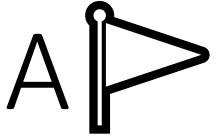


Jenkins

An Introduction



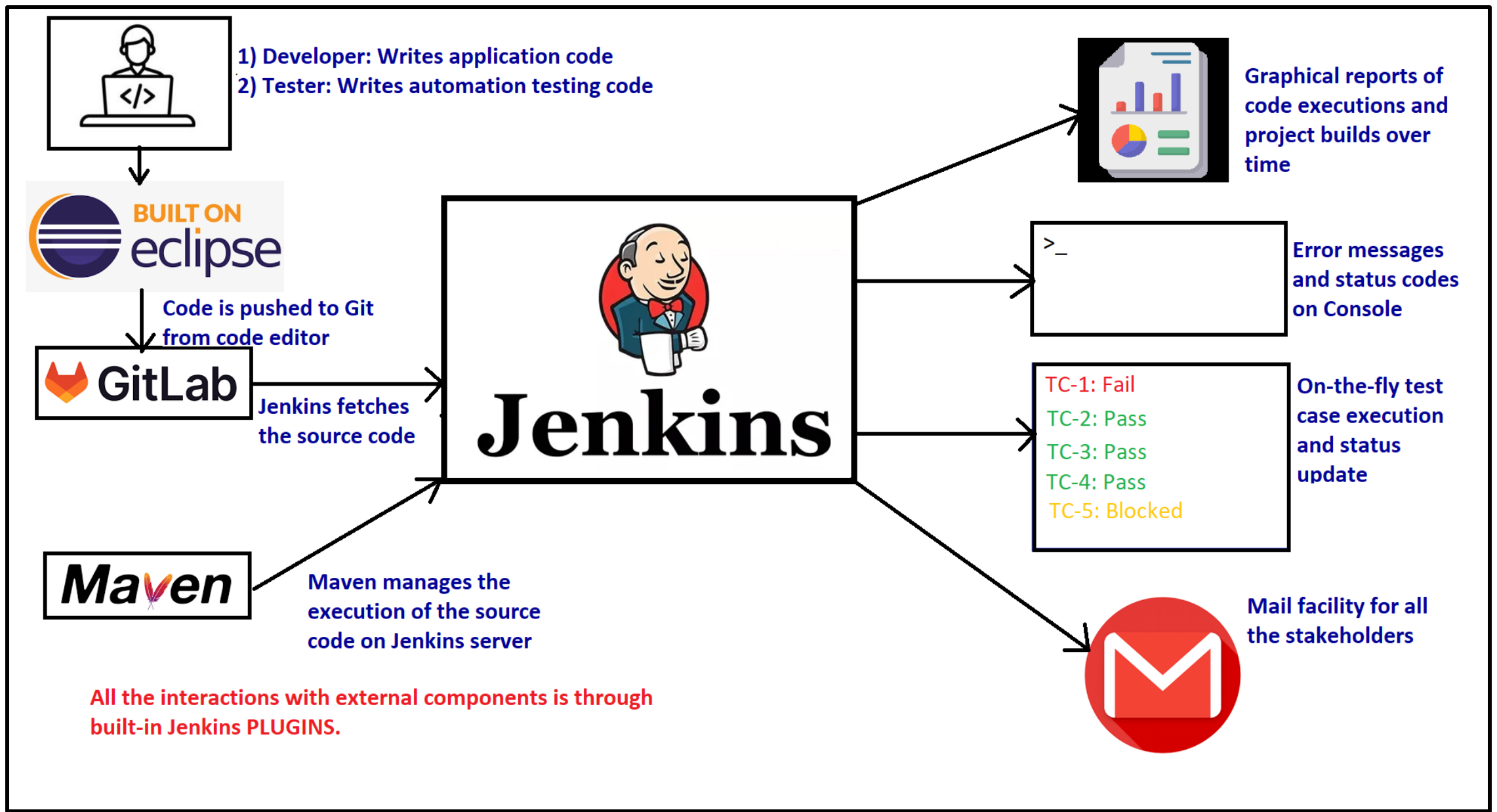
- What is Jenkins?
 - Features
 - How does Jenkins work?
- How does Jenkins communicate with other tools?
- Pipeline
 - How does a pipeline look like in Jenkins?
- Slave-node in Jenkins
 - Need
 - Usage
 - Master-slave architecture

What is Jenkins?

