

# How to be effective with JBoss Developer Studio

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Senior Principal Dude, Red Hat  
4<sup>th</sup> May, 2011

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# Me, me, me!

- Max Rydahl Andersen
- Lead of JBoss Tools & Developer Studio
- Hibernate Core, Tools, Seam, Weld, CDI, Forge, AS 7, ...
- Co-host on JBoss Community Asylum Podcast
- @maxandersen on Twitter

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# The Stuff!

- What is JBoss Developer Studio
- How to get JBoss Developer Studio
- More Plugins!
- Multi-Module Projects
- Enterprise Maven
- Local, Remote & Cloud Deployment

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# What is it ?

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Eclipse

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Eclipse

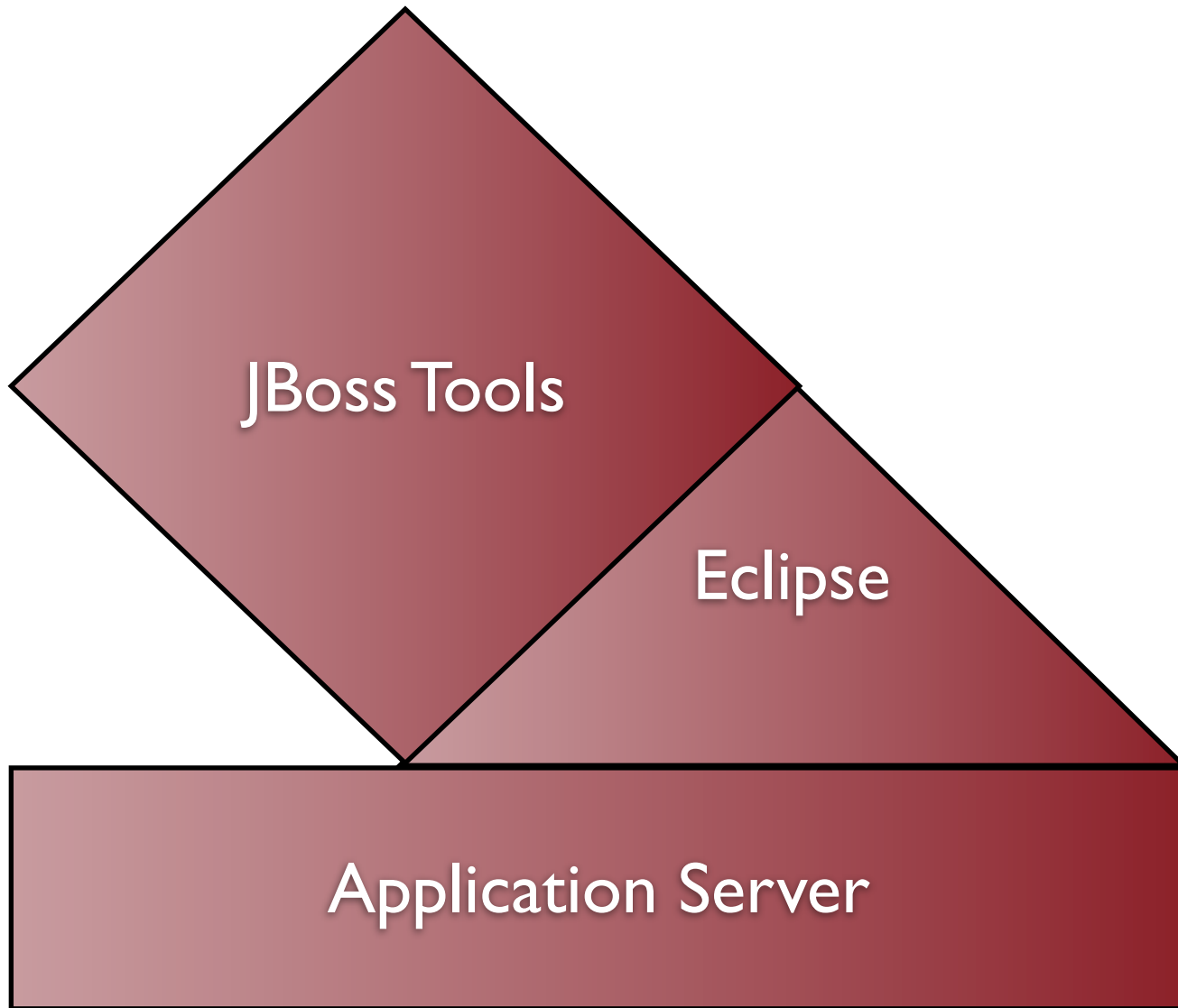
Application Server

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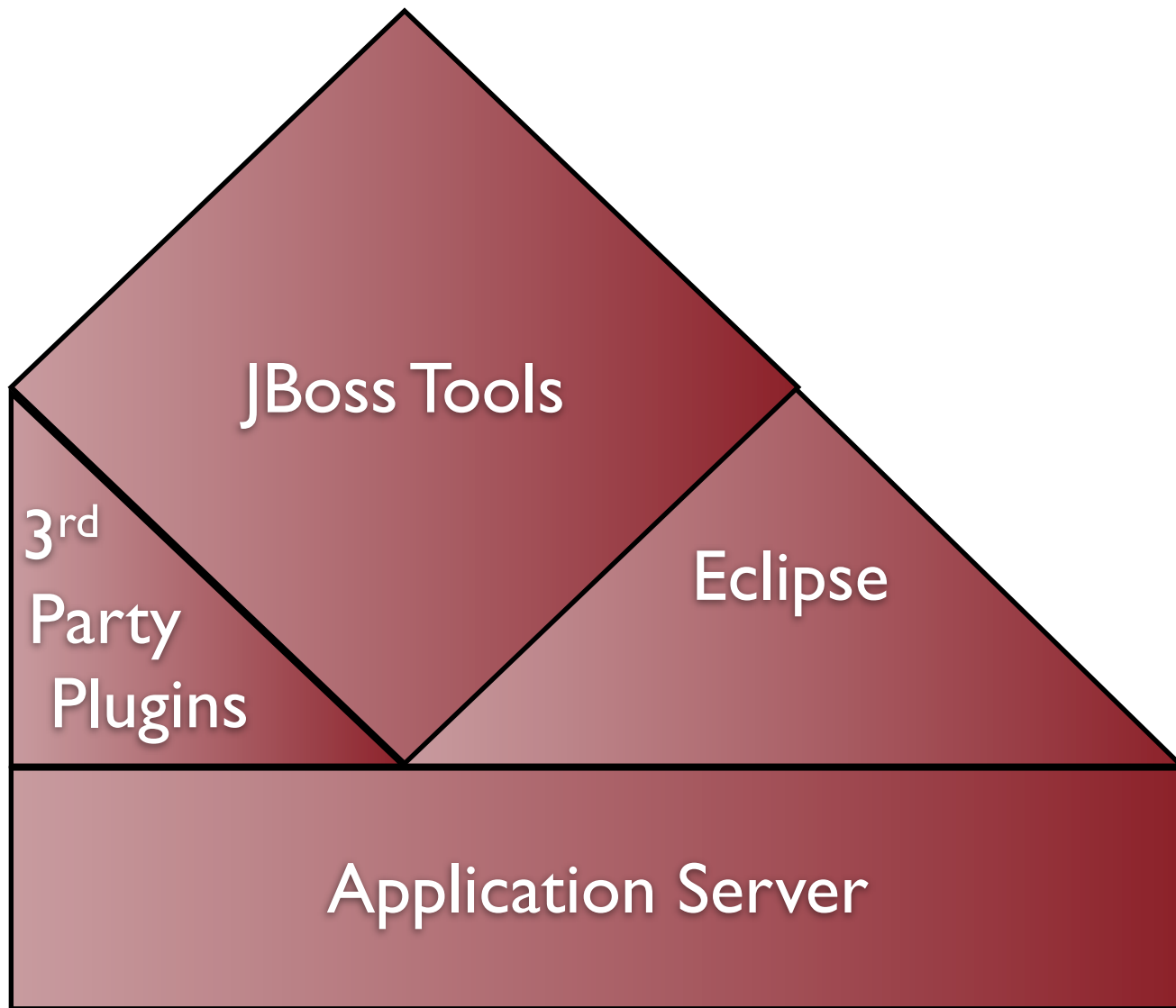
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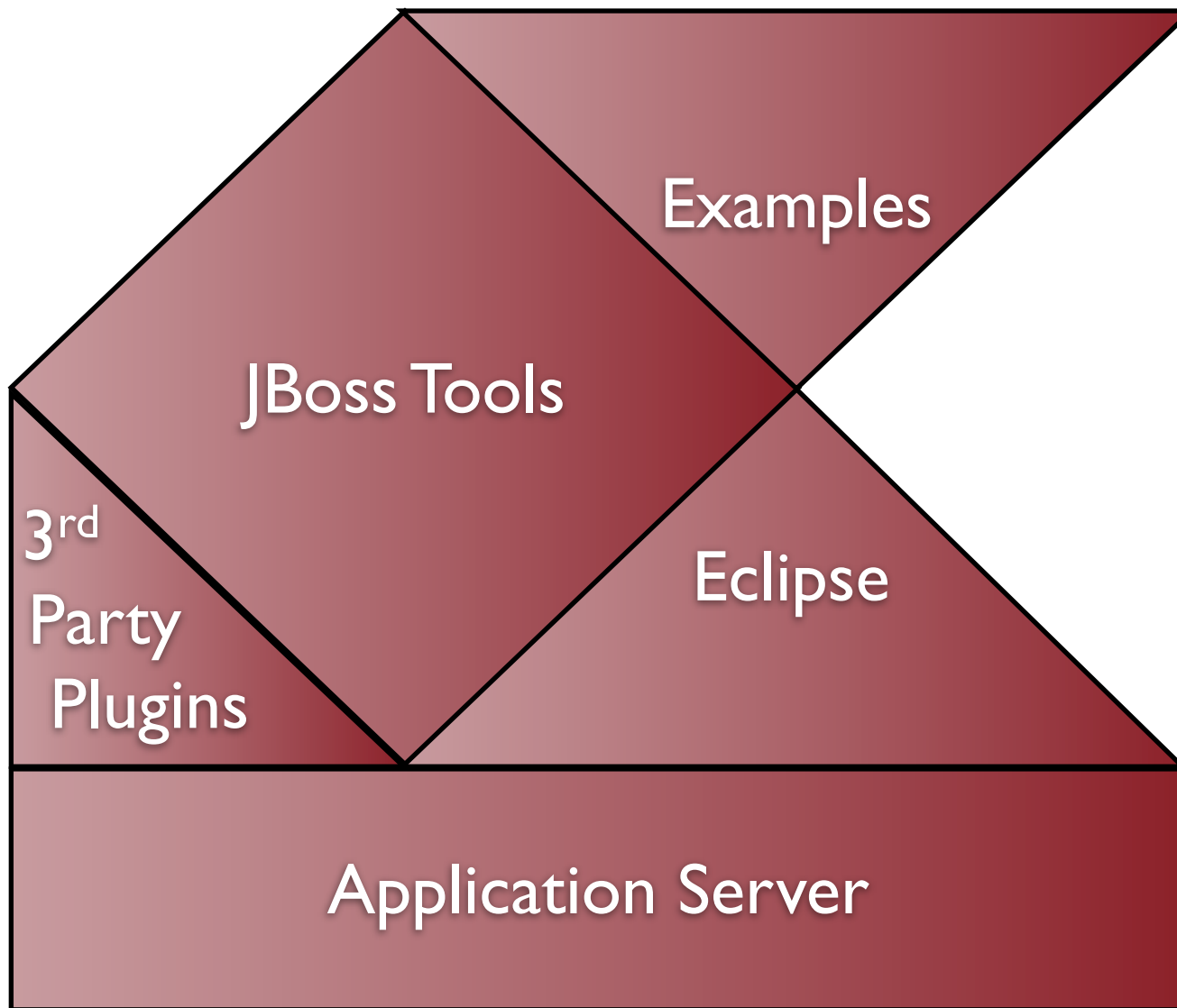


