM Manager
 - Collaboration for Purchasing
 - Collaboration for Vendor Manager

The installer installs all files associated with the collaboration group, including a set of generic business objects that all collaborations use. You can download, install, and view documentation about the individual collaborations at the following site: <http://www.ibm.com/websphere/wbi/serverexpress/infocenter>.

Uninstalling the Collaboration Capacity Pack using the GUI

IBM provides an uninstallation GUI program that lets you remove your Collaboration Capacity Pack installation. To run the uninstallation GUI, do the following:

1. Enter the following command to launch the uninstallation GUI:

```
ProductDir/_uninstCollabCP4.4/uninstall.bin
```

- The uninstallation welcome screen appears.
2. On the uninstallation welcome screen, select **Next**.
A pre-uninstallation summary screen appears.
 3. On the pre-uninstallation summary screen, select **Next**. The uninstaller removes the components.
A post-uninstallation summary screen appears.
 4. On the post-uninstallation summary screen, select **Finish** to exit the uninstallation GUI.

Taking the next step

After you have successfully installed a Collaboration Capacity Pack for a WebSphere Business Integration Server Express Plus installation, proceed to the *System Implementation Guide* for information on the following:

- Configuring the adapters that you chose during installation of WebSphere Business Integration Server Express Plus or an optional Adapter Capacity Pack.
- Configuring collaboration objects, business objects, and maps.
- Deploying objects to the repository.

Chapter 8. Manually configuring web-based tools

The web-based tools discussed in this chapter consist of the following tools:

- System Monitor
- Failed Event Manager (integrated into System Monitor)
- Web Deployment

This chapter includes the following sections:

- “Configuring web-based tools to use WebSphere Application Server or WebSphere Application Server Express” on page 44
- “Configuring web-based tools to use Tomcat” on page 46
- “Taking the next step” on page 48

Important: Follow the instructions in this chapter only if you intend to use the web-based tools components:

- You are using WebSphere Application Server version 5.1.1 or higher or WebSphere Application Server Express 5.1.1 or higher as your Web application server but did not have it installed before installing WebSphere Business Integration Server Express or Express Plus. In this case, see the section “Configuring web-based tools to use WebSphere Application Server or WebSphere Application Server Express” on page 44.
- You are using Tomcat 4.1.24 and 4.1.27 as your Web application server. In this case, see the section “Configuring web-based tools to use Tomcat” on page 46.

You do *not* need to follow the instructions in this chapter if a supported version of WebSphere Application Server or WebSphere Application Server Express existed on your system before you installed WebSphere Business Integration Server Express or Express Plus. In this case, the web-based tools were automatically installed and configured to work with WebSphere Application Server or WebSphere Application Server Express by the WebSphere Business Integration Server Express or Express Plus installer.

The automatic configuration assumes that no Web server, such as IBM HTTP Server, is installed. The application server created is named ICSMonitor. The web-based tools are configured to use a default port number of 7089. You can access System Monitor and Failed Event Manager with the URL `http://hostname:7089/ICSMonitor`; and Web Deployment with the URL `http://hostname:7089/WebDeployment`.

About web-based tools

Note: Web-based tools consist of the following:

- System Monitor
- Failed Event Manager
- Web Deployment

System Monitor

System Monitor is a tool that allows you to monitor a WebSphere Business Integration Server Express or Express Plus 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.

Failed Event Manager

Failed Event Manager, which is launched out of System Monitor, is a tool that allows you to work with failed events in the WebSphere Business Integration Server Express or Express Plus system from the Web and (on systems using Tomcat 4.1.24 and higher only) provides role-based access to failed events. For more information on how to configure security and to create custom roles for Failed Event Manager, see the *System Administration Guide*.

Web Deployment

Web Deployment is a web-based application that allows you to deploy the component(s) of a repository file to an InterChange server or import the component(s) of an InterChange server back to a repository file through HTTP/S, the protocol that is known to easily bypass firewalls. Both the deploy and import processes offer browser-based user interfaces allowing you to select some or all components wanted for deploying or importing.

Configuring web-based tools to use WebSphere Application Server or WebSphere Application Server Express

This section describes how to configure web-based tools to use WebSphere Application Server or WebSphere Application Server Express. For instructions on using Tomcat instead, see “Configuring web-based tools to use Tomcat” on page 46.

To configure the web-based tools to use WebSphere Application Server or WebSphere Application Server Express, you run a script supplied with WebSphere Business Integration Server Express and Express Plus. The script is called `CWDashboard.sh` and is located in the directory `ProductDir/bin` (where `ProductDir` represents the directory `Home_directory/IBM/WebSphereServer` by default). You can run this script to configure the tools to work with or without a Web server, such as IBM HTTP Web Server.

Before proceeding, make sure that you have installed WebSphere Application Server or WebSphere Application Server Express versions 5.1.1 or higher. (You can install WebSphere Application Server Express version 6.0 from the WebSphere Business Integration Server Express or Express Plus Launchpad.) Then proceed to one of the following sections, depending on whether you want to use your installation with a Web server:

- “Configuring web-based tools when using a Web server”
- “Configuring web-based tools when not using a Web server” on page 45

Configuring web-based tools when using a Web server

The WebSphere Application Server is supplied with a Web server; WebSphere Application Server Express is not. If you are using WebSphere Application Server Express and want to use a Web server, you must obtain and install the IBM HTTP Server (available for free from the IBM Web site) and the Web server plug-in for

WebSphere Application Server Express. See the WebSphere Application Server Express documentation for more information.

Note: In this section, *WASInstDir* refers to the directory where the WebSphere Application Server or WebSphere Application Server Express 5.1.1 or higher is installed.

To configure the web-based tools to use a Web server, perform the following steps:

1. Run `CWDashboard.sh` with the following parameters:
 - Installation path for WebSphere Application Server or WebSphere Application Server Express, for example, `/opt/IBM/WebSphere/Express60/AppServer`
 - Fully qualified host name of the machine on which you are installing, for example, `hostname.ibm.com`
 - WebSphere Business Integration Server Express or Express Plus installation directory, for example, `Home_directory/IBM/WebSphereServer`
 - The path to the DB2 installation's java directory, for example, `DB2_Installation_Dir/java`
 - `y` (for HTTP server yes)

Here is an example command:

```
Home_directory/IBM/WebSphereServer/CWDashboard.sh \
"opt/IBM/WebSphere/Express60/AppServer" \
hostname.ibm.com "Home_directory/IBM/WebSphere/Server" \
"DB2_Installation_Dir/java" y
```

Important: Certain steps in this procedure show commands broken on one or more lines, indicated by a slash (\). These line breaks were inserted to enable the text to fit on the page. When typing the actual commands, insert spaces at these points, not line breaks.

