

Android end-to-end demonstration

Overview

The purpose of this demonstration is to experience an end-to-end flow:

1. A sample application that is pre-bundled with the MobileFirst client SDK is registered and downloaded from the MobileFirst Operations Console.
2. A new or provided adapter is deployed to the MobileFirst Operations Console.
3. The application logic is changed to make a resource request.

End result:

- Successfully pinging the MobileFirst Server.
- Successfully retrieving data using a MobileFirst Adapter.

Prerequisites:

- Android Studio
- *Optional.* MobileFirst CLI (download (file:///home/travis/build/MFPSamples/DevCenter/_site/downloads))
- *Optional.* Stand-alone MobileFirst Server (download (file:///home/travis/build/MFPSamples/DevCenter/_site/downloads))

1. Starting the MobileFirst Server

Make sure you have created a Mobile Foundation instance (.../bluemix/using-mobile-foundation), or If using the MobileFirst Foundation Development Kit (.../installation-configuration/development/mobilefirst), navigate to the server's folder and run the command: `./run.sh` in Mac and Linux or `run.cmd` in Windows.

2. Creating an application

In a browser window, open the MobileFirst Operations Console by loading the URL: `http://your-server-host:server-port/mfpconsole`. If running locally, use: `http://localhost:9080/mfpconsole` (`http://localhost:9080/mfpconsole`). The username/password are `admin/admin`.

1. Click the **New** button next to **Applications**
 - Select the **Android** platform
 - Enter **com.ibm.mfpstarterandroid** as the **application identifier**
 - Enter **1.0** as the **version** value
 - Click on **Register application**

The screenshot shows the MobileFirst Operations Console interface. The left sidebar contains a 'Dashboard' section with links to 'mfp runtime', 'Applications (0)', 'Adapters (0)', 'Runtime Settings', 'Error Log', and 'Devices'. The 'Applications (0)' section has a 'New' button. The main content area is titled 'Register Application' and contains the following fields:

- Application Name:** 'MFPStarterAndroid' (with a green checkmark).
- Choose Platform:** 'Android' is selected (radio button).
- Package:** 'com.ibm.mfpstarterandroid' (with a green checkmark).
- Version:** '1.0' (with a green checkmark).

At the bottom of the form is a blue button labeled 'Register application'. Below the button is a note: '* When you add the SDK to your application without the MobileFirst Command Line Interface, follow the instructions in the Configurations Files tab of your new app.'

2. Click on the **Get Starter Code** tile and select to download the Android sample application.

MobileFirst Operations Console

Home > mfp > MFPStarterAndroid > Android 1.0.0

MFPStarterAndroid Android v 1.0.0 | com.ibm.mfpstarterandroid

Your application is now registered.

Next Steps

- Get Starter Code
- Set Up Authenticity
- Set Up Push
- Get CLI

Management | Authenticity | Security | Log Filters | Configuration Files

Last modified: May 28, 2016, 9:18 AM

Application Access

Status: *

☒ Active ☐ Active and Notifying ☐ Access Disabled

Direct Update

Deliver an update to a Cordova application by uploading a new web resource archive. After you upload the archive to MobileFirst Server, client devices receive update notifications the next time they request a server resource.

3. Editing application logic

1. Open the Android Studio project and import the project.
 2. From the **Project** sidebar menu, select the **app** → **java** → **com.ibm.mfpstarterandroid** → **ServerConnectActivity.java** file and:
- Add the following imports:

```
import java.net.URI;
import java.net.URISyntaxException;
import android.util.Log;
```

- Paste the following code snippet, replacing the call to `WLAAuthorizationManager.getInstance().obtainAccessToken()`:

```

WLAuthorizationManager.getInstance().obtainAccessToken("", new WLAccessTokenListener() {
    @Override
    public void onSuccess(AccessToken token) {
        System.out.println("Received the following access token value: " + token);
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                titleLabel.setText("Yay!");
                connectionStatusLabel.setText("Connected to MobileFirst Server");
            }
        });

        URI adapterPath = null;
        try {
            adapterPath = new URI("/adapters/javaAdapter/resource/greet");
        } catch (URISyntaxException e) {
            e.printStackTrace();
        }

        WLResourceRequest request = new WLResourceRequest(adapterPath, WLResourceRequest.GET);

        request.setQueryParameter("name", "world");
        request.send(new WLResponseListener() {
            @Override
            public void onSuccess(WLResponse wLResponse) {
                // Will print "Hello world" in LogCat.
                Log.i("MobileFirst Quick Start", "Success: " + wLResponse.getResponseText());
            }

            @Override
            public void onFailure(WLFailResponse wLFailResponse) {
                Log.i("MobileFirst Quick Start", "Failure: " + wLFailResponse.getErrorMsg());
            }
        });
    }

    @Override
    public void onFailure(WLFailResponse wLFailResponse) {
        System.out.println("Did not receive an access token from server: " + wLFailResponse.getErrorMsg());
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                titleLabel.setText("Bummer...");
                connectionStatusLabel.setText("Failed to connect to MobileFirst Server");
            }
        });
    }
});

