Installation Guide

Appeon PowerBuilder® 2019
FOR WINDOWS

Contents

1 Planning Your Installation

Before you install or upgrade, prepare your environment.

- Identify the components and options to install or upgrade.

- Make sure your system meets installation requirements.

- Identify software required.

In the **PowerBuilder 2019 Universal Edition**, you can choose to install PowerServer as well. If you decide to install PowerServer, please also carefully read the [Installation Guide for PowerServer (PB Edition)](#). PowerBuilder and PowerServer are described as separate products from the documentation perspective, which means, there are two sets of documents available in the PowerBuilder Universal Edition: one for PowerBuilder (**Windows Start | Appeon | PowerBuilder 2019 | PowerBuilder 2019 Help**), and the other for PowerServer (**Windows Start | Appeon | PowerBuilder 2019 | PowerServer (PB Edition) | Help 2019**).

In the **PowerBuilder 2019 Universal Edition** or **Cloud Edition**, you can choose to install SnapDevelop (PB Edition) as well. If you decide to install SnapDevelop (PB Edition), please also carefully read the SnapDevelop installation guide.

1.1 Installation Package Contents

The PowerBuilder x86 32-bit installation package contains the installer for PowerBuilder 2019, and a support folder that contains files that can be used to rebuild the PowerBuilder extensions for Web services clients and other supporting files.

1.2 System Requirements

Make sure your system meets all requirements before you install PowerBuilder. See the release bulletin for the most current information about required service packs.

> **Note**
>
> If you want to install PowerBuilder from the Appeon Installer (an online installation program), make sure your system also meets the requirements listed in [Preparing your environment](#).

Table 1.1: System Requirements for PowerBuilder

Product	Computer	Minimum memory	Hard disk space	Operating system
This table provides system requirements for PowerBuilder. The disk space requirements provided are approximate. The actual disk space you need for each product might vary depending on hard disk size, partitioning, and the features you choose to install. Additional temporary space is required on the hard disk during installation for uncompressing install files.				
PowerBuilder	Intel Core i3 or higher	1 GB	2 GB for all components	**Supported by PowerBuilder IDE and runtime:**

Product	Computer	Minimum memory	Hard disk space	Operating system
				Windows 7 32- or 64-bit with SP1 KB3033929
				Windows 8.1 32- or 64-bit
				Windows 10 32- or 64-bit
				Supported by PowerBuilder runtime only:
				Windows Server 2008 32- or 64-bit with SP2
				Windows Server 2012 R2
				Windows Server 2016

1.3 Software Requirements

Identify the software requirements for PowerBuilder.

Note

In the **PowerBuilder 2019 Universal Edition**, you can also install PowerServer; please carefully read the software requirements for PowerServer in the Installation Requirements section in the *Installation Guide for PowerServer (PB Edition)*.

In the **PowerBuilder 2019 Universal Edition** or **Cloud Edition**, you can also install SnapDevelop (PB Edition); please carefully read the software requirements for SnapDevelop in the SnapDevelop documentation site.

Table 1.2: Required Software for PowerBuilder features

Feature	Required Software
The following table lists the software required for PowerBuilder features.	
Install any required framework packages and SDKs before you install PowerBuilder. Microsoft developer software is available from the Microsoft Download Center.	
Read this table carefully to determine whether you need to install any software before you run the installer, and whether you need to install SQL Anywhere before installing PowerBuilder. If you select a feature with a prerequisite that is not yet installed, the installer displays a warning message.	
.NET Web services local host deployment	**Microsoft Internet Information Services (IIS) 7.5 or higher.**
	Note
	On the development computer, IIS is not required for PowerBuilder applications or components unless the same

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Feature	Required Software
	computer is used as server for smart client applications, or for Web service components. IIS is also not required on end users' computers.
	For information about configuring IIS, see Deploying Components as .NET Assemblies or Web Services (Obsolete).
PowerBuilder tutorials, demo databases, and sample applications	**SQL Anywhere 12 thru 17.** SQL Anywhere can be downloaded from the SAP Web site. If the installer does not detect SQL Anywhere 12, 16 or 17 on your computer, it displays a warning. If you choose to continue, the installer does not install the tutorials or register the demo databases. To use these features later, install SQL Anywhere first, then reinstall PowerBuilder.
MobiLink™ synchronization	**Adaptive Server® Anywhere 9.0.2 to SQL Anywhere 17.** MobiLink is a component of Adaptive Server Anywhere and SQL Anywhere. In the SQL Anywhere setup program, select Synchronization and Messaging, and then MobiLink.
EJB client development	**J2EE-compliant application server such as BEA WebLogic 8.1 and later, or IBM WebSphere 6.x.** **Oracle JDK.** The Oracle JDK is installed in the *%Appeon%\Shared\PowerBuilder\Jdk1.6.0_24* directory when you install PowerBuilder.
Web service clients and Web Service DataWindow in PowerBuilder	**Microsoft .NET Framework Version 4.0 or later.**
Saving DataWindows as PDF using the Ghostscript distiller and PostScript printing	**Ghostscript and PostScript printer driver.** See Section 4.2, "Installing Ghostscript" and Section 4.3, "Installing PostScript Drivers".
Saving DataWindows as PDF using XSL Formatting Objects (FO) and Java printing	**Oracle JDK and Apache FO processor.** The Oracle JDK is installed in the *%Appeon%\Shared\PowerBuilder\Jdk1.6.0_24* directory when you install PowerBuilder. The Apache FO processor is installed in the *%Appeon%\Shared\PowerBuilder\fop-0.20.5* directory when you install PowerBuilder.
Data access using the ADO.NET interface	**Microsoft .NET Framework Version 4.0 or later Redistributable Package.**
JDBC connectivity	**Oracle JDK.** The Oracle JDK is installed in the *%Appeon%\Shared\PowerBuilder\Jdk1.6.0_24* directory when you install PowerBuilder.

