

# HarmonyOS 组件库使用实践

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5. eventbus组件实战
6. HarmonyOS组件库如何下载 & 参与贡献

# 引导视频



小艺小艺 我想看汪汪队

# HarmonyOS发布16000+系统级接口

HarmonyOS Developer    设计    开发    分发    文档    支持

ark.annotation

- ▶ [Overview](#)
- ▶ [Annotation](#)
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- ▶ [ohos.aafwk.abilityjet.activedata](#)
- ▶ [ohos.aafwk.abilityjet.databindinding](#)
- ▶ [ohos.aafwk.content](#)
- ▶ [ohos.accessibility](#)
- ▶ [ohos.accessibility.ability](#)
- ▶ [ohos.account](#)
- ▶ [ohos.account.app](#)
- ▶ [ohos.ace.ability](#)
- ▶ [ohos.agp.animation](#)
- ▶ [ohos.agp.animation.stylesolutions](#)
- ▶ [ohos.agp.animation.timelinecurves](#)
- ▶ [ohos.agp.colors](#)
- ▶ [ohos.agp.components](#)
- ▶ [ohos.agp.components.element](#)

Since: 1

## Annotation Types Summary

Annotation Type	Description
<a href="#">Permanent</a>	Annotates persistent memory objects.
<a href="#">Unowned</a>	Annotates an object without ownership to eliminate circular reference.
<a href="#">UnownedLocal</a>	Annotates a method or a single local variable.
<a href="#">UnownedOuter</a>	Annotates a class to eliminate circular reference.
<a href="#">Weak</a>	Annotates weak reference objects.

下一篇 [Permanent](#)

# HarmonyOS应用开发难点



Java生态：百万级开源库

Android生态：十万级开源库

# HarmonyOS开源组件库生态

分类	子类	开源库个数
UI	基础控件	800
	自定义view	
动画图形类	动画	73
框架类	框架类	139
安全类	权限请求	18
	加解密	
工具类	注入注解	172
	公共库	
	传感器	
	事件总线	
	插件化	
	手势类	
	二维码	
	日志	
	其他	

多设备形态可用

多端部署

性能优化

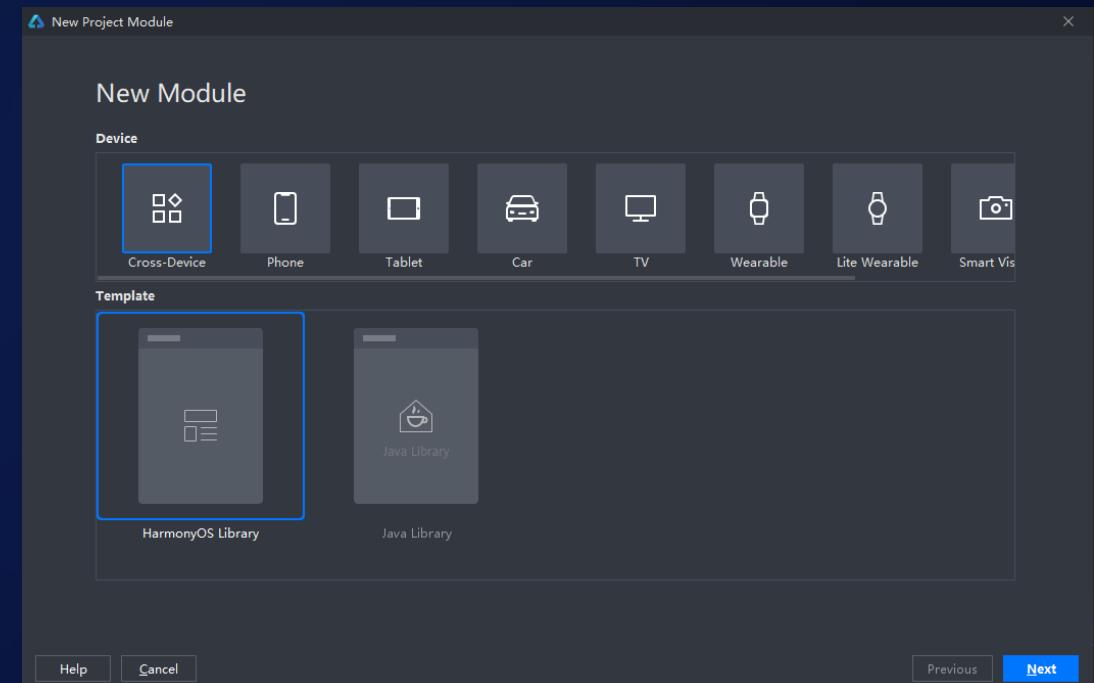
分类	子类	开源库个数
网络类	网络请求	55
	json	
	上传下载	
	异步通信	
	后台处理	
文件数据类	数据库	15
	序列化	
	映射	
	音频	23
	视频	
图片缓存	图片选择	9
	图片加载	
	图片压缩	
	图片处理	
基础功能	基础功能	27

