Setting up the MobileFirst development environment

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/8.0/setting-up-your-development-environment/mobilefirst-development-environment.md) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

Overview

The IBM MobileFirst Platform Foundation components can be installed either seperately via online repositories, or downloaded bundled together for offline installation using the Development Kit Installer.

This tutorial expands on the components of IBM MobileFirst Platform Foundation and the setup needed to get started with the MobileFirst Development environment.

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Development Kit

The development kit provides a ready-for-development environment with minimal configuration needed. The environment is made up of the following:
A WebSphere Liberty profile application server with MobileFirst Server deployed onto it. It is pre-configured with an "mfp" runtime and uses a pre-configured file system-based Apache Derby database.

The Development Kit consists of: MobileFirst Server, MobileFirst Developer Command-line Interface (CLI), MobileFirst Operations Console and the MobileFirst client SDKs.

IBM MobileFirst Platform Foundation components

MobileFirst Platform Foundation Development Kit Installer

The Installer can be downloaded ahead of time and be used for "offline situations", where Internet connectivity is not available. The Installer pre-packages the MobileFirst Server, The MobileFirst Developer CLI and the MobileFirst client SDKs for manual installation.

> To download the installer, visit the downloads
> (file:////home/travis/build/MFPSamples/DevCenter/_site/downloads/) page.

MobileFirst Server

MobileFirst Server is a set of Web Application Archive (.war) files that can be deployed to the following application servers: Tomcat, WebSphere Liberty profile and WebSphere Full profile.

The MobileFirst Server is installed as a stand-alone server and provides the following scripts in its **scripts** folder:

`.sh` scripts are for Linux and Mac.
`.cmd` scripts are for Windows.

- `console.[sh|cmd]` : Open the local MobileFirst Console

- `run.[sh|cmd]` : Run the local MobileFirst Server with trailing Liberty Server messages
- `start.[sh|cmd]` : Run the local MobileFirst Server in background mode
- `stop.[sh|cmd]` : Stop the currenet local MobileFirst Server instance

> To download and install the MobileFirst Server, visit the downloads (/downloads/) page.
>
> Learn more about the MobileFirst Server in the user documentation.

Adding the MobileFirst Server to Eclipse

The MobileFirst Server can be integrated into the Eclipse IDE, allowing to quickly starting and stopping of the development server.

1. From the **Servers** view in Eclipse, select **New → Server**.
2. If an IBM folder option does not exist, click on "Download additional server adapters".
3. Select **WebSphere Application Server Liberty Tools** and follow the on-screen instructions.
4. From the **Servers** view in Eclipse, select **New → Server**.
5. Select **IBM → WebSphere Application Server Liberty**.
6. Provide a server **name** and **hostname** and click **Next**.
7. Provide the path to the server's root directory, and select a JRE version to use.
8. Click **Next** followed by clicking **Finish**.

MobileFirst Operations Console

The MobileFirst Server's Operations Console expose the MobileFirst Server functionalities.
A developer can:

- Register and deploy applications and adapters
- Optionally download native/Cordova application and adapter templates
- Configure application aspects:
  - Authentication and security
  - Application Authenticity
  - Push Notifications
  - Direct Update
- Generate DevOps scripts for continuous integration workflows and faster development cycles
- and more

Once the MobileFirst Server is up & running, you can access the console from a browser using the URL:
`http://locahost:9080/mfpconsole` .

> Learn more about the MobileFirst Operations Console in the Using the MobilFirst Platform Operations Console (../../quick-start/console/) tutorial.

MobileFirst Command-line Interface

The IBM MobileFirst command-line interface (CLI) tool enables developers to:

- Manage MobileFirst Servers
- Register and configure applications
- Create, build, deploy and test adapters

> To download and install the MobileFirst Developer CLI, visit the downloads (/downloads/) page.
>
> Learn more about the various CLI commands in the Using CLI to manage MobileFirst artifacts (../../using-the-mfpf-sdk/using-cli-to-manage-mobilefirst-artifacts/) tutorial.

MobileFirst Platform Foundation client and server SDKs & APIs

MobileFirst Platform Foundation provides client-side SDKs for Cordova applications as well as for Native platforms (iOS, Android and Windows 8.1 Universal & Windows 10 UWP). Server-side APIs for adapter development are available as well.

To use the MobileFirst client SDKs, visit the Adding the MobileFirst Platform Foundation SDK (../../adding-the-mfpf-sdk/) tutorials category. To use the MobileFirst server-side APIs, visit the Adapters (../../adapters/) tutorials category.

Manual installation

If the MobileFirst SDKs were downloaded as part of the MobileFirst Platform Foundation Development Kit Installer, visit the user the documentation for installation instructions.

Applications and adapters development

You can use your preferred code editor or alternative IDEs, such as Atom.io, Visual Studio Code, Eclipse, IntelliJ and others, to implement applications and adapters.

For adapters develpment, refer to the Adapters (../../adapters/) category as well as to the Developing Adapters in IDEs (../../adapters/developing-adapters) and testing and debugging adapters (../../adapters/testing-and-debugging-adapters) tutorials.

> **Note:** API auto-completion is available only in Typescript-supporting IDEs.

Tutorials to follow next

Visit the All Tutorials (../../all-tutorials/) page and select a tutorials category to follow next.