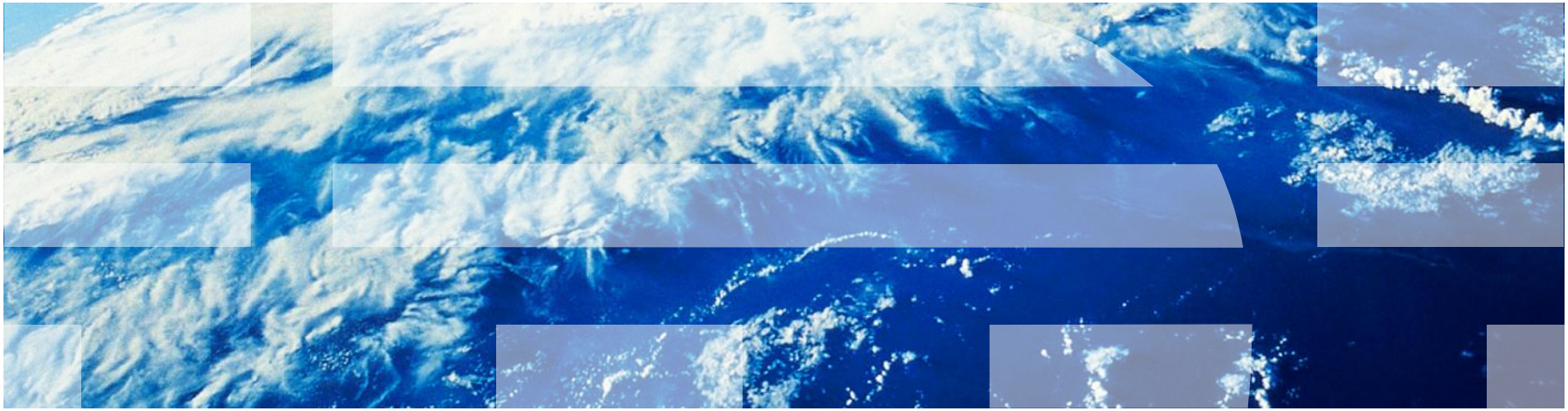
IBM Worklight Foundation V6.2.0 Getting Started

Application Authenticity Protection



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Agenda

- Overview
- Enabling application authenticity check – Hybrid
- Enabling application authenticity check – Native
- Controlling application authenticity from Worklight Console

Overview (1 of 5)

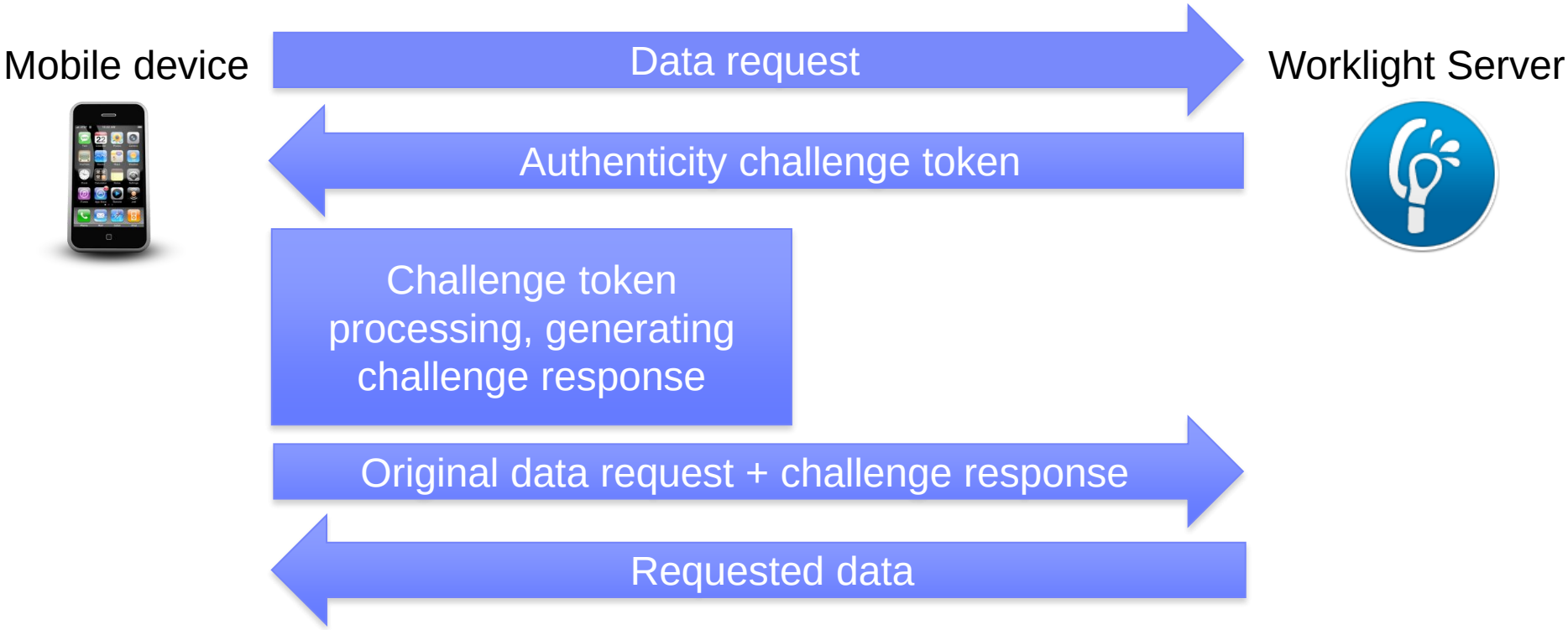
- The HTTP services (APIs) that Worklight® Server offers can be accessed by any entity by issuing an HTTP request.
- As described in previous modules, it is possible to protect relevant services with various security tests.
- The application authenticity check ensures that the application that tries to connect to a Worklight Server is the authentic one and was not tampered with or modified by some third-party attacker.
- Application authenticity is available for iOS and Android platforms.

