Distributing mobile applications with Application Center

Topics covered in this tutorial:

- Overview
- Installing and configuring
- Managing applications in the Application Center console
- The Application Center Mobile Client
- Deploying applications from MobileFirst Platform Studio
- Application Center command-line tools

Overview

The IBM MobileFirst Platform Application Center is a **repository of mobile applications** similar to public app stores but focused on the needs of an organization or a team (private app store)

It facilitates sharing mobile applications:

- You can **share feedback and rating** information.
- You can use access control lists to limit who can install applications.

It works with IBM MobileFirst and non IBM MobileFirst apps, and supports any **iOS, Android, BlackBerry 6 or 7**, and **Windows Phone 8** applications.

It can be used in different contexts:

- As an enterprise app store across an organization.
- During development to distribute applications within a team.

Installing and configuring

The Application Center is installed as part of the installation of the MobileFirst Platform Server with IBM Installation Manager.

Before you install the Application Center, you must have installed:

- An application server (Tomcat or WebSphere® Application Server [full or Liberty profile])
- A database (DB2®, Oracle, or MySQL)

If you do not have a database installed, the installation can also install an Apache Derby database. But, using this database is not recommended for production scenarios.

IBM Installation Manager guides you through the installation of the Application Center with choices of database and application server. Fore more information, see Installing MobileFirst Server (https://www-01.ibm.com/support/knowledgecenter/SSZH4A_6.2.0/com.ibm.worklight.installconfig.doc/admin/c_installation.html) in the IBM MobileFirst Platform product documentation.

Since iOS 7.1 supports only https, the Application Center server must be secured with SSL if you plan to distribute apps for devices running iOS 7.1. Self signed certificates do not work; only real SSL certificates work. See the topic Configure Secure Sockets Layer (https://www-01.ibm.com/support/knowledgecenter/SSZH4A_6.2.0/com.ibm.worklight.installconfig.doc/appcenter/c_ac_ssl_config.html) in the IBM MobileFirst Platform product documentation.

After the Application Center is installed with IBM Installation Manager, open the console using:

http://localhost:9080/appcenterconsole

Login with user / password : **demo** / **demo**

At this point, you can configure user authentication. For example, you can connect to an LDAP repository. For more information, see Configuring the Application Center after installation (https://www-01.ibm.com/support/knowledgecenter/SSZH4A_6.2.0/com.ibm.worklight.installconfig.doc/appcenter/c_configuration_of_the_applicati.html) in the IBM MobileFirst Platform product documentation.

The next step is to prepare the mobile client for Android, iOS, BlackBerry, and Windows Phone 8. The mobile client is the mobile application that you use to browse the catalog and install the application.

For **Android** phones and tablets:

- The mobile client is delivered as a compiled application (APK)

`/ApplicationCenter/installer/IBMApplicationCenter.apk`

For **iPad** and **iPhone**:

- You must compile and sign the client application provided in source code.
- In MobileFirst Platform Studio, open the IBMAppCenter Project at:

  `/ApplicationCenter/installer`

- Use **Run As > Build and Deploy** to build the project.
- Use Xcode to build and sign the application with your Apple iOS Enterprise profile.

For **Blackberry**:

- To build the BlackBerry version, you must have the BlackBerry Eclipse IDE (or Eclipse with the BlackBerry Java™ plug-in) with the BlackBerry SDK 6.0. The application also runs on BlackBerry OS 7 when compiled with BlackBerry SDK 6.0.
- A BlackBerry project is provided in:

  `/ApplicationCenter/installer/IBMAppCenterBlackBerry6`

For **Windows Phone 8**:

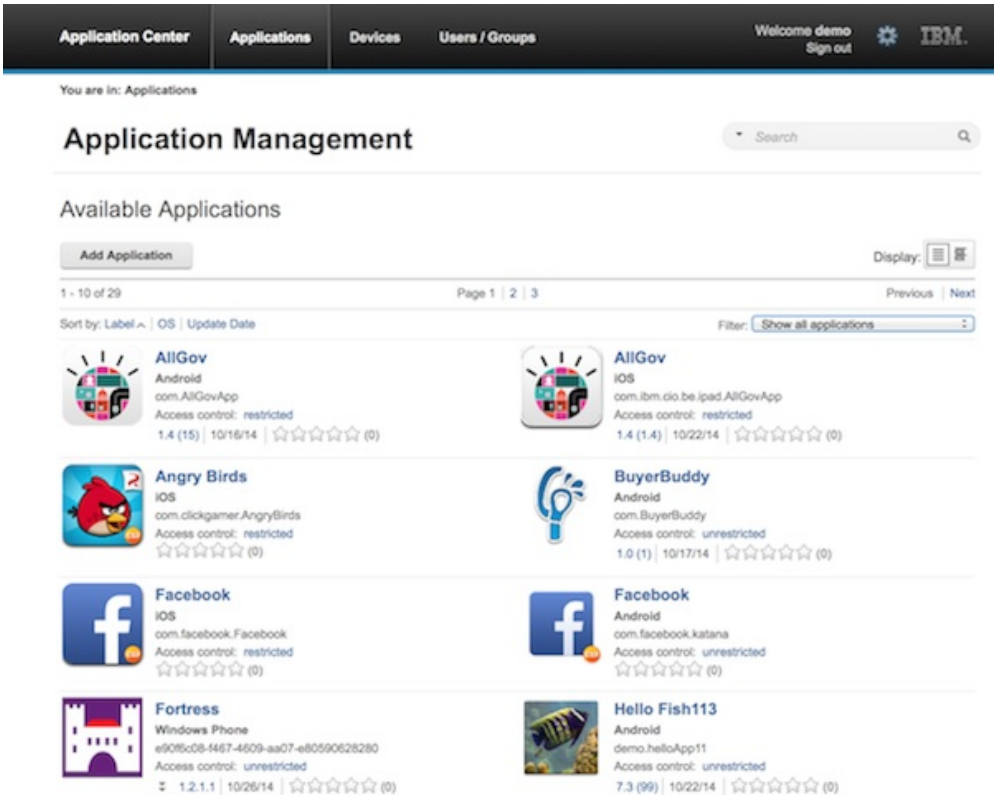
- You must register a company account with Microsoft.
- Application Center will only manage company applications that are signed with the company certificate that comes with your company account.
- The Application Center mobile client must also be signed with this company certificate.
- To install company applications on a device, the device must first be enrolled with the company by installing a company enrollment token.
- For more information about the company accounts and enrollment tokens see Company app distribution for Windows Phone (http://msdn.microsoft.com/library/windows/apps/jj206943(v=vs.105).aspx) in the Microsoft Developer website (http://dev.windows.com/en-us/develop).
- The Windows Phone version of the mobile client is included at:

  `/ApplicationCenter/installer/IBMApplicationCenterUnsigned.xap`

- **You cannot use the unsigned .xap file directly:** Before you can install it on a device, you must first sign it with your company certificate that you obtained from Symantec or Microsoft.
- For more information about how to sign the Windows Phone mobile client application, see the Microsoft Developer website (http://dev.windows.com/en-us/develop).

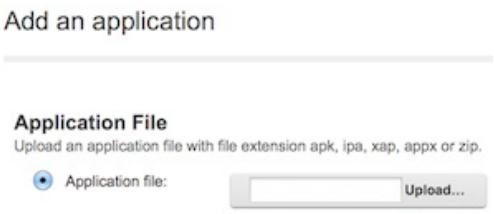
Managing applications in the Application Center console

Use the Application Center console to manage applications in the catalog in the following ways:



- Add and remove applications
- Manage versions of applications
- Look at the details of an application
- Restrict the access of an application to specific users or groups of users
- Read the reviews for each application
- Review registered users and devices

To add new applications in the Store:

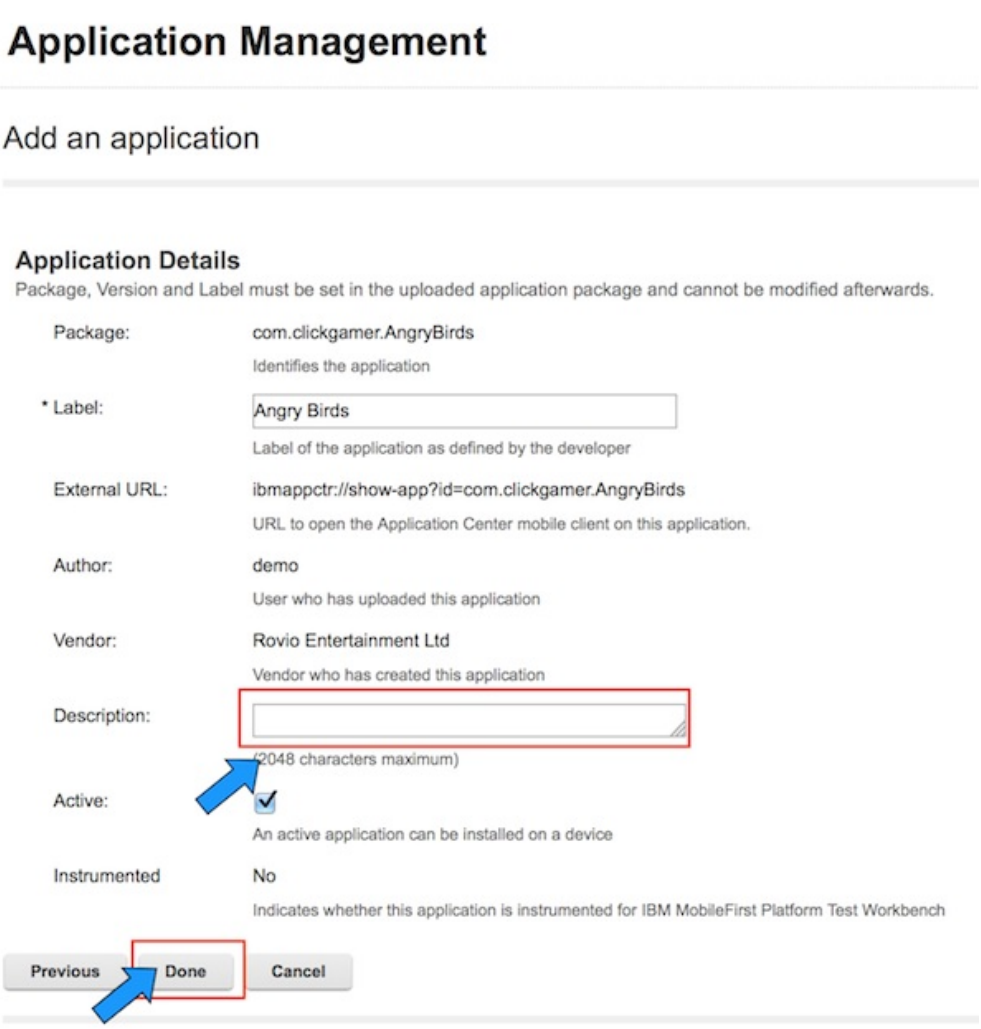


- Open the Application Center console.
- Click **Add application**.
- Select the Application File:
  - .ipa (iOS)
  - .apk (Android)
  - .zip (BlackBerry)
  - .xap (Windows Phone 8)
- Click **Next**.

In the Application Details views, you can review the information about the new application and enter further information such as the description.

You can return to this view later for all applications in the catalog.

Click **Done** to finish the task.



The new application is added to the store.

By default, an application can be installed by any authorized user of the store.

To restrict the access to a group of users:

- In the catalog view, click the **unrestricted link** that is next to the application name. The **Installation Access Control** page opens.
- Select **Access control enabled:** You can now enter the list of users or groups that are authorized to install the application.

- If you have configured LDAP, you add users and groups that are defined in the LDAP repository.

You can also add applications from public app stores such as Google Play or Apple App Store by entering their URLs.

The Application Center Mobile Client

The App Center mobile client is a mobile application to manage the applications on the device. With the mobile client, you can:

- List all applications from the catalog (for which you have access rights)
- List the favorite applications
- Install an application or upgrade to a new version
- Provide feedback and five-star rating for an application.

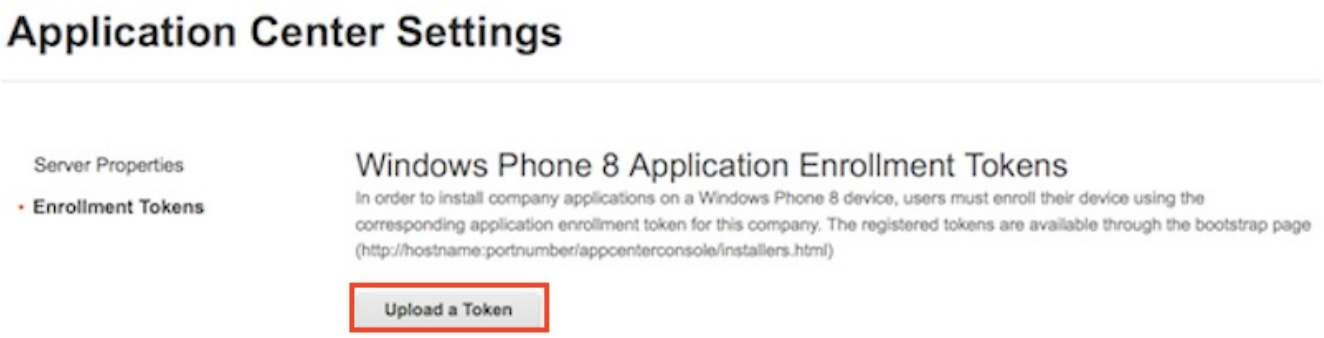
Application Center Mobile client applications must be added to the catalog.

