



Predictive Workbench User Guide

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About this guide

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This guide shows you how to install and use BusinessObjects Predictive Workbench XI 3.0 powered by SPSS Clementine on a Windows platform.

Predictive Workbench is a data mining tool that incorporates many types of data to develop predictive models that can improve decision making for your business. It features a mandatory integration add-on that allows you to use your **BusinessObjects** universes as data sources within the SPSS Clementine system.

Note: This guide is intended for new Predictive Workbench users, as well as current SPSS Clementine 12.0.1 users, who want to mine data in their BusinessObjects universes.



Installation notes



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Predictive Workbench for Windows features a Java user interface for designing analysis streams and an optional server to process these streams. It operates in standalone mode, as well as in distributed mode when you connect it to the Predictive Workbench Server.

After you install Predictive Workbench, you must install BusinessObjects XI 3.0 Integration for SPSS Clementine. This add-on installation connects Predictive Workbench to your BusinessObjects system and allows you to mine data from its universes.

The BusinessObjects XI 3.0 Integration automatically detects the presence of Predictive Workbench and installs the corresponding add-on components to connect Predictive Workbench to BusinessObjects universes.

Predictive Workbench and Predictive Workbench Server are based on SPSS Clementine 12.0.1, and SPSS Clementine Server 12.0.1, respectively. The Predictive Workbench Server is an optional installation. It is a scalable processing engine that provides analysis service to multiple Predictive Workbench systems.

Note: If SPSS Clementine 12.0.1 is already installed on your system, you must install BusinessObjects XI 3.0 Integration to access data in your BusinessObjects universes.

Predictive Workbench is available in two installation options, depending on your choice of language packs, as described in the following table.

Components	Languages Available
Option 1: Predictive Workbench powered by SPSS Clementine CD1	English, German, French, Italian, Spanish
Option 2: Predictive Workbench powered by SPSS Clementine CD2	English, Japanese, Simplified Chinese
BusinessObjects XI 3.0 Integration (mandatory add-on installation)	English, German, French, Italian, Spanish, Japanese, Simplified Chinese
Predictive Workbench Server (optional)	English only

Minimum requirements

Predictive Workbench and Predictive Workbench Server for Windows work best with the following minimum requirements:

Predictive Workbench

- Microsoft® Windows® Vista® (Business and Enterprise) x32 or x64 Edition; Microsoft® Windows® XP Professional with Service Pack 2 x32 or x64 Edition; Windows Server™ 2003 (Terminal Services).
- Intel® Pentium® or Pentium-class processor or higher (for 32-bit Windows); x64 (AMD 64 and EM64T) processor family (for 64-bit Windows)
- A monitor with 1024x768 resolution or higher
- Minimum 1 GB of available hard-disk space
- Minimum 1 GB of RAM; 2 GB or more recommended
- Microsoft® Internet Explorer® 6.0 or higher

Predictive Workbench Server

- Predictive Workbench and Predictive Workbench Server for Windows work best with the following requirements:
Windows Server 2003® (Standard and Enterprise) x32 or x64 Edition
- Pentium® or Pentium-class processor or higher (for 32-bit Windows); x64 (AMD 64 and EM64T) processor family (for 64-bit Windows), running at 1GHz or faster
- A network adapter running the TCP/IP network protocol
- Minimum 1 GB of available hard-disk space
- Minimum 4 GB of RAM

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Minimum requirements



Using Predictive Workbench



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Predictive Workbench allows data analysts as well as business end users to mine data and perform statistical analysis. Based on SPSS Clementine 12.0.1, Predictive Workbench lets you use your BusinessObjects universes as data sources, whether they use relational or OLAP data sources.

Predictive Workbench allows you to mine data for many business scenarios. For example, you can define and execute predictive analysis by building a model that analyzes a data set to identify the variables that affect customer loss. Or embed predictive analysis in business intelligence applications to recommend sales opportunities based on market analysis.

Examples of how you can use predictive analysis include the ability to monitor business activity to forecast sales, costs, and headcounts, and set up future alerts to forecast metrics. You can also mine data to determine whether targets are met or missed, build models, detect patterns in an OLAP cube and optimize mail lists.

Installing Predictive Workbench

Default installation directory: C:\Program
Files\BusinessObjects\Predictive Workbench 12.0

To install Predictive Workbench:

1. Open Predictive Workbench Client CD1 folder or Predictive Workbench CD2 folder, depending on your choice of languages.
2. Navigate to the `clem\NT` directory.
3. Double-click the `setup.exe` file, and then click **Next**.
4. Read the license agreement, select "I accept the terms in the license agreement", and click **Next**.
5. Click **Next** to install Predictive Workbench to the default folder, or click **Change** to select a different folder location.
6. Click **Next**.
7. Enter your **User Name** and **Organization** name, and then click **Next**.
8. Click **Install**.
9. After the installation process is complete, click **Finish**.
10. Choose a licensing method, and then click **Next**.

