

Managing Your Repositories With Archiva

by
Deng Ching

- Deng Ching
 - PMC Chair of Apache Archiva
 - PMC Member of Apache Continuum and Apache Maven
 - Senior Software Engineer at G2iX
 - oching@apache.org
- Apache Archiva
 - former sub-project of Maven
 - TLP in March 2008

- Repositories?
- Problems with Repositories..
 - bulging size
 - corrupted metadata
 - uber-slow downloads (remote repositories)
 - access control

The solution???

Use a **Repository Manager!**

Archiva is a build artifact repository manager which has the capabilities of hosting and serving an artifact repository. It supports Maven 1 and 2 repositories.

- Archiva has...
 - a repository purge feature
 - a utility for fixing metadata and checksums
 - the ability to serve as a local proxy cache for remote repositories
 - a role-based security system
 - .. and more

- Repository configuration
 - Managed versus Remote repositories
 - Creating and configuring a managed repository

Admin: Edit Managed Repository

Search for:



ID: internal

Name*: Archiva Managed Internal Repository

Directory*: /home/deng/TestFiles/internal

Index Directory:

Type: Maven 2.x Repository

Cron*: 0 0 * * * ?

Repository Purge By Days Older Than: 30

Repository Purge By Retention Count: 2

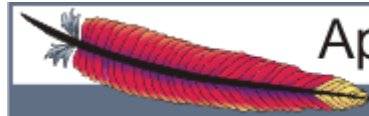
- Releases Included
- Snapshots Included
- Scannable
- Delete Released Snapshots

Update Repository

Repositories



- Repository configuration
 - Managed versus Remote repositories
 - Creating and configuring a remote repository



Current User: admin (admin) - [Edit Details](#) - [Logout](#)

Admin: Edit Remote Repository

Search for:

Name*:

URL*:

Username:

Password:

Timeout in seconds:

Type:

- Repository Configuration
 - Configuring a proxy cache
 - proxy connectors
 - policies for releases, snapshots, checksums, failures
 - black lists and white lists



Admin : Edit Proxy Connector

Search for:

Network Proxy*:

Managed Repository*:

Remote Repository*:

Policies:

Return error when:

On remote error:

Releases:

Snapshots:

Checksum:

Cache failures:

Properties: :

No properties have been set.

Black List:

No black list patterns have been set.

White List:

"/**/" ✖

Proxy Connectors



- Hooking up Maven with Archiva
 - as a download repository
 - locking down the repository...

```
<settings>  
  <mirrors>  
    <mirror>  
      <id>internal</id>  
  
      <url>http://repo.example.com/archiva/repository/internal</url>  
  
      <mirrorOf>*</mirrorOf>  
  
    </mirror>  
  </mirrors>  
</settings>
```

- configuring as an additional download repository:

```
<settings>
```

```
...
```

```
<profiles>
```

```
  <profile>
```

```
    <id>default</id>
```

```
    <repositories>
```

```
      <repository>
```

```
        <id>internal</id>
```

```
        <url>http://repo.example.com/archiva/repository/internal</url>
```

```
      </repository>
```

```
    </repositories>
```

```
  </profile>
```

```
</profiles>
```

```
</settings>
```

- Hooking up Maven with Archiva
 - Archiva as a deployment repository

```
<distributionManagement>
```

```
  <repository>
```

```
    <id>archiva.internal</id>
```

```
    <name>Internal Release Repository</name>
```

```
    <url>http://repo.example.com/archiva/repository/internal.releases/</url>
```

```
  </repository>
```

```
  <snapshotRepository>
```

```
    <id>archiva.snapshots</id>
```

```
    <name>Internal Snapshot Repository</name>
```

```
    <url>http://repo.example.com/archiva/repository/internal.snapshots/</url>  
>
```

```
  </snapshotRepository>
```

```
</distributionManagement>
```


- Grouping your repositories...
 - What are virtual repositories or repository groups?
 - When to use them?

A `settings.xml` without
virtual repositories...

