DAY 5 : DevOps, DevSecOps, and CI/CD

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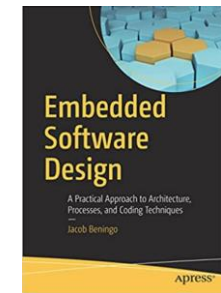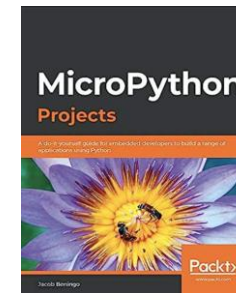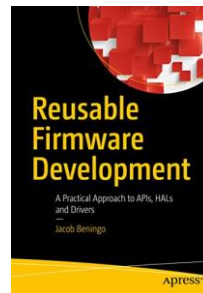
THE SPEAKER

Jacob Beningo

Lecturer Profile ....

Beningo Embedded Group - President

Focus: Embedded Software Consulting and Training

Specializes in *creating* and *promoting* **embedded software excellence** in businesses around the world.

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01

An Overview of Dev(Sec)Ops

An Overview of Dev(Sec)Ops

Overview

**4 Principles guide all DevOps Processes**

- Focus on providing incremental value to the users or customers in small and frequent iterations

- Improve collaboration and communication between development and operations teams.

- Automate as much of the software development life cycle as possible

- Continuously improve the software product

DevSecOps is DevOps with an emphasis on integrating security practices
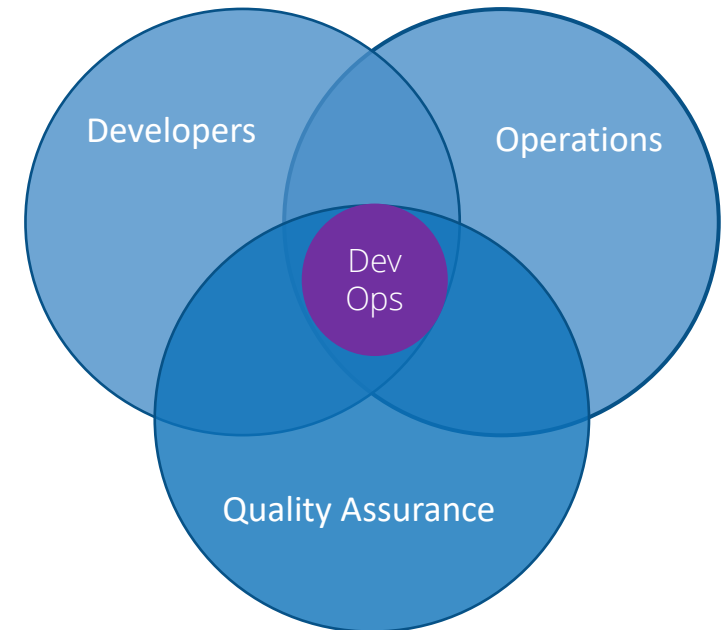
An Overview of Dev(Sec)Ops

DevOps Principles in Action

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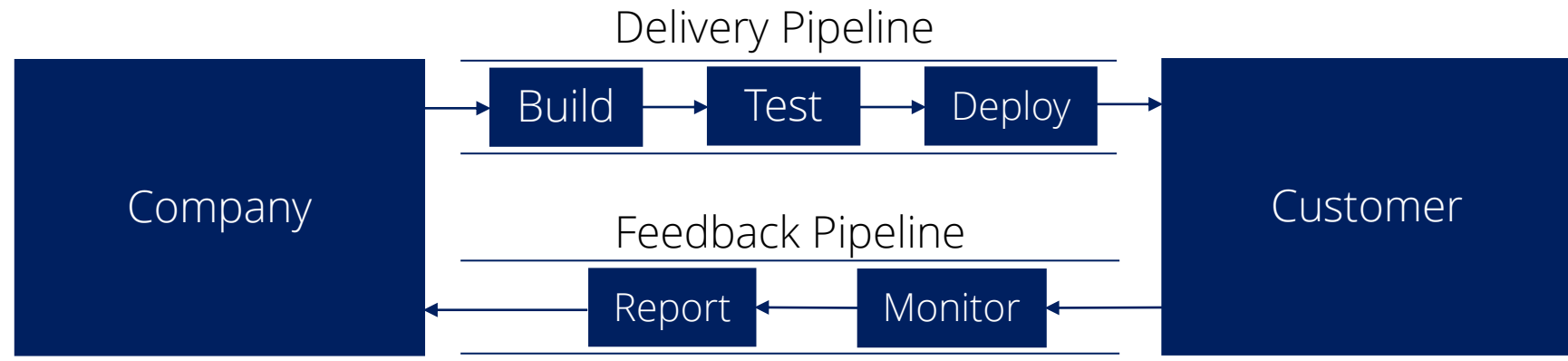
An Overview of Dev(Sec)Ops

