pentaho

Version 5.4

Install All Components

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Introduction to Pentaho BA Suite Wizard Installation

The Wizard is the easiest and quickest way to install the Pentaho Business Analytics (BA) Suite. The BA Suite consists of BA and Data Integration (DI) components. After installation, you can use the software to create reports and visualize data, create and schedule data integration processes, model data, and perform other processing on traditional and big data sources.

Prerequisites

If you are not sure which installation method to use, read BA Installation Overview before you begin.

Expertise

These instructions are written for anyone who wants to install the Pentaho BA Suite, or individual BA and DI components.
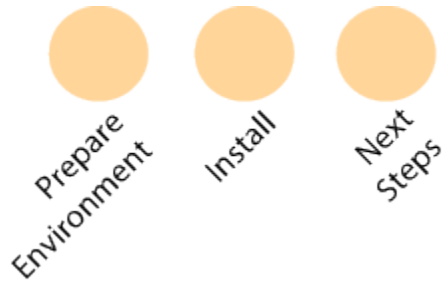
Tools

You must supply a server or workstation that meets the hardware and operating system requirements indicated in support technologies.

Login Credentials

All of the tasks in these instructions require that you have the computer privileges or accesses you need to install software on your server or workstation.
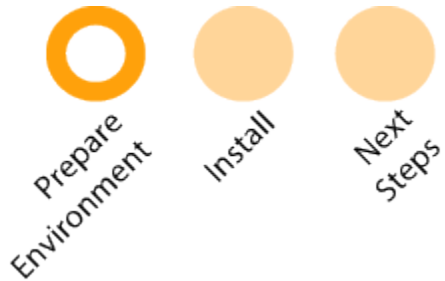
Wizard Installation Process Overview

The Wizard installation process consists of these steps.

- The [Prepare Environment](#) step explains how to prepare your computer for installation of the software.
- The [Install](#) step explains how to use the wizard to install the software.
- [Next Steps](#) explains what to do after you install the software.

Prepare Environment

This task explains how to prepare your computer for the installation of the software.

Create User Account

Windows User Account

If you plan to install the Pentaho BA Suite on a computer that runs Windows, you do not need to create a special user account. Just make sure that you have the appropriate privileges needed to install software. Often, this means that you need administrative-level privileges for the account that you use to install the software. Some Windows systems have expanded user access and permissions restrictions that change the way the software is installed and accessed by system users. If this happens, the installation wizard will require that you execute it with elevated permissions (**Run Elevated** status) so that the BA and DI Servers are accessible to all users.

Linux User Account

If you plan to install the software on a computer that runs Linux, create a user account named **pentaho** on the computer.

1. Establish a connection to the remote server.
2. In the **Terminal** window, create a new user account called **pentaho**, along with the `pentaho` home directory, by typing this command.

   ```
   sudo useradd -s /bin/bash -m pentaho
   ```

   Note: `/bin/bash` indicates that the user account should be created using the Bash shell. In many Linux distributions, the default new user shell is `/bin/sh` or some equivalent, such as Dash, that might not use the `~/.bashrc` configuration file by default. If you don't have or want to use Bash, adjust the instructions throughout this section accordingly.
3. In the **Terminal** window, assign a password for the **pentaho** user by typing this line.

   ```
   sudo passwd pentaho
   ```

4. Verify that you can log in using the newly-created **pentaho** user account.
   a. In the **Terminal** window, log in by typing pentaho user at the prompt.

   ```
   su pentaho
   ```

   b. Type the password for the **pentaho** user account if you are prompted.
   c. Use the **Terminal** window to navigate to the pentaho directory to verify that it has been created. By default, it is in the `/home` directory.
   d. Close the **Terminal** window.

Disable Anti-Spyware and Anti-Virus Programs

Disable any anti-spyware and anti-virus software before installing Pentaho Business Analytics. Some types of software firewalls and anti-virus scanners may also block the BA Server or prevent it from operating normally. After the server is installed, renable them.

Advanced Topics

Complete the instructions in this section only if you have a headless node or if you plan to install on a Mac OS.

Prepare a Headless Linux or Solaris Server

There are two headless server scenarios that require special procedures on Linux and Solaris systems. One is for a system that has no video card; the other is for a system that has a video card, but does not have an X server installed. In some situations -- particularly if your server doesn't have a video card -- you will have to perform both procedures in order to properly generate reports with the BA Server.

