

# Enterprise Maven Infrastructure



**Agile 2.0 - Sound software engineering practices put back into Agile Software development.**



# Who is Erik Drolshammer?

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- Author of the Enterprise Maven Infrastructure tactic
- Codehaus Mojo Committer

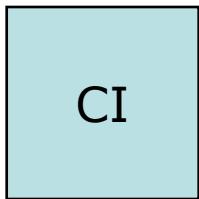
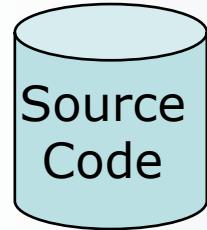
# **Agenda**

**1. What** is Enterprise Maven Infrastructure?

**2. Why** - What's in it for me?

# **1. What is Enterprise Maven Infrastructure?**

# 1<sup>st</sup> generation

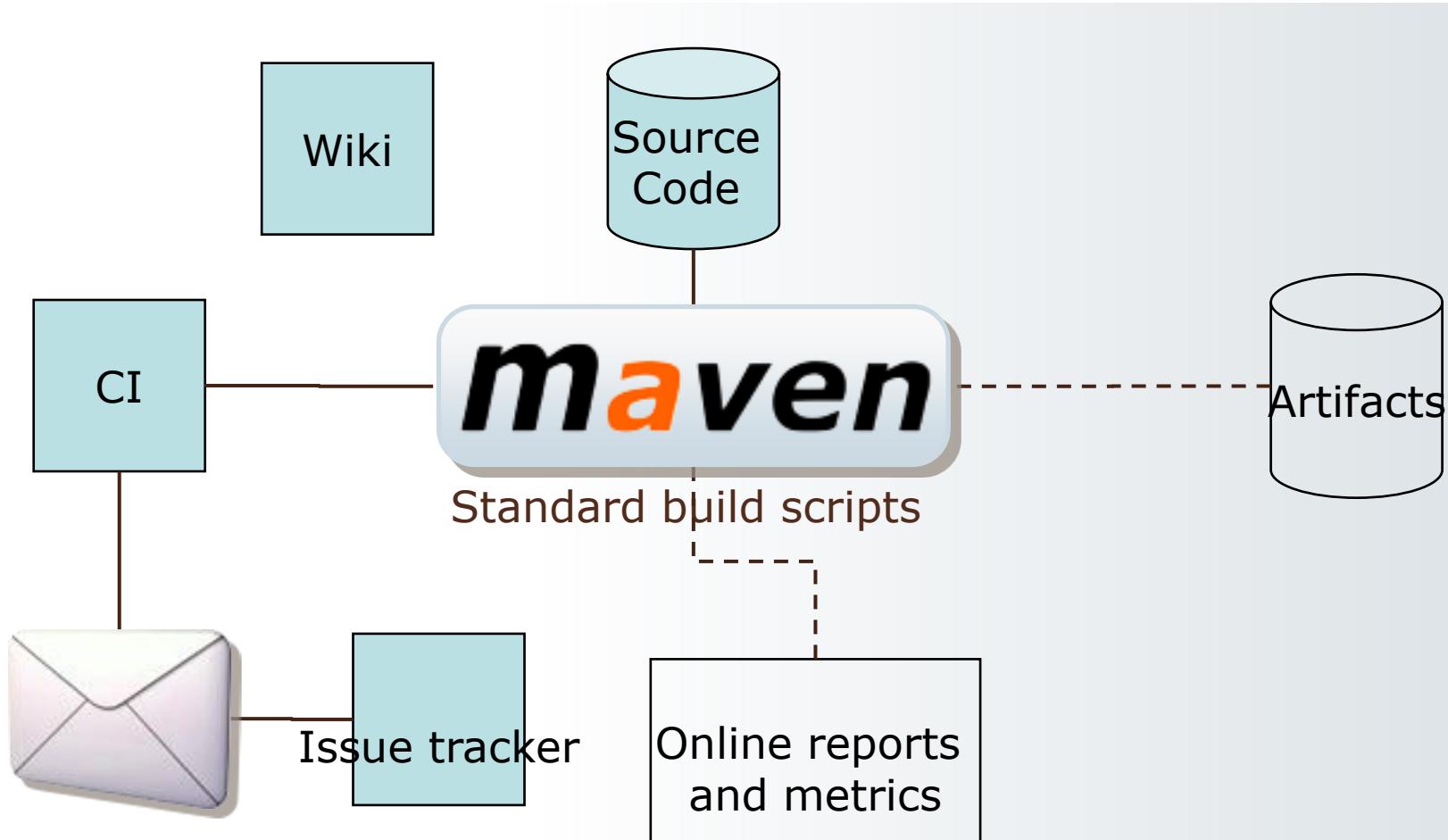


Custom build scripts

