

Instances:

Successfully terminated i-041d495b49048087e

Instances (3) info

Find Instance by attribute or tag (case-sensitive) Any state

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
ansible_client2	i-041d495b49048087e	Shutting-down	t2.micro	-	View alarms +	us-east-2c	ec2-3-137
ansible_client1	i-0dd4c146bb6b9b519	Running	t2.micro	-	View alarms +	us-east-2c	ec2-3-143
ansible_master	i-01a332cd73f2401e7	Running	t2.micro	-	View alarms +	us-east-2c	ec2-18-21

Select an instance

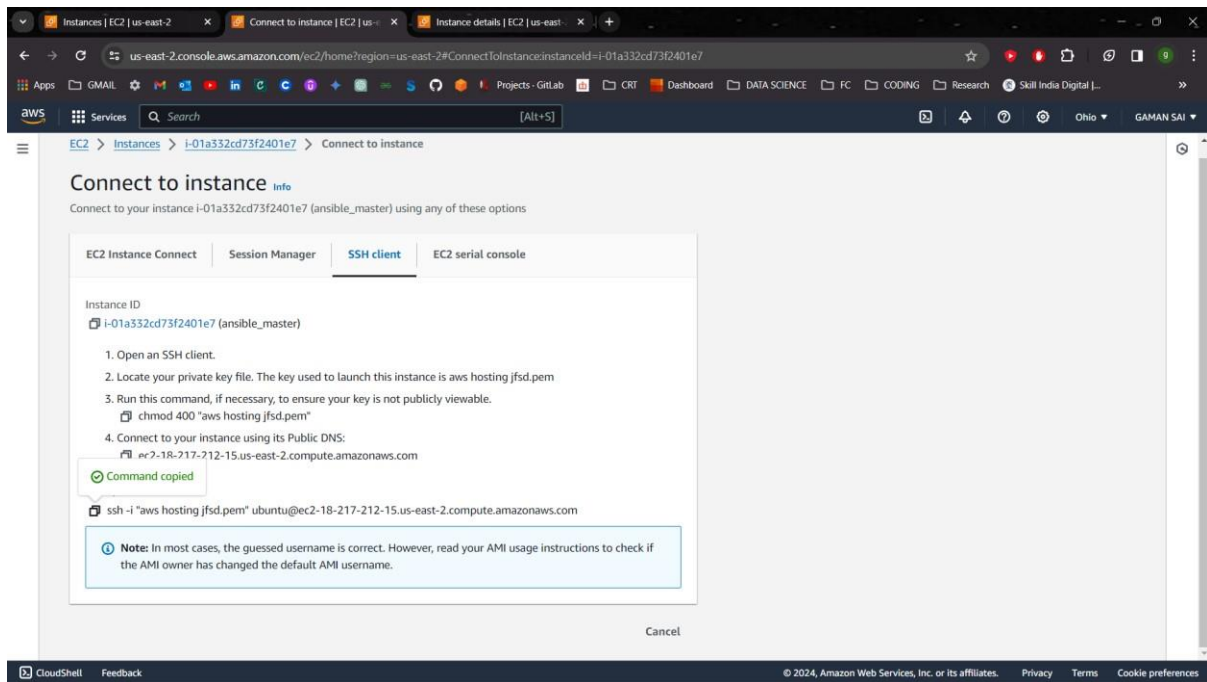
EC2 > Instances > i-01a332cd73f2401e7

Instance summary for i-01a332cd73f2401e7 (ansible_master) info

Updated 3 minutes ago

Instance ID i-01a332cd73f2401e7 (ansible_master)	Public IPv4 address 18.217.212.15 [open address]	Private IPv4 addresses 172.31.36.152
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-18-217-212-15.us-east-2.compute.amazonaws.com [open address]
Hostname type IP name: ip-172-31-36-152.us-east-2.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-36-152.us-east-2.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A) 18.217.212.15 [Public IP]	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. [Learn more]
Auto-assigned IP address 18.217.212.15 [Public IP]	VPC ID vpc-0dbfb95ab6d1c3d19	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-01bfbc4cbfb30ff1f	
IMDSv2 Required		