2. From the WebSphere Administrator's Console (accessible from a Web browser on a remote Windows machine), expand **Environment** in the left navigation pane, select the **Update Web Server Plugin** link (not available with WebSphere Application Server Express 6.0), and select **OK**.
3. If the ICSMonitor Application Server is started, stop it:
`WASInstDir/bin/stopServer.sh ICSMonitor`
4. Start the ICSMonitor Application Server:
`WASInstDir/bin/startServer.sh ICSMonitor`
5. To access System Monitor or Failed Event Manager, type the URL:
`http://hostname/ICSMonitor`

where *hostname* is the name of the computer on which WebSphere Application Server or WebSphere Application Server Express is installed.

6. To access Web Deployment, type the URL:
`http://hostname/WebDeployment`

where *hostname* is the name of the computer on which WebSphere Application Server or WebSphere Application Server Express is installed.

Configuring web-based tools when not using a Web server

If you are not using a Web server with your installation, you must configure the web-based tools to use a different port number. Do the following:

1. Run `ProductDir/bin/CWDashboard.sh` with the following parameters:

- Installation path for WebSphere Application Server or WebSphere Application Server Express, for example, /opt/IBM/WebSphere/Express60/AppServer
- Fully qualified host name of the machine on which you are installing, for example, hostname.ibm.com
- WebSphere Business Integration Server Express or Express Plus installation directory, for example, *Home_directory*/IBM/WebSphereServer
- The path to the DB2 installation's java directory, for example, *DB2_Installation_Dir*/java
- n (for no HTTP server)
- New port number, for example 7089
- New SSL port number (default is 7043)

Here is an example command:

```
Home_directory/IBM/WebSphereServer/CWDashboard.sh      \
"/opt/IBM/WebSphere/Express60/AppServer"              \
hostname.ibm.com "Home_directory/IBM/WebSphereServer  \
"DB2_Installation_Dir/java" n 7089 7043
```

Important: Certain steps in this procedure show commands broken on one or more lines, indicated by a slash (\). These line breaks were inserted to enable the text to fit on the page. When typing the actual commands, insert spaces at these points, not line breaks.

2. If the ICSMonitor Application Server is started, stop it:

```
WASInstDir/bin/stopServer.sh ICSMonitor
```

3. Start the ICSMonitor Application Server:

```
WASInstDir/bin/startServer.sh ICSMonitor
```

4. To access System Monitor and Failed Event Manager, type the URL:

```
http://hostname:portnumber/ICSMonitor
```

where *hostname* is the name of the computer on which WebSphere Application Server or WebSphere Application Server Express is installed.

5. To access Web Deployment, type the URL:

```
http://hostname:portnumber/WebDeployment
```

where *hostname* is the name of the computer on which WebSphere Application Server or WebSphere Application Server Express is installed.

Configuring web-based tools to use Tomcat

This section describes how to configure the web-based tools to use Tomcat. For instructions on using WebSphere Application Server or WebSphere Application Server Express as the Web application server instead of Tomcat, see “Configuring web-based tools to use WebSphere Application Server or WebSphere Application Server Express” on page 44. Before proceeding, ensure that you have Tomcat version 4.1.24 or 4.1.27 installed on your system.

Note: Tomcat 4.1.24 and 4.1.27 are not supported in double byte character set language environments.

Configuring System Monitor and Failed Event Manager to use Tomcat

To configure System Monitor and Failed Event Manager to use Tomcat, follow these steps:

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.

Note: If you used the WebSphere Business Integration Server Express or Express Plus installer to install the product, the CWDashboard.war file is located in the *ProductDir/WBSM* directory.

3. Edit the setclasspath.sh file, located in the *Tomcat_home/bin* directory, by doing the following:
 - a. Set the JAVA_OPTS property as follows:


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

Important: The lines beginning with the characters -D all appear on separate lines to enable them to fit on the page. Insert only spaces, not line breaks, between the -D lines.
 - b. Append the path to the db2java.zip file to the class path in setclasspath.sh. The db2java.zip file is located, by default, in the *DB2_Installation_Dir/java* directory.
4. (Optional) Change the port number in the *Tomcat_home/conf/server.xml* file. The default port number is 8080.
5. Start Tomcat, as follows:


```
Tomcat_home/bin/startup.sh
```

Configuring Web Deployment to use Tomcat

To configure Web Deployment to use Tomcat, follow these steps:

1. Create the Web Deployment 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 WebDeployment directory.

The WebDeployment.war file is located in the *ProductDir/WBWD* directory.

Note: If you used the WebSphere Business Integration Server Express or Express Plus installer to install the product, the WebDeployment.war file is located in the *ProductDir\WBWD* directory.

3. Edit the setclasspath.bat file, located in the *Tomcat_home/bin* directory, by doing the following:
 - a. Set the JAVA_OPTS property as follows:


```
DWD_HOME=Tomcat_home/webapps/WebDeployment
```
 - b. If you use DB2 for the InterChange Server Express repository, append the path to the db2java.zip file to the class path in setclasspath.bat. The db2java.zip file is located, by default, in the *DB2_Installation_Dir/java* directory.

Note: Step 5b is required only if the repository is on DB2.
4. (Optional) Change the port number in the *Tomcat_home/conf/server.xml* file. The default port number is 8080.

5. Start Tomcat, as follows:

```
Tomcat_home/bin/startup.sh
```

By default, security is enabled in the Tomcat 4.1.24 version of Web Deployment. A user with the role of administrator must be created in the `Tomcat_home/conf/server.xml` file so that the administrator can gain full access to the application. For details on how to create roles and use security in Web Deployment, refer to the *System Administration Guide*.

Taking the next step

If you have successfully installed your system prerequisites, installed WebSphere Business Integration Server Express or Express Plus, and configured the web-based tools, proceed to Chapter 4, “Starting and administering the WebSphere Business Integration Server Express or Express Plus system,” on page 29 for instructions on how to start your WebSphere Business Integration Server Express or Express Plus system.

Chapter 9. Upgrading the system

This chapter describes general procedures for upgrading existing WebSphere Business Integration Server Express and Express Plus installations. It contains the following sections:

- “Supported upgrade scenarios and assumptions”
- “Preparing the existing system” on page 52
- “Upgrading from WebSphere Business Integration Server Express V4.4 to Express Plus V4.4” on page 54
- “Upgrading from WebSphere Business Integration Server Express V4.3.1 to Express V4.4” on page 57
- “Upgrading from WebSphere Business Integration Server Express Plus V4.3.1 to Express Plus V4.4” on page 59
- “Starting the new upgraded version” on page 65
- “Validating the upgrade” on page 66
- “Testing the upgraded version” on page 66
- “Backing up the upgraded version” on page 66
- “Taking the next step” on page 66

Supported upgrade scenarios and assumptions

The following upgrade scenarios are supported:

- Upgrading an installation of WebSphere Business Integration Server Express version 4.4 to Express Plus version 4.4.
- Upgrading an installation of WebSphere Business Integration Server Express version 4.3.1 to Express version 4.4.
- Upgrading an installation of WebSphere Business Integration Server Express Plus version 4.3.1 to Express Plus version 4.4. Included within this scenario are instructions for performing the following:
 - Upgrading an Adapter Capacity Pack for WebSphere Business Integration Server Express Plus version 4.3.1 to version 4.4.
 - Upgrading a Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus version 4.3.1 to version 4.4.

