

IBM SPSS Collaboration and Deployment Services  
Scoring Server  
Version 8 Release 0

*Installation and Configuration Guide*



**Note**

Before using this information and the product it supports, read the information in "Notices" on page 37.

**Product Information**

This edition applies to version 8, release 0, modification 0 of IBM SPSS Collaboration and Deployment Services and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Chapter 1. IBM SPSS Collaboration and Deployment Services Scoring Server

The IBM® SPSS® Collaboration and Deployment Services Scoring Service is available as a separately deployable application, the IBM SPSS Collaboration and Deployment Services Scoring Server.

The scoring server improves deployment flexibility in several key areas:

- Scoring performance can be scaled independently from other services
- Scoring servers can be independently configured to dedicate computing resources to one or any number IBM SPSS Collaboration and Deployment Services scoring configurations
- The scoring server operating system and processor architecture does not need to match the IBM SPSS Collaboration and Deployment Services Repository or other scoring servers
- The scoring server application server does not need to match the application server used for IBM SPSS Collaboration and Deployment Services Repository or other scoring servers

To achieve the greatest flexibility, the scoring server communicates with the IBM SPSS Collaboration and Deployment Services Repository using only standard web service calls and JMS messages. There is no need for a shared file system or for a JDBC connection to the repository database. The network infrastructure must allow HTTP and JMS traffic between the repository server and scoring servers.

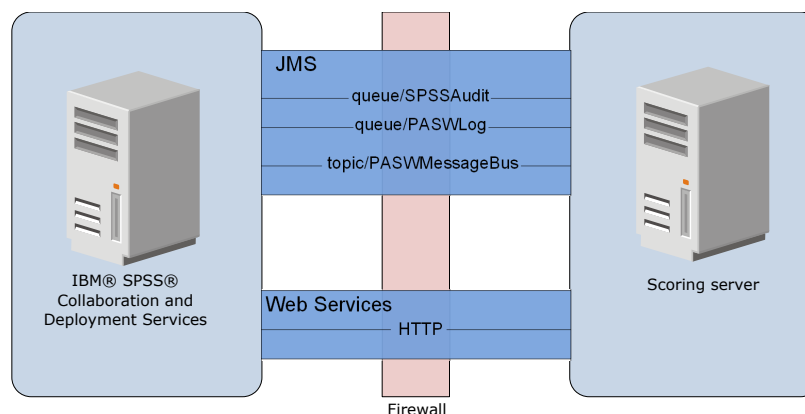


Figure 1. IBM SPSS Collaboration and Deployment Services with scoring server

### Important:

- When the scoring server is started, the IBM SPSS Collaboration and Deployment Services Repository must be available, so that the scoring configuration settings and related repository resources can be loaded. Once started, however, the scoring server will continue to run even if IBM SPSS Collaboration and Deployment Services Repository becomes unavailable.
- The scoring server runs outside the IBM SPSS Collaboration and Deployment Services Repository server environment, so IBM SPSS Collaboration and Deployment Services security roles cannot be enforced on the scoring server. Instead, the scoring server, as a JAX-WS application, can be secured by using standard application server security policy sets. Please refer to the application server Web services security documentation for more details.

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## Installation overview

Deploying the IBM SPSS Collaboration and Deployment Services Scoring Server involves obtaining the necessary files, installing the scoring server, and configuring the server to communicate with IBM SPSS Collaboration and Deployment Services Repository

### Procedure

To install IBM SPSS Collaboration and Deployment Services Scoring Server:

1. Verify that all IBM SPSS Collaboration and Deployment Services Scoring Server prerequisites have been met.
2. Configure IBM SPSS Collaboration and Deployment Services Repository to communicate with IBM SPSS Collaboration and Deployment Services Scoring Server.
3. Obtain the IBM SPSS Collaboration and Deployment Services Scoring Server installation files.
4. Configure the Installation Manager repository preferences or the Passport Advantage® account preferences.
5. Install IBM SPSS Collaboration and Deployment Services Scoring Server and any scoring adapters needed for your model types by using Installation Manager. For example, if the scoring server will generate scores for PMML models, install the IBM SPSS Collaboration and Deployment Services Scoring Adapter for PMML in addition to the scoring server.
6. Specify configuration settings for scoring.
7. Deploy and configure IBM SPSS Collaboration and Deployment Services Scoring Server.

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## Chapter 2. Prerequisites

Before you install IBM SPSS Collaboration and Deployment Services Scoring Server, review the system requirements and set up resources in your environment.

- The user must have a sufficient level of permissions to install and run IBM SPSS Collaboration and Deployment Services Scoring Server.
- IBM SPSS Collaboration and Deployment Services Repository must be installed and available to the IBM SPSS Collaboration and Deployment Services Scoring Server installation
- The IBM SPSS Collaboration and Deployment Services Repository instance must have scoring adapters for your model types installed. For instructions, see the scoring adapter installation documentation. For example, if the scoring server will generate scores for PMML models, install IBM SPSS Collaboration and Deployment Services Scoring Adapter for PMML.
- IBM Installation Manager must be installed on the system.

If Installation Manager is not already present on the system, it is automatically installed when you start the installation. If you have an older version of Installation Manager, you are required to update it on as part of the installation.

If Installation Manager is not installed automatically, and is not present on the system, install Installation Manager from the IBM Corp. support site (<http://www.ibm.com/support>). For download location and user information, see the Installation Manager documentation.

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### Host system requirements

Before installing IBM SPSS Collaboration and Deployment Services Scoring Server, verify that the hardware and software requirements have been met.

For current system requirements information, refer to the software product compatibility reports on the IBM Technical Support site at: <http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/softwareReqsForProduct.html>

If installing into WebSphere, the WebSphere profile used with IBM SPSS Collaboration and Deployment Services must be configured to run with Java 7 SDK. See the **Repository Installation and Configuration Guide** for details.

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### Application servers

IBM SPSS Collaboration and Deployment Services Scoring Server requires an application server. You can use the default application server included with the scoring server or supply your own.

The combination of the IBM SPSS Collaboration and Deployment Services Repository application server and the IBM SPSS Collaboration and Deployment Services Scoring Server application server defines the server topology. The following applications server topologies are supported:

*Table 1. Supported server topologies*

IBM SPSS Collaboration and Deployment Services Repository application server	IBM SPSS Collaboration and Deployment Services Scoring Server application server
WebSphere	Default WebSphere Application Server Liberty Profile included with scoring server
WebSphere	WebSphere
JBoss	JBoss
WebLogic	WebLogic

Table 1. Supported server topologies (continued)

IBM SPSS Collaboration and Deployment Services Repository application server	IBM SPSS Collaboration and Deployment Services Scoring Server application server
WebSphere	JBoss
WebLogic	JBoss

**Note:**

- If you deploy both the IBM SPSS Collaboration and Deployment Services Repository and the IBM SPSS Collaboration and Deployment Services Scoring Server in WebSphere, you can use either a same-cell or a different-cell topology for the server profiles.
- If you deploy both the IBM SPSS Collaboration and Deployment Services Repository and the IBM SPSS Collaboration and Deployment Services Scoring Server in JBoss, use a stand-alone server for each.
- If you deploy both the IBM SPSS Collaboration and Deployment Services Repository and the IBM SPSS Collaboration and Deployment Services Scoring Server in WebLogic, use the same domain.

## WebSphere deployment scenarios

When IBM SPSS Collaboration and Deployment Services Repository and the scoring server are running on WebSphere, there are two main deployment scenarios that determine the procedure for JMS configuration:

- IBM SPSS Collaboration and Deployment Services Repository and scoring server profiles running in the same WebSphere cell
- IBM SPSS Collaboration and Deployment Services Repository and scoring server profiles running in different WebSphere cells

### Servers in the same cell

The “same cell” topology is defined by IBM SPSS Collaboration and Deployment Services Repository and the scoring server running within the same WebSphere cell. In the example presented in the diagram, the repository is in *Cell1-Node1-Server1*. The scoring server can be deployed into the same node (*Cell1-Node1-Server2*), a different node (*Cell1-Node2-Server3*), or both. The scoring server does not place a limit on the number of nodes and servers that can be involved.



