

Assignment

2. Install ansible and connect the nodes to master and execute the adhoc commands on ansible masternode vm and test the packages installed or not

Yum→yellow dog update manager

Epel→Extra package enterprise release

Here:

Ansible Master Node: Public ip= 52.66.153.153, Private ip= 172.31.36.206

Ansible Node: Public ip= 13.232.164.224, Private ip= 172.31.45.70

Master & Server two Nodes are created on AWS:

The screenshot displays the AWS Management Console interface. On the left, the navigation menu includes 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMIs', 'AMI Catalog', 'Elastic Block Store', and 'Volumes'. The main content area shows the 'Instances (2/2)' page. A search bar at the top allows filtering by 'Instance state = running'. Below this, a table lists the instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
Ansible Node	i-0096503d3444cfa9c	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-3-109-
Ansible Master Node	i-0f9a4a83306f548a1	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-43-205-

Below the table, the 'Monitoring' section shows various metrics for the selected instances. The metrics include CPU utilization (%), Network in (bytes), Network out (bytes), Network packets in (count), and Network packets out (count). The status check for the Ansible Master Node shows '2/2 checks passed'.

Master Node:

aws

Services

Search

[Alt+S]

Mumbai

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EC2

EC2 Image Builder

New EC2 Experience

Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Instance state = running

Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	Ansible Node	i-0096503d3444cfa9c	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-3-109-
<input checked="" type="checkbox"/>	Ansible Master Node	i-0f9a4a83306f548a1	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-43-205-

Instance: i-0f9a4a83306f548a1 (Ansible Master Node)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0f9a4a83306f548a1 (Ansible Master Node)	43.205.231.183 open address	172.31.36.206
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-43-205-231-183.ap-south-1.compute.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-172-31-36-206.ap-south-1.compute.internal	ip-172-31-36-206.ap-south-1.compute.internal	-
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding
IPv4 (A)	t2.micro	
Auto-assigned IP address	VPC ID	

Feedback

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Node:

aws Services Search [Alt+S] Mumbai A_PRADHAN11

EC2 EC2 Image Builder

New EC2 Experience Tell us what you think

EC2 Dashboard
EC2 Global View
Events
Tags
Limits

▼ Instances

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

▼ Images

- AMIs
- AMI Catalog

▼ Elastic Block Store

- Volumes

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Instance state = running Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input checked="" type="checkbox"/>	Ansible Node	i-0096503d3444cfa9c	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-3-109-
<input type="checkbox"/>	Ansible Master Node	i-0f9a4a83306f548a1	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-43-205

Instance: i-0096503d3444cfa9c (Ansible Node)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-0096503d3444cfa9c (Ansible Node)	Public IPv4 address 3.109.216.7 open address	Private IPv4 addresses 172.31.45.70
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-109-216-7.ap-south-1.compute.amazonaws.com open address
Hostname type IP name: ip-172-31-45-70.ap-south-1.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-45-70.ap-south-1.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding
Auto-assigned IP address	VPC ID	

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Server Node on Putty:

aws

Services

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EC2

EC2 Image Builder

New EC2 Experience

Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances

Instance Types

Launch Templates

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Savings Plans

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Instances (1/2) Info

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Instance state = running

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	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	Ansible Node	i-0096503d3444cfa9c	Running	t2.micro	Initializing	No alarms	ap-south-1a	ec2-3-109-
<input checked="" type="checkbox"/>	Ansible Master Node	i-0f9a4a83306f548a1	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-43-205

Instance: i-0f9a4a83306f548a1 (Ansible Master Node)

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

Instance summary Info

Instance ID

i-0f9a4a83306f548a1 (Ansible Master Node)

Public IPv4 address

43.205.231.183

open address

IPv6 address

-

Instance state

Running

Hostname type

Private IP DNS name (IPv4 only)

ip-172-31-36-206.ap-south-1.compute.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

VPC ID

ec2-user@ip-172-31-36-206:~

login as: ec2-user

Authenticating with public key "Ansible_KP"

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/

[ec2-user@ip-172-31-36-206 ~]\$

Feedback

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```
ec2-user@ip-172-31-36-206:~  
login as: ec2-user  
Authenticating with public key "Ansible_KP"  
Last login: Sat Dec 24 21:15:43 2022 from 103.133.231.29  
  
  _ |  ( _ | _ )  
  _ |  /      Amazon Linux 2 AMI  
  _ | \ _ | _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-36-206 ~]$
```

Sudo yum update

```
ec2-user@ip-172-31-36-206:~  
login as: ec2-user  
Authenticating with public key "Ansible_KP"  
Last login: Sat Dec 24 21:15:43 2022 from 103.133.231.29  
  
  _ |  _ |  _ )  
  _ | (  _ /  Amazon Linux 2 AMI  
  _ | \  _ |  _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-36-206 ~]$ sudo yum update  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
amzn2-core | 3.7 kB 00:00:00  
No packages marked for update  
[ec2-user@ip-172-31-36-206 ~]$ sudo yum install  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
Error: Need to pass a list of pkgs to install  
Mini usage:  
  
install PACKAGE...  
  
Install a package or packages on your system  
  
aliases: install-n, install-na, install-nevra  
[ec2-user@ip-172-31-36-206 ~]$
```

Installing Ansible

Running commands:

- 1) `sudo amazon-linux-extras install epel`

```
[ =2.10.5  =2.10.8  =stable ]
33 java-openjdk11      available [ =11  =stable ]
34 lynis                available [ =stable ]
36 BCC                  available [ =0.x  =stable ]
37 mono                 available [ =5.x  =stable ]
38 nginx1               available [ =stable ]
39 ruby2.6              available [ =2.6  =stable ]
40 mock                 available [ =stable ]
41 postgresql11         available [ =11  =stable ]
42 php7.4               available [ =stable ]
43 livepatch            available [ =stable ]
44 python3.8            available [ =stable ]
45 haproxy2             available [ =stable ]
46 collectd             available [ =stable ]
47 aws-nitro-enclaves-cli available [ =stable ]
48 R4                   available [ =stable ]
   kernel-5.4          available [ =stable ]
50 selinux-ng           available [ =stable ]
51 php8.0               available [ =stable ]
52 tomcat9              available [ =stable ]
53 unbound1.13          available [ =stable ]
54 mariadb10.5          available [ =stable ]
55 kernel-5.10=latest   enabled   [ =stable ]
56 redis6               available [ =stable ]
57 ruby3.0              available [ =stable ]
58 postgresql12         available [ =stable ]
59 postgresql13         available [ =stable ]
60 mock2                available [ =stable ]
61 dnsmasq2.85          available [ =stable ]
62 kernel-5.15          available [ =stable ]
63 postgresql14         available [ =stable ]
64 firefox              available [ =stable ]
65 lustre               available [ =stable ]
66 php8.1               available [ =stable ]
67 awscli1              available [ =stable ]
[ec2-user@ip-172-31-36-206 ~]$
```

2) sudo yum install ansible -y

```

ec2-user@ip-172-31-36-206:~
warning: /var/cache/yum/x86_64/2/epel/packages/ansible-2.9.27-1.el7.noarch.rpm: Header V4 RSA/SHA256 Signature, key ID 35
2c64e5: NOKEY
Public key for ansible-2.9.27-1.el7.noarch.rpm is not installed
(1/4): ansible-2.9.27-1.el7.noarch.rpm | 17 MB 00:00:02
(2/4): python-paramiko-2.1.1-0.10.el7.noarch.rpm | 269 kB 00:00:00
(3/4): python2-httpplib2-0.18.1-3.el7.noarch.rpm | 125 kB 00:00:00
(4/4): sshpass-1.06-1.el7.x86_64.rpm | 21 kB 00:00:00
-----
Total | 7.5 MB/s | 17 MB 00:00:02
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
Importing GPG key 0x352C64E5:
  Userid : "Fedora EPEL (7) <epel@fedoraproject.org>"
  Fingerprint: 91e9 7d7c 4a5e 96f1 7f3e 888f 6a2f aea2 352c 64e5
  Package : epel-release-7-11.noarch (@amzn2extra-epel)
  From : /etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : python2-httpplib2-0.18.1-3.el7.noarch 1/4
  Installing : sshpass-1.06-1.el7.x86_64 2/4
  Installing : python-paramiko-2.1.1-0.10.el7.noarch 3/4
  Installing : ansible-2.9.27-1.el7.noarch 4/4
  Verifying : python-paramiko-2.1.1-0.10.el7.noarch 1/4
  Verifying : sshpass-1.06-1.el7.x86_64 2/4
  Verifying : python2-httpplib2-0.18.1-3.el7.noarch 3/4
  Verifying : ansible-2.9.27-1.el7.noarch 4/4

Installed:
  ansible.noarch 0:2.9.27-1.el7

Dependency Installed:
  python-paramiko.noarch 0:2.1.1-0.10.el7 python2-httpplib2.noarch 0:0.18.1-3.el7 sshpass.x86_64 0:1.06-1.el7

Complete!
[ec2-user@ip-172-31-36-206 ~]$

```

Ansible installed

Checking version


```
[ec2-user@ip-172-31-36-206 ~]$ ansible --version
ansible 2.9.27
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/home/ec2-user/.ansible/plugins/modules', u'/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/site-packages/ansible
  executable location = /usr/bin/ansible
  python version = 2.7.18 (default, May 25 2022, 14:30:51) [GCC 7.3.1 20180712 (Red Hat 7.3.1-15)]
[ec2-user@ip-172-31-36-206 ~]$
```

Installing Python:

```
ec2-user@ip-172-31-36-206:~  
[ec2-user@ip-172-31-36-206 ~]$ sudo yum install python -y  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
amzn2-core | 3.7 kB 00:00:00  
215 packages excluded due to repository priority protections  
Package python-2.7.18-1.amzn2.0.5.x86_64 already installed and latest version  
Nothing to do  
[ec2-user@ip-172-31-36-206 ~]$
```

Installing Openssl:

```
[ec2-user@ip-172-31-36-206 ~]$ sudo yum install openssl -y  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
215 packages excluded due to repository priority protections  
Package 1:openssl-1.0.2k-24.amzn2.0.4.x86_64 already installed and latest version  
Nothing to do  
[ec2-user@ip-172-31-36-206 ~]$
```

Installing Docker:

```
[ec2-user@ip-172-31-36-206 ~]$ sudo yum install docker -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
215 packages excluded due to repository priority protections
Resolving Dependencies
--> Running transaction check
--> Package docker.x86_64 0:20.10.17-1.amzn2.0.1 will be installed
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.17-1.amzn2.0.1.x86_64
--> Processing Dependency: libcgrouper >= 0.40.rc1-5.15 for package: docker-20.10.17-1.amzn2.0.1.x86_64
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.17-1.amzn2.0.1.x86_64
--> Processing Dependency: pigz for package: docker-20.10.17-1.amzn2.0.1.x86_64
--> Running transaction check
--> Package containerd.x86_64 0:1.6.8-1.amzn2 will be installed
--> Package libcgrouper.x86_64 0:0.41-21.amzn2 will be installed
--> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
--> Package runc.x86_64 0:1.1.4-1.amzn2 will be installed
--> Finished Dependency Resolution
```

Dependencies Resolved

Package	Arch	Version	Repository	Size
Installing:				
docker	x86_64	20.10.17-1.amzn2.0.1	amzn2extra-docker	39 M
Installing for dependencies:				
containerd	x86_64	1.6.8-1.amzn2	amzn2extra-docker	27 M
libcgrouper	x86_64	0.41-21.amzn2	amzn2-core	66 k
pigz	x86_64	2.3.4-1.amzn2.0.1	amzn2-core	81 k
runc	x86_64	1.1.4-1.amzn2	amzn2extra-docker	2.9 M

Transaction Summary

Install 1 Package (+4 Dependent packages)

Total download size: 69 M

Installed size: 260 M

```
ec2-user@ip-172-31-36-206:~  
Total download size: 69 M  
Installed size: 260 M  
Downloading packages:  
(1/5): libcgrou-0.41-21.amzn2.x86_64.rpm | 66 kB 00:00:00  
(2/5): pigz-2.3.4-1.amzn2.0.1.x86_64.rpm | 81 kB 00:00:00  
(3/5): containerd-1.6.8-1.amzn2.x86_64.rpm | 27 MB 00:00:00  
(4/5): docker-20.10.17-1.amzn2.0.1.x86_64.rpm | 39 MB 00:00:01  
(5/5): runc-1.1.4-1.amzn2.x86_64.rpm | 2.9 MB 00:00:00  
-----  
Total 65 MB/s | 69 MB 00:00:01  
Running transaction check  
Running transaction test  
Transaction test succeeded  
Running transaction  
  Installing : runc-1.1.4-1.amzn2.x86_64 1/5  
  Installing : containerd-1.6.8-1.amzn2.x86_64 2/5  
  Installing : libcgrou-0.41-21.amzn2.x86_64 3/5  
  Installing : pigz-2.3.4-1.amzn2.0.1.x86_64 4/5  
  Installing : docker-20.10.17-1.amzn2.0.1.x86_64 5/5  
  Verifying : runc-1.1.4-1.amzn2.x86_64 1/5  
  Verifying : pigz-2.3.4-1.amzn2.0.1.x86_64 2/5  
  Verifying : docker-20.10.17-1.amzn2.0.1.x86_64 3/5  
  Verifying : containerd-1.6.8-1.amzn2.x86_64 4/5  
  Verifying : libcgrou-0.41-21.amzn2.x86_64 5/5  
  
Installed:  
  docker.x86_64 0:20.10.17-1.amzn2.0.1  
  
Dependency Installed:  
  containerd.x86_64 0:1.6.8-1.amzn2 libcgrou.x86_64 0:0.41-21.amzn2 pigz.x86_64 0:2.3.4-1.amzn2.0.1  
  runc.x86_64 0:1.1.4-1.amzn2  
  
Complete!  
[ec2-user@ip-172-31-36-206 ~]$ docker --version  
Docker version 20.10.17, build 100c701  
[ec2-user@ip-172-31-36-206 ~]$
```

Docker version:

```
[ec2-user@ip-172-31-36-206 ~]$ docker version
Client:
Version:           20.10.17
API version:       1.41
Go version:        go1.18.6
Git commit:        100c701
Built:             Wed Sep 28 23:10:17 2022
OS/Arch:           linux/amd64
Context:           default
Experimental:      true
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[ec2-user@ip-172-31-36-206 ~]$
```

Now Ansible version:

ec2-user@ip-172-31-36-206:~

```
[ec2-user@ip-172-31-36-206 ~]$ ansible --version
```

```
ansible 2.9.27
```

```
  config file = /etc/ansible/ansible.cfg
```

```
  configured module search path = [u'/home/ec2-user/.ansible/plugins/modules', u'/usr/share/ansible/plugins/modules']
```

```
  ansible python module location = /usr/lib/python2.7/site-packages/ansible
```

```
  executable location = /usr/bin/ansible
```

```
  python version = 2.7.18 (default, May 25 2022, 14:30:51) [GCC 7.3.1 20180712 (Red Hat 7.3.1-15)]
```

```
[ec2-user@ip-172-31-36-206 ~]$
```

Now from Node:



Connect to instance [Info](#)

Connect to your instance i-0096503d3444cfa9c (Ansible Node) using any of these options

EC2 Instance Connect

Session Manager

SSH client

EC2 serial console

Instance ID

i-0096503d3444cfa9c (Ansible Node)

Public IP address

3.109.216.7

User name

ec2-user

Connect using a custom user name, or use the default user name ec2-user for the AMI used to launch the instance.

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

Cancel

Connect

aws

Services

Search

[Alt+S]

EC2

EC2 Image Builder

Amazon Linux 2 AMI

<https://aws.amazon.com/amazon-linux-2/>
[ec2-user@ip-172-31-45-70 ~]\$ ansible --version
-bash: ansible: command not found
[ec2-user@ip-172-31-45-70 ~]\$

Feedback

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From Master Node:

```
[ec2-user@ip-172-31-36-206 ~]$ cd .ssh  
[ec2-user@ip-172-31-36-206 .ssh]$
```

```
[ec2-user@ip-172-31-36-206 .ssh]$ ls
authorized_keys
[ec2-user@ip-172-31-36-206 .ssh]$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAwB74OfxvjHWU/HMcAcCsIqCqQPQr7b3672wZDXgnqR6LD9UT9jNzmJxA4CTZSG5nwkUyXWsNgKTFeJBQB
IBE997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RIzEG8KKMS/XsmlU0+cs5jFfilqv3VpwQGxwh3EBwkGdM4o1A34Z10C8Z48aIr1GVbZ1XHxbRmI09g3T5
hkW/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDNlTXXP+7d0qq066D9KzgiSWmi0H93ejlSuwh+hKmqG0JEnAIBMTsOtHFZzuRQH
fmFllywMUmyC8Tubt Ansible KP
[ec2-user@ip-172-31-36-206 .ssh]$
```

To generate

Now Generate Key:

```
[ec2-user@ip-172-31-36-206 .ssh]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ec2-user/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ec2-user/.ssh/id_rsa.
Your public key has been saved in /home/ec2-user/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:inffd0A8kxMvoXnqy7bFE9LZMtDablqSvWRIq0aC+R0 ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
The key's randomart image is:
+---[RSA 2048]-----+
|          o          |
|         = =         |
|        + @ .        |
|       O B           |
|      o  S O .       |
|     o ..Eo * =      |
|    ..+o.B @ .       |
|   ..o+.& + .        |
|  ..o*.o ...        |
+---[SHA256]-----+
[ec2-user@ip-172-31-36-206 .ssh]$
```

Check the number of keys available


```
[ec2-user@ip-172-31-36-206 .ssh]$ ls
authorized_keys  id_rsa  id_rsa.pub
[ec2-user@ip-172-31-36-206 .ssh]$
```

Now from child Node side:

Same



The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, 'Services' link, a search bar, and user information 'Mumbai' and 'A_PRADHAN11'. Below the navigation bar, the 'EC2' console is selected, showing 'EC2 Image Builder' as the active view. The main content area displays the 'Amazon Linux 2 AMI' page. A terminal window is open at the bottom of the page, showing the following commands and output:

```
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-45-70 ~]$ ansible --version
-bash: ansible: command not found
[ec2-user@ip-172-31-45-70 ~]$ ls
[ec2-user@ip-172-31-45-70 ~]$ cd .ssh
[ec2-user@ip-172-31-45-70 .ssh]$ ls
authorized_keys
[ec2-user@ip-172-31-45-70 .ssh]$ cat ^C
[ec2-user@ip-172-31-45-70 .ssh]$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAwfB740fxvjHWU/HMcAcCsIqCqQPQr7b3672wZDXgnqR6LD9UT9jNzmJxA4CTZSG5nwkUyXWNgKTFeJBQBI997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RIzEG8KKM
S/XsmlU0+cs5jFfilqv3VpwQGXwh3EBwkGdM4o1A34Z10C8Z48aIr1GVbZ1XHxbRmI09g3T5hkw/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDN1TXXP+7d0qq066D9KzgiSWmi0H93ejlSuwh+hK
mqG0JEnAIBMTsOtHFZzuRQHfmFllywMUmyC8Tubt Ansible_KP
[ec2-user@ip-172-31-45-70 .ssh]$
```

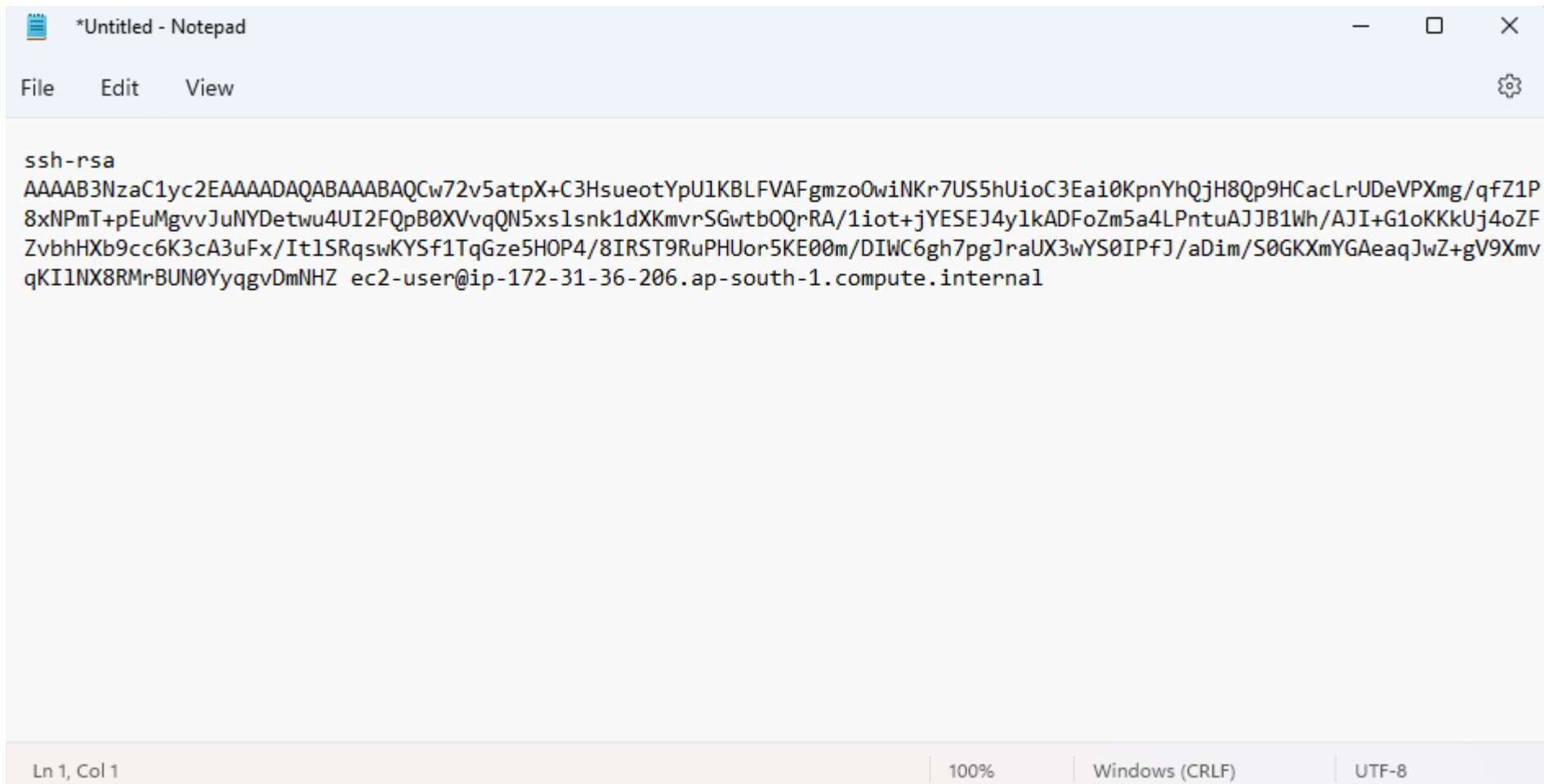
Now Copy the Public Key from Master Node:

```

ec2-user@ip-172-31-36-206: ~/.ssh
IBE997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RizEG8KKMS/XsmlU0+cs5jFfilqv3VpwQGxwh3EBwkGdM4o1A34Z10C8Z48aIrlGVbZ1XHxbRmI09g3T5
hkW/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDNlTXXP+7d0qq066D9KzgiSWmi0H93ejlSuwh+hKmqG0JEnAIBMtsOtHFZzuRQH
fmFllywMUmyC8Tubt Ansible KP
[ec2-user@ip-172-31-36-206 ~]$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ec2-user/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ec2-user/.ssh/id_rsa.
Your public key has been saved in /home/ec2-user/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:inffd0A8kxMvoXnqy7bFE9LZMtDablgSvWRiq0aC+R0 ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
The key's randomart image is:
+---[RSA 2048]-----+
|           o           |
|          = =          |
|         + @ .         |
|          O B          |
|       o   S O .       |
|    o ..Eo * =         |
|   ..+o.B @ .         |
|   ..o+.& + .         |
|   ..o*.o ...         |
+-----[SHA256]-----+
[ec2-user@ip-172-31-36-206 ~]$ ls
authorized_keys  id_rsa  id_rsa.pub
[ec2-user@ip-172-31-36-206 ~]$ ^C
[ec2-user@ip-172-31-36-206 ~]$ authorized_keys id_rsa id_rsa.pub
-bash: authorized_keys: command not found
[ec2-user@ip-172-31-36-206 ~]$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAw72v5atpX+C3HsueotYpUlKBLFVAFgmzoOwiNkr7US5hUioC3Eai0KpnYhQjH8Qp9HCacLrUDeVPXmg/qf
Z1P8xNPMt+pEuMgvvJuNYDetwu4UI2FQpB0XVvqQN5xslsnkldXKmvrsGwtbOQrRA/liot+jYESEJ4ylkADFoZm5a4LPntuAJJB1Wh/AJI+G1oKKkUj4oZFZv
bhHXb9cc6K3cA3uFx/ItlSRqswKYSf1TqGze5HOP4/8IRST9RuPHUor5KE00m/DIWC6gh7pgJraUX3wYS0IPfJ/aDim/S0GKXmYGaeaqJwZ+gV9XmvqKI1NX8
RMrBUN0YyqgvDmNHZ ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
[ec2-user@ip-172-31-36-206 ~]$ ^C
[ec2-user@ip-172-31-36-206 ~]$ █

```

Paste it on Notepad:



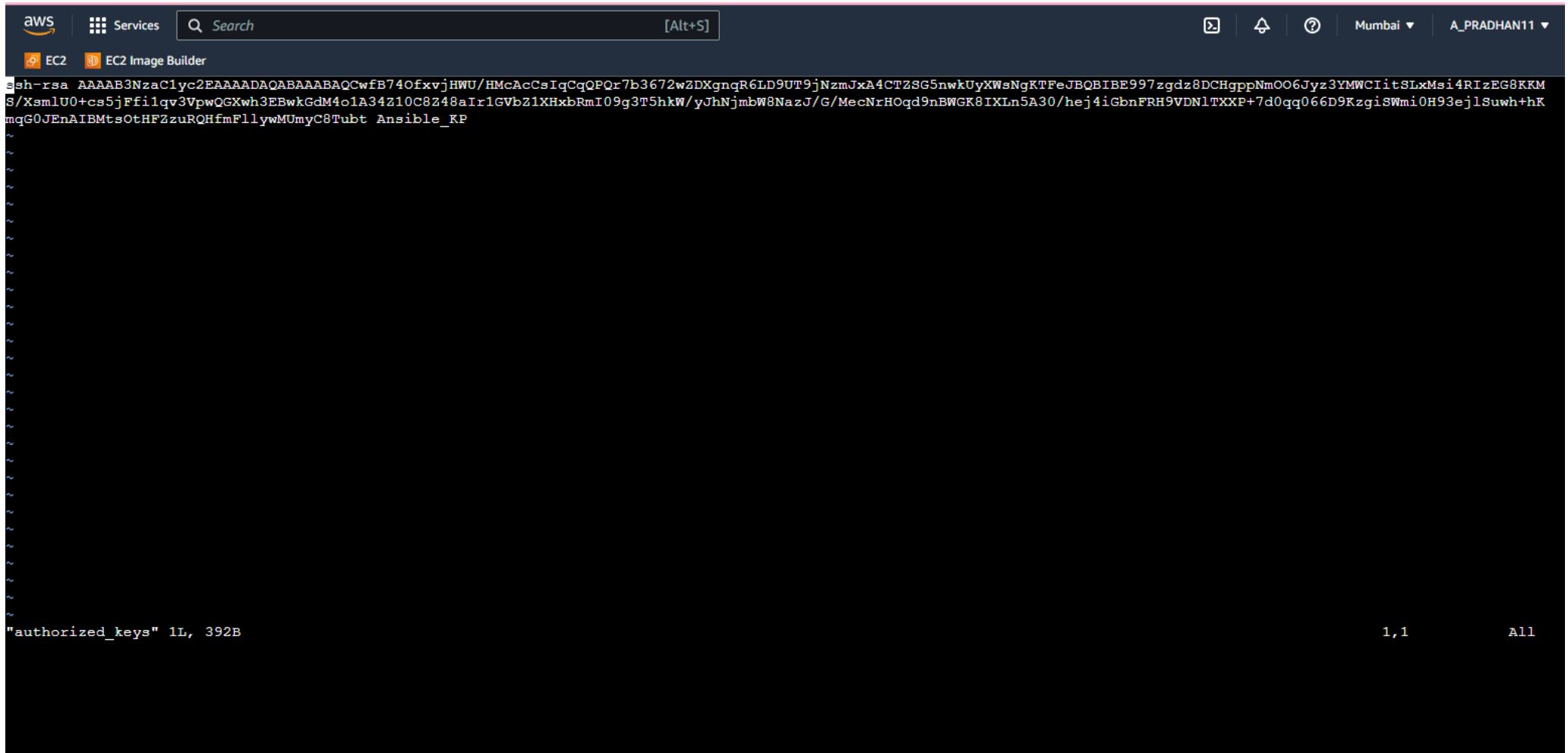
The image shows a Notepad window titled '*Untitled - Notepad'. The menu bar includes 'File', 'Edit', and 'View'. The text content is an SSH RSA public key for the user 'ec2-user' on the host 'ip-172-31-36-206.ap-south-1.compute.internal'. The key is displayed as a single line of text. The status bar at the bottom indicates 'Ln 1, Col 1', '100%', 'Windows (CRLF)', and 'UTF-8'.

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQAw72v5atpX+C3HsueotYpU1KBLFVAFgmzoOwiNkr7US5hUioC3Eai0KpnYhQjH8Qp9HCacLrUDeVPXmg/qfZ1P
8xNPmT+pEuMgvvJuNYDetwu4UI2FQpB0XVvqQN5xslsnk1dXKmvrSGwtb0QrRA/1iot+jYESEJ4ylkADFoZm5a4LPntuAJJB1Wh/AJI+G1oKKkUj4oZF
ZvbhHXb9cc6K3cA3uFx/It1SRqswKYSf1TqGze5HOP4/8IRST9RuPHUor5KE00m/DIwC6gh7pgJraUX3wYS0IPfJ/aDim/S0GKXmYGAeqJwZ+gV9Xmv
qKI1NX8RMrBUN0YyqgvDmNHZ ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
```

