Appeon Web Installation Guide for WebSphere Unix \Linux

Appeon Web® 2013 R2 (on WebSphere)

FOR UNIX\LINUX

Contents

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 Appeon 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.

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An overview of Appeon Web 2013 R2 for WebSphere Unix\Linux and its system architecture.

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Instructions for uninstalling Appeon Web 2013 R2 for WebSphere Unix\Linux.

1.3 Related documents

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

• Introduction to Appeon:

  Gives general introduction to Appeon for PowerBuilder and its editions.

• Getting Started (for Appeon Mobile):

  Guides you though installing PowerBuilder and Appeon 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 (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.

- Installation Guide on Cloud Platform:

  Provides instructions on how to install Appeon for PowerBuilder on the cloud-based platform such as Windows Azure and AWS EC2 and S3.

- 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

Appeon for PowerBuilder deploys entire PowerBuilder applications to the Web automatically.

From the native source code of PowerBuilder applications, Appeon for PowerBuilder can generate **bona fide** n-Tier Web applications that precisely replicate the Client/Server user interface with HTML running in standard Microsoft Web browsers. These Web applications offer the rich user experience of the original PowerBuilder applications and deliver the superior Quality Of Service (QOS) of the n-Tier Web architecture and J2EE platform, as well as greater availability, scalability, security and reliability.

Appeon for PowerBuilder allows the entire Web application conversion process to be executed within the PowerBuilder IDE. It does not require the developer to write a single line of HTML, Java, .NET or JavaScript code. Only standard PowerBuilder programming skills are required.

With Appeon for PowerBuilder, enterprises can continue to use PowerBuilder to build Client/Server applications. At the click of a button, the applications can be deployed to the Web. Enterprises can also transform existing Client/Server applications into Web applications. It is no longer a daunting task to develop Web applications. The task can become a familiar and easy routine for optimizing existing PowerBuilder applications or building new PowerBuilder applications.

2.2 System architecture

Appeon for PowerBuilder works with standard n-Tier Web 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 Appeon Server computers to provide load balancing and failover.

Figure 2.1: Appeon for PowerBuilder system architecture
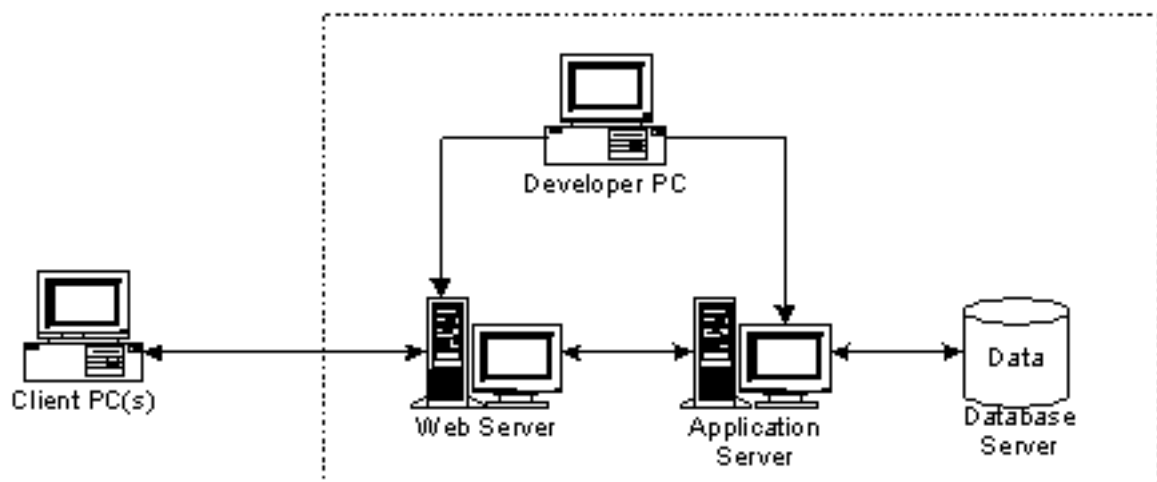
Each tier should have appropriate Appeon components and/or third-party software installed according to its role within the architecture. The following table briefly lists the tiers, their purposes and the required Appeon/third-party software.

Table 2.1: Tiers in the Appeon Web architecture

Tier	Purpose	Appeon Component	Third-party Software
Client	Runs Appeon deployed applications	None	The default Microsoft Internet Explorer Web browser
Developer PC	Deploys your PowerBuilder application to the testing and production Web environments with the n-Tier architecture.	Appeon Developer	PowerBuilder Internet Explorer
Web Server	Hosts the presentation layer of Appeon deployed applications, responds to incoming requests from Client PC and dispatches requests to the application server.	Appeon Server Web Component	WebSphere HTTP Server or any WebSphere-compatible Web server, such as Apache or IIS.
Application Server	Hosts the DataWindows and n-Tier components of Appeon deployed applications, provides necessary runtime services to the Web application, such as DataWindow retrieval and update, execution of business logic, and security authentication.	Appeon Server	WebSphere Application Server
Database Server	Hosts the application database.	None	JDBC-compliant RDBMS supported by Appeon. Please see Database server requirements for more information.

2.3 Appeon editions

Appeon Web 2013 R2 (on WebSphere UNIX\LINUX) contains the following editions.

Table 2.2: Appeon editions

Edition	Platform	Component	Description
Enterprise Edition	IBM AIX, Sun Solaris, HP Unix, RedHat Linux	• Appeon Server • Appeon Server Web Component	1) Appeon Developer and Appeon Help are not provided. 2) The Appeon Server clustering service is

Edition	Platform	Component	Description
			provided in Enterprise Edition only.
Workgroup Edition	IBM AIX, Sun Solaris, HP Unix, RedHat Linux	• Appeon Server • Appeon Server Web Component	Appeon Developer and Appeon Help are not provided.

2.4 Appeon components

2.4.1 Appeon Developer (Windows only)

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 deployed 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 deployed applications with necessary run-time services such as data connectivity, DataWindows 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 IBM HTTP Server, therefore, if you are using one WebSphere Application Server 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 (for third-party Web servers)

Appeon Server Web Component resides in the Web server as the runtime environment supporting a PowerBuilder-style Web graphical user interface within standard Microsoft Web browsers. Appeon Server Web Component is a set of JavaScript, HTML and XML files that enable the rich PowerBuilder-style UI in standard Microsoft Web browsers.

If you use a third-party Web server 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** in Appeon Help.

2.4.4 Appeon Help (Windows only)

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.

3 Installation Requirements

3.1 Client requirements

3.1.1 Software requirements

- Microsoft Internet Explorer 6.0 SP2, 7.0, 8.0, 9.0, 10.0, or 11.0

- Microsoft Windows 2000 SP4, Windows Server 2003 SP2, Windows XP SP3, Windows Vista SP2, Windows Server 2008 SP2, Windows Server 2012, Windows 7, or Windows 8/8.1

- (Optional) Adobe Acrobat Reader 6.0 or above (for viewing printed PDF DataWindows or reports)

3.1.2 Hardware requirements

- Intel processor(s) running at 1.8 GHz or faster

- At least 2 GB Free RAM

3.2 Appeon Server requirements

3.2.1 Software requirements

- Unix OS (such as IBM AIX, Sun Solaris, or HP Unix), or Linux (such as RedHat Linux) that is supported by IBM WebSphere Application Server

- IBM® WebSphere® Application Server 6.1, 7.0, 8.0 or 8.5.5, or IBM® WebSphere® Community Edition 3.0

  Please make sure that the WebSphere Application Servre is started by JDK 1.6 or above.

3.2.2 Hardware requirements

- Processor(s)

  Linux: 86 Pentium IV above, X86 AMD above

  IBM AIX: IBM Power4

  Solaris: UltraSparcIII, Solaris X86 Pentium

  HP-Unix: HP Itanium, HP PA-Risc

- At least 2 GB Free RAM (4 GB Free RAM recommended)

- 900 MB hard drive space (for WebSphere Application Server installation) plus 500 MB hard drive space (for Appeon Server installation)

3.2.3 (Optional) Third-party Web Server requirements

• Apache 1.3, 2.0, or 2.2 on Windows or Unix\Linux, or Microsoft IIS 6.0, 7.0, 7.5 or 8.0

• 50 MB available hard drive space (for Appeon Server Web Component installation)

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

3.3 Database server requirements

Appeon Web 2013 R2 can connect to any of the following database servers:

• SAP Sybase ASA/SQL Anywhere 8.0.2, 9.0, 10.0.1, 11.0, 12.0 or 16.0 with Sybase iAnywhere or jConnect JDBC driver

• SAP Sybase Adaptive Server Enterprise (ASE) 12.5.x or 15.x with Sybase jConnect or iAnywhere JDBC Driver

• SAP Sybase ASA/SQL Anywhere WEB Edition with Sybase jConnect or iAnywhere JDBC driver

• SAP Sybase IQ 12.6.x, 12.7.x or 15 with jConnect JDBC driver

• SAP HANA 1.00.36 with 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 or later with Teradata JDBC driver

For instructions on downloading and installing the driver files, refer to the *JDBC driver preparation* section in the *Appeon Server Configuration Guide*.

