

Eclipse Challenges in the Enterprise

Joep Rottinghuis

Productivity Tools Architect, eBay Inc.



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■ ■ ■ Enterprise Development and Deployment

The use of Eclipse as standard development environment has many benefits. However, a large code base coupled with very rapid pace of changes in codebase and corresponding tools pose interesting challenges. Some of the major challenges are:

⊕ **Scalability**

Pulling in thousands of projects containing few hundred thousand source files

⊕ **Deployment**

Plug-ins need to match code -> per-workspace plug-in management

⊕ **Usage tracking:**

Knowing who uses what and who faces which plug-in issues?

⊕ **Manifest maintenance:**

Managing OSGi Bundle/package versions and imports



■ ■ ■ Scalability

⊕ Use beefy desktop

- ⊕ Dual processor
- ⊕ Lots of memory
- ⊕ Big SATA II disks
- ⊕ Use RAMDisk / SSDs where possible

⊕ Update only what is needed

- ⊕ Fast-update leverages knowledge of branching and labeling process

⊕ Limit workspace size

- ⊕ Pre-build libraries
- ⊕ Challenge to know what to pull in as source versus binaries

⊕ Integrated workspace materialization

- ⊕ 1st gen: Version control system, build system, Eclipse
- ⊕ 2nd gen: Integrated Plug-in flow with incremental behavior

Deployment

⊕ Standardize on Eclipse

⊕ Java based installer

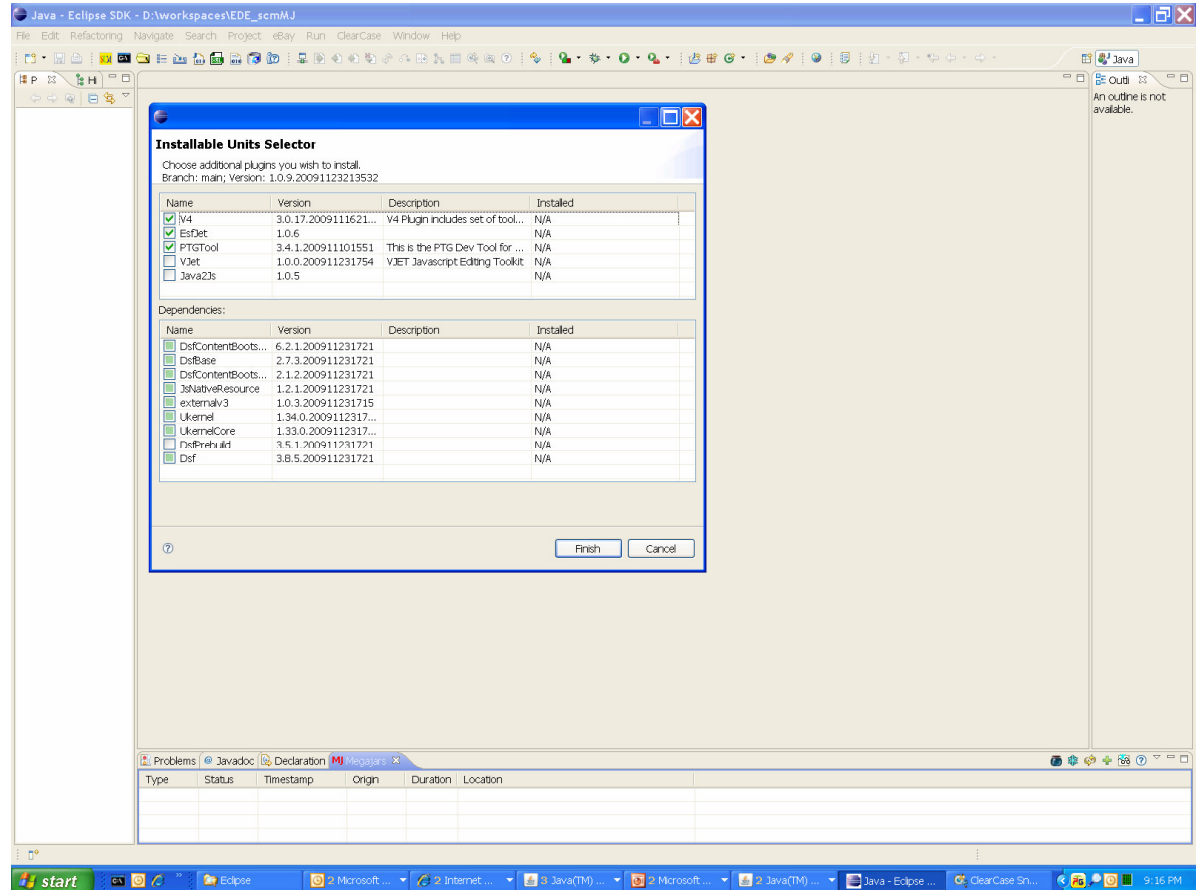
- ⊕ Pre-p2 era
- ⊕ Installs proper JVM also

