

Kubernetes Assignment-1

Module-9: Kubernetes Assignment - 1

You have been asked to:

- Deploy a Kubernetes Cluster for 3 nodes
 - Create a nginx deployment of 3 replicas
-

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EC2 RDS IAM

Console Home

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- Simple Notification Service

Lambda

CloudFormation

IAM Identity Center

IAM

Elastic Beanstalk

View all services

Applications (0)

Region: US East (N. Virginia)

Create application

us-east-1 (Current Region) Find applications < 1 >

Name Description Region Originating account

No applications

Get started by creating an application.

Create application

Go to myApplications

Welcome to AWS

Getting started with AWS

Learn the fundamentals and find valuable information to get the most out of AWS.

Training and certification

AWS Health

Open issues 0 Past 7 days

Scheduled changes 0 Upcoming and past 7 days

Other notifications

Cost and usage

Current month costs \$0.01

↓ 67% compared to last month for same period

Forecasted month end costs \$0.03

Cost (\$)

Feb 24 Apr 24 Jun 24

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EC2 RDS IAM

EC2 Dashboard

EC2 Global View Events Console-to-Code [Preview](#)

Instances

Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations

Images

AMIs AMI Catalog

Elastic Block Store

Volumes Snapshots Lifecycle Manager

Network & Security

Security Groups Elastic IPs Placement Groups

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

| | | | | | |
|---------------------|---|---------------------|---|-----------------|----|
| Instances (running) | 0 | Auto Scaling Groups | 0 | Dedicated Hosts | 0 |
| Elastic IPs | 0 | Instances | 0 | Key pairs | 8 |
| Load balancers | 0 | Placement groups | 0 | Security groups | 24 |
| Snapshots | 0 | Volumes | 0 | | |

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

[Launch instance](#) [Migrate a server](#)

Note: Your instances will launch in the US East (N. Virginia) Region

Instance alarms

[View in CloudWatch](#)

⚠ 0 in alarm ✔ 0 OK ⋯ 0 insufficient data

[Instances in alarm](#)

Scheduled events

[C](#)

Service health

[AWS Health Dashboard](#) [C](#)

| Region | Status |
|-----------------------|--|
| US East (N. Virginia) | ✔ This service is operating normally. |

Zones

| Zone name | Zone ID |
|------------|----------|
| us-east-1a | use1-az4 |
| us-east-1b | use1-az6 |
| us-east-1c | use1-az1 |
| us-east-1d | use1-az2 |
| us-east-1e | use1-az3 |

EC2 Free Tier [Info](#)

Offers for all AWS Regions.

2 EC2 free tier offers in use

End of month forecast ⚠ 0 offers forecasted to exceed free tier limit.

Exceeds free tier ⚠ 0 offers exceeded and is now pay-as-you-go pricing.

[View Global EC2 resources](#)

Offer usage (monthly)

Linux EC2 Instances 1% 742.106945 hours remaining

Storage space on EBS 24% 22.9 GB remaining

[View all AWS Free Tier offers](#)

Account attributes

[C](#)

Default VPC [Info](#)

none

Settings

Data protection and security

Zones

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Instances Info

Find Instance by attribute or tag (case-sensitive) All states

Instance state = running Clear filters

Name Instance ID Instance state Instance type Status check Alarm status Availability Zone Public IPv4 DNS Public IPv4 ... Elastic IP

No matching instances found

Select an instance

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EC2 RDS IAM

EC2 Instances Launch an instance

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name Swapnil-k8s Add additional tags

Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Li

ubuntu® Microsoft Red Hat SUSE Li

Browse more AMIs Including AMIs from AWS, Marketplace and the Community

Summary

Number of instances Info 3 When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI) Canonical, Ubuntu, 22.04 LTS, ...read more ami-0a0e5d9c7acc336f1

Virtual server type (instance type) t2.large

Firewall (security group) default

Storage (volumes) 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of

Cancel Launch instance Review commands

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EC2 RDS IAM

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
ami-0a0e5d9c7acc336f1 (64-bit (x86)) / ami-070f589e4b4a3fce (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs Free tier eligible

Instance type Info | Get advice

Instance type t2.large

Family: t2 2 vCPU 8 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.1208 USD per Hour
On-Demand RHEL base pricing: 0.1216 USD per Hour
On-Demand SUSE base pricing: 0.1928 USD per Hour
On-Demand Linux base pricing: 0.0928 USD per Hour

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required Swapnil Create new key pair

Network settings Info Edit

Summary Number of instances 3 When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI) Canonical, Ubuntu, 22.04 LTS, ...read more ami-0a0e5d9c7acc336f1

Virtual server type (instance type) t2.large

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Cancel Launch instance Review commands

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Network settings

Network | Info
vpc-020050eeb89f650ee | Default VPC

Subnet | Info
subnet-0cd8f86e5a754829f

Auto-assign public IP | Info
Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) | Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Common security groups Info
Select security groups

default sg-00d146a653d3de0ea X
VPC: vpc-020050eeb89f650ee

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage

Advanced

1x 8 GiB gp2 Root volume (Encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Summary

Number of instances | Info
3

When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0a0e5d9c7acc336f1

Virtual server type (instance type)
t2.large

Firewall (security group)
default

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of

Cancel Launch instance Review commands

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EC2 RDS IAM

Create security group Select existing security group

Common security groups Info Select security groups

default sg-00d146a653d3de0ea X VPC: vpc-020050eeb89f650ee

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage Info Advanced

1x 8 GiB gp2 Root volume (Encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems Edit

Advanced details Info

Summary

Number of instances Info 3 When launching more than 1 instance, consider EC2 Auto Scaling

Software Image (AMI) Canonical, Ubuntu, 22.04 LTS, ...read more ami-0a0e5d9c7acc336f1

Virtual server type (instance type) t2.large

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Cancel Launch instance Review commands

This screenshot shows the AWS EC2 Launch Instance wizard. On the left, under 'Configure storage', it shows a single root volume of 8 GiB using the gp2 SSD type. A tooltip indicates that free-tier eligible customers can get up to 30 GB of EBS storage. Below this, a note states that the selected AMI contains more instance store volumes than allowed, so only the first 0 are accessible. Under 'Advanced details', there's a note about backup via Data Lifecycle Manager. At the bottom, a summary panel lists the instance configuration: 3 instances, Canonical Ubuntu 22.04 AMI, t2.large instance type, default security group, and 1 encrypted root volume of 8 GiB. A detailed tooltip for the free tier explains the included resources. Finally, at the bottom right are 'Cancel', 'Launch instance' (in orange), and 'Review commands' buttons.

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Instances (3/3) Info

Last updated less than a minute ago

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... |
|--------------------|---------------------|----------------|---------------|--------------|---------------|-------------------|-------------------------|-----------------|
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-3-88-114-10.comp... | 3.88.114.10 |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-54-226-114-3.com... | 54.226.114.3 |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-18-234-239-80.co... | 18.234.239.80 |

3 instances selected

Monitoring

Configure CloudWatch agent

Alarm recommendations

1h 3h 12h 1d 3d 1w Custom UTC timezone

Add to dashboard

CPU utilization (%)

Various units

2e-5

1e-5

0

14:45 15:00 15:15 15:30

Network in (bytes)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

Network out (bytes)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

Network packets in (count)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

Network packets out (count)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

CPU credit usage (count)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

CPU credit balance (count)

No unit

1

0.5

0

14:45 15:00 15:15 15:30

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Network & Security Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces

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Instances (1/3) Info

Last updated 1 minute ago

Find Instance by attribute or tag (case-sensitive)

All states

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... | Elastic IP |
|-----------------------------|---------------------|----------------------|---------------|---------------------------|-----------------------------|-------------------|-------------------------|-----------------|------------|
| swapnil-k8s-Master | i-02a8d34d62ed9284d | Running | t2.micro | Initializing | View alarms | us-east-1a | ec2-34-229-91-166.co... | 34.229.91.166 | - |
| swapnil-k8s-S1 | i-08307ce2456400423 | Running | t2.micro | Initializing | View alarms | us-east-1a | ec2-54-234-36-91.com... | 54.234.36.91 | - |
| swapnil-k8s-S2 | i-01ccee36262a3c614 | Running | t2.micro | Initializing | View alarms | us-east-1a | ec2-34-229-134-17.co... | 34.229.134.17 | - |

i-01ccee36262a3c614 (swapnil-k8s-S2)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Instance ID: i-01ccee36262a3c614 (swapnil-k8s-S2)

Public IPv4 address: 34.229.134.17 | [open address](#)

Private IPv4 addresses: 172.30.0.191

Public IPv4 DNS: ec2-34-229-134-17.compute-1.amazonaws.com | [open address](#)

IPv6 address: -

Instance state: Running

Hostname type: IP name: ip-172-30-0-191.ec2.internal

Private IP DNS name (IPv4 only): ip-172-30-0-191.ec2.internal

Elastic IP addresses: -

Answer private resource DNS name: -

Instance type: t2.micro

AWS Compute Optimizer finding: [Opt-in to AWS Compute Optimizer for recommendations.](#) | [Learn more](#)

Auto-assigned IP address: 34.229.134.17 [Public IP]

VPC ID: vpc-020050eeb89f650ee (Default VPC)

Subnet ID: subnet-0cd8f86e5a754829f

Auto Scaling Group name: -

IAM Role: -

Instance ARN: arn:aws:ec2:us-east-1:866650389532:instance/i-01ccee36262a3c614

Platform: Ubuntu (Inferred)

AMI ID: ami-0a0e5d9c7acc336f1

Monitoring: disabled

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Instances (1/3) Info Find Instance by attribute or tag (case-sensitive) Running Last updated 1 minute ago C Connect Instance state Actions Launch instances

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... |
|--------------------|---------------------|----------------|---------------|--------------|---------------|-------------------|-------------------------|-----------------|
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-3-88-114-10.comp... | 3.88.114.10 |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-54-226-114-3.com... | 54.226.114.3 |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-18-234-239-80.co... | 18.234.239.80 |

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

Details Status and alarms Monitoring Security Networking Storage Tags

▼ Security details

IAM Role - Owner ID 866650389532 Launch time Tue Sep 24 2024 21:09:47 GMT+0530 (India Standard Time)

Security groups sg-00d146a653d3de0ea (default)

▼ Inbound rules

| Name | Security group rule ID | Port range | Protocol | Source | Security groups | Description |
|------|------------------------|------------|----------|-----------|-----------------|-------------|
| - | sgr-09f6142d1bb0379bf | All | All | 0.0.0.0/0 | default ↗ | - |
| - | sgr-0b514be9b1e527242 | All | All | ::/0 | default ↗ | - |

▼ Outbound rules

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EC2 > Security Groups > sg-00d146a653d3de0ea - default

sg-00d146a653d3de0ea - default

Actions ▾

Details

| | | | |
|---------------------|----------------------|----------------------|-----------------------|
| Security group name | sg-00d146a653d3de0ea | Description | VPC ID |
| Owner | 866650389532 | Inbound rules count | vpc-020050eeb89f650ee |
| | | 2 Permission entries | |
| | | Outbound rules count | |
| | | 1 Permission entry | |

Inbound rules Outbound rules Tags

Inbound rules (2)

Search

| Name | Security group rule... | IP version | Type | Protocol | Port range | Source | Description |
|------|------------------------|------------|-------------|----------|------------|-----------|-------------|
| - | sgr-0fba8875274ffe73d | IPv6 | All traffic | All | All | ::/0 | - |
| - | sgr-0657f74b4f2f07205 | IPv4 | All traffic | All | All | 0.0.0.0/0 | - |

C Manage tags Edit inbound rules < 1 > ⚙

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Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules Info

This security group has no inbound rules.