4 Installing Appeon Web 2013 R2

4.1 Overview

Appeon Web 2013 R2 (On WebSphere UNIX/LIUNX) consists of two components: Appeon Server and Appeon Server Web Component. To deploy the application to Appeon Servers and Web servers running on Unix\Linux, you can use an Appeon Developer installed from an Appeon for PowerBuilder **for Windows** edition.

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 that provide runtime services for the Appeon Web applications, such as data connectivity, DataWindows support, transaction management, and security. Appeon Server also includes Appeon Enterprise Manager (AEM) and Appeon Server Web Component.	WebSphere Application Server on Unix\Linux operating system.
Appeon Server Web Component	The runtime environment that supports a PowerBuilder-style Web graphical user interface within standard Microsoft Web browsers. Appeon Server Web Component is a library of JavaScript, HTML and XML files that form the foundation of the/an Appeon Web application.	Third-party Web server. For WebSphere HTTP Server, this installation is unnecessary since the Web Component is included in Appeon Server.
Appeon Help	The online help of all Appeon user documents which saves time and conveniently places the help information at your fingertips.	Windows operating system.

4.2 Installation scenarios

4.2.1 Overview

Appeon Web 2013 R2 works in network 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 should be installed according to network architecture.

4.2.2 Remote Appeon Server using WebSphere HTTP Server

Table 4.2: Remote Appeon Server installation

Scenarios	Requirements	Appeon Components
In this example, 2 computers are used: Computer 1 serves as Developer PC.	Computer 1: Microsoft Windows 2000, 2003, 2008, 2012, 7, 8/8.1, XP, or Vista Microsoft Internet Explorer SAP Sybase PowerBuilder SAP Sybase ASA/SQL Anywhere	Computer 1: Appeon Developer
Computer 2 serves as Web server, application server and database server.	Computer 2: Unix\Linux IBM WebSphere Application Server SAP Sybase ASA/SQL Anywhere, SAP Sybase ASE, SAP Sybase IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, or SAP HANA depending on the application database	Computer 2: Appeon Server

4.2.3 Remote Appeon Server using a third-party Web server

Table 4.3: Remote Appeon Server installation

Scenarios	Requirements	Appeon Components
In this example, 3 computers are used: Computer 1 serves as Developer PC.	Computer 1: Microsoft Windows 2000, 2003, 2008, 2012, 7, 8/8.1, XP, or Vista Microsoft Internet Explorer SAP Sybase PowerBuilder SAP Sybase 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 3 serves as application server and database server.	Computer 2: Unix\Linux IBM WebSphere Application Server SAP Sybase ASA/SQL Anywhere, SAP Sybase ASE, SAP Sybase IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, or SAP HANA depending on the application database	Computer 2: Appeon Server

4.2.4 Appeon Server Cluster

Table 4.4: 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 2000, 2003, 2008, 2012, 7, 8/8.1, XP, or Vista Microsoft Internet Explorer SAP Sybase PowerBuilder SAP Sybase ASA/SQL Anywhere	Computer 1: Appeon Developer
Computer 2 is the database server.	Computer 2: SAP Sybase SQL Anywhere, SAP Sybase ASE, SAP Sybase IQ, Oracle, Microsoft SQL Server, Informix, IBM DB2, Teradata, MySQL, 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
Computers 4 to n are a group of WebSphere Application Server.	Computers 4 to n: Unix\Linux IBM WebSphere Application Server	Computers 4 to n: Appeon Server (After installing Appeon Server to each WebSphere Application Server, configure the Appeon Servers as a cluster. Refer to Configuring Appeon Server Cluster for details).

4.3 Two installation methods

Appeon Web 2013 R2 provides two installation methods: **new installation** and **upgrade installation**.

• If your computer has not installed any version of Appeon for PowerBuilder, the installation 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 Web 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 Web 2013 R2 new installation

4.4.1 Appeon Server installation

To install Appeon Server on the Unix\Linux platform, you will go through the same installation process as that used for the Windows platform. The only difference is, with the Unix\Linux platform, you will complete the installation process in command line mode, instead of using graphical user interfaces.

Step 1: Verify that WebSphere Application Server, as well as any other programs you may be running, is stopped.

Step 2: Open the **Appeon4WebSphere** folder from the Appeon installation program and run the **install.sh** file using the command below:

```
./install.sh
```

Notes:

1. If you copy the Appeon installation program to the computer before installation, make sure that the directory does not contain special characters or spaces.

2. When you input the command, please be aware that file names and directory names are case sensitive.

The welcome message is displayed, which indicates that the installation process has started. Follow the step-by-step prompts to install Appeon Server.

Step 3: Press **Enter** or input **Next** to proceed.

```
Step 1. Welcome Message
-----------------------


##############################################################

Welcome to Appeon Server 2013 R2 for WebSphere installation!

##############################################################

Press Enter to start the installation [Exit][Next]>
```

You can also input **n**, **N**, **next** or **Next** to indicate **Next**, **p**, **P**, **previous**, or **Previous** to indicate **Previous**, and **e**, **E**, **exit** or **Exit** to indicate **Exit**. Notice that the input is case sensitive.

Step 4: Specify a JDK 1.6 or above to be used during the setup progress. The setup program will check whether the JAVA_HOME variable exists and whether it points to a valid JDK 1.6 or above. If it is valid, the JDK path will be automatically displayed as below; if it is not valid, please set a valid JDK 1.6 or above location.

```
Step 2. Set JDK 1.6 or above path
---------------------


JDK path is "/home/jdk1.6.0_17"
Press Enter to continue [Exit][Next]>
```

Step 5: According to the license you purchase, select the Product Type.

```
Step 3. Please choose Product Type

###############################################################

1. Appeon Web
2. Appeon Mobile
3. Appeon Web and Appeon Mobile
4. Appeon Universal


Please select a number to continue OR [Exit][Previous][Next]>
```

Step 6: Enter the Product Key that is shipped with the product.

```
Step 4. Product Key for Appeon Universal
-------------------------

###############################################################

The format of the product key provided by Appeon should be XXXX-XXXX
-XXXX-XXXX-XXXX-XXXX-XXXX. All characters should be capitalized.

###############################################################

Please input the product key or [Exit][Previous]>
```

Step 7: Specify the home directory of the WebSphere Application Server as the Appeon
Server installation directory, for example, /opt/IBM/WebSphere/AppServer or /opt/IBM/
WebSphere/AppServerCommunityEdition.

```
Step 5. Install Directory
-------------------------

Please Input the directory you want to install the Appeon Server 2013 R2.
(e.g. ../IBM/WebSphere/AppServer) or [Exit][Previous]>
```

Step 8: Confirm the setup settings.

```
Step 6. Confirm Information
-------------------------

###############################################################

              Confirm the installation

 The product type is "Appeon Universal"
 The product key for Appeon Universal is "XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX"
 The installation directory is "/home/AppServer/IBM/WebSphere/AppServer"
 AEM Console:
           Username: admin
           Password: admin

 The installer will start installing the files on your system.
 Go back if you want to change any settings for the installation.


###############################################################

 Please select an option to continue[Exit][Previous][Next]>
```

Press **Enter** to begin copying the required files or input **p** or **Previous** to modify the setup
settings.

Step 9: When the installation is complete, choose whether to start Appeon Server.

```
##############################################################

Congratulations! The installation has been successfully completed.

##############################################################

Start Appeon Server
------------------------------

Do you want to start the Appeon Server now? [Yes|No]>
```

To start Appeon Server immediately input **y**. To start it later input **n**. Refer to [Starting/Stopping Appeon Server](#) for how to manually start Appeon Server using commands.

4.4.1.1 Deploying appeonserver.ear package

After installing Appeon Server to the WebSphere Application Server home directory, you must deploy the Appeon Server EAR package (appeonserver.ear) manually, via the WebSphere Application Server Administrative Console.

Follow the instructions below to deploy the appeonserver.ear package to WebSphere Application Server (taking WebSphere AS 7.0 as an example).

Step 1: Start WebSphere Application Server. Open the $WAS_HOME/bin/ folder and run the startServer.sh file. For details on starting WebSphere Application Server, refer to [Starting/Stopping Appeon Server](#).

Step 2: Access WebSphere Application Server Administrative Console. Input http://localhost:9080/admin in the Web browser address bar on the local machine. The WebSphere Login window will appear.

