IBM SPSS Modeler Gold 17.1



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IBM SPSS Modeler Gold

Overview

This guide includes information about installing and configuring the SPSS product components for IBM® SPSS® Modeler Gold version 17.1.

SPSS Modeler Gold is a suite of the following SPSS products:

- IBM SPSS Collaboration and Deployment Services version 7
- IBM SPSS Modeler version 17.1
- IBM Analytical Decision Management version 17

This guide contains general steps for installing and configuring these products and their various adapters and components, with links to existing installation instructions.

Documentation for all IBM SPSS products is available in the online IBM Knowledge Center. In the Knowledge Center's **Table of Contents**, under **Products**, click **SPSS**. Documentation is also available in PDF format at the following locations:

- IBM SPSS Collaboration and Deployment Services 7 PDF documentation
- IBM SPSS Modeler 17.1 PDF documentation
- IBM Analytical Decision Management 17 PDF documentation

SPSS Modeler Gold topology

The following boxes represent the machines that make up a recommended SPSS Modeler Gold deployment, and list all the possible components that can be installed. Depending on your environment and your needs, note that your specific deployment may be organized differently, and may not include every possible software component. This is one example, and these machines will be referred to as *Server 1, Server 2*, and *Clients* throughout this document.

Server 1

(IBM SPSS Collaboration and Deployment Services machine)

- IBM Installation Manager
- · A supported web application server (WebSphere, for example)
- · A supported database (IBM DB2, for example)
- IBM SPSS Collaboration and Deployment Services Repository Server
- IBM SPSS Collaboration and Deployment Services Scoring Adapter for PMML
- IBM SPSS Modeler Adapter for IBM SPSS Collaboration and Deployment Services
- IBM Analytical Decision Management, IBM Analytical Decision Management Samples

Server 2 (IBM SPSS Modeler Server machine)

- IBM SPSS Modeler Server
- · IBM SPSS Modeler Essentials for R
- IBM SPSS Modeler Premium server components:
 - Text Analytics Server
 - Social Network Analysis Server
 - Entity Analytics Server
- IBM SPSS Data Access Pack

Clients

- IBM SPSS Collaboration and Deployment Services Deployment Manager client
- IBM SPSS Modeler client
- · IBM SPSS Modeler Essentials for R
- · IBM SPSS Modeler Scoring Adapter
- IBM SPSS Modeler Premium client components:
 - Text Analytics Client
 - Social Network Analysis Client
 - Entity Analytics Client
- · IBM SPSS Modeler Administration Console
- · IBM SPSS Collaboration and Deployment Services Essentials for Python

Figure 1. SPSS Modeler Gold Topology

Prerequisites

Before installing and configuring the IBM SPSS Modeler Gold products, it is assumed the environment meets all prerequisite system requirements such as a supported application server and database. Review the system requirements for each IBM SPSS product you plan to install before proceeding (for example, to ensure your application server and database are supported by all IBM SPSS components to be installed).

The following prerequisites are required:

IBM Installation Manager

IBM Installation Manager version 1.8 is required on *Server 1* for installing many of the products in the suite. For more information, see the Installation Manager documentation.

Web Application Server

You must install and configure a supported application server. For example, if using WebSphere, configure the following items:

- Create a WebSphere profile (called *AppSrv1*, for example)
- Keep the default security active
- Create a WebSphere admin user (called wsadmin, for example)

Database

You must install and configure your database to be used as a data source, to host the IBM SPSS Collaboration and Deployment Services Repository, and to host the IBM SPSS Modeler Entity Analytics database (if applicable). A repository database must be running and accessible before you install and configure the IBM SPSS Collaboration and Deployment Services Repository server.

For example, if using IBM DB2, configure the following items:

- Create a DB2 admin user (called db2admin, for example)
- Create database users if they'll be required later
- Create an IBM SPSS Collaboration and Deployment Services Repository database instance by running the example DB2 script included with IBM SPSS Collaboration and Deployment Services. See this documentation for details.