Embedded Delivery Pipeline

A successful Pipeline has at least five parts:

- Source control management through a tool like Git

- A CI/CD framework for managing pipelines and jobs

- Build automation tools such as Docker containers, compilers, metric analyzers, etc.

- Code testing and analysis frameworks

- Review, approval, and deployment processes
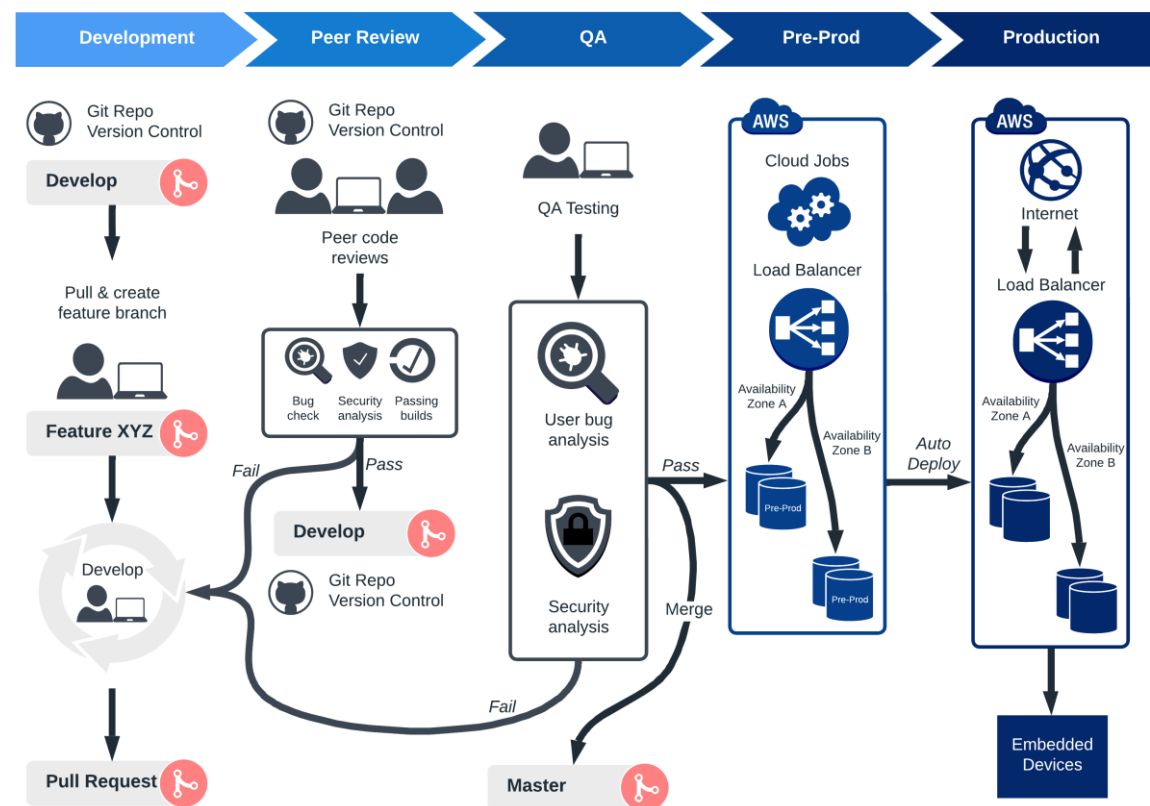
02 CI/CD for Embedded Systems

