

# Adapters overview

Relevant to:



Native iOS



Native Android



Native Windows Phone 8



Native Windows 8 Universal



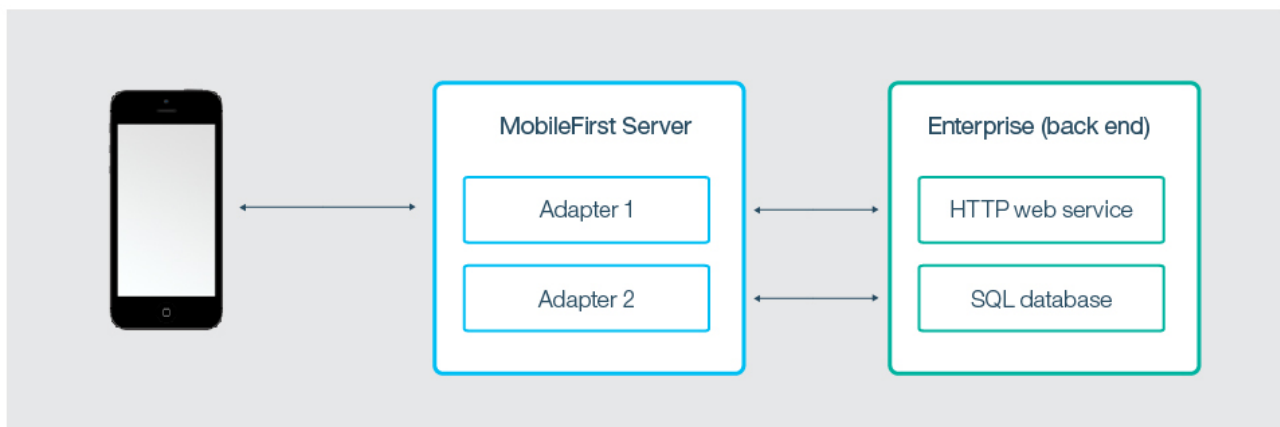
Hybrid

## Overview

This tutorial presents how to develop server-side code (adapters) that is used to transfer and retrieve information from back-end systems to client applications and cloud services. MobileFirst Server processes the information and handles security. You can write adapters in JavaScript or Java.

This tutorial covers the following topics:

- [Benefits of using adapters](#)
- [JavaScript adapters](#)
- [Java adapters](#)
- [Creating adapters](#)
- [Deploying adapters](#)
- [Testing adapters](#)
- [Tutorials to follow next](#)



## Benefits of using adapters

### Universality

- Adapters support multiple integration technologies and back-end information systems.

### Read-only and transactional capabilities

- Adapters support read-only and transactional access modes to back-end systems.

## Fast development

- Adapters use simple XML syntax and are easily configured with JavaScript API or Java API.

## Security

- Adapters use flexible authentication facilities to create connections with back-end systems.
- Adapters offer control over the identity of the connected user.

## Transparency

- Data that is retrieved from back-end applications is exposed in a uniform manner, regardless of the adapter type.

## Benefits specific to Java adapters

- Ability to fully control the URL structure, the content types, the request and response headers, content and encoding
- Easy and fast development and testing by using MobileFirst Studio or the command-line interface (CLI)
- Ability to test the adapter without MobileFirst Studio or CLI, by using a 3rd-party tool such as Postman
- Easy and fast deployment to a running MobileFirst Server instance with no compromise on performance and no downtime
- Security integration with the MobileFirst security model with no additional customization, by using simple annotations in the source code

## JavaScript adapters

JavaScript adapters provide templates for connection to various back-ends, such as HTTP, SQL, Cast Iron, SAP JCo, and SAP Netweaver. JavaScript adapters also provide a service discovery wizard, which you can use to autogenerate adapters for connecting to WSDL services and more.

[Learn more about JavaScript adapters](#)

## Java adapters

Java adapters expose a full REST API to the client and are written in Java. This type of adapters is based on the [JAX-RS specification](#).

