



# *Installing the Platform*

*Release 7.3*

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**Verivo Software, Inc.**  
1000 Winter Street  
Waltham, MA 02451  
781.795.8200  
[www.verivo.com](http://www.verivo.com)

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# Installing the Platform

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Verivo Software's enterprise mobility platform provides a set of services that supports customized data access from a mobile device. These services include security, configuration, enterprise data exchange, wireless data retrieval, data formatting and filtering, and system logging.

Verivo's enterprise mobility platform consists of the following primary components:

- **Verivo configuration database:** Stores configuration data about an app.
- **Verivo AppServer:** Provides authentication, access, logging to the Verivo database via HTTP for mobile users and push capability.
- **Verivo Connector:** Provides the bi-directional data interface between the Verivo database and various enterprise data sources.
- **Verivo AppStudio:** Allows administrators to build an app by configuring settings, creating app users, laying out the application display, and monitor mobile user behavior.
- **Verivo client:** Receives the data that represents an app from the configuration database through the AppServer.
- **Verivo plug-ins:** Facilitate the communication between applications and data sources.

For information on upgrading your installation, see [Upgrading](#).

This section describes the following topics:

- [Installation Requirements](#)
- [Installing the Configuration Database](#)
- [Installing AppServer](#)
- [Installing AppStudio](#)
- [Installing Plug-ins](#)
- [Uninstalling](#)
- [Upgrading](#)

# Installation Requirements

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This topic describes the requirements for each part of Verivo Software's enterprise mobility platform:

- [AppServer requirements](#)
- [Configuration database requirements](#)
- [AppStudio requirements](#)
- [Mobile device requirements](#)
- [Network Requirements](#)

## AppServer requirements

The AppServer is an internal Web server that runs Verivo services, and responds to HTTP requests from mobile devices. System requirements include:

- Server-class computer with a minimum of 2x1 GHz CPUs, 4GB RAM, 10GB available disk space
- Windows Server, one of the following:
  - 2003 R2 SP2 32-bit
  - 2008 R2 SP1 64-bit
- IIS 6.0 or later, including IIS 7.5
- Microsoft .NET Framework v4.x
- IP connectivity to the Verivo database server and required enterprise and external data sources

## Configuration database requirements

The Microsoft SQL Server DBMS hosting the Verivo configuration database has the following requirements:

- Server-class computer with a minimum of 2x1 GHz CPUs, 2GB RAM, and 20GB disk space available to SQL Server
- Microsoft SQL Server 2005 or 2008

## AppStudio requirements

The workstation running AppStudio has the following requirements:

- Windows 7 32-bit or 64-bit
- Microsoft .NET Framework v4.0 or higher
- IP connectivity to the Verivo database server

## Mobile device requirements

The following section describe the requirements for each supported mobile device.

### Android device system requirements

Android devices must have OS v2.0.1 or higher.

### iOS device system requirements

Devices running iOS must run iOS versions 4.x or 5.x.

### BlackBerry device system requirements

BlackBerry devices have the following requirements:

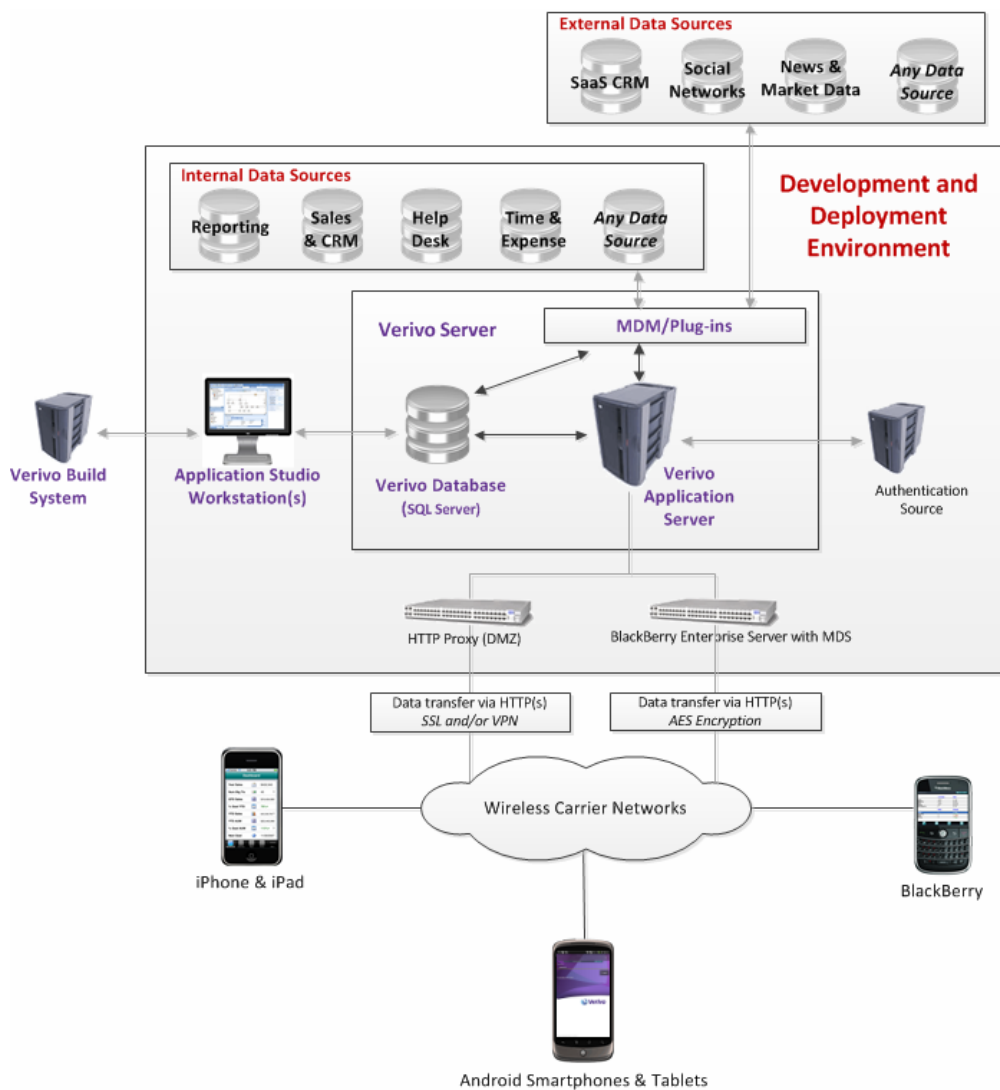
- BlackBerry OS 5.0 or later
- HTTP connectivity via BlackBerry Enterprise Server (BES), BlackBerry Internet Service (BIS), or WAP 2.0
- eMMC or SD card
  - For an SD card, you need a minimum capacity of 1 GB with a minimum of 10 MB free.

