Node FSD Training

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Week-6: Schedule for NodeJS FSD Training

Day#	Date	Topic
Day-26	15-May-2024	React JS : Forms, Class Components, Hooks
Day-27	16-May-2024	React 18, DevOps CI/D & Docker
Day-28	**20-May-2024**	**Azure Cloud Services**
Day-29	21-May-2024	Case Study Frontend + Backend Development + Integration + Unit Testing - 4+Technical discussion
Day-30	22-May-2024	Case Study Frontend + Backend Development + Integration + Unit Testing - 4+Technical discussion

Cloud Computing

Cloud Computing Introduction

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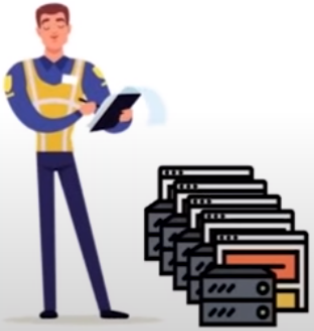
Before Cloud

Before Cloud Computing

Suppose you want to host a website, these are the following things that you would need to do:

Buy a stack of servers.



Monitoring and Maintain servers.

High traffic? More servers.

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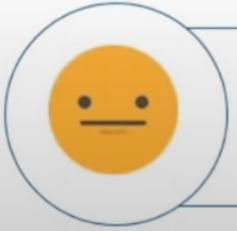
Disadvantages

If you consider costs then this setup is expensive.

Troubleshooting problems can be tedious and may conflict with your business goals.



Since the traffic is varying, your servers will be idle most of the time.

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Cloud Computing Introduction

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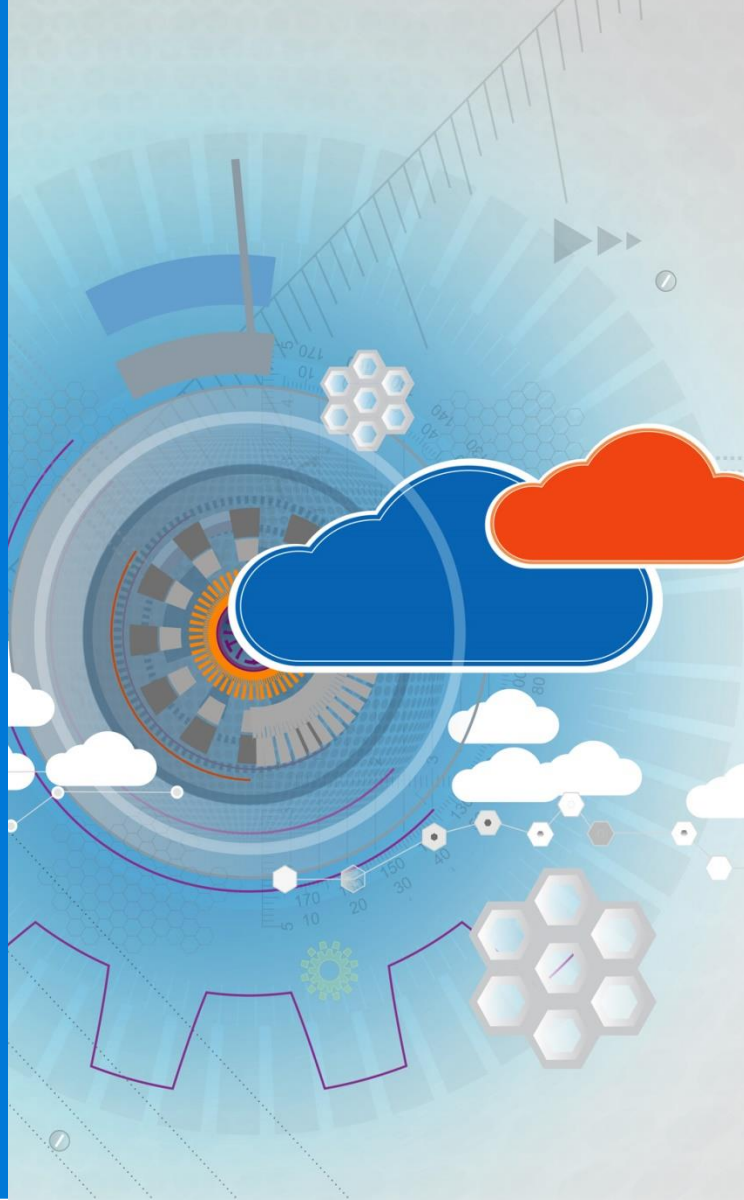
What is Cloud Computing?