Systems without video cards

The **java.awt.headless** option enables systems without video output and/or human input hardware to execute operations that require them. To set this application server option when the BA Server starts, you will need to modify the startup scripts for either the BA Server, or your Java application server. You do not need to do this now, but you will near the end of these instruction when you perform the Start BA Server step. For now, add the following item to the list of CATALINA_OPTS parameters: **-Djava.awt.headless=true**.

The entire line should look something like this:

```
export CATALINA_OPTS="-Djava.awt.headless=true -Xms4096m -Xmx6144m -
XX:MaxPermSize=256m -Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.
gcInterval=3600000"
```

If you intend to create a BA Server service control script, you must add this parameter to that script's CATALINA_OPTS line.
Note: If you do not have an X server installed, you must also follow the below instructions.

Systems without X11

To generate charts, the Pentaho Reporting engine requires functionality found in X11. If you are unwilling or unable to install an X server, you can install the **xvfb** package instead. xvfb provides X11 framebuffer emulation, which performs all graphical operations in memory instead of sending them to the screen.

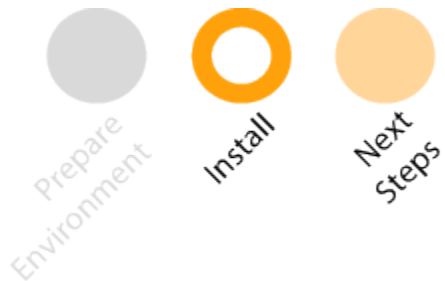Use your operating system's package manager to properly install xvfb.

Adjust Amount of Memory Mac OS Allocates for PostgreSQL

If you plan to install the software on a Mac OS, and you choose to use PostgreSQL, you need to increase the amount of memory that the Mac OS allocates for PostgreSQL. You can skip these instructions if you plan to install the software on Windows or Linux.

PostgreSQL is the name of the default database that contains audit, schedule and other data that you create. PostgreSQL starts successfully only if your computer has allocated enough memory. Go to http://www.postgresql.org/docs/devel/static/kernel-resources.html and follow the instructions there on how to adjust the memory settings on your computer.

Install Pentaho BA Suite

After you have prepared your environment, use the Wizard to install the Pentaho BA Suite.

Install Pentaho BA Suite with the Wizard

Use the wizard to install Pentaho BA Suite. The wizard installs BA components, DI components, Tomcat web application server, and PostgreSQL, which is the default database that houses the BA and DI Repositories. The BA and DI Repositories hold audit, scheduling, and solution content.

Installation instructions are the same for the Windows, Linux, and Mac platforms.

Before you start, choose whether you want to install using the default or custom methods.

Table 1. Wizard Installation Decision Table

Explore Considerations	Choose the Best Option For You	
	Default	Custom
Summary	This option installs all components automatically.	This option allows you to choose the components you want to install.
Installed Components	Installs all components in the Pentaho BA Suite. These include: • Servers: BA Server and DI Server. • BA Design Tools: Report Designer, Schema Workbench, Metadata Editor, Aggregation Designer, Spoon (with Instaview), Pan, Kitchen, and Carte. • Plugins: All BA Plugins such as Pentaho Mobile, Dashboard Designer, Analyzer, Interactive Reporting, and some DI	You can choose to install some or all of the components in the Pentaho BA Suite. These include: • Servers: BA Server and DI Server. • BA Design Tools: Report Designer, Schema Workbench, Metadata Editor, Aggregation Designer, Spoon (with Instaview), Pan, Kitchen, and Carte. • Plugins: All BA Plugins such as Pentaho Mobile, Dashboard Designer, Analyzer, Interactive Reporting, and some DI

Explore Considerations	Choose the Best Option For You	
	Default	Custom
	Plugins such as Big Data and Marketplace.	Plugins such as Big Data and Marketplace.
Expertise	You need this knowledge to perform this type of installation. • Basic computer knowledge.	You need this knowledge to perform this type of installation. • Knowledge of your networking environment, including database port numbers if they differ from the default and IP addresses.
Time	Approximately 30 minutes.	Approximately 30 minutes or less.
Recommendation	Select if you want to install all of the Pentaho software on your workstation or server and if you want to install sample content. We recommend that you choose this option if you want to evaluate Pentaho or to start using it quickly.	Select if you want to choose which Pentaho programs to install on your workstation or server or if you want the option to not install sample content. We recommend that you choose this option if you want to set up a production system or if you want to install only some Pentaho products. For example, if you want to install the Pentaho BA and DI Servers on your server, and the Interactive Reporting and Analysis tools on a workstation, choose this option.