Note: For more information about licensing methods, see the SPSS Clementine documentation in the Documentation folder.

11. If you license your product, enter an authorization code.
12. Click **Next**.
13. Click **Finish**.

You must install BusinessObjects XI 3.0 Integration for SPSS Clementine to complete your installation and connect to universes.

Installing BusinessObjects XI 3.0 Integration

You must install BusinessObjects XI 3.0 Integration after you install Predictive Workbench.

To install BusinessObjects XI 3.0 Integration:

1. Open BusinessObjects XI 3.0 Integration for SPSS Clementine folder.
2. Double-click the `setup.exe` file.
3. Select a language from the drop-down menu, and click **OK**.
4. In the "Installation Wizard" dialog box, click **Next**.
5. Read the license agreement, select: "I accept the terms of the license agreement" and click **Next**.
6. Enter your **User Name** and **Organization** name.
7. Click **Next** to begin installation to the specified location where Predictive Workbench is detected.
8. Click **Finish**.

To start the Predictive Workbench application, go to:

Windows Start menu > BusinessObjects XI 3.0 > Predictive Workbench > Predictive Workbench

Tip: You can run the BusinessObjects XI 3.0 Integration installation silently through a configuration file with the extension `.ini` in the command line.

Invoke the installer by running the `setup.exe` as follows:

```
setup.exe -r <path to the configuration file>
```

The configuration file is a text file with the extension `.ini` containing the following:

```
[OTHER]  
QUIET=/qn  
[INSTALL]
```

```
ENABLELOGFILE="1"  
Accept="Yes"  
USERNAME="Business Objects"  
COMPANYNAME="Business Objects"
```

Installing Predictive Workbench Server

Default installation directory: C:\Program
Files\BusinessObjects\Predictive Workbench Server 12.0

To install Predictive Workbench Server:

1. Open Predictive Workbench Server folder.
2. Navigate to the directory `clem\NT`.
3. Double-click the `setup.exe` file, and then click **Next**.
4. Read the license agreement, select: "I accept the terms of the license agreement", and then click **Next**.
5. When prompted, click **Next** to install Predictive Workbench Server to the default folder, or click **Change** to select a different folder location.
6. Click **Next**.
7. Enter your **User Name** and **Organization** name, and then click **Next**.
8. In the "Installation Wizard" dialog box, click **Install**.
9. Click **Finish**.

Note: You must install BusinessObjects XI 3.0 Integration after you install Predictive Workbench Server. Refer to [Installing BusinessObjects XI 3.0 Integration](#) on page 13.

Note:

- You must license Predictive Workbench Server from the command prompt after installation. For more information, refer to the Clementine documentation located in the Documentation folder.
- The Predictive Workbench Server, which runs as an NT service, is named "Clementine Server 12.0".

Uninstalling Predictive Workbench

For uninstallation, please note the product name **BusinessObjects Predictive Workbench XI 3.0**.

To uninstall Predictive Workbench, you must also uninstall BusinessObjects XI 3.0 Integration.

To uninstall Predictive Workbench:

1. Select: **Windows Start Menu > Control Panel > Add or Remove Programs**.
2. Select **BusinessObjects Predictive Workbench XI 3.0**.
3. Click **Remove**.

A window appears to confirm you want to remove Predictive Workbench from your computer.

4. Click **Yes**.

Uninstalling Predictive Workbench Server

For uninstallation, please note the product name **BusinessObjects Predictive Workbench Server XI 3.0**.

To uninstall Predictive Workbench Server, you must also uninstall BusinessObjects XI 3.0 Integration.

To uninstall Predictive Workbench Server:

1. Select: **Windows Start Menu > Control Panel > Add or Remove Programs**.
2. Select **BusinessObjects Predictive Workbench Server XI 3.0**.
3. Click **Remove**.

A window appears to confirm you want to remove Predictive Workbench Server from your computer.

4. Click **Yes**.

Uninstalling BusinessObjects XI 3.0 Integration

For uninstallation, please note the product name **BusinessObjects XI 3.0 Integration for SPSS Clementine**.

You must uninstall BusinessObjects XI 3.0 Integration to uninstall Predictive Workbench Server.

To uninstall BusinessObjects XI 3.0 Integration:

1. Select: **Windows Start Menu > Control Panel > Add or Remove Programs**.
2. Select **BusinessObjects XI 3.0 Integration for SPSS Clementine**.
3. Click **Remove**.

A window appears to confirm you want to remove Predictive Workbench Server from your computer.

4. Click **Yes**.

Working with Universe nodes

Predictive Workbench is a tool for creating data streams. A data stream is the sequence of operations performed on data records as they flow from the data source through each manipulation and to the destination. You can save streams and reuse them with different data files. The three steps to create a data stream are:

- import data into Predictive Workbench
- manipulate the data through a series of manipulations
- send the data to a destination

About the "Nodes" palette

In Predictive Workbench data modeling **nodes**, or icons, help you to explore and transform data. They are located in the "Nodes" palette, which is displayed below the data stream canvas. Each palette contains **nodes** that are grouped together for different phases of data stream operations. They include:

- "Sources": Import data into Predictive Workbench.

