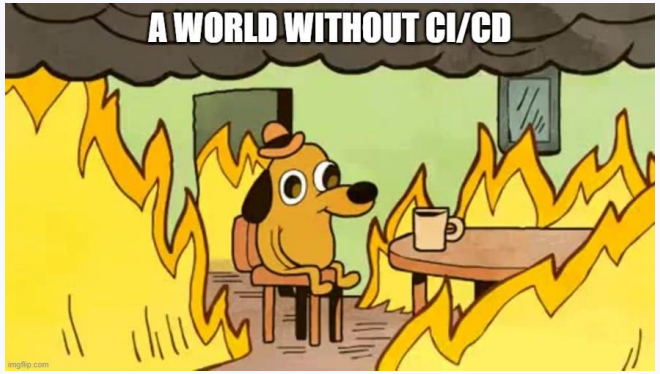
Fundamentals & Benefits of choosing to adopt CI/CD

Speaker: Thanh Tran

Date: 09.01.2023

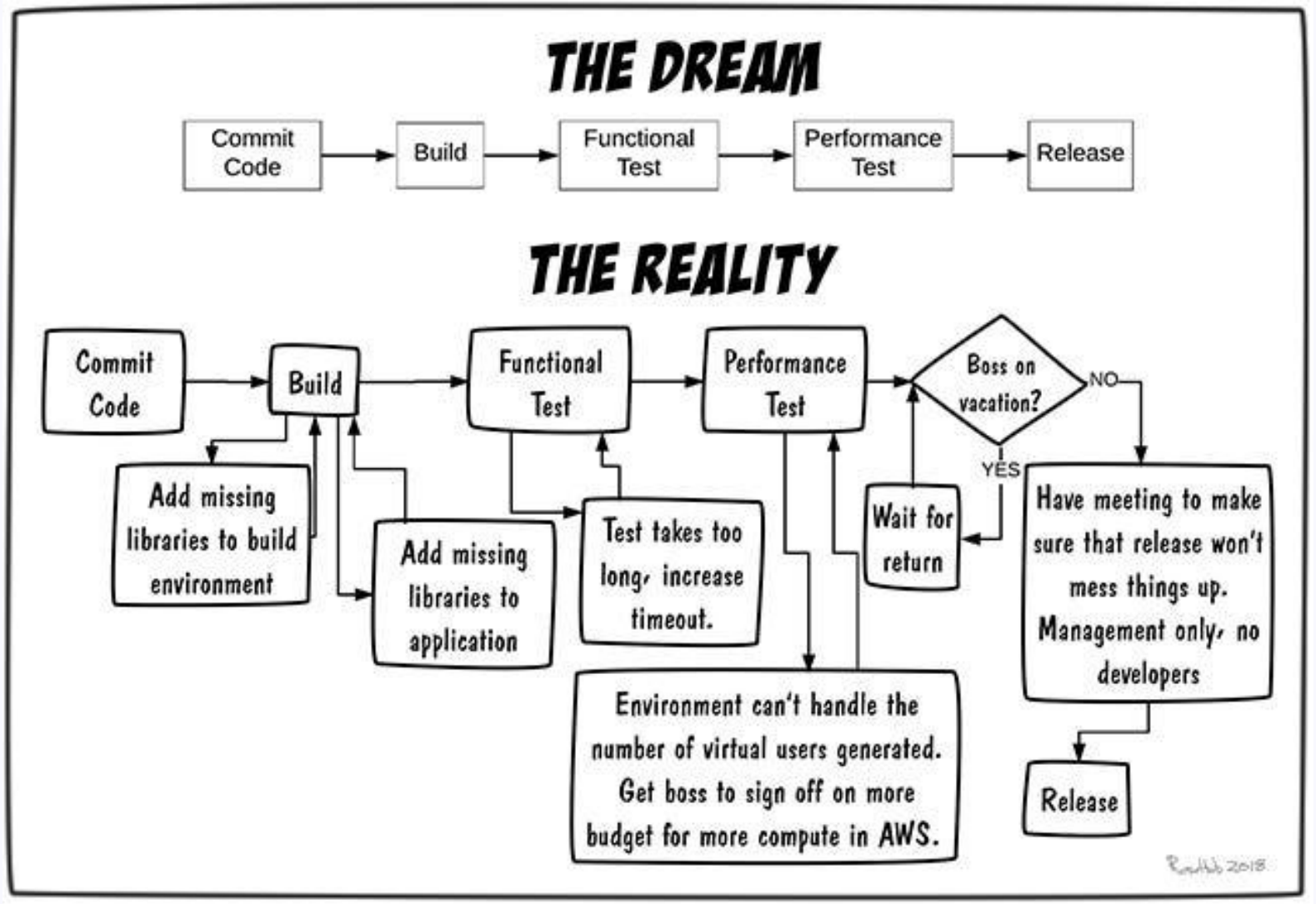
Part 01

Introduction



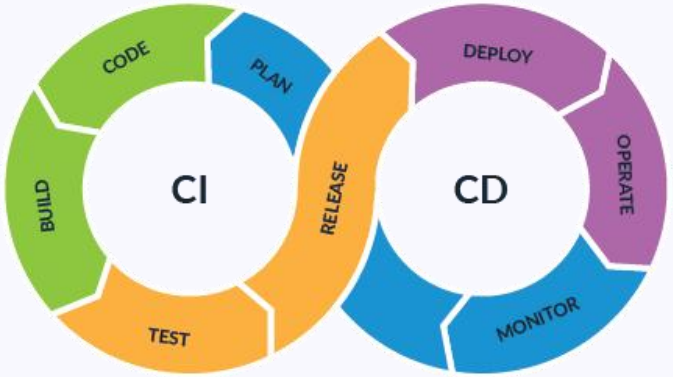
The world before CI/CD

Everything requires human interference that leads to a huge amount of erros



Part 02

Fundamentals

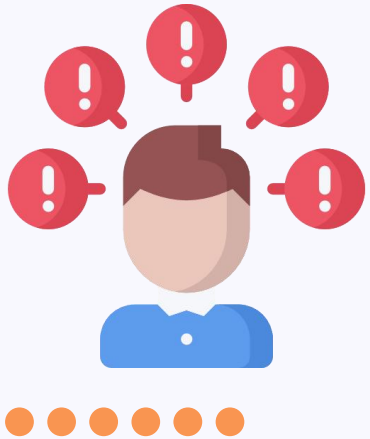


Fundamentals

- Continuous Integration: The practice of merging all developers' working copies to a shared mainline several times a day. Everything related to the code fits here.
- Continuous Deployment: A software engineering approach in which the value is delivered frequently through automated deployments.
- Continuous Delivery: An engineering practice in which teams produce and release value in short cycles.

Part 03

“Warning signs”



Warning signs

- If you identify with any of these items, you should consider CI/CD an essential piece of your development workflow:

- Investing more time in a release cycle than delivering value
- Going through integration hell every time we finish a feature
- Code gets lost because of botched merges
- Unit test suite hasn't been green in ages
- Deployments contribute to schedule slip
- Friction between ops and development departments
- Only one engineer can deploy a system
- Deployments are not cause for celebration

Part 04

Benefits

Benefits

Technical Language	Value	Translation
Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code
Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes
Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments
Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
Deploy to Production Without Manual Checks	Increase Revenue	Less time to market
Automated Smoke Tests	Protect Revenue	Reduced downtime from a deploy-related crash or major bug
Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state

THANKS FOR LISTENING

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