CI/CD for Embedded Systems

Overview

The value of CI/CD for embedded:

- Improving software quality

- Decreasing the time spent debugging

- Decreasing project costs

- Enhancing the ability to meet deadlines

- Simplifying the software deployment process
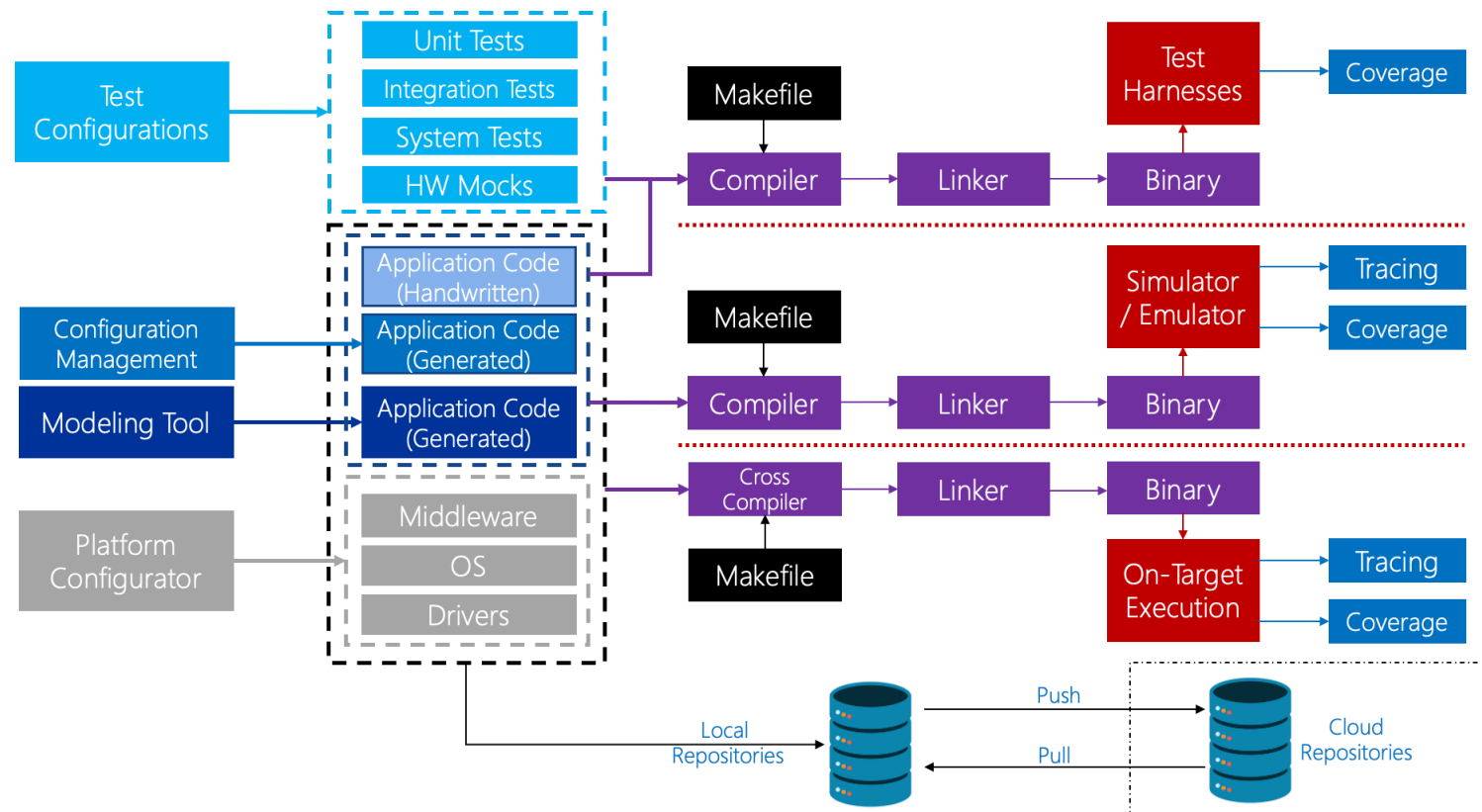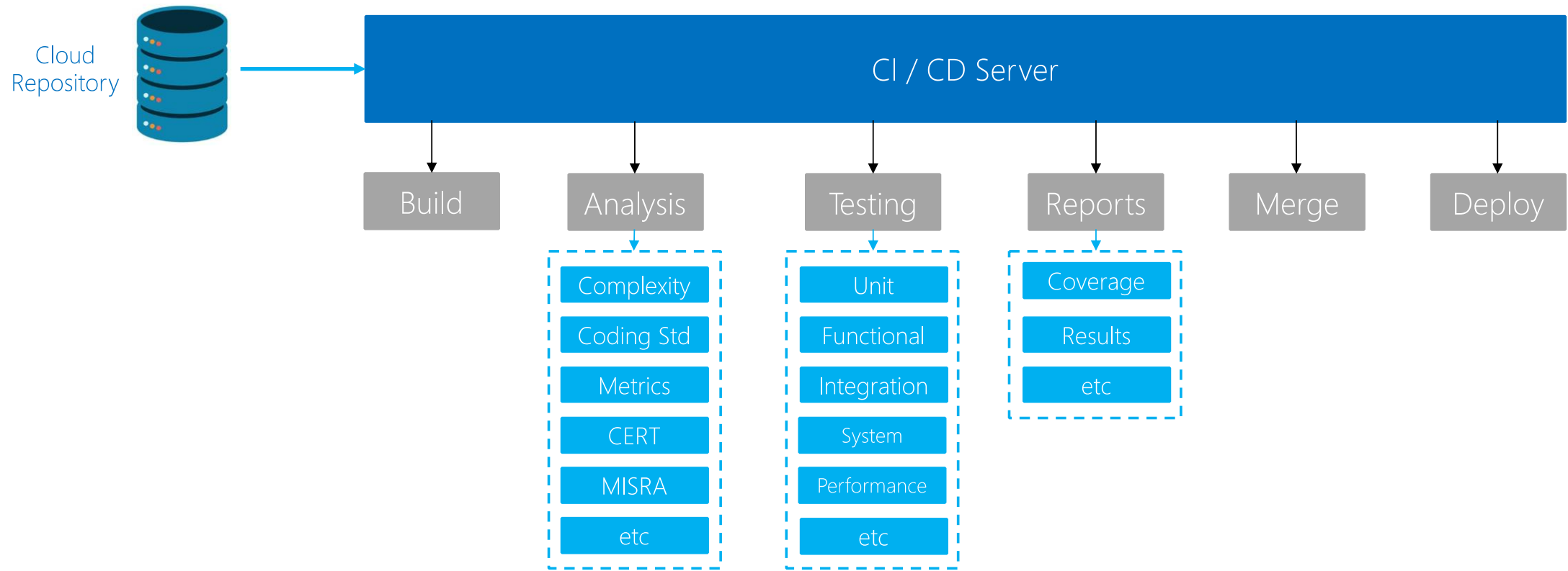
CI/CD for Embedded Systems