Overview (2 of 5)

- **Important:**
  - Application authenticity protection is not available in the Worklight Development Server. To test, deploy the application to a Worklight Server on a remote application server.
  - Application authenticity protection is available only to licensed installations of Worklight Server.

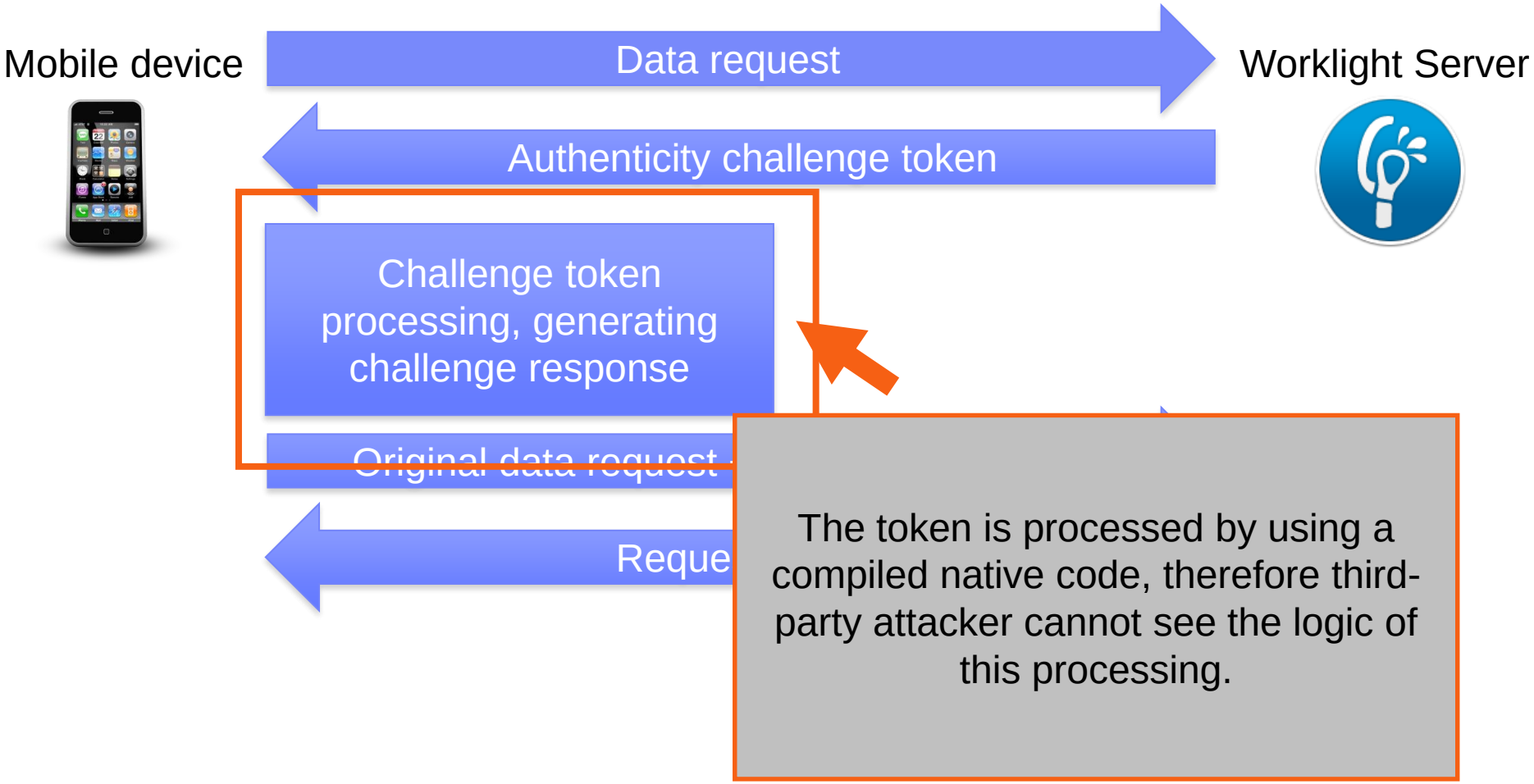
Overview (3 of 5)

