

DevOps Solutions in Azure



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Code Repositories

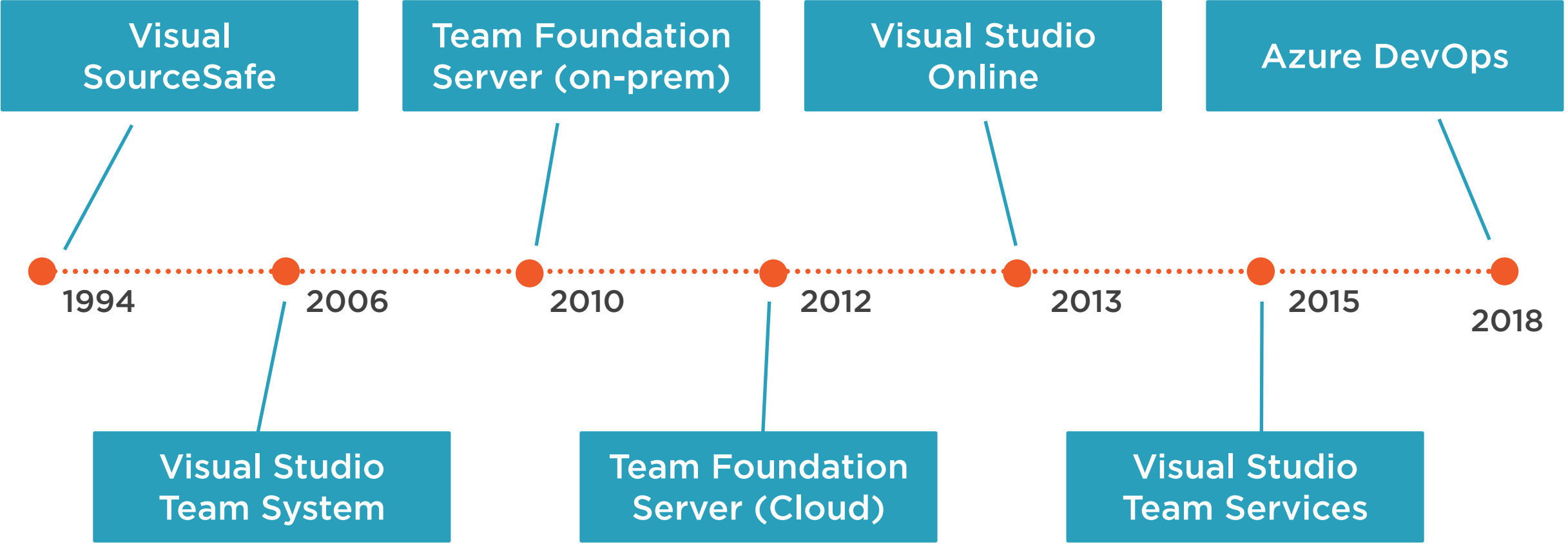
Team is working on the same code

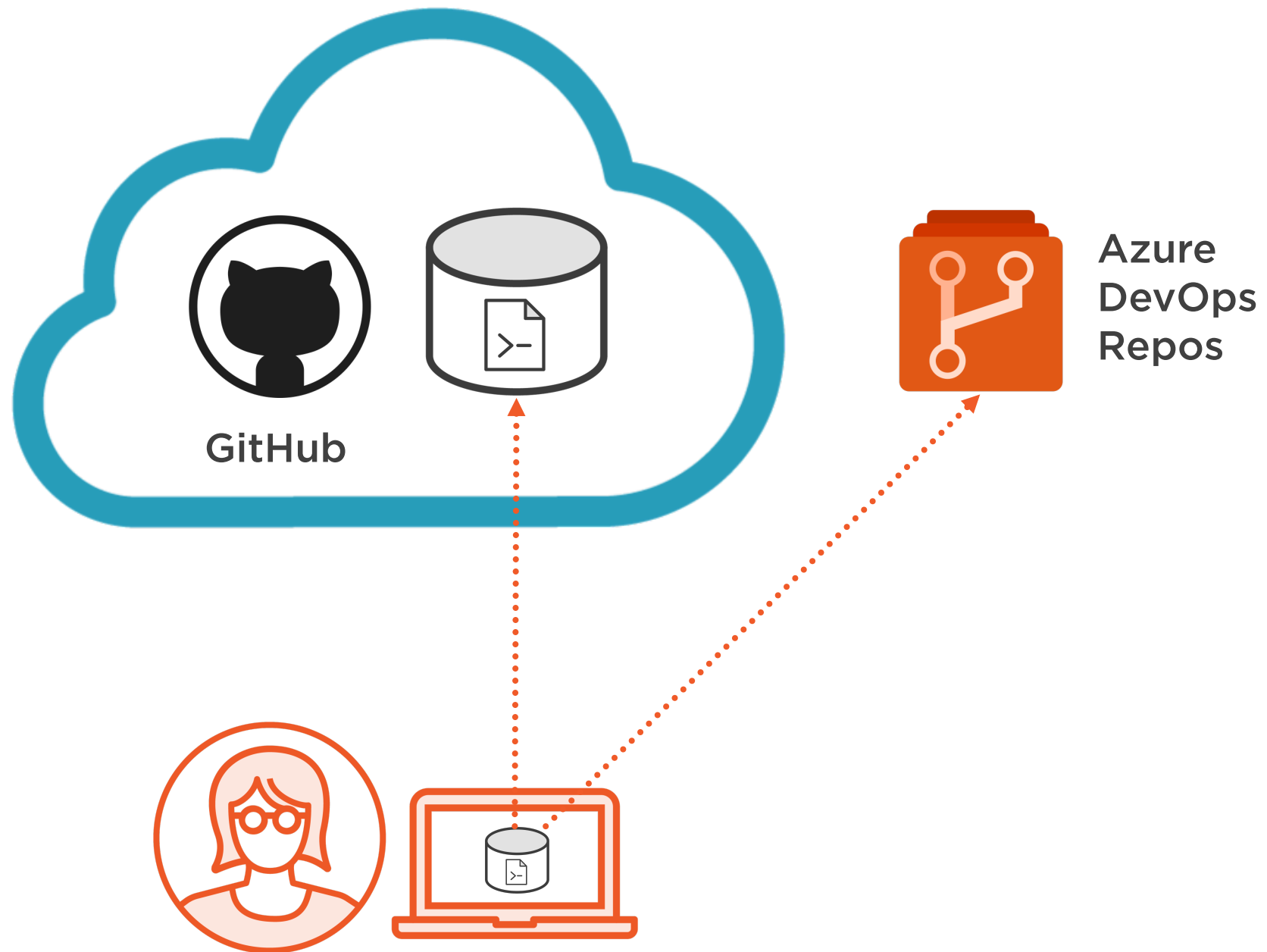
Potential for overwriting work of others

Central place to store code

Check-out capability

Ability to merge code conflicts







Collaboration Tools

Tracking of tasks and responsibilities

Work broken down into iterations

Kanban boards are a popular technique



Azure DevOps
Boards

Supports popular project management methodologies

- Agile
- Scrum
- Basic
- CMMI

Link work items

- Pull requests
- Code commits
- Tests
- Builds
- Architectural diagrams

On-premises Solutions

Azure DevOps Server

GitHub Enterprise



Overview



Azure DevOps and GitHub

DevOps Pipelines and GitHub Actions

Azure DevTest Labs



Azure DevOps Pipelines and GitHub Actions



DevOps CI/CD

Continuous Integration

Continuous Deployment





Azure DevOps
Pipelines

Build pipelines and release pipelines

Defined in YAML file

Code can be pulled from Azure Repos or external repo (i.e. GitHub)

