cprime

Ansible Automation: Installation, Configuration, and Deployment Tasks

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Summary of Tasks

1. **Manual Installation of Ansible on Any OS** – Install Ansible manually using a Bash script.
2. **Ansible Configuration File (ansible.cfg)** – Set up configuration parameters for inventory, logging, privilege escalation, SSH settings, and performance tuning.
3. **Creating a Secure User with Password** – Generate a secure password using OpenSSL and create a user with Ansible.
4. **Playbook 1: Install Apache and Copy HTML** – Install and start Apache, then copy an HTML file to the web server.
5. **Adding an HTML Page to the Web Server** – Deploy a pre-defined HTML page using Ansible.
6. **Running the Playbook** – Execute the playbook to install Apache and deploy the web page, then verify the setup.
7. **Playbook 2: Install Multiple Packages** – Install utilities like PHP, wget, git, vim, and nano using Ansible.
8. **Managing Multiple Inventories** – Use multiple inventory files for different environments like development and production.
9. **Automatic Installation and Testing with Ping** – Automate Ansible installation and test connectivity across multiple servers.

TASK 1 :

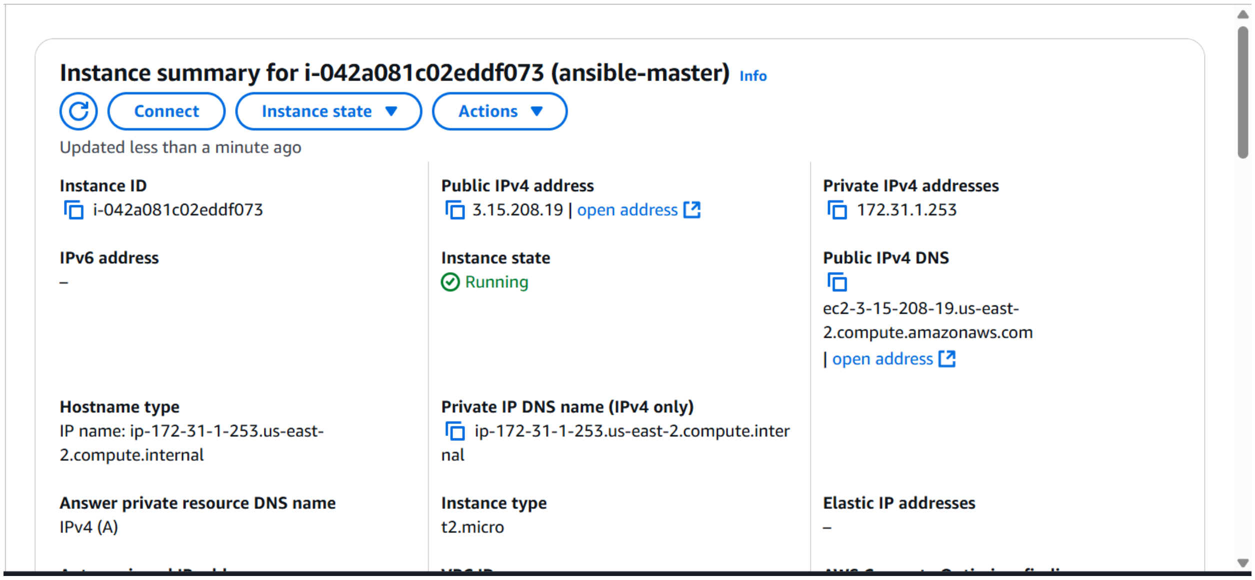
Manual Installation of Ansible on Any OS

Ansible requires **Python** and **pip** to be installed. The following **Bash script** installs Ansible on a machine:

Bash Script: Install Ansible

Bash script

```
#! /bin/bash

sudo yum install python-pip -y

sudo pip install ansible
```



Instance summary for i-042a081c02eddf073 (ansible-master)

Updated less than a minute ago

Instance ID
i-042a081c02eddf073

Public IPv4 address
3.15.208.19 | open address

Private IPv4 addresses
172.31.1.253

IPv6 address
–

Instance state
Running

Public IPv4 DNS
ec2-3-15-208-19.us-east-2.compute.amazonaws.com
| open address

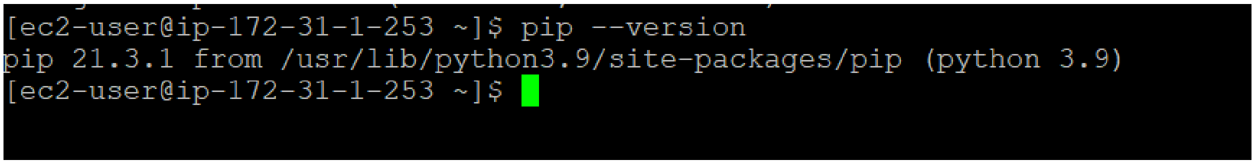
Hostname type
IP name: ip-172-31-1-253.us-east-2.compute.internal

