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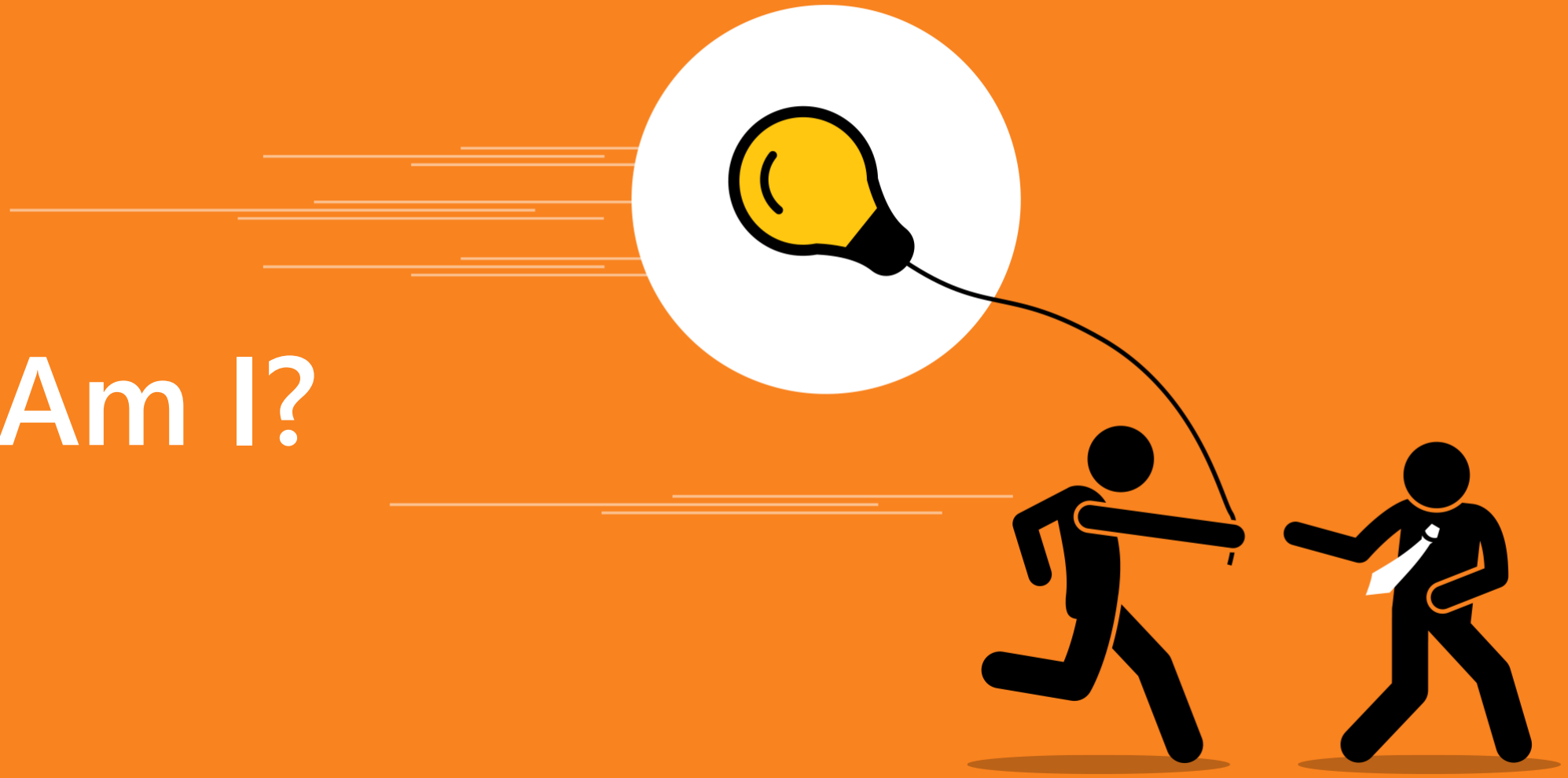
Who Am I?



