**Automating Infrastructure using Terraform.**

DESCRIPTION

Use Terraform to provision infrastructure

**Description:**

Nowadays, infrastructure automation is critical. We tend to put the most emphasis on software development processes, but infrastructure deployment strategy is just as important. Infrastructure automation not only aids disaster recovery, but it also facilitates testing and development.

Your organization is adopting the DevOps methodology and in order to automate provisioning of infrastructure there's a need to setup a centralised server for Jenkins.

Terraform is a tool that allows you to provision various infrastructure components. Ansible is a platform for managing configurations and deploying applications. It means you'll use Terraform to build a virtual machine, for example, and then use Ansible to instal the necessary applications on that machine.

Considering the Organizational requirement you are asked to automate the infrastructure using Terraform first and install other required automation tools in it.

**Tools required:** Terraform, AWS account with security credentials, Keypair

**Expected Deliverables:**

Launch an EC2 instance using Terraform

Connect to the instance

           Install Jenkins, Java, and Python in the instance

**Terraform Coding:**

provider "aws" {

region= "ap-south-1"

profile="default"

}

resource "aws\_instance" "myprov" {

ami="ami-010aff33ed5991201"

instance\_type = "t2.micro"

security\_groups=["launch-wizard-4"]

key\_name="d"

tags = {

Name = "webserver4"

}

}

resource "null\_resource" "con" {

connection {

type = "ssh"

user = "ec2-user"

private\_key = file("C:/Users/vikas/Downloads/d.pem")

host = "${aws\_instance.myprov.public\_ip}"

}

provisioner "remote-exec" {

inline=[

"sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo",

"sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key",

"sudo yum install python3 -y",

"sudo yum install java -y ",

"sudo yum install jenkins -y ",

"sudo systemctl restart jenkins",

"sudo systemctl status jenkins"

]

}

}