

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.

Disabling Application Authenticity

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

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.

The screenshot displays the MobileFirst Operations Console interface. The top navigation bar includes the 'MobileFirst Operations Console' title, an 'Analytics Console' link, a user profile 'Hello, demo', and an information icon. The left sidebar shows a breadcrumb trail: 'Home > mfp > com.worklight.MyBankApp > iOS 1.0'. The main content area is titled 'com.worklight.MyBankApp iOS v 1.0' and features a 'Delete version' button. A modal dialog box titled 'Configure Security Check Parameters' is open, containing the following fields and controls:

- Scope element:** A text input field containing 'appAuthenticity'.
- Expiration (seconds) *:** A text input field containing '5000'.
- Expiration (seconds):** A label indicating the unit of the expiration value.
- Default Value:** A label showing the default value as '3600'.
- Buttons:** 'Add' and 'Cancel' buttons at the bottom of the dialog.

The background of the console shows a list of applications under the 'mfp' namespace, with 'com.worklight.MyBankApp' selected. Below the dialog, there is a section for 'Security Check Configurations' with a 'Create New' button and a message: 'You didn't create security check configuration yet. Get started by clicking "Create New"'. The right sidebar contains a 'Create New' button and a diagram of a mobile device with a security check icon.