Cloud computing refers to the ***on-demand*** *provision of* ***computational resources*** *(data, software) via a computer network, rather than from a local computer.*

What Cloud Computing offers?

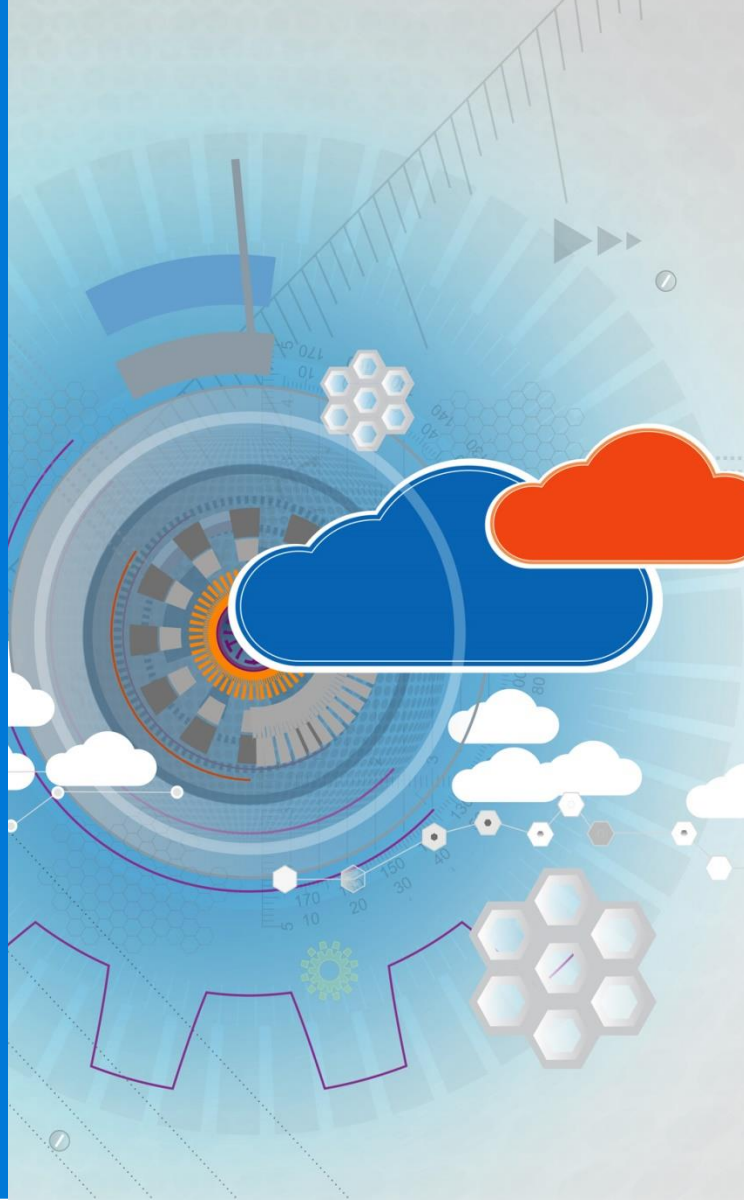
- Huge Space
- Collection of Data Center
- Group of Organization + People + Network + Resources
- Let you rent the services that required

Cloud Providers (Market Players)



Cloud Providers (Market Players)

Service Models in Cloud



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Service Models in Cloud

Cloud computing offers different types of **Service Models**

1. IaaS (Infrastructure As A Service)
2. PaaS (Platform As A Service)
3. SaaS (Software As A Service)

Service Models in Cloud

“IaaS”

infrastructure as a service

move to it

“PaaS”

platform as a service

build on it

“SaaS”

software as a service

consume it

Windows Azure

Deployment Models

- Private
- Public
- Hybrid

Services Provided by Azure

Microsoft Azure

Services Provided by Azure

1. Azure Resources
2. Azure Container
3. Azure Application Insights
4. Azure Logic Apps
5. Azure WebApps
6. Azure Service Bus
7. Azure Blob storage
8. Azure SQL database
9. Azure DevOps
10. Azure Kubernetes service

Azure Resources

What is Azure Resource?

