

#8: eKosystem: Gradle.

JUNO



fitbit

SPACE





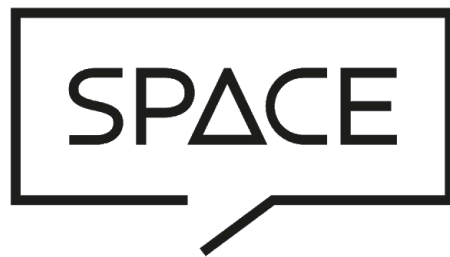
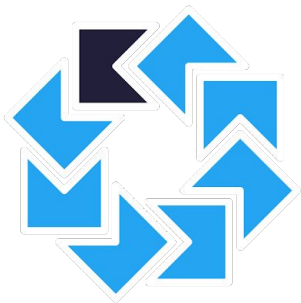
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JUNO



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Менторы





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Gradle

Сборщик, написанный на Groovy

Groovy

Groovy — \$hit для DSL

Groovy

```
git show --format=medium $(git rev-list  
HEAD | tail -n 1)
```

```
commit 9ddae5a
```

```
Author: Hans Dockter
```

```
Date:   Mon Mar 10 06:50:30 2008 +0000
```

```
create trunk directory
```

```
git show --format=medium $(git rev-list  
HEAD | tail -n 1)
```

```
commit 3e4dce3
```

```
Author: Andrey Breslav
```

```
Date:   Mon Nov 8 14:03:36 2010 +0300
```

```
test
```


Groovy

```
apply plugin: 'application'  
mainClass = 'kotlin.Course'  
distTar.enabled = false
```

```
task wrapper(type: Wrapper)  
{  
    version = '5.4'  
}
```

Groovy

```
apply plugin: 'application'  
mainClassName = 'kotlin.Course'  
distTar.enabled = false
```

```
task wrapper(type: Wrapper)  
{  
    gradleVersion = '5.4'  
}
```

Корень зла

```
methodMissing(String name, def args)
```

Groovy

- + Сладенький
- Слишком много магии
- Слабая поддержка в IDE
- Ошибки на рантайме

Kotlin

fun

Kotlin Meets Gradle

```
apply<ApplicationPlugin>()
```

```
configure<ApplicationPluginConvention> {  
    mainClassName = "kotlin.Course"  
}
```

```
repositories { jcenter() }
```

```
dependencies { "testCompile"("junit:junit:4.12") }
```

Kotlin Meets Gradle

```
settings.gradle (Groovy)  
.init.gradle (Groovy)
```

3 года спустя

```
2
3  plugins {
4      kotlin("jvm").version("1.3.21")
5      application
6  }
7
8  repositories { jcenter() }
9
10 application {
11     mainClass
12     mainClassName = { from(jarManifestName) / jarManifestName }
13 }
14 dependencies {
15     implementation("org.jetbrains.kotlin:kotlin-stdlib-jdk8")
16     implementation("software.amazon.awssdk:dynamodb")
17 }
18
```


3 года спустя

```
10 application {  
11     mainClassName = "kotlin.Course"  
12 }  
13  
14 dependencies {  
15     implementation("org.jetbrains.kotlin:kotlin-stdlib-jdk8")  
16     implementation("software.amazon.awssdk:dynamodb")  
17     testIm  
18     λ testImplementation(dependencyNotation: Any) for DependencyHandler in org.gradle.kotlin.  
19     λ testImplementation(dependency: T, dependencyConfiguration: T.() -> Unit) for Dependency  
    λ testImplementation(dependencyNotation: String, dependencyConfiguration: ExternalModuleD  
    λ testImplementation(group: String, name: String, version: String? = ..., configuration:  
    λ testImplementation(group: String, name: String, version: String? = ..., configuration:  
    λ testImplementationDependenciesMetadata(dependencyNotation: Any) for DependencyHandler i  
    λ testImplementationDependenciesMetadata(dependency: T, dependencyConfiguration: T.() ->  
    λ testImplementationDependenciesMetadata(dependencyNotation: String, dependencyConfigurat
```