# HarmonyOS开源组件库格式介绍

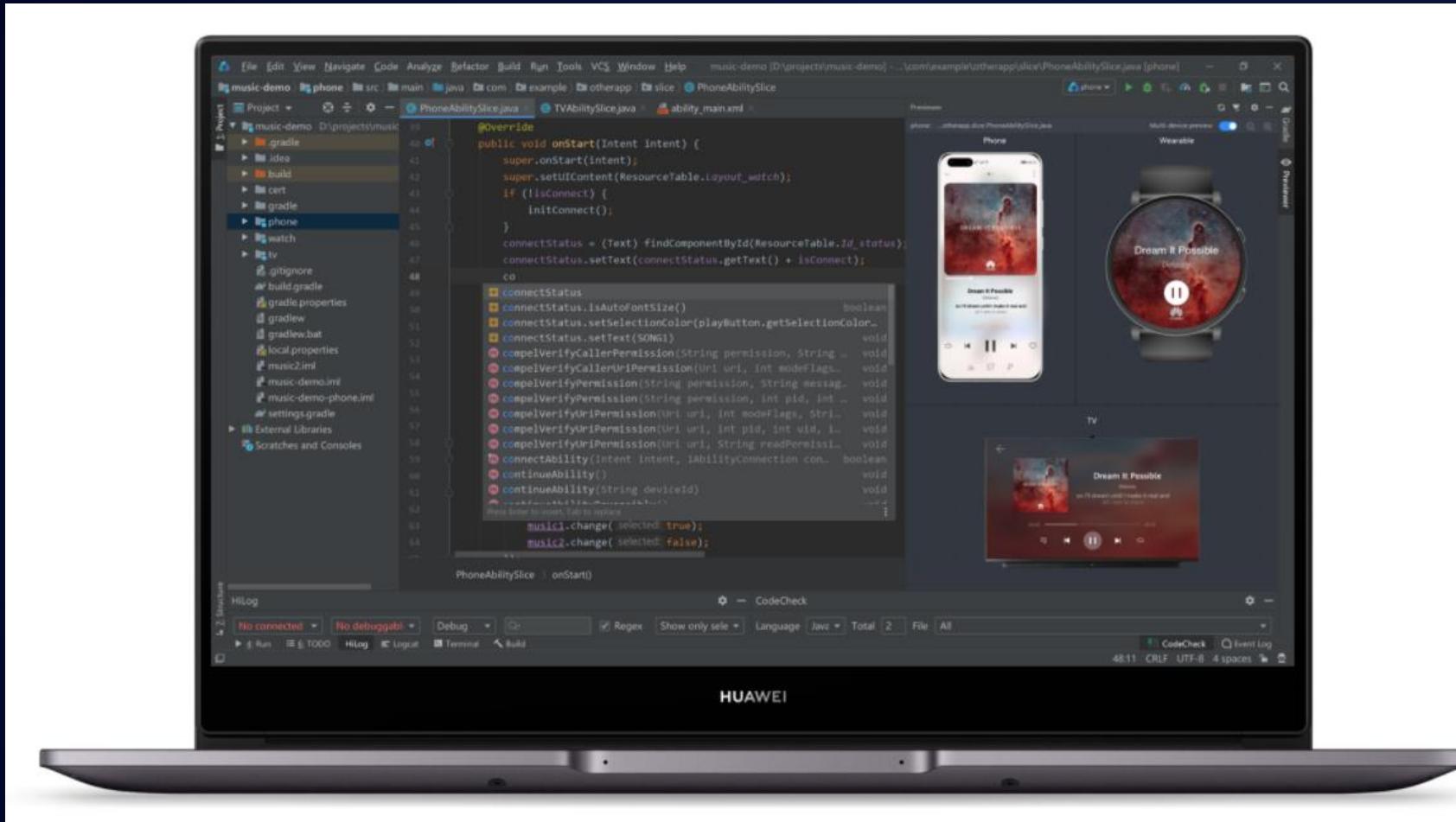
## 组件库目录结构



## Deveco IDE中的组件库开发模板



# HarmonyOS应用开发



<https://developer.harmonyos.com/cn/develop/devco-studio>

# HarmonyOS组件库使用

## 1. Har包引用(build.gradle)

```
dependencies {  
    implementation fileTree(dir: 'libs', include: ['*.jar', '*.har'])  
}
```

## 2. 源文件引用(build.gradle)

```
dependencies {  
    implementation project(":library")  
}
```

## 3. Maven仓引用(build.gradle)

方式一:

```
dependencies {  
    implementation 'com.huawei.har:mylibrary:1.0.1'  
}
```

方式二:

```
allprojects{  
    repositories {  
        maven {  
            url 'file:///D:/01.localMaven/' //本地或远程Maven仓  
        }  
    }  
}
```

# Lottie开源组件库的引用 – har包引用

The screenshot shows the Android Studio interface with the project 'lottie-ohos-master' open. The left sidebar displays the project structure, including a red box highlighting the 'libs' folder which contains the 'lottie-debug.har' file. The main editor window shows the 'build.gradle (:entry)' file with code for an OHOS project. A second red box highlights the 'implementation fileTree(dir: 'libs', include: ['\*.jar', '\*.har'])' line under the 'dependencies' block.

```
apply plugin: 'com.huawei.ohos.hap'  
ohos {  
    compileSdkVersion 5  
    defaultConfig { DefaultConfigOptions it ->  
        compatibleSdkVersion 5  
    }  
    signingConfigs {...}  
}  
dependencies {  
    implementation fileTree(dir: 'libs', include: ['*.jar', '*.har'])  
}
```

# 在代码中导入Lottie相关功能类后，直接调用对应的功能接口

The screenshot shows an Android Studio code editor with the following details:

- Project Structure:** The project is named "lottie-ohos-master". It includes modules for "entry" and "lottie", and a "libs" folder containing "lottie-debug.har". The "entry" module has a "src/main/java/com/airbnb/lottie/demo/slice" package containing classes like AnimationSlice, AssetLoadSlice, JsonItemProvider, MainAbilitySlice, and UrlLoadSlice.
- Code Editor:** The code being edited is in the "AnimationSlice.java" file under the "entry" module. The current line of code is: `L.setTraceEnabled(true);` A tooltip for this method is displayed, listing its parameters and return type.
- Method Tooltip:** The tooltip for the `setTraceEnabled` method shows the following information:

```
void setTraceEnabled(boolean enabled)
```
- Run Tab:** The "Run" tab shows the build process: "lottie-ohos-master:entry [packageReleaseHap]" completed successfully in 3 s 957 ms.
- Event Log:** The "Event Log" tab shows several recent log entries, including build logs and Gradle tasks.

File Edit View Navigate Code Analyze Refactor Build Run HiCode Tools VCS Window Help lottie-ohos-master - build.gradle (:entry)

Project lottie-ohos-master D:\14-Android\DevEco\lottie-ohos-master

entry AnimationSlice.java MainAbility.java lottie\build.gradle config.json .gitignore build.gradle (:entry) Remote Device

P40 00:43:59

My Review Tasks

Gradle

Remote Device

Previewer

Project Structure

lottie-ohos-master

.gradle

idea

build

entry

build

libs

lottie-debug.har

src

main

java

com.airbnb.lottie.demo

slice

AnimationSlice

AssetLoadSlice

JsonItemProvider

MainAbilitySlice

UrlLoadSlice

Lottie

LottieValueAnimatorUnitTests

MainAbility

resources

config.json

.gitignore

build.gradle

gradle

lottie

build

src

.gitignore

dependencies{}

Run: entry

Event Log

Favorites

OhosBuildVariants

leetcode

Word Book

4: Run 5: Problems 6: Debug 7: CodeCheck + Gradle View 8: CheckStyle 9: CodeReview Terminal Build Statistic HiLog TODO