- Authenticity check flow



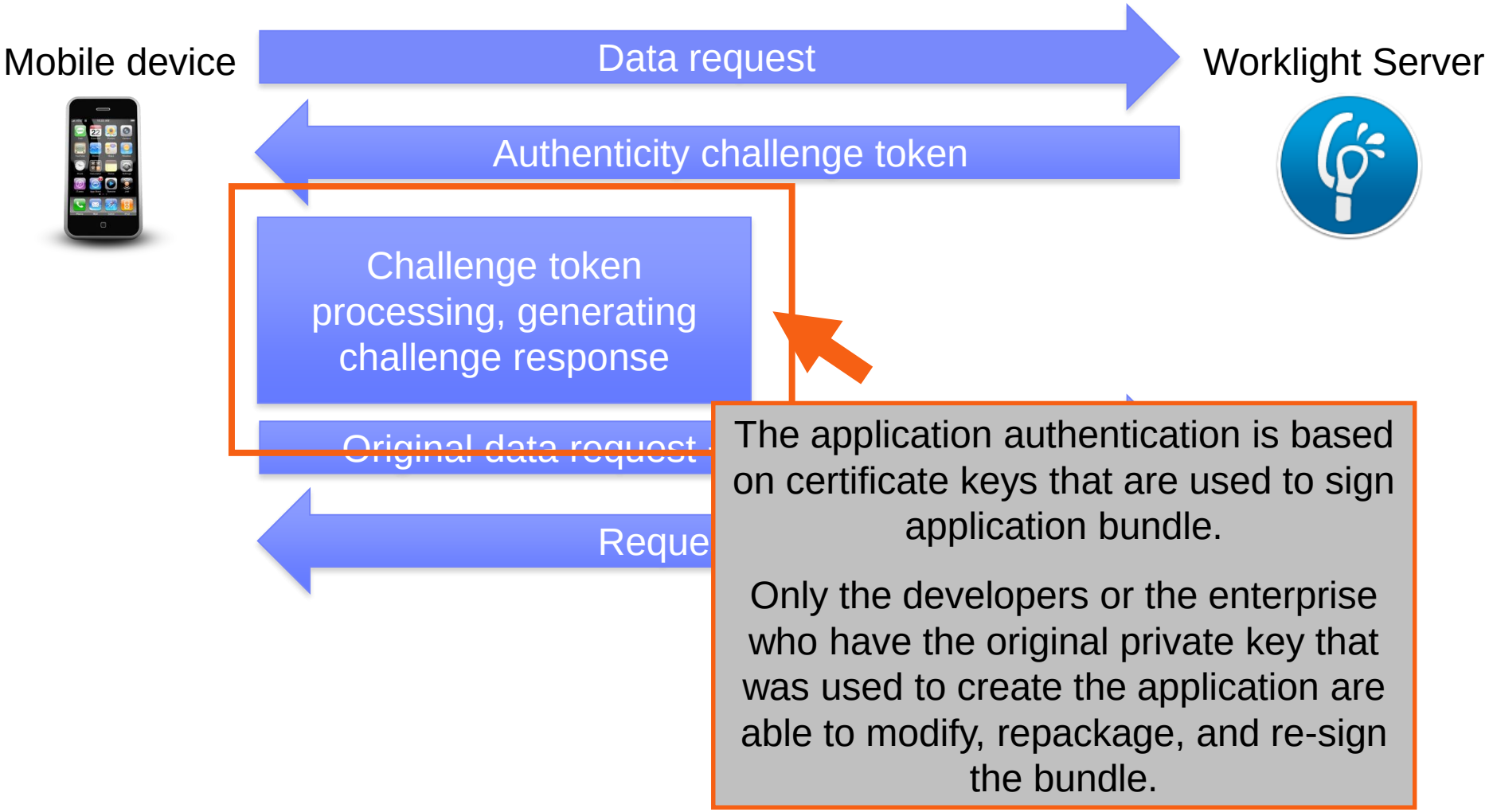
Overview (4 of 5)