[Add rule](#)[Cancel](#)[Preview changes](#)[Save rules](#)

Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules Info

| Security group rule ID | Type <small>Info</small> | Protocol <small>Info</small> | Port range <small>Info</small> | Source <small>Info</small> | Description - optional <small>Info</small> | |
|------------------------|--------------------------|------------------------------|--------------------------------|------------------------------|---|---------------------|
| - | All traffic | All | All | Anywhere- <small>...</small> | <input type="text" value="0.0.0.0/0"/> X | Delete |
| - | All traffic | All | All | Anywhere- <small>...</small> | <input "::="" 0"="" type="text" value=""/> X | Delete |

[Add rule](#)

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

X

Cancel Preview changes Save rules

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Inbound security group rules successfully modified on security group (sg-00d146a653d3de0ea | default)

Details

EC2 > Security Groups > sg-00d146a653d3de0ea - default

sg-00d146a653d3de0ea - default

Actions ▾

Details

| | | | | | | | |
|---------------------|--------------|---------------------|----------------------|----------------------|----------------------------|--------|-----------------------|
| Security group name | default | Security group ID | sg-00d146a653d3de0ea | Description | default VPC security group | VPC ID | vpc-020050eeb89f650ee |
| Owner | 866650389532 | Inbound rules count | 2 Permission entries | Outbound rules count | 1 Permission entry | | |

Inbound rules Outbound rules Tags

Inbound rules (2)

Search

| Name | Security group rule... | IP version | Type | Protocol | Port range | Source | Description |
|------|------------------------|------------|-------------|----------|------------|-----------|-------------|
| - | sgr-06d3f7d8d9365f0aa | IPv6 | All traffic | All | All | ::/0 | - |
| - | sgr-03c1bf795d5d99971 | IPv4 | All traffic | All | All | 0.0.0.0/0 | - |

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Instances (1/3) Info Last updated 5 minutes ago Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) Running

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... |
|--------------------|---------------------|----------------|---------------|--------------|---------------|-------------------|-------------------------|-----------------|
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-3-88-114-10.comp... | 3.88.114.10 |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-54-226-114-3.com... | 54.226.114.3 |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | Initializing | View alarms + | us-east-1a | ec2-18-234-239-80.co... | 18.234.239.80 |

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

Details Status and alarms Monitoring Security Networking Storage Tags

Security details

IAM Role - Owner ID 866650389532 Launch time Tue Sep 24 2024 21:09:47 GMT+0530 (India Standard Time)

Security groups sg-00d146a653d3de0ea (default)

Inbound rules

Filter rules

| Name | Security group rule ID | Port range | Protocol | Source | Security groups | Description |
|------|------------------------|------------|----------|-----------|-----------------|-------------|
| - | sgr-09f6142d1bb0379bf | All | All | 0.0.0.0/0 | default | - |
| - | sgr-0b514be9b1e527242 | All | All | ::/0 | default | - |

Outbound rules

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EC2 RDS IAM

EC2 Instances i-0741ed1b57cdc364a Connect to instance

Connect to instance Info

Connect to your instance i-0741ed1b57cdc364a (Swapnil-k8s-S2) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

All ports are open to all IPv4 addresses in your security group
All ports are currently open to all IPv4 addresses, indicated by All and 0.0.0.0/0 in the inbound rule in [your security group](#). For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. [Learn more](#).

Instance ID
 i-0741ed1b57cdc364a (Swapnil-k8s-S2)

Connection Type
 Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.
 Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IPv4 address
 18.234.239.80
 IPv6 address

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.
 ubuntu

Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

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Network & Security Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces

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Instances (1/3) Info

Last updated less than a minute ago

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... | Elastic IP |
|--------------------|---------------------|----------------|---------------|-------------------|---------------|-------------------|-------------------------|-----------------|------------|
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-3-88-114-10.comp... | 3.88.114.10 | - |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-54-226-114-3.com... | 54.226.114.3 | - |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-18-234-239-80.co... | 18.234.239.80 | - |

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

| | | | |
|----------------------------------|-----------------------------|---------------------------------|---|
| Instance ID | 54.226.114.3 open address | Private IPv4 address | 172.30.0.99 |
| IPv6 address | - | Instance state | Running |
| Hostname type | ip-172-30-0-99.ec2.internal | Private IP DNS name (IPv4 only) | ip-172-30-0-99.ec2.internal |
| IP name: | ip-172-30-0-99.ec2.internal | Instance type | t2.large |
| Answer private resource DNS name | - | VPC ID | vpc-020050eeb89f650ee (Default VPC) |
| Auto-assigned IP address | 54.226.114.3 [Public IP] | Subnet ID | subnet-0cd8f86e5a754829f |
| IAM Role | - | Instance ARN | arn:aws:ec2:us-east-1:866650389532:instance/i-0e4ea3a37c7ee3a74 |
| IMDSv2 | Required | | |

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

EC2 Instances i-0e4ea3a37c7ee3a74 Connect to instance

Connect to instance Info

Connect to your instance i-0e4ea3a37c7ee3a74 (Swapnil-k8s-51) using any of these options

[EC2 Instance Connect](#) [Session Manager](#) [SSH client](#) [EC2 serial console](#)

⚠ All ports are open to all IPv4 addresses in your security group
All ports are currently open to all IPv4 addresses, indicated by **All** and **0.0.0.0/0** in the inbound rule in [your security group](#). For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. [Learn more.](#)

Instance ID [i-0e4ea3a37c7ee3a74 \(Swapnil-k8s-51\)](#)

Connection Type

Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.

Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IPv4 address [54.226.114.3](#)

IPv6 address

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, `ubuntu`.

[X](#)

Note: In most cases, the default username, `ubuntu`, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel [Connect](#)

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swappnil

EC2 RDS IAM

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New

Images AMIs AMI Catalog

Elastic Block Store Volumes Snapshots Lifecycle Manager

Network & Security Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces

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Instances (1/3) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

All states

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... | Elastic IP |
|--------------------|---------------------|----------------|---------------|-------------------|--------------|-------------------|---|-----------------|------------|
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | 2/2 checks passed | View alarms | us-east-1a | ec2-3-88-114-10.compute-1.amazonaws.com | 3.88.114.10 | - |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | 2/2 checks passed | View alarms | us-east-1a | ec2-54-226-114-3.compute-1.amazonaws.com | 54.226.114.3 | - |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | 2/2 checks passed | View alarms | us-east-1a | ec2-18-234-239-80.compute-1.amazonaws.com | 18.234.239.80 | - |

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

| | | |
|--|---|---|
| Instance ID | Public IPv4 address | Private IPv4 addresses |
| i-0aac4b945549b81f1 (Swapnil-k8s-Master) | 3.88.114.10 open address | 172.30.0.110 |
| IPv6 address | Instance state | Public IPv4 DNS |
| - | Running | ec2-3-88-114-10.compute-1.amazonaws.com open address |
| Hostname type | Private IP DNS name (IPv4 only) | Elastic IP addresses |
| IP name: ip-172-30-0-110.ec2.internal | ip-172-30-0-110.ec2.internal | - |
| Answer private resource DNS name | Instance type | AWS Compute Optimizer finding |
| - | t2.large | Opt-in to AWS Compute Optimizer for recommendations. Learn more |
| Auto-assigned IP address | VPC ID | Auto Scaling Group name |
| 3.88.114.10 [Public IP] | vpc-020050eeb89f650ee (Default VPC) | - |
| IAM Role | Subnet ID | |
| - | subnet-0cd8f86e5a754829f | |
| IMDSv2 | Instance ARN | |
| Required | arn:aws:ec2:us-east-1:866650389532:instance/i-0aac4b945549b81f1 | |

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AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

EC2 Instances i-0aac4b945549b81f1 Connect to instance

Connect to instance Info

Connect to your instance i-0aac4b945549b81f1 (Swapnil-k8s-Master) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

All ports are open to all IPv4 addresses in your security group
All ports are currently open to all IPv4 addresses, indicated by All and 0.0.0.0/0 in the inbound rule in your security group. For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. [Learn more](#).

Instance ID: [i-0aac4b945549b81f1 \(Swapnil-k8s-Master\)](#)

Connection Type:

Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.

Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IPv4 address: 3.88.114.10

IPv6 address: -

Username: X

Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

aws | Services | [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 15:46:58 UTC 2024

System load: 0.0          Processes:      107
Usage of /: 20.7% of 7.57GB  Users logged in: 0
Memory usage: 2%           IPv4 address for eth0: 172.30.0.167
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-30-0-167:~$ 
ubuntu@ip-172-30-0-167:~$ 
ubuntu@ip-172-30-0-167:~$ 
ubuntu@ip-172-30-0-167:~$ sudo apt update -y
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)
PublicIPs: 18.234.239.80 PrivateIPs: 172.30.0.167



aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

EC2 RDS IAM

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 15:48:06 UTC 2024

System load: 0.0          Processes: 107
Usage of /: 20.7% of 7.57GB Users logged in: 0
Memory usage: 2%          IPv4 address for eth0: 172.30.0.99
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ sudo apt update -y[]
```

i-0e4ea3a37c7ee3a74 (Swarnil-k8s-S1)
PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99



aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 15:49:01 UTC 2024

System load: 0.0          Processes:      106
Usage of /: 20.7% of 7.57GB  Users logged in: 0
Memory usage: 2%           IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo apt update -y
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master) X
PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

```
Get:11 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [906 kB]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [177 kB]
Get:13 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.3 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2064 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [357 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.8 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2504 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [432 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [616 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1126 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [262 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.2 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:41 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:42 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Fetched 33.9 MB in 5s (6677 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano k8.sh
```

i-0aac4b945549b81f1 (Swannil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
sudo swapoff -a

# Create the .conf file to load the modules at bootup
cat <<EOF | sudo tee /etc/modules-load.d/k8s.conf
overlay
br_netfilter
EOF

sudo modprobe overlay
sudo modprobe br_netfilter

# sysctl params required by setup, params persist across reboots
cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable cri-o --now
sudo systemctl start cri-o.service

echo "CRI runtime installed successfully"

# Add Kubernetes APT repository and install required packages
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110



aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
# sysctl params required by setup, params persist across reboots
cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable crio --now
sudo systemctl start crio.service

echo "CRI runtime installed successfully"

# Add Kubernetes APT repository and install required packages
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg

sudo apt-get update -y
sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
sudo apt-get update -y
sudo apt-get install -y jq
sudo systemctl enable --now kubelet

sudo systemctl start kubelet
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | [Alt+S] | | | | | | N. Virginia | Intellipaat-Swapnil

* Documentation: <https://help.ubuntu.com>
* Management: <https://landscape.canonical.com>
* Support: <https://ubuntu.com/pro>

System information as of Tue Sep 24 15:59:28 UTC 2024

```
System load: 0.0          Processes:      108
Usage of /: 23.7% of 7.57GB  Users logged in:    0
Memory usage: 3%           IPv4 address for eth0: 172.30.0.99
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

77 updates can be applied immediately.
43 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:48:06 2024 from 18.206.107.28
ubuntu@ip-172-30-0-99:~$ sudo apt update -
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Fetched 129 kB in 0s (364 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ sudo nano k8.sh
```

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

GNU nano 6.2 k8.sh

```
# Create the .conf file to load the modules at bootup
cat <<EOF | sudo tee /etc/modules-load.d/k8s.conf
overlay
br_netfilter
EOF

sudo modprobe overlay
sudo modprobe br_netfilter

# sysctl params required by setup, params persist across reboots
cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable cri-o --now
sudo systemctl start cri-o.service

echo "CRI runtime installed successfully"
```

[Read 48 lines]

^G Help ^C Write Out ^W Where Is ^R Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-) To Bracket M-Q Previous ^B Back ^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-G Copy ^Q Where Was M-W Next ^F Forward ^P Prev Word ^N Next Word

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1) X

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

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aws | Services | [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

GNU nano 6.2

```
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable crio --now
sudo systemctl start crio.service

echo "CRI runtime installed successfully"

# Add Kubernetes APT repository and install required packages
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
echo 'deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core:/stable:/v1.29/deb/ /' | sudo tee /etc/apt/sources.list.d/kubernetes.list

sudo apt-get update -y
sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
sudo apt-get update -y
sudo apt-get install -y jq

sudo systemctl enable --now kubelet
sudo systemctl start kubelet
```

^G Help ^O Write Out ^W Where Is ^R Cut ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket M-Q Previous ^B Back ^P Prev Word
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-6 Copy ^C Where Was M-W Next ^F Forward ^N Next Word

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

Public IPs: 54.226.114.3 Private IPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia ▾ | Intellipaat-Swapnil ▾

EC2 RDS IAM

```
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2064 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [357 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.8 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2504 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [432 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [616 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1126 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [262 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.2 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1844 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [298 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2439 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [420 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [584 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [906 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [177 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.3 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 33.9 MB in 5s (6661 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-167:~$ 
ubuntu@ip-172-30-0-167:~$ sudo nano k8.sh
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

PublicIPs: 18.234.239.80 PrivateIPs: 172.30.0.167

aws | Services | Search [Alt+S] | X | 🔍 | ⓘ | ⚙️ | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
sudo swapoff -a