32:2 LF UTF-8 4 spaces Event Log

```
apply plugin: 'com.huawei.ohos.hap'

ohos {
    compileSdkVersion 5
    defaultConfig { DefaultConfigOptions it ->
        compatibleSdkVersion 5
    }

    signingConfigs {...}

    dependencies {
        implementation fileTree(dir: 'libs', include: ['*.jar', '*.har'])
    }
}
```

# glide开源组件库的引用 - 源文件引用

The screenshot shows the Android Studio interface with two open build.gradle files:

- glideDemo/build.gradle**: This file contains dependencies for the main application. It includes:
  - Implementation of fileTree for lib files.
  - Implementation of org.jetbrains.annotations:annotations:20.1.0.
  - TestCompile of junit:junit:4.12.
  - A red box highlights the line `implementation project(":library")`, which depends on the `library` module.
- library/build.gradle**: This file contains dependencies for the library module. It includes:
  - Implementation of gif\_decoder.
  - Implementation of disklrucache.
  - Implementation of org.jetbrains.annotations:annotations:20.1.0.
  - TestCompile of junit:junit:4.12.

A red arrow points from the `implementation project(':library')` line in the `glideDemo/build.gradle` file to the `library` module in the Project structure, indicating that the library module is being referenced by the main application's build script.

```
apply plugin: 'com.huawei.ohos.hap'
ohos {...}

dependencies {
    implementation fileTree(dir: 'libs', include: ['*.jar', '*.har'])
    implementation 'org.jetbrains:annotations:20.1.0'
    testCompile 'junit:junit:4.12'
    // 依赖glide核心库
    implementation project(":library")
}

dependencies {
    //依赖gif解码库
    implementation project(':gif_decoder')
    //依赖缓存核心算法库
    implementation project(':disklrucache')
    implementation 'org.jetbrains:annotations:20.1.0'
    testCompile 'junit:junit:4.12'
}
```