Feature	Required Software
Runtime Packager	**Microsoft Windows Installer.** Microsoft Windows Installer is installed by default on all supported Windows platforms.
C# features (such as Import C# Solution, Generate C# Models, C# Core Web API, C# Assembly etc.)	**Universal C Runtime (CRT).** Universal CRT is installed by default on Windows 10. On the other supported Windows platform, you can follow the on-screen instructions to download and install the package when you install PowerBuilder. See Downloading and Installing UCRT. **Microsoft .NET Framework 4.6.1 SDK** **Microsoft .NET Core SDK 2.1.6** **TypeScript SDK 3.1** The above three components will be automatically installed if the installer detects that they are not installed on the current machine. If your current machine runs on Windows 7, make sure that Service Pack 1 (KB976932) has already been installed; if your current machine runs on Windows 8.1, make sure that KB 2919355 has already been installed.

2 Preinstallation Tasks

This topic describes tasks to perform before installation.

- Log in as an administrator, as you must have administrator privileges to run the installer.

- Read the release bulletins for the latest information on the products that you are installing. Release bulletin is available on the Appeon web site at https://www.appeon.com/support/documents/appeon_online_help/pb2019/release_bulletin_for_pb.

- Make sure the drive on which you install PowerBuilder is not compressed. If compression is enabled on the installation drive, the installer fails.

- Make sure you have a TEMP environment variable that points to an existing directory location with at least 300MB free space. The installer writes files to this directory during the installation and frees the space after the installation is complete.

- Close any open applications.

- Back up any files created with earlier versions of Appeon tools. Make sure that any PBLs you plan to migrate have been regenerated without error in your current version of PowerBuilder before you back them up.

  In addition to backing up your PBLs, back up any files that contain information you do not want to lose, such as database files, INI files, preference information, and modified database definition files. For more information about backing up and migrating existing applications, see Chapter 4, *Postinstallation Tasks*.

- Read Section 1.3, "Software Requirements" to determine whether you need to install any software before installing PowerBuilder 2019.

3 Installation Process

3.1 Online Installation

Starting from 2019, a new and more efficient way to install Appeon products is introduced -- Appeon Installer, which is an online installer with a self-extracting download that leads you through the installation process. The machine will be required to connect with Internet during the installation process. For those who prefer to use the offline installer, it can be downloaded from our product download site or from the Appeon Installer (by selecting **Download Offline Installer** in the Appeon Installer).

3.1.1 Preparing your environment

Appeon Installer relies on the following operating system and software to run:

- Windows 10, 8.1, or 7 SP1 KB3033929

- Universal C Runtime (CRT)

  Universal CRT is installed by default on Windows 10, but not on Windows 7 and 8.1. You can follow the instructions in [Downloading and Installing UCRT](#) to install UCRT. UCRT must be installed before you can install Microsoft .NET Framework 4.6.1 SDK.

- Microsoft .NET Framework 4.6.1 SDK or later

  It can be downloaded from https://dotnet.microsoft.com/download/archives.

3.1.2 Downloading the Appeon Installer

Download the Appeon Installer executable from the **Downloads** page on the Appeon User Center (login is required).

3.1.3 Starting the Appeon Installer

The Appeon Installer executable (AppeonInstaller_bootstrapper.exe) should be available in your download directory after it is downloaded.

1. Double click **AppeonInstaller_bootstrapper.exe** to start the Appeon Installer (you must have administrator privileges to run the installer).

2. Select to agree to the license terms and click **Continue**.

3. Click **Install** under PowerBuilder 2019 GA and select the edition you want to install.

   For those who prefer to use the traditional offline installer, s/he can select **Download Offline Installer** and then select the edition s/he wants to download. This will download the offline installer.

   For those who want to upgrade the product, s/he can click **Update** and then select the EBF or MR package for the product s/he wants to upgrade.

4. Based on the edition you selected, Appeon Installer shows the installed product(s) as well as the available product(s) in the **Products** tab. Select the product(s) you want to install from the **Available** list.

Appeon Installer will also check if the prerequisites have been installed; if not installed, a warning message (and installation instructions if any) will be displayed on the right of page.