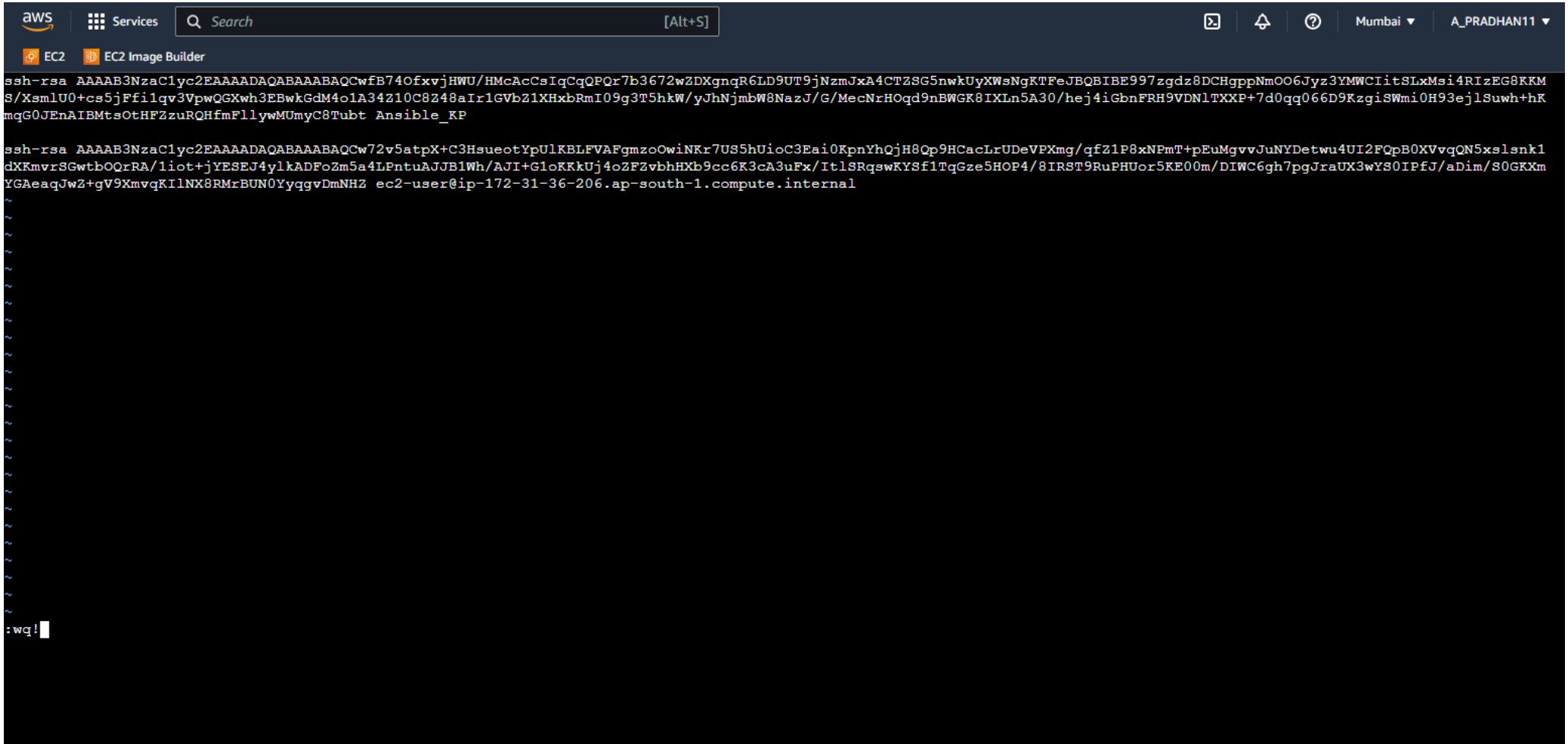
Now From Node:

AWS Connect

```
[ec2-user@ip-172-31-45-70 .ssh]$ vi authorized_keys
```



Press Insert Key for Insert Mode:





Services

Search

[Alt+S]



Mumbai ▾

A_PRADHAN11 ▾



EC2



EC2 Image Builder

```
  _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
__| \__|__|__|
```

<https://aws.amazon.com/amazon-linux-2/>

```
[ec2-user@ip-172-31-45-70 ~]$ ansible --version
```

```
-bash: ansible: command not found
```

```
[ec2-user@ip-172-31-45-70 ~]$ ls
```

```
[ec2-user@ip-172-31-45-70 ~]$ cd .ssh
```

```
[ec2-user@ip-172-31-45-70 .ssh]$ ls
```

```
authorized_keys
```

```
[ec2-user@ip-172-31-45-70 .ssh]$ cat ^C
```

```
[ec2-user@ip-172-31-45-70 .ssh]$ cat authorized_keys
```

```
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCFB74OfxvjHWU/HMcAcCsIqCqQPQr7b3672wZDXgnqR6LD9UT9jNzmJxA4CTZSG5nwkUyXWaNqKTFeJBQBIBE997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RIzEG8KKM  
S/XsmlU0+cs5jFfi1qv3VpwQGxwh3EBwkGdM4o1A34Z10C8Z48aIr1GVbZ1XHxbRmIO9g3T5hkW/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDNLTXXP+7d0qq066D9KzgiSWmi0H93ejlSuwh+hK  
mqG0JEnAIBMTsOtHFZzuRQHfmFllYwMUmyC8Tubt Ansible_KP
```

```
[ec2-user@ip-172-31-45-70 .ssh]$ vi authorized_keys
```

```
[ec2-user@ip-172-31-45-70 .ssh]$ █
```



```
aws Services Search [Alt+S] Mumbai A_PRADHAN11
EC2 EC2 Image Builder
Last login: Sun Dec 25 14:33:29 2022 from ec2-13-233-177-4.ap-south-1.compute.amazonaws.com

  _ | _ | _ )
 _ | ( _ | /  Amazon Linux 2 AMI
 __| \__|__|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-45-70 ~]$ ansible --version
-bash: ansible: command not found
[ec2-user@ip-172-31-45-70 ~]$ ansible version
-bash: ansible: command not found
[ec2-user@ip-172-31-45-70 ~]$ ls
[ec2-user@ip-172-31-45-70 ~]$ cd .ssh
[ec2-user@ip-172-31-45-70 .ssh]$ ls
authorized_keys
[ec2-user@ip-172-31-45-70 .ssh]$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAwfB74OfxvJHWU/HMcAcCsIqCqQPQr7b3672wZDXgnqR6LD9UT9jNzmJxA4CTZSG5nwkUyXWsNgKTFeJBQBIBE997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RIzEG8KKM
S/XsmlU0+cs5jFfilqv3VpwQGXwh3EBwkGdM4o1A34Z10C8Z48aIr1GVbZ1XHxbRmI09g3T5hkW/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDNlTXXP+7d0qq066D9KzgiSWmi0H93ejlSuwh+hK
mqG0JEnAIBMTsOthF2zuRQHfmFllYwMUmyC8Tubt Ansible_KP

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAw72v5atpX+C3HsueotYpU1KBLFVAFgmzoOwiNkr7US5hUioC3Eai0KpnYhOjH8Qp9HCacLrUDEVPXmg/qfZ1P8xNpMT+pEuMgvvJuNYDetwu4UI2FQpB0XVvqQN5xslsnk1
dXKmvvSGwtbOQrRA/liot+jYESEJ4ylkADFoZm5a4LPntuAJJB1Wh/AJI+GloKKkUj4oZFZvbbHxb9cc6K3cA3uFx/ItlSRqswKYsf1TqGze5HOP4/8IRST9RuPHUor5KE00m/DIWC6gh7pgJraUX3wYS0IPfJ/aDim/S0GKXm
YGAeqJwZ+gV9XmvqKIlNX8RMrBUN0YyqgvDmNHZ ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
[ec2-user@ip-172-31-45-70 .ssh]$ vi authorized_keys
[ec2-user@ip-172-31-45-70 .ssh]$ cd //
[ec2-user@ip-172-31-45-70 //]$
```

From Master Node

ec2-user@ip-172-31-36-206: ~/.ssh

```
login as: ec2-user
Authenticating with public key "Ansible_KP"
Last login: Mon Dec 26 14:55:02 2022 from 103.133.231.29
```

```
  _ |  _ |  )
 _ | (  _ | /   Amazon Linux 2 AMI
 _ | \  _ |  _ |
```