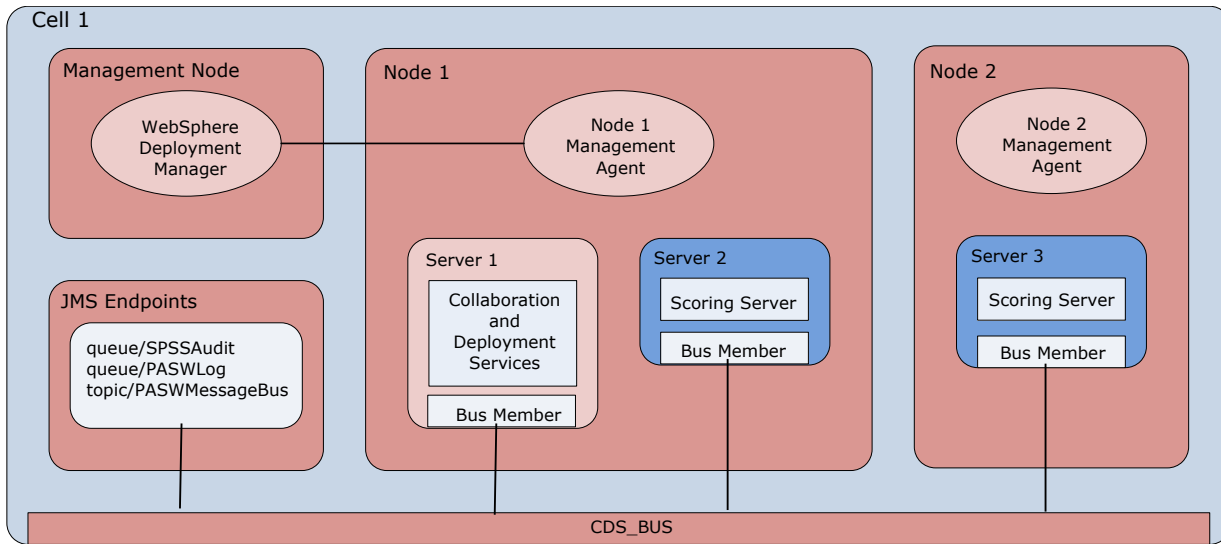


Figure 2. IBM SPSS Collaboration and Deployment Services Repository and scoring sServer profiles running in the same WebSphere cell

### Servers in different cells

The “different cells” topology is defined by the IBM SPSS Collaboration and Deployment Services Repository and the scoring server application running in different WebSphere cells. In the example presented in the diagram, the repository is in *Cell1-Node1-Server1*. The scoring server is deployed into a different cell (*Cell2-Node1-Server1*).

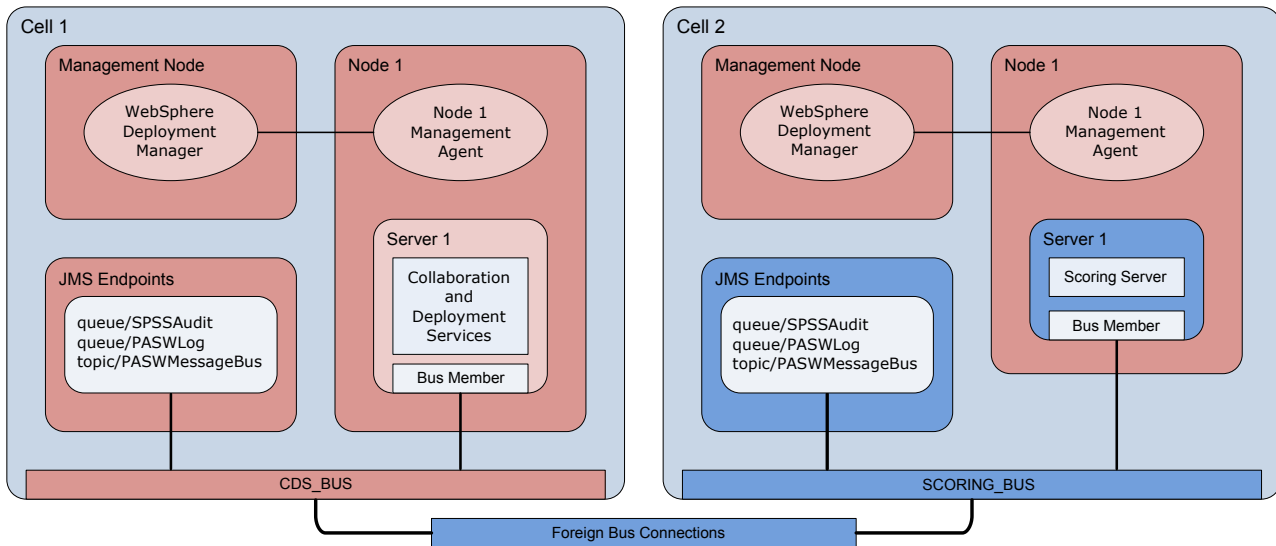


Figure 3. IBM SPSS Collaboration and Deployment Services Repository and scoring server profiles running in different WebSphere cells

During the deployment, the two cells are connected using a service integration bus (for example, *SCORING\_BUS*), so that JMS traffic generated from one cell is visible to the other cell. Another example of this topology includes running the scoring server in an unmanaged WebSphere profile. The scoring server does not place a limit on the number of cells, nodes, and servers that can be involved. However, each cell running the scoring server requires a unique service integration bus connection to the *CDS\_BUS* in the IBM SPSS Collaboration and Deployment Services Repository cell. Using a large number of cells could be difficult to manage.



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## Chapter 3. Configuring IBM SPSS Collaboration and Deployment Services Repository for scoring servers in different cells

For the WebSphere different-cells topology, you must define foreign bus connections to allow servers in different cells to communicate with each other.

### About this task

In the same-cell server topology, all servers are in a single cell and share a common bus. However, in the different-cell topology, each cell has a bus. Foreign bus connections must be defined between the cell buses to allow the servers in one cell to communicate with the servers in another cell. Define these connections using the WebSphere administration console. For more information on bus configuration in WebSphere, see the WebSphere documentation.

### Procedure

1. In the scoring server cell, create a new service integration bus with a unique name (such as *SCORING\_BUS*). The bus security should be disabled.
2. In the scoring server cell, add the scoring server to the new bus.
3. In the scoring server cell, create a foreign bus connection from the bus for the scoring server to the bus for the IBM SPSS Collaboration and Deployment Services Repository.
  - The bus connection type should be direct connection.
  - The foreign bus type should be service integration bus
  - The name of the foreign service integration bus should be the name of the IBM SPSS Collaboration and Deployment Services Repository bus, typically *CDS\_BUS*.
  - The gateway messaging engine should identify the node, server, and bus. Example values include *CDS-Node01.server1-CDS\_BUS* and *DG1-DEV-CLST-2aNode02.cds\_server-CDS\_BUS*.
  - The bus link name should be *CDS\_SCORING\_JMS\_LINK*.
  - The target inbound transport chain should be *InboundBasicMessaging*.
  - The bootstrap service integration bus provider endpoints should be a comma-separated list of endpoint triplets or the form *hostName:portNumber:chainName*. An example value is *cds.server.example.com:7278:BootstrapBasicMessaging*.
  - The foreign bus link routing properties should add topic space mappings, with a topic space in the local bus and a topic space in the foreign bus.
  - The topic space map should include a local topic space and a remote topic space of *Default.Topic.Space*.
4. Repeat the previous step, creating a foreign bus connection from the bus for IBM SPSS Collaboration and Deployment Services Repository to the bus for the scoring server.
5. Stop the scoring server process.

### Results

The bus for the cell containing the IBM SPSS Collaboration and Deployment Services Repository and the bus for the cell containing the scoring server can communicate through foreign bus connections.

### What to do next

After defining the bus connections, configure IBM Installation Manager and install the scoring server.



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## Chapter 4. Installation files

Before installing, you must obtain the installation files.

To obtain the installation files do one of the following:

- Download the files from the Passport Advantage site, and use local installation: Licensed customers with a Passport Advantage ID and password can download the necessary product repositories from the Passport Advantage site.
- Access the live repositories, and use web-based installation: If you have a Passport Advantage ID and password, you can use Installation Manager to install the product directly from IBM hosted repositories.



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## Chapter 5. Getting started with Installation Manager

Installing, updating, or uninstalling the product can be performed by using IBM Installation Manager in wizard, console, or silent mode. However, you must configure an IBM Installation Manager repository or Passport Advantage preferences before performing these tasks.

For complete information about Installation Manager, see the IBM Installation Manager documentation.

### Wizard mode

In wizard mode, you run Installation Manager from a graphical user interface.

Most of the time, you start Installation Manager with the default shortcuts that are installed with your version of Installation Manager.

From the installation location of Installation Manager, you can run the IBMIM application file to start in wizard mode manually.

The default IBMIM location for the operating system varies depending on the installation type (administrator, nonadministrator, or group).

