

# ***IBM SPSS Modeler 15 Batch Installation for UNIX***

The following instructions are for installing IBM® SPSS® Modeler Batch version 15.

IBM® SPSS® Modeler Batch provides the complete analytical capabilities of the standard SPSS Modeler Client but without access to the regular user interface. Batch mode allows you to perform long-running or repetitive tasks without your intervention and without the presence of the user interface on the screen. It must be run in distributed mode along with IBM® SPSS® Modeler Server (local mode is not supported).

## ***System Requirements for IBM SPSS Modeler Batch***

The minimum hardware and software requirements for IBM® SPSS® Modeler Batch are as follows:

*Note:* IBM® SPSS® Modeler Text Analytics is a Microsoft Windows-only client, but can connect to a remote server running Microsoft Windows, Sun® Solaris™, Linux Red Hat®, HP-UX®, or IBM AIX®.

- **Operating system.** Microsoft Windows 7 (Professional and Enterprise) x32 and x64 Editions; Microsoft Windows Vista (Business and Enterprise) with Service Pack 1 x32 and x64 Editions; Microsoft Windows XP Professional with Service Pack 3 x32 and x64 Editions.
- **Hardware.** Intel Pentium or Intel Pentium-class processor or higher (for 32-bit Microsoft Windows); x64 (AMD 64 and EM64T) processor family (for 64-bit Microsoft Windows) running at 1GHz or faster. A monitor with 1024x768 resolution or higher. A disk drive is also required if you are installing from a disk.
- **Minimum free disk space.** 10GB of available hard-disk space on Microsoft Windows IBM® SPSS® Modeler client machine and additional space for data created.
- **Minimum RAM.** 2 GB RAM minimum; 4 GB, or more, recommended.
- **Software.** SPSS Modeler version 15 and Microsoft Internet Explorer 7.0 or higher for online help.
- **Virtual environment.** The following virtual environments support SPSS Modeler Text Analytics :
  - Windows 2008® Terminal Services and R2
  - Windows 2003® Terminal Services and R2
  - Citrix XenApp 5 – Standard, Advanced and Enterprise
  - Citrix Presentation Server 4.5 – Standard, Advanced and Enterprise
  - VMWare ESX Server 3.5
  - VMWare vSphere 4.0
- **Operating system.** IBM AIX® 6.1 or 7.1 for 64-bit POWER systems; HP-UX 11i V3 for 64-bit Itanium systems; Oracle Solaris™ 9.x or 10 for 64-bit SPARC systems; Red Hat Enterprise Linux 5.x for 32-bit x86 systems; Red Hat Enterprise Linux 5.x or 6.x for 64-bit x64 or IBM

System z systems; Red Hat Enterprise Linux Advanced Platform 5.x for 32-bit x86 systems; Red Hat Enterprise Linux Advanced Platform 5.x or 6.x for 64-bit x64 or IBM System z systems; SuSE Linux Enterprise Server 10 or 11 for 64-bit x64 or IBM System z systems

- **Hardware.** PowerPC processor, 233MHz or faster and IBM System p for IBM AIX; Itanium processor for HP-UX; UltraSPARC II (or better) for Solaris; Pentium or Pentium-class processor or higher for 32-bit Linux; x64 (AMD 64 and EM64T) processor family or IBM s390x System z for 64-bit Linux
- **Minimum free disk space.** 2 gigabytes (GB) recommended.
- **RAM.** 4 GB is recommended.
- **Virtual environment.** The following virtual environments support IBM® SPSS® Modeler Server.
  - IBM PowerVM Hypervisor for IBM AIX
  - IBM PR/SM or z/VM for Linux for IBM System z
  - VMWare ESX Server 4.1
  - VMWare vSphere 4.0
- **Cluster environment.** The following cluster environments support SPSS Modeler Server.
  - IBM HACMP/RSCT for IBM AIX
  - IBM WebSphere App Server 64-bit
  - Microsoft Cluster Service for Windows
  - Oracle Solaris Cluster
  - Oracle WebLogic App Server 64-bit
  - Red Hat Cluster Suite for Red Hat Enterprise Linux

### ***Additional Requirements***

You must ensure that kernel limits on the system are sufficient for the operation of SPSS Modeler Server. The data, memory, and file ulimits are particularly important and should be set to unlimited within the SPSS Modeler Server environment. To do this:

- ▶ Add the following commands to *modelersrv.sh*:

```
ulimit -d unlimited
```

```
ulimit -m unlimited
```

```
ulimit -f unlimited
```

- ▶ Restart SPSS Modeler Server.

You also need the *gzip* file compression utility and *GNU cpio* installed and on the PATH in order for the installer to be able to uncompress the installation files.

### **Solaris.**

In addition to aforementioned system requirements, installing on Solaris also requires the following version specific patches. Patches can be downloaded from <http://sunsolve.sun.com/pub-cgi/show.pl?target=patchpage>.

