

# Installation Guide for JBoss/WildFly Windows

Appeon® for PowerBuilder® 2016 Windows  
FOR WINDOWS

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# 1 About This Book

## 1.1 Audience

This book is for a PowerBuilder programmer to set up the Web and/or mobile development and runtime environment by installing the different components of Apeon for PowerBuilder.

## 1.2 How to use this book

There are seven chapters in this book.

Chapter 1: About This Book

A general description of this book.

Chapter 2: Introduction

An overview of Apeon for PowerBuilder 2016 for JBoss/WildFly Windows and its system architecture.

Chapter 3: Installation Requirements

The system requirements for installing Apeon for PowerBuilder 2016 for JBoss/WildFly Windows.

Chapter 4: Installing Apeon for PowerBuilder 2016

Instructions for installing and upgrading Apeon Server, Apeon Developer, and Apeon Server Web Component.

Chapter 5: Configuring Apeon Server Cluster

Instructions for configuring an Apeon Server cluster.

Chapter 6: Post-Installation Configuration Tasks

Instructions on configurations required for Apeon system architecture that affect the running of Web applications.

Chapter 7: Uninstalling Apeon for PowerBuilder 2016

Instructions for uninstalling Apeon for PowerBuilder 2016 for JBoss/WildFly Windows.

## 1.3 Related documents

Apeon provides the following user documents to assist you in understanding Apeon for PowerBuilder and its capabilities:

- Introduction to Apeon:  
Gives general introduction to Apeon for PowerBuilder and its editions.
- Getting Started (for Apeon Mobile):  
Guides you through installing PowerBuilder and Apeon for PowerBuilder, and developing and deploying a mobile application.
- New Features Guide:

Introduces new features and changes in Appeon for PowerBuilder.

- **Appeon Mobile Tutorials:**  
Gives instructions on deploying, running, and debugging the mobile application, distributing native mobile apps, and configuring the Appeon Server cluster.
- **Appeon Mobile (Offline) Tutorials:**  
Gives instructions on setting up the Appeon Mobile and offline environment, and configuring, deploying, running, updating, and debugging the offline application.
- **Appeon Installation Guide:**  
Provides instructions on how to install Appeon for PowerBuilder successfully.
- **Mobile UI Design & Development Guide:**  
Introduces general guidelines on designing and developing the mobile app and UI.
- **Migration Guidelines for Appeon Web:**  
A process-oriented guide that illustrates the complete diagram of the Appeon Web migration procedure and various topics related to steps in the procedure, and includes a tutorial that walks you through the entire process of deploying a small PowerBuilder application to the Web.
- **Supported PB Features:**  
Provides a detailed list of supported PowerBuilder features which can be converted to the Web/Mobile with Appeon as well as which features are unsupported.
- **Appeon Developer User Guide:**  
Provides instructions on how to use the Appeon Developer toolbar in Appeon for PowerBuilder.
- **Workarounds & API Guide:**  
Provides resolutions for unsupported features and various APIs to facilitate you to implement the features (including Web and mobile) that are not easy or impossible to implement in the PowerBuilder IDE.
- **Appeon Workspace User Guide:**  
Gives a general introduction on Appeon Workspace and provides detailed instructions on how to use it.
- **Appeon Server Configuration Guide:**  
Provides instructions on how to configure Appeon Server Monitor, establish connections between Appeon Servers and database servers, and configure AEM for maintaining Appeon Server and the deployed applications.
- **Web Server Configuration Guide:**

Describes configuration instructions for different types of Web servers to work with the Appeon Server.

- **Troubleshooting Guide:**

Provides information on troubleshooting issues; covering topics, such as product installation, application deployment, AEM, and Appeon application runtime issues.

- **Appeon Performance Tuning Guide:**

Provides instructions on how to modify a PowerBuilder application to achieve better performance from its corresponding Web/mobile application.

- **Testing Appeon Web Applications with QTP:**

Provides instructions on how to test Appeon Web applications with QTP.

## **1.4 If you need help**

If you have any questions about this product or need assistance during the installation process, access the Technical Support Web site at <http://www.appeon.com/support>.

## 2 Introduction

### 2.1 Overview

Apeon for PowerBuilder is the first and revolutionary solution that leverages the PowerBuilder IDE for building an application and deploying it as a Windows client/server app, a Windows browser-based Web app, and an iOS/Android native mobile app. PowerBuilder is a very mature and productive 4GL development environment, running on the Windows platform, and offering distinguished features such as MDI windows, DataWindows, menus, and toolbars. All of these powerful features will be available in the deployed application.

From the native source code of PowerBuilder applications, Apeon for PowerBuilder can generate n-tier applications that can run on the Web or mobile environment. The application that run on the Web environment can automatically and precisely replicate the Client/Server user interface with HTML running in standard Windows Web browsers, while the application that run on the mobile environment can automatically take the typical mobile user interface for the iOS and Android OS. The application business logic including DataWindows, Embedded SQL and dynamic SQLs is deployed to a Java-based or .NET-based back-end. These applications offer the rich user experience of the original PowerBuilder applications and deliver the superior Quality Of Service (QOS) of the n-tier architecture and J2EE platform, as well as greater availability, scalability, security and reliability.

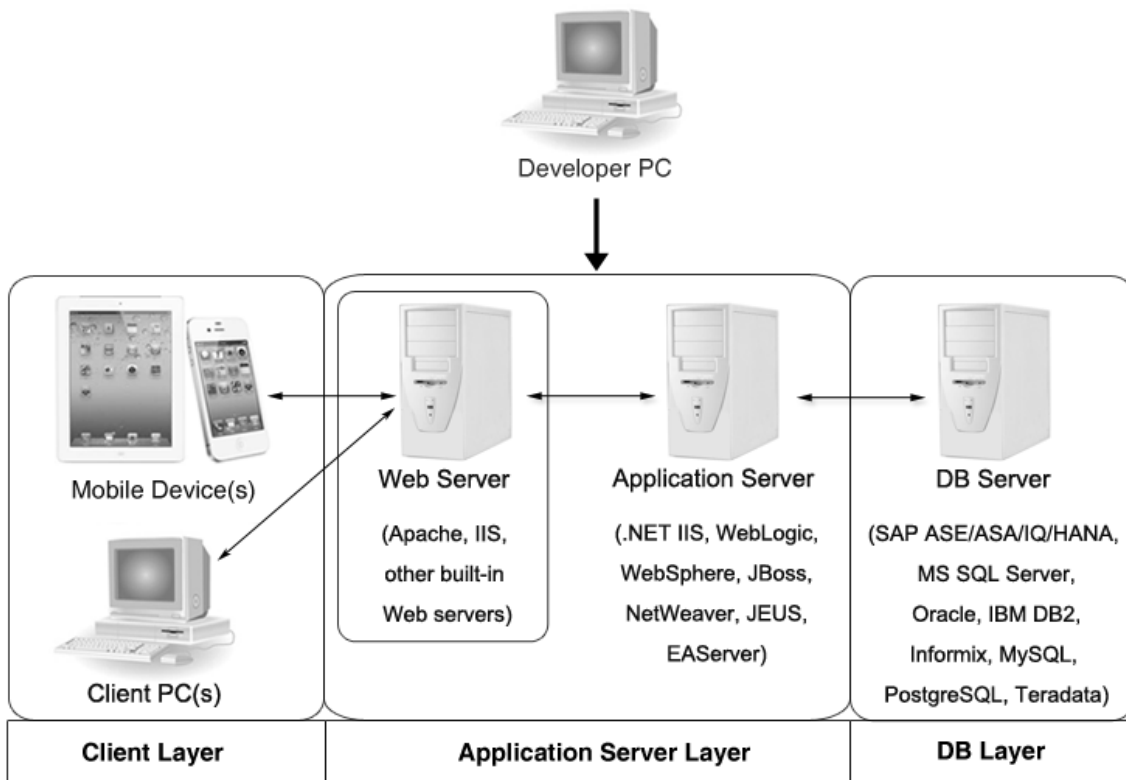
Apeon for PowerBuilder allows the entire application conversion process to be executed within the PowerBuilder IDE. It does not require the developer to write a single line of code. Only standard PowerBuilder programming skills are required.

### 2.2 System architecture

Apeon for PowerBuilder works with standard n-tier architecture. Each tier serves a specific purpose in the architecture, though it may not necessarily reside in the same physical machine. For example, the Web server, application server and database server can reside in one machine or in different machines. A single tier may also be spread across multiple physical machines. For example, the application server can consist of a cluster of Apeon Server computers to provide load balancing and failover.



**Figure 2.1: System architecture**



Apeon applications deploy to the standard n-tier architecture - the client tier, middle tier (application server), and data tier (database) are logically separated. Each tier should have appropriate Apeon components and/or third-party software installed according to its role within the architecture. The following table briefly lists the tiers, roles, their purposes and the required Apeon/third-party software.

**Table 2.1: Tiers in the Apeon architecture**

Tier	Role	Purpose	Apeon Componer	Third-party Software
Client tier	Mobile Device	Runs the Apeon native mobile applications.	Apeon Workspace (Optional)	None
	Client PC	Runs the Apeon Web applications in Web browsers.	Apeon Xcelerator plug-in	Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, or Opera
Developer PC	Developer PC	Deploys your PowerBuilder application to the server.	Apeon Developer	PowerBuilder
Middle tier	Web Server	Responds incoming requests from the client tier, and dispatches requests to the application server.	Apeon Server Web Component	JBoss/WildFly Web server or any JBoss-compatible Web server

Tier	Role	Purpose	Apeon Compoer	Third-party Software
		Hosts the presentation layer of the deployed Web applications.		
	Application Server	Hosts the DataWindows of the Apeon deployed applications, and provides the necessary run-time services to the deployed applications, such as DataWindow retrieval and update, Embedded SQLs, dynamic SQLs, security authentication etc. Apeon application middle-tier can invoke Java components, external DLL functions, and C++ components. Furthermore, it supports Web Services for the most flexibility integrating with J2EE and .NET.	Apeon Server	WildFly or JBoss EAP
Data tier	Database Server	Hosts the application database.	None	JDBC-compliant RDBMS supported by Apeon. Please see <a href="#">Database server requirements</a> for more information.

- Client Tier

**Mobile device:** The mobile application client layer is implemented using universal C++ libraries and JavaScript libraries. The C++ libraries render the mobile-style UI and provide interface for calling the device native features, information and hardware (camera, GPS, etc.), and support accessing the client/offline database and running the offline application. The JavaScript libraries support the PowerScript or UI logic coded in the Window object, user object (including NVOs), menu object and any other visual objects. These client libraries are automatically included in Apeon Workspace or the packaged mobile app.

**Client PC:** The Web application client layer consists of two plug-ins and some C++/JavaScript libraries which are originally built into Apeon Server Web Component and then automatically downloaded to the client when the application is run for the first time. The two plug-ins manage the download and caching of the Web application and also act as the bridge to interact between the C++/JS libraries and the Web page. The C++/JS libraries render the PowerBuilder-style Web graphical user interface in the Web browsers.

- Middle Tier

The middle tier, which hosts the business logic, is implemented with J2EE or .NET components. These components execute the DataWindows, Embedded SQLs, and dynamic SQLs of the deployed application. The middle tier deploys to the Java or .NET compliant

Appeon Server, leveraging dozens of many-years of investments in DataWindows and other business logic.

- Data Tier

The database stores the raw data for the application and stored procedures, if any. The existing database from the PowerBuilder application can be simply re-used without modification so long as it is an Appeon-certified database.

## 2.3 Appeon editions

Appeon for PowerBuilder 2016 provides the following editions for the Windows platform.

**Table 2.2: Appeon editions**

Edition	Component	Description
Enterprise Edition	<ul style="list-style-type: none"> <li>• Appeon Server</li> <li>• Appeon Server Web Component</li> <li>• Appeon Workspace (for Appeon Mobile only)</li> <li>• Appeon Help</li> </ul>	<ol style="list-style-type: none"> <li>1) Appeon Developer is not provided.</li> <li>2) The Appeon Server clustering service is provided.</li> <li>3) Product activation is required within 30 days.</li> </ol>
Workgroup Edition	<ul style="list-style-type: none"> <li>• Appeon Server</li> <li>• Appeon Server Web Component</li> <li>• Appeon Workspace (for Appeon Mobile only)</li> <li>• Appeon Help</li> </ul>	<ol style="list-style-type: none"> <li>1) Appeon Developer is not provided.</li> <li>2) Product activation is required within 30 days.</li> </ol>
Developer Edition	<ul style="list-style-type: none"> <li>• Appeon Developer</li> <li>• Appeon Server</li> <li>• Appeon Server Web Component</li> <li>• Appeon Workspace (for Appeon Mobile only)</li> <li>• Appeon Help</li> </ul>	<ol style="list-style-type: none"> <li>1) The maximum number of online users is 5.</li> <li>2) Product activation is required within 30 days.</li> </ol>
Trial Edition	<ul style="list-style-type: none"> <li>• Appeon Developer</li> <li>• Appeon Server</li> <li>• Appeon Server Web Component</li> <li>• Appeon Workspace (for Appeon Mobile only)</li> <li>• Appeon Help</li> </ul>	<ol style="list-style-type: none"> <li>1) Trial Edition has a 30-day time bomb.</li> <li>2) The Appeon Server clustering service is provided.</li> <li>3) The maximum number of online user is unlimited.</li> </ol>

## 2.4 Appeon components

### 2.4.1 Appeon Developer

Appeon Developer is a plug-in to the PowerBuilder IDE installed to the developer's PC. It provides a set of tools that enable the mobile and Web application generation, maintenance, and upgrades within the PowerBuilder IDE. These tools are accessed via a toolbar in the PowerBuilder IDE, which automatically loads each time PowerBuilder is started.

### 2.4.2 Appeon Server

Appeon Server is a set of server components that is deployed to the application server. It provides the Appeon applications with necessary run-time services such as data connectivity, DataWindow support, transaction management, and security.

Appeon Server also includes Appeon Enterprise Manager (AEM) and Appeon Server Web Component.

AEM is the management console for Appeon Server and the deployed applications. When you install Appeon Server, AEM is automatically installed.

During the Appeon Server installation, the Appeon Server Web Component is automatically installed to the JBoss/WildFly Web Server, therefore, if you are using one WildFly or JBoss EAP as both the Web server and the application server, you will NOT need to run the Appeon Server Web Component installation.

### 2.4.3 Appeon Server Web Component

Appeon Server Web Component resides in the Web server. It consists of the Web server redirector plug-in (that dispatches the user requests to the Appeon Server) and a set of runtime libraries for the Web application (that supports the PowerBuilder-style UI in the Web browser).

If you use a third-party Web server (such as Apache or IIS) and/or physically separate the Web server and the Appeon Server, for example, for load balancing purpose, you will need to install Appeon Server Web Component to the Web server and configure the Web server with the redirector plug-in. For detailed instructions on configuring the Web server, refer to Web Server Configuration Guide.

### 2.4.4 Appeon Workspace (for Appeon Mobile only)

Appeon Workspace is installed on the mobile device to help simplify the distribution and installation of the native mobile app. It consists of a set of mobile client libraries and a graphical user interface. The mobile client libraries generate the mobile-style UI, support the PowerScript and UI logic, provide interfaces for calling the mobile SDK, and support accessing the client/offline database and running the offline mobile application. The graphical user interface allows end users to install and run the mobile application from Appeon Server conveniently, so developers do not need to register their mobile applications in the online application store, and the end users do not need to install them from there.

Appeon Workspace is distributed as a native mobile app thru the online app stores (such as Apple App Store, Google Play) or over-the-air, and it is also automatically included when

you package and compile the Appeon mobile application as the iOS application archive (IPA) file or Android application package (APK) file.

### **2.4.5 Appeon Help**

Appeon Help provides easy access to all user documents. It saves time and conveniently places the help information, such as, the Appeon supported features, at your fingertips.

Appeon Help is a Microsoft compiled HTML help (.chm) which can be installed and viewed on the Windows OS only. To view the Appeon documentation on all OS, you can visit the [online web help](#) at the Appeon web site.

## 3 Installation Requirements

### 3.1 Client requirements

#### 3.1.1 Software requirements

##### Requirements for the mobile device:

- Apple iOS 7.1.2, 8, 8.1, or 9

iOS devices: iPad 2/3/4/Mini/Air, iPhone 4/4S/5/5C/5S/6/6 Plus, iPod touch 4/5, iPad Pro 12.9-inch.

- Google Android 4.x, 5.0, or 6.0

Android devices that have been certified by Apeon include Samsung Galaxy Tab S2, Samsung Galaxy Note 8.0 GT-N5100, Samsung Galaxy Note 10.1 GT-N8000, Google Nexus 6P, Google Nexus 7, LG Nexus 4 E960 (smartphone), Samsung Galaxy Tab 3 10.1 GT-P5210, Samsung Google Nexus 10, ASUS ZenPad S8.0, and ASUS MeMo Pad FHD 10 ME 302C.

##### Requirements for the Web client PC:

- Microsoft Internet Explorer (8.0 thru 11), Microsoft Edge (27 thru 38), Mozilla Firefox (29 thru 47), Google Chrome (35 thru 53), or Opera (30 thru 39)
- Windows Vista SP2, Windows 7, Windows 8.1, or Windows 10  
IE can also support Microsoft Windows 2000 SP4, & Windows Vista SP2, though the other browsers may not.
- (Optional) Adobe Acrobat Reader 6.0 or above (for viewing printed PDF DataWindows or reports)

#### 3.1.2 Hardware requirements

##### Requirements for the Web client PC:

- Intel processor(s) running at 1.8 GHz or faster
- At least 2 GB Free RAM

### 3.2 Apeon Server requirements

#### 3.2.1 Software requirements

- Windows Operating System that is supported by WildFly and JBoss EAP
- WildFly 10, JBoss EAP 6.0.1, or JBoss EAP 6.4

Please make sure that WildFly 10 is started by JDK 1.8 or above and JBoss EAP 6.x is started by JDK 1.6 or above.

### 3.2.2 Hardware requirements

- Intel processor(s) running at 1.8 GHz or faster
- At least 2 GB Free RAM (4 GB Free RAM recommended)
- 900 MB hard drive space (for WildFly or JBoss EAP installation) plus 500 MB hard drive space (for Apeon Server installation)

### 3.2.3 (Optional) Third-party Web Server requirements

- Apache 1.3, 2.0, or 2.2, or Microsoft IIS 6.0, 7.0, 7.5, 8.0, or 10
- 50 MB hard drive space (for Apeon Server Web Component installation)

To make the third-party Web server work with Apeon Server, you must have the Web server redirector plug-in installed and configured. For detailed instructions, refer to Web Server Configuration Guide.

## 3.3 Apeon Developer requirements

### 3.3.1 Software requirements

- (Recommended) Microsoft Internet Explorer (9.0 thru 11)  
(Optional) Microsoft Edge (27 thru 38), Mozilla Firefox (29 thru 47), Google Chrome (35 thru 53), or Opera (30 thru 39)  
IE is recommended because it works on all Windows OS, while the other browsers may not work on certain Windows OS, please check [Client requirements](#) to determine which OS these browsers can support.  
IE 8 is not recommended because Apeon Debugger does not support IE 8, though you can run the Apeon Web app in IE 8 successfully.
- Windows Vista SP2, Windows 7, Windows 8.1, or Windows 10
- SAP PowerBuilder 9.0.3 (build 8784), 10.2.1 (build 9914), 10.5.2 (build 7826), 11.2 (build 8669), 11.5 (build 3127), 12.0 (build 3517), 12.5 (build 2511), 12.5.2 (build 5006), or 12.6 (build 4058)

If you do not have the required build, download and run the PowerBuilder EBF program from the SAP Software Download Center.

- ODBC database driver or a native database driver for the database server used by your application. Note that you cannot use a native database driver for SAP ASA/SQL Anywhere or IBM DB2 database.

- (Optional) SAP ASA/SQL Anywhere 8.0.2, 9.0, 10.0.1, 11.0, 12.0 or 16.0 (for running the PowerBuilder demos included in Apeon installation).

### 3.3.2 Hardware requirements

- Intel processor(s) running at 1.8 GHz or faster
- At least 2 GB Free RAM (4 GB Free RAM recommended)
- 2 GB hard drive space (for Apeon Developer installation only)

Each PowerBuilder application conversion project will require additional hard drive space based on the size of the PowerBuilder application.

### 3.4 Database Server requirements

Apeon for PowerBuilder 2016 can connect to any of the following database servers:

- SAP ASA/SQL Anywhere 8.0.2, 9.0, 10.0.1, 11.0, 12.0 or 16.0 with SAP iAnywhere or jConnect JDBC driver, or  
SAP ASA/SQL Anywhere WEB Edition with SAP jConnect or iAnywhere JDBC driver
- SAP Adaptive Server Enterprise (ASE) 12.5.x or 15.x with SAP jConnect or iAnywhere JDBC Driver
- SAP IQ 12.6.x, 12.7.x or 15 with jConnect JDBC driver
- SAP HANA 1.00.36 with SAP In-Memory Database JDBC driver
- IBM DB2 UDB 8.1, 8.2, 9.5 or 10 with IBM JDBC driver
- Informix 9.x, 10.x or 11.x with IBM JDBC driver
- Microsoft SQL Server 2000 SP4, 2005 SP1, 2008 or 2012 with MSFT JDBC driver or JTDS driver
- MySQL 5.5.x or 5.6.x with Connector/J driver
- Oracle 8i, 9i, 10g, 11g or 12c with Oracle JDBC Driver
- Teradata 13.00.00.27 with Teradata JDBC driver
- PostgreSQL 9.2 with PostgreSQL JDBC driver

For instructions on downloading and installing the driver files, refer to Section 4.2.4, “JDBC driver preparation” in *Apeon Server Configuration Guide for J2EE*.

### 3.5 Offline synchronization requirements

#### 3.5.1 Client Database requirements

Apeon for PowerBuilder 2016 supports the following client/offline databases:



- UltraLite 12.0.1

According to [SAP SQL Anywhere Supported Platforms](#), UltraLite supports Android-ARM only, and does not support Android-X86. Which means, if your Android device is powered by Intel or AMD x86 processors, rather than RISC-based ARM chips, then your device will not have offline accessibility to the local UltraLite database.

- SQLite 3.x

### 3.5.2 Synchronization Server requirements

Apeon for PowerBuilder 2016 supports the following offline synchronization server:

- MobiLink Server (included in SQL Anywhere 12.0.1 components)

Note: MobiLink can synchronize an UltraLite database, but cannot synchronize a SQLite database. To synchronize a SQLite database, you would need to develop your own synchronization solution.

### 3.5.3 Server Database requirements

MobiLink Server can connect to the consolidated databases that MobiLink supports.

For detailed information, refer to **MobiLink consolidated database** in SQL Anywhere online help (<http://infocenter.sybase.com/help/index.jsp?topic=/com.sybase.help.sqlanywhere.12.0.1/mlserver/ml-consdb.html>).