5. Based on the product(s) you selected, the available components will be shown in the **Components** tab. Select the components you want to install.

   The required components or prerequisites are automatically selected and cannot be de-selected. The installed components/prerequisites will still be listed but cannot be selected (the selection box is greyed out)

6. In the **Locations** tab, use the default download location and installation location or specify where you want the product to be downloaded and installed.

7. In the **Additional Options** tab, specify a SQL Anywhere engine for running the demo and tutorials.

8. Click **Install** to begin the installation.

9. When installation is complete, read the status message carefully to make sure installation is successful, and then click **Restart Now** to restart the machine immediately or click **Restart Later** to manually restart the machine later.

3.2 Offline Installation

The offline installer can be downloaded from our product download site or from the Appeon Installer (by selecting **Download Offline Installer** in the Appeon Installer). It can be used to install the product on the machine where Internet access is not available.

3.2.1 Starting the Offline Installer

Follow these steps to launch the downloaded offline installer to begin the PowerBuilder installation.

1. Exit any programs that are running.

2. Run the *Autorun.exe* file (in Universal edition) or the *setup.exe* file (in Standard or Cloud edition) in the offline installer (you must have administrator privileges to run the installer).

3. Click **Install**.

   The installer collects basic and licensing information before launching the individual installers for PowerBuilder, PowerServer (PB Edition), and/or SnapDevelop (PB Edition).

3.2.2 Selecting Products and Providing Basic Information

The installer collects basic information before beginning the PowerBuilder installation.

Note

Click **Cancel** to interrupt the installation at any point during this procedure. You can then either exit or resume the installer. If you choose to exit, you can stop the current installation and continue with your other selections, or end the installer completely.

To select the PowerBuilder product and provide basic information before installing
PowerBuilder:

1. On the start page of the installer, select **Install**.

2. On the Welcome page, click **Next.**

   If you have not installed prerequisites for PowerBuilder, the next page in the wizard
   informs you what needs to be installed. Click **Cancel** to exit the wizard, or **Next** to
   continue without installing the prerequisites.

3. On the License Agreement page, read the license agreement, select the **I accept the terms
   of the license agreement** radio button, and click **Next** to continue.

4. On the Customer Information page, enter your name and your company's name.

5. On the Select Products page, select **PowerBuilder IDE** and click **Next** to continue.

   Note

   If you are installing the **PowerBuilder 2019 Universal Edition**, you can also select
   to install **PowerServer (PB Edition)**, **PowerServer Toolkit**, **PowerServer Help**, and
   PowerServer Web Component. For installation instructions, refer to the Installing
   PowerServer 2019 section in the *Installation Guide for PowerServer (PB Edition)*.

   If you are installing the **PowerBuilder 2019 Universal Edition** or **Cloud Edition**,
   you can also select to install **SnapDevelop (PB Edition)**. For installation instructions,
   refer to the SnapDevelop installation guide.

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6. On the Choose Destination Location page, click **Next** to accept the destination path
   shown, or click **Browse** and select a different path, click **OK**, and click **Next**.

7. On the Choose Destination Location For Shared Files page, click **Next** to accept the
   destination path shown, or click **Browse** and select a different path, click **OK**, and click
   Next. Use the same folder for shared files for all products in this set.

8. On the Specify the SQL Anywhere Engine page, select **Yes** and then specify the location
   of a SQL Anywhere engine that will be used to run the demo database (PB demo DB) or
   select **No** if no SQL Anywhere engine, and click **Next**.

9. Complete the installer for the product you selected.

3.2.3 Downloading and Installing UCRT

If you are installing **Universal Edition** or **Cloud Edition**, and if you select to install
PowerBuilder as well as SnapDevelop (PB Edition) so as to empower PowerBuilder IDE
with the following C# features: Import C# Solution, Generate C# Models, C# Core Web API,
C# Assembly etc., you must have Universal C Runtime (CRT) installed on your development
machine.

In Windows 10, UCRT is installed by default; in the other Windows platforms, if
PowerBuilder installer detects that UCRT is not installed, it will provide the package list

according to your platform, and you must download and install the package in the order listed.

You may check the required package in the following table.

Note that you must install the package one by one in the order listed.

