

Application Authenticity

Overview

By issuing an HTTP request, any entity can access the HTTP services (APIs) that IBM MobileFirst Platform Foundation Server offers.

The out-of-the-box Application Authenticity security check (../authentication-concepts/) ensures that an application that tries to connect to a MobileFirst Server instance is the authentic one and was not tampered with or modified by a third-party attacker.

To enable Application Authenticity you can either follow the on-screen instructions in the **MobileFirst Operations Console** → **[your-application]** → **Authenticity**, or review the information below.

Availability

Application Authenticity is available in all supported platforms (iOS, Android, Windows 8.1 Universal, Windows 10 UWP) in both Cordova and Native applications.

Note: Application Authenticity is **not available** in the MobileFirst Development Server. To test, use a remote application server such as a QA, UAT or Production server.

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Authenticity Flow

Application Authenticity is based on certificate keys that are used to sign the application bundles. Only the developer or the enterprise who have the original private key that was used to create the application are able to modify, repack, and re-sign the bundle.

Once an application has successfully registered with the MobileFirst Server, and passed the Authenticity challenge, an Authenticity token is granted. For as long as the token is valid, the Authenticity challenge will not occur again. See [Configuring authenticity \(configuring-authenticity\)](#) to learn how this can be customized.



The challenge token in the diagram is processed by compiled native code, so that third-party attackers cannot see the logic of this processing.

Enabling Application Authenticity

To enable Application Authenticity in your Cordova or Native application, the application's binary file needs to be signed using the MobileFirst-supplied command line tool. Eligible binary files are: `ipa` for iOS, `apk` for Android and `appx` for Windows 8.1 Universal & Windows 10 UWP.

1. Open a **Command-line** window and run the command: `java -jar path-to-mfp-server-authenticity-tool.jar path-to-binary-file`

For example:

```
java -jar /Users/idanadar/Desktop/mfp-server-authenticity-tool.jar /Users/idanadar/Desktop/MyBankApp.pipa
```

The result of the command above is an `.authenticity_data` file generated next to the `MyBankApp.ipa` file, called `MyBankApp.authenticity_data`.

2. Open the MobileFirst Operations Console in your browser of choice.
3. Select your application from the left-side pane and click on the Authenticity menu item.
4. Click on "Upload Authenticity File" to upload the `.authenticity_data` file.

When the `.authenticity_data` file is uploaded, Application Authenticity is enabled.

The screenshot shows the MobileFirst Operations Console interface. On the left, a sidebar contains a 'Back' link, the application name 'mfp', and a list of applications under 'Applications' with a 'Create new' button. The selected application is 'com.worklight.MyBankApp'. Under 'Platform', 'iOS' is selected with a count of '1', and '1.0' is listed below it. A 'Push' button is at the bottom of the sidebar. The main content area shows the breadcrumb 'Home > mfp > com.worklight.MyBankApp > iOS 1.0' and a 'Delete version' button. The title is 'com.worklight.MyBankApp iOS v 1.0'. Below this are tabs for 'Management', 'Authenticity' (which is active), 'Security', and 'Configuration Files'. The 'Application Authenticity' section has a sub-header and a description: 'Activating Application Authenticity protection ensures that the only the authentic application binary is able to communicate with the MobileFirst Server.' Below this is a red warning box with an exclamation mark icon and the text: 'For security reasons, it is recommended that you enable Application Authenticity. Upload file to enable.' Underneath is a box with 'Status: Disabled' and an 'Upload Authenticity File' button. At the bottom, a section titled 'Follow these steps to set up Application Authenticity' lists three steps: 1. Download the Application Authenticity tool, 2. Create the Authenticity File, and 3. Upload the Authenticity File.

Disabling Application Authenticity

To disable Application Authenticity, click the "Delete Authenticity File" button.

This screenshot shows the same MobileFirst Operations Console interface as the previous one, but with the 'Authenticity' status changed to 'Enabled'. The 'Status: Enabled' box now has a 'Delete Authenticity File' button instead of 'Upload Authenticity File'. A green success message box at the top of the main content area reads: 'Successfully uploaded the Authenticity File.' The rest of the interface, including the sidebar and the 'Follow these steps to set up Application Authenticity' section, remains the same.

Configuring Application Authenticity

The Application Authenticity out-of-the-box security check can be configured with the following property:

- `expirationInSec`: Defaults to 3600 seconds / 1 hour. Defines the duration until the Authenticity token expires.

Once an authenticity check has been performed, it will not be performed again until the token has expired based on the set value.

To configure the `expirationInSec` property:

1. Load the MobileFirst Operations Console and navigate to **[your application] → Security → Security Check Configurations** and click on **Create New**.
2. Search for the "appAuthenticity" scope element.

3. Set a new value in seconds.

MobileFirst Operations Console

Analytics Console Hello, demo

Home > mfp > com.worklight.MyBankApp > iOS 1.0

com.worklight.MyBankApp iOS v 1.0

Configure Security Check Parameters

Scope element
appAuthenticity

Expiration (seconds) *
5000

Expiration (seconds)
Default Value: 3600

Add Cancel

out-of-the-box security checks or

Create New

Security Check Configurations

Manage and update parameters of out-of-the-box and custom authentications.

Create New

You didn't create security check configuration yet

Get started by clicking "Create New"