*Table 2. Default installation locations for IBMIM*

Operating system	Administrator	Nonadministrator	Group
Windows XP Professional	C:\Program Files\IBM\Installation Manager	C:\Documents and Settings\user\IBM\Installation Manager\eclipse	Not available.
Windows Vista, Windows 2008, Windows 7, Windows 8, and Windows 2012	C:\Program Files [(x86)]\IBM\Installation Manager\eclipse	C:\Users\user\IBM\Installation Manager\eclipse	
Linux and UNIX	/opt/IBM/InstallationManager/eclipse	/user_home_directory/IBM/InstallationManager/eclipse	/user_home_directory/IBM/InstallationManager_Group/eclipse

### Console mode

Use console mode when you do not have a graphics display device available or when you want to run Installation Manager without the graphical user interface. Installation Manager supports installing in an ASCII text-based mode that is called the console mode. Console mode is interactive text-based user interface to Installation Manager. For example, use console mode for server-side deployments when no graphical user interface is present, or for running the installation from a remote host.

To start console mode:

1. Open a command line.
2. Go to the `tools` subdirectory.
3. Run the command that is appropriate for the operating system:
  - Windows: `imcl.exe -c`
  - Linux, UNIX, and z/OS®: `./imcl -c`

The default tools location varies depending on the operating system and installation type (administrator, nonadministrator, or group). For more information, see the Installation Manager documentation.

Table 3. Default installation locations for the tools subdirectory

Operating system	Administrator	Nonadministrator	Group
Windows XP Professional	C:\Program Files\IBM\Installation Manager\eclipse\tools	C:\Documents and Settings\user\IBM\Installation Manager\eclipse\tools	
Windows Vista, Windows 2008, Windows 7, Windows 8, and Windows 2012	C:\Program Files [(x86)]\IBM\Installation Manager\eclipse\tools	C:\Users\user\IBM\Installation Manager\eclipse\tools	
Linux and UNIX	/opt/IBM/InstallationManager/eclipse/tools	/user_home_directory/IBM/InstallationManager/eclipse/tools	/user_home_directory/IBM/InstallationManager_Group/eclipse/tools

## Silent mode

Use silent installations to deploy software to multiple systems, or to an enterprise. Silent installations are defined by a response file and started from the command line or a batch file. The response file is provided with the product distribution. For more information, see “Installing silently by using a response file” on page 19.

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## Repository preferences

An IBM Installation Manager repository is a location that stores data for installing, modifying, rolling back, or updating packages.

Before you install, modify, or update packages, obtain the installation repository location from your administrator or from IBM.

**Note:** To successfully access an installation repository, the repository location path must not contain an ampersand (&).

The following topics provide instructions for setting repository preferences in wizard and console mode.

### Setting repository preferences in wizard mode

You can add, edit, or remove repositories and modify the repository order in the repository table using wizard mode.

### About this task

You can clear credentials for a repository or test a connection to a repository. You might find both a `diskTag.inf` file and a `repository.config` file in the IBM product installation files. Use the `diskTag.inf` file when you select a repository location.

### Procedure

To add, edit, or remove a repository location:

1. Start Installation Manager in wizard mode by using IBMIM. For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.
2. Click **File > Preferences > Repositories**. The Repositories page opens and shows available repositories, repository locations, and the connection status for the repositories.



3. Click **Add Repository**.
4. Enter the repository location or click **Browse**. When you browse, go to the repository location and select the `diskTag.inf` file, the `repository.config` file, the `.zip` file, or the `.jar` file as appropriate for your environment.
5. Click **OK**.  
If you provided an HTTPS or restricted FTP repository location, you are prompted to enter a user ID and password. The new repository location is added to the list. If the repository is not connected, a red box shows in the **Connection** column.
6. Optional: Select **Search service repositories during installation and updates**. Installation Manager searches the service repositories at IBM.com for updates to installed packages.
7. Click **OK** to close the Preference page.

## Setting repository preferences in console mode

You can use console mode to add, remove, open, move, or close repositories.

### About this task

A selected option is indicated by an X in brackets: [X]. Options that are not selected are indicated by empty brackets: [ ]. You can press **Enter** to select the default entry or select a different command. For example, [N] indicates that the default selection is N for the **Next** command.

### Procedure

To add a repository:

1. Start Installation Manager in console mode by using `imcl -c`. For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.
2. Enter P: Preferences.
3. Enter 1: Repositories.
4. Enter D: Add repository.
5. Enter a repository location such as `C:\installation_files\repository.config`. If you add a repository that requires credentials, you are prompted to provide the required credentials.  
Use the correct case when you enter the repository location. If the correct case is not used, the package is not shown in the list of available packages for installation.
  - a. Enter P: Provide credentials and connect.
  - b. Enter the *user\_name* and press **Enter**.
  - c. Enter the *password* and press **Enter**.
  - d. Enter 1 to save the password.
  - e. Enter 0: Ok.
6. Enter A: Apply Changes and Return to Preferences Menu.
7. Enter R: Return to Main Menu.

---

## Passport Advantage preferences

IBM Installation Manager can access installation packages from Passport Advantage. Passport Advantage is a centralized online location for the acquisition of IBM software offerings.

Before you install, modify, or update packages, obtain valid Passport Advantage credentials.

The following topics provide instructions for setting Passport Advantage preferences in wizard and console mode.

## Setting Passport Advantage preferences in wizard mode

You can set the Installation Manager Passport Advantage preferences to connect to Passport Advantage using wizard mode.

### About this task

**Important:** If you share an instance of Installation Manager with other users, see the Installation Manager documentation for information on installing as an administrator, nonadministrator, or group.

### Procedure

To set Passport Advantage preferences:

1. Start Installation Manager in wizard mode by using IBMIM. For more information, see Chapter 5, "Getting started with Installation Manager," on page 11.
2. Click **File > Preferences > Passport Advantage**.
3. Select the **Connect to Passport Advantage** check box to connect to the Passport Advantage repository. The Password Required window opens.
4. Enter a user name and password for Passport Advantage.
5. Optional: Select **Save password** to save the user name and password credentials.  
If you do not save the user name and password credentials, you are prompted for these credentials each time you access Passport Advantage.
6. Click **OK** to close the Password Required window.
7. Click **OK** to close the Preferences window.

### What to do next

To delete saved user name and password credentials:

1. Click **File > Preferences > Passport Advantage**.
2. Click **Clear Credentials**.
3. Click **OK** in the Confirm Clear Credentials window.

## Setting Passport Advantage preferences in console mode

You can set the Installation Manager Passport Advantage preference to connect to Passport Advantage in console mode.

### Procedure

1. Start Installation Manager in console mode by using `imcl -c`. For more information, see Chapter 5, "Getting started with Installation Manager," on page 11.
2. Enter `P`: Preferences.
3. Enter `6`: Passport Advantage.
4. Enter `1`: Connect to Passport Advantage. A selected option is indicated by an `X` in brackets: `[X]`.
5. Enter `P`: Provide credentials and connect.
6. Enter the user name for the Passport Advantage account.
7. Enter the password.  
If you do not save the user name and password credentials, you are prompted for these credentials each time you access Passport Advantage.
  - a. Optional: If you entered a password, enter `1`: Save password if valid.
8. Enter `O`: OK to save the credentials.

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## Chapter 6. Installing IBM SPSS Collaboration and Deployment Services Scoring Server

You can install in wizard, console, or silent mode.

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### Installing in wizard mode

You can install IBM SPSS Collaboration and Deployment Services Scoring Server by using IBM Installation Manager in wizard mode

#### Before you begin

Before you can install, IBM Installation Manager must have access to the repository that contains the package.

- If you have an IBM Passport Advantage account, you can install packages from the Passport Advantage site. For more information about connecting to a Passport Advantage repository, see “Setting Passport Advantage preferences in wizard mode” on page 14.
- If you are installing from a repository that is not on the Passport Advantage site, you must specify the repository in the preferences before you install. For more information, see “Setting repository preferences in wizard mode” on page 12.

#### Procedure

1. Start Installation Manager in wizard mode by using IBMIM. For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.
2. In Installation Manager, click **Install**. Installation Manager searches the defined repositories for available packages. If no available packages are found, verify that you specified the repository correctly. See “Setting repository preferences in wizard mode” on page 12.
3. If a new version of Installation Manager is found, you might be prompted to confirm the installation. Click **Yes** to proceed. Installation Manager automatically installs the new version, restarts, and resumes.
4. The Install page of Installation Manager lists all the packages that were found in the repositories that Installation Manager searched. Only the most recent version of the package is shown. To show all versions of a package that Installation Manager finds, select **Show all versions**. Click a package version to show the package description in the **Details** pane. If more information about the package is available, a **More info** link is included at the end of the description text.