Table 3.1:

Windows Platform	Package List	Download URL
Windows 8.1 32-bit	1. Windows8.1-KB2919442-x86.msu 2. clearcompressionflag.exe 3. Windows8.1-KB2919355-x86.msu 4. Windows8.1-KB2999226-x86.msu	1. https://www.microsoft.com/en-us/download/details.aspx?id=42135 2. https://www.microsoft.com/en-us/download/details.aspx?id=42327 3. https://www.microsoft.com/en-us/download/details.aspx?id=42327 4. https://www.microsoft.com/en-us/download/details.aspx?id=48234
Windows 8.1 64-bit	1. Windows8.1-KB2919442-x64.msu 2. clearcompressionflag.exe 3. Windows8.1-KB2919355-x64.msu 4. Windows8.1-KB2999226-x64.msu	1. https://www.microsoft.com/en-us/download/details.aspx?id=42162 2. https://www.microsoft.com/en-us/download/details.aspx?id=42335 3. https://www.microsoft.com/en-us/download/details.aspx?id=42335 4. https://www.microsoft.com/en-us/download/details.aspx?id=48234
Windows 7 SP1 32-bit	1. Windows6.1-KB2533623-x86.msu 2. Windows6.1-KB2999226-x86.msu	1. https://www.microsoft.com/en-us/download/details.aspx?id=26767 2. https://www.microsoft.com/en-us/download/details.aspx?id=48234
Windows 7 SP1 64-bit	1. Windows6.1-KB2533623-x64.msu 2. Windows6.1-KB2999226-x64.msu	1. https://www.microsoft.com/en-us/download/details.aspx?id=26767 2. https://www.microsoft.com/en-us/download/details.aspx?id=48234

3.2.4 Selecting PowerBuilder components

Continue with the installer to select which PowerBuilder components to install.

1. On the Select Components page, unselect any components you do not want to install, and click **Next**.

   You cannot unselect the **PowerBuilder Base Components** option.

   Select or unselect the check boxes of individual components, or click **Select All** or **Unselect All** to change all the check boxes.

2. On the Select Program Folder page, select the program folder to which program icons will be added, or specify a new one; then click **Next**.

3. On the Start Copying Files page, review your settings, then click **Next** to begin installing files, or **Back** to change your selections.

4. On the InstallShield Wizard Complete page, click **Finish** to return to the installer.

After installing, make sure users have write permission for their user profile directories (for example, *Public Documents* in Windows 7), and for *HKEY_CURRENT_USER* in the Windows registry.

3.2.4.1 PowerBuilder Components

The installer lets you choose which PowerBuilder components to install.

Table 3.2: Components

Component	Description
PowerBuilder Base Components	Installs the ODBC driver, ORCA Software Development Kit (SDK), the PowerBuilder Document Object Model extension, the ability to save DataWindow objects as PDF using the distill or XSL-FO methods, support for rich text, and Oracle JDK. You must install the base components: you cannot unselect this option.
Native Database Interfaces	Interfaces that enable you to interact with server databases natively. Expand the tree view to select interfaces to install.
ADO.NET Driver	Interface to connect to databases using an ADO.NET data provider.
OLE DB Driver	Interface to connect to databases using an OLE DB data provider.
JDBC Driver	Interface to connect to databases using JDBC.
SCC Interface	Interface for connecting to any source code control system that supports the Microsoft SCC interface.
PB Native Interface	An SDK for developing extensions to PowerBuilder in C++. Optional wizards are installed in Visual Studio 2005 and Visual Studio .NET 2002 and 2003 if they are available on your system.
EJB Client	The EJB Client PBNI extension, which enables you to develop clients for EJBs running on J2EE-compliant servers.
Web Services	The extensions and other files that enable you to create clients for Web services using the .NET or EasySoap Web service engines.
Tutorial	Source files for the tutorial in the Getting Started book. If you want to do the PowerBuilder tutorial or use the code examples, install SQL Anywhere if it is not already installed on your computer. When you install PowerBuilder, the installer creates an ODBC data source for the demo database. If SQL Anywhere is not installed on your system when you install PowerBuilder, the installer does not install the demo database, code examples, or tutorial files.
Demo Database	A SQL Anywhere database used in the tutorial, the Code Examples sample application, and examples in the documentation.

Component	Description
Code Examples	The Code Examples application, which demonstrates many coding techniques.
Translation Toolkit	Tools to help you translate applications into other languages.
PowerBuilder Resource Monitor	A utility to help determine whether there are sufficient USER/GDI resources available in the operating system to open a painter.
PowerBuilder Runtime Packager	A tool that packages files required for deployment into an *MSI* file.
Help Files	Compiled CHM help file for PowerBuilder.

3.2.5 Completing the Offline Installer

After all the products you selected have been installed, you return to the installer.

To complete the installer:

1. On the InstallShield Wizard Complete page, click **Finish** to complete the installation.

   If you do not unselect the check boxes on this page, the installer displays the readme file.

2. On the System Reboot Required page, click **Finish** to reboot your computer, or choose to reboot your computer later.

   After installing PowerBuilder, always shut down and restart your computer before using it.

PowerBuilder generates a log file *PBLog_2019.txt* in *%*Windows*%* \System32\AppeonInstallLog (in 32-bit OS) or *%*Windows*%*\SysWOW64\AppeonInstallLog (in 64-bit OS).

3.2.5.1 What the Installer Does

The installer installs files and updates the Windows registry.