Note: For complete instructions and details about database requirements, see the the IBM SPSS Collaboration and Deployment Services documentation.

Installation files

Installation files for all SPSS Modeler Gold products to be installed must be downloaded from Passport Advantage and copied to the appropriate machine. Or you can point to the Passport Advantage site during installation for some components. For a list of the required Passport Advantage part numbers, and which machine to place each downloaded file on, see "Passport Advantage part numbers" on page 7.

Installing IBM SPSS Modeler Gold

The installation instructions here are organized by the machines the products will be installed on. See "Overview" on page 1 for an recommendation of which components to install on which machine. We recommend following the installation order outlined in this section.

IBM SPSS Collaboration and Deployment Services Server components (Server 1)

Complete the following steps to install components on Server 1.

Before you can install, IBM Installation Manager must have access to the repository that contains the IBM SPSS product packages. You must also shut down the application server.

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 Repository preferences.

- 1. Start Installation Manager in wizard mode by running the IBMIM application file. For more information, see Start Installation Manager.
- 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 repository preferences correctly.

- 3. The Install page of Installation Manager lists all the packages that were found in the repository that Installation Manager searched. Installation Manager will check Fix Central on the Web for the latest fix pack versions of the packages. Be sure you install the latest fix packs for all SPSS components installed.
- 4. Select the following packages and then click Next.
 - IBM SPSS Collaboration and Deployment Services Repository Server (base offering)
 - IBM SPSS Collaboration and Deployment Services Scoring Adapter for PMML
 - IBM Analytical Decision Management
 - IBM SPSS Modeler Adapter for IBM SPSS Collaboration and Deployment Services

Note: IBM SPSS Collaboration and Deployment Services - Repository Server is the base offering. The other packages are extensions and will be installed on top of (into the directory of) the base Repository Server offering.

- 5. On the Licenses page, accept the license agreement and click Next to continue.
- 6. 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**.
- 7. Click **Next** to continue the installation.
- 8. On the next Location page, select the translations to install for packages in the package group. The corresponding language translations for the graphical user interface and documentation are installed. Choices apply to all packages that are installed in this package group. This option may not apply to all product installations. Click **Next** to continue.
- 9. The Features page shows the package features that will be installed. Accept all defaults. For the IBM Analytical Decision Management package, select **Production** or **Non-Production** depending on the type of environment you are setting up. the You can click a feature to view its brief description under **Details**.
- 10. 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.
- 11. Click Install. When the installation process completes, you receive a confirmation message.
- 12. Run the Repository configuration utility. See the instructions online here.
- 13. Start the WebSphere application server and then use the Windows Control Panel to start the IBM SPSS Collaboration and Deployment Services Server. Go to **Control Panel**, then **Administrative Tools**, then **Services**.
- 14. Wait a few minutes and then verify the Repository server status by launching browser-based IBM SPSS Collaboration and Deployment Services Deployment Manager. See the instructions here.

IBM SPSS Modeler Server components (Server 2)

Complete the following steps to install components on Server 2.

Important: Install the latest Fix Packs for all components.

- 1. Install SPSS Modeler Server. See the installation instructions available online here for Windows or here for UNIX.
- 2. Edit the SPSS Modeler Server options.cfg file, if necessary (for example, to update the server port number). See the documentation available online here
- 3. Install IBM SPSS Modeler Premium components (Text Analytics Server, Social Network Analysis Server, and Entity Analytics Server) into SPSS Modeler Server. See the SPSS Modeler Premium installation instructions available online here.

- 4. Install SPSS Modeler Essentials for R. See the installation instructions available online here. Note in the instructions that you must first download and install R version 3.1 from here. Version 3.1.0 is recommended.
- 5. Install the IBM SPSS Data Access Pack. See the installation instructions available online here for Windows or here for UNIX.
- 6. Use the Windows Control Panel to start the SPSS Modeler Server, Text Analytics Server, Social Network Analysis Server, and Entity Analytics Server. Go to Control Panel, then Administrative Tools, then Services.