- Authenticity check flow



Overview (5 of 5)

- Authenticity check flow



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Enabling application authenticity check – Hybrid (1 of 9)

- To enable application authenticity, start by modifying your `authenticationConfig.xml` file.
  - Add the relevant authentication realm to your security tests.
  - If you use `<mobileSecurityTest>`, you must add the `<testAppAuthenticity/>` child-element to it.
  - If you use `<customSecurityTest>`, you must add the `<test realm="wl_authenticityRealm"/>` child-element to it.

```
<mobileSecurityTest name="mobileTest">
    <testAppAuthenticity/>
    <testUser realm="MyUserAuthRealm"/>
    <testDeviceId provisioningType="auto" />
</mobileSecurityTest>
```

==

```
<customSecurityTest name="mobileTest">
    <test realm="wl_authenticityRealm" step="1"/>
    <test realm="wl_antiXSRFRealm" step="1"/>
    <test realm="wl_remoteDisableRealm" step="1"/>
    <test realm="MyUserAuthRealm" isInternalUserID="t
    <test realm="wl_deviceAutoProvisioningRealm" isIn
</customSecurityTest>
```

Enabling application authenticity check – Hybrid (2 of 9)

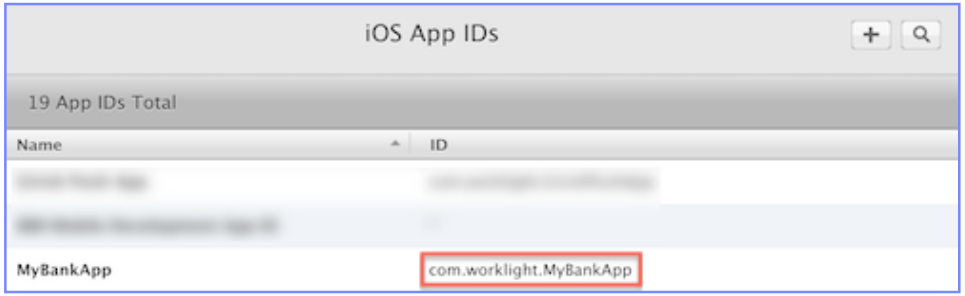
- Next, modify the `application-descriptor.xml` file of your application.
  - Add the `securityTest` attribute to the Android or iPhone/iPad environment element. For example:

```
<android version="1.0" securityTest="customTests">
```

Enabling application authenticity check – Hybrid (3 of 9)

- To enable application authenticity check for the **iPhone/iPad environment**:

  1. Specify the `bundleId` of your application exactly as you defined it in the Apple Developer portal. For example:

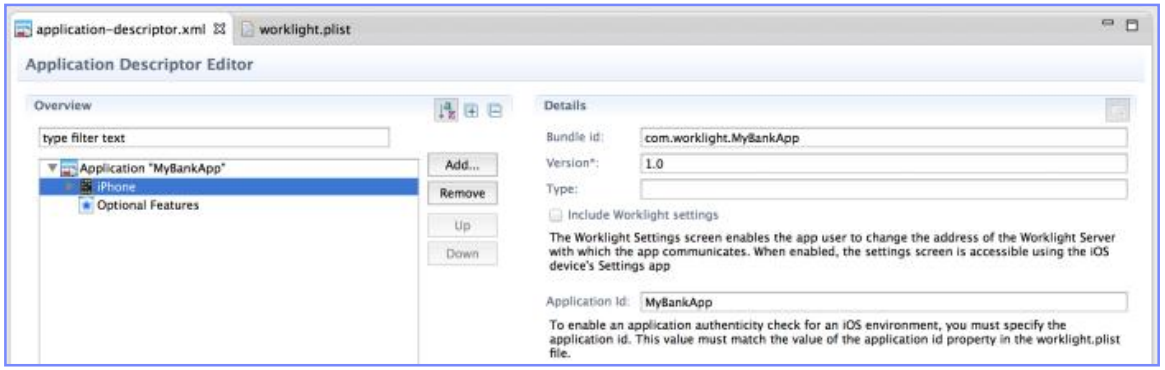



```
<iphone bundleId="com.worklight.MyBankApp" version="1.0">
    <worklightSettings include="false"/>
    <security>
        <encryptWebResources enabled="false"/>
        <testWebResourcesChecksum enabled="false" ignoreFileExtensions="png, jpg, jpeg, gif, mp4, mp3"/>
    </security>
</iphone>
```

Enabling application authenticity check – Hybrid (4 of 9)

- To enable application authenticity check for the **iPhone/iPad environment**:

  2. Add the **Application Id** by using the Application Descriptor Editor (design view):



  - The Application Id value must match the value of the `application id` property, which is located in the `worklight.plist` file.

Enabling application authenticity check – Hybrid (4 of 9)

- You can also directly edit `application-descriptor.xml` and add an `applicationId` attribute to the `iphone` element:

```
<iphone
    bundleId="com.worklight.MyBankApp"
    applicationId="MyBankApp"
    securityTest="customTests"
    version="1.0"
>
```

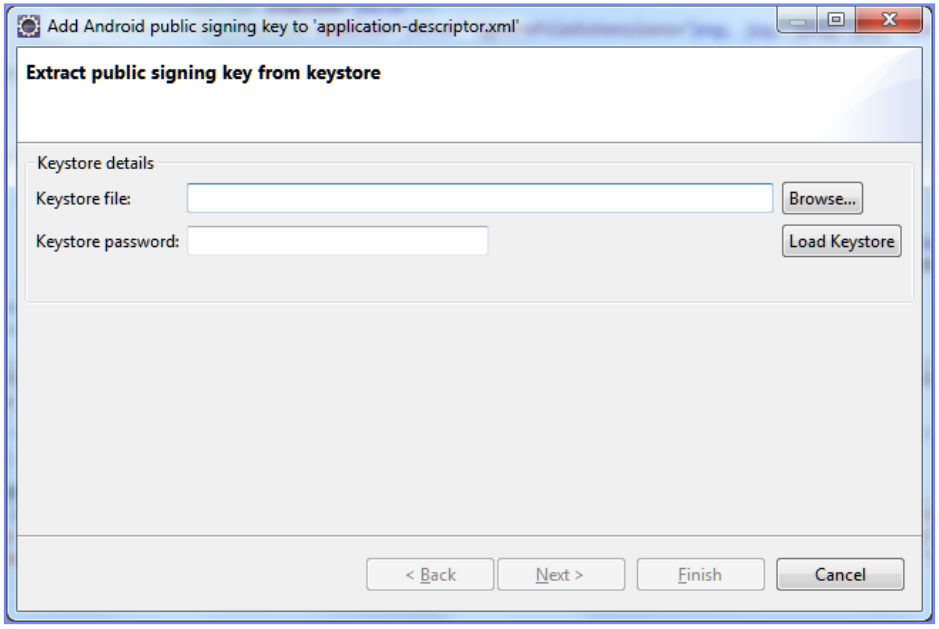
Enabling application authenticity check – Hybrid (5 of 9)

- To enable application authenticity check for the **Android environment**:

  1. Extract the public signing key of the certificate that is used to sign application bundle (`.apk` file).
     - Worklight Studio provides tools to simplify this process.
     - If you are building an application for distribution (production), you must extract the public key from the certificate that you are using to sign your production ready application.
     - If you are building an application in the development environment, you might use the public key from a default development certificate that is supplied by the Android SDK.
     - The development certificate can be found in a keystore that is in a **{user-home}/.android/debug.keystore** file.

