Ansible Tasks
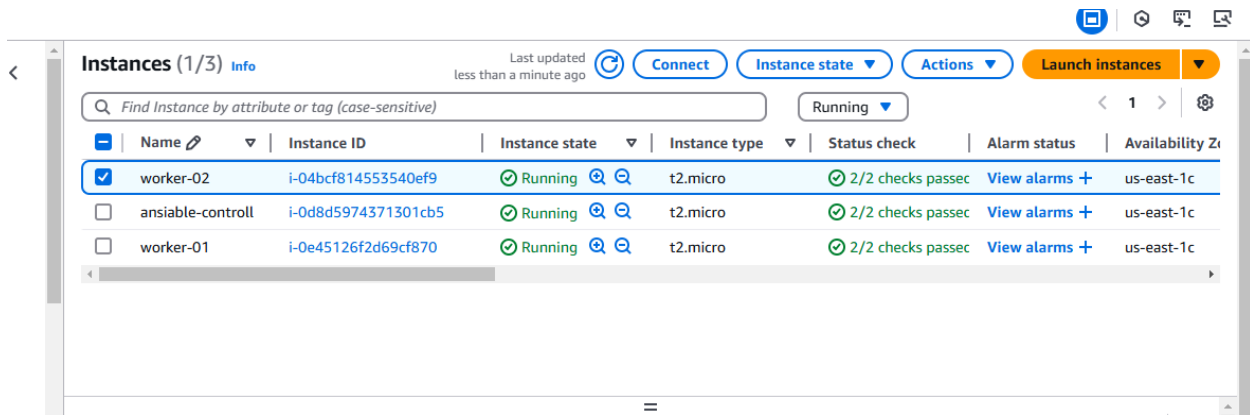
1) Watch ansible-01 video and write down notes.

2) Setup one master and two worker nodes in ansible.


```
e them.
root@ip-172-31-26-77:~# 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-argcomplete python3-dnspython
  python3-kerberos python3-libcloud python3-lockfile
  python3-ntlm-auth python3-passlib python3-requests-ntlm
  python3-resolvelib python3-selinux python3-simplejson
  python3-winrm python3-xmltodict
Suggested packages:
  cowsay sshpass python3-trio python3-aioquic python3-h2
  python3-httpx python3-httpcore python-lockfile-doc
The following NEW packages will be installed:
  ansible ansible-core python3-argcomplete python3-dnspython
  python3-kerberos python3-libcloud python3-lockfile
  python3-ntlm-auth python3-passlib python3-requests-ntlm
  python3-resolvelib python3-selinux python3-simplejson
  python3-winrm python3-xmltodict
0 upgraded, 15 newly installed, 0 to remove and 43 not upgrade
d.
Need to get 19.5 MB of archives.
After this operation, 315 MB of additional disk space will be
used.
Do you want to continue? [Y/n] yes
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/uni
verse amd64 python3-resolvelib all 1.0.1-1 [25.7 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/mai
n amd64 python3-dnspython all 2.6.1-1ubuntu1 [163 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/uni
verse amd64 ansible-core all 2.16.3-0ubuntu2 [1280 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/uni
```

Worker_1

```
$ ssh -i "rakesh.pem" ubuntu@ec2-54-160-194-41.compute-1.amazonaws.com
The authenticity of host 'ec2-54-160-194-41.compute-1.amazonaws.com (54.160.194.
41)' can't be established.
ED25519 key fingerprint is SHA256:FaJAOEO7C9t5L2aNxovzbP3/VnvTzNaNLORkbCsuULs.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-160-194-41.compute-1.amazonaws.com' (ED25519)
 to the list of known hosts.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1018-aws x86_64)

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

 System information as of Wed Dec 11 11:16:02 UTC 2024

  System load:  0.65             Processes:             106
  Usage of /:   24.7% of 6.71GB  Users logged in:       0
  Memory usage: 21%              IPv4 address for enX0: 172.31.19.98
  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
```

Worker_2

```
$ ssh -i "rakesh.pem" ubuntu@ec2-54-152-154-62.compute-1.amazonaws.com
The authenticity of host 'ec2-54-152-154-62.compute-1.amazonaws.com (54.152.154.
62)' can't be established.
ED25519 key fingerprint is SHA256:Dt8IT61OKck9GCkg557sVHY32x1CeVAVdSJ7m+hik7I.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-152-154-62.compute-1.amazonaws.com' (ED25519)
 to the list of known hosts.
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1018-aws x86_64)

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

 System information as of Wed Dec 11 11:39:22 UTC 2024

  System load:  0.08             Processes:             106
  Usage of /:   24.7% of 6.71GB  Users logged in:       0
  Memory usage: 19%              IPv4 address for enX0: 172.31.27.183
  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.
```

3) Execute the adhoc command shared in #dvps-cloud-documents Channel.

