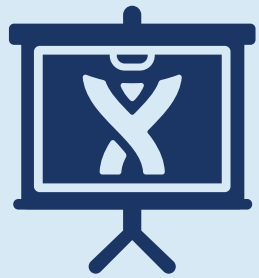




**Atlassian**



**Training**





# Getting Started with Atlassian Plugins

Mary Anthony, Atlassian



# Welcome



# You Should Have

- A wireless connection to the training Wifi.
- A printed handout of the slides for this class.
  - Windows users need Wordpad or access here:  
[https://bitbucket.org/atlassian\\_tutorial/camp2012labs/src](https://bitbucket.org/atlassian_tutorial/camp2012labs/src)
- A USB key containing files you will need for this class.
  - A printed handout of the labs for this class.
- Access to terminal window on your desktop.





# Administrivia

---

- Start your computer and check your internet connection.
- Make sure you can access the files on the USB.
- This course is 3 hours long --- two 5-minute breaks.
- One 15 minute longer break about half way through.
- At the end of course we really want your feedback!





# Course Roadmap

---

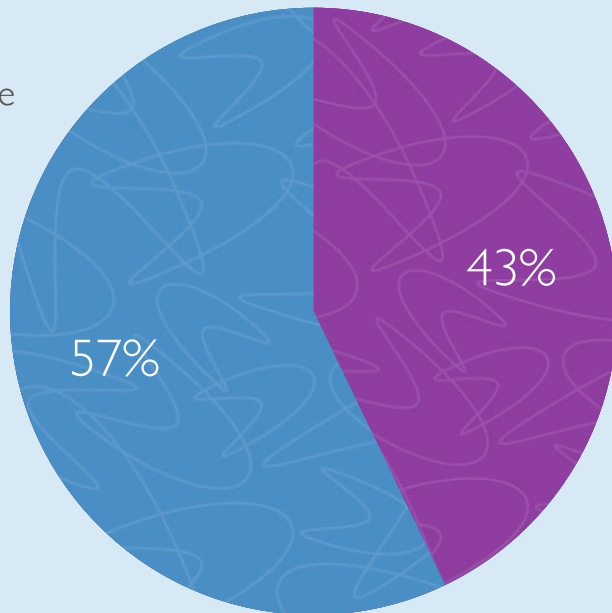
- Getting Started with Atlassian Plugins
- Confluence Plugin Development
- JIRA Plugin Development





# Who Are You People?

- Advanced
- Beginners
- Intermediate



- Engineer
- Other

- Eclipse
- Other

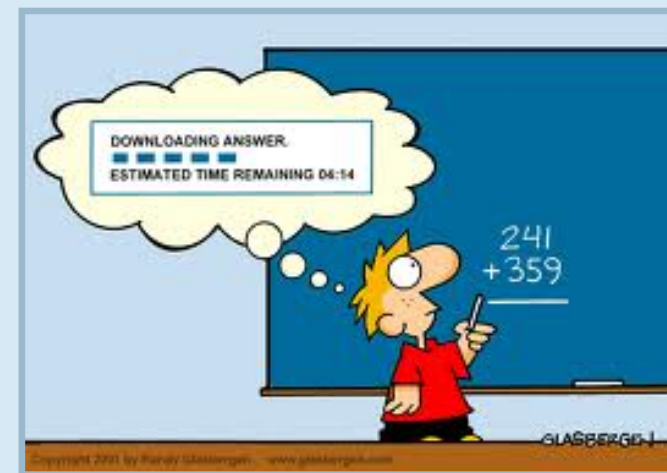
- Have
- Have not





# What You Will Learn

- SDK installation and environment
- Development workflow
- Plugin Framework Basic
- Common Components Introduced
- Development tools





# Who and How

---

- About your instructor
- How we will work through the class
- If you have questions...





# What You Will Build

The collage consists of three overlapping screenshots. The top-left screenshot shows a 'Brand Designer' interface with a list of design options: Logo & Color Palette, Images, Icons, Gradients, and Watermarks. The top-right screenshot shows the JIRA Administration page for a user named 'Frank' with an age of 55, including a 'Save' button and a footer with version information. The bottom screenshot shows a 'Developer Blog' interface with a 'Cancel' and 'Apply' button.





# Install and Environment

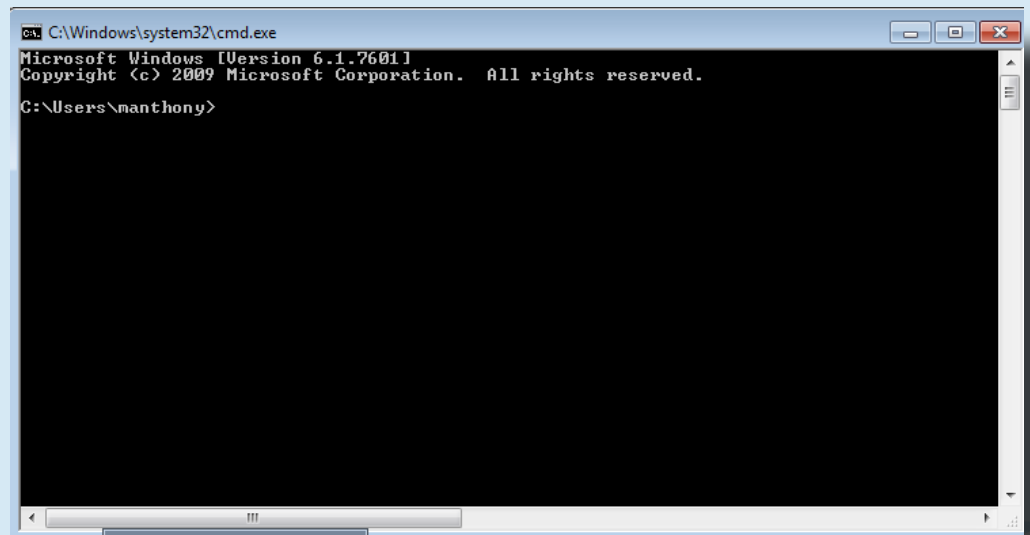
# Lab 1: Installation





# 1.1 Open a Terminal Window

- A terminal window gives you access to a command line.
- In Windows a terminal window is also called a DOS Command Prompt Window.





## 1.2: Check for JDK 6

- Java Developer Kit (JDK)
- The Atlassian Plugin SDK requires you to have JDK 1.6 installed.
- What is the difference between the JRE and the JDK?

```
javac -version
```



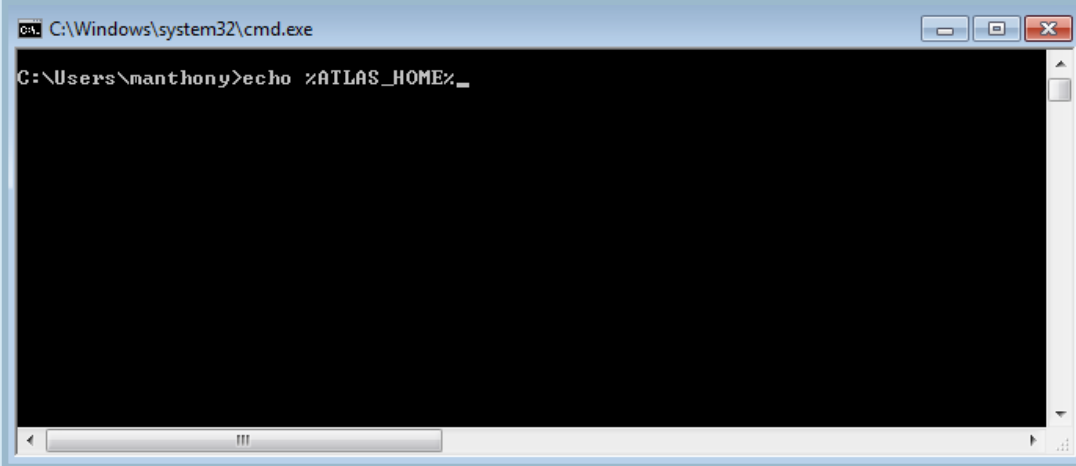
```
manthony — bash — 69x16
[manthony@~] $ javac -version
javac 1.6.0_33
[manthony@~] $
```



# 1.3 Remove Previous SDK Settings

---

- If you have installed the SDK before you need to remove environment set up.
- Remove **ATLAS\_HOME** settings from your environment.
- Remove **ATLAS\_HOME/bin** from your path.



```
C:\Windows\system32\cmd.exe
C:\Users\anthony>echo %ATLAS_HOME%
```

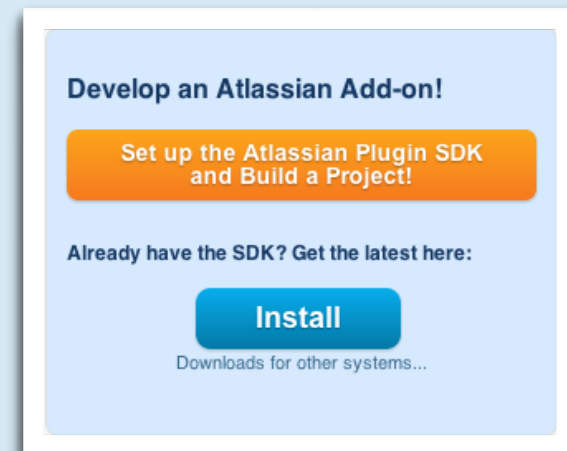




# 1.4: Download the SDK Installer

## 1. Download the installer.

- USB Key
- <http://developer.atlassian.com>





# 1.5: Install the SDK

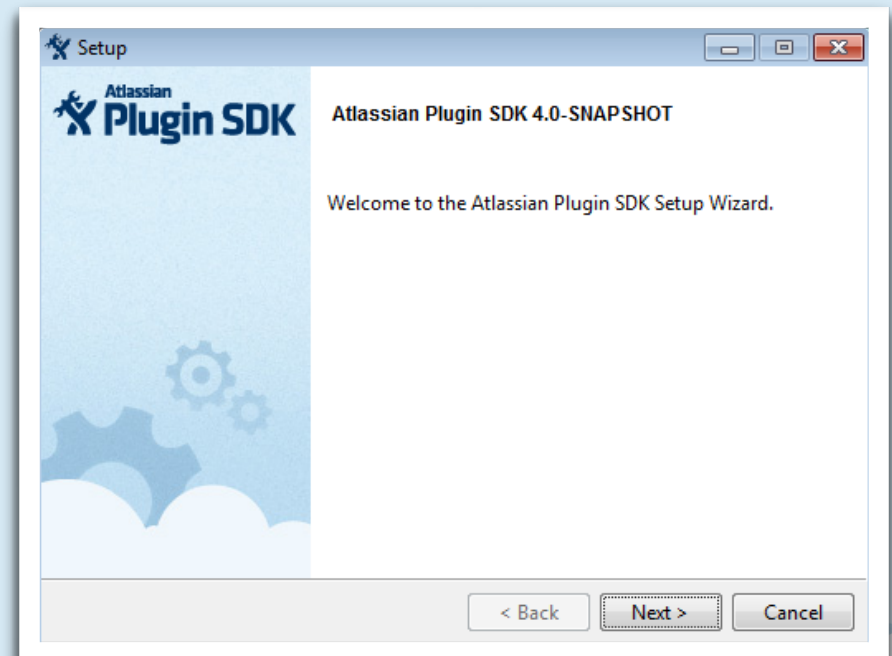
## Windows users:

1. Double click the Installer.
2. Install in a path without spaces
3. Requires a restart

## Mac users:

1. Double click the package.

**Other Unix Flavors** -- see the PDF for the details





# 1.6: Verify Your Installation

- **atlas-version**
  - SDK version
  - Java version
  - Java home
- Also the output includes details about your environment.

```
manthony — bash — 90x14
[manthony@~] $ atlas-version
ATLAS Version:    4.0-blitz3
ATLAS Home:      /usr/share/atlassian-plugin-sdk-4.0-blitz3
ATLAS Scripts:  /usr/share/atlassian-plugin-sdk-4.0-blitz3/bin
ATLAS Maven Home: /usr/share/atlassian-plugin-sdk-4.0-blitz3/apache-maven
-----
Executing: /usr/share/atlassian-plugin-sdk-4.0-blitz3/apache-maven/bin/mvn --version
Apache Maven 2.1.0 (r755702; 2009-03-18 12:10:27-0700)
Java version: 1.6.0_33
Java home: /System/Library/Java/JavaVirtualMachines/1.6.0.jdk/Contents/Home
Default locale: en_US, platform encoding: MacRoman
OS name: "mac os x" version: "10.7.4" arch: "x86_64" Family: "mac"
[manthony@~] $
```



# 1.7: Problems with atlas-version?

## Windows Users

Verify the installation set these up:

Right-click the **My Computer** icon on your desktop.

