

Blackberry MDM configuration with hybrid apps

Step 1: Install latest stable version of nodeJs on machine

- MacOS - `$ brew install node`
- Window - Browse nodejs portal <https://nodejs.org/en/> and download and run windows installer
- Verify Installation using –
 `$ node -v`
 `$ npm -v`

Step 2: Installing Ionic and its Dependencies

- `$ npm install -g ionic`
- `$ npm install -g cordova@8`
- `$ npm install -g @angular/cli`

Step 3: Create a simple project using angular or any other framework.

- `$ ionic start projectName blank --type=angular`
- `$ cd projectName`
- `$ ionic cordova platform add android@8`
- `$ ionic cordova platform add ios@4.5.5`

Step 4: Test the application in terminal to ensure that you can build a non-blackberry dynamics app

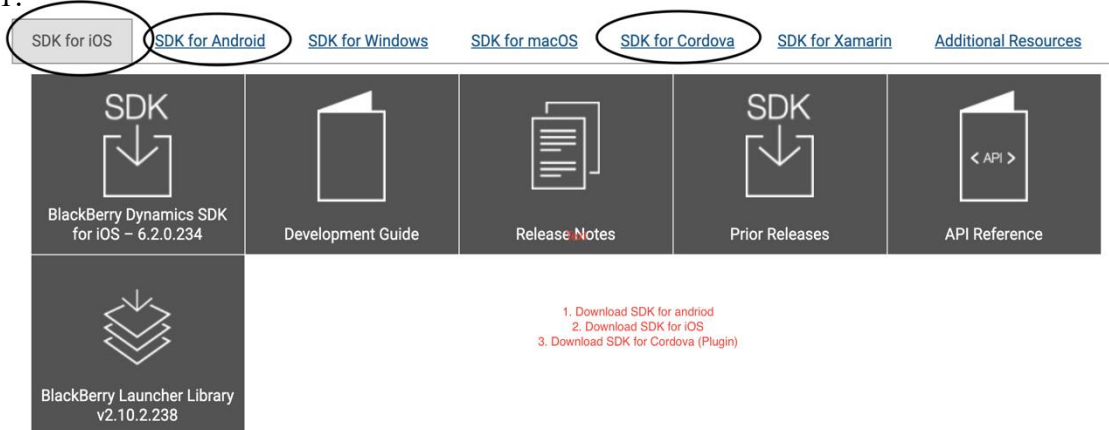
- `$ ionic cordova build android`
- `$ ionic cordova build ios`
- `$ ionic cordova emulate android / $ionic cordova run android --devices`
- `$ ionic cordova emulate ios / $ionic cordova run ios --devices`

- At this point, if the app does not successfully build and deploy to your emulator or devices something is wrong. Pause here and fix your development environment before continuing.

Step 5: Configuration of BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0

- Registration using company email address on blackberry portal
<https://account.blackberry.com/#/register>
- Login on blackberry developer portal
<https://login.blackberry.com/sso/SSOPOST/metaAlias/idp>
- Browse and download latest SDK for android, ios and cordova plugin
<https://developers.blackberry.com/us/en/resources/downloads.html>

1.



Step 6:

- For Mac Users –

- Install android studio and set system environment variable path on mac
- Extract BlackBerry_Dynamics_SDK_for_iOS_v7.0.0.93 tar file and double-click at .pkg file to install the ios SDK on mac
- Create a folder “blackberry/dynamics_sdk” inside android director/Library /Android/sdk/extras and copy m2repository from BlackBerry_Dynamics_SDK_for_Cordova.zip inside dynamics_sdk folder
- Final path - Library /Android/sdk/extras / blackberry / dynamics_sdk/ m2repository

- For Window User

- Install android studio and set system environment variable path
- Create a folder “blackberry/dynamics_sdk” inside C:\Users\userName\AppData\Local\Android\Sdk\Android/sdk /extras and copy m2repository from BlackBerry_Dynamics_SDK_for_Cordova.zip inside dynamics_sdk
- Final path – C:\Users\userName\AppData\Local\Android\Sdk\Android/sdk/extras/blackberry/dynamics_sdk/ m2repository