## 4 Installing Appeon for PowerBuilder 2016

### 4.1 Overview

Appeon for PowerBuilder 2016 (on Windows) consists of five major components: Appeon Developer, Appeon Server, Appeon Server Web Component, Appeon Help, and Appeon Workspace.

**Table 4.1: Appeon components**

Component	Description	Installed on
Appeon Developer	A plug-in to the PowerBuilder IDE installed to the developer's PC.	PowerBuilder on Windows operating system.
Appeon Server	A set of server components deployed to the application server providing runtime services for the application, such as data connectivity, DataWindows support, transaction management, and security.  Appeon Server also includes Appeon Enterprise Manager (AEM) and Appeon Server Web Component.	WildFly or JBoss EAP on Windows operating system.
Appeon Server Web Component	A set of Web server redirectors that dispatches the user requests to Appeon Server, and a set of runtime libraries that supports a PowerBuilder-style Web UI within standard Windows Web browsers.	Third-party Web server.  For JBoss/WildFly Web server, this installation is unnecessary since the Web Component is included in Appeon Server.
Appeon Help	The compiled HTML help of all Appeon user documents which saves time and conveniently places the help information at your fingertips.	Windows operating system.
Appeon Workspace (for Appeon Mobile only)	A native mobile application installed on the mobile device to simplify distributing, downloading, and running the Appeon mobile applications.	Mobile Device.

### 4.2 Installation scenarios

#### 4.2.1 Overview

Appeon for PowerBuilder works with n-tier architecture: different Appeon components should be installed to the computer(s) according to their roles in the network. In this section, some practical scenarios are described to demonstrate how Appeon for PowerBuilder should be installed according to network architecture.

## 4.2.2 Developer PC

**Table 4.2: Developer PC installation**

Scenarios	Requirements	Appeon Components
One physical machine, Computer 1, serves as Developer PC, Web server, application server and database server	Computer 1: Microsoft Windows Server 2012 R2, 2008 R2, or 2003 Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, or Opera SAP PowerBuilder WildFly or JBoss EAP SAP ASA/SQL Anywhere (Optional) SAP ASE, SAP IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, PostgreSQL, or SAP HANA depending on application database	Computer 1: Appeon Developer Appeon Server

## 4.2.3 Remote Appeon Server using JBoss/WildFly Web Server

**Table 4.3: Remote Appeon Server and Web server installation**

Scenarios	Requirements	Appeon Components
In this example, 2 computers are used: Computer 1 serves as Developer PC.	Computer 1: Microsoft Windows 10, 8.1, 7, or Vista Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, or Opera SAP PowerBuilder SAP ASA/SQL Anywhere	Computer 1: Appeon Developer
Computer 2 serves as Web server, application server and database server.	Computer 2: Microsoft Windows Server 2012 R2, 2008 R2, or 2003 WildFly or JBoss EAP SAP ASA/SQL Anywhere, SAP ASE, SAP IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, PostgreSQL, or SAP HANA depending on application database	Computer 2: Appeon Server

#### 4.2.4 Remote Appeon Server using a third-party Web server

**Table 4.4: Remote Appeon Server and Web server installation**

Scenarios	Requirements	Appeon Components
In this example, 2 computers are used: Computer 1 serves as Developer PC.	Computer 1: Microsoft Windows 10, 8.1, 7, or Vista Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, or Opera SAP PowerBuilder SAP ASA/SQL Anywhere	Computer 1: Appeon Developer
Computer 2 serves as Web server	Computer 2: Microsoft IIS or Apache	Computer 2: Appeon Server Web Component
Computer 2 serves as Web server, application server and database server.	Computer 2: Microsoft Windows Server 2012 R2, 2008 R2, or 2003 WildFly or JBoss EAP SAP ASA/SQL Anywhere, SAP ASE, SAP IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, PostgreSQL, or SAP HANA depending on application database	Computer 2: Appeon Server

#### 4.2.5 Appeon Server Cluster

**Table 4.5: Appeon Server cluster installation**

Scenarios	Requirements	Appeon Components
In this example, N (N>=4) computers are used: Computer 1 is used for Developer PC.	Computer 1: Microsoft Windows 10, 8.1, 7, or Vista Microsoft Internet Explorer, Microsoft Edge, Mozilla Firefox, Google Chrome, or Opera SAP PowerBuilder SAP ASA/SQL Anywhere	Computer 1: Appeon Developer
Computer 2 is the database server.	Computer 2: SAP ASA/SQL Anywhere, SAP ASE, SAP IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, PostgreSQL, or SAP HANA depending on application database	Computer 2: None
Computer 3 is the Web server.	Computer 3: Microsoft IIS or Apache	Computer 3: Appeon Server Web Component

Scenarios	Requirements	Appeon Components
Computers 4 to n are a group of JBoss/WildFly servers.	Computers 4 to n: Microsoft Windows Server 2012 R2, 2008 R2, or 2003 WildFly or JBoss EAP	Computers 4 to n: Appeon Server (After installing Appeon Server to each JBoss/WildFly server, configure the Appeon Servers as a cluster. Refer to <a href="#">Configuring Appeon Server Cluster</a> for details)

### 4.3 Two installation methods

Appeon for PowerBuilder 2016 provides two installation methods: **new installation** and **upgrade installation**.

- If your computer has not installed any version of Appeon for PowerBuilder, the setup program automatically takes the new installation method.
- If your computer has Appeon 6.2 or an earlier version installed, you must uninstall the version, prepare the environment for Appeon for PowerBuilder 2016 installation, and then use the setup program to install. The setup program takes the new installation method.
- If your computer has Appeon 6.5 or a later version installed, the setup program automatically takes the upgrade installation method.

### 4.4 Appeon new installation

#### 4.4.1 Starting the installation

Step 1: Double click the **Setup.exe** file in the installation package. The **Appeon for PowerBuilder 2016 Setup** program starts. The entry page has several options to guide you through the various installation tasks.

- **Install:** Click this button to start installing the product.
- **View Server Settings:** Click this button to ensure that the application server settings are appropriate for the Appeon Server installation.
- **View Training Video:** Click this button to watch the video to learn how to install the product.

- **View Product Manuals:** Click this button to read the user manuals for the product.
- **View Readme:** Click this button to read the key system requirements and installation information for the product.
- **Visit Our Web Site:** Click this button to visit the Appeon web site.
- **Exit:** Click this button to exit the setup program.

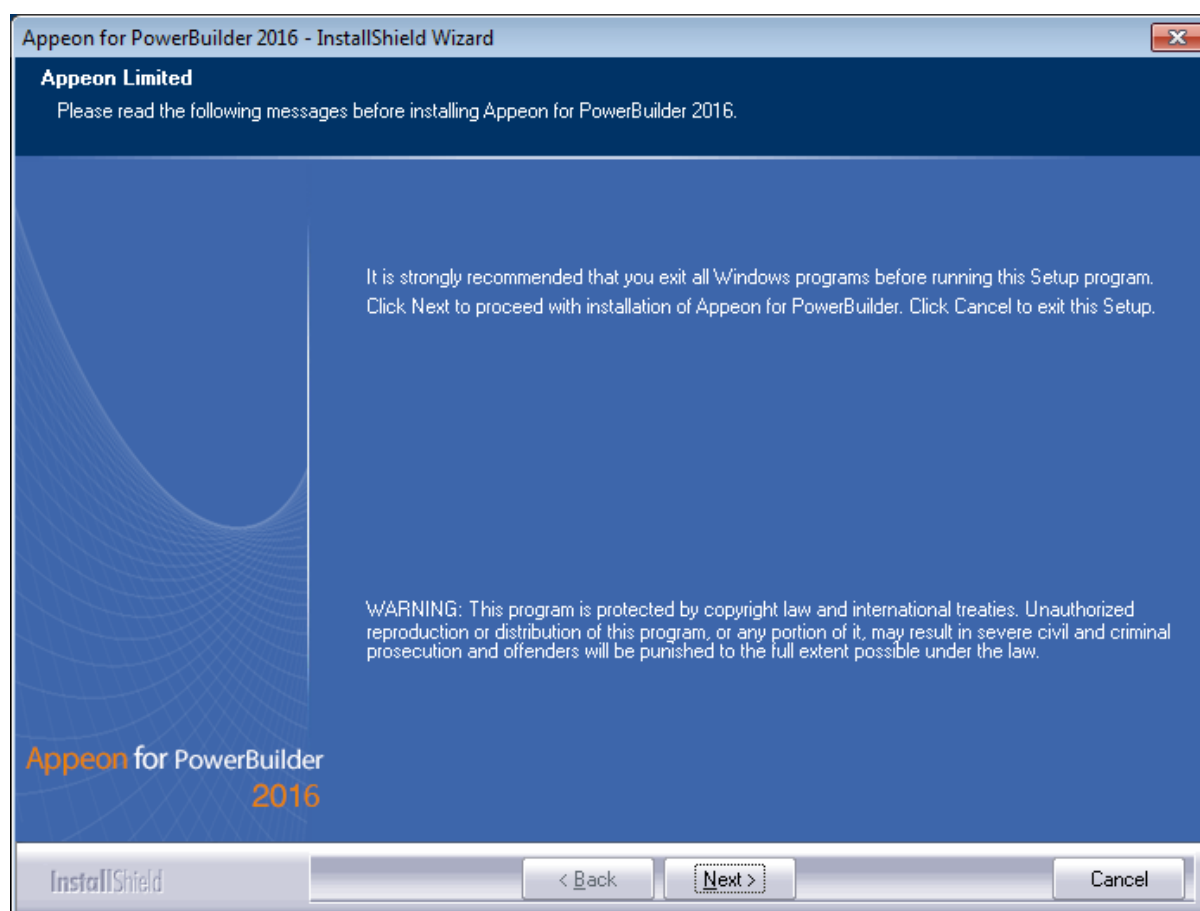
Note: Make sure there is enough space on the C: drive for storing temporary files for installation. Otherwise an error message will pop up, saying "1607: Unable to install InstallShield Scripting Runtime".

Step 2: Click **Install**.

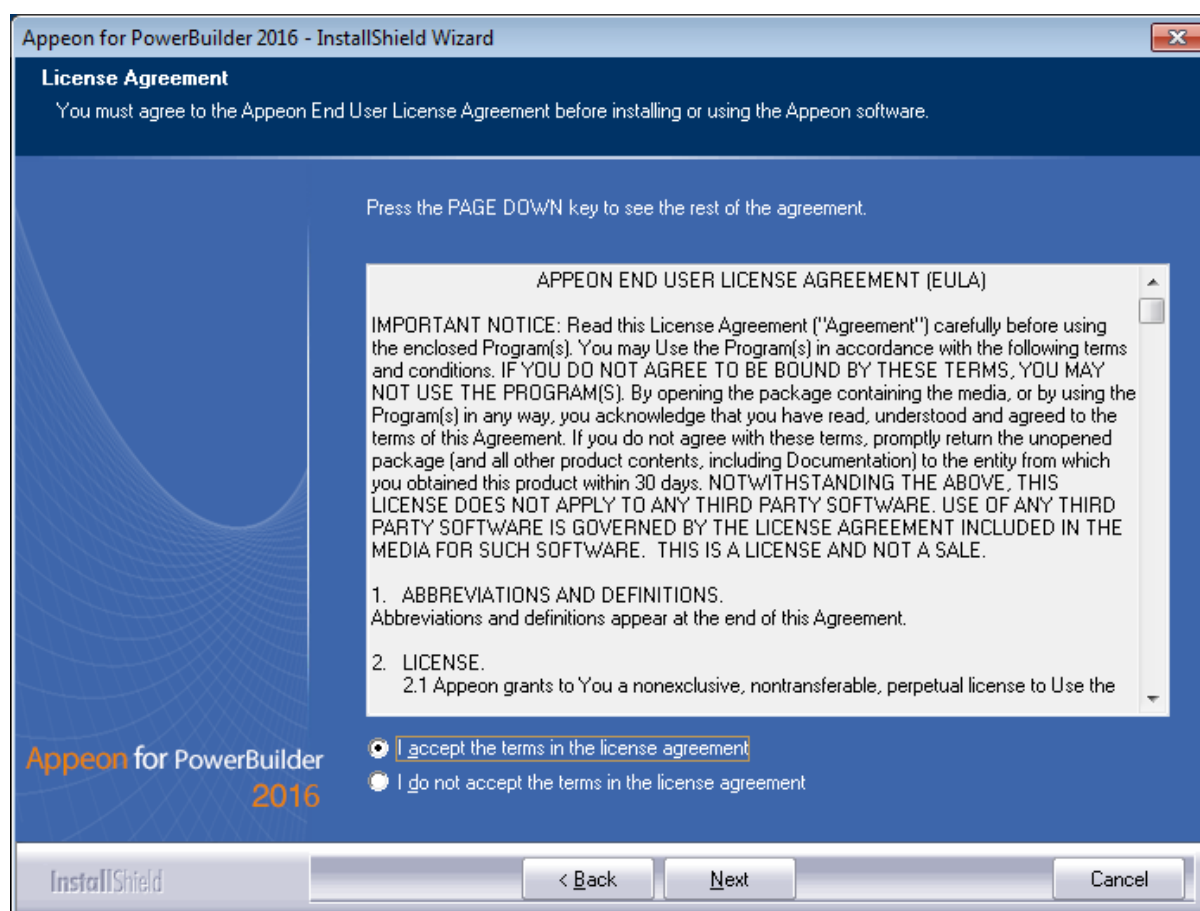
**Figure 4.1: Install Appeon for PowerBuilder**



Step 3: Click **Next** on the introduction screen.

**Figure 4.2: Introduction page**

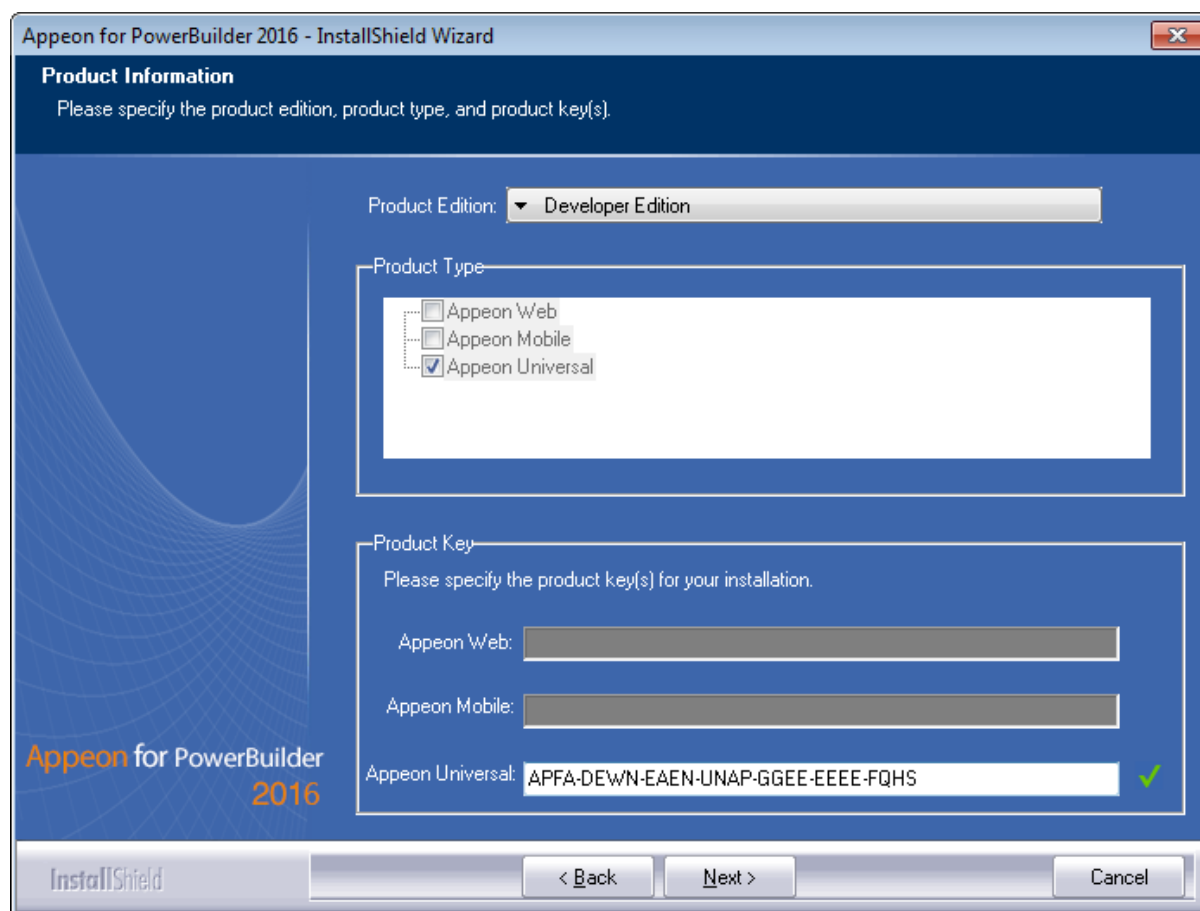
Step 4: Accept the terms in the license agreement page and click **Next**.

**Figure 4.3: License Agreement page**

Step 5: According to the license you purchase, select the product edition and the product type: **Apeon Web**, **Apeon Mobile**, or **Apeon Universal**, and then enter the product key which is shipped with the Apeon product. Click **Next**.

If you select the **Trial** or **Developer** edition, **Apeon Universal** will be automatically selected so you can experience both the Web and mobile deployments at no additional charge.

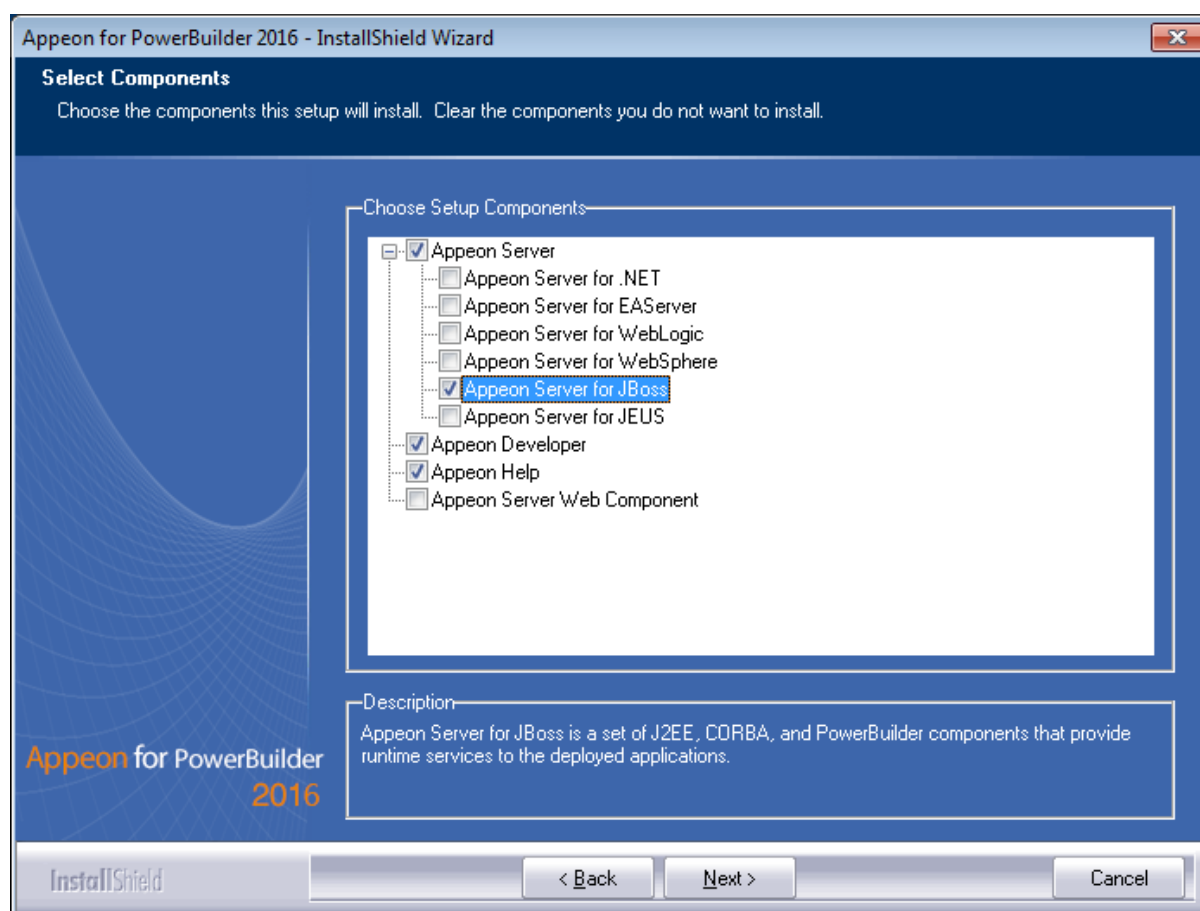


**Figure 4.4: Product edition, type and key page**

Step 6: Select the component(s) you want to install and click **Next**. The Setup program will install the selected component(s) in the order listed.

For the WildFly or JBoss EAP application server, be sure to select **Appeon Server for JBoss**, as shown in the following figure.

For Developer Edition and Trial Edition, if more than one application servers such as JBoss, WebSphere, etc. are installed on the same computer, you can repeatedly run the setup program to install Appeon Server to these application servers, for example, you can first run the setup program and select **Appeon Server for JBoss** to install Appeon Server to the WildFly application server, you can then run the setup program again and select **Appeon Server for WebSphere** to install Appeon Server to the WebSphere application server.

**Figure 4.5: Select components**

Refer to the following sections to complete the installation of each component.

- For Appeon Server installation instructions, refer to [Appeon Server installation](#).
- For Appeon Developer installation instructions, refer to [Appeon Developer installation](#).
- For Appeon Help installation instructions, refer to [Appeon Help installation](#).
- For Appeon Server Web Component installation instructions, refer to [Appeon Server Web Component installation](#).

If you are using one WildFly or JBoss EAP application server as both the Appeon Server and the Web server, then you will not need to install Appeon Server Web Component, because it is included in Appeon Server and will be installed automatically during Appeon Server installation.