# Create the .conf file to load the modules at bootup
cat <<EOF | sudo tee /etc/modules-load.d/k8s.conf
overlay
br_netfilter
EOF

sudo modprobe overlay
sudo modprobe br_netfilter

# sysctl params required by setup, params persist across reboots
cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable cri-o --now
sudo systemctl start cri-o.service

echo "CRI runtime installed successfully"

# Add Kubernetes APT repository and install required packages
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)
Public IPs: 18.234.239.80 Private IPs: 172.30.0.167

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

```
# sysctl params required by setup, params persist across reboots
cat <<EOF | sudo tee /etc/sysctl.d/k8s.conf
net.bridge.bridge-nf-call-iptables = 1
net.bridge.bridge-nf-call-ip6tables = 1
net.ipv4.ip_forward = 1
EOF

# Apply sysctl params without reboot
sudo sysctl --system

## Install CRI-O Runtime
sudo apt-get update -y
sudo apt-get install -y software-properties-common curl apt-transport-https ca-certificates gpg

sudo curl -fsSL https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/cri-o-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/cri-o-apt-keyring.gpg] https://pkgs.k8s.io/addons:/cri-o:/prerelease:/main/deb/ /" | sudo tee /etc/apt/sources.list.d/cri-o.list

sudo apt-get update -y
sudo apt-get install -y cri-o

sudo systemctl daemon-reload
sudo systemctl enable crio --now
sudo systemctl start crio.service

echo "CRI runtime installed successfully"

# Add Kubernetes APT repository and install required packages
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.29/deb/Release.key | sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg

sudo apt-get update -y
sudo apt-get install -y kubelet="1.29.0-*" kubectl="1.29.0-*" kubeadm="1.29.0-*"
sudo apt-get update -y
sudo apt-get install -y jq

sudo systemctl enable --now kubelet
sudo systemctl start kubelet
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

PublicIPs: 18.234.239.80 PrivateIPs: 172.30.0.167

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2504 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [432 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [616 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1126 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [262 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.2 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1844 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [298 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2439 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [420 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [584 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [906 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [177 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.3 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 33.9 MB in 5s (6661 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-167:~$ sudo nano k8.sh
ubuntu@ip-172-30-0-167:~$
ubuntu@ip-172-30-0-167:~$ bash k8.sh
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

PublicIPs: 18.234.239.80 PrivateIPs: 172.30.0.167

aws | Services | [Alt+S] | ⋮ | ? | ? | ? | N. Virginia ▾ | Intellipaat-Swarpnil ▾

EC2 RDS IAM

System information as of Tue Sep 24 15:59:28 UTC 2024

```
System load: 0.0          Processes: 108
Usage of /: 23.7% of 7.57GB  Users logged in: 0
Memory usage: 3%           IPv4 address for eth0: 172.30.0.99
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

77 updates can be applied immediately.
43 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:48:06 2024 from 18.206.107.28
ubuntu@ip-172-30-0-99:~$ sudo apt update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Fetched 129 kB in 0s (364 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-99:~$
```

ubuntu@ip-172-30-0-99:~\$ sudo nano k8.sh
ubuntu@ip-172-30-0-99:~\$ sudo nano k8.sh
ubuntu@ip-172-30-0-99:~\$
ubuntu@ip-172-30-0-99:~\$
ubuntu@ip-172-30-0-99:~\$ bash k8.sh

i-0e4ea3a37c7ee3a74 (Swarnil-k8s-S1)
PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swainil

EC2 RDS IAM

```
Get:14 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2064 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [357 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.8 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2504 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [432 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [616 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1126 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [262 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.2 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:41 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:42 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Fetched 33.9 MB in 5s (6677 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano k8.sh
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ bash k8.sh[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

AWS | Services Search [Alt+S]

EC2 RDS IAM

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libjq1 libonig5
The following NEW packages will be installed:
  jq libjq1 libonig5
0 upgraded, 3 newly installed, 0 to remove and 73 not upgraded.
Need to get 357 kB of archives.
After this operation, 1087 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libonig5 amd64 6.9.7.1-2build1 [172 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjq1 amd64 1.6-2.1ubuntu3 [133 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 jq amd64 1.6-2.1ubuntu3 [52.5 kB]
Fetched 357 kB in 0s (14.3 MB/s)
Selecting previously unselected package libonig5:amd64.
(Reading database ... 65478 files and directories currently installed.)
Preparing to unpack .../libonig5_6.9.7.1-2build1_amd64.deb ...
Unpacking libonig5:amd64 (6.9.7.1-2build1) ...
Selecting previously unselected package libjq1:amd64.
Preparing to unpack .../libjq1_1.6-2.1ubuntu3_amd64.deb ...
Unpacking libjq1:amd64 (1.6-2.1ubuntu3) ...
Selecting previously unselected package jq.
Preparing to unpack .../jq_1.6-2.1ubuntu3_amd64.deb ...
Unpacking jq (1.6-2.1ubuntu3) ...
Setting up libonig5:amd64 (6.9.7.1-2build1) ...
Setting up libjq1:amd64 (1.6-2.1ubuntu3) ...
Setting up jq (1.6-2.1ubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-30-0-93:~$ 
ubuntu@ip-172-30-0-93:~$ 
ubuntu@ip-172-30-0-93:~$ sudo kubeadm config images pull|
```

i-02a8d34d62ed9284d (swapnil-k8s-Master)

PublicIPs: 34.229.91.166 PrivateIPs: 172.30.0.93

X

j-0aac4b945549b81f1 (Swannil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Scanning processes... [=====]
Scanning processes... [=====

Scanning linux images... [=====
Scanning linux images... [=====
Scanning linux images... [=====
Scanning linux images... [=====
Scanning linux images... [=====
Scanning linux images... [=====

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

ubuntu@ip-172-30-0-110:~$ sudo kubeadm config images pull
I0924 16:15:16.721528 4772 version.go:256] remote version is much newer: v1.31.0; falling back to: stable-1.29
[config/images] Pulled registry.k8s.io/kube-apiserver:v1.29.9
[config/images] Pulled registry.k8s.io/kube-controller-manager:v1.29.9
[config/images] Pulled registry.k8s.io/kube-scheduler:v1.29.9
[config/images] Pulled registry.k8s.io/kube-proxy:v1.29.9
[config/images] Pulled registry.k8s.io/coredns/coredns:v1.11.1
[config/images] Pulled registry.k8s.io/pause:3.9
[config/images] Pulled registry.k8s.io/etcd:3.5.10-0
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo kubeadm init
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

[kubelet-start] Starting the kubelet
[wait-control-plane] Waiting for the kubelet to boot up the control plane as static Pods from directory "/etc/kubernetes/manifests". This can take up to 4m0s
[apiclient] All control plane components are healthy after 6.002255 seconds
[upload-config] Storing the configuration used in ConfigMap "kubeadm-config" in the "kube-system" Namespace
[kubelet] Creating a ConfigMap "kubelet-config" in namespace kube-system with the configuration for the kubelets in the cluster
[upload-certs] Skipping phase. Please see --upload-certs
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the labels: [node-role.kubernetes.io/control-plane node.kubernetes.io/exclude-from-external-load-balancers]
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the taints [node-role.kubernetes.io/control-plane:NoSchedule]
[bootstrap-token] Using token: b0gcyr.bcvxvhxyggbkxwgp
[bootstrap-token] Configuring bootstrap tokens, cluster-info ConfigMap, RBAC Roles
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to get nodes
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to post CSRs in order for nodes to get long term certificate credentials
[bootstrap-token] Configured RBAC rules to allow the csapprover controller automatically approve CSRs from a Node Bootstrap Token
[bootstrap-token] Configured RBAC rules to allow certificate rotation for all node client certificates in the cluster
[bootstrap-token] Creating the "cluster-info" ConfigMap in the "kube-public" namespace
[kubelet-finalize] Updating "/etc/kubernetes/kubelet.conf" to point to a rotatable kubelet client certificate and key
[addons] Applied essential addon: CoreDNS
[addons] Applied essential addon: kube-proxy

Your Kubernetes control-plane has initialized successfully!

To start using your cluster, you need to run the following as a regular user:

```
mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

Alternatively, if you are the root user, you can run:

```
export KUBECONFIG=/etc/kubernetes/admin.conf
```

You should now deploy a pod network to the cluster.
Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:
<https://kubernetes.io/docs/concepts/cluster-administration/addons/>

Then you can join any number of worker nodes by running the following on each as root:

```
kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
--discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eeb39efd20
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | X | 🔔 | ⓘ | ⚙️ | N. Virginia | Intellipaat-Swarpnil

[apiclient] All control plane components are healthy after 6.002255 seconds
[upload-config] Storing the configuration used in ConfigMap "kubeadm-config" in the "kube-system" Namespace
[kubelet] Creating a ConfigMap "kubelet-config" in namespace kube-system with the configuration for the kubelets in the cluster
[upload-certs] Skipping phase. Please see --upload-certs
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the labels: [node-role.kubernetes.io/control-plane node.kubernetes.io/exclude-from-external-load-balancers]
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the taints [node-role.kubernetes.io/control-plane:NoSchedule]
[bootstrap-token] Using token: b0gcyr.bcvxvhxyggbkxwgp
[bootstrap-token] Configuring bootstrap tokens, cluster-info ConfigMap, RBAC Roles
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to get nodes
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to post CSRs in order for nodes to get long term certificate credentials
[bootstrap-token] Configured RBAC rules to allow the csapprover controller automatically approve CSRs from a Node Bootstrap Token
[bootstrap-token] Configured RBAC rules to allow certificate rotation for all node client certificates in the cluster
[bootstrap-token] Creating the "cluster-info" ConfigMap in the "kube-public" namespace
[kubelet-finalize] Updating "/etc/kubernetes/kubelet.conf" to point to a rotatable kubelet client certificate and key
[addons] Applied essential addon: CoreDNS
[addons] Applied essential addon: kube-proxy

Your Kubernetes control-plane has initialized successfully!

To start using your cluster, you need to run the following as a regular user:

```
mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

Alternatively, if you are the root user, you can run:

```
export KUBECONFIG=/etc/kubernetes/admin.conf
```

You should now deploy a pod network to the cluster.
Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:
<https://kubernetes.io/docs/concepts/cluster-administration/addons/>

Then you can join any number of worker nodes by running the following on each as root:

```
kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
--discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eeb39efd20
ubuntu@ip-172-30-0-110:~$ mkdir -p $HOME/.kube
ubuntu@ip-172-30-0-110:~$ sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
ubuntu@ip-172-30-0-110:~$ sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia ▾ | Intellipaat-Swapnil ▾

EC2 RDS IAM

```
[upload-config] Storing the configuration used in ConfigMap "kubeadm-config" in the "kube-system" Namespace
[kubelet] Creating a ConfigMap "kubelet-config" in namespace kube-system with the configuration for the kubelets in the cluster
[upload-certs] Skipping phase. Please see --upload-certs
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the labels: [node-role.kubernetes.io/control-plane node.kubernetes.io/exclude-from-external-load-balancers]
[mark-control-plane] Marking the node ip-172-30-0-110 as control-plane by adding the taints [node-role.kubernetes.io/control-plane:NoSchedule]
[bootstrap-token] Using token: b0gcyr.bcvxvhxyggbkxwgp
[bootstrap-token] Configuring bootstrap tokens, cluster-info ConfigMap, RBAC Roles
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to get nodes
[bootstrap-token] Configured RBAC rules to allow Node Bootstrap tokens to post CSRs in order for nodes to get long term certificate credentials
[bootstrap-token] Configured RBAC rules to allow the csraapprover controller automatically approve CSRs from a Node Bootstrap Token
[bootstrap-token] Configured RBAC rules to allow certificate rotation for all node client certificates in the cluster
[bootstrap-token] Creating the "cluster-info" ConfigMap in the "kube-public" namespace
[kubelet-finalize] Updating "/etc/kubernetes/kubelet.conf" to point to a rotatable kubelet client certificate and key
[addons] Applied essential addon: CoreDNS
[addons] Applied essential addon: kube-proxy

Your Kubernetes control-plane has initialized successfully!

