Gradle

Buildship

EclipseCon US 2016
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Gradle is a Modern Open-Source Polyglot Enterprise Build Automation System

http://gradle.org/migrating-a-maven-build-to-gradle/
Gradle - Background
The Build

- Compile
  - Unit Testing
- Code Generation
- Package Mgmt.
- Standardization
- Dependency Mgmt.
- Deploy
- Integration Testing
- Custom Extensions
Polyglot
LinkedIn

**2,000**
Active Gradle Using Developers

**2,000**
Software Components

**300,000**
Gradle Executions Per Week

**1,000**
Release Builds per Day
Customers

Google

Android

LinkedIn

GAP

Oracle

PayPal

AT&T

Netflix

unity

Prezi

Spring

ebay

Palantir

Motorola
Adoption

more than 1’100’000 downloads of Gradle during the month of December 2015
WHAT TECHNOLOGIES ARE DEVELOPERS REALLY INTERESTED IN?

**Gradle** - Almost 6 in 10 developers say they want to learn more about this build tool.

**IntelliJ IDEA** - Almost half of developers would rather use IntelliJ than any other IDE.

**Scala** - 47% of developers would choose Scala as their next JVM language.

**Java 8** - Over 1/3 of developers see getting familiar with Java 8 as their highest priority until 2015.

58% Gradle

49% IntelliJ IDEA

47% Scala

35% Java 8

Sample population of 2164 Java professionals, sample error 2.1%

REBELLABS
Books
Terminology

- Project
- Task
- Dependency
IDE-Integration - Vision
Make Eclipse more powerful

- extend what you can do from within Eclipse
  - integrate deeply into Eclipse
Have a single truth of build logic

- put all execution logic into the build
- derive all information from the build model
In a unified build, Gradle is the single source of build logic.
Tooling API

- Proxy for embedding Gradle
- Extension mechanism to provide custom models

Client VM with gradle-tooling-api.jar

get build models

invoke build tasks

Gradle Daemon for Gradle build

invoke tests
Tooling API

• Backward & forward compatible
  From 1.0 to 2.8

• Runtime Isolation
  Separate daemon process

• High Level Services
  Build Cancellation, Continuous Mode, Test Execution, etc.

• Build Event Model
  Life-cycle events, task events, test events
Demo
Coming soon
In the works

• Project dependency substitution
• Debugging tests run through Gradle from IDE
• Views for dependency tree and applied plugins
• Support for WTP

https://github.com/eclipse/buildship/tree/master/docs/stories
Resources
Buildship: Eclipse Plug-ins for Gradle

Eclipse Plug-ins for Gradle is a collection of Eclipse plug-ins that provide support for building software using Gradle.

Licenses:
- Eclipse Public License 1.0

https://projects.eclipse.org/projects/tools.buildship
https://github.com/eclipse/buildship
<table>
<thead>
<tr>
<th>Application</th>
<th>Size</th>
<th>Downloads</th>
<th>Compatibility</th>
<th>Description</th>
<th>Platform</th>
<th>Version</th>
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</thead>
<tbody>
<tr>
<td>Eclipse IDE for Java Developers</td>
<td>165 MB</td>
<td>361,617</td>
<td>Mac OS X</td>
<td>The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Mylyn, Maven integration and WindowBuilder.</td>
<td>64 bit</td>
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<tr>
<td>Eclipse IDE for C/C++ Developers</td>
<td>175 MB</td>
<td>151,093</td>
<td>Mac OS X</td>
<td>An IDE for C/C++ developers with Mylyn integration.</td>
<td>64 bit</td>
<td></td>
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<tr>
<td>Eclipse IDE for Eclipse Committers 4.5.1</td>
<td>243 MB</td>
<td>112,350</td>
<td>Mac OS X</td>
<td>Package suited for development of Eclipse itself at Eclipse.</td>
<td>64 bit</td>
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<tr>
<td>Eclipse for PHP Developers</td>
<td>152 MB</td>
<td>105,463</td>
<td>Mac OS X</td>
<td>The essential tools for any PHP developer, including PHP language support, Git client, Mylyn and editors for JavaScript, HTML, CSS and.</td>
<td>64 bit</td>
<td></td>
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<tr>
<td>Eclipse IDE for Java and DSL Developers</td>
<td>295 MB</td>
<td>68,262</td>
<td>Mac OS X</td>
<td>The essential tools for Java and DSL developers, including a Java &amp; Xtend IDE, a DSL Framework (Xtext), a Git client.</td>
<td>64 bit</td>
<td></td>
</tr>
<tr>
<td>Eclipse for RCP and RAP Developers</td>
<td>257 MB</td>
<td>58,578</td>
<td>Mac OS X</td>
<td>A complete set of tools for developers who want to create Eclipse plug-ins, Rich Client Applications or Remote Application Platform (RCP+RAP).</td>
<td>64 bit</td>
<td></td>
</tr>
</tbody>
</table>
History

Gradle.com

- Data of every build is collected
- CI or local
- From every location
- Shared with your colleagues / community
- Available at gradle.com
A wrong JVM is used to run the tests

Test failed: DateTest.testDate

A wrong JVM is used to run the tests

Changed Strategy of configuration 'compile' after it has been resolved in build.gradle

Warning

Deprecation warnings (compileJava) found

Dynamic dependency: org.apache.commons:commons-lang:3.3+ from 3.3.2 vs 3.3.3 for this build.

Dynamic dependency: org.apache.commons:commons-lang:3.3+ from 3.3.2 vs 3.3.3 for this build.

Hans committed 5 minutes ago

Updated code
Welcome
Start building happiness

Create a Build Receipt

What is a build receipt?
Evaluate the Sessions

Sign in and vote at eclipsecon.org