Microsoft

Enterprise CI-CD testing done right

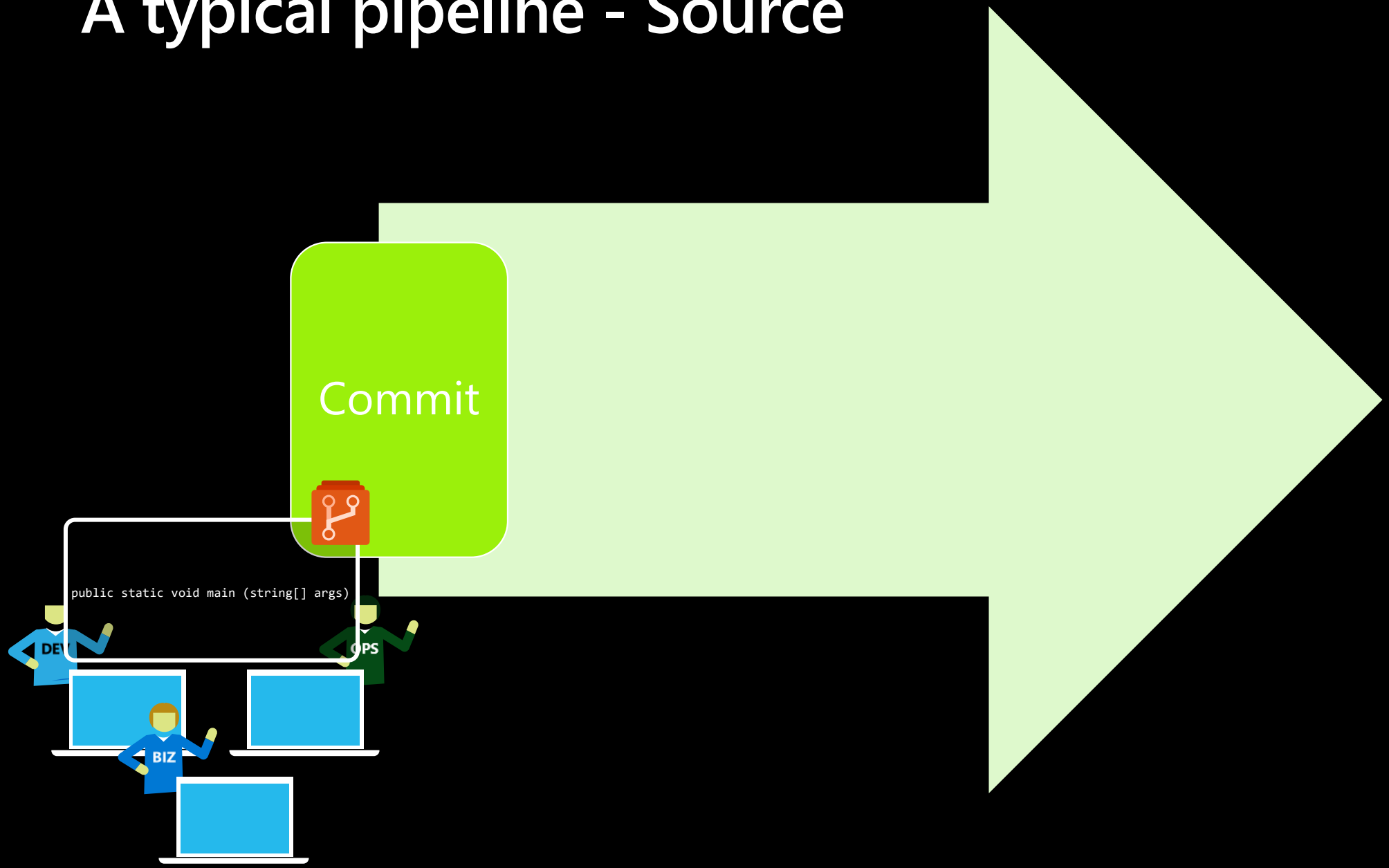
Jan-Hendrik Peters, Premier Field Engineer (Microsoft Germany GmbH)