The right-click menu displays.

Choose **Properties**.

The **System Properties** dialog displays.

Click the **Advanced** tab.

Click the **Environment Variables** button.

The **Environment Variables** dialog appears.

Locate the **System variables** section.

## Other Users - Shell Setup

```
export ATLAS_HOME='/Users/manthony/  
atlassian-plugin-sdk'
```

```
PATH=$JAVA_HOME/bin:$ATLAS_HOME/bin:  
$PATH
```





# 1.8: Install an IDE (Optional)

- An IDE is not required.
- It does make some things easier.
- In class we will use Eclipse to view files.
- It is important that your IDE use JDK 1.6



# Lab 2: Explore



# 2.1: Explore the SDK

- **ATLAS\_SCRIPTS/**
  - **apache-maven**
    - **bin**
    - **boot**
    - **conf**
    - **lib**
    - **maven-docs**
  - **bin**
  - **repository**

```

bin — bash — 90x21
[manthony@bin] $ cd /usr/local/bin
[manthony@bin] $ ls atlas-*
atlas-clean
atlas-cli
atlas-clover
atlas-compile
atlas-create-bamboo-plugin
atlas-create-bamboo-plugin-module
atlas-create-confluence-plugin
atlas-create-confluence-plugin-module
atlas-create-crowd-plugin
atlas-create-crowd-plugin-module
atlas-create-fecru-plugin
atlas-create-fecru-plugin-module
atlas-create-home-zip
atlas-create-jira-plugin
atlas-create-jira-plugin-module
atlas-create-jira4-plugin
atlas-create-jira5-plugin
atlas-create-plugin
atlas-create-refapp-plugin
atlas-create-refapp-plugin-module
atlas-create-stash-plugin
atlas-create-stash-plugin-module
atlas-debug
atlas-help
atlas-install-plugin
atlas-integration-test
atlas-mvn
atlas-package
atlas-release
atlas-release-rollback
atlas-ruin
atlas-run
atlas-run-standalone
atlas-unit-test
atlas-update
atlas-version
[manthony@bin] $

```



## 2.2: Start an Application

---

1. In a terminal window navigate to your home
  2. Create a directory called **atlasstandalone**
  3. Change to your new **atlasstandalone** directory
  4. Try one of these atlas commands:
    - **atlas-run-standalone --product jira --version 5.1**
    - **atlas-run-standalone --product confluence --version 4.3**
- <https://developer.atlassian.com/display/DOCS/atlas-run-standalone>





# When Your Application Loads

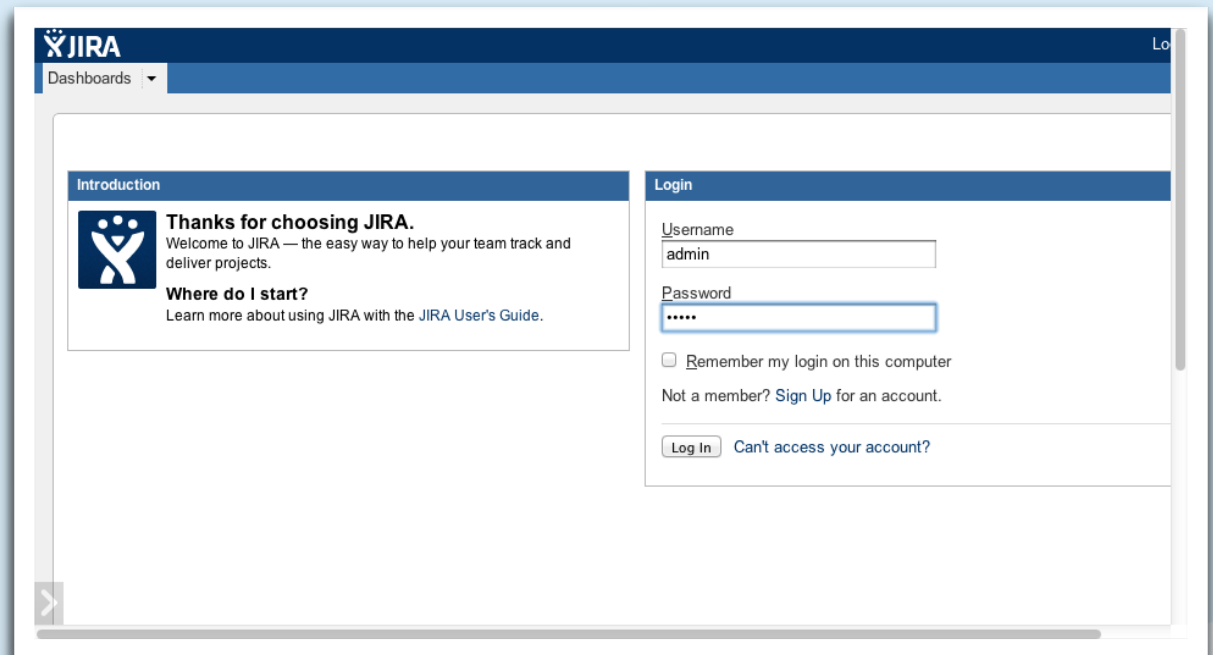
- Google Analytics
- Success message with application location.

```
atlasstandalone — java — 90x22
Downloading: https://m2proxy.atlassian.com/repository/public/junit/junit-dep/4.5/junit-dep-4.5.jar
Downloading: https://m2proxy.atlassian.com/repository/public/org/mockito/mockito-core/1.8.5/mockito-core-1.8.5.jar
27K downloaded (objenesis-1.0.jar)
175K downloaded (junit-dep-4.5.jar)
273K downloaded (hamcrest-all-1.2.jar)
1307K downloaded (mockito-core-1.8.5.jar)
[WARNING] Component manager not found for returned component. Ignored. component=org.apache.maven.wagon.providers.http.LightweightHttpsWagon@4578986b
[INFO] [cargo:start]
[INFO] [2.ContainerStartMojo] Resolved container artifact org.codehaus.cargo:cargo-core-container-tomcat:jar:1.2.3 for container tomcat6x
[INFO] [stalledLocalDeployer] Deploying [/Users/manthony/atlasstandalone/amps-standalone/target/jira/jira.war] to [/Users/manthony/atlasstandalone/amps-standalone/target/container/tomcat6x/cargo-jira-home/webapps]...
[INFO] [talledLocalContainer] Tomcat 6.x starting...
[INFO] [talledLocalContainer] Tomcat 6.x started on port [2990]
[INFO] jira started successfully in 137s at http://localhost:2990/jira
[INFO] Type Ctrl-D to shutdown gracefully
[INFO] Type Ctrl-C to exit
```



## 2.3 Open the Application in a Browser

- Open your application in a browser.
  - Username: **admin**
  - Password: **admin**

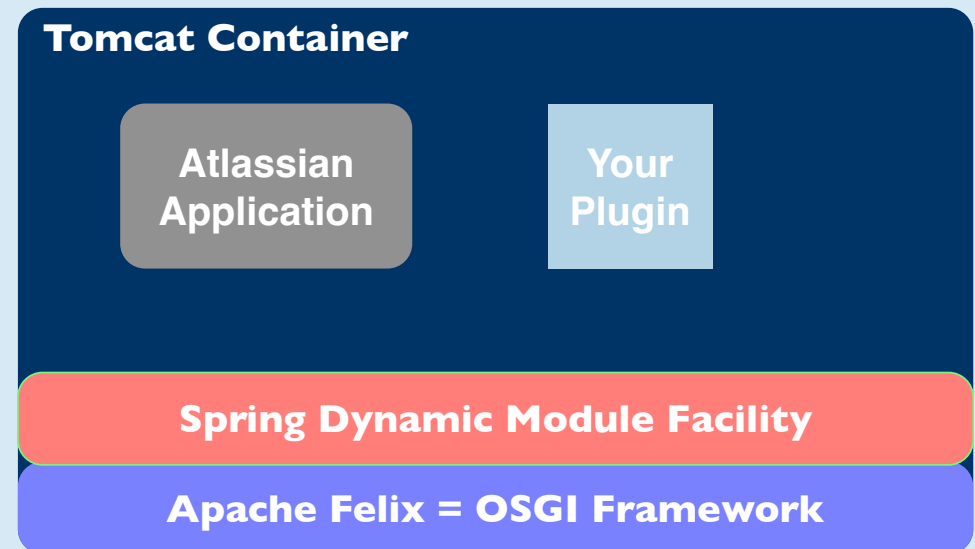


The screenshot shows the JIRA login interface. At the top, there is a navigation bar with the JIRA logo and a 'Dashboards' dropdown menu. The main content area is divided into two sections: 'Introduction' and 'Login'. The 'Introduction' section contains a welcome message and a link to the JIRA User's Guide. The 'Login' section contains a form with fields for 'Username' (containing 'admin') and 'Password' (containing '\*\*\*\*\*'). There is also a checkbox for 'Remember my login on this computer' and a 'Log In' button. A link for 'Can't access your account?' is also visible.



# The Plugin Framework

- Tomcat container
- Application deployed as a WAR inside a Tomcat container
- Your plugin is deployed as an application in Tomcat
- Plugin Framework Support



## 2.4 Examine Output of Standalone

1. Open another terminal window.
2. Change to **atlasstandalone**.
3. Navigate down to the **target** directory.
4. List the contents.

```
target — bash — 76x15
Last login: Sun Sep 16 15:06:54 on ttys002
[manthony@~] $ cd atlasstandalone/
[manthony@atlasstandalone] $ ls
amps-standalone
[manthony@atlasstandalone] $ cd amps-standalone/
[manthony@amps-standalone] $ ls
target
[manthony@amps-standalone] $ cd target
[manthony@target] $ ls
container                                jira
dependency-maven-plugin-markers         jira-5.0.log
[manthony@target] $
```



## 2.5 Stopping the Running Application

- CTRL-D gracefully shutdown
- CTRL-C to Exit

```
atlasstandalone -- bash -- 90x22
[INFO] [stalledLocalDeployer] Deploying [/Users/manthony/atlasstandalone/amps-standalone/target/jira/jira.war] to [/Users/manthony/atlasstandalone/amps-standalone/target/container/tomcat6x/cargo-jira-home/webapps]...
[INFO] [talledLocalContainer] Tomcat 6.x starting...
[INFO] [talledLocalContainer] Tomcat 6.x started on port [2990]
[INFO] jira started successfully in 137s at http://localhost:2990/jira
[INFO] Type Ctrl-D to shutdown gracefully
[INFO] Type Ctrl-C to exit
[INFO] jira: Shutting down
[INFO] using codehaus cargo v1.2.3
[INFO] [cargo:stop {execution: virtual-execution}]
[INFO] [talledLocalContainer] Tomcat 6.x is stopping...
[INFO] [talledLocalContainer] Tomcat 6.x is stopped
[INFO] amps:stop in 11s
[INFO] -----
[INFO] BUILD SUCCESSFUL
[INFO] -----
[INFO] Total time: 91 minutes 27 seconds
[INFO] Finished at: Sun Sep 16 18:12:58 PDT 2012
[INFO] Final Memory: 37M/123M
[INFO] -----
[manthony@atlasstandalone] $
```



# Takeaways from Install and Environment

---

- The SDK has a dependency on Java 1.6.
- The **atlas-version** command tells you what SDK you are using.
- The SDK includes a Maven installation and a lot of helper scripts.
- Use **atlas-run-standalone** to run a specific product and version.
- The product and your plugin runs inside of a tricked-out Tomcat container.
- The **atlas-run-standalone** command has output.





