

Application Authenticity

fork and edit tutorial (<https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/8.0/authentication-and-security/application-authenticity/index.md>) | report issue (<https://github.ibm.com/MFPSamples/DevCenter/issues/new>)

Overview

By issuing an HTTP request, an entity can access to corporate HTTP services (APIs) IBM MobileFirst Platform Foundation Server provides access to. The predefined 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.

Limitations

- 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.
- Application Authenticity does not support **Bitcode** in iOS. If using Application Authenticity, disable Bitcode in the Xcode project properties.

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Application Authenticity Flow

By default, the application-authenticity security check is run during the application's runtime registration with MobileFirst Server, which occurs the first time an instance of the application attempts to connect to the server.

Once an application has passed the authenticity challenge, an authenticity scope 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 application-authenticity 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-application-authenticity-tool.jar path-to-binary-file`

For example:

```
java -jar /Users/your-username/Desktop/application-authenticity-tool.jar /Users/your-username/Desktop/MyBankApp.ipa
```

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 navigation sidebar 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'. The main application 'com.worklight.MyBankApp' is selected, showing its platform as 'iOS' and version as '1.0'. The right pane displays the 'Application Authenticity' settings for 'com.worklight.MyBankApp iOS v 1.0'. The 'Authenticity' tab is active, showing a status of 'Disabled'. A message states: 'Activating Application Authenticity protection ensures that the only the authentic application binary is able to communicate with the MobileFirst Server.' Below this, a warning icon and text recommend enabling Application Authenticity. A 'Status: Disabled' box is present, along with an 'Upload Authenticity File' button. 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 the 'Application Authenticity' status is now 'Enabled'. A green checkmark icon and a message 'Successfully uploaded the Authenticity File.' are displayed at the top of the settings pane. The 'Status: Enabled' box is now highlighted, and the 'Delete Authenticity File' button is visible. The 'Follow these steps to set up Application Authenticity' section remains the same.

Configuring Application Authenticity

The predefined application-authenticity 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"