Details Status and alarms New Monitoring Security Networking Storage Tags



Connecting To instances:

```
Master Client1 Client2
System information as of Wed Mar 6 02:15:30 UTC 2024
System load: 0.0166015625 Processes: 101
Usage of /: 20.3% of 7.57GB Users logged in: 0
Memory usage: 22% IPv4 address for eth0: 172.31.36.152
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-172-31-36-152:~$ |
```

us-east-2.console.aws.amazon.com/ec2/home?region=us-east-2#InstanceDetails:instanceId=i-0dd4c146bb6b9b519

EC2 Dashboard
EC2 Global View
Events

▼ 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

Instance summary for i-0dd4c146bb6b9b519 (ansible_client1) Info

Updated 4 minutes ago

Connect Instance state Actions

Instance ID i-0dd4c146bb6b9b519 (ansible_client1)	Public IPv4 address 3.143.220.83 open address	Private IPv4 addresses 172.31.47.216
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-143-220-83.us-east-2.compute.amazonaws.com open address
Hostname type IP name: ip-172-31-47-216.us-east-2.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-47-216.us-east-2.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 3.143.220.83 [Public IP]	VPC ID vpc-0dbfb95ab6d1c3d19	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-01bfb4cbfb30ff1f	
IMDSv2 Required		

Details Status and alarms New Monitoring Security Networking Storage Tags

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us-east-2.console.aws.amazon.com/ec2/home?region=us-east-2#ConnectToInstance:instanceId=i-0dd4c146bb6b9b519

EC2 > Instances > i-0dd4c146bb6b9b519 > Connect to instance

Connect to instance Info

Connect to your instance i-0dd4c146bb6b9b519 (ansible_client1) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID
i-0dd4c146bb6b9b519 (ansible_client1)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is `aws hosting jfsd.pem`
3. Run this command, if necessary, to ensure your key is not publicly viewable.
`chmod 400 "aws hosting jfsd.pem"`
4. Connect to your instance using its Public DNS:
ec2-3-143-220-83.us-east-2.compute.amazonaws.com

Example:
`ssh -i "aws hosting jfsd.pem" ubuntu@ec2-3-143-220-83.us-east-2.compute.amazonaws.com`

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

Cancel

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```
Master Client
Warning: Permanently added 'ec2-3-143-220-83.us-east-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1018-aws x86_64)

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

System information as of Wed Mar  6 02:16:37 UTC 2024

System load:  0.0          Processes:      96
Usage of /:   20.3% of 7.57GB Users logged in: 0
Memory usage: 21%         IPv4 address for eth0: 172.31.47.216
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

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applicable law.

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

ubuntu@ip-172-31-47-216:~$ |
```

```
Master Client
Warning: Permanently added 'ec2-3-143-220-83.us-east-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1018-aws x86_64)

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

System information as of Wed Mar  6 02:16:37 UTC 2024

System load:  0.0          Processes:      96
Usage of /:   20.3% of 7.57GB Users logged in: 0
Memory usage: 21%         IPv4 address for eth0: 172.31.47.216
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

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

ubuntu@ip-172-31-47-216:~$ python3 --version
Python 3.10.12
ubuntu@ip-172-31-47-216:~$ |
```

sudo apt update sudo apt-add-repository

ppa:ansible/ansible sudo apt update