The installer:

- Installs Appeon files in an *Appeon* directory

- Installs writable Appeon files to directories that are shared by all users

- Installs system files in the Windows operating system path

- Creates a program group and icons for each product installed

- Creates uninstall files to identify what needs to be removed if you uninstall a product

- Makes changes to the Windows registry

- Creates or updates the INI file *PB.INI* (for PowerBuilder)

3.2.5.1.1 Writable files shared by all users

As part of its Federal Desktop Core Configuration (FDCC) compliance configuration, PowerBuilder installs writable files that are shared by all users. On Windows 7/8.1/10, it is *C:\Users\Public\Documents\Appeon\PowerBuilder 19.0*.

The shared files include:

- The PB Demo databases (*pbdemo2019.db* and *pbdemo2019u.db*)

- All Code Examples directories and files

- The PowerBuilder compiled HTML Help files

- The Translation Toolkit directories and files

3.2.5.1.2 Files reserved for individual users

Other writable files are installed in the default *Program Files\Appeon* subdirectories, but are copied to different locations the first time a user starts PowerBuilder. In this way, each user gets a private copy of these files.

The following table lists the files that are copied and updated in the directories of users. In the table header, `UserName` is a variable that can be replaced by the user name of a PowerBuilder user. For Windows 7, the `UserName` directory is under the *C:\Users* directory.

Table 3.3:

In *C:\...\UserName* subdirectory	Files copied or updated
On Windows 2008, Windows 7/8.1/10: • *AppData\Local\Appeon\PowerBuilder 19.0*	• Initialization files (*PB.INI*, *PBLAB190.ini*, *PBODB190.ini*)
On Windows 2008, Windows 7/8.1/10: • *Documents\Appeon\PowerBuilder 19.0\Tutorial*	• Files for the PowerBuilder Getting Started tutorial

The locations of writable PowerBuilder files reserved for individual use are set in HKEY_CURRENT_USER registry entries for each PowerBuilder user. For example, the location of the *PB.INI* file that is copied to each user's local application data directory is registered under the registry key *HKEY_CURRENT_USER\Software\Sybase\PowerBuilder \19.0\InitPath.*

3.2.5.1.3 Registry changes

The installer makes the following changes to the Windows registry:

- Creates or updates the key in *HKEY_CURRENT_USER\Software* and *HKEY_LOCAL_MACHINE\Software*

- Updates system and user paths in *HKEY_CURRENT_USER\Environment*

- Adds the appropriate paths to the registry path *HKEY_LOCAL_MACHINE\Software \Microsoft\Windows\CurrentVersion\App Paths*

- Adds the paths of compiled HTMLHelp files to the registry path *HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\HTMLHelp*

3.2.6 Installing in Silent (Unattended) Mode

Install PowerBuilder from a Command Prompt window or script, without displaying messages or windows during the installation process.

Prerequisites

Complete installation planning.

1. Accept the license agreement.

2. Specify the SQL Anywhere engine.

3. Configure the **silentinstall.bat** file.

4. Run **silentinstall.bat** to install PowerBuilder.

3.2.6.1 Accepting the License Agreement

Accept the Appeon license agreement before running the silent installation.

Edit the *silentinstall.bat* file located in the installation package and change the value of set AgreeToAppeonLicense from false to true.

```
set AgreeToAppeonLicense=false
```

3.2.6.2 Specifying the SQL Anywhere Engine

Specify the location of a SQL Anywhere engine before running the silent installation.

For the Universal Edition, edit the *pbsetup.iss* file located in the *PowerBuilder* sub-folder of the installation package and set the value of szSqlAnywhereDir.

For the Standard or Cloud Edition, edit the *pbsetup.iss* file located in the installation package and set the value of szSqlAnywhereDir.

```
szSqlAnywhereDir=C:\Program Files\SQL Anywhere 16\Bin64
```

3.2.6.3 Silent Install Commands

This topic describes the *silentinstall* command syntax for PowerBuilder.

To run the silent installation from a Windows Command Prompt, run this command in the installation package:

```
silentinstall.bat
[ "opt=product" "dir=directoryName" "shr=sharedDirectoryName" "log=logFileName" ]
[ { help | /? } ]
```

The parameters can be listed in any order and are not case sensitive. Parameter values are also not case sensitive.

Table 3.4:

Silent installation parameter	Description
opt	Specifies the name of the products to install.

Silent installation parameter	Description
	This parameter needs not to be specified in the PowerBuilder Standard Edition because it automatically takes PowerBuilder as the value. For the PowerBuilder Universal Edition, values are: • **All** Installs PowerBuilder, PowerServer (PB Edition), PowerServer Toolkit, PowerServer Help, PowerServer Web Component, and SnapDevelop (PB Edition). • **PB** Installs only PowerBuilder • **PSM** Installs only PowerServer (PB Edition) • **PST** Installs only PowerServer Toolkit • **PSH** Installs only PowerServer Help • **PSWC** Installs only PowerServer Web Component • **SDEV** Installs only SnapDevelop (PB Edition) Multiple products can be separated by a slash ("/"), for example, opt=PB/PSM/PST.
`dir`	Indicates the main installation directory. If you omit this parameter, silentinstall installs the product to the *sysDriver\Program Files\Appeon\productName* directory, where `sysDriver` is the main computer drive, and `productName` is PowerBuilder 2019.
`shr`	Indicates the shared directory for PowerBuilder. If you omit this parameter, this directory installs to *sysDriver\Program Files\Appeon\Shared*.
`log`	Names the log file for the installation. If you omit this parameter, the log file is written to the system *Temp* directory with the file name, *silentinstall.log*.
`help` or `/?`	Displays command syntax and parameters instead of running the command.

