

Express Runtime



Express Runtime Getting Started Guide for Deploying a Solution

Version 2.1.1

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Note

Before using this information and the product it supports, read the information in "Notices," on page 21.

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This edition applies to version 2, release 1, modification 1 of IBM Express Runtime (product number 5724-J10) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. About this document

This document describes IBM® Express Runtime. Express Runtime helps you deploy applications and IBM middleware components across multiple platforms as a single package.

This guide is intended to help the first-time user understand how to use Express Runtime to deploy solutions quickly.

Who might use this information

This guide is intended for end users who plan to use Express Runtime to configure, deploy, and administer IBM middleware components and, optionally, applications. An end user either obtains a solution from a third-party who has developed a solution with IBM Express Runtime, or uses the included Express Runtime middleware-only solution. To create and customize a solution file for an end user, refer to the *IBM Express Runtime Getting Started Guide for Developing Solutions for Deployment*.

This document assumes you have no previous experience with Express Runtime. You should be familiar with the operating system where you plan to install Express Runtime. For information on the operating systems you can use, see "System requirements". For information about the included middleware components, see "Express Runtime middleware components".

Chapter 2. Express Runtime concepts

Express Runtime provides a cohesive set of middleware components that when combined with applications that business partners provide, create total business solutions. Express Runtime greatly reduces the time, effort, and complexity of installing, configuring, and administering middleware components and solutions.

Deployment wizard

The deployment wizard helps you deploy an Express Runtime solution to target computers. The deployment wizard guides you, step-by-step, through the configuration and deployment of a solution. It runs on the source computer (known as a staging server) and can deploy solutions either locally or remotely. The deployment wizard helps you complete the following tasks, which are explained in more detail in the chapter "Deploying with Express Runtime":

- Selecting tasks to deploy
- Specifying target computers for each task
- Configuring deployment parameters for each task
- Reviewing task summary information
- Deploying one or more tasks
- Monitoring deployment status

IBM Installation Agent

The IBM Installation Agent helps you receive and install the components of an Express Runtime solution on target computers. Each target computer, with the exception of localhost, must have the IBM Installation Agent installed and running before deployment to the target computers can begin. The IBM Installation Agent is shipped with Express Runtime. More information about the installation agent is available in the IBM Installation Agent InfoCenter.

Express Runtime console

The Express Runtime console helps you manage servers on multiple operating systems from a single, Web-based location. It provides a simple method for performing administrative tasks on servers hosting Express Runtime middleware components. Using the Express Runtime console, you can perform the following tasks:

- Manage the Express Runtime middleware
- Perform frequent administrative tasks
- Customize tasks to an individual's user role
- Monitor systems using common logging

Express Runtime middleware components

An Express Runtime solution installs one or more of the following IBM middleware components:

IBM DB2 Universal Database™ Express Edition for Windows® and Linux™ (the i5/OS™ or OS/400® database is embedded in the operating system)

Designed for small and medium business needs, DB2 Universal Database Express UDB features self-tuning, self-managing, self-configuring capabilities that increase reliability while reducing complexity and required skills.

IBM Informix® Dynamic Server – Express

Informix Dynamic Server (IDS) is an extensible object-relational database server from IBM. IDS supports on-demand computing, WebSphere®, and OLTP and OLAP data management applications in the SQL, Dynamic SQL, C++, and Java™ languages.

IBM WebSphere Application Server – Express

IBM WebSphere Application Server – Express helps you develop, deploy, and manage static and dynamic Web sites with wizards and templates that can generate code. You can view information in databases, perform updates, and create and use Web services.

IBM HTTP Server for Windows, Linux, and i5/OS or OS/400

The foundation of any on-demand business application is the Web server. The IBM HTTP Server uses SSL secure connections, a fast response cache accelerator, and an administration server that helps to administer and configure itself.

Chapter 3. Preparing to use Express Runtime

As an end user, you might use Express Runtime in one of the following ways:

- An IBM Business Partner gives you a complete solution image and instructs you to deploy the solution without installing Express Runtime separately.
- You want to deploy only the IBM middleware components, which means you do not need to completely install Express Runtime.
- An IBM Business Partner gives you a solution file for which you need to install Express Runtime, and then open the solution file to deploy the solution. For this scenario, refer to the *Express Runtime Getting Started Guide for Business Partners*.

If you receive a complete solution image from a business partner, all the pieces of Express Runtime that you need are included in that solution image. You do not need a separate copy of the Express Runtime product. The basic flow of the deployment is:

1. Insert the solution image media.
2. A launch pad is displayed prompting you to install the image.
3. When you begin to install the image, the Express Runtime deployment wizard is displayed, prompting you to set the values for any variables that the business partner did not already provide for you, or to change any variables that the business partner set.
4. Once you have specified all the values, the deployment wizard begins deploying the solution to the target computers.
5. The middleware components and applications are installed with the set values on the target computers.
6. When deployment is completed, you exit the deployment wizard, and all the files that were installed on the deploying computer are automatically removed.