## Network Requirements

This section describes the required network connectivity between the major server components of the Verivo infrastructure for both typical and more complex customer infrastructures.

### Network connections

The following diagram shows servers and network links that are required to run Verivo Software's enterprise mobility platform:



Review network connectivity requirements before installing Verivo's enterprise mobility platform. Typical preparation includes:

- Establishing IP connectivity between servers.
- Opening firewall ports as needed.

- Configuring HTTP proxies.
- Establishing domain trusts between required servers.

The following table describes some of the connections:

Connection	Description
MDM to data sources	<p>Verivo plug-ins run on the Verivo AppServer and in AppStudio. Each Verivo plug-in requires connectivity to its specific data source.</p> <p><b>To configure the connection to the MDM and data sources:</b></p> <ul style="list-style-type: none"> <li>• Configure network connectivity between each machine running Verivo plug-in and each data source. Plug-in data sources include company enterprise databases as well as third-party data sources and live feeds.</li> <li>• Set plug-in data source connection parameters within AppStudio.</li> <li>• Optionally configure a linked server on the Verivo database server to point to enterprise data sources; set permissions to execute objects on enterprise sources via the linked server.</li> </ul>
Verivo AppServer to Verivo configuration database	<p>The AppServer executes services that issue online data requests to the Verivo configuration database server. These services use ADO.NET to exchange SQL requests and data with the database server.</p> <p><b>To configure the Verivo AppServer to the Verivo configuration database:</b></p> <ul style="list-style-type: none"> <li>• Specify the database connection string in the web.config file of the Web server.</li> <li>• Specify server/dbInstance in the connection string if the DB instance is not default.</li> <li>• Add port# to the server name if the default SQL Server port (1433) is not used.</li> </ul>
Verivo AppServer to domain controller	<p>The Verivo AppServer authenticates each HTTP request against the specified domain controller, active directory, or directory using IIS-based NTLM or basic authentication.</p> <p><b>To configure the connection between the Verivo AppServer and the domain controller:</b></p> <p>The IIS server must be able to access and have sufficient trusts for the domain authority to authenticate inbound user requests.</p>
MDS to Verivo AppServer	<p>BlackBerry Enterprise Server's Mobile Data Service (MDS) handles HTTP requests made via the Verivo client app from a BlackBerry device, and directs requests to the appropriate Verivo Web server. HTTP connectivity between MDS and the Verivo AppServer, the latter listens on the configured port, typically port 80. Verivo supports SSL, enabled on the AppServer to encrypt traffic within this connection.</p> <p><b>To configure the connection between MDS and the Verivo AppServer:</b></p> <ul style="list-style-type: none"> <li>• Configure the HTTP listening port for the Verivo AppServer, typically 80.</li> <li>• Configure BES MDS to connect via a proxy if a proxy sits between MDS and the Verivo Web server.</li> <li>• Ensure that the following MIME types are allowed through the proxy: .html, .jad, and .cod for over-the-air app downloads.</li> </ul>

BES MDS to Verivo app on a device	<p>Configure BES MDS with outbound-only connectivity to the Internet via port 3101; see RIM's BES documentation.</p> <p><b>To configure the connection between BES MDS and a Verivo app running on a device:</b></p> <p>This BES configuration is the same as required for BES to send/receive standard email traffic. If wireless email works, do nothing here.</p>
AppStudio to Verivo configuration database	<p>AppStudio connects directly to the database server via ADO.NET, using SQL commands to read and write data.</p> <p><b>To configure the connection between AppStudio and the Verivo configuration database:</b></p> <p>Database connection parameters are configured via AppStudio during login, using server name, user ID and password.</p>

## Complex infrastructure requirements

This section shows how to configure server and connectivity requirements for customers who use load balancers, proxy servers, and Windows Server 2003.

### Configuring a linked server

If you plan to download large volumes of data and memory resources are limited, you can use Verivo SQL pass-through capability by configuring a required linked server between the Verivo configuration database and enterprise data sources. In order to connect to your data via a linked query, configure the appropriate Verivo plug-in as follows:

- Enable the **AllowLinkedQuery** connection parameter.
- Assign the **LinkDataSource** parameter to your linked server name.

For detailed instructions on configuring Verivo plug-ins to SQL enterprise sources see the *Verivo Build, Deploy, and Manage Applications* guide. For instructions on configuring other Verivo plug-ins, see the specific *Verivo Working with Plug-Ins* guide for your enterprise data provider.

### Configuring the Verivo AppServer in a Web farm environment

To set the AppServer to support a Web farm:

1. Install the Verivo AppServer on all desired Web servers.
2. On the load balancer, set session data to stick to user profiles.

**i** Verivo does not store session data on IIS. Authentication requires stored session data, so if you intend to use authentication on a Web farm you must enable sticky sessions on the load balancer to send users to the server hosting their data.



## Installing the Configuration Database

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If you are creating a fresh installation, install the Verivo configuration database in these steps:

- [Download the configuration database installer](#)
- [Run the configuration database installer](#)
- [Create a database user with owner permissions](#)

### Download the configuration database installer

In order to download the configuration database installer:

1. Log on to the Verivo product delivery FTP site. You should have already received log in credentials from Verivo.

<ftp://ftp.verivo.com>

2. Navigate to the following directory:


Shared\Verivo 7.3\Database\Installer\

3. Depending on your version of Microsoft SQL Server (2005 or 2008), download the appropriate zip file to the database host machine:
  - PyxisMobileDatabaseInstaller\_73x\_emptydb\_2008.zip
  - PyxisMobileDatabaseInstaller\_73x\_emptydb\_2005.zip

### Run the configuration database installer


1. Make sure that Microsoft SQL Server 2005 or 2008 is running.
2. Extract and run the configuration database installer, one of the following:

- PyxisMobileDatabaseInstaller\_73x\_emptydb\_2005.exe
- PyxisMobileDatabaseInstaller\_73x\_emptydb\_2008.exe

 On Windows 7, run the installer as administrator.