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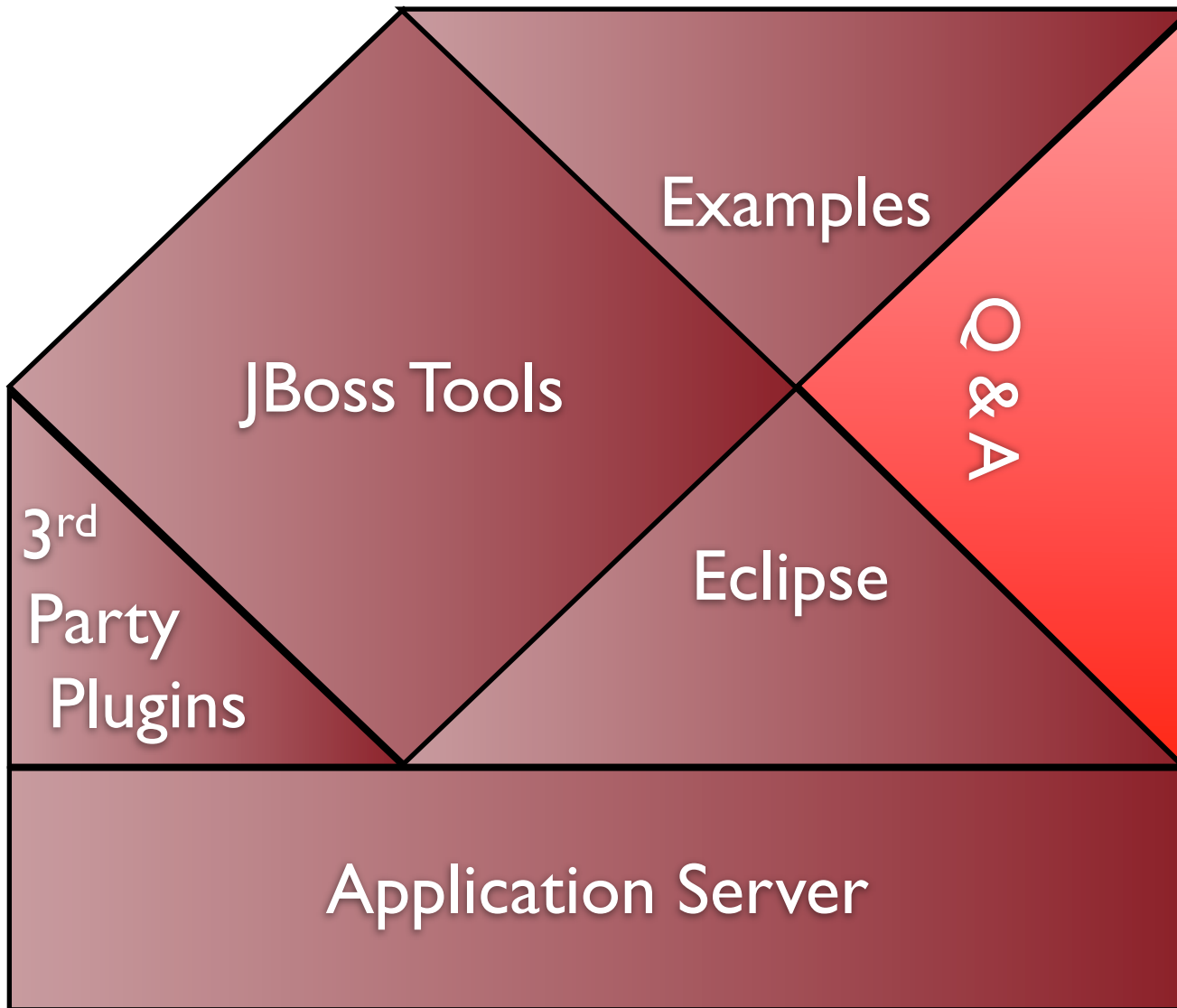


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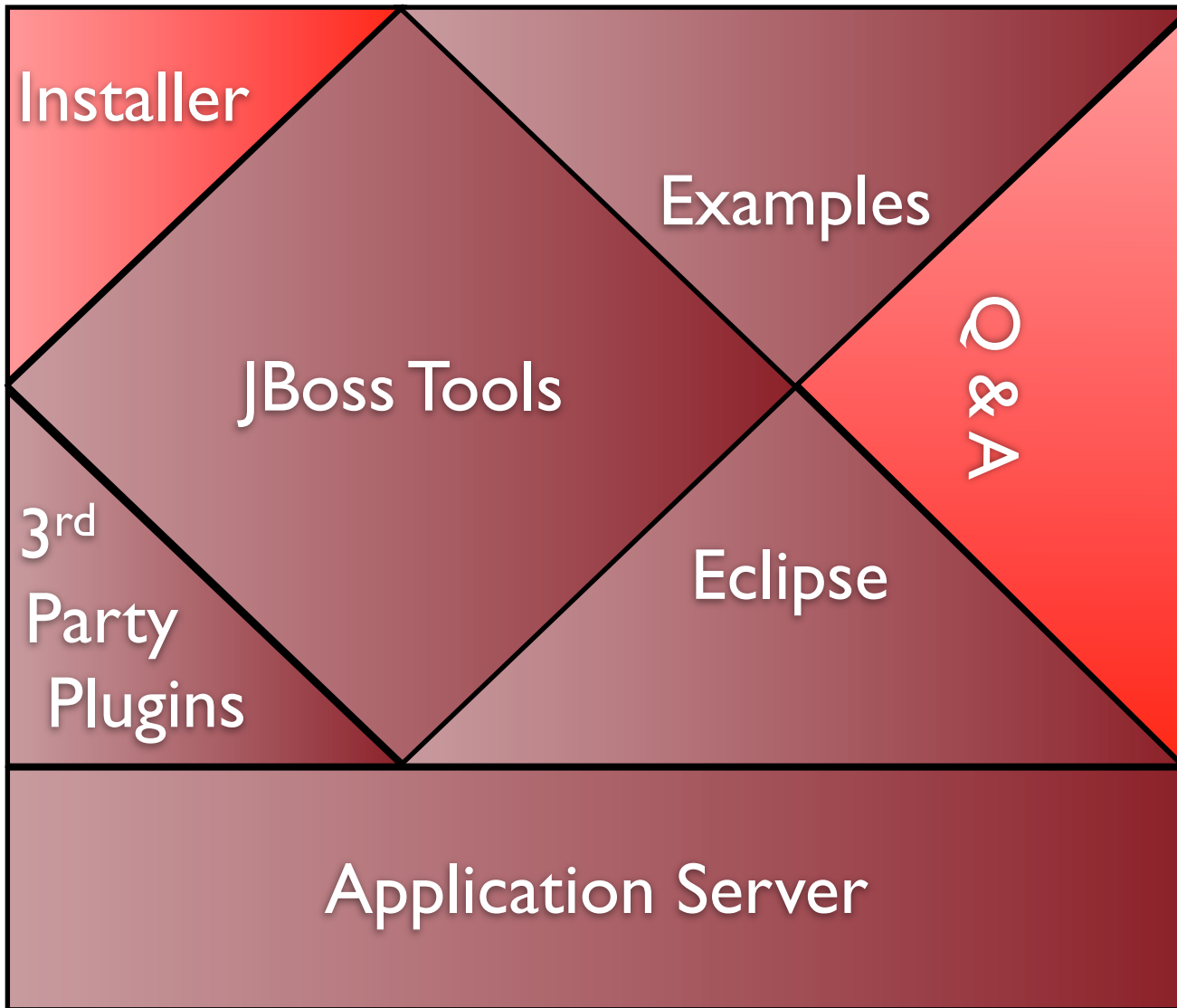


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# Free!

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  by Red Hat

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4.5.0 GA

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Application Server



# 99\$

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EAP  
4.x

EAP  
5.x

AS 4

AS 5

AS 6

Tom  
cat

...

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# How to get it ?

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<http://devstudio.jboss.com>

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# <http://devstudio.jboss.com>

- JBoss Developer Studio
  - “Just” the IDE/Tooling
  - **Free** - Just need to register!
- JBoss Developer Studio Portfolio Edition
  - IDE/Tooling bundled with EAP
  - Access to Red Hat Linux Enterprise Edition & JBoss Middleware Platforms
  - 99\$

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“I wan’t more!”

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“I wan’t more!”

... svn, git, findbugs,  
maven, spring, testng,  
google gwt, eclEmma, ...

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“It’s Eclipse - Just add the proper updatesite...!”

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“It’s Eclipse - Just add the  
proper updatesite...!”

but...

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# Mo'Plugins Mo'Problems!

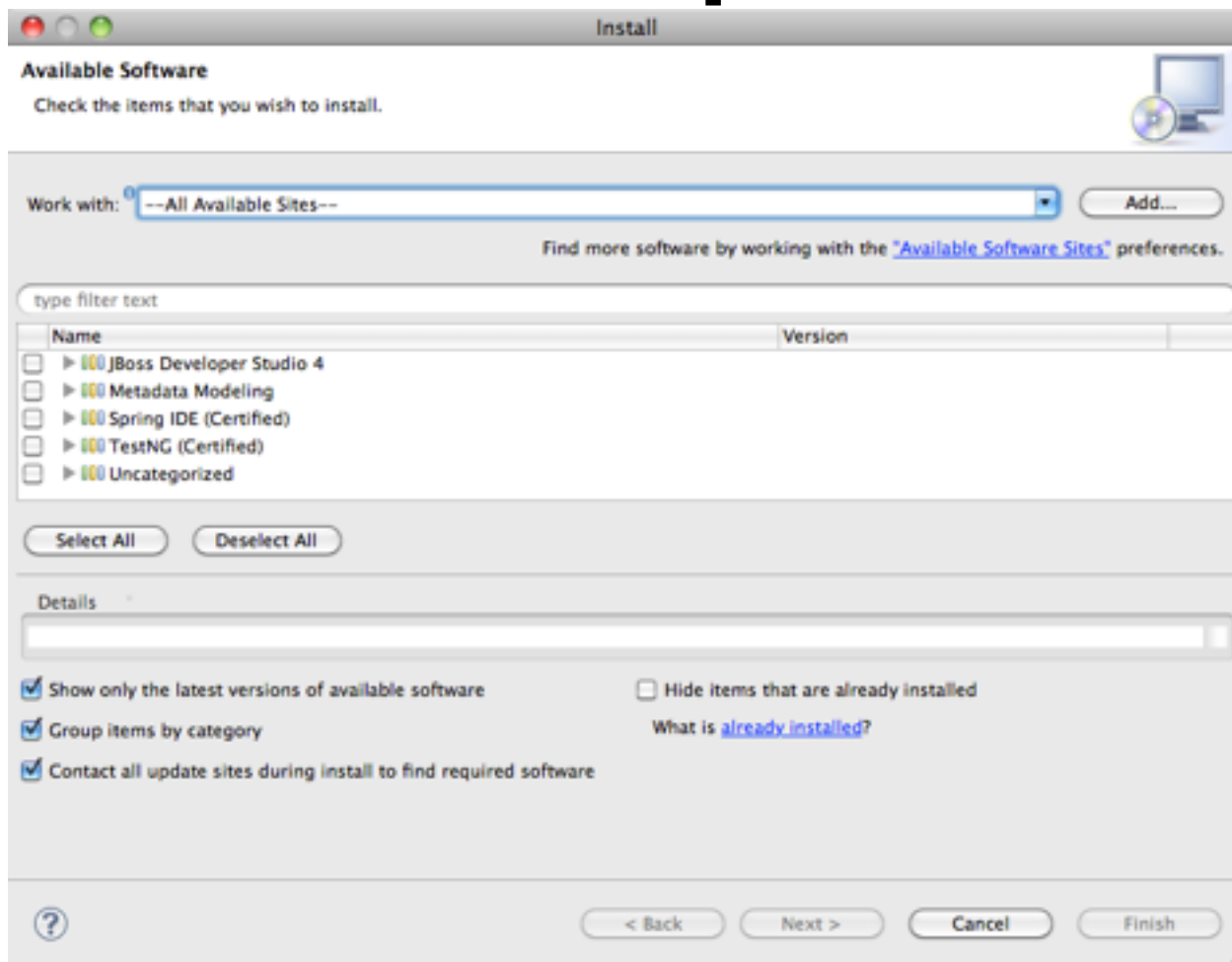
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# Certified Update Sites



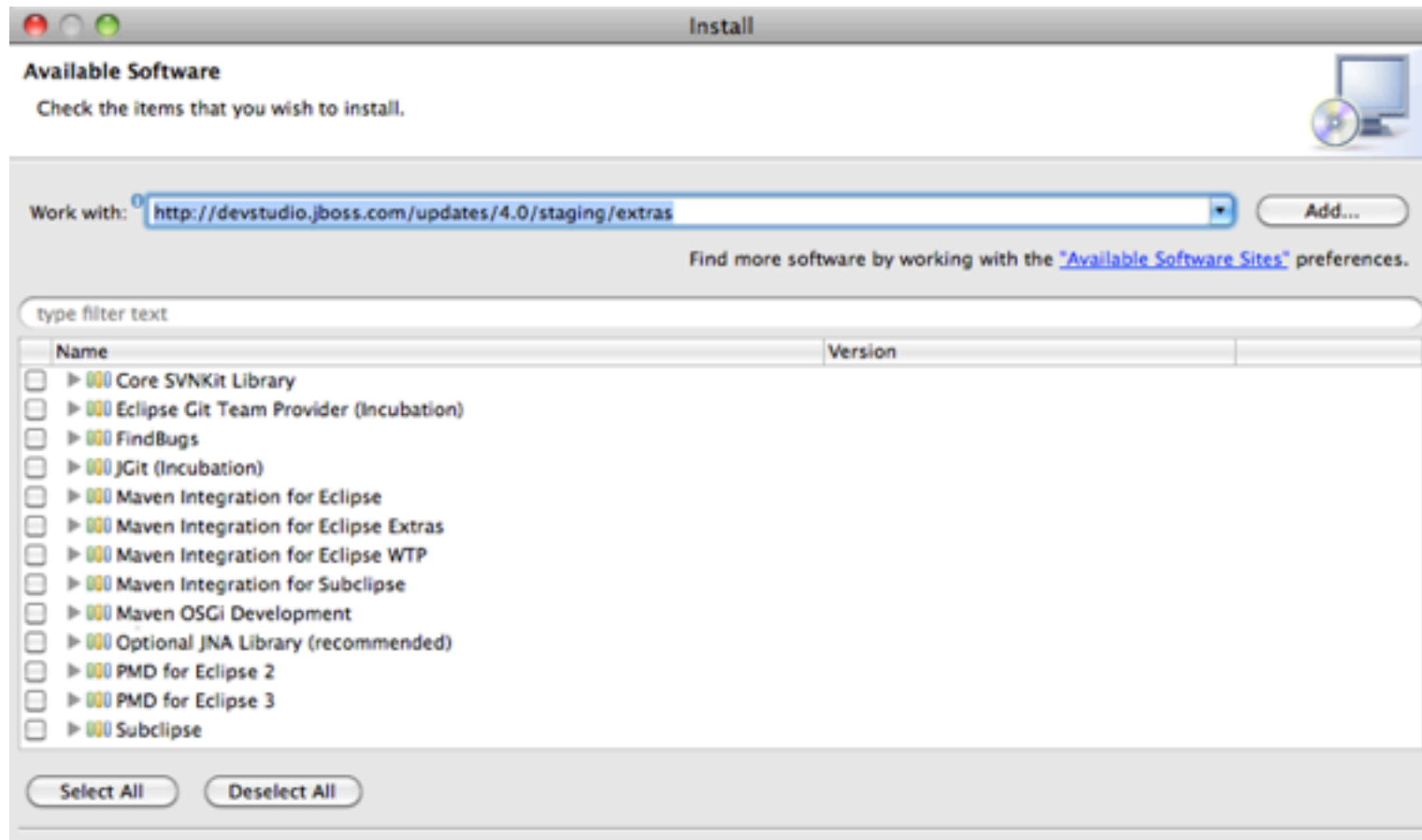
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# Coming Soon...



