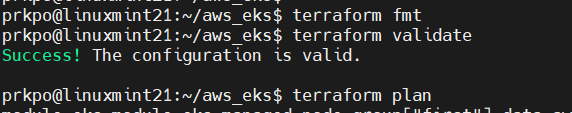
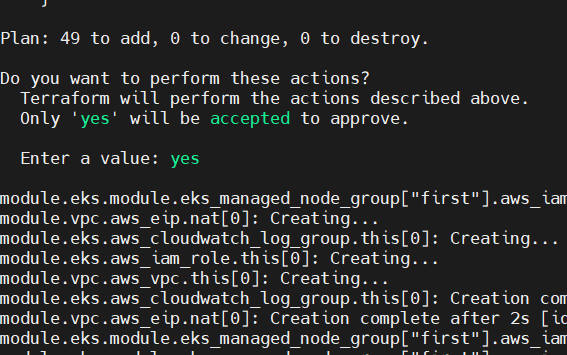
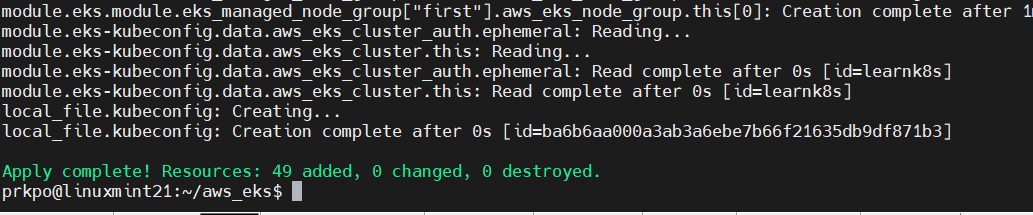
Экзаменационная работа

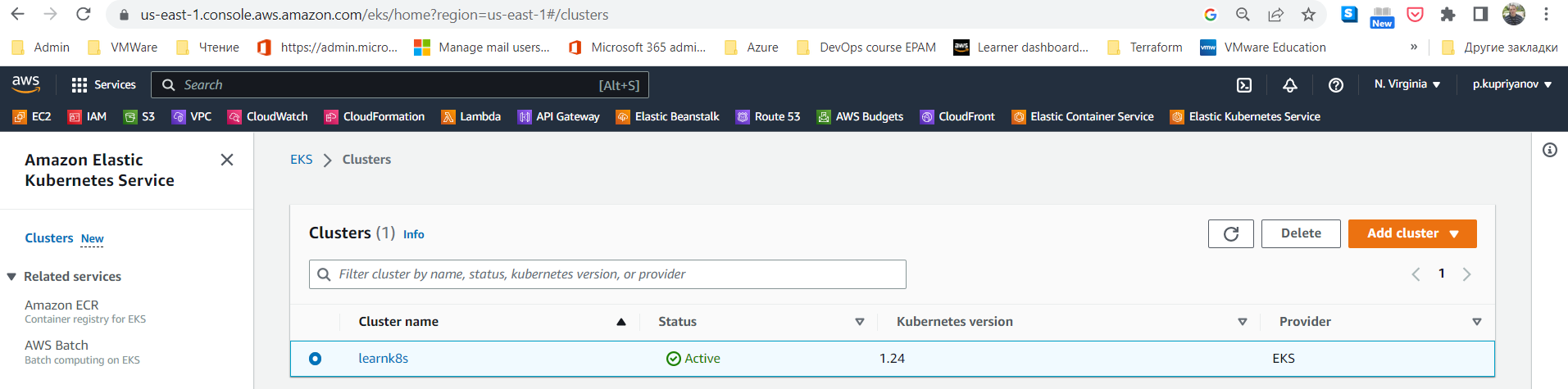
1. Создание кластера Kubernetes на базе AWS EKS.

Конфигурационный файл приведен в Листинге 1.