Figure 4.1: WebSphere Login window
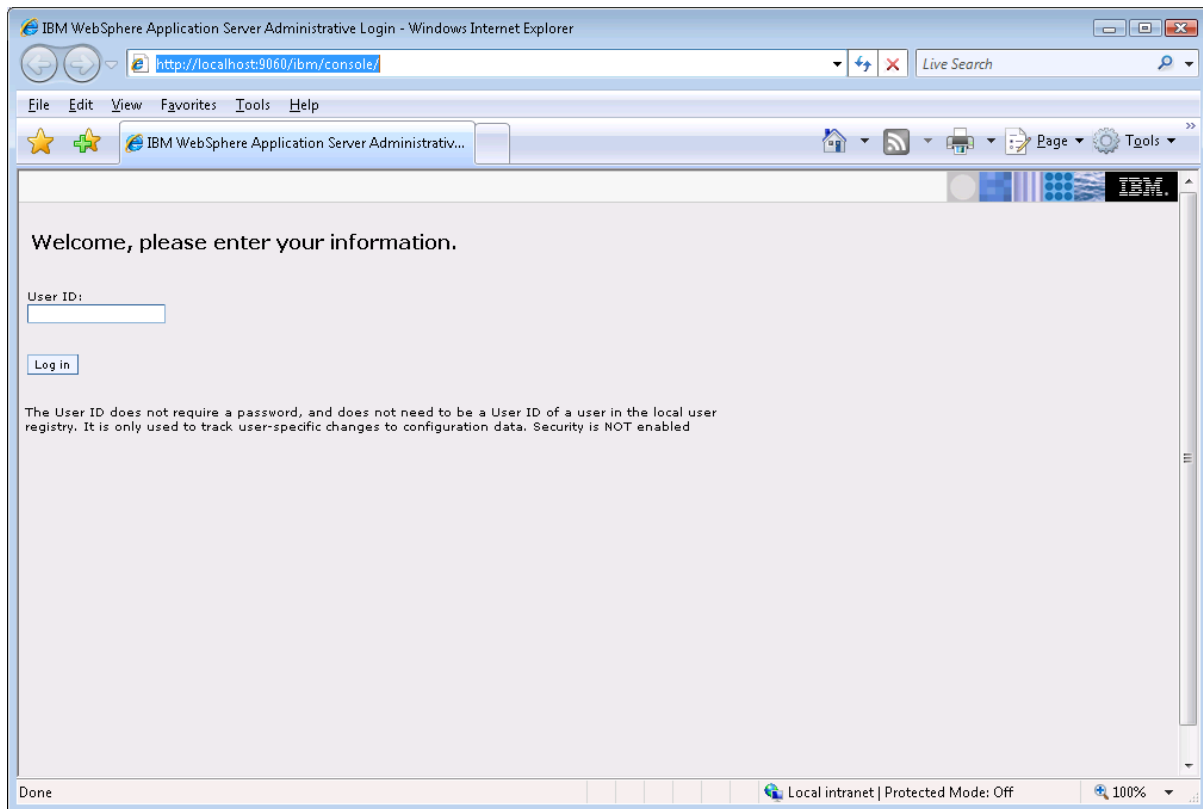
Step 3: Log in to the WebSphere console with the the appropriate user ID.

Step 4: Expand the **Applications** node and click **Install New Application** in the left pane.

Step 5: Click the **Browse** button on the "Preparing for the application installation" window that appears in the right pane and select the appeonserver.ear package installed to the home directory of the WebSphere Application Server.

Figure 4.2: Select appeonserver.ear package
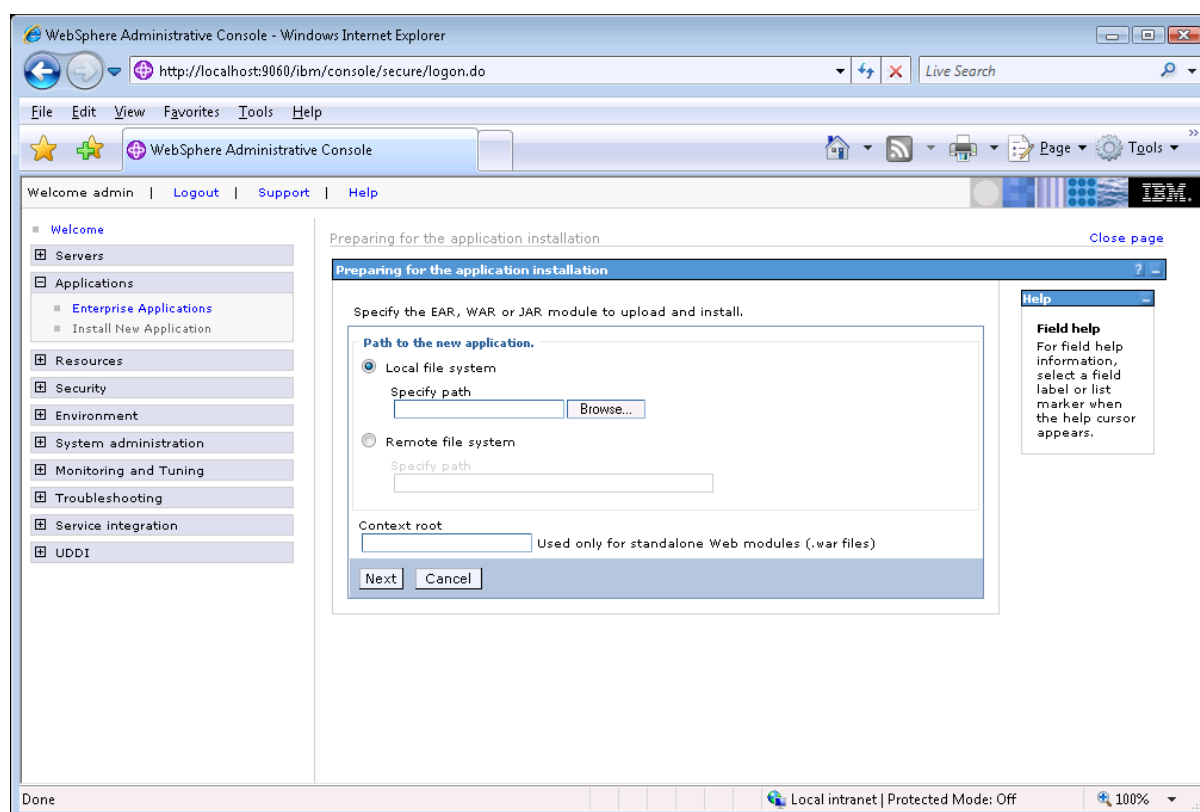
If the appeonserver.ear package is not installed on the local machine, select "Server path" and specify the location for appeonserver.ear.

Step 6: Follow the prompts and click **Next**. It is safe to use the default settings.

During this process, you may encounter "Application Security Warnings" from WebSphere. You can simply disregard these warnings, because the appeonserver.ear application requires no security settings to be set on WebSphere.

Step 7: Click **Finish** to complete the installation.

Check to make sure that the installation was successful.

The name used to identify the application (appeonserver.ear) is **AppeonServer** by default.

Figure 4.3: Check installed status
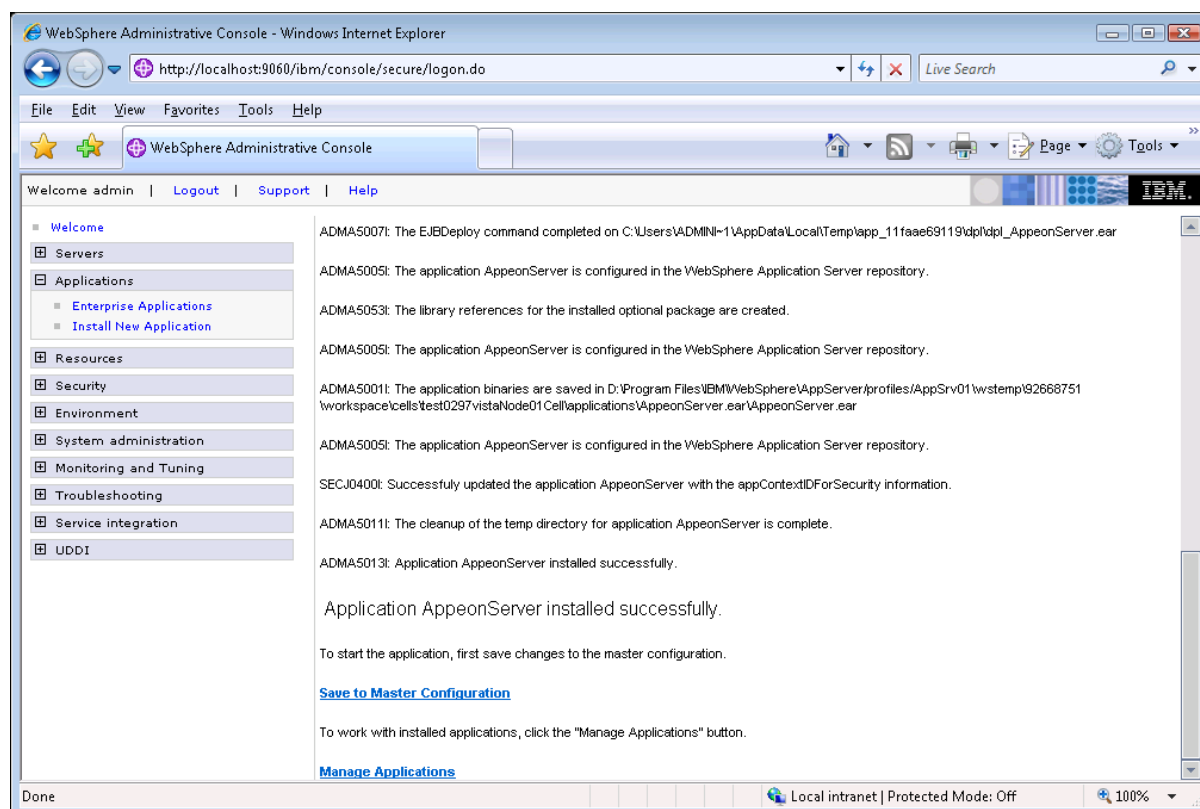
Step 8: Click the **Save to Master Configuration** link.