3. In the **Run Package** dialog box, set the following fields:
  - **Server:** Set to the name of the server hosting the configuration database. It might take a moment for the pull-down menu to populate
  - Choose an authentication type: **Windows authentication**, or **SQL Server authentication**. If you choose SQL Server authentication, supply login information—user name and password—in order to create a database and database objects.
  - Select **Make a database**
4. Click **Advanced**.
5. In the Verivo database options window, set the following fields:
  - **Database** and **Log:** Set to the desired directories. By default, both are set to the same directory as the SQL server database.
  - Set **Collation:** Set to the language of your enterprise data source.
  - **Recovery model** and **Database size (MB):** Set as desired. Verivo recommends setting the **Recovery model** to Simple for development and Full for production. You can modify these settings at any time.

6. Click **OK**.
7. In the **Database** field of the **Run Package** dialog box, enter a name for the configuration database. For example, Verivo. Write down the name of this database as you need it later in the installation process.
8. In the **Run Package** dialog box, click **Run**.
9. Click **Yes**. Then click **OK** once the package has executed successfully.

 On Windows 7, if a “This Program might not have installed correctly” compatibility message appears, click on “This program installed correctly”.

The configuration database installation package creates the database on the server, and builds tables, stored procedures and user-defined functions.

## Create a database user with owner permissions

After installing the configuration database, create a database user. The user must have owner permissions in **SQL Server Enterprise Manager** on the configuration database.

The user you create in SQL Server corresponds to an administrator user in AppStudio. For example, create a database user named "mpdemo" with a password of "mpdemo". When you log in to AppStudio, you are prompted for an administrator user name and password, as well as the database server name and configuration database. AppStudio uses that log in name and password to connect to the database, so it should match the user name and password of the database user.

## Installing AppServer

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This section describes how to install the Verivo AppServer. Upgrading users must reinstall the AppServer by following the same steps as first-time installers.

The Verivo AppServer runs as a Web site under Internet Information Services (IIS). Verivo services respond to HTTP requests for data from mobile devices by querying the Verivo configuration database and returning results to the device in a standard format. The applications on the mobile device then read those results and display them to the mobile user.

This section contains the following topics:

- [AppServer Installation](#)
- [IIS 7 Configuration](#)
- [IIS 6 Configuration](#)
- [Configuring IIS Security](#)

### AppServer Installation

The instructions provided in this chapter describe a typical installation of the Verivo AppServer. For customers with additional IIS security requirements, contact Verivo customer support for more information.

#### Prerequisites

Before beginning the AppServer installation, be sure that you have administrative privileges to create virtual directories in IIS.

#### Installation steps

To install the Verivo AppServer:

1. Log on to the Verivo product delivery FTP site. You should have already received log in credentials from Verivo.

<ftp://ftp.verivo.com>

2. Navigate to the following directory:

```
Shared\Verivo 7.3\AppServer\
```

3. Download AppServer\_Raw file and extract its contents to a location accessible by IIS. For example, extract it to the directory:

```
c:\inetpub\wwwroot\Verivo73\
```

4. Run the PM\_DBCConnectorTool.exe from where you extracted AppServer\_Raw to in Step 3. For example:

```
c:\inetpub\wwwroot\Verivo73\PM_DBCConnectorTool.exe
```

5. In the Verivo Connection Tool window, set the following fields:

- **Config File:** Click the '...' button to navigate to the directory where you extracted the AppServer files. Select the web.config file in that directory and click **Open**.
- Enter the Database Server Name, Database Name, Database Login, and Database Password for the

Verivo configuration database you installed earlier. Supply a port number in the Database Server Name only if you use a non-standard port.

- **Database Timeout:** Specify in seconds the amount of time that elapses before database requests time out. The default is 1800. Reset this value only if your database executes commands that require a very long time to complete.
6. Click **Test Connection String** to verify that the AppServer can connect to your data source.
  7. After receiving a successful connection alert message, click **OK**. Then click **Update Config**, and **OK**.
  8. The installer updates the web.config file in the location you choose, for example:

```
<local>:\inetpub\wwwroot\Verivo73\web.config
```

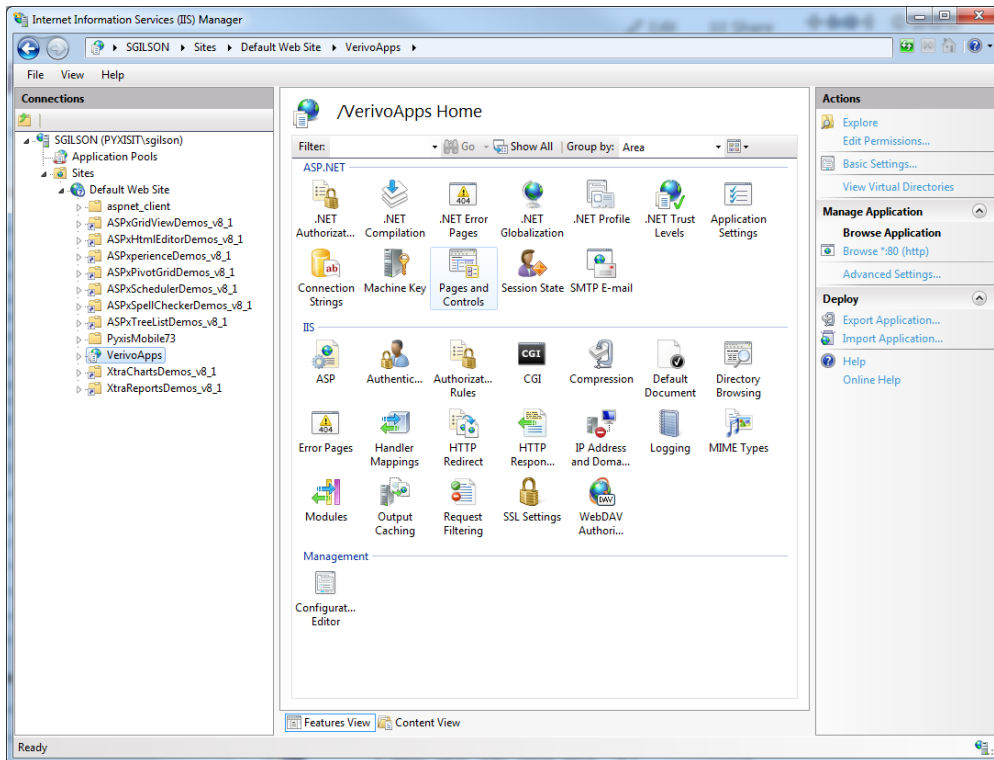
#### **Note**

After installing AppServer and before deploying to a production server, you should remove the test page. For more information, see [General Deployment Guidelines](#).