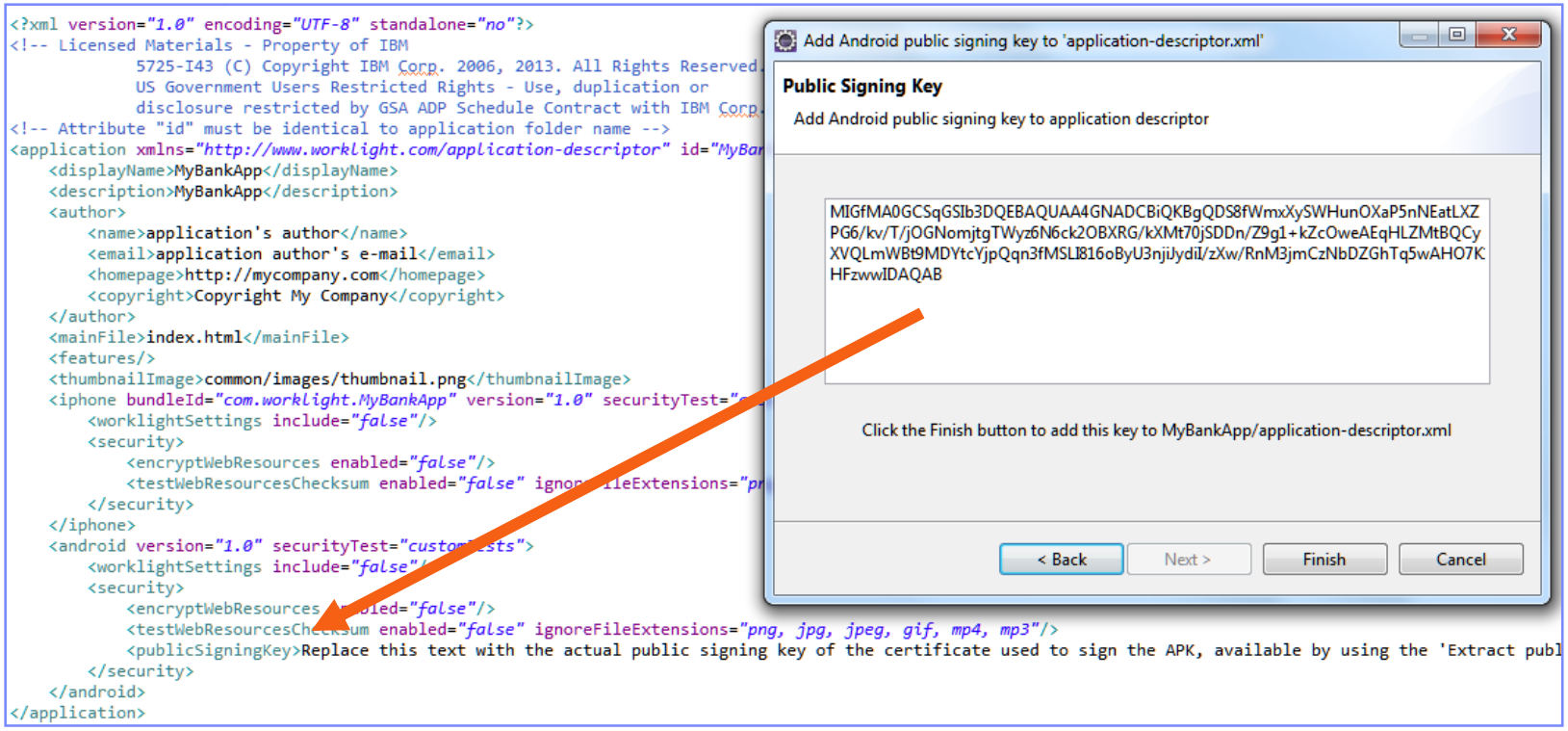
Enabling application authenticity check – Hybrid (6 of 9)

- You can either extract the public key manually or use the wizard that is Worklight Studio provides.
- To use the wizard:
  1. Right-click your Android environment folder and select **Extract public signing key**.
  2. Specify the location and the password of a keystore file, and click **Load Keystore**.
  3. The default password for **debug.keystore** is “android”.
  4. Set the **Key alias** and click **Next**.