<https://aws.amazon.com/amazon-linux-2/>

```
[ec2-user@ip-172-31-36-206 ~]$ cd .ssh
```

```
[ec2-user@ip-172-31-36-206 .ssh]$ ansible --version
```

```
ansible 2.9.27
```

```
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/home/ec2-user/.ansible/plugins/modules', u
'/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/site-packages/ansible
  executable location = /usr/bin/ansible
  python version = 2.7.18 (default, May 25 2022, 14:30:51) [GCC 7.3.1 20180712 (
Red Hat 7.3.1-15)]
```

```
[ec2-user@ip-172-31-36-206 .ssh]$
```

root@ip-172-31-36-206:/

```
[ec2-user@ip-172-31-36-206 ~]$ cd ..
```

```
[ec2-user@ip-172-31-36-206 home]$ cd //
```

```
[ec2-user@ip-172-31-36-206 //]$ sudo su
```

```
[root@ip-172-31-36-206 /]# sudo su
```

```
[root@ip-172-31-36-206 /]# cd ../../
```

```
[root@ip-172-31-36-206 /]# ec2-user
```

```
bash: ec2-user: command not found
```

```
[root@ip-172-31-36-206 /]# cd ../../
```

```
[root@ip-172-31-36-206 /]# ls
```

```
bin boot dev etc home lib lib64 local media mnt opt proc root run sbin srv sys tmp usr var
```

```
[root@ip-172-31-36-206 /]#
```

```
[root@ip-172-31-36-206 /]# cd etc
[root@ip-172-31-36-206 etc]# ls
acpi                dhcp                hostname            motd                rc2.d              statetab.d
adjtime            DIR_COLORS          hosts               mtab               rc3.d              subgid
aliases            DIR_COLORS.256color hosts.allow          my.cnf             rc4.d              subuid
aliases.db         DIR_COLORS.lightbgcolor hosts.deny           my.cnf.d           rc5.d              sudo.conf
alternatives       docker              idmapd.conf         nanorc             rc6.d              sudoers
amazon             docker-runtimes.d  image-id            netconfig          rc.d               sudoers.d
anacrontab         dracut.conf         inittab             NetworkManager    rc.local           sudo-ldap.conf
ansible            dracut.conf.d       inputrc             networks           request-key.conf  sysconfig
at.deny            e2fsck.conf         iproute2            nfs.conf           request-key.d     sysctl.conf
audisp             environment         issue              nfsmount.conf     resolv.conf       sysctl.d
audit              ethertypes          issue.net           nsswitch.conf     rpc               systemd
bash_completion.d exports             issue.net           nsswitch.conf.bak rpm                system-release
bashrc             exports.d            krb5.conf           openldap           rsyncd.conf       system-release-cpe
binfmt.d           filesystems          krb5.conf.d         opt               rsyslog.conf      terminfo
chkconfig.d        fstab               ld.so.cache         os-release         rsyslog.d         tmpfiles.d
chrony.conf        gcrypt             ld.so.conf          pam.d              rwtab             trusted-key.key
chrony.d           GeoIP.conf          ld.so.conf.d        passwd            rwtab.d           udev
chrony.keys        GeoIP.conf.default libaudit.conf       passwd-           sasl2             updatedb.conf
cifs-utils         gnupg              libnl               pkcs11            scl               update-motd.d
cloud              GREP_COLORS         libuser.conf        pki               screenrc          vimrc
containerd         groff              locale.conf         plymouth          security          wgetrc
cron.d             group              localtime           pm                selinux           X11
cron.daily          group-             logrotate.conf      popt.d            services          xdg
cron.deny          grub2.cfg           logrotate.d         postfix           sestatus.conf     xinetd.d
cron.hourly        grub2-efi.cfg       lsm                 ppp               setuptool.d       yum
cron.monthly       grub.d              lvm                 prelink.conf.d    shadow            yum.conf
crontab            gshadow            machine-id           profile            shadow-           yum.repos.d
cron.weekly        gshadow-           magic               profile.d          shells
csh.cshrc          gss                man_db.conf         protocols         skel
csh.login          gssproxy           mke2fs.conf         python            ssh
dbus-1             hibagent-config.cfg modprobe.d          rc0.d             ssl
default            hibinit-config.cfg modules-load.d      rc1.d             statetab
depmod.d           host.conf
```

```
[root@ip-172-31-36-206 etc]# ls |grep ansible
ansible
[root@ip-172-31-36-206 etc]# ls -ll |grep ansible
drwxr-xr-x  3 root root      51 Dec 24 22:44 ansible
[root@ip-172-31-36-206 etc]# cd ansible
[root@ip-172-31-36-206 ansible]# ls
ansible.cfg  hosts  roles
[root@ip-172-31-36-206 ansible]# ls -ll
total 24
-rw-r--r-- 1 root root 19985 Jan 15  2022 ansible.cfg
-rw-r--r-- 1 root root  1041 Dec 24 22:44 hosts
drwxr-xr-x 2 root root    6 Jan 15  2022 roles
[root@ip-172-31-36-206 ansible]# cat ansible.cfg
```

root@ip-172-31-36-206:/etc/ansible

```
# config file for ansible -- https://ansible.com/
# =====

# nearly all parameters can be overridden in ansible-playbook
# or with command line flags. ansible will read ANSIBLE_CONFIG,
# ansible.cfg in the current working directory, .ansible.cfg in
# the home directory or /etc/ansible/ansible.cfg, whichever it
# finds first

[defaults]

# some basic default values...

#inventory      = /etc/ansible/hosts
#library        = /usr/share/my_modules/
#module_utils   = /usr/share/my_module_utils/
#remote_tmp     = ~/.ansible/tmp
#local_tmp      = ~/.ansible/tmp
#plugin_filters_cfg = /etc/ansible/plugin_filters.yml
#forks          = 5
#poll_interval  = 15
#sudo_user      = root
#ask_sudo_pass  = True
#ask_pass       = True
#transport      = smart
#remote_port    = 22
#module_lang    = C
#module_set_locale = False

# plays will gather facts by default, which contain information about
# the remote system.
#
# smart - gather by default, but don't regather if already gathered
# implicit - gather by default, turn off with gather_facts: False
# explicit - do not gather by default, must say gather_facts: True
#gathering = implicit
```

Opening Host file of Master Node

root@ip-172-31-36-206:/etc/ansible

[root@ip-172-31-36-206 ansible]# cat hosts

```
[root@ip-172-31-36-206 ansible]# cat hosts
# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
#   - Comments begin with the '#' character
#   - Blank lines are ignored
#   - Groups of hosts are delimited by [header] elements
#   - You can enter hostnames or ip addresses
#   - A hostname/ip can be a member of multiple groups
#
# Ex 1: Ungrouped hosts, specify before any group headers.
## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10
#
# Ex 2: A collection of hosts belonging to the 'webservers' group
## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
#
# If you have multiple hosts following a pattern you can specify
# them like this:
## www[001:006].example.com
#
# Ex 3: A collection of database servers in the 'dbservers' group
## [dbservers]
##
## db01.intranet.mydomain.net
```

```
## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group

## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110

# If you have multiple hosts following a pattern you can specify
# them like this:

## www[001:006].example.com

# Ex 3: A collection of database servers in the 'dbservers' group

## [dbservers]
##
## db01.intranet.mydomain.net
## db02.intranet.mydomain.net
## 10.25.1.56
## 10.25.1.57

# Here's another example of host ranges, this time there are no
# leading 0s:

## db-[99:101]-node.example.com
[nodeserver]
3.109.216.7

[root@ip-172-31-36-206 ansible]#
```

Now checking the ip of Node running on Master


```
root@ip-172-31-36-206:/etc/ansible
[root@ip-172-31-36-206 ansible]# ssh -i ec2-user@13.232.164.224
Warning: Identity file ec2-user@13.232.164.224 not accessible: No such file or directory.
usage: ssh [-1246AaCfGgKkMNNqsTtVvXxYy] [-b bind_address] [-c cipher_spec]
        [-D [bind_address:]port] [-E log_file] [-e escape_char]
        [-F configfile] [-I pkcs11] [-i identity_file]
        [-J [user@]host[:port]] [-L address] [-l login_name] [-m mac_spec]
        [-O ctl_cmd] [-o option] [-p port] [-Q query_option] [-R address]
        [-S ctl_path] [-W host:port] [-w local_tun[:remote_tun]]
        [user@]hostname [command]
[root@ip-172-31-36-206 ansible]# ssh ec2-user@13.232.164.224
The authenticity of host '13.232.164.224 (13.232.164.224)' can't be established.
ECDSA key fingerprint is SHA256:7zCbI9kqlJvStC1s+967bRBXdBTazV2nC8BlGfH4I2E.
ECDSA key fingerprint is MD5:24:97:7f:39:e8:a5:b1:c5:d3:ab:25:5c:db:9c:b6:a7.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '13.232.164.224' (ECDSA) to the list of known hosts.
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
[root@ip-172-31-36-206 ansible]#
```

Its permission denied.

Thus,

Now open vi hosts

```
root@ip-172-31-36-206:/etc/ansible
[root@ip-172-31-36-206 ansible]# vi hosts
```

```
root@ip-172-31-36-206:/etc/ansible
# Ex 1: Ungrouped hosts, specify before any group headers.

## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group

## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110

# If you have multiple hosts following a pattern you can specify
# them like this:

## www[001:006].example.com

# Ex 3: A collection of database servers in the 'dbservers' group

## [dbservers]
##
## db01.intranet.mydomain.net
## db02.intranet.mydomain.net
## 10.25.1.56
## 10.25.1.57

# Here's another example of host ranges, this time there are no
# leading 0s:

## db-[99:101]-node.example.com
[nodeserver]
13.232.164.224
:wq!
```

Now Close Putty and open again

aws

Services

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EC2

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Instances

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Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Instances (1/6) Info

Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Status check	Alarm status	Availability Zone	Public IPv4
<input checked="" type="checkbox"/>	Ansible Master Node	i-0f9a4a8306f548a1	2/2 checks passed	No alarms	ap-south-1a	ec2-52-66-153-153.ap-south-1.compute.amazonaws.com
<input type="checkbox"/>	Ansible Node	i-0096503c...	2/2 checks passed	No alarms	ap-south-1a	ec2-13-232...
<input type="checkbox"/>	Ansible_VMachine#1	i-0792f316...		No alarms	ap-south-1a	-
<input type="checkbox"/>	Ansible_VMachine#2	i-0a23f4ba...		No alarms	ap-south-1a	-
<input type="checkbox"/>	My_Machine_DOCKER...	i-00ece7fb...		No alarms	ap-south-1b	-
<input type="checkbox"/>	VM Docker	i-070d444e...		No alarms	ap-south-1a	-

Instance: i-0f9a4a8306f548a1 (Ansible Master Node)

DetailsSecurityNetworkingS...

