



BATCH : Batch 85

LESSON : Jenkins

DATE : 30.10.2022

SUBJECT : Jenkins Introduction-
Installation



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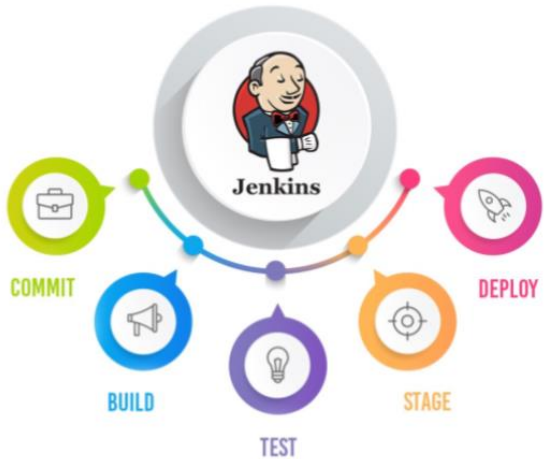
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Jenkins Introduction



What is Jenkins?



- ✅ Jenkins is a self-contained, open source automation server.
- ✅ Automates all sorts of tasks related to building, testing, and delivering or deploying software.

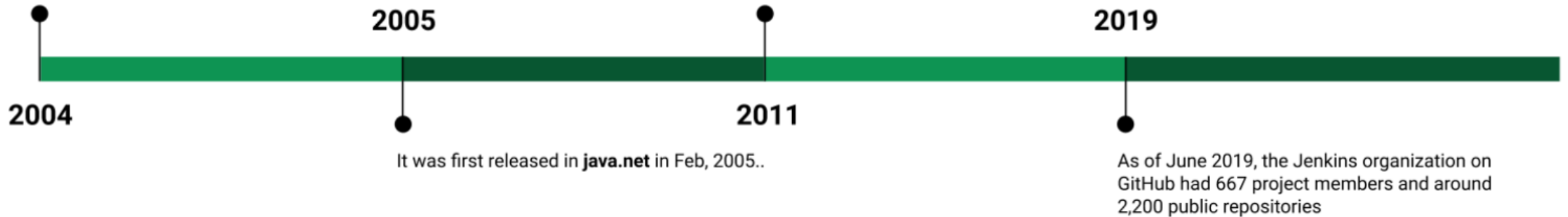


Jenkins History

Started to Hudson Project

Jenkins was originally developed as the Hudson project. Hudson's creation started in the summer of 2004 at Sun Microsystems

In 2011, after the acquisition of Sun Microsystems by **Oracle**, it is forked and renamed as **Jenkins**.

