



Get drunk on the code.

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#jenkinsconf

About Me

- ▣ Worked at Oracle as a contractor, and Redprie as an intern.
- ▣ Contributed code to Hudson, and Jenkins.
- ▣ Lead developer of Cobertura - an OSS code coverage utility.



Before writing a new plugin, I ask myself:

- Does the plugin already exist (Or
- could it be done with pre-existing plugins)?
- Could it be created as a new feature (pull request)?



Agenda

□ Beginner Section:

- Installing maven and creating hello world plugin.
- How to execute hello world plugin.

□ Intermediate Section:

- Write a Root Action
- Write a new Builder (also Console Notes)

□ Advanced Section:

- Writing CLI Command





Beginners Section

Install Maven and create hello world
program

What is Maven?



- ❑ Software Project Management and Comprehension Tool.
- ❑ Uses pom.xml file for managing dependencies.
- ❑ Allow for similar file structures.

Installing Maven



- Go to <http://maven.apache.org/download.cgi>
- Download latest release
- Install in `/usr/share/maven/`
- Add to `$PATH`
- Ubuntu: `sudo apt-get install maven`
- Mac: `brew install maven`

Let's get started already!!

▣ <https://wiki.jenkins-ci.org/display/JENKINS/Plugin+tutorial> for setting up settings.xml file.

▣ Either execute:

- ▣ `mvn hpi:create`

- ▣ `mvn -U org.jenkins-ci.tools:maven-hpi-plugin:create`



Console output



```
[~/Jenkins@schristou88]
% mvn hpi:create
[INFO] Scanning for projects...
[INFO]
[INFO] -----
[INFO] Building Maven Stub Project (No POM) 1
[INFO] -----
[INFO]
[INFO] --- maven-hpi-plugin:1.109:create (default-cli) @ standalone-pom ---
Enter the groupId of your plugin [org.jenkins-ci.plugins]:
Enter the artifactId of your plugin (normally without '-plugin' suffix): helloworld
[INFO] Defaulting package to group ID + artifact ID: org.jenkins-ci.plugins.helloworld
[WARNING] Package name contains invalid characters. Replacing it with 'org.jenkinsci.plugins.helloworld'
[INFO] -----
[INFO] Using following parameters for creating Archetype: maven-hpi-plugin:1.109
[INFO] -----
[INFO] Parameter: groupId, Value: org.jenkins-ci.plugins
[INFO] Parameter: package, Value: org.jenkinsci.plugins.helloworld
[INFO] Parameter: artifactId, Value: helloworld
[INFO] Parameter: basedir, Value: /home/schristou88/Jenkins
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] ***** End of debug info from resources from generated POM *****
[INFO] Archetype created in dir: /home/schristou88/Jenkins/helloworld
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.281s
[INFO] Finished at: Mon Jun 09 02:50:32 PDT 2014
[INFO] Final Memory: 14M/179M
[INFO] -----
[~/Jenkins@schristou88]
% █
```

Tree Structure of default plugin



```
File Edit View Search Terminal Tabs Help
Terminal
[~/Jenkins/demo@schristou88]
% tree
.
├── pom.xml
├── src
│   ├── main
│   │   ├── java
│   │   │   ├── org
│   │   │   │   ├── jenkinsci
│   │   │   │   │   ├── plugins
│   │   │   │   │   │   ├── demo
│   │   │   │   │   │   │   └── HelloWorldBuilder.java
│   │   │   └── resources
│   │   │       ├── index.jelly
│   │   │       └── org
│   │   │           ├── jenkinsci
│   │   │           │   ├── plugins
│   │   │           │   │   ├── demo
│   │   │           │   │   │   ├── HelloWorldBuilder
│   │   │           │   │   │   │   ├── config.jelly
│   │   │           │   │   │   │   ├── global.jelly
│   │   │           │   │   │   │   ├── help-name.html
│   │   │           │   │   │   │   └── help-useFrench.html
└── 13 directories, 7 files
[~/Jenkins/demo@schristou88]
% 
```



Live Demo Time...



Live testing of plugin
Execute: `mvn hpi:run`



Intermediate Section How to write a Root Action

What is a Root Action?



The screenshot shows the Jenkins web interface. The top navigation bar includes links for File, Edit, View, History, Tools, and Help. The main content area displays the Jenkins logo and a list of links: New Job, People, Build History, Manage Jenkins, Credentials, UI Samples, and Jenkins home page. Below these links, there is a section titled 'Build Queue' which states 'No builds in the queue.' and a section titled 'Build Executor Status' which contains a table showing the status of two executors.

#	Status
1	Idle
2	Idle

Why create a root action?

- Companies with several Jenkins instances could create links to their other Jenkins masters.
- If open source project, could have link to their home page.



This demo will...

- Create a new Root Action
- Link main page to Company URL
say we link to jenkins-ci.org).





Live Demo Time...



Intermediate Section How to write a Builder

Why create a builder?

- If a builder for a new application does not exist.
- Companies that write their own applications/build scripts can create builders oriented around their organization.





Live Demo Time...



Advanced Section

How to write a CLI Command

CLI Commands in Jenkins?

□ Jenkins allows for CLI Command execution to do many things like:

- Run a job
- Delete a job
- Create a Node
- Execute groovy script
- And many more things. But let's add a new operation



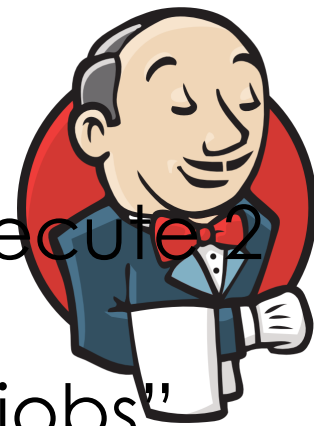
Why Write a CLI Command?

- Exposing administrative commands to admins.
- Exposing data and operations to build inside Jenkins.



This demo will...

- We will write a cli operation to execute two jobs.
- CLI Command called “execute-two-jobs”.
- We have two arguments “job1” and “job2”.





Live Demo Time...



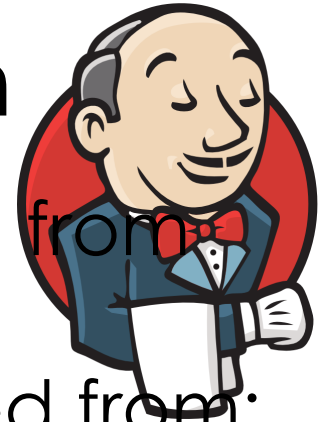
□ Command line execute:

□ `java -jar jenkins-cli.jar -s http://localhost:8080/jenkins/
execute-two-jobs --first job1 --second job2`

Let's test this example

Credits and more information

- Jesse Glick – Borrowed information from multiple slides he has.
- This plugin and slides can be obtained from:
 - <http://github.com/christ66/demo-plugin.git>
- Questions:
 - Twitter: @schristou88
 - IRC: schristou
 - Github ID: christ66



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