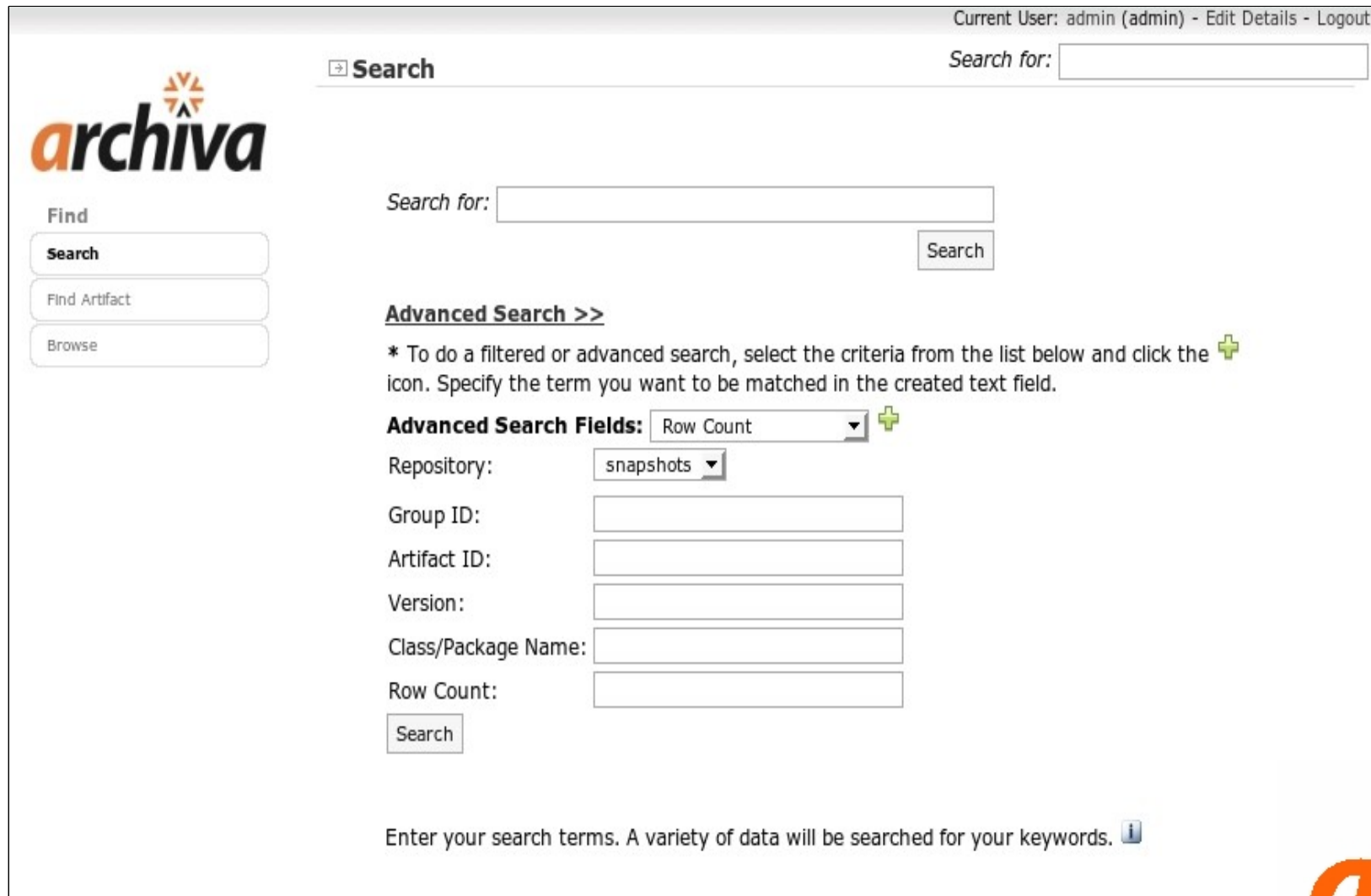
A `settings.xml` with
virtual repositories configured...

- Grouping your repositories...

The screenshot shows the Archiva Administration interface for managing Repository Groups. At the top, it displays the current user as 'admin (admin)' and provides options to 'Edit Details' or 'Logout'. A search bar is also present. The main content area is titled 'Administration - Repository Groups' and includes a sidebar with 'Administration' and 'Repository Groups' links. The interface shows two existing repository groups: 'releases.group' and 'snapshots.group'. Each group contains a list of repositories. For 'releases.group', there are 'local.mirror' (Local Mirror) and 'internal.releases' (Internal Releases Repo). For 'snapshots.group', there is 'apache.snapshots.proxy' (Apache Snapshots Proxy). Each repository entry includes its name, description, and URL. A 'snapshots' dropdown menu and an 'Add Repository' button are visible for each group.

- Grouping your repositories...
 - Only supports read operations
 - Configuring in `settings.xml`
 - Same configuration as with a regular repository

- Other Archiva add-ons:
 - Search/Find/Browse



The screenshot displays the Archiva web interface. At the top right, it shows the current user as 'admin (admin)' with links for 'Edit Details' and 'Logout'. The main header includes the Archiva logo and a search bar labeled 'Search for:'. On the left side, there is a 'Find' section with buttons for 'Search', 'Find Artifact', and 'Browse'. The central area features a 'Search for:' text input field and a 'Search' button. Below this is an 'Advanced Search >>' section with a note: '* To do a filtered or advanced search, select the criteria from the list below and click the + icon. Specify the term you want to be matched in the created text field.' The 'Advanced Search Fields' section includes a dropdown menu for 'Row Count' (with a '+' icon), a 'Repository:' dropdown menu set to 'snapshots', and several empty text input fields for 'Group ID:', 'Artifact ID:', 'Version:', 'Class/Package Name:', and 'Row Count:'. A 'Search' button is located at the bottom of this section. At the bottom of the page, there is a footer message: 'Enter your search terms. A variety of data will be searched for your keywords.' with a small icon.