#### 4.4.2 Appeon Server installation

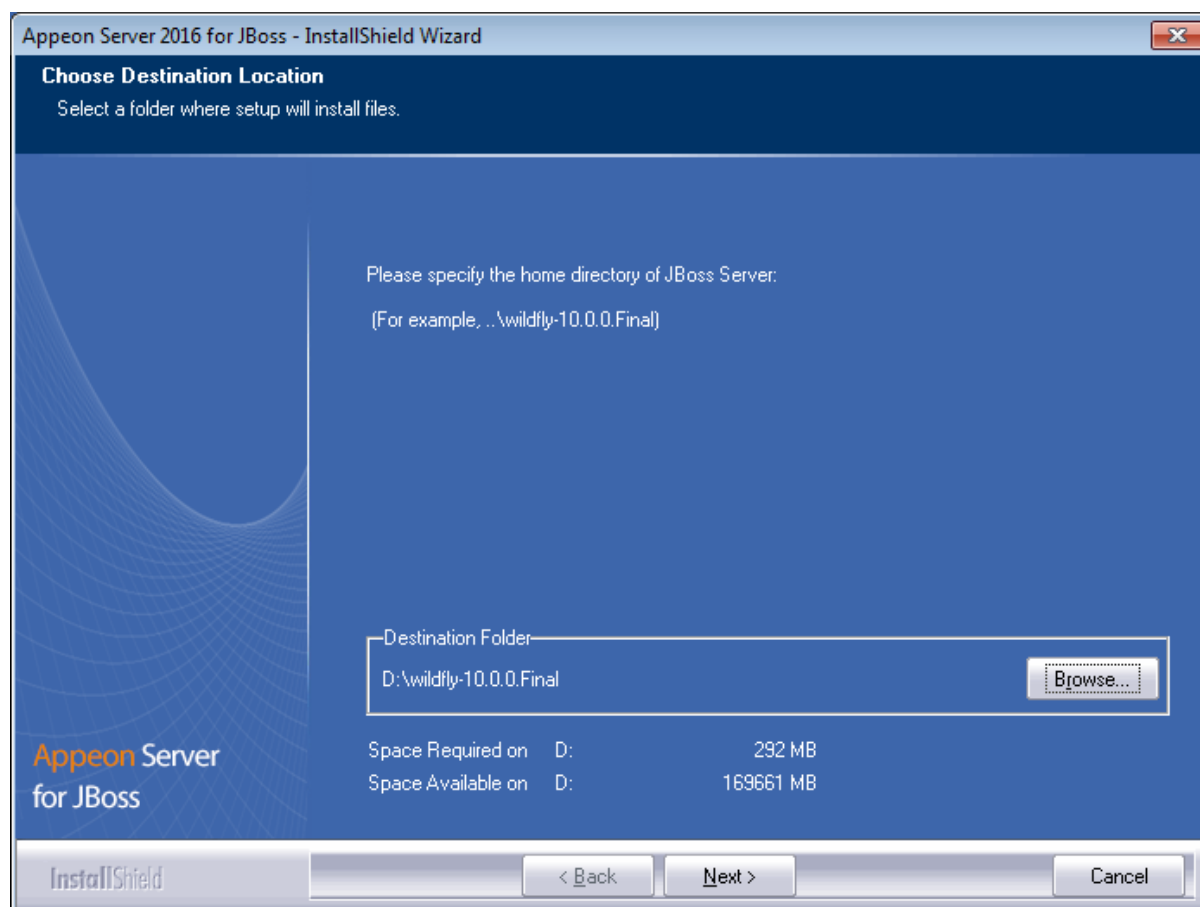
Follow the instructions below to install Appeon Server to the JBoss/WildFly application server.

Step 1: Verify that JBoss/WildFly server, as well as any other programs you may be running, is stopped.

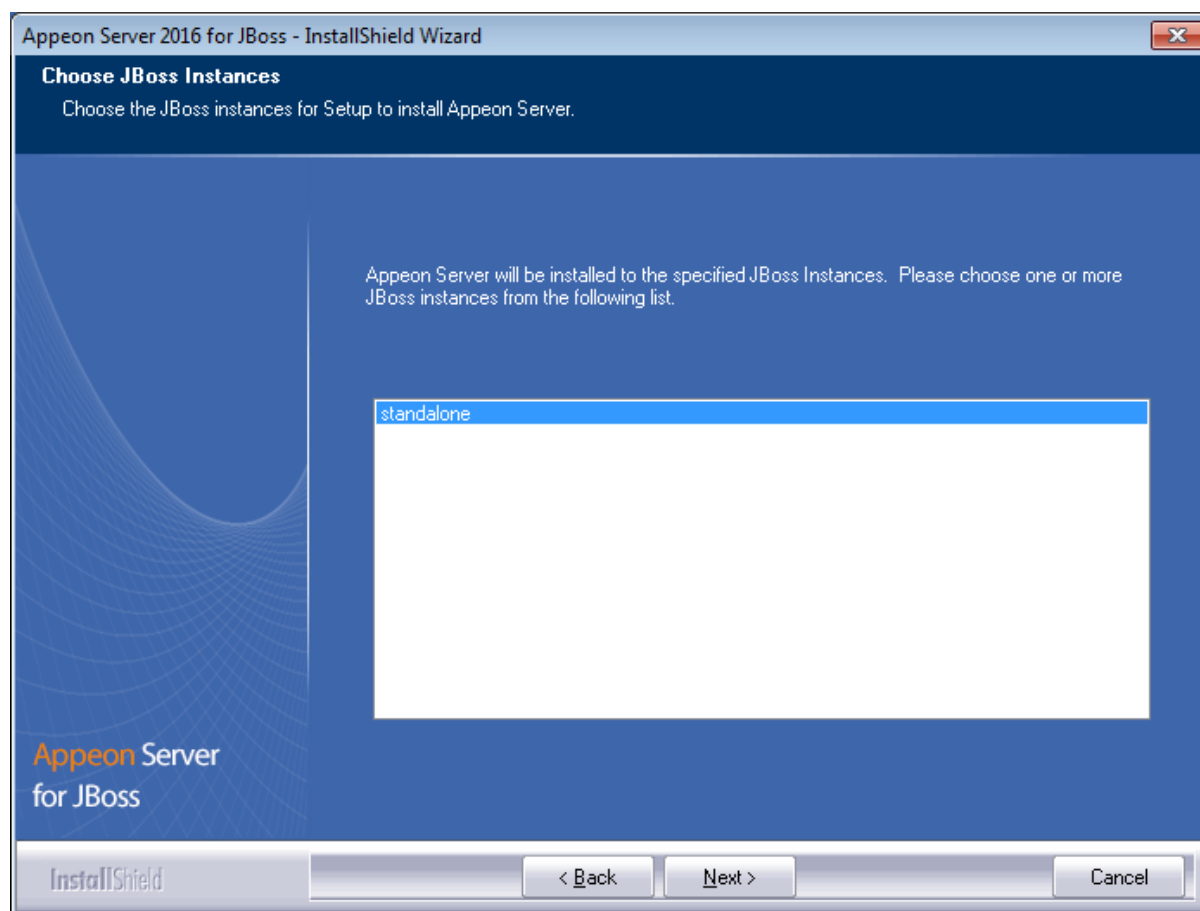
Step 2: Launch the **Apeon for PowerBuilder 2016 Setup** program and select to install **Apeon Server for JBoss** (see [Starting the installation](#)). Wait until Apeon Server completes the preparation.

Step 3: Click **Browse** to specify the home directory of WildFly or JBoss EAP where Apeon Server will be installed, for example, C:\wildfly-10.0.0.Final. Click **Next**.

**Figure 4.6: Configure AEM**



Step 4: Choose one or more JBoss/WildFly instances from the list. The Apeon Server EAR package (apeonserver.ear) will be installed to the specified JBoss/WildFly server instance(s).

**Figure 4.7: Choose JBoss/WildFly Instances**

Step 5: Specify the user name and password for Appeon Enterprise Manager (AEM).

**Figure 4.8: AEM login Username and Password**

Appeon Server 2016 for JBoss - InstallShield Wizard

**Specify the AEM login Username and Password**  
Enter the username and password for Appeon Enterprise Manager.

The default username and password for AEM are "admin". Appeon recommends you to change the default values.

Username:

Password:

Confirm Password:

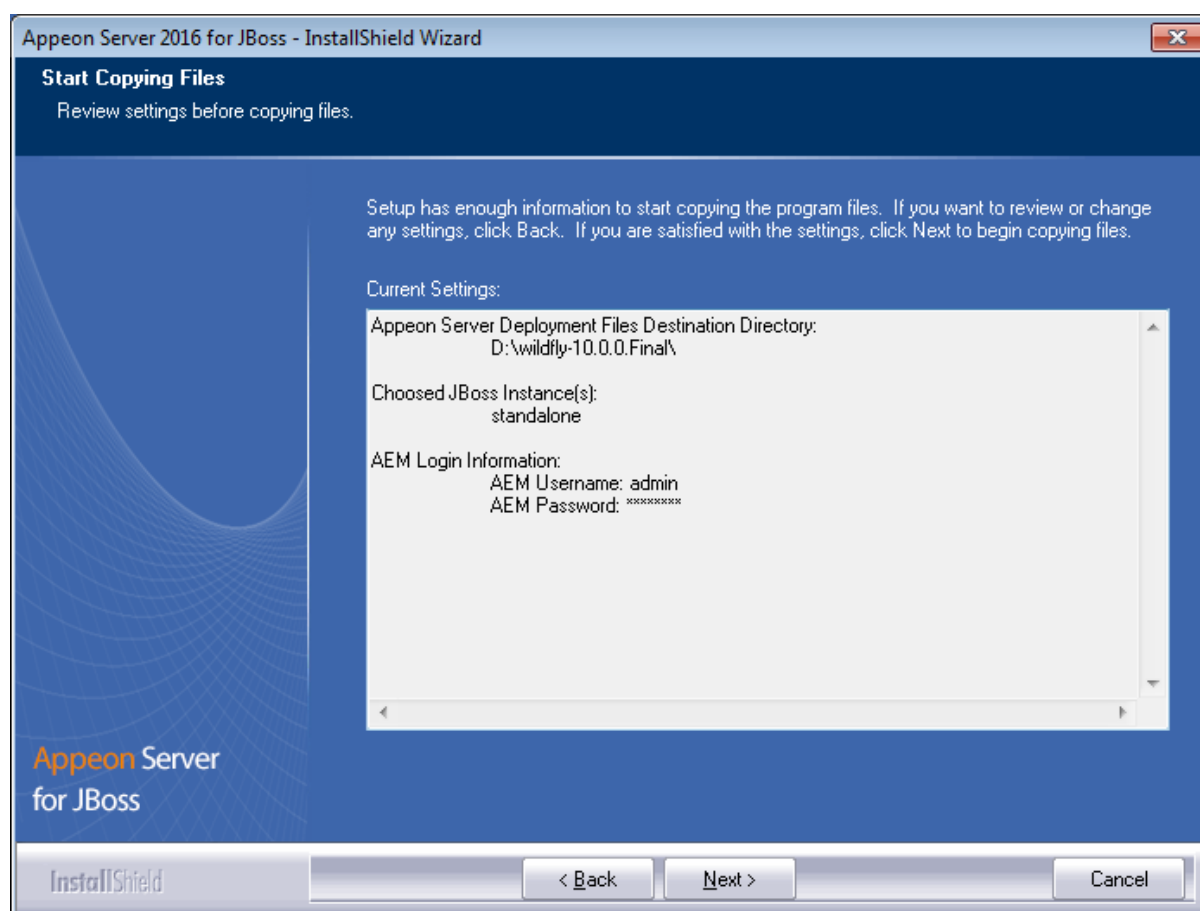
Appeon Server  
for JBoss

InstallShield

< Back    Next >    Cancel

Step 6: Check the summary of settings.

Click **Back** to change any unwanted settings or click **Next** to have Setup begin copying files.

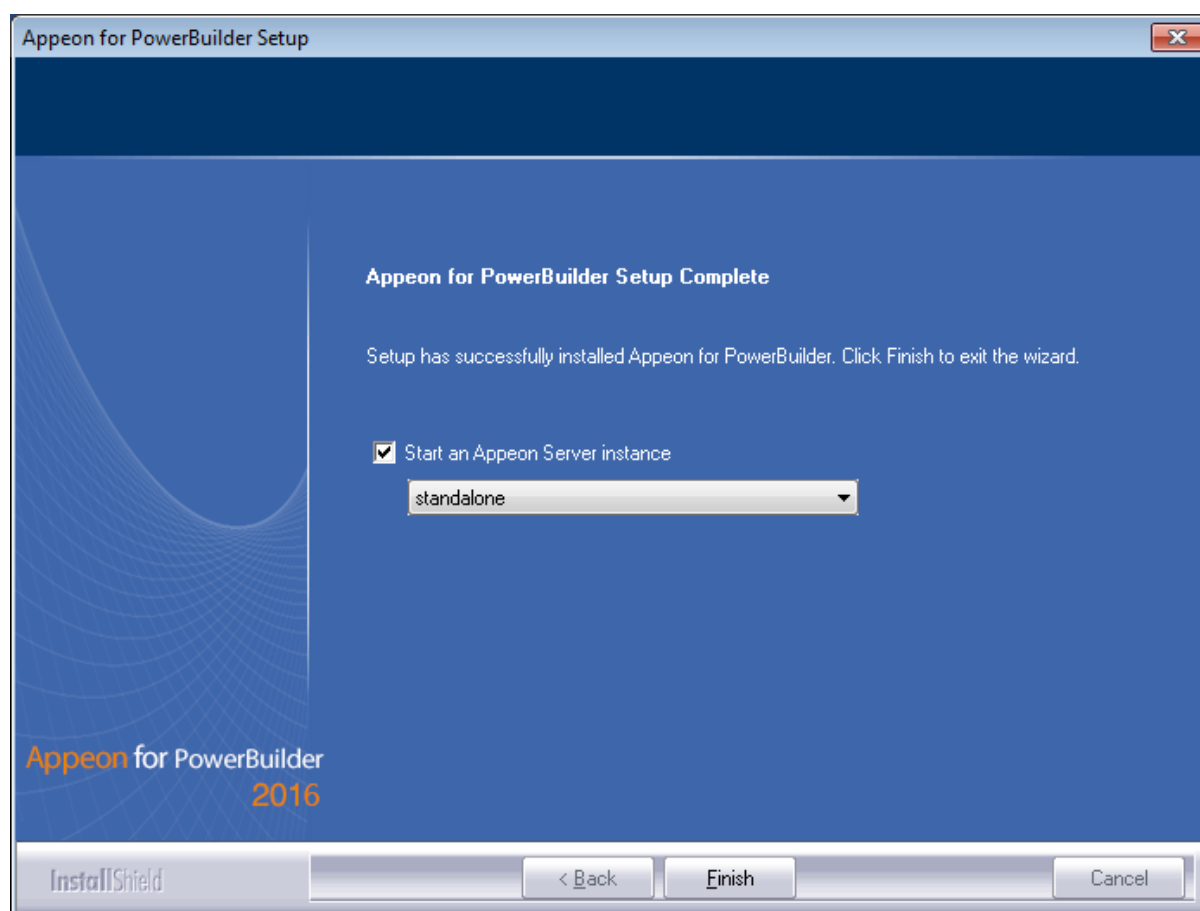
**Figure 4.9: Start Copying Files**

Step 7: Wait until Appeon Server installation is completed.

Appeon Server has been successfully installed to the specified JBoss/WildFly application server home directory and the Appeon Server EAR package (appeonserver.ear) has been successfully installed to the selected JBoss/WildFly server instance(s).

Step 8: Choose whether to start Appeon Server. It is selected by default. Then choose an Appeon Server instance to start. To manually start Appeon Server from the Windows shortcut later, uncheck the box, then click **Finish** to end the installation of Appeon Server.

For details about starting Appeon Server, refer to [Starting/Stopping Appeon Server](#).

**Figure 4.10: Apeon Server finish page**

### 4.4.3 Apeon Developer installation

#### 4.4.3.1 Prerequisites

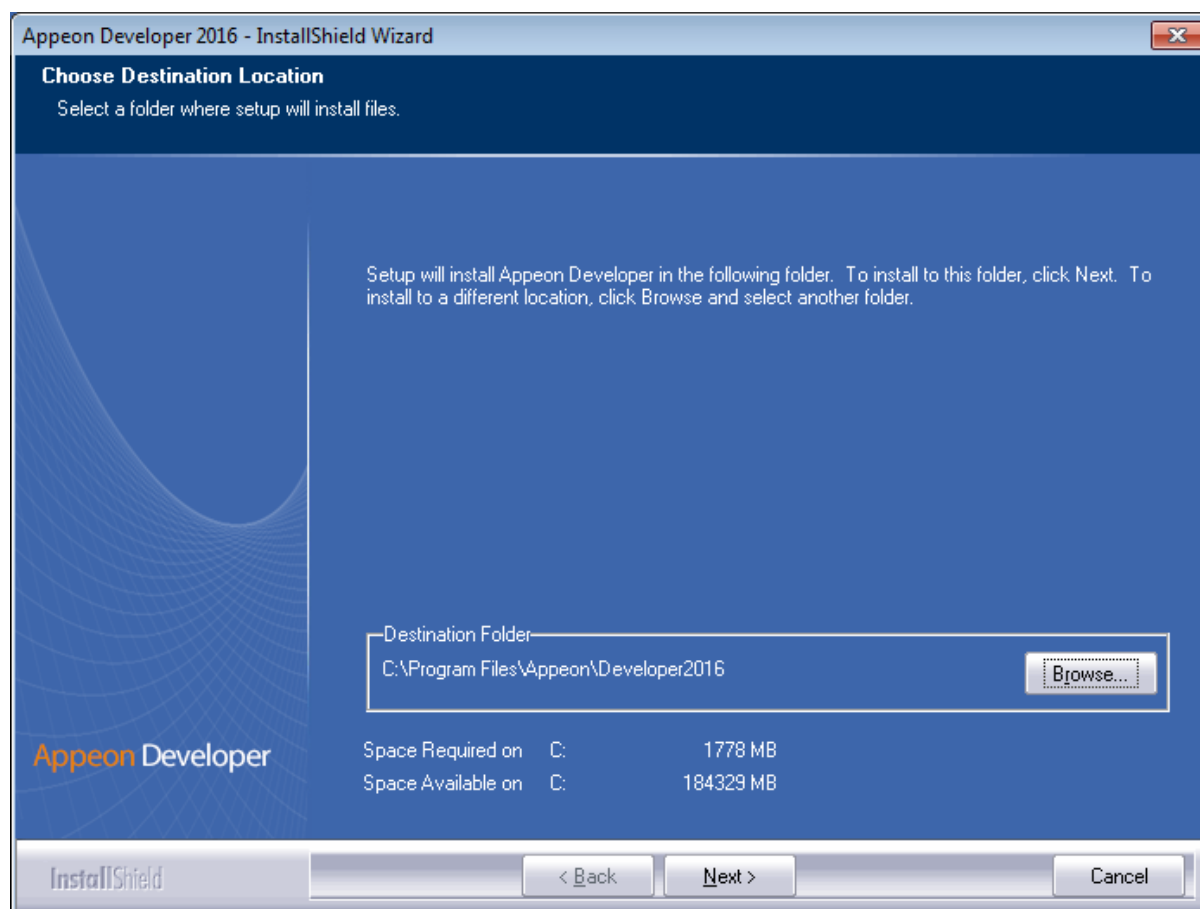
- The Developer PC meets the system requirements in [Apeon Developer requirements](#). Verify that PowerBuilder 9.0.3, 10.2.1, 10.5.2, 11.2, 11.5, 12.0, 12.5, 12.5.2, or 12.6 is installed or updated by running the PowerBuilder Setup program. You cannot install or update the software by copying files and folders from another source.
- Verify that PowerBuilder has been upgraded to the latest available build.
- Shut down PowerBuilder, ASA/SQL Anywhere, and any other Windows programs before beginning the installation process.
- Verify in Windows Task Manager that the following processes are not running under the Process tab: **EonADTxx.exe**, **java.exe**, **jagsrv.exe**, **jagsrvagent.exe**, and **pbxxx.exe**. If these processes are running, be sure to end them.

#### 4.4.3.2 Installation instructions

Step 1: Launch the **Apeon for PowerBuilder 2016 Setup** program and select to install **Apeon Developer** (see [Starting the installation](#)).

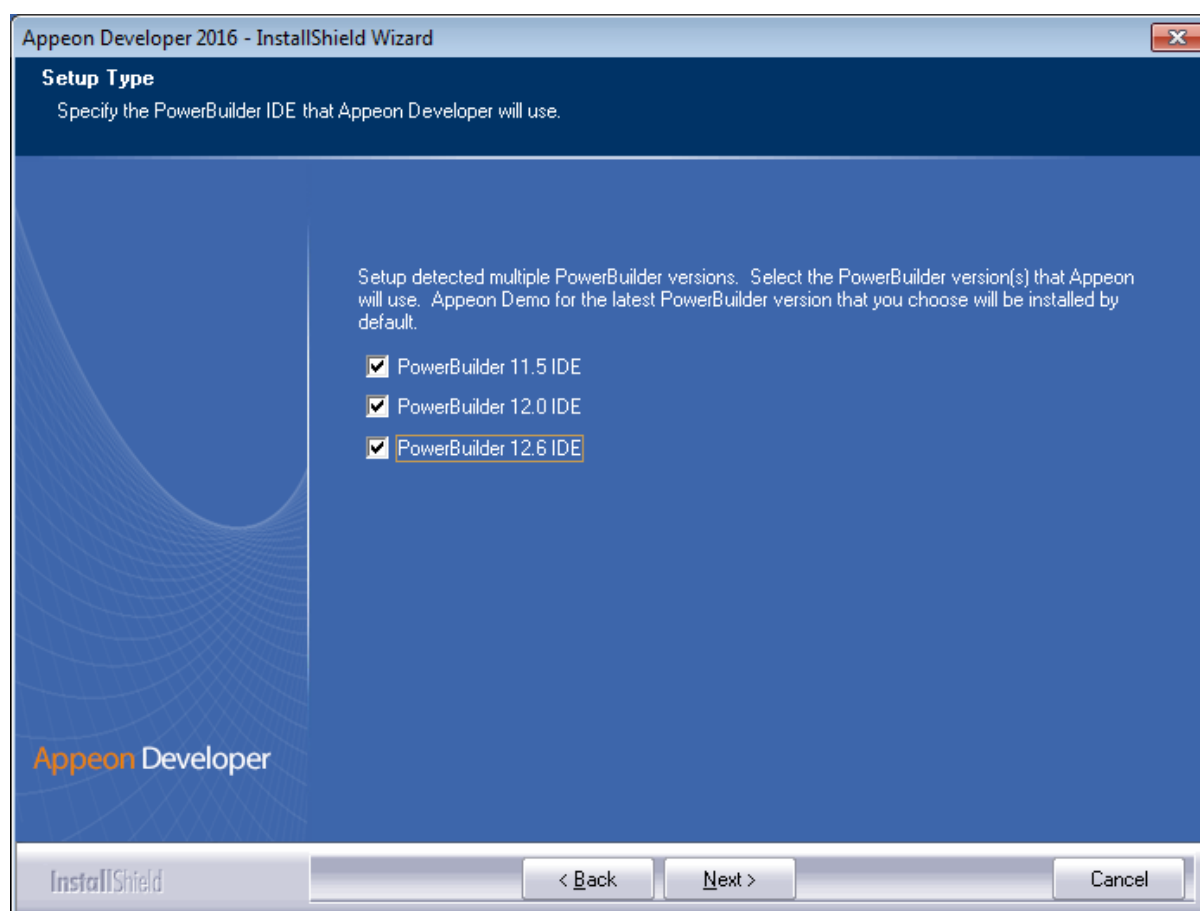
Step 2: Click **Next** to install Appeon Developer to the default location, or click **Browse** to select another location.