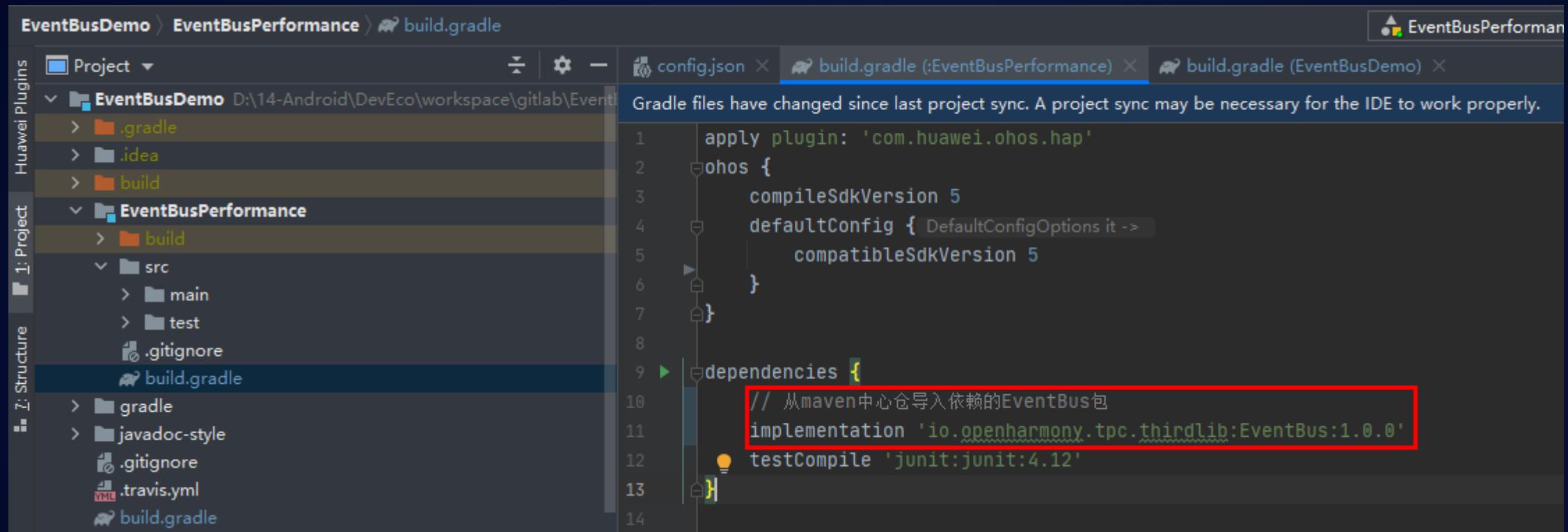
# 在代码中导入glide类后，直接调用对应的功能接口

The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The project is named "glideDemo". It contains a module named "entry" which has a "src/main/java/com.example.glide/slice" package containing a class named "GlideXmlAbilitySlice.java". Other packages like "diskrucache" and "library" are also present.
- Code Editor:** The file "GlideXmlAbilitySlice.java" is open. The cursor is at line 35, where the code is calling `Glide.with(classContext).`. A code completion dropdown is displayed, listing various methods available on the `Glide` object.
- Code Completion Suggestion:** The suggestions include:
  - `m addDefaultRequestListener(RequestListener<Obj...> listener)`
  - `m applyDefaultRequestOptions(RequestOptions req...)`
  - `m as(Class<ResourceType> resource...)`
  - `m asBitmap()`
  - `m asDrawable()`
  - `m asDrawableHarmony()`
  - `m asFile()`
  - `m clear(Target<?> target)`
  - `m download(Object model)`
  - `m downloadOnly()`
  - `m isPaused()`
  - `m load(Uri uri)`
  - `m load(File file)`
  - `m load(byte[] model)`
  - `m load(Object model)`
  - `m load(PixelMap map)`
  - `m load(String string)`
  - `m load(Element drawable)`
  - `m load(TintableResourceProvider resourceProvider)`
- Event Log:** Shows the following log entries:
  - 10:59 Gradle sync started
  - 10:59 The IDE modules below were removed by the Gradle project reload:  
glide
  - You can [open dialog](#) to select the ones you need to restore.



# eventbus开源组件库的引用 – maven引用



```
EventBusDemo > EventBusPerformance > build.gradle
Huawei Plugins Project EventBusPerformance build.gradle (EventBusPerformance) build.gradle (EventBusDemo)
EventBusDemo D:\14-Android\DevEco\workspace\gitlab\EventBusDemo .gradle .idea build EventBusPerformance build src main test .gitignore .build.gradle gradle javadoc-style .gitignore .travis.yml build.gradle
Gradle files have changed since last project sync. A project sync may be necessary for the IDE to work properly.
apply plugin: 'com.huawei.ohos.hap'
ohos {
    compileSdkVersion 5
    defaultConfig { DefaultConfigOptions it ->
        compatibleSdkVersion 5
    }
}
dependencies {
    // 从maven中心仓导入依赖的EventBus包
    implementation 'io.openharmony.tpc.thirdlib:EventBus:1.0.0'
    testCompile 'junit:junit:4.12'
}
```

在代码中导入eventbus相关功能类后，直接调用对应的功能接口

File Edit View Navigate Code Analyze Refactor Build Run HiCode Tools VCS Window Help EventBusDemo - build.gradle (EventBusPerformance)

EventBusPerformance HUAWEI ANA-AN00 Remote Device

P40 00:24:40

Project EventBusDemo D:\14-Android\DevEco\workspace\gitlab\Bus\EventBusDemo EventBusPerformance

build.gradle (EventBusPerformance) TestSetupSlice.java Test.java TestApplication.java TestEvent.java TestRunnerSlice.j

```
apply plugin: 'com.huawei.ohos.hap'
ohos {
    compileSdkVersion 5
    defaultConfig { DefaultConfigOptions it ->
        compatibleSdkVersion 5
    }
}
dependencies {
    // 从maven中心仓导入依赖的EventBus包
    implementation 'io.openharmony.tpc.thirdlib:EventBus:1.0.0'
    testCompile 'junit:junit:4.12'
}
```

src main java org.greenrobot.eventbusperf slice testsubject Test TestApplication TestEvent TestFinishedEvent TestParams TestRunner TestSetupAbility resources config.json test .gitignore build.gradle gradle javadoc-style .gitignore .travis.yml build.gradle build.sh

dependencies()

Build: Sync Build Output Build Analyzer

EventBusDemo: finished at 2021/4/16 12:12:11 ± 398 ms

> Configure project :EventBusPerformance  
Configuration 'testCompile' is obsolete and has been replaced with 'testImplementation'. It will be removed after 2021-06-01. To suppress this warning, use '@SuppressLint("ObsoleteMethodUsage")' on the 'testCompile' configuration.  
BUILD SUCCESSFUL in 709ms

12:04 The IDE modules below were removed by the Gradle project reload:  
EventBusTestJava  
  
You can [open dialog](#) to select the ones you need to restore.