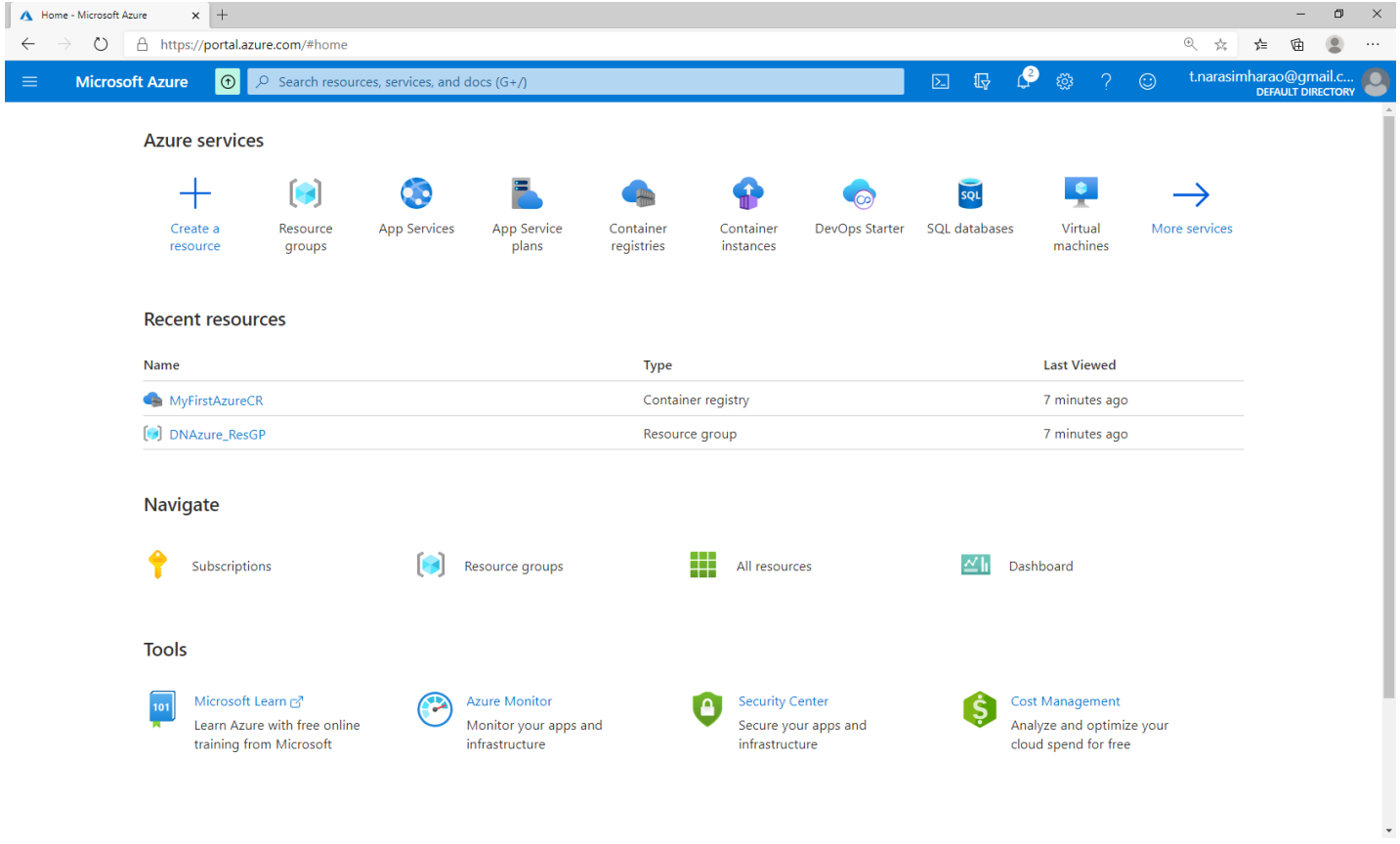
- Resources: Resources are instances of services that you create, like virtual machines, storage, or SQL databases.
- Resource groups: A resource group is a logical container into which Azure resources like web apps, databases, and storage accounts are deployed and managed.