**Figure 4.11: Appeon Developer location**



Step 3: If you have more than one PowerBuilder installed, you will be given a choice of which version(s) to integrate into Appeon Developer.

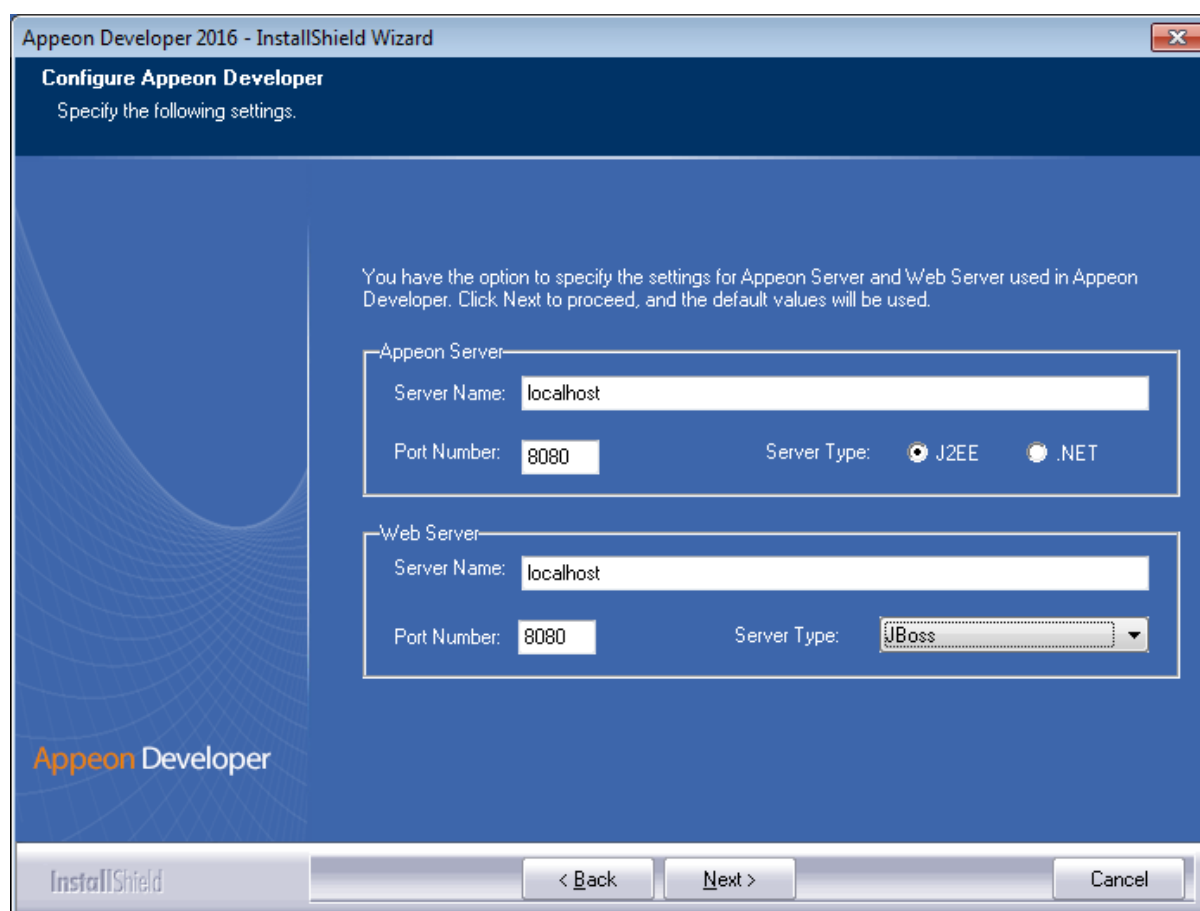


**Figure 4.12: PowerBuilder IDE**

Step 4: Specify the server name, port number and server type for Appeon Server and Web server used in Appeon Developer. Note that for Appeon Server installed to JBoss/WildFly, you must select **J2EE** as Server Type of Appeon Server. Click **Next**.

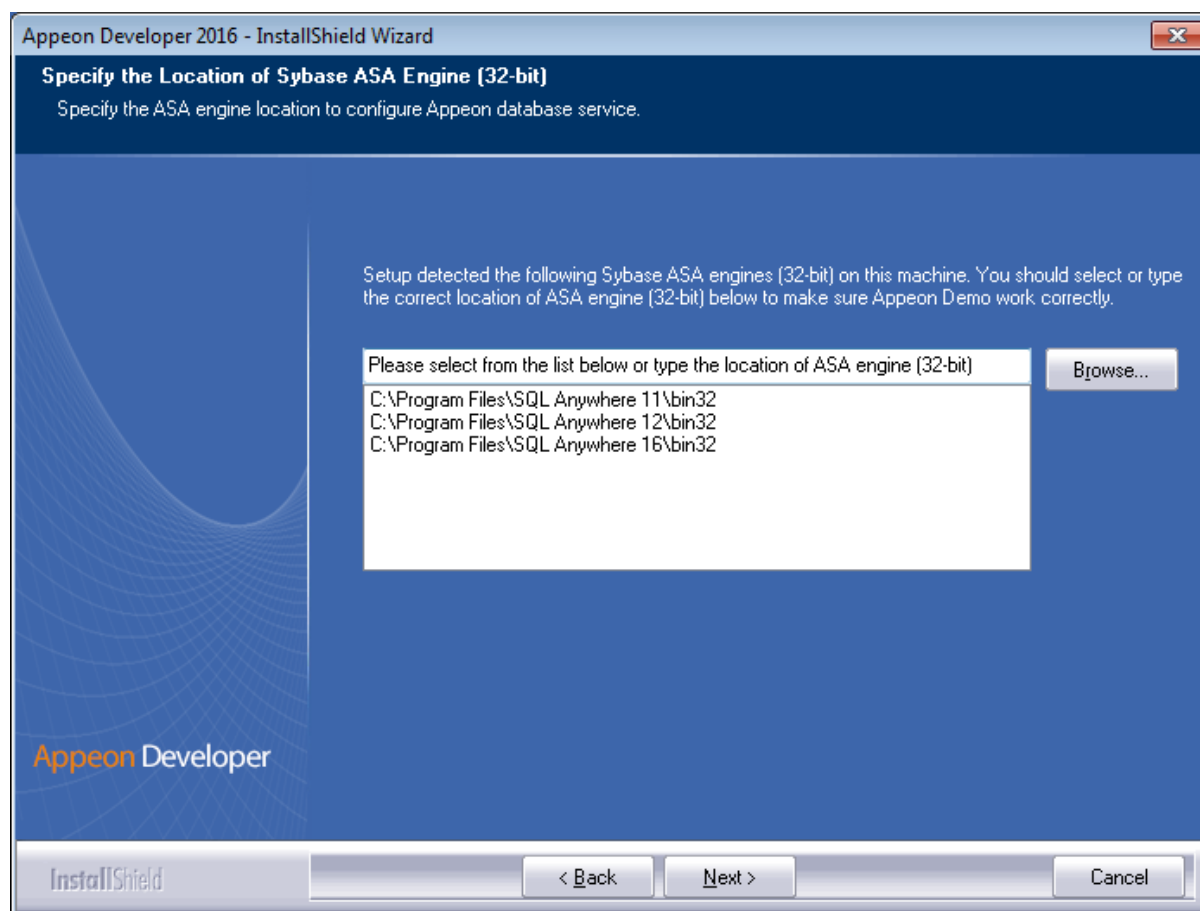
If you want to use an Appeon Server that has been already installed to the same machine where Appeon Developer is being installed, use the default values. If you want to use a remote Appeon Server, specify the server name and port number of the remote server. The setup program can automatically configure the **Server Profile** and **Deployment Profile** in the **Appeon Developer Configuration** window for the specified servers.

You can change these settings in the **Configure** tool of Appeon Developer after the installation when necessary. For detailed instructions, refer to Section 4.2.3, “Managing server profiles” in *Appeon Developer User Guide*.

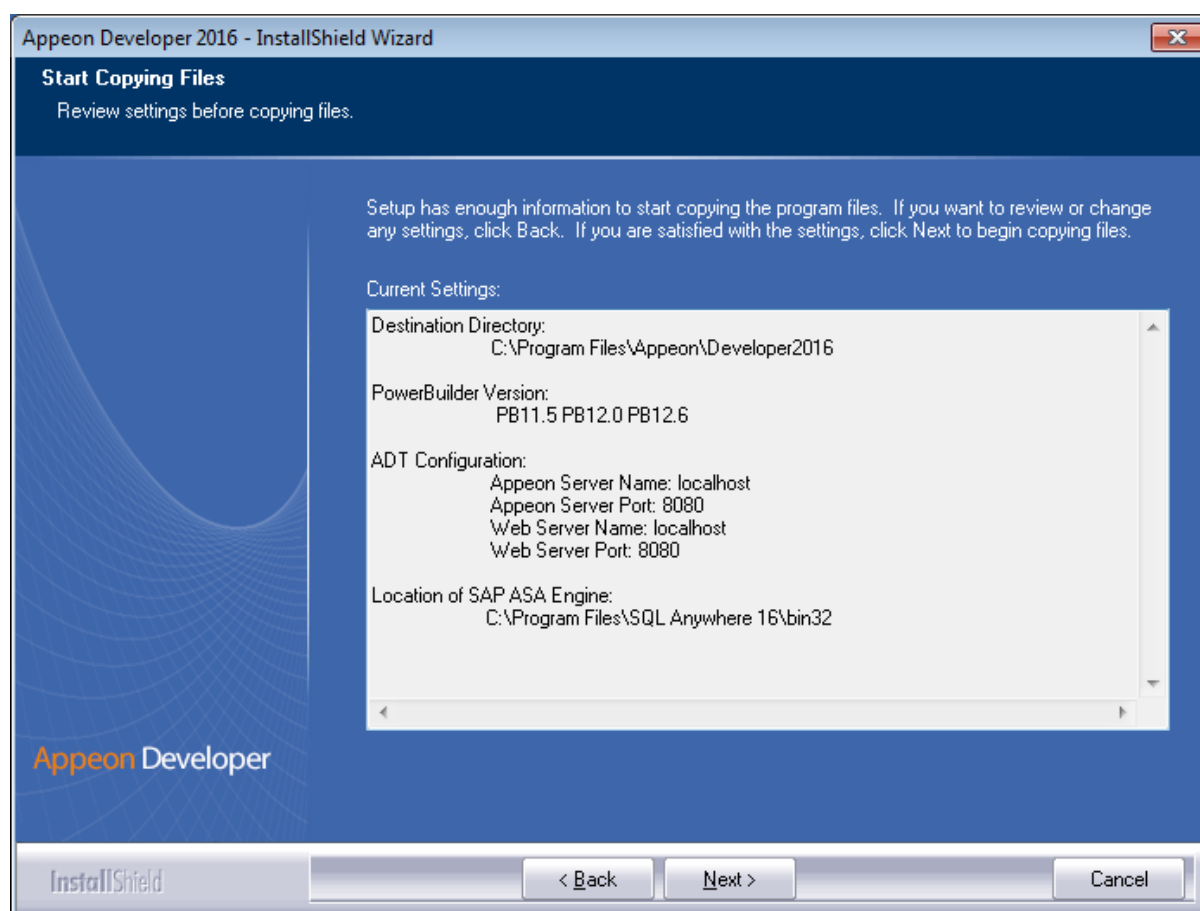
**Figure 4.13: Configure Apeon Developer**

Step 5: Select the location of SAP SQL Anywhere engine (32-bit) for running Apeon Demos.

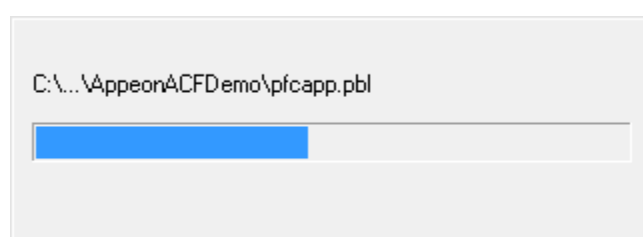
As Apeon Demos connect with a 32-bit SAP SQL Anywhere database, therefore, you will need to select a 32-bit SAP SQL Anywhere engine. Setup lists all copies of 32-bit SAP SQL Anywhere engines detected in your machine.

**Figure 4.14: SQL Anywhere for Appeon Demo**

Step 6: Check the summary of settings.

**Figure 4.15: Summary of settings**

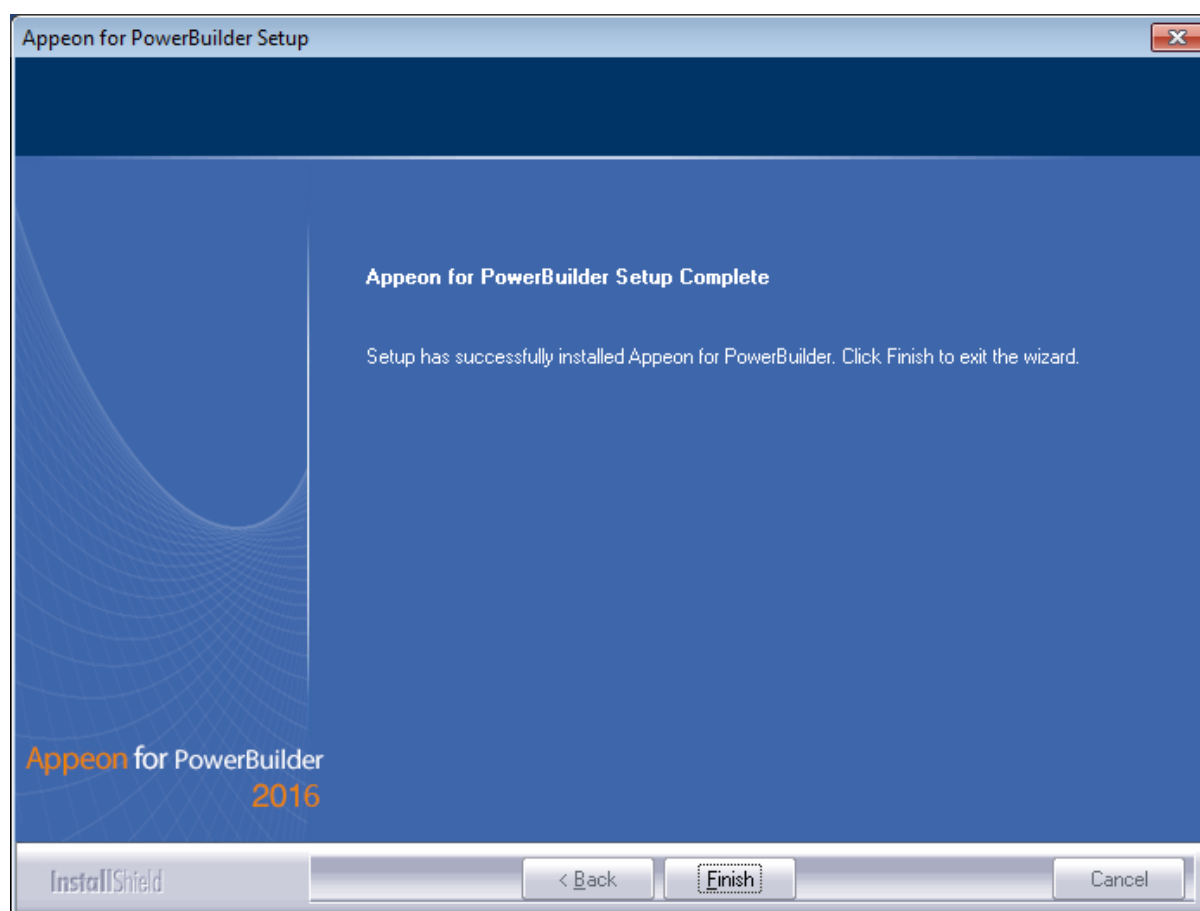
Click **Back** to change any unwanted settings or click **Next** and Setup will begin copying files.

**Figure 4.16: Appeon Developer installation progress**

During the installation process of Appeon Developer, the **Microsoft Visual C++ Redistributable Package** will be automatically installed, to support the running of Appeon Emulator in Appeon Developer.

Step 7: Wait until the installation is complete.

Step 8: Click **Finish** to exit.

**Figure 4.17: Setup Complete**

#### 4.4.4 Appeon Server Web Component installation (for third-party Web servers only)

If you use a third-party Web server (such as Apache or IIS) or set up an individual machine (separate from the application server) as the Web server, you will need to install the Appeon Server Web Component. If not, you do not need to run the installation of the Appeon Server Web Component separately since it is included in Appeon Server.

##### 4.4.4.1 Prerequisites

- Install a third-party Web server that is compatible with the JBoss/WildFly redirector plugin. For a list of compatible third-party Web servers, refer to [\(Optional\) Third-party Web server requirements](#).
- Stop the Web server and any other Windows programs before beginning the installation process.

##### 4.4.4.1.1 Prerequisites if Web Component installed to multiple Web servers

Appeon Server Web Component can be installed to multiple Web servers. Make sure all Web servers meet the above requirements and repeat the installation steps for the Appeon Server Web Component on each Web server.

#### 4.4.4.2 Installation instructions

Step 1: Launch the **Apeon for PowerBuilder 2016 Setup** program and select to install **Apeon Server Web Component** (see [Starting the installation](#)).

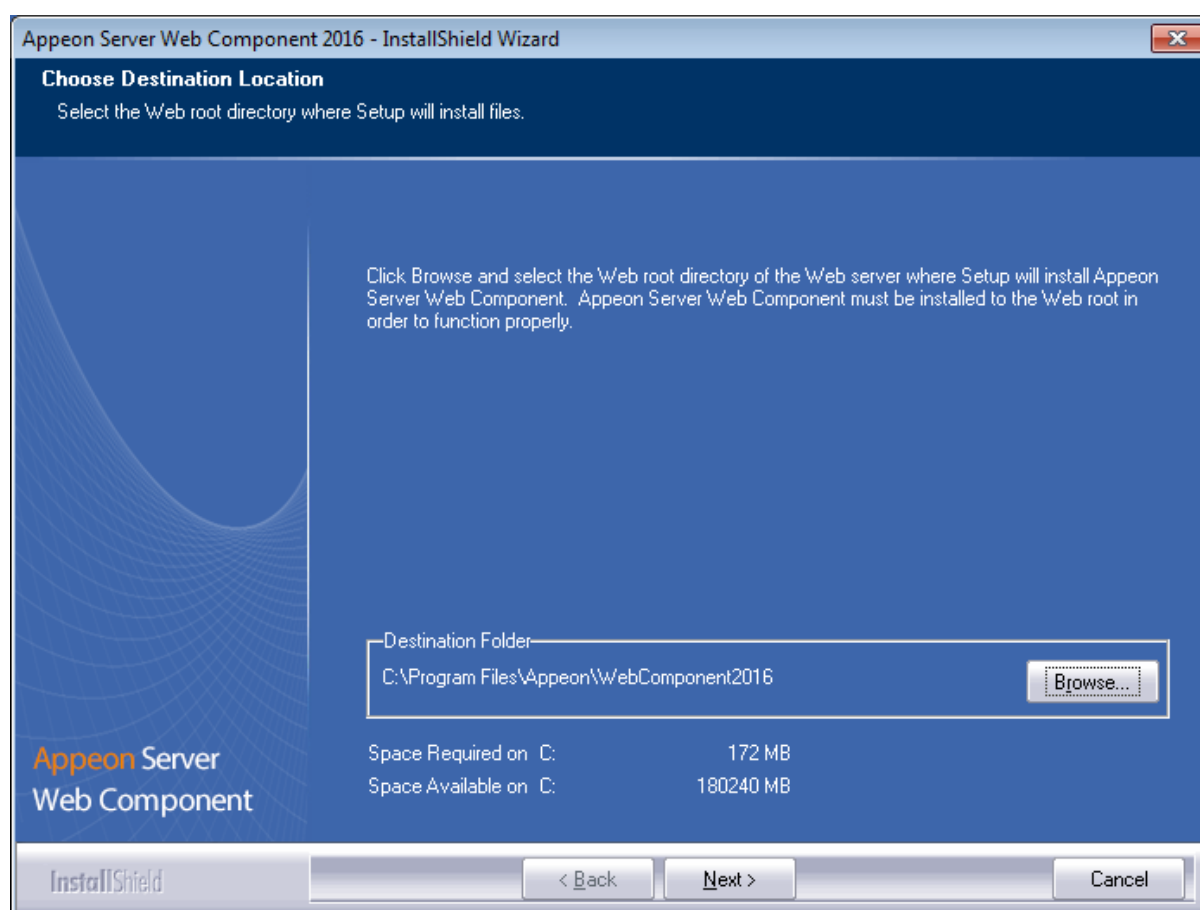
Step 2: Click **Browse** to select the Web root (or document root) for the Web server. Below lists the default Web root (or document root) of the Web server:

Apache 2.0: C:\Program Files\Apache Group\Apache2\htdocs

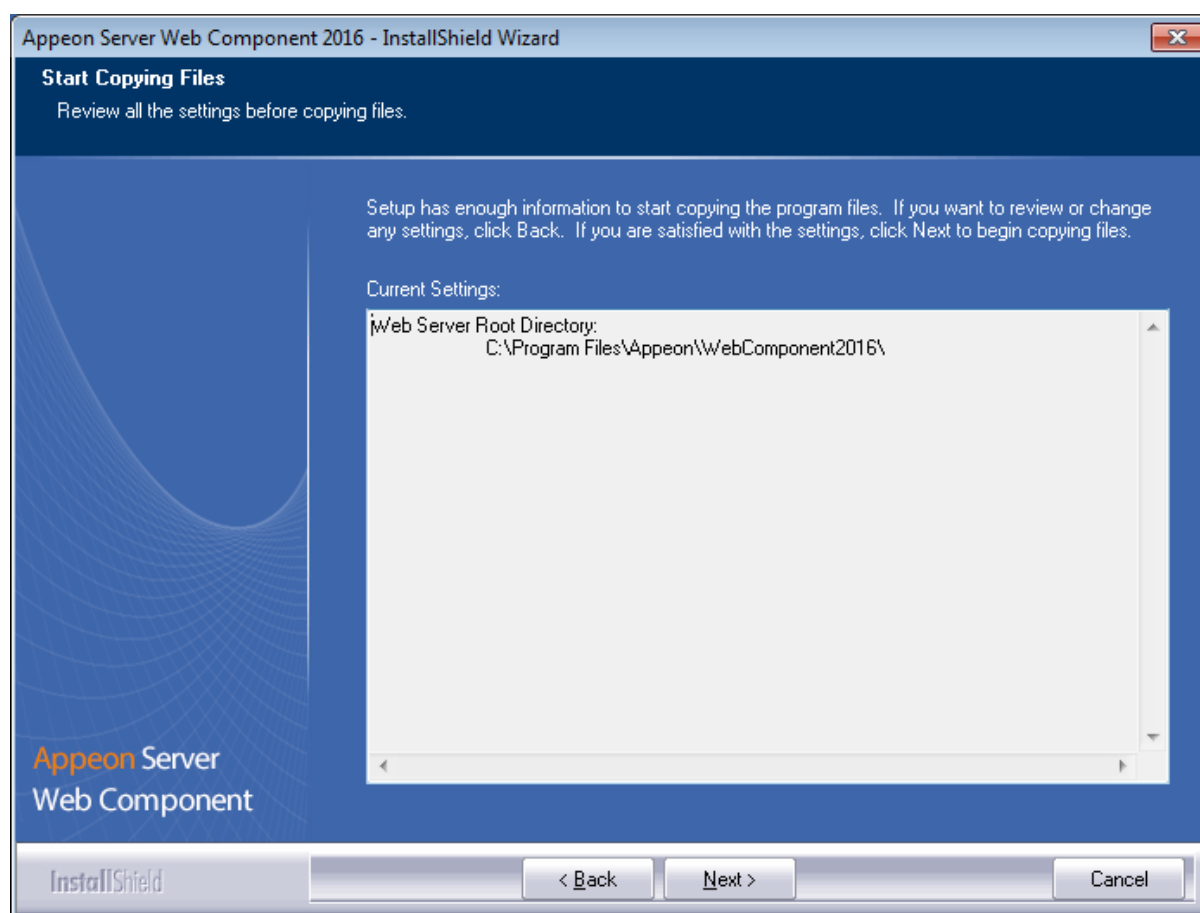
IIS: C:\inetpub\wwwroot

If Apeon Server Web Component is installed to the default path: "C:\Program Files\Apeon\WebComponent2016", instead of the Web root (or document root) of the Web server, you would need to manually copy it to the Web root (or document root) later in order to run the Apeon application.