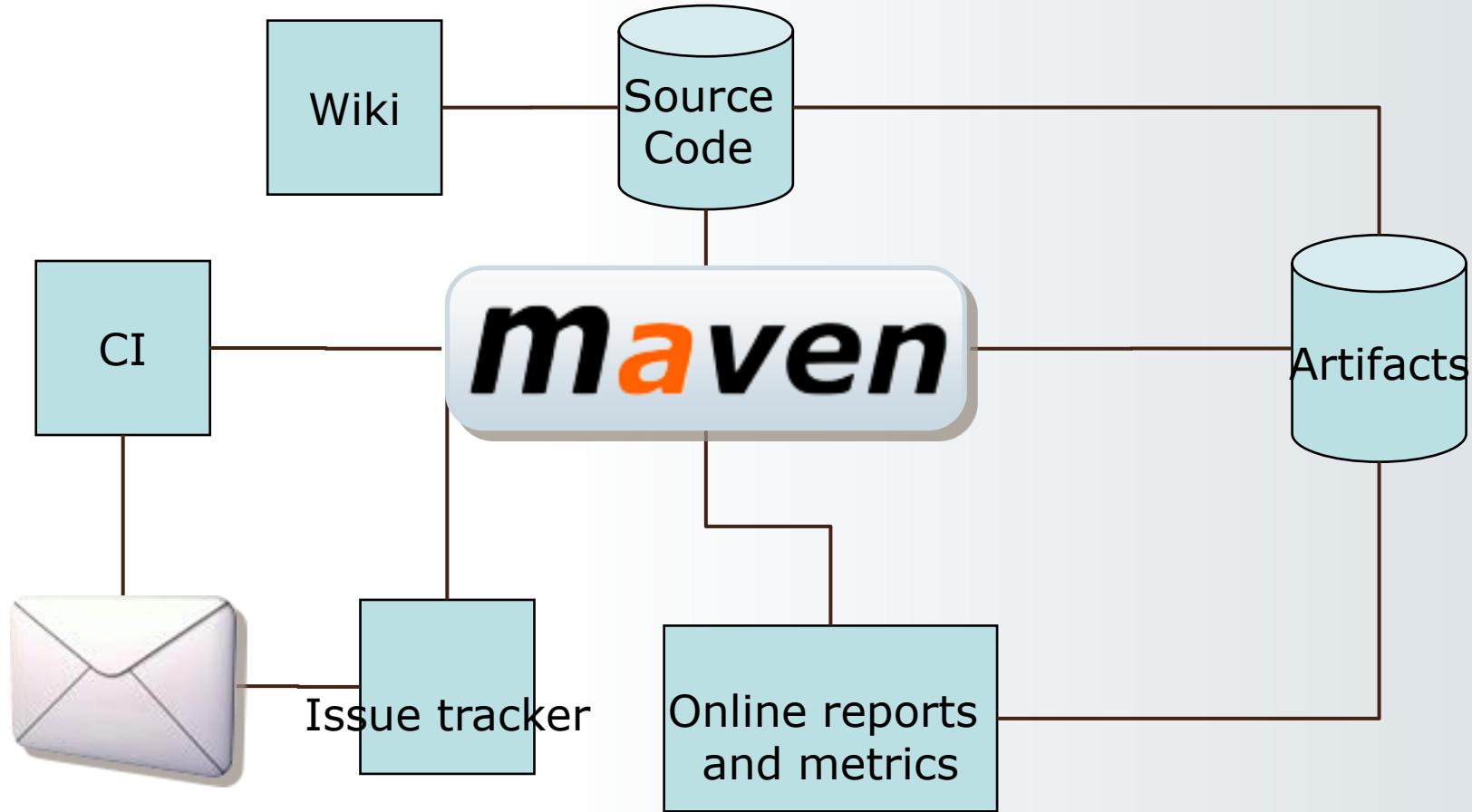


Issue tracker

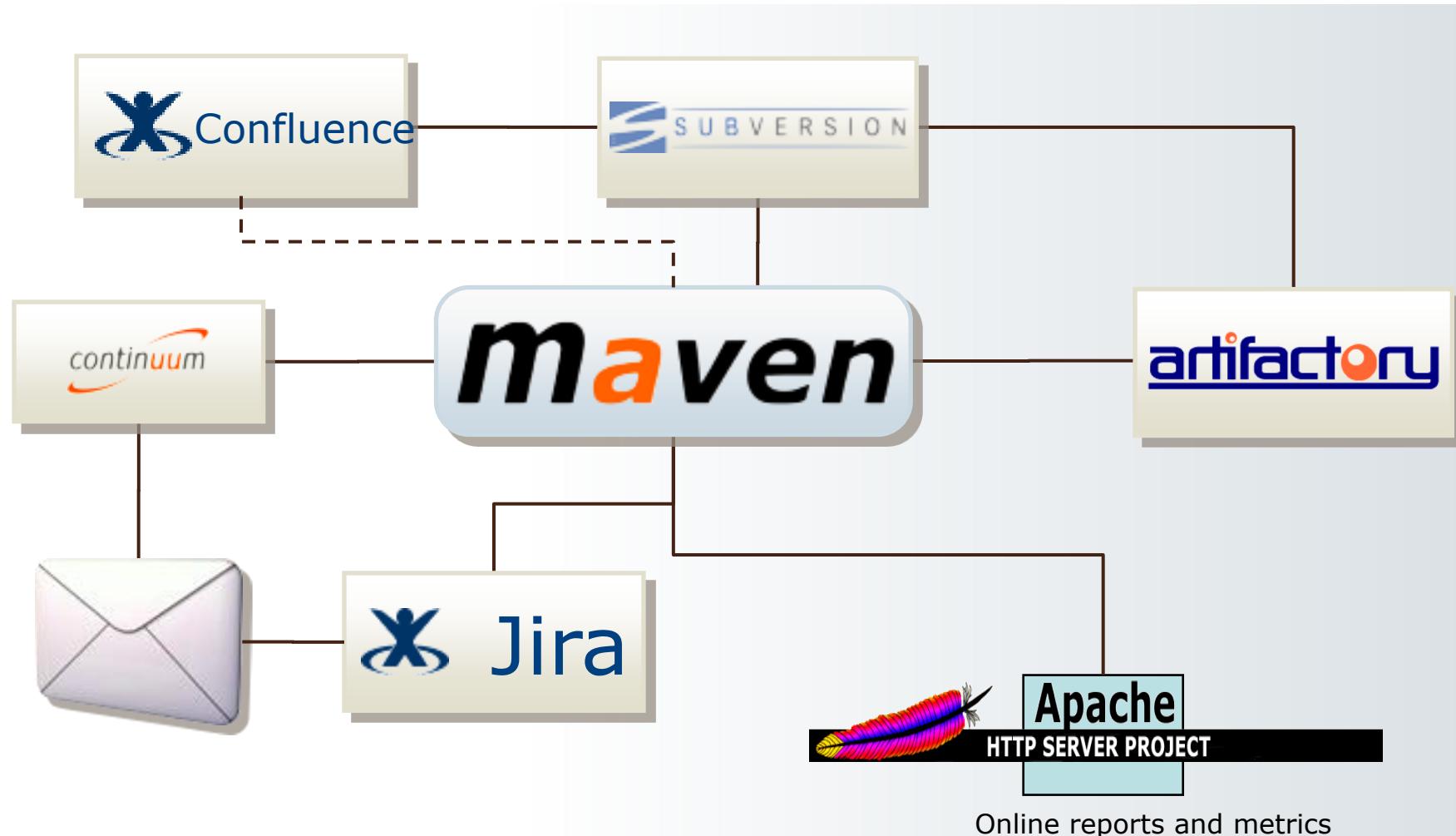
# 2<sup>nd</sup> generation



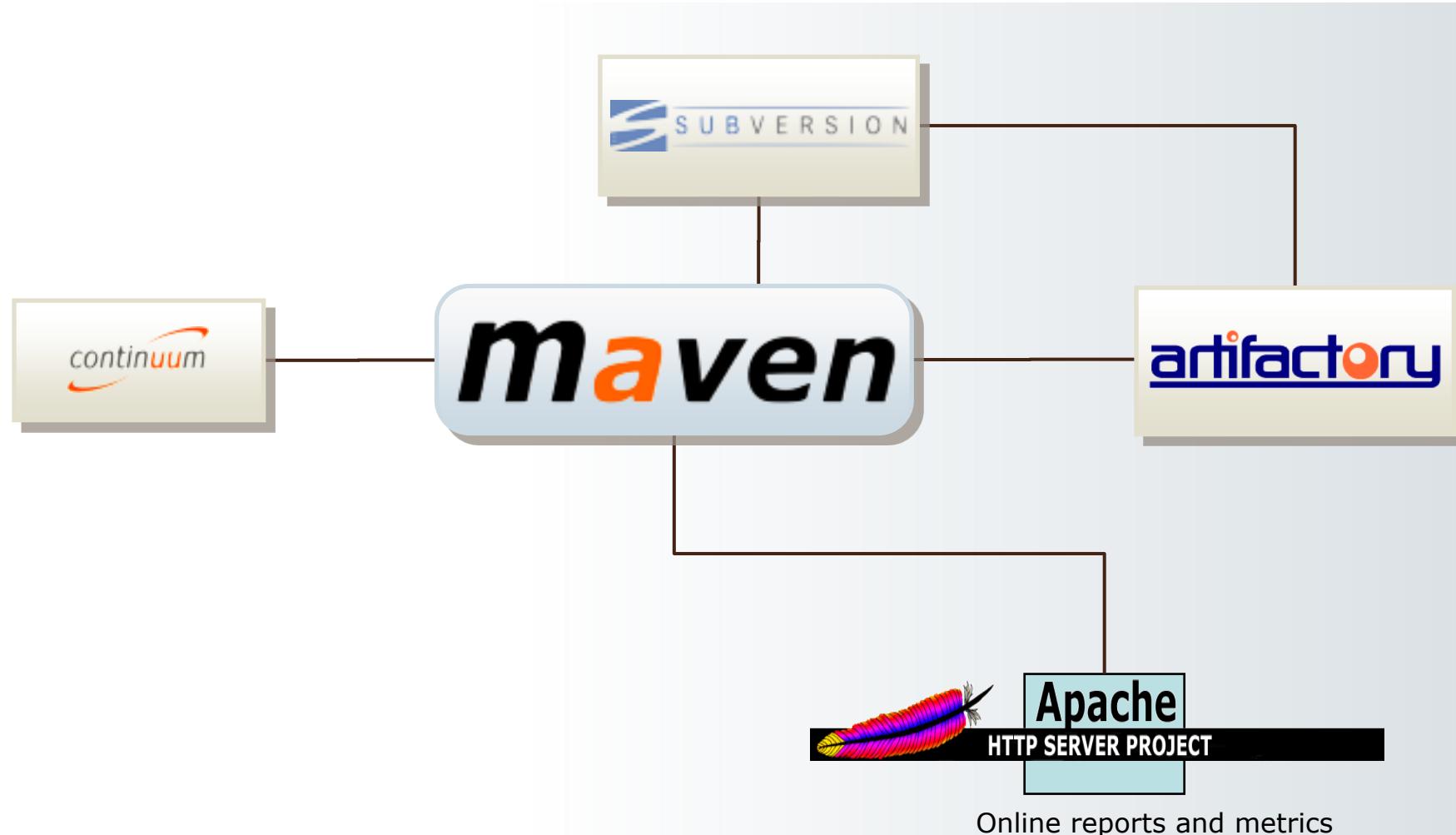
# 3<sup>rd</sup> generation: EMI (abstract view)