Client components

Complete the following steps to install client software.

Important: Install the latest Fix Packs for all components.

- 1. Install IBM SPSS Collaboration and Deployment Services Deployment Manager Client. See the installation instructions available online here.
- 2. Install IBM SPSS Modeler Client. See the installation instructions available online here.
- 3. Install SPSS Modeler Essentials for R. See the installation instructions available online here. Note in the instructions that you must first install R version 3.1 from here. Version 3.1.0 is recommended.
- 4. Install IBM SPSS Modeler Premium client components (Social Network Analysis Client, Entity Analytics Client, and Text Analytics Client). See the SPSS Modeler Premium Client installation instructions available online here.
- 5. If you want to use ODBC from the client without connecting to SPSS Modeler Server, then install the IBM SPSS Data Access Pack. See the installation instructions available online here for Windows or here for UNIX..

Optional components

Additional IBM SPSS Collaboration and Deployment Services components are available for installation. To install any of the following, click the links to see the installation instructions.

- IBM SPSS Collaboration and Deployment Services Essentials for Python
- IBM SPSS Collaboration and Deployment Services Remote Scoring Server
- IBM SPSS Collaboration and Deployment Services Remote Process Server

Note: The Remote Scoring Server and the Remote Process Server are usually installed on different machines, and they are typically not installed on the same machine as the IBM SPSS Collaboration and Deployment Services Repository (the repository already contains the functionality). For more information about these components, see the IBM SPSS Collaboration and Deployment Services documentation.

Post-installation steps

After installation, perform the following required configuration steps. Depending on your environment, additional configuration may be required.

IBM SPSS Collaboration and Deployment Services Server components (Server 1)

- 1. Start the repository server. For instructions, see here.
- 2. Verify the repository is running by accessing browser-based IBM SPSS Collaboration and Deployment Services Deployment Manager. Navigate to the login page at http://<repository host>:/<port number>/security/login and specify the admin login credentials that were specified during repository configuration.
- 3. For additional information about post-installation steps for IBM SPSS Collaboration and Deployment Services, see the documentation here.

IBM SPSS Modeler Server components (Server 2)

- 1. To configure the SPSS Modeler Server, see this documentation (for Windows) or this documentation (for UNIX) and follow the instructions in these sections:
 - Checking the Server Status
 - · Connecting End Users
 - IBM SPSS Data Access Pack Technology
- 2. To configure IBM SPSS Modeler Social Network Analysis, see this documentation.
- 3. Use the IBM SPSS Data Access Pack to configure an ODBC driver that points to your database. See this PDF (for Windows) or this PDF (for UNIX).
- 4. To configure IBM SPSS Modeler Entity Analytics, see the documentation here.

Client components

Perform the following configuration on the client machine(s). The first 4 steps use the IBM SPSS Collaboration and Deployment Services Deployment Manager client software.