Step 9: Click the **Save** button to save the new installation to the master configuration.

Figure 4.4: save the new installation
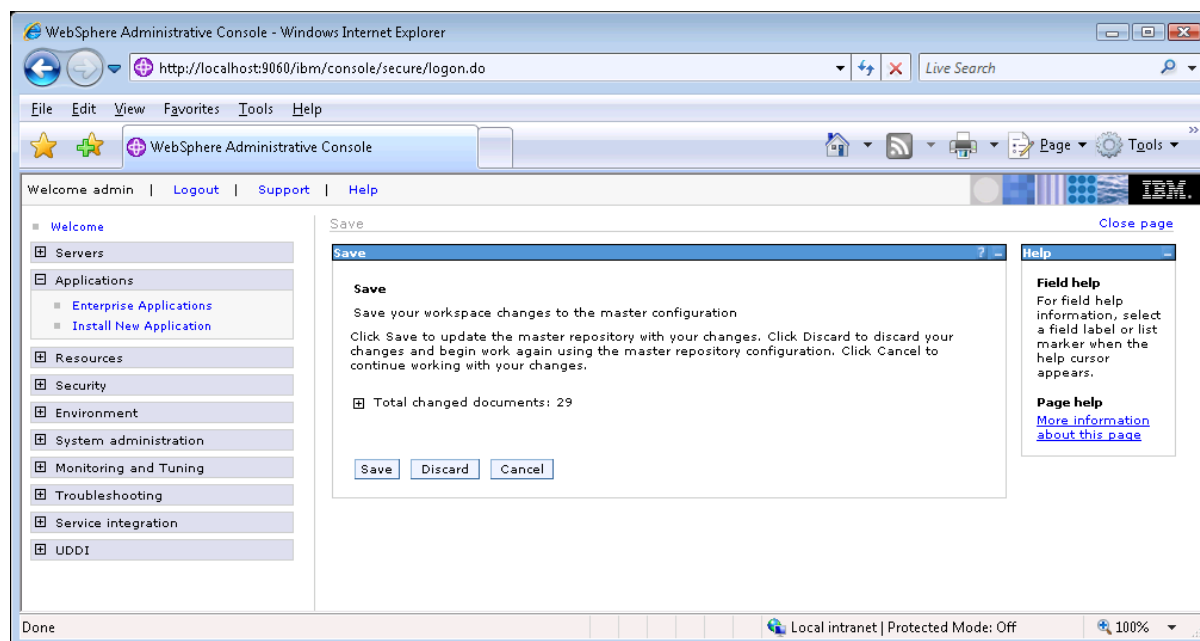
Step 10: Restart the WebSphere server to enable new configurations.

Step 11: Ensure that the newly installed application: **AppeonServer** (the default application name for appeonserver.ear), is started.

Expand the **Application** node and click **Enterprise Applications** in the left pane. **AppeonServer** is listed as an installed application in the table in the right pane.

- Check to make sure that **AppeonServer** has successfully started (➡).

- If the initial status of **AppeonServer** is "stopped" (✖), select **AppeonServer** by checking the appropriate box on the left and click the **Start** button to start it.

AppeonServer will start automatically when WebSphere Application Server is started.

Figure 4.5: AppeonServer starts automatically
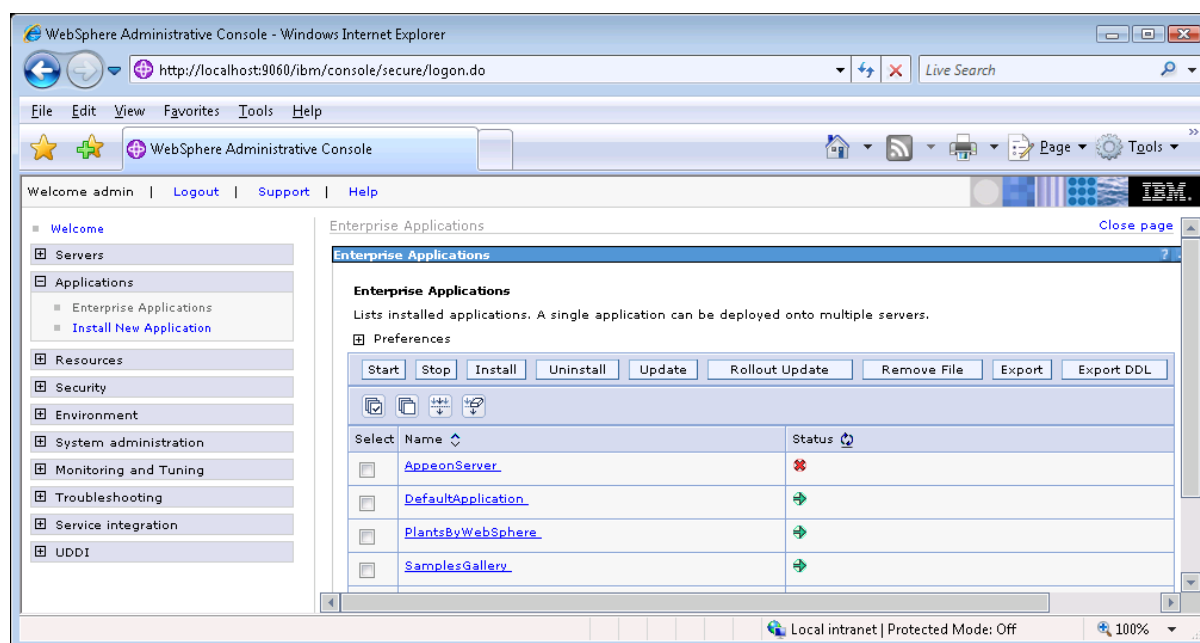
Step 12: Launch Appeon Enterprise Manager (AEM) to further verify that the Appeon Server EAR Package is successfully deployed.

Enter the following URL in the Web browser address bar: http://**host**:**port**/AEM, for example, http://localhost:9080/AEM. If the AEM logon window can be opened, the Appeon Server EAR package is deployed correctly and is ready for use.

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

If you use a third-party Web server 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.

4.4.2.1 Prerequisites

- Install a third-party Web server that is compatible with the WebSphere redirector plug-in. For a list of compatible third-party Web servers, refer to (Optional) Third-party Web server requirements.

- Stop the Web server and any other programs before beginning the installation process.

4.4.2.1.1 Prerequisites if Web Component installed to multiple third-party Web servers

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

4.4.2.2 Installation instructions

There is no Setup program for installing Appeon Server Web Component on Unix\Linux. You can directly copy the Appeon Server Web Component source files to the Web server Web root on Unix\Linux.

Step 1: Locate the **AppeonWebComponent.tar** file in the **AppeonWebComponent** folder on the Appeon installation program.

Step 2: Decompress the **AppeonWebComponent.tar** file into the Web root of the Web server. For example, the Web root of Apache 1.3 is $Apache/htdocs.

4.4.2.2.1 Installing and configuring the Web server redirector plug-in

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

4.5 Appeon Web 2013 R2 upgrade installation

4.5.1 Overview

If you have installed Appeon 6.5 or a later version, you can upgrade to Appeon Web 2013 R2, 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 Web 2013 R2.

