Driver App编译流程现状

1、本地编译流程

DriverApp与国内大多APP不同，它支持海外多个国家使用，后续还会增加更多国家，目前支持的国家如下：

```
#
COUNTRY_VERSION_ID=1

#
COUNTRY_VERSION_MY=2

#
COUNTRY_VERSION_TH=3

#
COUNTRY_VERSION_PH=4

#
COUNTRY_VERSION_VN=5

#
COUNTRY_VERSION_SG=6

#
COUNTRY_VERSION_TW=7
```

对于不同国家APK生成，目前使用productFlavors方式多渠道打包，根据配置的flavorName在编译时依次生成对应的APK包
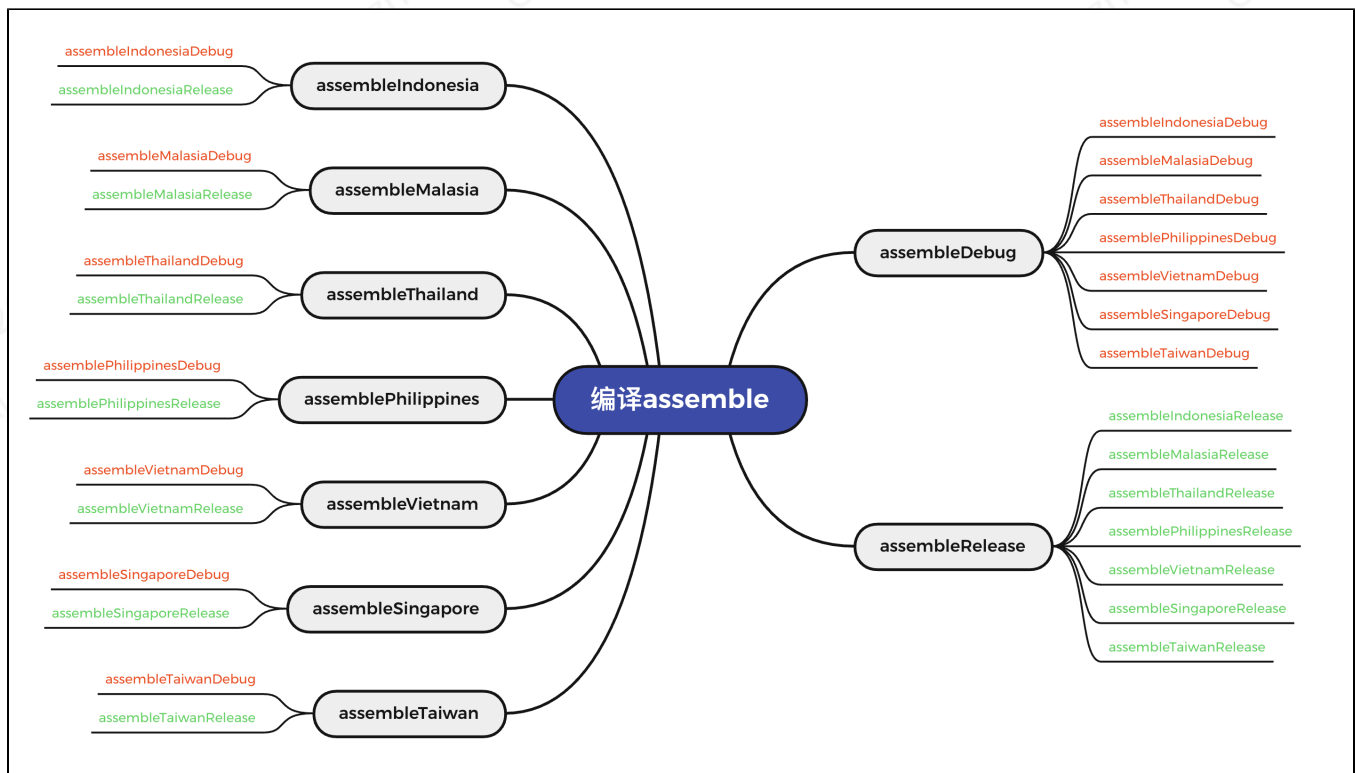
而在每个flavor定义中，添加了countryVersion配置和编译小语种资源目录，如下所示：

```groovy
productFlavors {
    indonesia {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_ID}")
        resConfigs 'in'
    }
    malasia {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_MY}")
        resConfigs 'ms'
    }
    thailand {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_TH}")
        resConfigs 'th'
    }
    philippines {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_PH}")
        resConfigs 'tl'
    }
    vietnam {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_VN}")
        resConfigs 'vi'
    }
    singapore {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_SG}")
        resConfigs 'en'
    }
    taiwan {
        dimension 'default'
        buildConfigField('int', 'countryVersion', "${COUNTRY_VERSION_TW}")
        resConfigs 'zh-rTW'
    }
}
```

例如，indonesia国家，在编译时countryVersion为COUNTRY_VERSION_ID，编译生成的APK中包含in语言和en语言(英文默认支持)