- 1. Open Deployment Manager client, go to the **Content Explorer** tab, and create a new content server connection if you have not done so already. See the instructions here. After creating the connection, double-click it and log on (you can use the *admin* account password that was specified during Repository installation).
- 2. Create a new IBM SPSS Modeler Server definition and associated credentials definition. Name them both modeler (lowercase). This is the expected name for IBM Analytical Decision Management to work properly out of the box. If you need to use different names, additional configuration is required (and documented here).
 - For additional instructions about creating server definitions and credentials, see the online documentation here.
- 3. Right-click the **Content Repository** folder, select **Import**, and import the DecisionManagementExamples.pes file into the Repository. For detailed instructions, see the documentation here. Note that the DecisionManagementExamples.pes file is in the Repository installation directory under /components/decision-management/Demo. Or you can download it from Passport Advantage. This step imports sample application files, models, and rules for use with the IBM Analytical Decision Management applications.
- 4. Go to the Server Administration tab and create an administered server connection if you have not done so already. Then create users and groups as required for your deployment and assign them roles. For instructions on creating groups and assigning roles, see the documentation here.
 Note that certain roles are required for IBM Analytical Decision Management administration. See the documentation here for more information.
- 5. Verify that IBM Analytical Decision Management was installed correctly and that the server definition and credentials were set up properly in step 2 by logging on to IBM Analytical Decision Management . See the instructions here to launch the product login screen in a browser.
- 6. For each SPSS Modeler Client, create a connection to the IBM SPSS Modeler Server hosted on *Server* 2, using these instructions.
- 7. Open SPSS Modeler Client and create a connection to the IBM SPSS Collaboration and Deployment Services Repository hosted on *Server 1*. See the instructions available here.
- 8. Log in to IBM Analytical Decision Management (http://hostname:port/DM, where hostname is the name or IP address of Server 1, and port is the application server port). Use the admin account credentials you specified during IBM SPSS Collaboration and Deployment Services Repository installation. Then click **Add application** and add each application to the launch page.
- 9. Log in to browser-based IBM SPSS Collaboration and Deployment Services Deployment Manager (http://hostname:port/security/login, where hostname is the name or IP address of Server 1, and port is the application server port) and set the maximum file upload size, if desired. This allows users to upload data files to IBM Analytical Decision Management. Before doing this, make sure you consider security implications. See the fourth bullet of the documentation here.

10. If you installed IBM SPSS Collaboration and Deployment Services - Essentials for Python, see the instructions here to verify the installation.

Other

Administration consoles

· To facilitate easier server administration and configuration, we recommend installing IBM SPSS Collaboration and Deployment Services Deployment Manager client and the IBM SPSS Modeler Administration Console onto the same machine. This provides for a single place to administer all SPSS servers.

You can combine both administration consoles into a single user interface by installing Deployment Manager first, and then installing the Modeler administration console into Deployment Manager (rather than installing the Modeler administration console as standalone). Then when you open Deployment Manager client, IBM SPSS Modeler Administration Console will have its own tab.

The consoles can be used to start and stop servers, change configuration settings, and so on.

Passport Advantage part numbers

The following table lists the Passport Advantage part number for each eAssembly that makes up the IBM SPSS Modeler Gold offering. For a complete list of all eImages included in each of the eAssemblies listed below, see the IBM SPSS Modeler Gold sections of the table at the end of the IBM SPSS Modeler 17.1 download document.

Table 1. Passport Advantage parts

SPSS component	Part number
IBM SPSS Modeler Gold 17.1 Microsoft Windows Multilingual eAssembly ¹	CRX2IML ¹
IBM SPSS Modeler Gold Keyless 17.1 Microsoft Windows eAssembly ²	CRX2JML ²
IBM SPSS Modeler Server Gold 17.1 Microsoft Windows Multilingual eAssembly	CRX2KML
IBM SPSS Modeler Server Gold 17.1 AIX Multilingual eAssembly	CRX2LML
IBM SPSS Modeler Server Gold 17.1 Linux x86-64 Multilingual eAssembly	CRX2MML
IBM SPSS Modeler Server Gold 17.1 Linux on z Systems Multilingual eAssembly	CRX2NML
IBM SPSS Modeler Server Gold 17.1 Oracle Solaris Multilingual eAssembly	CRX2PML
IBM SPSS Modeler Server Gold 17.1 Linux on System p LE Multilingual eAssembly	CRX2QML
IBM WebSphere Application Server 8.5.5 for IBM SPSS Modeler Server Gold 17.1 Multiplatform Multilingual eAssembly	CRX2RML

¹ This eAssembly will be used if you intend to install *concurrent* user clients (and, therefore, need to supply license keys). If you only have entitlements to concurrent users, you will not see the IBM SPSS Modeler Gold Keyless 17.1 Microsoft Windows eAssembly download.

² This eAssembly will be used if you intend to install *authorized* user clients (which do not need to be licensed via keys). You will only see this download option if you have authorized users (or both authorized users and concurrent users).

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