Note that applications deployed with the old version and the demo applications must be redeployed with Appeon Web 2013 R2 after the upgrade.

4.5.2 Upgrading Appeon Server

To upgrade Appeon Server on the Unix\Linux platform, you will go through the same upgrade installation process as that used for the Windows platform. The only difference is, with the Unix\Linux platform, you will complete the installation process in command line mode, instead of using graphical user interfaces.

Step 1: Verify that WebSphere Application Server, as well as any other programs you may be running, is stopped.

Step 2: Open the **Appeon4WebSphere** folder from the Appeon installation program and then run the **upgrade.sh** file using the command below:

```
./upgrade.sh
```

Note: File names and directory names are case sensitive.

The welcome message is displayed, which indicates that the upgrade installation process has started. Follow the step-by-step prompts to install Appeon Server.

Step 3: Press **Enter** or input **Next** to proceed.

```
Step 1. Welcome Message
-----------------------


################################################################

Welcome to Appeon Server 2013 R2 for WebSphere upgrade!

################################################################

Press Enter to start the upgrade [Exit][Next]>
```

You can also input **n**, **N**, **next** or **Next** to indicate **Next**, **p**, **P**, **previous**, or **Previous** to indicate **Previous**, and **e**, **E**, **exit** or **Exit** to indicate **Exit**. Notice that the input is case sensitive.

Step 4: Specify a JDK 1.6 or above to be used during the upgrade progress. The upgrade program will check whether the JAVA_HOME variable exists and whether it points to a valid JDK 1.6 or above. If it is valid, the JDK path will be automatically displayed as below; if it is not valid, please set a valid JDK 1.6 or above location.

```
Step 2. Set JDK 1.6 or above path
---------------------



JDK path is "/home/jdk1.6.0_17"
Press Enter to continue [Exit][Next]>
```

Step 5: According to the license you purchase, select the Product Type.

```
Step 3. Please choose Product Type

################################################################

1. Appeon Web
2. Appeon Mobile
3. Appeon Web and Appeon Mobile
4. Appeon Universal


Please select a number to continue OR [Exit][Previous][Next]>
```

Step 6: Enter the Product Key that is shipped with the product.

```
Step 4. Product Key for Appeon Universal
------------------------

################################################################

The format of the product key provided by Appeon should be XXXX-XXXX
-XXXX-XXXX-XXXX-XXXX-XXXX. All characters should be capitalized.

################################################################

Please input the product key or [Exit][Previous]>
```

Step 7: Input the path of Appeon Server which you want to upgrade, for example, /opt/IBM/ WebSphere/AppServer or /opt/IBM/WebSphere/AppServerCommunityEdition. Press Enter.

The upgrade installation procedure will automatically check whether the path you input is valid.

```
Step 5. Upgrade Directory
-------------------------

Please input the directory of Appeon Server needs to upgrade
(e.g. ../IBM/WebSphere/AppServer) or [Exit][Previous]>
```

Step 8: Confirm the setup settings.

```
Step 6. Confirm Information
---------------------------

###############################################################

                   Confirm the installation

 The product type is "Appeon Universal"
 The product key for Appeon Universal is "XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX"
 The Upgrade directory is "/home/AppServer/IBM/WebSphere/AppServer"
 Appeon Server 2013 R2 EAR file will be copied to
 "/home/AppServer/IBM/WebSphere/AppServer//home/AppServer/IBM/WebSphere/AppServer/
installableApps".
 Please re-deploy this application manually in WebSphere Console
 after this upgrade process is completed.


###############################################################

Please select an option to continue[Exit][Previous][Next]>
```

Press **Enter** to begin copying the required files or input **p** or **Previous** to modify the setup settings.

Step 9: Wait until the upgrade installation is complete.

```
###############################################################

Congratulations! The upgrade for WebSphere has been completed successfully.

###############################################################
```

4.5.3 Upgrading Appeon Server Web Component

4.5.3.1 Prerequisites

• Stop the Web server and any other programs before beginning the upgrade process.

• If Appeon Server Web Component is installed to multiple third-party Web servers, repeat the upgrade steps for the Appeon Server Web Component on each Web server.

4.5.3.2 Upgrade instructions

There is no Setup program for upgrading Appeon Server Web Component on Unix\Linux. You can directly copy the Appeon Server Web Component source files to the Web server Web root on Unix\Linux.

Step 1: Locate the **AppeonWebComponent.tar** file in the **AppeonWebComponent** folder on the Appeon installation program.

Step 2: Decompress the **AppeonWebComponent.tar** file into the Web root of the Web server. For example, the Web root of Apache 1.3 is $Apache/htdocs.

4.6 Starting/Stopping Appeon Server

4.6.1 Starting Appeon Server

Change to the $appeon/bin/ folder, for example, /opt/IBM/WebSphere/AppServer/appeon/ bin/ or /opt/IBM/WebSphere/AppServerCommunityEdition/appeon/bin/ and run the appeonserverstart.sh file.

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

Figure 4.6: Startup complete
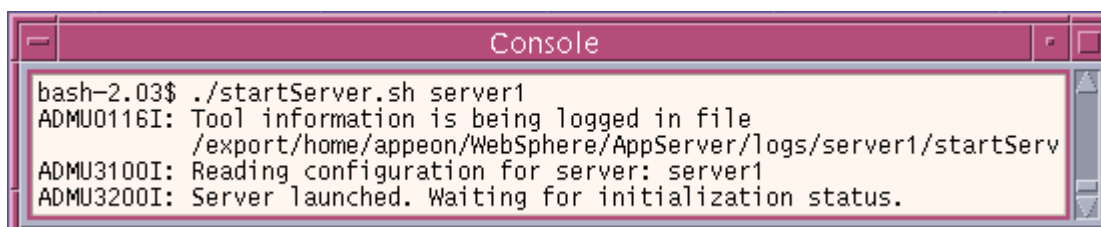
4.6.2 Logging in to WebSphere Application Server Administrative Console

Step 1: Enter the following URL in a Web browser to access the WebSphere Application Server Administrative Console.

• From the computer on which the WebSphere Application Server is running: http:// localhost:9080/admin or http://localhost:8080/console (for WebSphere CE)

• From any other computer: http://**HOST**:9080/admin or http://**HOST**:8080/console (for WebSphere CE)

  HOST indicates the machine name or the IP address of the computer on which the WebSphere Application Server is running. Make sure no other programs are using the same port.

The logon page of "WebSphere Application Server Administration Console" appears, as shown below for WebSphere AS 5.

Figure 4.7: Logon page
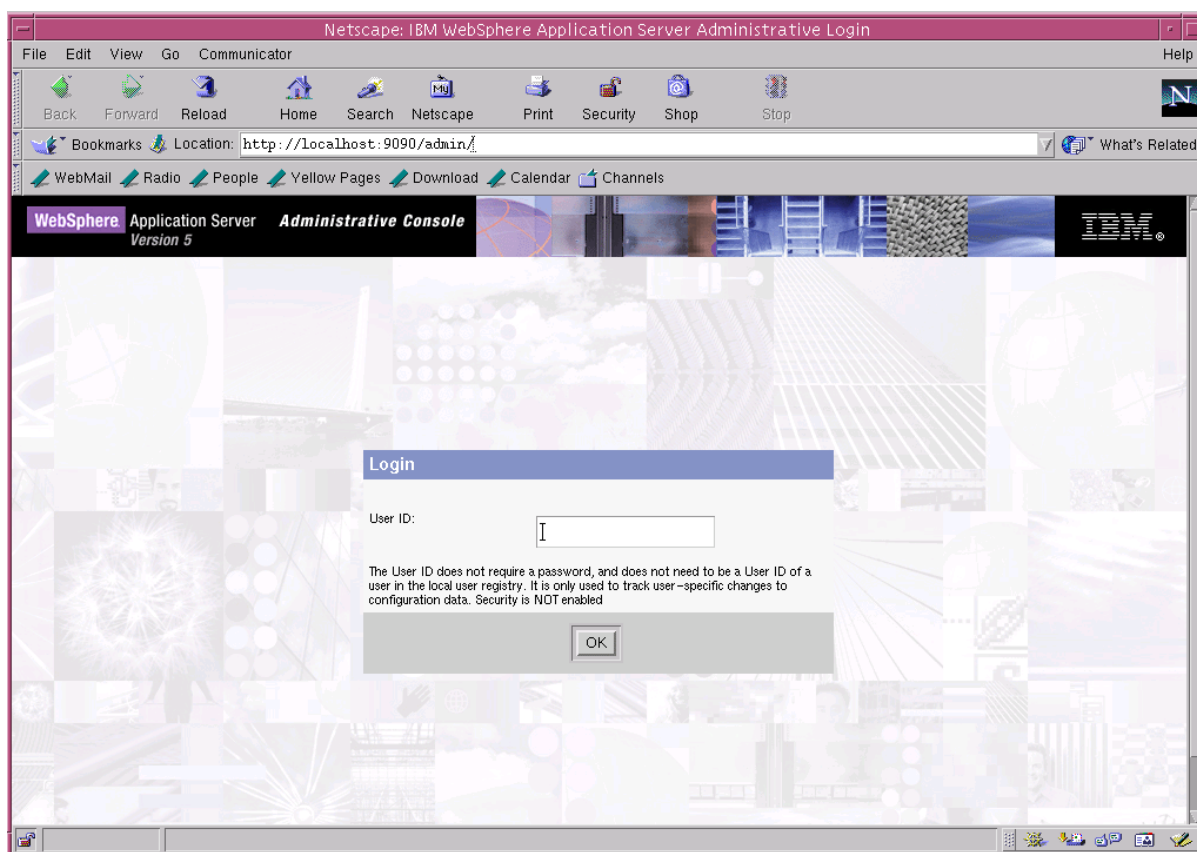
Step 2: Log in to the Administrative Console using the appropriate user name.