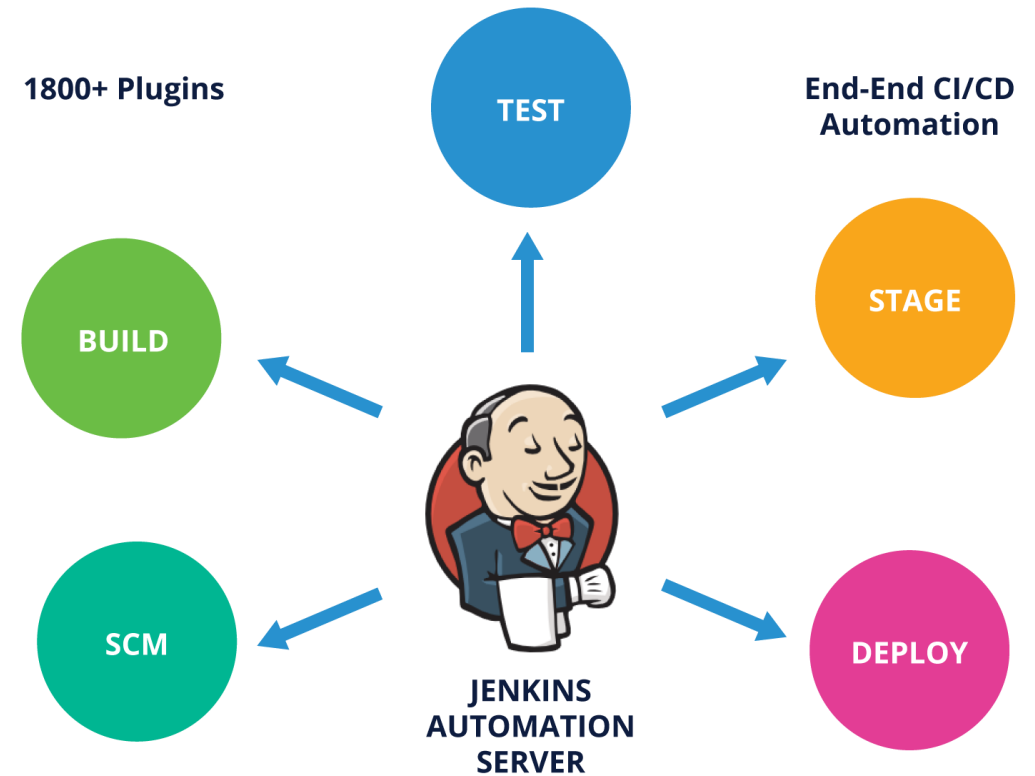




CI/CD Tools

CI/CD Tools	Feature: Pricing	Feature: Licensing	Feature: Hosting	Feature: Extensions/ Plugins
Atlassian Bamboo	Paid	Closed	On-premises	**
Bitbucket Pipelines	Paid	Closed	Cloud/ On-premises	**
AWS CodePipeline	Paid	Closed	Cloud	*
Azure Pipelines	Paid	Closed	Cloud	**
Circle CI	Paid	Closed	On-premises/ Cloud	***
CloudBees Core	Paid	Closed	On-premises/ Cloud	*****
GitHub Actions	Paid	Closed	On-premises/ Cloud	***
GitLab CI/CD	Free/Paid	OSS/Closed	On-premises/ Cloud	*
Google Cloud Build	Paid	Closed	Cloud	**
Jenkins	Free	OSS	On-premises/ Cloud	*****
Travis CI	Paid	Closed	On-premises/ Cloud	***

