



BlackBerry Dynamics SDK for Android

Release Notes

11.0

Contents

- BlackBerry Dynamics SDK for Android version 11.0..... 4**
- Installing or upgrading the software..... 7**
- Reference for all deprecated interfaces, classes, and methods..... 8**
- Limitations for OkHttp Support..... 9**
- Legal notice..... 10**

BlackBerry Dynamics SDK for Android version 11.0

What's new in the BlackBerry Dynamics SDK for Android version 11.0

Changes to the SDK and software requirements:

Feature	Description
Android 13 readiness	<p>This release adds support for devices using Android 13. Due to new intent filtering on Android 13, which impacts easy activation, authentication delegation, and inter-container communications (ICC), you must update BlackBerry Dynamics SDK for Android to version 11.0.</p> <p>As a result of the new intent filtering, apps that target Android 13 (API level 33) will only be supported in the BlackBerry Dynamics SDK for Android 11.1 release.</p>
BBWebView enhancements	<p>The following enhancements to BBWebView are new in this release of BlackBerry Dynamics SDK for Android:</p> <ul style="list-style-type: none">• The <code>onReceivedBBError</code> function which allows BBWebView to notify a developer about an error, has been implemented .• The <code>BBWebResourceError</code> class which holds information about an error, has been implemented.• If the administrator enables the DLP policy in UEM, users can not drag and drop text to, from, or within a BBWebView page.
Changes to installation for the BlackBerry Dynamics SDK for Android	<p>Support for installing and integrating the BlackBerry Dynamics SDK for Android using a <code>.jar</code> file has been removed in this release. Developers must use the <code>.aar</code> format for integration. See Integrate the BlackBerry Dynamics SDK using Gradle in the development guide for more information.</p>
Changes to Android Studio SDK Manager support	<p>Support for downloading the SDK using Android Studio's SDK manager is deprecated and removed in this release. Developers must only use Gradle for integration.</p>
Changes to OkHttp support	<p>The following changes to OkHttp support are new in this release of BlackBerry Dynamics SDK for Android:</p> <ul style="list-style-type: none">• OkHttp, which was previously only supported as a beta feature, is now generally available.• You can now use the <code>BBCustomInterceptor</code> class to manage cookies. Applications can access cookies that are managed by the BlackBerry Dynamics Runtime through the <code>BBCookieJar</code> API. Cookies are always stored in the secure container. For more information, see the BlackBerry Dynamics SDK for Android API reference.• You can now add an OkHttp authenticator through the <code>BBCustomInterceptor</code> class. For more information, see BBCustomInterceptor in the BlackBerry Dynamics SDK for Android API reference.
ClipboardManager enhancements	<p>The <code>clearPrimaryClip()</code> function has been added to the <code>ClipboardManager</code> class in this release of BlackBerry Dynamics SDK for Android. For more information, see ClipboardManager in the BlackBerry Dynamics API reference.</p>

Feature	Description
Third-party IDP activation enhancements	Users can now activate a BlackBerry Dynamics app through a third-party IDP, such as Active Directory or Okta. Users can also sign in using their organizational credentials if they need to reset their app password or if their app has been locked. If this feature is enabled by an administrator, users will not need to request an unlock code through UEM self-service or from their administrator.

BlackBerry Dynamics Launcher Library

This release uses BlackBerry Dynamics Launcher Library version 3.5.0.234

Fixed issues

The following issues are fixed in this release:

- An issue where multiple credential prompts would display when setting up a Kerberos authentication method type test, has been resolved. (GD-59074)
- An issue where a Dynamics app would get stuck at the splash screen after activating the app using insecure Wi-Fi, and then switching to secure Wi-Fi, has been resolved. (GD-59015)
- An issue where BlackBerry Work would get stuck on the lock screen in some occasions, has been resolved. (GD-58990)
- An issue where the Compose Email icon was disabled after attaching photos to an email message and returning to the home screen, has been resolved. (GD-58576)

Known Limitations

- If a user switches from a third-party keyboard to the system keyboard, in some deployment configurations, the application may take a minute to detect the change and remove the **Custom Keyboards Restricted** notification. (GD-57693)

Workaround: By relaunching the app, the notification will be removed and the user will be able to use the system keyboard immediately.

