

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 |



Microsoft

Cloud Computing

Cloud Computing Introduction



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.

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.

Cloud Computing Introduction



What is Cloud Computing?

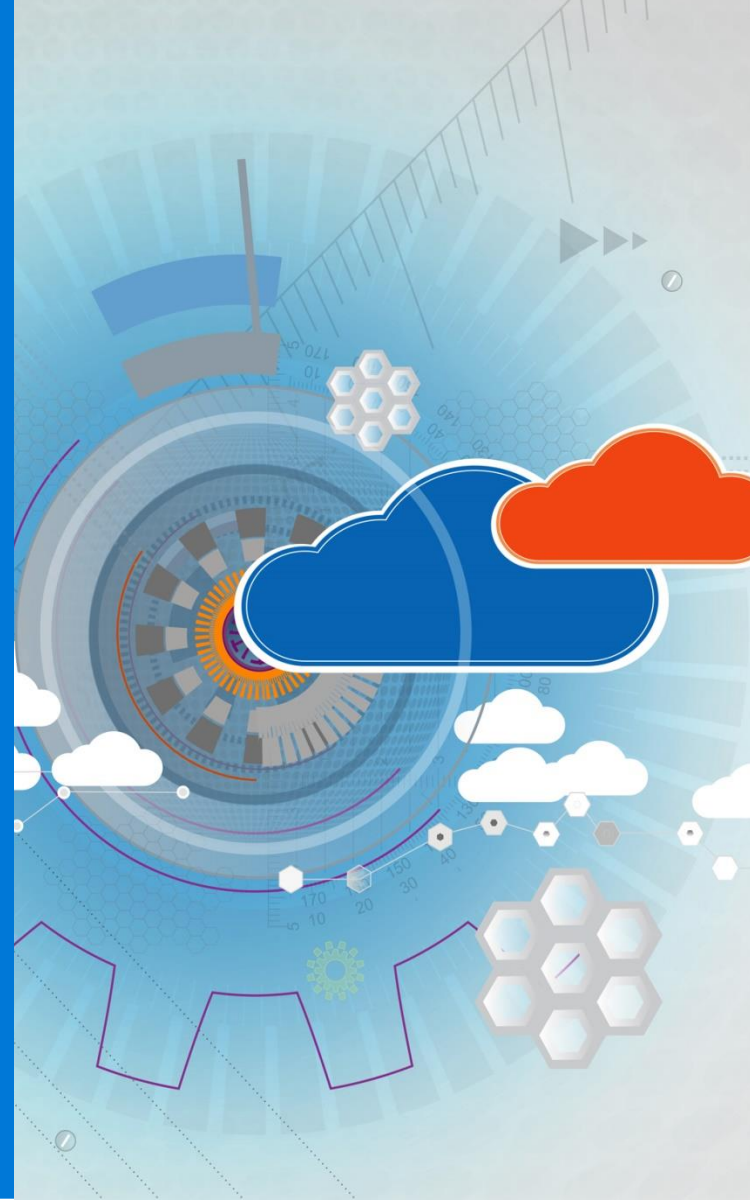
*Cloud computing refers to the **on-demand** provision of **computational resources** (data, software) via a computer network, rather than from a local computer.*

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



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

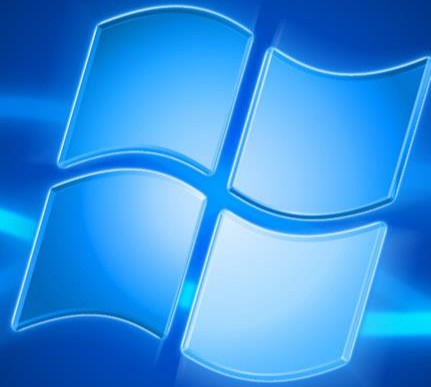
build on it



“SaaS”

software as a service

consume it

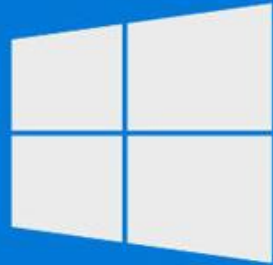


Windows Azure

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.