1800+ Plugins

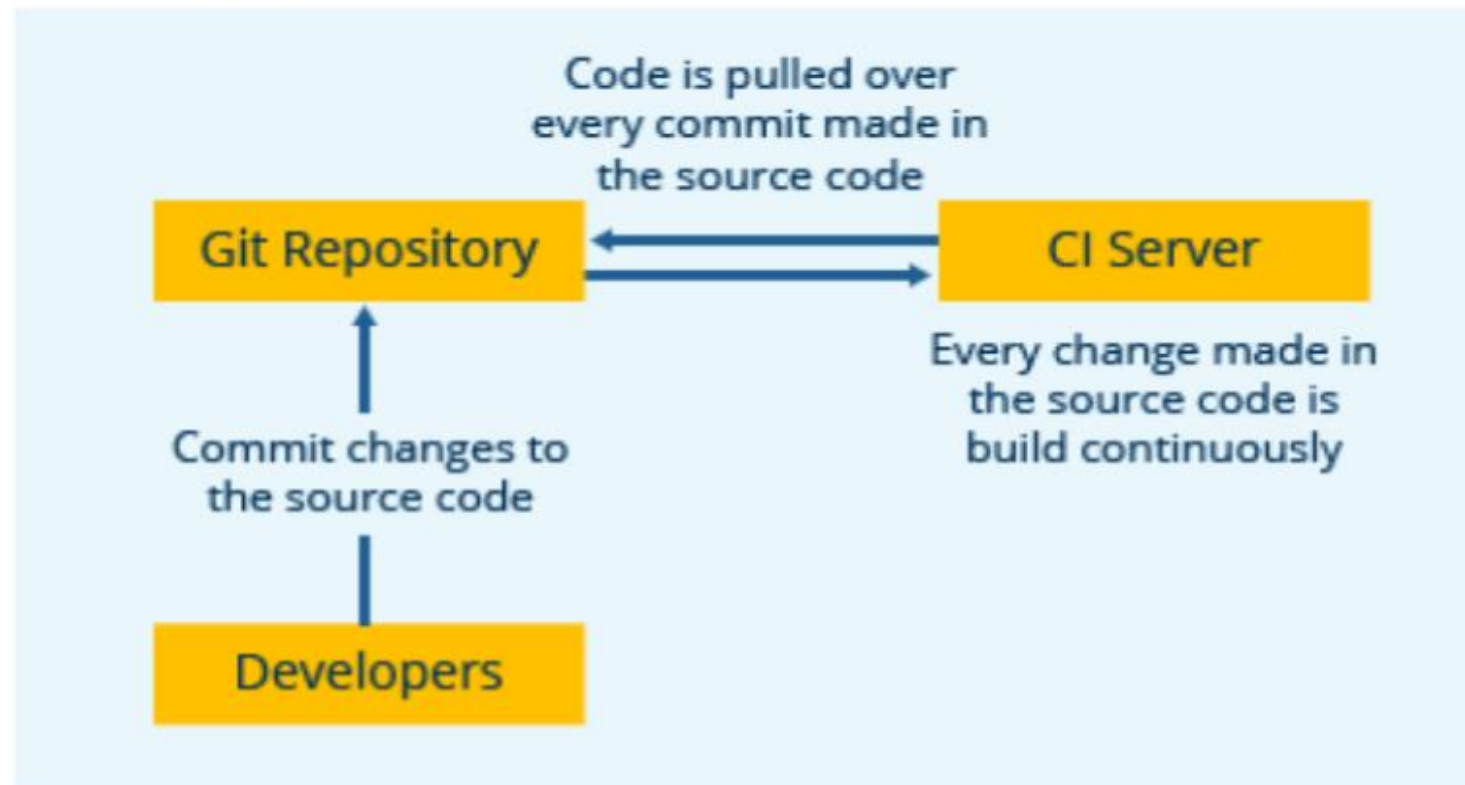




Continuous Integration

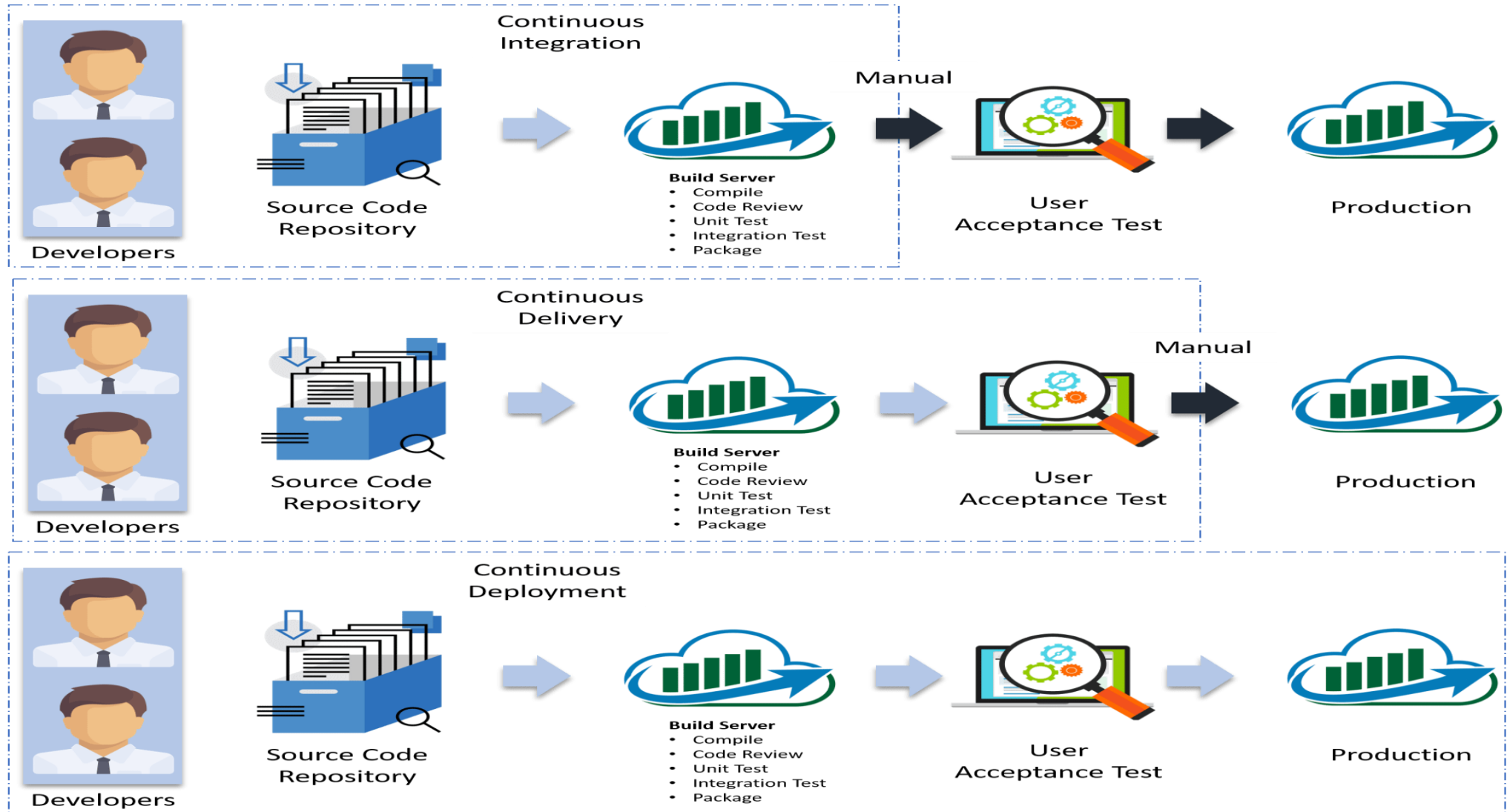


Continuous Integration



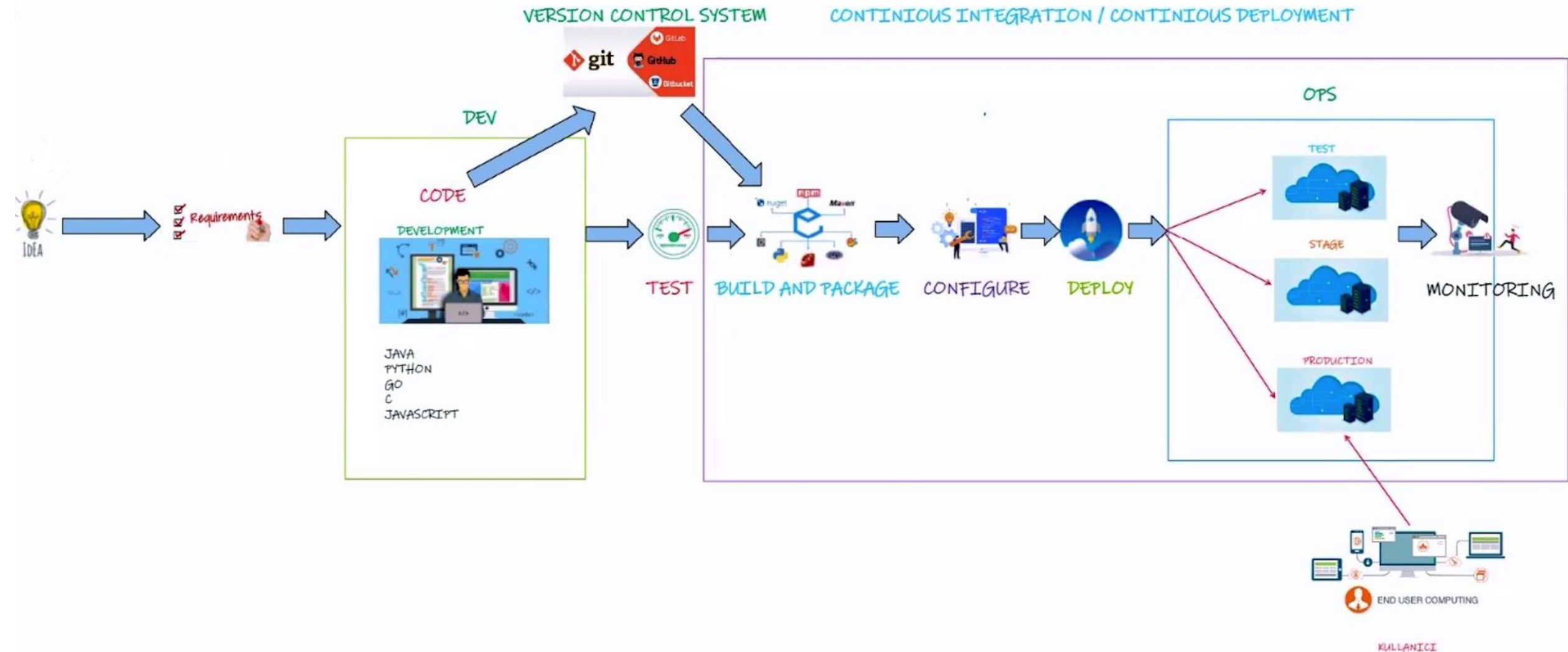


Continuous Delivery and Continuous Deployment