```

4. Deploy an adapter

Download this prepared .adapter artifact (../javaAdapter.adapter) and deploy it from the MobileFirst Operations Console using the **Actions → Deploy adapter** action.

Alternatively, click the **New** button next to **Adapters**.

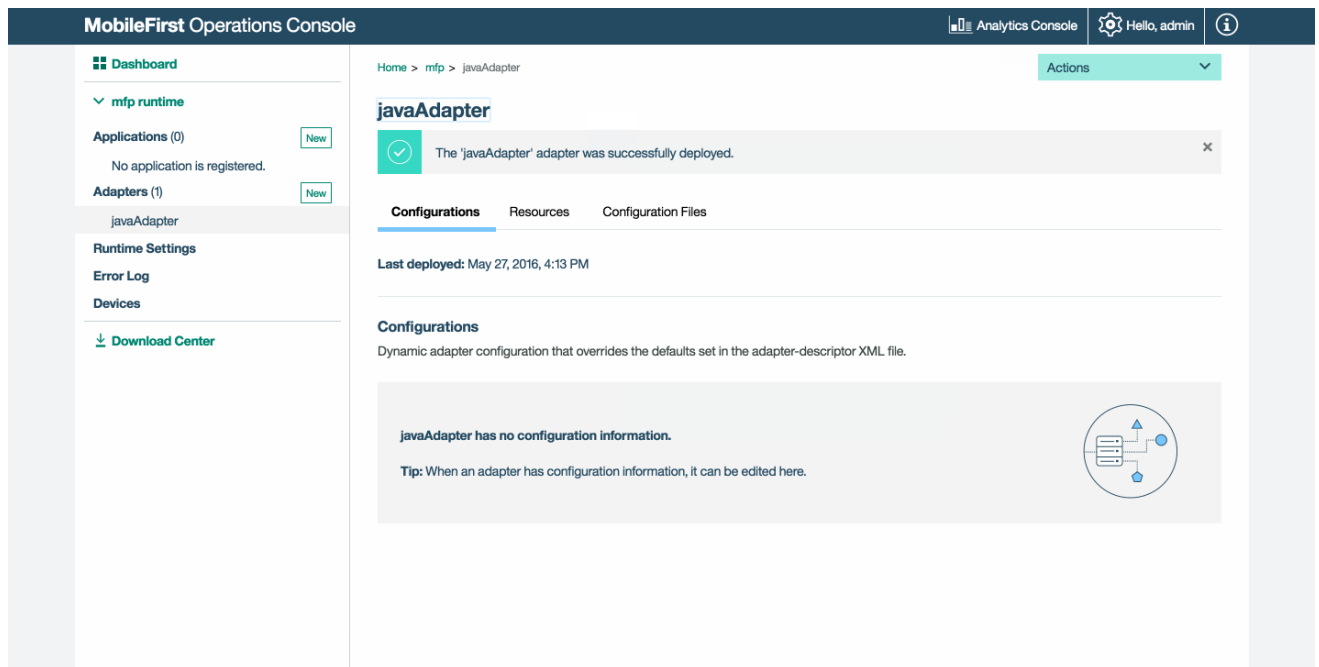
1. Select the **Actions → Download sample** option. Download the "Hello World" **Java** adapter sample.

If Maven and MobileFirst CLI are not installed, follow the on-screen **Set up your development environment** instructions.

2. From a **Command-line** window, navigate to the adapter's Maven project root folder and run the command:

```
mpfdev adapter build
```

3. When the build finishes, deploy it from the MobileFirst Operations Console using the **Actions → Deploy adapter** action. The adapter can be found in the **[adapter]/target** folder.