Azure services



Create a resource



Resource groups



App Services



App Service plans



Container registries



Container instances



DevOps Starter



SQL databases



Virtual machines



More services

Recent resources

| Name | Type | Last Viewed |
|----------------|--------------------|---------------|
| MyFirstAzureCR | Container registry | 7 minutes ago |
| DNAzure_ResGP | Resource group | 7 minutes ago |

Navigate



Subscriptions



Resource groups



All resources



Dashboard

Tools



Microsoft Learn
Learn Azure with free online training from Microsoft



Azure Monitor
Monitor your apps and infrastructure



Security Center
Secure your apps and infrastructure



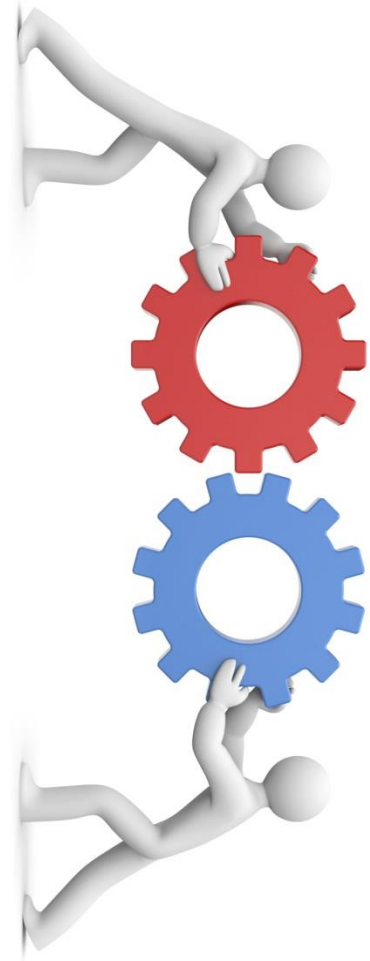
Cost Management
Analyze and optimize your cloud spend for free



Microsoft Azure

Development & Operations

Narasimha



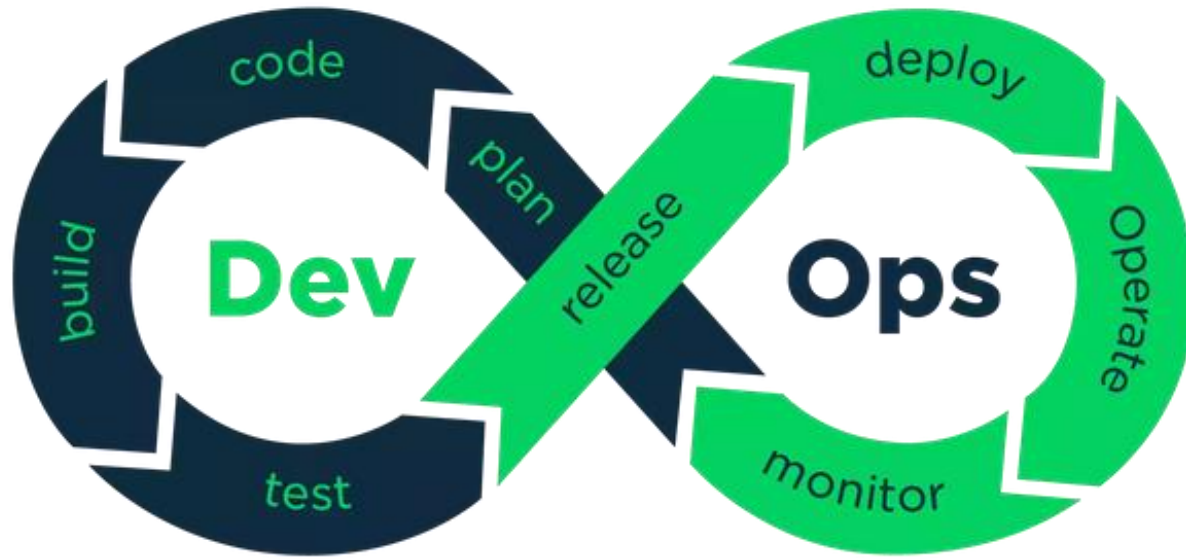
Development - Operations



Introduction to DevOps

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





Development Operations

What is DevOps?