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# Install

## Available Software

Check the items that you wish to install.



Work with:

Add...

Find more software by working with the ["Available Software Sites"](#) preferences.

type filter text

<input type="checkbox"/>	Name	Version
<input type="checkbox"/>	▶  Core SVNKit Library	
<input type="checkbox"/>	▶  Eclipse Git Team Provider (Incubation)	
<input type="checkbox"/>	▶  FindBugs	
<input type="checkbox"/>	▶  JGit (Incubation)	
<input type="checkbox"/>	▶  Maven Integration for Eclipse	
<input type="checkbox"/>	▶  Maven Integration for Eclipse Extras	
<input type="checkbox"/>	▶  Maven Integration for Eclipse WTP	
<input type="checkbox"/>	▶  Maven Integration for Subclipse	
<input type="checkbox"/>	▶  Maven OSGi Development	
<input type="checkbox"/>	▶  Optional JNA Library (recommended)	
<input type="checkbox"/>	▶  PMD for Eclipse 2	
<input type="checkbox"/>	▶  PMD for Eclipse 3	
<input type="checkbox"/>	▶  Subclipse	

Select All

Deselect All

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# Let's Go Be Effective!

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# Mo'Application Servers Mo'Setup!

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# Mo' Application Servers No' Setup!

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# Runtime Detection

The screenshot shows the Eclipse IDE Preferences dialog, titled "Preferences". The left sidebar contains a tree view of preference categories, with "JBoss Tools Runtime Detection" selected. The main area is titled "JBoss Tools Runtime Detection" and contains a text box explaining that paths on the list are scanned for runtimes. Below this is a table with two columns: "Path" and "Every start". The first row contains the path "/Users/max/jboss-runtimes" and a checked checkbox. To the right of the table are buttons for "Add", "Edit...", "Remove", and "Search...". Below the table is a section titled "Available runtime detectors" with a table listing detectors: JBoss AS, Seam, Drools, and jBPM, each with a checked checkbox and a "Link" button.

type filter text

- ▶ General
- ▶ Ant
- ▶ Data Management
- ▶ Drools
  - Drools Task
  - FreeMarker Editor
  - Guvnor
- ▶ Help
  - HQL editor
- ▶ Install/Update
- ▶ Java
- ▶ Java EE
- ▶ Java Persistence
- ▶ JavaScript
- ▶ JBoss jBPM
- ▼ JBoss Tools
  - ESB Validator
  - JBoss ESB Runtimes
  - JBoss Maven Integration
  - JBoss Portlet
  - JBoss Tools Runtime Deti
  - Project Examples
  - Usage Reporting
  - ▶ Web
- ▶ Maven
  - ModeShape
- ▶ Plug-in Development

**JBoss Tools Runtime Detection**

Each path on this list will be automatically scanned for runtimes when a new workspace is created or if selected at every Eclipse startup. Click Edit to configure rules/filters for the search.

Path	Every start
/Users/max/jboss-runtimes	<input checked="" type="checkbox"/>

Add  
Edit...  
Remove  
Search...

Available runtime detectors

Type	Link
<input checked="" type="checkbox"/> JBoss AS	<a href="#">Link</a>
<input checked="" type="checkbox"/> Seam	<a href="#">Link</a>
<input checked="" type="checkbox"/> Drools	<a href="#">Link</a>
<input checked="" type="checkbox"/> jBPM	<a href="#">Link</a>

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# Preferences

type filter text

- ▶ General
- ▶ Ant
- ▶ Data Management
- ▶ Drools
  - Drools Task
  - FreeMarker Editor
  - Guvnor
- ▶ Help
  - HQL editor
- ▶ Install/Update
- ▶ Java
- ▶ Java EE
- ▶ Java Persistence
- ▶ JavaScript
- ▶ JBoss JBPM
- ▼ JBoss Tools
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  - JBoss ES B Runtimes
  - JBoss Maven Integration
  - JBoss Portlet
  - JBoss Tools Runtime Det
  - Project Examples
  - Usage Reporting
  - ▶ Web
- ▶ Maven
- ModeShape
- ▶ Plug-in Development

## JBoss Tools Runtime Detection



Each path on this list will be automatically scanned for runtimes when a new workspace is created or if selected at every Eclipse startup. Click Edit to configure rules/filters for the search.

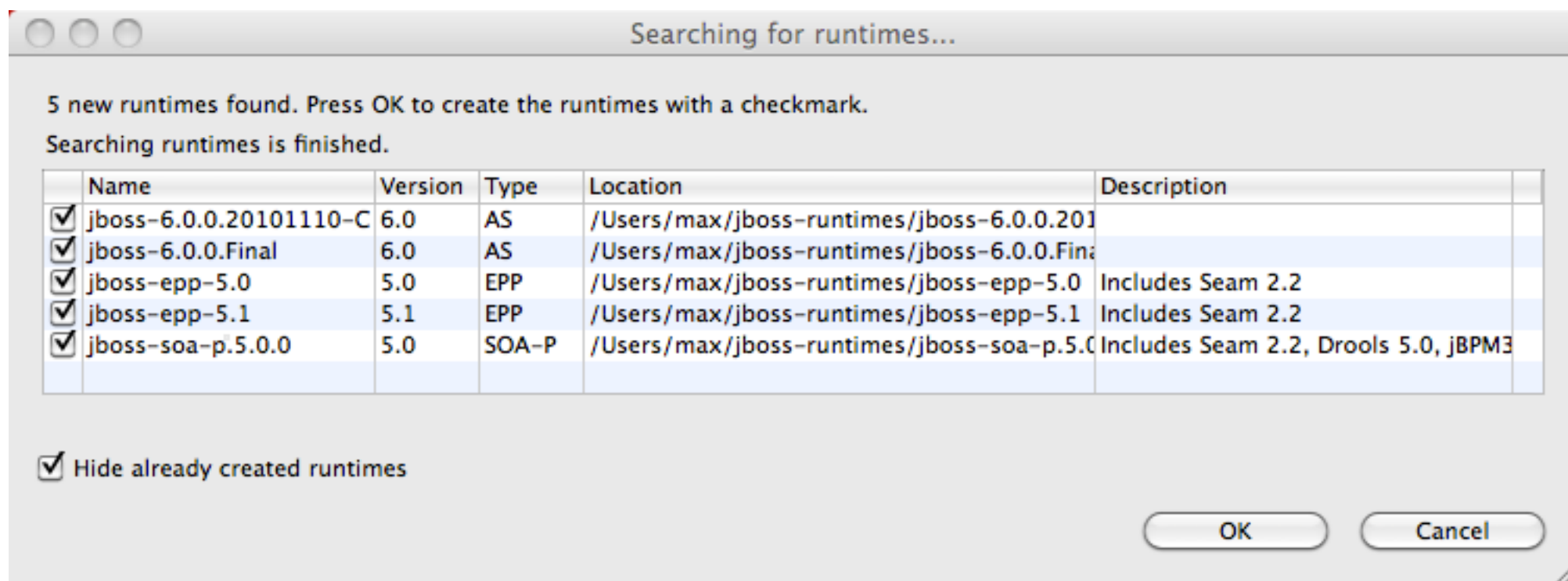
Path	Every start
/Users/max/jboss-runtimes	<input checked="" type="checkbox"/>

- Add
- Edit...
- Remove
- Search...

### Available runtime detectors

Type	Link
<input checked="" type="checkbox"/> JBoss AS	<a href="#">Link</a>
<input checked="" type="checkbox"/> Seam	<a href="#">Link</a>
<input checked="" type="checkbox"/> Drools	<a href="#">Link</a>
<input checked="" type="checkbox"/> jBPM	<a href="#">Link</a>

# Runtime Detection



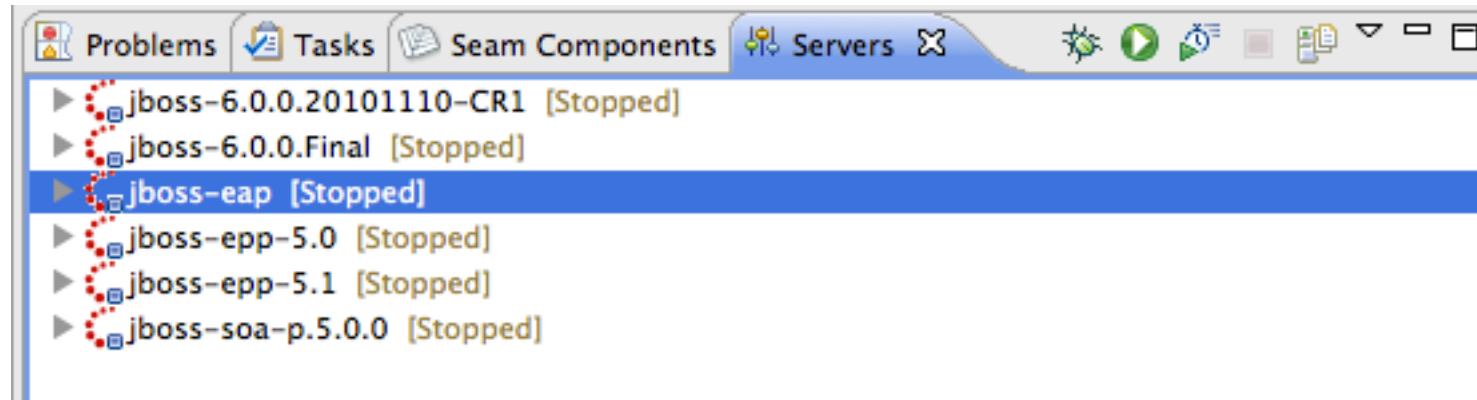
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# Runtime Detection



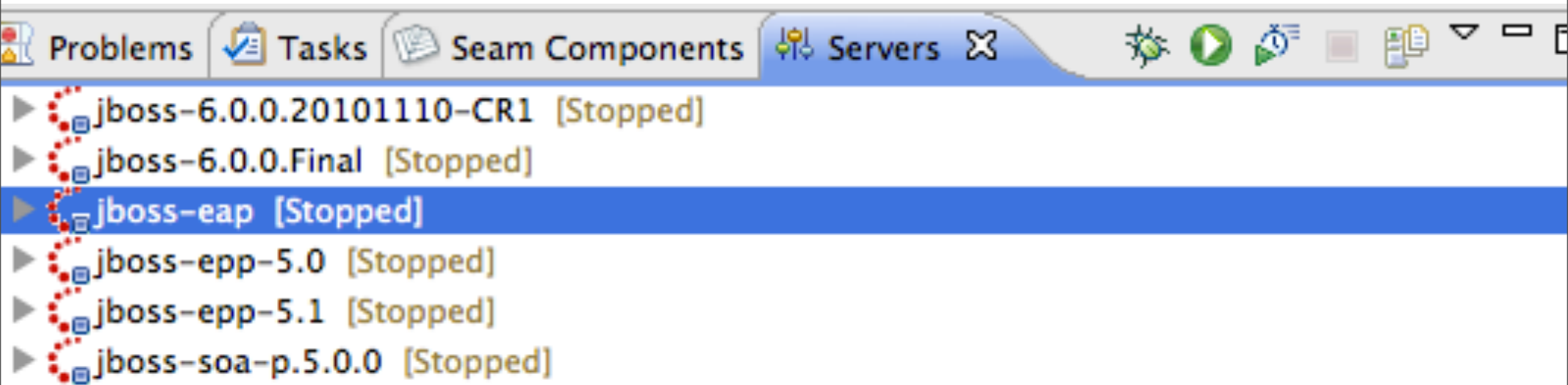
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# Runtime Detection



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# Effective Learning ?