4.6.3 Stopping Appeon Server

Stopping WebSphere Application Server will shut down Appeon Server.

Change to the $WebSphere/AppServer/bin/ folder, for example, /opt/IBM/WebSphere/
AppServer/bin/ or /opt/IBM/WebSphere/AppServerCommunityEdition/bin, and run the
shutdown.sh file.

```
./shutdown.sh server1
```

If you have any problems in using WebSphere Application Server, refer to the WebSphere
Application Server documents at http://www7b.software.ibm.com/wsdd/zones/was/.

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 WebSphere 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 **Tutorial 5: Configure Appeon Server Cluster** in *Appeon Mobile Tutorials*.

1. Install **Appeon Server** to multiple WebSphere servers.

2. Create **Appeon Server cluster** in AEM.

3. Configure the **Web server** for the Appeon Server cluster.

4. Deploy the 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 Appeon system architecture, including installing Appeon for PowerBuilder components, as well as configuring Appeon Server cluster. Once the Appeon 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 Appeon system architecture that affect the running of all applications but do not include configuration tasks performed in Appeon Developer and Appeon Enterprise Manager for specific applications.

Table 6.1: Post-installation tasks

Task	Description	Detailed Instructions Given in...
Configuration for the client machine	The IE security settings and Windows login user privileges may prevent downloading the Appeon Xcelerator plug-in.	Configuration for client machine
System language setting	Configuration required for the client, Appeon Server and database server. The operating system language settings can affect the characters that are displayed in the Appeon Web application.	System language settings
Database JDBC driver preparation	Configuration required for Appeon Server. You should copy the corresponding driver files for the database server in use to the WebSphere server installation folder in the machine hosting Appeon Server.	**JDBC driver preparation** in the **Appeon Server Configuration Guide**
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 Unix\Linux.	**DataWindow Data Cache** in the **Appeon Server Configuration Guide**
Configuration for supporting dynamic DataWindows	Configuration required for database server. Configuration at the database server is required for support of dynamic DataWindows.	**Dynamic DataWindow** in the **Supported**

Task	Description	Detailed Instructions Given in...
		PB Features for Appeon Web
Configuration for fixing an ASE issue	Appeon 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"	**ASE Chained mode issue** in the **Appeon Troubleshooting Guide**

6.2 Configuration for client machine

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

For more information about the Appeon ActiveX file and the manual installation method, refer to the "Installing Appeon ActiveX Control" section in Supported PB Features for Appeon Web.

6.2.1 Configuring IE security settings

We recommend you add the URL of Appeon Web 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 ActiveX controls. 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.

Figure 6.1: IE security settings
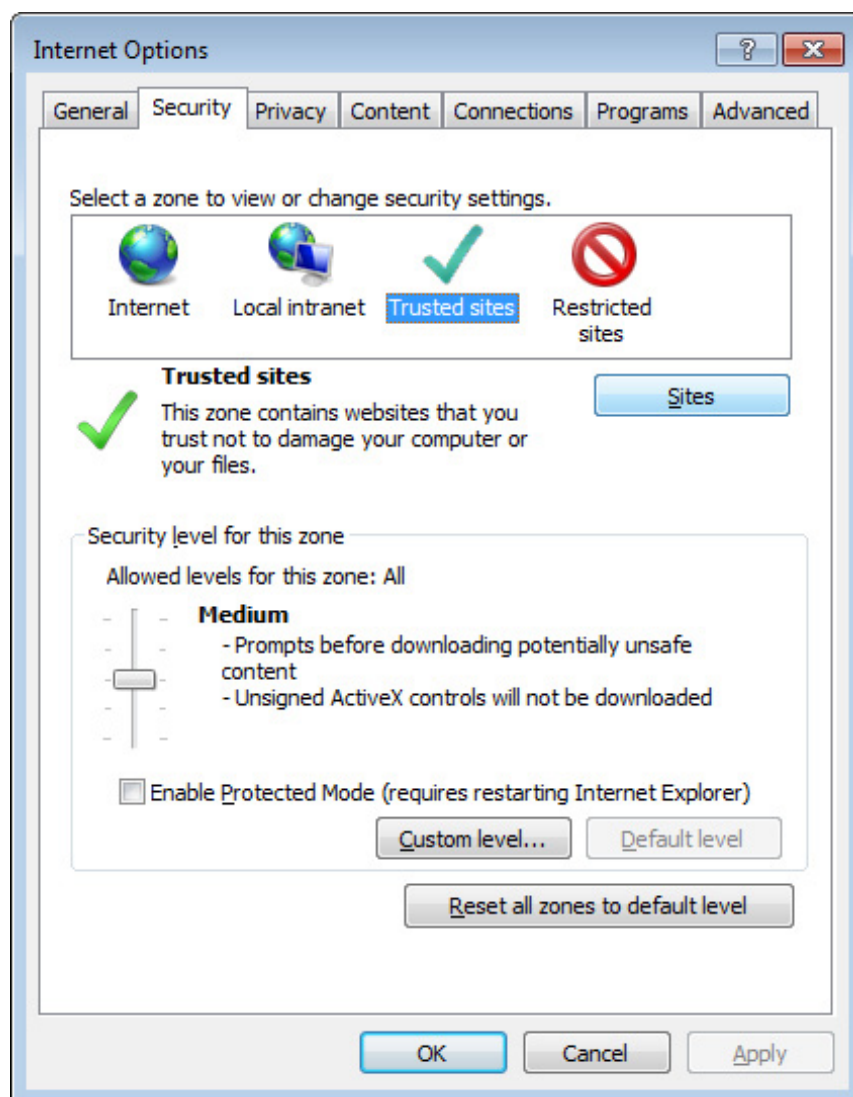
Step 3: In the Trusted sites window, input the URL of the Web application to the "Add this website to the zone" box. Uncheck the checkbox of "Require server verification (https:) for all sites in this zone". Click **Add** then click **Close** to return to the Internet Options window.

Figure 6.2: Trusted sites
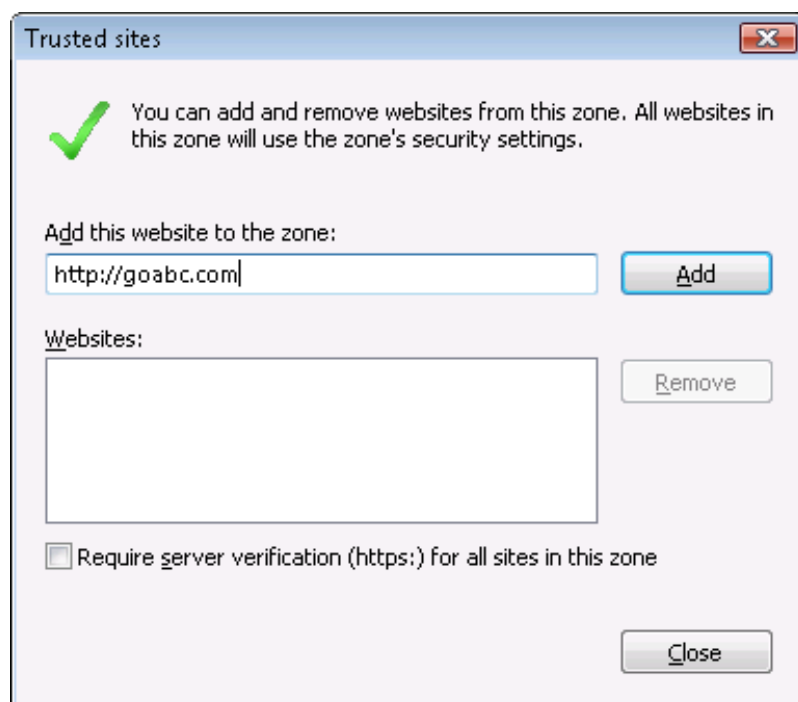
Step 4: If you do not want to add the URL to the trusted sites (in Step 3), you will need to select the appropriate zone, then click the **Custom Level** button, and enable the following settings (they are enabled for the trusted sites by default):

• Download signed ActiveX controls

• Run ActiveX controls and plug-Ins

• Script ActiveX controls marked safe for scripting

• Active scripting

Step 5: Click **OK** to save the settings and close IE.