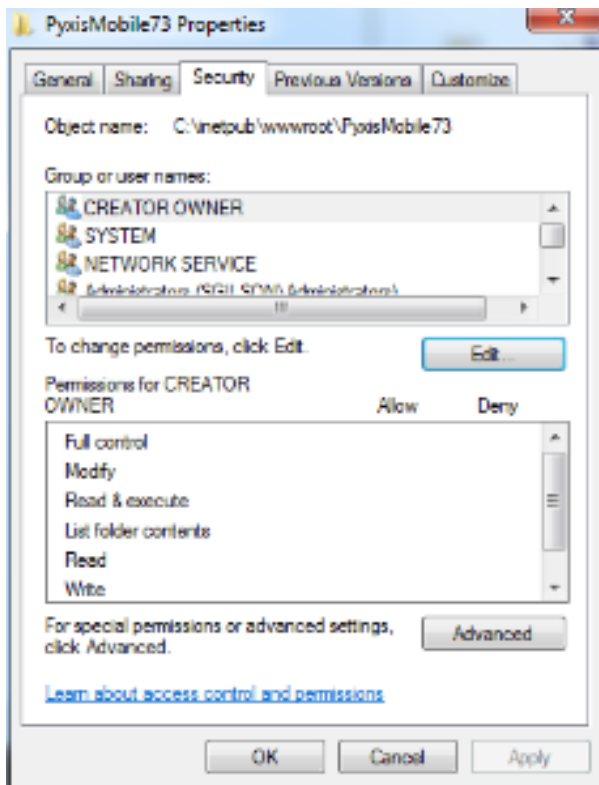
## IIS 7 Configuration

You configure Internet Information Services (IIS) 7 to create an application directory for the Web site that hosts the Verivo AppServer:

1. Open IIS 7.
2. In the left pane of the IIS console, drill-down and locate the web site that hosts the Verivo AppServer you installed earlier. For example, Default Web Site.
3. Right-click on the web site and select the menu option **Add Application**.
4. In the Add Application dialog, set the following fields:
  - a. **Alias:** Enter an alias name for the directory containing your apps. For example, VerivoApps.
  - b. For the **Application Pool**, the AppServer requires a .NET 4.0 application pool. Click the **Select** button to select a .NET 4.0 Application Pool.
  - c. **Physical path:** Point to the location where you installed the AppServer, such as C:\inetpub\wwwroot\Verivo73.
5. Click **OK**.



6. Click the new application directory, VerivoApps, to set its properties.
7. In the center pane, in the IIS section, open **Default Document** and move index.html to the top priority position. Click **Move Up** in the Actions pane on the right until the index.html is at the top.
8. Click Application Pools in the left pane.
9. Determine the Identity that corresponds to the .NET 4.0 application pool that you set above for **Application Pool**. You must ensure that the identity has full access to VerivoApps.
10. To ensure that the identity has full access to VerivoApps, right click on VerivoApps in the left pane, and select **Edit Permissions...**
11. Select the **Security** tab in the dialog box.



12. Click the **Edit** button. The **Permissions for VerivoApps** dialog box appears.
13. Click the **Add** button. The **Select Users, Computers, Service Accounts, or Groups** dialog box appears.
14. In the **Enter the object names to select (examples)** area of the dialog box, enter the name of the Identity of the .NET 4.0 application pool. The Identity is specific to your system, your system security configurations, and other configuration options. See your system administrator for the name of your application pool.

- ✓ To determine the application pool identity:
- a. Click **Application Pools** in Connections in the left pane.
  - b. In the middle pane, select the .NET 4.0 Application Pool you assigned earlier.
  - c. Select **Advanced Settings** from the right pane.
  - d. In the Process Model section, select **Identity** then the "..." button on the far right. The Application Pool Identity dialog box opens.
  - e. Select the appropriate **Identity** from the pull-down menu of the desired account.
  - f. Click **OK**.

15. Click the **Check Names** button. The identity is now underlined in the dialog box.
16. Click **OK**.
17. With the Identity selected under **Groups or User names**, select **Full Control** under **Allow** in the permissions area of the dialog box.
18. Click **Apply**.
19. Click **OK** twice.
20. Select the Default Web Site in the left pane.
21. Double click **MIME Types** under IIS in the middle pane to add the supported MIME types to the web site. MIME types are necessary to help mobile clients handle file name extensions appropriately.

22. Select **Add** in the Actions pane to launch the Add MIME Type window. Add the .jad extension and MIME type shown in the following table:

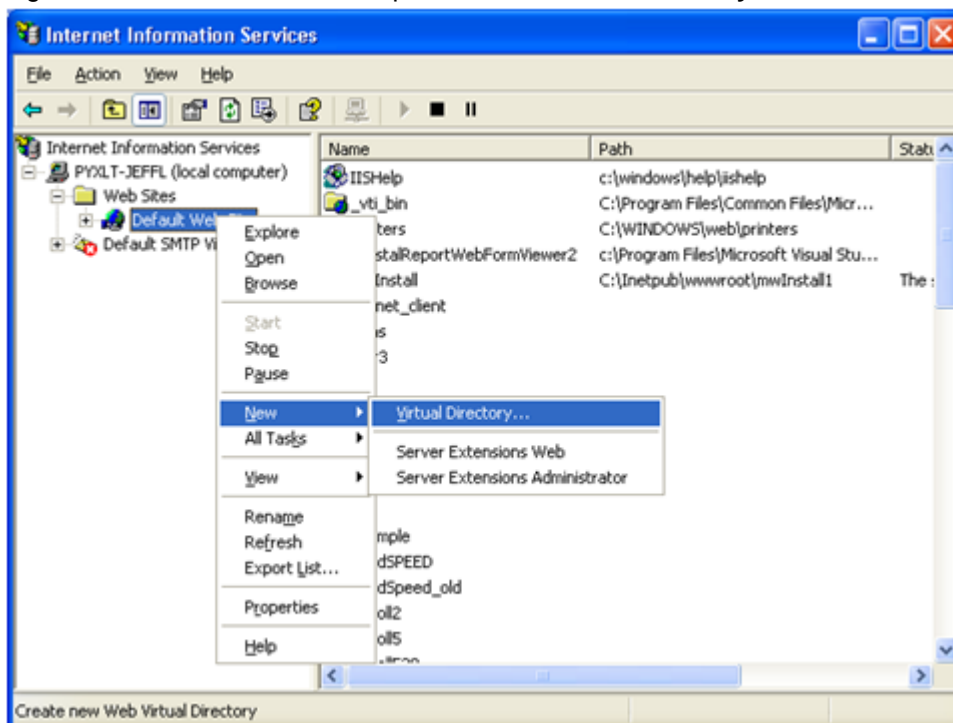
File name extension	MIME type
.jad	text/vnd.sun.j2me.app-descriptor
.cod	application/vnd.rim.cod
	Note that the .cod extension might already be defined. If so, edit its definition to specify the content type.
.apk	application/vnd.android.package-archive

23. Click **OK**.  
 24. Repeat steps 22 and 23 to add the .cod and .apk MIME types.

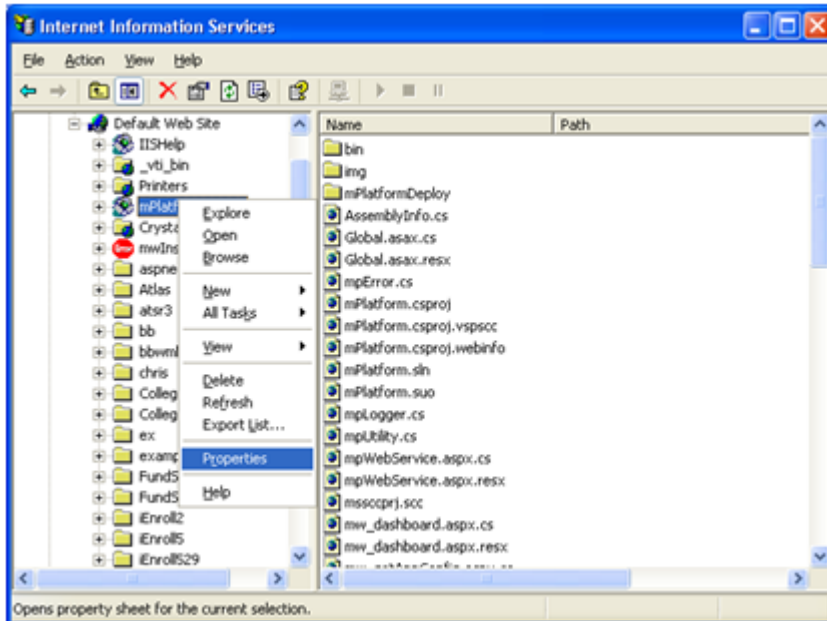
## IIS 6 Configuration

You configure Internet Information Services (IIS) 6 to create a virtual directory for the Web site that hosts the Verivo AppServer:

1. Open IIS 6.
2. In the left pane of the IIS console, drill-down and locate the web site that hosts the Verivo AppServer you installed earlier. For example, Default Web Site.
3. If the computer containing the web site does not appear in the list, click the **Action** menu and then **Connect**. In the **Connect to Computer** dialog box, enter the **Computer name** or click **Browse** to locate it. Once you find it, click **OK**.
4. Right click and select the menu option **New > Virtual Directory**.



5. In the Virtual Directory Alias page of the Virtual Directory Creation wizard, enter an alias for the Web site to host the AppServer, such as VerivoApps.
6. Click **Next**.
7. In the Web Site Content Directory page of the wizard, point to the location where you installed the AppServer, such as c:\inetpub\wwwroot\Verivo73.
8. Click **Next**.
9. In the Access Permissions page of the wizard, allow Read and Run scripts permissions.
10. Click **Next** and **Finish**.
11. Configure the new virtual directory by returning to the left pane of the IIS console. Right-click the new virtual directory—the new alias name—and select **Properties**.



12. On the **Documents** tab of the selected virtual directory Properties window, set the default document as index.html by selecting it in the list and clicking the **Move Up** button until it is at the top. Click **Apply**.
13. Click the **HTTP Headers Tab** of the Properties dialog box.
14. In the **Custom HTTP Headers** section, add the following three custom HTTP headers (you have to add them separately by pressing the **Add** button three times):
  - a. **Custom header name:** Cache-Control **Custom header value:** no-cache, no-store, max-age=0, must-revalidate
  - b. **Custom header name:** Pragma **Custom header value:** no-cache
  - c. **Custom header name:** Expires **Custom header value:** -1
15. On the **ASP .NET** tab, select the ASP .NET version. The Verivo AppServer requires an ASP .NET 4.0 version or later. Select a .NET version.
16. Click **OK**.
17. In IIS, click **Application Pools** in the left pane.
18. Determine the Identity that corresponds to the application pool for the virtual directory. You must ensure that the identity has full access to VerivoApps.
19. To ensure that the identity has full access to VerivoApps, right click on VerivoApps in the left pane, and select **Permissions**.
20. Click the **Edit** button.
21. Click the **Add** button. The **Select Users, Computers, Service Accounts, or Groups** dialog box appears.
22. In the **Enter the object names to select (examples)** area of the dialog box, enter the name of the Identity application pool. The Identity is specific to your system, your system security configurations, and other configuration options. See your system administrator for the name of your application pool.



- ✔ To find the application pool identity, click the **Advanced** button and enter the name in the Common Queries field. Then click **Find Now**. When it appears in the Search results at the bottom, select it and click **OK**.