- Open the Application Center console.
- Click the **Add Application** button to add the mobile client .apk, .ipa,.zip, or .xap file.
- Click **Next** to open the Details page.
- In the Application Details page, select **Installer** to indicate that this application is a mobile client.
- Click **Done** to add the IBM App Center app to the catalog.

Windows Phone 8

On Windows Phone 8, you must also install the enrollment token that you received with your company account in the Application Center console, so that users will be able to enroll their devices.

This is done in the Application Center Settings page that you can open through the gear icon.



Before you can install the Mobile Client, you must enroll the device with the company by installing the enrollment token:

- Open the web browser on the device.
- Enter the URL: http://hostname:9080/appcenterconsole/installers.html
- Enter the user name and password.
- Click **Tokens**, to open the list of enrollment tokens.
- Select the company in the list. The details of the company account are displayed.
- Click **Add Company Account**. Your device is enrolled.

To install the mobile client on the mobile device:

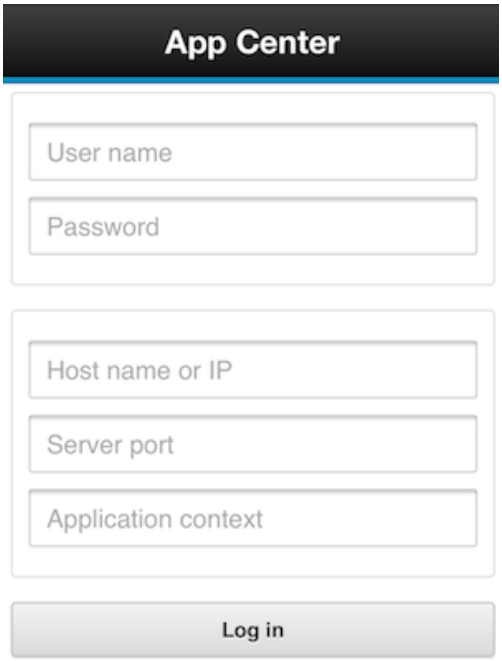
- Open the web browser on the device.

- Enter the URL:
  http://hostname:9080/appcenterconsole/installers.html
- Enter the user name and password.
- Select the IBM App Center application to start the installation.

On **Android** devices, you must open the Android Download application and select the IBM App Center for installation.

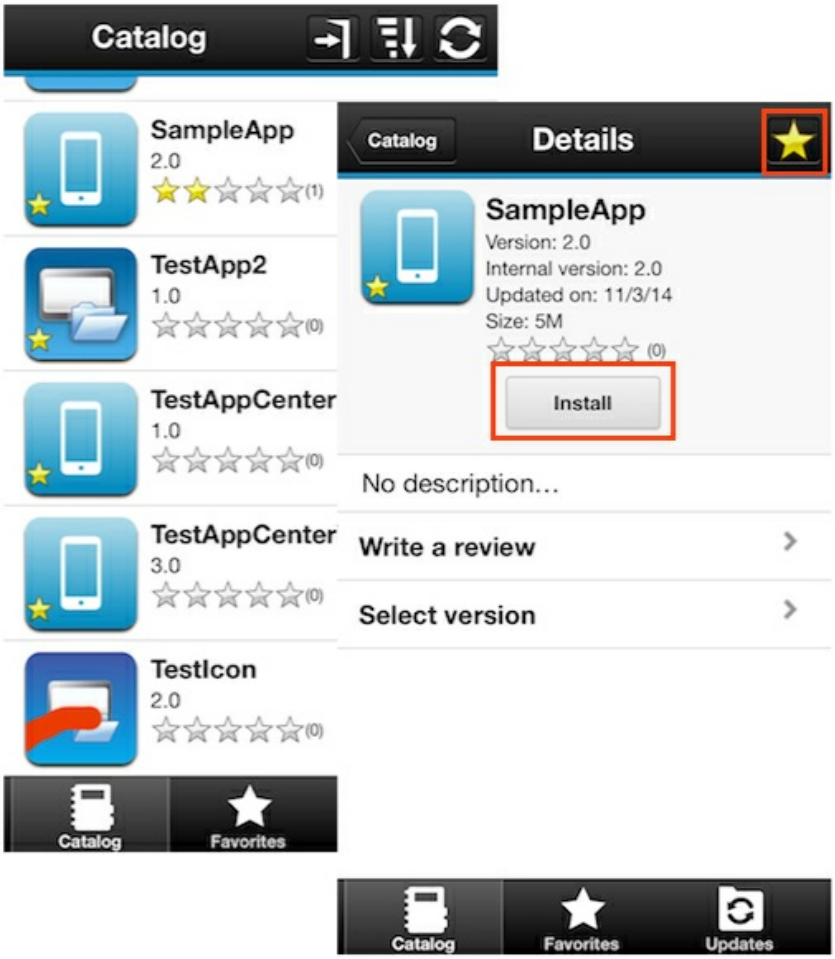
To log in to the Mobile client:

- Enter your credentials for access to the server.
- Enter the host name or IP address of the server.
- In the **Port** field, enter the port number if it is not the default one (9080).
- In the **Context** field, enter the context: **applicationcenter**.



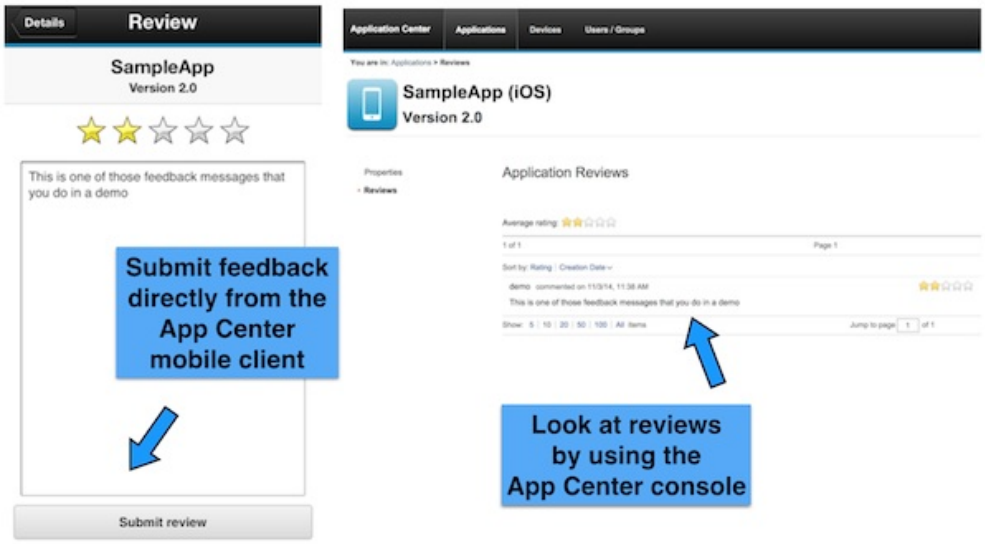
App Center Mobile Client Views

- The **Catalog** view displays the list of available applications.
- Selecting an application opens the **Details** view on the application. An application can be installed from the Details view.
- Applications can be marked as favorites by using the star icon in the Details View.