3 года спустя

```
settings.gradle.kts (Kotlin)  
.init.gradle.kts (Kotlin)
```

Kotlin DSL

```
plugins {  
    application  
    kotlin("jvm") version ("1.3.21")  
    id("org.jenkins-ci.jpi") version ("0.22.0")  
}  
  
apply<JUnitPlatformPlugin>()
```

Kotlin DSL

```
application {  
    mainClassName = "kotlin.Course"  
}
```

Kotlin DSL

```
configure<JUnitPlatformExtension> {  
    filters {  
        tags({  
            include("base")  
        })  
    }  
}
```

Kotlin DSL

```
configure(ListOf(project(":a"), project(":b"))) {  
    dependencies { ... }  
    configure<JacocoPluginExtension> { ... }  
    tasks {  
        withType<Test> { ... }  
    }  
}
```

Kotlin DSL

```
task<Test>("integrationTest") {  
    useJUnitPlatform()  
    testLogging {  
        showStandardStreams = true  
    }  
}
```

Kotlin DSL

```
tasks {  
    "clean"(Delete::class) {  
        delete(buildDir)  
    }  
    wrapper {  
        gradleVersion = "5.4"  
    }  
    val intTest by configuring(Test::class) {  
        useJUnitPlatform()  
    }  
}
```


Kotlin DSL

```
val kotlinVersion by project

dependencies {
    compile(kotlin("stdlib-jre8", "${kotlinVersion}"))
}
```

Kotlin DSL

```
apply {  
    from("another.gradle.kts")  
}
```

Android

```
apply plugin:  
'com.android.application'
```

```
apply plugin:  
'kotlin-android'
```

```
plugins {  
    id("com.android.application")  
        version "3.0.1"  
  
    kotlin("android") version "1.2.0"  
}
```

Android

```
android {  
    ...  
    defaultConfig {  
        applicationId 'a.b.c.D'  
        minSdkVersion 15  
        targetSdkVersion 27  
        versionCode 1  
        versionName '1.0'  
    }  
    ...  
}
```

```
android {  
    ...  
    defaultConfig {  
        applicationId = "a.b.c.D"  
        minSdkVersion(15)  
        targetSdkVersion(27)  
        versionCode = 1  
        versionName = "1.0"  
    }  
    ...  
}
```

Ложка дёгтя

```
ant.zip(destfile: 'archive.zip')
{
    fileset(dir: 'src') {
        include(name: 'a.xml')
    }
}
```

```
ant.withGroovyBuilder {"zip"
    ("destfile" to "archive.zip") {
        "fileset"("dir" to "src") {
            "include"
                ("name" to "a.xml")
        }
    }
}
```

Ложка дёгтя

```
test {  
    useTestNG {  
        suites 'knight'  
    }  
}
```