Ideal Build System

Image Source: Gitlab

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CI/CD for Embedded Systems

Overview

CI/CD for Embedded Systems

Overview

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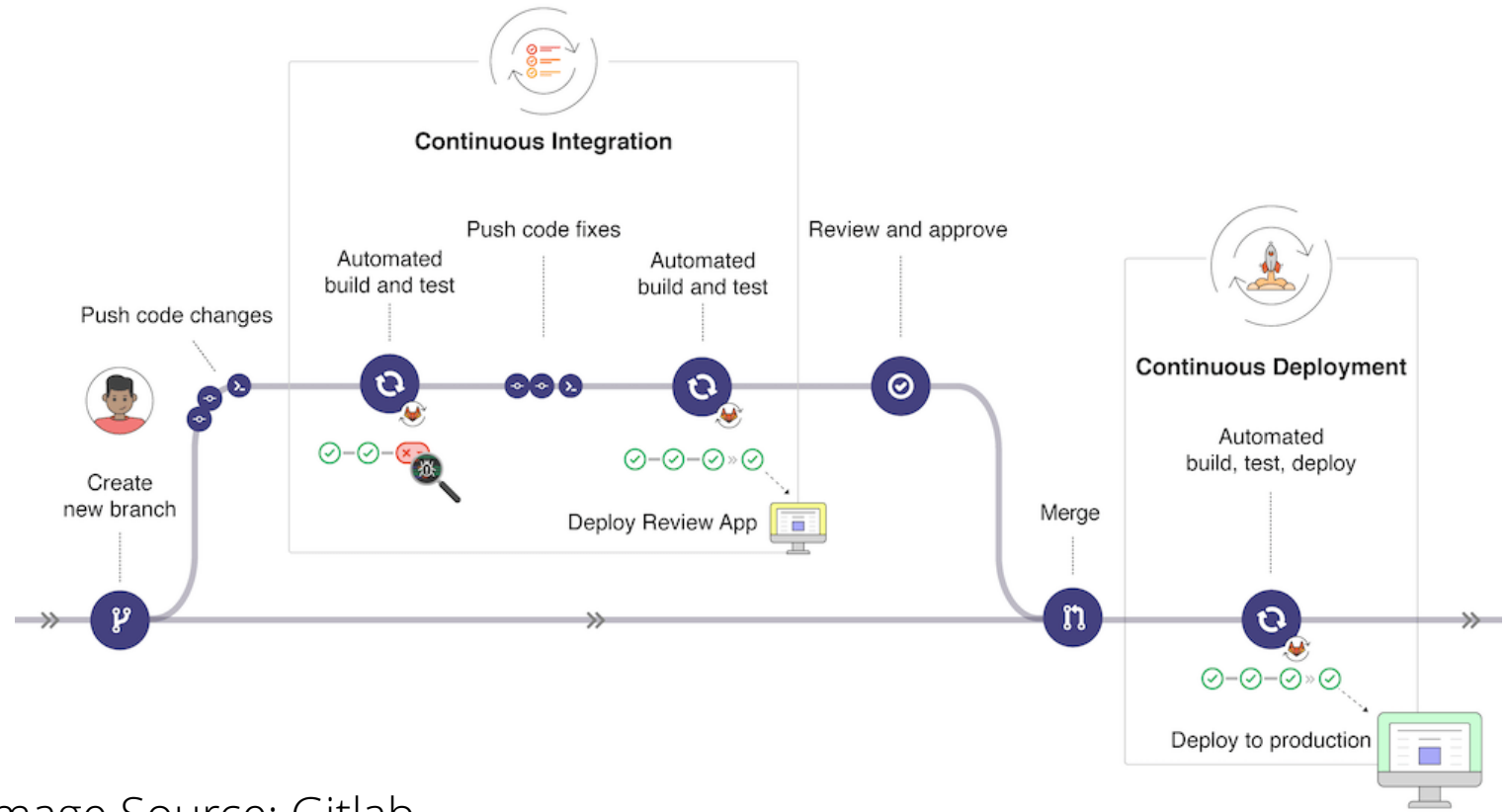
CI/CD for Embedded Systems