To start using your cluster, you need to run the following as a regular user:

mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config

Alternatively, if you are the root user, you can run:

export KUBECONFIG=/etc/kubernetes/admin.conf

You should now deploy a pod network to the cluster.
Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:
https://kubernetes.io/docs/concepts/cluster-administration/addons/

Then you can join any number of worker nodes by running the following on each as root:

kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
--discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eeb39efd20
ubuntu@ip-172-30-0-110:~$ mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
ubuntu@ip-172-30-0-110:~$ kubectl apply -f https://raw.githubusercontent.com/projectcalico/calico/master/manifests/calico.yaml
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

The following additional packages will be installed:
libjq1 libonig5

The following NEW packages will be installed:
jq libjq1 libonig5

0 upgraded, 3 newly installed, 0 to remove and 73 not upgraded.
Need to get 357 kB of archives.
After this operation, 1087 kB of additional disk space will be used.

```
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libonig5 amd64 6.9.7.1-2build1 [172 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjq1 amd64 1.6-2.1ubuntu3 [133 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 jq amd64 1.6-2.1ubuntu3 [52.5 kB]
Fetched 357 kB in 0s (11.8 MB/s)
Selecting previously unselected package libonig5:amd64.
(Reading database ... 65478 files and directories currently installed.)
Preparing to unpack .../libonig5_6.9.7.1-2build1_amd64.deb ...
Unpacking libonig5:amd64 (6.9.7.1-2build1) ...
Selecting previously unselected package libjq1:amd64.
Preparing to unpack .../libjq1_1.6-2.1ubuntu3_amd64.deb ...
Unpacking libjq1:amd64 (1.6-2.1ubuntu3) ...
Selecting previously unselected package jq.
Preparing to unpack .../jq_1.6-2.1ubuntu3_amd64.deb ...
Unpacking jq (1.6-2.1ubuntu3) ...
Setting up libonig5:amd64 (6.9.7.1-2build1) ...
Setting up libjq1:amd64 (1.6-2.1ubuntu3) ...
Setting up jq (1.6-2.1ubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-30-0-99:~$ sudo kubeadm reset pre-flight checks[]
```

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

The following NEW packages will be installed:
jq libjq1 libonig5
0 upgraded, 3 newly installed, 0 to remove and 73 not upgraded.
Need to get 357 kB of archives.
After this operation, 1087 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libonig5 amd64 6.9.7.1-2build1 [172 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjq1 amd64 1.6-2.lubuntu3 [133 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 jq amd64 1.6-2.lubuntu3 [52.5 kB]
Fetched 357 kB in 0s (11.8 MB/s)
Selecting previously unselected package libonig5:amd64.
(Reading database ... 65478 files and directories currently installed.)
Preparing to unpack .../libonig5_6.9.7.1-2build1_amd64.deb ...
Unpacking libonig5:amd64 (6.9.7.1-2build1) ...
Selecting previously unselected package libjq1:amd64.
Preparing to unpack .../libjq1_1.6-2.lubuntu3_amd64.deb ...
Unpacking libjq1:amd64 (1.6-2.lubuntu3) ...
Selecting previously unselected package jq.
Preparing to unpack .../jq_1.6-2.lubuntu3_amd64.deb ...
Unpacking jq (1.6-2.lubuntu3) ...
Setting up libonig5:amd64 (6.9.7.1-2build1) ...
Setting up libjq1:amd64 (1.6-2.lubuntu3) ...
Setting up jq (1.6-2.lubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-30-0-99:~\$
ubuntu@ip-172-30-0-99:~\$ sudo kubeadm reset pre-flight checks
W0924 16:22:44.685955 5837 preflight.go:56] [reset] WARNING: Changes made to this host by 'kubeadm init' or 'kubeadm join' will be reverted.
[reset] Are you sure you want to proceed? [y/N]: y

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

j-0741ed1b57cdc364a (Swapnil-k8s-S2)

Public IPs: 18.234.239.80 Private IPs: 172.30.0.167

i-0741ed1b57cdc364a (Swannil-k8s-S2)

Public IPs: 18.234.239.80 Private IPs: 172.30.0.167

aws | Services | [Alt+S] | X | 🔍 | ⓘ | ⚙️ | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-30-0-99:~$ sudo kubeadm reset pre-flight checks
W0924 16:22:44.685955      5837 preflight.go:56] [reset] WARNING: Changes made to this host by 'kubeadm init' or 'kubeadm join' will be reverted.
[reset] Are you sure you want to proceed? [y/N]: y
[preflight] Running pre-flight checks
W0924 16:23:08.589834      5837 removeetcdmember.go:106] [reset] No kubeadm config, using etcd pod spec to get data directory
[reset] Deleted contents of the etcd data directory: /var/lib/etcd
[reset] Stopping the kubelet service
[reset] Unmounting mounted directories in "/var/lib/kubelet"
[reset] Deleting contents of directories: [/etc/kubernetes/manifests /var/lib/kubelet /etc/kubernetes/pki]
[reset] Deleting files: [/etc/kubernetes/admin.conf /etc/kubernetes/super-admin.conf /etc/kubernetes/kubelet.conf /etc/kubernetes/bootstrap-kubelet.conf /etc/kubernetes/controller-manager.conf /etc/kubernetes/scheduler.conf]

The reset process does not clean CNI configuration. To do so, you must remove /etc/cni/net.d

The reset process does not reset or clean up iptables rules or IPVS tables.
If you wish to reset iptables, you must do so manually by using the "iptables" command.

If your cluster was setup to utilize IPVS, run ipvsadm --clear (or similar)
to reset your system's IPVS tables.

The reset process does not clean your kubeconfig files and you must remove them manually.
Please, check the contents of the $HOME/.kube/config file.
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ 
ubuntu@ip-172-30-0-99:~$ sudo su[]
```

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Scanning linux images... [=====]
Scanning linux images... [=====
Scanning linux images... [=====
Scanning linux images... [=====

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-30-0-167:~$ sudo kubeadm reset pre-flight checks
W0924 16:24:58.501680    5198 preflight.go:56] [reset] WARNING: Changes made to this host by 'kubeadm init' or 'kubeadm join' will be reverted.
[reset] Are you sure you want to proceed? [y/N]: y
[preflight] Running pre-flight checks
W0924 16:25:20.159294    5198 removeetcdmember.go:106] [reset] No kubeadm config, using etcd pod spec to get data directory
[reset] Deleted contents of the etcd data directory: /var/lib/etcd
[reset] Stopping the kubelet service
[reset] Unmounting mounted directories in "/var/lib/kubelet"
[reset] Deleting contents of directories: [/etc/kubernetes/manifests /var/lib/kubelet /etc/kubernetes/pki]
[reset] Deleting files: [/etc/kubernetes/admin.conf /etc/kubernetes/super-admin.conf /etc/kubernetes/kubelet.conf /etc/kubernetes/bootstrap-kubelet.conf /etc/kubernetes/controller-manager.conf /etc/kubernetes/scheduler.conf]

The reset process does not clean CNI configuration. To do so, you must remove /etc/cni/net.d

The reset process does not reset or clean up iptables rules or IPVS tables.
If you wish to reset iptables, you must do so manually by using the "iptables" command.

If your cluster was setup to utilize IPVS, run ipvsadm --clear (or similar)
to reset your system's IPVS tables.

The reset process does not clean your kubeconfig files and you must remove them manually.
Please, check the contents of the $HOME/.kube/config file.
ubuntu@ip-172-30-0-167:~$ sudo su[]
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

Public IPs: 18.234.239.80 Private IPs: 172.30.0.167

aws | Services | Search [Alt+S] | N. Virginia ▾ | Intellipaat-Swarpnil ▾

EC2 RDS IAM

Your Kubernetes control-plane has initialized successfully!

To start using your cluster, you need to run the following as a regular user:

```
mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

Alternatively, if you are the root user, you can run:

```
export KUBECONFIG=/etc/kubernetes/admin.conf
```

You should now deploy a pod network to the cluster.
Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:
<https://kubernetes.io/docs/concepts/cluster-administration/addons/>

Then you can join any number of worker nodes by running the following on each as root:

```
kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
    --discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eeb39efd20
ubuntu@ip-172-30-0-110:~$ mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
ubuntu@ip-172-30-0-110:~$ kubectl apply -f https://raw.githubusercontent.com/projectcalico/calico/master/manifests/calico.yaml
poddisruptionbudget.policy/calico-kube-controllers created
serviceaccount/calico-kube-controllers created
serviceaccount/calico-node created
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apiextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgpfilters.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgppeers.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/blockaffinities.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/caliconodestatuses.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/clusterinformations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/felixconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/globalnetworkpolicies.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/globalnetworksets.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/hostendpoints.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamblocks.crd.projectcalico.org created
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

```
ubuntu@ip-172-30-0-99:~$ sudo kubeadm reset pre-flight checks
W0924 16:22:44.685955    5837 preflight.go:56] [reset] WARNING: Changes made to this host by 'kubeadm init' or 'kubeadm join' will be reverted.
[reset] Are you sure you want to proceed? [y/N]: y
[preflight] Running pre-flight checks
W0924 16:23:08.589834    5837 removeetcdmember.go:106] [reset] No kubeadm config, using etcd pod spec to get data directory
[reset] Deleted contents of the etcd data directory: /var/lib/etcd
[reset] Stopping the kubelet service
[reset] Unmounting mounted directories in "/var/lib/kubelet"
[reset] Deleting contents of directories: [/etc/kubernetes/manifests /var/lib/kubelet /etc/kubernetes/pki]
[reset] Deleting files: [/etc/kubernetes/admin.conf /etc/kubernetes/super-admin.conf /etc/kubernetes/kubelet.conf /etc/kubernetes/bootstrap-kubelet.conf /etc/kubernetes/controller-manager.conf /etc/kubernetes/scheduler.conf]
```

The reset process does not clean CNI configuration. To do so, you must remove /etc/cni/net.d

The reset process does not reset or clean up iptables rules or IPVS tables.
If you wish to reset iptables, you must do so manually by using the "iptables" command.

If your cluster was setup to utilize IPVS, run ipvsadm --clear (or similar)
to reset your system's IPVS tables.

The reset process does not clean your kubeconfig files and you must remove them manually.
Please, check the contents of the \$HOME/.kube/config file.

```
ubuntu@ip-172-30-0-99:~$ sudo su
root@ip-172-30-0-99:/home/ubuntu# kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
--discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eeb39efd20 --v=5
```

i-0e4ea3a37c7ee3a74 (Swapnil-k8s-S1)
PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.

```
ubuntu@ip-172-30-0-167:~$ sudo kubeadm reset pre-flight checks
W0924 16:24:58.501680    5198 preflight.go:56] [reset] WARNING: Changes made to this host by 'kubeadm init' or 'kubeadm join' will be reverted.
[reset] Are you sure you want to proceed? [y/N]: y
[preflight] Running pre-flight checks
W0924 16:25:20.159294    5198 removeetcdmember.go:106] [reset] No kubeadm config, using etcd pod spec to get data directory
[reset] Deleted contents of the etcd data directory: /var/lib/etcd
[reset] Stopping the kubelet service
[reset] Unmounting mounted directories in "/var/lib/kubelet"
[reset] Deleting contents of directories: [/etc/kubernetes/manifests /var/lib/kubelet /etc/kubernetes/pki]
[reset] Deleting files: [/etc/kubernetes/admin.conf /etc/kubernetes/super-admin.conf /etc/kubernetes/kubelet.conf /etc/kubernetes/bootstrap-kubelet.conf /etc/kubernetes/controller-manager.conf /etc/kubernetes/scheduler.conf]
```

The reset process does not clean CNI configuration. To do so, you must remove /etc/cni/net.d

The reset process does not reset or clean up iptables rules or IPVS tables.
If you wish to reset iptables, you must do so manually by using the "iptables" command.

If your cluster was setup to utilize IPVS, run ipvsadm --clear (or similar)
to reset your system's IPVS tables.

The reset process does not clean your kubeconfig files and you must remove them manually.
Please, check the contents of the \$HOME/.kube/config file.