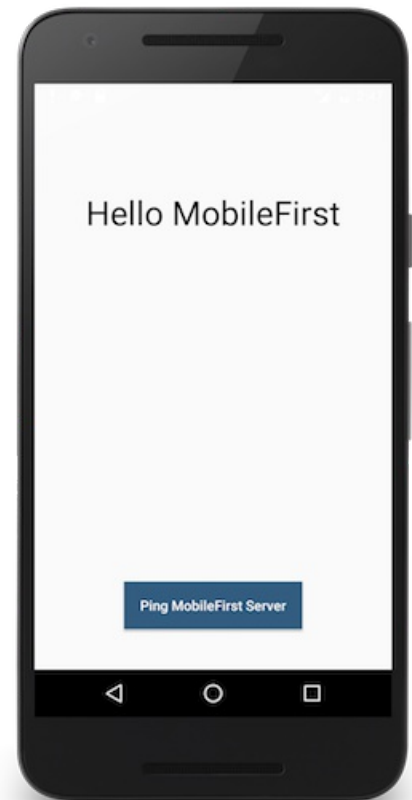


5. Testing the application

- In Android Studio, from the **Project** sidebar menu, select the **app** → **src** → **main** → **assets** → **mfpclient.properties** file and edit the **protocol**, **host** and **port** properties with the correct values for your MobileFirst Server.
 - If using a local MobileFirst Server, the values are typically **http**, **localhost** and **9080**.
 - If using a remote MobileFirst Server (on Bluemix), the values are typically **https**, **your-server-address** and **443**.

Alternatively, if you have installed the MobileFirst CLI, then navigate to the project root folder and run the command `mfpdev app register`. If a remote MobileFirst Server is used, run the command `mfpdev server add` ([../application-development/using-mobilefirst-cli-to-manage-mobilefirst-artifacts/#add-a-new-server-instance](#)) to add the server, followed by for example: `mfpdev app register myBluemixServer`.

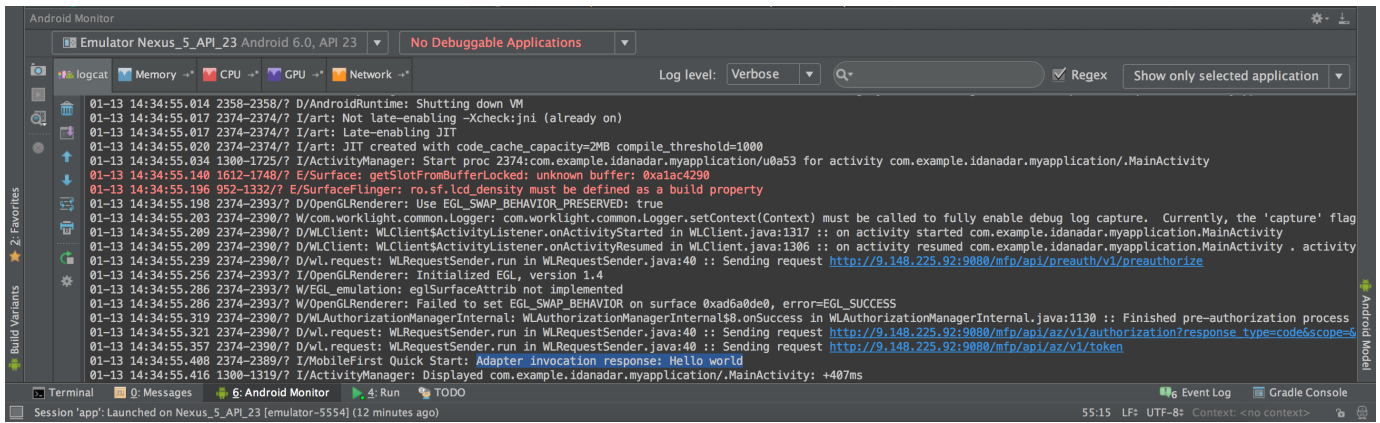
- Click on the **Run App** button.



Results

- Clicking the **Ping MobileFirst Server** button will display **Connected to MobileFirst Server**.
- If the application was able to connect to the MobileFirst Server, a resource request call using the deployed Java adapter will take place.

The adapter response is then printed in Android Studio's LogCat view.



Next steps

Learn more on using adapters in applications, and how to integrate additional services such as Push Notifications, using the MobileFirst security framework and more:

- Review the Using the MobileFirst Foundation (../application-development/) tutorials
- Review the Adapters development (../adapters/) tutorials
- Review the Authentication and security tutorials (../authentication-and-security/)
- Review the Notifications tutorials (../notifications/)
- Review All Tutorials (../all-tutorials)

Last modified on

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(https://github.com/MobileFirst-Platform-Developer-Center)

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