What is Azure Resource?

- It provides a useful midway point between the subscription level and the **resources** themselves for administration and cost management, and for applying role-based access controls.

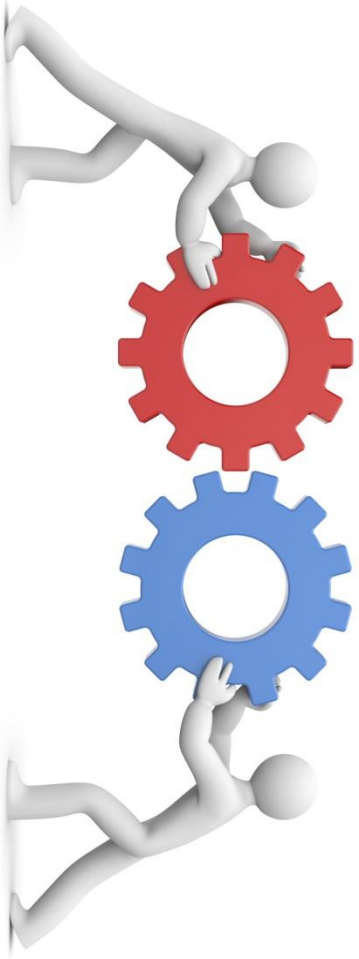
Azure Resource Manager (ARM)

- Azure Resource Manager is the deployment and management service for Azure.
- It provides a management layer that enables you to create, update, and delete resources in your Azure account.



Microsoft Azure

Development & Operations



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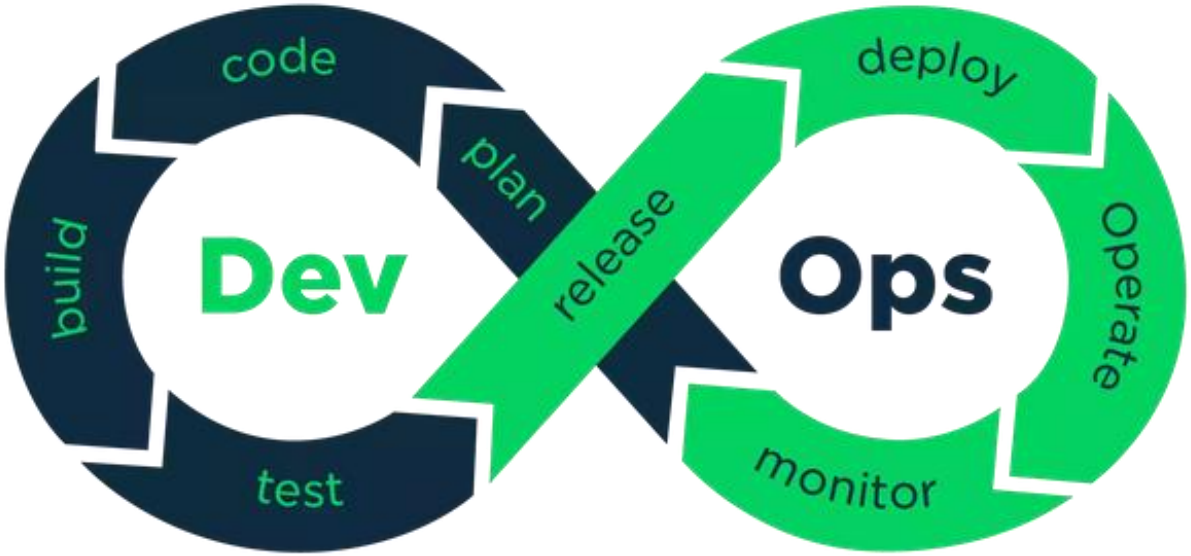
Development - Operations