If you are going to deploy and install only the IBM middleware included with Express Runtime, you obtain the Express Runtime product, but you do not need to install the entire product. The basic flow of the deployment is:

1. Insert the Express Runtime product media.
2. A launch pad is displayed prompting you to install only the included IBM middleware.
3. When you indicate you want to install the middleware components, the Express Runtime deployment wizard is displayed prompting you to select the middleware you want and to set the values for any variables.
4. Once you have specified all the values, the deployment wizard begins deploying the middleware components to the target computers.
5. The middleware components are installed with the set values on the target computers.
6. When deployment is completed, you exit the deployment wizard, and all the files that were installed on the deploying computer are removed automatically.

Chapter 4. Planning a deployment

This section provides planning information to help you deploy a solution using Express Runtime. This section provides information on the following topics:

- Checklist for planning a deployment
- Operating systems you can use with Express Runtime
- Obtaining the solution to deploy
- Determining which tasks to deploy
- Determining which target computers to deploy to
- Installing the IBM Installation Agent on the target computer

Checklist for planning a deployment

To deploy a solution with Express Runtime, ensure that the tasks in the following checklist are completed. Details about each task are available in the remaining sections.

1. Verify that the computer where you install Express Runtime, also referred to as the staging server, uses the correct type of operating system.
2. Obtain the Express Runtime solution. You can obtain a customized solution from a third party who developed a customized Express Runtime solution, or you can use the middleware-only solution that is provided with the Express Runtime product to deploy the included IBM middleware components.
3. Determine which solutions or middleware components you want to deploy.
4. Determine which target computers to deploy to.
5. Install the IBM Installation Agent on each remote target computer.

Operating systems you can use with Express Runtime

The following table illustrates the operating systems that you can use for the computer where you install Express Runtime. This is also the computer from where you deploy the solution. Verify that this computer uses a supported operating system.

Table 1.

| Platform | Development | Staging server |
|---|-------------|----------------|
| OS/400 V5R2 & V5R3 | No | No |
| Red Hat Linux 3.0 - Red Hat Enterprise Linux | Yes | Yes |
| Red Hat Linux 4.0 - Red Hat Enterprise Linux | No | Yes |
| SUSE LINUX 9.0 - SUSE LINUX Enterprise Server | Yes | Yes |
| SUSE LINUX 8.0 - SUSE LINUX Enterprise Server | No | Yes |

Table 1. (continued)

| Platform | Development | Staging server |
|---|-------------|----------------|
| LINUX on POWER™ (using SUSE LINUX Enterprise Server 9.0, Red Hat Enterprise Linux AS 3.0, or Red Hat Enterprise Linux AS 4.0) | No | Yes |
| RedFlag AS 4.1 Linux | No | Yes |
| Windows 2000 Server or Advanced Server w/SP4+ | Yes | Yes |
| Windows 2003 Server Standard and Enterprise w/SP1+ | Yes | Yes |
| Windows XP Professional w/SP2+ | Yes | Yes |
| Windows 2000 Professional w/SP3+ | Yes | Yes |

Obtaining the solution

The deployment wizard uses a solution file to deploy a solution. If a business partner provides you with a solution launcher image, the solution file is included as part of that image. The solution file has a .ser extension and contains information about the tasks that you can deploy and any customization necessary to complete the deployment successfully.

You can obtain a custom solution file from a business partner, or you can use the middleware-only solution provided with Express Runtime. The middleware-only solution contains tasks that help you deploy the Express Runtime middleware to any valid operating system. Solutions obtained from a business partner contain tasks that help you deploy the Express Runtime middleware components that the business partner customized. Solutions also contain any customized business partner applications.

Determining which tasks to deploy

Express Runtime solutions are comprised of one or more tasks. A task is a group of one or more actions performed by the deployment wizard, such as the installation of a middleware component. You select one or more tasks in a solution to deploy.

If you received a solution from an Express Runtime solution developer, some tasks might be preselected. When a task is preselected, it means that your solution provider suggests that you deploy the preselected tasks. If other tasks are available in the solution, you can, optionally, select them for deployment using the deployment wizard. Or the person who developed the Express Runtime solution might require you to deploy all the tasks in the solution.

If you use the middleware-only solution provided with Express Runtime, no tasks are preselected. In the middleware-only solution, each middleware component is displayed as one task.

Determining which target computers to deploy a solution to

The deployment wizard can deploy solutions either locally to the computer that the deployment wizard is running on, or remotely to another computer. Deploying a solution remotely requires that the IBM Installation Agent is running on each of the target computers. When the deployment wizard begins a deployment from the staging server, it sends task information to the target computers. Each IBM Installation Agent receives the task information and completes the specified tasks on the target computer. An Express Runtime solution developer can create a solution that only deploys only to localhost, in which case you do not see target computer information.