Enabling application authenticity check – Hybrid (7 of 9)

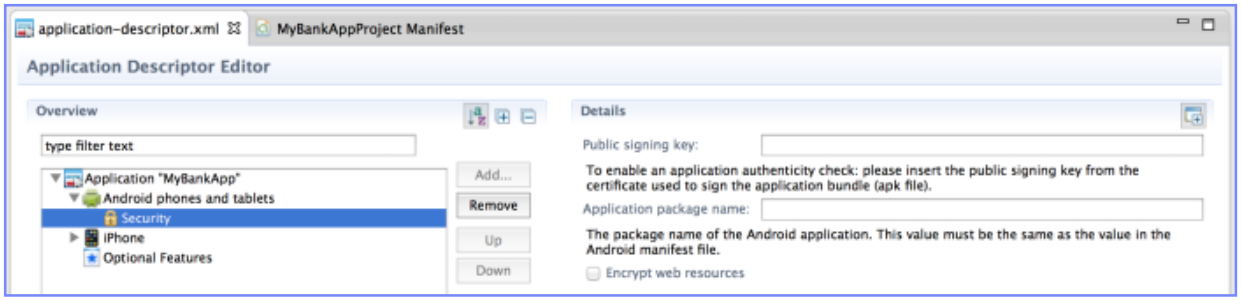
- A dialog opens that displays the public key.
- After you click **Finish**, the public key is automatically pasted to the relevant section of the `application-descriptor.xml` file.



Enabling application authenticity check – Hybrid (8 of 9)

- To enable application authenticity check for the **Android environment**:

  2. Add the **Application package name** by using the Application Descriptor Editor (design view):



  - Take the **Application package name** value from the `package` attribute of the `<manifest>` node in the `AndroidManifest.xml`.
  - If you decide to change the value to another, verify that you change it in both locations.

Enabling application authenticity check – Hybrid (9 of 9)

- You can also directly edit `application-descriptor.xml` and add a `packageName`:

```
<android version="1.0" securityTest="customTests">
    <worklightSettings include="false"/>
    <security>
        <encryptWebResources enabled="false"/>
        <testWebResourcesChecksum enabled="false"
            ignoreFileExtensions="png, jpg, jpeg, gif, mp4, mp3"/>
        <publicSigningKey>MIGfM …</publicSigningKey>
        <packageName>com.MyBankApp</packageName>
    </security>
</android>
```

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Enabling application authenticity check – Native

- When you enable App Authenticity in a native application:
  - For the **iOS environment:**
    1. In Eclipse, the steps to follow are the same as done in the previous slides.
    2. In Xcode, verify that the following value exists in the **Other Linker Flags** field: `-ObjC`
  - For the **Android environment:**
    1. In Eclipse, the steps to follow are the same as done in the previous slides.
    2. From the Worklight project Native API folder, copy the following folders to your native project `lib` folder: `armabi, armabi-v7a, mips, x86`.