Introduction to DevOps

- What is DevOps?
- What is CI / CD?
- Azure DevOps Starter Project
- Demo Application



Development Operations

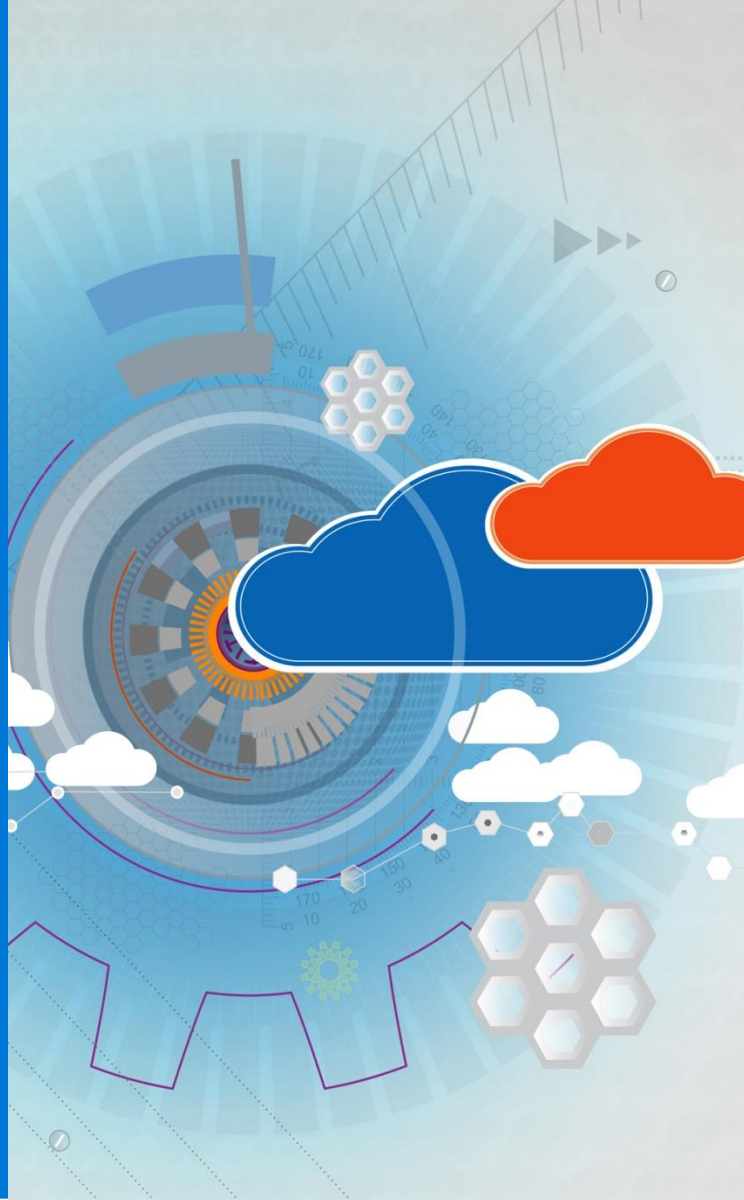
What is DevOps?

DevOps is a set of practices that combines software development and IT operations.

What is DevOps?

DevOps aims to shorten the systems development life cycle and provide continuous delivery with high software quality.