6.2.2 Logging in as administrator or normal user

Different Internet Explorer versions require different user privileges for installing the ActiveX control.

• If using IE 8.0, 9.0 or 10 on Windows Vista/7/2008, you do not need administrative privileges to download and register the ActiveX control; you can log into the machine as a normal user.

• If using IE 8.0, 9.0 or 10 on Windows XP/2003, or if using IE 7.0 or earlier, you must log in as a member of the Administrator group so you have the permissions to download and register the ActiveX control successfully.

Please read the appropriate section for the IE version you are using.

A useful tip: In very rare cases, even after making the required configurations, you still get errors such as "Appeon Xcelerator plug-in cannot be loaded" or "Internet Explorer cannot open the Internet site http://<Web site>. Operation aborted.", you can try this to resolve the error: right click the **Internet Explorer** icon on desktop, choose **Run as administrator**; after the Web application runs successfully, restart IE in the normal way.

6.2.2.1 Using IE 8.0, 9.0 or 10

- If you are using IE 8.0, 9.0 or 10 on Windows Vista/7/2008, follow the prompts in IE information bar to install the ActiveX control, no matter which user account (administrator or normal user) you use.

- If you are using IE 8.0, 9.0 or 10 on Windows XP/2003, first log in as an Administrator group member, then follow the prompts in IE information bar to install the ActiveX control, then log off and log in again as a normal user.

The following are detailed steps to install the ActiveX control from the IE information bar:

Step 1: Click the IE information bar, the yellow message bar at the top, that says, "This website wants to install the following add-on: 'Appeon Web Library' from 'Appeon Corporation'. If you trust the website and the add-on and want to install it, click here...".

Step 2: Select "Install This Add-on for All Users on This Computer...". This will complete the installation of the first Appeon ActiveX control. (Note: you will need to do this step one more time, as there are two Appeon ActiveX controls to install.)
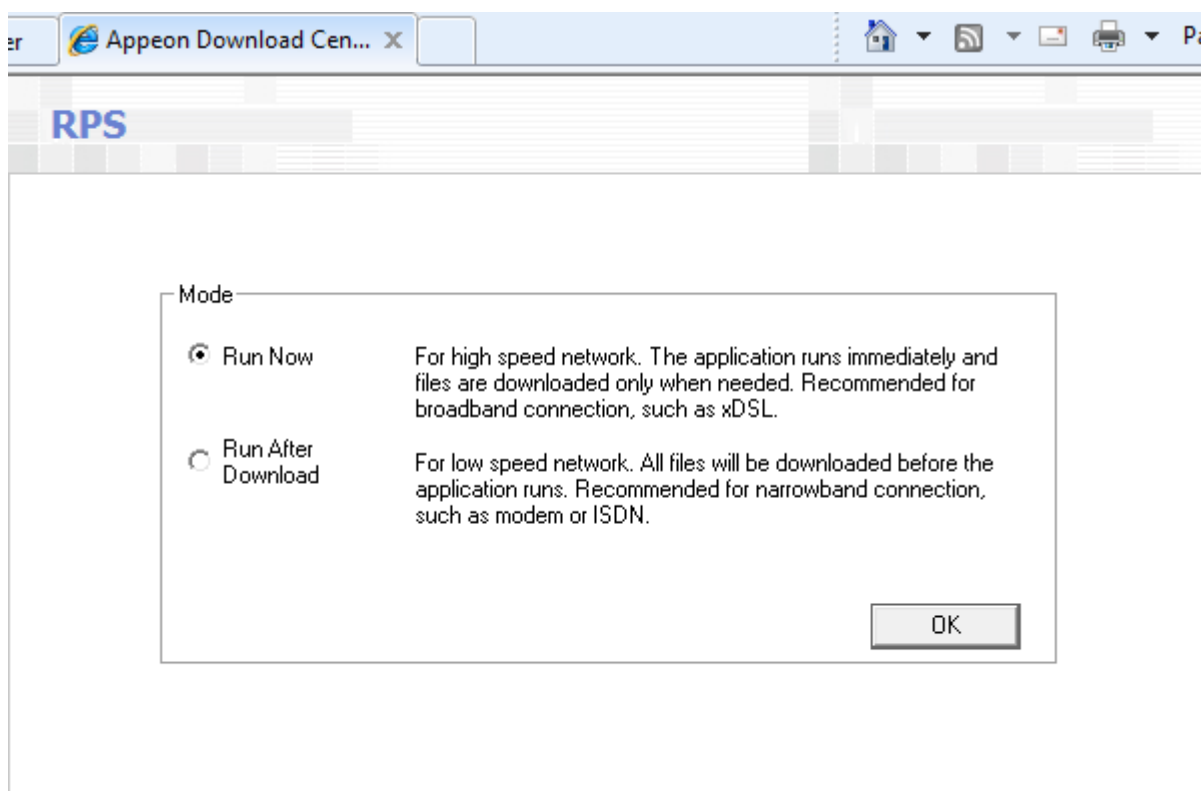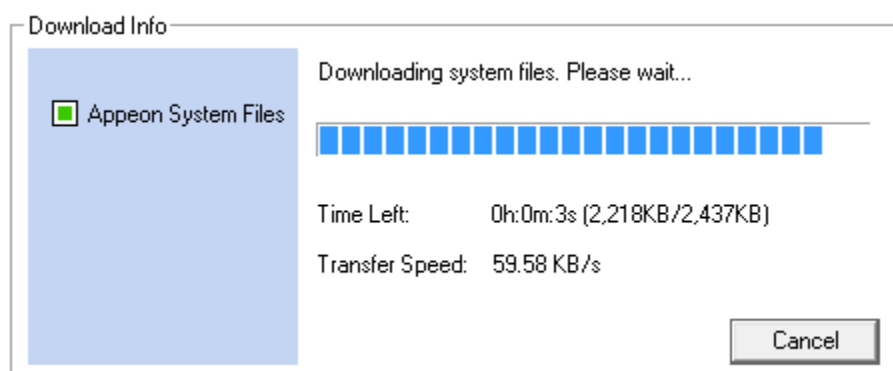
Figure 6.3: IE information bar
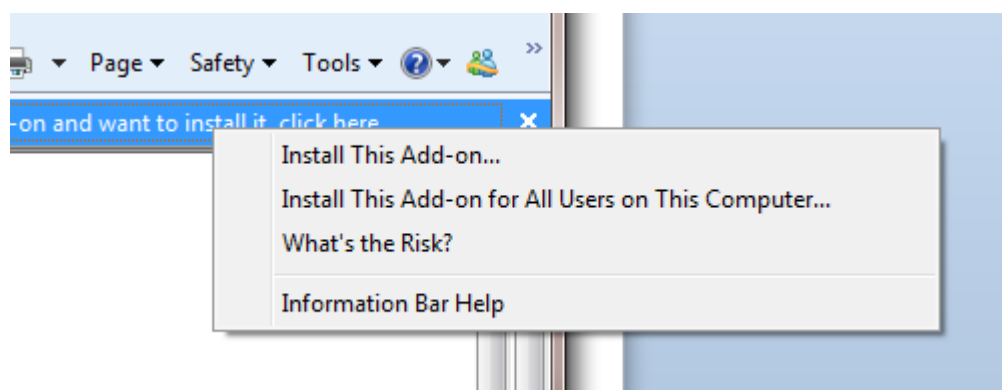
Step 3: Click **Yes** if Windows display the following "User Account Control" screen confirming that you want to install the component.