```
sudo apt install ansible
```

```
sudo vim /etc/ansible/hosts
```

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

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individual files in /usr/share/doc/*/copyright.

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applicable law.

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

ubuntu@ip-172-31-36-152:~$ sudo apt update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1424 kB]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [279 kB]
Get:13 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1508 kB]
Get:14 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [249 kB]
Get:15 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1052 kB]
Get:16 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [237 kB]
Get:17 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [22.1 kB]
Get:18 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [42.1 kB]
Get:19 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [10.1 kB]
Get:20 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [472 B]
Get:21 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [41.7 kB]
Get:22 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [10.5 kB]
Get:23 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 B]
Get:24 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [24.3 kB]
Get:26 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:27 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1208 kB]
Get:28 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:29 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
```

```
Master Client
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.1 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7476 B]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 29.8 MB in 6s (5370 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
35 packages can be upgraded. Run 'apt list --upgradable' to see them.

ubuntu@ip-172-31-36-152:~$ sudo apt-add-repository ppa:ansible/ansible
Repository: 'deb https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/ jammy main'
Description:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or custom code to depl
oy and update your applications- automate in a language that approaches plain English, using SSH, with no agents to install on remote systems.

http://ansible.com/

If you face any issues while installing Ansible PPA, file an issue here:
https://github.com/ansible-community/ppa/issues
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Adding deb entry to /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Adding disabled deb-src entry to /etc/apt/sources.list.d/ansible-ubuntu-ansible-jammy.list
Adding key to /etc/apt/trusted.gpg.d/ansible-ubuntu-ansible.gpg with fingerprint 6125E2A8C77F2818FB7BD15B93C4A3FD7BB9C367
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy InRelease [18.0 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy/main amd64 Packages [1116 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy/main Translation-en [752 B]
Fetched 19.9 kB in 1s (20.8 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-36-152:~$ sudo apt update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
35 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-36-152:~$
```



```
Master Client
Fetches 19.9 kB in 1s (20.8 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-36-152:~$ sudo apt update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
35 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-36-152:~$ sudo apt install ansible
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  ansible-core python3-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko python3-requests-kerberos
  python3-requests-ntlm python3-resolvlib python3-winrm python3-xlrd python3-xlsxwriter python3-yaml python3-zipp python3-zstd sshpass
Suggested packages:
  python-nacl-doc python3-gssapi python3-invoke
The following NEW packages will be installed:
  ansible ansible-core python3-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko python3-requests-kerberos
  python3-requests-ntlm python3-resolvlib python3-winrm python3-xlrd python3-xlsxwriter python3-yaml python3-zipp python3-zstd sshpass
0 upgraded, 14 newly installed, 0 to remove and 35 not upgraded.
Need to get 17.9 MB of archives.
After this operation, 194 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 python3-packaging all 21.3-1 [30.7 kB]
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-resolvlib all 0.8.1-1 [23.6 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 python3-jmespath all 0.10.0-1 [21.7 kB]
Get:4 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-kerberos amd64 1.1.14-3.1build5 [23.0 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 python3-nacl amd64 1.5.0-2 [63.1 kB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-ntlm-auth all 1.4.0-1 [20.4 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 python3-paramiko all 2.9.3-0ubuntu1.2 [134 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-requests-kerberos all 0.12.0-2 [11.9 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-requests-ntlm all 1.1.0-1.1 [6160 B]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-xlrd all 0.12.0-2 [12.6 kB]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-winrm all 0.3.0-2 [21.7 kB]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 python3-xlsxwriter all 0.3.0-2 [11.7 kB]
Get:13 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy/main amd64 ansible-core all 2.16.4-1ppa-jammy [1031 kB]
Get:14 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu jammy/main amd64 ansible all 9.3.0-1ppa-jammy [16.5 MB]
Fetches 17.9 MB in 2s (7785 kB/s)
Selecting previously unselected package python3-packaging.
```

```
Master Client
Selecting previously unselected package python3-requests-kerberos.
Preparing to unpack .../09-python3-requests-kerberos_0.12.0-2_all.deb ...
Unpacking python3-requests-kerberos (0.12.0-2) ...
Selecting previously unselected package python3-requests-ntlm.
Preparing to unpack .../10-python3-requests-ntlm_1.1.0-1.1_all.deb ...
Unpacking python3-requests-ntlm (1.1.0-1.1) ...
Selecting previously unselected package python3-xlrd.
Preparing to unpack .../11-python3-xlrd_0.12.0-2_all.deb ...
Unpacking python3-xlrd (0.12.0-2) ...
Selecting previously unselected package python3-winrm.
Preparing to unpack .../12-python3-winrm_0.3.0-2_all.deb ...
Unpacking python3-winrm (0.3.0-2) ...
Selecting previously unselected package sshpass.
Preparing to unpack .../13-sshpas_1.09-1_amd64.deb ...
Unpacking sshpass (1.09-1) ...
Setting up python3-ntlm-auth (1.1.0-1.1) ...
Setting up python3-resolvlib (0.8.1-1) ...
Setting up python3-kerberos (1.1.14-3.1build5) ...
Setting up sshpass (1.09-1) ...
Setting up python3-xlrd (0.12.0-2) ...
Setting up python3-packaging (21.3-1) ...
Setting up python3-jmespath (0.10.0-1) ...
Setting up python3-requests-kerberos (0.12.0-2) ...
Setting up python3-nacl (1.5.0-2) ...
Setting up python3-requests-ntlm (1.1.0-1.1) ...
Setting up ansible-core (2.16.4-1ppa-jammy) ...
Setting up python3-winrm (0.3.0-2) ...
Setting up ansible (9.3.0-1ppa-jammy) ...
Setting up python3-paramiko (2.9.3-0ubuntu1.2) ...
Processing triggers for man-db (2.10.2-1) ...
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-172-31-36-152:~$ sudo vim /etc/ansible/hosts
ubuntu@ip-172-31-36-152:~$
```

```
Master Client
# 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
#
# You can also use ranges for multiple hosts:
## db-[99:101]-node.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
#
"/etc/ansible/hosts" 54L, 1175B 1,1 Top
```