12:08 Gradle sync started  
12:08 Gradle sync failed: Sync issues found (2 s 318 ms)  
12:12 Gradle sync started  
12:12 Gradle sync finished in 1 s 400 ms

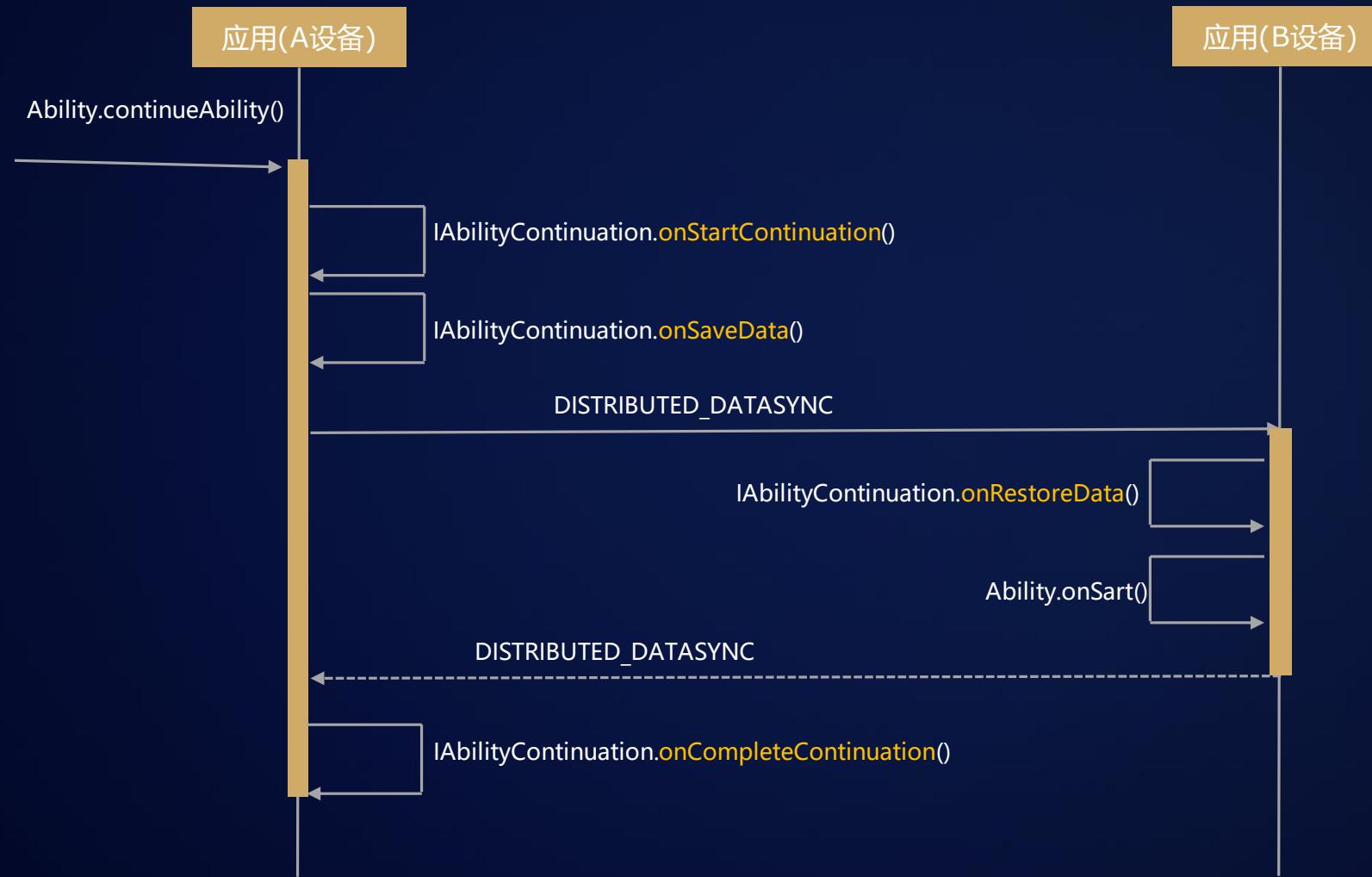
Run Problems Git Gradle View CheckStyle Terminal CodeCheck CodeReview HiLog Build Statistic TODO