# Hello World

# Lab 3: Generate a Plugin





# 3.1: Create a Plugin “Frame”

1. Groupid	com.atlassian.plugins.tutorial.refapp
Artifact id	adminUI
2. Version	1.0-SNAPSHOT
3. Package	com.atlassian.plugins.tutorial.refapp.adminui

com.atlassian.plugins.tutorial.refapp

adminUI

1.0-SNAPSHOT

com.atlassian.plugins.tutorial.refapp.adminui

## 3.2 Look at Generated Code

1. Change to the **PROJECT\_ROOT** directory.
2. List the project contents.

```
adminUI — bash — 85x28
|__LICENSE.TXT
|__pom.xml
|__README.txt
|__src
|  |__main
|  |  |__java
|  |  |  |__com
|  |  |  |  |__atlassian
|  |  |  |  |  |__plugins
|  |  |  |  |  |  |__tutorial
|  |  |  |  |  |  |  |__refapp
|  |  |  |  |  |  |  |__adminui
|  |  |  |  |  |  |  |  |__ExampleServlet.java
|  |  |  |  |  |  |  |__resources
|  |  |  |  |  |  |  |__atlassian-plugin.xml
|  |__test
|  |  |__java
|  |  |  |__com
|  |  |  |  |__atlassian
|  |  |  |  |  |__plugins
|  |  |  |  |  |  |__tutorial
|  |  |  |  |  |  |  |__refapp
|  |  |  |  |  |  |  |__adminui
|  |  |  |  |  |  |  |  |__ExampleServletTest.java
|  |  |  |  |  |  |  |__it
|  |  |  |  |  |  |  |  |__IntegrationTestMyPlugin.java
|  |  |  |  |  |  |  |__resources
|  |  |  |  |  |  |  |__TEST_RESOURCES_README.txt
```



## 3.3: Start Your Plugin

1. Make sure you are in the project root.
2. Enter the following command:

```
atlas-run
```

Pay attention to the output. It contains information that can help you to debug.

And then the last four lines...

```
[WARNING] [talledLocalContainer] Sep 10, 2012 3:26:26 PM
org.apache.coyote.http11.Http11Protocol start
[WARNING] [talledLocalContainer] INFO: Starting Coyote HTTP/1.1 on http-5990
[WARNING] [talledLocalContainer] Sep 10, 2012 3:26:26 PM
org.apache.jk.common.ChannelSocket init
[WARNING] [talledLocalContainer] INFO: JK: ajp13 listening on /0.0.0.0:8009
[WARNING] [talledLocalContainer] Sep 10, 2012 3:26:26 PM
org.apache.jk.server.JkMain start
[WARNING] [talledLocalContainer] INFO: Jk running ID=0 time=0/65 config=null
[WARNING] [talledLocalContainer] Sep 10, 2012 3:26:26 PM
org.apache.catalina.startup.Catalina start
[WARNING] [talledLocalContainer] INFO: Server startup in 18803 ms
[INFO] [talledLocalContainer] - META-INF/services/
org.apache.xerces.xni.parser.XMLParserConfiguration
[INFO] [talledLocalContainer] Tomcat 6.x started on port [5990]
[INFO] refapp started successfully in 28s at http://marya.local:5990/refapp
[INFO] Type Ctrl-D to shutdown gracefully
[INFO] Type Ctrl-C to exit
```



## 3.4: Log into the RefApp

- No, it isn't pretty.
- admin/admin
- Meant for cross-platform development -- if you can run it here you can run it anywhere

enable live reload Login

**ATLASSIAN RefApp**

### Welcome to the Atlassian RefApp!

This application has no useful features whatsoever. It is intended to be used as a platform for testing cross product Atlassian plugins.

- [Old RefApp Home Page](#)
- [Distributed Auth Status](#)

This is a list of all projects (Charles) in this RefApp:

Key Name
----------

Wondering how the above links got there? Just add a web item to your plugin:

```
<web-item key="myLink" section="index.links" weight="40" application="refapp">
  <label key="My Link Name or I18n Key">
    <link linkId="myLinkId">/relative/or/absolute/path/to/my/link</link>
  </web-item>
```

In addition to Web Items, you can also add Web Panels to the above section, for example:

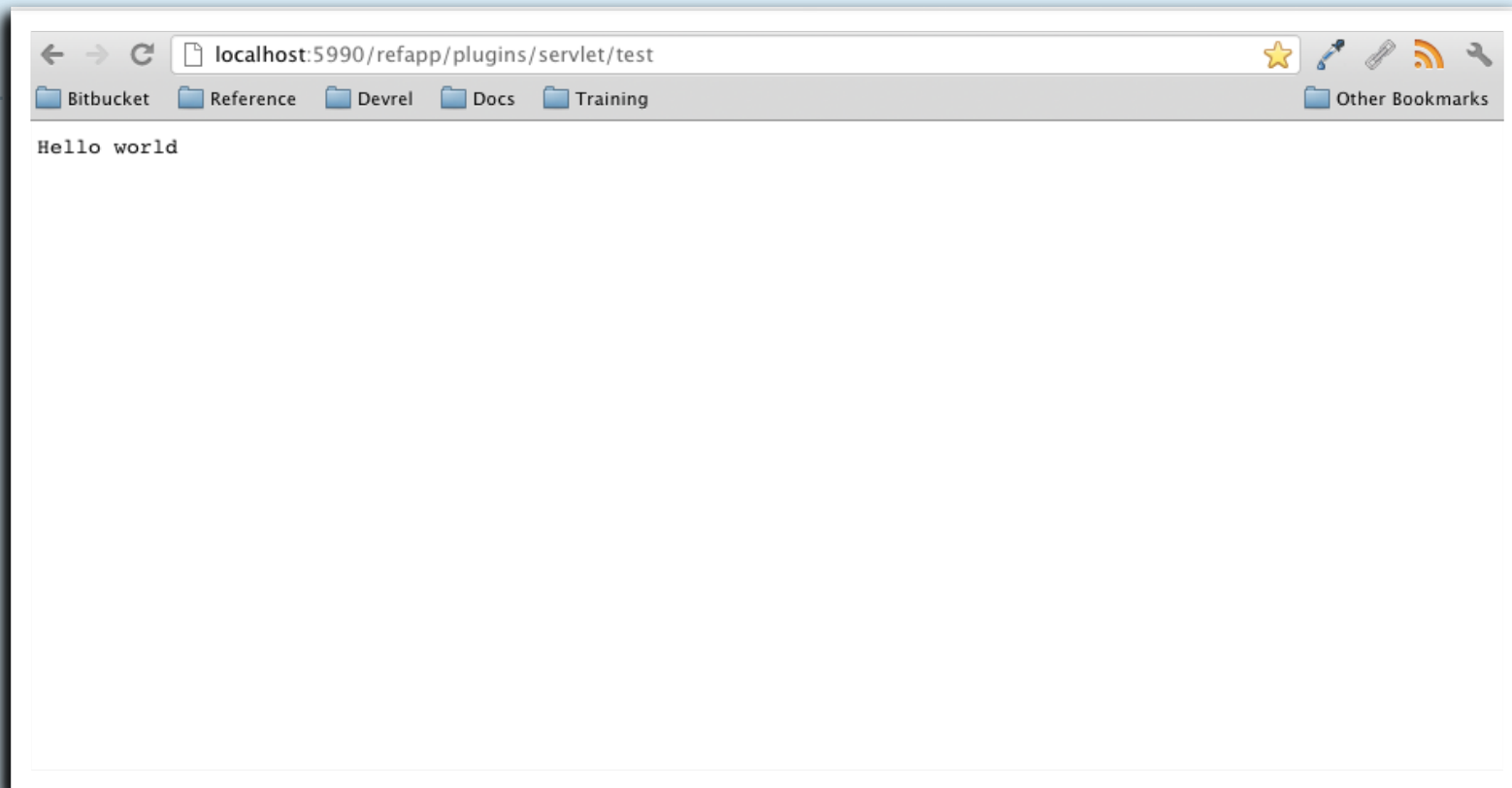
```
<web-panel key="myPanel" location="atl.refapp.index">
  <resource name="view" type="velocity" location="/relative/or/absolute/path/to/my/panel.vm"/>
</web-panel>
```

Other places you can add links to include `system.admin/general`, `header.links` and `footer.links`. You might want to log in, by default, three users are available, admin, fred and barney. Their passwords are the same as their usernames.

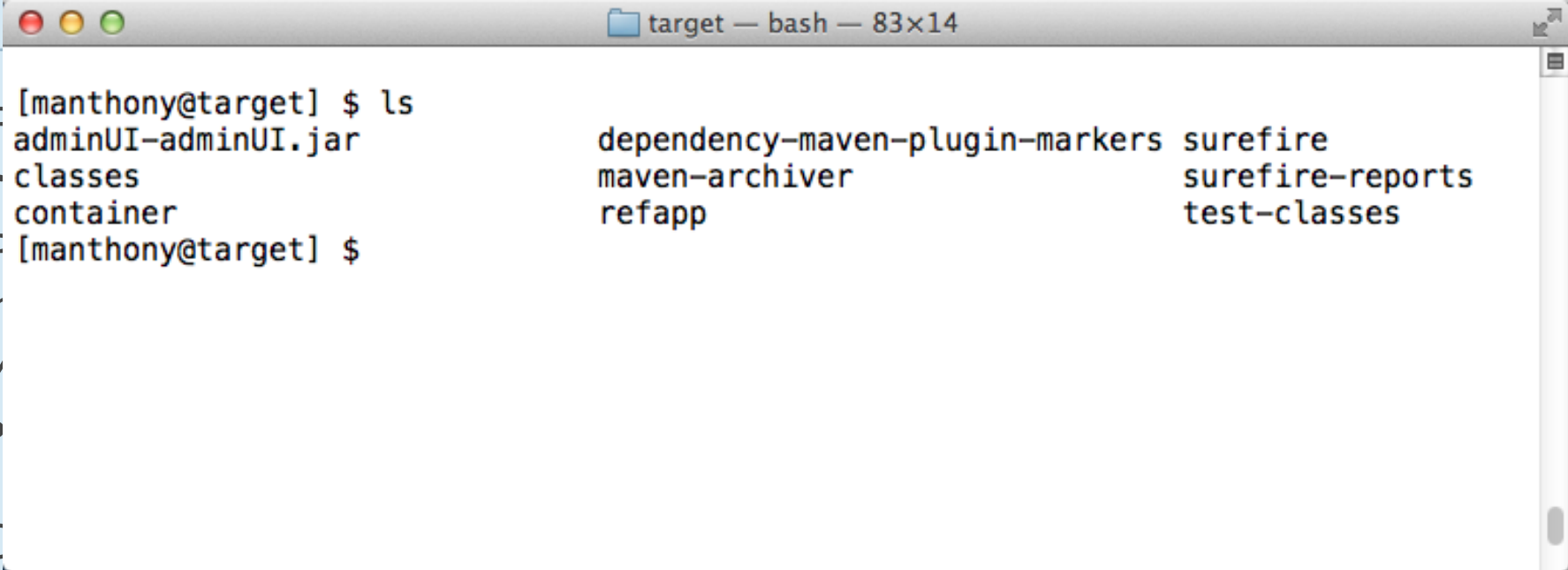
Atlassian RefApp 2.12.0 - [Issues](#) | [Documentation](#) | [Builds](#) | [Login](#)