⊕ Plug-ins need to match code

⊕ Per workspace plug-in management

- ⊕ Auto-config

⊕ JNLP RCP app



Manifest Maintenance

Need to deploy bundles twice

- Part of Eclipse installation
- Per workspace workspace updates
- Same bundle, separate *Bundle-SymbolicName*

Use *Export-package* w. version

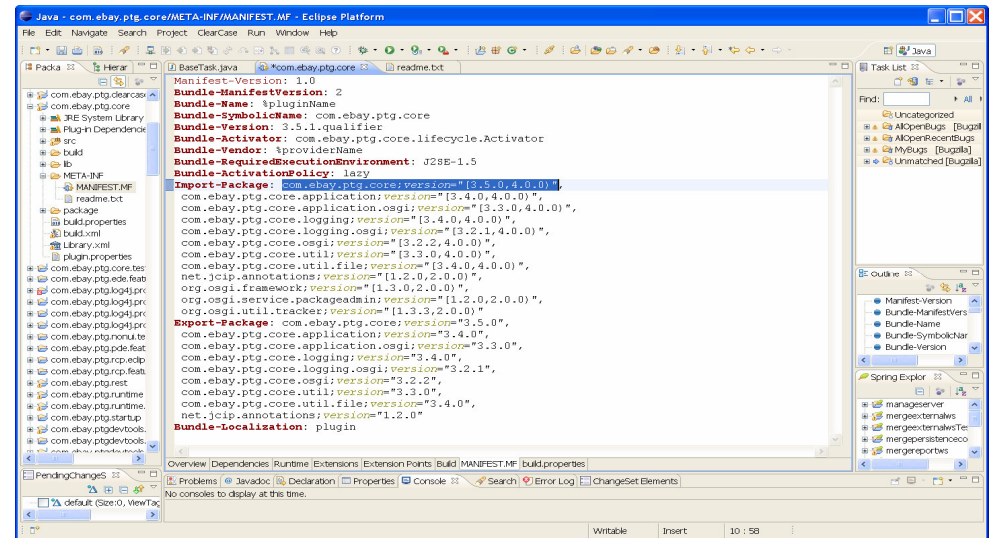
Use *Import-package* w. version ranges

How to deal with maintenance?

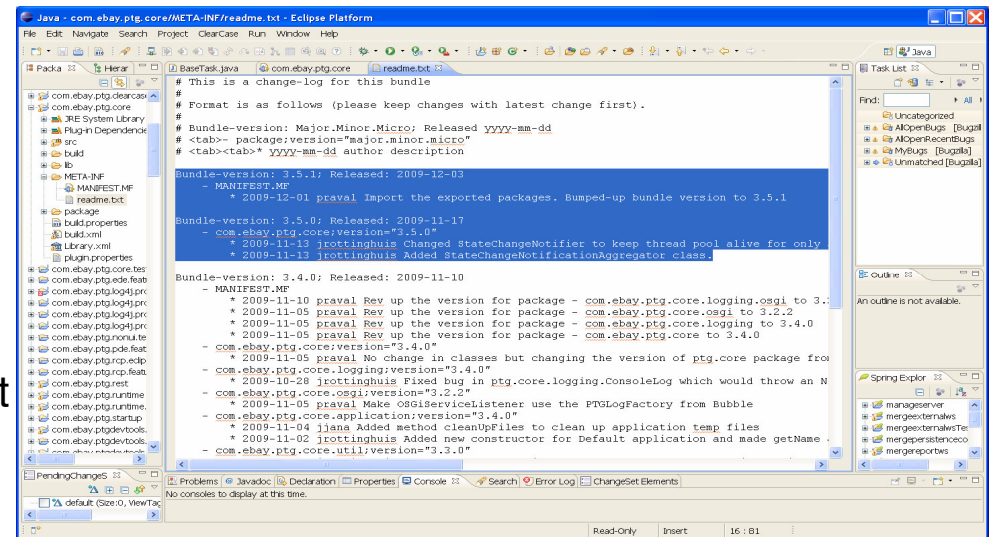
- Cascading version changes
- When to bump versions?
- What is in each release?
- Closing a release