In Java adapters, it is up to the developer to define the returned content and its format, as well as the URL structure of each resource.

[Learn more about Java adapters](#)

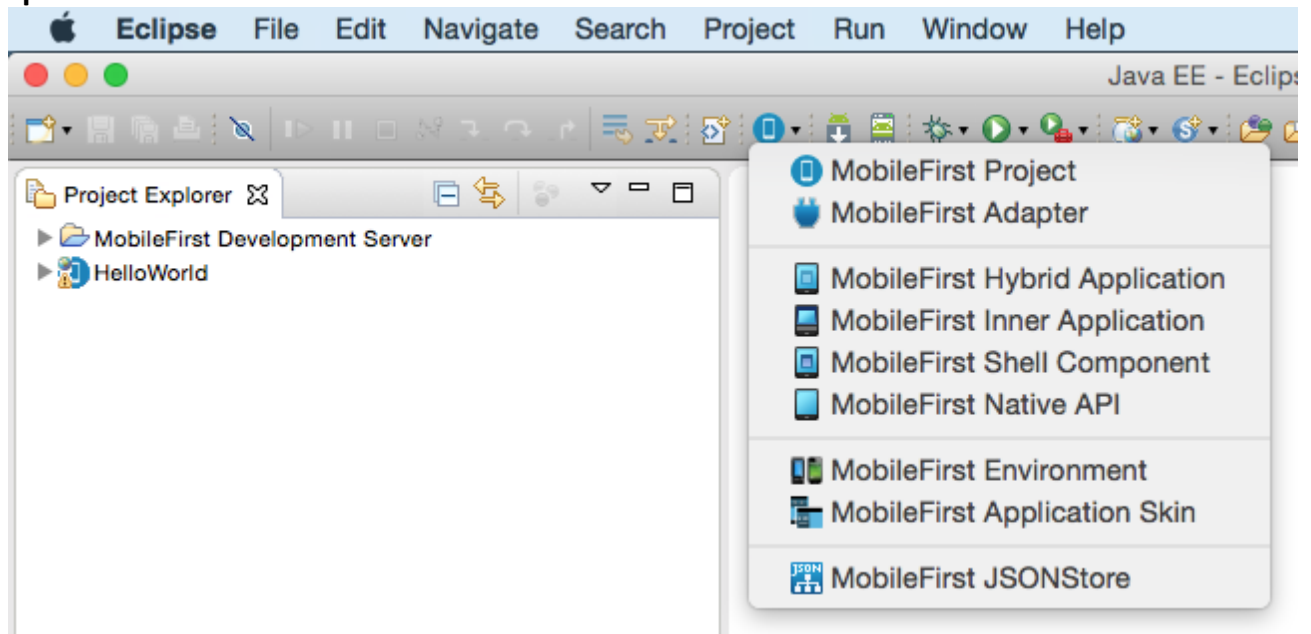
## Creating adapters

## CLI

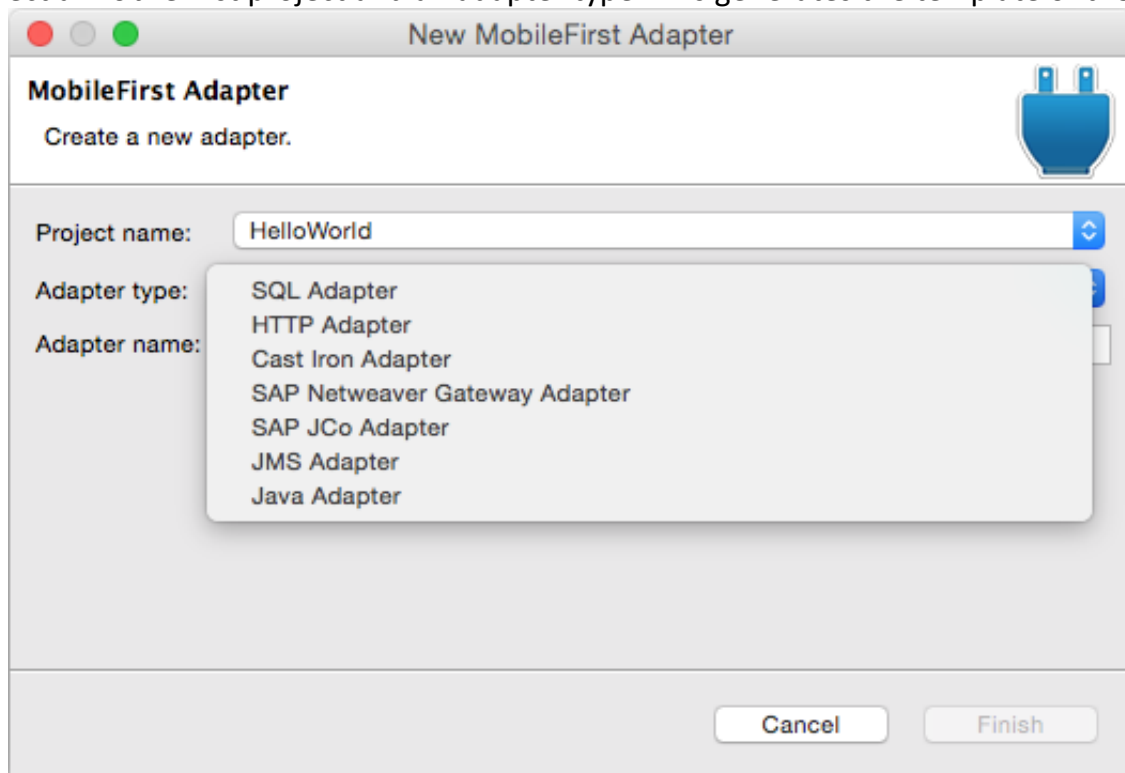
From the project's directory, use `mfp add adapter` and follow the interactive instructions.

## Studio

1. In Eclipse, click the MobileFirst icon that is located in the toolbar and select **MobileFirst Adapter**.



2. Select a MobileFirst project and an adapter type. This generates the template of the adapters.



3. Select an adapter type and type an adapter name. Applications use this name to access the adapter.
4. Click **Finish**.

# Deploying adapters

## CLI

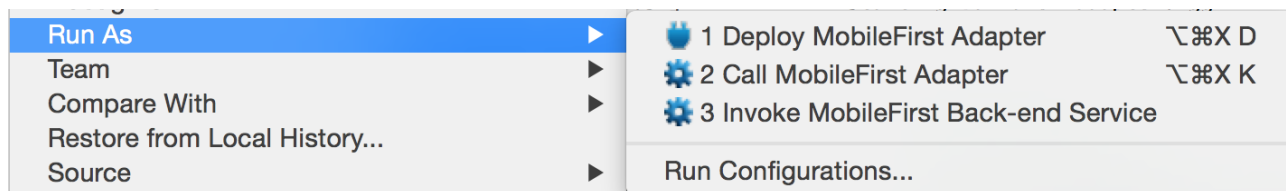
In the terminal, go to the adapter's directory: `$ cd adapters/TestAdapt/`.

Use `mfp build` to build the current adapter.