Known Behavior

- The Android runtime permission *POST_NOTIFICATIONS* is no longer required by BlackBerry Dynamics SDK for Android 11.0. However, if permission has been requested by the app and granted by the user, mobile threat detections will be alerted via push notification. For apps still using BlackBerry Dynamics SDK 10.2 or earlier, the end user will be prompted to grant this permission after upgrading to Android 13.
- If a user opens a BlackBerry Dynamics app on an insecure Wi-Fi network while the **Unsafe Wi-Fi detected** compliance action is enabled, they will receive a dialog stating that the application is blocked for this network. If the user opens the network settings on Android 13, the network settings panel will be blank until the user taps the **Settings** button from the panel.

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

BlackBerry Dynamics SDK for Android supports the OkHttp API. The following table outlines the limitations as of this release:

Note: BlackBerry Dynamics uses OkHttp version 4.9.1.

Limitation	Description
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">• Third-party authentication interceptors might support NTLM authentication.• Kerberos authentication using PKINIT or KCD is supported, but Kerberos using user-supplied credentials is not supported.• SPNEGO is not supported.
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.
Certificates	It is not currently possible to disable HTTPS host/peer certificate verification, or to enforce pinned certificates.

Legal notice

©2022 BlackBerry Limited. Trademarks, including but not limited to BLACKBERRY, BBM, BES, EMBLEM Design, ATHOC, CYLANCE and SECUSMART are the trademarks or registered trademarks of BlackBerry Limited, its subsidiaries and/or affiliates, used under license, and the exclusive rights to such trademarks are expressly reserved. All other trademarks are the property of their respective owners.

This documentation including all documentation incorporated by reference herein such as documentation provided or made available on the BlackBerry website provided or made accessible "AS IS" and "AS AVAILABLE" and without condition, endorsement, guarantee, representation, or warranty of any kind by BlackBerry Limited and its affiliated companies ("BlackBerry") and BlackBerry assumes no responsibility for any typographical, technical, or other inaccuracies, errors, or omissions in this documentation. In order to protect BlackBerry proprietary and confidential information and/or trade secrets, this documentation may describe some aspects of BlackBerry technology in generalized terms. BlackBerry reserves the right to periodically change information that is contained in this documentation; however, BlackBerry makes no commitment to provide any such changes, updates, enhancements, or other additions to this documentation to you in a timely manner or at all.

This documentation might contain references to third-party sources of information, hardware or software, products or services including components and content such as content protected by copyright and/or third-party websites (collectively the "Third Party Products and Services"). BlackBerry does not control, and is not responsible for, any Third Party Products and Services including, without limitation the content, accuracy, copyright compliance, compatibility, performance, trustworthiness, legality, decency, links, or any other aspect of Third Party Products and Services. The inclusion of a reference to Third Party Products and Services in this documentation does not imply endorsement by BlackBerry of the Third Party Products and Services or the third party in any way.

EXCEPT TO THE EXTENT SPECIFICALLY PROHIBITED BY APPLICABLE LAW IN YOUR JURISDICTION, ALL CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS, OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS OR WARRANTIES OF DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, MERCHANTABLE QUALITY, NON-INFRINGEMENT, SATISFACTORY QUALITY, OR TITLE, OR ARISING FROM A STATUTE OR CUSTOM OR A COURSE OF DEALING OR USAGE OF TRADE, OR RELATED TO THE DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN, ARE HEREBY EXCLUDED. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY STATE OR PROVINCE. SOME JURISDICTIONS MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES AND CONDITIONS. TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES OR CONDITIONS RELATING TO THE DOCUMENTATION TO THE EXTENT THEY CANNOT BE EXCLUDED AS SET OUT ABOVE, BUT CAN BE LIMITED, ARE HEREBY LIMITED TO NINETY (90) DAYS FROM THE DATE YOU FIRST ACQUIRED THE DOCUMENTATION OR THE ITEM THAT IS THE SUBJECT OF THE CLAIM.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, IN NO EVENT SHALL BLACKBERRY BE LIABLE FOR ANY TYPE OF DAMAGES RELATED TO THIS DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN INCLUDING WITHOUT LIMITATION ANY OF THE FOLLOWING DAMAGES: DIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR AGGRAVATED DAMAGES, DAMAGES FOR LOSS OF PROFITS OR REVENUES, FAILURE TO REALIZE ANY EXPECTED SAVINGS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, LOSS OF BUSINESS OPPORTUNITY, OR CORRUPTION OR LOSS OF DATA, FAILURES TO TRANSMIT OR RECEIVE ANY DATA, PROBLEMS ASSOCIATED WITH ANY APPLICATIONS USED IN CONJUNCTION WITH BLACKBERRY PRODUCTS OR SERVICES, DOWNTIME COSTS, LOSS OF THE USE OF BLACKBERRY PRODUCTS OR SERVICES OR ANY PORTION THEREOF OR OF ANY AIRTIME SERVICES, COST OF SUBSTITUTE GOODS, COSTS OF COVER, FACILITIES OR SERVICES, COST OF CAPITAL, OR OTHER SIMILAR PECUNIARY LOSSES, WHETHER OR NOT SUCH DAMAGES