The following upgrade scenarios are *not* supported:

- Upgrading an installation of WebSphere Business Integration Server Express version 4.3.1 to Express Plus version 4.4.
- Upgrading an installation of WebSphere Business Integration Server Express Plus version 4.3.1 to Express version 4.4.

During any upgrade procedure, components you have already installed are preselected for upgrade and cannot be unselected. Additional components not already installed can be selected for installation during the upgrade process. All upgrade procedures assume the following:

- You will perform the upgrade in a development environment, then move the upgrade to your production environment after system tests have been completed.

- You have all appropriate software available. For a list of required software, see <http://www.ibm.com/software/integration/wbiserverexpress>.
- You will perform the upgrade to the InterChange Server Express component as well as to the adapter and Samples components if they exist on separate machines, by running the installer on the various machines.

Preserving existing user projects

Any user projects defined in your existing WebSphere Business Integration Server Express or Express Plus system are stored locally with the tools. When you run the installer to upgrade to another version of WebSphere Business Integration Server Express or Express Plus, the newly upgraded tools will not automatically recognize the path to the System Manager workspace in which your existing user projects reside.

To make all system manager projects (user projects and integration component libs) available, you can do either of the following:

- Migrate existing user projects by exporting them as solutions to a temporary location before the upgrade, and then importing them into your new installation after the upgrade. This is the recommended approach.
- After the upgrade, revise your System Manager workspace path to point to the location of your original workspace, where your original user projects reside.

Migrating existing projects

To migrate existing projects, first export them as a solution to a temporary location, then import them back into your newly upgraded System Manager.

Exporting user project solutions

To export a user project and the integration components it references as a solution, perform the following steps:

Note: Exporting a solution migrates only the integration components and shortcuts are included in the user projects that you select for that solution. If you want to also migrate additional integration components that have not been included as shortcuts in any user project, then also follow the procedures for Exporting components to a package using System Manager in the System Implementation Guide.

1. In the WebSphere Business Integration System Manager view, expand the **User Projects** folder, then right-click the **InterChange Server Projects** folder and choose **Export Solution** from the context menu. System Manager displays the Export Solution wizard.
2. To select the components you want to export, perform one of these options:
 - Enable the check box next to user projects to select all of the components in the projects.
 - Enable the check box next to a component group to select all of the components in the group.
 - Highlight a component group and then enable check boxes next to individual components in the right-hand pane to select those components.
3. Either type the full path and name of the directory into which the solution should be exported in the text field at the bottom of the wizard screen, or click **Browse** to navigate to the desired directory.
4. Click **Finish**. The System Manager does the following to export the solution in the directory specified in Step 3:

- a. Creates a User directory that contains the shortcuts in the user projects selected during the export of the solution.
 - b. Creates a System directory that contains the directories of the integration component library referenced by the shortcuts in the user projects selected during the export of the solution.
5. When prompted that the export operation completed successfully, click **OK**.

Importing user project solutions

With InterChange Server Express running, connect System Manager to your InterChange Server Express instance and perform the following steps:

1. Expand the User Projects folder, right-click **InterChange Server Projects**, and select **Import Solution**.
2. Either type the full path and name of the directory in which the exported solution exists into the Solution directory name field, or click **Browse** to navigate to the desired directory.
3. Click **Finish**. The System Manager creates the integration component libraries and user projects defined in the exported solution in your environment.

Upgrading software prerequisites

The Launchpad installation interface will automatically upgrade some software prerequisites. However, if you have a version of the prerequisite that is prior to one supported for upgrade by the current version of WebSphere Business Integration Server Express or Express Plus, you will have to manually upgrade the prerequisite before upgrading WebSphere Business Integration Server Express or Express Plus. (Refer to <http://www.ibm.com/software/integration/wbiserverexpress> for information about the supported versions of prerequisite software.) You can also choose to manually upgrade the prerequisite for any other reason. If you manually upgrade a prerequisite to a version that is supported by the current release (WebSphere Business Integration Server Express 4.4), the Launchpad will detect that you have a current version of that prerequisite when you perform the rest of the upgrade. Follow the upgrade instructions provided with a particular prerequisite if you manually upgrade it.

The following sections describe steps that must be done for any database and the upgrade scenarios for several software prerequisites. Make sure to follow the steps in “Backing up the system” on page 53 before uninstalling or upgrading any software.

Database migration options

In preparing your WebSphere Business Integration Express system for an upgrade, you have two options for migrating the database: an in-place database migration and a without in-place database migration. An in-place database migration means re-using the old repository and letting WebSphere Business Integration Express do the upgrade of the repository during the first WebSphere Business Integration Express server startup. A without in-place database migration means upgrading with a brand new and empty repository database. Make sure to follow the special instructions in “Backing up the system” on page 53 for in-place database migration.

IBM DB2 Universal Database

If you uninstall a prior version of DB2, so that no DB2 version is present, the Launchpad will prompt you to install DB2 version 8.2 Express.

If you have DB2 version 8.1.5 or higher installed, the Launchpad will not prompt you to install a newer version of DB2. In this case, if you are on a version of DB2 prior to 8.2, and wish to upgrade to version DB2 8.2, you must upgrade it manually.

Note: If a supported version of DB2 (8.15 or higher) is already installed, follow the instructions for "in-place" migration as explained in "Backing up the system" on page 53.

Microsoft SQL Server

If you are using Microsoft SQL Server 2000 as your database, you must manually upgrade it according to the Microsoft SQL Server upgrade instructions. The Launchpad will not upgrade it automatically.

IBM WebSphere Application Server

WebSphere Business Integration Server Express or Express Plus version 4.4 supports WebSphere Application Server Express version 6.0 and 5.1.1. Version 6.0 is the version that the Launchpad installs. You should uninstall any version of WebSphere Application Server prior to 5.1.1. If you have 5.1.1 already and wish to upgrade to 6.0, you must do so manually as the Launchpad will not prompt you to do so.

Note: Installing WAS 6.0 Express via Launchpad over previous WebSphere Application Server Express versions (WebSphere Application Server Express 5.1, or 5.1.1 for example) may result in two co-existing installations of WAS on the machine. In this case, LaunchPad will deploy Web-based tooling onto the WAS 6.0 Express installation.