Verify that the target computers to which you want to deploy a solution use a valid target computer operating system. The following table shows the target supported operating systems:

Table 2.

| Platform | Deployment targets |
|--|--------------------|
| OS/400 V5R2 & V5R3 | Yes |
| Red Hat Linux 3.0 - Red Hat Enterprise Linux | Yes |
| Red Hat Linux 4.0 - Red Hat Enterprise Linux | Yes |
| SUSE LINUX 9.0 - SUSE LINUX Enterprise Server | Yes |
| SUSE LINUX 8.0 - SUSE LINUX Enterprise Server | Yes |
| LINUX on POWER (using SUSE LINUX Enterprise Server 9.0, Red Hat Enterprise Linux AS 3.0, or Red Hat Enterprise Linux AS 4.0) | Yes |
| RedFlag AS 4.1 Linux | Yes |
| Windows 2000 Server or Advanced Server w/SP4+ | Yes |
| Windows 2003 Server Standard and Enterprise w/SP1+ | Yes |
| Windows XP Professional w/SP2+ (Note: Informix [®] Dynamic Server is the only Express Runtime middleware that supports Windows XP Professional SP 2.) | No |
| Windows 2000 Professional w/SP3+ | Yes |

The Express Runtime console cannot be deployed on IBM OS/400 Version 5 Release 2 or IBM i5/OS Version 5 Release 3.

Installing the IBM Installation Agent on the target computer

Install the IBM Installation Agent on each target computer to which you plan to remotely deploy a solution. Begin the installation of the IBM Installation Agent from the IBM Installation Agent launch pad. On Windows, the launch pad automatically starts from the installation CD or DVD. If you are deploying from a

network location, or if the launch pad does not automatically start, start it by using `launchpad.exe` on Windows or `launchpad.sh` on Linux.

The IBM Installation Agent launch pad provides controls for performing the following tasks:

- Installing IBM Installation Agent
- Viewing the IBM Installation Agent prerequisites
- Viewing the IBM Installation Agent readme file

More information about installing the IBM Installation Agent is available in the IBM Installation Agent InfoCenter and in the product documentation when you install using the launch pad.

Chapter 5. Deploying with Express Runtime

The Express Runtime deployment wizard guides you through the steps needed to configure and deploy a solution. You can use the middleware-only solution, provided with Express Runtime, to deploy the Express Runtime middleware components, or you can use a custom solution, provided by a business partner, to deploy a total business solution. To deploy a solution with Express Runtime, complete the following process:

1. Start the deployment wizard.
2. Open the solution file in the deployment wizard.
3. Select the tasks to deploy.
4. Configure the selected tasks.
5. Start the deployment.

Starting the deployment wizard

There are several ways to start the deployment wizard. Start the deployment wizard using one of the following methods:

Deploying a solution using a solution launcher image

If a business partner provided you a solution launcher image on a CD or DVD, complete the following steps:

1. Insert the solution launcher image CD or DVD.
2. The solution launcher starts automatically. This process can take anywhere from a few seconds to several minutes, depending on the speed of the system, the condition of the hard disk (if it is fragmented), and the speed of the disk access.
3. If a launch pad is displayed, click “Deploy solution” to start the deployment wizard. If the launch pad does not automatically start, start it by using the `launchpad.exe` program on Microsoft® Windows or the `launchpad.sh` program on Linux. Both programs are located on the CD or DVD provided by a business partner.
4. The deployment wizard starts with the solution open.

Deploying only Express Runtime middleware components

If you purchased Express Runtime to deploy only the Express Runtime middleware components, and you selected Deploy Middleware Only in the Express Runtime installation, the deployment wizard automatically starts with the middleware-only solution open. When you close the deployment wizard, the Express Runtime files are automatically removed from the computer. To restart the deployment wizard, restart the Express Runtime installation and select Deploy Middleware Only again.

Deploying with Express Runtime installed

If you have already installed the Express Runtime product, perform the following steps to start the deployment wizard and open the solution provided by a business partner:

1. Start the deployment wizard. On a Microsoft Windows operating system, click **Start > Programs > IBM Express Runtime 2.1 > Deployment wizard**. On a Linux operating system, click **Main Menu > IBM Express Runtime 2.1 > Deployment wizard**.
2. Open the solution that you want to deploy. To open the solution, click **File > Open** from the deployment wizard.
3. Browse to the location of the solution (.ser) file, and click **Open**.
4. The deployment wizard is initialized with the specified solution open.