# 3.5: View Your Plugin



## 3.6 Examine the Output



```
target — bash — 83x14
[manthony@target] $ ls
adminUI-adminUI.jar      dependency-maven-plugin-markers  surefire
classes                  maven-archiver                  surefire-reports
container                refapp                           test-classes
[manthony@target] $
```

4. List the contents of the directory.



## 3.7: Import into an IDE

---

### Eclipse Users:

- Use Maven to generate Eclipse project files

```
atlas-mvn eclipse:eclipse
```

- Import your project into Eclipse

### IntelliJ Idea Users:

- Convert your project to an Idea project

```
atlas-mvn idea:idea
```

- Import your project into Idea



# Lab 4: Plugin Project Files





# 4.1: Examine the POM

- Open your **pom.xml** file

POM = Project Object Model File

```
<project>
  ...metadata...
  <dependencies>
    <dependency/>
  </dependencies>
  <build>
    <plugins>
      <plugin/>
    </plugins>
  </build>
  <properties>
</project>
```





## 4.2: Edit the Organization

---

1. Open the `pom.xml` file.
2. Locate the `<organization>` information

```
<organization>  
  <name>Example Company</name>  
  <url>http://www.example.com/</url>  
</organization>
```

3. Personalize your organization.



# criptor

```
<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">

  <modelVersion>4.0.0</modelVersion>
  <groupId>com.atlassian.plugins.tutorial.refapp</groupId>
  <artifactId>adminUI</artifactId>
  <version>1.0-SNAPSHOT</version>

  <organization>
```

```
</dependency>
<dependency>
  <groupId>javax.servlet</groupId>
  <artifactId>servlet-api</artifactId>
  <version>2.4</version>
  <scope>provided</scope>
</dependency>
</dependencies>
```

... its name is atlassian-plugin.xml.

... about your plugin and the modules it contains.

- Notice the variables in

```
<atlassian-plugin key="${project.groupId}.${project.artifactId}" name="${project.name}" plugins-version="2">
  <plugin-info>
    <description>${project.description}</description>
    <version>${project.version}</version>
    <vendor name="${project.organization.name}" url="${project.organization.url}" />
  </plugin-info>
  <servlet name="adminUI" class="com.atlassian.plugins.tutorial.refapp.adminui.ExampleServlet" key="test">
    <url-pattern>/test</url-pattern>
  </servlet>
</atlassian-plugin>
```



## 4.4 Run in an Application

---

1. Make sure you are in the project root
2. Enter one of the following commands:

```
atlas-run --product jira --version 5.1
```

OR

```
atlas-run --product confluence --version 4.3
```



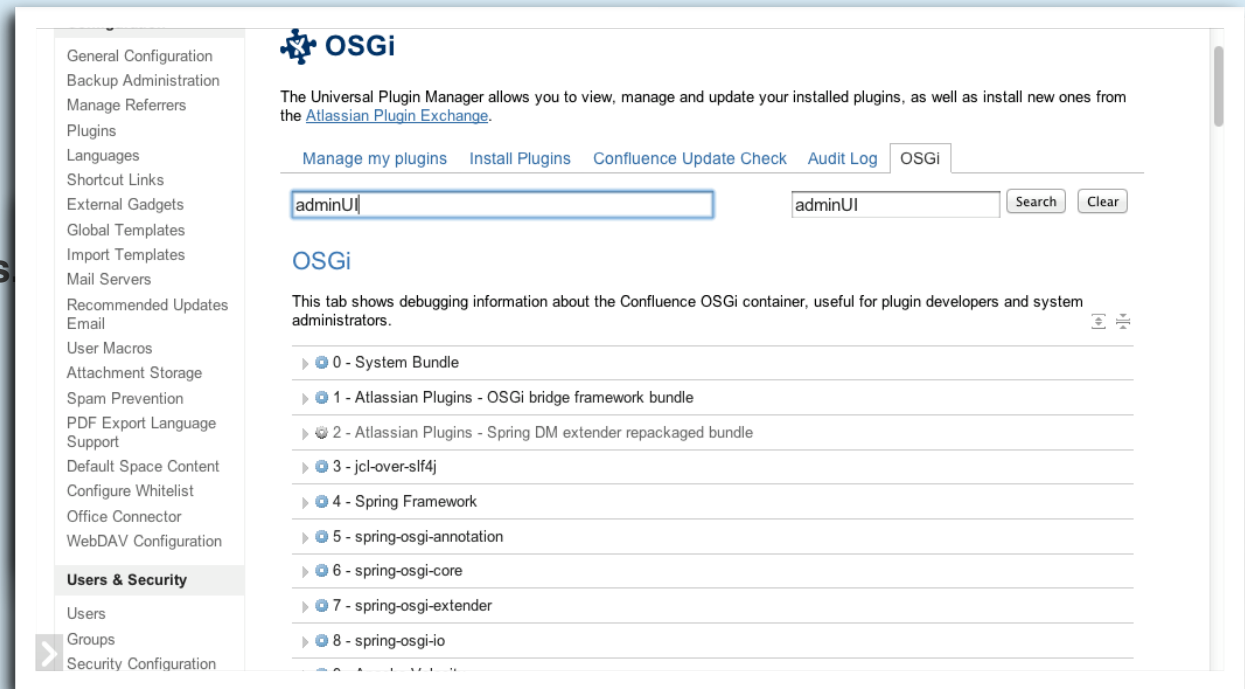


# 4.5 Examine Your Plugin in UPM

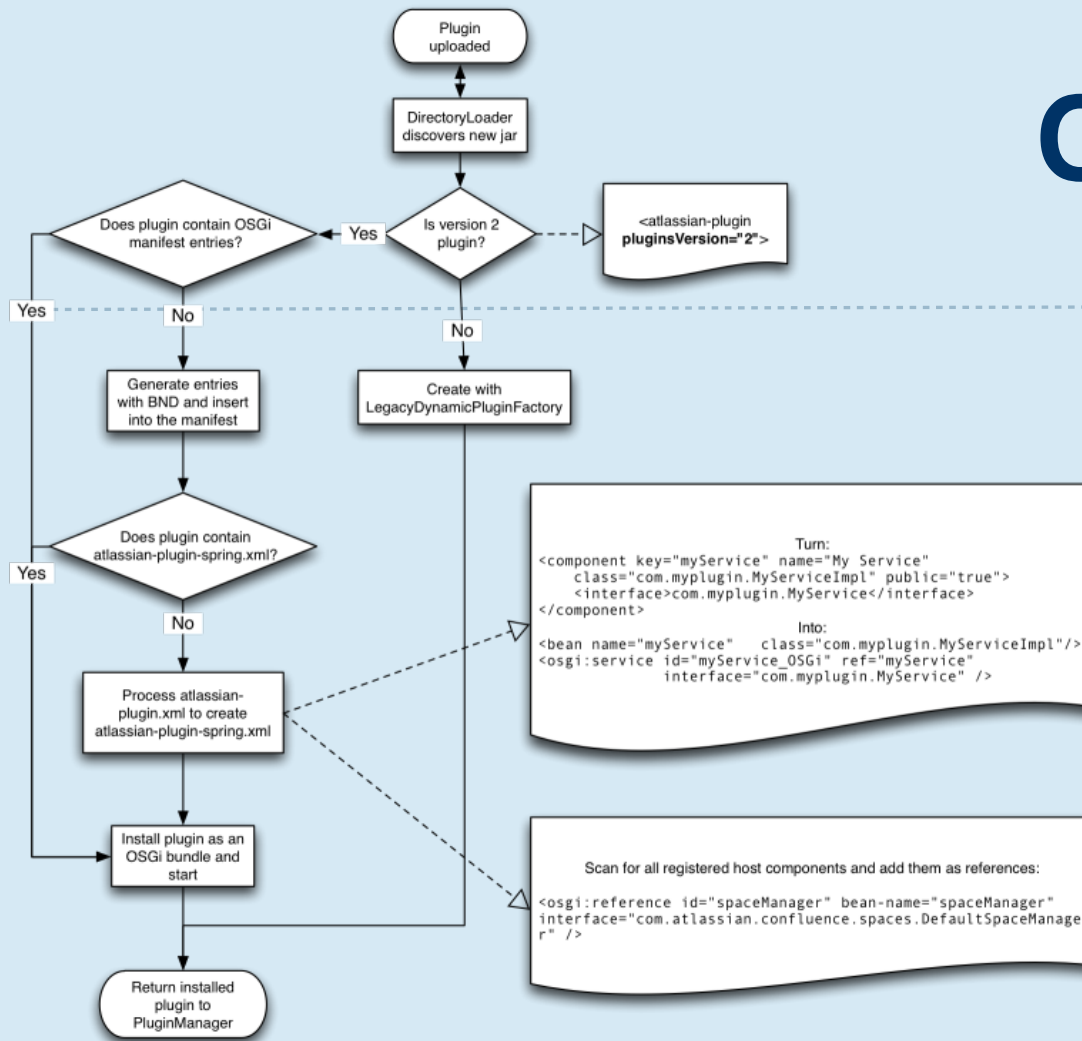
1. Go to your product dashboard.
2. Navigate to **Manage Plugins**:

**JIRA:** Click **Administration** then **Plugins**

**CONFLUENCE:** Click **Browse > Confluence Admin** then click **Manage Plugins**.



# OSGI Lifecycle



OSGi

This tab shows debugging information about the JIRA OSGi container, useful for plugin developers and system administrators.