IBM WebSphere MQ Server and Client

If you have an older version of IBM WebSphere MQ installed that was supported by a previous version of WebSphere Business Integration Express, Launchpad will do an automatic upgrade to the supported version. For example, if you have MQ 5.3 CSD 05 installed, Launchpad will do an automatic upgrade to CSD 06.

IBM Java Development Kit

The Launchpad installs the appropriate version of the IBM JDK (version 1.4.2). It is not necessary to remove the previous version.

Preparing the existing system

Before upgrading any system, you must perform the following steps:

- "Putting the system in a quiescent state"
- "Backing up the system" on page 53
- "Shutting down the system" on page 54

Putting the system in a quiescent state

Before you upgrade your system, you must make sure it is in a quiescent state. This means that all in-progress events are completed and all in-doubt transactions are resolved before backing up the environment and performing the upgrade procedure.

The following steps describe how to put the system in a quiescent state:

1. Resubmit failed events or discard the events (this step is optional).
2. Stop all connectors from polling the event tables by setting the connector `PollFrequency` property to `No` and restarting the connector.
3. Let all events run through the system, including all in-process events. All in-doubt transactions must be resolved.
4. Clear the queues by removing any old events from the queues.

Note: Perform step 4 only if you are not processing your failed events and choose to resubmit the events from the application. Otherwise, the queues should be empty, but double-check to be sure.

See the *System Administration Guide* for more information about how to stop a running system gracefully.

Backing up the system

Backing up the system allows you to recover any files that might be overwritten inadvertently during the installation of the new version. Before performing the upgrade procedure, back up both static data and dynamic data (changeable data that you back up on a regular basis, regardless of upgrades). For examples of static and dynamic data, see Table 3 on page 54.

To back up the system, do the following:

- Back up your current ICS Express repository using the `repos_copy` utility. For example, suppose your InterChange Server Express instance is named `WICSEX` and it has the default login `admin` and default password `null`. The following `repos_copy` command creates a backup of the repository objects in a file called `RepositoryExpress.txt`:

```
repos_copy -sWICSEX -oRepositoryExpress.txt -uadmin -pnull
```

- Back up the product directory. Important items to include in this backup are any customizations, including the following:
 - Custom `.jar` files (such as custom data handlers) and Java packages, which are typically in the `lib` subdirectory of the product directory
 - All startup scripts
 - The configuration file for WebSphere MQ, which resides in the following directory:

```
ProductDir\mqseries\crossworlds_mq.tst
```

IBM recommends taking a system backup of the *entire* InterChange Server Express product directory.

- Arrange for a System Administrator to back up the file structure. Environment settings and other files must be copied.
- Arrange for an System Administrator to back up IBM WebSphere MQ.
- Arrange for the database administrator (DBA) to back up the database. This should be a complete backup, including schema information and stored procedures. If you have configured your system to use databases *in addition to* the ICS Express repository database, make sure you back up these other databases as well.

Note: Use the appropriate database utility to perform this step. For example, DB2 provides an export utility. Consult your database server documentation for instructions.

Table 3 on page 54 summarizes how to back up the different components.

Table 3. Backup methods for data

| Type of data | Backup method |
|---|---|
| Static data | |
| Repository | Use the <code>repos_copy</code> utility to save some or all of the customized system components. For more information, see the description of how to back up components in the <i>System Administration Guide</i> . |
| Custom map Java class files (.class) | To include these files in your system backup, make sure the following directory is in your system backup: <code>ProductDir\DLMS</code> |
| Custom connectors | Include the following directory in your system backup: <code>ProductDir\connectors\connector_name</code> , where “ <code>connector_name</code> ” is the name of the custom connector. |
| Customized startup scripts | If you have customized any startup scripts, make sure that they are included in your system backup. |
| ICS Express configuration file (InterchangeSystem.cfg) | Include in your system backup the ICS Express configuration file, which resides in the <code>ProductDir</code> directory. |
| Dynamic data | |
| Cross-reference, failed events, and relationship tables | Use the database backup utility for the database. For more information, see the description of how to back up system components in the <i>System Administration Guide</i> . |
| Connector event archive tables | Use the database backup utility for the database that contains these tables. |
| Log files | Include the following directory in your system backup: <code>ProductDir\log</code> |

Shutting down the system

After backups are complete, you can shut down the system as follows:

1. Shut down InterChange Server Express and its related components.
2. Shut down the database server.
3. Shut down WebSphere MQ.

For more information on system shutdown, see the *System Administration Guide*.

Upgrading from WebSphere Business Integration Server Express V4.4 to Express Plus V4.4

After the system is in a quiescent state and backed up, you can safely start the upgrade procedure. The Launchpad provides a way to launch the GUI installer that leads you through upgrading WebSphere Business Integration Server Express V4.4 to Express Plus V4.4. The GUI does the following:

- Installs WebSphere Business Integration Server Express Plus product components.
- Installs any new adapters you select.
- Does not drop your existing database.
- Retains your existing repository and does not redeploy it.

To invoke the Launchpad to launch the GUI, do the following:

1. Select the button labeled **Install Product** in the left column of the Launchpad.
The Upgrade Product screen appears.
2. On the Upgrade Product screen, select **Next**.

The Install Server screen appears.

3. On the Install Server screen, do one of the following:
 - If you have the version 4.4 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and disabled. Select **Next**.
 - If you do *not* have the version 4.4 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 InterChange Server Express component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 InterChange Server Express component from being installed.

Select **Next**.

The Install Adapters screen appears.

4. On the Install Adapters screen, if you have version 4.4 adapters installed, the check box beside each installed adapter is selected and disabled. In addition, if you have not already installed the Adapter for JText, it is selected by default because it is required to run the System Test sample. (The System Test sample is part of the Samples component, which can be selected from the Install Samples screen, described in Step 5.) Do one of the following:
 - If you do not want to install any other adapters than the ones you have already installed, unselect the check box beside the Adapter for JText if necessary and select **Next**.
 - If you want to install only the Adapter for JText in addition to the other adapters you have already installed, leave the check box beside the Adapter for JText selected and select **Next**.
 - If you want to install other adapters in addition to the Adapter for JText and the ones you have already installed, leave the check box beside the Adapter for JText selected, select the check boxes beside the other adapters you want to add, and then select **Next**.

The Install Samples screen appears.

Important: You can install as many adapters as you want.

5. On the Install Samples screen, do one of the following:
 - If you have the version 4.4 Samples component installed, the check box beside the entry **Samples** is selected and disabled. Select **Next**.
 - If you do *not* have the version 4.4 Samples component installed, the check box beside the entry **Samples** is checked and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 Samples component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 Samples component from being installed.

Select **Next**.

The Software Prerequisites screen appears.

6. On the Software Prerequisites screen, the installer informs you of any required prerequisites. Do one of the following:
 - If the Software Prerequisites screen indicates that no additional prerequisites are needed, proceed to Step 7 on page 56.