Instance summary Info

Instance ID

i-0f9a4a8306f548a1 (Ansible Master Node)

IPv6 address

-

Hostname type

IP name: ip-172-31-36-206.ap-south-1.compute.internal

Answer private resource DNS name

Running

Private IP DNS name (IPv4 only)

ip-172-31-36-206.ap-south-1.compute.internal

Instance type

Private IPv4 addresses

172.31.36.206

Public IPv4 DNS

ec2-52-66-153-153.ap-south-1.compute.amazonaws.com

open address

Elastic IP addresses

PuTTY Configuration

Category: Session

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address) 52.66.153.153 Port 22

Connection type: SSH Serial Other: Telnet

Load, save or delete a stored session

Saved Sessions

Default Settings

Load Save Delete

Close window on exit: Always Never Only on clean exit

About Open Cancel

```
ec2-user@ip-172-31-36-206:~  
login as: ec2-user  
Authenticating with public key "Ansible_KP"  
Last login: Mon Dec 26 15:11:26 2022 from 103.133.231.29  
  
  _ |  _ | _ )  
  _ | ( _ _ /  Amazon Linux 2 AMI  
  _ | \ _ _ | _ _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-36-206 ~]$ ssh ec2-user@13.232.164.224
```

Provide Node ip like : `ssh ec2-user@ 13.232.164.224`

Then, Master will connected to Node like:

ec2-user@ip-172-31-45-70:~

login as: ec2-user

Authenticating with public key "Ansible_KP"

Last login: Mon Dec 26 15:11:26 2022 from 103.133.231.29

```
  _ |  ( _ | _ )  
  _ |  /      Amazon Linux 2 AMI  
  _ | \ _ | _ |
```

<https://aws.amazon.com/amazon-linux-2/>

[ec2-user@ip-172-31-36-206 ~]\$ ssh ec2-user@13.232.164.224

The authenticity of host '13.232.164.224 (13.232.164.224)' can't be established.

ECDSA key fingerprint is SHA256:7zCbI9kqlJvStC1s+967bRBXdBTazV2nC8BlGfH4I2E.

ECDSA key fingerprint is MD5:24:97:7f:39:e8:a5:b1:c5:d3:ab:25:5c:db:9c:b6:a7.

Are you sure you want to continue connecting (yes/no)? yes

Warning: Permanently added '13.232.164.224' (ECDSA) to the list of known hosts.

Last login: Mon Dec 26 14:25:04 2022 from ec2-13-233-177-5.ap-south-1.compute.amazonaws.com

```
  _ |  ( _ | _ )  
  _ |  /      Amazon Linux 2 AMI  
  _ | \ _ | _ |
```

<https://aws.amazon.com/amazon-linux-2/>

[ec2-user@ip-172-31-45-70 ~]\$

Now checking authorized keys of Node

←↻🔒https://ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0096503d3444cfa9c&osUser=ec2-user&sshPor...A^🌟⚙️📁🔍👤...

awsServices🔍Search[Alt+S]

📁🔍🔔🔍MumbaiA_PRADHAN11🔍🔧📖📄+

📁 EC2📁 EC2 Image Builder

Last login: Mon Dec 26 15:37:44 2022 from 52.66.153.153

__|__|_)
__| (/ Amazon Linux 2 AMI
__|__|__|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-45-70 ~]\$ cd .ssh
[ec2-user@ip-172-31-45-70 .ssh]\$ ls
authorized_keys
[ec2-user@ip-172-31-45-70 .ssh]\$ cat authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQAwfB74OfxvjHWU/HMcAcCsIqCqQPQr7b3672wzDXgnqR6LD9UT9jNzmJxA4CTZSG5nwkUyXWsnGKTFeJBQBIBIE997zgdz8DCHgppNmOO6Jyz3YMWCIitSLxMsi4RizEG8KKM
S/Xsm1U0+cs5jFfi1qv3VpwQGxwh3EBwkGdM4o1A34Z10C8Z48aIr1GVbz1XHxbRmI09g3T5hkW/yJhNjmbW8NazJ/G/MecNrHOqd9nBWGK8IXLn5A30/hej4iGbnFRH9VDN1TXXP+7d0qq066D9KzgiSWmi0H93ej1Suwh+hK
mqG0JEnAIBmtsOtHfZzuRQHfmFllywMUmyC8Tubt Ansible_KP

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQADW9drAiZyVAGYC/EvIsAoN0hRYECZeoCFXgdUrIG7Y0s7GJVQ17ICQrQ1C9oIhCEcpx2nY82o46mTBGWNggghn0ClNguWDVWA9iy11OuChzNix9+SNg1ZMr25KAmuHFs3lhuP
L+yTY/Uhusfr0P0DwN9XUosuVfizC/NrNw3VD+36iyg/8QXP5UCRy8HUFINFyjaLf/bEcCBw7Gv4WvuB99VQFR5u+LXX+Bg7aHyHCc/EbpSKU5WAQObdAyyvVjacPDRIE9CkPPdC2Ss76STC6Ib1WNkgrJITa+UwrSgUKnfdrHN
W4EEE1+RKdZbRemlqaQ+2HcWnTV4U0WBnNwx72rb ec2-user@ip-172-31-36-206.ap-south-1.compute.internal
[ec2-user@ip-172-31-45-70 .ssh]\$

```
ec2-user@ip-172-31-45-70:~  
login as: ec2-user  
Authenticating with public key "Ansible_KP"  
Last login: Mon Dec 26 15:11:26 2022 from 103.133.231.29  
  
  _ |  _ |  _ |  
  _ | (  _ | /   Amazon Linux 2 AMI  
  _ | \  _ |  _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-36-206 ~]$ ssh ec2-user@13.232.164.224  
The authenticity of host '13.232.164.224 (13.232.164.224)' can't be established.  
ECDSA key fingerprint is SHA256:7zCbI9kqlJvStC1s+967bRBXdBTazV2nC8BlGfH4I2E.  
ECDSA key fingerprint is MD5:24:97:7f:39:e8:a5:b1:c5:d3:ab:25:5c:db:9c:b6:a7.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added '13.232.164.224' (ECDSA) to the list of known hosts.  
Last login: Mon Dec 26 14:25:04 2022 from ec2-13-233-177-5.ap-south-1.compute.amazonaws.com  
  
  _ |  _ |  _ |  
  _ | (  _ | /   Amazon Linux 2 AMI  
  _ | \  _ |  _ |  
  
https://aws.amazon.com/amazon-linux-2/  
[ec2-user@ip-172-31-45-70 ~]$
```

Under Master, Child Node

Now Some Ad-hoc Commands from the Master

Again open Putty with master

ec2-user@ip-172-31-36-206:~

login as: ec2-user

Authenticating with public key "Ansible_KP"

Last login: Mon Dec 26 15:34:42 2022 from 103.133.231.29

```
  _ |   _ |   )
  _ | (   _ /   Amazon Linux 2 AMI
  _ |\__|   |
```

<https://aws.amazon.com/amazon-linux-2/>

[ec2-user@ip-172-31-36-206 ~]\$ ansible all -m ping

[WARNING]: Platform linux on host 13.232.164.224 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.

```
13.232.164.224 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
```

[ec2-user@ip-172-31-36-206 ~]\$

Node ip vm connected successfully

Now ad-hoc commands

1) `ansible all -m yum -b -a "name=git"`

install git on Master

ec2-user@ip-172-31-36-206:~

login as: ec2-user

Authenticating with public key "Ansible_KP"

Last login: Mon Dec 26 15:34:42 2022 from 103.133.231.29

```
  _ |  _ |  )  
  _ | (  _ /  Amazon Linux 2 AMI  
  _ |\__|__|
```

<https://aws.amazon.com/amazon-linux-2/>

[ec2-user@ip-172-31-36-206 ~]\$ ansible all -m ping

[WARNING]: Platform linux on host 13.232.164.224 is using the discovered Python interpreter at /usr/bin/python, but future installation of another Python interpreter could change this. See https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.

```
13.232.164.224 | SUCCESS => {  
    "ansible_facts": {  
        "discovered_interpreter_python": "/usr/bin/python"  
    },  
    "changed": false,  
    "ping": "pong"  
}
```

[ec2-user@ip-172-31-36-206 ~]\$ ansible all -m yum -b -a "name=git"

```

}
[ec2-user@ip-172-31-36-206 ~]$ ansible all -m yum -b -a "name=git"
[WARNING]: Platform linux on host 13.232.164.224 is using the discovered Python interpreter at /usr/bin/python, but
future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.
13.232.164.224 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": true,
  "changes": {
    "installed": [
      "git"
    ]
  },
  "msg": "",
  "rc": 0,
  "results": [
    "Loaded plugins: extras_suggestions, langpacks, priorities, update-motd\nResolving Dependencies\n--> Running tran
saction check\n--> Package git.x86_64 0:2.38.1-1.amzn2.0.1 will be installed\n--> Processing Dependency: perl-Git = 2.38
.1-1.amzn2.0.1 for package: git-2.38.1-1.amzn2.0.1.x86_64\n--> Processing Dependency: git-core-doc = 2.38.1-1.amzn2.0.1 f
or package: git-2.38.1-1.amzn2.0.1.x86_64\n--> Processing Dependency: git-core = 2.38.1-1.amzn2.0.1 for package: git-2.38
.1-1.amzn2.0.1.x86_64\n--> Processing Dependency: perl(Term::ReadKey) for package: git-2.38.1-1.amzn2.0.1.x86_64\n--> Pro
cessing Dependency: perl(Git::I18N) for package: git-2.38.1-1.amzn2.0.1.x86_64\n--> Processing Dependency: perl(Git) for
package: git-2.38.1-1.amzn2.0.1.x86_64\n--> Running transaction check\n--> Package git-core.x86_64 0:2.38.1-1.amzn2.0.1
will be installed\n--> Package git-core-doc.noarch 0:2.38.1-1.amzn2.0.1 will be installed\n--> Package perl-Git.noarch
0:2.38.1-1.amzn2.0.1 will be installed\n--> Processing Dependency: perl(Error) for package: perl-Git-2.38.1-1.amzn2.0.1.n
oarch\n--> Package perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2 will be installed\n--> Running transaction check\n--> Pa
ckage perl-Error.noarch 1:0.17020-2.amzn2 will be installed\n--> Finished Dependency Resolution\n\nDependencies Resolved\n\n
=====
Package                               Arch           Ver
sion
=====\nInstalling:\n git                x86_64        2.38.1-1.amzn2.0.1
Dependencies:\n git-core                x86_64        2.38.1-1.amzn2.0.1
2.38.1-1.amzn2.0.1                amzn2-core    2.9 M\n perl-Error                noarch        1:0.17020-2.amzn2
32 k\n perl-Git                    noarch        2.38.1-1.amzn2.0.1
2.30-20.amzn2.0.2                amzn2-core    31 k\n\nTransaction Summary\n=====
  
