

What is Azure DevOps?

- Implementing DevOps methodology with help of **azure DevOps services** of **Azure repos** for **git remote repository management**, **azure pipelines** for CI/CD , **Azure artifact** for **artifact's managemnt** , **Azure test plans** for **autimation testing**, and **Azure Boards** for **project management tool**.

what is DevOps?

- Devps of a fusion of Development Dev and operations Ops practices aimed at unifying software development and IT operations. The main goal is the shorten the Development life cycle and provide continous devilvery high software gaulity. DevOps is not a set of tools, it is cultture and mindset promotes most collebartion between development and operations team. This approach allows more frequent code release and faster problem solving and a more agile response to market changes.

Differnce between DevOps and Azure DevOps Oand AWS DevOps and GCP DevOps?

- The main difference between all these, usage of **tools** change to implement *DevOps methodology*..

tools	DevOps	AWS DevOps	Azure DevOps	GCP DevOps
git remote repository	Github/Bitbucket/GitLab	AWS code commit	Azure Repos	cloud source
CI/CD	Jenkins/GitLab/ any tools	code build, code deploy	Azure pipleine	GCP cloud build
configuration management tools	Ansible/Chef/any other tools	Ansible/chef/any other tools	Ansible/chef/ any other tools	Ansible/chef/any other tools
Artifact management	Nexus/Jfrog	AWS artifact	Azure artifact	GCP artifact registry
project manament tools	any project tools	any project tools	Azure Boards	any project tools
containerization	Docker	Docker	Docker	Docker
Container orchestation	Kubernetes	Kubernetes , note: create kubernetes cluster use "AWS EKS " service	Kubernetes note: create kubernetes cluster use "Azure AKS" service	Kubernetes note: create kubernetes cluster use "GCP GKE" service
Infra as a code	terraform	terraform/AWS cloud formation	terraform/Azure ARM templates	Terraform

- Notes:

- In the case of **AWS DevOps services** AWS code commit, AWS code build, AWS code pipeline, AWS code deploy and AWS artifact service --> these are part of AWS cloud only.
- In the case of **Azure DevOps services** Azure Repo, Azure pipeline, Azure Artifact , Azure test plans, and Azure Boards --> these are separated from Azure cloud, providing as another product of Microsoft.
 - <https://portal.azure.com> --> to connect to Azure cloud
 - <https://dev.azure.com/organization-name> ---> to connect Azure DevOps services.
- In the case of **GCP DevOps services** GCP cloud source, GCP cloud Build, GCP artifact repository -> these are part of **GCP** cloud only.

Why Azure DevOps is more popular compare to AWS DevOps?

- Rich matured service compare to AWS DevOps and GCP DevOps.
- No need to develop **custom scripts** to implement CI/CD.
- pre-defined tasks are available in Azure DevOps for any CI/CD operations.
- to implement and Easy maintain the DevOps operations.