# 3<sup>rd</sup> generation: EMI (concrete view)



# Minimal Enterprise Maven Infrastructure

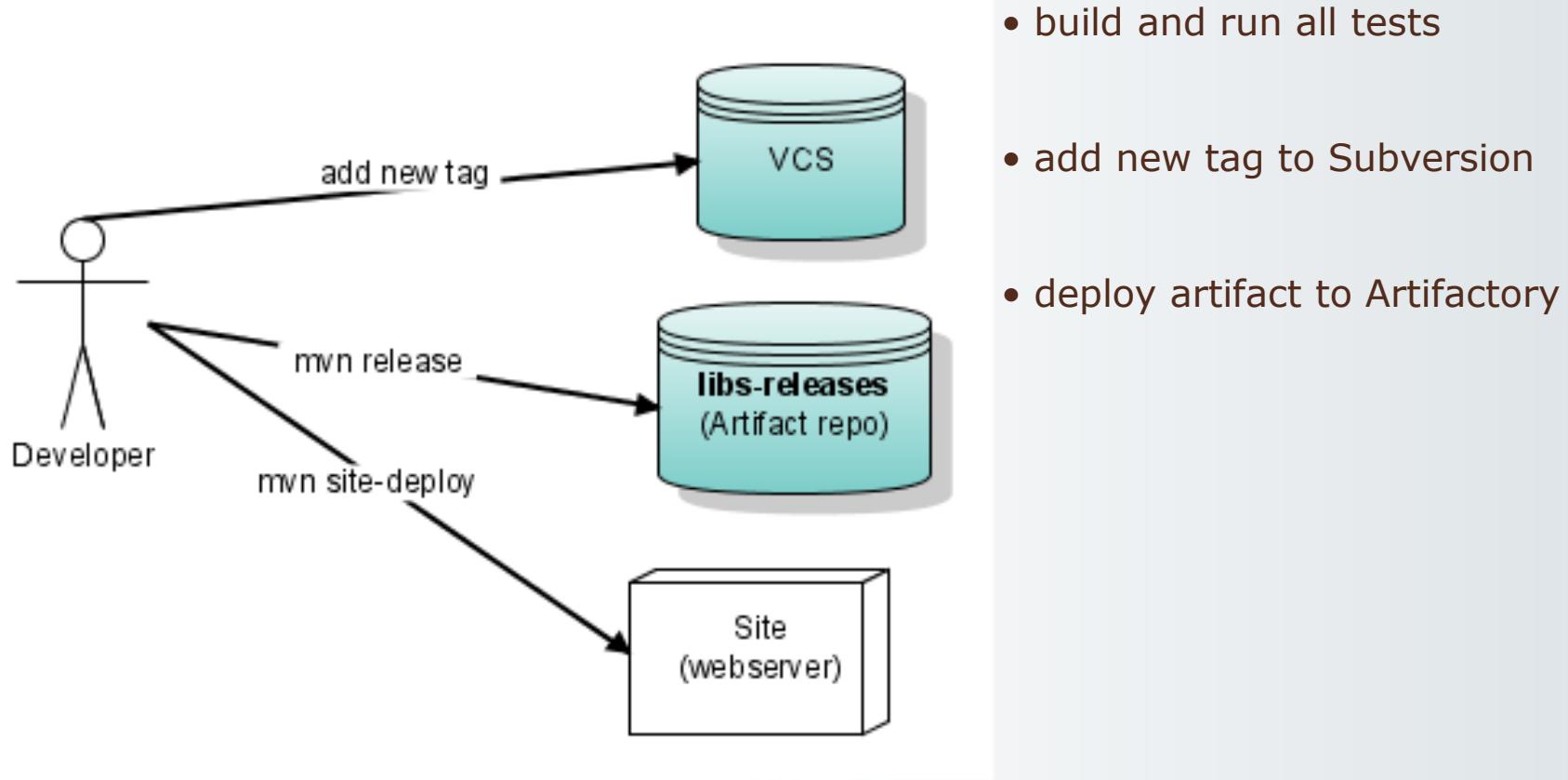


Online reports and metrics

# Processes and practices

- Standardization
- Make the "best way", the easiest way.

# Release



# Email Communication

- CI build results on email
  - [projectName-ci@company.com](mailto:projectName-ci@company.com)
- Post-commit hooks
  - [projectName-svn@company.com](mailto:projectName-svn@company.com)
- Email lists
  - [projectName@company.com](mailto:projectName@company.com)
  - [projectName-dev@company.com](mailto:projectName-dev@company.com)

# Automatic code review

- CPD, PMD and FindBugs errors break the build
- Ensure license header in all files
- Standardize code style
  - *Checkstyle*

## 2. Why - what's in it for me?

# Reduce complexity

- Standardized project organization
- Many small projects instead of a few big ones.
- Automatic dependency tree generation
- Tool support for QA (CPD, PMD, FindBugs, Checkstyle)

# Project Dependency Graph

## Dependency Tree

- org.codehaus.mojo:appassembler-maven-plugin:maven-plugin:1.0 [!](#) 
  - org.codehaus.mojo.appassembler:appassembler-model:jar:1.0 (compile) [!](#) 
    - org.codehaus.plexus:plexus-utils:jar:1.5.6 (compile) [!](#)
    - stax:stax-api:jar:1.0.1 (compile) [!](#)
    - net.java.dev.stax-utils:stax-utils:jar:20060502 (compile) [!](#)
    - stax:stax:jar:1.1.1-dev (runtime) [!](#)
    - junit:junit:jar:3.8.2 (test) [!](#)
  - org.codehaus.mojo.appassembler:appassembler-booter:jar:1.0 (test) [!](#) 
    - org.codehaus.mojo.appassembler:appassembler-model:jar:1.0 (test) [!](#)
  - org.codehaus.plexus:plexus-utils:jar:1.5.6 (compile) [!](#)