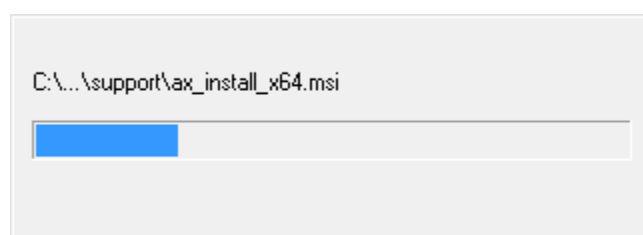
**Figure 4.18: Apeon Server Web Component location**



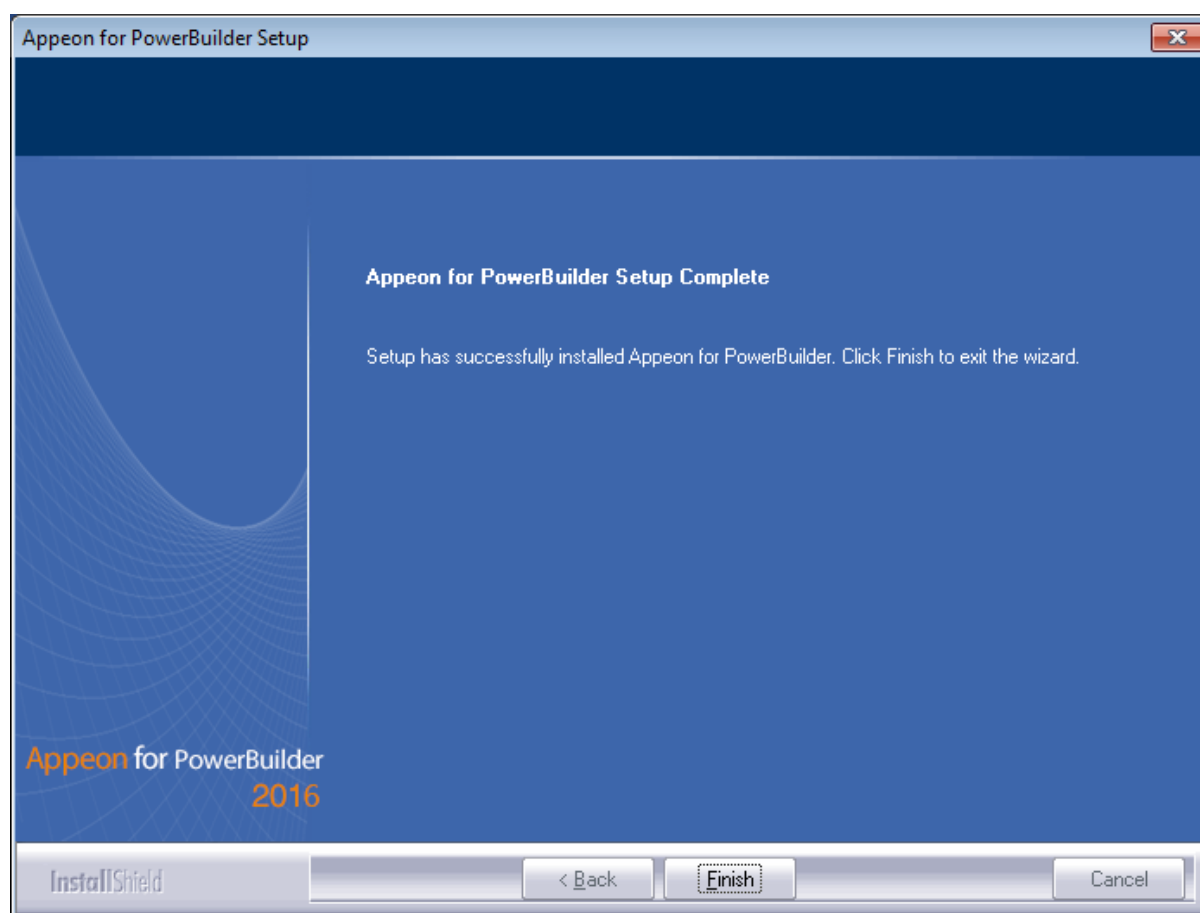
Step 3: Check the summary of settings.

**Figure 4.19: Summary of settings**

Click **Back** to change any unwanted settings or click **Next** and Setup will begin copying files.

**Figure 4.20: Appeon Server Web Component installation progress**

Step 4: Click **Finish** when the installation is complete.

**Figure 4.21: Setup Complete**

#### 4.4.4.2.1 Installing and configuring the Web server redirector plug-in

To ensure the third-party Web server works with Appeon Server, install and configure the Appeon redirector plug-in for the Web server. Instructions for installing and configuring the redirector plug-in are provided in Web Server Configuration Guide.

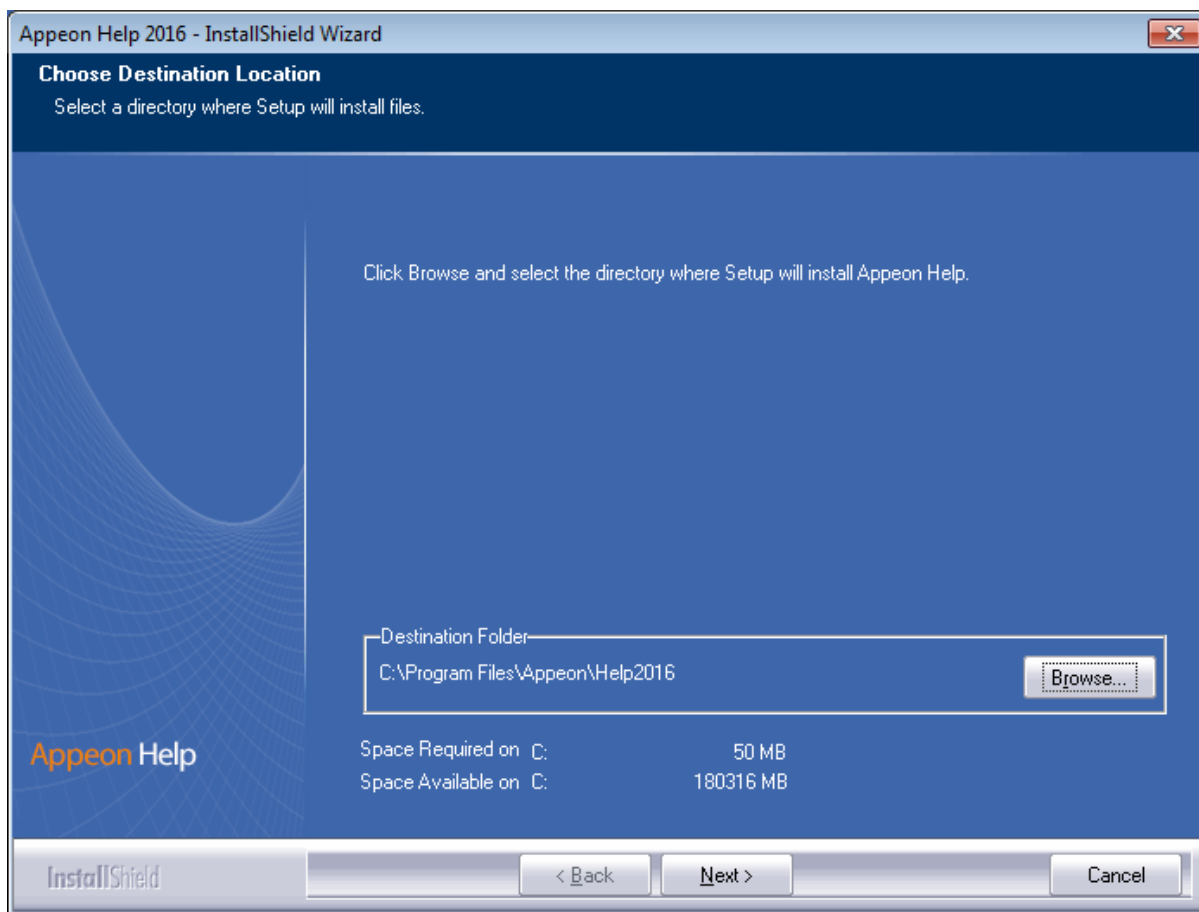
#### 4.4.5 Appeon Help installation

Step 1: Launch the **Appeon for PowerBuilder 2016 Setup** program and select to install **Appeon Help** (see [Starting the installation](#)).

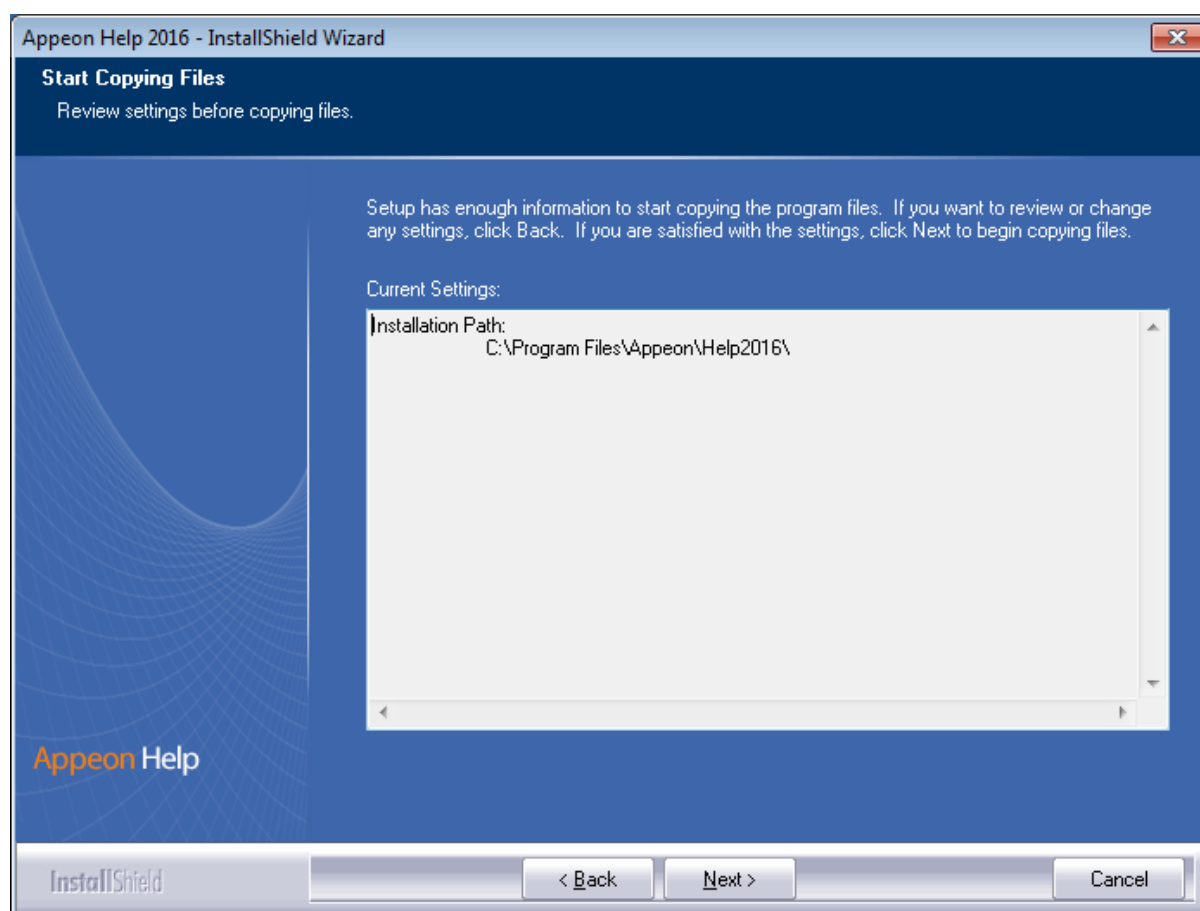
Step 2: Click **Next** to install Appeon Help to the default location, or click **Browse** to select another location.



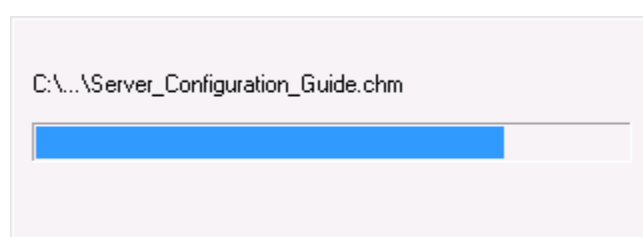
**Figure 4.22: Help location**



Step 3: Check the summary of settings.

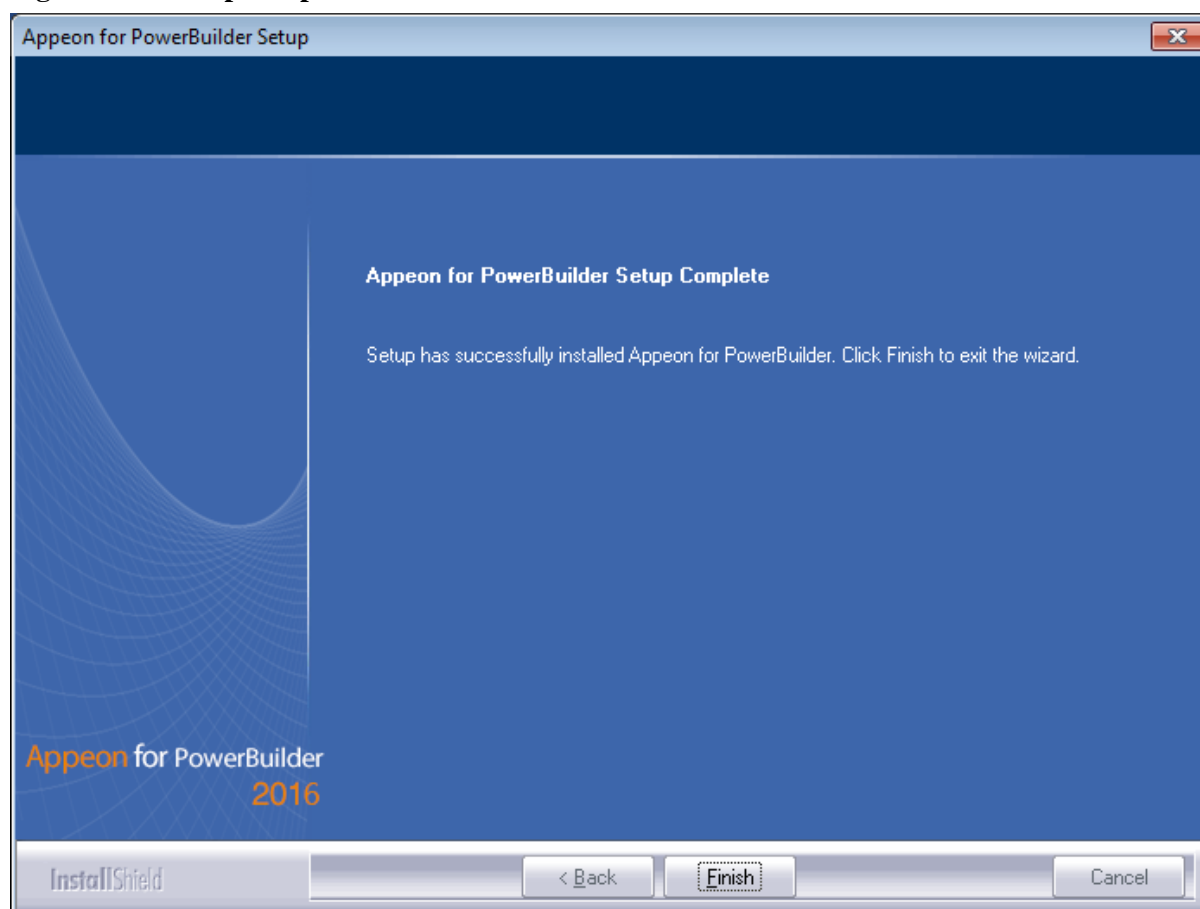
**Figure 4.23: Summary of settings**

Click **Back** to change any unwanted settings or click **Next** and Setup will begin copying files.

**Figure 4.24: Appeon Help installation process**

Step 4: Wait until the installation is complete.

Step 5: Click **Finish** to exit.

**Figure 4.25: Setup complete**

## 4.5 Appeon upgrade installation

### 4.5.1 Before you upgrade

If you have installed Appeon 6.5 or a later version, you can upgrade to Appeon for PowerBuilder 2016, but you cannot upgrade from Appeon 6.2 or an earlier version. If you are using Appeon 6.2 or an earlier version, uninstall it and then install Appeon for PowerBuilder 2016.

Note that applications deployed with the old version and the demo applications must be redeployed with Appeon for PowerBuilder 2016 after the upgrade.

Before upgrading to Appeon for PowerBuilder 2016, upgrade the system environment as required in [Installation requirements](#).

In addition to the system environment requirements, you should meet the installation prerequisites listed in [Appeon new installation](#) before upgrading each of the Appeon components.

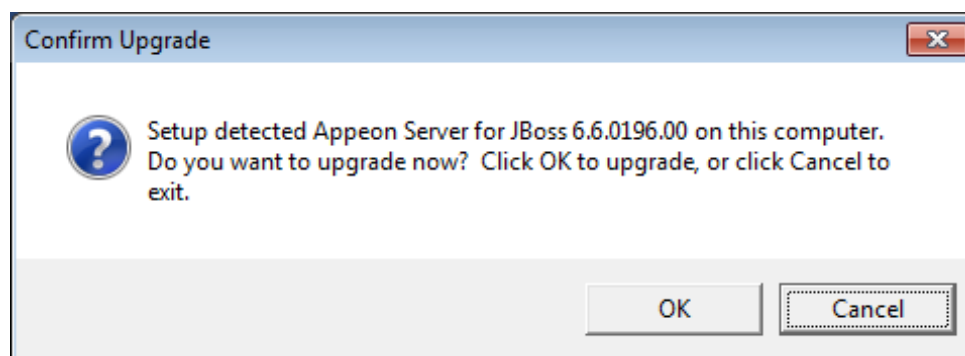
### 4.5.2 Upgrading to Appeon for PowerBuilder 2016

#### 4.5.2.1 Upgrading Appeon Server

Step 1: Launch the **Appeon for PowerBuilder 2016 Setup** program and select to install **Appeon Server for JBoss** (see [Starting the installation](#)).

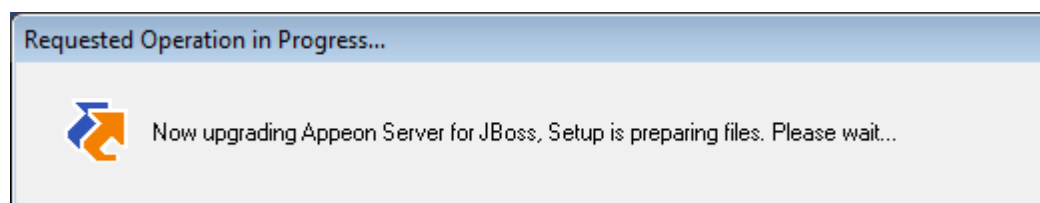
Step 2: Click the **OK** button in the **Confirm Upgrade** message box.

**Figure 4.26: Confirm upgrade**



When the **OK** button is clicked, a message box opens indicating that the upgrade is preparing files.

**Figure 4.27: Setup is preparing files**



The upgrade process uninstalls the old version of Appeon Server, backs up configurations and begins the installation of **Appeon Server** based on the backup information. This will take several minutes.

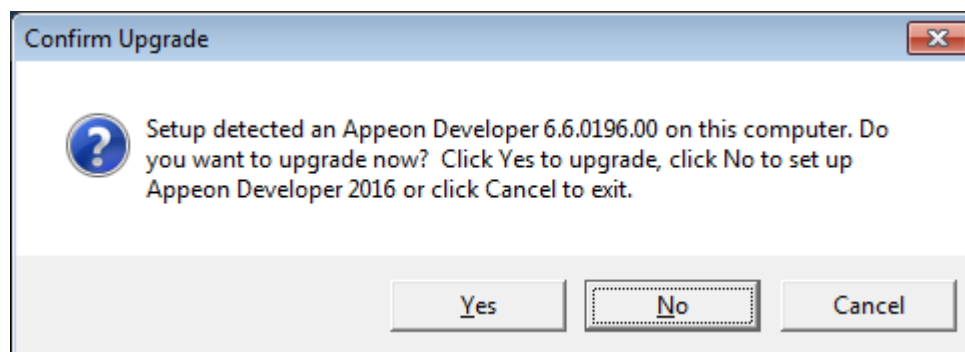
Step 3: Click the **Finish** button when the upgrade is complete.

#### 4.5.2.2 Upgrading Appeon Developer

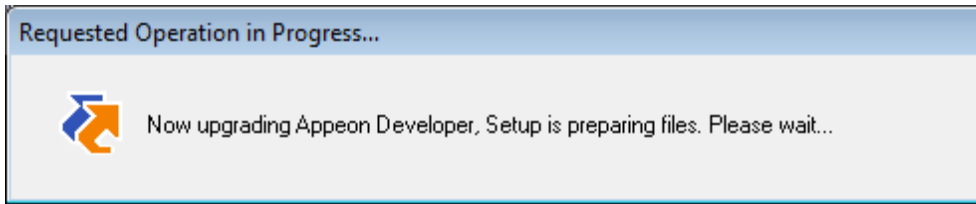
Step 1: Launch the **Appeon for PowerBuilder 2016 Setup** program and select to install **Appeon Developer** (see [Starting the installation](#)).