If you are running Installation Manager in group mode, you can install only packages that are enabled for installing in group mode. If the package is not enabled for installing in group mode, you receive an error and cannot continue with the package installation in group mode.

5. Select IBM SPSS Collaboration and Deployment Services Scoring Server and any scoring adapters corresponding to the model types you use for scoring. Click **Next**.

**Important:** To be able to generate scores, at least one scoring adapter must be installed with the scoring server. If you do not include a scoring adapter in your installation, the scoring server will not function.

6. On the Licenses page, read the license agreements for the selected package. After you accept the license agreement, click **Next** to continue.
7. On the Location page, enter the path for the shared resources directory in the **Shared Resources Directory** field. The shared resources directory contains resources that can be shared by multiple package groups. Click **Next**.

8. On the Location page, either choose a package group into which to install the packages or create a package group. A package group is a directory that contains resources that packages share with other packages in the same group. The first time that you install a package, you must create a package group. If you select more than one package to install, verify that the packages can be installed in the same package group by checking the documentation for the packages. For packages that cannot be installed in the same package group, install one package in one package group. After the installation completes, install the second package in a different package group.

Option	Description
Use the existing package group	Select a package group into which to install the packages. If the packages being installed are not compatible with the selected group, an alert reports the conflict. If a group is not compatible, either select a different group or create a new group.
Create a new package group	Click Browse to specify the installation directory for the packages. If you are installing on a 64-bit operating system, select the architecture for the installation as either 32-bit or 64-bit.

Click **Next** to continue the installation.

9. On the Features page, select the package features to install. Click **Expand All** to view all of the feature options. For the scoring server, select one of the following deployment options:

Option	Description
Easy deploy	This option installs a default application server and deploys the scoring server into it. The IBM SPSS Collaboration and Deployment Services Repository associated with the scoring server must be running the WebSphere application server.
Manual deploy	This option installs all necessary scoring server artifacts for subsequent manual deployment to your application server. For more information on supported server topologies, see "Application servers" on page 3

When you are finished selecting features, click **Next**.

10. On the Configurations page, specify the configuration settings for your deployment. The settings available depend on the deployment type.

Option	Description
Easy deploy	Enter the URL and connection credentials for the repository server to associate with the scoring server. In addition, specify the WebSphere SIP endpoint port for the scoring server application server.
Manual deploy	Select the application server type used for the scoring server or select <b>Create all supported EARs</b> to create a deployment EAR file for all supported application server types.

11. On the Summary page, review your choices before you install the packages.  
On Windows, Installation Manager checks for running processes. If processes are blocking the installation, a list of these processes is shown in the Blocking Processes section. You must stop these processes before you continue the installation. Click **Stop All Blocking Processes**. If there are no processes that must be stopped, you do not see this list. The running processes lock files that must be accessed or modified by Installation Manager.
12. Click **Install**. When the installation process completes, you receive a confirmation message.

## Results

IBM SPSS Collaboration and Deployment Services Scoring Server is installed in the specified directory.

## What to do next

- If you installed the scoring server using the Easy deploy option, specify the settings for the scoring configurations deployed to the scoring server.
- If you installed the scoring server using the Manual deploy option, deploy the IBM SPSS Collaboration and Deployment Services Scoring Server EAR file to your application server.

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## Installing in console mode

You can install IBM SPSS Collaboration and Deployment Services Scoring Server by using IBM Installation Manager in console mode.

### Before you begin

Before you can install, Installation Manager must have access to the repository that contains the package.

- If you have an IBM Passport Advantage account, you can install packages from the Passport Advantage site. For more information about connecting to a Passport Advantage repository, see “Setting Passport Advantage preferences in console mode” on page 14.
- If you are installing from a repository that is not on the Passport Advantage site, you must specify the repository in the preferences before you install. For more information, see “Setting repository preferences in console mode” on page 13.

### About this task

A selected option is indicated by an X in brackets: [X]. Options that are not selected are indicated by empty brackets: [ ]. You can press **Enter** to select the default entry or select a different command. For example, [N] indicates that the default selection is N for the **Next** command.

Some options may include a status prefix of [**Error**] or [**Incomplete**]. This status indicates that IBM Installation Manager does not currently have valid values for the parameters included in that option. You must select any options having this status and specify values for the parameters.

### Procedure

To install in console mode:

1. Start Installation Manager in console mode by using `imcl -c`.  
The default `imcl` location varies depending on the operating system and installation type (administrator, nonadministrator, or group). For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.
2. Enter 1: Install - Install software packages. Packages that can be installed are listed.  
If you have repositories that require credentials and you did not save the credentials, you are prompted to provide these credentials
3. Enter 1: [ ] *package\_name*. To select a package, enter the number that is next to the package. This example selects the first package listed. If the selected package requires a later version of Installation Manager, you are prompted to install the later version.

**Important:** To be able to generate scores, at least one scoring adapter must be installed with the scoring server. If you do not include a scoring adapter in your installation, the scoring server will not function.

4. On the Select screen, enter the number that is next to the package that you want to install.

- **1:** Choose version *package\_version* for installation. This option shows when you chose a package that is not selected for installation.

The **1:** Do NOT install version *package\_version* option shows when you chose a package that is selected for installation.

- **2:** Show all available versions of the package.

5. Optional: Enter 0: Check for Other Versions, Fixes, and Extensions. Installation Manager searches available repositories for other versions, fixes, or extensions of the selected package.

- For Installation Manager to search the default repository for the installed packages, the **Search service repositories during installation and updates** preference must be selected. This preference is selected by default. To access this preference, go to the Repositories preference page.

- Typically, Internet access is required.

- The **Check for Other Versions, Fixes, and Extensions** option indicates the number of other versions, fixes, or extensions found but does not list the found items. To see available versions, enter the number that is next to the package then enter **2:** Show all available versions of the package.

6. Continue selecting packages and specifying their versions to install. When you are done, enter N.

7. Options for the Licenses screen:

- **1:** *product\_name* - License Agreement. To view a license agreement, enter the number that is next to the product name. This example selects the first license agreement listed.

- **A:**  I accept the terms in the license agreement.

- **D:**  I do not accept the terms in the license agreement. If you decline the license agreement, the installation is stopped. To continue the installation, you must accept the license agreement.

a. Enter A to accept the license agreement.

b. Enter N: Next.

8. To enter a different value for the shared resources directory, enter M: Shared Resources Directory. To accept the default value for shared resources directory or to continue after you enter a different value, enter N: Next.

**Important:** You can specify the shared resources directory only the first time that you install a package. Select the drive with enough available space to ensure adequate space for the shared resources of future packages. You cannot change the location of the shared resources directory unless you uninstall all packages.

9. Optional: To enter a different value for the package group location, enter M: Change Location. To accept the default values or to continue after you enter a different value, enter N: Next.

A package group is a directory that contains resources that packages share with other packages in the same group. The first time that you install a package, you must create a package group. If you select more than one package to install, verify that the packages can be installed in the same package group by checking the documentation for the packages. For packages that cannot be installed in the same package group, install one package in one package group. After the installation completes, install the second package in a different package group.

10. On the Features screen, specify the deployment option for the scoring server.

- Enter 1 to select the Easy deploy option. This option installs a default application server and deploys the scoring server into it. The IBM SPSS Collaboration and Deployment Services Repository associated with the scoring server must be running the WebSphere application server.

- Enter 2 to select the Manual deploy option. This option installs all necessary scoring server artifacts for subsequent manual deployment to your application server. For more information on supported server topologies, see “Application servers” on page 3

Enter N.

11. Enter 1 to specify configuration settings for your deployment. The settings available depend on the deployment type.

Option	Description
Easy deploy	<ul style="list-style-type: none"> <li>• Enter 1 to specify the URL for the repository server to associate with the scoring server</li> <li>• Enter 2 to specify the user name for connecting to the repository server</li> <li>• Enter 3 to specify the password for connecting to the repository server</li> <li>• Enter 4 to specify the WebSphere SIB endpoint port that is used for monitoring changes</li> </ul>
Manual deploy	<ul style="list-style-type: none"> <li>• Enter 1 to create a deployment EAR file for all supported application server types</li> <li>• Enter 2 to indicate that the scoring server will run in IBM WebSphere Application Server</li> <li>• Enter 3 to indicate that the scoring server will run in Oracle WebLogic</li> <li>• Enter 4 to indicate that the scoring server will run in RedHat JBoss</li> </ul>

After completing the configuration settings, enter N.