- If the Software Prerequisites screen indicates that additional prerequisites are needed, refer to Step 4 on page 12 for instructions on how to install the prerequisites, and the section “Software prerequisites” on page 20 for additional prerequisite information.
7. Select the button labeled **Install Product** located at the bottom of the Software Prerequisites screen.

The Software License Agreement screen appears.

8. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

One of the following occurs:

- If the InterChange Server Express component is already installed and will be upgraded or you are installing the InterChange Server Express component during the upgrade, the installer checks that appropriate prerequisites exist and are configured properly.
 - If the prerequisite conditions are not met, an error message is displayed and you are forced to cancel the installation.
 - If the prerequisite conditions are met, product installation begins. In this case, continue with these instructions at Step 11.
- Installer performs a check to see if MQ Client is installed. If MQ Client is not installed, an error message is displayed and you are forced to cancel the installation.
- If the InterChange Server Express component is not already installed and will not be installed during the upgrade, the Name Server Configuration screen appears. In this case, continue with these instructions at Step 9.

Note: The maximum number of physical processors that can be used with this server machine is restricted to two processors. Please refer to the product license terms for more details.

9. On the Name Server Configuration screen, type the IP address of the computer on which you have installed or plan to install the InterChange Server Express component, and then select **Next** to begin the installation process. See the section “Additional Custom installation information” on page 19 for more information about the Name Server.
10. Before the installation begins, installer will check the following:
 - If DB2 version 8.1.5 or version 8.2 is installed. Server is selected to install.
 - If DB2 is configured. This check is not executed when upgrading the server or additional installation on server is done. Server is selected to install for the first time.
 - If IBM JDK version 1.4.2 is installed. Server is selected to install.
 - If MQ Server version 5.3.06 is installed. Server is selected to install.
 - If any of these checks fail, an error message is displayed and you are forced to cancel the installation.

Note: The installer checks for these items, only if they were selected for installation.

11. As the installation process begins, the installer verifies that enough disk space exists for the installation:
 - If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must

select **Back** and unselect some features or sub-features or delete some unneeded space on the specified drive.

- If enough space does exist, installation and configuration begin. A number of informational screens are presented. When installation and configuration are complete, the post-installation summary screen appears, which indicates if the process was successful or if problems were encountered. Select **Finish** to exit the GUI.

Upgrading from WebSphere Business Integration Server Express V4.3.1 to Express V4.4

After the system is in a quiescent state and backed up, you can safely start the upgrade procedure. The Launchpad provides a way to launch the GUI installer that leads you through upgrading WebSphere Business Integration Server Express V4.3.1 to WebSphere Business Integration Server Express V4.4. The GUI does the following:

- Installs WebSphere Business Integration Server Express V4.4 product components.
- Installs any new adapters you select.
- Does not drop your existing database.
- Retains your existing repository and does not redeploy it.
- Any role-based access security roles that you set up previously for Failed Event Manager are not retained (you can create new role-based access security roles, as described in the System Implementation Guide).

To invoke the Launchpad to launch the GUI, do the following:

1. Select the button labeled **Install Product** in the left column of the Launchpad. The Upgrade Product screen appears.
2. On the Upgrade Product screen, select **Next**. The Install Server screen appears.
3. On the Install Server screen, do one of the following:
 - If you have the version 4.4 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and disabled. Select **Next**.
 - If you do *not* have the version 4.4 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 InterChange Server Express component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 InterChange Server Express component from being installed.

Select **Next**.

The Install Adapters screen appears.

4. On the Install Adapters screen, if you have version 4.4 adapters installed, the check box beside each installed adapter is selected and disabled. In addition, if you have not already installed the Adapter for JText, it is selected by default because it is required to run the System Test sample. (The System Test sample is part of the Samples component, which can be selected from the Install Samples screen, described in Step 5 on page 58.) Do one of the following:

- If you do not want to install any other adapters than the ones you have already installed, unselect the check box beside the Adapter for JText if necessary and select **Next**.
- If you want to install only the Adapter for JText in addition to the other adapters you have already installed, leave the check box beside the Adapter for JText selected and select **Next**.
- If you want to install other adapters in addition to the Adapter for JText and the ones you have already installed, leave the check box beside the Adapter for JText selected, select the check boxes beside the other adapters you want to add, and then select **Next**.

The Install Samples screen appears.

5. On the Install Samples screen, do one of the following:
 - If you have the version 4.4 Samples component installed, the check box beside the entry **Samples** is selected and disabled. Select **Next**.
 - If you do *not* have the version 4.4 Samples component installed, the check box beside the entry **Samples** is checked and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 Samples component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 Samples component from being installed.

Select **Next**.

Note: The Samples component requires installation of the InterChange Server Express and the JText Adapter. Therefore, when you elect to install the Samples component, the InterChange Server Express and the JText Adapter are installed as well, regardless of whether you elected to install them in previous screens.

The Software Prerequisites screen appears.

6. On the Software Prerequisites screen, the installer informs you of any required prerequisites. Do one of the following:
 - If the Software Prerequisites screen indicates that no additional prerequisites are needed, proceed to Step 7.
 - If the Software Prerequisites screen indicates that additional prerequisites are needed, refer to Step 4 on page 12 for instructions on how to install the prerequisites and “Software prerequisites” on page 20 for additional prerequisite information.
7. Select the button labeled **Install Product** located at the bottom of the Software Prerequisites screen.

The Software License Agreement screen appears.

8. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

The upgrade check screen appears.

9. On the upgrade check screen, select **Next**.
One of the following occurs:
 - If the InterChange Server Express component is already installed and will be upgraded or you are installing the InterChange Server Express component during the upgrade, the installer checks that appropriate prerequisites exist and are configured properly.

- If the prerequisite conditions are not met, an error message is displayed and you are forced to cancel the installation.
- If the prerequisite conditions are met, product installation begins. In this case, continue with these instructions at Step 12.
- If the InterChange Server Express component is not already installed and will not be installed during the upgrade, the Name Server Configuration screen appears. In this case, continue with these instructions at Step 11.

Note: The maximum number of physical processors that can be used with this server machine is restricted to two processors. Please refer to the product license terms for more details.

10. Before the installation begins, installer will check the following:
 - If DB2 version 8.1.5 or version 8.2 is installed. Server is selected to install.
 - If DB2 is configured. This check is not executed when upgrading the server or additional installation on server is done. Server is selected to install for the first time.
 - If IBM JDK version 1.4.2 is installed. Server is selected to install.
 - If MQ Server version 5.3.06 is installed. Server is selected to install.
 - If any of these checks fail, an error message is displayed and you are forced to cancel the installation.

Note: The installer checks for these items, only if they were selected for installation.