因此，每个渠道国家打包APK流程是一致的，在本地开发打包APK，只要通过渠道对应命令即可生成对应国家APK，如果需要生成全部渠道

APK包，也有对应的编译命令，目前多渠道编译打包命令总结如下：

另外，在gradle.properties中定义了app运行的各种环境，通常开发在本地默认编译Test环境，国家为印尼；如果需要本地打包其他环境的APK，在此文件中修改对应值即可

```
#0  1 uat 2 staging 3
#  env  App cache key
ENV_TEST=0
ENV_UAT=1
ENV_STAGE=2
ENV_LIVE=3

ENV_TEST_NAME="test"
ENV_UAT_NAME="uat"
ENV_STAGE_NAME="staging"
ENV_LIVE_NAMNE="live"
```

2、流水线编译流程

DriverApp目前的版本发布编译执行是在Jenkins中完成，通过在Athena-Pack平台设置打包参数，触发版本构建通知Jenkins，执行预先配置的脚本

通过一系列步骤完成APK的打包生成，Jenkins流水线具体编译流程主要包含：

1. 输入参数
2. Clone 代码
3. 构建 Apk
4. APK 存档
5. 分发

相比本地编译打包流程，流水线主要多了Clone代码、APK存档、分发三个步骤

具体的执行脚本在 pipeline_android_pack.sh

构建Apk环节与本地编译打包基本一致

Jenkins Pipeline Android打包具体步骤参考

[SCA] Jenkins Pipeline Android打包

3、编译速度现状

3.1、本地编译速度摸底

以本人MacBook Pro为例，每次编译打包所有渠道APK，执行多次后结果如下：

全量编译：

(1) 9m 45s

profile-2021-08-16-14-05-21.html

Summary	Configuration	Depend

Description	Duration
Total Build Time	9m45.13s
Startup	0.040s
Settings and buildSrc	0.907s
Loading Projects	0.016s
Configuring Projects	0.643s
Artifact Transforms	11.088s
Task Execution	48m22.17s

Task	Duration	Result
:app–driver	37m26.73s	(total)
:app–driver:javaPreCompileThailandRelease	4m49.07s	
:app–driver:mergeThailandReleaseJavaResource	4m34.36s	
:app–driver:mergeSingaporeReleaseJavaResource	3m22.78s	
:app–driver:mergeTaiwanReleaseJavaResource	2m39.14s	
:app–driver:mergePhilippinesReleaseJavaResource	2m9.66s	
:app–driver:mergeVietnamReleaseResources	1m42.47s	
:app–driver:mergeSingaporeReleaseNativeLibs	1m25.27s	
:app–driver:javaPreCompileSingaporeRelease	1m22.65s	
:app–driver:mergeIndonesiaReleaseNativeLibs	1m16.80s	
:app–driver:mergeMalasiaReleaseNativeLibs	1m5.78s	
:app–driver:javaPreCompilePhilippinesRelease	1m4.80s	
:app–driver:mergePhilippinesReleaseNativeLibs	1m1.36s	
:app–driver:mergeTaiwanReleaseNativeLibs	43.205s	
:app–driver:mergeTaiwanReleaseResources	35.027s	
:app–driver:mergeMalasiaReleaseJavaResource	33.413s	
:app–driver:mergeThailandReleaseResources	33.016s	
:app–driver:minifyIndonesiaReleaseWithR8	29.048s	
:app–driver:minifyPhilippinesReleaseWithR8	27.991s	

(2)

增量编译：

3.2、流水线编译速度摸底

1.查看Athena-Pack打包平台，筛选编译配置为所有渠道，分支为release相关的构建结果，数据如下：

	耗时	构建环境
1	17m28s	uat version/release-4.9.1
2	18m38s	uat version/release-4.9.1
3	19m23s	staging version/release-4.9.6
4	15m49s	staging version/release-4.9.1
5	17m7s	live version/release-5.0.0
6	19m44s	live version/release-4.9.6
7	17m39s	live version/release-4.9.3
8	17m31s	live version/release-4.9.2
平均	**17m55s**	

目前流水线构建全渠道包耗时大概在17m55s左右

采集数据截图如下：

(1) 17min 28s

spx	all	10000	release	uat	version/release-4.9.1	...		2021-06-29 16:02:49	2021-06-29 16:20:17	Success

(2) 18min 38s

spx	all	10000	release	uat	version/release-4.9.1	...		2021-06-29 15:33:38	2021-06-29 15:52:16	Success

(3) 19min 23s

spx	all	4.9.6	release	staging	version/release-4.9.6	0728version	2021-07-26 12:10:04	2021-07-26 12:29:27	Success

(4) 15min 49s

spx	all	4.9.1	release	staging	version/release-4.9.1	...		2021-07-01 14:12:28	2021-07-01 14:28:17	Success

(5) 17min 7s

spx	all	5.0.0	release	live	version/release-5.0.0	...		2021-08-11 13:28:30	2021-08-11 13:45:37	Success

(6) 19min 44s

spx	all	4.9.6	release	live	version/release-4.9.6	...		2021-07-28 15:05:45	2021-07-28 15:25:29	Success

(7) 17min 39s

spx	all	4.9.3	release	live	version/release-4.9.3	...		2021-07-21 18:34:07	2021-07-21 18:51:46	Success

(8) 17min 31s

spx	all	4.9.2	release	live	version/release-4.9.2	...		2021-07-14 11:56:45	2021-07-14 12:14:16	Success