- An open-source automation server that can automate almost anything related to computer software.
- Can integrate with almost all the programming languages, test case tools, bug management tools, source code management tools, code execution tools, reporting tools, etc.
- Author: Kohsuke Kawaguchi
- Initial release: 2 February 2011

Jenkins Features

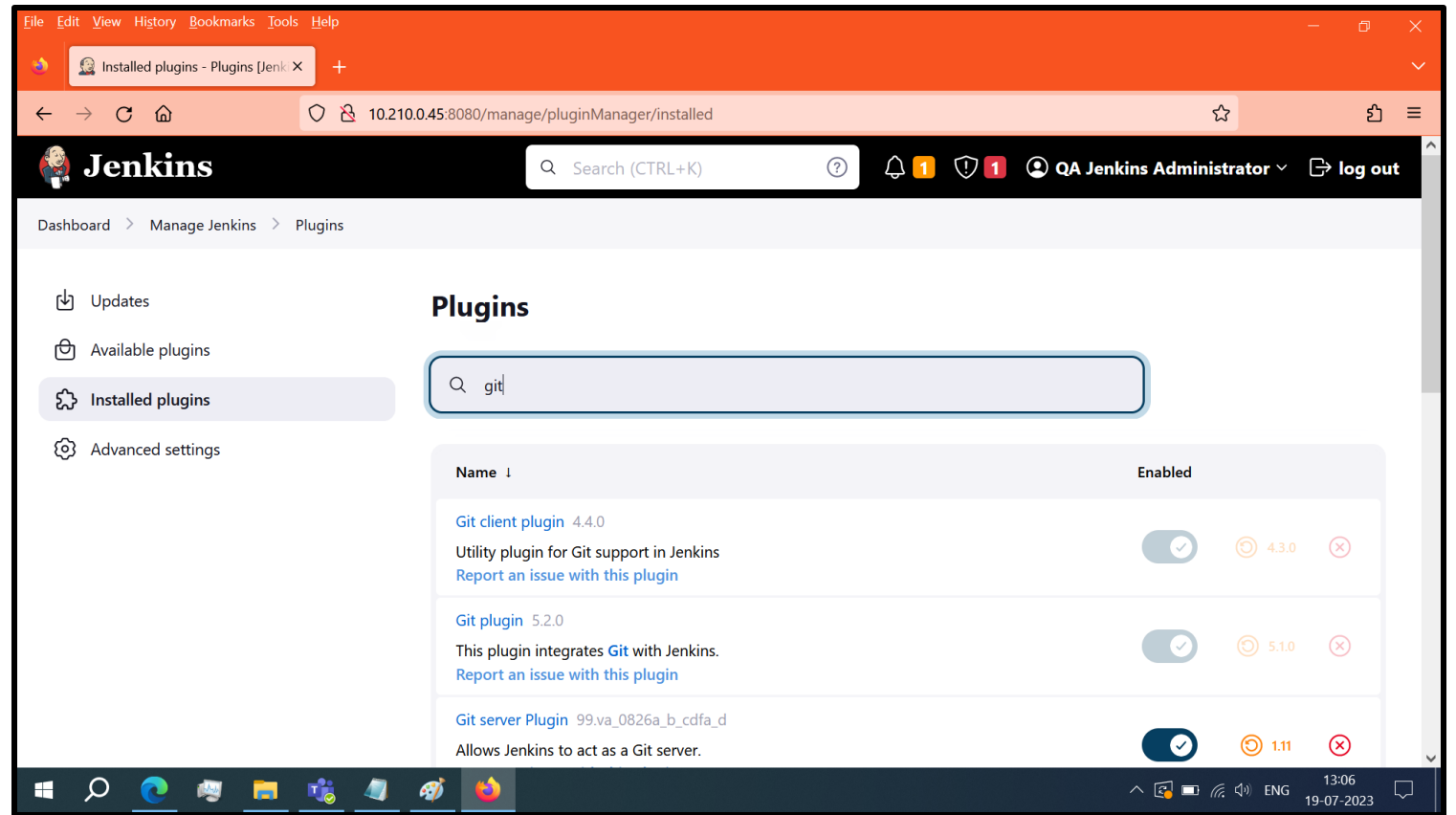
- Developed in Java
- Platform independent
- CI/CD
- Automatic project builds



How does Jenkins work?

How does Jenkins communicate with other tools?