Step 2: Click the **Yes** button in the **Confirm Upgrade** message box.

**Figure 4.28: Confirm upgrade**



Once you click the **Yes** button, a message box opens indicating that Setup is preparing files.

**Figure 4.29: Setup is preparing files**

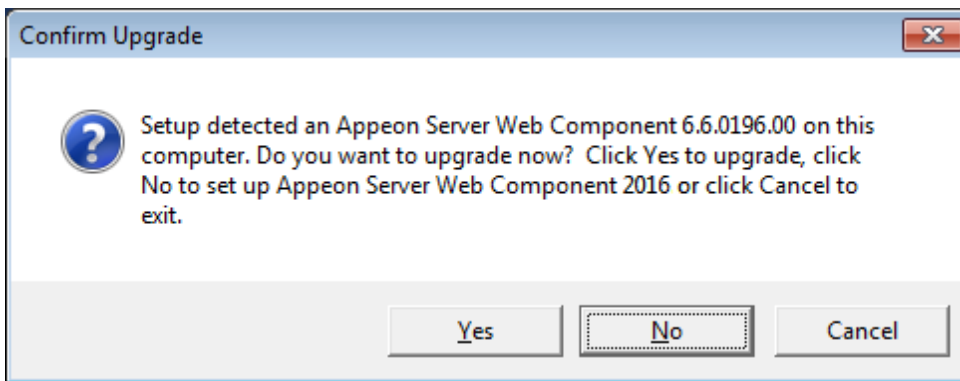
The upgrade process uninstalls the old version of Appeon Developer, backs up configurations then begins the installation of **Appeon Developer** based on the backup information. This will take several minutes.

Step 3: Click the **Finish** button when the upgrade is complete.

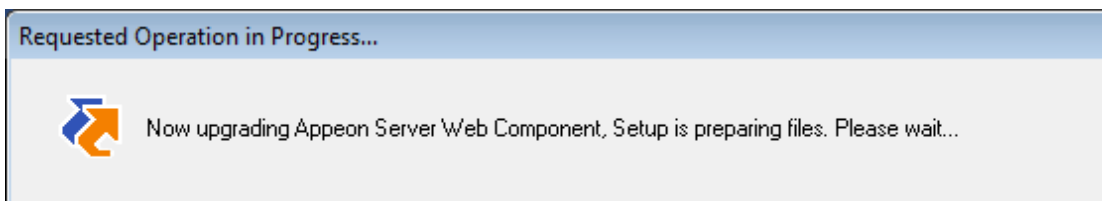
#### 4.5.2.3 Upgrading Appeon Server Web Component

Step 1: Launch the **Appeon for PowerBuilder 2016 Setup** program and select to install **Appeon Server Web Component** (see [Starting the installation](#)).

Step 2: Click the **Yes** button in the **Confirm Upgrade** message box.

**Figure 4.30: Confirm upgrade**

Once you click the **Yes** button, a message box opens indicating that Setup is preparing files.

**Figure 4.31: Setup is preparing files**

The upgrade process uninstalls the old version of Appeon Server Web Component then begins the installation of **Appeon Server Web Component**. This will take several minutes.

Step 3: Click the **Finish** button when the upgrade is complete.

#### 4.5.3 Upgrade configuration settings manually

After the product upgrade, most configurations made in the old version are retained and will continue to work in Appeon for PowerBuilder 2016. However, because the configuration

settings of Apeon for PowerBuilder 2016 have been adjusted, it is recommended that you review the configuration settings in Apeon Developer and Apeon Server AEM to become familiar with the new settings and make sure the old ones are not lost or mis-configured.

After verifying all settings, applications deployed with the old version and Apeon Demos must be redeployed in Apeon for PowerBuilder 2016.

Note: If the application uses the Apeon Workarounds PBL, you must use the new Apeon Workarounds PBL to replace those of the old version.

## 4.6 Starting/Stopping Apeon Server

### 4.6.1 Starting Apeon Server

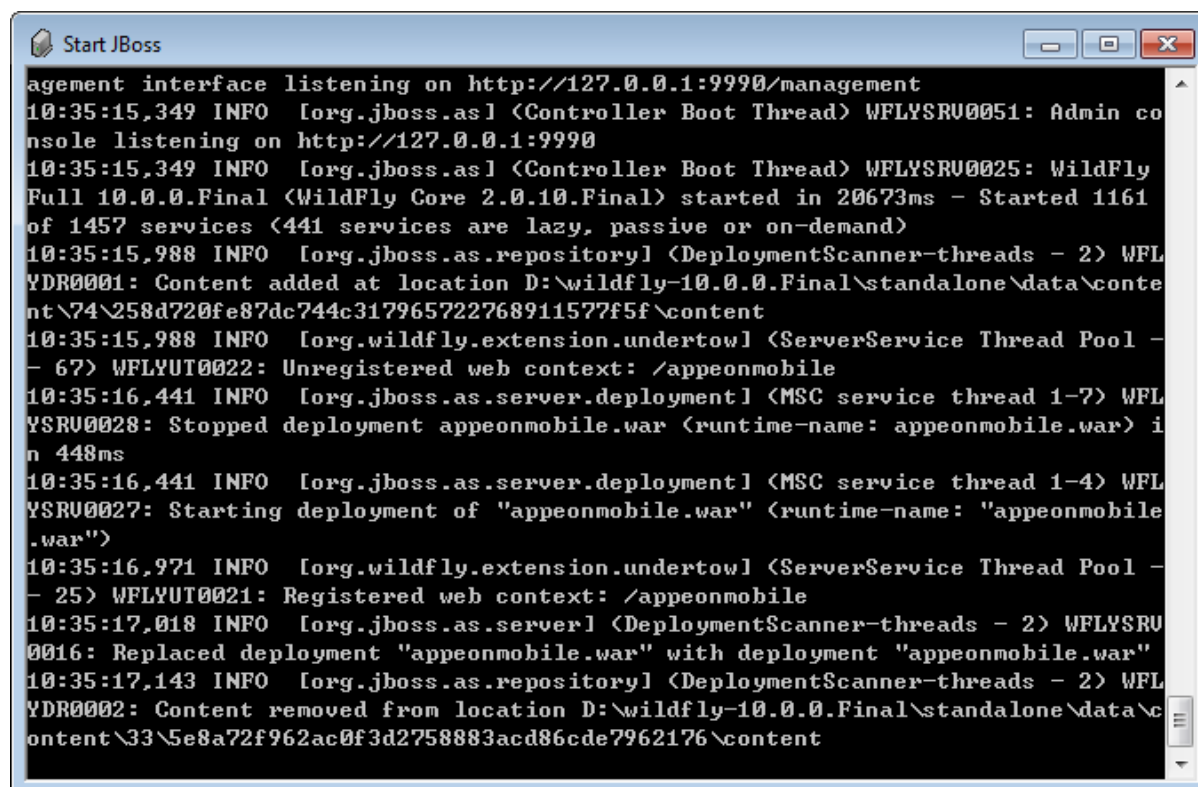
Once Apeon Server has been installed and integrated into WildFly or JBoss EAP, starting WildFly or JBoss EAP will automatically start Apeon Server. To start JBoss/Apeon Server:

Open the Windows **Start** menu and select **Programs | Apeon for PowerBuilder 2016 | Apeon Server for JBoss | Instances | InstanceName | Start JBoss**.

For Windows Vista/7/2008/8/8.1 with UAC turned on, if you are running on a non-Administrator Windows account (such as an Administrators group member or a User group member), please right click the **Start JBoss** shortcut menu and then select **Run as administrator** to start JBoss/Apeon Server.

When the server startup process is completed, the following message will appear in the command window.

Figure 4.32: Start JBoss



```
agement interface listening on http://127.0.0.1:9990/management
10:35:15,349 INFO [org.jboss.as] (Controller Boot Thread) WFLYSRU0051: Admin console listening on http://127.0.0.1:9990
10:35:15,349 INFO [org.jboss.as] (Controller Boot Thread) WFLYSRU0025: WildFly Full 10.0.0.Final (WildFly Core 2.0.10.Final) started in 20673ms - Started 1161 of 1457 services (441 services are lazy, passive or on-demand)
10:35:15,988 INFO [org.jboss.as.repository] (DeploymentScanner-threads - 2) WFLYDR0001: Content added at location D:\wildfly-10.0.0.Final\standalone\data\content\74\258d720fe87dc744c317965722768911577f5f\content
10:35:15,988 INFO [org.wildfly.extension.undertow] (ServerService Thread Pool - 67) WFLYUT0022: Unregistered web context: /apeonmobile
10:35:16,441 INFO [org.jboss.as.server.deployment] (MSC service thread 1-7) WFLYSRU0028: Stopped deployment apeonmobile.war (runtime-name: apeonmobile.war) in 448ms
10:35:16,441 INFO [org.jboss.as.server.deployment] (MSC service thread 1-4) WFLYSRU0027: Starting deployment of "apeonmobile.war" (runtime-name: "apeonmobile.war")
10:35:16,971 INFO [org.wildfly.extension.undertow] (ServerService Thread Pool - 25) WFLYUT0021: Registered web context: /apeonmobile
10:35:17,018 INFO [org.jboss.as.server] (DeploymentScanner-threads - 2) WFLYSRU0016: Replaced deployment "apeonmobile.war" with deployment "apeonmobile.war"
10:35:17,143 INFO [org.jboss.as.repository] (DeploymentScanner-threads - 2) WFLYDR0002: Content removed from location D:\wildfly-10.0.0.Final\standalone\data\content\33\5e8a72f962ac0f3d2758883acd86cde7962176\content
```

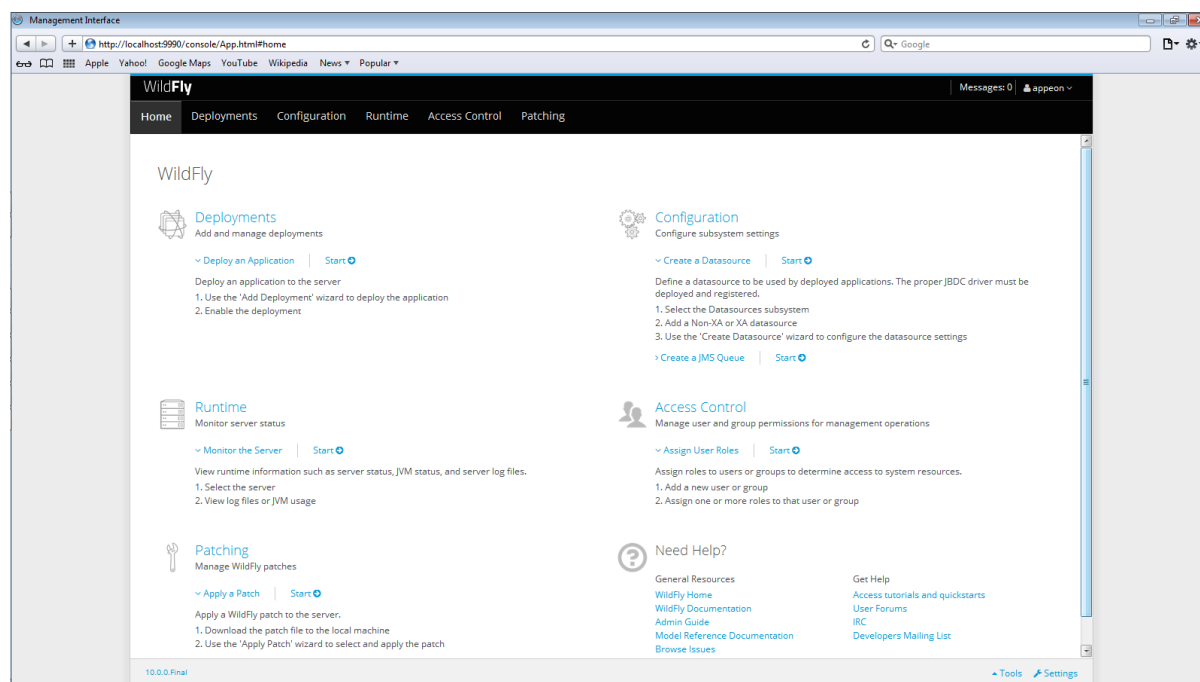
## 4.6.2 Logging in to WildFly or JBoss EAP Management Interface

Step 1: From the computer on which WildFly or JBoss EAP is running, open the Windows **Start** menu and select: **Programs | Apeon for PowerBuilder 2016 | Apeon Server for JBoss | Instances | InstanceName | JBoss Manager**.

Step 2: Input the user name and password to log in to the management interface.

Below is the main page of the WildFly Management Interface after login.

**Figure 4.33: WildFly Management Interface main page**



## 4.6.3 Stopping Apeon Server

Stopping WildFly or JBoss EAP will shut down Apeon Server.

If you have any problems in using WildFly or JBoss EAP, refer to the JBoss documents at <https://docs.jboss.org/author/dashboard.action>.

## 4.7 Troubleshoot Apeon installation problems

Chapter 1, *Troubleshooting Apeon Install* in *Troubleshooting* provides solutions to some common problems with installing Apeon for PowerBuilder. If you could not find a solution for your problem, it could be because it is a new problem or an intricate problem that happens only under specific circumstance or environment. In both cases, it is highly recommended that you follow steps below to generate and send the log file to us for investigation.

Step 1: Go to the **Apeon** folder in the installation package, open the **Product.ini** file in the text editor, find the **RecordDllLog** parameter in this file and set the value to **1** (this will enable the logging functionality), by default the value is **0** (which disables logging).

For example:

```
[DllLog]
RecordDllLog=1
```

**Step 2:** Run the installation package and reproduce the installation error.

**Step 3:** Go to ...\\System32\\AppeonInstallLog (or ...\\SystemWOW64\\AppeonInstallLog\\ in 64-bit machine) and find the log files there.

Each Appeon component will have a separate log file, for example, AppeonADT2014.txt for Appeon Developer, AppeonDNS2014.txt for Appeon Server.



## 5 Configuring Appeon Server Cluster

Appeon provides its own tools and plug-ins to configure an Appeon Server cluster and implement the load balancing and failover functionalities. An Appeon Server cluster is essentially a group of JBoss/WildFly application servers, each with Appeon Server and Appeon plug-in installed.

Following are high level steps for configuring an Appeon Server cluster. For detailed instructions, please refer to Chapter 6, *Tutorial 5: Configure Appeon Server Cluster* in *Appeon Mobile Tutorials (Mobile only)*. The instructions are exactly the same for Appeon Web and Appeon Mobile.

1. Install **Appeon Server** to multiple WildFly or JBoss EAP application servers.
2. Create **Appeon Server cluster** in AEM.
3. Configure the **Web server** for the Appeon Server cluster.
4. Install an Appeon application to the Appeon Server cluster and Web server(s).

## 6 Post-Installation Configuration Tasks

### 6.1 Overview

The previous chapters provide instructions on how to set up Apeon system architecture, including installing Apeon for PowerBuilder components, as well as configuring Apeon Server cluster. Once the Apeon system is set up and before you start deploying applications, the post-installation configuration tasks listed in the following table will help ensure that the deployed applications run as desired. Post-installation configuration tasks refer to configurations required for Apeon system architecture that affect the running of all applications but do not include configuration tasks performed in Apeon Developer and Apeon Enterprise Manager for specific applications.

**Table 6.1: Post-installation tasks**

Task	Description	Detailed Instructions Given in...
Configuration for the Web client PC	The IE security settings and Windows login user privileges may prevent downloading the Apeon Xcelerator plug-in for the Web application.	<a href="#">Configuration for client machine</a>
System language setting	Configuration required for the Web client PC, Apeon Server and database server.  The operating system language settings can affect the characters that are displayed in the Web application.	<a href="#">System language settings</a>
Database JDBC driver preparation	Configuration required for Apeon Server.  You should copy the corresponding JDBC driver files for the database server in use to the JBoss/WildFly server installation folder in the machine hosting Apeon Server.	Section 4.2.4, “JDBC driver preparation” in <i>Apeon Server Configuration Guide for J2EE</i>
Configuration for supporting DataWindow Data Cache feature	Configuration required for database server and Web server.  The DataWindow Data Cache feature can cache DataWindow data that are frequently used on the Web server to improve runtime performance, but will not work until you fulfill the configuration requirements for database server(s) and Web server(s).  This feature is not available for Web servers running on Unix/Linux.	Section 5.4.8.3, “DataWindow Data Cache” in <i>Apeon Server Configuration Guide for J2EE</i>
Configuration for supporting dynamic DataWindows	Configuration required for database server.	Section 11.5, “Dynamic DataWindow” in <i>Supported PB</i>

Task	Description	Detailed Instructions Given in...
	Configuration at the database server is required for support of dynamic DataWindows.	<i>Features for Apeon Web (Web only)</i>
Configuration for fixing an ASE issue	Apeon provides several SQL files for you modifying the chain modes of stored procedures in ASE database to avoid the following error:  "Select error: Stored procedure... may be run only in unchained transaction mode"	Section 4.6.2, "ASE Chained mode issue" in <i>Troubleshooting</i>

## 6.2 Configuration for Web client PC

Running the deployed Web application on the client machine is dependent on the Apeon Xcelerator plug-in. To ensure (only for the first time) the Apeon Xcelerator plug-in can be downloaded and installed automatically when the Web application is run, the following configuration on the client machine is required.

For more information about the Apeon Xcelerator plug-in and the manual installation method, refer to Section 5.1.2, "Installing Apeon Xcelerator plug-in" in *Supported PB Features for Apeon Web (Web only)*.

### 6.2.1 Verifying Web browser settings

There are a few settings in the Web browser that may affect the running of the Apeon Web application, such as the JavaScript and the plug-in. By default, these settings are enabled (appropriate for running the Web application) in Edge/Chrome/Firefox/Opera except Internet Explorer. Normally you would not need to go through the following section if you use Edge/Chrome/Firefox/Opera, unless you encounter problems when running the Web application. However, if you use Internet Explorer, you are recommended to configure Internet Explorer according to the following section.

#### 6.2.1.1 Verifying Chrome/Firefox/Opera settings

If you use Chrome/Firefox/Opera as the Web browser, you should be able to directly run the Apeon Web application in it without any problems, with the default settings of these browsers, however, if you encounter runtime problems, or if you have changed the default settings before, you are recommended to double check that the following two settings are enabled in the browser:

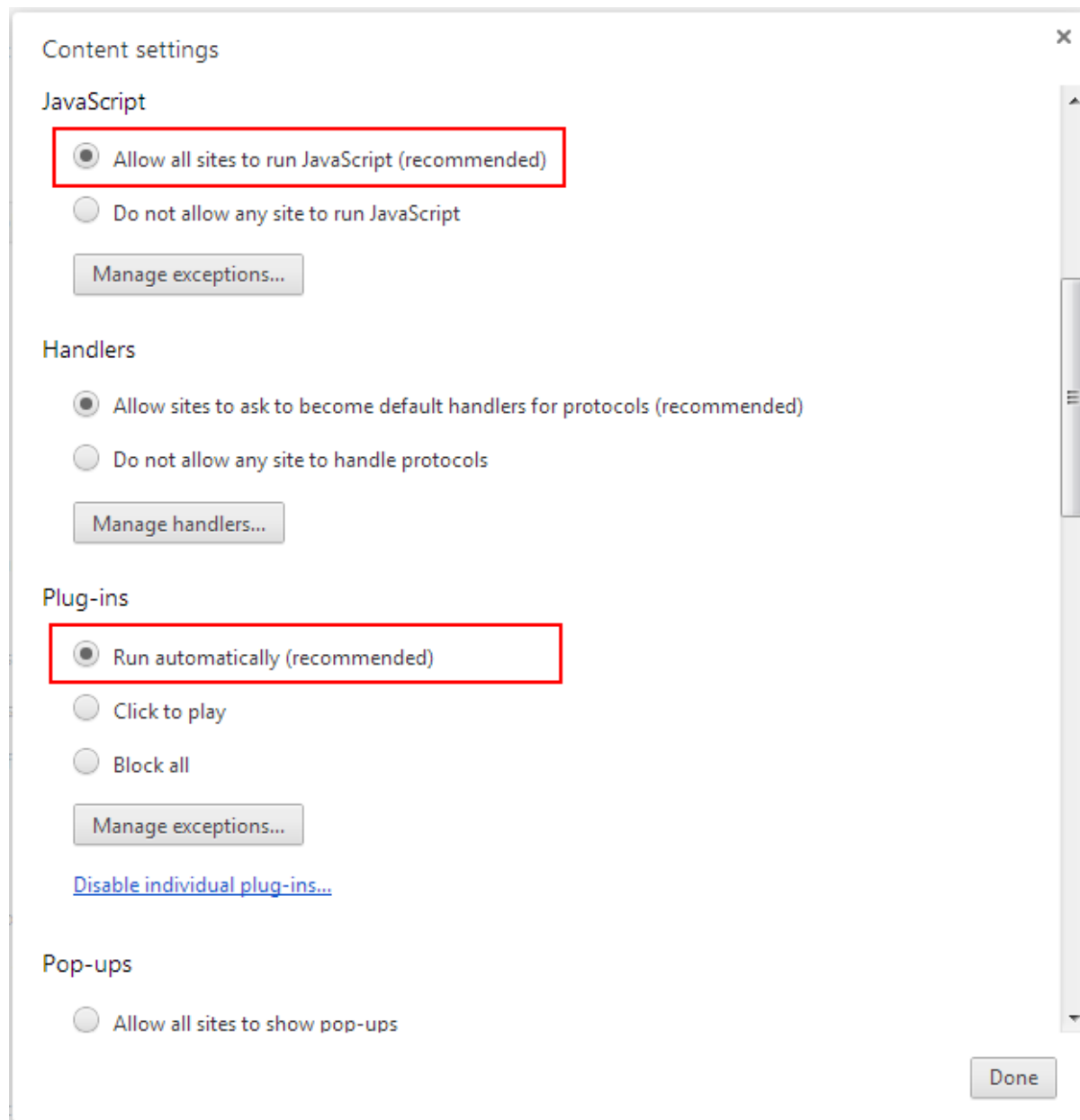
- Enable JavaScript
- Enable plug-in

For Firefox, these two settings are automatically enabled and cannot be changed manually. Therefore, you normally need not to verify the settings in Firefox.