11. On the Name Server Configuration screen, type the IP address of the computer on which you have installed or plan to install the InterChange Server Express component, and then select **Next** to begin the installation process. See the section “Additional Custom installation information” on page 19 for more information about the Name Server.
12. As the installation process begins, the installer verifies that enough disk space exists for the installation:
 - If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and unselect some features or sub-features, or delete some unneeded space on the specified drive.
 - If enough space does exist, installation and configuration begin. A number of informational screens are presented. When installation and configuration are complete, the post-installation summary screen appears, which indicates if the process was successful or if problems were encountered. Select **Finish** to exit the GUI.

Upgrading from WebSphere Business Integration Server Express Plus V4.3.1 to Express Plus V4.4

After the system is in a quiescent state and backed up, you can safely start the upgrade procedure. The Launchpad provides a way to launch the GUI installer that leads you through upgrading WebSphere Business Integration Server Express Plus V4.3.1 to WebSphere Business Integration Server Express Plus V4.4. The GUI does the following:

- Installs WebSphere Business Integration Server Express Plus V4.4 product components.
- Installs any new adapters you select.
- Does not drop your existing database.

- Retains your existing repository and does not redeploy it.
- Any role-based access security roles that you set up previously for Failed Event Manager are not retained (you can create new role-based access security roles, as described in the *System Implementation Guide*).

Note: If you have version 4.3.1 Adapter or Collaboration Capacity Packs for WebSphere Business Integration Server Express Plus installed, you must upgrade these to version 4.4 as well, *after* upgrading the WebSphere Business Integration Server Express Plus product. See the sections “Upgrading the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4.” on page 62 and “Upgrading the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4” on page 64 for more information.

To invoke the Launchpad to launch the GUI, do the following:

1. Select the button labeled **Install Product** in the left column of the Launchpad. The Upgrade Product screen appears.

2. On the Upgrade Product screen, select **Next**. The Install Server screen appears.

3. On the Install Server screen, do one of the following:

- If you have the version 4.3.1 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and disabled. Select **Next**.
- If you do *not* have the version 4.3.1 InterChange Server Express component installed, the check box beside the entry **InterChange Server Express** is selected and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 InterChange Server Express component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 InterChange Server Express component from being installed.

Select **Next**.

The Install Adapters screen appears.

4. On the Install Adapters screen, if you have version 4.3.1 adapters installed, the check box beside each installed adapter is selected and disabled. In addition, if you have not already installed the Adapter for JText, it is selected by default because it is required to run the System Test sample. (The System Test sample is part of the Samples component, which can be selected from the Install Samples screen, described in Step 5.) Do one of the following:

- If you do not want to install any other adapters than the ones you have already installed, unselect the check box beside the Adapter for JText if necessary and select **Next**.
- If you want to install only the Adapter for JText in addition to the other adapters you have already installed, leave the check box beside the Adapter for JText selected and select **Next**.
- If you want to install other adapters in addition to the Adapter for JText and the ones you have already installed, leave the check box beside the Adapter for JText selected, select the check boxes beside the other adapters you want to add, and then select **Next**.

The Install Samples screen appears.

5. On the Install Samples screen, do one of the following:

- If you have the version 4.3.1 Samples component installed, the check box beside the entry **Samples** is selected and disabled. Select **Next**.
- If you do *not* have the version 4.3.1 Samples component installed, the check box beside the entry **Samples** is checked and enabled. You can proceed in one of two ways:
 - Leave the entry selected to install the version 4.4 Samples component during the upgrade of other installed components.
 - Unselect the check box to keep the version 4.4 Samples component from being installed.

Select **Next**.

The Software Prerequisites screen appears.

6. On the Software Prerequisites screen, the installer informs you of any required prerequisites. Do one of the following:
 - If the Software Prerequisites screen indicates that no additional prerequisites are needed, proceed to Step 7.
 - If the Software Prerequisites screen indicates that additional prerequisites are needed, refer to Step 4 on page 12 for instructions on how to install the prerequisites, and “Software prerequisites” on page 20 for additional prerequisite information.
7. Select the button labeled **Install Product** located at the bottom of the Software Prerequisites screen.

The Software License Agreement screen appears.

8. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

The upgrade check screen appears.

9. On the upgrade check screen, select **Next**.

One of the following occurs:

- If the InterChange Server Express component is already installed and will be upgraded or you are installing the InterChange Server Express component during the upgrade, the installer checks that appropriate prerequisites exist and are configured properly.
 - If the prerequisite conditions are not met, an error message is displayed and you are forced to cancel the installation.
 - If the prerequisite conditions are met, product installation begins. In this case, continue with these instructions at Step 12 on page 62.
- If the InterChange Server Express component is not already installed and will not be installed during the upgrade, the Name Server Configuration screen appears. In this case, continue with these instructions at Step 11 on page 62.

Note: The maximum number of physical processors that can be used with this server machine is restricted to two processors. Please refer to the product license terms for more details.

10. Before the installation begins, installer will check the following:
 - If DB2 version 8.1.5 or version 8.2 is installed. Server is selected to install.
 - If DB2 is configured. This check is not executed when upgrading the server or additional installation on server is done. Server is selected to install for the first time.
 - If IBM JDK version 1.4.2 is installed. Server is selected to install.

- If MQ Server version 5.3.06 is installed. Server is selected to install.
- If any of these checks fail, an error message is displayed and you are forced to cancel the installation.

Note: The installer checks for these items, only if they were selected for installation.

11. On the Name Server Configuration screen, type the IP address of the computer on which you have installed or plan to install the InterChange Server Express component, and then select **Next** to begin the installation process. See the section “Additional Custom installation information” on page 19 for more information about the Name Server.
12. As the installation process begins, the installer verifies that enough disk space exists for the installation:
 - If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and unselect some features or sub-features or delete some unneeded space on the specified drive.
 - If enough space does exist, installation and configuration begin. A number of informational screens are presented. When installation and configuration are complete, the post-installation summary screen appears, which indicates if the process was successful or if problems were encountered. Select **Finish** to exit the GUI.

If you have version 4.3.1 Adapter or Collaboration Capacity Packs for WebSphere Business Integration Express Plus installed, you must upgrade them to version 4.4 as well. See the sections “Upgrading the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4.” and “Upgrading the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4” on page 64 for details.

Upgrading the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4.

This procedure upgrades one or more adapters installed from the version 4.3.1 Adapter Capacity Pack for WebSphere Business Integration Server Express Plus to version 4.4. It also allows you to install an additional adapter during the upgrade. It assumes the following:

- WebSphere Business Integration Server Express Plus V4.4 is already installed on your machine.
- You have administrative privileges on the machine on which you are upgrading the adapter.
- WebSphere Business Integration Server Express V4.4 is not installed on the same machine on which you are installing the adapter. (Adapter Capacity Packs can be used only with an existing WebSphere Business Integration Server Express Plus 4.4 installation.)
- If the adapters to be upgraded or installed do or will not exist on the same machine as InterChange Server Express, an installation of WebSphere MQ 5.3.0.2 CSD06 exists on the same machine on which the adapter will be upgraded or installed.