```
ubuntu@ip-172-30-0-167:~$ sudo su
root@ip-172-30-0-167:/home/ubuntu# ^[[200~kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
>
kubeadm: command not found
root@ip-172-30-0-167:/home/ubuntu# kubeadm join 172.30.0.110:6443 --token b0gcyr.bcvxvhxyggbkxwgp \
--discovery-token-ca-cert-hash sha256:f3029d6286ebb4be75fa0259bbac11c7f59716107232f0b7a28ee0eef39efd20 --v=5
```

i-0741ed1b57cdc364a (Swapnil-k8s-S2)

Public IPs: 18.234.239.80 Private IPs: 172.30.0.167

AWS | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
poddisruptionbudget.policy/calico-kube-controllers created
serviceaccount/calico-kube-controllers created
serviceaccount/calico-node created
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apiextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgpfilters.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/bgppeers.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/blockaffinities.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/caliconodestatuses.crd.projectcalico.org created
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clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS    ROLES   AGE     VERSION
ip-172-30-0-110  Ready    control-plane  14m    v1.29.0
ip-172-30-0-167  Ready    <none>   56s    v1.29.0
ip-172-30-0-99   Ready    <none>   111s   v1.29.0
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ kubectl apply -f https://raw.githubusercontent.com/projectcalico/calico/master/manifests/calico.yaml
poddisruptionbudget.policy/calico-kube-controllers created
serviceaccount/calico-kube-controllers created
serviceaccount/calico-node created
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apiextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
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clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS   ROLES      AGE     VERSION
ip-172-30-0-110  Ready    control-plane  12m    v1.29.0
ip-172-30-0-56  Ready    <none>    109s   v1.29.0
ip-172-30-0-96  Ready    <none>    46s    v1.29.0
ubuntu@ip-172-30-0-110:~$ 
```

i-01a1361a1198e8e6e (Swannil-k8s-Master)

PublicIPs: 54.163.32.239 PrivateIPs: 172.30.0.110

aws | Services | [Alt+S] | ⋮ | ? | ? | ? | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apixextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
customresourcedefinition.apixextensions.k8s.io/bgpfilters.crd.projectcalico.org created
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daemonset.apps/calico-node created
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NAME      STATUS    ROLES   AGE     VERSION
ip-172-30-0-110  Ready    control-plane  14m    v1.29.0
ip-172-30-0-167  Ready    <none>   56s    v1.29.0
ip-172-30-0-99   Ready    <none>   111s   v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | X | 🔍 | ⓘ | ⚙️ | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
serviceaccount/calico-cni-plugin created
configmap/calico-config created
customresourcedefinition.apiextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
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clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME           STATUS    ROLES      AGE     VERSION
ip-172-30-0-110 Ready    control-plane   14m    v1.29.0
ip-172-30-0-167 Ready    <none>    56s    v1.29.0
ip-172-30-0-99  Ready    <none>    111s   v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$ sudo nano assign1.yaml[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: assignment1-deployment
  labels:
    app: nginx
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx
          ports:
            - containerPort: 80
```

Help Write Out Where Is Execute Location Undo New File Set Mark To Bracket Previous Back Prev Word
Exit Read File Replace Cut Justify Go To Line Redo Copy Where Was Next Forward Next Word

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
customresourcedefinition.apixextensions.k8s.io/bgpconfigurations.crd.projectcalico.org created
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clusterrole.rbac.authorization.k8s.io/calico-cni-plugin created
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS   ROLES      AGE     VERSION
ip-172-30-0-110  Ready    control-plane  14m    v1.29.0
ip-172-30-0-167  Ready    <none>    56s    v1.29.0
ip-172-30-0-99   Ready    <none>    111s   v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$ sudo nano assign1.yaml
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign1.yaml
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | [Alt+S] | ⋮ | ? | ? | ? | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
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clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS    ROLES      AGE      VERSION
ip-172-30-0-110  Ready    control-plane  14m      v1.29.0
ip-172-30-0-167  Ready    <none>     56s      v1.29.0
ip-172-30-0-99   Ready    <none>     111s     v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$ sudo nano assign1.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign1.yaml
deployment.apps/assignment1-deployment created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
customresourcedefinition.apiextensions.k8s.io/hostendpoints.crd.projectcalico.org created
customresourcedefinition.apiextensions.k8s.io/ipamblocks.crd.projectcalico.org created
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ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign1.yaml
deployment.apps/assignment1-deployment created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME        READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  3/3     3           3          60s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get pods
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

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customresourcedefinition.apiextensions.k8s.io/ipreservations.crd.projectcalico.org created
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clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS    ROLES      AGE      VERSION
ip-172-30-0-110  Ready    control-plane  14m     v1.29.0
ip-172-30-0-167  Ready    <none>    56s     v1.29.0
ip-172-30-0-99   Ready    <none>    111s    v1.29.0
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$ sudo nano assign1.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign1.yaml
deployment.apps/assignment1-deployment created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME      READY  UP-TO-DATE  AVAILABLE  AGE
assignment1-deployment  3/3    3           3          60s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get pods
NAME                  READY  STATUS    RESTARTS  AGE
assignment1-deployment-7c5ddbd54-dw9ms  1/1    Running  0          2m16s
assignment1-deployment-7c5ddbd54-n2tb8  1/1    Running  0          2m16s
assignment1-deployment-7c5ddbd54-rb2q8  1/1    Running  0          2m16s
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
customresourcedefinition.apiextensions.k8s.io/adminnetworkpolicies.policy.networking.k8s.io created
clusterrole.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrole.rbac.authorization.k8s.io/calico-node created
clusterrole.rbac.authorization.k8s.io/calico-cni-plugin created
clusterrolebinding.rbac.authorization.k8s.io/calico-kube-controllers created
clusterrolebinding.rbac.authorization.k8s.io/calico-node created
clusterrolebinding.rbac.authorization.k8s.io/calico-cni-plugin created
daemonset.apps/calico-node created
deployment.apps/calico-kube-controllers created
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS    ROLES     AGE      VERSION
ip-172-30-0-110  Ready    control-plane  14m    v1.29.0
ip-172-30-0-167  Ready    <none>    56s    v1.29.0
ip-172-30-0-99   Ready    <none>    111s   v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
No resources found in default namespace.
ubuntu@ip-172-30-0-110:~$ sudo nano assign1.yaml
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign1.yaml
deployment.apps/assignment1-deployment created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME        READY  UP-TO-DATE  AVAILABLE  AGE
assignment1-deployment  3/3     3           3          60s
ubuntu@ip-172-30-0-110:~$ kubectl get pods
NAME            READY  STATUS    RESTARTS  AGE
assignment1-deployment-7c5ddbd54-dw9ms  1/1    Running  0          2m16s
assignment1-deployment-7c5ddbd54-n2tb8   1/1    Running  0          2m16s
assignment1-deployment-7c5ddbd54-rb2q8   1/1    Running  0          2m16s
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME            READY  STATUS    RESTARTS  AGE   IP          NODE  NOMINATED NODE  READINESS GATES
assignment1-deployment-7c5ddbd54-dw9ms  1/1    Running  0          3m30s  192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8   1/1    Running  0          3m30s  192.168.2.193  ip-172-30-0-167  <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8   1/1    Running  0          3m30s  192.168.2.194  ip-172-30-0-167  <none>        <none>
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

Kubernetes Assignment-2

Module-9: Kubernetes Assignment - 2

You have been asked to:

- Use the previous deployment
 - Create a service of type NodePort for nginx deployment
 - Check the nodeport service on a browser to verify
-

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 17:05:10 UTC 2024

System load: 0.23      Processes: 146
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 11%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swannil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110



aws | Services | Search [Alt+S]

EC2 RDS IAM

GNU nano 6.2 assign2.yaml *

```
apiVersion: v1
kind: Service
metadata:
  name: my-service
spec:
  type: NodePort
  selector:
    app: nginx
  ports:
    - port: 80
      # By default and for convenience, the 'targetPort' is set to
      # the same value as the 'port' field.
      targetPort: 80
      # Optional field
      # By default and for convenience, the Kubernetes control plane
      # will allocate a port from a range (default: 30000-32767)
      nodePort: 30007
```

^G Help ^C Write Out ^W Where Is ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket M-Q Previous ^E Back ^P Prev Word
^X Exit ^R Read File ^\ Replace ^K Cut ^U Paste ^J Justify ^/ Go To Line M-E Redo M-G Copy ^Q Where Was M-W Next ^F Forward ^N Next Word

i-0aac4b945549b81f1 (Swapnil-k8s-Master) X

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 17:05:10 UTC 2024

System load: 0.23          Processes: 146
Usage of /: 49.7% of 7.57GB Users logged in: 0
Memory usage: 11%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ 
```

i-0aac4b945549b81f1 (Swannil-k8s-Master) X
PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 17:05:10 UTC 2024

System load: 0.23      Processes: 146
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 11%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
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Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ kubectl get svc
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master) X

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

* Documentation: <https://help.ubuntu.com>
* Management: <https://landscape.canonical.com>
* Support: <https://ubuntu.com/pro>

System information as of Tue Sep 24 17:05:10 UTC 2024

```
System load: 0.23      Processes: 146
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 11%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

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Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      54m
my-service  NodePort   10.97.231.117  <none>        80:30007/TCP  67s
ubuntu@ip-172-30-0-110:~$ 
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

```
I0924 16:30:06.323595 5872 token.go:80] [discovery] Created cluster-info discovery client, requesting info from "172.30.0.110:6443"
I0924 16:30:06.335024 5872 token.go:118] [discovery] Requesting info from "172.30.0.110:6443" again to validate TLS against the pinned public key
I0924 16:30:06.344947 5872 token.go:135] [discovery] Cluster info signature and contents are valid and TLS certificate validates against pinned roots, will use API Server "172.30.0.110:6443"
I0924 16:30:06.344965 5872 discovery.go:52] [discovery] Using provided TLSBootstrapToken as authentication credentials for the join process
I0924 16:30:06.344984 5872 join.go:546] [preflight] Fetching init configuration
I0924 16:30:06.344993 5872 join.go:592] [preflight] Retrieving KubeConfig objects
[preflight] Reading configuration from the cluster...
[preflight] FYI: You can look at this config file with 'kubectl -n kube-system get cm kubeadm-config -o yaml'
I0924 16:30:06.354054 5872 kubeproxy.go:55] attempting to download the KubeProxyConfiguration from ConfigMap "kube-proxy"
I0924 16:30:06.358070 5872 kubelet.go:74] attempting to download the KubeletConfiguration from ConfigMap "kubelet-config"
I0924 16:30:06.362184 5872 initconfiguration.go:114] skip CRI socket detection, fill with the default CRI socket unix:///var/run/containerd/containerd.sock
I0924 16:30:06.362339 5872 interface.go:432] Looking for default routes with IPv4 addresses
I0924 16:30:06.362352 5872 interface.go:437] Default route transits interface "eth0"
I0924 16:30:06.362411 5872 interface.go:209] Interface eth0 is up
I0924 16:30:06.362461 5872 interface.go:257] Interface "eth0" has 2 addresses :[172.30.0.99/24 fe80::8ff:ffff:fe06:6365/64].
I0924 16:30:06.362473 5872 interface.go:224] Checking addr 172.30.0.99/24.
I0924 16:30:06.362480 5872 interface.go:231] IP found 172.30.0.99
I0924 16:30:06.362487 5872 interface.go:263] Found valid IPv4 address 172.30.0.99 for interface "eth0".
I0924 16:30:06.362492 5872 interface.go:443] Found active IP 172.30.0.99
I0924 16:30:06.365881 5872 preflight.go:104] [preflight] Running configuration dependant checks
I0924 16:30:06.365895 5872 controlplaneprepare.go:225] [download-certs] Skipping certs download
I0924 16:30:06.365902 5872 kubelet.go:121] [kubelet-start] writing bootstrap kubelet config file at /etc/kubernetes/bootstrap-kubelet.conf
I0924 16:30:06.366323 5872 kubelet.go:136] [kubelet-start] writing CA certificate at /etc/kubernetes/pki/ca.crt
I0924 16:30:06.366753 5872 kubelet.go:157] [kubelet-start] Checking for an existing Node in the cluster with name "ip-172-30-0-99" and status "Ready"
I0924 16:30:06.369596 5872 kubelet.go:172] [kubelet-start] Stopping the kubelet
[kubelet-start] Writing kubelet configuration to file "/var/lib/kubelet/config.yaml"
[kubelet-start] Writing kubelet environment file with flags to file "/var/lib/kubelet/kubeadm-flags.env"
[kubelet-start] Starting the kubelet
[kubelet-start] Waiting for the kubelet to perform the TLS Bootstrap...
I0924 16:30:07.595358 5872 cert_rotation.go:137] Starting client certificate rotation controller
I0924 16:30:07.595398 5872 kubelet.go:220] [kubelet-start] preserving the criosocket information for the node
I0924 16:30:07.595410 5872 patchnode.go:31] [patchnode] Uploading the CRI Socket information "unix:///var/run/crio/crio.sock" to the Node API object "ip-172-30-0-99" as an annotation

This node has joined the cluster:
* Certificate signing request was sent to apiserver and a response was received.
* The Kubelet was informed of the new secure connection details.