whoami

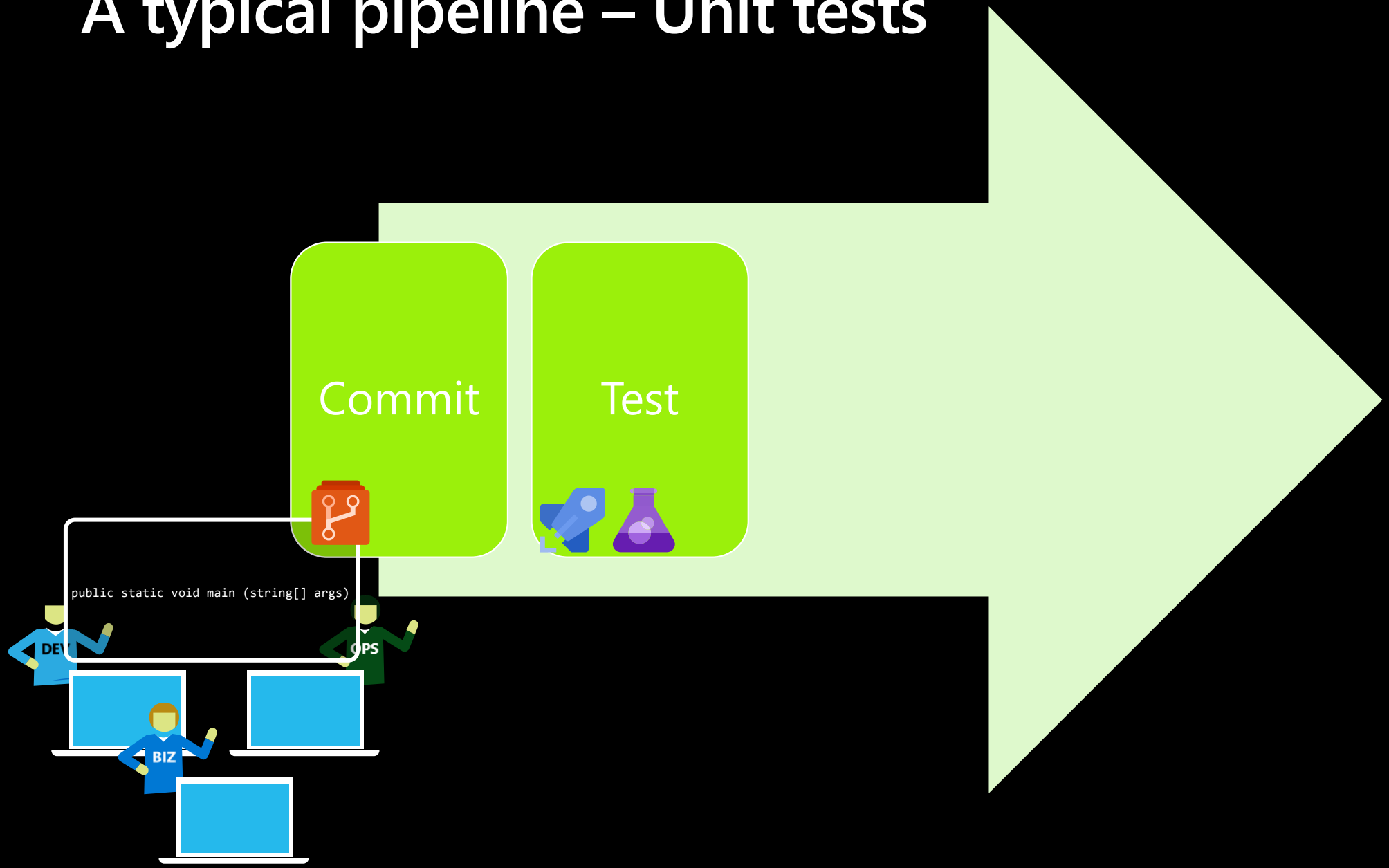
Premier Field Engineer at Microsoft Germany
Automating things since 2011
Azure, DevOps, PowerShell, C#
Developer at OSS project AutomatedLab