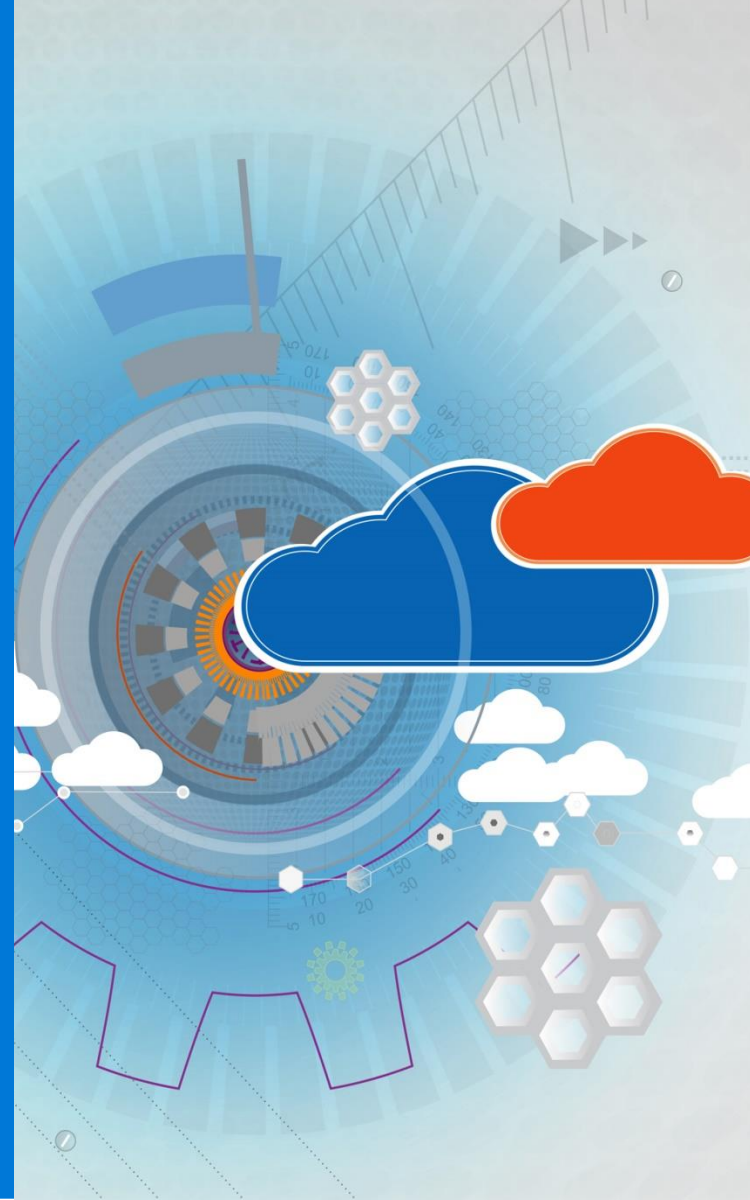
DevOps is a set of practices
that combines software
development and IT
operations.



What is DevOps?