Ansible all -m ping

```
Connection to 172.31.23.212 closed.
root@ip-172-31-26-77:/# ansible all -m ping
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
172.31.23.212 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
root@ip-172-31-26-77:/# |
```

Worker-1

```
root@ip-172-31-26-77:/# ansible worker-1 -m ping
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.23.212 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
root@ip-172-31-26-77:/# |
```

Worker-2

```
root@ip-172-31-26-77:/# ansible worker-2 -m ping
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
root@ip-172-31-26-77:/# |
```

Ansible all -m setup

```
root@ip-172-31-26-77:/# ansible all -m setup
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | SUCCESS => {
    "ansible_facts": {
        "ansible_all_ipv4_addresses": [
            "172.31.19.98"
        ],
        "ansible_all_ipv6_addresses": [
            "fe80::8ff:e9ff:feff:7e1b"
        ],
        "ansible_apparmor": {
            "status": "enabled"
        },
        "ansible_architecture": "x86_64",
        "ansible_bios_date": "08/24/2006",
        "ansible_bios_vendor": "Xen",
        "ansible_bios_version": "4.11.amazon",
        "ansible_board_asset_tag": "NA",
        "ansible_board_name": "NA",
        "ansible_board_serial": "NA",
        "ansible_board_vendor": "NA",
        "ansible_board_version": "NA",
        "ansible_chassis_asset_tag": "NA",
        "ansible_chassis_serial": "NA",
        "ansible_chassis_vendor": "Xen",
        "ansible_chassis_version": "NA",
        "ansible_cmdline": {
            "BOOT_IMAGE": "/vmlinuz-6.8.0-1018-aws",
            "console": "ttyS0",
            "nvme_core.io_timeout": "4294967295",
            "panic": "-1",
            "ro": true,
            "root": "PARTUUID=ede263c9-faae-4d70-b586-306f8f26c5d3"
        },
        "ansible_date_time": {
            "date": "2024-12-11",
            "day": "11",
            "epoch": "1733923379",
```

Ansible all –a uptime

```
}
root@ip-172-31-26-77:/# ansible all -a uptime
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | CHANGED | rc=0 >>
 13:24:17 up  2:09,  2 users,  load average: 0.04, 0.02, 0.00
172.31.23.212 | CHANGED | rc=0 >>
 13:24:17 up 12 min,  2 users,  load average: 0.15, 0.06, 0.05
root@ip-172-31-26-77:/# |
```

Ansible all –a "free -m"

```
 13:24:17 up 12 min,  2 users,  load average: 0.15, 0.06, 0.05
root@ip-172-31-26-77:/# ansible all -a "free -m"
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | CHANGED | rc=0 >>
               total        used        free      shared  buff/cache   available
Mem:             957         352         174           0         586         604
Swap:              0           0           0
172.31.23.212 | CHANGED | rc=0 >>
               total        used        free      shared  buff/cache   available
Mem:             957         339         444           0         325         618
Swap:              0           0           0
root@ip-172-31-26-77:/# |
```

Ansible all –m shell –a "uptime"

```
root@ip-172-31-26-77:/# ansible all -m shell -a "uptime"
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | CHANGED | rc=0 >>
 13:28:48 up  2:14,  2 users,  load average: 0.00, 0.00, 0.00
172.31.23.212 | CHANGED | rc=0 >>
 13:28:48 up 17 min,  2 users,  load average: 0.00, 0.02, 0.03
root@ip-172-31-26-77:/# |
```