- *Solaris 2.9 Patch IDs* : 111711-16, 111712-16, and 111722-05 (C++)
- *Solaris 2.10 Patch IDs*: 119963 (C++)

You must also have the library `/usr/lib/iconv/646%UTF-8` installed on your system. If this is not currently installed, please install the *SUNWiniu8* or *SUNWiniu8x* packages, which will install this library as part of the Indic iconv modules for UTF-8.

#### **Red Hat Enterprise Linux 5.x (32-bit x86).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *pam* package (version *pam-0.99.6.2-6.el5\_5.2*)
- The *glibc* package (version *glibc-2.5-58*)
- The *libstdc++* package (version *libstdc++-4.1.2-50.el5*)
- The *libgcc* package (version *libgcc-4.1.2-50.el5*)
- The *audit-libs* package (version *audit-libs-1.7.18-2.el5*)

#### **Red Hat Enterprise Linux 5.x (64-bit x64).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *zlib* package (version *zlib-1.2.3-3*)
- The *pam* package (version *pam-0.99.6.2-6.el5\_5.2*)
- The *glibc* package (version *glibc-2.5-58*)
- The *libstdc++* package (version *libstdc++-4.1.2-50.el5*)
- The *libgcc* package (version *libgcc-4.1.2-50.el5*)
- The *audit-libs* package (version *audit-libs-1.7.18-2.el5*)

#### **Red Hat Enterprise Linux 6.x (32-bit x86).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *pam* package (version *pam-1.1.1-4.el6.i686*)
- The *glibc* package (version *glibc-2.12-1.7.el6.i686*)
- The *libstdc++* package (version *libstdc++-4.4.4-13.el6.i686*)
- The *libgcc* package (version *libgcc-4.4.4-13.el6.i686*)

- The *audit-libs* package (version *audit-libs-2.0.4-1.el6.i686*)
- The *nss-softokn-freebl* package (version *nss-softokn-freebl-3.12.7-1.1.el6.i686*)

**Red Hat Enterprise Linux 6.x (64-bit x64).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *zlib* package (version *zlib-1.2.3-25.el6.x86\_64*)
- The *pam* package (version *pam-1.1.1-4.el6.x86\_64*)
- The *glibc* package (version *glibc-2.12-1.7.el6.x86\_64*)
- The *libstdc++* package (version *libstdc++-4.4.4-13.el6.x86\_64*)
- The *libgcc* package (version *libgcc-4.4.4-13.el6.x86\_64*)
- The *audit-libs* package (version *audit-libs-2.0.4-1.el6.x86\_64*)
- The *nss-softokn-freebl* package (version *nss-softokn-freebl-3.12.7-1.1.el6.x86\_64*)

**SuSE Linux 10 (64-bit x64).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *zlib* package (version *zlib-1.2.3-15.2*)
- The *pam* package (version *pam-0.99.6.3-28.18.39*)
- The *glibc* package (version *glibc-2.4-31.74.1*)
- The *libstdc++* package (version *libstdc++-4.1.2\_20070115-0.29.6*)
- The *libgcc* package (version *libgcc-4.1.2\_20070115-0.29.6*)
- The *audit-libs* package (version *audit-libs-1.2.9-6.19*)

**SuSE Linux 11 (64-bit x64).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find the versions specified, contact your system administrator.

- The *zlib* package (version *zlib-1.2.3-106.34*)
- The *pam* package (version *pam-1.0.4-0.5.12*)
- The *glibc* package (version *glibc-2.11.1-0.17.4*)
- The *libstdc++* package (version *libstdc++43-4.3.4\_20091019-0.7.35*)
- The *libgcc* package (version *libgcc43-4.3.4\_20091019-0.7.35*)
- The *audit-libs* package (version *audit-libs-1.7.7-5.16*)

**zLinux 64-bit (IBM System z).**

The following additional packages are needed to run properly. Search and apply using your configured update manager. If you are unable to find at least the minimum versions specified, contact your system administrator.

- The *libstdc++* package (version: *libstdc++-5.0.7-X.Y.s390x* where *X.Y* is *0.0* or later).
- The *libgcc* package (version: *libgcc-4.2.0-X.Y.s390x* where *X.Y* is *0.0* or later).