Private IP DNS name (IPv4 only)
ip-172-31-1-253.us-east-2.compute.internal

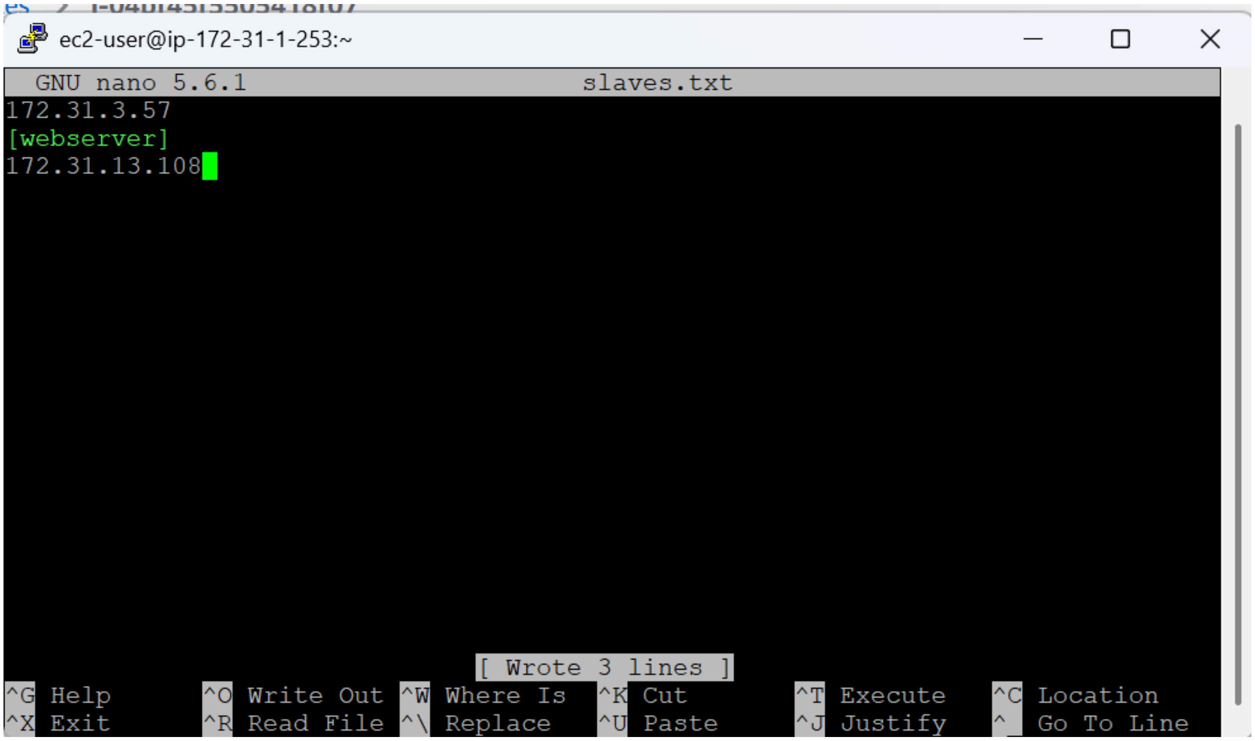
Answer private resource DNS name
IPv4 (A)

Instance type
t2.micro

Elastic IP addresses
–



```
[ec2-user@ip-172-31-1-253 ~]$ pip --version
pip 21.3.1 from /usr/lib/python3.9/site-packages/pip (python 3.9)
[ec2-user@ip-172-31-1-253 ~]$
```



ec2-user@ip-172-31-1-253:~

```
  GNU nano 5.6.1                         slaves.txt
172.31.3.57
[webserver]
172.31.13.108

                             [ Wrote 3 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^  Go To Line
```

Ansible Configuration File (ansible.cfg)

Ansible reads configurations from the file **`ansible.cfg`**

config file for ansible -- http://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 = $HOME/.ansible/hosts remote_tmp = $HOME/.ansible/tmp forks = 150 sudo_user = root transport = smart

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 = smart

additional paths to search for roles in, colon separated

roles_path = $HOME/.ansible/roles

uncomment this to disable SSH key host checking

host_key_checking = False

logging is off by default unless this path is defined

if so defined, consider logrotate

```
log_path = /var/log/ansible.log
```

default module name for /usr/bin/ansible

```
module_name = shell
```

set plugin path directories here, separate with colons

```
action_plugins = /usr/share/ansible_plugins/action_plugins:$HOME/.ansible/plugins/action_plugins
callback_plugins = /usr/share/ansible_plugins/callback_plugins:$HOME/.ansible/plugins/callback_plugins
connection_plugins =
/usr/share/ansible_plugins/connection_plugins:$HOME/.ansible/plugins/connection_plugins
lookup_plugins = /usr/share/ansible_plugins/lookup_plugins:$HOME/.ansible/plugins/lookup_plugins
vars_plugins = /usr/share/ansible_plugins/vars_plugins:$HOME/.ansible/plugins/vars_plugins  filter_plugins
= /usr/share/ansible_plugins/filter_plugins:$HOME/.ansible/plugins/filter_plugins
```

by default callbacks are not loaded for /bin/ansible, enable this if you

want, for example, a notification or logging callback to also apply to

/bin/ansible runs

```
#bin_ansible_callbacks = False
```

the CA certificate path used for validating SSL certs. This path

should exist on the controlling node, not the target nodes

common locations:

RHEL/CentOS: /etc/pki/tls/certs/ca-bundle.crt

Fedora : /etc/pki/ca-trust/extracted/pem/tls-ca-bundle.pem

Ubuntu : /usr/share/ca-certificates/cacert.org/cacert.org.crt

```
ca_file_path = /usr/share/ca-certificates/cacert.org/cacert.org.crt
```

if set to a persistent type (not 'memory', for example 'redis') fact values from previous runs in Ansible will be stored. This may be useful when wanting to use, for example, IP information from one group of servers without having to talk to them in the same playbook run to get their current IP information.

```
fact_caching = jsonfile fact_caching_connection  = $HOME/.ansible/facts  fact_caching_timeout  = 600
```

retry files

```
#retry_files_enabled  = False retry_files_save_path  = ~/.ansible/retry
```

```
[privilege_escalation]  #become=True  #become_method=sudo  #become_user=root
#become_ask_pass=False
```

```
[ssh_connection]
```

ssh arguments to use

Leaving off ControlPersist will result in poor performance, so use paramiko on older platforms rather than removing it

```
ssh_args  = -o ControlMaster=auto  -o ControlPersist=60s
```

The path to use for the ControlPath sockets. This defaults to "%(directory)s/ansible-ssh-%%h-%%p-%%r", however on some systems with very long hostnames or very long path names (caused by long user names or deeply nested home directories) this can exceed the character limit on file socket names (108 characters for most platforms). In that case, you may wish to shorten the string below.

Example:

control_path = %(directory)s/%%h-%%r

```
control_path = %(directory)s/ansible-ssh-%%h-%%p-%%r
```

Enabling pipelining reduces the number of SSH operations required to execute a module on the remote server. This can result in a significant performance improvement when enabled, however when using "sudo:" you must first disable 'requiretty' in /etc/sudoers

By default, this option is disabled to preserve compatibility with sudoers configurations that have requiretty (the default on many distros).

```
pipelining = True
```

if True, make ansible use scp if the connection type is ssh (default is sftp)

```
scp_if_ssh = True
```

[accelerate] accelerate_port = 5099 accelerate_timeout = 30 accelerate_connect_timeout = 5.0

The daemon timeout is measured in minutes. This time is measured

from the last activity to the accelerate daemon.

accelerate_daemon_timeout = 30

If set to yes, accelerate_multi_key will allow multiple

private keys to be uploaded to it, though each user must

have access to the system via SSH to add a new key. The default

is "no".

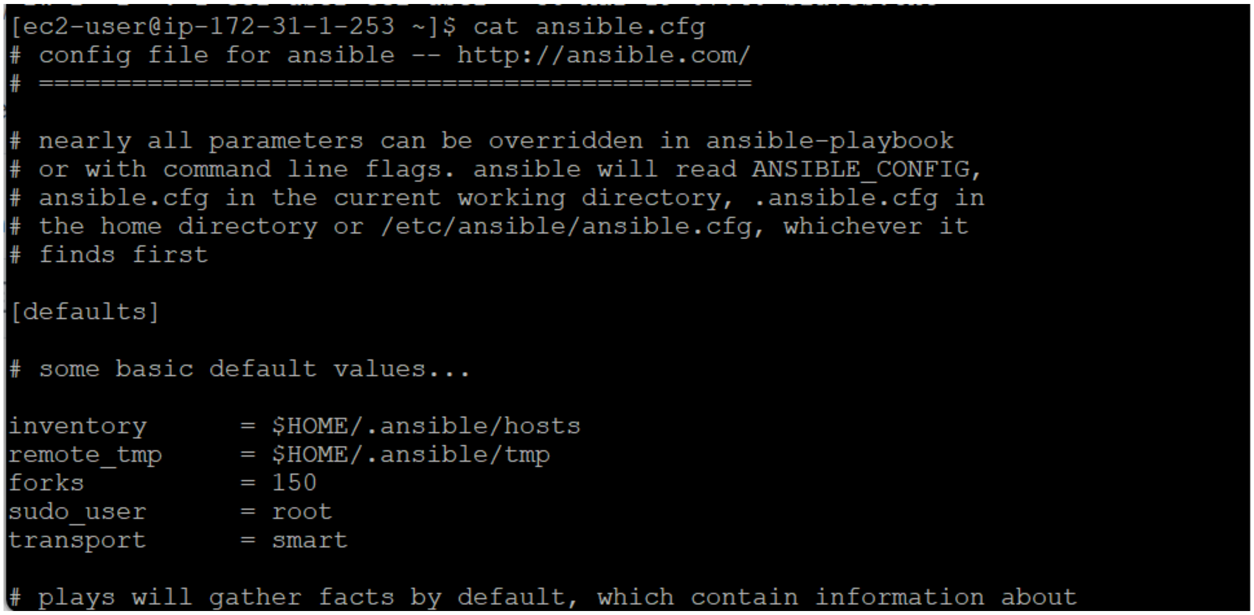
#accelerate_multi_key = yes

[selinux]**file systems that require special treatment when dealing with security context**