Continuous Delivery and Continuous Deployment





Jenkins Concepts

All +	S	W	Name ↓	Last Success	Last Failure	Last Duration	
			backend-app	10 hr - #2	10 hr - #3	4 ms	
			custom-app-build	10 hr - #2	N/A	3 ms	
			frontend-app	10 hr - #2	N/A	3 ms	
			pipeline-app	10 hr - #4	10 hr - #3	45 sec	

Icon: S M L

Legend Atom feed for all Atom feed for failures Atom feed for just latest builds

Build Status

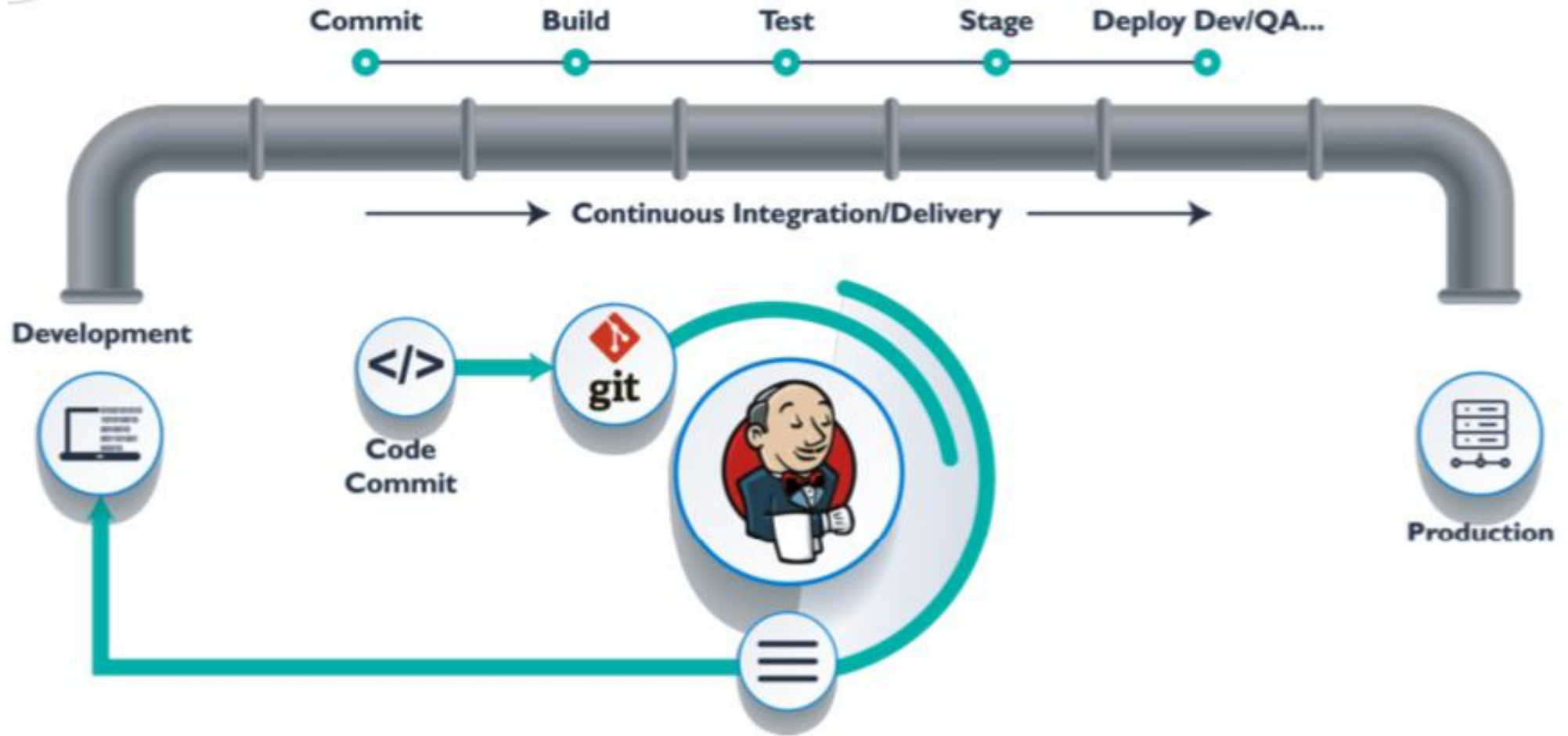
Build Status	Color Code
Build is currently in progress	
Build is successful	
Aborted build	
Failed build	
Unstable build	