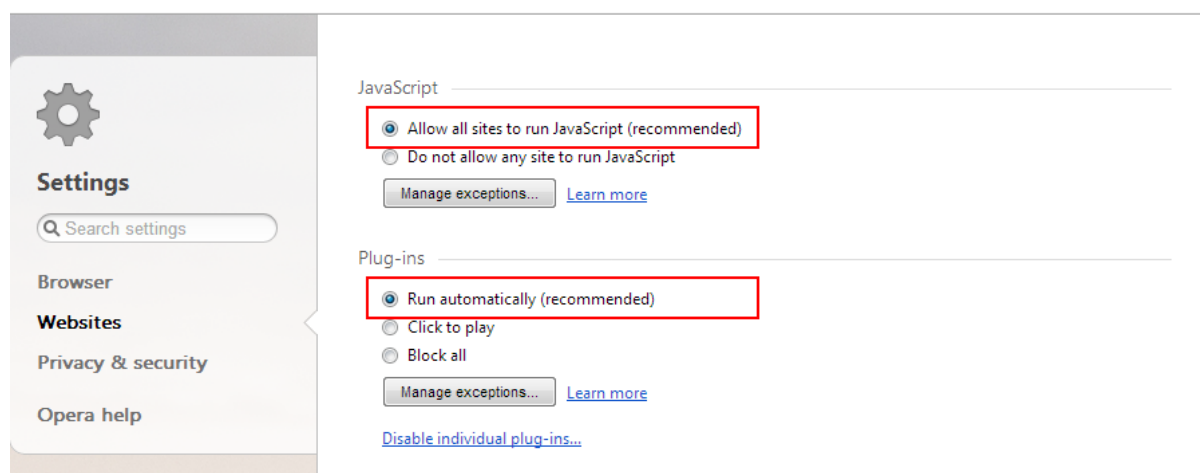
For Chrome, go to **Settings**, then click the **Show advanced settings** link, then click the **Content Settings** button under **Privacy**, and then verify the settings are enabled. If you have

to disable these two settings for some reason, then make sure you add the URL of the Apeon Web application to the exception list.

**Figure 6.1: Settings in Chrome**



For Opera, go to **Settings**, then select **Websites**, and then verify the settings are enabled. If you have to disable these two settings for some reason, then make sure you add the URL of the Apeon Web application to the exception list.

**Figure 6.2: Settings in Opera**

### 6.2.1.2 Configuring IE settings

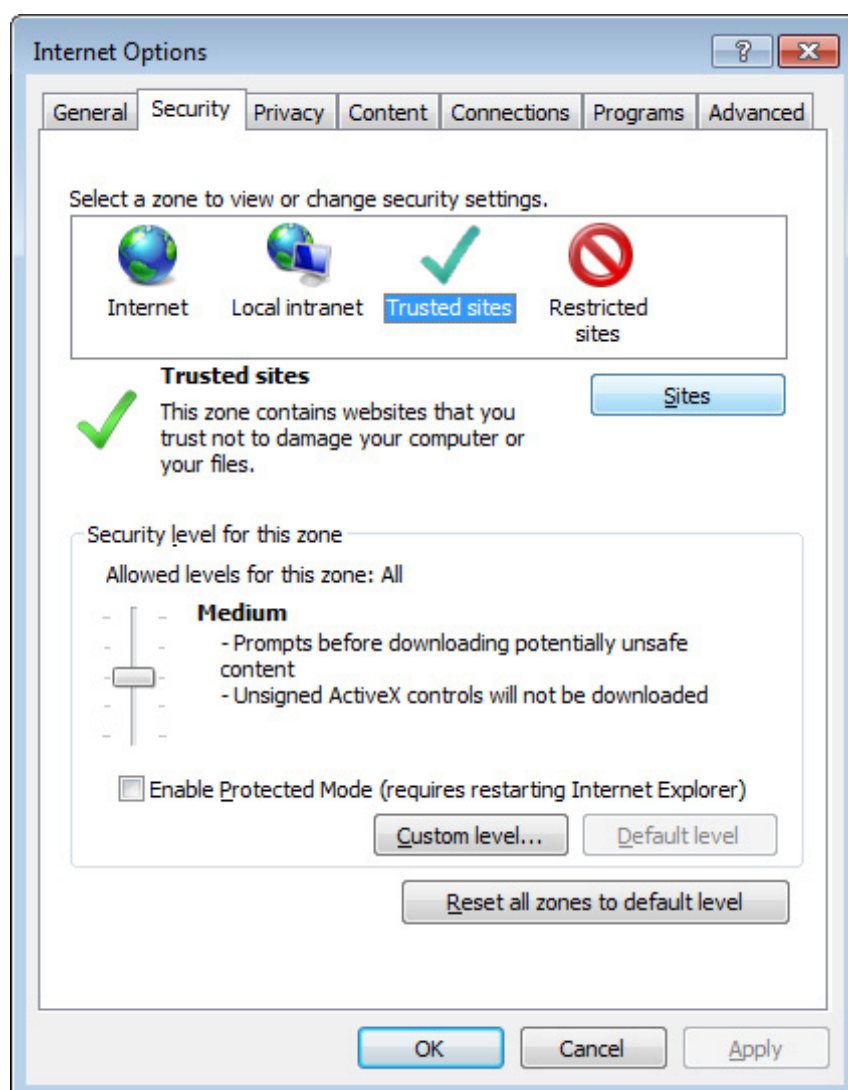
If you use Internet Explorer, we recommend you add the URL of the deployed application to the **Trusted Sites** zone in Internet Explorer, because the default security settings of this zone are appropriate for downloading and installing the Appeon Xcelerator plug-in. However, if you do not want to add the URL to the Trusted Sites zone, you will need to make sure the security settings (listed in Step 4 below) are enabled for the appropriate zone. The following are detailed steps to add the URL to the Trusted Sites zone.

Step 1: In Internet Explorer, on the **Tools** menu, click **Internet Options**.

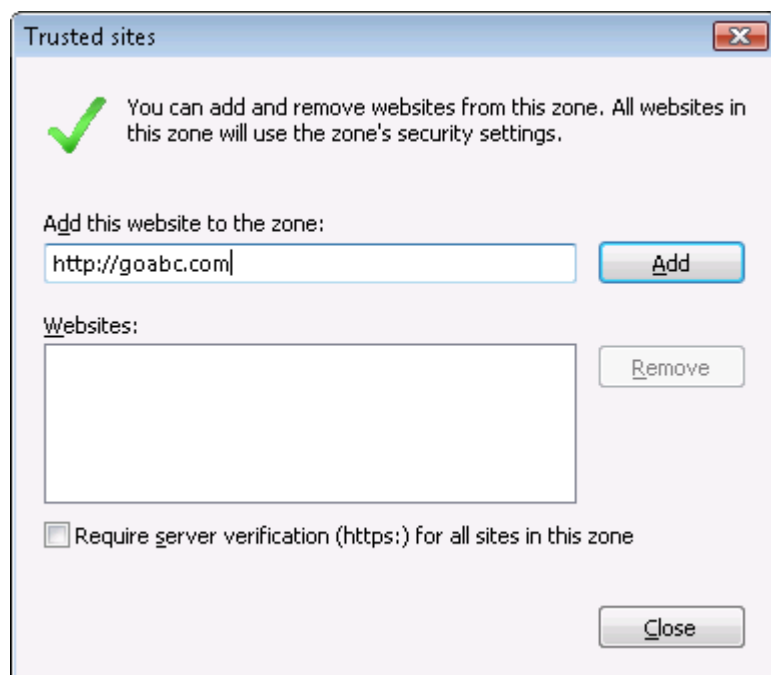
Step 2: In the Internet Options window, select the **Security** tab. Then select the **Trusted sites** Web content zone, and click the **Sites** button.

**Note:** **Enable Protected Mode** on the **Security** tab should not be selected (it is not selected by default). If there is any reason this option must be turned on, please make sure to follow the instructions in Section 4.1.3, "'Failed to get resource from Appeon Server' error" in *Troubleshooting* to resolve the issue caused by this option.

For IE 11, you should also make sure both "**Enable Enhanced Protected Mode**" and "**Enable 64-bit processes for Enhanced Protected Mode**" (the latter is available in Windows 8.1 only) are unchecked in the **Advanced** tab.

**Figure 6.3: IE security settings**

Step 3: In the Trusted sites window, input the URL of the deployed application to the "Add this website to the zone" box. Uncheck the checkbox of "Require server verification (https:) for all sites in this zone". Click **Add** then click **Close** to return to the Internet Options window.

**Figure 6.4: Trusted sites**

Step 4: Click **OK** to save the settings and close IE.

### 6.2.2 Logging in as administrator or normal user

No special privilege is required to download and install the Appeon Xcelerator plug-in, no matter you use Edge, Chrome, Firefox, Opera, or Internet Explorer, which means, you can log into the Windows OS with any user.

Note when running the Appeon Web application for the first time, the Web browser would prompt you to run the Appeon cross-browser plug-in with two options: "**only this time**" or "**always run for this site**". It is highly recommended that you select the "**always run for this site**" option, especially for Chrome, because the application will fail to run in Chrome if you select "**only this time**".

## 6.3 System language settings

Sometimes the operating system language settings can affect the characters displayed in the deployed application. To avoid any such display issues, verify that:

- The language of the data in the database used by the application matches the operating system language settings on the machine where Appeon Server is installed.
- The language of the data in the database used by the application matches the Windows language settings on each Client machine where the Web application will be viewed.
- The language of the data in the database used by the Appeon-deployed Web application matches Windows language settings on the machine where Appeon Developer is installed.

### To set the language settings in Windows operating system:

Step 1: Open Windows Start Menu and select Settings | Control Panel.

Step 2: Double-click **Regional Options**.

Step 3: Select the appropriate language from the **Your locale** DropDownListBox.

Step 4: Click the **Set Default** button. The Select System Local window displays.

Step 5: Select the appropriate locale. Verify that it is the same as that selected in the **Your locale** list box in Regional Options.

Step 6: Click **OK** to return to the Regional Options window.

Step 7: Verify that the language selected in the **Your locale** list box and the language checked as default in **Language settings for the system** settings are the same. The language can be from different regions as long as it is the same language.

Step 8: Click **Apply** and **OK** in the Regional Options window to accept the settings.

**To set the language settings in Unix/Linux operating system:**

Step 1: Change to the etc/default folder and edit the init file.

Step 2: Set the value of the LANG command to the appropriate language. You can use command "locale -a" to view the locale languages supported by the operating system.



## 7 Uninstalling Appeon for PowerBuilder 2016

### 7.1 Overview

To uninstall Appeon for PowerBuilder 2016, uninstall each of its components separately. The uninstall process reverses the actions performed by the Appeon setup program. Uninstall does not delete any files created by the user in Appeon, such as application files generated while deploying the demo applications or your own application to Appeon Server. Delete these files manually from the Web root (or document root) of the Web server.

Do not try to reverse installation steps or uninstall Appeon by deleting files manually or changing your Registry. This can create serious problems with your system in general and new Appeon releases in particular.

There are two ways to uninstall Appeon components:

- Launch the uninstall program of the Appeon component from Windows **Start** menu | **Programs** | **Appeon for PowerBuilder 2016**.
- Launch **Add/Remove Programs** from the Windows **Control Panel**. Select the Appeon component and click **Change/Remove** to begin the uninstall process.

### 7.2 Uninstalling Appeon Developer

Step 1: Shut down PowerBuilder and any other SAP software.

Step 2: Verify that Appeon Developer and other Windows programs have been shut down.

Open **Windows Task Manager**, switch to the **Process** tab and verify that the following processes are not running. If they are running, end them:

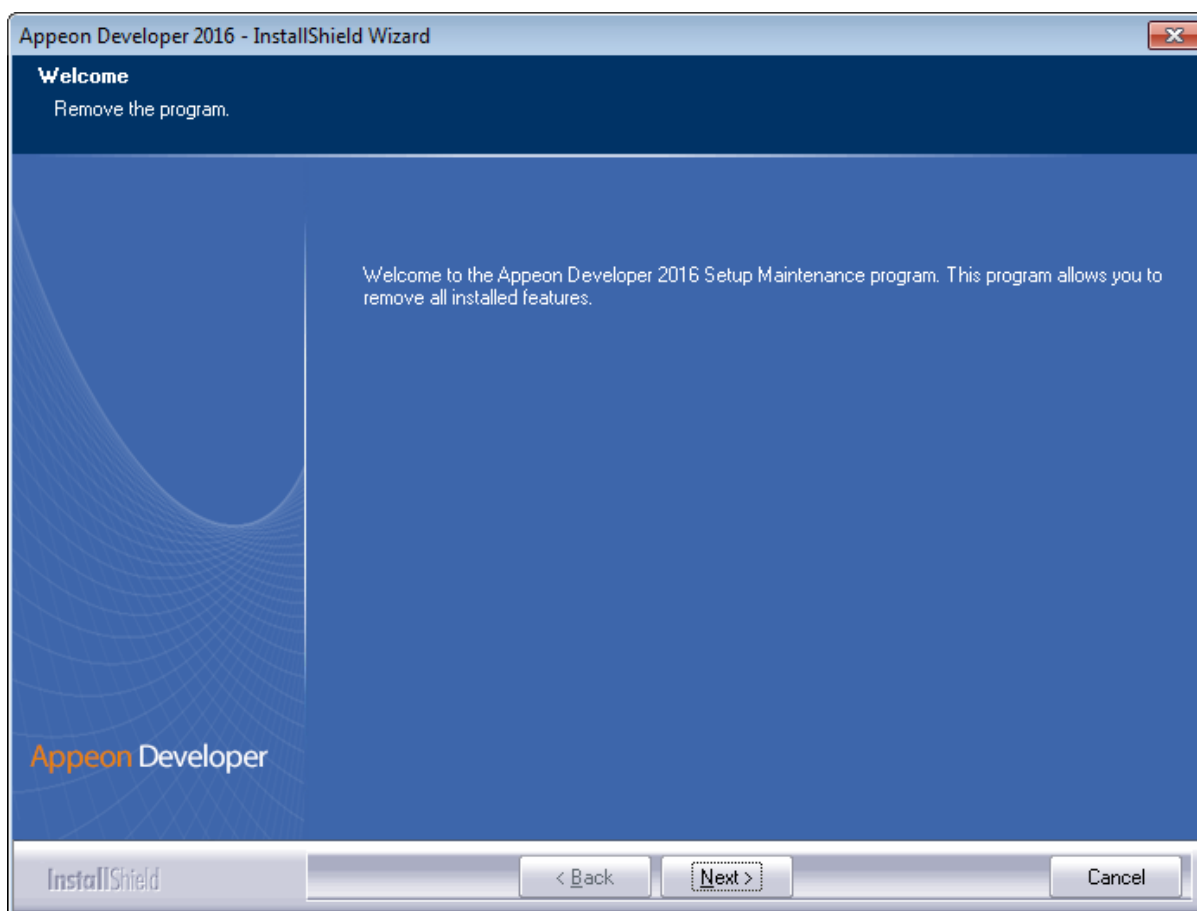
- **EonADTxx.exe**
- **pbxxx.exe**
- **java.exe, jagsrv.exe** and **jagsrvagent.exe**
- **dbengx.exe** and **dbsrvx.exe**

If EonADTxx.exe is running when attempting to uninstall Appeon Developer, the Appeon setup program will detect that the processes are running and an error message will appear.

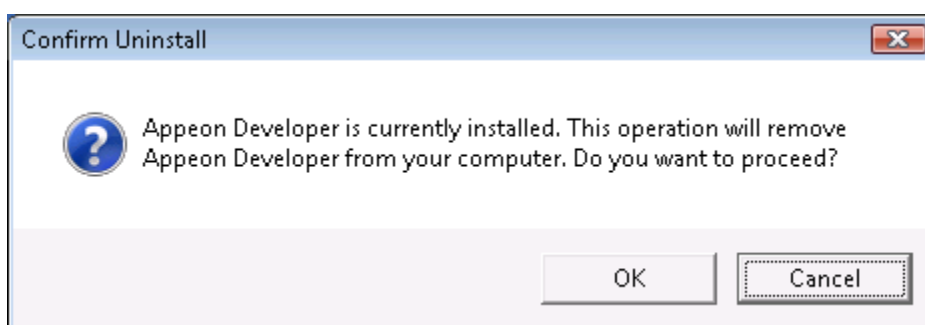
End the processes in the **Processes** tab of **Windows Task Manager** before clicking the **OK** button on the message box. If you click **OK** before ending the process, the message box will continue to display and will not allow you to continue until the process is ended. In this case, click **Cancel** in the message box, end the process and begin the uninstall process again.

Step 3: Select Windows **Start** | **Control Panel**; under **Programs**, click **Uninstall a program**; select **Appeon Developer 2016** and click **Uninstall** to begin the uninstall process.

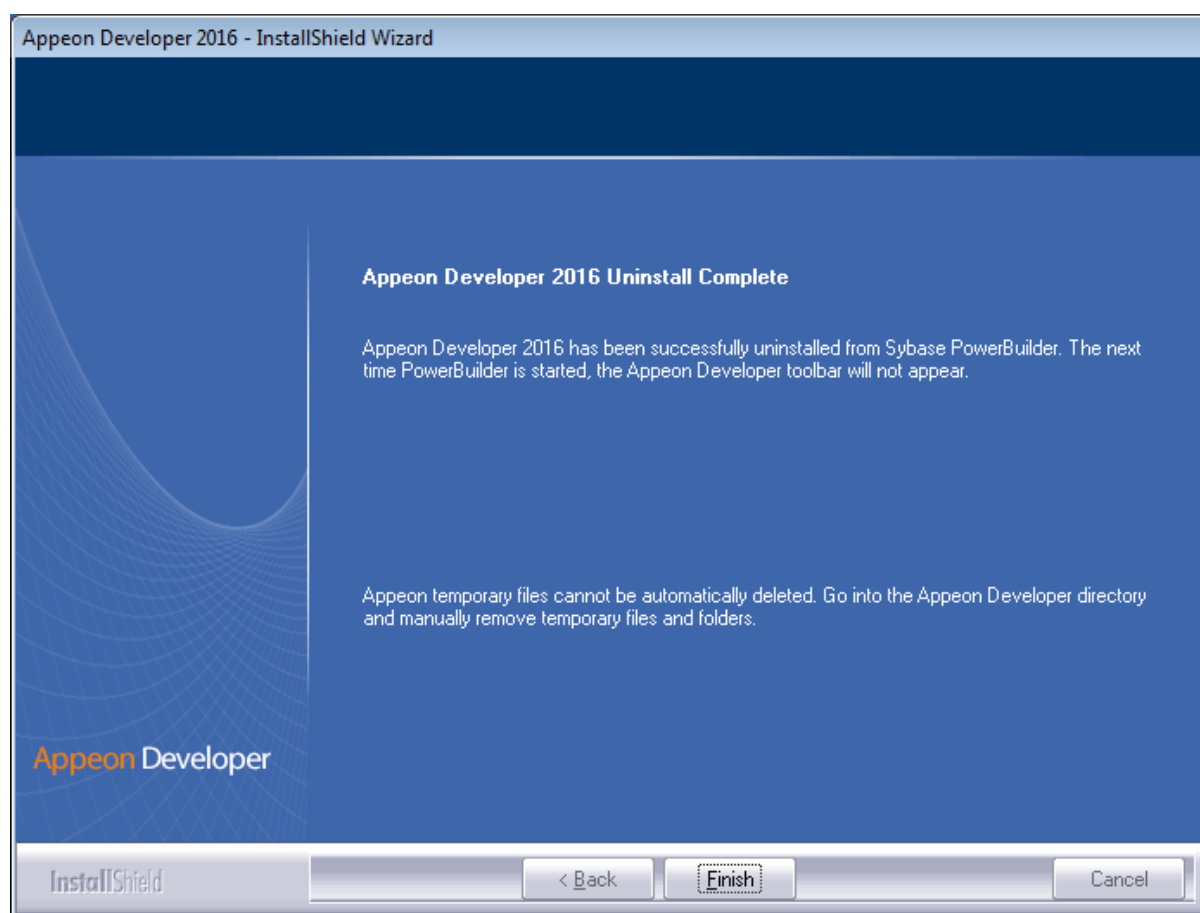
Step 4: Click **Next**.

**Figure 7.1: Remove Appeon Developer**

Step 5: Click **OK** to confirm the removal of Appeon Developer.

**Figure 7.2: Confirm uninstall**

Step 6: Click **Finish** when uninstall is complete.

**Figure 7.3: Appeon Developer uninstall complete**

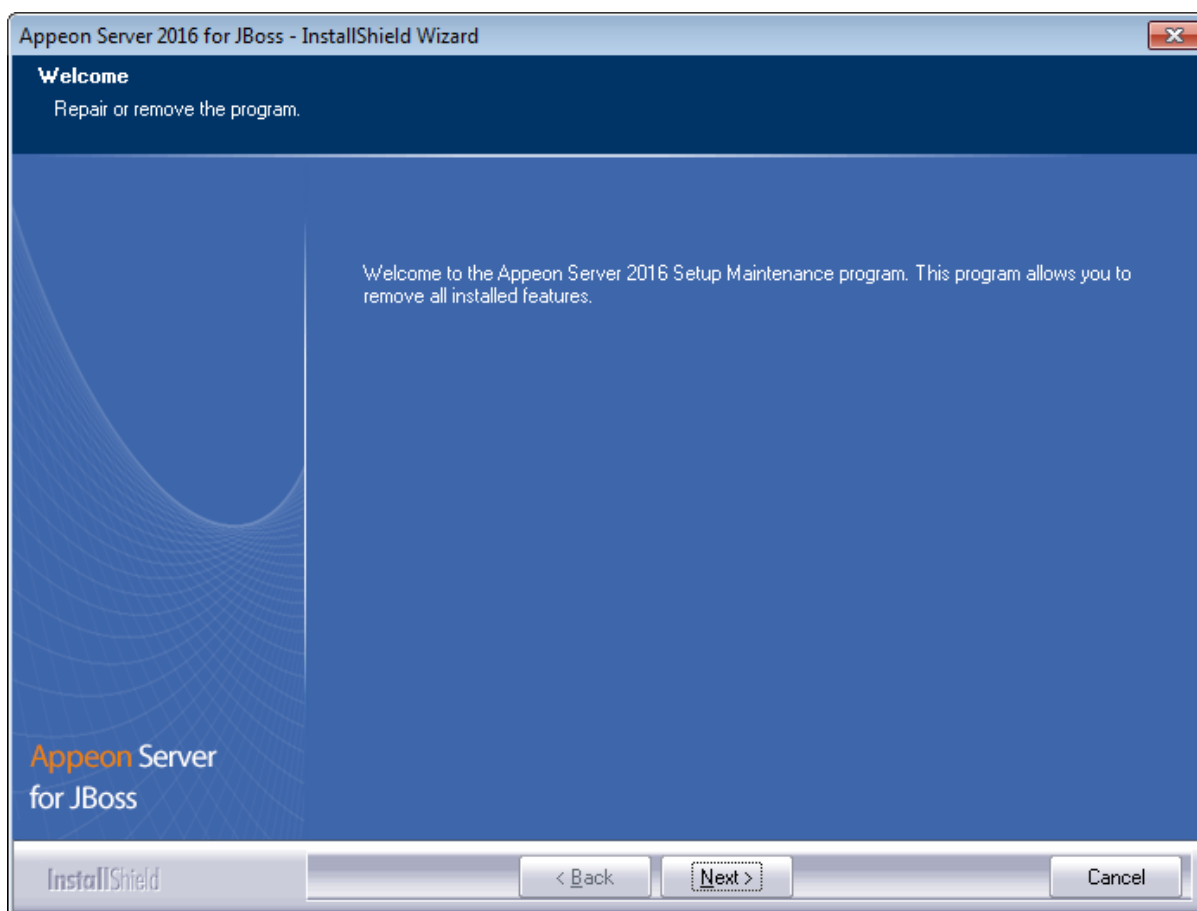
Step 7: Use Windows Explorer to manually delete the folder where Appeon Developer was installed. This will remove all Appeon Developer files that are not automatically uninstalled.