Run 'kubectl get nodes' on the control-plane to see this node join the cluster.
```

root@ip-172-30-0-99:/home/ubuntu#

i-0e4ea3a37c7ee3a74 (Swannil-k8s-S1)

PublicIPs: 54.226.114.3 PrivateIPs: 172.30.0.99

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Kubernetes Assignment-3

Module-9: Kubernetes Assignment - 3

You have been asked to:

- Use the previous deployment
 - Change the replicas to 5 for the deployment
-

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

* Support: <https://ubuntu.com/pro>

System information as of Tue Sep 24 17:05:10 UTC 2024

```
System load: 0.23      Processes: 146
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 11%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      54m
my-service  NodePort   10.97.231.117  <none>        80:30007/TCP  67s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get po
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

Usage of /: 49.7% of 7.57GB Users logged in: 0
Memory usage: 11% IPv4 address for eth0: 172.30.0.110
Swap usage: 0%

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP      54m
my-service   NodePort    10.97.231.117  <none>        80:30007/TCP  67s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get po
NAME                  READY   STATUS    RESTARTS   AGE
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
81 updates can be applied immediately.  
41 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
New release '24.04.1 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml  
service/my-service created  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get svc  
NAME      TYPE      CLUSTER-IP     EXTERNAL-IP    PORT(S)      AGE  
kubernetes   ClusterIP  10.96.0.1    <none>        443/TCP    54m  
my-service   NodePort   10.97.231.117  <none>        80:30007/TCP 67s  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get po  
NAME          READY   STATUS    RESTARTS   AGE  
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m  
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m  
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m  
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide  
NAME          READY   STATUS    RESTARTS   AGE   IP           NODE   NOMINATED-NODE   READINESS   GATES  
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m  192.168.87.129  ip-172-30-0-99  <none>       <none>  
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m  192.168.2.193  ip-172-30-0-167 <none>       <none>  
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m  192.168.2.194  ip-172-30-0-167 <none>       <none>  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get deploy[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services [Alt+S] | ... | N. Virginia ▾ | Intellipaat-Swannil ▾

EC2 RDS IAM

See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 15:49:02 2024 from 18.206.107.29
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP    10.96.0.1    <none>        443/TCP     54m
my-service   NodePort    10.97.231.117  <none>        80:30007/TCP 67s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get po
NAME            READY   STATUS    RESTARTS   AGE
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME            READY   STATUS    RESTARTS   AGE   IP           NODE   NOMINATED-NODE   READINESS   GATES
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m  192.168.87.129  ip-172-30-0-99  <none>       <none>
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m  192.168.2.193  ip-172-30-0-167 <none>       <none>
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m  192.168.2.194  ip-172-30-0-167 <none>       <none>
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME            READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  3/3     3           3           34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy[]
```

i-0aac4b945549b81f1 (Swannil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
# Please edit the object below. Lines beginning with a '#' will be ignored,
# and an empty file will abort the edit. If an error occurs while saving this file will be
# reopened with the relevant failures.
#
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1"
    kubectl.kubernetes.io/last-applied-configuration: |
      {"apiVersion": "apps/v1", "kind": "Deployment", "metadata": {"annotations": {}, "labels": {"app": "nginx"}, "name": "assignment1-deployment", "namespace": "default"}, "spec": {"replicas": 3, "selector": {"matchLabels": {"app": "nginx"}}, "template": {"metadata": {"labels": {"app": "nginx"}}, "spec": {"containers": [{"image": "nginx", "name": "nginx", "ports": [{"containerPort": 80}]}]}}}}
  creationTimestamp: "2024-09-24T16:50:16Z"
  generation: 1
  labels:
    app: nginx
  name: assignment1-deployment
  namespace: default
  resourceVersion: "3498"
  uid: 40510ed5-5a27-45d3-afb1-03056e55b161
spec:
  progressDeadlineSeconds: 600
  replicas: 5
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: nginx
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: nginx
    spec:
      containers:
```

-- INSERT -- 22,14 Top

i-0aac4b945549b81f1 (Swapnil-k8s-Master) X

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
creationTimestamp: null
labels:
  app: nginx
spec:
  containers:
  - image: nginx
    imagePullPolicy: Always
    name: nginx
    ports:
    - containerPort: 80
      protocol: TCP
    resources: {}
    terminationMessagePath: /dev/termination-log
    terminationMessagePolicy: File
  dnsPolicy: ClusterFirst
  restartPolicy: Always
  schedulerName: default-scheduler
  securityContext: {}
  terminationGracePeriodSeconds: 30
status:
  availableReplicas: 3
  conditions:
  - lastTransitionTime: "2024-08-29T17:27:23Z"
    lastUpdateTime: "2024-08-29T17:27:23Z"
    message: Deployment has minimum availability.
    reason: MinimumReplicasAvailable
    status: "True"
    type: Available
  - lastTransitionTime: "2024-08-29T17:27:17Z"
    lastUpdateTime: "2024-08-29T17:27:23Z"
    message: ReplicaSet "assignment1-deployment-7c5ddbd54" has successfully progressed.
    reason: NewReplicaSetAvailable
    status: "True"
    type: Progressing
  observedGeneration: 1
  readyReplicas: 3
  replicas: 3
  updatedReplicas: 3
```

:wq

i-01a1361a1198e8e6e (Swapnil-k8s-Master)

Public IPs: 54.163.32.239 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ sudo nano assign2.yaml  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml  
service/my-service created  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get svc  
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE  
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      54m  
my-service  NodePort   10.97.231.117  <none>        80:30007/TCP  67s  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get po  
NAME          READY  STATUS      RESTARTS  AGE  
assignment1-deployment-7c5ddbd54-dw9ms  1/1   Running    0          33m  
assignment1-deployment-7c5ddbd54-n2tb8  1/1   Running    0          33m  
assignment1-deployment-7c5ddbd54-rb2q8  1/1   Running    0          33m  
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide  
NAME          READY  STATUS      RESTARTS  AGE     IP           NODE      NOMINATED NODE  READINESS GATES  
assignment1-deployment-7c5ddbd54-dw9ms  1/1   Running    0          33m  192.168.87.129  ip-172-30-0-99  <none>        <none>  
assignment1-deployment-7c5ddbd54-n2tb8  1/1   Running    0          33m  192.168.2.193  ip-172-30-0-167 <none>        <none>  
assignment1-deployment-7c5ddbd54-rb2q8  1/1   Running    0          33m  192.168.2.194  ip-172-30-0-167 <none>        <none>  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get deploy  
NAME          READY  UP-TO-DATE  AVAILABLE  AGE  
assignment1-deployment  3/3    3          3          34m  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy  
[1]+  Stopped                  kubectl edit deploy  
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy  
deployment.apps/assignment1-deployment edited  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ kubectl apply -f assign2.yaml
service/my-service created
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      54m
my-service  NodePort   10.97.231.117  <none>        80:30007/TCP  67s
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get po
NAME          READY   STATUS    RESTARTS   AGE
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME          READY   STATUS    RESTARTS   AGE   IP           NODE      NOMINATED NODE   READINESS GATES
assignment1-deployment-7c5ddbd54-dw9ms  1/1     Running   0          33m  192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8   1/1     Running   0          33m  192.168.2.193  ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8   1/1     Running   0          33m  192.168.2.194  ip-172-30-0-167 <none>        <none>
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  3/3      3           3          34m
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
[1]+  Stopped                  kubectl edit deploy
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
deployment.apps/assignment1-deployment edited
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  5/5      5           5          40m
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

Kubernetes Assignment-4

Tasks To Be Performed:

1. Use the previous deployment
2. Change the service type to ClusterIP

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME                               READY   STATUS    RESTARTS   AGE     IP           NODE      NOMINATED NODE  READINESS GATES
assignment1-deployment-7c5ddbf54-dw9ms  1/1    Running   0          33m    192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbf54-n2tb8   1/1    Running   0          33m    192.168.2.193   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbf54-rb2q8   1/1    Running   0          33m    192.168.2.194   ip-172-30-0-167 <none>        <none>
ubuntu@ip-172-30-0-110:~$
```

```
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  3/3     3            3           34m
```

```
ubuntu@ip-172-30-0-110:~$
```

```
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
[1]+  Stopped                  kubectl edit deploy
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
deployment.apps/assignment1-deployment edited
ubuntu@ip-172-30-0-110:~$
```

```
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment  5/5     5            5           40m
```

```
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME                               READY   STATUS    RESTARTS   AGE     IP           NODE      NOMINATED NODE  READINESS GATES
assignment1-deployment-7c5ddbf54-dw9ms  1/1    Running   0          40m    192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbf54-n2tb8   1/1    Running   0          40m    192.168.2.193   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbf54-nhtf5   1/1    Running   0          2m30s  192.168.87.131  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbf54-rb2q8   1/1    Running   0          40m    192.168.2.194   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbf54-zzbzdz  1/1    Running   0          2m30s  192.168.87.130  ip-172-30-0-99  <none>        <none>
ubuntu@ip-172-30-0-110:~$
```

```
ubuntu@ip-172-30-0-110:~$
```

```
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      77m
my-service  NodePort  10.97.231.117  <none>        80:30007/TCP  23m
```

```
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

EC2 RDS IAM

```
assignment1-deployment-7c5ddbd54-n2tb8 1/1 Running 0 33m 192.168.2.193 ip-172-30-0-167 <none> <none>
assignment1-deployment-7c5ddbd54-rb2q8 1/1 Running 0 33m 192.168.2.194 ip-172-30-0-167 <none> <none>
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME READY UP-TO-DATE AVAILABLE AGE
assignment1-deployment 3/3 3 3 34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
[1]+ Stopped                  kubectl edit deploy
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy
deployment.apps/assignment1-deployment edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME READY UP-TO-DATE AVAILABLE AGE
assignment1-deployment 5/5 5 5 40m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GATES
assignment1-deployment-7c5ddbd54-dw9ms 1/1 Running 0 40m 192.168.87.129 ip-172-30-0-99 <none> <none>
assignment1-deployment-7c5ddbd54-n2tb8 1/1 Running 0 40m 192.168.2.193 ip-172-30-0-167 <none> <none>
assignment1-deployment-7c5ddbd54-nhtf5 1/1 Running 0 2m30s 192.168.87.131 ip-172-30-0-99 <none> <none>
assignment1-deployment-7c5ddbd54-rb2q8 1/1 Running 0 40m 192.168.2.194 ip-172-30-0-167 <none> <none>
assignment1-deployment-7c5ddbd54-zzbzdz 1/1 Running 0 2m30s 192.168.87.130 ip-172-30-0-99 <none> <none>
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 77m
my-service NodePort 10.97.231.117 <none> 80:30007/TCP 23m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl edit svc[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | X | ! | ? | ⚙️ | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

```
targetPort: 6443
sessionAffinity: None
type: ClusterIP
status:
loadBalancer: {}
apiVersion: v1
kind: Service
metadata:
annotations:
  kubectl.kubernetes.io/last-applied-configuration: |
    {"apiVersion": "v1", "kind": "Service", "metadata": {"annotations": {}, "name": "my-service", "namespace": "default"}, "spec": {"ports": [{"nodePort": 30007, "port": 80, "targetPort": 80}], "selector": {"app": "nginx"}, "type": "NodePort"}}
creationTimestamp: "2024-09-24T17:11:25Z"
name: my-service
namespace: default
resourceVersion: "5400"
uid: f8a83f0f-798a-4322-8ece-d5b4c00c5543
spec:
clusterIP: 10.97.231.117
clusterIPs:
- 10.97.231.117
externalTrafficPolicy: Cluster
internalTrafficPolicy: Cluster
ipFamilies:
- IPv4
ipFamilyPolicy: SingleStack
ports:
- nodePort: 30007
  port: 80
  protocol: TCP
  targetPort: null
  selector:
    app: nginx
  sessionAffinity: None
  type: ClusterIP
status:
loadBalancer: {}
kind: List
metadata: {}
:wg[]
```

i-0aac4b945549b81f1 (Swannil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110



AWS | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swannil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ kubectl edit deploy deployment.apps/assignment1-deployment edited
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment   5/5      5           5           40m
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME                               READY   STATUS    RESTARTS   AGE     IP           NODE   NOMINATED-NODE   READINESS   GATES
assignment1-deployment-7c5ddbd54-dw9ms   1/1    Running   0          40m    192.168.87.129   ip-172-30-0-99   <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8   1/1    Running   0          40m    192.168.2.193   ip-172-30-0-167  <none>        <none>
assignment1-deployment-7c5ddbd54-nhtf5   1/1    Running   0          2m30s  192.168.87.131  ip-172-30-0-99   <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8   1/1    Running   0          40m    192.168.2.194   ip-172-30-0-167  <none>        <none>
assignment1-deployment-7c5ddbd54-zzbzdz  1/1    Running   0          2m30s  192.168.87.130  ip-172-30-0-99   <none>        <none>
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      77m
my-service  NodePort  10.97.231.117  <none>        80:30007/TCP  23m
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      88m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP       34m
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swannil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110



This site can't be reached

54.226.114.3 refused to connect.

