

Introduction to PowerServer

Appeon® PowerServer® 2017
FOR WINDOWS & UNIX & LINUX

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1 About This Book

1.1 Audience

This book is intended for users who want to know the basics about Appeon PowerServer.

1.2 How to use this book

There are five chapters in this book.

Chapter 1: About This Book

A general description of this book

Chapter 2: Edition

Introduction to the Appeon Editions.

Chapter 3: PowerServer Web

Introduction to the PowerServer Web product.

Chapter 4: PowerServer Mobile

Introduction to the PowerServer Mobile product.

Chapter 5: Copyright and Disclaimer

A general description of the copyright statement.

1.3 Related documents

Appeon provides the following user documents to assist you in understanding Appeon PowerServer and its capabilities:

- **Introduction to Appeon:**
Gives general introduction to Appeon PowerServer and its editions.
- **Getting Started (for PowerServer Mobile):**
Guides you through installing PowerBuilder and Appeon PowerServer, and developing and deploying a mobile application.
- **New Features Guide:**
Introduces new features and changes in Appeon PowerServer.
- **PowerServer Mobile Tutorials:**
Gives instructions on deploying, running, and debugging the mobile application, distributing native mobile apps, and configuring the PowerServer cluster.
- **PowerServer Mobile (Offline) Tutorials:**
Gives instructions on setting up the PowerServer Mobile (Offline) environment, and configuring, deploying, running, updating, and debugging the offline application.

- **Appeon Installation Guide:**
Provides instructions on how to install Appeon PowerServer successfully.
- **Mobile UI Design & Development Guide:**
Introduces general guidelines on designing and developing the mobile app and UI.
- **Migration Guidelines for PowerServer 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.
- **PowerServer Toolkit User Guide:**
Provides instructions on how to use the PowerServer Toolkit in Appeon PowerServer.
- **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.
- **PowerServer Configuration Guide:**
Provides instructions on how to configure PowerServer Monitor, establish connections between PowerServer and database servers, and configure AEM for maintaining PowerServer and the deployed applications.
- **Web Server Configuration Guide:**
Describes configuration instructions for different types of Web servers to work with the PowerServer.
- **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 UFT:**

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

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 Editions

Appeon PowerServer 2017 contains the following editions. For more details, refer to Section 2.3, “Editions and components” in *Installation Guide for .NET*.

Table 2.1: Appeon edition

OS	Editions	Application Servers	Components
Windows	PB Edition ^a	Microsoft .NET Framework\IIS	<ul style="list-style-type: none"> PowerServer Toolkit^b PowerServer (Mobile) Appeon Workspace PowerServer (PB Edition) Help
	Enterprise Edition Workgroup Edition Developer Edition Trial Edition	Microsoft .NET Framework\IIS	PowerServer (Mobile & Web)
		JBoss	Appeon Workspace
		Oracle WebLogic	
		IBM WebSphere	PowerServer Help
		TmaxSoft JEUS	
Unix (IBM AIX, Sun Solaris, HP Unix), Linux (RedHat Linux)	Enterprise Edition Workgroup Edition	JBoss	PowerServer (Mobile & Web)
		Oracle WebLogic	Appeon Workspace
		IBM WebSphere	
		TmaxSoft JEUS	

^aPB Edition is only available in the [Appeon PowerBuilder Universal Edition](#).

^bPowerServer Toolkit 2017 can deploy apps to PowerServer (Mobile & Web) 2017 or 2016.

Because of differences between different application servers (.NET Framework\IIS, JBoss, WebLogic, WebSphere, or JEUS) and different platforms (Windows and Linux\Unix), some features are only available in certain circumstance. Refer to the following table for details.

Table 2.2: Feature difference

Feature	.NET (IIS)	JBoss \WebLogic \WebSphere \JEUS
	Windows	Windows \Linux\Unix
Web Demos	-	Yes
EJB Components	-	Yes

Feature	.NET (IIS)	JBoss WebLogic WebSphere JEUS
	Windows	Windows Linux Unix
Com/Com+/.NET Components	Yes	-
DataWindow Data Caching ^a	Yes	Yes
LDAP Security	Yes ^b	Yes

^aAll types of PowerServer support Application Server data cache and client-side data cache, but support Web server data cache on Windows platform only. If data caching feature is enabled in Web server, but if it does not work due to improper configuration or unsupported platform (such as Unix, Linux), then the Application Server data cache is automatically enabled.

^b.NET (IIS) Version supports only Microsoft Active Directory, while J2EE edition supports IBM LDAP, Netscape LDAP, Sun LDAP, and Microsoft Active Directory.

