



# **BlackBerry Dynamics SDK for Android**

## **Release Notes**

10.1



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# BlackBerry Dynamics SDK for Android version 10.1

## What's new in the BlackBerry Dynamics SDK for Android version 10.1

### Changes to the SDK and software requirements

| Feature                    | Description   |
|----------------------------|---|
| BlackBerry WebView Library | <p>The following changes have been made to BlackBerry WebView in this release:</p> <ul style="list-style-type: none"><li>• Replaced any usage of <code>com.blackberry.bbwebview.BBChromeClient</code> with the new class name <code>com.blackberry.bbwebview.BBWebChromeClient</code>. This change has been made to better align with the naming of the native method.</li><li>• The <code>com.blackberry.bbwebview.WebClientObserver</code> class is deprecated. For the required methods, you can extend <a href="#">BBWebViewClient</a>, <a href="#">BBWebView</a>, and <a href="#">BBWebChromeClient</a>. For more information about the methods to override in <code>BBWebViewClient</code>, <code>BBWebView</code>, or <code>BBWebChromeClient</code>, see the following Android developer resources:<ul style="list-style-type: none"><li>• <a href="#">Android Developers WebViewClient</a></li><li>• <a href="#">Android Developers WebView</a></li><li>• <a href="#">Android Developers WebChromeClient</a></li></ul></li><li>• <code>BBWebView</code> supports custom implementations of <code>WebChromeClient</code> and <code>WebViewClient</code>. To use this functionality, you must extend the <code>BBWebChromeClient</code> and <code>BBWebViewClient</code> classes.<ul style="list-style-type: none"><li>• For <code>WebViewClient</code>, use the setter detailed at <a href="#">Android Developers WebView</a>.</li><li>• For <code>WebChromeClient</code>, use the setter detailed at <a href="#">Android Developers WebView</a>.</li></ul></li><li>• HTTP authentication (Basic, Digest, NTLM, Kerberos) is now supported in <code>BBWebView</code>. See <a href="#">Using the BBWebView library</a> for more information.</li></ul> |
| Changes to API support     | <p><b>Note:</b> The OkHttp API is currently available as a beta feature release that is subject to further testing and changes.</p> <p>The OkHttp API is now supported as a beta feature in this release. The support is provided from an Interceptor called <code>BBCustomInterceptor</code>, which when used will direct HTTP requests through the BlackBerry Dynamics communications system in the same way as the existing <code>HttpClient</code> API. See the <a href="#">BlackBerry Dynamics API guide</a> for more information.</p> <p>There are some limitations with OkHTTP in this release. See <a href="#">Limitations for OkHttp Support</a> for more information.</p>   |

### New administrative and security features

| Feature   | Description  |
|---|--|
| Support for additional BlackBerry Protect Mobile features | This release includes support for new BlackBerry Protect Mobile features to detect insecure networks and insecure Wi-Fi. An administrator enables these features using a BlackBerry Protect profile. For more information, see <a href="#">Protecting devices from network threats in the BlackBerry UEM Overview and Administration guide</a> . |

## BlackBerry Dynamics Launcher Library

This release uses BlackBerry Dynamics Launcher Library version 3.3.1.217.

### Fixed issues

The following issues are fixed in this release:

- A biometric authentication issue where the BlackBerry Dynamics app would crash if Android biometrics were enabled in UEM, but no biometrics were set up on the device, has been resolved. (FIRST-17729)
- An issue where the BBWebView sample app binary XML would crash on startup has been resolved. (FIRST-17727)
- An issue with caching criteria, which resulted in the wrong Kerberos ticket being sent in some cases, has been resolved. (FIRST-17590)
- An issue where cancelling the Easy Activation process resulted in a redirection to the lock screen for the previously activated app has been resolved. The user will now be redirected to the app activation screen to enter their email address and access key. (GD-56598)

### Known issues

- If you use direct references to the BlackBerry Dynamics SDK .aar files in your build.gradle repositories (for example, `compile(name:'android_handheld_platform-8.1.0.57', ext:'aar')`) instead of using Maven linkage (for example, `api "com.blackberry.blackberrydynamics:android_handheld_platform:8.1.0.57"`), errors may occur in the AndroidManifest file in the Gradle caches directory. To resolve, use Maven linkage or specify `android_handheld_resources` and `android_handheld_platform` in the build.gradle file.
- The Android certificate import API for the BlackBerry Dynamics SDK is no longer supported. BlackBerry recommends using certificates from the Android Native Keystore if it is acceptable that the key material is protected by the device and not by BlackBerry Dynamics.
- If a user is prompted to activate a BlackBerry Dynamics app using their password for another BlackBerry Dynamics app that they have previously activated (also known as Easy Activation), then cancels out of the prompt, the lock screen for the previously activated app displays instead of the screen to enter their activation credentials. (GD-56598)
- If "Allow Android biometric authentication" is enabled in the BlackBerry Dynamics profile, when the user activates a BlackBerry Dynamics app on an Android 12 emulator, fingerprint authentication fails for the app with the error message "Internal error: Retry or restart". (GD-56289)
- If you configured the BlackBerry Dynamics profile to require users to enter their password when a BlackBerry Dynamics app returns to the foreground, on Android 12 devices, this functionality does not work as expected (the app does not prompt the user for their password when it returns to the foreground). (GD-56162)
- If a user with Android 11 or later is activating a BlackBerry Dynamics app using a QR code and selects the "Only this time" option when prompted to grant permissions, certificate import issues might occur if the app remains in the background for longer than one minute during the import process. BlackBerry recommends that users select the "While using the app" option when prompted. (GD-54972)