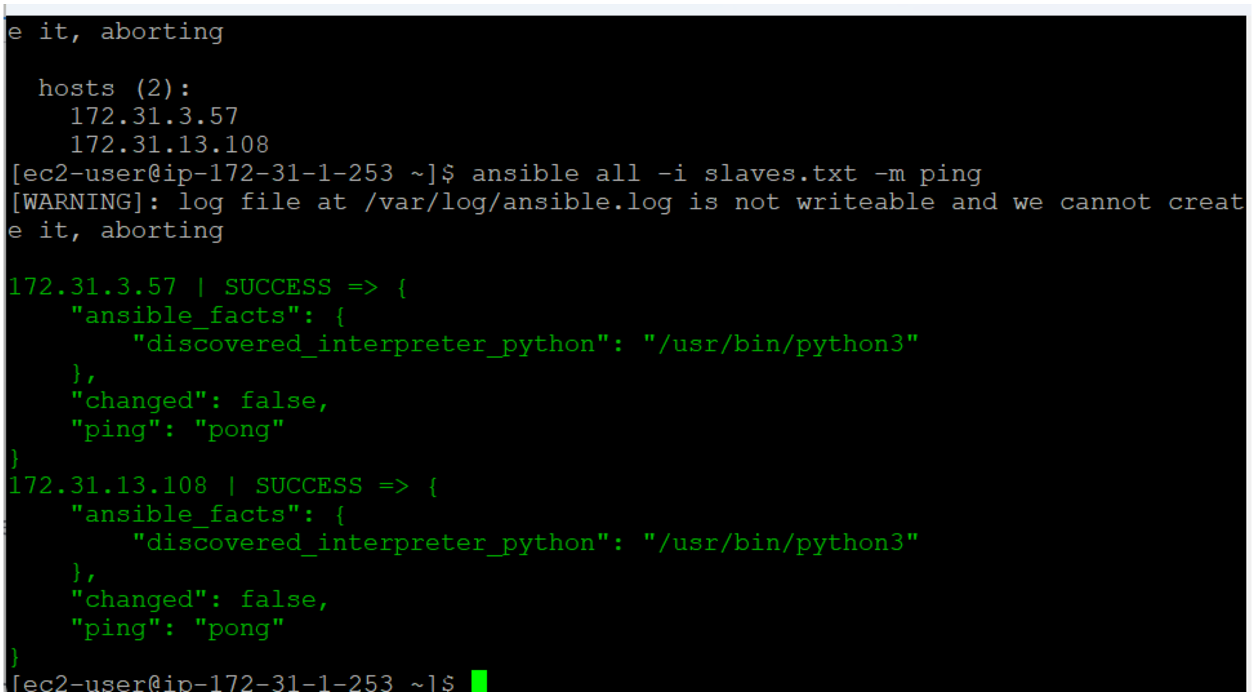
the default behaviour that copies the existing context or uses the user default

needs to be changed to use the file system dependent context.

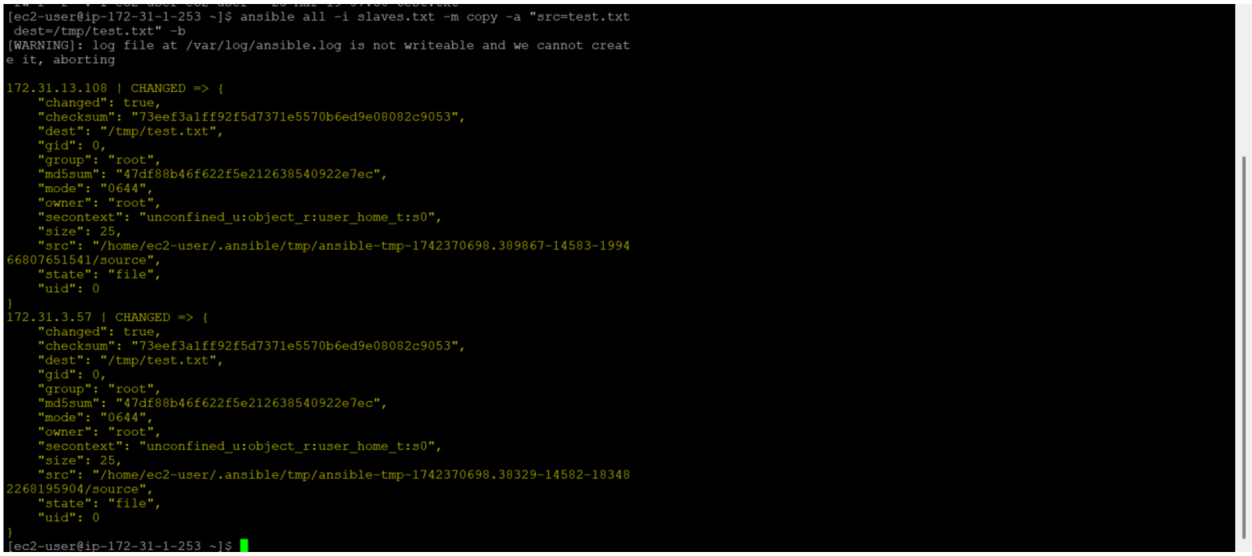
#special_context_filesystems=nfs,vboxsf,fuse,ramfs



