



# **BlackBerry Dynamics SDK for React Native Release Notes**

12.0



# Contents

**BlackBerry Dynamics SDK for React Native version 12.0.....4**

**Legal notice..... 10**

# BlackBerry Dynamics SDK for React Native version 12.0

The BlackBerry Dynamics SDK for React Native is open sourced and available on GitHub, along with developer documentation and sample apps, at <https://github.com/blackberry/BlackBerry-Dynamics-React-Native-SDK>.

## New in this release

Feature	Description
Support for BlackBerry Dynamics SDK 12.0	BlackBerry Dynamics SDK for iOS and Android 12.0 is now supported.
Support for Play Integrity attestation	<p>Play Integrity attestation is supported and added to the existing SafetyNet attestation library. For more information, see <a href="#">Implementing Play Integrity attestation for BlackBerry Dynamics apps</a>.</p> <p>The BlackBerry Dynamics SDK for React Native 12.0 is not compatible with previous versions of the SafetyNet library. BlackBerry Dynamics apps must use the latest SafetyNet library distributed with the BlackBerry Dynamics SDK for React Native 12.0 to support Play Integrity attestation. For more information, see the <a href="#">BlackBerry Dynamics SDK for Android API</a> reference.</p>
Enhancements to the <WebView /> UI component	<p>The following APIs have been added to the &lt;WebView /&gt; UI component to enhance secure download functionality for Android:</p> <ul style="list-style-type: none"><li>• <code>showDownloadDirectory()</code>: This method allows you to show the BBWebView Downloads user interface with a list of downloaded files from the Download directory.</li><li>• <code>getDownloadDirectoryPath()</code>: This method allows you to get the path to the BBWebView Downloads directory in the secure file system.</li></ul> <p>For more information, see the <a href="#">BBWebView API documentation</a>.</p> <p>The <a href="#">WebViewBrowser sample app</a> has also been updated.</p>

## Support

Feature	Description
Development requirements	<ul style="list-style-type: none"><li>• macOS X</li><li>• Windows 10 (Android only)</li><li>• Windows 11 (Android only)</li></ul>

Feature	Description
React Native supported versions	<ul style="list-style-type: none"> <li>• 0.72.x</li> <li>• 0.71.x</li> <li>• 0.70.x</li> <li>• 0.69.x (This version is deprecated and will be removed in a future release.)</li> <li>• 0.68.x (This version is deprecated and will be removed in a future release.)</li> <li>• 0.67.x (This version is deprecated and will be removed in a future release.)</li> <li>• 0.66.x (This version is deprecated and will be removed in a future release.)</li> </ul> <p>React Native 0.67.x and earlier requires Node.js version 12.x. and Java version 8.x.</p> <p>React Native 0.68.x and later requires Node.js version 18.x. and Java version 11.x.</p>
BlackBerry Dynamics SDK supported versions	<ul style="list-style-type: none"> <li>• BlackBerry Dynamics SDK for Android version 11.1 11.2, and 12.0. See the <a href="#">software and development requirements</a>.</li> <li>• BlackBerry Dynamics SDK for iOS version 11.1 11.2, and 12.0. See the <a href="#">software and development requirements</a>.</li> </ul> <p><b>Note:</b> The BlackBerry Dynamics SDK for React Native supports the <a href="#">BlackBerry Dynamics SDK for iOS version 12.0 dynamic framework</a> only. The iOS SDK static framework is no longer supported.</p>

## Features

Feature	Description
Integration with BlackBerry Dynamics	Integration of the BlackBerry Dynamics SDK for iOS and Android into the React Native application is supported by the addition of the BlackBerry-Dynamics-for-React-Native-Base module. You can also integrate a locally downloaded version of BlackBerry Dynamics SDK for iOS into your BlackBerry Dynamics React Native app.
Secure connectivity	<ul style="list-style-type: none"> <li>• XMLHttpRequest and fetch are secured in scope of the BlackBerry-Dynamics-for-React-Native-Networking module.</li> <li>• &lt;WebView /&gt; is secured in scope of the BlackBerry-Dynamics-for-React-Native-WebView UI component.</li> </ul>
Secure storage	<ul style="list-style-type: none"> <li>• AsyncStorage is secured in the BlackBerry-Dynamics-for-React-Native-Async-Storage module.</li> <li>• SQLite is secured in the BlackBerry-Dynamics-for-React-Native-SQLite-Storage module.</li> </ul>