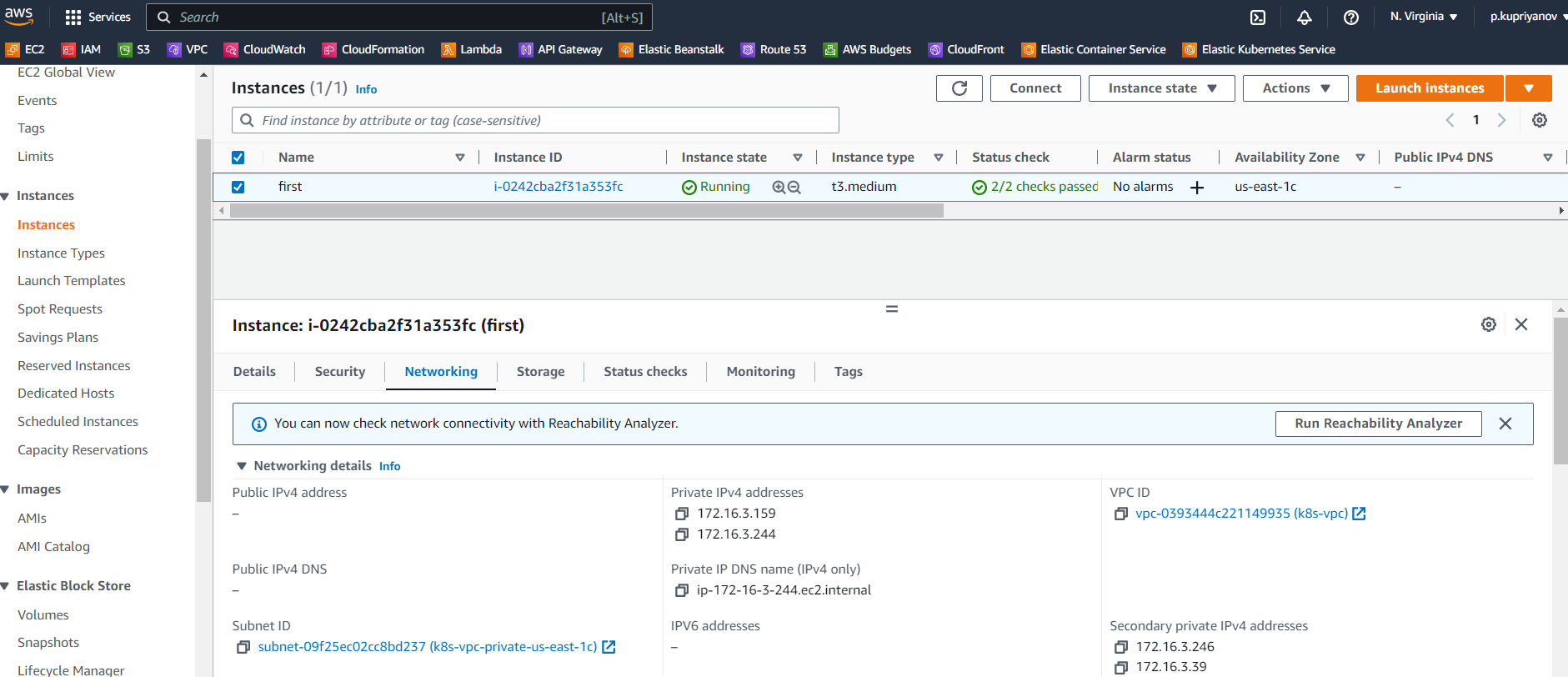






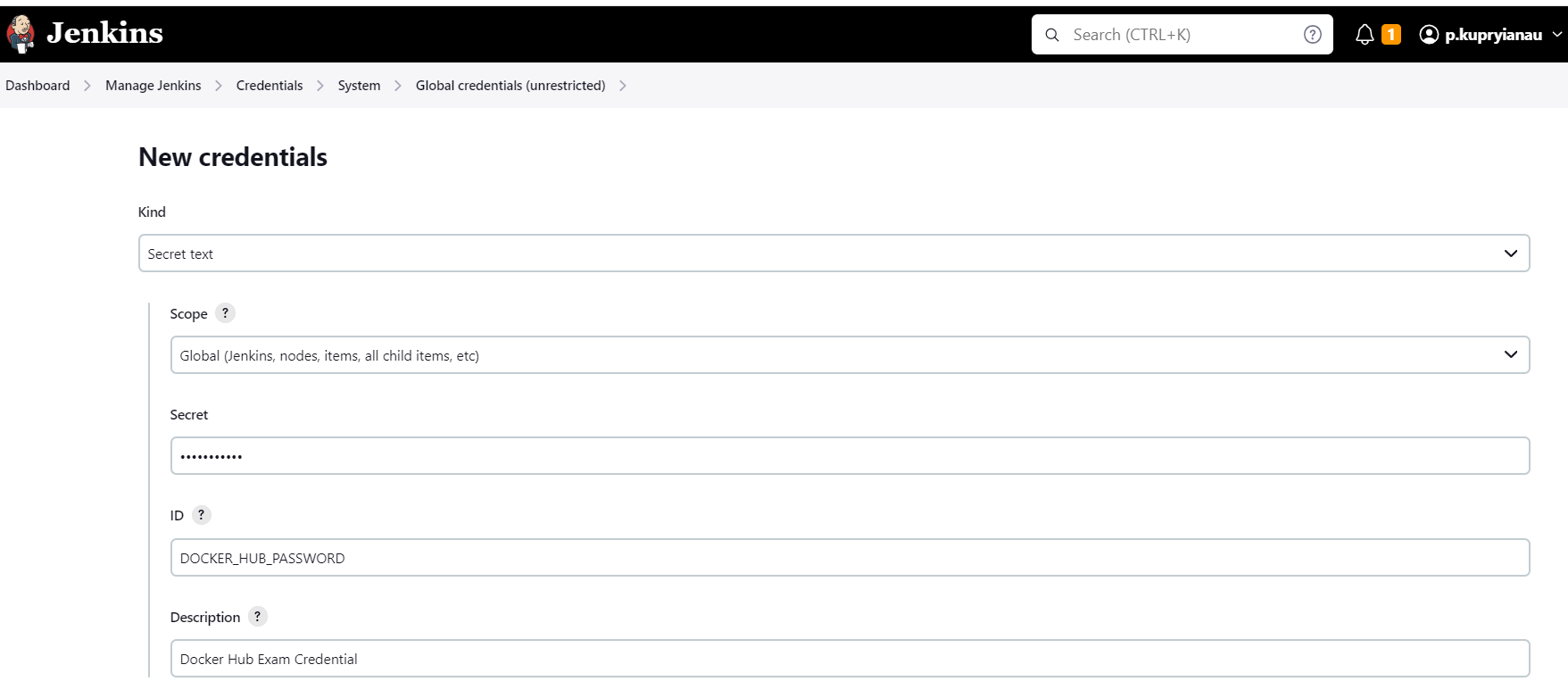


Cluster name = learnk8s

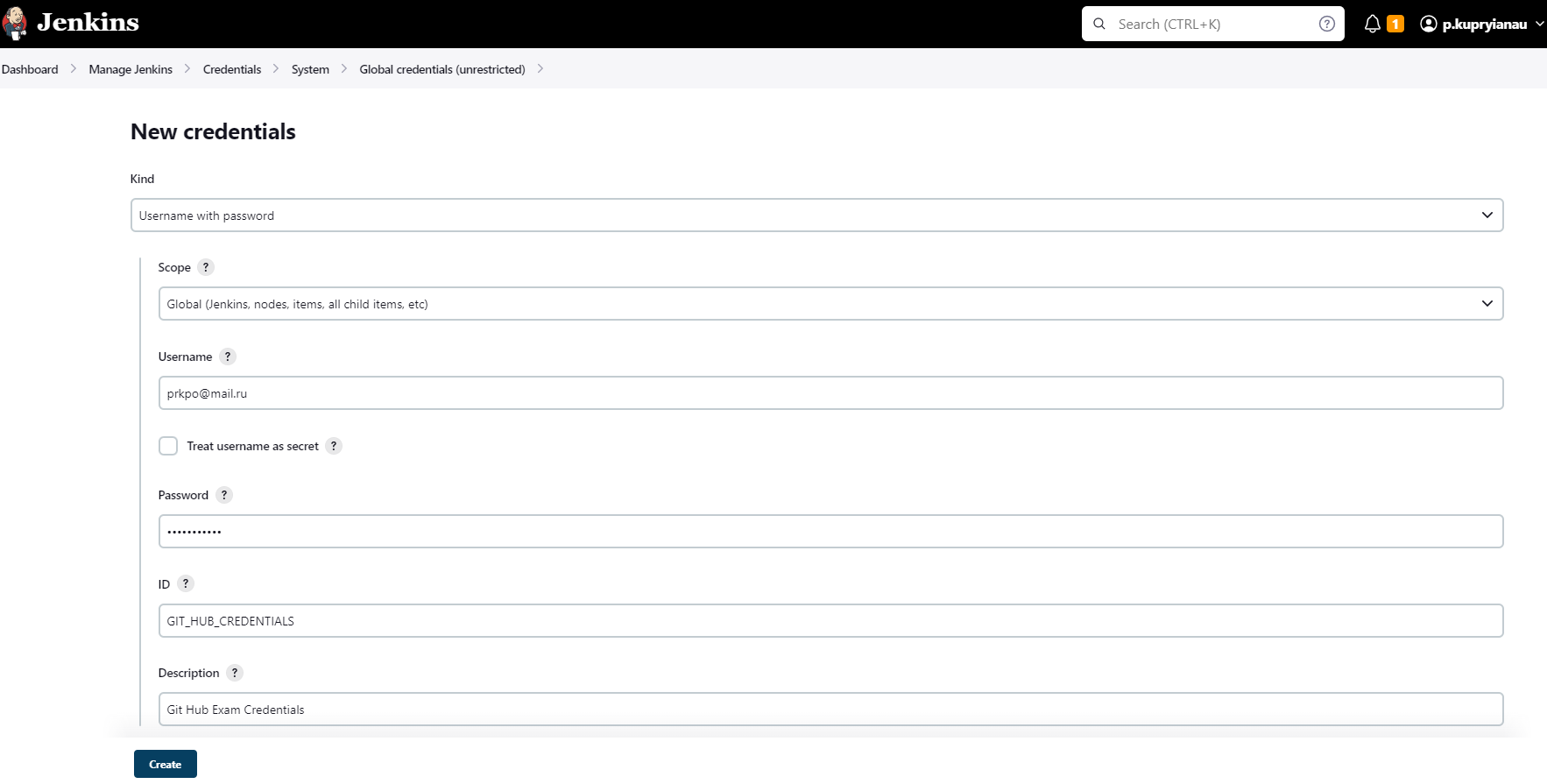


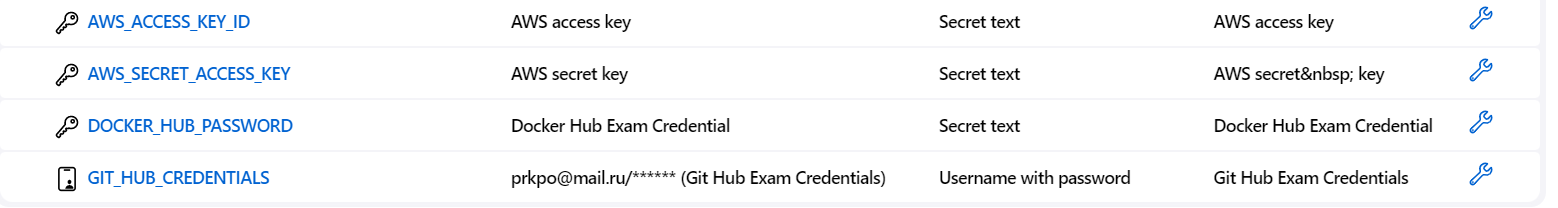
1. Создание учетных данных в Jenkins

Создание УЗ Docker Hub



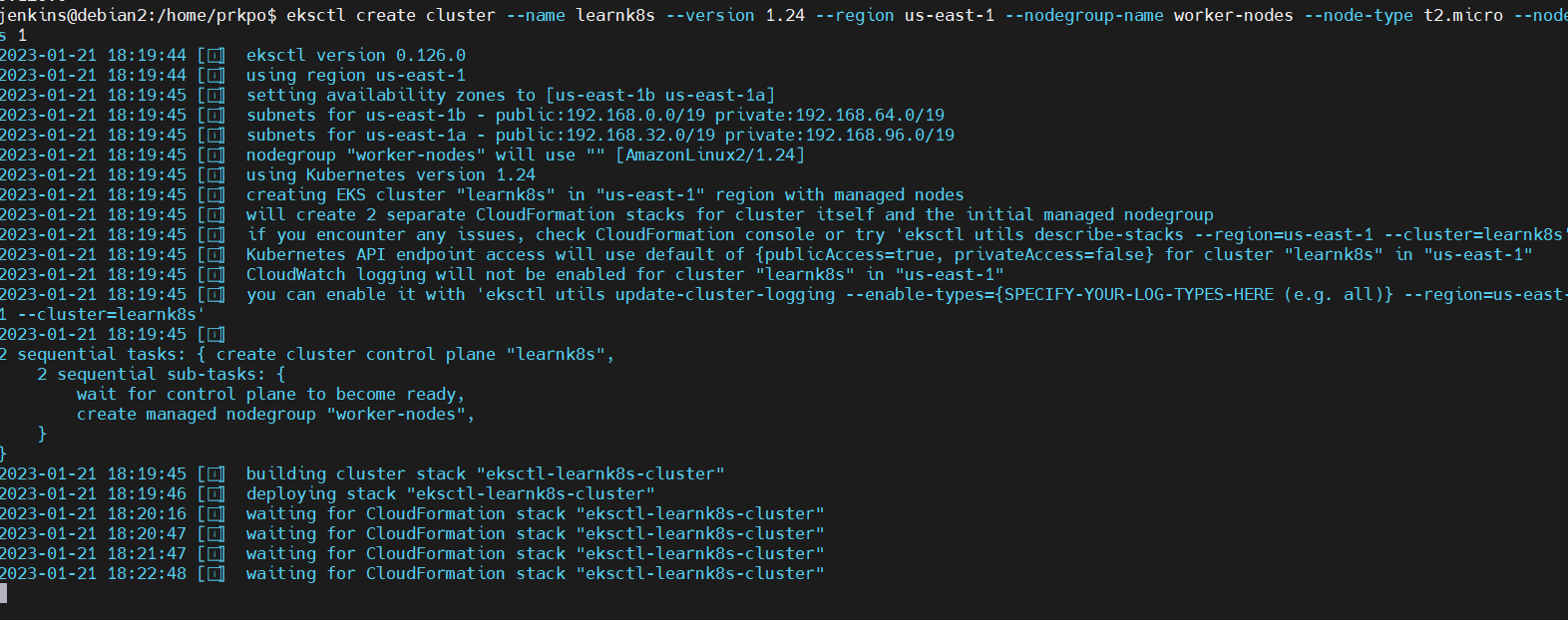
Создание УЗ GitHub





Создание EKS кластера

eksctl create cluster --name learnk8s --version 1.24 --region us-east-1 --nodegroup-name worker-nodes --node-type t2.micro --nodes 1



Листинг 1

# Создание AWS EKS кластера

terraform {

required\_version = ">= 0.13.1"

required\_providers {

aws = {

source = "hashicorp/aws"