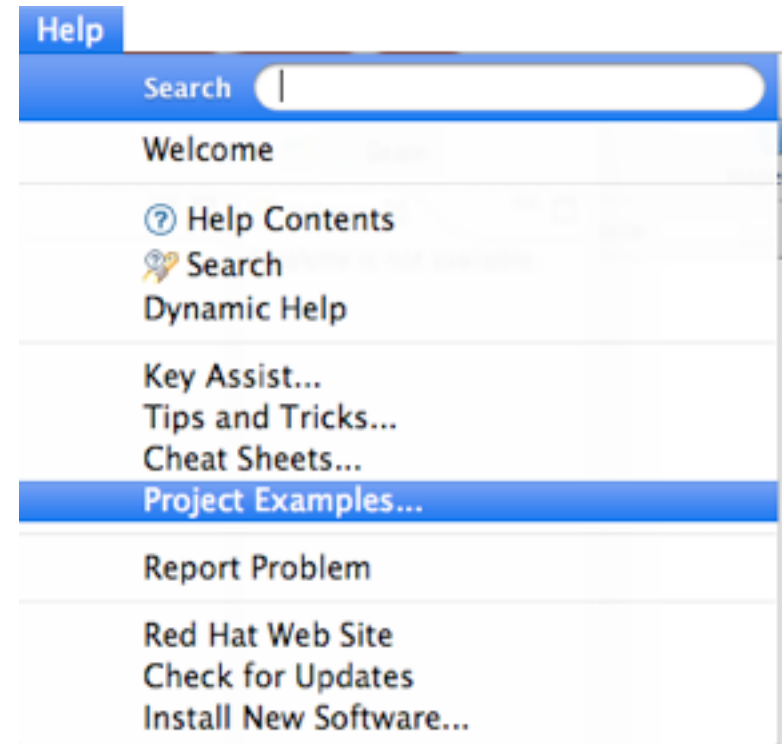
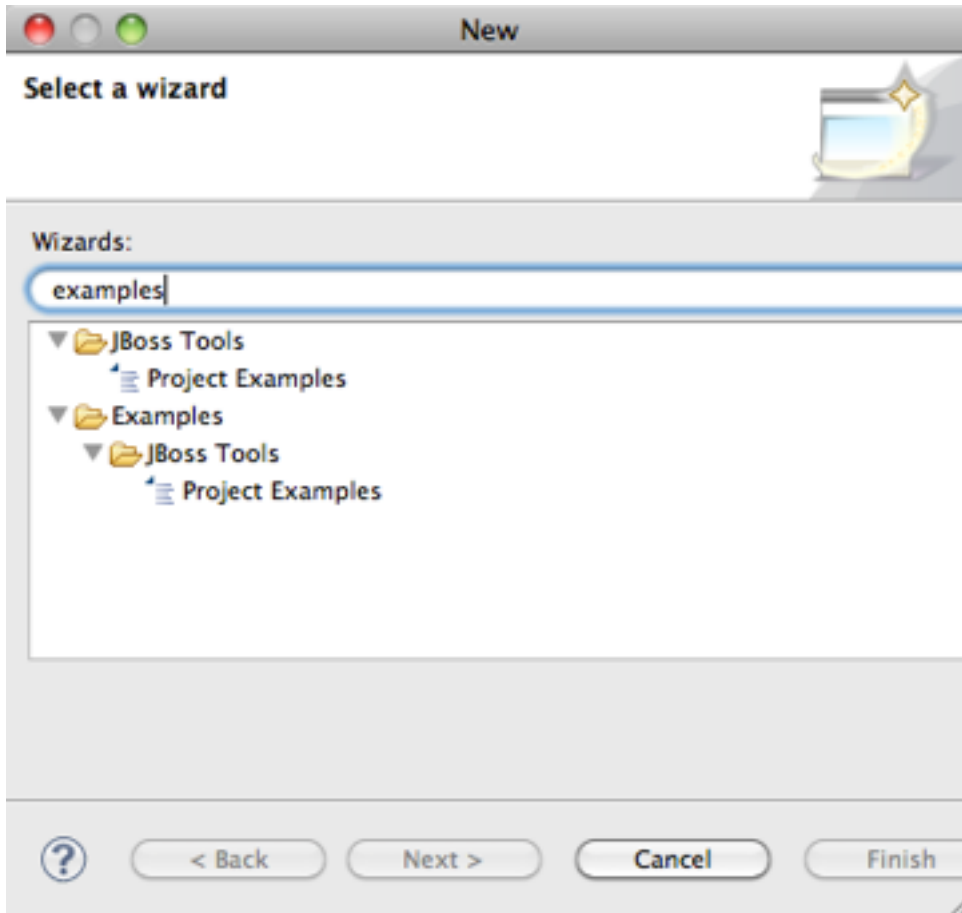
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# Project Examples



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# Project Examples

The screenshot displays the JBoss Developer Studio interface. The main editor shows the code for `AuthenticatorAction.java` in the package `org.jboss.seam.example.booking`. The code is as follows:

```
package org.jboss.seam.example.booking;

import static org.jboss.seam.ScopeType.SESSION;

@Stateless
@Name("authenticator")
public class AuthenticatorAction
    implements Authenticator
{
    @PersistenceContext
    private EntityManager em;

    @In(required=false)
    @Out(required=false, scope = SESSION)
    private User user;

    public boolean authenticate()
    {
        List results = em.createQuery("select u from User u where u.username = :username").getResultList();

        if (results.size()==0) {
            return false;
        } else {
            user = (User) results.get(0);
            return true;
        }
    }
}
```

The left sidebar shows the project structure for `booking22`, including `AuthenticatorAction.java`. The right sidebar shows a table of contents for the project overview:

Section	Action
Introduction	
Open the Seam perspective	
Overview of the booking example	
The application uses six session beans for to implement the business logic for the listed features. Three entity beans implement the application's persistent domain model.	
AuthenticatorAction provides the login authentication logic.	▶ ↻
BookingListAction retrieves existing bookings for the currently logged in user.	▶ ↻
ChangePasswordAction updates the password of the currently logged in user.	▶ ↻
HotelBookingAction implements booking and confirmation functionality. This functionality is implemented as a conversation, so this is one of the most interesting classes in the application.	▶ ↻
HotelSearchingAction implements the hotel search functionality.	▶ ↻

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# Beyond Hello World ?

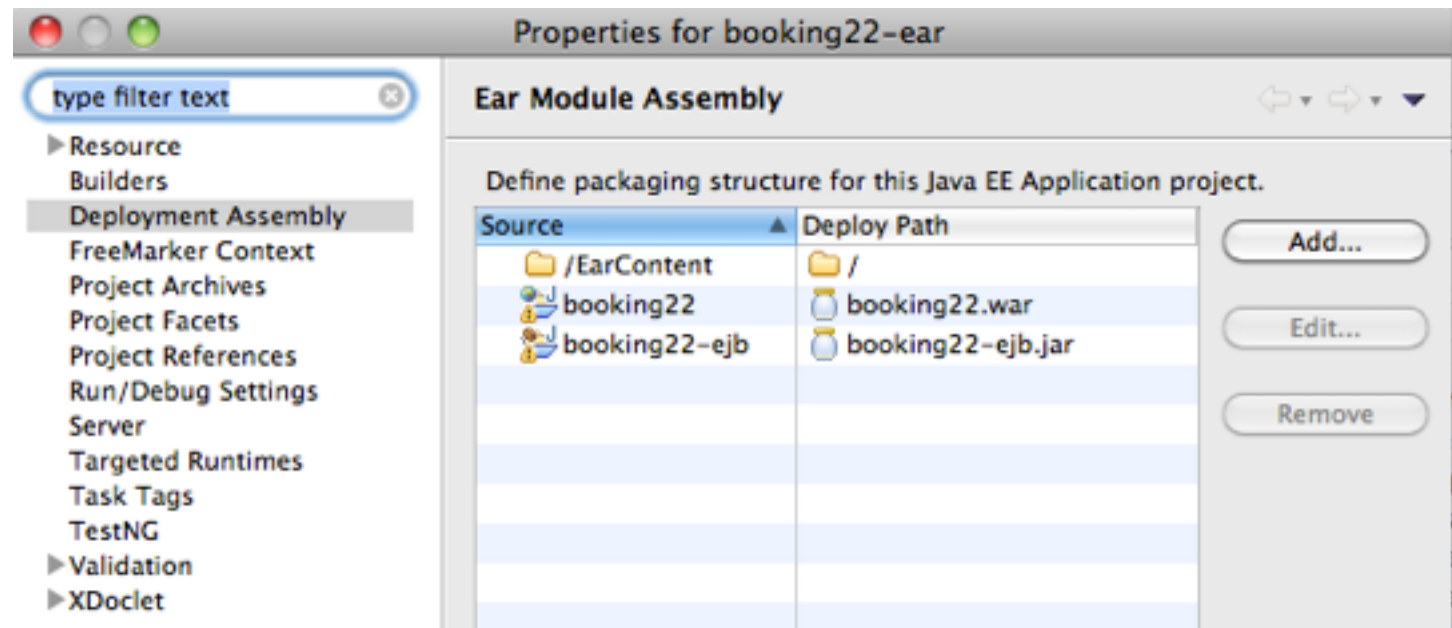
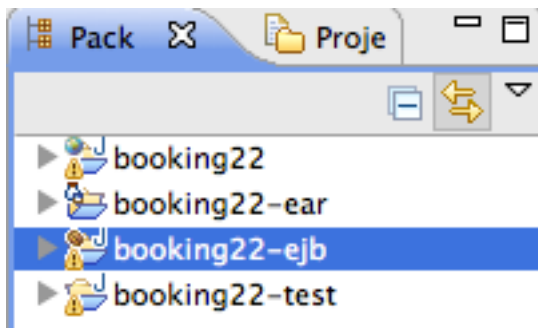
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# Multi-Module Projects



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# Beyond the IDE ?

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# Maven

- Pervasive Build and Dependency Management Tool
- Gives a common language to express project structure and which artifacts a project needs and which it products
- Perfect for examples, sharing, teams, continuous integration, ...
- BUT...

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# Challenge #1

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# Challenge #1

Maven  
Project Model

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# Challenge #1

Eclipse  
Project Model

Maven  
Project Model

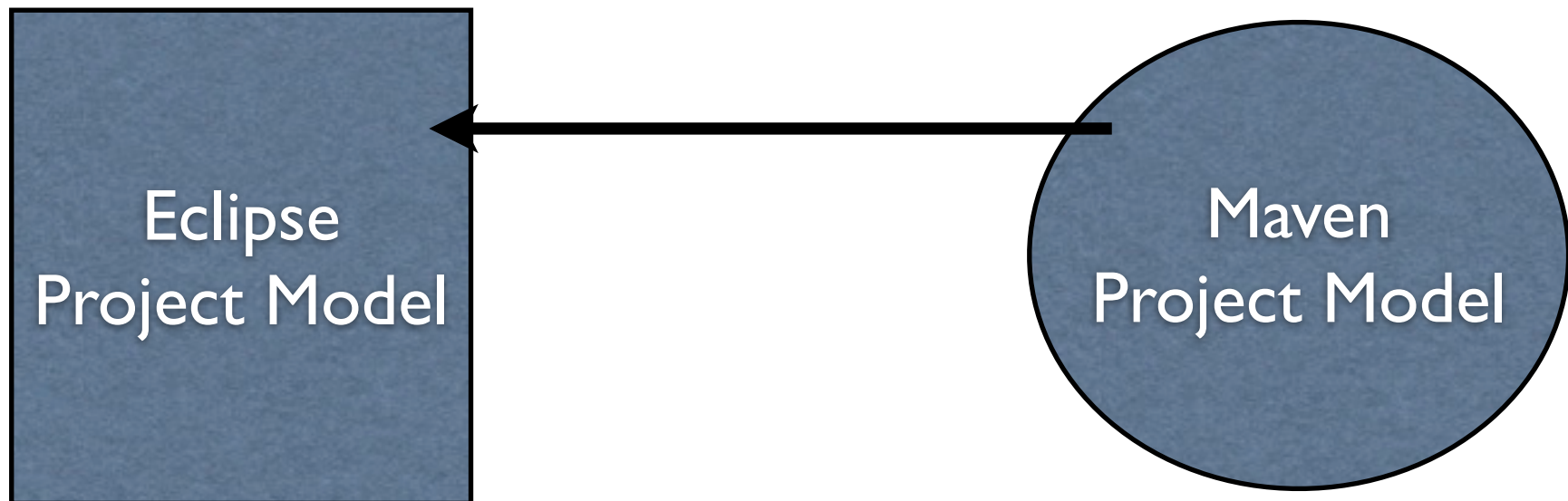
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# Challenge #1



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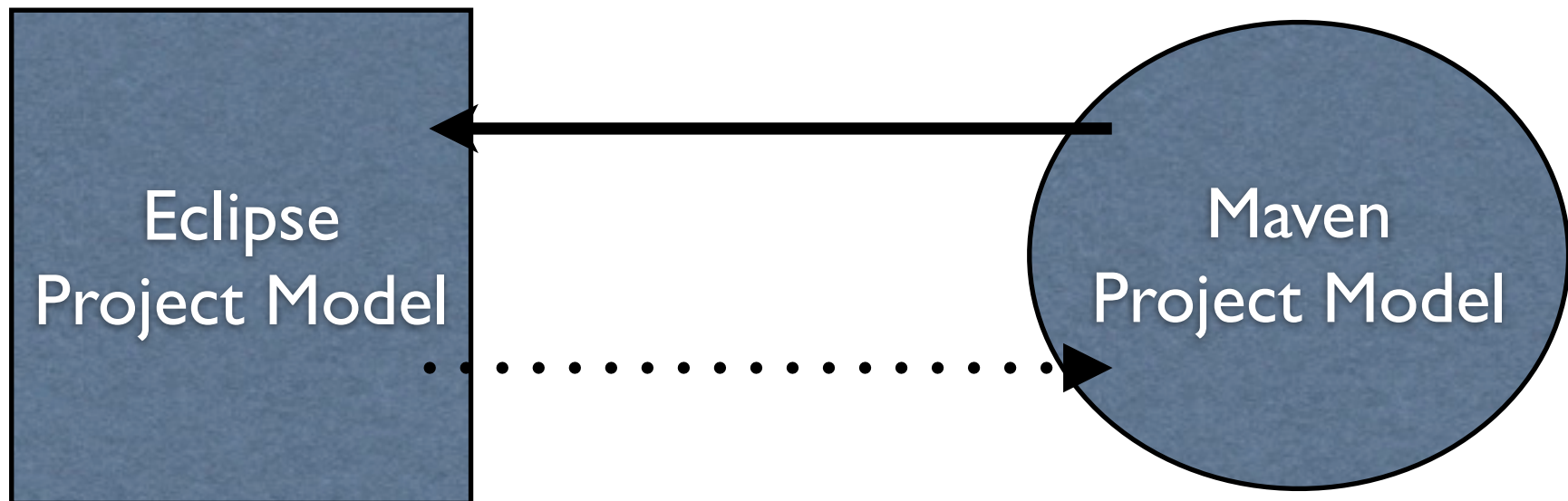
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# Challenge #1



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# m2e

- Maven integration for Eclipse, formerly known as m2eclipse
- Allows for plugins to react and interact with Maven Project Model
- It's (almost) Perfect!