Step 7: Installation of blackberry dynamics plugin

- For both android and ios platforms
 - \$ ionic cordova plugin add <path of BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0.38>/plugins/cordova-plugin-bbd-configure
- Android only
 - \$ ionic cordova plugin add <Path of BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0.38>/plugins/cordova-plugin-bbd-configure -variable bbdSDKForAndroid="C:\Users\userName\AppData\Local\Android\Sdk\extras\blackberry\dynamics_sdk\m2repository" --variable bbdSDKForiOS=""
- iOS only
 - \$ ionic cordova plugin add <Path of BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0.38>/plugins/cordova-plugin-bbd-configure --variable bbdSDKForiOS="/Applications/Xcode.app/Contents/Developer/Platforms/iPhoneOS.platform/Developer/SDKs/iPhoneOS.sdk/System/Library/Frameworks/GD.framework" --variable bbdSDKForAndroid=""

Step 8:

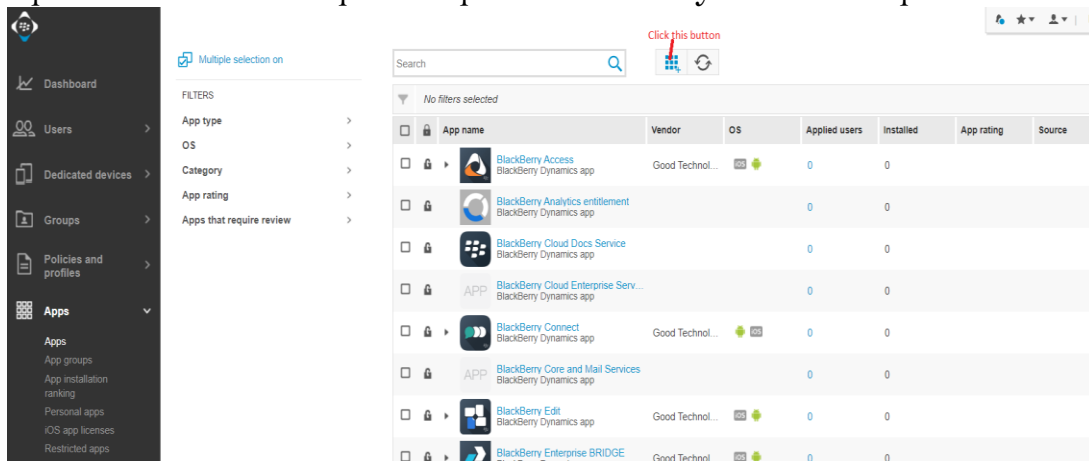
- Open BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0.38\plugins\cordova-plugin-bbd-base plugin into visual studio and removed `<uses-sdk android:minSdkVersion="23" android:targetSdkVersion="27" />` from plugin.xml file

Step 9:

- cordova-plugin-bbd-all or cordova-plugin-bbd-base is used to enable your apps. We will use cordova-plugin-bbd-base that provides the necessary configuration that is required for the BlackBerry Dynamics platform
- `$ ionic cordova plugin add < path of BlackBerry_Dynamics_SDK_for_Cordova_v6.0.0.38> /plugins/cordova-plugin-bbd-base`

Step 10: Deploy Mobile Apps integrated with BlackBerry SDK to BlackBerry UEM

- Prepare release build of android (apk) and ios (ipa) using android studio and xcode
- Upload release build apk and ipa on blackberry uem admin panel such as



The screenshot shows a dialog box titled 'Add BlackBerry Dynamics entitlement'. Below the title is the instruction 'Add Internal BlackBerry Dynamics apps (.ipa, .apk, .xap, .appx)'. The form contains four fields: 'Name' (filled with 'blackberry uem device management'), 'BlackBerry Dynamics entitlement ID' (filled with 'io.ionic.demo.uem.photogallery'), 'BlackBerry Dynamics entitlement version' (filled with '0.0.1'), and an empty 'Description' field. At the bottom are 'Cancel' and 'Add' buttons.

Add BlackBerry Dynamics entitlement

Add Internal BlackBerry Dynamics apps (.ipa, .apk, .xap, .appx).