92 - com.atlassian.plugins.tutorial.refapp.adminUI

Atlassian-Plugin-Key	com.atlassian.plugins.tutorial.refapp.adminUI
Bnd-LastModified	1347226932719
Bundle-Description	This is the com.atlassian.plugins.tutorial.refapp.adminUI plugin for Atlassian Refapp.
Bundle-DocURL	http://www.example.com/
Bundle-ManifestVersion	2
Bundle-Name	com.atlassian.plugins.tutorial.refapp.adminUI
Bundle-SymbolicName	com.atlassian.plugins.tutorial.refapp.adminUI
Bundle-Vendor	Example Company
Bundle-Version	1.0.0.SNAPSHOT
Created-By	1.6.0_33 (Apple Inc.)
Manifest-Version	1.0
Spring-Context	*,timeout=60
Tool	Bnd-1.43.0

- Bundle-ClassPath - 1 entry
- Import-Package - 2 entries
- Private-Package - 2 entries
- Registered Services - 1 entry

**Service 624**

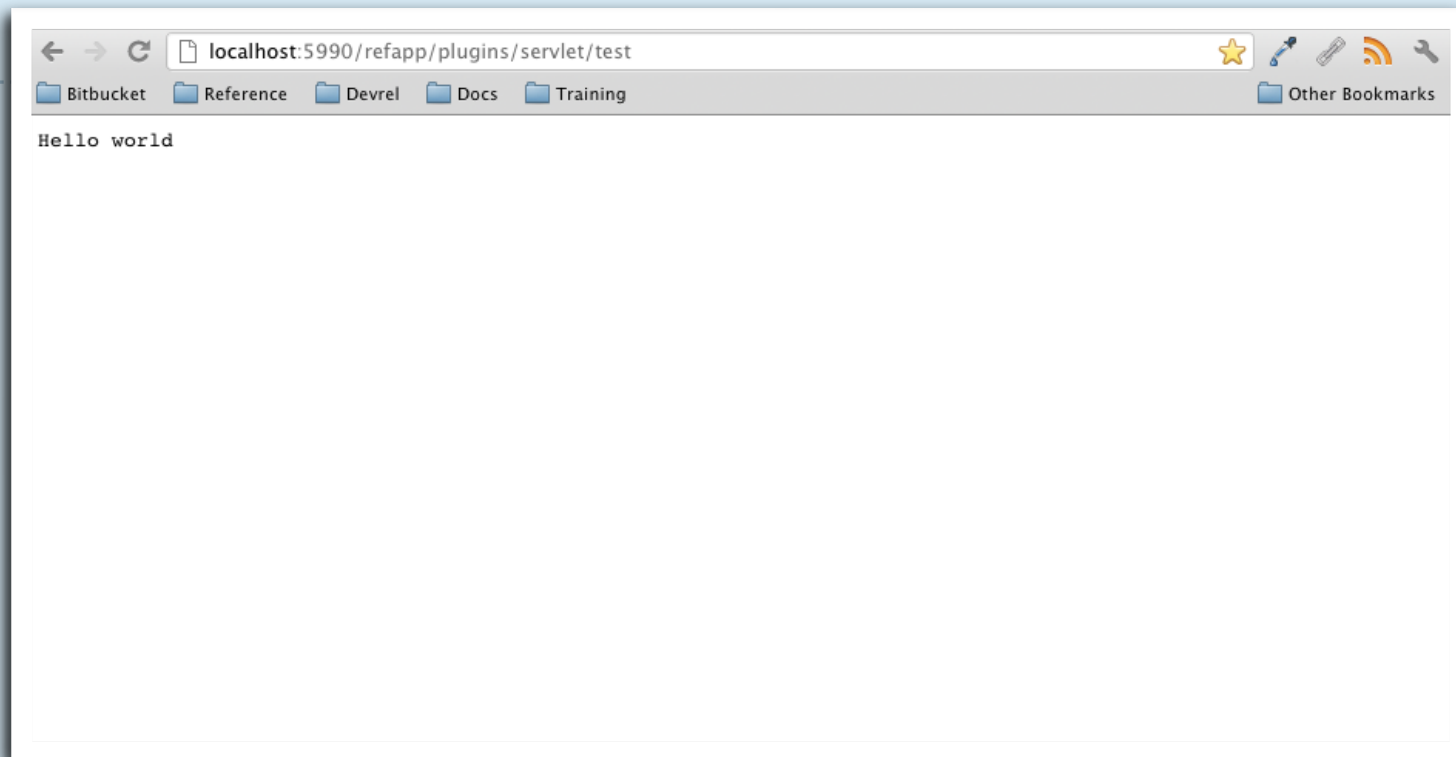
```

org.springframework.osgi.context.DelegatedExecutionOsgiBundleApplicationContext, org.springframework.osgi.context.ConfigurableOsgiBundleApplicationContext, org.springframework.context.ConfigurableApplicationContext, org.springframework.context.ApplicationContext, org.springframework.context.Lifecycle, org.springframework.beans.factory.ListableBeanFactory, org.springframework.beans.factory.HierarchicalBeanFactory, org.springframework.context.MessageSource, org.springframework.context.ApplicationEventPublisher, org.springframework.beans.factory.BeanFactory, org.springframework.core.io.ResourceLoader, org.springframework.beans.factory.DisposableBean
Used by Atlassian JIRA - Plugins - SAL Plugin
    
```

- Services In Use - 1 entry



# 4.6: View Your Plugin





# Leave the Application Running

Dashboard



## Welcome to Confluence

Confluence is where your team collaborates and shares knowledge — create, share and discuss your files, ideas, minutes, specs, mockups, diagrams, and projects.

### Get started

1. [Choose your profile picture](#) and update your profile.
2. [Add a few users](#) to try out Confluence with you.
3. [Add a new space](#) where your team can collaborate. You can create a space for your team or for a new project you're working on.
4. [Update this welcome message](#) to create a custom greeting.

Inv

Popular

```
adminUI — java — 123x18
[INFO] [talledLocalContainer] INFO: Server startup in 78288 ms
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:17 AM com.sun.jersey.server.impl.application.WebApplicationImpl _initiate
[INFO] [talledLocalContainer] INFO: Initiating Jersey application, version 'Jersey: 1.8-atlassian-6 03/12/2012 02:59 PM'
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:18 AM com.sun.jersey.server.impl.application.WebApplicationImpl _initiate
[INFO] [talledLocalContainer] INFO: Initiating Jersey application, version 'Jersey: 1.8-atlassian-6 03/12/2012 02:59 PM'
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:30 AM com.sun.jersey.server.impl.application.WebApplicationImpl _initiate
[INFO] [talledLocalContainer] INFO: Initiating Jersey application, version 'Jersey: 1.8-atlassian-6 03/12/2012 02:59 PM'
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:30 AM com.sun.jersey.server.impl.application.WebApplicationImpl _initiate
[INFO] [talledLocalContainer] INFO: Loading wadlGenerator com.sun.jersey.server.wadl.generators.WadlGeneratorApplicationDoc
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:30 AM com.sun.jersey.api.wadl.config.WadlGeneratorLoader loadWadlGenerator
[INFO] [talledLocalContainer] INFO: Loading wadlGenerator com.sun.jersey.server.wadl.generators.WadlGeneratorGrammarsSupport
[INFO] [talledLocalContainer] Sep 17, 2012 8:44:30 AM com.sun.jersey.api.wadl.config.WadlGeneratorLoader loadWadlGenerator
[INFO] [talledLocalContainer] INFO: Loading wadlGenerator com.atlassian.plugins.rest.doclet.generators.resourcedoc.AtlassianWadlGeneratorResourceDocSupport
```

This tab shows popular content. Create, comment on or like content to see it appear here.



# Lab 5: Development Tools

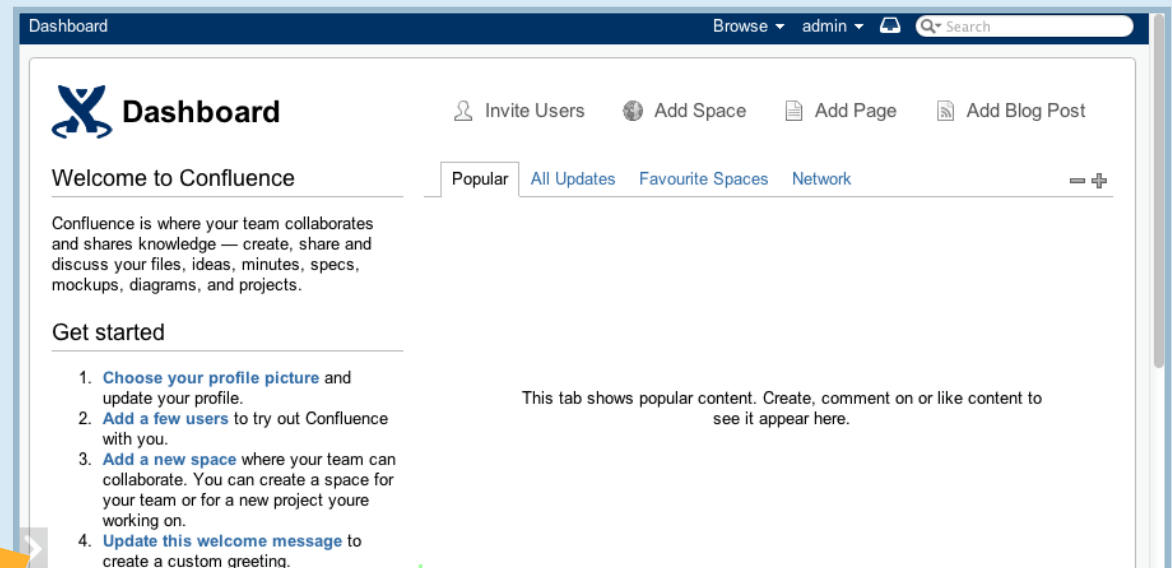




# 5.1 Open Dev Toolbar

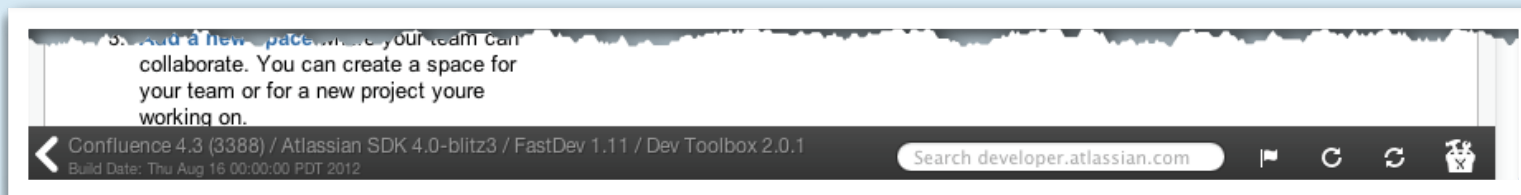
1. Go to your product dashboard.
2. Locate the arrow in left hand corner.
3. Click it.

**Not tested under IE!**



# Developer Toolbar

- Searching API
- Productivity features
- Locating additional help
- atlas commands automatically load toolbar





# 5.2 Search for SAL

Dashboard > dashboard.name Browse > system.space.menu admin

Invite Users > easyuser.add.users.button
 Add Space > dashboard.button.add.space

Add Page > add.page
 Add Blog Post > add.blog

**Dashboard > title.dashboard**

h2. Welcome to Confluence  
 Confluence is where your team collaborates and shares knowledge — create, share & edit content, diagrams, and projects.

**Get started**

1. **Choose your profile picture** and update your profile.
2. **Add a few users** to try out Confluence with you.
3. **Add a new space** where your team can collaborate. You can create a space for your team.
4. **Update this welcome message** to create a custom greeting.

>welcome.to.confluence > h2. Welcome to Confluence  
 Confluence is where your team collaborates and shares knowledge — create, share & edit content, diagrams, and projects.

Confluence 4.3 (3388) / Atlassian SDK 4.0-blitz3 / FastDev 1.11 / Dev Toolbox 2.0.1  
 Build Date: Thu Aug 16 00:00:00 PDT 2012

Doc | API | Answers

**Results for: sal**

**SAL Issue Tracker**  
 Below is a list of the open issues for SAL, draw...  
<https://developers.atlassian.com/display/SAL/SAL+Issue+Tracker>

**Shared Access Layer Documentation**  
 Getting Started SAL is a component of the Atlas...  
<https://developers.atlassian.com/display/SAL/Shared+Access+L...>

**Shared Access Layer Documentation Archives**  
 Our online documentation covers the most rece...  
<https://developers.atlassian.com/display/ARCHIVES/Shared+Ac...>

**SAL Services**  
 Below is a list of the services provided by the A...  
<https://developers.atlassian.com/display/SAL/SAL+Services>





# 5.3 Turn on i18n Keys

The screenshot shows a Confluence dashboard page with the following content:

- Dashboard > dashboard.name
- Browse > system.space.menu admin
- Search > quick.search.sub
- Invite Users > easyuser.add.users.button
- Add Space > dashboard.button.add.space
- Add Page > add.page
- Add Blog Post > add.blog
- Dashboard > title.dashboard
- h2. Welcome to Confluence
- Confluence is where your team collaborates and shares knowledge — create, share and discuss your files, ideas, minutes, specs, mockups, diagrams, and projects.
- Get started
- 1. Choose your profile picture and update your profile.
- 2. Add a few users to try out Confluence with you.
- 3. Add a new space where your team can collaborate. You can create a space for your team or for a new project youre working on.
- 4. Update this welcome message to create a custom greeting.
- >welcome.to.confluence>h2. Welcome to Confluence
- Confluence is where your team collaborates and shares knowledge — create, share and discuss your files, ideas, minutes, specs, mockups, diagrams, and projects.
- Get started
- 1. Choose your profile picture and update your profile.