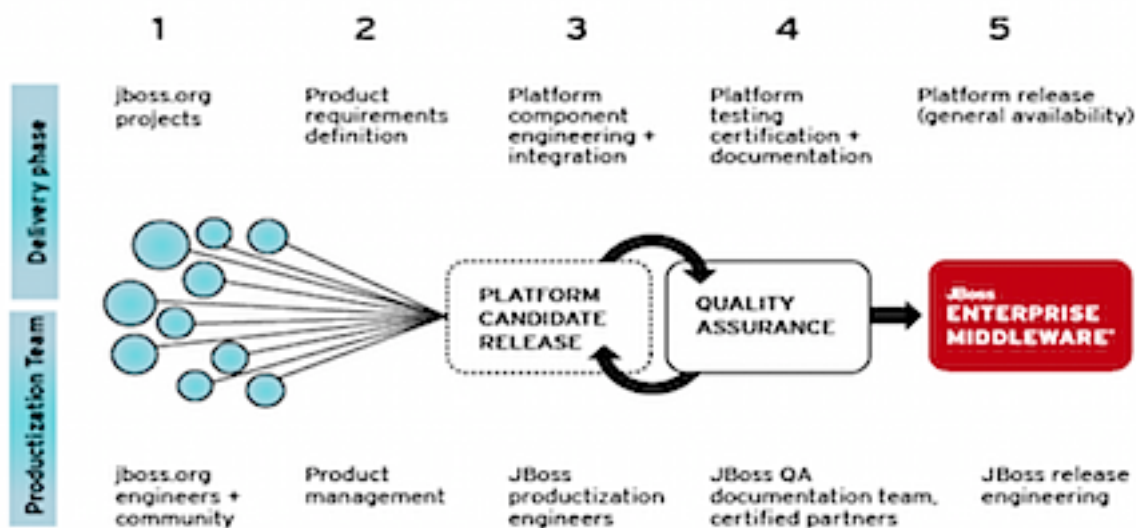
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# Challenge #2



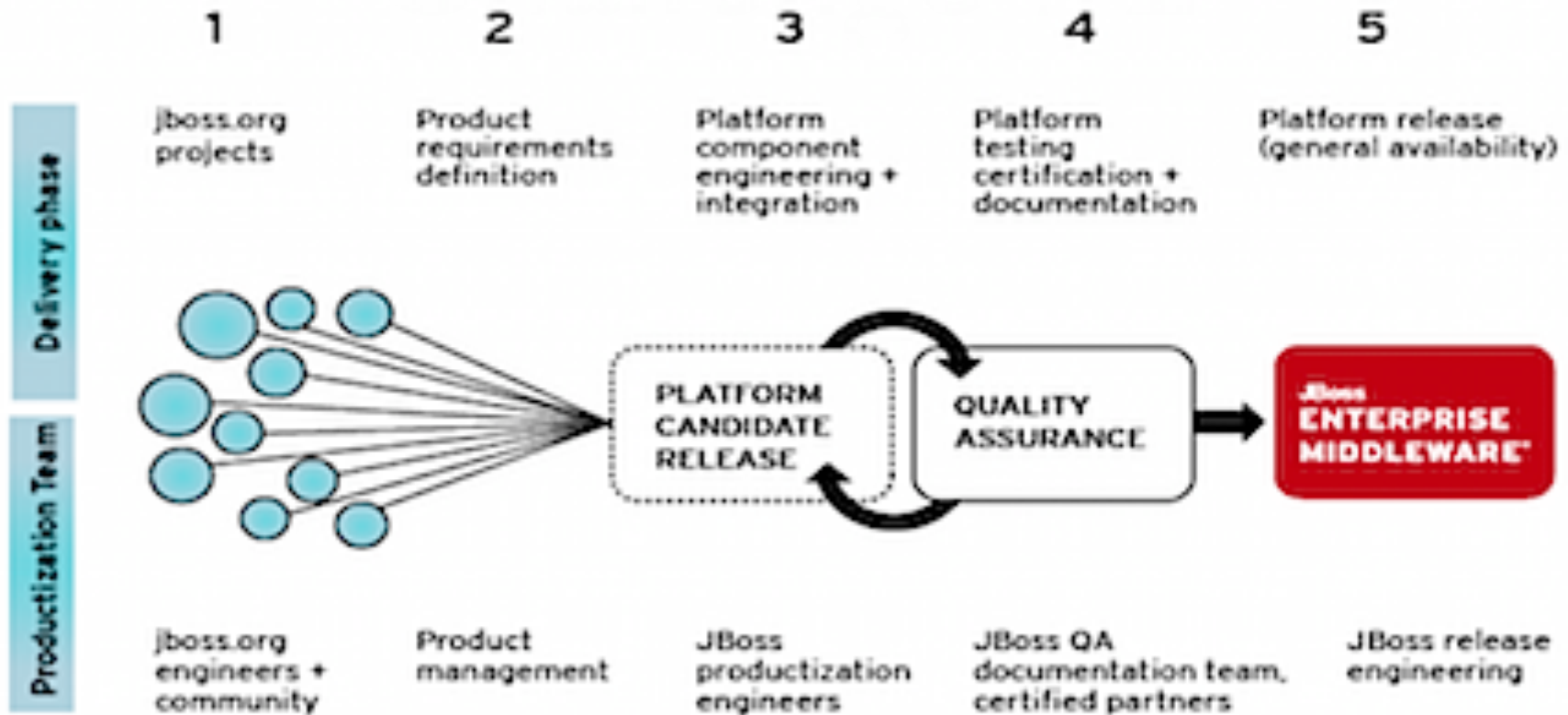
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# Challenge #2



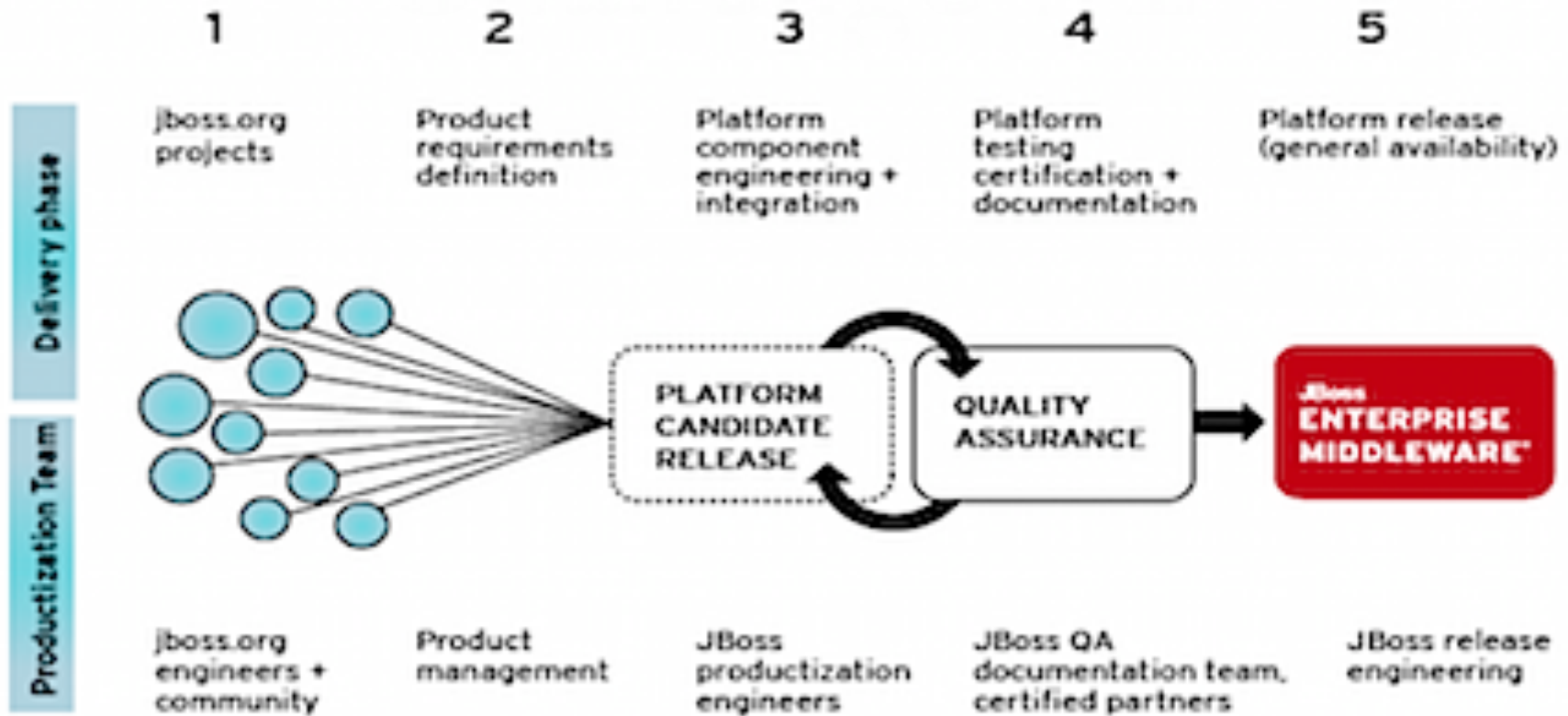
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# Challenge #2



org == com

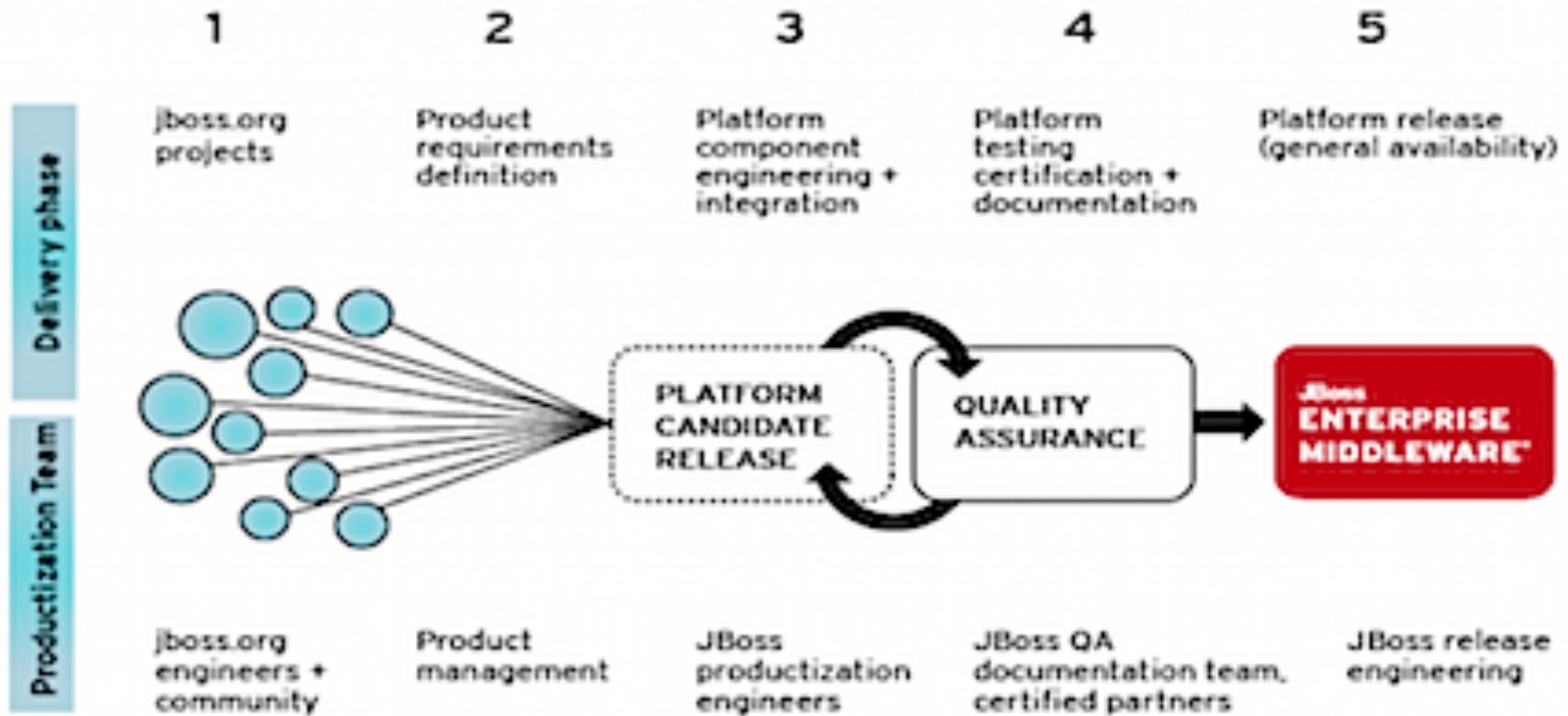
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# Challenge #2



