Infrastructure as Code (IaC) is a key practice in DevOps that involves managing and provisioning computing infrastructure through machine-readable definition files, rather than through physical hardware configuration or interactive configuration tools. IaC enables automation and simplifies the management of infrastructure, making it a cornerstone of modern DevOps practices.  
With Simple words – this is practice to have our infrastructure build and explaned with codes.

**Key Concepts of IaC:**

1. **Automation**:
   * Infrastructure is automatically provisioned and managed using scripts and definition files, reducing the need for manual configuration.
2. **Consistency**:
   * By using code to define infrastructure, environments can be consistently reproduced, ensuring that development, testing, and production environments are identical.
3. **Version Control**:
   * Infrastructure code can be versioned just like application code. This enables tracking of changes, rollback to previous versions, and collaboration among team members.
4. **Scalability**:
   * Infrastructure can be scaled up or down easily by modifying the code and reapplying it, making it adaptable to changing demands.
5. **Documentation**:
   * IaC files serve as documentation of the infrastructure, providing a clear and up-to-date view of the infrastructure setup.

**Examples of IaC Tools:**

1. **Terraform**:
   * Developed by HashiCorp, Terraform is an open-source tool that allows users to define and provision data center infrastructure using a declarative configuration language.
   * Example:

provider "aws" {

region = "us-west-2"

}

resource "aws\_instance" "example" {

ami = "ami-0c55b159cbfafe1f0"

instance\_type = "t2.micro"

}

1. **AWS CloudFormation**:
   * A service by Amazon Web Services that provides a common language for describing and provisioning all the infrastructure resources in a cloud environment.
   * Example:

{

"Resources": {

"MyEC2Instance": {

"Type": "AWS::EC2::Instance",

"Properties": {

"ImageId": "ami-0c55b159cbfafe1f0",

"InstanceType": "t2.micro"

}

}

}

}