Gradle sync finished in 1 s 400 ms (13 minutes ago) 10:20 CRLF UTF-8 4 spaces master Event Log

Gradle Plugins Project EventBusDemo EventBusPerformance HUAWEI ANA-AN00 Remote Device

Gradle My Review Tasks Previewer Remote Device

# HarmonyOS多设备的流转



**Ability:** 是 HarmonyOS 应用程序可以提供的功能的抽象

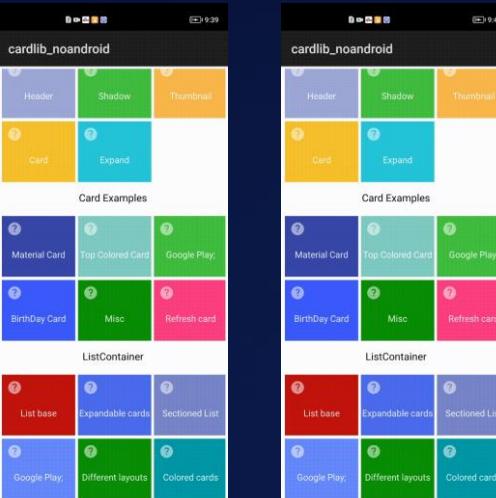
**IAbilityContinuation:** 启用在分布式系统中实施迁移的 Ability

# 其它开源组件库Demo效果展示

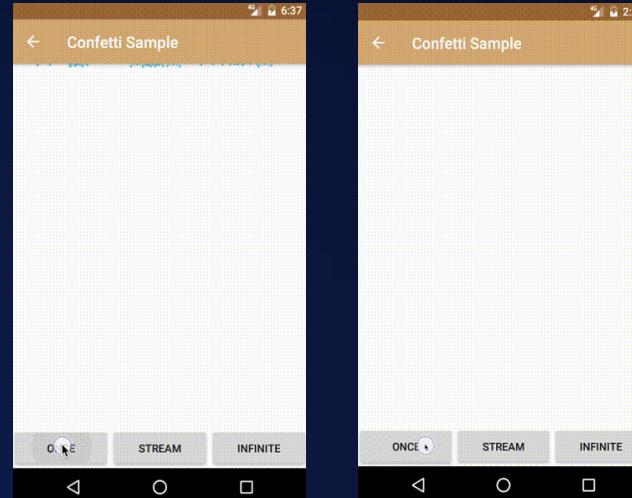
**BezierMaker**  
简单的贝赛尔曲线绘制方法



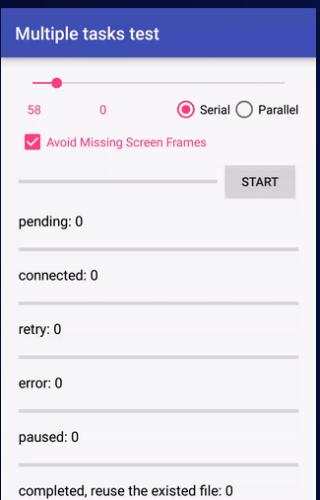
**cardslib 卡片式布局库**



**confetti 模仿雪花飘落的动画**



**FileDownloader 文件下载库**



**FlycoTabLayout  
自定义TabLayout组件**



**ohos-Universal-Image-  
Loader  
常用图片加载工具之一**



## 开源组件库获取路径

Gitee 开源链接:

<https://gitee.com/openharmony-tpc>



开发者联盟开源组件库详情



# Har包管理平台供开发者统一获取HarmonyOS开源组件二进制

HarmonyOS Package Manager

搜索组件 搜索

**热门** 最近3个月下载次数最多的TOP10组件

显示更多...

**分类** 涵盖主要的应用组件

<b>多媒体</b> 视频、音频播放、剪辑	<b>图形</b> 图片处理、滤镜、美颜...	<b>UI</b> UI框架、界面组件、样式、布局
<b>数据绑定</b> ORM框架	<b>通信</b> 移动通信、短信、聊天	<b>云服务</b> 云存储、计算、分发、AI



<https://hpm.harmonyos.com/hapm/>