Agenda

- Overview
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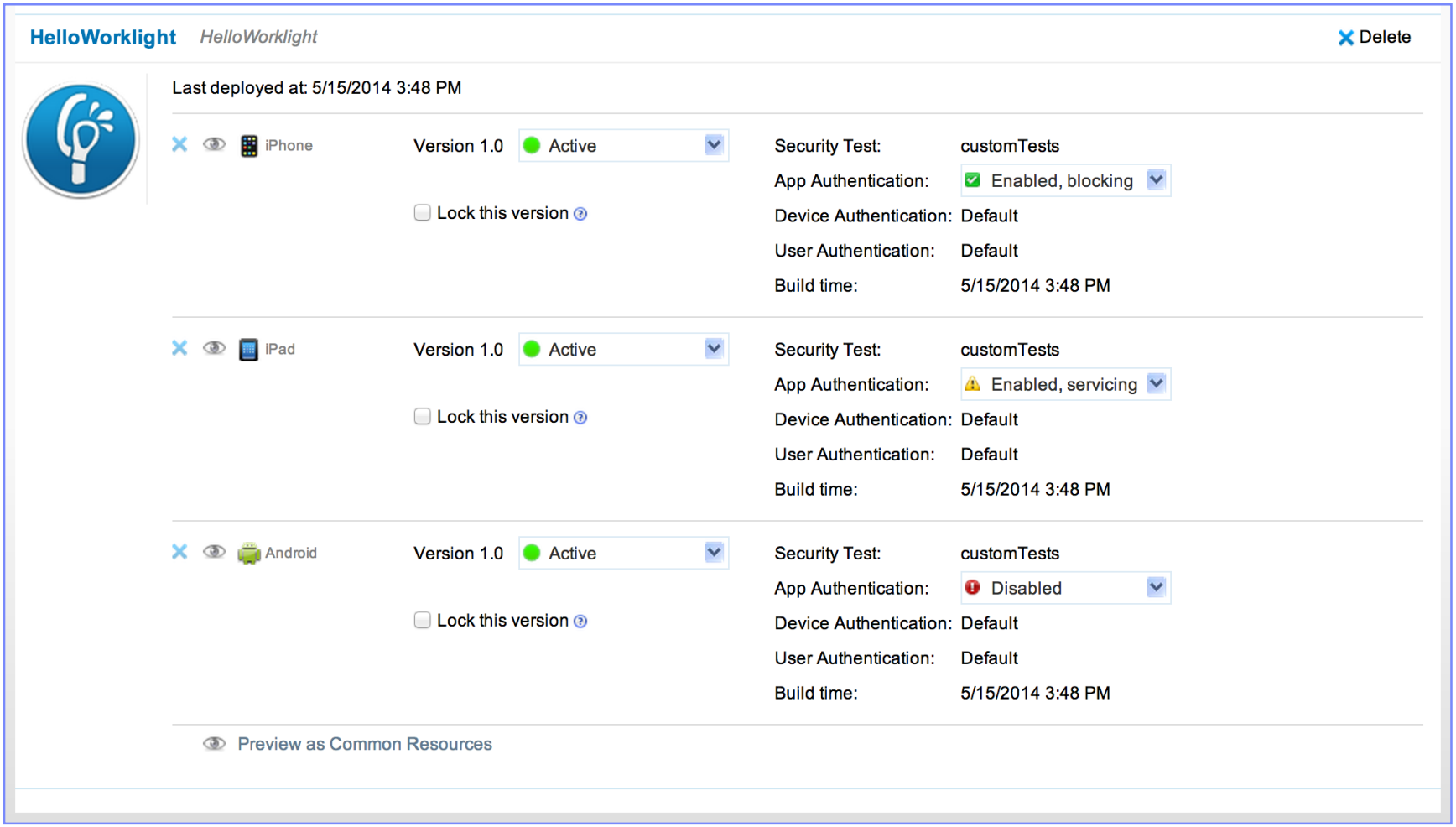
Controlling Application Authenticity from Worklight Console (1 of 2)

- Worklight Console provides means for enabling and disabling application authenticity realm.
- You can set three modes:
  - **Enabled, blocking** – This mode means that the application authenticity check is enabled. If the application fails the check, it will not be served by a Worklight Server.
  - **Enabled, serving** – This mode means that the application authenticity check is enabled. If the application fails the check, it will still be served by a Worklight Server.
  - **Disabled** – This mode means that application authenticity check is disabled.

Controlling Application Authenticity from Worklight Console (2 of 2)



Controlling Application Authenticity from Worklight Console (3 of 3)

- Worklight Console provides means for enabling and disabling application authenticity realm.
- You can set three modes:
  - **Enabled, blocking** – This mode means that the application authenticity check is enabled. If the application fails the check, it will not be served by a Worklight Server.
  - **Enabled, serving** – This mode means that the application authenticity check is enabled. If the application fails the check, it will still be served by a Worklight Server.
  - **Disabled** – This mode means that application authenticity check is disabled.

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