CI & CD

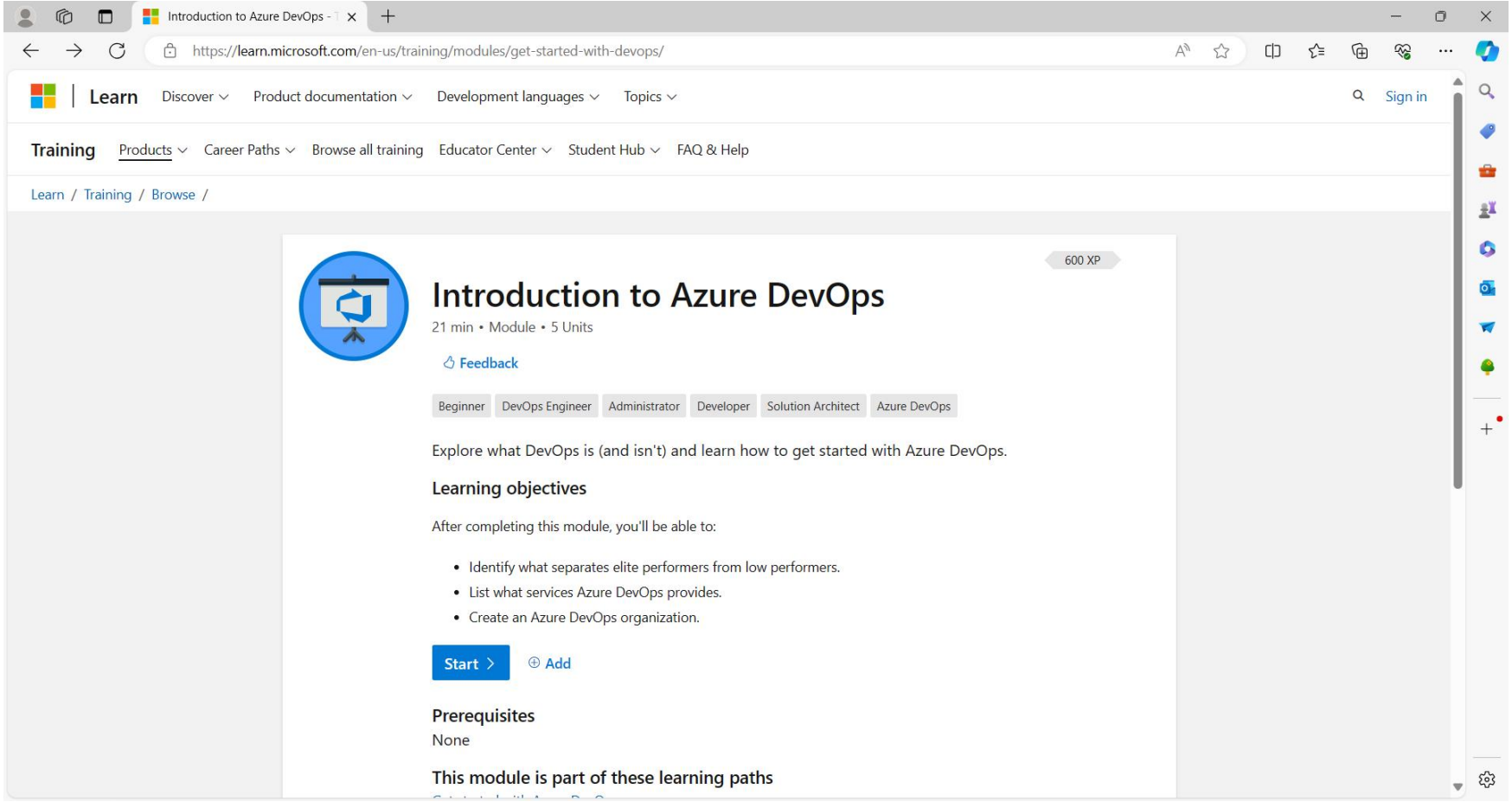


What is CI/CD?

CI/CD generally refers to the combined practices of continuous integration and either continuous delivery or continuous deployment.

CI/CD bridges the gaps between development and operation activities and teams by enforcing automation in building, testing and deployment of applications.

https://learn.microsoft.com/en-us/training/modules/get-started-with-devops/



Deployment - Operations

Introducing Azure DevOps

Azure Boards

Plan, track, and discuss work across teams, deliver value to your users faster.

Azure Repos

Unlimited cloud-hosted private Git repos. Collaborative pull requests, advanced file management, and more.

Azure Pipelines

CI/CD that works with any language, platform, and cloud. Connect to GitHub or any Git provider and deploy continuously to any cloud.

Azure Test Plans

The test management and exploratory testing toolkit that lets you ship with confidence.

Azure Artifacts

Create, host, and share packages. Easily add artifacts to CI/CD pipelines.