org == com    org ~ = com

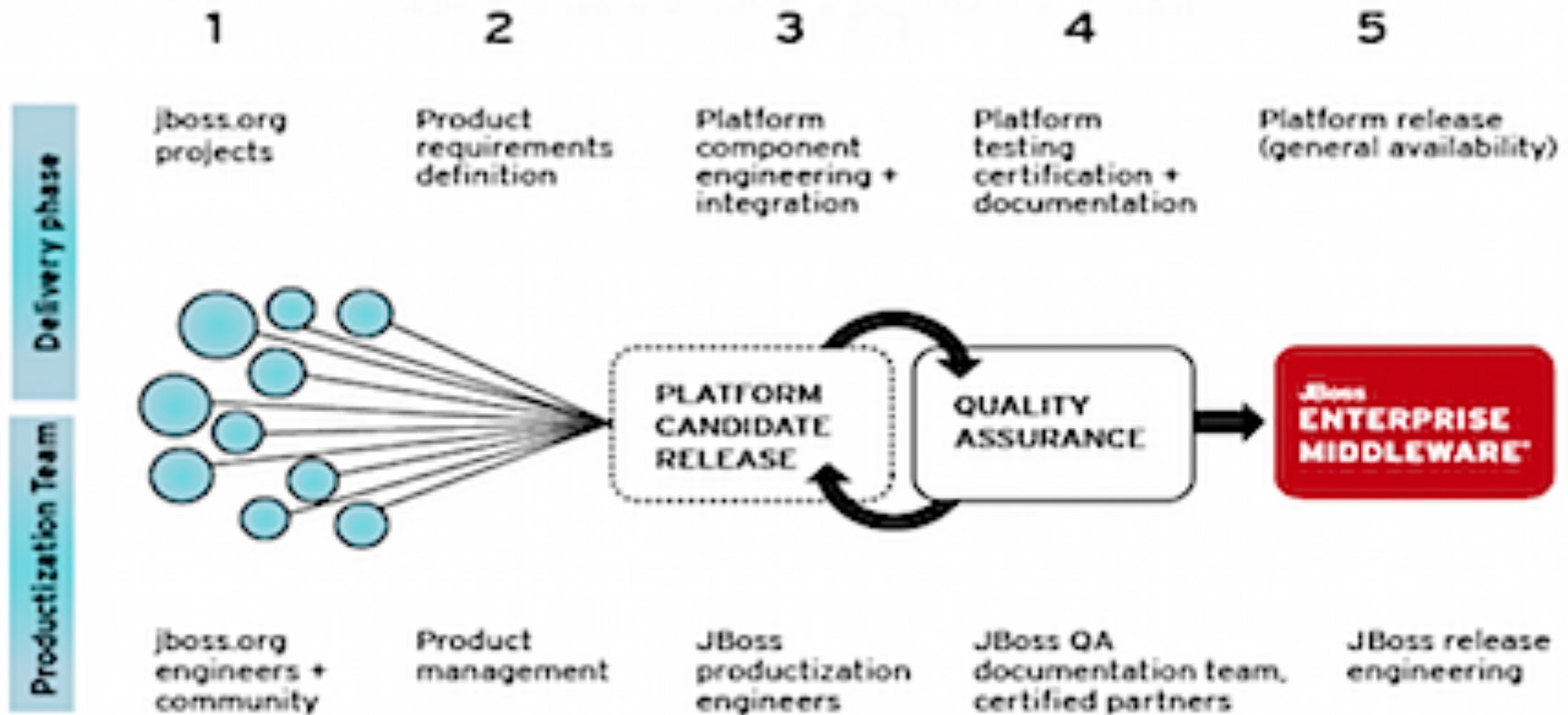
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# Challenge #2



org == com    org ~ = com    org != com

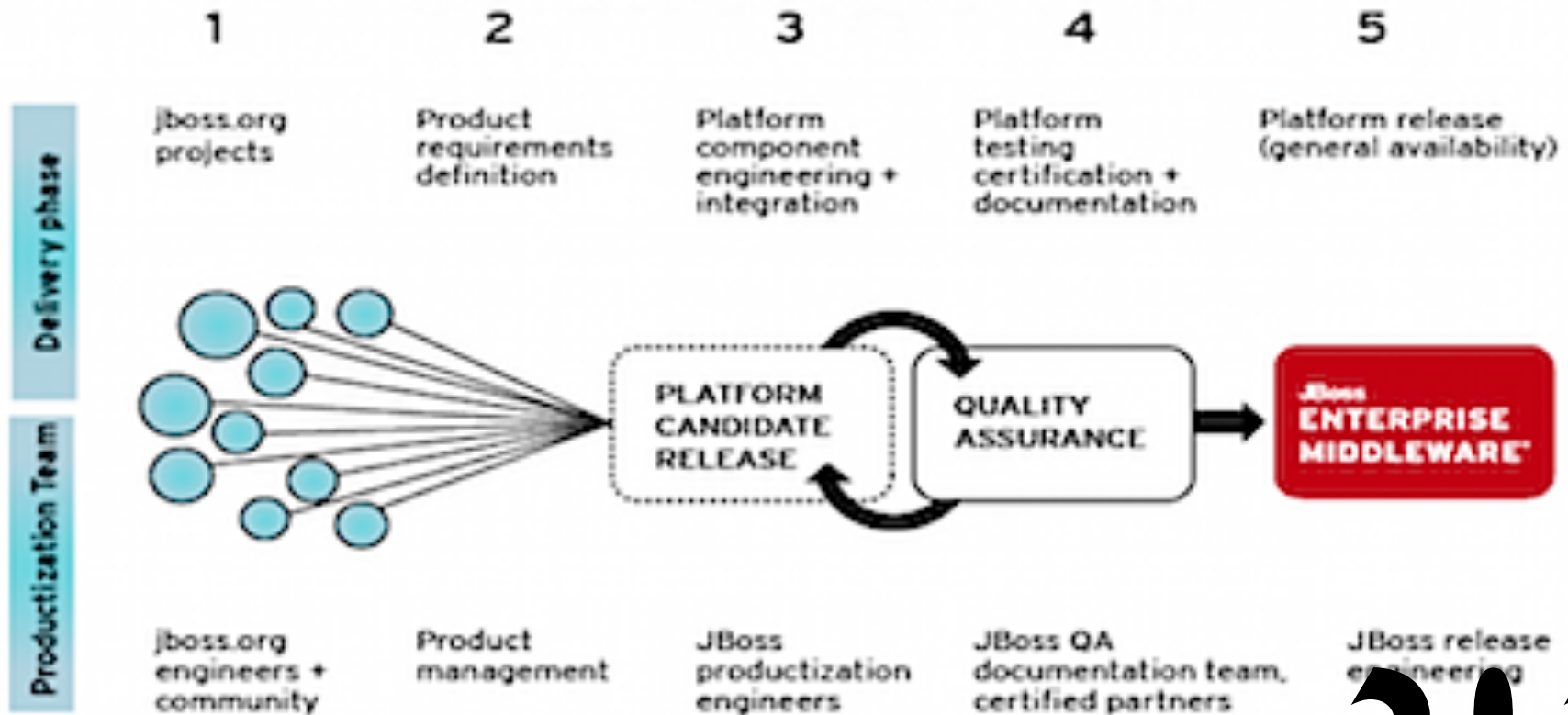
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# Challenge #2



org == com    org ~ = com    org != com

?!?

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# Challenge #2 Explained

pom.xml:

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

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# Challenge #2 Explained

~/.m2/repository

pom.xml:

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

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# Challenge #2 Explained



~/.m2/repository

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```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

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# Challenge #2 Explained

Maven Central

~/.m2/repository

**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

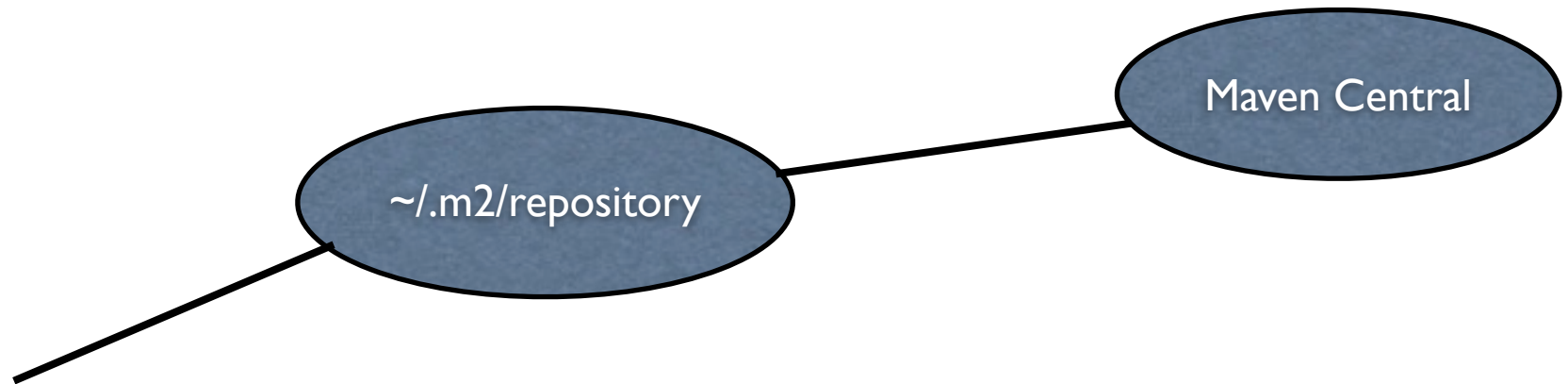
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

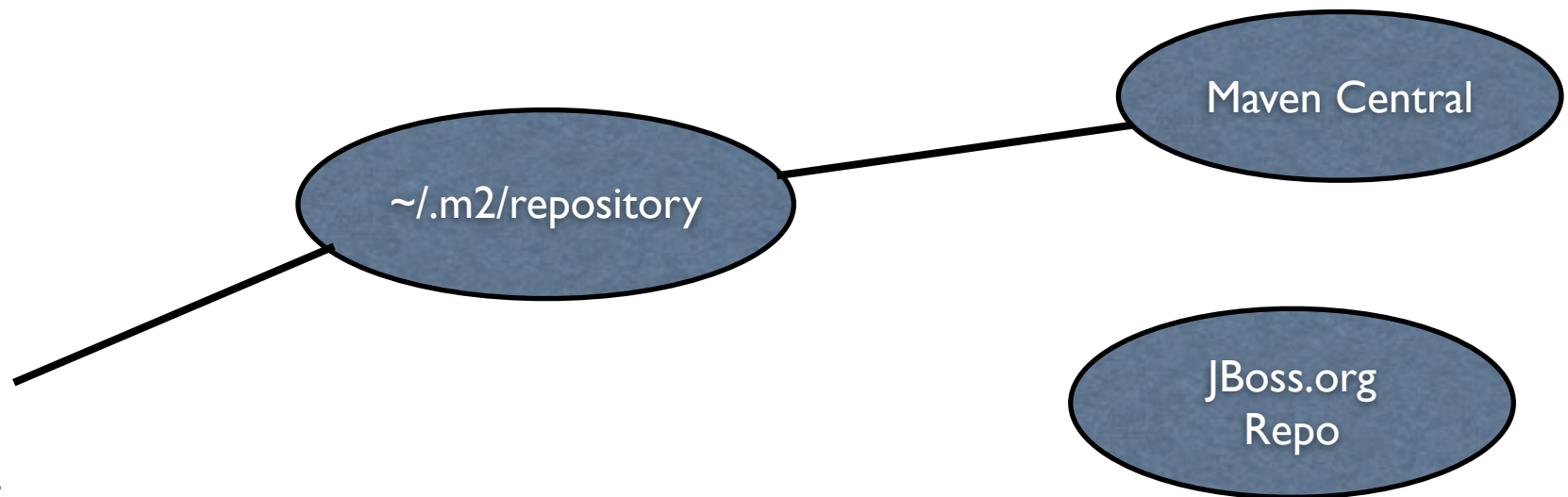
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# Challenge #2 Explained



**pom.xml:**

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<groupId>org.jboss.jbossas.client</groupId>  
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```