Figure 6.4: UAC window
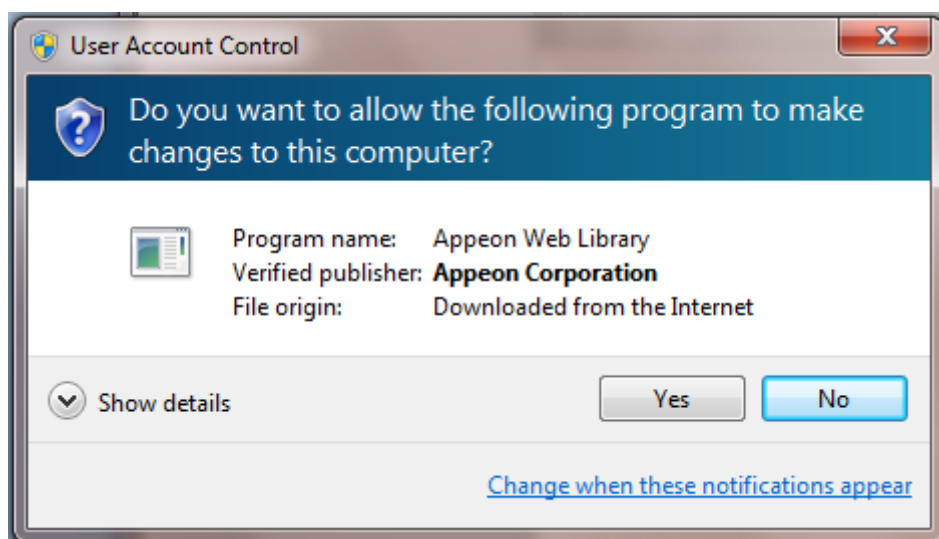
The installation will proceed and when it is successful, the following web page will be displayed.

Figure 6.5: Appeon download center

Step 4: Click the **OK** button and the system will begin the download process.

Figure 6.6: Download file

Step 5: After this process is complete, you will see the "Appeon Xcelerator plug-in cannot be loaded" screen again. Click the IE information bar and select "Install This Add-on for All Users on This Computer..." one more time (this will install the second plug-in). This time you will see a spiraling wait icon and at the bottom left side on the status bar, you will see several program files being loaded. Once this process is completed, the application is ready to be used.

6.2.2.2 Using IE 7.0 (or earlier)

If you are using IE 7.0 or earlier, you need to first log in as an Administrator group member, then follow the prompts in IE information bar to install the ActiveX control, then log off and log in again as a normal user.

For Windows Vista, 2008, or 7, if UAC is on, when you follow the prompts in the IE information bar to install the ActiveX control, a window as below may appear, you need to input the administrator password and click **OK**; then the ActiveX control will be installed successfully.

Figure 6.7: User Account Control

If you are using IE 7, make sure IE is not started in "No-Add-ons" mode, as IE browser started in this mode will not be able to run the Appeon ActiveX control. In this case, exit IE and restart it in normal mode.

6.2.3 Verifying Appeon ActiveX control installation

We recommend you verify the installation of Appeon ActiveX controls, especially after you upgrade Internet Explorer or Appeon for PowerBuilder. The following are detailed steps.

Step 1: In Internet Explorer, on the **Tools** menu, click **Manage Add-ons**.

Figure 6.8: Manage add-ons
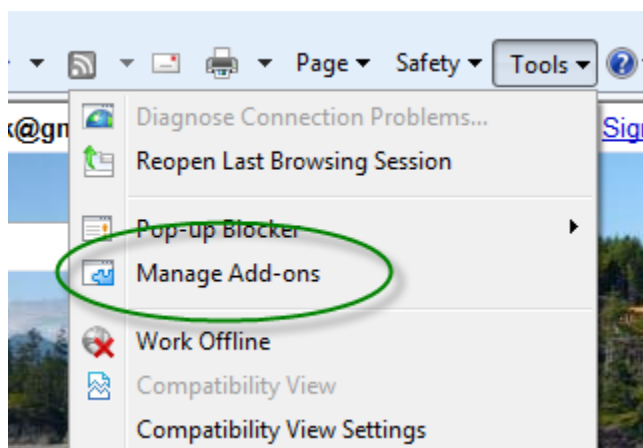
Step 2: From the list of add-ons, there are two listed for Appeon Corporation: EonDownloadCenter Class and EonUISpace Class. Make sure their status are Enabled.

Figure 6.9: Verify ActiveX control status

Name	Publisher	Status	File date	Version	Load t
Adobe PDF Link Helper	Adobe Systems, Incorpo...	Enabled	02/27/2009 12:07 P...	9.1.0.163	0.03 s
Adobe PDF Reader	Adobe Systems, Incorpo...	Enabled	02/27/2009 12:07 P...		
Appeon Corporation					
EonDownloadCenter Class	Appeon Corporation	Enabled	07/01/2010 9:16 PM	6.5.106.0	
EonUISpace Class	Appeon Corporation	Enabled	07/01/2010 9:17 PM	6. 5. 0106. 0	
Apple Inc.					
QuickTime Object	Apple Inc.	Enabled	09/09/2010 4:01 PM	QuickTime...	
Control name is not available					
Web Test Recorder	Control name is not avai...	Enabled		4.0.31106.0	

6.3 System language settings

Sometimes the operating system language settings can affect the characters displayed in the Appeon Web 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 Web 2013 R2

7.1 Overview

To uninstall Appeon Web 2013 R2, uninstall each of its components separately. The uninstall process reverses the actions performed by the Appeon installation program. Uninstallation does not delete any user created files in Appeon, such as Web files generated while deploying the demo applications or your own application to Appeon Server. Delete these files manually from the Web root.

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.

7.2 Uninstalling Appeon Server

Step 1: Undeploy the **AppeonServer** application from the WebSphere Application Server Console.

Figure 7.1: Undeploy AppeonServer
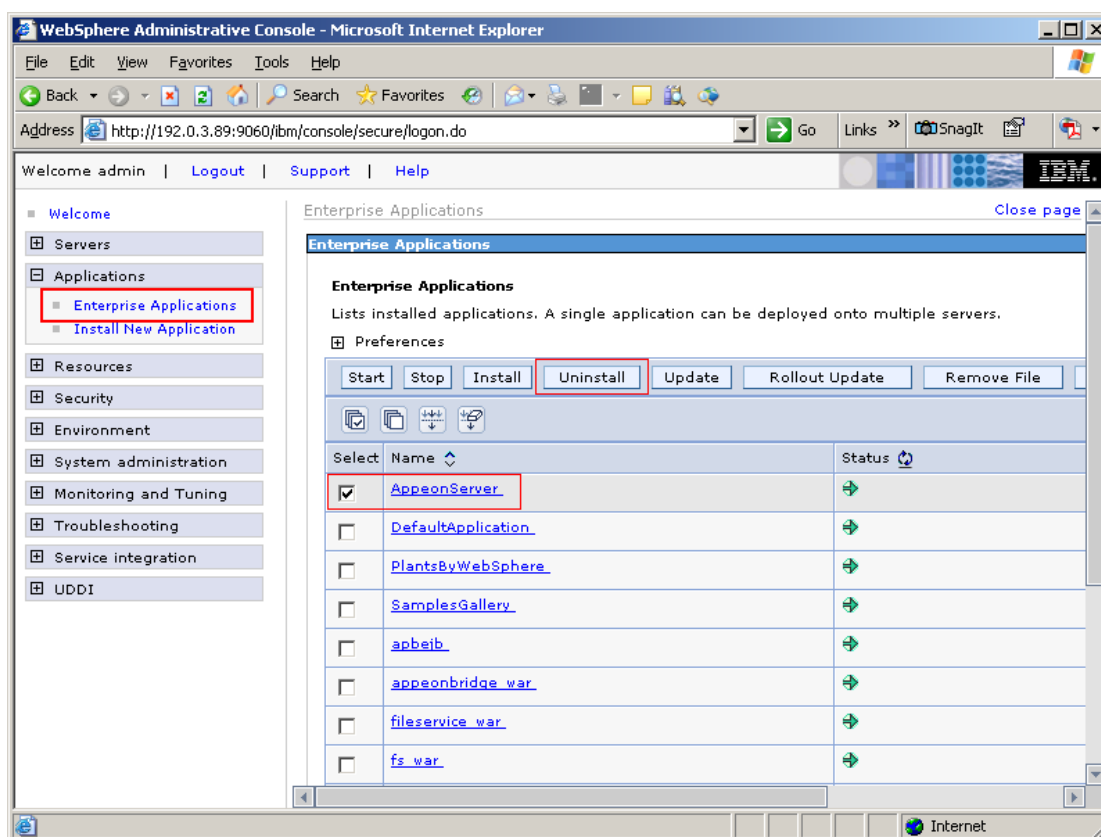
Step 2: Stop all running programs including Appeon Server and WebSphere Application Server.

Step 3: Run the **apbuninstall.sh** file in the **_uninst** folder under the Appeon Server installation directory, for example, /opt/IBM/WebSphere/AppServer/appeon/_uninst or /opt/IBM/WebSphere/AppServerCommunityEdition/appeon/_uninst.

Step 4: Input **y** and press **Enter** to confirm the removal of Appeon Server.

Step 5: After the uninstall process is complete, remove any files or folders left in the Appeon installation folder.

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

To uninstall Appeon Server Web Component on Unix\Linux, you directly go to the Web root of the Web server and remove the entire "appeon" folder.

7.3.1 Uninstalling Web Component if multiple third-party Web servers are involved

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

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