The following example uses all parameters for the silent installation command:

```
silentinstall.bat "opt=pb" "dir=D:\appeon\pb190" "shr=D:\appeon\shared" "log=D:\appeon\install.log"
```

When installing PowerBuilder, the silent installation writes warnings to its log file if the computer does not have the correct version of any of these items:

• SQL Anywhere

• Microsoft .NET Framework

- Microsoft .NET Framework SDK

- Microsoft IIS

4 Postinstallation Tasks

Before using PowerBuilder after installation, you might need to perform some migration or configuration tasks.

- Migrating applications to the current version of PowerBuilder 2019

  If you have applications and PowerBuilder library files (PBLs) that you created in an earlier version of PowerBuilder, you can migrate them to version 2019. Before you do, make sure your PBLs can be successfully regenerated under the earlier version, and make backup copies.

  PowerBuilder 2019 are Unicode enabled, and some changes are made to your code when you migrate an application from PowerBuilder 9.x or earlier. For details, see Section 5.9, "Migrating targets" in *Users Guide*.

  Also read the migration issues section in the PowerBuilder release bulletin and the Migrating PowerBuilder Applications technical document.

- Setting up your DBMS

  Your DBMS might require additional setup procedures for use with PowerBuilder. For details, see Connecting to Your Database.

- Upgrading databases for jConnect for JDBC

  Might be required to prepare SQL Anywhere or Adaptive Server® Enterprise databases for jConnect 5.5.

- Installing Ghostscript

  Required if you want to use the distill method for saving DataWindows as PDF.

- Installing PostScript drivers

  Required if you want to use the distill method for saving DataWindows as PDF.

4.1 Upgrading Databases for jConnect for JDBC

Prepare SQL Anywhere or Adaptive Server Enterprise databases for jConnect by installing additional tables and stored procedures.

jConnect provides these scripts to install the required stored procedures and tables. Refer to the installation guide for jConnect for detailed information.

4.2 Installing Ghostscript

Install Ghostscript if you plan to use the distill method for saving DataWindows as PDF.

To install Ghostscript:

1. Into a temporary directory on your computer, download the self-extracting executable file for the version of Ghostscript you want from one of the sites listed on the Ghostscript Web site at http://ghostscript.com/.

2. Run the executable file to install Ghostscript on your system.

The default installation directory is *C:\Program Files\gs*.

4.3 Installing PostScript Drivers

This topic describes how to install and use PostScript drivers for saving DataWindows as PDF.

Using the distill method for saving DataWindows as PDF requires a PostScript printer or printer driver installed on your system. Use the Windows Add Printer wizard to install a PostScript printer. If a PostScript printer was never installed on your computer or the required Microsoft *pscript5.dll* file is not available, the wizard might prompt you to insert a Windows operating system installation CD.

- To add a PostScript printer to your system:

    1. Select **Settings Printers** from the Windows **Start** menu.

    2. Double-click **Add Printer**.

    3. Specify a local printer.

    4. Specify **FILE:** as the port.

    5. Select a manufacturer (for example, HP) and a printer with the designation PS (such as HP LaserJet Series 4050 PS).

    Note

    Some printers do not handle images correctly. For example, the HP Color LaserJet PS does not display images in the PDF output, and the HP LaserJet 4/4M Plus PS 600 displays color images using greyscale.

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    6. Accept the default name or enter a shorter name for the printer.

    7. Complete the wizard.

- To use the print driver in the DataWindow painter:

    1. Select the **Distill Custom PostScript** check box on the Data Export property page for PDF export.

    2. On the Print Specifications page, specify the printer name (added to the Printer Settings dialog in the previous procedure).

- To use the print driver in a script, set the Distill.CustomPostScript and Printer properties.

    For example:

    ```
    dw_1.Object.DataWindow.Export.PDF.Distill.CustomPostScript=1
    dw_1.Object.DataWindow.Printer="HP LaserJet Series 4050 PS"
    ```

5 Activating PowerBuilder

Starting from PowerBuilder 2017, the developer is required to log in and activate PowerBuilder first before using it. If you do not have a valid account to log in, please contact your license administrator to create an account for you. And depending on whether the machine where PowerBuilder is installed has Internet access or not, the account should be assigned with an online license or offline license by your license administrator.

5.1 Online activation

Online activation requires you to input an account which is assigned with a valid online license by your license administrator. And Internet access is required during the activation process, because the online license will be activated by the Appeon license server.

> **Note**
>
> This section talks about activating **PowerBuilder** only, if you want to activate **PowerServer (PB Edition)**, please follow the [Activating PowerServer (PB Edition)](#) section in the Appeon License User Guide.