Ansible all –m shell –a "ps -ef"

```
root@ip-172-31-26-77:/# ansible all -m shell -a "ps -ef"
[WARNING]: Invalid characters were found in group names but no
t replaced, use
-vvvv to see details
172.31.19.98 | CHANGED | rc=0 >>
UID           PID    PPID  C STIME TTY          TIME CMD
root            1       0  0 11:14 ?        00:00:01 /sbin/init
root            2       0  0 11:14 ?        00:00:00 [kthreadd]
root            3       2  0 11:14 ?        00:00:00 [pool_work
queue_release]
root            4       2  0 11:14 ?        00:00:00 [kworker/R
-rcu_g]
root            5       2  0 11:14 ?        00:00:00 [kworker/R
-rcu_p]
root            6       2  0 11:14 ?        00:00:00 [kworker/R
-slub_]
root            7       2  0 11:14 ?        00:00:00 [kworker/R
-netns]
root           10       2  0 11:14 ?        00:00:00 [kworker/0
:0H-events_highpri]
root           12       2  0 11:14 ?        00:00:00 [kworker/R
-mm_pe]
root           13       2  0 11:14 ?        00:00:00 [rcu_tasks
_rude_kthread]
root           14       2  0 11:14 ?        00:00:00 [rcu_tasks
_trace_kthread]
root           15       2  0 11:14 ?        00:00:00 [ksoftirqd
/0]
root           16       2  0 11:14 ?        00:00:00 [rcu_sched
]
root           17       2  0 11:14 ?        00:00:00 [migration
/0]
root           18       2  0 11:14 ?        00:00:00 [idle_inje
ct/0]
```

Install appache2 server

}
root@ip-172-31-26-77:/# ansible all -m apt -a "name=apache2 state=present"
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.23.212 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "cache_update_time": 1731142153,
    "cache_updated": false,
    "changed": false
}
172.31.19.98 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "cache_update_time": 1733915784,
    "cache_updated": false,
    "changed": false
}
root@ip-172-31-26-77:/# |

⚠ Not secure   34.233.121.135

# Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:
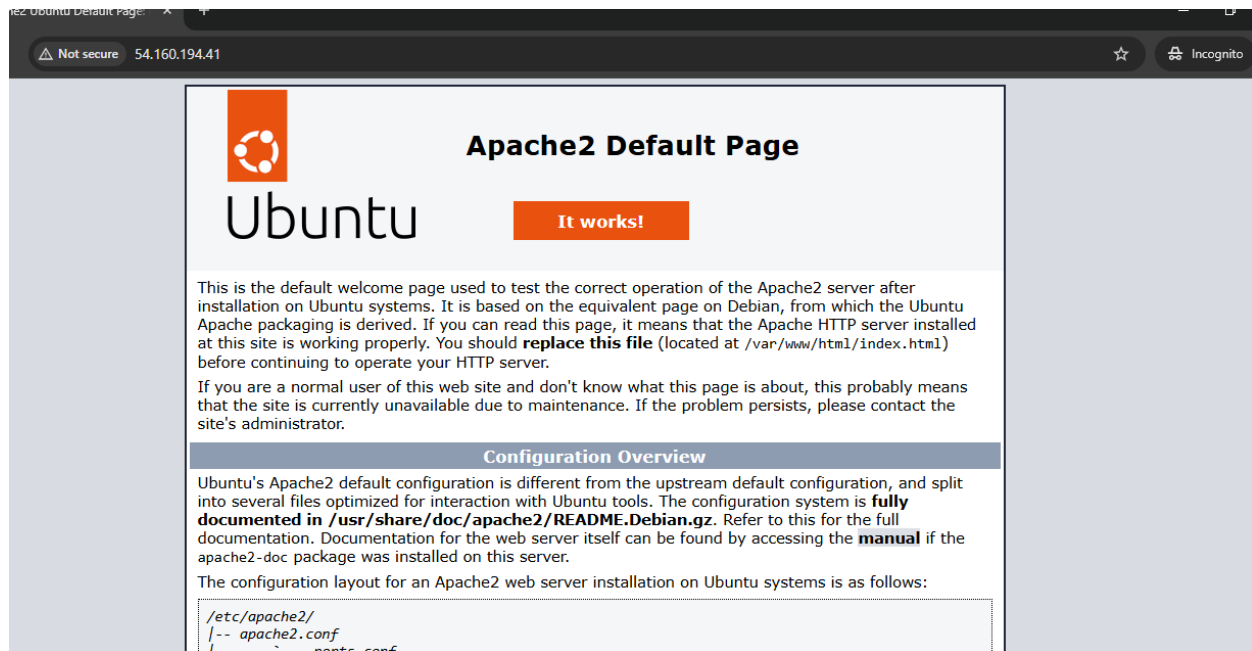
Ansible all –m apt –a "name-apache2 state-absent"


```
root@ip-172-31-26-77:/# ansible all -m apt -a "name=apache2 state=absent"
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.23.212 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": true,
    "stderr": "",
    "stderr_lines": [],
    "stdout": "Reading package lists...\nBuilding dependency tree...\nReading state information...\nThe following packages were automatically install
ed and are no longer required:\n  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3\n  libaprutil1-ldap libaprutil1t64 liblua
5.4-0 ssl-cert\nUse 'apt autoremove' to remove them.\nThe following packages will be REMOVED:\n  apache2\n0 upgraded, 0 newly installed, 1 to remove
and 0 not upgraded.\nAfter this operation, 465 kB disk space will be freed.\n(Reading database ... \r(Reading database ... 5%\r(Reading database ...
10%\r(Reading database ... 15%\r(Reading database ... 20%\r(Reading database ... 25%\r(Reading database ... 30%\r(Reading database ... 35%\r(Reading
database ... 40%\r(Reading database ... 45%\r(Reading database ... 50%\r(Reading database ... 55%\r(Reading database ... 60%\r(Reading database ... 6
5%\r(Reading database ... 70%\r(Reading database ... 75%\r(Reading database ... 80%\r(Reading database ... 85%\r(Reading database ... 90%\r(Reading d
atabase ... 95%\r(Reading database ... 100%\r(Reading database ... 71322 files and directories currently installed.)\r\nRemoving apache2 (2.4.58-1ubu
ntu8.4) ...\r\nProcessing triggers for man-db (2.12.0-4build2) ...\r\nProcessing triggers for ufw (0.36.2-6) ...\r\n",
    "stdout_lines": [
        "Reading package lists...",
        "Building dependency tree...",
        "Reading state information...",
        "The following packages were automatically installed and are no longer required:",
        "  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3",
        "  libaprutil1-ldap libaprutil1t64 liblua5.4-0 ssl-cert",
        "Use 'apt autoremove' to remove them.",
        "The following packages will be REMOVED:",
        "  apache2",
        "0 upgraded, 0 newly installed, 1 to remove and 0 not upgraded.",
        "After this operation, 465 kB disk space will be freed.",
        "(Reading database ... ",
        "(Reading database ... 5%",
        "(Reading database ... 10%",
```