- Interface between Jenkins and any third-party tool
- Enhances Jenkins functionality as per organizational or user needs
- Integrate various build tools, cloud providers, analysis tools and much more



Pipeline

- Jenkins Pipeline is a tool suite which supports implementing and integrating continuous delivery pipelines into Jenkins.
- A continuous delivery (CD) pipeline is an automated expression of your process for getting software from version control right through to your users and customers.
- Every change to your software (committed in source control) goes through a complex process on its way to being released.
- This process involves building the software in a reliable and repeatable manner, as well as progressing the built software (called a "build") through multiple stages of testing and deployment.

erp-cud-country-fe [Jenkins] x +

Not secure | 10.212.0.92:8080/view/ECGC-FE/job/erp-cud-country-fe/

Dashboard > ECGC-FE > erp-cud-country-fe

Pipeline erp-cud-country-fe Pipeline Name/Project Name

Recent Changes

Graphical test results from TestNG

LoC executed and LoC missed

Project builds over time

Stage View

Pipeline stages

TestNG Results Trend

Code Coverage Trend

Dependency-Track Trend

Stage	Declarative: Checkout SCM	Declarative: Tool Install	Environment Variables	environment selection	Compilation	Unit Testing	Code Coverage	Code Analysis	SonarQube Security	Generate BOM	publishing report on Dependency-Track	Build Images	Upload Images to SIT/QA	k8s deploying in SIT	k8s deploying in QA	k8s deploying in SIT and QA	Declarative: Post Actions
Average stage times:	3s	177ms	1s	1s	12s	19s	2s	1min 47s	1min 49s	11s	13s	1min 21s	15s	0ms	0ms	8s	881ms
#440	2s	156ms	1s	1s (preused for 11s)	8s	17s	1s	1min 36s	1min 36s	9s	11s	1min 20s	15s			9s	820ms
#447	3s	256ms	1s	1s (preused for 20s)	9s	17s	2s	1min 35s	1min 44s	11s	14s	1min 19s	16s			9s	861ms

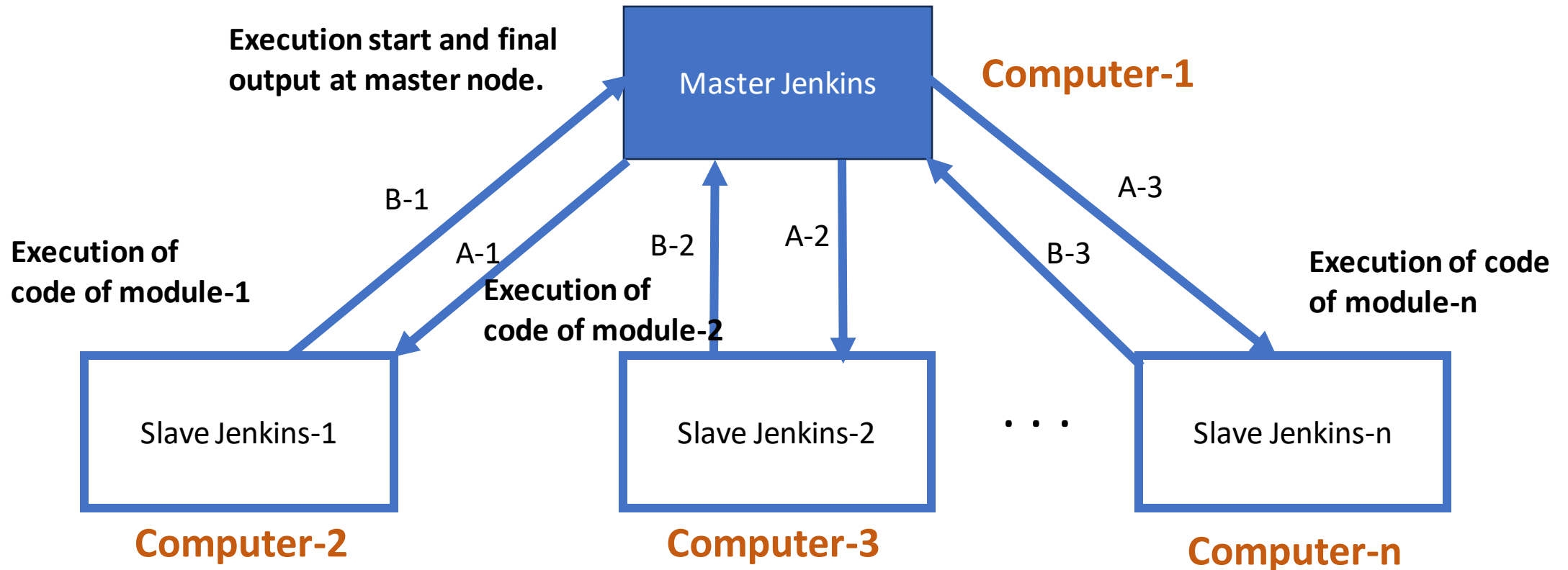
Windows taskbar: 15:51 20-07-2023

Sample Pipeline

Slave node in Jenkins

- Why is it needed?
 - Distributed builds for large projects
- How to add and use it?
 - IP address, username and password

Master-slave architecture



- 1) A-x: Command from master to slave to execute a module-x
- 2) B-x: Output of execution of module-x from slave to master

Thanku thee!!!