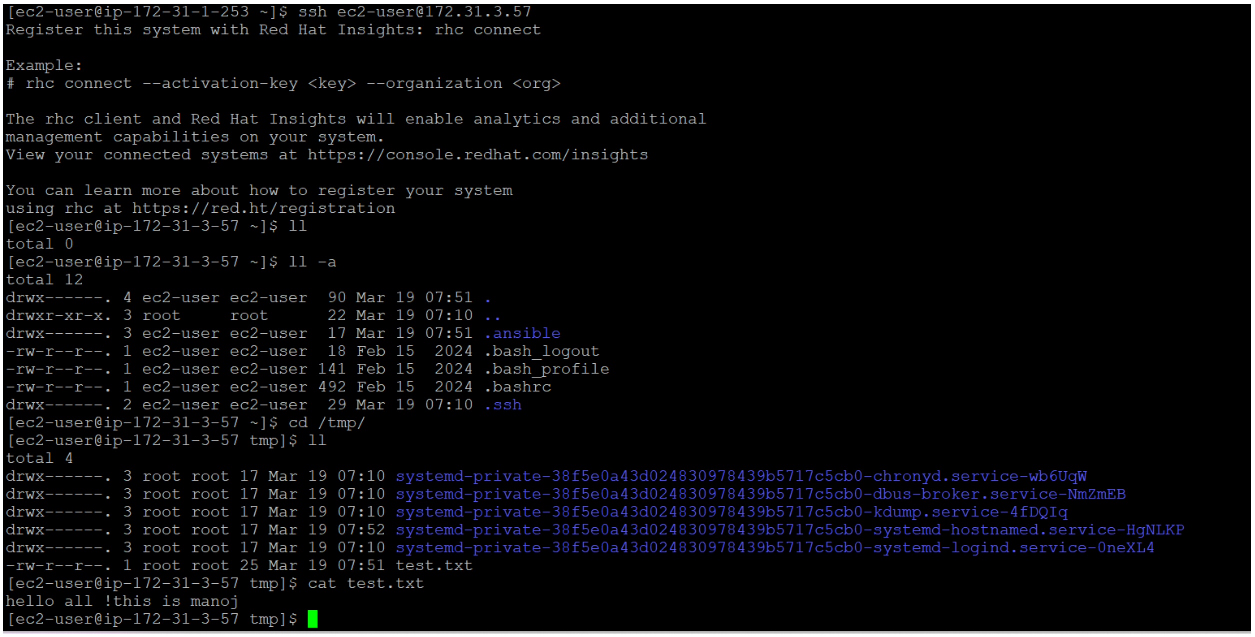
```
[ec2-user@ip-172-31-1-253 ~]$ cat ansible.cfg
# config file for ansible -- http://ansible.com/
# ==============================================

# 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      = $HOME/.ansible/hosts
remote_tmp     = $HOME/.ansible/tmp
forks          = 150
sudo_user      = root
transport      = smart

# plays will gather facts by default, which contain information about
```