Download the Software

To download the software, complete these steps.

1. Make sure that you are logged into the computer on which you want to install the software. You should be log on with an account that allows you to install software. On Windows, this is typically an account that has administrator privileges. On Linux, this is also an account that has administrator privileges, such as the **pentaho** account that you created during the previous step.

2. Download the correct installation wizard's file for your operating system.

   • **Windows**: `pentaho-business-analytics-5.3.0-x64.exe`

   • **Linux**: `pentaho-business-analytics-5.3.0-x64.bin`

   • **Mac**: `pentaho-business-analytics-5.3.0-x64.app.tar.gz`

3. If you are using Linux, make sure that you have the appropriate permission to execute the file. Open a **Terminal** window, navigate to the directory where you just downloaded the file, then enter the following at the prompt.

```
chmod a+x ./pentaho-business-analytics-5.3.0-x64.bin
```

Start the Installation Wizard

To start the installation wizard, complete the following steps.

NOTE:

Launch the installer from a locally mounted hard drive only. Network-mounted drives (e.g. NFS or Netbeui) are not supported for performance reasons.

Do one of the following.

- **If you are using Windows:** Open **Windows Explorer** and navigate to the installation file you just downloaded. Double-click the `pentaho-business-analytics-5.3.0-x64.exe` file to launch it.

- **If you are using Mac:** Unpack the `pentaho-business-analytics-5.3.0-x64.app.tar.gz` archive, then double-click the pentaho-business-analytics-5.3.0-x64.app installation app.

- **If you are using Linux and your computer *can* display graphics:** Open a **Terminal** window and navigate to the installation file you just downloaded. Enter this command at the prompt, then press **Enter**.

```
./pentaho-business-analytics-5.3.0-x64.bin
```

- **If you are using Linux and your computer *cannot* display graphics:** open a **Terminal** window and navigate to the installation file you just downloaded. At the prompt enter *one* of these commands, then press **Enter**. **Enter this command if you have GTK libraries on your system and want to use the GTK Toolkit:**

```
./pentaho-business-analytics-5.3.0-x64.bin --mode text
```

Enter this command if you do not have GTK libraries on your system or if you want to use OpenMotif instead:

```
./pentaho-business-analytics-5.3.0-x64.bin --mode xwindow
```

Default Installation

If you choose the default installation option, complete the following steps. If you want to install using a custom method, read the Custom Installation instructions.

NOTE:

You cannot install into a directory that already exists. If you try, you will get an error message. If you are using Linux, we do not recommend that you install the software in the `/opt/` directory. The complicated permissions requirements and general isolation from the rest of the system can cause unintended issues to arise if the software is installed there.

1. After you start the wizard, the Pentaho Wizard Splash Screen appears, then the **Welcome** window. Click **Next**.

2. Read the license agreement. Click **I accept the license agreement**, then click **Next** to continue.

3. Select **Default** installation in the **Setup Type** window.

4. In the **Installation Folder** window, accept the default directory or choose a different directory by entering the path in the text box or by clicking **Browse** to find directory where you want to install the software. Click **Next**.

5. When prompted for the PostgreSQL password, enter the password you want to assign to the PostgreSQL database's admin user. Do not use these characters in the password because the Wizard cannot process them: ' " & < > \

6. Click **Next** to continue.The **Ready to Install** window appears. Click the **Next** button to install the software.

7. The **Installation in Progress** window appears. The software takes about 45 minutes to install.

8. An error occurs if Pentaho BA and DI Server port numbers (**8080**, **9092**, **9080**, **8443**, **9443**, and **5432**) are not available on your system and if the additional ports that the wizard has tried are not available. If the wizard cannot find an available port, you are prompted to enter port numbers you want to use.

