

Repository Management

Why do I need a Repository Manager?

Repository Management

Repository managers serve two purposes:

they act as highly configurable proxies between your organization and the public repositories and

they also provide an organization with a deployment destination for your own generated artifacts.

Repository Proxy - 1

Proxying speeds up builds throughout your organization by installing a local cache for all artifacts from the Central repository.

Artifact only needs to be downloaded from the remote repository once.

Repository Proxy - 2

Real cost savings are going to be the time it takes to check for new versions of dependencies and to download dependencies.

Repository Proxy - 3

Serving dependencies from a local repository can save you hundreds of requests over HTTP, and, in very large multi-project builds, this can shave minutes from a build.

Repository Deployment Destination

Unless you expect every member of your organization to download and build every single internal project, you will want to provide a mechanism for developers and departments to share both SNAPSHOT and releases for internal project artifacts.

A repository manager provides your organization with such a deployment target.

Repository Deployment Destination - 2

Once you install a repository manager, you can start to deploy snapshots and releases to a custom repository managed by the repository manager.

Over time, this central deployment point for internal projects becomes the fabric for collaboration between different development teams.

The List of Repository Managers

The following pages describe a short list of the main repository managers

Apache Archiva

Apache Archiva is an extensible repository management software that helps taking care of your own personal or enterprise-wide build artifact repository. It is the perfect companion for build tools such as Maven, Continuum, and ANT.

Apache Archiva

Archiva offers several capabilities, amongst which remote repository proxying, security access management, build artifact storage, delivery, browsing, indexing and usage reporting, extensible scanning functionality... and many more!

Artifactory

Artifactory is a Maven 2 enterprise repository. It offers advanced proxying, caching and security facilities to provide a robust, reproducible and independent build environment when using Maven.

Artifactory

Artifactory is being used by clients ranging from small startup teams to international corporate teams employing distributed development, thus improving the development experience for tens of thousands of developers. Artifactory exposes a robust artifacts management platform using rich Ajax web UI and can be run out-of-the-box with a simple "unzip and launch".

Nexus (previously Proximity)

- Anyone who was using Proximity is now encouraged to use Nexus.
- The entire codebase of Proximity was absorbed into Nexus and Nexus provides a migration path for all Proximity users.
- Nexus currently has an active development team, and portions of the indexing code from Nexus are also being used in m2eclipse

Nexus - www.sonatype.org/nexus/ Book

- The best way to learn Nexus is to download the free book "Repository Management with Nexus"

[http://www.sonatype.com/index.php/Support/Books/
Repository-Management-with-Nexus](http://www.sonatype.com/index.php/Support/Books/Repository-Management-with-Nexus)

Nexus - www.sonatype.org/nexus/ Video

OSS and the Enterprise: How Nexus can Help

- This video is a very quick overview of evolution of the Enterprise over the last decade.
- If you've been developing software over this time period you've noticed a change in the way software is developed.
- This video talks about how OSS has changed how developers approach software development and it relates these changes to Nexus.

Nexus Video

- <https://www.youtube.com/watch?v=FSsBnipUaaE&featu>

Nexus 2.0 Demo

- Intro up to 8:50
- Demo starts 8:50
- Total run 25 minutes
- Jason van Zyl demonstrates some of the key features of Nexus 2.0: Repository Health Check, .NET integration, and Smart Proxy. See Nexus Pro 2.0 in action. Download and install the free trial today.
- <https://www.youtube.com/watch?v=IYIdEFsIQGk&featu>

3 Managers URL Summary

- <http://archiva.apache.org/> Last Published: 14 Apr 2012
- <http://www.jfrog.com/products.php> v 2.6.1 patch to 2012-05-06 version (Artifactory)
- <http://www.sonatype.org/nexus/> 2.0.4

Retrospective

- What worked well
- What did not work
- What should we start doing?

Next Time

- Continue with actual Nexus Install?
- Discuss how we create / avoid Design Dependency?
 - Class Dependencies
 - Inheritance
 - Association
 - Package Dependencies
 - Acyclic Dependencies
 - Testing with Jdepend
 - Binary Dependencies
 - Inverting Relationships
 - Callback, Escalation, Demotion
 - JarAnalyzer

Dependency Tools

- Dependency Finder -- <http://depfind.sourceforge.net/>
- on the page a list of Author maintained 'other' Dependency Finders - <http://depfind.sourceforge.net/>
- - JDepend
- - Jar Jar Links
- - Jar Analyzer <http://www.kirkk.com/main/Main/Resource>
- - Ivy
- - NoUnit
- - FindBugs