The Launchpad provides a way to launch the GUI installer that leads you through upgrading the adapters from an existing Adapter Capacity Pack installation. The GUI upgrades installed adapters, installs a new adapter if selected, and configures all adapters as services.

To invoke the Launchpad to launch the GUI, do the following:

1. Select the button labeled **Install Capacity Pack** from the left column of the Launchpad.

The Install Capacity Pack screen appears with two buttons.

2. Select **Install Adapter Capacity Pack** to launch the GUI to install the Adapter Capacity Pack.

The welcome screen appears.

3. At the welcome screen, select **Next**.

The Software License Agreement screen appears.

4. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.

The upgrade check screen appears.

5. On the upgrade check screen, select **Next**.

The installer checks that the prerequisites listed at the beginning of this section have been met. If any have not been met, it forces you to cancel the installation by selecting the **Cancel** button. If all prerequisites have been met, the feature screen appears.

6. On the feature screen, only those adapters that are not already installed appear. Do one of the following:

- If you do not want to install any other adapter than the ones you are upgrading, select **Next**.
- If you want to install another adapter in addition to the ones you are upgrading, select one adapter from the list of available adapters by selecting the radio button beside its name, then select **Next**. For more information about which adapter to select, see the section “Deciding which adapter to install” on page 36.

One of the following screens appears:

- If the InterChange Server Express is installed on the local machine, the InterChange Server Express Password screen appears. In this case, proceed to Step 9 on page 64.
 - If the InterChange Server Express exists on a remote machine, the Server IP Address Configuration screen appears. In this case, proceed to Step 7.
7. On the Server IP Address Configuration screen, type the IP address of the computer on which you have installed the InterChange Server Express component. If the InterChange Server Express is on an OS/400 machine, select the check box beside the entry **InterChange Server Express is on OS/400**. Then select **Next**. One of the following screens appears:
 - If you selected the check box beside the entry **InterChange Server Express is on OS/400**, the Server Name Configuration screen appears. In this case, proceed to Step 8.
 - If you did not select the check box beside the entry **InterChange Server Express is on OS/400**, the InterChange Server Express Password screen appears. In this case, proceed to Step 9 on page 64.
 8. On the Server Name Configuration screen, do the following:
 - Type the name of the InterChange Server Express instance on the OS/400 machine. (The default is QWBIDFT44. If you created a different name for your instance, type it instead.)
 - Type the ORB port number. (The default is 14500. If you used a different port number, type it instead.) Then select **Next**.

The pre-installation summary screen appears.

9. On the pre-installation summary screen, review your selection and installation location and select **Next**.

The installer verifies that enough disk space exists for the installation. Installation then proceeds, as follows:

- If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and delete some unneeded space on the specified drive.
 - If enough space does exist, installation and configuration begin. When installation and configuration are complete, the installer attempts to connect to the server to register the license for this adapter. A message dialog informs you if the adapter was registered successfully; an error dialog alerts you if registration was unsuccessful or if you exceeded the maximum number of adapters that can be registered with the InterChange Server Express. Select **OK** to exit this dialog. The post-installation summary screen appears, which indicates if the process was successful or if problems were encountered.
10. On the post-installation summary screen, select **Finish** to exit the installation GUI.

If you have a version 4.3.1 Collaboration Capacity Pack for WebSphere Business Integration Express Plus installed, you must upgrade it to version 4.4 as well. See the section “Upgrading the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4” for details.

Upgrading the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 to V4.4

This procedure upgrades a version 4.3.1 Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus to version 4.4. It assumes the following:

- The Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus V4.3.1 is already installed on your machine and you are now installing V4.4.
- You have administrative privileges on the machine on which you are upgrading the Collaboration Capacity Pack.
- The Collaboration Capacity Pack will be installed on the same machine on which the InterChange Server Express component is installed.
- The InterChange Server Express component is *not* running.

The Launchpad provides a way to launch the GUI installer that leads you through upgrading an existing Collaboration Capacity Pack installation. The Collaboration Capacity Pack GUI upgrades the selected collaboration group and deploys the installed content to the InterChange Server Express.

To invoke the Launchpad to launch the GUI, do the following:

1. Select the button labeled **Install Capacity Pack** from the left column of the Launchpad. The Install Capacity Pack screen appears with two buttons.
2. Select the button labeled **Install Collaboration Capacity Pack** to launch the GUI to install the Collaboration Capacity Pack. The Launchpad first checks if the InterChange Server Express component of WebSphere Business Integration Server Express Plus is installed on the local machine. It then acts, as follows:

- If the InterChange Server Express component is not installed on the local machine, a warning dialog alerts you that installation can fail. Select **Cancel** to cancel the installation or **Install** to continue the installation. If you elect to continue the installation, the welcome screen appears.
 - If the InterChange Server Express component is installed on the local machine, the welcome screen appears.
3. On the welcome screen, select **Next**.
The Software License Agreement screen appears.
 4. Read and accept the terms of the Software License Agreement by selecting the radio button beside the entry **I accept the terms in the license agreement**, then select **Next**.
The installer checks that the prerequisites listed at the beginning of this section have been met. If any have not been met, it forces you to cancel the installation by selecting the **Cancel** button. If all prerequisites have been met, the upgrade check screen appears.
 5. On the upgrade check screen, confirm that you want to upgrade the installed Collaboration Capacity Pack by selecting **Next**.
The installer verifies that enough disk space exists for the installation. Installation then proceeds, as follows:
 - If enough space does not exist, the **Next** button is disabled since installation cannot be completed with the provided disk space. In this case, you must select **Back** and delete some unneeded space on the specified drive.
 - If enough space does exist, installation and configuration begin. When installation and configuration are complete, the post-installation summary screen appears, which indicates if the process was successful or if problems were encountered.
 6. On the post-installation summary screen, select **Finish** to exit the GUI.

Starting the new upgraded version

After you have completed your upgrades, you can start the WebSphere Business Integration Server Express or Express Plus system using your existing version of the repository by doing the following:

1. Ensure that all required supporting software is running. Supporting software includes the following:
 - WebSphere MQ (make sure that Queue Manager and the Listener are both up and running)
 - The database server
2. Start InterChange Server Express. Starting this component automatically starts the Persistent Naming Server as well.
For instructions on how to start InterChange Server Express, refer to “Starting WebSphere Business Integration Server Express or Express Plus” on page 29.

You can check the `InterChangeSystem.log` file in the `ProductDir` directory to confirm a successful startup.

Note: If InterChange Server Express fails to start up after you upgrade the system, review this upgrade procedure to be sure you followed all the instructions. If the cause of the failure is still unknown, consult IBM technical support for assistance before attempting adjustments or restoring from backup.