  - org.apache.maven:maven-plugin-api:jar:2.0 (compile) [!](#)
  - org.apache.maven:maven-project:jar:2.0.6 (compile) [!](#) 
    - org.apache.maven:maven-settings:jar:2.0.6 (compile) [!](#)
    - org.apache.maven:maven-profile:jar:2.0.6 (compile) [!](#) 
      - org.apache.maven:maven-model:jar:2.0.6 (compile) [!](#)
      - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (compile) [!](#)
    - org.apache.maven:maven-model:jar:2.0.6 (compile) [!](#)
    - org.apache.maven:maven-artifact-manager:jar:2.0.6 (compile) [!](#) 
      - org.apache.maven:maven-repository-metadata:jar:2.0.6 (compile) [!](#)
      - org.apache.maven:maven-artifact:jar:2.0.6 (compile) [!](#)
      - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (compile) [!](#)
      - org.apache.maven.wagon:wagon-provider-api:jar:1.0-beta-2 (compile) [!](#)
    - org.apache.maven:maven-plugin-registry:jar:2.0.6 (compile) [!](#) 
      - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (compile) [!](#)
    - org.apache.maven:maven-artifact:jar:2.0.6 (compile) [!](#)
    - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (compile) [!](#)
  - org.apache.maven:maven-artifact:jar:2.0.6 (compile) [!](#)
  - stax:stax-api:jar:1.0.1 (compile) [!](#)
  - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (compile) [!](#) 
    - junit:junit:jar:3.8.2 (test) [!](#)
    - classworlds:classworlds:jar:1.1-alpha-2 (compile) [!](#)
  - junit:junit:jar:3.8.2 (test) [!](#)
  - org.apache.maven:maven-settings:jar:2.0.6 (test) [!](#) 
    - org.apache.maven:maven-model:jar:2.0.6 (test) [!](#)
    - org.codehaus.plexus:plexus-container-default:jar:1.0-alpha-9-stable-1 (test) [!](#)
  - org.apache.maven:maven-model:jar:2.0.6 (test) [!](#)