        "stdout_lines": [
            "Reading package lists...",
            "Building dependency tree...",
            "Reading state information...",
            "The following packages were automatically installed and are no longer required:",
            "   apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3",
            "   libaprutil1-ldap libaprutil1t64 liblua5.4-0 ssl-cert",
            "Use 'apt autoremove' to remove them.",
            "The following packages will be REMOVED:",
            "   apache2",
            "0 upgraded, 0 newly installed, 1 to remove and 43 not upgraded.",
            "After this operation, 465 kB disk space will be freed.",
            "(Reading database ... ",
            "(Reading database ... 5%",
            "(Reading database ... 10%",
            "(Reading database ... 15%",
            "(Reading database ... 20%",
            "(Reading database ... 25%",
            "(Reading database ... 30%",
            "(Reading database ... 35%",
            "(Reading database ... 40%",
            "(Reading database ... 45%",
            "(Reading database ... 50%",
            "(Reading database ... 55%",
            "(Reading database ... 60%",
            "(Reading database ... 65%",
            "(Reading database ... 70%",
            "(Reading database ... 75%",
            "(Reading database ... 80%",
            "(Reading database ... 85%",
            "(Reading database ... 90%",
            "(Reading database ... 95%",
            "(Reading database ... 100%",
            "(Reading database ... 71322 files and directories currently installed.)",
            "Removing apache2 (2.4.58-1ubuntu8.5) ...",

Ansible all –m file –a "path=/home/rakesh.txt state=touch mode=0755"

root@ip-172-31-26-77:/# ansible all -m file -a "path=/home/testfile state=touch mode=0755"
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
172.31.19.98 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": true,
    "dest": "/home/testfile",
    "gid": 0,
    "group": "root",
    "mode": "0755",
    "owner": "root",
    "size": 0,
    "state": "file",
    "uid": 0
}
172.31.23.212 | CHANGED => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": true,
    "dest": "/home/testfile",
    "gid": 0,
    "group": "root",
    "mode": "0755",
    "owner": "root",
    "size": 0,
    "state": "file",
    "uid": 0
}
root@ip-172-31-26-77:/#

root@ip-172-31-19-98:~# ls
rakesh.txt snap
root@ip-172-31-19-98:~#

root@ip-172-31-23-212:/# cd ~
root@ip-172-31-23-212:~# ls
rakesh.txt snap
root@ip-172-31-23-212:~#