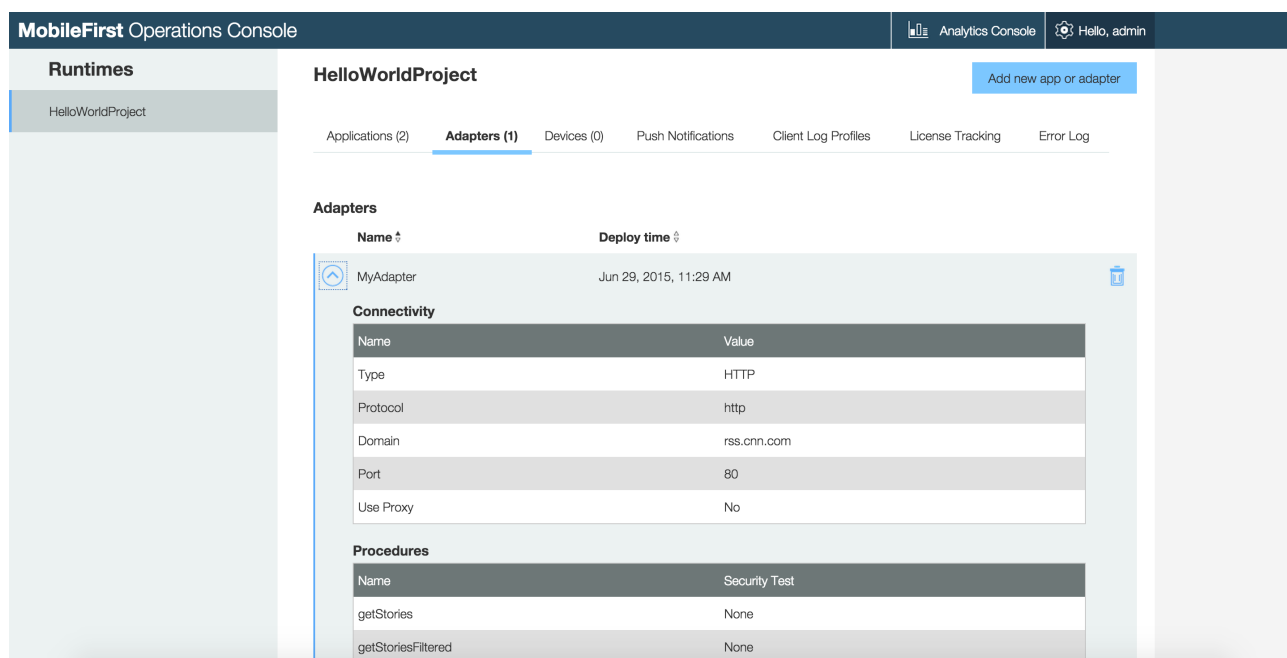
Use `mfp deploy` to deploy the current adapter.

## Studio

1. Select an adapter to deploy.
2. Right-click the adapter and select **Run As > Deploy MobileFirst Adapter**.



MobileFirst Studio archives the adapter code and deploys it to the MobileFirst Server instance. You can see the deployed adapter in the [MobileFirst Console](#).



# Testing adapters

## CLI

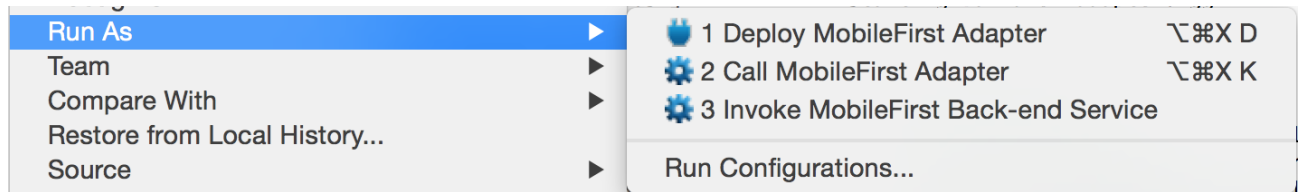
To run a procedure test, make sure your adapter is built and deployed, then use `$ mfp adapter call`. Follow the interactive instructions.

## Studio

To test adapter procedures, you can use MobileFirst Studio.