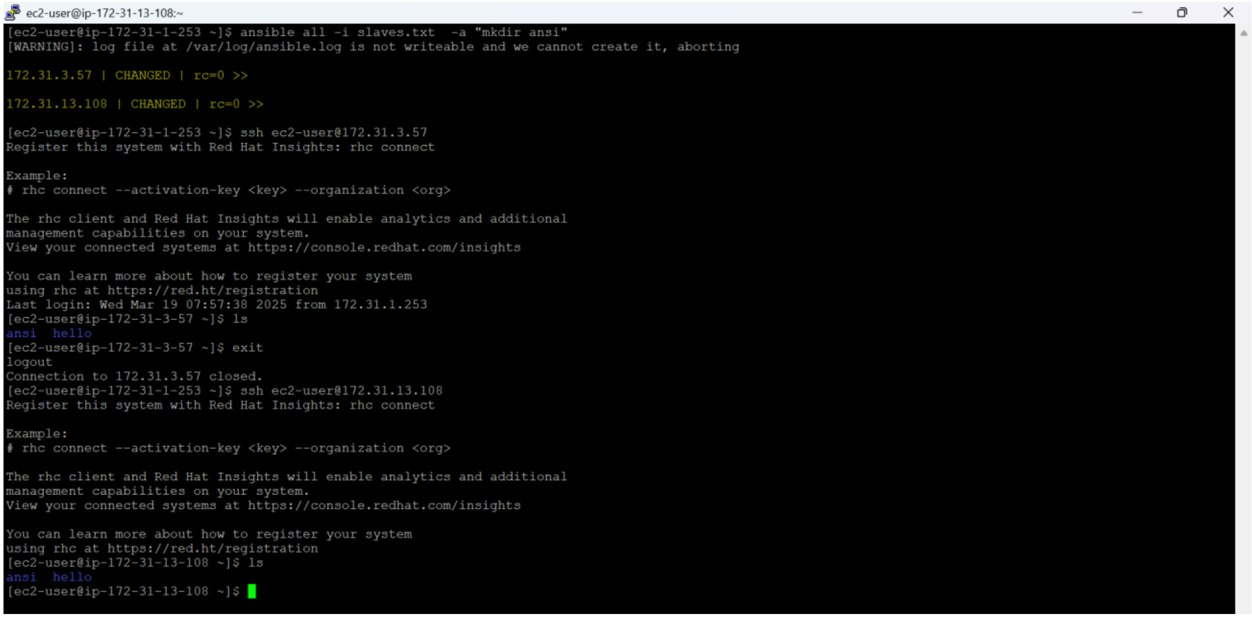
```
e it, aborting

  hosts (2):
    172.31.3.57
    172.31.13.108
[ec2-user@ip-172-31-1-253 ~]$ ansible all -i slaves.txt -m ping
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot creat
e it, aborting

172.31.3.57 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
172.31.13.108 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3"
    },
    "changed": false,
    "ping": "pong"
}
[ec2-user@ip-172-31-1-253 ~]$
```



```
[ec2-user@ip-172-31-1-253 ~]$ ansible all -i slaves.txt -m copy -a "src=test.txt
 dest=/tmp/test.txt" -b
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot creat
e it, aborting

172.31.13.108 | CHANGED => {
    "changed": true,
    "checksum": "73eef3a1ff92f5d7371e5570b6ed9e08082c9053",
    "dest": "/tmp/test.txt",
    "gid": 0,
    "group": "root",
    "md5sum": "47df88b46f622f5e212638540922e7ec",
    "mode": "0644",
    "owner": "root",
    "secontext": "unconfined_u:object_r:user_home_t:s0",
    "size": 25,
    "src": "/home/ec2-user/.ansible/tmp/ansible-tmp-1742370698.389867-14583-1994
66807651541/source",
    "state": "file",
    "uid": 0
}
172.31.3.57 | CHANGED => {
    "changed": true,
    "checksum": "73eef3a1ff92f5d7371e5570b6ed9e08082c9053",
    "dest": "/tmp/test.txt",
    "gid": 0,
    "group": "root",
    "md5sum": "47df88b46f622f5e212638540922e7ec",
    "mode": "0644",
    "owner": "root",
    "secontext": "unconfined_u:object_r:user_home_t:s0",
    "size": 25,
    "src": "/home/ec2-user/.ansible/tmp/ansible-tmp-1742370698.38329-14582-18348
2268195904/source",
    "state": "file",
    "uid": 0
}
[ec2-user@ip-172-31-1-253 ~]$
```



```
[ec2-user@ip-172-31-1-253 ~]$ ssh ec2-user@172.31.3.57
Register this system with Red Hat Insights: rhc connect

Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
[ec2-user@ip-172-31-3-57 ~]$ ll
total 0
[ec2-user@ip-172-31-3-57 ~]$ ll -a
total 12
drwx------. 4 ec2-user ec2-user  90 Mar 19 07:51 .
drwxr-xr-x. 3 root     root      22 Mar 19 07:10 ..
drwx------. 3 ec2-user ec2-user  17 Mar 19 07:51 .ansible
-rw-r--r--. 1 ec2-user ec2-user  18 Feb 15  2024 .bash_logout
-rw-r--r--. 1 ec2-user ec2-user 141 Feb 15  2024 .bash_profile
-rw-r--r--. 1 ec2-user ec2-user 492 Feb 15  2024 .bashrc
drwx------. 2 ec2-user ec2-user  29 Mar 19 07:10 .ssh
[ec2-user@ip-172-31-3-57 ~]$ cd /tmp/
[ec2-user@ip-172-31-3-57 tmp]$ ll
total 4
drwx------. 3 root root 17 Mar 19 07:10 systemd-private-38f5e0a43d024830978439b5717c5cb0-chronyd.service-wb6UqW
drwx------. 3 root root 17 Mar 19 07:10 systemd-private-38f5e0a43d024830978439b5717c5cb0-dbus-broker.service-NmZmEB
drwx------. 3 root root 17 Mar 19 07:10 systemd-private-38f5e0a43d024830978439b5717c5cb0-kdump.service-4fDQIq
drwx------. 3 root root 17 Mar 19 07:52 systemd-private-38f5e0a43d024830978439b5717c5cb0-systemd-hostnamed.service-HgNLKP
drwx------. 3 root root 17 Mar 19 07:10 systemd-private-38f5e0a43d024830978439b5717c5cb0-systemd-logind.service-0neXL4
-rw-r--r--. 1 root root 25 Mar 19 07:51 test.txt
[ec2-user@ip-172-31-3-57 tmp]$ cat test.txt
hello all !this is manoj
[ec2-user@ip-172-31-3-57 tmp]$ 
```