9. The **Installation Complete** window appears. Make note of the **Administrative** and **System User** names and passwords. (The default password for both is **password**.) Click the **Launch the Pentaho User Console Now** and **Launch Pentaho Data Integration Now** to launch the Pentaho User Console and Spoon.

10. Click **Finish** to end the process.

NOTE:

If you have trouble with the installer, check the [Troubleshooting](#) documentation. Once the installation wizard is complete, the BA Server and DI Server are running with the default parameters. Terminal windows might remain open after installation. If you close them, the BA and DI Servers stop. On Windows, the BA and DI Servers are installed as system services, meaning that they start when you start your computer, and they stop when you shut down your computer. The User Console, Spoon, and other tools must be manually run. In the next step of these instructions there are links to documentation that explains how to start and stop servers manually.

Custom Installation

To use custom installation, complete these instructions.

NOTE:

You cannot install into a directory that already exists. If you try, you will get an error message. If you are using Linux, we do not recommend that you install the software in the `/opt/` directory. The complicated permissions requirements and general isolation from the rest of the system can cause unintended issues to arise if the software is installed there.

1. After you start the wizard, the Pentaho Wizard Splash Screen appears, then the **Welcome** window. Click **Next**.

2. Read the license agreement. Click **I accept the license agreement**, then click **Next** to continue.

3. Select **Custom** installation in the **Setup Type** window.

4. Select the Pentaho applications that you want to install from the **Pentaho Applications** window. Click **Next**.

5. If you indicated that you wanted to install the **BA Server**, the **Sample Content** window appears. Indicate that you want to install it, then click **Next**.

6. In the **Installation Folder** window, accept the default directory or choose a different directory by entering the path in the text box or by clicking **Browse** to find the directory where you want to install the the software. Click **Next**.

7. If you indicated that you wanted to install the **BA Server** the **PostgreSQL postgres user password** window appears. Enter the password you want to assign to the PostgreSQL database's admin user. Do not use these characters in the password because the Wizard cannot process them: ' " & < > \

8. Click **Next**. The **Ready to Install** window appears. Click the **Next** button to install the software.

9. The **Installation in Progress** window appears. The software takes about 30 minutes to install, but sometimes it takes a little longer. If that happens, wait for the installer to complete. **Note:** An error occurs if Pentaho BA and DI Server port numbers (**8080**, **9092**, **9080**, **8443**, **9443**, and **5432**) are not available on your system and if the additional ports that the wizard has tried are not available. If the wizard cannot find an available port, you are prompted to enter port numbers you want to use.

10. The **Installation Complete** window appears. Make note of the **Administrative** and **System User** names and passwords. (The default password for both is **password**. Click the **Launch the Pentaho User Console now** and **Launch Pentaho Data Integration now** to launch the Pentaho User Console and Spoon.

11. Click **Finish** to end the process.

NOTE:

If you have trouble with the installer, check the [Troubleshooting](#) documentation. Once the installation wizard is complete, the BA Server and DI Server are running with the default parameters. Terminal windows might remain open after installation. If you close them, the BA and DI Servers stop. On Windows, the BA and DI Servers are installed as system services, meaning that they start when you start your computer, and they stop when you shut down your computer. The User Console, Spoon, and other tools must be manually run. In the next step of these instructions there are links to documentation that explains how to start and stop servers manually.

Verify Installation

To verify that the installation occurred properly, review the software directory structure and the installation summary file.

1. Open a file explorer window such as **Windows Explorer** or a command line tool such as the **Command Prompt** or **Terminal** windows.

2. Navigate to the directory where you installed the software, then compare this directory structure with yours. If you installed the entire suite, the structure should look like this.

```
pentaho/
pentaho/design-tools/
pentaho/design-tools/aggregation-designer/
pentaho/design-tools/data-integration/
pentaho/design-tools/metadata-editor/
pentaho/design-tools/report-designer/
pentaho/design-tools/schema-workbench/
pentaho/documentation/
pentaho/java/
pentaho/jdbc-distribution/
pentaho/license-installer/
pentaho/licenses/
pentaho/monetdb/
pentaho/postgresql/
pentaho/scripts/
```

```
pentaho/server/

pentaho/server/biserver-ee/

pentaho/server/biserver-ee/licenses/

pentaho/server/biserver-ee/logs/

pentaho/server/biserver-ee/pentaho-solutions/

pentaho/server/biserver-ee/third-party-tools/

pentaho/server/biserver-ee/tomcat/

pentaho/server/biserver-ee/wkhtmltoimage/

pentaho/server/data-integration-server/

pentaho/server/data-integration-server/licenses/

pentaho/server/data-integration-server/logs/

pentaho/server/data-integration-server/pentaho-solutions/

pentaho/server/data-integration-server/scripts/

pentaho/server/data-integration-server/tomcat/

pentaho/server/hsql-sample-database
```