The Process
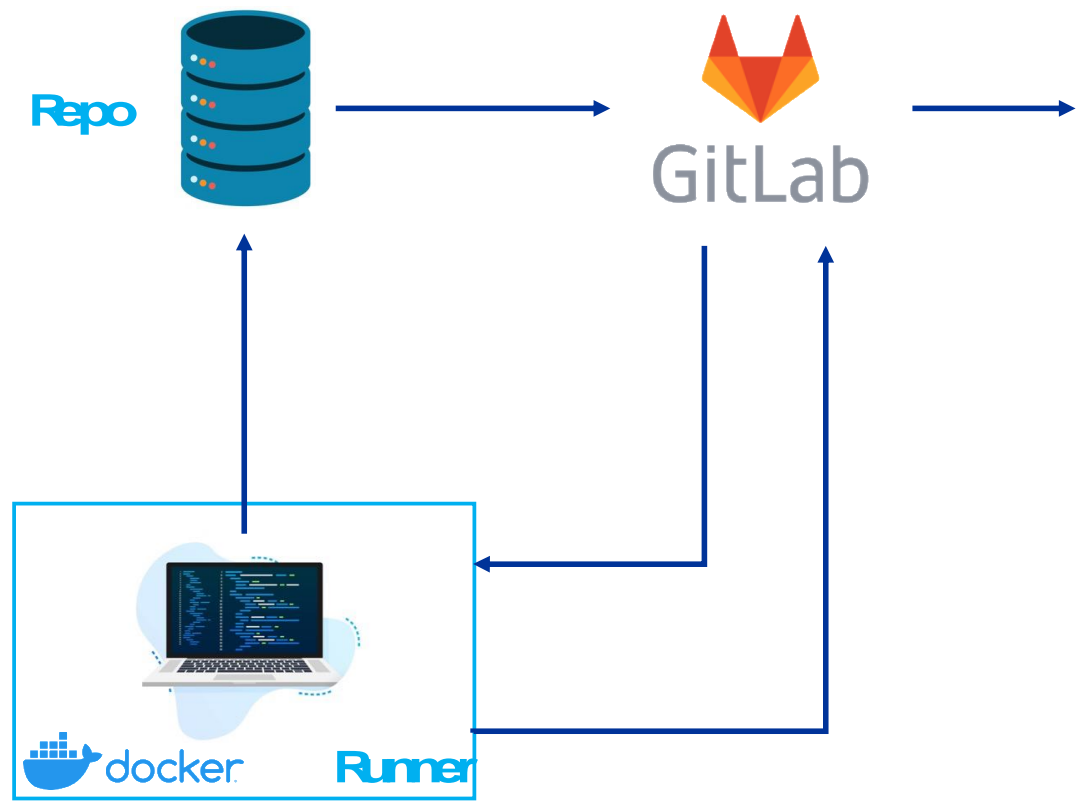
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CI/CD for Embedded Systems

What is a pipeline?

A **pipeline** is a group of jobs that get executed in states.

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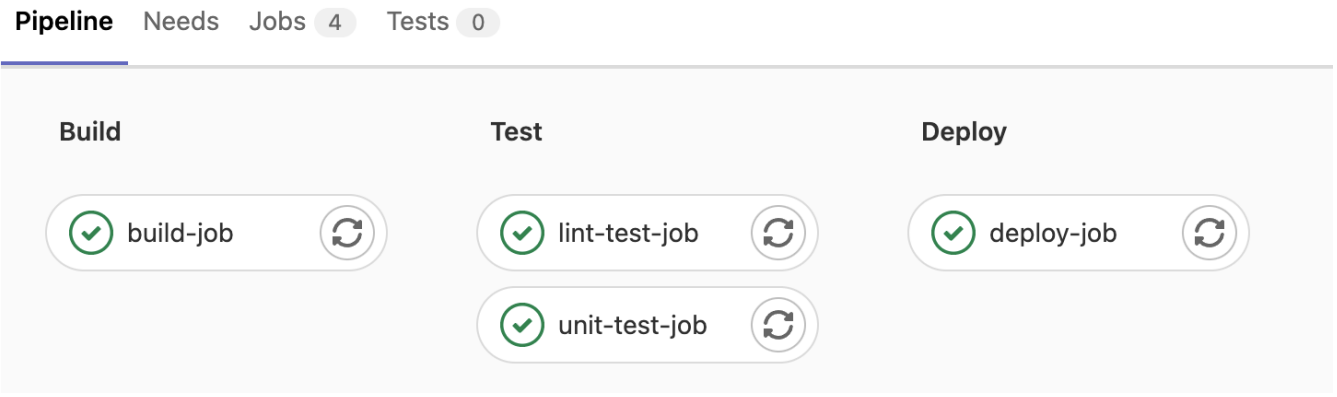
CI/CD for Embedded Systems

Embedded Pipelines

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QUESTIONS

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Thank You

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