Name *
blackberry uem device management

BlackBerry Dynamics entitlement ID *
io.ionic.demo.uem.photogallery

BlackBerry Dynamics entitlement version *
0.0.1

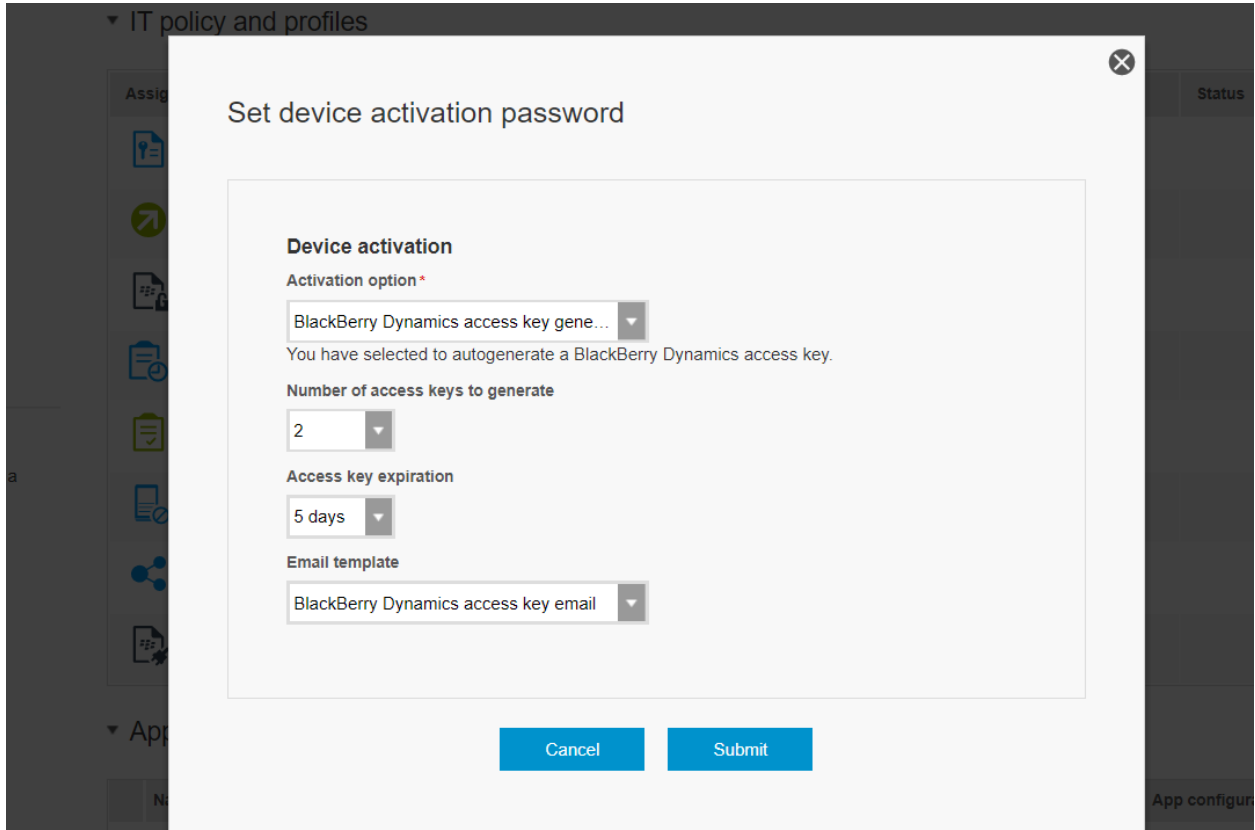
Description

Cancel Add

Please refer this site for more details

<https://www.appdome.com/no-code-mobile-integration-knowledge-base/deploying-apps-fused-with-the-blackberry-dynamics-emm-sdk-to-uem/>

Step 11: Generate device activate code. UEM will send device activation code on registered user email address. Activation code is required for registered apps and device on blackberry uem