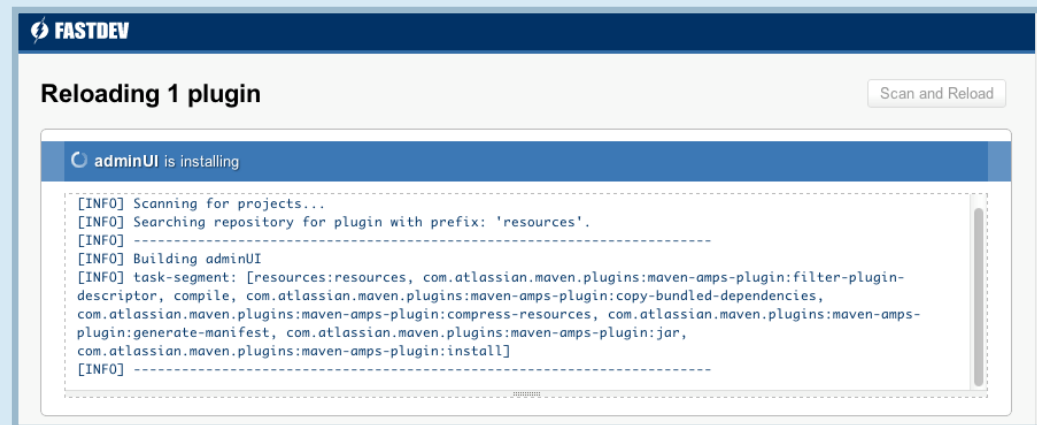
Confluence 4.3 (3388) / Atlassian SDK 4.0-blitz3 / FastDev 1.11 / Dev Toolbox 2.0.1  
Build Date: Thu Aug 16 00:00:00 PDT 2012

Search developer.atlassian.com



## 5.4 Try FastDev

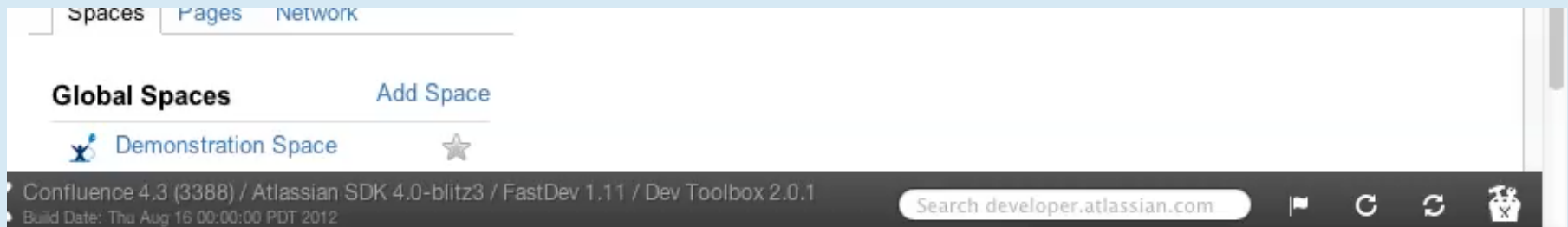
- Identifies plugins with changes.
- Reloads and recompiles.
- Not all the modules you can add to your plugin work with FastDev
- SHIFT-Reload launches FastDev
- We have no changes...yet.





## 5.5 Enable Live Reload

- Click to enable.
- Spinner activates only for the current page





## 5.6 What is the Toolbox?

- The toolbox is accessible in production systems.
- Access is controlled in running applications.
- Expands on the toolbar.
- REST Browser

Dashboard > Administration > Atlassian Developer Toolbox

Browse admin Search

### Developer Toolbox

REST API Browser

#### Configuration

- General Configuration
- Backup Administration
- Manage Referrers
- Plugins
- Languages
- Shortcut Links
- External Gadgets
- Global Templates
- Import Templates
- Mail Servers
- Recommended Updates Email
- User Macros
- Attachment Storage
- Spam Prevention
- PDF Export Language Support
- Default Space Content
- Configure Whitelist
- Office Connector
- WebDAV Configuration

#### Users & Security

- Users
- Groups

### Atlassian Developer Toolbox

Highlight i18n Unhighlight i18n Scan and reload FastDev

You're running Confluence version: **4.3**  
Download the latest (4.3)

You're using Atlassian SDK version: **4.0-blitz3**  
Download the latest

#### Development Tools

- OSGi Plugins Console
- FastDev Console
- REST API Browser
- Show Platform Components (and versions)

#### Documentation

- All Developer Documentation
- Confluence Developer Documentation
- JavaDoc for this version of Confluence
- Atlassian User Interface Documentation

Confluence 4.3 (3388) / Atlassian SDK 4.0-blitz3 / FastDev 1.11 / Dev Toolbox 2.0.1  
Build Date: Thu Aug 19 00:00:00 PDT 2012

Search developer.atlassian.com



# 5.7 REST API Browser

The screenshot displays the REST API Browser interface for the Confluence Activity Stream Plugin. The browser is set to 'admin' mode. The main content area shows the plugin details and a list of resources. The selected resource is `/actions/page-watch/{key}`, which supports a POST method. The parameters table is as follows:

Parameter	Value	Type	Description
key	<input type="text"/>	long	

Below the table, there is an 'Execute' button, a 'Clear results' link, and a 'Representation' dropdown menu set to `*/*`. The footer of the browser shows the version information: Confluence 4.3 (3388) / Atlassian SDK 4.0-blitz3 / FastDev 1.11 / Dev Toolbox 2.0.1, with a build date of Thu Aug 16 00:00:00 PDT 2012.



# Takeaways from Hello World

---

- You can use the `atlas-` commands to generate a skeleton project.
- The `pom.xml` file is a Maven file that defines dependencies and build actions.
- The `atlassian-plugin.xml` file is a descriptor that uses components/modules based on available dependencies.
- The Refapp is a light weight application representing services/components common to the plugin framework.
- A refapp plugin runs in JIRA, Confluence or any other Atlassian Application.
- Through the UPM a developer can enable/disable or help debug OSGI.problems with his/her plugin.



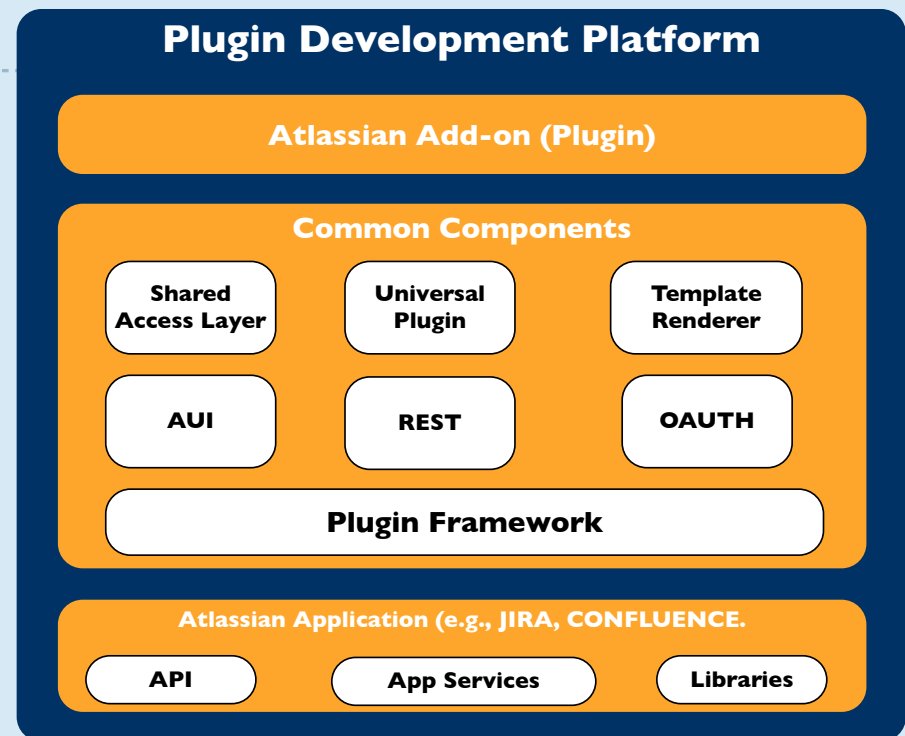


# Controls & UI



# Understanding the Services

- Shared Access Layer (SAL)
- Atlassian Template Renderer
- Atlassian User Interface (AUI)
  
- Typically using these involves
  - `pom.xml` dependencies
  - `atlassian-plugin.xml` elements/modules



# Lab 6: Authorization





# 6.1 Add Dependencies

---

```
<dependency>
  <groupId>com.atlassian.templaterenderer</groupId>
  <artifactId>atlassian-template-renderer-api</artifactId>
  <version>1.3.1</version>
  <scope>provided</scope>
</dependency>
<dependency>
  <groupId>com.atlassian.sal</groupId>
  <artifactId>sal-api</artifactId>
  <version>2.7.1</version>
  <scope>provided</scope>
</dependency>
```





## 6.2 Add SAL Modules

`atlas-create-refapp-plugin-module`

Component Import Option

`com.atlassian.sal.api.user.UserManager`

`com.atlassian.sal.api.auth.LoginUriProvider`

`com.atlassian.templaterenderer.TemplateRenderer`





# What changed?

```
atlassian-plugin.xml  adminUI/pom.xml
1 <?xml version="1.0" encoding="UTF-8"?>
2
3 <atlassian-plugin key="${project.groupId}.${project.artifactId}" name="${project.name}" plugins-version="2">
4   <plugin-info>
5     <description>${project.description}</description>
6     <version>${project.version}</version>
7     <vendor name="${project.organization.name}" url="${project.organization.url}"/>
8   </plugin-info>
9   <servlet name="adminUI" class="com.atlassian.plugins.tutorial.refapp.adminui.ExampleServlet" key="test">
10    <url-pattern>/test</url-pattern>
11  </servlet>
12  <component-import key="templateRenderer" interface="com.atlassian.templaterenderer.TemplateRenderer" filter=""/>
13  <component-import key="userManager" interface="com.atlassian.sal.api.user.UserManager" filter=""/>
14  <component-import key="loginUriProvider" interface="com.atlassian.sal.api.auth.LoginUriProvider" filter=""/>
15 </atlassian-plugin>
16
```



## 6.3 Edit the Servlet Code

---

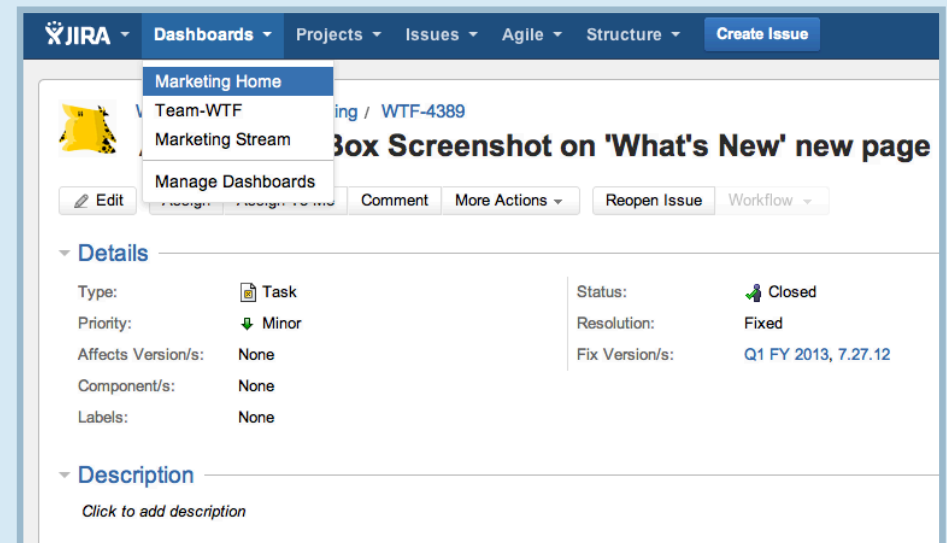
1. Locate the **ExampleServlet.java** file in your project.
2. Open the file.
3. Replace the content of the file with the contents of the **ExampleServlet\_replace.txt** in this LAB folder.