5.1.1 Activating with an online license

To activate PowerBuilder using an account assigned with an online license, follow these steps:

Step 1 -- Launch PowerBuilder IDE. When you launch PowerBuilder IDE for the first time after installation, the **Log in to PowerBuilder** window displays automatically.

Step 2 -- Click **Log in** in the **Log in to PowerBuilder** window.

Step 3 -- Input the user name and password for your account, and then click **Log In**.

Make sure the current machine can connect to Internet, as your account will be validated and the binding license will be activated by the Appeon license server immediately. Once validation and activation is successful, you will be logged in to PowerBuilder IDE.

To view the account and license information, click your account name on the right top of the PowerBuilder IDE and then click **Account Management** in the popup menu.

5.1.2 Refreshing an online license

When an online license is renewed or upgraded by your license administrator, you will need to refresh the online license information in the PowerBuilder IDE accordingly.

You refresh an online license by clicking the **Refresh license** link in the account information window (opened by selecting the **Account Management** popup menu). Internet access is required.

5.1.3 Log out to de-activate

Once you log in to PowerBuilder successfully, which also means the online license is activated successfully, you should stay login unless you absolutely need to log out to de-activate the license, for example, to move PowerBuilder to a different machine.

To de-activate an online license, you log out of PowerBuilder by clicking the **Sign out** link in the account information window (opened by selecting the **Account Management** popup menu). Internet access is required.

Once logout is successful, you will be shown with the **Log in to PowerBuilder** window again.

When you uninstall PowerBuilder with Internet connection, you will be automatically logged out PowerBuilder when the uninstall process starts; when you uninstall PowerBuilder without Internet connection, you will be prompted to contact your license administrator to de-activate your license on the website and then the uninstall process starts.

5.2 Offline activation

Offline license is created to meet the needs where the machine with PowerBuilder installed does not have Internet connection.

An account assigned with an offline license can either be used to log in to PowerBuilder with or without Internet connection. When an account with an offline license is logged in with Internet connection, the process is as easy as the account with an online license.

Please notice that cloud-based machines or virtual machines where PowerBuilder **is installed cannot be activated using an offline license; only online license can be used.**

Note

This section talks about activating **PowerBuilder** only, if you want to activate **PowerServer (PB Edition)**, please follow the Activating PowerServer (PB Edition) section in the Appeon License User Guide.

5.2.1 Activating with an offline license

To activate an offline license, follow these steps:

Step 1 -- In the **Log in to PowerBuilder** window, click **Activate offline license manually**.

Step 2 -- Input the user name and password for your account, and select whether to activate the license with or without Internet connection.

• If **Activation with Internet connection** is selected, make sure your current machine can access Internet, and the offline license will be activated by the Appeon license server immediately after you click **Activate**.

• If **Activation without Internet connection** is selected, you will need to take the following steps to activate the offline license:

1. Click **Generate Client Request** to create the client request (a text string), and then click **Copy Client Request** to copy the string to the clipboard.

2. Transfer the string to a machine with Internet connection, and visit the **License Activation** web page by this URL: https://www.appeon.com/license/get/activation-code?type=activation. On the web page, paste the string to the text box and then click **Submit**. A server response (another text string) is generated.

3. Transfer the server response string back to PowerBuilder, and paste the string to the **Server Response** text box, and then click **Activate**.

4. Click **OK** when the activation completes.

Once the offline license is activated successfully, you will be logged in to PowerBuilder IDE.

To view the corresponding license information, click the menu **Help** | **Offline License Management | License Info** in the PowerBuilder IDE.

5.2.2 Renewing an offline license

When an offline license is renewed by your license administrator, you will need to renew the offline license information in the PowerBuilder IDE accordingly.

To renew an offline license in PowerBuilder IDE, follow these steps:

Step 1 -- In the PowerBuilder IDE, select **Help** | **Offline License Management | Renew**.

Step 2 -- Select whether to renew the offline license with or without Internet connection.

- If **Renew with Internet connection** is selected, make sure your current machine can access Internet, and the offline license will be renewed by the Appeon license server immediately after you click **Renew**.

- If **Renew without Internet connection** is selected, you will need to take the following steps to renew the offline license:

  1. Click **Generate Client Request** to generate a request string.

  2. Click **Copy Client Request** to get the request string, and transfer the string to a machine with Internet connection.

  3. On the machine with Internet connection, visit the **License Renewal** web page by this URL: https://www.appeon.com/license/get/activation-code?type=renewal. On the web page, paste the string to the text box and then click **Submit**. A response string will be generated if the license is renewed successfully by the Appeon license server.

  4. Transfer the response string back to the PowerBuilder IDE, and paste the string to the **Server Response** text box, and then click **Renew**.

  5. Click **OK** when the renew completes.

The renewal license will take effect the day after the current license expires.