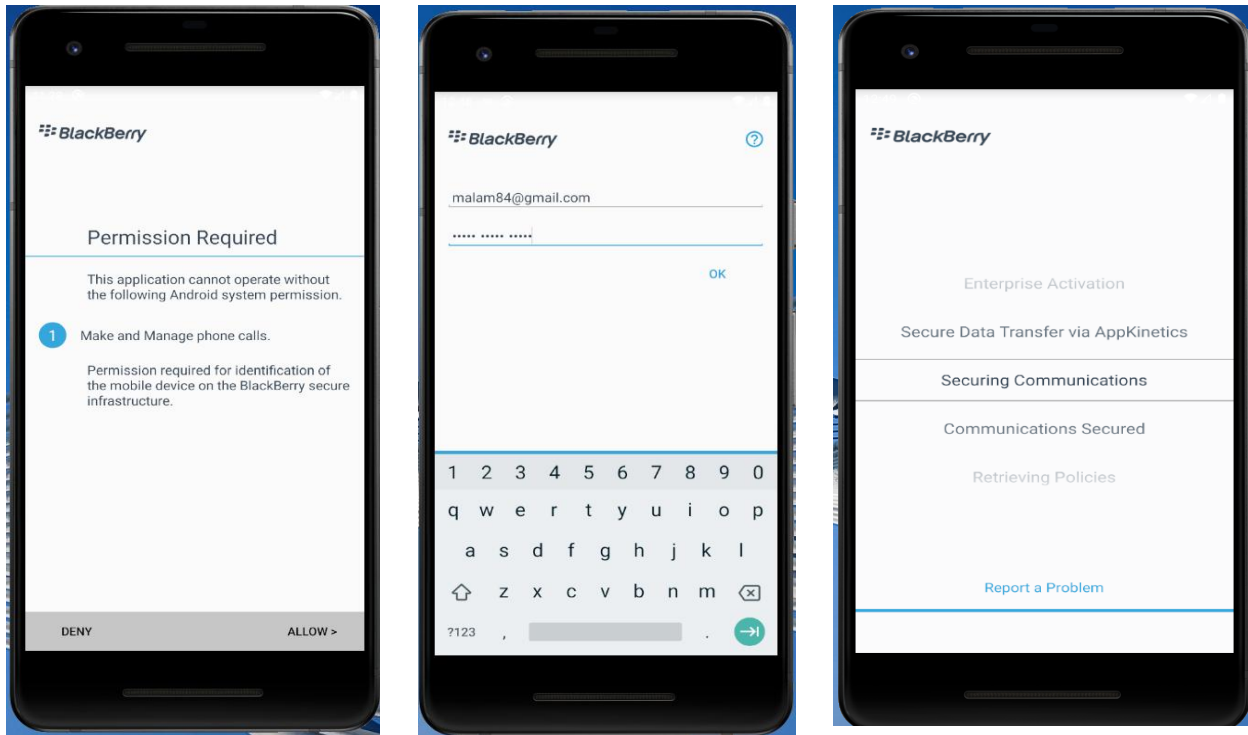


The screenshot shows a web application interface with a sidebar on the left containing various icons and a main content area. A modal dialog box titled "Set device activation password" is open in the center. The dialog has a close button (X) in the top right corner. Inside the dialog, there is a section titled "Device activation" with the following fields and options:

- Activation option ***: A dropdown menu showing "BlackBerry Dynamics access key gene...". Below this, a message states: "You have selected to autogenerate a BlackBerry Dynamics access key."
- Number of access keys to generate**: A dropdown menu showing the value "2".
- Access key expiration**: A dropdown menu showing the value "5 days".
- Email template**: A dropdown menu showing "BlackBerry Dynamics access key email".

At the bottom of the dialog, there are two buttons: "Cancel" and "Submit".

Step 12: Ruining apk and ipa in device or emulator



Step 13: Blackberry UEM provide list of plugins and functionality that user can used in their apps. Developer can used blackberry dynamic sdk api reference url for development

<https://developer.blackberry.com/devzone/files/blackberry-dynamics/cordova/>

Some important blackberry UEM features

Blackberry self services, Secure communication between apps, AtHoc Services, Restful services, Single Sign off, Analytics, Blackberry client and many more