WERE FORESEEN OR UNFORESEEN, AND EVEN IF BLACKBERRY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, BLACKBERRY SHALL HAVE NO OTHER OBLIGATION, DUTY, OR LIABILITY WHATSOEVER IN CONTRACT, TORT, OR OTHERWISE TO YOU INCLUDING ANY LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY.

THE LIMITATIONS, EXCLUSIONS, AND DISCLAIMERS HEREIN SHALL APPLY: (A) IRRESPECTIVE OF THE NATURE OF THE CAUSE OF ACTION, DEMAND, OR ACTION BY YOU INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR ANY OTHER LEGAL THEORY AND SHALL SURVIVE A FUNDAMENTAL BREACH OR BREACHES OR THE FAILURE OF THE ESSENTIAL PURPOSE OF THIS AGREEMENT OR OF ANY REMEDY CONTAINED HEREIN; AND (B) TO BLACKBERRY AND ITS AFFILIATED COMPANIES, THEIR SUCCESSORS, ASSIGNS, AGENTS, SUPPLIERS (INCLUDING AIRTIME SERVICE PROVIDERS), AUTHORIZED BLACKBERRY DISTRIBUTORS (ALSO INCLUDING AIRTIME SERVICE PROVIDERS) AND THEIR RESPECTIVE DIRECTORS, EMPLOYEES, AND INDEPENDENT CONTRACTORS.

IN ADDITION TO THE LIMITATIONS AND EXCLUSIONS SET OUT ABOVE, IN NO EVENT SHALL ANY DIRECTOR, EMPLOYEE, AGENT, DISTRIBUTOR, SUPPLIER, INDEPENDENT CONTRACTOR OF BLACKBERRY OR ANY AFFILIATES OF BLACKBERRY HAVE ANY LIABILITY ARISING FROM OR RELATED TO THE DOCUMENTATION.

Prior to subscribing for, installing, or using any Third Party Products and Services, it is your responsibility to ensure that your airtime service provider has agreed to support all of their features. Some airtime service providers might not offer Internet browsing functionality with a subscription to the BlackBerry® Internet Service. Check with your service provider for availability, roaming arrangements, service plans and features. Installation or use of Third Party Products and Services with BlackBerry's products and services may require one or more patent, trademark, copyright, or other licenses in order to avoid infringement or violation of third party rights. You are solely responsible for determining whether to use Third Party Products and Services and if any third party licenses are required to do so. If required you are responsible for acquiring them. You should not install or use Third Party Products and Services until all necessary licenses have been acquired. Any Third Party Products and Services that are provided with BlackBerry's products and services are provided as a convenience to you and are provided "AS IS" with no express or implied conditions, endorsements, guarantees, representations, or warranties of any kind by BlackBerry and BlackBerry assumes no liability whatsoever, in relation thereto. Your use of Third Party Products and Services shall be governed by and subject to you agreeing to the terms of separate licenses and other agreements applicable thereto with third parties, except to the extent expressly covered by a license or other agreement with BlackBerry.

The terms of use of any BlackBerry product or service are set out in a separate license or other agreement with BlackBerry applicable thereto. NOTHING IN THIS DOCUMENTATION IS INTENDED TO SUPERSEDE ANY EXPRESS WRITTEN AGREEMENTS OR WARRANTIES PROVIDED BY BLACKBERRY FOR PORTIONS OF ANY BLACKBERRY PRODUCT OR SERVICE OTHER THAN THIS DOCUMENTATION.

BlackBerry Enterprise Software incorporates certain third-party software. The license and copyright information associated with this software is available at <http://worldwide.blackberry.com/legal/thirdpartysoftware.jsp>.

BlackBerry Limited
2200 University Avenue East
Waterloo, Ontario
Canada N2K 0A7

BlackBerry UK Limited
Ground Floor, The Pearce Building, West Street,
Maidenhead, Berkshire SL6 1RL
United Kingdom

Published in Canada