Terraform:

Terraform is an IAC tool, used primarily by DevOps teams to automate various infrastructure tasks. The provisioning of cloud resources, for instance, is one of the main use cases of Terraform.

The Azure Kubernetes Service (AKS) is a fully managed Kubernetes service for deploying, managing, and scaling containerized applications on Azure. We use terraform to manage the service in azure cloud without manually deploying it. By using IAC(Terraform) we can automate it using terraform script .

We deploy in Terraform for several benefits like

* Unified Workflow
* Full Lifecycle Management
* Graph of Relationships between services for deploying application

Prerequisites:

* Azure account
* Azure CLI
* Kubectl

Steps:

* Create App registrations and with single tenant directory.
* Copy Client\_id, Tenant\_id, Subscription\_id.
* Create Secret under App registrations and copy the secret Value.
* Create IAM Role under resource groups to Create kubernetes cluster to allow terraform to deploy application in Azure.
* Now, create main.tf file which contains credentials and Providers.
* Create Source script to create AKS cluster.
* Add Kubeconfig in the script to configure Kubernetes object.
* Now, Use Terraform commands to create the resource without using Manual implementation.
* Terraform Init-to initialize server

Terraform Validate- to validate the configuration

Terraform Plan- To create plan before creating resource

Terraform apply- To create Resource

* We can Observe the Flow of Resource formed in overview of cluster.