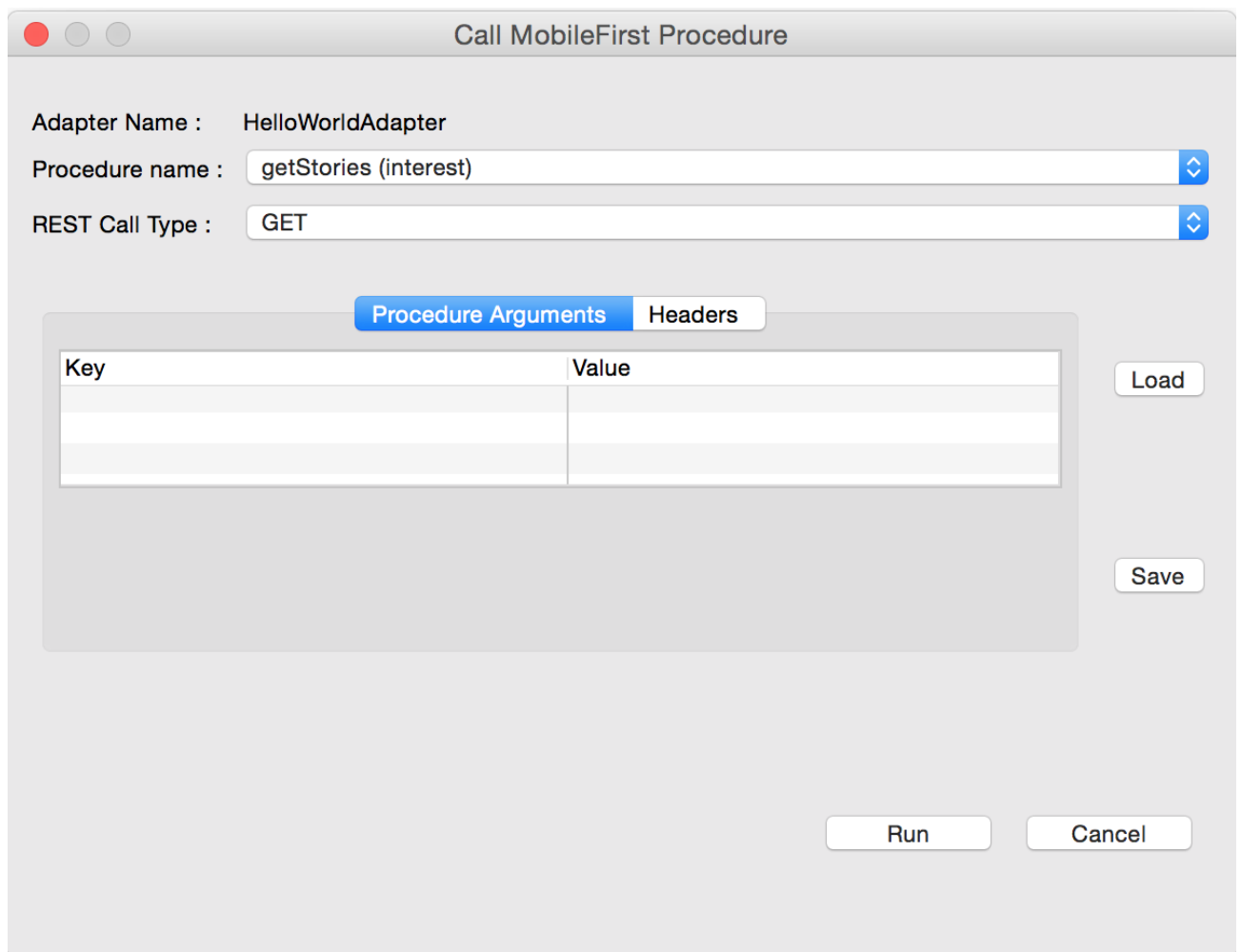
To run a procedure test:

## 1. Select **Run As > Call MobileFirst Procedure**.



2. Select the procedure that you want to test.
3. Enter key values and click **Run**.

## JavaScript adapters



## Java adapters

Call MobileFirst Procedure

Adapter Name : HelloWorldAdapter

Procedure name : /HelloWorld/adapters/HelloWorldAdapter/users

REST Call Type : GET

Path Parameters Query Parameters Body Parameters Headers

Key	Value

Load

Save

Run Cancel

For more information about JavaScript and Java adapters, see the topic about “MobileFirst adapters overview” in the user documentation.

## Tutorials to follow next

Follow the tutorials in the [server-side development section](#) to learn more about HTTP, SQL, Cast Iron, and JMS JavaScript adapters, Java adapters, invoking adapter procedures from hybrid and native applications, advanced adapter usage and more.