

Jenkins

Continuous Delivery and Automation

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<http://www.jenkins.io/>

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What is CI/CD

- Continuous Integration
- Continuous Delivery



Jenkins

- Free and Open source
- Supports multiple languages
- Both GUI and versionable job configs
- Reduces Developer Time
- Automates Tedious and Repetitive Processes
- Notifications
- Build Servers
 - Comments
 - Email
 - Chat Apps



ADI-IA Jenkins @adi-ia-jenkins commented 3 weeks ago

Build triggered.



ADI-IA Jenkins @adi-ia-jenkins commented 3 weeks ago

Build Started: <https://ia-builds.doit.wisc.edu:8443/job/wiscli>



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Build finished. Tests PASSED. Build results available at: <http://...>



jenkins APP 3:55 PM

[STARTED][WebHosting API] **step** = Unit/Integration Test, **build** = [https://ia-tools-jenkins.doit.wisc.edu/job/git.doit.wisc.edu/job/adi-ia%252Fwebhosting-customers-rest-ws/job!/37%20-%20DWH-645%20Update%20configuration%20for%20using%20AWS%20hosted%20Jenkins%20\(merge\)/6/](https://ia-tools-jenkins.doit.wisc.edu/job/git.doit.wisc.edu/job/adi-ia%252Fwebhosting-customers-rest-ws/job!/37%20-%20DWH-645%20Update%20configuration%20for%20using%20AWS%20hosted%20Jenkins%20(merge)/6/)

[FAILED][WebHosting API] **step** = Unit/Integration Test, **build** = [https://ia-tools-jenkins.doit.wisc.edu/job/git.doit.wisc.edu/job/adi-ia%252Fwebhosting-customers-rest-ws/job!/37%20-%20DWH-645%20Update%20configuration%20for%20using%20AWS%20hosted%20Jenkins%20\(merge\)/6/](https://ia-tools-jenkins.doit.wisc.edu/job/git.doit.wisc.edu/job/adi-ia%252Fwebhosting-customers-rest-ws/job!/37%20-%20DWH-645%20Update%20configuration%20for%20using%20AWS%20hosted%20Jenkins%20(merge)/6/)

Considerations

- Self Hosted Tool
- Size Constraints



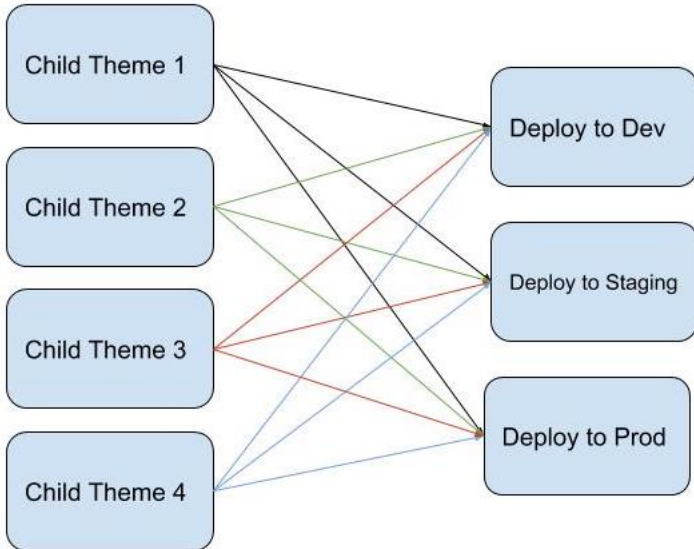
How do we use Jenkins?

- One to Many
 - One Git Repository
 - Many Jenkins Jobs
 - Merge Request Jobs
 - Build Jobs
 - Deploy Jobs
- Many to Many
 - Many Git Repositories
 - Many Jenkins Jobs

One to Many

- 1 Developer Makes Changes and Tests Locally
- 2 Developer opens a Merge Request on GitLab
 - Jenkins builds the Merge Request
 - Jenkins Runs Tests Against the Merge Request
- 3 Once tests are passing and code is reviewed, the developer merges the changes
- 4 Jenkins runs tests again
- 5 Jenkins creates a versionable artifact
- 6 Jenkins deploys the jobs to the chosen environments

Many to Many



- Standard
- Blue Ocean

- Groovy Based
- Version Controlled

```
1 pipeline {  
2   agent any  
3  
4   stages {  
5     stage('Build') {  
6       steps {  
7         echo 'Building..' }  
8     }  
9   }  
10 }  
11
```

Example

Questions