#### **AIX 6.1.**

In addition to aforementioned system requirements, installing on AIX 6.1 also requires the following:

- *bos.net.tcp.client* (version: *6.1.5.1*)
- *bos.rte.bind\_cmds* (version: *6.1.5.0*)
- *bos.rte.libc* (version: *6.1.5.1*)
- *bos.rte.libpthreads* (version: *6.1.5.0*)
- *bos.rte.security* (version: *6.1.5.0*)
- *vacpp.cmp.rte* (version: *11.1.0.3*)
- *bos.rte.iconv* (version: *6.1.5.0*)
- *bos.adt.lib* (version: *6.1.2.0*)
- *bos.rte.streams* (version: *6.1.5.0*)
- *bos.rte.mslib* (version: *6.1.5.0*)
- *bos.rte.odm* (version: *6.1.5.0*)

#### **AIX 7.1.**

In addition to aforementioned system requirements, installing on AIX 7.1 also requires the following:

- *bos.net.tcp.client* (version: *7.1.0.1*)
- *bos.rte.bind\_cmds* (version: *7.1.0.0*)
- *bos.rte.libc* (version: *7.1.0.1*)
- *bos.rte.libpthreads* (version: *7.1.0.0*)
- *bos.rte.security* (version: *7.1.0.1*)
- *xlC.rte* (version: *11.1.0.1*)
- *bos.rte.iconv* (version: *7.1.0.0*)
- *bos.adt.lib* (version: *7.1.0.0*)
- *bos.rte.streams* (version: *7.1.0.0*)
- *bos.rte.mslib* (version: *7.1.0.0*)
- *bos.rte.odm* (version: *7.1.0.0*)

#### **HP-UX.**

In addition to aforementioned system requirements, installing on HP-UX also requires that C++ Runtime libraries be installed. You can download them as patch PHSS\_26946. To access the patch, go to <http://www4.itrc.hp.com/service/patch/mainPage.do>. Registration is required but is free of charge.

## ***Installing IBM SPSS Modeler Batch***

### ***Installing from the DVD***

- ▶ Insert the IBM® SPSS® Modeler Server installation disk into the drive and ensure that you can access the drive. On Solaris, the volume manager (the vold daemon) must be running. On HP-UX, if you have problems installing, ask your administrator to mount the DVD-ROM device using the `-o cdcase` option.
- ▶ Change directories to the DVD mount point.
- ▶ Change directories to the *modelbat* directory.
- ▶ Change to the relevant platform directory.
- ▶ Run the *.bin* install script. For example:  

```
./modelerbatchlinux.bin -i console
```
- ▶ Introduction details are displayed. Press Enter to continue.
- ▶ Licensing information is displayed. Read the license, type 1 to accept it, and press Enter to continue.
- ▶ You are prompted to type the installation location. To use the default directory (*/usr/IBM/SPSS/ModelerBatch<nn>*, where *<nn>* is the version number), press Enter. If you specify a directory other than the default, make sure that the path name does not contain extended ASCII characters, the space character, or the ampersand (&) character.
- ▶ You are prompted to confirm the installation location. When it is correct, type y and press Enter.
- ▶ A pre-installation summary is displayed to confirm your entries so far. Press Enter to continue.
- ▶ A message is displayed to say the installation routine is ready to run. Press Enter to continue.
- ▶ A progress bar is displayed whilst the installation routine runs. When the installation is complete, press Enter to exit from the installer.

### ***Notes for Installation***

This section contains special instructions for this installation.

## ***Licensing Your Product***

No license is required for IBM® SPSS® Modeler Batch.

## ***Troubleshooting an Installation***

### ***Invalid digital signature on installation***

SPSS Modeler products use IBM-issued certification for digital signing. In certain circumstances you may see the following error on trying to install SPSS Modeler products:

Error 1330. A file that is required cannot be installed because the cabinet file filename has an invalid digital signature...

#### ***Windows XP or Windows Server users***

You may see this message when installing under Windows XP or Windows Server 2003, typically with a cabinet file greater than 500MB. To correct this problem, install the following Windows update:

For Windows XP: <http://support.microsoft.com/kb/960554/en-us>

For Windows Server: <http://support.microsoft.com/kb/888303/en-us>

#### ***All Windows users***

You see this message if you try to install SPSS Modeler products on a machine that has no Internet connection and does not have the correct certificate installed. Use the following procedure to correct this problem.

1. Click OK to acknowledge the message.
2. Click Cancel to exit from the installer.
3. If the machine on which you want to install has no Internet connection, perform the next step on an Internet-connected machine and copy the *.cer* file to the machine where you want to install.
4. From <http://www.verisign.com/support/roots.html>, scroll down to locate the VeriSign Class 3 Primary CA - G5 root Certification Authority (CA). Download this root CA and save it as a *.cer* file.
5. Double-click the *.cer* file.
6. On the General tab, click Install Certificate.
7. Follow the instructions in the Certificate Import Wizard, using the default options and clicking Finish at the end.
8. Retry the installation.

## Starting IBM SPSS Modeler Batch

You can use the command line of your operating system to launch IBM® SPSS® Modeler as follows:

- ▶ On a computer where IBM® SPSS® Modeler is installed, open a DOS, or command-prompt, window.
- ▶ To launch the SPSS Modeler interface in interactive mode, type the `modelerclient` command followed by the required arguments; for example:

```
modelerclient -stream report.str -execute
```

The available arguments (flags) allow you to connect to a server, load streams, run scripts, or specify other parameters as needed.