nyanhp
nyanhp

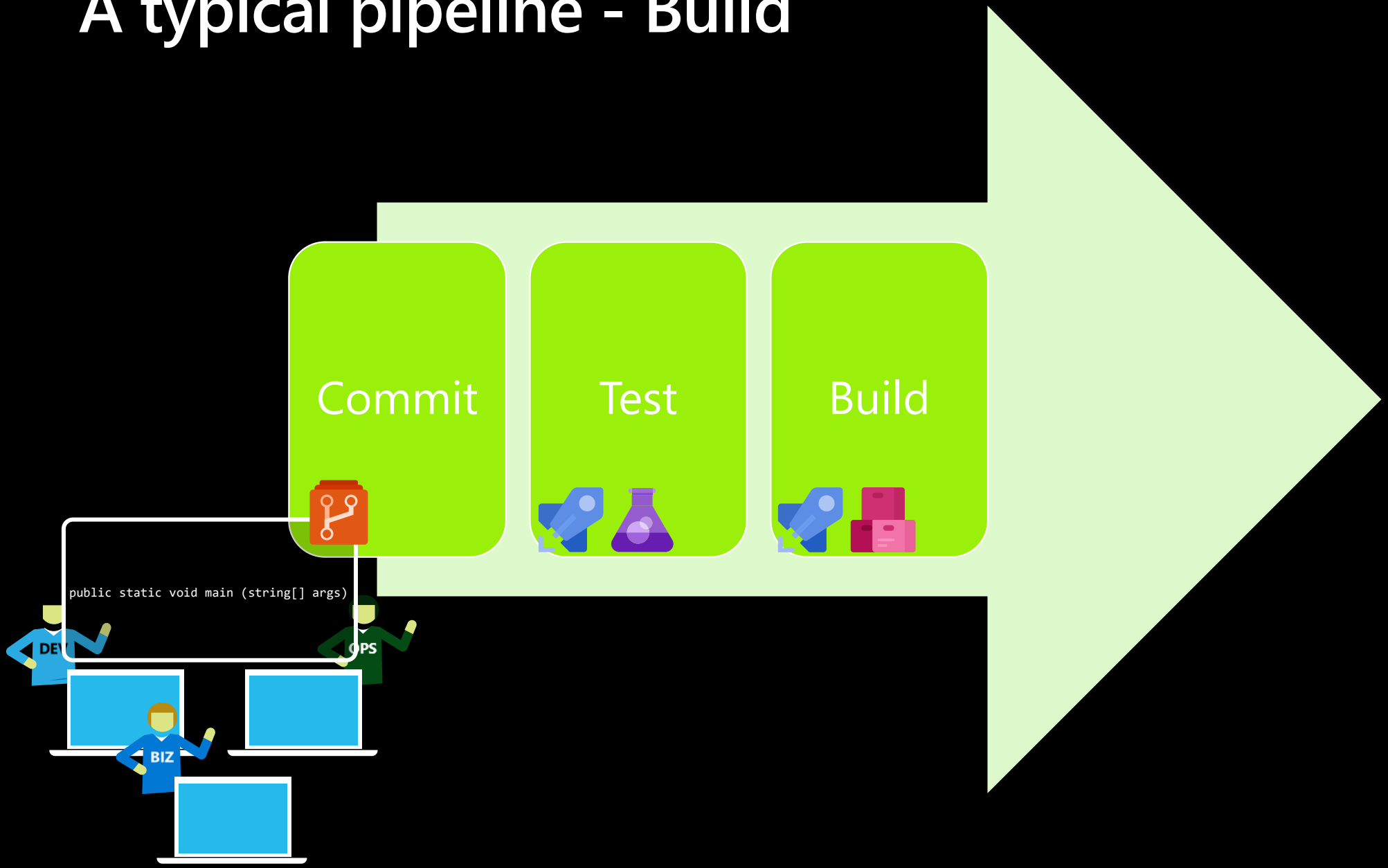
A typical pipeline - Source



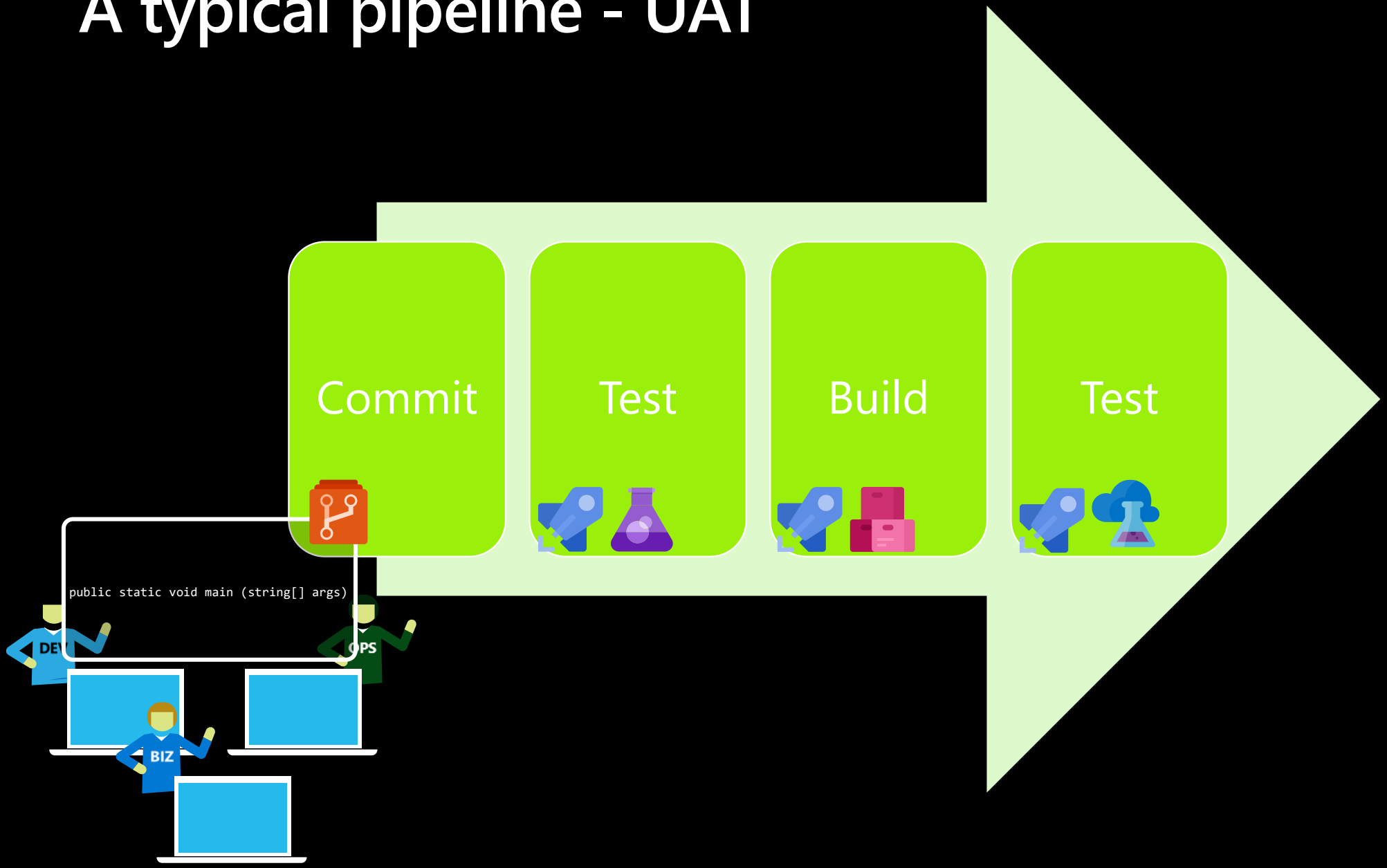
A typical pipeline – Unit tests