12. On the Summary screen, review your selections before you install the package.

Optional: To generate a response file, enter G: Generate an installation response file. Enter the name of the response file and use `.xml` as the file extension. Response files are XML files. You can include a directory location when you enter the response file name to save the file to a different location.

13. Enter I: Install.

14. When the installation completes, enter F: Finish.

## Results

IBM SPSS Collaboration and Deployment Services Scoring Server is installed in the specified directory location.

## What to do next

- If you installed the scoring server using the Easy deploy option, specify the settings for the scoring configurations deployed to the scoring server.
- If you installed the scoring server using the Manual deploy option, deploy the IBM SPSS Collaboration and Deployment Services Scoring Server EAR file to your application server.

---

## Installing silently by using a response file

You can use a response file to install in silent mode.

### Before you begin

Locate the `SilentInstallOptions` response file provided in the installation package.

### Procedure

To install a package in silent mode:

Run the `imcl` command:

- Windows: `imcl.exe input response_file -log log_file`
- Linux and UNIX: `./imcl input response_file -log log_file`

The default **imcl** location will vary depending on the operating system and installation type (administrator, nonadministrator, or group). For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.

## Results

When the installation is complete, a status of 0 is returned. If the installation cannot be completed, a non-zero number is returned.

A log file is available. For more information, see the Installation Manager documentation.

## Example

*Table 4. Install commands by operating system*

Operating system	Command
Windows	<code>imcl.exe input c:\response_files\install.xml -log c:\mylog\install_log.xml -acceptLicense</code>
Linux, UNIX	<code>./imcl input /response_files/install.xml -log /mylog/install_log.xml -acceptLicense</code>

Enclose file paths that include spaces with double quotation marks.



## Chapter 7. Specifying scoring configuration settings

A configuration file specifies the scoring configurations that are deployed to the IBM SPSS Collaboration and Deployment Services Scoring Server.

### Before you begin

Use IBM Installation Manager to install IBM SPSS Collaboration and Deployment Services Scoring Server and any necessary scoring adapters.

### About this task

You define configuration settings in the `scoring-configuration.xml` file. This file contains the following two sections:

#### serviceProperties

This section defines property name-value pairs that control the runtime behavior of the scoring server. The scoring server uses the `cds.server.url.prefix` property to initiate web service calls to the IBM SPSS Collaboration and Deployment Services Repository. The value of this property must match the URL prefix of the IBM SPSS Collaboration and Deployment Services Repository server. Other properties may also be defined in this section, but should generally not be required.

#### configurationSelectors

This section determines which scoring configurations are deployed on the scoring server. The list of selectors is processed, in order to determine if a particular scoring configuration on the IBM SPSS Collaboration and Deployment Services Repository server should be deployed to the scoring server. The first selector to match the configuration name will control how the scoring configuration is deployed to the scoring server. The selector definition has additional options to customize the scoring configuration behavior on the scoring server. For example, setting the `cacheSize` option will override the setting loaded from the IBM SPSS Collaboration and Deployment Services Repository server, allowing the cache size to be tailored to the scoring server resources. By default, this file is designed to deploy all scoring configurations with settings identical to the IBM SPSS Collaboration and Deployment Services Repository server.

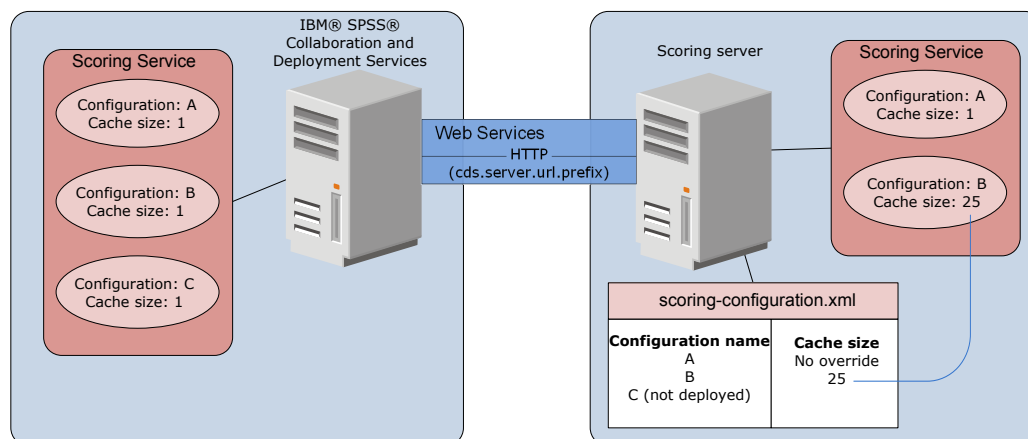


Figure 4. Scoring server environment configuration

This diagram represents how the `scoring-configuration.xml` file determines the settings on the scoring server. The IBM SPSS Collaboration and Deployment Services Repository server contains the scoring

configurations A, B, and C, each having a cache size of 1. The `scoring-configuration.xml` file on the scoring server specifies the three configuration names A, B, and C but indicates that C is not deployed. The configuration setting for cache size for B is defined as 25. As a result, the scoring server consists of the scoring configurations A and B, with the former having a cache size of 1 defined by the IBM SPSS Collaboration and Deployment Services Repository server and the latter having a cache size of 25 defined by the scoring server.

## Procedure

1. Open the file `<server-home>/configuration/scoring-configuration.xml` in a text editor.
2. Specify the URL prefix for IBM SPSS Collaboration and Deployment Services Repository as the value for the `cds.server.url.prefix` property.
3. Specify the scoring configurations from IBM SPSS Collaboration and Deployment Services Repository to be deployed on the scoring server by defining `selectByName` and `selectByPattern` elements.
  - The `selectByName` element specifies a scoring configuration by its name.
  - The `selectByPattern` element specifies a pattern that is compared to scoring configuration names. Any scoring configuration having a name that matches the pattern is deployed to the scoring server.
4. Save the changes to `scoring-configuration.xml` and close the file. For details about how the Scoring Server finds the file, and other important information, see “How does the scoring server find `scoring-configuration.xml`?”

## What to do next

After defining the scoring configuration settings, start the scoring server and submit scoring requests.

---

## How does the scoring server find `scoring-configuration.xml`?

The IBM SPSS Collaboration and Deployment Services Scoring Server searches for the `scoring-configuration.xml` file in the following places in the following order.

- The server will search a system property called `com.spss.scoring.configuration.file` whose value is a full path to the file (not a directory). You are responsible for setting this full path if you want to override the default behavior. When defining this value, make sure the appropriate path separator is specified for the operating system in use (for example, `/` or `\`).

Also be careful with spaces in the file path, and use quoting as necessary, depending on how your application server allows you to define Java system properties. For example, on Windows quotes are required when specifying a Java system property via a batch file or command prompt like this:

```
set JAVA_OPTIONS=%JAVA_OPTIONS% -Dcom.spss.scoring.configuration.file="C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\configuration\scoring-configuration.xml"
```

- The server will search for the configuration file inside the scoring server EAR file, at the root of the archive. You are responsible for placing the file inside the `scoringserver60.ear` file if you want to override the default behavior. Using this mechanism requires an update of the EAR with a copy of `scoring-configuration.xml` if you add new adapters, which ultimately creates a new EAR file. This option may be useful for configuring the scoring server in a clustered environment, because the configuration file will be available to all nodes in the cluster automatically.
- The server will search for the file at the location where the server was installed. This is the default behavior, and only requires you to update the file in this location. The scoring server finds this location by using a system property called `com.spss.scoring.server.home`, which must always be defined, and provides the path to the scoring server home directory. This system property is combined with the path `/configuration/scoring-configuration.xml`. For example:

```
<com.spss.scoring.server.home system property value>/configuration/scoring-configuration.xml
```

**Note:** In most cases, using this third option is preferred. The first two options are for cases when more control is desired regarding the file's location.

## Special cases for Liberty

When you deploy IBM SPSS Collaboration and Deployment Services on WebSphere to Liberty Scoring Server, the behavior for how the scoring server looks up its configuration information is slightly different. In Liberty, the `server.xml` file is the primary mechanism for configuring the application server and scoring configurations. Note that the file is located at `<scoring home>\wlp\usr\servers\cdeScoringServer\server.xml`, and it imports another XML file from `<scoring home>\scoring\scoring.server.xml`.