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Jenkins

AGENDA

1. Challenges of SW
2. Introduction to CI/CD
3. Why having a CI/CD tool is helpful?
4. Introduction to Jenkins
5. Jenkins Architecture
6. Jenkins Features
7. Installation and Configuration

Challenges of SW

As the project grows, complexity grows:

- Physical code size
- Dependencies
- Number of developers
- Package versions
- The risk for errors in code increases
- The difficulty of integrating changes increases
- build across multiple platforms

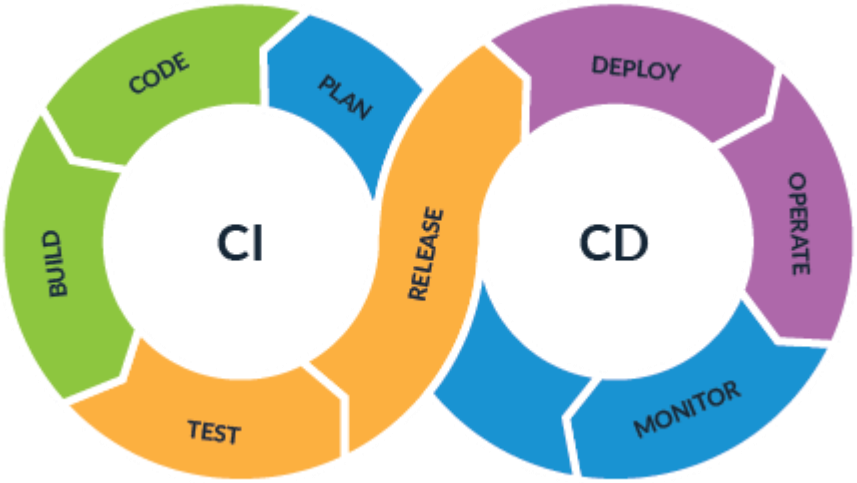
Continuous Integration solves this!

- Early feedback, automation, reduce release time.

Introduction

CI/CD

- DevOps: is a complete process which is present in almost every section of your project, so this is a process what you implement in your project, and it helps in not just automating your individual sections but also helps in a complete flow of information in a streamlined way.
- Continuous integration: is a software development practice where members of a team integrate their work frequently, usually each person integrates at least daily leading to multiple integrations per day. Each integration is verified by an automated build (including test) to detect integration errors as quickly as possible.”
- Continuous Delivery: deploy on pre-production/stage environment.
- Continuous Deployment: deploy on final production environment.



Why having a CI/CD tool is helpful?

- Early/rapid feedback!
- Better project visibility
- Insures clean environments
- Manual tasks automated
- No large integration steps
- A full working/deployable version at ANY POINT IN TIME
- Complete documentation of who did what

Jenkins

- Jenkins is a continuous integration and build server.
- It is used to build software development projects manually, periodically, or automatically.
- It is an open-source Continuous Integration tool written in Java.
- Jenkins is used by teams of all different sizes, for projects with various languages.

Why use Jenkins?

- Immediate feedback on broken builds
- No building from dev machines and manually copying files
- Automated deployment
- Automated test execution and feedback
- Generate test reports
- Integrated with different Version Control System
- Notify stakeholders of build status

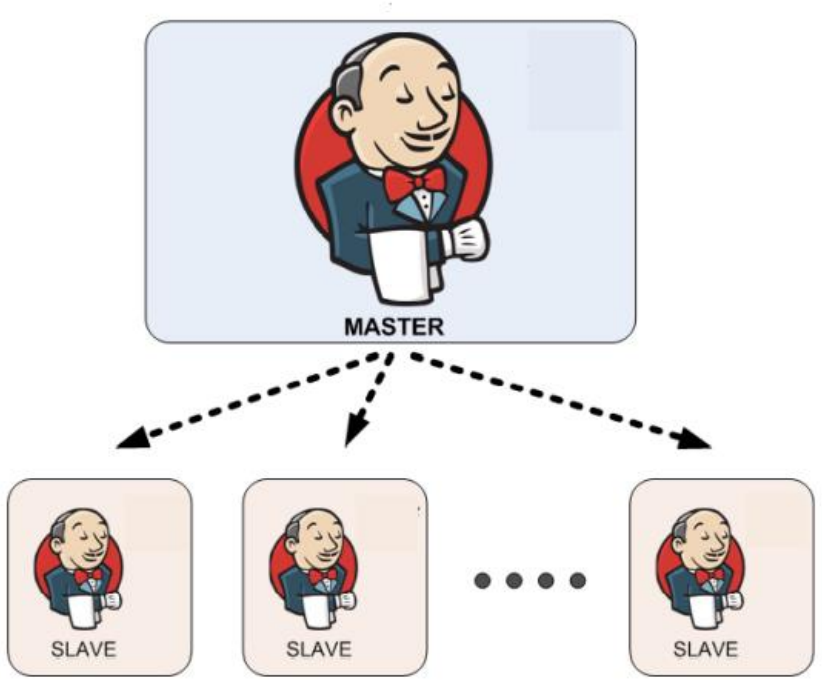
Jenkins Architecture

Master:

- Schedule build jobs.
- Dispatch builds to the slaves for the actual job execution.
- Monitor the slaves and record the build results.
- Can also execute build jobs directly.

