Android Basic Integration

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This page outlines the steps required to integrate the Branch Android SDK.

At the end, you will be ready to do things like send <u>Branch Events</u> and use <u>Branch Deep Links</u>.

Please note that some Branch Android SDK features require a Branch Growth Platform package. See our <u>packaging page</u> for details.

GitHub	SDK Size	Speed	Min. OS Version
<u>Repo</u>	~187kb for all	Median 80ms to	API Level 21+
	features	250ms	

Older Versions

If you'd like to support down to Android API version 9, please pin to version 1.14.5 of the Branch Android SDK.

If you'd like to support Android API version 15, please pin to a 2.x version of the Branch Android SDK.

The minimum version we support for Branch Android SDK 3.x is Android version 16.

1. Configure Branch Dashboard

Start by configuring the Branch Dashboard for your application.

1. Configure the default link settings for your app within the Configuration page of the

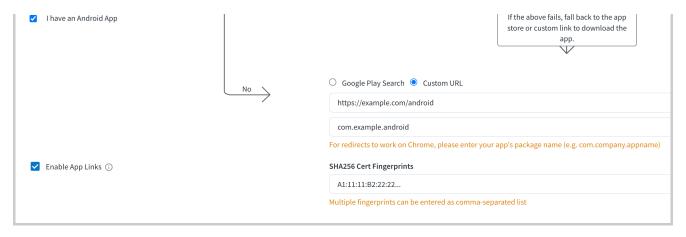
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2. Install Branch

To install Branch, import the Branch Android SDK into your app-level build.gradle (Groovy) or build.gradle.kts (Kotlin), noting the REPLACE code comments where you need to add your app's values:

```
COPY
    Groovy
    apply plugin: 'com.android.application'
    android {
         compileSdkVersion 25
         buildToolsVersion "25.0.2"
         defaultConfig {
              applicationId "com.example.android" // REPLACE with your app ID
              minSdkVersion 16
              targetSdkVersion 25
              versionCode 1
              versionName "1.0"
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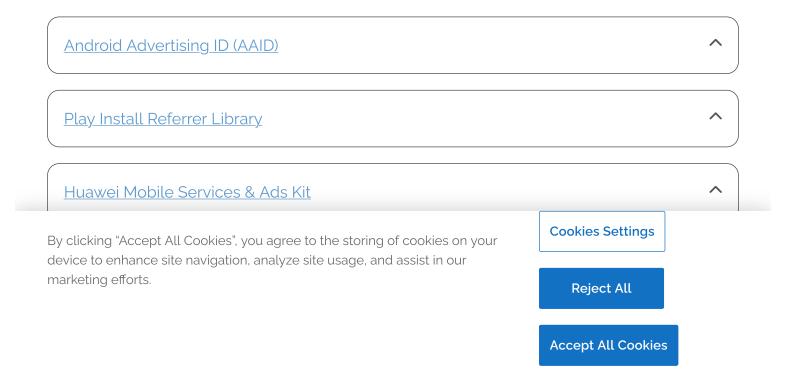
```
dependencies {
    // Required for all Android apps:
    implementation 'io.branch.sdk.android:library:5.8.0' // Check for la
    implementation 'store.galaxy.samsung.installreferrer:samsung_galaxys
    // Required if your app is in the Google Play Store (tip: avoid usin implementation 'com.google.android.gms:play-services-ads-identifier:
    // Alternatively, use the following lib for getting the AAID:
    // implementation 'com.google.android.gms:play-services-ads:17.2.0'
}
```

Make sure you are using the latest version of io.branch.sdk.android:library by checking the version here.

3. Add Dependencies

At this stage, you can add certain dependencies to your Android app that will enable additional Branch Android SDK functionality.

Note: Some of these dependencies are already bundled into the Branch Android SDK.



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4. Configure App

To configure your app to use the Branch Android SDK, you will need to update your AndroidManifest.xml file.

To populate the file with the correct values, you will need to gather your:

- App package name
- Android URI scheme
- The app.link domain associated with your app
- The -alternate.app.link domain associated with your app
- Branch Live Key
- Branch Test Key

You can find these values for your app in your Branch Dashboard <u>App Settings</u> and <u>Link Settings</u>.

Use the sample code below for your AndroidManifest.xml file, making sure to replace every value that has a REPLACE comment associated with it:

```
XML
                                                                                 COPY
  <?xml version="1.0" encoding="utf-8"?>
  <manifest</pre>
      xmlns:android="http://schemas.android.com/apk/res/android"
      package="com.example.android">
      <uses-permission android:name="android.permission.INTERNET" />
      <uses-permission android:name="com.google.android.gms.permission.AD ID"/>
      <!-- REPLACE `android:name` with your app's package name -->
      <application</pre>
                android:allowBackup="true"
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```

```
android:launchMode="singleTask"
    android:label="@string/app name"
    android:theme="@style/AppTheme.NoActionBar"
    android:exported="true">
<intent-filter>
    <action android:name="android.intent.action.MAIN" />
    <category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
<!-- Branch URI Scheme -->
<intent-filter>
    <!-- If utilizing $deeplink path please explicitly declare yo
    <!-- REPLACE `android:scheme` with your Android URI scheme --
    <data android:scheme="yourapp" android:host="open" />
    <action android:name="android.intent.action.VIEW" />
    <category android:name="android.intent.category.DEFAULT" />
    <category android:name="android.intent.category.BROWSABLE" />
</intent-filter>
<!-- Branch App Links - Live App -->
<intent-filter android:autoVerify="true">
    <action android:name="android.intent.action.VIEW" />
    <category android:name="android.intent.category.DEFAULT" />
   <category android:name="android.intent.category.BROWSABLE" />
    <!-- REPLACE `android:host` with your `app.link` domain -->
   <data android:scheme="https" android:host="example.app.link"</pre>
    <!-- REPLACE `android:host` with your `-alternate` domain (re
    <data android:scheme="https" android:host="example-alternate.</pre>
</intent-filter>
<!-- Branch App Links - Test App -->
```

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Single Task Launch Mode & Activities

The Single Task mode instantiates the Main/Splash Activity only if it does not exist in the Activity Stack.