[httpd_servers]

Client1 ansible_ssh_host=<private ip of client> ansible_ssh_user=ubuntu

```
Master Client
[httpd_servers]
Client1 ansible_ssh_host=172.31.47.216 ansible_ssh_user=ubuntu
#
# 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
#
# You can also use ranges for multiple hosts:
## db-[99:101]-node.example.com
#
# Ex 3: A collection of database servers in the 'dbservers' group:
## [dbservers]
##
## db01.intranet.mydomain.net
-- INSERT --
3,1 Top
```

```
Master Client
Setting up python3-winrm (0.3.0-2) ...
Setting up ansible (9.3.0-lppa-jammy) ...
Setting up python3-paramiko (2.9.3-0ubuntu1.2) ...
Processing triggers for man-db (2.10.2-1) ...
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-172-31-36-152:~$ sudo vim /etc/ansible/hosts
ubuntu@ip-172-31-36-152:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:t6e/kdyWjeweZrZLCy1tRiLfBStY57DY8WfBEc7FB0 ubuntu@ip-172-31-36-152
The key's randomart image is:
+---[RSA 3072]-----+
|
|.. E+|
|.oo o|
|.o.+|
|ooo .|
|S .+ .o|
|==+.+...|
|+.%0o .|
|_0-0+|
|..%o=|
+---[SHA256]-----+
ubuntu@ip-172-31-36-152:~$ cat /home/ubuntu/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQgODs0ZDn5saah2B2KRuQt+5ebZ/c9rECqgPcRjw9Z1N/oZisdKkLYm9SR+5N5CEqETfY9yQwpXxwPjvatjw9LYqmmOgSQQCH6goN0dkidUTQjv4Q3iI8dLb
FN8Ya1DnX9LcVu7H0+nSGy4suNkgxAab7oZ0CV/Lx9jyu3Y0jciaGVHkEK1X+quqisLqSDWumsnjdaYWOXh8HC6ZhrnWfmgQ+PpRsyFFNu9Fs9w/9cjaL3uAAs1RhYyhonypfWwoD8herjAgmMqZ0pnBrEZm
5kA7JSSN14hXPVFTfFex8LQQLT6DvJ3m0YkeVFTjNX+gTphVKdt1SzY60taELfX02Q3xULUj5b5kymEuTtHf21NNpTJfivjX6RxoJjK+fzLH5DcFFoMtX8EaEoK50/xvyrtj20X9YTrJd4nHSEgDff+m0L51LQ
SFstn17vPDP1YfEUSHRw+maaf8zPJ+YTp0sJp3m12gN7/2KtTJn2awdVL3yYRdhcGWH81jfZbGoymPXs= ubuntu@ip-172-31-36-152
ubuntu@ip-172-31-36-152:~$
```

```
Master Client
Warning: Permanently added 'ec2-3-143-220-83.us-east-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1018-aws x86_64)

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

System information as of Wed Mar  6 02:16:37 UTC 2024

System load:  0.0          Processes:      96
Usage of /:   20.3% of 7.57GB Users logged in:  0
Memory usage: 21%         IPv4 address for eth0: 172.31.47.216
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-172-31-47-216:~$ python3 --version
Python 3.10.12
ubuntu@ip-172-31-47-216:~$ cd .ssh
ubuntu@ip-172-31-47-216:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-47-216:~/.ssh$
```



```
Master Client
Warning: Permanently added 'ec2-3-143-220-83.us-east-2.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1018-aws x86_64)

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See "man sudo_root" for details.

ubuntu@ip-172-31-47-216:~$ python3 --version
Python 3.10.12
ubuntu@ip-172-31-47-216:~$ cd .ssh
ubuntu@ip-172-31-47-216:~/.ssh$ ls
authorized_keys
ubuntu@ip-172-31-47-216:~/.ssh$ sudo vi authorized_keys |
```

```
Master Client
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQgQDs0ZDn5saah2B2KRuQt+5ebZ/c9rECqgPcRjw9Z1N/oZisdKkLYw9SR+5N5CEqETfy9yQwpxxwPjvatjw9LYqmwOgSQQCH6goN0dkidUTQjv4Q3iIiBdlb
FNBYa1DnX9LcVu7H0+nSGy4suNkgxAab7oZ8CV/Lx9jyu3Y0jciaGVHkEK1X+quqiS1qSDWumsnjdYVW0Xh8HC6ZhrnWfmGQ+FrRsyFFNu9Fs9w/9cjal3uAAs1RhYyhonypfWwoD8herjAqmWqZ0pnBrEZm
SKA7JSSN14hXPVFTFFex8lQQLT6DyJJm0YKevFTjNX+gTphVKdt15zY60taELfX0203xULUjb5kywEUTfHf2INNpTJfivjX6RxoJjK+fzLH5DcFFoMtX8EaEoK50/xvyrtj20X9YTrJd4nHSEgDff+moLS1LQ
SFstNnL7vPDDIYFEUtSMrW+maaf8zPJ+YTpDsJP3wil2gN7/2KttJn2awdVL3yYRdhcGWH81jfZbGoymPXs= ubuntu@ip-172-31-36-152

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQgCuLy33Npi2pKoAHwXucmH5fWwFcGbAQTwidQKsHycjN2Q0AL1fHL2QItCzEH8n3RFDwFmzstqkVDcv2xKq81Uv2JUunK92irGuJ0nXKXwuezDmnBc8ITHr
yuHuzYP2LYMOarPgXtzQtCtYgDgXLTtggf39Ur6NnhyTJ1ZactLLV5sV+5Lr4ZwpQJe13R8ihjY1RkzE6ZYtusjQkxKrfIEkpgsYUVySkUHGyrjKxVoH4uHf4FHWdKtLY7V/D7gVLHsDKoLmHxmySWbCD+h2
V7ia+JWLwzs08UFTMNQCurr3E1dHsDUXm578iF0P2UF0vTHIH+OLApAn3tgptL+CuIbD aws hosting jfsd

:wq|
```