version = ">= 4.49.0"

}

}

}

provider "aws" {

region = "us-east-1"

}

data "aws\_availability\_zones" "available" {}

data "aws\_eks\_cluster" "cluster" {

name = module.eks.cluster\_id

}

data "aws\_eks\_cluster\_auth" "cluster" {

name = module.eks.cluster\_id

}

locals {

cluster\_name = "learnk8s"

}

provider "kubernetes" {

host = data.aws\_eks\_cluster.cluster.endpoint

cluster\_ca\_certificate = base64decode(data.aws\_eks\_cluster.cluster.certificate\_authority.0.data)

token = data.aws\_eks\_cluster\_auth.cluster.token

}

module "eks-kubeconfig" {

source = "hyperbadger/eks-kubeconfig/aws"

version = "1.0.0"

depends\_on = [module.eks]

cluster\_id = module.eks.cluster\_id

}

resource "local\_file" "kubeconfig" {

content = module.eks-kubeconfig.kubeconfig

filename = "kubeconfig\_${local.cluster\_name}"

}

module "vpc" {

source = "terraform-aws-modules/vpc/aws"

version = "3.18.1"

name = "k8s-vpc"

cidr = "172.16.0.0/16"

azs = data.aws\_availability\_zones.available.names

private\_subnets = ["172.16.1.0/24", "172.16.2.0/24", "172.16.3.0/24"]

public\_subnets = ["172.16.4.0/24", "172.16.5.0/24", "172.16.6.0/24"]

enable\_nat\_gateway = true

single\_nat\_gateway = true

enable\_dns\_hostnames = true

public\_subnet\_tags = {

"kubernetes.io/cluster/${local.cluster\_name}" = "shared"

"kubernetes.io/role/elb" = "1"

}

private\_subnet\_tags = {

"kubernetes.io/cluster/${local.cluster\_name}" = "shared"

"kubernetes.io/role/internal-elb" = "1"

}

}

module "eks" {

source = "terraform-aws-modules/eks/aws"

version = "18.30.3"

cluster\_name = "${local.cluster\_name}"

cluster\_version = "1.24"

subnet\_ids = module.vpc.private\_subnets

vpc\_id = module.vpc.vpc\_id

eks\_managed\_node\_groups = {

first = {

desired\_capacity = 1

max\_capacity = 3

min\_capacity = 1

instance\_type = "t2.medium"

}

}

}