3 PowerServer Web

PowerServer Web extends the capabilities of PowerBuilder so that a PowerBuilder application can be deployed to the Web. The deployment process produces a true n-Tier Web application with a J2EE-based or .NET-based back-end and an HTML UI front-end. The source PowerBuilder application that will be deployed to the Web may be an existing 2-tier application or a new 3-tier Web application in PowerBuilder. A 3-tier Web application can be constructed quickly and easily, using only your PowerBuilder skills. Either way, PowerServer Web is the fastest way to: 1) convert PowerBuilder applications into bona fide Web applications, and 2) convert PowerBuilder developers into highly productive Web application developers.

PowerServer Web is composed of a developer tool and a set of runtime server components: PowerServer Toolkit, PowerServer (which includes AEM), PowerServer Web Component, and PowerServer Help:

- **PowerServer Toolkit.** An extension to PowerBuilder that enables the Web application generation, maintenance, and upgrades within the PowerBuilder IDE.
- **PowerServer for J2EE Server.** Composed of J2EE and PowerBuilder server components that provide runtime services for the deployed Web application such as data connectivity, complete DataWindows support, transaction management, printing, and security.
- **PowerServer for .NET.** Composed of Microsoft .NET components that provide runtime services for the deployed Web application such as data connectivity, complete DataWindows support, transaction management, printing, and security.

PowerServer also includes AEM, which is essentially the user interface for PowerServer. This UI is implemented as a JSP Web application enabling the system administrator to manage deployed Web applications and PowerServer over the Internet, an intranet or an extranet.

- **PowerServer Web Component.** A series of JavaScript-based Web components generating PowerBuilder-style GUI in standard Web browsers.
- **PowerServer 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.

PowerServer Web provides several additional tools (included in the installation package) to aid you in deploying existing PowerBuilder applications to the Web:

- **Appeon Workarounds PBL.** Provides you several Appeon workaround functions that can help work around the unsupported features, such as DataWindow GetFullState, SetFullState, GetChanges and SetChanges functions. Refer to Chapter 2, *Appeon Workarounds PBL Reference in Workarounds & API Guide* for the functions provided in Appeon Workarounds PBL.
- **Appeon Sales Application Demo.** Familiarize yourself with the PowerServer Toolkit in PowerBuilder and with the deployment process by converting the Sales Application Demo to the Web.

- **Appeon Code Examples and Appeon ACF Demo.** Explore examples of some of the rich PowerBuilder and PFC functionalities that PowerServer Web can support on the Web. Appeon Code Examples also serves as a reference for how to best implement these supported PowerBuilder features. An application that is compliant with Appeon-supported features can be deployed to the Web in a few minutes with the click of a button.

4 PowerServer Mobile

PowerServer Mobile extends the capabilities of PowerBuilder so that a PowerBuilder application can be deployed and run on the mobile device. The deployment process produces a true native mobile application with a J2EE-based or .NET-based back-end and an mobile-style UI front-end.

PowerServer Mobile is composed of an application workspace, a developer tool, and a set of runtime server components: Appeon Workspace, PowerServer Toolkit, PowerServer (which includes the AEM), PowerServer Web Component, and PowerServer Help:

- **Appeon Workspace.** A native mobile application installed on the mobile device to simplify distributing, downloading, and running the Appeon mobile applications.
- **PowerServer Toolkit.** An extension to PowerBuilder that enables the mobile application generation, maintenance, and upgrades within the PowerBuilder IDE.
- **PowerServer for J2EE Server.** Composed of J2EE and PowerBuilder server components that provide runtime services for the deployed application such as data connectivity, complete DataWindows support, transaction management, printing, and security.
- **PowerServer for .NET.** Composed of Microsoft .NET components that provide runtime services for the deployed application such as data connectivity, complete DataWindows support, transaction management, printing, and security.

PowerServer also includes AEM, which is essentially the user interface for PowerServer. This UI is implemented as a JSP Web application enabling the system administrator to manage the deployed applications and PowerServer over the Internet, an intranet or an extranet.

- **PowerServer Web Component.** A series of C++ and JavaScript libraries generating mobile-style UI.
- **PowerServer 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.

PowerServer Mobile provides several additional tools (included in the installation package) to aid you in deploying existing PowerBuilder applications to the mobile device:

- **Appeon Workarounds & API PBL.** Provides you APIs that can help work around the unsupported features and call the mobile device native features. Refer to Chapter 2, *Appeon Workarounds PBL Reference in Workarounds & API Guide* for the functions provided in Appeon Workarounds PBL.
- **Appeon Demo Applications.** Including Sales App Demo, Code Examples Demo, ACF Demo, SAPTechEd2012 Demo, and Order Demo (iPhone only) that can familiarize yourself with the features that PowerServer Mobile supports.

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