

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' button, 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'. Below this is a 'Push' button. 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' (selected), 'Security', and 'Configuration Files'. The 'Application Authenticity' section has a sub-header '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.' Below the warning box 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.

The screenshot shows the MobileFirst Operations Console interface after the authenticity file has been uploaded. The sidebar is identical to the previous screenshot. The main content area shows the same breadcrumb and title. The 'Authenticity' tab is still selected. The 'Application Authenticity' section now has a green success box with a checkmark icon and the text 'Successfully uploaded the Authenticity File.' Below this is a box with 'Status: Enabled' and a 'Delete Authenticity File' button. 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"