# The New Servlet Code

- Constructor
- `doGet()`
- `redirectToLogin()`
- `getUri()`





## 6.4 Run FastDev

1. Back to your running application.
2. Press the **FastDev** button.

The screenshot shows the FastDev interface with a dark blue header containing a lightning bolt icon and the text "FASTDEV". Below the header, the main area is titled "Reloading 1 plugin" and includes a "Scan and Reload" button. A progress bar indicates "adminUI is installing". Below this, a log window displays the following text:

```
[INFO] Scanning for projects...
[INFO] Searching repository for plugin with prefix: 'resources'.
[INFO] -----
[INFO] Building adminUI
[INFO] task-segment: [resources:resources, com.atlassian.maven.plugins:maven-amps-plugin:filter-plugin-
descriptor, compile, com.atlassian.maven.plugins:maven-amps-plugin:copy-bundled-dependencies,
com.atlassian.maven.plugins:maven-amps-plugin:compress-resources, com.atlassian.maven.plugins:maven-amps-
plugin:generate-manifest, com.atlassian.maven.plugins:maven-amps-plugin:jar,
com.atlassian.maven.plugins:maven-amps-plugin:install]
[INFO] -----
```



# 6.5: Test the Redirect

1. Log out of the application.

2. Enter the URL of your servlet in the browser.

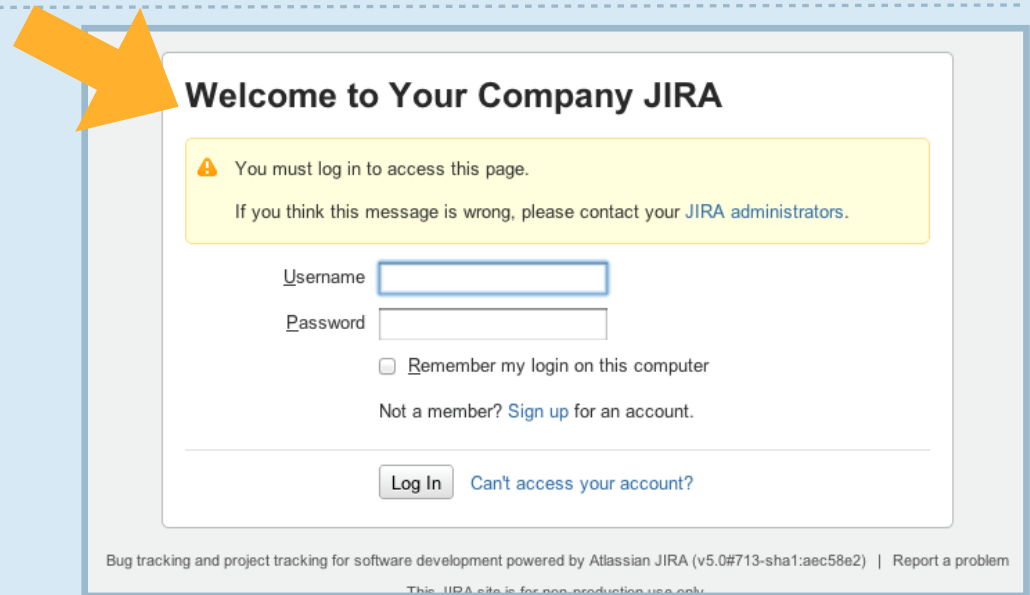
`http://localhost:2990/jira/plugins/servlet/test`

`http://localhost:1990/confluence/plugins/servlet/test`

3. Make sure you get redirected.

4. Then, go ahead and login.

After logging in you should be on your servlet page.



# Lab 7: Look & Feel

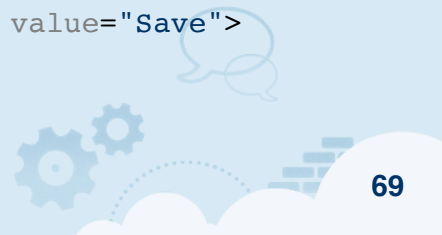




# 7.1: Create a Velocity Template

1. Go to the `PLUGIN_ROOT/src/main/resources` directory.
2. Create an `admin.vm` file in the directory.
3. Add the content of `admin_LAB7_NEW.vm` in the LAB folder.
4. Save the file.

```
<html>
  <head>
    <title>My Admin</title>
  </head>
  <body>
    <form id="admin">
      <div>
        <label for="name">Name</label>
        <input type="text" id="name" name="name">
      </div>
      <div>
        <label for="age">Age</label>
        <input type="text" id="age" name="age">
      </div>
      <div>
        <input type="submit" value="Save">
      </div>
    </form>
  </body>
</html>
```





## 7.2: Add Render to Servlet

---

1. Locate the **ExampleServlet.java** file in your project.
2. Open the file.
3. Replace the content of the file with the contents of the **ExampleServlet\_replace.txt** in this LAB folder.





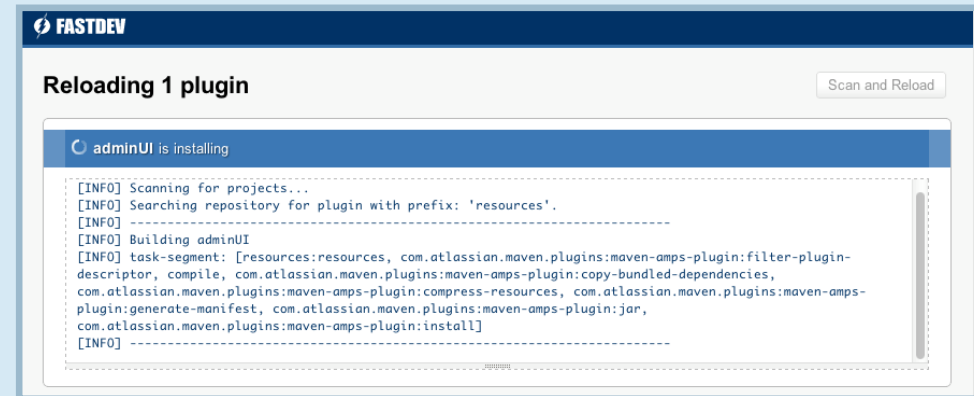
## 7.3: Run FASTDEV

1. Navigate to the servlet:

```
http://localhost:2990/jira/plugins/  
servlet/test
```

```
http://localhost:1990/confluence/plugins/  
servlet/test
```

2. Press SHIFT-Reload on your keyboard.





# How Does It Look?

---

Name

Age





# 7.4: Decorate Your Slide

1. Change directory to the `PLUGIN_ROOT/src/main/resources` directory.

Edit the `admin.vm` file.

Add the `<meta>` element after the `<title>`.

```
<meta name="decorator" content="atl.admin">
```

Save the file.

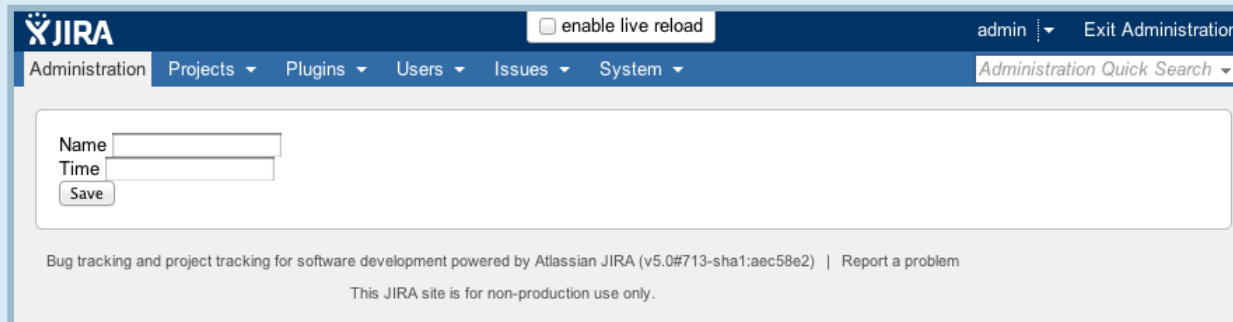
Navigate to the servlet:

```
http://localhost:2990/jira/plugins/servlet/test
```

```
http://localhost:1990/confluence/plugins/servlet/test
```

Reload the servlet page.

Turn on Live Reload for the page.





## 7.5: Add Some CSS

1. Go to the `PLUGIN_ROOT/src/main/resources` directory.
2. Create an `admin.vm` file in the directory.
3. Add the content of `admin_LAB7_RMGR.vm` in the LAB folder.
4. Save the file.

```
<html>
  <head>
    <title>MyServlet Admin</title>
    <meta name="decorator" content="atl.admin">
  </head>
  <body>
    <form id="admin" class="aui">
      <div class="field-group">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name"
class="text">
      </div>
      <div class="field-group">
        <label for="age">Age:</label>
        <input type="text" id="age" name="age"
class="text">
      </div>
      <div class="field-group">
        <input type="submit" value="Save" class="button">
      </div>
    </form>
  </body>
</html>
```



# Looking Good

The screenshot shows the JIRA Administration interface. At the top left is the JIRA logo. To its right is a checkbox labeled "enable live reload" which is checked. Further right is a user profile "admin" with a dropdown arrow and a link "Exit Administration". Below this is a navigation bar with tabs: "Administration" (selected), "Projects", "Plugins", "Users", "Issues", and "System", each with a dropdown arrow. On the far right of the navigation bar is an "Administration Quick Search" input field. The main content area contains a form with two input fields: "Name:" and "Time:". Below these fields is a "Save" button. At the bottom of the page, there is a footer with the text: "Bug tracking and project tracking for software development powered by Atlassian JIRA (v5.0#713-sha1:aec58e2) | Report a problem" and "This JIRA site is for non-production use only." The background of the slide features decorative gear and speech bubble icons.



# Takeaways from Controls and GUI

---

- Shared Access Layer gives you access to user profile information.
- To use SAL or AUI my project needs to specify the dependencies in the `pom.xml` file.
- The components you want to use should appear in the descriptor.
- Use a template to control the look of your page.
- AUI provides some “canned” decorators so your plugin “fits in.”