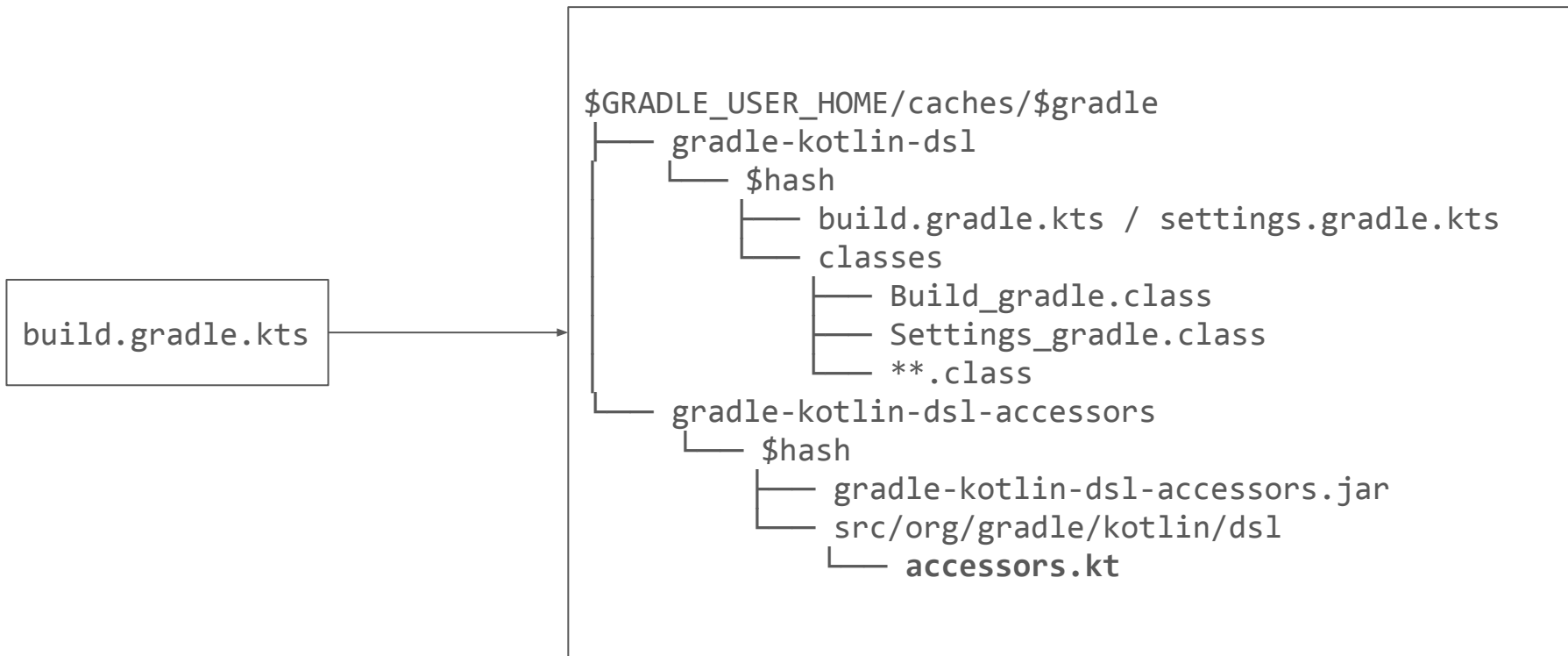
```
task("test", Test::class){  
    useTestNG(closureOf<TestNGOptions> {  
        suites("knight")  
    })  
}
```

Как это работает?

```
.../META-INF/services/org.gradle.scripts.ScriptingLanguage
```

```
org.gradle.kotlin.dsl.provider.KotlinScriptingLanguage
```

Как это работает?



Как это работает?

```
inline val PluginDependenciesSpec.`application` :  
PluginDependencySpec get() = id("org.gradle.application")
```

```
fun Project.`application`(configure:  
org.gradle.api.plugins.ApplicationPluginConvention.() -> Unit):  
Unit = configure(`application`)
```

Как это работает?

```
./gradlew tasks --all | grep kotlinDsl
```

```
kotlinDslAccessorsReport - ...
```

Kotlin

- + Сладкий
- + Поддержка в IDE
- + Ошибки сразу
- + Перспективный
- Не без магии

Kotlin @ Gradle

```
cloc --include-lang=Java,Kotlin,Groovy
```

```
master (March 2018)
```

```
14773 text files.
```

```
14324 unique files.
```

```
1876 files ignored.
```

Language	files	blank	comment	code
Groovy	5366	105758	74859	484570
Java	7512	77799	169979	340224
Kotlin	119	1266	1393	5735
SUM:	12997	184823	246231	830529

```
cloc --include-lang=Java,Kotlin,Groovy
```

```
master (April 2019)
```

```
18155 text files.
```

```
17115 unique files.
```

```
4706 files ignored.
```

Language	files	blank	comment	code
Groovy	4823	119257	78444	549075
Java	8355	87575	189978	387231
Kotlin	462	10578	9393	35640
SUM:	13640	217410	277815	971946



Спасибо!