

# Testing MobileFirst Platform applications with the Mobile Test Workbench

## Overview

IBM Mobile Test Workbench v7.8.0.1 for IBM MobileFirst Platform Foundation provides several unique resources to test MobileFirst applications.

- You can create functional tests on hybrid and native applications that run on iOS 7.x or Android.
- The test workbench creates tests in a natural language and provides visual test editing.
- The test workbench runs within Eclipse and is integrated with MobileFirst Studio.

The testing approach with the test workbench consists of four stages:

1. Recording: You first play your test with the recording-ready app and generate a test script.
2. Authoring: You edit and enhance the test script by adding verification points and others instructions.
3. Playback: You run the test script on a real device or on a simulator.
4. Reporting: You generate an HTML report.

This tutorial covers the following topics:

- Installing and configuring the test workbench
- The mobile client
  - Installing the Android mobile client
  - Installing the iOS mobile client
- Creating a test project
  - Preparing an application for testing
  - Creating a test
  - Editing a test
  - Running a test
- For more information

## Installing and configuring the test workbench

To use the IBM Mobile Test Workbench, you must install an Eclipse plug-in into an existing instance of MobileFirst Studio.

In MobileFirst Studio, go to **Help > Eclipse Marketplace** and search for "mobilefirst".

When you locate the IBM Mobile Test Workbench, click **Install**.

**Note:** New installations of IBM Mobile Test Workbench require the latest version of MobileFirst Studio.

After the Mobile Test Workbench plug-in is installed, you can see that a new **Test Workbench** perspective is available in Eclipse:



If you do not see the perspective button above, select **Window > Open Perspective > Other...** and then **Test Workbench**.

Also, note the following icons in the Eclipse toolbar:



- The leftmost icon opens the Mobile Applications view. This view lists all the applications that are available for testing.
- The next icon opens the Mobile Devices view. This view lists the devices that you use to test your application.

## The mobile client

With the mobile client application, you can record tests, run test playbacks, and view reports on the mobile device. The mobile client application must be installed on a real device or on a simulator/emulator.

The mobile client communicates with the test workbench to install applications, store test scripts, and test results. **Important:** Note the Workbench URL in the Mobile Devices view:



## Installing the Android mobile client

To install the mobile client on an Android device or on an emulator:

1. Use the QR code that is available in the Mobile Devices view to open an installation page on the device.  
On the device, the QR code opens a page that displays installation instructions.



2. Follow the instructions to download and install the mobile application on your Android device.



- When the IBM Rational Test Workbench application is installed on your device, start the application.
- Configure the address of the test workbench in the Workbench settings section.  
The URL is the same as the URL of the page opened by the QR code, without `/mobile` at the end. The URL has the following structure: `http://host-ipaddress:7878`



- Press the device **Back** button. If the connection is correctly established, you can see the connection icon at the bottom of the screen.



## Installing the iOS mobile client



On iOS, the mobile client is a web application that runs in the Safari or Chrome browser on your device.

To run the client, type the Workbench URL in the following format, in a browser on your device: `http://Workbench_URL:port/mobile`

When using the mobile test client on an iOS device, make sure to enable pop-up windows. Pop-up windows must be allowed for the Workbench IP address. Safari silently disables pop-up windows and Google Chrome prompts you to allow pop-up windows. To change this setting for Safari, navigate to **Settings.app > Safari** and disable the option to **Block Pop-ups**.

## Creating a test project

To start testing an IBM MobileFirst application, you must create a test project.

You create a test project in one of two ways:

- After creating the MobileFirst application, and before clicking on **Finish**, select **IBM Mobile Test Workbench**:



- You can also select **File > New > Test Workbench Project**.



## Preparing an application for testing

Before you can test an MobileFirst hybrid application, go through the following steps:

1. Build and deploy your project by right-clicking the project name and selecting **Run As > Run on MobileFirst Development Server**, to ensure that the native project is built and the application is deployed to the server.

- If you build for iOS to test on a physical device, make sure that the appropriate certificate is specified in Xcode.
- Right-click the Android, iPhone, or iPad environment in your MobileFirst application and click **Run As > Test with IBM Mobile Test Workbench**.



You can now see the test-ready application in the Mobile Applications view in the test workbench and in the mobile client.



- Set the state of the application to **Available** in the Mobile Applications view before you start recording a test.

## Creating a test

- Start recording a test.
  - On the Android client**, select the application in the list of managed apps and click **Record** in the mobile client on the device.
  - On the iOS web client**, select the application in the list of managed apps, install the app on the device by clicking **Install**.

When the installation is complete, click **Record**.

If you are using an iOS 7.1 or later, it is not possible to click the **Install** button.

Instead, you can install the application from the Mobile Devices view:





Everything that you do with the application is recorded and sent to the test workbench. For example, the script records when you press a button or when you enter text in an entry field.

- To stop recording, close the application by clicking **Home** (iOS) or **Back** (Android).

A message that reports the availability of a new recording is displayed on the test workbench.



- Follow the wizard instructions to generate a test from the recording. You are asked to store the test in the test project.

For more information about how to create a test, see the Rational Test Workbench Mobile Test Edition ([http://www-01.ibm.com/support/knowledgecenter/SS2HS7\\_8.6.0/com.ibm.rational.test.lt.mob.rtwm.ditaval.doc/topics/tintro\\_create\\_test.html](http://www-01.ibm.com/support/knowledgecenter/SS2HS7_8.6.0/com.ibm.rational.test.lt.mob.rtwm.ditaval.doc/topics/tintro_create_test.html))" user documentation topic.

## Editing a test

After the recording, you can edit the test in the natural language editor.



You can edit the test to insert *verification points* (for example, to verify the value of a user interface element), to replace recorded test values with variable test data, or to add dynamic data to the test.



## Running a test



Run a test to ensure that the app matches the expected behavior as defined in the verification points. During the test, each verification point is checked and receives a `pass`, `fail`, or `inconclusive` status.

The available tests are visible in the mobile client and you can run the test from this application.

## For more information

For more information about IBM MobileFirst Platform Foundation functional testing and the IBM Mobile Test Workbench, see Testing with IBM MobileFirst Platform Foundation ([http://ibm.biz/knowctr#SSHS8R\\_7.0.0/com.ibm.worklight.test.doc/test/c\\_wl\\_mobile\\_test\\_ovw.html](http://ibm.biz/knowctr#SSHS8R_7.0.0/com.ibm.worklight.test.doc/test/c_wl_mobile_test_ovw.html)) in the user documentation