## 7.3 Uninstalling Appeon Server

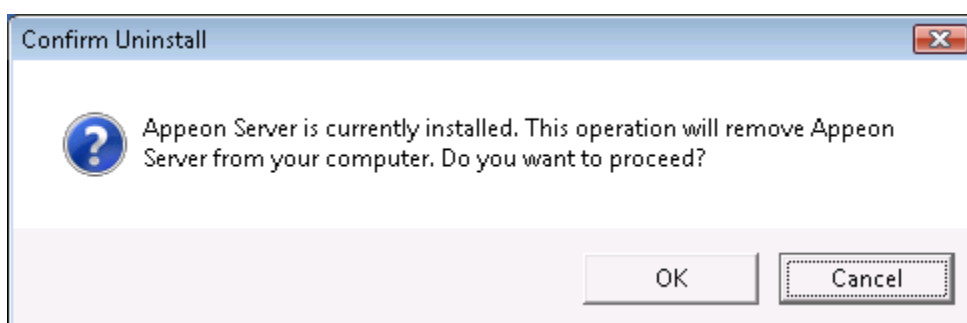
Step 1: Shut down Appeon Server and WildFly or JBoss EAP application server.

Step 2: Select Windows **Start | Control Panel**; under **Programs**, click **Uninstall a program**; select **Appeon Server 2016 for JBoss** and click **Uninstall** to begin the uninstall process.

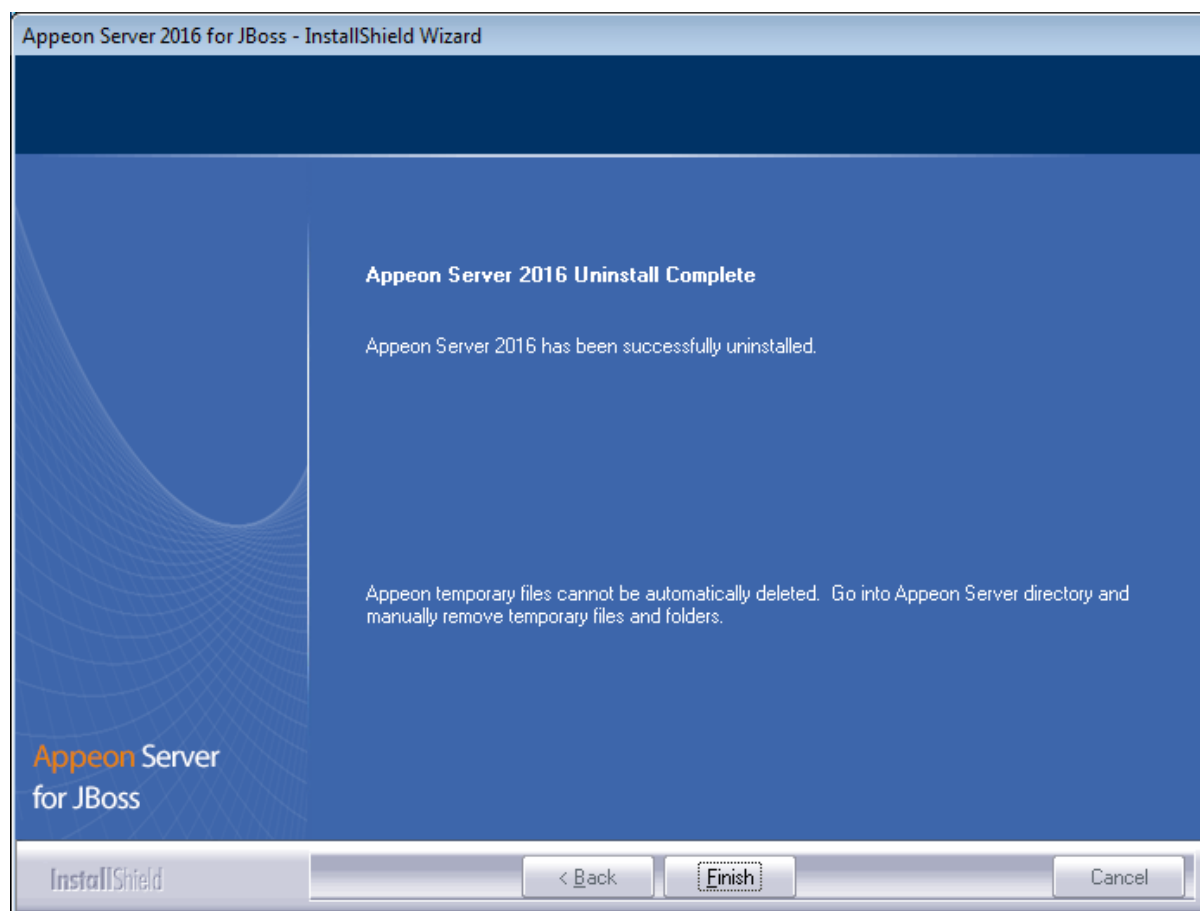
Step 3: Click **Next**.

**Figure 7.4: Remove Appeon Server**

Step 4: Click **OK** to confirm the removal of Appeon Server.

**Figure 7.5: Confirm uninstall**

Step 5: Click **Finish** when Appeon Server is completely uninstalled.

**Figure 7.6: Appeon Server uninstall complete**

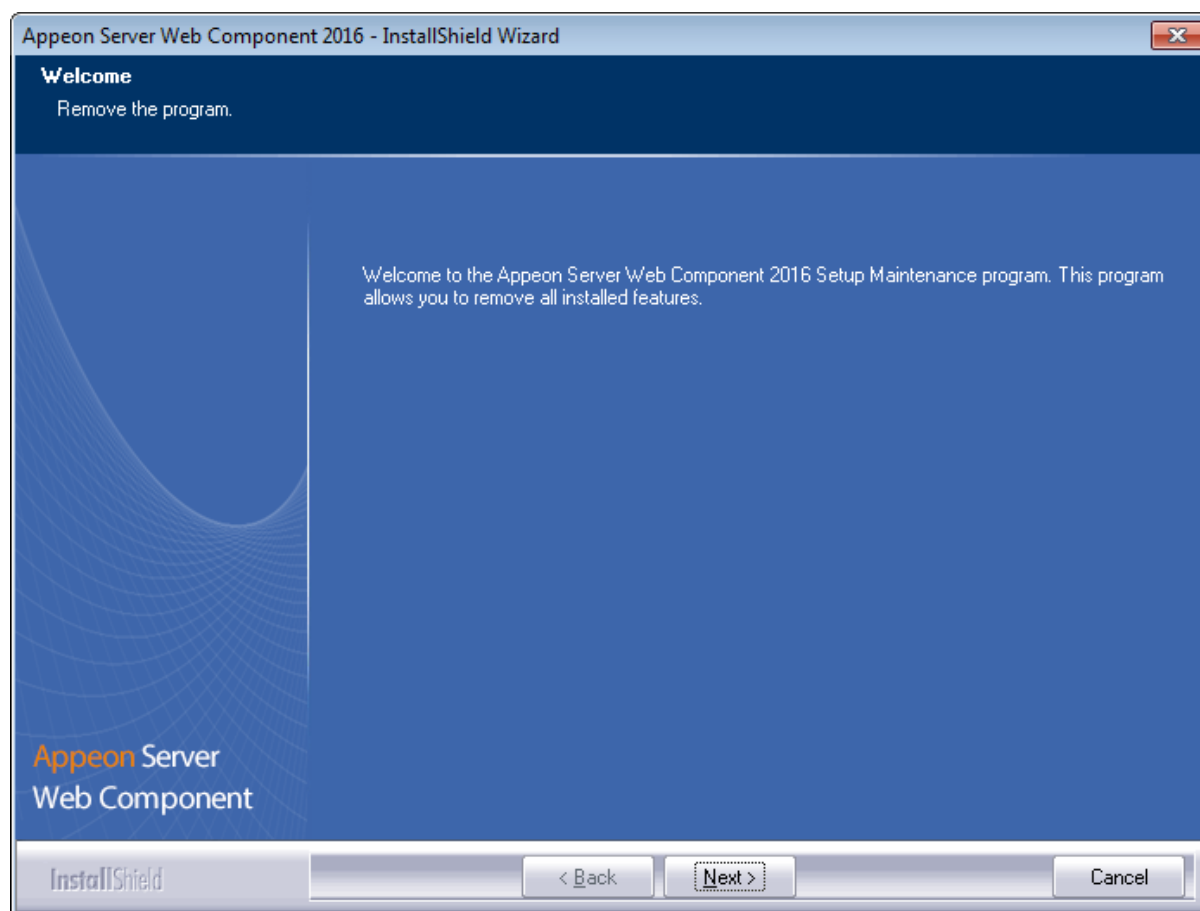
Step 6: After the uninstall process is complete, remove any files or folders left in the Appeon Server installation folder.

## 7.4 Uninstalling Appeon Server Web Component (for third-party Web servers only)

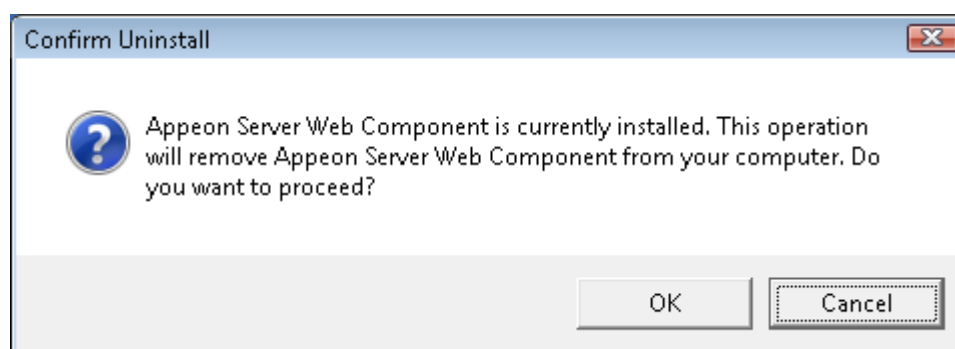
Step 1: Stop all Windows programs as well as the Web server.

Step 2: Select Windows **Start | Control Panel**; under **Programs**, click **Uninstall a program**; select **Appeon Server Web Component 2016** and click **Uninstall** to begin the uninstall process.

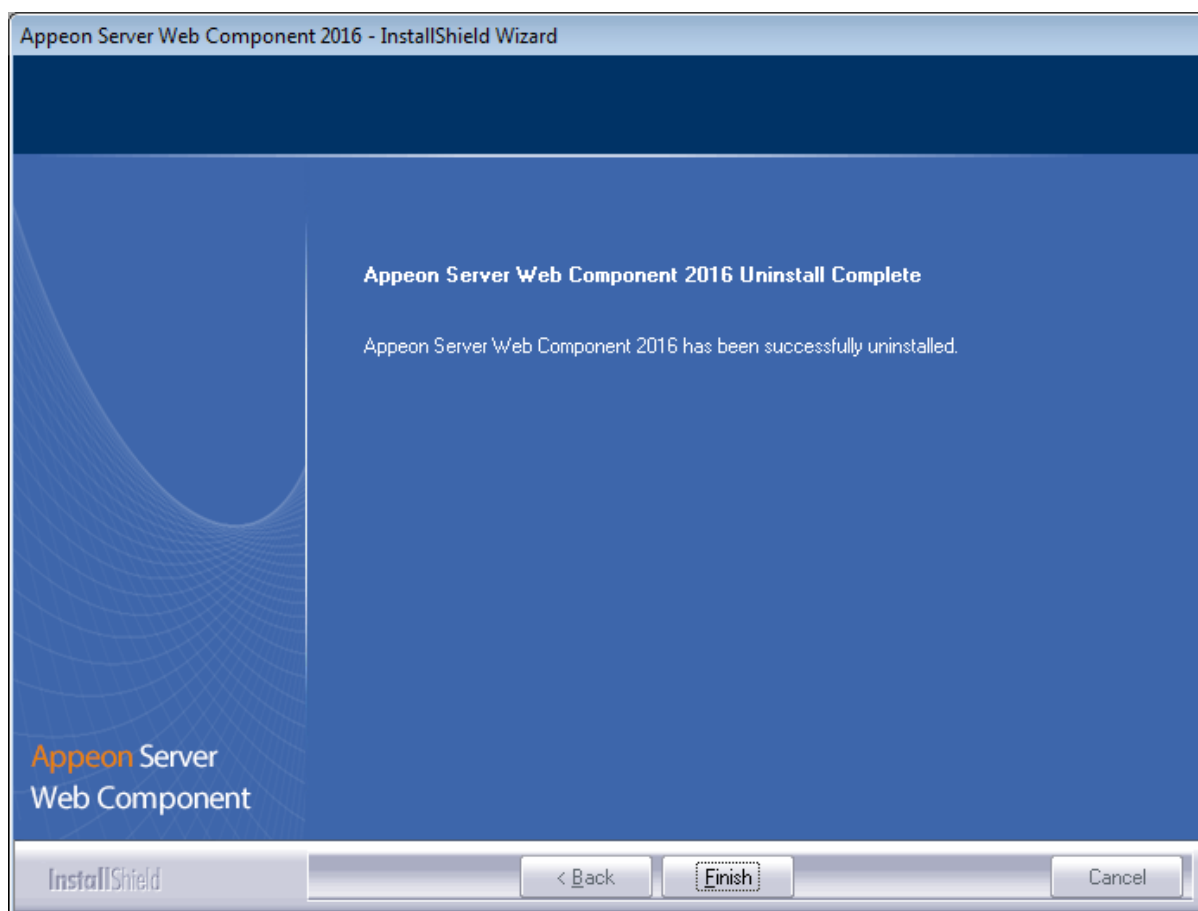
Step 3: Click **Next**.

**Figure 7.7: Remove Appeon Server Web Component**

Step 4: Click **OK** to confirm the removal of Appeon Server Web Component.

**Figure 7.8: Confirm uninstall**

Step 5: Click **Finish** when the uninstallation is complete.

**Figure 7.9: Appeon Server Web Component uninstall complete**

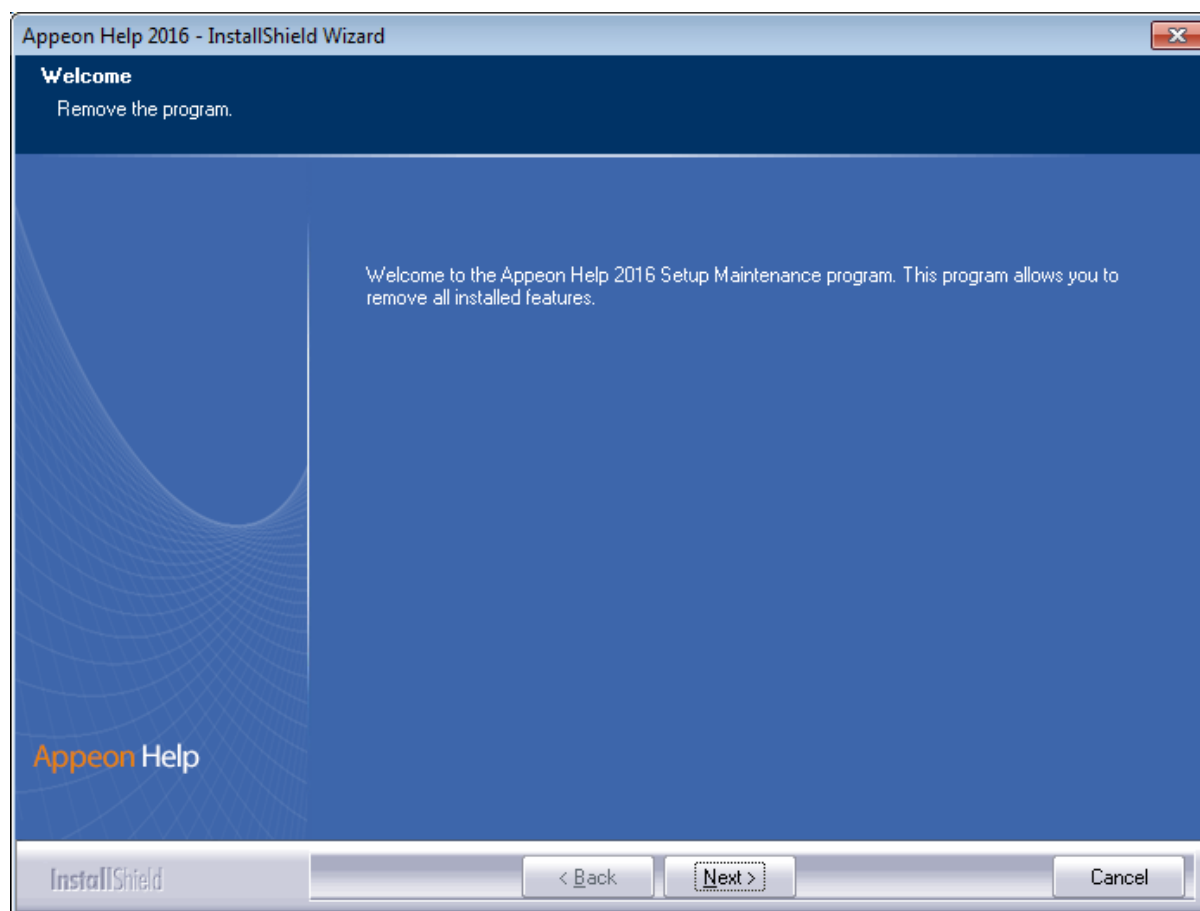
#### 7.4.1 Uninstalling Web Component if multiple Web servers are involved

Repeat the Web Component uninstall steps for each third-party Web server.

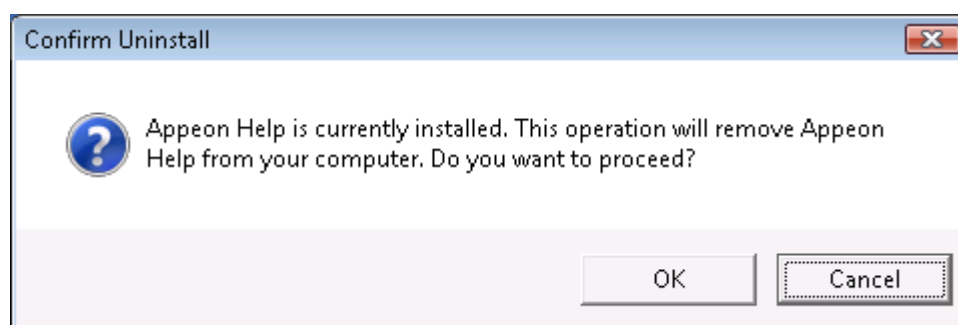
### 7.5 Uninstalling Appeon Help

Step 1: Select Windows **Start | Control Panel**; under **Programs**, click **Uninstall a program**; select **Appeon Help 2016** and click **Uninstall** to begin the uninstall process.

Step 2: Click **Next**.

**Figure 7.10: Remove Appeon Help**

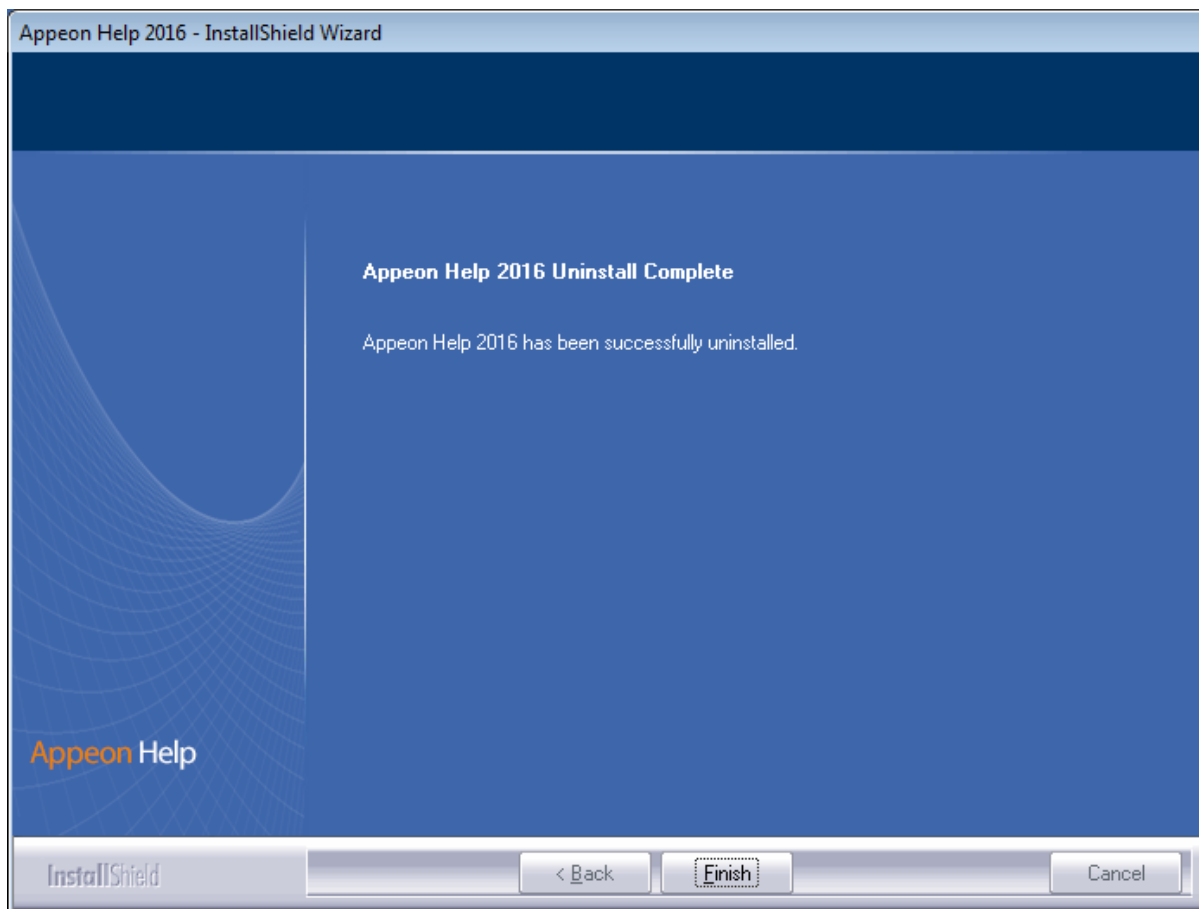
Step 3: Click **OK** to confirm the removal of the Appeon Help.

**Figure 7.11: Confirm uninstall**

Step 4: Click **Finish** when the uninstallation is complete.



**Figure 7.12: Appeon Help uninstall complete**



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