If the Activity exists in the background, every subsequent intent to the Activity just brings it to the foreground. You can read more about Single Task mode <a href="https://example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-example.com/here-ex

5. Load Branch

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```
COPY
package com.example.android;
import android.app.Application;
import io.branch.referral.Branch;
public class CustomApplicationClass extends Application {
    @Override
    public void onCreate() {
        super.onCreate();
        // Branch logging for debugging
        Branch.enableLogging();
        // Branch object initialization
        Branch.getAutoInstance(this);
}
```

To learn more about the getAutoInstance() and getInstance() methods, visit our Android SDK Full Reference guide.

6. Initialize Branch

To initialize Branch, add the following code to your Launcher Activity:



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```
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.util.Log;
import android.view.View;
import android.view.Menu;
import android.view.MenuItem;
import org.json.JSONObject;
import io.branch.indexing.BranchUniversalObject;
import io.branch.referral.Branch;
import io.branch.referral.BranchError;
import io.branch.referral.util.LinkProperties;
public class LauncherActivity extends AppCompatActivity {
   @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_launcher);
    }
   @Override
    protected void onStart() {
        super.onStart();
        Branch.sessionBuilder(this).withCallback(new Branch.BranchUniver
            @Override
            public void onInitFinished(BranchUniversalObject branchUnive
                if (error != null) {
                    Log.e("BranchSDK_Tester", "branch init failed. Cause
                } else {
                    Log.i("BranchSDK_Tester", "branch init complete!");
```

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```
}).withData(this.getIntent().getData()).init();
    }
   @Override
    public void onNewIntent(Intent intent) {
        super.onNewIntent(intent);
        this.setIntent(intent);
        if (intent != null && intent.hasExtra("branch_force_new_session"
            Branch.sessionBuilder(this).withCallback(new BranchReferralI
                @Override
                public void onInitFinished(JSONObject referringParams, B
                    if (error != null) {
                        Log.e("BranchSDK_Tester", error.getMessage());
                    } else if (referringParams != null) {
                        Log.i("BranchSDK_Tester", referringParams.toStri
                    }
            }).reInit();
   }
}
```

LauncherActivity vs Other Activities

Branch recommends initializing the session inside the LauncherActivity. This is the Activity that contains the intent filter android.intent.category.LAUNCHER in your AndroidManifest.xml file.

However if your ann requires it session initialization can hannen in a different Activity

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Always Initialize Branch in onStart()

Initializing Branch in other Android lifecycle methods, like onCreate() or onResume(), will lead to unintended behavior. The onStart() method is what makes the Activity visible to the user, as the app prepares for the Activity to enter the foreground and become interactive.

To learn more, visit:

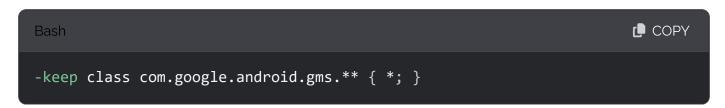
- Branch FAQ
- Android Developer Docs

If your app requires a different session initialization setup, please see the <u>Delay Branch</u> <u>Initialization</u> section of our Android Advanced Features guide.

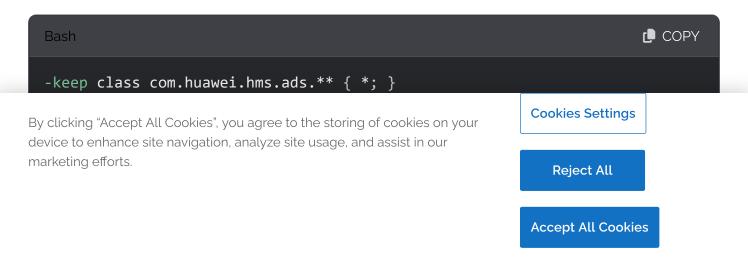
7. Configure ProGuard

To collect the Google Advertising ID, you must ensure that ProGuard doesn't remove the necessary Google Ads class.

The surest way to do this is add it to your ProGuard rules. If your Application is enabled with ProGuard, add the following instruction to your proguard.cfg or proguard-rules.pro file:



If you are adding support for Huawei devices without Google Mobile Services, please make sure to add the following to your ProGuard rules:



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Validation methods:

- 1. The Integration Status tab in the Branch Dashboard.
- 2. The Branch Android SDK's Integration Validation method.
- 3. The Branch Android SDK's Enable Logging method.
- 4. Branch's <u>Link Debugger tool</u>, which helps you confirm Branch Deep Link configuration, data, and routing.

For additional testing scenarios and tools, visit the <u>Android Testing page</u>.

If you're running into issues with your Branch Android SDK integration, start by looking at the <u>Android Troubleshooting page</u>.

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