23. Click the **Check Names** button. The identity is now underlined in the dialog box.
24. Click **OK**.
25. With the Identity selected under **Groups or User names**, select **Full Control** under **Allow** in the permissions area of the dialog box.
26. Click **Apply**.
27. Click **OK**.
28. Add supported MIME types to your new virtual directory. MIME types are necessary to help mobile clients handle file name extensions appropriately.
  - Select the HTTP Headers tab of the same virtual directory Properties window and click **MIME Types**.
  - In the MIME Types window, click **New** to launch the MIME Type window. Create the following MIME types:

File name extension	MIME Type
.jad	text/vnd.sun.j2me.app-descriptor
.cod	application/vnd.rim.cod
.apk	application/vnd.android.package-archive

29. Click **OK**.
30. Click **Apply** then **OK** to close the Properties window.

## Configuring IIS Security

On your server, ensure the IIS is configured correctly to handle the Microsoft IIS missing host header information leak. When sending a request without the `Host` header, under certain configurations, IIS discloses its internal IP address in the `Location` header.

### Affected Products

- Microsoft IIS 4.0-6.0
- IIS 7.0 (only if `alternateHostName` is not set)

### Fix for IIS 7

To fix this issue on IIS 7, make sure that you set `alternateHostName`. Use the following command to determine the current setting of `alternateHostName`:

```
appcmd.exe list config -section:system.webServer/serverRuntime
```

where the `appcmd.exe` command is located in the `Windows\system32\inetsrv\` directory.

In the output of the `appcmd.exe` command, locate the `serverRuntime` property. If `alternateHostName` is set, you see output in the form:

```
<system.webServer>
  <serverRuntime alternateHostName="myServer.myCompany.com" />
</system.webServer>
```

If `alternateHostName` is not set, you see output in the form:

```
<system.webServer>
  <serverRuntime />
</system.webServer>
```

If `alternateHostName` is not set, set it by executing the following command:

```
appcmd.exe set config -section:system.webServer/serverRuntime /alternateHostName:<server name> /commit:apphost
```

where `<server_name>` corresponds to the name of your server

For example:

```
appcmd.exe set config -section:system.webServer/serverRuntime
/alternateHostName:myServer.myCompany.com /commit:apphost
```

### Fix for IIS 6

For IIS 6, you must set the `alternateHostName` property as described above for IIS 7, and you also must make sure to install the security patch located at <http://support.microsoft.com/kb/834141>.

## Installing AppStudio

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This section describes how to install the Verivo Software's AppStudio. Upgrading users must reinstall AppStudio by following the same steps as first-time installers.

### Install AppStudio

You must have administration privileges for the machine where you install AppStudio.

#### To install AppStudio:

1. Log on to the Verivo product delivery FTP site. You should have already received log in credentials from Verivo.

<ftp://ftp.verivo.com>

2. Find the Verivo AppStudio zip file at the Verivo product delivery location:

Shared\Verivo 7.3\App Studio\AppStudioInstaller.zip

3. Download the zip file to the machine where you are installing the AppStudio, unzip it, then run the installer:

AppStudioInstaller.msi

4. Follow the steps in the Application Studio Setup Wizard.

The AppStudio installation program configures settings and installs all AppStudio files.

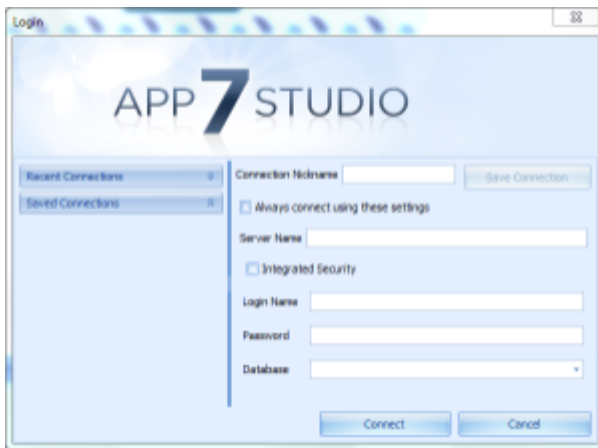
### Log in to AppStudio

After you install AppStudio, you can log in for the first time. For more information, see [Logging in to AppStudio](#).

**i** Remember, your login name and password for AppStudio must match the login name and password of a Microsoft SQL Server user with owner permissions on the configuration database. For more information on setting up the configuration database, see [Installing the Configuration Database](#).

#### To log in to AppStudio:

1. Start AppStudio. The AppStudio login screen appears:



2. Enter the following information:

- **Connection Nickname:** A user-defined name that lets you save login information.
- **Always connect using these settings:** Leave unchecked for now.
- **Server Name:** The name of the server hosting the Microsoft SQL Server that contains the configuration database. This value depends on how SQL Server is configured. For example, it could be just the machine name hosting SQL Server, such as localhost or my.server.company.com. Or, you might have to include the full server instance name, such as localhost\sqlexpress.
- **Integrated Security:** If unchecked, the **Login Name** and **Password** fields correspond to a username and password for the Microsoft SQL Server hosting the configuration database. If checked, the **Login Name** and **Password** fields are disabled and AppStudio uses the Windows Credentials of the AppStudio user to connect to the configuration database.
- **Login Name:** The user name on the Microsoft SQL Server that hosts the configuration database.
- **Password:** The password on the Microsoft SQL Server.
- **Database:** Select the Verivo configuration database for the selected Microsoft SQL Server.

3. Select **Connect**.

4. A pop-up window might appear asking if you would like to create an administrator with full access rights for the login name. An administrator user can create apps and create other users.

5. Click **Yes**.

6. If you do not connect, check the following:

- You entered the server name precisely.
- You entered the database name precisely.
- You entered your user name and password to the Verivo database precisely.
- The configuration database is running.
- You have permissions to access to the Verivo database. You can verify your access privileges by logging in to the Verivo database via your database provider.

**i** For additional information, please refer to this article:

<http://support.verivo.com/entries/21290182-user-is-getting-unable-to-connect-when-logging-into-applica>

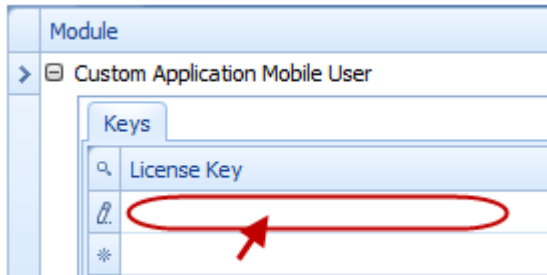
## Add a license key

With no license key, you can create an app in AppStudio, but you cannot run the app on a simulator or device.