# Getting to Settings

# Lab 8: Add Some Settings





# 8.1 Add Some Dependencies

1. Open the pom.xml file inside the root of your project.
2. Find the <dependencies> section.
3. Locate the <packaging> tag and the <dependencies> section that immediately follows it.
4. Insert the following inside the <dependencies> section:

```
<dependency>  
  <groupId>com.google.collections</groupId>  
  <artifactId>google-collections</artifactId>  
  <version>1.0-rc2</version>  
</dependency>
```
5. Verify that you put the dependencies inside the correct <dependencies> section. The one immediately following the <packaging> tag.
6. Save your file.





## 8.2 Edit the Descriptor

---

1. Open the `atlassian-plugin.xml` file in your code.
2. Add a `PluginSettingsFactory` component:

```
<component-import  
key="pluginSettingsFactory"  
interface="com.atlassian.sal.api.plugin  
settings.PluginSettingsFactory"  
filter="" />
```
3. Save the file.
4. Open a new terminal window.
5. At the root of your project directory, run the command:

```
atlas-mvn eclipse:eclipse
```
6. Return to Eclipse and Refresh your project.





## 8.3 Edit the Template

---

1. Change directory to the `PLUGIN_ROOT/src/main/resources` directory.
2. Edit the `admin.vm` file.
3. Add an action and a method to the `<form>` element:

```
<form id="admin" class="aui" action="" method="POST">
```

4. Save the file.





## 8.4: Add Data to Servlet

---

1. Locate the `ExampleServlet.java` file in your project.
2. Open the file.
3. Replace the content of the file with the contents of the `ExampleServlet_replace.txt` in this LAB folder.



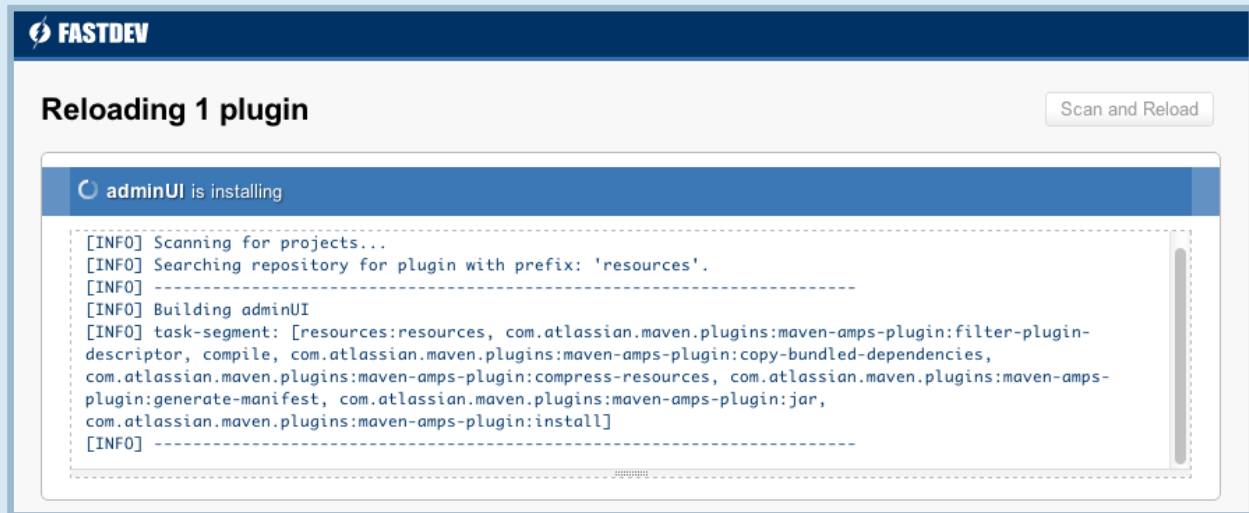


# 8.5: Run FASTDEV

1. Navigate to the servlet:

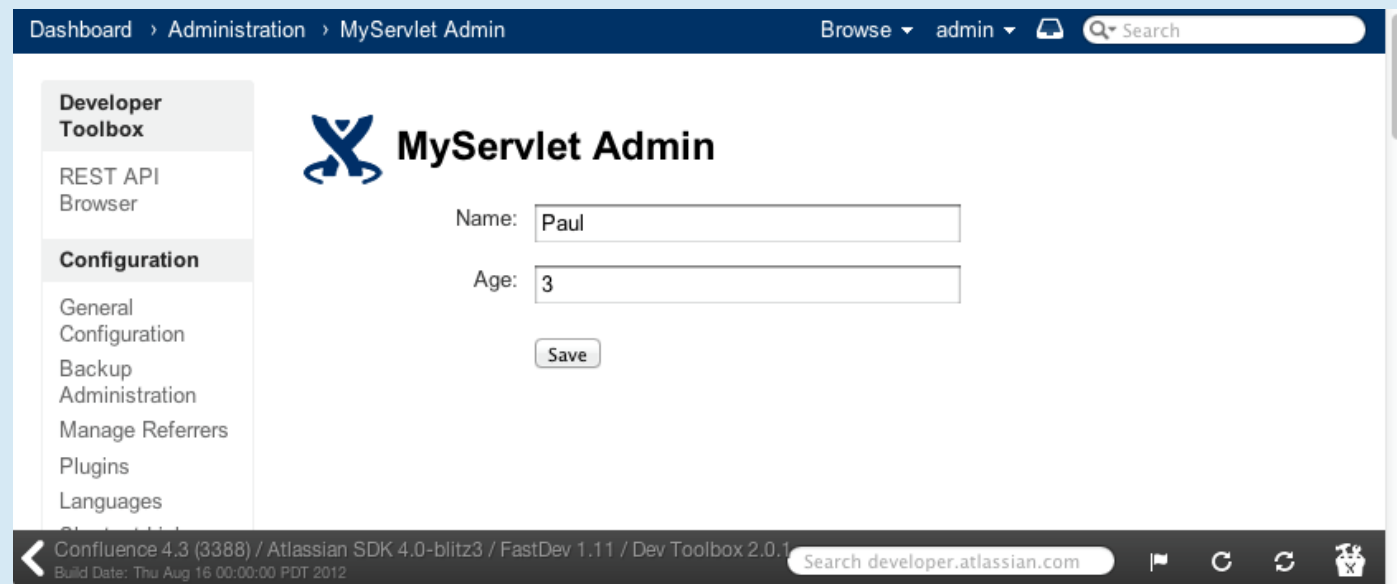
`http://localhost:2990/jira/plugins/servlet/test`  
`http://localhost:1990/confluence/plugins/servlet/test`

2. Press SHIFT-Reload on your keyboard.



# 8.6: Test Your Data

1. Go to your servlet.
2. Enter a **Name** and **Age** value.
3. Press **Save**.



The screenshot shows the 'MyServlet Admin' web application interface. The breadcrumb navigation at the top reads 'Dashboard > Administration > MyServlet Admin'. The page title is 'MyServlet Admin' with a logo. On the left, there is a 'Developer Toolbox' sidebar with a 'Configuration' section expanded, showing options like 'General Configuration', 'Backup Administration', 'Manage Referrers', 'Plugins', and 'Languages'. The main content area contains a form with two input fields: 'Name: Paul' and 'Age: 3'. Below the fields is a 'Save' button. The footer of the application displays version information: 'Confluence 4.3 (3388) / Atlassian SDK 4.0-blitz3 / FastDev 1.11 / Dev Toolbox 2.0.1' and a search bar for 'developer.atlassian.com'.



# 8.7 Look at Plugin in OSGI

1. Navigate to the **Manage Plugins** section.

JIRA: Click Administration then Plugins

CONFLUENCE: Click **Browse > Confluence Admin** then click **Manage Plugins**

2. Click the **OSGI** tab.

3. Search for your plugin.

4. Open the plugin.

The screenshot shows the OSGI console interface. At the top, there are navigation tabs: 'Manage my plugins', 'Install Plugins', 'Confluence Update Check', 'Audit Log', and 'OSGI'. Below these is a search bar with the text 'adminUI' and buttons for 'Search bundle metadata', 'Search', and 'Clear'. The main content area is titled 'OSGI' and contains a message: 'This tab shows debugging information about the Confluence OSGi container, useful for plugin developers and system administrators.' Below this, a list of bundles is shown, with one selected: '128 - com.atlassian.plugins.tutorial.refapp.adminUI'. The details for this bundle are as follows:

Location	file:/Users/manthony/atlastutorials/adminUI/target/confluence/home/plugins-osgi-cache/transformed-plugins/1347904915171plugin_6403097378061867496_1347904915000.jar
Atlassian-Plugin-Key	com.atlassian.plugins.tutorial.refapp.adminUI
Bnd-LastModified	1347904915353
Bundle-Description	This is the com.atlassian.plugins.tutorial.refapp.adminUI plugin for Atlassian Refapp.
Bundle-DocURL	http://www.mycool.com/
Bundle-ManifestVersion	2
Bundle-Name	com.atlassian.plugins.tutorial.refapp.adminUI
Bundle-SymbolicName	com.atlassian.plugins.tutorial.refapp.adminUI
Bundle-Vendor	My Cool Company
Bundle-Version	1.0.0.SNAPSHOT
Created-By	1.6.0_33 (Apple Inc.)
Manifest-Version	1.0
Spring-Context	*,timeout:=60
Tool	Bnd-1.43.0

Below the details, there are expandable sections for 'Bundle-ClassPath - 2 entries', 'Import-Package - 7 entries', and 'Private-Package - 6 entries'. At the bottom, there is a search bar with the text 'com.google.common.collect'.



# Takeaways

---


- You can add dependencies to any API you like.
- OSGI isolates your dependency on load from conflicts with other plugins.
- You can edit the `atlassian-plugin.xml` file manually.
- `PluginSettings` APIs give you the means to store data.
- You can review your plugin's dependencies running in UPM.





# Next Steps

# Visit the Documentation



The screenshot shows the Atlassian Developers website. The main navigation bar includes 'Docs', 'Atlassian Marketplace', 'Answers', 'News', and 'About'. A secondary navigation bar lists various Atlassian products: SDK, JIRA, Confluence, Crowd, Bamboo, Gadgets, AUI, API Reference, and Other Topics. The left sidebar contains a tree view of the SDK documentation, with 'Introduction to the Atlassian Plugin SDK' selected. The main content area features the title 'Introduction to the Atlassian Plugin SDK', a byline for Sarah Maddox, and an introductory paragraph explaining the SDK's purpose. A call-to-action box on the right encourages users to 'Develop an Atlassian Add-on!' and provides buttons for 'Set Up the Atlassian Plugin SDK and Build a Project', 'Already have the SDK? Get version 3.11 here:', '.zip (Win)', and '.tgz (Unix)'. A 'Feedback?' button is visible on the right edge of the page.

# https://bitbucket.org/atlassian\_tutorial

The screenshot shows a web browser window displaying the Bitbucket profile for 'atlassian\_tutorial'. The browser's address bar shows the URL 'https://bitbucket.org/atlassian\_tutorial'. The Bitbucket logo and navigation menu are visible at the top. The profile header includes the name 'Atlassian Tutorials (atlassian\_tutorial)', the member date '28 November 2011', and counts for 'Members (24)' and 'Followers (9)'. Below this, there are buttons for 'Following', 'Send message', and 'Leave team'. The 'Recent activity' section lists three events: creating a repository 'atlassian\_tutorial/jira-rpc-plugin' 6 days ago, creating 'atlassian\_tutorial/writing-macros-for-confluence-pre4' 10 days ago, and deleting 'atlassian\_tutorial/testnewrepo' 18 days ago. A 'Repositories' section is partially visible on the right, showing a list of repositories under a 'Filter Repositories' search box.



# Evaluate the Course

- The feedback we got from Summit directly influenced the classes here at Camp.
- IOW, what you say can make a big difference to what you get in the future.
- Look for and fill out the evaluation form.





# Thank You!