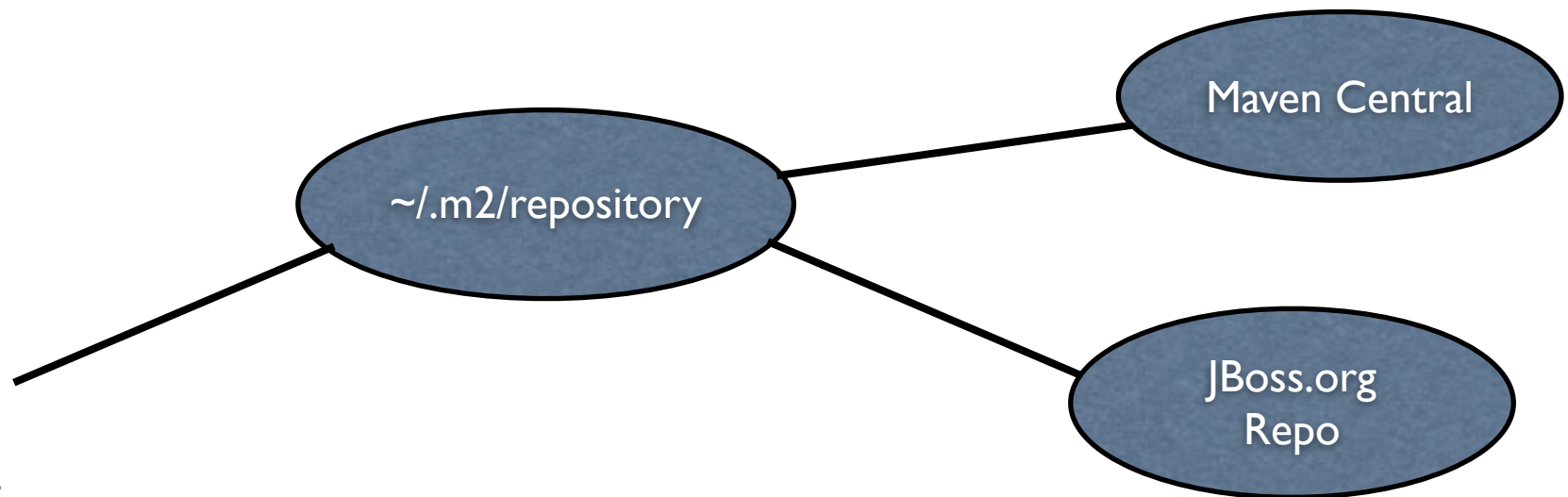
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
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<version>5.1.0</version>
```

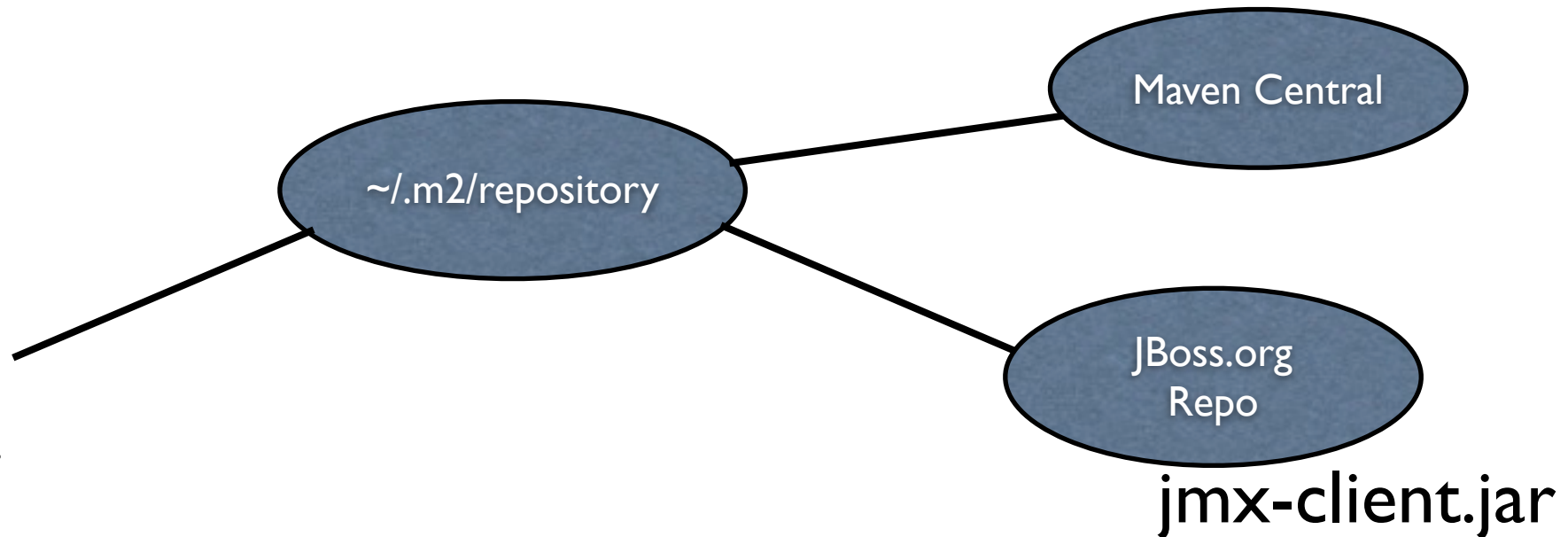
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

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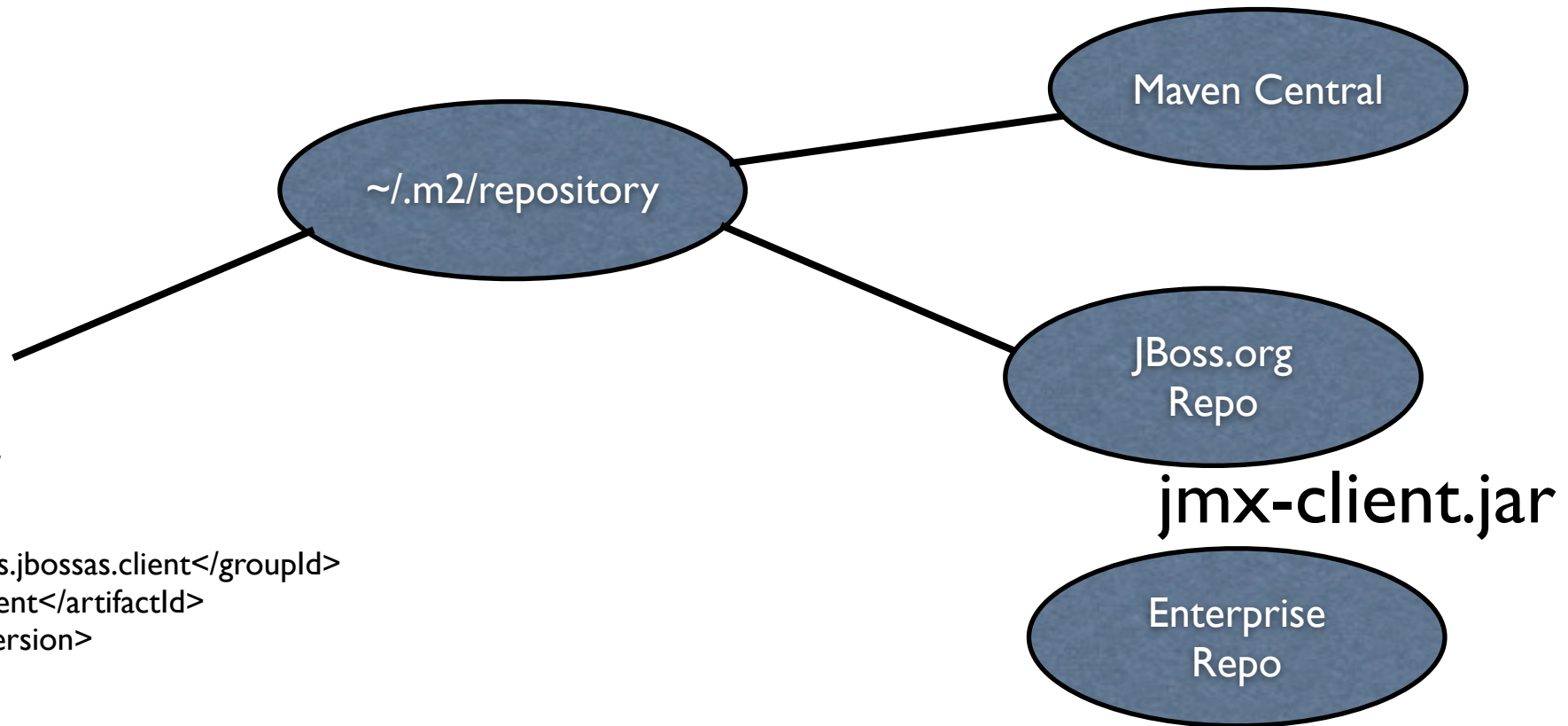
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
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<version>5.1.0</version>
```

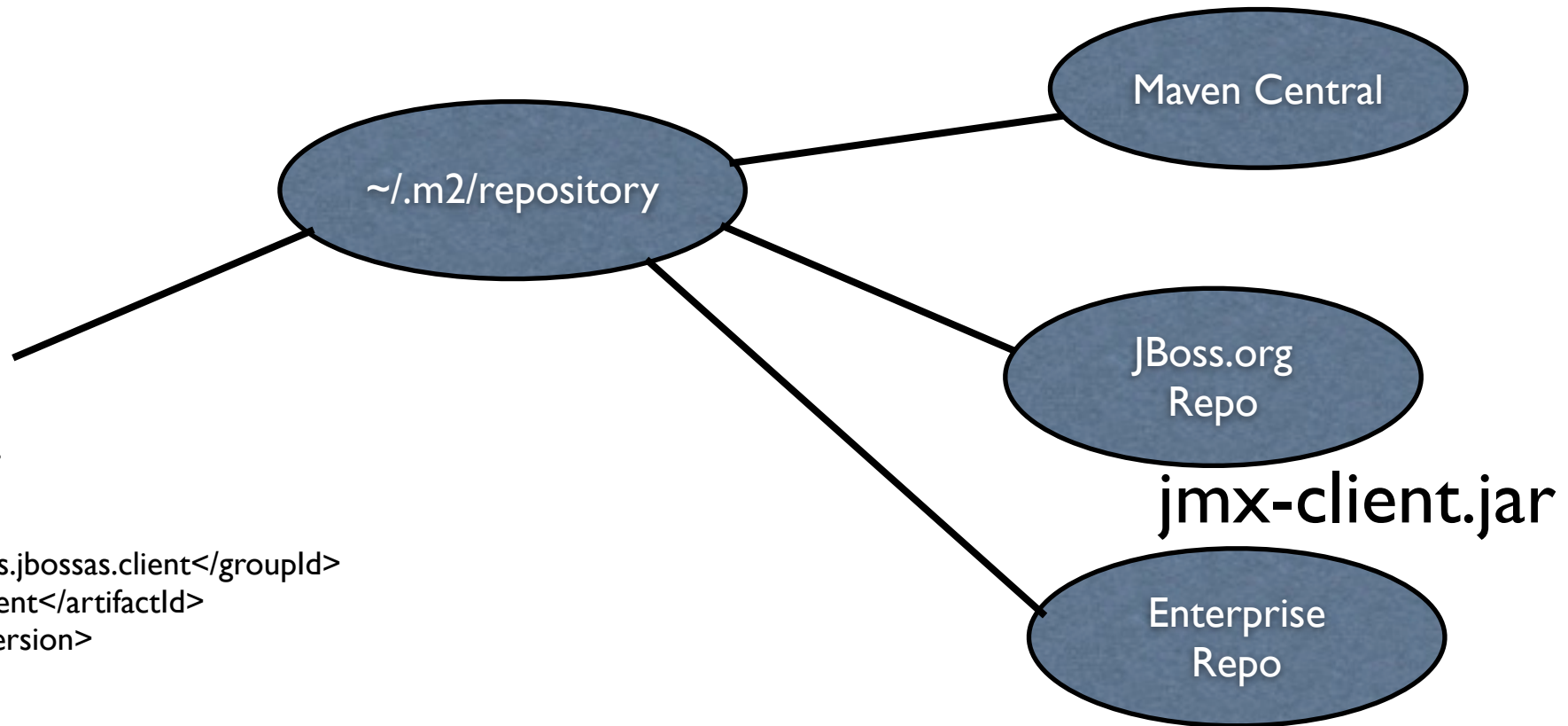
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
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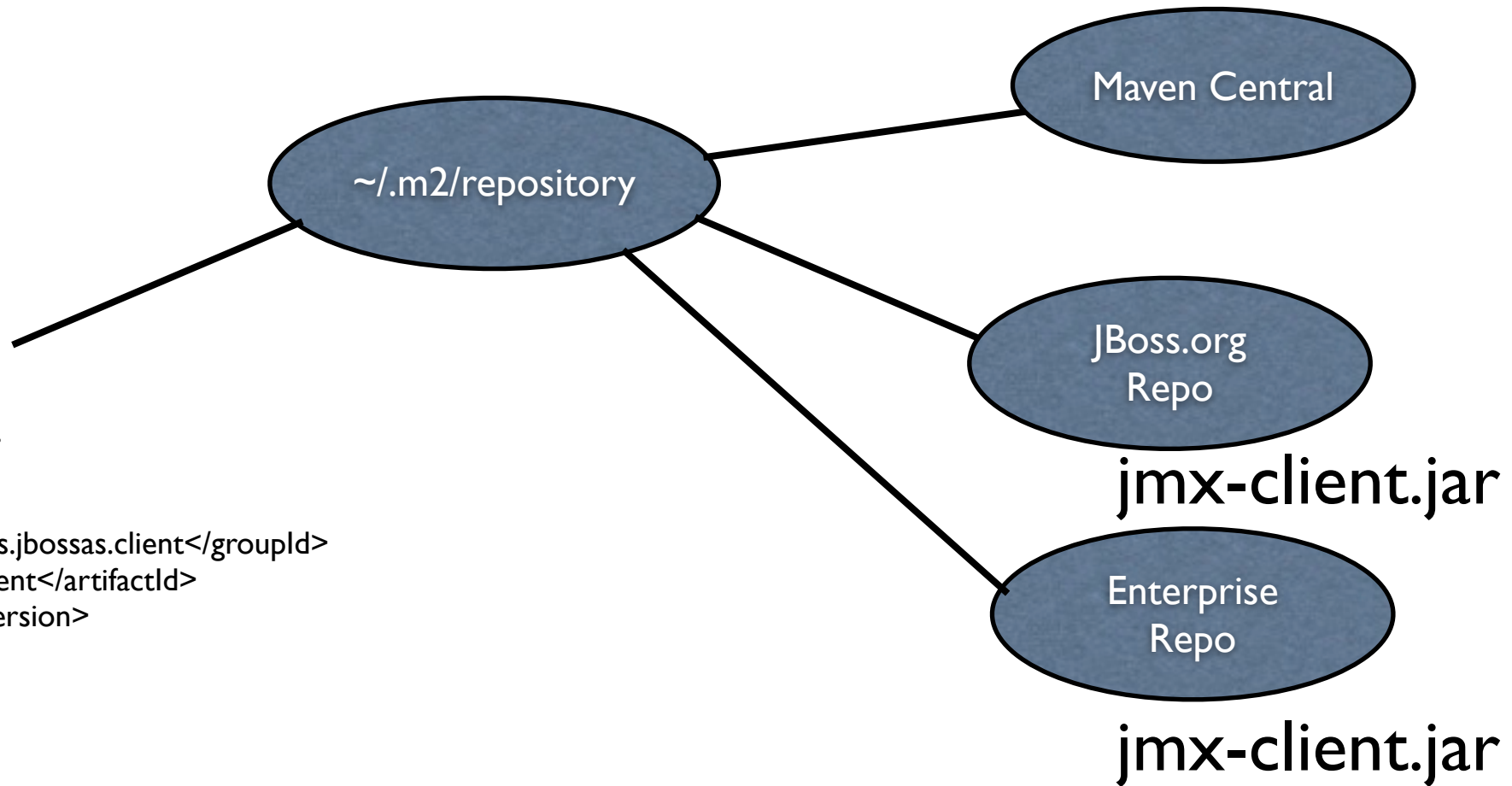
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# Challenge #2 Explained