Try:

- Checking the connection
- Checking the proxy and the firewall

ERR_CONNECTION_REFUSED

Reload

Details

Kubernetes Assignment-5

Module-9: Kubernetes Assignment - 5

You have been asked to:

- Use the previous deployment
 - Deploy an nginx deployment of 3 replicas
 - Create an nginx service of type clusterip
 - Create an ingress service /apache to apache service /nginx to nginx service
-

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

EC2 Instances Launch an instance

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name Add additional tags

Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Li

ubuntu® Microsoft Red Hat SUSE Li

Browse more AMIs Including AMIs from AWS, Marketplace and the Community

Summary

Number of instances Info 1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0a0e5d9c7acc336f1

Virtual server type (instance type)
t2.medium

Firewall (security group)
default

Storage (volumes)
1 volume(s) - 8 GiB

i Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance Review commands

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

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EC2 | RDS | IAM

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
ami-0a0e5d9c7acc336f1 (64-bit (x86)) / ami-070f589e4b4a3fce (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Instance type [Info](#) | [Get advice](#)

Instance type: t2.medium

Family: t2 2 vCPU 4 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0464 USD per Hour
On-Demand RHEL base pricing: 0.0752 USD per Hour
On-Demand Windows base pricing: 0.0644 USD per Hour
On-Demand SUSE base pricing: 0.1464 USD per Hour

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required: Swapnil

Network settings [Info](#)

Edit

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 22.04 LTS, ... [read more](#)
ami-0a0e5d9c7acc336f1

Virtual server type (instance type): t2.medium

Firewall (security group): default

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Review commands

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

Network settings Info Edit

Network | Info
vpc-020050eeb89f650ee | Default VPC

Subnet | Info
subnet-0df06ea348102a8f5

Auto-assign public IP | Info
Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) | Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Common security groups Info
Select security groups ▾

default sg-00d146a653d3de0ea X
VPC: vpc-020050eeb89f650ee

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage Info Advanced

1x 8 GiB gp2 Root volume (Encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage X

Summary

Number of instances | Info
1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more ami-0a0e5d9c7acc336f1

Virtual server type (instance type)
t2.medium

Firewall (security group)
default

Storage (volumes)
1 volume(s) - 8 GiB

i Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet. X

Cancel Launch instance Review commands

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AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

Create security group Select existing security group

Common security groups Info

Select security groups

default sg-00d146a653d3de0ea X VPC: vpc-020050eeb89f650ee

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage Info Advanced

1x 8 GiB gp2 Root volume (Encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems Edit

Advanced details Info

Summary

Number of instances Info 1

Software Image (AMI) Canonical, Ubuntu, 22.04 LTS, ...read more ami-0a0e5d9c7acc336f1

Virtual server type (instance type) t2.medium

Firewall (security group) default

Storage (volumes) 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance Review commands

This screenshot shows the AWS EC2 instance creation process. It begins with a 'Configure storage' section where a single 8 GiB gp2 volume is selected as the root volume. A note indicates that only the first 0 instance store volumes from the AMI will be accessible. Below this, a message about free tier storage is displayed. The 'Summary' section provides an overview of the instance configuration, including the number of instances (1), the software image (Canonical, Ubuntu, 22.04 LTS), the virtual server type (t2.medium), the firewall (default security group), and storage (1 volume - 8 GiB). A detailed note about the free tier benefits is shown. Finally, the 'Launch instance' button is prominently displayed at the bottom right.

AWS Services Search [Alt+S] N. Virginia Intellipaat-Swapnil

EC2 RDS IAM

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations New Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security Security Groups Elastic IPs IMDSv2

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive) All states

Instances (1/4) Info

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... |
|--------------------|---------------------|----------------|---------------|-------------------|---------------|-------------------|-------------------------|-----------------|
| minikube | i-02c913fde14938578 | Running | t2.medium | Initializing | View alarms + | us-east-1d | ec2-34-203-236-46.co... | 34.203.236.46 |
| Swapnil-k8s-Master | i-0aac4b945549b81f1 | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-3-88-114-10.comp... | 3.88.114.10 |
| Swapnil-k8s-S1 | i-0e4ea3a37c7ee3a74 | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-54-226-114-3.com... | 54.226.114.3 |
| Swapnil-k8s-S2 | i-0741ed1b57cdc364a | Running | t2.large | 2/2 checks passed | View alarms + | us-east-1a | ec2-18-234-239-80.co... | 18.234.239.80 |

i-02c913fde14938578 (minikube)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

| | | |
|---------------------------------------|-------------------------------------|---|
| Instance ID | Public IPv4 address | Private IPv4 addresses |
| i-02c913fde14938578 (minikube) | 34.203.236.46 open address | 172.30.3.161 |
| IPv6 address | Instance state | Public IPv4 DNS |
| - | Running | ec2-34-203-236-46.compute-1.amazonaws.com open address |
| Hostname type | Private IP DNS name (IPv4 only) | Elastic IP addresses |
| IP name: ip-172-30-3-161.ec2.internal | ip-172-30-3-161.ec2.internal | - |
| Answer private resource DNS name | Instance type | AWS Compute Optimizer finding |
| - | t2.medium | Opt-in to AWS Compute Optimizer for recommendations. Learn more |
| Auto-assigned IP address | VPC ID | Auto Scaling Group name |
| 34.203.236.46 [Public IP] | vpc-020050eeb89f650ee (Default VPC) | - |
| IAM Role | Subnet ID | |
| - | subnet-0df06ea348102a8f5 | |
| IMDSv2 | Instance ARN | |

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AWS Services Search [Alt+S] EC2 RDS IAM N. Virginia Intellipaat-Swapnil

EC2 Instances i-02c913fde14938578 Connect to instance

Connect to instance Info

Connect to your instance i-02c913fde14938578 (minikube) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

All ports are open to all IPv4 addresses in your security group
All ports are currently open to all IPv4 addresses, indicated by All and 0.0.0.0/0 in the inbound rule in [your security group](#). For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. [Learn more](#).

Instance ID [i-02c913fde14938578 \(minikube\)](#)

Connection Type

Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.

Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IPv4 address [34.203.236.46](#)

IPv6 address

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.

Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 17:58:48 UTC 2024

System load: 0.36      Processes: 114
Usage of /: 20.7% of 7.57GB  Users logged in: 0
Memory usage: 6%          IPv4 address for eth0: 172.30.3.161
Swap usage: 0%           Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

```
ubuntu@ip-172-30-3-161:~$ sudo apt update -y
```

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161



aws | Services Search [Alt+S] N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [290 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.2 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2308 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1987 kB]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [398 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [572 B]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [890 kB]
Get:19 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [175 kB]
Get:20 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.0 kB]
Get:21 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:22 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:23 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [349 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.8 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2384 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [410 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [604 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1112 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [260 kB]
Get:31 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.0 kB]
Get:32 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:33 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:34 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:35 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:36 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:37 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:38 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:39 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:40 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:41 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:42 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Fetched 33.4 MB in 4s (8605 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
44 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-0-123:~$ 
ubuntu@ip-172-30-0-123:~$ 
ubuntu@ip-172-30-0-123:~$ sudo nano a.sh |
```

i-062b6bb2ac6128d31 (minikube)

PublicIPs: 3.89.243.160 PrivateIPs: 172.30.0.123

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
sudo apt update
sudo apt install docker.io
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube_latest_amd64.deb
sudo dpkg -i minikube_latest_amd64.deb
sudo chmod 777 /var/run/docker.sock
minikube start
```

^G Help ^C Write Out ^W Where Is ^R Cut ^T Execute ^C Location M-U Undo New File M-A Set Mark M-) To Bracket M-Q Previous ^B Back ^A Prev Word ^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-G Copy ^Q Where Was M-W Next ^F Forward ^P Next Word ^E

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.8 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2504 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [432 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [616 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1126 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [262 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.2 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [43.3 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.8 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [444 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.8 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.8 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1844 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [298 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2439 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [420 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [584 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [906 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [177 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.3 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 33.9 MB in 4s (8796 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-3-161:~$ sudo nano a.sh
ubuntu@ip-172-30-3-161:~$ bash a.sh
```

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [420 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [584 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [906 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [177 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.3 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 33.9 MB in 4s (8796 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-30-3-161:~$ 
ubuntu@ip-172-30-3-161:~$ sudo nano a.sh
ubuntu@ip-172-30-3-161:~$ 
ubuntu@ip-172-30-3-161:~$ bash a.sh
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Fetched 128 kB in 0s (300 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
72 packages can be upgraded. Run 'apt list --upgradable' to see them.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 72 not upgraded.
Need to get 75.5 MB of archives.
After this operation, 284 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161

aws | Services | [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
Preparing to unpack minikube_latest_amd64.deb ...
Unpacking minikube (1.34.0-0) ...
Setting up minikube (1.34.0-0) ...
Error: unknown command "star" for "minikube"

Did you mean this?
  start
  stop

Run 'minikube --help' for usage.
ubuntu@ip-172-30-3-161:~$ start
Command 'start' not found, did you mean:
  command 'stars' from snap stars (2.7jrc3)
  command 'rstart' from deb x11-session-utils (7.7+4build2)
  command 'kstart' from deb kde-cli-tools (4:5.24.4-0ubuntu1)
  command 'tart' from deb tart (3.10-1build1)
  command 'stat' from deb coreutils (8.32-4.lubuntu1.2)
  command 'startx' from deb xinit (1.4.1-0ubuntu4)
See 'snap info <snapname>' for additional versions.
ubuntu@ip-172-30-3-161:~$ minikube status
* Profile "minikube" not found. Run "minikube profile list" to view all profiles.
  To start a cluster, run: "minikube start"
ubuntu@ip-172-30-3-161:~$ minikube start
* minikube v1.34.0 on Ubuntu 22.04 (xen/amd64)
* Automatically selected the docker driver. Other choices: ssh, none
* Using Docker driver with root privileges
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.45...
* Downloading Kubernetes v1.31.0 preload...
  > preloaded-images-k8s-v18-v1...: 326.69 MiB / 326.69 MiB 100.00% 55.56 M
  > gcr.io/k8s-minikube/kicbase...: 487.89 MiB / 487.90 MiB 100.00% 60.61 M
* Creating docker container (CPUs=2, Memory=2200MB)...
* Preparing Kubernetes v1.31.0 on Docker 27.2.0...
- Generating certificates and keys...
- Booting up control plane...
- Configuring RBAC rules...
* Configuring bridge CNI (Container Networking Interface)...
* Verifying Kubernetes components...
- Using image gcr.io/k8s-minikube/storage-provisioner:v5
```