For more information, see the *IBM® SPSS® Modeler Batch User's Guide*, available under the `\Documentation\<language>` folder on the IBM® SPSS® Modeler ServerDVD.

## IBM SPSS Modeler Server Access

IBM® SPSS® Modeler Batch must be run in distributed mode along with IBM® SPSS® Modeler Server. Contact your system administrator for information about servers, user IDs, and passwords.

For more information, see the *IBM SPSS Modeler Server Administration and Performance Guide*, available in the file *ServerandPerformanceGuide.pdf* under the `\Documentation\<language>` folder on the SPSS Modeler Server DVD.

Installation documents can also be downloaded from the web at <http://www-01.ibm.com/support/docview.wss?uid=swg27023172>. Documentation is also available from the SPSS Modeler Information Center at <http://publib.boulder.ibm.com/infocenter/spssmodl/v15r0m0/>.

## Database Access

To read or write to a database, you must have an ODBC data source installed and configured for the relevant database, with read or write permissions as needed. The IBM® SPSS® Data Access Pack includes a set of ODBC drivers that can be used for this purpose, and these drivers are available on the IBM SPSS Data Access Pack DVD or from the download site. If you have questions about creating or setting permissions for ODBC data sources, contact your database administrator.

Database support in IBM® SPSS® Modeler is classified into three tiers, each representing a different level of support for SQL pushback and optimization, depending on the database vendor. The different levels of support are implemented by means of a number of system settings, which can be customized as part of a Services engagement.



The three tiers of database support are:

**Table 1-1**  
*Database support tiers*

<b>Support tier</b>	<b>Description</b>
Tier 1	All possible SQL pushback is available, with database-specific SQL optimization.
Tier 2	Most SQL pushback is available, with non-database-specific SQL optimization.
Tier 3	No SQL pushback or optimization—only reading data from, and writing data to, the database.

### **Supported ODBC Drivers**

For the latest information on which databases and ODBC drivers are supported and tested for use with SPSS Modeler 15, see the product compatibility matrices on the corporate Support site (<http://www.ibm.com/support>).

### **Where to Install Drivers**

Note that ODBC drivers must be installed and configured on each computer where processing may occur.

- If you are running IBM® SPSS® Modeler in local (standalone) mode, the drivers must be installed on the local computer.
- If you are running SPSS Modeler in distributed mode against a remote IBM® SPSS® Modeler Server, the ODBC drivers need to be installed on the computer where SPSS Modeler Server is installed. For SPSS Modeler Server on UNIX systems, see also “Configuring ODBC drivers on UNIX systems” later in this section.
- If you need to access the same data sources from both SPSS Modeler and SPSS Modeler Server, the ODBC drivers must be installed on both computers.
- If you are running SPSS Modeler over Terminal Services, the ODBC drivers need to be installed on the Terminal Services server on which you have SPSS Modeler installed.
- If you are using the IBM® SPSS® Modeler Solution Publisher Runtime to run published streams on a separate computer, you also need to install and configure ODBC drivers on that computer.

**Note:** If you are using SPSS Modeler Server on UNIX to access a Teradata database you must use the ODBC Driver Manager that is installed with the Teradata ODBC driver. In order to make this change to SPSS Modeler Server please specify a value for ODBC\_DRIVER\_MANAGER\_PATH near the top of the modelersrv.sh script where indicated by the comments. This environment variable needs to be set to the location of the ODBC Driver Manager that is shipped with the Teradata ODBC driver (/usr/odbc/lib in a Teradata ODBC driver default installation). You must restart SPSS Modeler Server for the change to take effect. For details of the SPSS Modeler Server platforms that offer support for Teradata access, and the Teradata ODBC driver version that is supported, see the corporate Support site at <http://www.ibm.com/support>.

**Configuring ODBC drivers on UNIX systems**

By default, the DataDirect Driver Manager is not configured for SPSS Modeler Server on UNIX systems. To configure UNIX to load the DataDirect Driver Manager, enter the following commands:

```
cd modeler_server_install_directory/bin
rm -f libspssodbc.so
ln -s libspssodbc_datadirect.so libspssodbc.so
```

Doing so removes the default link and creates a link to the DataDirect Driver Manager.

***In-Database Modeling***

IBM® SPSS® Modeler supports integrated modeling, allowing you to make the most of the power of your database by using native algorithms provided by the database vendor. You can build, score, and store models inside the database—all from within the SPSS Modeler application, combining the analytical capabilities and ease-of-use of SPSS Modeler with the power and performance of a database. For specific requirements to support database modeling, see the *SPSS Modeler In-Database Mining Guide*, available under the `\documentation` folder on the installation disk.