**pom.xml:**

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<version>5.1.0</version>
```

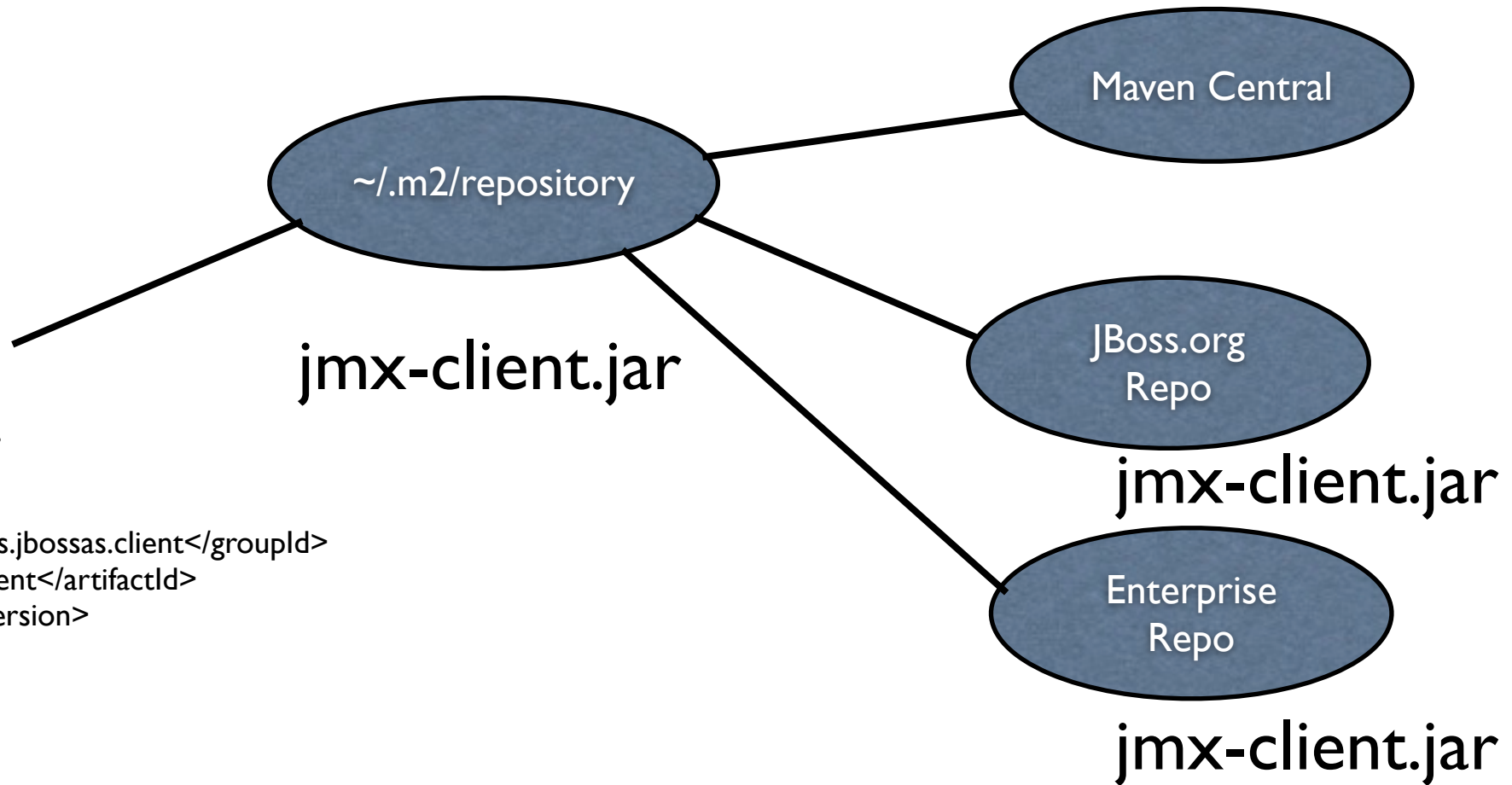
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# Challenge #2 Explained



**pom.xml:**

```
<groupId>org.jboss.jbossas.client</groupId>  
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<version>5.1.0</version>
```

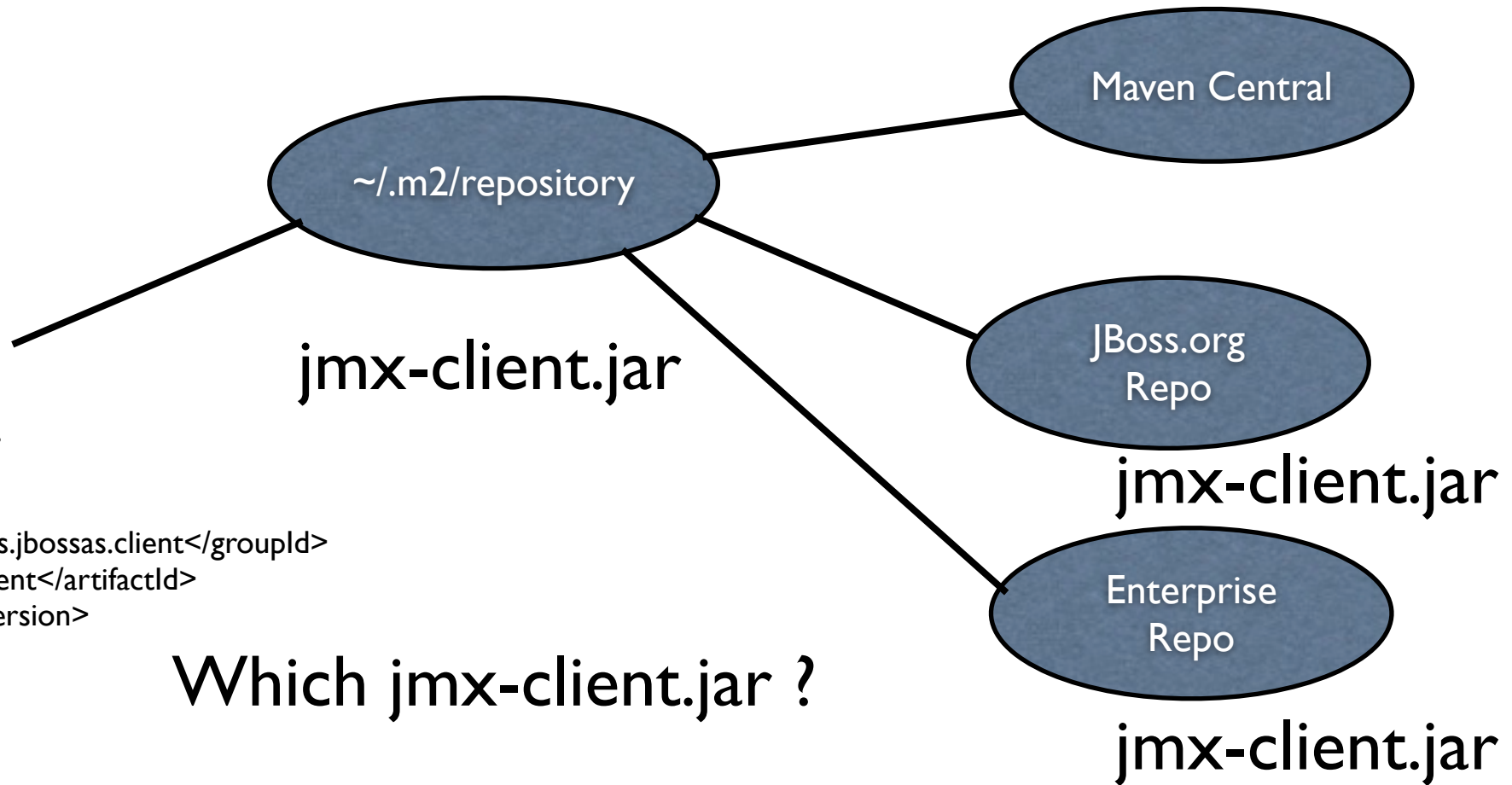
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# Challenge #2 Explained



pom.xml:

```
<groupId>org.jboss.jbossas.client</groupId>  
<artifactId>jmx-client</artifactId>  
<version>5.1.0</version>
```

Which jmx-client.jar ?

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# Project Wolf!



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# Project Wolf!

- Make JBoss Enterprise product artifacts from a Maven repository with unique G.A.V's
- EAP 5.1 repackaged as Maven available for interested customers today
- Plan: EAP 6 will have Native Maven repository



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# BOM POM!

## Dependency Management:

```
<dependencyManagement>
  <dependencies>
    <dependency>
      <groupId>com.jboss.eap</groupId>
      <artifactId>eap-bom</artifactId>
      <version>5.1.0</version>
      <type>pom</type>
      <scope>import</scope>
    </dependency>
  </dependencies>
</dependencyManagement>
```

## Dependencies:

```
<dependencies>
  <dependency>
    <groupId>jboss.web</groupId>
    <artifactId>servlet-api</artifactId>
  </dependency>
  <dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <scope>test</scope>
  </dependency>
</dependencies>
```

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# Enterprise Maven Repository

- Interested ?
  - [max.andersen@redhat.com](mailto:max.andersen@redhat.com)
  - [burr.sutter@redhat.com](mailto:burr.sutter@redhat.com)



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# Maven + Developer Studio

- 4.0/4.1:
  - Install m2eclipse + m2e/wtp
  - Use Eclipse Marketplace or Certified Site
- 5.0 (Plan)
  - Pre-bundled/configured

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# The Deployment Ninja

# What is the challenge ?

- Users have many types of projects with different needs.
- Eclipse have tendency to only support one kind of deployment
  - Eclipse Web Tools style projects (jar, war, ear, etc.)
- ..and sometimes you just want to get things done!

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# Developer Studio adds...

- Project Archives
- Deployment of single files or directories
- ...but still works with Eclipse Web Tools Projects
- ...and it is NOT dependent on JBoss Application Server, but works really well with it

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# Demo

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# Developer Studio adds...

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# How To Be Effective with JBoss Developer Studio

- One nice package - but can be extended if needed
- Multi Module Support using WTP
- Work's with Maven
  - Be careful, look out for Wolf's!
- Learn the Deployment ninja tricks!

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# Questions ?



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# Questions ?

Maven Best Practices  
Wednesday - 15:10-16:10

JBoss Developer BOF  
Wednesday - 17:30-19:00

“Rapid Project Creation” - Seam  
and JBoss Developer Studio  
Thursday - 14:00-15:00

@maxandersen or @jbosstools

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