```

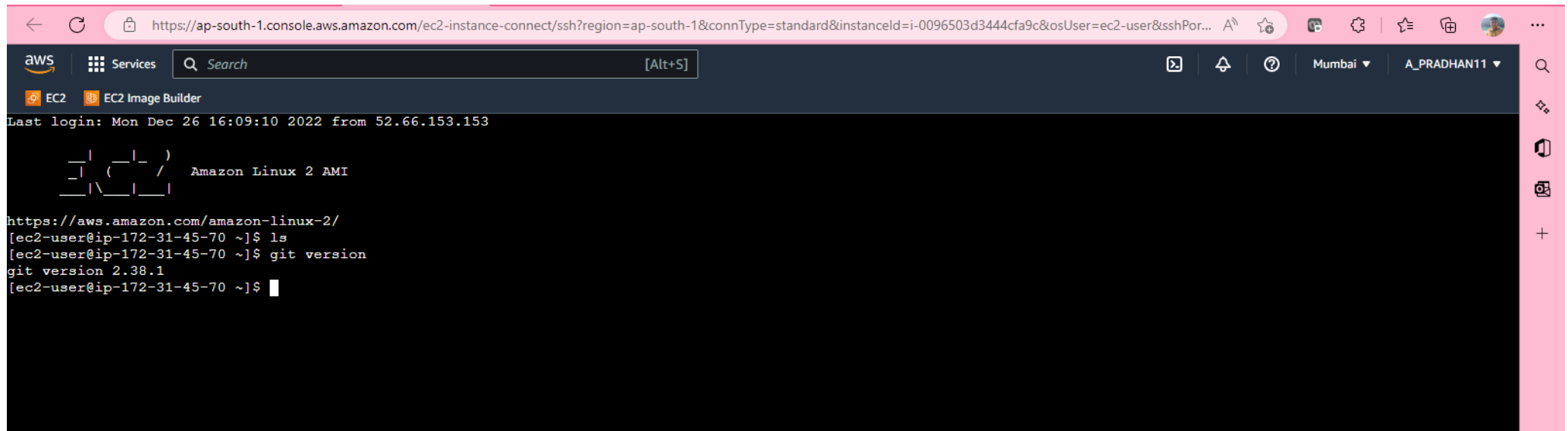
```

2.30-20.amzn2.0.2      amzn2-core      31 k\n\nTransaction Summary\n=====
\nInstall 1 Package (+5 Dependent packages)\n\nTotal download size: 11 M\nInstalled size: 43 M\nDownloading packages:\n-----\nTotal
38 MB/s | 11 MB 00:00 \nRunning transaction check\nRunning transaction
test\nTransaction test succeeded\nRunning transaction\n Installing : git-core-2.38.1-1.amzn2.0.1.x86_64
1/6 \n Installing : git-core-doc-2.38.1-1.amzn2.0.1.noarch 2/6 \n Installing : 1:perl-
Error-0.17020-2.amzn2.noarch 3/6 \n Installing : perl-TermReadKey-2.30-20.amzn2.0.2.x86_64
4/6 \n Installing : perl-Git-2.38.1-1.amzn2.0.1.noarch 5/6 \n Installing : git
-2.38.1-1.amzn2.0.1.x86_64 6/6 \n Verifying : perl-TermReadKey-2.30-20.amzn2.0.2.x86_64
1/6 \n Verifying : git-core-doc-2.38.1-1.amzn2.0.1.noarch 2/6 \n Verifying :
git-2.38.1-1.amzn2.0.1.x86_64 3/6 \n Verifying : git-core-2.38.1-1.amzn2.0.1.x86_64
4/6 \n Verifying : 1:perl-Error-0.17020-2.amzn2.noarch 5/6 \n Verifying
g : perl-Git-2.38.1-1.amzn2.0.1.noarch 6/6 \n\nInstalled:\n git.x86_64 0:2.38.1-1.amzn2.0.1
\n\nDependency Installed:\n git-core.x86_64 0:2.38.1-1.amzn2.0.1
\n git-core-doc.noarch 0:2.38.1-1.amzn2.0.1 \n perl
-Error.noarch 1:0.17020-2.amzn2 \n perl-Git.noarch 0:2.38.1-1.amzn2.0.1
\n perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2 \n\n
Complete!\n"
]
}
[ec2-user@ip-172-31-36-206 ~]$ █

```

Now Git has installed on Master

Then Checking Git on Node:



The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, 'Services' menu, a search bar, and a '[Alt+S]' button. Below this, there's a header for the 'EC2' service, showing 'EC2 Image Builder' and 'Last login: Mon Dec 26 16:09:10 2022 from 52.66.153.153'. The main area displays a terminal window for an Amazon Linux 2 AMI. The terminal output shows the user logging in as 'ec2-user' and running the command 'git version', which returns 'git version 2.38.1'.

```

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-45-70 ~]$ ls
[ec2-user@ip-172-31-45-70 ~]$ git version
git version 2.38.1
[ec2-user@ip-172-31-45-70 ~]$ █

```

Yes, Git available on node also.

Now removing git from the Master

Command: `ansible all -b -a "yum remove git -y"`

```
[ec2-user@ip-172-31-36-206 ~]$ ansible all -b -a "yum remove git -y"
[WARNING]: Consider using the yum module rather than running 'yum'.  If you need to use command because yum is
insufficient you can add 'warn: false' to this command task or set 'command_warnings=False' in ansible.cfg to get rid of
this message.
[WARNING]: Platform linux on host 13.232.164.224 is using the discovered Python interpreter at /usr/bin/python, but
future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.
13.232.164.224 | CHANGED | rc=0 >>
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package git.x86_64 0:2.38.1-1.amzn2.0.1 will be erased
--> Processing Dependency: git = 2.38.1-1.amzn2.0.1 for package: perl-Git-2.38.1-1.amzn2.0.1.noarch
--> Running transaction check
--> Package perl-Git.noarch 0:2.38.1-1.amzn2.0.1 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                Arch          Version                Repository              Size
=====
Removing:
git                    x86_64        2.38.1-1.amzn2.0.1     @amzn2-core             132 k
Removing for dependencies:
perl-Git               noarch        2.38.1-1.amzn2.0.1     @amzn2-core             65 k

Transaction Summary
=====
Remove  1 Package (+1 Dependent package)

Installed size: 197 k
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
```

```
Running transaction
  Erasing      : git-2.38.1-1.amzn2.0.1.x86_64          1/2
  Erasing      : perl-Git-2.38.1-1.amzn2.0.1.noarch      2/2
  Verifying    : perl-Git-2.38.1-1.amzn2.0.1.noarch      1/2
  Verifying    : git-2.38.1-1.amzn2.0.1.x86_64          2/2

Removed:
  git.x86_64 0:2.38.1-1.amzn2.0.1

Dependency Removed:
  perl-Git.noarch 0:2.38.1-1.amzn2.0.1

Complete!
[ec2-user@ip-172-31-36-206 ~]$
```

Command: **ansible all -m yum -b -a "name=java"**

```
[ec2-user@ip-172-31-36-206 ~]$ ansible all -m yum -b -a "name=java"
[WARNING]: Platform linux on host 13.232.164.224 is using the discovered Python
interpreter at /usr/bin/python, but future installation of another Python
interpreter could change this. See https://docs.ansible.com/ansible/2.9/referen
ce_appendices/interpreter_discovery.html for more information.
13.232.164.224 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": true,
  "changes": {
    "installed": [
      "java"
    ]
  },
  "msg": "",
  "rc": 0,
  "results": [
    "Loaded plugins: extras_suggestions, langpacks, priorities, update-motd\nResolving Dependencies\n--> Running tran
saction check\n--> Package java-17-amazon-corretto.x86_64 1:17.0.5+8-1.amzn2.1 will be installed\n--> Processing Depende
ncy: java-17-amazon-corretto-headless(x86_64) = 1:17.0.5+8-1.amzn2.1 for package: 1:java-17-amazon-corretto-17.0.5+8-1.am
zn2.1.x86_64\n--> Processing Dependency: giflib for package: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Pro
cessing Dependency: libXtst for package: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Processing Dependency:
libXrandr for package: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Processing Dependency: libXrender for pac
kage: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Processing Dependency: libXt for package: 1:java-17-amazon
-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Processing Dependency: libXinerama for package: 1:java-17-amazon-corretto-17.0.5
+8-1.amzn2.1.x86_64\n--> Processing Dependency: libXi for package: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n
--> Processing Dependency: libXll for package: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64\n--> Running transactio
n check\n--> Package giflib.x86_64 0:4.1.6-9.amzn2.0.2 will be installed\n--> Processing Dependency: libSM.so.6()(64bit)
for package: giflib-4.1.6-9.amzn2.0.2.x86_64\n--> Processing Dependency: libICE.so.6()(64bit) for package: giflib-4.1.6-
9.amzn2.0.2.x86_64\n--> Package java-17-amazon-corretto-headless.x86_64 1:17.0.5+8-1.amzn2.1 will be installed\n--> Proc
essing Dependency: log4j-cve-2021-44228-cve-mitigations for package: 1:java-17-amazon-corretto-headless-17.0.5+8-1.amzn2.
1.x86_64\n--> Processing Dependency: alsa-lib for package: 1:java-17-amazon-corretto-headless-17.0.5+8-1.amzn2.1.x86_64\n
--> Processing Dependency: dejavu-sans-mono-fonts for package: 1:java-17-amazon-corretto-headless-17.0.5+8-1.amzn2.1.x86_
64\n--> Processing Dependency: dejavu-serif-fonts for package: 1:java-17-amazon-corretto-headless-17.0.5+8-1.amzn2.1.x86_
64\n--> Processing Dependency: dejavu-sans-fonts for package: 1:java-17-amazon-corretto-headless-17.0.5+8-1.amzn2.1.x86_6
```