ansible -m ping all

```
Master Client
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-36-152:~$ sudo vim /etc/ansible/hosts
ubuntu@ip-172-31-36-152:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:t6e/KdyWjjewezrZLCyltRilFb5tY57DY8WfBEC7FB0 ubuntu@ip-172-31-36-152
The key's randomart image is:
+----[RSA 3872]----+
|      . . E+      |
|     .oo o|      |
|    .o.+ |      |
|   .ooo .|      |
|  S .+. o. |      |
| .==+. ...|      |
| +.Noo ..|      |
| .00+  |      |
| .==o   |      |
+----[SHA256]-----+
ubuntu@ip-172-31-36-152:~$ cat /home/ubuntu/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDs0ZDn5saah2B2KRuQt+5ebZ/c9rECqgPcRjW9Z1N/oZisdKkLYm9SR+5N5CEqETfY9yQwpxxwPjvatjw9LYqmwOgSQQCH6goN0dkidUTQjv4Q3iIiBdlb
FNBYa1DnX9LcVu7H0+nSGy4suNkgxAab7oZ0CV/Lx9jyu3Y0jciaGVHkEK1X+quqiSlqSDWumsnjdaYWOXh8HC6ZhrnWfmGQ+FrRsyFFNu9Fs9w/9cjal3uAAs1RhYYhonypfWwoD8herjAgmWqZ0pnBrEZm
5kA7JSSN14hXPVFTfFex8LQQLT6DyJJm0YKeVfTjNX+gTphVkdT15zY60taELfX02Q3xULUjb5kywEUTf2INNpTJfivjX6RxoJjK+fzLH5DcFFoMtX8EaEoK50/xvyrtj20X9YTrJd4nHSEgDff+moL51LQ
SFstNnL7vPDPiYfEUTSMrW+maaf8zPJ+YTpDsjP3wil2gN7/2KtJn2awdVL3yYRdhcGWH81jfZbGoymPXs= ubuntu@ip-172-31-36-152
ubuntu@ip-172-31-36-152:~$ ansible -m ping all
The authenticity of host '172.31.47.216 (172.31.47.216)' can't be established.
ED25519 key fingerprint is SHA256:ScQl4+Ft2Cu+aBQbWfYIghMLvwEz0duN0jg1D0aLWI.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$ |
```