Slave:

- Execute build jobs dispatched by the master.



Jenkins Features

Installation & Configuration

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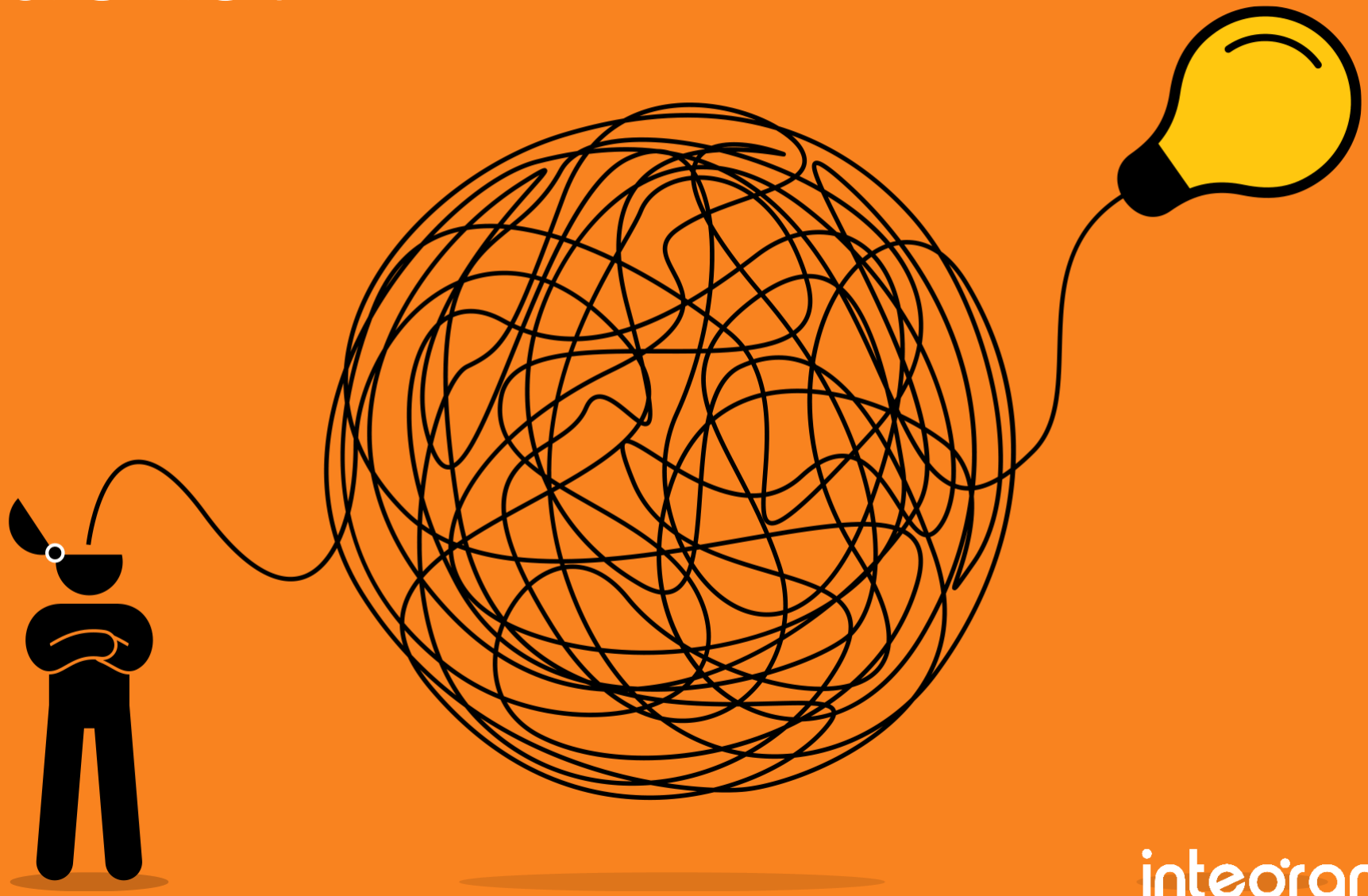
Any Questions?



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THANK YOU

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