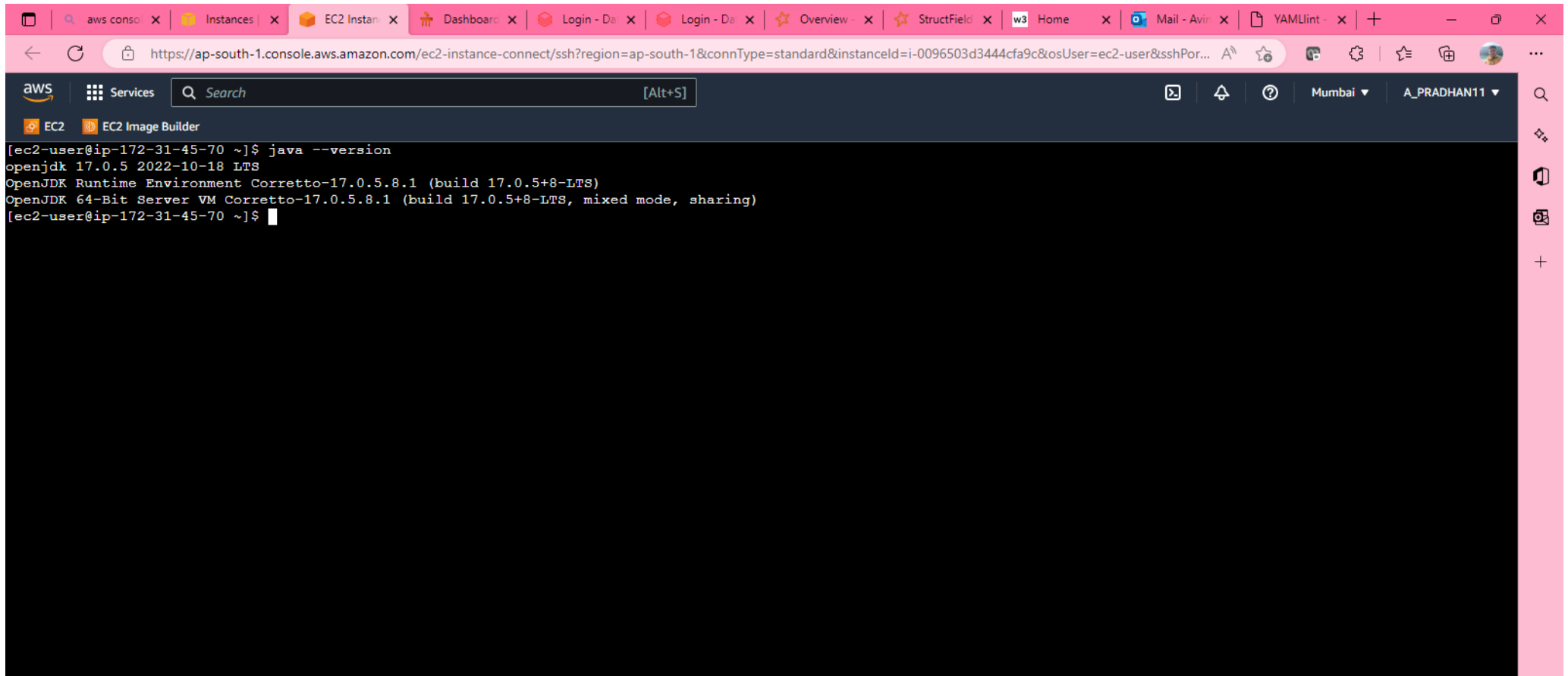
```

ec2-user@ip-172-31-36-206:~
: 1:java-17-amazon-corretto-17.0.5+8-1.amzn2.1.x86_64      10/28 \n Verifying : libXi-1.7.9-1.amzn2.0.2.x86_64
      11/28 \n Verifying : libX11-common-1.6.7-3.amzn2.0.2.noarch      12/28 \n Verif
ying : dejavu-fonts-common-2.33-6.amzn2.noarch      13/28 \n Verifying : libXau-1.0.8-2.1.amzn2.0.2.x86_
64      14/28 \n Verifying : libSM-1.2.2-2.amzn2.0.2.x86_64      15/28 \n V
erifying : libXrender-0.9.10-1.amzn2.0.2.x86_64      16/28 \n Verifying : dejavu-sans-fonts-2.33-6.am
zn2.noarch      17/28 \n Verifying : fontconfig-2.13.0-4.3.amzn2.x86_64      18/28 \
n Verifying : libXt-1.1.5-3.amzn2.0.2.x86_64      19/28 \n Verifying : giflib-4.1.6-9.amzn2.0.
2.x86_64      20/28 \n Verifying : libXinerama-1.1.3-2.1.amzn2.0.2.x86_64      21/
28 \n Verifying : dejavu-sans-mono-fonts-2.33-6.amzn2.noarch      22/28 \n Verifying : libxslt-1.1.28-6.am
zn2.x86_64      23/28 \n Verifying : python-javapackages-3.4.1-11.amzn2.noarch
      24/28 \n Verifying : libXtst-1.2.3-1.amzn2.0.2.x86_64      25/28 \n Verifying : alsa-lib-1.1.4.
1-2.amzn2.x86_64      26/28 \n Verifying : libICE-1.0.9-9.amzn2.0.2.x86_64
      27/28 \n Verifying : javapackages-tools-3.4.1-11.amzn2.noarch      28/28 \n\nInstalled:\n java-17-am
azon-corretto.x86_64 1:17.0.5+8-1.amzn2.1      \n\nDependency Installed:\n alsa-lib.x86_64 0:1.1.4.
1-2.amzn2      \n dejavu-fonts-common.noarch 0:2.33-6.amzn2
      \n dejavu-sans-fonts.noarch 0:2.33-6.amzn2      \n dejavu-sans-mono-fon
ts.noarch 0:2.33-6.amzn2      \n dejavu-serif-fonts.noarch 0:2.33-6.amzn2
      \n fontconfig.x86_64 0:2.13.0-4.3.amzn2      \n fontpackages-fil
esystem.noarch 0:1.44-8.amzn2      \n giflib.x86_64 0:4.1.6-9.amzn2.0.2
      \n java-17-amazon-corretto-headless.x86_64 1:17.0.5+8-1.amzn2.1      \n javapackages
-tools.noarch 0:3.4.1-11.amzn2      \n libICE.x86_64 0:1.0.9-9.amzn2.0.2
      \n libSM.x86_64 0:1.2.2-2.amzn2.0.2      \n libX11.x
86_64 0:1.6.7-3.amzn2.0.2      \n libX11-common.noarch 0:1.6.7-3.amzn2.0.2
      \n libXau.x86_64 0:1.0.8-2.1.amzn2.0.2      \n libX
ext.x86_64 0:1.3.3-3.amzn2.0.2      \n libXi.x86_64 0:1.7.9-1.amzn2.0.2
      \n libXinerama.x86_64 0:1.1.3-2.1.amzn2.0.2      \n
libXrandr.x86_64 0:1.5.1-2.amzn2.0.3      \n libXrender.x86_64 0:0.9.10-1.amzn2.0.2
      \n libXt.x86_64 0:1.1.5-3.amzn2.0.2      \n libxcb.x86_64 0:1.12-1.amzn2.0.2
      \n libXtst.x86_64 0:1.2.3-1.amzn2.0.2      \n libxslt.x86_64 0:1.1.28-6.amzn2
      \n log4j-cve-2021-44228-hotpatch.noarch 0:1.3-7.amzn2      \n python-javapackages.noarch 0:3.
4.1-11.amzn2      \n python-lxml.x86_64 0:3.2.1-4.amzn2.0.3
      \n\nComplete!\n"
    ]
}
[ec2-user@ip-172-31-36-206 ~]$

```

Java installed on Master.

From Node:



The screenshot shows the AWS Management Console interface. The top navigation bar includes tabs for 'aws console', 'Instances', 'EC2 Instance', 'Dashboard', 'Login - De', 'Login - De', 'Overview -', 'StructField', 'w3 Home', 'Mail - Avir', and 'YAMLint'. The address bar shows the URL: <https://ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0096503d3444cfa9c&osUser=ec2-user&sshPort=22>. The main content area displays the 'EC2' and 'EC2 Image Builder' sections. A terminal window is open, showing the command `java --version` and its output:

```
[ec2-user@ip-172-31-45-70 ~]$ java --version
openjdk 17.0.5 2022-10-18 LTS
OpenJDK Runtime Environment Corretto-17.0.5.8.1 (build 17.0.5+8-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.5.8.1 (build 17.0.5+8-LTS, mixed mode, sharing)
[ec2-user@ip-172-31-45-70 ~]$
```

Now, Java also installed on Node vm.