

## Week 2 Assignment 1

File Path - <https://github.com/shubhamsharma11/TerraformProjects>

### main.tf

```
provider "azurerm" {
  features {}
}

# Create a resource group
resource "azurerm_resource_group" "rg04" {
  name     = var.rg_name
  location = "East US"
}

# Create a virtual network within the resource group
resource "azurerm_virtual_network" "vnet02" {
  name                = var.vnet_name
  resource_group_name = azurerm_resource_group.rg04.name
  location            = azurerm_resource_group.rg04.location
  address_space       = ["10.0.0.0/16"]
}

resource "azurerm_public_ip" "publicip01" {
  name                = "publiciptest01"
  location            = azurerm_resource_group.rg04.location
  resource_group_name = azurerm_resource_group.rg04.name
  allocation_method   = "Static"
}

resource "azurerm_network_interface" "nic01" {
  name                = "nic_test_01"
  location            = azurerm_resource_group.rg04.location
  resource_group_name = azurerm_resource_group.rg04.name

  ip_configuration {
    name                          = "internal"
    subnet_id                    = azurerm_subnet.subnet01[0].id
    private_ip_address_allocation = "Dynamic"
    public_ip_address_id         = azurerm_public_ip.publicip01.id
  }
}

resource "azurerm_subnet" "subnet01" {
  count                = length(var.subnet_ip)
  name                 = var.subnet_name[count.index]
  resource_group_name = azurerm_resource_group.rg04.name
  virtual_network_name = azurerm_virtual_network.vnet02.name
  address_prefixes     = [var.subnet_ip[count.index]]
}

# -----
# This line is to follow company policy as boot diagnostics should be enabled

/*Create a storage account to create blob storage for the boot diag output*/
resource "azurerm_storage_account" "diagSA01" {
  name                = "bootdiagsa021220232"
  resource_group_name = azurerm_resource_group.rg04.name
  location            = azurerm_resource_group.rg04.location
  account_tier        = "${element(split("_", var.boot_diagnostics_sa_type),0)}"
  account_replication_type = "${element(split("_", var.boot_diagnostics_sa_type),1)}"
}
# -----

resource "azurerm_virtual_machine" "vm01" {
  name                = "vm_test_01"
  location            = azurerm_resource_group.rg04.location
```

```

resource_group_name = azurerm_resource_group.rg04.name
network_interface_ids = [azurerm_network_interface.nic01.id]
vm_size              = "Standard_DS1_v2"

# -----
# This line is to follow company policy as boot diagnostics should be enabled
boot_diagnostics {
  enabled = "true"
  storage_uri = azurerm_storage_account.diagSA01.primary_blob_endpoint
}
# -----

# Uncomment this line to delete the OS disk automatically when deleting the VM
# delete_os_disk_on_termination = true

# Uncomment this line to delete the data disks automatically when deleting the VM
# delete_data_disks_on_termination = true

storage_image_reference {
  publisher = "Canonical"
  offer     = "0001-com-ubuntu-server-jammy"
  sku       = "22_04-lts"
  version   = "latest"
}
storage_os_disk {
  name           = "myosdisk1"
  caching        = "ReadWrite"
  create_option  = "FromImage"
  managed_disk_type = "Standard_LRS"
}
os_profile {
  computer_name = "hostname"
  admin_username = "testadmin"
  admin_password = "Password1234!"
}
os_profile_linux_config {
  disable_password_authentication = true
  ssh_keys {
    path = "/home/testadmin/.ssh/authorized_keys"
    key_data = "ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQCywo3fhW1eU1NCRRGtSHHbUlwJKQNK5RA156cwK1YmySgt3ZKNd31q0C5UFV+z1bwGNHi0bA
Nr1LTXxkngitiZ4mfitit/dmhe24qVGdc9dgVXRmSH1wEeiJTQ6IN/dBRtLBbV5cNrZNGsksVqrGoEzgEHHDdQYpohPL0HBhqvBBNw
Cs/X6IagH1T0uLm40ihCwC1FmDTMxgPytj8t6VNzXNuH2ubq/s2fhY2yIo2AsGeJXXQc4o2yipwWC0Zg+h406zS/mKRTmGqXarTJos
2e8hPB4FwRAI37yKb+lqgGUs3wPnb+m+MMWw1iRvPreZnCVDEh2jwCY0CXn/phGggz  vmuser@CNative"
  }
}

resource "null_resource" "copy-file" {
  provisioner "file" {
    source = "text1.txt"
    destination = "text1.txt"

    connection {
      type = "ssh"
      user = "testadmin"
      private_key = "${file("C:\\Users\\VMUser\\.ssh\\id_rsa1")}"
      host = azurerm_public_ip.publicip01.ip_address
    }
  }
}

resource "null_resource" "remote-command" {
  provisioner "remote-exec" {
    inline = [
      "cp text1.txt text2.txt"
    ]

    connection {
      type = "ssh"
      user = "testadmin"
      private_key = "${file("C:\\Users\\VMUser\\.ssh\\id_rsa1")}"
      host = azurerm_public_ip.publicip01.ip_address
    }
  }
}

```

```
}  
}  
}
```

## variable.tf

```
variable "vnet_name" {  
  type      = string  
  default    = "vnet_test2"  
}  
  
variable "rg_name" {  
  type      = string  
  default    = "rg_test4"  
}  
  
variable "subnet_ip" {  
  type      = list  
  default    = ["10.0.0.0/24", "10.0.1.0/24", "10.0.2.0/24"]  
}  
  
variable "subnet_name" {  
  type      = list  
  default    = ["subnet_test_1", "subnet_test_2", "subnet_test_3"]  
}  
  
variable "boot_diagnostics_sa_type" {  
  default    = "Standard_LRS"  
}
```

## text1.txt

This is text file.  
This will be copied to the server