Tip: The universe **node** is located on the "Sources" tab and allows you to connect to data in your BusinessObjects Enterprise universes.

- "Record Ops": Perform operations on data records, including select, sample, sort, merge and append.
- "Field Ops": Perform operations on data fields, including filter, derive new fields and determine the data type for given fields.
- "Graphs": Display data before and after model is made, including plots, histograms, web nodes, time plots and evaluation charts.
- "Modeling": Create models such as neural nets, decision lists, clustering algorithms and data sequencing.
- "Output": Produce a variety of outputs, including data, charts and model results which you can send directly to another application, such as Excel.

Each universe **node** can define a query based on a universe saved on your BusinessObjects system. After you add universe **nodes** to a data stream, you can connect them to other types of **nodes** as well as cut, copy and paste them between data streams. You can also create universe queries and then view the query properties and results in the "Preview" tab. Once you create the universe **node**, you can customize the name and properties in the "Annotation" tab. To manage universes, add or remove them in the "Fields" area.

Note: **Nodes** must connect to each other to form a data stream.

Adding a universe node to a data stream

Once you install Predictive Workbench along with the BusinessObjects XI 3.0 Integration, the universe **node** is available as a data source for your workflows.

To Start Predictive Workbench:

Go to **Windows Start Menu > All Programs > BusinessObjects XI 3.0 > Predictive Workbench > Predictive Workbench**

To add a universe **node** to a stream:

1. Click on the universe **node** icon.
2. In **Edit** menu, click **Node > Connect**.
3. Click on a **node** you want to connect to.

Tip: To easily redirect a data stream, click on the connection arrow and drag it to another source.

1. Click **File > New Stream**.

- Or Click **File > Open Stream** to add a universe node to an existing data stream.

2. Click **Insert > Sources > Universe**.

Tip: To quickly add a universe **node** to a stream, in the "Sources" palette, double-click on the universe icon, or click and drag the universe node onto the canvas using the middle mouse button.

3. To select a universe, double-click the universe node on the canvas.

4. Click **Universe**.

A login dialog box appears and prompts you to enter your BusinessObjects Enterprise credentials.

5. Enter your BusinessObjects Enterprise login information.

A new dialog box opens with your available universes.

6. Select a universe and click **OK**.

Note: You can only select one universe at a time.

7. Select which data fields you would like to use and click **>**.

- To preview details of your selected fields, click **Preview** tab at bottom of window.
- To change the name of the Universe, click the **Annotations** tab at bottom of window.

Note: Information about the field appears in the "Details" section of the screen.

8. Click **Apply**.

9. Click **OK**.

10. In menu, click **Save Stream**.

To connect a universe **node** to another **node** in a data stream: click on the universe icon and go to **Edit > Node > Connect** and then select the **node** you want to connect to.

Note: When you re-open a file and try to execute it, you need to re-establish a connection to your BusinessObjects Enterprise system. If you do not have the proper credentials for the BusinessObjects Enterprise

system, the stream will fail. To avoid this error, log in before you execute the stream.

Tip: You can log on to a new BusinessObjects Enterprise connection during the same session. However, this will disconnect your current BusinessObjects Enterprise connection and may affect your data stream if the same universes do not exist on the new connection.

Connecting to BusinessObjects Enterprise

To connect to a BusinessObjects Enterprise system:

1. Click **Tools > BusinessObjects Enterprise Login**.
2. When the login dialog box opens, enter your BusinessObjects Enterprise login information.
3. Click **Log On**.

Tip: To connect to a new BusinessObjects Enterprise system, follow the previous steps and the existing connection is automatically disconnected.

Universe query limitations and exceptions

Please note the following limitations when defining a universe query:

- Connecting to universes based on SAP Business Information Warehouse (BW) queries with prompts is not supported.
- Connecting to universes that contain mandatory conditions with “@Prompt” syntax are supported. Mandatory universe conditions that do not contain prompts are supported.
- Selecting optional universe conditions when defining the query through the universe **node** is not supported.
- Creating filters when defining the query through the universe **node** is not supported. However, you can manipulate data using the "Record Ops" and "Field Ops" in Predictive Workbench.
- Creating a query based on two universes is not supported. However, you can define multiple queries by adding multiple universe nodes, and merge the data using the "Record Ops" and "Field Ops" in Predictive Workbench.

- Connecting to a single BusinessObjects Enterprise system through the Predictive Workbench is supported. To connect to a different system, your existing connection is automatically disconnected.



Get More Help



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Online documentation library

Business Objects offers a full documentation set covering all products and their deployment. The online documentation library has the most up-to-date version of the Business Objects product documentation. You can browse the library contents, do full-text searches, read guides on line, and download PDF versions. The library is updated regularly with new content as it becomes available.

http://support.businessobjects.com/documentation/product_guides/

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<http://devlibrary.businessobjects.com>

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