5.2.3 Upgrading an offline license

When an offline license is upgraded by your license administrator, for example, from a Standard Edition to a Universal Edition, you will need to upgrade the offline license information in the PowerBuilder IDE accordingly.

To upgrade an offline license in PowerBuilder IDE, follow these steps:

Step 1 -- In the PowerBuilder IDE, select **Help** | **Offline License Management | Upgrade**.

Step 2 -- Select whether to upgrade the offline license with or without Internet connection.

- If **Upgrade with Internet connection** is selected, make sure your current machine can access Internet, and the offline license will be upgraded by the Appeon license server immediately after you click **Upgrade**.

- If **Upgrade without Internet connection** is selected, you will need to take the following steps to upgrade the offline license:

  1. Click **Generate Client Request** to generate a request string.

  2. Click **Copy Client Request** to get the request string, and transfer the string to a machine with Internet connection.

  3. On the machine with Internet connection, visit the **License Upgrade** web page by this URL: https://www.appeon.com/license/get/activation-code?type=upgrade. On the web page, paste the string to the text box and then click **Submit**. A response string will be generated if the license is upgraded successfully by the Appeon license server.

  4. Transfer the response string back to the PowerBuilder IDE, and paste the string to the **Server Response** text box, and then click **Upgrade**.

  5. Click **OK** when the upgrade completes.

5.2.4 De-activating an offline license

Once you log in to PowerBuilder successfully, which also means the offline license is activated successfully, you should stay login unless you absolutely need to de-activate the license, for example, to move PowerBuilder to a different machine.

To de-activate an offline license, follow these steps:

Step 1 -- In the PowerBuilder IDE, select **Help** | **Offline License Management** | **Deactivate**.

Step 2 -- Depending on whether the machine has Internet connection, select to deactivate the license with or without Internet connection.

- If **Deactivation with Internet connection** is selected, make sure your current machine can access Internet, and the offline license will be deactivated by the Appeon license server immediately after you click **Deactivate** and confirm the deactivation in the dialog box.

- If **Deactivation without Internet connection** is selected, you will need to take the following steps to deactivate the offline license:

  1. Click **Deactivate / Copy Deactivation Request** to generate and copy the request string. Although the offline license is deactivated from PowerBuilder immediately after you click **Deactivate**, you should not stop here, because you should also deactivate the license from the Appeon license server to release the license for the subsequent use.

     The string is by default saved to the Users\<username>\AppData\Local\Temp \PBLicenseDeactivate\DeactivateCode.txt file.

  2. Transfer the string to a machine with Internet connection.

3. On the machine with Internet connection, visit the **License Deactivation** web page by this URL: https://www.appeon.com/license/get/activation-code?type=deactivation. On the web page, paste the copied string to the text box and then click **Submit**. You will be prompted if the license is de-activated successfully from the Appeon license server.

6 Uninstalling PowerBuilder

This topic describes how to uninstall PowerBuilder.

When you start to uninstall PowerBuilder, you will be asked to deal with the license first:

- If you are using an online license, when you uninstall PowerBuilder with Internet connection, you will be automatically logged out PowerBuilder when the uninstall process starts; when you uninstall PowerBuilder without Internet connection, you will be prompted to contact your license administrator to de-activate your license on the website and then the uninstall process starts.

- If you are using an offline license, you can uninstall PowerBuilder without deactivating the license (if you want to continue using the license on this computer), or deactivate the license and uninstall PowerBuilder (if you want to move the license to a different computer).

For how to log out PowerBuilder or deactivate an offline license, refer to Log out or De-activating an offline license.

Use one of these methods to run the uninstall program for the product that you want to uninstall:

- Add or Remove Programs dialog box

  1. Make a backup copy of any files you might want to reuse (such as DB, INI, and PBL files) if you plan to reinstall.

  2. Open the Control Panel from the Start menu and double-click the **Add/Remove Programs** button.

  3. On the Install/Uninstall tab page, select the product to uninstall, click **Add/Remove**, and click **Yes** when prompted to confirm that you want to uninstall the tool.

  4. If you are prompted to delete a shared file, click the appropriate response.

     If the usage count for a system file in the registry indicates that the file is no longer being used, the uninstall program asks if you want to delete the file. Some applications do not increment the usage count; therefore, **do not delete a file unless you are sure it is not being used by another application**.

- Silent uninstallation

  Run the *silentuninstall.bat* file, similarly like how you configure and run the the *silentinstall.bat* (see Section 3.2.6.3, "Silent Install Commands").

The uninstall program removes:

- Shared and standard program files

- Folder items

- Program folders

- Program directories

- Program registry entries

The uninstall program deletes file and icon groups, as well as system and user path settings in the registry and INI files. Simply deleting directories does not fully uninstall these products.

Note

The installer increments the usage count in the registry for each shared Appeon DLL and each shared system DLL. The uninstall program decrements that count. The uninstall program does not try to delete a shared DLL until the usage count reaches zero.

Note

Unlike the installer, the uninstall program has no **Back** or **Cancel** button. Once you click **Yes** in the procedure below, the program cannot be stopped.