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

CI & CD

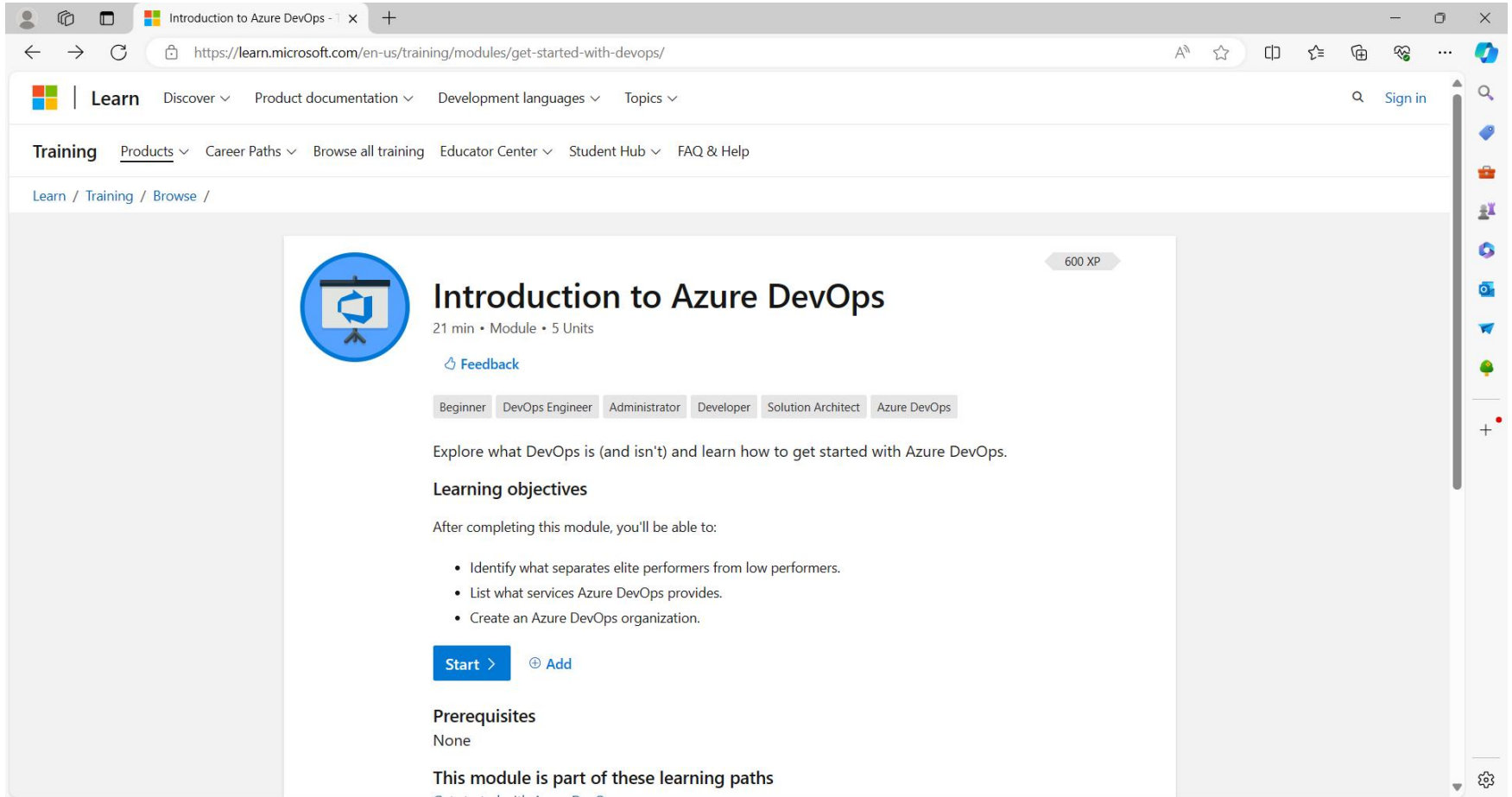


What is CI/CD?

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/>



The screenshot shows a web browser window with the URL <https://learn.microsoft.com/en-us/training/modules/get-started-with-devops/>. The page features the Microsoft Learn header with navigation links like 'Discover', 'Product documentation', 'Development languages', and 'Topics'. A 'Sign in' button is in the top right. Below the header, a 'Training' section includes links for 'Products', 'Career Paths', 'Browse all training', 'Educator Center', 'Student Hub', and 'FAQ & Help'. The main content area displays the module 'Introduction to Azure DevOps' with a blue icon of a screen and a 600 XP badge. It specifies a duration of 21 minutes, 5 units, and a 'Feedback' link. A row of tags includes 'Beginner', 'DevOps Engineer', 'Administrator', 'Developer', 'Solution Architect', and 'Azure DevOps'. The description states: 'Explore what DevOps is (and isn't) and learn how to get started with Azure DevOps.' Under 'Learning objectives', it lists three goals: identifying elite vs. low performers, listing Azure DevOps services, and creating an organization. At the bottom, there are 'Start >' and 'Add' buttons, followed by 'Prerequisites' (None) and a note that the module is part of learning paths.


Introduction to Azure DevOps - 1 x

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

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 Introduction to Azure DevOps 600 XP

21 min • Module • 5 Units

[Feedback](#)

Beginner DevOps Engineer Administrator Developer Solution Architect Azure DevOps

Explore what DevOps is (and isn't) and learn how to get started with Azure DevOps.

Learning objectives

After completing this module, you'll be able to:

- Identify what separates elite performers from low performers.
- List what services Azure DevOps provides.
- Create an Azure DevOps organization.

[Start >](#) [Add](#)

Prerequisites

None

This module is part of these learning paths

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.



