Common CommCare Mobile Dev Workspace Build Errors

This page will be serve as a troubleshooting guide for common CommCare dev environment errors and issues

Common, Utility Solutions

Make sure you clean your workspace; this will resolve many issues
Make sure you refresh your packages after pulls and pushes
If you are having issues getting your Nokia emulator to run, clear out the *.db files in the appdb folder of the phone
Good, old fashioned restart of Eclipse, your phone, and adb

Error type: multiple dex files

Examples:

Unable to execute dex: Multiple dex files define
Conversion to Dalvik format failed: Unable to execute dex: Multiple dex files define

What this bug means

This error occurs when multiple instances of a library are present in a package or application. For example, the CommCareODK.apk application has two commcare-libraries.jar files in its path when you try to build it.

Resolving this error

You must ensure that the ODK application only has each library on its path once.

This can be due to a library being in both the project's lib and libs folder - simply delete the .jar from the libs folder
Often this issue is introduced due to the opendatakit.collect project Exporting the library. Go to that project's build path, select the "Order and Exports" tab, and make sure that none of the imported .jar files are checked; only opendatakit.collect specific folders should be exported

Error type: Activity not started

Example

Starting: Intent { act=android.intent.action.MAIN cat=[android.intent.category.LAUNCHER] cmp=org.commcare.dalvik/.activities.CommCareHomeActivity }
ActivityManager: Warning: Activity not started, its current task has been brought to the front

What this bug means

The application was already running on your device and you haven't made any changes to your code since.

Resolution

Just open the application via your phone, since the code is already up to date. You might need to save your changes, or clean, and run again if you're certain you've made changes.

Error type: Signature Mismatch

What this bug means

The application was already running on your device with a different signing key: usually, this means you installed a play store or build server version of CommCareODK, and are trying to push your local code. These have separate keys, so can't be upgraded over each other.

Resolution

Uninstall the version currently on your phone and run your code again

Error type: Eclipse hanging on "Launching Application"

Example

Failed to install commcare-odk.apk on device '015d1884b53c1613': timeout

What this bug means

This means Eclipse is having trouble communicating with your device. This can be due to a number of things, but if you're setup for USB debugging properly this usually has to do with the adb

Resolution

Close Eclipse. From the command line, run adb kill-server then adb start-server (you'll need adb-tools on your path to do this). Then restart Eclipse.
Error type: Source not found

What this bug means

This isn't actually a runtime bug, but rather a debug issue. It means Eclipse tried to step through some portion of the code that you don't have the source for. (For example, if you're using the commcare- and javarosa-libraries.jar instead of the source code)

Resolution

Either attach the source code to these jars (I have no experience doing this, though Eclipse seems to provide tools) or don't run in Debug.

Error type: stlLoadLibs or stlport_shared

What this bug means

One of the Android libraries requires that your SQL libs be in a libs folder (rather than just in your lib folder) in the commcare-odk package

Resolution

Copy the armeabi folder from lib into a new folder called libs in your commcare-odk package

Error type: Cannot import com.google.android

What this bug means

Problems with Google-related code

Resolution

Make sure that the correct Google APIs are installed:

- In Eclipse, go to the Android SDK Manager (button in top toolbar with an Android robot)
- Make sure all of the below are installed
  - Android SDK Tools (most recent version)
  - Android SDK Build Tools (most recent version)
  - SDK Platform (all versions)
  - Google APIs (all versions)
  - Android Support Library
  - Google Play Services

Also make sure that you're targeting the correct API version:

- In Eclipse's package manager, right-click on a project and go to Properties
- Under Android, make sure that Google APIs is checked, API level 15