Feature	Description
Data leakage prevention (DLP)	<p>No code work is required to support DLP for iOS and Android. Note the following:</p> <ul style="list-style-type: none"> <li>On iOS, the <code>&lt;Text /&gt;</code> component, <code>&lt;TextInput /&gt;</code> component, and Clipboard API are secured by integrating BlackBerry Dynamics.</li> <li>On Android, the following items are required: <ul style="list-style-type: none"> <li>The <code>&lt;Text /&gt;</code> component is secured in scope of the BlackBerry-Dynamics-for-React-Native-Text UI component.</li> <li>The <code>&lt;TextInput /&gt;</code> component is secured in scope of the BlackBerry-Dynamics-for-React-Native-TextInput UI component.</li> <li>The BlackBerry-Dynamics-for-React-Native-Clipboard module secures the <a href="#">Clipboard</a> API on Android.</li> </ul> </li> </ul>
Inter-Container Communication (ICC)	<p>ICC (also known as AppKinetics) provides service discovery, service consumption, and service providing capabilities for BlackBerry Dynamics React Native apps and allows secure communication with other BlackBerry Dynamics apps. To implement some ICC capabilities in BlackBerry Dynamics React Native apps, use the BlackBerry-Dynamics-for-React-Native-AppKinetics module.</p>
Support for Yarn package manager	<ul style="list-style-type: none"> <li>To add a BlackBerry Dynamics React Native module, run following command: <code>\$ yarn add &lt;path_to_module&gt;</code></li> <li>To remove a BlackBerry Dynamics React Native module, run following command: <code>\$ yarn remove &lt;path_to_module&gt;</code></li> </ul> <p>For more information, see the readme file for each module.</p>
Importing a prepopulated SQLite database	<p>You can use any of the methods detailed here to import a prepopulated SQLite database: <a href="#">Importing a prepopulated database</a>. The third method is supported for Android only. For more information, see the readme file at <a href="https://github.com/blackberry/BlackBerry-Dynamics-React-Native-SDK">https://github.com/blackberry/BlackBerry-Dynamics-React-Native-SDK</a>.</p>

## Package contents

Feature	Description
Modules	<ul style="list-style-type: none"> <li>• BlackBerry-Dynamics-for-React-Native-Base automatically integrates the BlackBerry Dynamics SDK for iOS and Android into the React Native application.</li> <li>• BlackBerry-Dynamics-for-React-Native-Networking secures XMLHttpRequest and fetch APIs on Android. For more information, see <a href="#">React Native: Networking</a>.</li> <li>• BlackBerry-Dynamics-for-React-Native-SQLite-Storage secures SQLite database usage, based on the <a href="#">react-native-sqlite-storage</a> third-party module.</li> <li>• BlackBerry-Dynamics-for-React-Native-Async-Storage secures built-in <a href="#">AsyncStorage</a>.</li> <li>• BlackBerry-Dynamics-for-React-Native-Clipboard secures the built-in <a href="#">Clipboard</a> API.</li> <li>• BlackBerry-Dynamics-for-React-Native-AppKinetics provides the ability to use BlackBerry Dynamics app-based services within a BlackBerry Dynamics React Native app to securely communicate with other BlackBerry Dynamics apps in a process called Inter-Container Communication (ICC) or AppKinetics; also provides service discovery, service consumption, and service providing capabilities.</li> <li>• BlackBerry-Dynamics-for-React-Native-FileSystem secures the API for the <a href="#">react-native-fs</a> module; the JavaScript API of this module is the same, but files and directories are now stored and managed within the BlackBerry Dynamics secure container.</li> <li>• BlackBerry-Dynamics-for-React-Native-Launcher allows you to integrate the BlackBerry Dynamics Launcher with your BlackBerry Dynamics React Native apps.</li> <li>• BlackBerry-Dynamics-for-React-Native-Application allows you to access information that is globally available to any BlackBerry Dynamics app.</li> </ul>
UI components	<ul style="list-style-type: none"> <li>• BlackBerry-Dynamics-for-React-Native-Text enables data leakage protection (DLP) within UI components on Android.</li> <li>• BlackBerry-Dynamics-for-React-Native-TextInput enables DLP within UI components on Android.</li> <li>• BlackBerry-Dynamics-for-React-Native-WebView secures the built-in <code>&lt;WebView /&gt;</code> UI component to securely load public and enterprise resources within a WebView.</li> </ul>