http://mojo.codehaus.org/appassembler/loader/appassembler-maven-plugin/dependencies.html

# Manage and reduce risk

- Standardized release scheme
- Reproducible builds
- Traceability in test and production environments

# Release notes from Jira

The screenshot shows a JIRA report for the Appassembler Maven Plug-In. The report lists several issues:

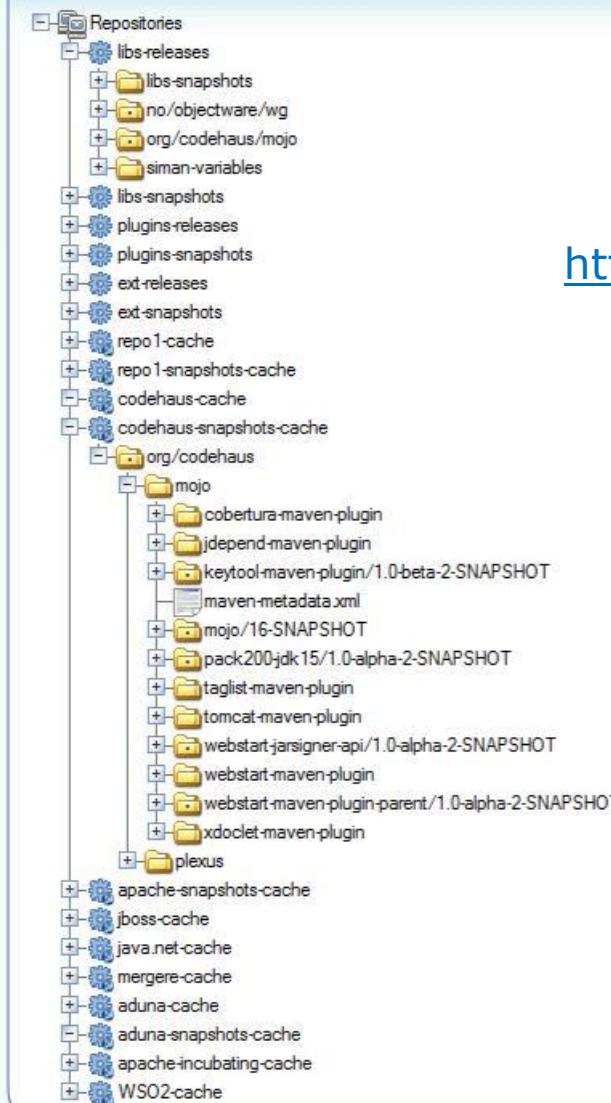
Key	Summary	Status	Resolution	By
MAPPASM-69	Inconsistent test result for testDefaultJSWFilesIfNoGeneratorConfigurationsIsSet() in JavaServiceWrapperDaemonGeneratorTest.java	Closed	Fixed	David J. M. Karlsen
MAPPASM-70	Appassembler does not create correct relative paths for snapshot dependencies	Closed	Fixed	Kaare Nilsen
MAPPASM-73	Document how to use a wrapper script in combination with scripts generated by appassembler to support environment specific settings	Closed	Fixed	Erik Drolshammer
MAPPASM-75	Document how to use the JSW-functionality	Closed	Fixed	Erik Drolshammer
MAPPASM-76	Add support for specifying default RUN_AS_USER in JSW mojo	Closed	Fixed	Carlos Sanchez
MAPPASM-77	Add ability to control of configuration directory (currently hardcoded to etc/)	Closed	Fixed	Trygve Laugstol