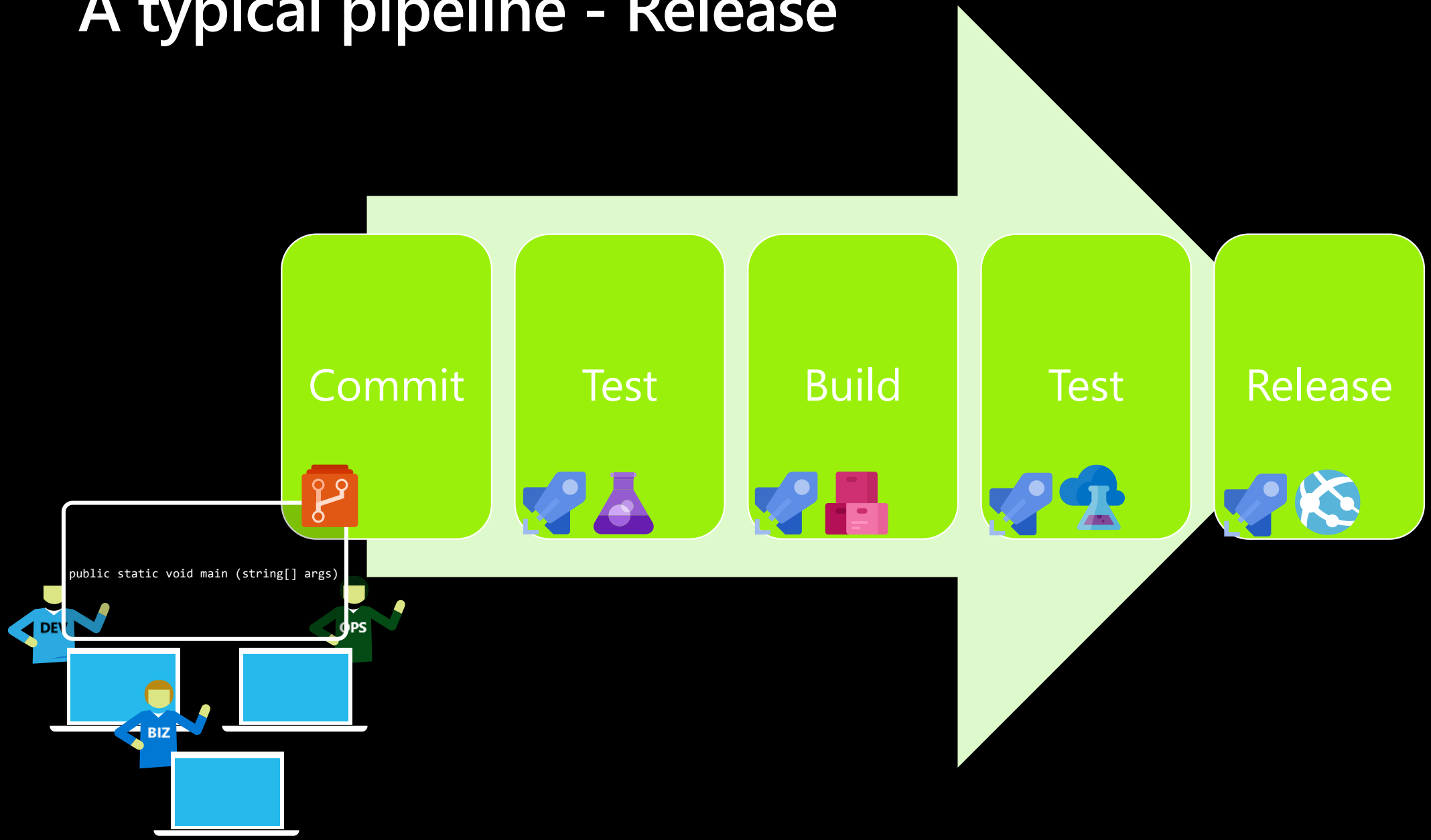
A typical pipeline - Build



A typical pipeline - UAT

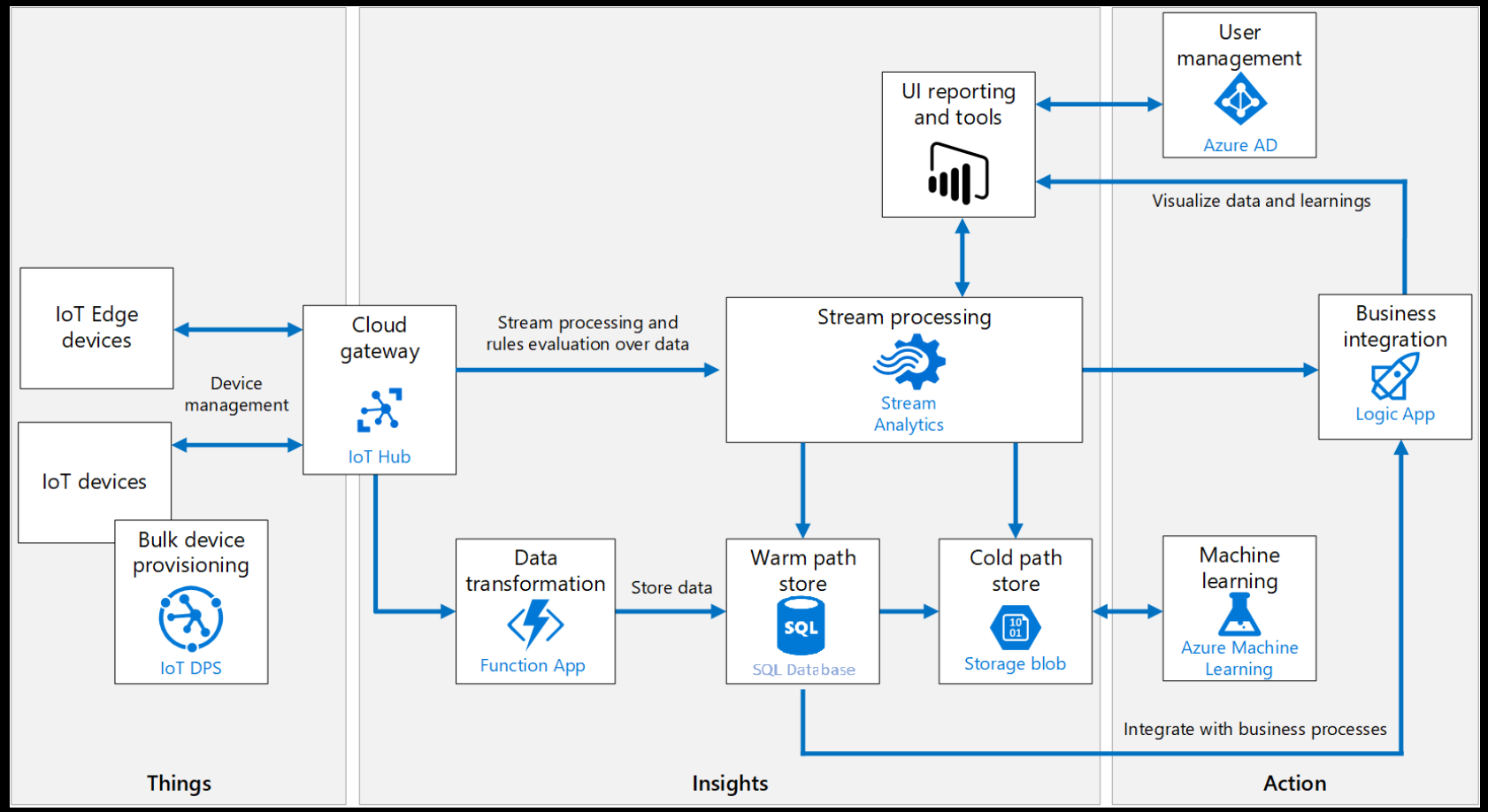


A typical pipeline - Release



Testing