ec2-user@ip-172-31-13-108:~

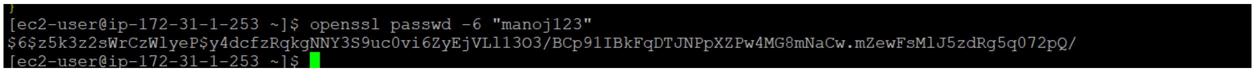
```
[ec2-user@ip-172-31-1-253 ~]$ ansible all -i slaves.txt  -a "mkdir ansi"
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.3.57 | CHANGED | rc=0 >>

172.31.13.108 | CHANGED | rc=0 >>

[ec2-user@ip-172-31-1-253 ~]$ ssh ec2-user@172.31.3.57
Register this system with Red Hat Insights: rhc connect

Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
Last login: Wed Mar 19 07:57:38 2025 from 172.31.1.253
[ec2-user@ip-172-31-3-57 ~]$ ls
ansi  hello
[ec2-user@ip-172-31-3-57 ~]$ exit
logout
Connection to 172.31.3.57 closed.
[ec2-user@ip-172-31-1-253 ~]$ ssh ec2-user@172.31.13.108
Register this system with Red Hat Insights: rhc connect

Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
[ec2-user@ip-172-31-13-108 ~]$ ls
ansi  hello
[ec2-user@ip-172-31-13-108 ~]$ 
```

PASSWD :

To create a user with a secure password, use OpenSSL:

Generate a Secure Hashed Password

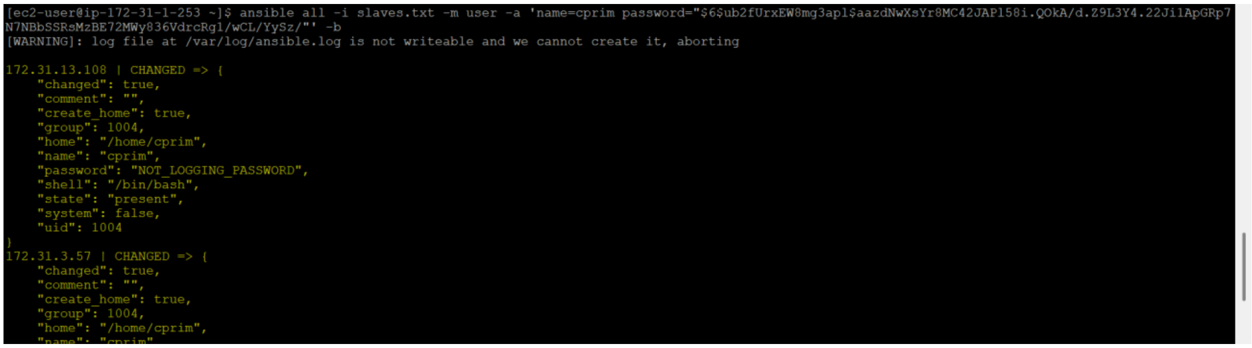
Openssl passwd –6 “manoj123”



```
}
[ec2-user@ip-172-31-1-253 ~]$ openssl passwd -6 "manoj123"
$6$z5k3z2sWrCzWlyeP$y4dcfzRqkgNNY3S9uc0vi6ZyEjVLl13O3/BCp91IBkFqDTJNPpXZPw4MG8mNaCw.mZewFsMlJ5zdRg5q072pQ/
[ec2-user@ip-172-31-1-253 ~]$
```