There is an XML section inside the `scoring.server.xml` file that contains character data. This character data is the contents of the serviceConfiguration XML that looks very similar to the configuration file located at `<scoring home>\scoring\configuration\scoring-configuration.xml`. Following is a truncated example (note the underlined section):

```
<com.spss.scoring.scoringConfiguration>
  <scoringConfigurationXml>
    <![CDATA[
      <u>serviceConfiguration xmlns="http://xml.spss.com/scoring/configuration">
        ...
      </u>serviceConfiguration<u>
    ]]>
  </scoringConfigurationXml>
</com.spss.scoring.scoringConfiguration>
```

So for Liberty, as long as the `<com.spss.scoring.scoringConfiguration>` XML is present, the scoring server will always use it and will never look in the other places described previously. If `<com.spss.scoring.scoringConfiguration>` is not present, then the search order noted previously is used.

The server log contains information about the location of the scoring configuration. For example, for a scoring server deployed on Liberty, the log contains statements such as the following:

```
05:21:38,487 INFO [Configuration] JNDI name
'osgi:service/com.spss.scoring.local.IScoringOSGIServiceComponent' will be used to
retrieve Scoring configuration xml.
05:21:38,488 INFO [Configuration] An input stream was created for Scoring Configuration
XML at location osgi:service/com.spss.scoring.local.IScoringOSGIServiceComponent
05:21:38,488 INFO [Configuration] Attempting to validate scoring-configuration xml.
05:21:38,510 INFO [Configuration] Attempting to load Scoring Configuration XML file
05:21:38,510 INFO [Configuration] An input stream was created for Scoring Configuration
XML at location osgi:service/com.spss.scoring.local.IScoringOSGIServiceComponent
```

And here's another example where the scoring server is deployed on JBoss:

```
2015-11-04 17:19:58,306 INFO [com.spss.configsys.Configuration] Configuration
(ServerService Thread Pool -- 62) System property com.spss.scoring.server.home will be
used to find scoring-configuration.xml file at path C:/your_install_dir/S\configuration\
scoring-configuration.xml
2015-11-04 17:19:58,478 INFO [com.spss.configsys.Configuration] Configuration
(ServerService Thread Pool -- 62) An input stream was created for Scoring Configuration
XML at location C:/your_install_dir/S S\configuration\scoring-configuration.xml
2015-11-04 17:19:58,650 INFO [com.spss.configsys.Configuration] Configuration
(ServerService Thread Pool -- 62) Attempting to validate scoring-configuration xml.
2015-11-04 17:19:58,759 INFO [com.spss.configsys.Configuration] Configuration
(ServerService Thread Pool -- 62) Attempting to load Scoring Configuration XML file
2015-11-04 17:19:58,790 INFO [com.spss.configsys.Configuration] Configuration
(ServerService Thread Pool -- 62) An input stream was created for Scoring Configuration
XML at location C:/your_install_dir/S S\configuration\scoring-configuration.xml
```

In both examples, the log shows where the scoring server tried to find its configuration information. When an error occurs in obtaining the scoring configuration information, FATAL messages will be

displayed in the log because the scoring server cannot function properly without the information. You can also turn on debug logging if you want even more information about scoring server activity (the logs become large in this case, so we recommend searching for `com.spss.configsys.Configuration` or `Configuration`).

---

## Chapter 8. Deploying IBM SPSS Collaboration and Deployment Services Scoring Server

The IBM SPSS Collaboration and Deployment Services Scoring Server installation creates an EAR file that must be deployed to an application server.

### Before you begin

- Use IBM Installation Manager to install IBM SPSS Collaboration and Deployment Services Scoring Server.
- Specify the scoring configuration settings. See Chapter 7, “Specifying scoring configuration settings,” on page 21.

### Procedure

1. Deploy IBM SPSS Collaboration and Deployment Services Scoring Server to your application server. The steps depend on the application server.
  - “Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for WebSphere”
  - “Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for JBoss” on page 27
  - “Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for WebLogic” on page 28
2. Start the IBM SPSS Collaboration and Deployment Services Scoring Server.

---

## Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for WebSphere

The IBM SPSS Collaboration and Deployment Services Scoring Server installation creates an EAR file that must be deployed to an application server. For WebSphere, you deploy the EAR file by using Jython scripts.

### Before you begin

- Use IBM Installation Manager to install IBM SPSS Collaboration and Deployment Services Scoring Server.
- Specify the scoring configuration settings. See Chapter 7, “Specifying scoring configuration settings,” on page 21.

### About this task

Deploying the scoring server involves running Jython deployment scripts by using the WebSphere `wsadmin` tool. The scripts assume that the current working directory is set to the directory containing the script file. When invoking the Jython script, change the current working directory to the directory containing the script file and specify the full path to the script processor.

There are two types of command line parameters for the `wsadmin` tool:

- Parameters passed to the `wsadmin`
- Parameters passed to the Jython script

The `wsadmin` parameters vary depending on the topology of WebSphere is managed or unmanaged. For unmanaged topologies, the WebSphere server must be stopped when running a script. If you need to manually change something in the WebSphere console, start the server, perform the action, and shut

down the server before proceeding. The command must be run from the WebSphere profile into which the scoring server is being installed. The `-connType none` option must be used. The following is an example of the command:

```
<PROFILE_HOME>/bin/wsadmin.(bat/sh) -lang jython -connType none  
-f <PYTHON_SCRIPT_FILE_NAME> [script parameters]
```

For managed topologies, the WebSphere Deployment Manager and associated node managers must be running, but the servers should all be stopped. The command must be run from the WebSphere profile running the WebSphere Deployment Manager (DMGR).

If administrative security is enabled for the WebSphere profile, the administrative user ID and password parameters must also be passed to `wsadmin`:

```
-user <USER> -password <PASSWORD>
```

If the scoring server is being deployed into a non-clustered server, the node and server parameters must be passed to the Jython script:

```
-node <NODE> -server <SERVER>
```

If the scoring server is being deployed into a clustered server, the cluster parameter must be passed to the Jython script:

```
-cluster <CLUSTER_NAME>
```

## Procedure

1. If you are using a different-cells topology, run the file `<server-home>/toDeploy/current/WebSphere/bin/CrtScoringJMS.py` by using the WebSphere `wsadmin` tool. For example:

```
<PROFILE_HOME>\bin\wsadmin.bat -lang jython -conntype NONE -f CrtScoringJMS.py  
-node DG1-DEV-CLST-2BNode01 -server server1 -busName SCORING_BUS
```

**Important:** Before running `CrtScoringJMS.py`, you must first define the bus if you haven't already. For details about creating and configuring the bus, see Chapter 3, "Configuring IBM SPSS Collaboration and Deployment Services Repository for scoring servers in different cells," on page 7.

If you are using a same-cell topology, continue to the next step.

2. Run the file `<server-home>/toDeploy/current/WebSphere/bin/CrtScoringResources.py` by using the WebSphere `wsadmin` tool. For example:

```
<PROFILE_HOME>\bin\wsadmin.bat -lang jython -conntype NONE -f CrtScoringResources.py  
-node DG1-DEV-CLST-2BNode01 -server server1
```

3. Use the WebSphere `wsadmin` tool to deploy the scoring server EAR file by running the file `<server-home>/toDeploy/current/WebSphere/bin/DeployScoring.py`. For example:

```
<PROFILE_HOME>\bin\wsadmin.bat -lang jython -conntype NONE -f DeployScoring.py  
-node DG1-DEV-CLST-2BNode01 -server server1
```

4. Start the scoring server.
5. Create a JAAS credential for access to the IBM SPSS Collaboration and Deployment Services Repository server. Use administrator credentials for the IBM SPSS Collaboration and Deployment Services Repository for the JAAS credential. Note that the path to create the credential is Enterprise Applications > IBM\_SPSS\_Remote\_Scoring\_Server\_8.0 > Manage Modules > security-jca.rar > IBM\_SPSS\_Remote\_Scoring\_Server\_8.0.IBM SPSS Collaboration and Deployment Services Security JCA > J2C connection factories > IBM\_SPSS\_SECURITY-JCA > JAAS - J2C authentication data > New...
6. Configure the J2C connections factories to use the new authentication alias. Note that the path to set the JAAS security credential is Enterprise Applications > IBM\_SPSS\_Remote\_Scoring\_Server\_8.0 > Manage Modules > security-jca.rar > IBM\_SPSS\_Remote\_Scoring\_Server\_8.0.IBM SPSS Collaboration and Deployment Services Security JCA > J2C connection factories > IBM\_SPSS\_SECURITY-JCA.

- a. For the IBM\_SPSS\_SECURITY-JCA J2C connection factory, define the value for the component-managed authentication alias as the credential created in the previous step.
  - b. For the authentication preference, specify BASIC\_PASSWORD.
7. For a same-cell topology, start the scoring server. For a different-cell topology, restart the scoring server.

## Results

The scoring configurations specified in the configuration file are available to process scoring requests on the scoring server.