Feature	Description
Sample apps	<ul style="list-style-type: none"> <li>• BasicNetworking provides examples of using fetch and XMLHttpRequest in different scenarios. This app covers different HTTP request types (GET, POST, PUT, DELETE, and so on), authentication types (basic auth, Digest, NTLM), and includes the ability to send different data types to the server and receive responses for different data types.</li> <li>• ClipboardTestApp demonstrates how to use the <a href="#">Clipboard</a> API for data leakage prevention (DLP). It is possible to change the DLP policy on UEM and see how it affects the clipboard within the app. If DLP is enabled, clipboard data cannot be copied from a BlackBerry Dynamics app to a non-BlackBerry Dynamics app, and vice-versa.</li> <li>• DLP demonstrates how to use the <code>&lt;Text /&gt;</code> and <code>&lt;TextInput /&gt;</code> UI components together with the UEM DLP policy option. If DLP is on, it is not possible to perform cut-copy-paste operations to transfer data from BlackBerry Dynamics to non-BlackBerry Dynamics applications, and vice-versa.</li> <li>• SQLite demonstrates how to use a secure SQLite DB instance in a React Native app.</li> <li>• UnitTest runs Jasmine unit tests for fetch, XMLHttpRequest, Clipboard, AsyncStorage, SQLite, and AppKinetics in a React Native application.</li> <li>• WebViewBrowser demonstrates how to use the <code>&lt;WebView /&gt;</code> component in a React Native application.</li> <li>• FileSystem demonstrates how to use a secure FileSystem instance in a React Native app, how to manage files and directories, and how to upload and download files.</li> <li>• WebSocketClient and WebSocketServer demonstrate how to establish a connection to a WebSocket server using "ws://" or "wss://" protocols, how to send or receive text or binary data over a WebSocket connection, and how to close a WebSocket connection.</li> <li>• AppKinetics demonstrates how to use <a href="#">AppKinetics, or secure Inter-Container Communication (ICC)</a>, including sending and receiving files using ICC and creating secure email with BlackBerry Work or the native email client (if permitted).</li> <li>• Policy demonstrates how to retrieve a collection of app-specific configuration and policy settings. The retrieval of these settings happens during the method call or whenever settings are changed.</li> </ul>

### Fixed issues

When sending a file from BlackBerry Work using AppKinetics, if the Annotate file service was enabled, the Edit file service did not work properly. (GD-61620)

### Known issues

Image content may not be visible on the iOS clipboard sample app. (GD-63121)



Flipper cannot be used with BlackBerry Dynamics SDK for React Native in debug configuration because it disables some BlackBerry Dynamics secure networking functionality. Flipper is disabled by default on iOS and Android. If your BlackBerry Dynamics SDK for React Native app does not use the secure connectivity feature (**BlackBerry-Dynamics-for-React-Native-Networking** module), you can enable Flipper by uncommenting the following:

- On iOS: Uncomment the `use_flipper!()` line in Podfile.
- On Android: Uncomment the `initializeFlipper(this, getReactNativeHost().getReactInstanceManager());` line in `MainApplication.java` for React Native versions less than 71, or uncomment the `ReactNativeFlipper.initializeFlipper(this, getReactNativeHost().getReactInstanceManager());` line in `MainApplication.java` for React Native versions 71 and later.

When both default and secure SQLite libraries are linked to an iOS project, it can cause conflicts and unpredictable behavior.

**Workaround:** Remove the `sqlite3` dependency in `*/node_modules/reactnative-webrtc/react-native-webrtc.podspec`, and then run `pod install` again.

Apps targeting Android 12 and higher are required to specify an explicit value for `android:exported` when the corresponding component has an intent filter defined. More details can be found [here](#). React Native 0.68 and higher supports Android 12+ by default by setting appropriate setting in `AndroidManifest.xml`. For React Native versions 0.67 and earlier, `android:exported` should be set manually.

React Native for iOS projects using Xcode 14.3 (14E222b) fails to build properly. This is a known issue with the React Native platform, and more details can be found [here](#).

When loading the Metro server on React Native versions 0.72.0 or 0.72.1, a "Cannot read properties of undefined (reading 'addHelper')" error occurs.

**Workaround:** Add the following devDependency to the project:

```
$ yarn add @babel/traverse@7.22.8 --dev
```

When creating a new React Native project on versions 0.72.5 or earlier, an error may occur when installing `activesupport` CocoaPods dependencies.

**Workaround:** Create or update the `gemfile` in the root of your project with this dependency: `gem 'activesupport', '~> 7.0.8'`. Then, run the following commands:

```
$ bundle update activesupport
$ bundle exec pod install
```

The same issue can occur when running Dynamics React Native sample apps. Make sure that version 7.0.8 of `activesupport` Ruby gem is installed locally:

```
gem uninstall activesupport --version 7.x.x
gem install activesupport --version 7.0.8
```

# Legal notice

©2023 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.

Patents, as applicable, identified at: [www.blackberry.com/patents](http://www.blackberry.com/patents).

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, MERCHANTABILITY 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