**To add a license key:**

1. Obtain a license key from Verivo.

2. Start AppStudio
3. Select the **Licensing** icon in the AppStudio toolbar. The Licensing Manager appears.
4. Select the **Modules** tab in the Licensing Manager.
5. Typically, you set the license in the **Custom Application Mobile User** row. Click the plus **+** sign next to the **Custom Application Mobile User** row to expand it.
6. Paste your license key into the **License Key** column.



7. Click the **Reload** button at the bottom of the screen. The **Max Users** and **End Date** columns update from information in the license.

You can now deploy apps to a simulator or device.

## Installing Plug-ins

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Plug-ins facilitate the connection between a mobile application and a data source. The Verivo platform includes a number of plug-ins for connecting to common data sources that are installed with the AppServer and AppStudio. Others must be downloaded and installed separately. You can also create your own custom plug-ins, in which case you must install the plug-in SDK.

For information on installing plug-ins, see [Downloading and installing pre-built plug-ins](#).

For information on using the plug-in SDK, see [About the Plug-in SDK](#).

# Uninstalling

---

This section describes the following topics:

- [Uninstalling the AppServer](#)
- [Uninstalling the Configuration Database](#)

## Uninstalling the AppServer

To remove earlier versions of the Verivo AppServer:

1. Delete the IIS virtual directory that you created during the AppServer installation or upgrade.
2. As an administrator, go to **Control Panel > Programs > Uninstall a Program** and remove the AppServer from your system.

## Uninstalling the Configuration Database

To remove the configuration database from the Microsoft SQL Server:

1. Delete the configuration database that you created during the database installation.
2. After uninstalling all instances of the database, remove the DBMS login that you use to access the database.

# Upgrading

This section includes the following topics:

- [Upgrading an Existing Configuration Database](#)
- [Upgrading the AppServer](#)
- [Upgrading AppStudio](#)
- [Upgrading Client Software for Mobile Users](#)

If you have an earlier version of Verivo Software's enterprise mobility platform installed, it is generally recommended to maintain the various environments (development, testing, production) that use the earlier version, and install the new Verivo configuration database and AppServer in separate environments. This approach lets you continue to support existing mobile apps, while you simultaneously develop and test apps in the new environment. After upgraded apps are tested and deployed, old product versions can be gradually phased out as clients acquire the new versions.

## Upgrading an Existing Configuration Database

If you are upgrading from an earlier product version, you should create a separate environment for the new configuration database. Upgrading an existing configuration database is a three-stage process:

1. Populate a new configuration database.
2. Download the upgrade package.
3. Upgrade the new configuration database.

## Database versions and upgrade paths

The following table describes the upgrade paths for Verivo versions 6.x and 7.x:

Current Version	Upgrade Steps
7.x	Run the 7.3 program DatabaseUpgrader.exe.
6.x	Upgrade in two stages: <ol style="list-style-type: none"> <li>1. Upgrade the database from 6.x to 7.2 by running the 7.2 program DatabaseUpgrader.exe.</li> <li>2. Run the 7.3 program DatabaseUpgrader.exe.</li> </ol>

The procedures in this section assume you are upgrading a 7.x configuration database. For more information about upgrading versions 6.x or earlier, contact Verivo Professional Services.

## Populate a new configuration database

Create a configuration database and populate it with the data of the existing database:

1. Connect to the server that hosts the current 7.x database.
2. Back up the 7.x database.
3. Create an empty database with a unique name. The name should clearly differentiate this new database from the version 7.x database—for example, VerivoDB73.
4. Restore the database backup to the new database. This populates the new database with configuration data of existing Verivo applications.

## Download the upgrade package



To download the upgrade package:

1. Log on to the Verivo product delivery FTP site. You should have already received log in credentials from Verivo.

<ftp://ftp.verivo.com>

2. Navigate to the following directory:

```
\Shared\Verivo 7.3\Database\Upgrader\DatabaseUpgrader.zip
```

3. Download the zip file to the machine where you are installing the Verivo database.

## Upgrade the new configuration database

The Verivo upgrade program updates the new configuration database to version 7.3: it builds new tables, alters existing tables, and migrates configuration data.

Upgrade the database to version 7.3 as follows:

1. Extract and run the upgrade program:

```
DatabaseUpgrader.exe
```

On Windows 7, run the upgrade as administrator.

2. In the Upgrade Verivo Database dialog, set the following fields:
  - a. **Server:** Set to the name of the server hosting the Verivo database.
  - b. Choose an authentication type: Windows authentication, or SQL Server authentication. If you choose SQL Server authentication, supply login information—user name and password—with permissions to alter database objects.
  - c. **Database:** Set to the new database.
  - d. **Target Version:** Set to the latest version.
2. Click Run.

## Upgrading the AppServer

Upgrading users must reinstall the AppServer by following the same steps as first-time installers. For more information, see [Installing AppServer](#).

The following issues apply only if you are upgrading earlier versions of Verivo Software's enterprise mobility platform:

- Make sure the `<customErrors>` property in the `web.config` file is set to `On` after the upgrade. This setting configures the server to always display custom (friendly) error messages.
- If you have apps that were created with earlier versions of Verivo's enterprise mobility platform, you should maintain your existing AppServer environment as long as necessary in order to facilitate a smooth upgrade transition for current mobile users. Therefore, you should create a separate directory for the new AppServer installation.
- The distribution provides a new `web.config` for the AppServer. If desired, you can retain the `web.config` from an earlier installation. If you do so, you should update this file by editing this key setting:

```
<add key="DeployVersionsBB" value="..., 7.0=BB OS 7.0 or greater" />
```

If you have plug-ins from the previous installation, you must manually copy them over to the AppServer's plug-ins directory.

⊖ Be careful not to overwrite any plug-ins that are already in this directory.

## Upgrading AppStudio

Upgrading users must reinstall AppStudio by following the same steps as first-time installers. For more information, see [Installing AppStudio](#).