---

## Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for JBoss

To deploy IBM SPSS Collaboration and Deployment Services Scoring Server in the JBoss application server, copy several files installed by IBM Installation Manager to your application server instance.

### Before you begin

- Use IBM Installation Manager to install IBM SPSS Collaboration and Deployment Services Scoring Server.
- Specify the scoring configuration settings. See Chapter 7, “Specifying scoring configuration settings,” on page 21.

### Procedure

1. Update the JBoss server configuration file to include the IBM SPSS Collaboration and Deployment Services Repository URL for the JMS Bridge configuration.
  - a. Edit the file `<SS_HOME>\toDeploy\current\JBoss\resources\cds_scoring_server.xml` and search for the string **REVIEW:**.
  - b. Update the `java.naming.provider.url` field with your repository server host name or IP address for the **CDS\_Bridge\_MessageBusTopicUpdate**, **CDS\_Bridge\_AuditQ**, and **CDS\_Bridge\_LogQ** bridges.
2. Update the credentials in the server configuration file that are used by the scoring server to connect to the IBM SPSS Collaboration and Deployment Services Repository.
  - a. Search for "picketbox" in your JBoss directory, make a note of its location, and then encode the repository server password by using JBoss utilities. For example:
 

```
CD <JBOSS_HOME>
java -cp
%JBOSS_HOME%\modules\system\layers\base\org\picketbox\main\picketbox-4.0.17.Final-redhat-1.jar;
%JBOSS_HOME%\modules\system\layers\base\org\jboss\logging\main\jboss-logging-3.1.2.GA-redhat-1.jar
org.picketbox.datasource.security.SecureIdentityLoginModule <password>
```
  - b. Edit the file `<SS_HOME>\toDeploy\current\JBoss\resources\cds_scoring_server.xml` and search for the string **REVIEW:**.
  - c. Update the **userName** and **password** options of the security-domain name="CDSScoringServer" section with the repository server user identifier and JBoss-encrypted password.
  - d. Save the changes to the file.
3. Copy the file `<SS_HOME>\toDeploy\current\JBoss\resources\cds_scoring_server.xml` to your `<JBOSS_HOME>\standalone\configuration` directory.
4. Copy the file `<SS_HOME>\toDeploy\current\JBoss\resources\CDS_SS_JVMSystem.properties` to your `<JBOSS_HOME>\bin` directory.
5. Copy the file `<SS_HOME>\toDeploy\current\JBoss\deployables\scoringserver80.ear` to your `<JBOSS_HOME>\standalone\deployments` directory.
6. Edit the file `<SS_HOME>\toDeploy\current\JBoss\bin\startScoringServer.bat` and specify your location of `<JBOSS_HOME>`.

7. Start the scoring server.
  - a. Set <JAVA\_HOME>.
  - b. Run the following command:
 

```
<SS_HOME>\toDeploy\current\JBoss\bin\startScoringServer.bat
```

## Results

The scoring configurations specified in the configuration file are available to process scoring requests on the scoring server.

---

## Deploying IBM SPSS Collaboration and Deployment Services Scoring Server for WebLogic

The IBM SPSS Collaboration and Deployment Services Scoring Server installation creates an EAR file that must be deployed to an application server. For Weblogic, you deploy the EAR file by using Jython scripts.

### Before you begin

- Use IBM Installation Manager to install IBM SPSS Collaboration and Deployment Services Scoring Server.
- Specify the scoring configuration settings. See Chapter 7, “Specifying scoring configuration settings,” on page 21.

### Procedure

1. Make the scoring configuration file available to the scoring server, if you haven't already. For details about the available methods, see “How does the scoring server find scoring-configuration.xml?” on page 22
2. Run the following commands, either from the command line or from a batch file, to set up and start a standalone "administration server" (a single server domain).

```
set JAVA_HOME=<path to Java home>
set DOMAIN_HOME=<path to scoring server domain home>
call <SS_HOME>\toDeploy\current\Weblogic\bin\setScoringEnv.bat
call <DOMAIN_HOME>\startWebLogic.cmd
```

For example:

```
set JAVA_HOME=c:\Program Files\Oracle\jdk1.8.0_60
set DOMAIN_HOME=c:\Oracle\Middleware\Oracle_Home\user_projects\domains\unmanaged_domain
call "C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\toDeploy\current\WebLogic\bin\setScoringEnv.bat"
call %DOMAIN_HOME%\startWebLogic.cmd
```

3. Run the following commands, either from the command line or from a batch file, to set up and start an "administration server" followed by a "managed server."

- a. Set and start the "administration server" first:

```
set JAVA_HOME=<path to Java home>
set DOMAIN_HOME=<path to scoring server domain home>
call <SS_HOME>\toDeploy\current\Weblogic\bin\setScoringEnv.bat
call <DOMAIN_HOME>\startWebLogic.cmd
```

For example:

```
set JAVA_HOME=c:\Program Files\Oracle\jdk1.8.0_60
set DOMAIN_HOME=c:\Oracle\Middleware\Oracle_Home\user_projects\domains\managed_domain
call "C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\toDeploy\current\WebLogic\bin\setScoringEnv.bat"
call %DOMAIN_HOME%\startWebLogic.cmd
```

- b. Next, set up and start the "managed server."



```

set JAVA_HOME=<path to Java home>
set DOMAIN_HOME=<path to scoring server domain home>
set SERVER_NAME=<weblogic server name>
set ADMIN_URL=<URL of the Weblogic Administration Server for scoring domain>
call <DOMAIN_HOME>\bin\startManagedWebLogic.cmd

```

For example:

```

set JAVA_HOME=c:\Program Files\Oracle\jdk1.8.0_60
set DOMAIN_HOME=c:\Oracle\Middleware\Oracle_Home\user_projects\domains\managed_domain
call "C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\toDeploy\current\WebLogic\bin\setScoringEnv.bat"
set SERVER_NAME=ManagedServer_1
set ADMIN_URL=http://localhost:7003
call %DOMAIN_HOME%\bin\startManagedWebLogic.cmd

```

**Important:** Make sure the server(s) is running before running CrtScoringJMS.py and DeployScoring.py in the next steps.

4. Run the file <server-home>\toDeploy\current\WebLogic\bin\CrtScoringJMS.py by using the WebLogic Scripting Tool (wlst). The CrtScoringJMS.py script creates the WebLogic settings required for using JMS in the scoring server. Supply values for the following parameters:

**-adminURL**

WebLogic admin server connection URL for the scoring server. Required. Example:  
t3://host:port

**-user** User name for connecting to the WebLogic admin server that will run the scoring server. Required.

**-password**

Password for connecting to the WebLogic admin server that will run the scoring server. Required.

**-targetServer**

The name of the WebLogic server instance that the scoring server will be deployed to. Either this or -targetCluster is required.

**-targetCluster**

The name of the WebLogic cluster to deploy to. Either this or -targetServer is required.

**-cdsURL**

IBM SPSS Collaboration and Deployment Services Repository server Bridge destination URL. Required. Example: t3://host1:port

**-scoringURL**

Scoring Bridge destination URL. Required. Example: t3://host1:port

**-wlHome**

WebLogic installation location. This should be the parent of the server/lib directory. Required. Example: /bea/wlserver\_10.3

**-nodeSuffix**

Optional suffix appended to resources requiring unique names.

**-jmsTarget**

Optional target for the JMS server in a cluster.

**-cdsUser**

Optional user name for the IBM SPSS Collaboration and Deployment Services JMS Bridge destination.

**-cdsPassword**

Optional password for the IBM SPSS Collaboration and Deployment Services JMS Bridge destination.

**-scoringUser**

Optional user name for the Scoring JMS Bridge destination.

**-scoringPassword**

Optional password for the Scoring JMS Bridge destination.

Example usage:

```
wlst CrtScoringJMS.py -adminURL t3://localhost:7001 -user weblogic -password Weblogic1
-targetServer scoringServer -cdsURL t3://host:port -scoringURL t3://host:port -wHome /bea/wlserver_10.3
```

5. Run the file <server-home>\toDeploy\current\WebLogic\bin\DeployScoring.py by using the WebLogic Scripting Tool (wlst). The DeployScoring.py deploys the scoring server EAR file to a WebLogic server. Supply values for the following parameters:

**-adminURL**

WebLogic admin server connection URL for the scoring server. Required. Example:  
t3://host:port

**-user** User name for connecting to the WebLogic admin server that will run the scoring server. Required.

**-password**

Password for connecting to the WebLogic admin server that will run the scoring server. Required.

**-targetServer**

The name of the WebLogic server instance that the scoring server will be deployed to. Either this or -targetCluster is required.

