

# 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 separately via online repositories which contain the latest release, or downloaded bundled together for future or 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.

If you intend to use MobileFirst Server on IBM Containers, see the Using Mobile Foundation ([../ibm-containers/](#)) tutorial.

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## MobileFirst Platform Foundation Development Kit

The development kit provides a ready-for-development environment with minimal configuration needed.

The development Kit consists of the following components: MobileFirst Server & MobileFirst Operations Console, MobileFirst Developer Command-line Interface (CLI), MobileFirst client SDKs and MobileFirst adapter tooling.

## Development Kit Installer

The Installer packages the components for local installation where Internet connectivity is not available. The components are available through the MobileFirst Operations Console's Downloads page.

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

## MobileFirst Platform Foundation components

### MobileFirst Server

As part of the Development Kit, the MobileFirst Server is provided pre-deployed on a WebSphere Liberty profile application server. The server is pre-configured with an "mfp" runtime and uses a filesystem-based Apache Derby database.

To download and install the MobileFirst Server, visit the downloads (/downloads/) page. If using MobileFirst Server on IBM Containers, see the Using Mobile Foundation (../../ibm-containers/) tutorial.

In the server directory, available are the following scripts:

- `run. [sh|cmd]` : Run the local MobileFirst Server with trailing Liberty Server messages
  - Add the `-bg` flag to run the process in the background
- `stop. [sh|cmd]` : Stop the current local MobileFirst Server instance
- `console. [sh|cmd]` : Open the local MobileFirst Console

## Adding the MobileFirst Server to Eclipse

The MobileFirst Server can be integrated into the Eclipse IDE.

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 exposes the following functionalities.

A developer can:

- Register and deploy applications and adapters
- Optionally download native/Cordova application and adapter starter code templates
- Configure an application's authentication and security properties
- Manage applications:
  - Application Authenticity
  - Direct Update
  - Remote Disable/Notify
- Send Push Notifications to iOS and Android devices
- Generate DevOps scripts for continuous integration workflows and faster development cycles

Learn more about the MobileFirst Operations Console in the Using the MobileFirst Platform Operations Console (../../setting-up-your-development-environment/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 \(../using-the-mf-pf-sdk/using-cli-to-manage-mobilefirst-artifacts/\)](#) tutorial.

## MobileFirst Platform Foundation client SDKs and adapter tooling

MobileFirst Platform Foundation provides client SDKs for Cordova applications as well as for Native platforms (iOS, Android and Windows 8.1 Universal & Windows 10 UWP). Adapter tooling for adapters and security checks development is available as well.

- To use the MobileFirst client SDKs, visit the [Adding the MobileFirst Platform Foundation SDK \(../adding-the-mf-pf-sdk/\)](#) tutorials category.
- To develop adapters, visit the [Adapters \(../adapters/\)](#) tutorials category.
- To develop security checks, visit the [Authentication and security \(../authentication-and-security/\)](#) tutorials category.

### Manual installation

To use the client SDKs and adapter tooling that are provided as part of the Development Kit Installer instead of the online repositories, visit the user documentation ([http://www-01.ibm.com/support/knowledgecenter/SSHS8R\\_8.0.0/wl\\_welcome.html](http://www-01.ibm.com/support/knowledgecenter/SSHS8R_8.0.0/wl_welcome.html)) for setup instructions.

## Applications and adapters development

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

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

For adapters development, refer to the [Adapters \(../adapters/\)](#) category, as well as to the [Developing Adapters in IDEs \(../adapters/developing-adapters\)](#) tutorial and the [testing and debugging adapters \(../adapters/testing-and-debugging-adapters\)](#) tutorial.

## Tutorials to follow next

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