Zero to Jenkins in 5 days

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June 18, 2014

#jenkinsconf

Getting started with Jenkins

- Build

- Parameterize

- Design First

- Configuring Jenkins jobs

- What Plugins are out there

Jenkins Build

- What is a Jenkins "Build"?

- Not necessarily a product build

- Think of it as your run main method of your class

```
public static void main(String[] args) {

}
```

Parameterize
(Extended Choice Parameter Plugin)

- Allows Job re-use

- Easy to maintain

- Think about how often jobs could change?

- Think about your entire pipeline

- What happens when you have a new release/version of your product?

- Params change, use source control for them (Maven/RTC/Clearcase/Git)

- Can help you to scale and run more in parallel without the added maintenance of duplicate jobs (Multi-job Plugin)
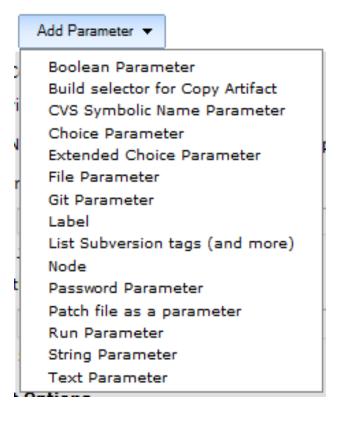
Design First

- Re-Configuring jobs can be painful and tedious

- It should be easy to update/modify your pipeline and jobs

- What could change in your pipeline over time, think ahead!

- Understand the Jenkins job and all the pre/post build options

- Start/Stop/Restart pipelines from any step

- Debugging your pipeline

- Use source control for storing all aspects of your pipeline

- Start small, then expand, use naming conventions (Nested View Plugin)

- Design out your pipeline ahead of time, then implement in Jenkins

Configuring Jenkins jobs

- Anything command line - Jenkins can execute

- Don't hard-code things that could change (Extended Choice Parameter Plugin)

- Security – who can build and configure (Matrix Authorization Strategy Plugin)

- Jenkins job results (xUnit Plugin)

- Post processing of results (Publish jUnit/xUnit results)

- Use the workspace to your benefit (Environment Injector Plugin)

- There may be a better solution than using "blocking jobs"

- How to maintain your jobs/slave nodes/pipeline?

Configuring Jenkins jobs

☑ This build is parameterized

Add Parameter ▼

- Boolean Parameter
- Build selector for Copy Artifact
- CVS Symbolic Name Parameter
- Choice Parameter
- Extended Choice Parameter
- File Parameter
- Git Parameter
- Label
- List Subversion tags (and more)
- Node
- Password Parameter
- Patch file as a parameter
- Run Parameter
- String Parameter
- Text Parameter

⣿ Extended Choice Parameter

Name	
Description	
Parameter Type	Single Select ▼
Value	
Property File	
Property Key	
Default Value	
Default Property File	
Default Property Key	
Quote Value	☐
Number of Visible Items	
Delimiter	

Configuring Jenkins jobs

Groovy Label Assignment Plugin

☑ Groovy script to restrict where this project can be run

Groovy Script

```
if(RegressionTest == "true") {
// use nodes labeled "debug_node"
println("Groovy Using DEV Driver for Regression")
return "DEVELOPMENT_GRTE";
}else{
println("Groovy Using Production Driver")
return "grte";
}
```

Matrix Authorization Strategy Plugin

☑ Enable project-based security

☐ Block inheritance of global authorization matrix

User/group	Job							Run		SCM
	Delete	Configure	Read	Discover	Build	Workspace	Cancel	Delete	Update	Tag
Anonymous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

User/group to add: [   ] [Add]

Configuring Jenkins jobs

Build-Name Setter Plugin

-

☑ Set Build Name

Build Name   `${ENV,var="Operating System"}-Running All tests`

☐ Use custom workspace

☑ Execute concurrent builds if necessary

Configuring Jenkins jobs

Build Time-out Plugin

☑ Abort the build if it's stuck

Time-out strategy   ◉ Absolute

Timeout minutes `1440`

◯ Elastic

◯ Likely stuck

◯ No Activity

Time-out variable [   ]

Set a build timeout environment variable

Time-out actions   **Abort the build**

[Add action ▼]

Build Step Options

[Add build step ▼]

Conditional step (single)
Conditional steps (multiple)
Copy artifacts from another project
Execute Groovy script
Execute Windows batch command
Execute shell
Execute system Groovy script
Inject environment variables
Invoke Ant
Invoke top-level Maven targets
LA Job Executor
Process xUnit test result report
Trigger/call builds on other projects
Windows PowerShell

Useful Plugins

- **Build-Name Setter Plugin**
- **Conditional Build Step Plugin**
- **Downstream Build View Plugin**
- **Environment Injector Plugin**
- **Extended Choice Parameter Plugin**
- **Multi Job Plugin**
- **Parameterized Trigger Plugin**
- **Groovy Label Assignment Plugin**
- **Nested View Plugin**
- **Run Condition Plugin**
- **Show Build parameters Plugin**
- **View Job Filters Plugin**
- **Log Parser Plugin**
- **Build-time-out Plugin**
- **Source control plugins for integration**

Stuck? Need Help?

- Google is your friend

- Jenkins book by O'Reilly

- Forums, communities, use social platforms

- Chances are other people have had your question and may have a solution

- Tons of plugins out there

- Create your own plugin, or help contribute to enhance/fix existing plugins

- Report bugs/issues

Questions?

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