ansible -m ping httpd_servers

ansible -m ping Client1

```
Master Client
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDs0ZDn5saah2B2KRuQt+5ebZ/c9rECqgPcRjW9Z1N/oZisdKkLYm9SR+5N5CEqETfY9yQwpxxwPjvatjw9LYqmwOgSQQCH6goN0dkidUTQ
jv4Q3iIiBdlbFNBYa1DnX9LcVu7H0+nSGy4suNkgxAab7oZ0CV/Lx9jyu3Y0jciaGVHkEK1X+quqiSlqSDWumsnjdaYWOXh8HC6ZhrnWfmGQ+FrRsyFFNu9Fs9w/9cjal3uAAs1RhYYhonyp
fWwoD8herjAgmWqZ0pnBrEZm5kA7JSSN14hXPVFTfFex8LQQLT6DyJJm0YKeVfTjNX+gTphVkdT15zY60taELfX02Q3xULUjb5kywEUTf2INNpTJfivjX6RxoJjK+fzLH5DcFFoMtX8EaEo
K50/xvyrtj20X9YTrJd4nHSEgDff+moL51LQSFstNnL7vPDPiYfEUTSMrW+maaf8zPJ+YTpDsjP3wil2gN7/2KtJn2awdVL3yYRdhcGWH81jfZbGoymPXs= ubuntu@ip-172-31-36-152
ubuntu@ip-172-31-36-152:~$ ansible -m ping all
The authenticity of host '172.31.47.216 (172.31.47.216)' can't be established.
ED25519 key fingerprint is SHA256:ScQl4+Ft2Cu+aBQbWfYIghMLvwEz0duN0jg1D0aLWI.
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Client1 | SUCCESS => {
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    "discovered_interpreter_python": "/usr/bin/python3"
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  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$
ubuntu@ip-172-31-36-152:~$ ansible -m ping httpd_servers
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
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ubuntu@ip-172-31-36-152:~$ ansible -m ping Client1
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$ |
```



```
Master Client
jv4Q3iIiBdlbFNBYa1DnX9LcVu7H0+nSGy4suNkgxAab7oZ0CV/Lx9jyu3Y0jciaGVHkEK1X+quq1SlqSDWumsnjdaYwOXh8HC6ZhrnWfmGQ+FpRsyFfNu9Fs9w/9cjal3uAAs1RhYYhonyp
fWwoD8herjAgmWqZ0pnBrEZm5kA7JSSN14hXPVFTfFex8lQQLT6DyJJm0YKeVfTjNX+gTpHVkdT15zY60taELFX02Q3xULUjbSkYwEUtHF2INnpTJfivjX6RxoJjK+fzLH5DcFFoMtX8EaEo
K50/xvyrtj2OX9YTrJd4nHSEgDff+moLS1LQSFstNnL7vPDPIYfEUtSMrW+maaf8zPJ+YTPDsJP3wil2gN7/2KTtJn2awdVL3yYRdhcGWH81jfZbGoymPXs= ubuntu@ip-172-31-36-152
ubuntu@ip-172-31-36-152:~$ ansible -m ping all
The authenticity of host '172.31.47.216 (172.31.47.216)' can't be established.
ED25519 key fingerprint is SHA256:ScQL4+Ft2Cu+aBQbWPFyIghMLvwEz0duN0jg1D0aLWI.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$ ansible -m ping httpd_servers
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$ ansible -m ping Client1
Client1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-36-152:~$ cd Lab1/
-bash: cd: Lab1/: No such file or directory
ubuntu@ip-172-31-36-152:~$ mkdir Lab1
ubuntu@ip-172-31-36-152:~$ cd Lab1/
ubuntu@ip-172-31-36-152:~/Lab1$ ls
ubuntu@ip-172-31-36-152:~/Lab1$ sudo vi inventory
ubuntu@ip-172-31-36-152:~/Lab1$ ls
inventory
ubuntu@ip-172-31-36-152:~/Lab1$ sudo vi sample_playbook.yml
```

- name: My First Play hosts:

httpd_servers tasks:

- name: Ping my hosts

ansible.builtin.ping:

- name: Print message

ansible.builtin.debug:

msg: Hello World