Deploying a solution

With the deployment wizard started and the solution open, you can begin to configure and deploy the solution. The deployment wizard guides you through the following steps to complete the customization and deployment of the solution.

1. Read the Welcome dialog of the deployment wizard. Click **Next**.
2. In the Select Tasks dialogs, select the tasks that you want to deploy by clicking the check boxes that correspond to the tasks. Click **Next**. Repeat this step for each Select Tasks dialog.
3. In the Specify Targets dialog, if one appears, enter the host or IP address of the target computer, and click **Add**. To deploy a solution locally to the computer on which you are running the deployment wizard, enter "localhost" for the host name. If no Specify Targets dialog appears, the solution will be deployed to the localhost only. To deploy a task to another computer, enter a new host name or IP address, and click **Add**. The IBM Installation Agent software must be installed on each target machine other than the local computer. Repeat until all host names have been added for each task. Click **Next**.
4. In the Specify Configuration dialog, provide values for all configuration parameters that the deployment wizard requires. Some configuration dialogs might have parameters on both the Typical and Advanced tabs. The Advanced tab contains parameters that most users do not need, so only experienced users should change them. Click **Next**. Repeat this step for each task that requires configuration information.
5. Review the information in the Summary dialog. To deploy all of the tasks in the summary dialog, click **Deploy All**. To deploy only one task, if this option is available, click the **Deploy** button that corresponds with the task.

In the Status dialog, you can monitor the progress of the deployment until deployment completes.

Chapter 6. Other documentation available

The following table provides information about other documentation that you can use:

Table 3. Other documentation

| Information unit | Purpose | How to access |
|--------------------------------------|---|--|
| Express Runtime InfoCenter | Describes pertinent product information from installation, development, deployment, and maintenance instructions, to concept and troubleshooting information. | From the Express Runtime library page at http://www.ibm.com/software/webservers/expressruntime/library/ or from the Help menu in the deployment wizard. |
| Express Runtime release notes | Sometimes called a readme, describes product information that was not captured in the Express Runtime InfoCenter. | From the Express Runtime CD or DVD. |
| IBM Installation Agent InfoCenter | Describes how to install and configure the IBM Installation Agent. Conceptual and troubleshooting information is also included. | From the Express Runtime library page at http://www.ibm.com/software/webservers/expressruntime/library/ |
| IBM Installation Agent release notes | Sometimes called a readme, describes product information that was not captured in the IBM Installation Agent InfoCenter. | From the IBM Installation Agent CD or DVD. |

For IBM middleware documentation, install the middleware components to view each product's documentation. You can also access documentation for each middleware component on the World Wide Web:

IBM DB2 Universal Database Express:

<http://www.ibm.com/software/data/db2/udb/>

Informix Dynamic Server Express:

<http://www.ibm.com/software/data/informix/ids/>

IBM WebSphere Application Server – Express

<http://www.ibm.com/software/webservers/appserv/express/>

IBM HTTP Server for Windows, Linux, and OS/400 or i5/OS

<http://www.ibm.com/software/webservers/httpservers/>

Express Runtime solution developers might provide documentation regarding solutions they provide separately from the Express Runtime documentation.

Chapter 7. Troubleshooting

If you encounter errors during a deployment, perform the following tasks to identify the cause of the problem:

- On the Status dialog, click **Detailed Messages**. A table of messages is displayed in a new dialog. Double-click on a message to view more detailed information and to print the error details.
- Verify that the staging server can communicate with all of the target computers. Use the left navigation in the deployment wizard, and click **Specify Targets**. Click **Test Connections** on each Specify Targets dialog to verify that the agent is running on all of the target computers.
- View the log file: `<InstallPath>\logs\IRU_DeploymentWizard.log`, where `<InstallPath>` is the location where you installed Express Runtime.
- Record any displayed error messages.

Chapter 8. Accessibility

You can use screen-reader software to hear what is displayed on the user interface of the deployment wizard. You can operate all features using the keyboard instead of the mouse. Express Runtime honors system accessibility settings, such as font and color settings. Accelerator and mnemonic keys are enabled throughout Express Runtime. These are identified on the Menu bar and its associated pull-down menus.

You can use keys or key combinations to perform operations that can also be done through mouse actions. Many menu actions can be initiated from the keyboard. In those cases, the keyboard equivalent is displayed to the right of the menu item or the shortcut letter is underlined. In addition, the following keyboard shortcuts are enabled:

Tab Navigates through the user interface.

Arrow keys

Navigate within each panel in the user interface.

F3 Decreases size of selected column incrementally.

F4 Increases size of selected column incrementally.

F5 Moves selected column to the left.

F6 Moves selected column to the right

Navigating in Linux

If you have trouble navigating a panel in Linux using CTRL+Tab, use CTRL+ALT+Tab instead. If this is not the default navigation method, refer to the operating system documentation to change the navigation settings.

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