Health/Build Stability

Health/Build Stability	Weather Icon
If > 80% of the build runs are successful	
If 61% - 80% of the build runs are successful	
If 41% - 60% of the build runs are successful	
If 21% to 40% of the build runs are successful	
If < 21% of the build runs are successfully	



Jenkins Concepts: Pipelines





Jenkins Concepts

✓ Pipeline :

- ✓ A Pipeline is a user-defined model of a CD pipeline.

✓ Node :

- ✓ A node is a machine that is part of the jenkins environment and is capable of executing a Pipeline.

✓ Stage :

- ✓ A stage block defines a completely distinct subset of tasks performed through the entire Pipeline

✓ Step :

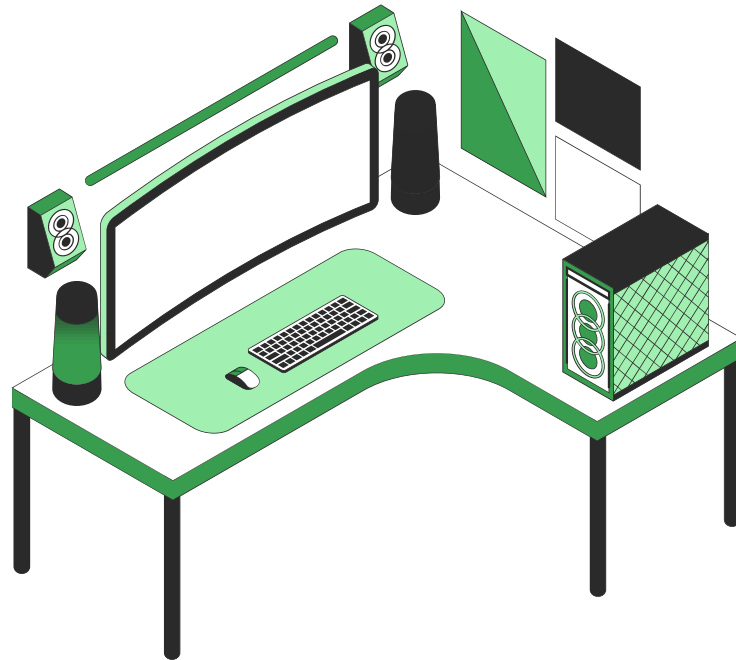
- ✓ Single task



Jenkins Documentation

<https://www.jenkins.io>

<https://www.jenkins.io/download/>



Do you have any questions?

Send it to us! We hope you learned something new.