- Integration testing requires appropriate environment



Testing

Integration testing requires appropriate environment

Often additional components are necessary

- Certificates
- Databases
- Web servers

Testing

Integration testing requires appropriate environment

Often additional components are necessary

- Certificates
- Databases
- Web servers

Some tooling can already help

- Docker
- Packer
- Selenium

Testing

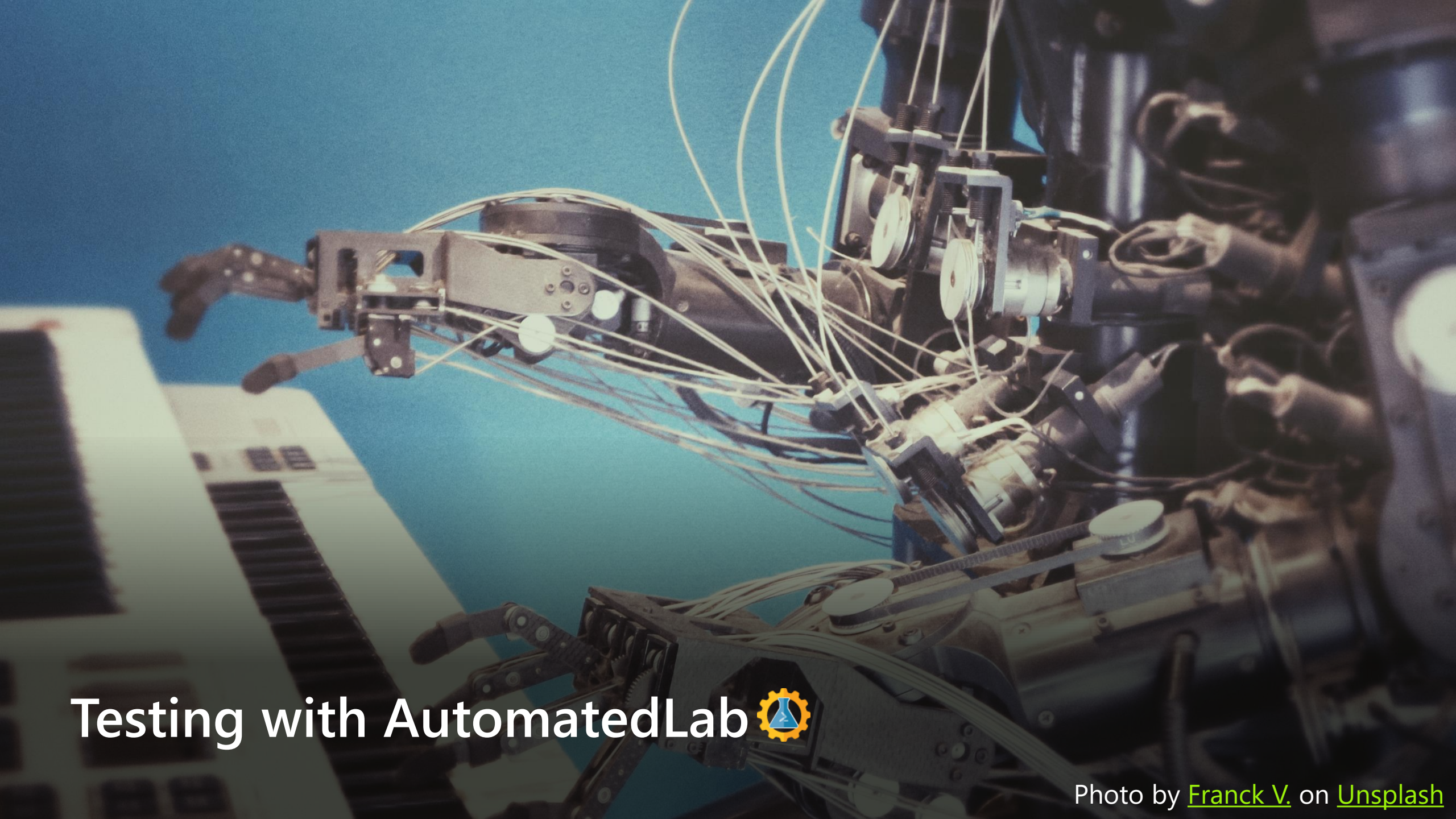
Integration testing requires appropriate environment