Validating the upgrade

To validate the success of the upgrade, you must ensure that the repository schema was created and that all objects were loaded successfully. You must perform some of the following tasks on the machine running System Manager.

- Validate that WebSphere MQ queues are created and loaded with no errors. Select Statistics from the Server menu in System Manager, then ensure all the queues are in place.
- Validate that all connectors found their given queues successfully. Select System View from the Server menu in System Manager, and verify that the connectors have green-light icons next to them, and that the status of the connectors is Inactive.
- Validate that all connectors and business objects show up correctly in System Manager.
- Check for errors in the log file by selecting Log Viewer from the Tools menu in System Manager.

Attention: If any errors exist in the log file, you must resolve them before continuing.

Testing the upgraded version

Before moving the upgraded system from development to production, IBM recommends that you perform tests on every interface and every business process in production. Consider the following items when testing the system:

- Connectors — Test connector connectivity by starting up each connector. Make sure that the configuration changes have been made. In the connector log file, make sure the connector can connect to the specified application.
- Scripts and stored procedures — Scripts and stored procedures need to be tested only if they were upgraded. Scripts must be modified to contain the new directory path locations.
- Volume and performance — If past performance measurements have been taken, take new performance measurements and compare the two to make sure that the system is stable.

Backing up the upgraded version

When your upgrade process is complete, back up your WebSphere Business Integration Server Express or Express Plus system. See “Backing up the system” on page 53.

Taking the next step

Your upgrade to WebSphere Business Integration Server Express or Express Plus is complete. If you upgraded to WebSphere Business Integration Server Express Plus and want to install an optional Adapter or Collaboration Capacity Pack, see the chapters Chapter 6, “Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 35 or Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39.

Appendix. Silently installing and uninstalling

You can install or uninstall WebSphere Business Integration Server Express or Express Plus, an Adapter Capacity Pack, or a Collaboration Capacity Pack, without using the supplied GUIs. Silent installations and uninstallations are run from a command line.

In a silent installation, the responses you normally specify manually when you run the installer are stored in a supplied template response file. This response file is then read by an executable that installs the components. You must make necessary modifications to this response file before running the executable. Documentation describing the options that can be set exists within each file.

A silent uninstallation might or might not require use of a response file.

This chapter contains the following sections:

- “Silently installing WebSphere Business Integration Server Express and Express Plus”
- “Silently uninstalling WebSphere Business Integration Server Express and Express Plus” on page 68
- “Silently installing the Adapter Capacity Pack” on page 68
- “Silently uninstalling the Adapter Capacity Pack” on page 68
- “Silently installing the Collaboration Capacity Pack” on page 69
- “Silently uninstalling the Collaboration Capacity Pack” on page 69

Silently installing WebSphere Business Integration Server Express and Express Plus

Response files for silently installing WebSphere Business Integration Server Express and Express Plus are located in the Launchpad directory on the CD root and are named as follows:

- For WebSphere Business Integration Server Express silent installation:
WBIServerExpressResponseFile.txt
- For WebSphere Business Integration Server Express Plus silent installation:
WBIServerExpressPlusResponseFile.txt

To perform a silent installation, do the following:

1. Review the assumptions and installation-by-GUI procedure described in Chapter 3, “Installing required software prerequisites and WebSphere Business Integration Server Express or Express Plus,” on page 7 so you are familiar with the required prerequisites and installation options. Documentation describing the options that can be set exists within the response file as well.
2. Copy the response file from the CD media to a directory of your choice and modify it with the settings needed for your installation.
3. Move to the directory containing the modified response file.
4. Issue the following command:

```
mount_point/Launchpad/setupLinux.bin -silent -options <response_file_name>
```

Silently uninstalling WebSphere Business Integration Server Express and Express Plus

To perform a silent uninstallation of all WebSphere Business Integration Server Express or Express Plus components, do the following:

1. Move to the directory *ProductDir/_uninstWBIServerExp4.4* in a WebSphere Business Integration Server Express installation; to *ProductDir/_uninstWBIServerExpPlus4.4* in a WebSphere Business Integration Server Express Plus installation.
2. Issue the following command:

```
uninstaller.bin -silent
```

Important:

1. The user who uninstalls the product must be the same user who installed the product. Problems with permissions can result if the same user does not perform both tasks.
2. You might need to manually delete the *Home_directory/IBM/WebSphereServer* directory.

Silently installing the Adapter Capacity Pack

The name of the response file used to silently install the Adapter Capacity Pack is *adaptercp_silent.txt* and it is located on the CD in the directory *Launchpad/AdapterCapacityPack*.

To perform a silent installation, do the following:

1. Review the assumptions and installation-by-GUI procedure described in Chapter 6, “Installing the Adapter Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 35 so you are familiar with the required prerequisites and installation options. Documentation describing the options that can be set exists within the response file as well.
2. Copy the response file from the CD media to a directory of your choice and modify it with the settings needed for your installation.
3. Move to the directory containing the modified response file.
4. Issue the following command:

```
mount_point/AdapterCapacityPack/setupxLinux.bin -silent -options<reponse file>
```

Silently uninstalling the Adapter Capacity Pack

The name of the response file used to silently uninstall the Adapter Capacity Pack is *adaptercp_silent_uninst.txt* and it is located on the CD in the directory *Launchpad/AdapterCapacityPack*.

To perform a silent uninstallation, do the following:

1. Move to the directory *ProductDir/_uninstAdapterCP4.4*.
2. Issue the following:

```
uninstaller.bin -silent
```

Silently installing the Collaboration Capacity Pack

The name of the response file used to silently install the Collaboration Capacity Pack is `collabcp_silent.txt` and it is located on the CD in the directory `Launchpad/CollabCapacityPack`.

To perform a silent installation, do the following:

1. Review the assumptions and installation-by-GUI procedure described in Chapter 7, “Installing the Collaboration Capacity Pack for WebSphere Business Integration Server Express Plus,” on page 39 so you are familiar with the required prerequisites and installation options. Documentation describing the options that can be set exists within the response file as well.
2. Copy the response file from the CD media and modify it with the settings needed for your installation.
3. Move to the directory containing the modified response file.
4. Issue the following command:

```
mount_point/CollabCapacityPack/setupLinux.bin -silent \
-options collabcp_silent.txt
```

Silently uninstalling the Collaboration Capacity Pack

To perform a silent uninstallation of the Collaboration Capacity Pack, do the following:

1. Move to the directory `ProductDir/_uninstCollabCP4.4`.
2. Issue the following:

```
uninstaller.bin -silent
```

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WebSphere Business Integration Server Express and Express Plus include software developed by the Eclipse Project (<http://www.eclipse.org/>).



WebSphere Business Integration Server Express, Version 4.4, and WebSphere Business Integration Server Express Plus, Version 4.4.

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