<http://mojo.codehaus.org/appassembler/appassembler-maven-plugin/jira-report.html>

# Higher utilization and reuse

- Software portfolio
  - *Product lifecycle*
  - *Total Cost of Ownership*
- Artifact traceability
- Dependencies between artifacts

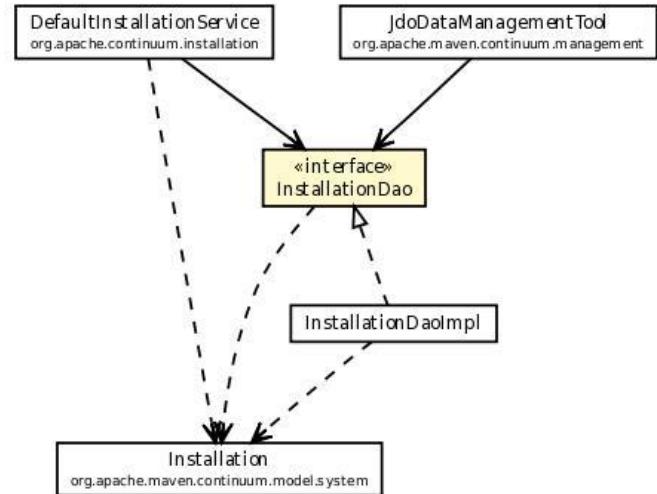
- ▼ Browsing
  - Repositories Tree
  - Virtual Repositories
- Search for Artifacts
- Deploy an Artifact
- Security
- Export & Import
- Configuration



<http://m2repo.objectware.no>

org.apache.continuum.dao

## Interface InstallationDao



### All Known Implementing Classes:

[InstallationDaoImpl](#)

```
public interface InstallationDao
```

#### Version:

\$Id: InstallationDao.java 684085 2008-08-08 20:48:14Z evenisse \$

#### Author:

[Emmanuel Venisse](#)

## Method Summary

<code>Installation</code>	<code>addInstallation(Installation installation)</code>
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<http://continuum.apache.org/ref/1.3.1-SNAPSHOT/apidocs/org/apache/continuum/dao/InstallationDao.html>

# Basis for other concepts

## Enterprise Maven Infrastructure

- *JigZaw – Agile Testing Done Right*
- *RPM-based Deployment*
- *Confluence-based Documentation Release*
- *ConfigService*

# RPM-based deployment

- Separate configuration from the business logic
  - Generate start scripts
  - Standard deployment routines
  - Reuse
- 
- Dramatically reduce deployment errors
  - Dramatically reduce deployment time

*Time to market* ☺

# Summary

- Infrastructure is crucial for ***efficient*** development in the enterprise
- Work ***smarter*** to get more out of existing infrastructure!

# **Resources**

[http://wiki.community.objectware.no/display/smiftonull/  
Enterprise+Maven+Infrastructure](http://wiki.community.objectware.no/display/smiftonull/Enterprise+Maven+Infrastructure)

[http://wiki.community.objectware.no/display/smiftonull/  
RPM+Deployment+with+Java+Service+Wrapper](http://wiki.community.objectware.no/display/smiftonull/RPM+Deployment+with+Java+Service+Wrapper)