Use *readme.txt*

- Human readable text along with manifest
- Bundle-version: a.b.c; Released: date
- package;version="x.y.z"
- * 2009-12-5 jrottinghuis Change desc



```
Manifest-Version: 1.0
Bundle-ManifestVersion: 2
Bundle-Name: !pluginName
Bundle-SymbolicName: com.ebay.ptg.core
Bundle-Version: 3.5.1.qualifier
Bundle-Activator: com.ebay.ptg.core.lifecycle.Activator
Bundle-Vendor: !providerName
Bundle-RequiredExecutionEnvironment: J2SE-1.5
Bundle-ActivationPolicy: lazy
Import-Package: com.ebay.ptg.core;version="[3.5.0,4.0.0)",
com.ebay.ptg.core.application;version="[3.4.0,4.0.0)",
com.ebay.ptg.core.application.osgi;version="[3.3.0,4.0.0)",
com.ebay.ptg.core.logging;version="[3.4.0,4.0.0)",
com.ebay.ptg.core.logging.osgi;version="[3.2.1,4.0.0)",
com.ebay.ptg.core.osgi;version="[3.2.2,4.0.0)",
com.ebay.ptg.core.util;version="[3.3.0,4.0.0)",
com.ebay.ptg.core.util.file;version="[3.4.0,4.0.0)",
net.jcip.annotations;version="(1.2.0,2.0.0)",
org.osgi.framework;version="(1.3.0,2.0.0)",
org.osgi.service.packageadmin;version="(1.2.0,2.0.0)",
org.osgi.util.tracker;version="(1.3.3,2.0.0)"
Export-Package: com.ebay.ptg.core;version="3.5.0",
com.ebay.ptg.core.application;version="3.4.0",
com.ebay.ptg.core.application.osgi;version="3.3.0",
com.ebay.ptg.core.logging;version="3.4.0",
com.ebay.ptg.core.logging.osgi;version="3.2.1",
com.ebay.ptg.core.osgi;version="3.2.2",
com.ebay.ptg.core.util;version="3.3.0",
com.ebay.ptg.core.util.file;version="3.4.0",
net.jcip.annotations;version="1.2.0"
Bundle-Localization: plugin
```



```
This is a change-log for this bundle
#
# Format is as follows (please keep changes with latest change first).
# Bundle-version: Major.Minor.Micro: Released yyyy-mm-dd
# <tab>- package;version="major.minor.micro"
# <tab>-> yyyy-mm-dd author description

Bundle-version: 3.5.1; Released: 2009-12-03
- MANIFEST.MF
* 2009-12-01 praval Import the exported packages. Bumped-up bundle version to 3.5.1

Bundle-version: 3.5.0; Released: 2009-11-17
- com.ebay.ptg.core;version="3.5.0"
* 2009-11-13 jrottinghuis Changed StateChangeNotifier to keep thread pool alive for only
* 2009-11-13 jrottinghuis Added StateChangeNotificationAggregator class.

Bundle-version: 3.4.0; Released: 2009-11-10
- MANIFEST.MF
* 2009-11-10 praval Rev up the version for package - com.ebay.ptg.core.logging.osgi to 3.
* 2009-11-05 praval Rev up the version for package - com.ebay.ptg.core.osgi to 3.2.2
* 2009-11-05 praval Rev up the version for package - com.ebay.ptg.core.logging to 3.4.0
* 2009-11-05 praval Rev up the version for package - com.ebay.ptg.core to 3.4.0
- com.ebay.ptg.core;version="3.4.0"
* 2009-11-05 praval No change in classes but changing the version of ptg.core package fro
- com.ebay.ptg.core.logging;version="3.4.0"
* 2009-10-28 jrottinghuis Fixed bug in ptg.core.logging.consolelog which would throw an N
- com.ebay.ptg.core.osgi;version="3.2.2"
* 2009-11-05 praval Make OSGIServiceListener use the PTGLogFactory from Bubble
- com.ebay.ptg.core.application;version="3.4.0"
* 2009-11-04 jjana Added method cleanUpFiles to clean up application temp files
* 2009-11-02 jrottinghuis Added new constructor for Default application and made getName
- com.ebay.ptg.core.util;version="3.3.0"
```



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Questions?

Joep Rottinghuis
Productivity Tools Architect
Engineering Services Group, eBay Inc.