**-targetCluster**

The name of the WebLogic server cluster to deploy to. Either this or -targetServer is required.

Example usage:

```
wlst DeployScoring.py -adminURL t3://localhost:7001 -user weblogic -password Weblogic1 -targetServer scoringServer
```

Example for deploying to an "administration server" (i.e., single server domain). This example assumes IBM SPSS Collaboration and Deployment Services Repository and the scoring server are running on the same machine (and therefore localhost is used), the repository runs on port 7001, and the scoring server runs on port 7002. Adjust this example to suit your environment.

```
cd C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\toDeploy\current\WebLogic\bin
C:\Oracle\Middleware\Oracle_Home\oracle_common\common\bin\wlst.cmd CrtScoringJMS.py -adminURL
t3://localhost:7002 -user weblogic -password weblogic1 -targetServer AdminServer -cdsURL
t3://localhost:7001 -scoringURL t3://localhost:7002 -wHome C:\Oracle\Middleware\Oracle_Home\wlserver
C:\Oracle\Middleware\Oracle_Home\oracle_common\common\bin\wlst.cmd DeployScoring.py -adminURL
t3://localhost:7002 -user weblogic -password weblogic1 -targetServer AdminServer
```

Example for deploying to a "managed server." This example assumes IBM SPSS Collaboration and Deployment Services Repository and the scoring server are running on the same machine (and therefore localhost is used), the admin server is running on port 7003, the repository runs on port 7001, and the scoring server runs on port 7004. Adjust this example to suit your environment.

```
cd C:\Program Files\IBM\SPSS\Deployment\8.0\ScoringServer\toDeploy\current\WebLogic\bin
C:\Oracle\Middleware\Oracle_Home\oracle_common\common\bin\wlst.cmd CrtScoringJMS.py -adminURL
t3://localhost:7003 -user weblogic -password weblogic1 -targetServer ManagedServer_1 -cdsURL
t3://localhost:7001 -scoringURL t3://localhost:7004 -wHome C:\Oracle\Middleware\Oracle_Home\wlserver
C:\Oracle\Middleware\Oracle_Home\oracle_common\common\bin\wlst.cmd DeployScoring.py -adminURL
t3://localhost:7003 -user weblogic -password weblogic1 -targetServer ManagedServer_1
```

6. Specify the IBM SPSS Collaboration and Deployment Services Repository server credentials by configuring a J2C security alias for the scoring server in the security-jca.jar module.

- a. In the WebLogic Administration Console, expand the scoring server application in the Deployments section.
- b. Select **security-jca > Security > Outbound Credential Mappings**.
- c. Create a credential mapping. Specify the following values for the mapping properties:
  - Outbound Connection Pool = ResourceSecurityConnectionFactory
  - WebLogic Server User = Unauthenticated WLS User
  - EIS User Name = IBM SPSS Collaboration and Deployment Services user name
  - EIS Password = IBM SPSS Collaboration and Deployment Services password for specified user
7. Start the IBM SPSS Collaboration and Deployment Services Scoring Server. Then restart the WebLogic server(s) associated with the scoring server (this forces the scoring server to pick up the setting changes and load the configurations upon startup).

## Results

The scoring configurations specified in the configuration file are available to process scoring requests on the scoring server.



---

## Chapter 9. Uninstalling IBM SPSS Collaboration and Deployment Services Scoring Server

You can uninstall in wizard or console mode.

You must log in with a user account that has the same privileges as the account that was used to install IBM SPSS Collaboration and Deployment Services Scoring Server.

**Important:** Certain files in the IBM SPSS Collaboration and Deployment Services Scoring Server program directory (for example, program data) cannot be deleted by IBM Installation Manager. You must manually delete the program directory to completely remove all IBM SPSS Collaboration and Deployment Services Scoring Server files from the system after you uninstall it with IBM Installation Manager.

---

### Uninstalling by using wizard mode

You can use IBM Installation Manager in wizard mode to uninstall IBM SPSS Collaboration and Deployment Services Scoring Server.

#### Before you begin

You must log in with a user account that has the same privileges as the account that was used to install the packages that you want to uninstall.

#### Procedure

To uninstall IBM SPSS Collaboration and Deployment Services Scoring Server:

1. Close programs that you installed with Installation Manager.
2. Start Installation Manager in wizard mode by using IBMIM.  
The default **IBMIM** location will vary depending on the operating system and installation type (administrator, nonadministrator, or group). For more information, see Chapter 5, “Getting started with Installation Manager,” on page 11.
3. In Installation Manager, click **Uninstall**.
4. In the Uninstall wizard, select the IBM SPSS Collaboration and Deployment Services Scoring Server package.
5. Click **Next**.
6. On the Summary page, review your selections. Click **Back** to change your selections. If you are satisfied with your choices, click **Uninstall**.  
On Windows, Installation Manager checks for running processes. If processes are blocking the uninstall process, a list of these processes is shown in the Blocking Processes section. You must stop these processes before you continue the uninstall process. Click **Stop All Blocking Processes**. If there are no processes that must be stopped, you do not see this list. The running processes lock files that must be accessed or modified by Installation Manager.
7. When the uninstallation process finishes, the Complete page opens and confirms the uninstallation process.

---

### Uninstalling by using console mode

You can use IBM Installation Manager in console mode to uninstall IBM SPSS Collaboration and Deployment Services Scoring Server.

## Before you begin

You must log in with a user account that has the same privileges as the account that was used to install the packages.

## About this task

A selected option is indicated by an X in brackets: [X]. Options that are not selected are indicated by empty brackets: [ ]. You can press **Enter** to select the default entry or select a different command. For example, [N] indicates that the default selection is N for the **Next** command.

## Procedure

To uninstall IBM SPSS Collaboration and Deployment Services Scoring Server:

1. Close programs that you installed with Installation Manager.
2. Start Installation Manager in console mode by using `imcl -c`.  
The default `imcl` location will vary depending on the operating system and installation type (administrator, nonadministrator, or group). For more information, see Chapter 5, "Getting started with Installation Manager," on page 11.
3. Enter 5: Uninstall - Remove the installed software packages.
4. To select the IBM SPSS Collaboration and Deployment Services Scoring Server package group, enter the number that is next to the package group.
5. Enter N: Next to continue.
6. To select the package, enter the number that is next to the package.  
Optional: To select all packages to uninstall, enter A: Select all packages. The A: Unselect all packages option shows when all packages are selected for uninstall.
7. In the Summary panel, review your selections before you uninstall. Enter U: Uninstall.
8. When the uninstall process completes, enter F: Finish.

## Chapter 10. Deprecated features

If you are migrating from an earlier release of IBM SPSS Collaboration and Deployment Services, you should be aware of the various features that have been deprecated since the last version.

If a feature is deprecated, IBM Corp. might remove this capability in a subsequent release of the product. Future investment will be focussed on the strategic function listed under recommended migration action. Typically, a feature is not deprecated unless an equivalent alternative is provided.

The following tables indicate what is deprecated. Where possible, the table also indicates the recommended migration action.

*Table 5. Features deprecated in previous versions*

Deprecation	Recommended migration action
Security Provider: Active Directory with local override, which supports extended groups and allowed users	Use the standard Active Directory security provider with any necessary groups added
IBM SPSS Collaboration and Deployment Services Enterprise View	Use the Analytic Data View feature
IBM SPSS Collaboration and Deployment Services Enterprise View Driver	Use the Analytic Data View feature
Scenario files	Scenario files (.scn) are no longer supported. Enterprise View source nodes cannot be modified in Deployment Manager. Old scenario files can be modified in IBM SPSS Modeler client and resaved as stream files. Also, scoring configurations that used a scenario file must be deleted and recreated based on a stream file.
Web Install for IBM SPSS Deployment Manager	Use the standalone installer
BIRT Report Designer for IBM SPSS	None
BIRT Report Designer for IBM SPSS viewer	None
IBM SPSS Collaboration and Deployment Services Portlet	Use the IBM SPSS Collaboration and Deployment Services Deployment Portal directly, or use the web services APIs
IBM SPSS Collaboration and Deployment Services Web Part	Use the IBM SPSS Collaboration and Deployment Services Deployment Portal directly, or use the web services APIs
Scoring Service V1 API	Scoring Service V2 API
Scheduling Server Service	None
Reporting Service	None
Authentication Service login operation	Authentication Service doLogin operation
Search Service search operation	Search Service search2.5 operation
SPSS AXIS/Castor web services client jar	Use the tools provided with the Java Runtime Environment, Integrated Development Environment, or Eclipse Web Tools Platform (WTP)

For updated information about deprecated features, see the IBM Knowledge Center.





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