**Workaround:** Instruct users to force close the app and open it again.

- If a BlackBerry Dynamics app uses Kerberos authentication and the app tries to access a web page using an IP address, after the user enters their credentials, the web page does not load as expected and the user is prompted for their credentials again in a loop. (GD-54481)

**Workaround:** When developing BlackBerry Dynamics apps, do not hard code URLs that use IP addresses. If users can manually enter a URL, instruct users to avoid URLs that use an IP address.

- If an app tries to open a BlackBerry Dynamics app that was not already open using [AppKinetics](#), the BlackBerry Dynamics app might not come to the foreground. (GD-54205)

**Workaround:** The user can start the BlackBerry Dynamics app and leave it running in the background before performing the AppKinetics operation.

- If a user upgrades a BlackBerry Dynamics app that uses SDK version 9.x or earlier to a new version that uses SDK 10.1 or later, the app will not retain any cookies. (GD-55766)

# Installing or upgrading the software

For complete installation instructions, upgrade guidance, and software requirements, see the [BlackBerry Dynamics SDK for Android Development Guide](#). The Development Guide also provides instructions for implementing the SDK libraries as .aar files that can be published to an internal repository.

If you installed the SDK using Android Studio SDK manager and you made changes to the sample apps, the update might override the sample apps, discarding your changes.

**Note:** The BlackBerry Dynamics SDK for Android 5.0 and later includes a compliance enhancement to protect against malicious attempts to add a debugger to deployed BlackBerry Dynamics apps. Your options for configuring this feature depend on the version of BlackBerry UEM and the BlackBerry Dynamics SDK. For more information, see [Configure compliance settings so you can debug your app](#) in the BlackBerry Dynamics SDK Development Guide.

# Reference for all deprecated interfaces, classes, and methods

This document specifies the interfaces, classes, and methods that were deprecated in this release of the SDK (if any). For a full list of all deprecated objects, view the [API reference for your platform](#) and open the deprecated list in the appendix.

You should plan to stop using any interfaces, classes, and methods that are included in the deprecated list.



# Limitations for OkHttp Support

**Note:** The OkHttp API is currently available as a beta feature release that is subject to further testing and changes.

Support for OkHttp API as a beta feature is new in the 10.1 release of BlackBerry Dynamics SDK. The following table outlines limitations in the initial release:

| Limitation                  | Description   |
|-----------------------------|---|
| Get, set, and clear cookies | Cookies are supported and are always stored in the secure container, however, there are currently no methods to get, set, or clear them.  |
| Caching                     | Caching is not supported in this release.   |
| Proxy                       | Proxy servers are supported, but there is no API to set a proxy. It will work if proxies are set in UEM, either using a PAC file or manually. If proxy authentication is required, this will be done automatically as is the case for the existing HttpClient API. Otherwise, a 407 HTTP status will be returned.   |
| Authentication              | <ul style="list-style-type: none"><li>Basic authentication will work if an authentication interceptor is used and included before the BBCustomInterceptor when building the OkHttpClient. Use of OkHttp authenticators is not supported, and is unlikely to be supported due to constraints imposed by OkHttp. See the following for a simple example of such an interceptor:<pre>public class ReactiveBasicAuthInterceptor : Interceptor {     val credentials = Credentials.basic("username",     "password")      @NotNull     override public fun intercept(chain: Chain):     Response {         val request = chain.request()         val response = chain.proceed(request)         return if (response.code == 401)          chain.proceed( request.newBuilder().header("Authorization",         credentials).build() )         else             response     } }</pre></li><li>NTLM authentication may similarly be supported by third-party authentication interceptors.</li><li>Kerberos authentication using PKINIT or KCD is supported, but Kerberos using user-supplied credentials is not supported.</li><li>SPNEGO is not supported.</li></ul> |
| Timeouts                    | Timeouts in OkHttp are separated into connection timeouts, read timeouts, and write timeouts. BlackBerry Dynamics OkHttp only supports connection timeouts, and it is not currently possible to change the timeout value.   |

| Limitation   | Description  |
|--------------|--|
| Certificates | It is not currently possible to disable HTTPS host/peer certificate verification, or to enforce pinned certificates. |

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