Find

Search
Find Artifact
Browse

Current User: admin (admin) - Edit Details - Logout

Search for:



Logging

- Info
- Dependencies
- Dependency Tree
- Used By
- Mailing Lists

[top] / commons-logging / commons-logging / 1.0.4

Commons Logging is a thin adapter allowing configurable bridging to other, well known logging systems.

Repository internal
Group ID commons-logging
Artifact ID commons-logging
Version 1.0.4
Packaging jar

Downloads

| | |
|-----|--------|
| Jar | 38,015 |
| Pom | 5,264 |

POM Snippet

```
<dependency>
  <groupId>commons-logging</groupId>
  <artifactId>commons-logging</artifactId>
  <version>1.0.4</version>
</dependency>
```

Other Details

URL <http://jakarta.apache.org/commons/logging/>
Organisation [The Apache Software Foundation](#)
License [The Apache Software License, Version 2.0](#)
Issue Tracker
Continuous Integration


SCM

Connection <scm:cv:s:pserver:anoncv:s@cv:s.apache.org:/home/cv:spublic:jakarta-commons/logging>
Viewer <http://cv:s.apache.org/viewcv:s/jakarta-commons/logging/>



- Other Archiva add-ons:
 - Reports
 - Repository Statistics
 - Repository Health
 - RSS feeds (new artifacts in the repository, new versions of an artifact)

- Repository Statistics



Current User: admin (admin) - Edit Details - Logout

Search for:

Statistics Report

« 1 »


[Export to CSV](#)

Latest Statistics Comparison Report

| Repository | Total File Count | Total Size | Artifact Count | Group Count | Project Count | Plugins | Archetypes | Jars | Wars | Deployments | Downloads |
|-----------------|------------------|------------|----------------|-------------|---------------|---------|------------|------|------|-------------|-----------|
| proxy-snapshots | 23 | 33980 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| internal | 4 | 986 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Manage Reports

- Repository Health Report



Find

Manage

Current User: admin (admin) - Edit Details - Logout
Search for:

Reports

Repository: releases

[\[top\]](#) / [ant](#) / [ant](#) / **1.6.5**

Unable to read project model /home/deng/TestFiles/internal/ant/ant/1.6.5/ant-1.6.5.pom : Unable to parse project xml file:/home/deng/TestFiles/internal/ant/ant/1.6.5/ant-1.6.5.pom: Error on line 1 of document : The prefix "xsi" for attribute "xsi:schemaLocation" associated with an element type "project" is not bound. Nested exception: The prefix "xsi" for attribute "xsi:schemaLocation" associated with an element type "project" is not bound.

Page: 1

- Security
 - Security at the repository level
 - Plans to move to resource level security

- Security
 - Access control
 - Repository Manager
 - Repository Observer
 - The **guest** account
 - The **admin** account

■ Security

- Configuring in `settings.xml`

```
<settings>
```

```
  <servers>
```

```
    <server>
```

```
      <id>internal</id>
```

```
      <username>ARCHIVA.USERNAME</username>
```

```
      <password>ARCHIVA.PASSWORD</password>
```

```
    </server>
```

```
  </servers>
```


```
</settings>
```

- The server `<id>` must match the `<id>` of the mirror or repository configured in `settings.xml` OR `pom.xml`

- Security
 - Security in virtual repositories
 - User would only be able to get artifacts from the repositories (under the group) he/she has the permission to access
 - Same `<server>` configuration with a regular repository

- Maintenance
 - deleting artifacts in the repository
 - directly via filesystem
 - via webapp

Current User: admin (admin) - Edit Details - Logout

 **Delete Artifact** Search for:

Group Id*:

Artifact Id*:

Version*:

Repository Id:

Find

Search

Find Artifact

Browse

Manage

Reports

User Management

User Roles

Appearance

Upload Artifact

Delete Artifact

- Maintenance (background tasks)
 - repository scanning
 - database scanning

- Maintenance
 - repository purging
 - by retention count
 - by artifact age
 - delete released snapshots
 - how it works

- Maintenance
 - fixing metadata and checksums
 - metadata-update consumer
 - create-missing-checksums consumer
 - how they work

- Maintenance
 - cleaning up the index and database
 - the cleanup consumers
 - how it works

A quick look at

Archiva...

- Status of the community...
 - newly released 1.2! (March 26, 2009)
 - 15 committers (6 active)
 - lots of contributors

... And we're writing a best practices book on Maven, Archiva and Continuum!

- Site: **<http://archiva.apache.org>**
- Wiki:
<http://cwiki.apache.org/confluence/display/ARCHIVA>
- Mailing Lists:
 - Devs: **dev@archiva.apache.org**
 - Users: **users@archiva.apache.org**
- IRC: **[irc.codehaus.org#archiva](irc://codehaus.org/#archiva)**
- Twitter: **@archiva**

Questions???

Thank You...