3. Open the `installation-summary.txt` file. Make sure that the design tools and plugins that you installed are listed.

4. Review the following locations of files and directories before going to the next step.

Top-level files

These files are found in the top-level Pentaho directory:

- • **ctlscript.sh:** Starts, stops, restarts, and shows the status of Pentaho services. Available on Linux and Mac only.
- • **installation-summary.txt:** Contains the information from the summary screen at the end of the installation process.
- • **uninstall:** A script that removes Pentaho Business Analytics.

Locations of specific programs

- • **BA Server:** `pentaho/server/biserver-ee/`
- • **DI Server:** `pentaho/server/data-integration-server/`
- • **Report Designer:** `pentaho/design-tools/report-designer/`
- • **Schema Workbench:** `pentaho/design-tools/schema-workbench/`
- • **Data Integration (Spoon):** `pentaho/design-tools/data-integration/`
- • **Metadata Editor:** `pentaho/design-tools/metadata-editor/`
- • **Aggregation Designer:** `pentaho/design-tools/aggregation-designer/`
- • **Dashboard Designer:** `pentaho/server/biserver-ee/pentaho-solutions/system/dashboards/`
- • **Analyzer:** `pentaho/server/biserver-ee/pentaho-solutions/system/analyzer/`
- • **Interactive Reporting:** `pentaho/server/biserver-ee/pentaho-solutions/system/pentaho-interactive-reporting/`
- • **License Installer:** `pentaho/license-installer/`
- • **Pentaho Mobile:** `pentaho/server/biserver-ee/pentaho-solutions/system/pentaho-mobile-plugin/`

Location of logs:

- • **BA Server Logs**: `pentaho/server/biserver-ee/logs/`
- • **Tomcat Logs for BA Server**: `pentaho/server/biserver-ee/tomcat/logs/`
- • **DI Server Logs**: `pentaho/server/data-integration-server/logs/`
- • **Tomcat Logs for DI Server**: `pentaho/server/data-integration-server/tomcat/logs/`

Location of JDBC drivers:

NOTE:

For Mac OSX, you will have to copy the JDBC .jar into the location listed for Report Designer.

- • **BA Server**: `pentaho/server/biserver-ee/tomcat/lib/`
- • **Report Designer**: `pentaho/design-tools/report-designer/lib/jdbc/`
- • **Schema Workbench**: `pentaho/design-tools/schema-workbench/drivers/`
- • **Aggregation Designer**: `pentaho/design-tools/aggregation-designer/drivers/`
- • **Metadata Editor**: `pentaho/design-tools/metadata-editor/libext/JDBC/`
- • **DI Server**: `pentaho/server/data-integration-server/tomcat/lib`
- • **Spoon**: `pentaho/design-tools/data-integration/lib/`

Default Port Numbers (your port numbers might differ if these ports are already used for other programs):

- • **5432**: PostgreSQL Server
- • **8080**: BA Server Tomcat Web Server Startup Port
- • **8012**: BA Server Shutdown Port
- • **9080**: DI Server Port
- • **9001**: HSQL Server Port
- • **9092**: Embedded H2 Database
- • **50000 or 50006**: Monet Database Port

Uninstall Pentaho

If you need to uninstall Pentaho, complete these steps.

1. Navigate to the `pentaho` directory, and run the `uninstall` file.
2. The Uninstall Wizard is launched.
3. When prompted, indicate whether you want to delete the data files.
4. When prompted at the end of the process, restart your computer.

Next Steps

Congratulations! You have finished installing the Pentaho BA Suite. Now, you are ready to do these things.

- Read [Set Up BA Server and Tools](#) to learn how to start the server and design tools, set up licenses, configure security, and more.

- Read [Set up DI Server and Tools](#) to learn how to start the server and design tools, and to set up licenses.