If you have plug-ins from the previous installation, you must manually copy them from the previous version of AppStudio's plug-ins directory to the new version. To do this, locate the plug-ins directory and copy the DLL files.

⊖ Be careful not to overwrite any plug-ins that are already in this directory.

## Upgrading Client Software for Mobile Users

When you upgrade an app to use a new release of Verivo Software's enterprise mobility platform, you must also upgrade the Verivo client app on a user's device.

The first step in upgrading the client app is to use AppStudio to specify the minimum client version required by the app. On app startup, the AppServer checks the current client version against the specified minimum client version. If an upgrade is required, the app user is notified and can then choose to install the upgrade.

You deploy the upgraded version of the app for download on the Verivo AppServer or on the app store for each type of device. You must also edit the Web.config file on the AppServer to point to the location of the upgrade file.

For more information on the two types of upgrades, see the following:

- [Upgrade from the Verivo AppServer](#)
- [Upgrade from the app store](#)

### Upgrade from the Verivo AppServer

To configure an upgrade from the Verivo AppServer, package and deploy your app using the the new client files on the Verivo AppServer. Then, edit the Web.config file to specify the location of the upgrade for each device type (Android, BlackBerry, and iOS).

#### To perform an upgrade from the AppServer:

1. Start AppStudio and load the app.
2. Select the **Application Properties** icon on the AppStudio toolbar.
3. Select the **Server** tab.
4. Set **Minimum client version** to the minimum version of the client. For example, set it to 7.3.15.
5. Set the **Upgrade URL** to the URL of the Default.aspx file in the Verivo AppServer's `deploy` directory. For example:

```
http://172.17.2.7/VerivoApps/deploy/Default.aspx
```

The Default.aspx file is shipped with the Verivo AppServer. It lets the user select the app to upgrade from all of the apps in the `deploy` directory. If you only want to allow the user to be able to upgrade a specific app, include the AppID in the URL, as shown below:

```
http://172.17.2.7/VerivoApps/deploy/Default.aspx?AppID=1002
```

In this case, the download begins immediately without the user having to select the app to upgrade.

- For BlackBerry devices, copy the BB directory of the updated Blackberry Client Pull directory to the `deploy` directory on the AppServer. For example, `C:\inetpub\wwwroot\PyxisMobile73\deploy\BB`.
- Edit the `Web.config` file under your Verivo AppServer to set the `DeployAppFilesBB` key. The value of the key specifies the AppID and the name of the app to upgrade. For example:

```
<add key="DeployAppFilesBB" value="1001=my_app, 1002=my_other_app" />
```

After selecting the app to upgrade, the upgrade file downloads and prompts you to install the upgrade. All data is preserved.

- For Android devices, copy the updated Android `.apk` file to the `deploy` directory on the AppServer. For example, `C:\inetpub\wwwroot\PyxisMobile73\deploy`.
- Edit the `Web.config` file under your Verivo AppServer to set the `DeployRedirectAndroid` key. The value of the key specifies the AppID and the URL of the client upgrade file. For example:

```
<add key="DeployRedirectAndroid" value="1002=http://172.17.2.7/VerivoApps/deploy/my_client.apk" />
```

If there are multiple apps, specify multiple `value` entries, as shown below:

```
<add key="DeployRedirectAndroid" value="1002=http://172.17.2.7/VerivoApps/deploy/my_client.apk, 1003=http://172.17.2.7/VerivoApps/deploy/my_other_client.apk" />
```

After the upgrade file downloads, you are prompted you to install the upgrade. Depending on the type of Android device, you will either have to navigate to the downloaded file or you will navigate to the file automatically. All data is preserved.

- For iOS devices, copy the iOS `.ipa` file and `.plist` file to the `deploy` directory on the AppServer. Verivo creates the `.ipa` file for you, and Verivo can optionally create the `.plist` file as well.

**i** Make sure that you have created MIME types for the `.ipa` and `.plist` files in IIS. The MIME types are:

- `.ipa = application/octet-stream`
- `.plist = text/xml`

- Modify the `web.config` file's `DeployRedirectiOS` key to specify the `itms-services` URL to allow OTA download on iOS. The value of the key specifies the AppID and the location of the client upgrade file. For example:

```
<add key="DeployRedirectiOS" value="1002=itms-services://?action=download-manifest&url=http://172.17.2.7/VerivoApps/deploy/my_client.plist"/>
```

If there are multiple apps, specify multiple value entries, as shown below:

```
<add key="DeployRedirectiOS"
```

```
value="1002=itms-services://?action=download-manifest&url=http://172.17.2.7/VerivoApps/deploy/my_client.plist,
1003=itms-services://?action=download-manifest&url=http://172.17.2.7/VerivoApps/deploy/my_other_client.plist" />
```

After the upgrade file downloads, you are prompted to install it. All data is preserved.

## Upgrade from the app store

To configure an upgrade from an app store, package and deploy your app using the the new client files on the appropriate app store. Then, edit the Web.config file to specify the location of the upgrade for each device type (Android, BlackBerry, and iOS).

### To upgrade from a device's app store:

1. Start AppStudio and load the app.
2. Select the **Application Properties** icon on the AppStudio toolbar.
3. Select the **Server** tab.
4. Set **Minimum client version** to the minimum version of the client. For example, set it to 7.3.15.
5. Set the **Upgrade URL** to the URL of the Default.aspx file in the Verivo AppServer's `deploy` directory. For example:

```
http://172.17.2.7/VerivoApps/deploy/Default.aspx
```

The Default.aspx file is shipped with the Verivo AppServer. It lets the user select the app to upgrade from all of the apps in the `deploy` directory. If you only want to allow the user to be able to upgrade a specific app, include the AppID in the URL, as shown below:

```
http://172.17.2.7/VerivoApps/deploy/Default.aspx?AppID=1002
```

In this scenario, the download begins immediately without the user having to select the app to upgrade.

6. Modify the Web.config file's `DeployRedirectBBAppWorld` key to point to the appropriate URL of the app on the Blackberry App World.
7. Modify the Web.config file's `DeployRedirectAndroid` key to point to the appropriate URL of the app on Google Play.
8. Modify the Web.config file's `DeployRedirectiOS` key to point to the appropriate URL of the app on the Apple App Store.