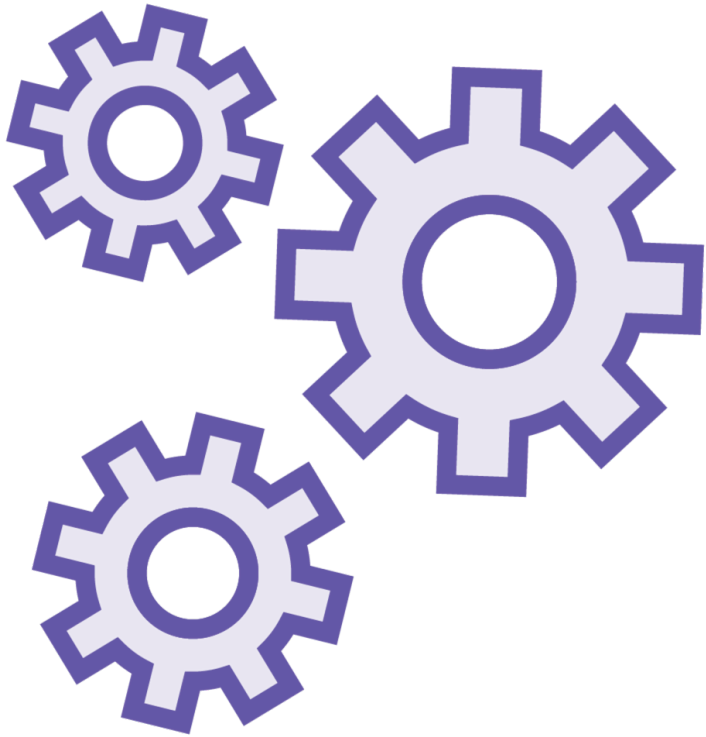
Run tests during pipeline

Create reports within pipeline

Publish artifacts

Publish ARM templates to create resources in Azure





GitHub Actions

Similar to Azure DevOps Pipelines

Also written in YAML

Similar capabilities

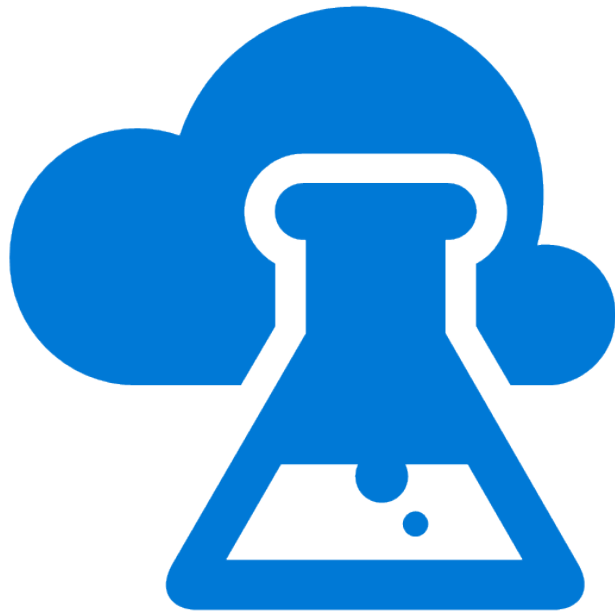
Build code on Windows, Linux, and Mac agents

GitHub actions run within workflows



Azure DevTest Labs





Azure DevTest Labs

Base images for virtual machines

Images pre-configured with tools

Existing VMs in a pool

Constraints on resources that can be created by a developer

- Size of VM
- Number of VMs

Auto-start and auto-stop of VMs

Use Cases for DevTest Labs

Developer Desktops

Test Environments

Hands-on Labs

Sandbox Environment



Course Summary



Core Azure architectural components

Azure management tools

Core resources available in Azure

- Compute
- Networking
- Storage

Core solutions available in Azure

- IoT
- Big Data Analytics
- Artificial Intelligence

Azure DevOps and GitHub



Thank You!



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