Often additional components are necessary

- Certificates
- Databases
- Web servers

Some tooling can already help

- Docker
- Packer
- Selenium

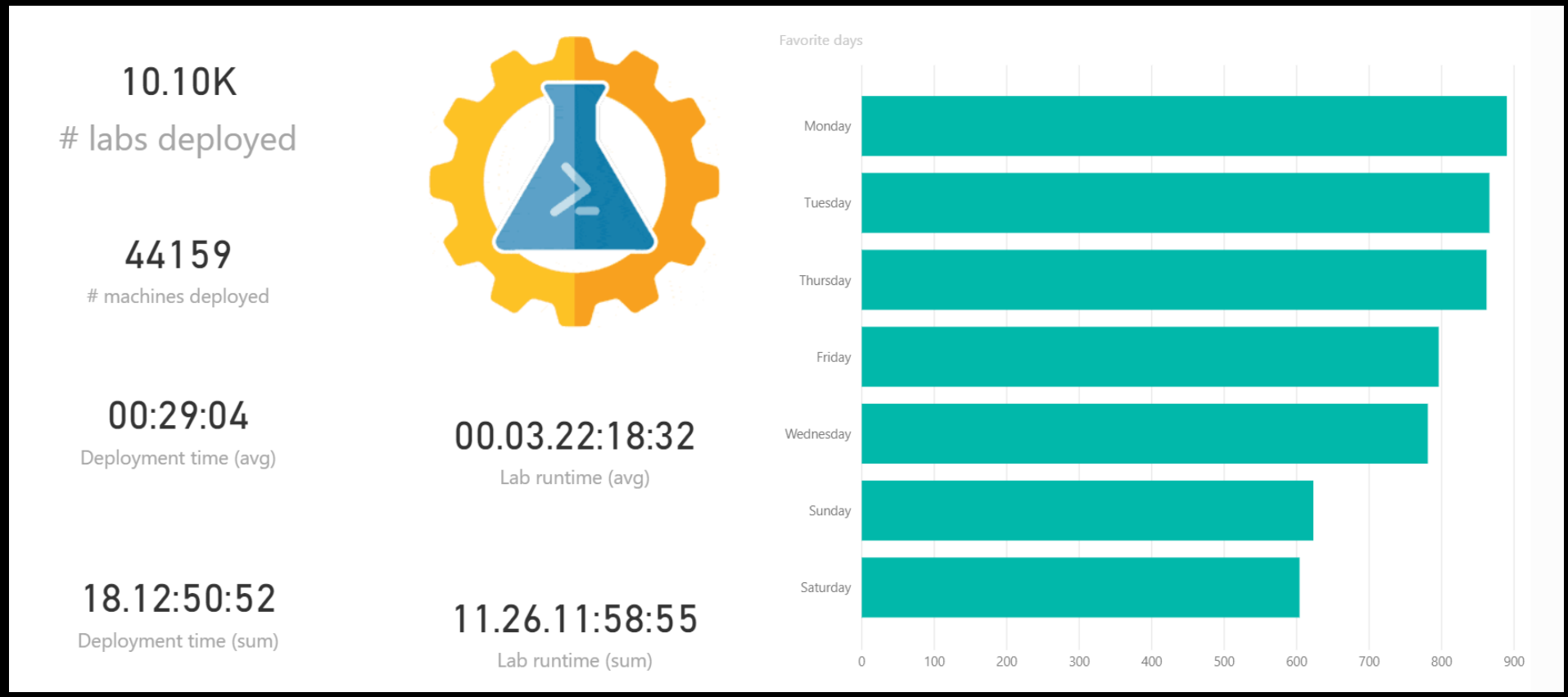


Testing with AutomatedLab

Photo by Franck V. on Unsplash

Intro - AutomatedLab

Open-source lab automation framework



Intro - AutomatedLab

Open-source lab automation framework

Infrastructure as code

```
LabRecipe MySuperLab {
    DeployRole = 'Domain', 'SQL'
    VmPrefix = 'LB'
  } | Invoke-LabRecipe
```

Intro - AutomatedLab

Open-source lab automation framework

Infrastructure as code

Deploy idempotent environments to your specifications anywhere

Intro - AutomatedLab

Open-source lab automation framework

Infrastructure as code

Deploy idempotent environments to your specifications anywhere

Runs with PowerShell on Windows and Linux

Intro - AutomatedLab

Open-source lab automation framework

Infrastructure as code

Deploy idempotent environments to your specifications anywhere

Runs with PowerShell on Windows and Linux

Deploys to Hyper-V and Azure

- In active development: kvm/quemu support on Linux

Intro - AutomatedLab

Open-source lab automation framework

Infrastructure as code

Deploy idempotent environments to your specifications anywhere

Runs with PowerShell on Windows and Linux

Deploys to Hyper-V and Azure

- In active development: kvm/quemu support on Linux

Deploys Windows and Linux VMs, Azure App Services

Intro - AutomatedLab

Zero-touch deployment of many roles, including (but not limited to)

- ADDS
- ADCS
- ADFS
- SQL Server 2008 – vNext
- TFS/Azure DevOps Server
- DHCP
- DSC
- Failover Cluster
- Nested Virtualization
- NuGet
- SharePoint
- Office Server

Demo: Pipeline for DSC configs

Summary

AutomatedLab helps with complex test environments

AutomatedLab deploys repeatable environments end to end

Help will be given to those that ask for it: https://automatedlab.org

Issues and PRs go to https://github.com/automatedlab/automatedlab

Microsoft

© Copyright Microsoft Corporation. All rights reserved.