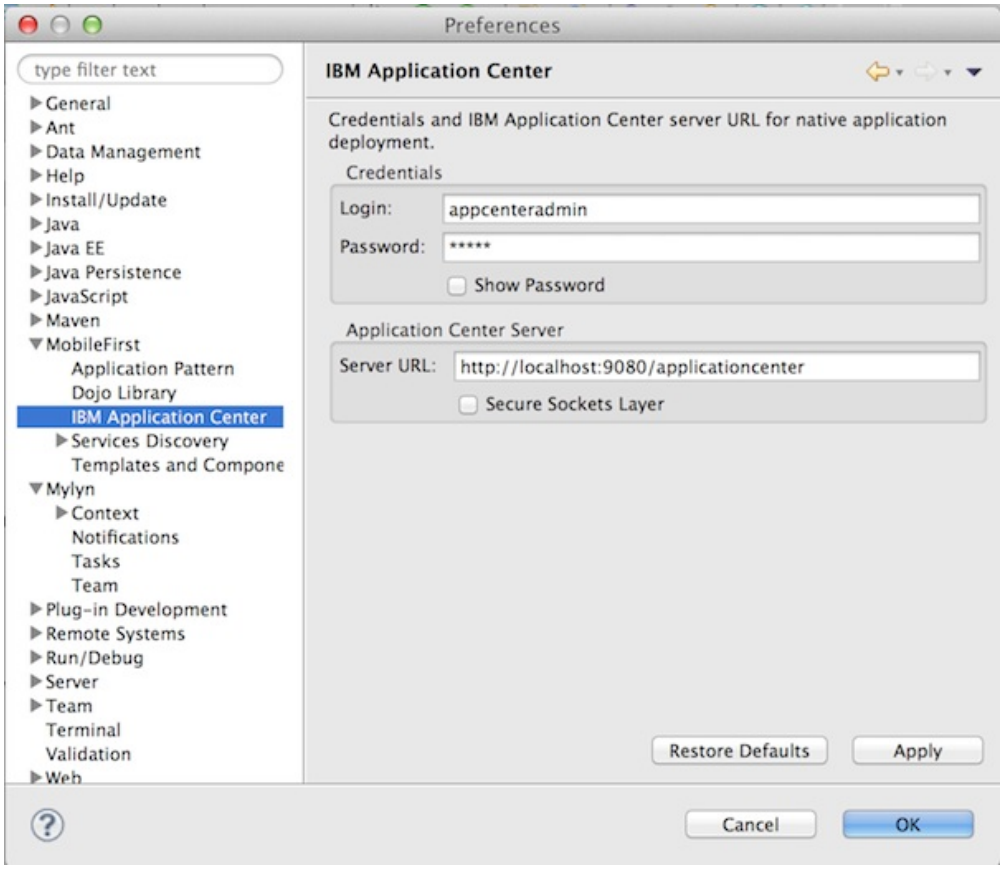
- Favorite applications are listed in the **Favorites** view. This list is available on all the devices of a particular user.
- The Updates view lists all available updates. In the Updates view, you can navigate to the Details view. You can select a newer version of the application or take the latest available version.If the Application Center is configured to send push notifications, you might be notified of updates by push notification messages.

From the Mobile Client, you can rate the application and send a review. Reviews can be viewed on the console or on the mobile device.



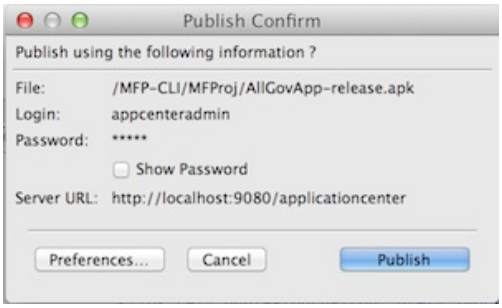
Deploying applications from MobileFirst Platform Studio

Applications can be deployed to the Application Center directly from MobileFirst Platform Studio. You start by setting the publication preferences.



In MobileFirst Platform Studio inside Eclipse, open the **Eclipse Preferences** view.

Select **MobileFirst > IBM Application Center** and specify the server URL, your login, and your password.



To deploy APK files or IPA files to the Application Center:

1. Right-click the file in the MobileFirst Platform Studio workspace.
2. Select **IBM Application Center** / **Publish Application.**
3. Confirm by clicking **Publish**.

Application Center command-line tools

The `/ApplicationCenter/tools` directory contains all the files that are required to use the command-line tool or Ant tasks to manage the applications in the store:

- `applicationcenterdeploytool.jar`: the upload command-line tool.
- `json4jar`: the library for the JSON format that is required by the upload tool.
- `build.xml`: a sample Ant script that you can use to upload a single file or a sequence of files to the Application Center.
- `acdeploytool.sh` and `acdeploytool.bat`: Simple scripts to call Java with `applicationcenterdeploytool.jar`.

For example, to deploy an application **app.apk** to the store in **localhost:9080/applicationcenter** with user ID **"demo"** and password **"demo"**, use:

```
Java com.ibm.appcenter.Upload -s http://localhost:9080 -c applicationcenter -u demo -p demo app.apk
```

For more information

For more information about Application Center, see the Application Center topic in the IBM MobileFirst Platform user documentation.