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161

aws | Services | Search [Alt+S] | X | ! | ? | ⚙️ | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
command 'rstart' from deb x11-session-utils (7.7+4build2)
command 'kstart' from deb kde-clients (4:5.24.4-0ubuntu1)
command 'tart' from deb tart (3.10-1build1)
command 'stat' from deb coreutils (8.32-4.lubuntu1.2)
command 'startx' from deb xinit (1.4.1-0ubuntu4)
See 'snap info <snapname>' for additional versions.
ubuntu@ip-172-30-3-161:~$ minikube status
* Profile "minikube" not found. Run "minikube profile list" to view all profiles.
  To start a cluster, run: "minikube start"
ubuntu@ip-172-30-3-161:~$ minikube start
* minikube v1.34.0 on Ubuntu 22.04 (xen/amd64)
* Automatically selected the docker driver. Other choices: ssh, none
* Using Docker driver with root privileges
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.45 ...
* Downloading Kubernetes v1.31.0 preload ...
  > preloaded-images-k8s-v18-v1...: 326.69 MiB / 326.69 MiB 100.00% 55.56 M
  > gcr.io/k8s-minikube/kicbase...: 487.89 MiB / 487.90 MiB 100.00% 60.61 M
* Creating docker container (CPUs=2, Memory=2200MB) ...
* Preparing Kubernetes v1.31.0 on Docker 27.2.0 ...
- Generating certificates and keys ...
- Booting up control plane ...
- Configuring RBAC rules ...
* Configuring bridge CNI (Container Networking Interface) ...
* Verifying Kubernetes components...
- Using image gcr.io/k8s-minikube/storage-provisioner:v5
* Enabled addons: default-storageclass, storage-provisioner
* kubectl not found. If you need it, try: 'minikube kubectl -- get pods -A'
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
ubuntu@ip-172-30-3-161:~$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured
ubuntu@ip-172-30-3-161:~$
```

i-02c913fde14938578 (minikube)

PublicIPs: 34.203.236.46 PrivateIPs: 172.30.3.161

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME           READY   UP-TO-DATE   AVAILABLE   AGE
assignment1-deployment   5/5      5          5          40m
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl get pods -o wide
NAME                           READY   STATUS    RESTARTS   AGE     IP           NODE   NOMINATED-NODE   READINESS   GATES
assignment1-deployment-7c5ddbd54-dw9ms   1/1    Running   0          40m    192.168.87.129   ip-172-30-0-99   <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8    1/1    Running   0          40m    192.168.2.193    ip-172-30-0-167  <none>        <none>
assignment1-deployment-7c5ddbd54-nhtf5    1/1    Running   0          2m30s   192.168.87.131   ip-172-30-0-99   <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8    1/1    Running   0          40m    192.168.2.194    ip-172-30-0-167  <none>        <none>
assignment1-deployment-7c5ddbd54-zzbzdz   1/1    Running   0          2m30s   192.168.87.130    ip-172-30-0-99   <none>        <none>
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      77m
my-service  NodePort  10.97.231.117  <none>        80:30007/TCP  23m
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP      88m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP       34m
ubuntu@ip-172-30-0-110:~$ ubuntu@ip-172-30-0-110:~$ kubectl get no
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
NAME          READY   STATUS    RESTARTS   AGE     IP           NODE      NOMINATED NODE  READINESS GATES
assignment1-deployment-7c5ddbd54-dw9ms  1/1    Running   0          40m    192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8  1/1    Running   0          40m    192.168.2.193   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbd54-nhtf5  1/1    Running   0          2m30s  192.168.87.131  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8  1/1    Running   0          40m    192.168.2.194   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbd54-zzbzdz  1/1    Running   0          2m30s  192.168.87.130   ip-172-30-0-99  <none>        <none>

ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      77m
my-service  NodePort  10.97.231.117  <none>        80:30007/TCP  23m

ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      88m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP       34m

ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS  ROLES      AGE      VERSION
ip-172-30-0-110  Ready   control-plane  116m   v1.29.0
ip-172-30-0-167  Ready   <none>      103m   v1.29.0
ip-172-30-0-99   Ready   <none>      104m   v1.29.0

ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ 
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
NAME          READY   STATUS    RESTARTS   AGE     IP           NODE      NOMINATED NODE  READINESS GATES
assignment1-deployment-7c5ddbd54-dw9ms  1/1    Running   0          40m    192.168.87.129  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-n2tb8  1/1    Running   0          40m    192.168.2.193   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbd54-nhtf5  1/1    Running   0          2m30s  192.168.87.131  ip-172-30-0-99  <none>        <none>
assignment1-deployment-7c5ddbd54-rb2q8  1/1    Running   0          40m    192.168.2.194   ip-172-30-0-167 <none>        <none>
assignment1-deployment-7c5ddbd54-zzbzdz  1/1    Running   0          2m30s  192.168.87.130   ip-172-30-0-99  <none>        <none>

ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      77m
my-service  NodePort  10.97.231.117  <none>        80:30007/TCP  23m

ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1      <none>        443/TCP      88m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP       34m

ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME        STATUS  ROLES      AGE      VERSION
ip-172-30-0-110  Ready   control-plane  116m    v1.29.0
ip-172-30-0-167  Ready   <none>      103m    v1.29.0
ip-172-30-0-99   Ready   <none>      104m    v1.29.0

ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
  NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
  kubernetes   ClusterIP    10.96.0.1        <none>       443/TCP     77m
  my-service   NodePort    10.97.231.117    <none>       80:30007/TCP  23m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
  NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
  kubernetes   ClusterIP    10.96.0.1        <none>       443/TCP     88m
  my-service   ClusterIP   10.97.231.117    <none>       80/TCP      34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
  NAME      STATUS      ROLES      AGE      VERSION
  ip-172-30-0-110  Ready      control-plane  116m    v1.29.0
  ip-172-30-0-167  Ready      <none>      103m    v1.29.0
  ip-172-30-0-99   Ready      <none>      104m    v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
  NAME      READY      UP-TO-DATE      AVAILABLE      AGE
  assignment1-deployment  5/5       5            5           86m
  nginx      2/2       2            2           65s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl expose deploy nginx --type=NodePort --name=nginx-np[]
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl edit svc  
[2]+ Stopped kubectl edit svc  
ubuntu@ip-172-30-0-110:~$ kubectl edit svc  
service/kubernetes skipped  
service/my-service edited  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get svc  
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE  
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 88m  
my-service ClusterIP 10.97.231.117 <none> 80/TCP 34m  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get no  
NAME STATUS ROLES AGE VERSION  
ip-172-30-0-110 Ready control-plane 116m v1.29.0  
ip-172-30-0-167 Ready <none> 103m v1.29.0  
ip-172-30-0-99 Ready <none> 104m v1.29.0  
ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2  
deployment.apps/nginx created  
ubuntu@ip-172-30-0-110:~$ kubectl get deploy  
NAME READY UP-TO-DATE AVAILABLE AGE  
assignment1-deployment 5/5 5 5 86m  
nginx 2/2 2 2 65s  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl expose deploy nginx --type=NodePort --name=nginx-np  
service/nginx-np exposed  
ubuntu@ip-172-30-0-110:~$  
ubuntu@ip-172-30-0-110:~$ kubectl get svc  
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE  
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 122m  
my-service ClusterIP 10.97.231.117 <none> 80/TCP 68m  
nginx-np NodePort 10.103.11.21 <none> 80:31436/TCP 30s  
ubuntu@ip-172-30-0-110:~$
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
[2]+  Stopped                  kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP    10.96.0.1    <none>        443/TCP     88m
my-service   ClusterIP    10.97.231.117  <none>        80/TCP      34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS      ROLES      AGE      VERSION
ip-172-30-0-110  Ready      control-plane  116m    v1.29.0
ip-172-30-0-167  Ready      <none>       103m    v1.29.0
ip-172-30-0-99   Ready      <none>       104m    v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME      READY      UP-TO-DATE      AVAILABLE      AGE
assignment1-deployment  5/5      5            5            86m
nginx      2/2      2            2            65s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl expose deploy nginx --type=NodePort --name=nginx-np
service/nginx-np exposed
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP    10.96.0.1    <none>        443/TCP     122m
my-service   ClusterIP    10.97.231.117  <none>        80/TCP      68m
nginx-np     NodePort    10.103.11.21   <none>        80:31436/TCP  30s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl port-forward service/nginx-np --address 0.0.0.0 :80
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
[2]+ Stopped      kubectl edit svc
ubuntu@ip-172-30-0-110:~$ kubectl edit svc
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP     88m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP      34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS      ROLES      AGE      VERSION
ip-172-30-0-110  Ready      control-plane  116m    v1.29.0
ip-172-30-0-167  Ready      <none>       103m    v1.29.0
ip-172-30-0-99   Ready      <none>       104m    v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME      READY      UP-TO-DATE      AVAILABLE      AGE
assignment1-deployment  5/5       5            5            86m
nginx      2/2       2            2            65s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl expose deploy nginx --type=NodePort --name=nginx-np
service/nginx-np exposed
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes  ClusterIP  10.96.0.1    <none>        443/TCP     122m
my-service  ClusterIP  10.97.231.117  <none>        80/TCP      68m
nginx-np    NodePort    10.103.11.21  <none>        80:31436/TCP  30s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl port-forward service/nginx-np --address 0.0.0.0 :80
Forwarding from 0.0.0.0:41259 -> 80
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

```
service/kubernetes skipped
service/my-service edited
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP    10.96.0.1    <none>        443/TCP     88m
my-service   ClusterIP    10.97.231.117  <none>        80/TCP      34m
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get no
NAME      STATUS      ROLES      AGE      VERSION
ip-172-30-0-110  Ready      control-plane  116m    v1.29.0
ip-172-30-0-167  Ready      <none>       103m    v1.29.0
ip-172-30-0-99   Ready      <none>       104m    v1.29.0
ubuntu@ip-172-30-0-110:~$ kubectl create deployment nginx --image=nginx --port=80 --replicas=2
deployment.apps/nginx created
ubuntu@ip-172-30-0-110:~$ kubectl get deploy
NAME      READY      UP-TO-DATE      AVAILABLE      AGE
assignment1-deployment  5/5      5           5           86m
nginx      2/2      2           2           65s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl expose deploy nginx --type=NodePort --name=nginx-np
service/nginx-np exposed
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
kubernetes   ClusterIP    10.96.0.1    <none>        443/TCP     122m
my-service   ClusterIP    10.97.231.117  <none>        80/TCP      68m
nginx-np     NodePort    10.103.11.21   <none>        80:31436/TCP  30s
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl port-forward service/nginx-np --address 0.0.0.0 :80
Forwarding from 0.0.0.0:41259 -> 80
^Cubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ sudo nano
ubuntu@ip-172-30-0-110:~$ sudo nano ingress.yaml[]
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swainil

EC2 RDS IAM

GNU nano 6.2 ingress.yaml *

```
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: ingress
  annotations:
    nginx.ingress.kubernetes.io/rewrite-target: /
spec:
  ingressClassName: nginx
  rules:
  - http:
      paths:
      - path: /nginx
        pathType: Prefix
        backend:
          service:
            name: nginx
            port:
              number: 80
```

^G Help ^C Write Out ^W Where Is ^T Execute ^C Location M-U Undo M-A Set Mark M-] To Bracket M-Q Previous ^E Back ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo M-G Copy ^Q Where Was M-W Next ^F Forward ^P Prev Word ^N Next Word

i-0aac4b945549b81f1 (Swainil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | [Alt+S] | N. Virginia | Intellipaat-Swapnil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 18:31:00 UTC 2024

System load: 0.32      Processes: 145
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 12%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

```
81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
```

```
Last login: Tue Sep 24 17:05:10 2024 from 18.206.107.28
ubuntu@ip-172-30-0-110:~$ sudo nano ingress.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f ingress.yaml
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master) X

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swarpnil

Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1022-aws x86_64)

```
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 24 18:31:00 UTC 2024

System load: 0.32      Processes: 145
Usage of /: 49.7% of 7.57GB  Users logged in: 0
Memory usage: 12%          IPv4 address for eth0: 172.30.0.110
Swap usage: 0%
```

Expanded Security Maintenance for Applications is not enabled.

81 updates can be applied immediately.
41 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See <https://ubuntu.com/esm> or run: sudo pro status

New release '24.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

```
Last login: Tue Sep 24 17:05:10 2024 from 18.206.107.28
ubuntu@ip-172-30-0-110:~$ sudo nano ingress.yaml
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl apply -f ingress.yaml
ingress.networking.k8s.io/ingress created
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ 
ubuntu@ip-172-30-0-110:~$ kubectl get ing
```

i-0aac4b945549b81f1 (Swarnil-k8s-Master) X

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110

aws | Services | Search [Alt+S] | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

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NAME      CLASS   HOSTS   ADDRESS   PORTS   AGE
ingress   nginx   *        80       35s
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl get svc
NAME      TYPE      CLUSTER-IP    EXTERNAL-IP   PORT(S)   AGE
kubernetes  ClusterIP  10.96.0.1   <none>        443/TCP   136m
my-service  ClusterIP  10.97.231.117 <none>        80/TCP    82m
nginx-np   NodePort   10.103.11.21  <none>        80:31436/TCP 14m
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$
ubuntu@ip-172-30-0-110:~$ kubectl port-forward service/ingress-nginx-controller -n ingress-nginx --address 0.0.0.0 :443
```

i-0aac4b945549b81f1 (Swapnil-k8s-Master)

Public IPs: 3.88.114.10 Private IPs: 172.30.0.110

aws | Services | [Alt+S] | X | ▲ | ? | ⚙ | N. Virginia | Intellipaat-Swapnil

EC2 RDS IAM

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Error from server (NotFound): namespaces "ingress-nginx" not found
ubuntu@ip-172-30-0-110:~$ 
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i-0aac4b945549b81f1 (Swapnil-k8s-Master)

PublicIPs: 3.88.114.10 PrivateIPs: 172.30.0.110