**Terraform**

***\*\*ENSURE DOCKER DESKTOP IS OPEN\*\****

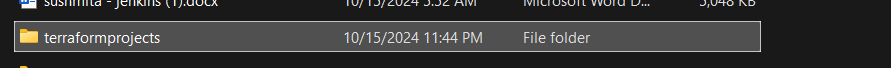
1. **Download terraform zip from** [**https://developer.hashicorp.com/terraform/install?product\_intent=terraform**](https://developer.hashicorp.com/terraform/install?product_intent=terraform)
2. **Unzip the downloaded file**
3. **Add the location of the downloaded file to the path variable**

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Description automatically generated**

1. **On CMD🡪 Run as administrator:   
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   Description automatically generated**
2. **Create a folder in the same location where your installation file is**

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1. **Inside terraformprojects create:**

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Description automatically generated**

1. **On cmd🡪run as administrator:**

****

**EXAMPLE 1. CREATING YOUR OWN NAME-SPACE**

1. **In main.tf**

**Paste and save:**

terraform {

required\_providers {

kubernetes = {

source = "hashicorp/kubernetes"

version = "~> 2.0"

}

}

}

provider "kubernetes" {

config\_path = "~/.kube/config" # Default path for kubectl config

}

resource "kubernetes\_namespace" "example" {

metadata {

name = "example-namespace"

}

}

resource "kubernetes\_deployment" "nginx" {

metadata {

name = "nginx-deployment"

namespace = kubernetes\_namespace.example.metadata[0].name

}

spec {

replicas = 2

selector {

match\_labels = {

app = "nginx"

}

}

template {

metadata {

labels = {

app = "nginx"

}

}

spec {

container {

name = "nginx"

image = "nginx:latest"

port {

container\_port = 80

}

}

}

}

}

}

1. **On cmd🡪run:**

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**NODE PORT**

**Exercise 2: In main.tf paste:**

terraform {

required\_providers {

kubernetes = {

source = "hashicorp/kubernetes"

version = "~> 2.0"

}

}

}

provider "kubernetes" {

config\_path = "~/.kube/config" # Path to your kubeconfig file (default location)

}

# Basic NGINX Deployment

resource "kubernetes\_deployment" "nginx" {

metadata {

name = "nginx-deployment"

}

spec {

replicas = 1 # Deploy 1 replica for simplicity

selector {

match\_labels = {

app = "nginx"

}

}

template {

metadata {

labels = {

app = "nginx"

}

}

spec {

container {

name = "nginx"

image = "nginx:latest"

port {

container\_port = 80

}

}

}

}

}

}

# Basic Kubernetes Service to Expose NGINX Deployment

resource "kubernetes\_service" "nginx" {

metadata {

name = "nginx-service"

}

spec {

selector = {

app = "nginx"

}

port {

port = 80

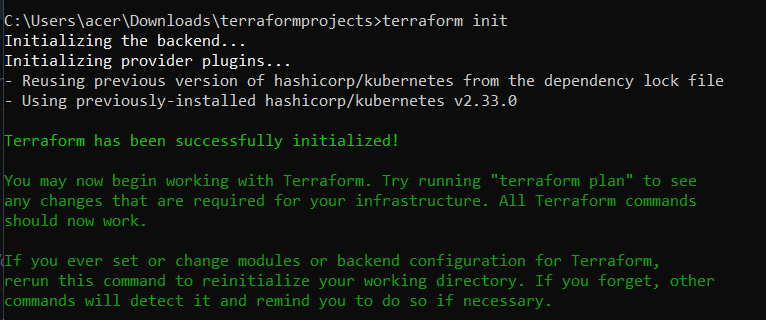
target\_port = 80

}

type = "NodePort" # Simpler than LoadBalancer, exposes a port on each node

}

}

****

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**A screen shot of a computer

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