Create a User with Ansible

Ansible all –i slaves.txt -m user –a ‘name=name password=”hashed_key” ’ -b

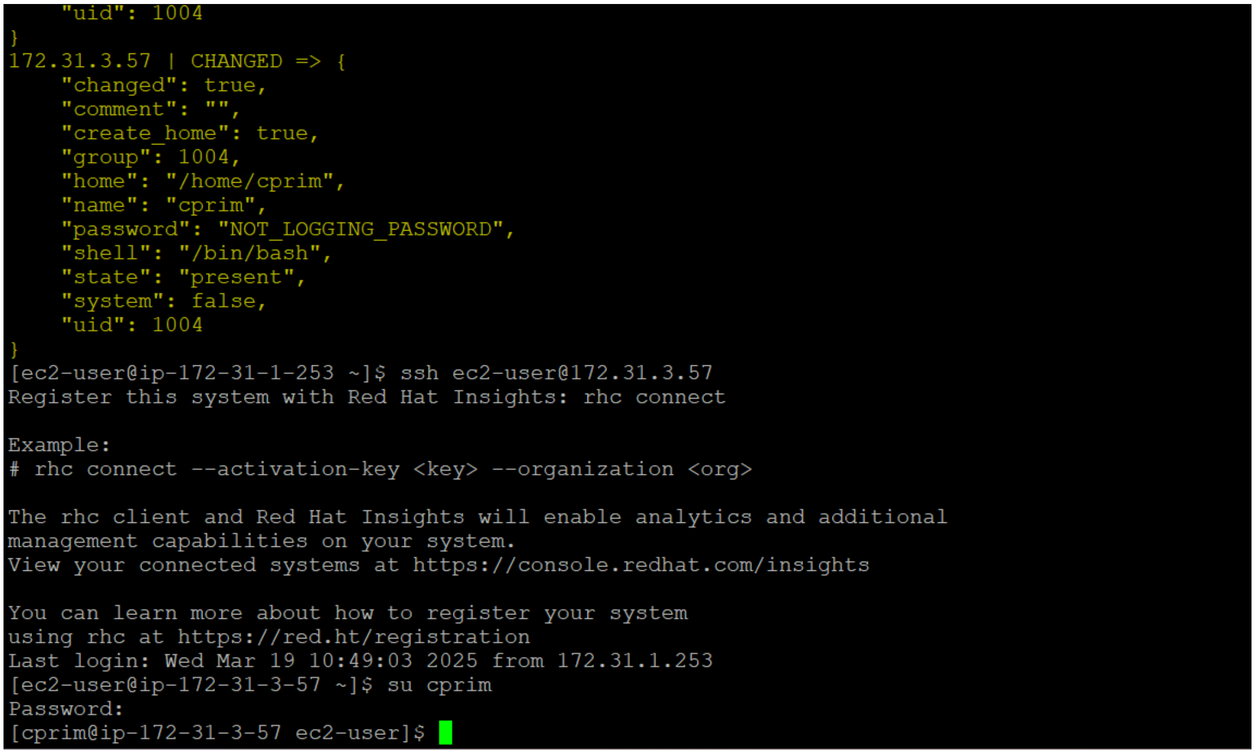


```
[ec2-user@ip-172-31-1-253 ~]$ ansible all -i slaves.txt -m user -a 'name=cprim password="$6$ub2fUrxEW8mg3apl$aazdNwXsYr8MC42JAP158i.QOkA/d.Z9L3Y4.22JilApGRp7
N7NBbSSRsMzBE72MWy836VdrcRg1/wCL/YySz/"' -b
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.13.108 | CHANGED => {
    "changed": true,
    "comment": "",
    "create_home": true,
    "group": 1004,
    "home": "/home/cprim",
    "name": "cprim",
    "password": "NOT_LOGGING_PASSWORD",
    "shell": "/bin/bash",
    "state": "present",
    "system": false,
    "uid": 1004
}
172.31.3.57 | CHANGED => {
    "changed": true,
    "comment": "",
    "create_home": true,
    "group": 1004,
    "home": "/home/cprim",
    "name": "cprim"
```

Ssh ec2-user@172.31.3.57

Su cprim

Testing with SSH and Switching Users



```
    "uid": 1004
}
172.31.3.57 | CHANGED => {
    "changed": true,
    "comment": "",
    "create_home": true,
    "group": 1004,
    "home": "/home/cprim",
    "name": "cprim",
    "password": "NOT_LOGGING_PASSWORD",
    "shell": "/bin/bash",
    "state": "present",
    "system": false,
    "uid": 1004
}
[ec2-user@ip-172-31-1-253 ~]$ ssh ec2-user@172.31.3.57
Register this system with Red Hat Insights: rhc connect

Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
Last login: Wed Mar 19 10:49:03 2025 from 172.31.1.253
[ec2-user@ip-172-31-3-57 ~]$ su cprim
Password:
[cprim@ip-172-31-3-57 ec2-user]$
```

Playbook 1: Install Apache and Copy HTML

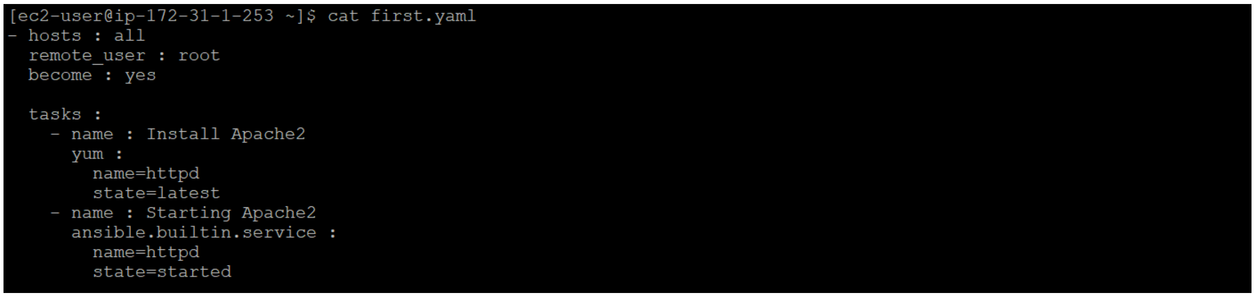
This playbook installs Apache (`httpd`), starts it, and copies an HTML file to the server.

Yaml file :

```
- hosts : all
  remote_user : ec2-user
  become : yes

  tasks :
    - name : Install Apache2
      yum :
        name=httpd
        state=latest
    - name : Starting Apache2
      ansible.builtin.service :
        name=httpd
        state=started
```

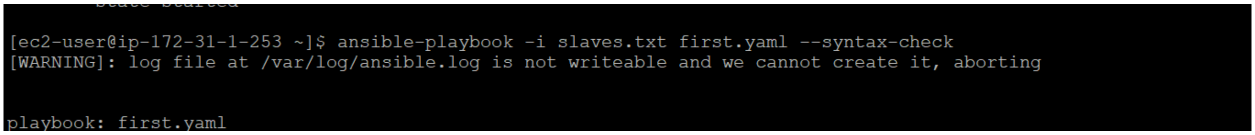
Steps :

1.create a yaml file



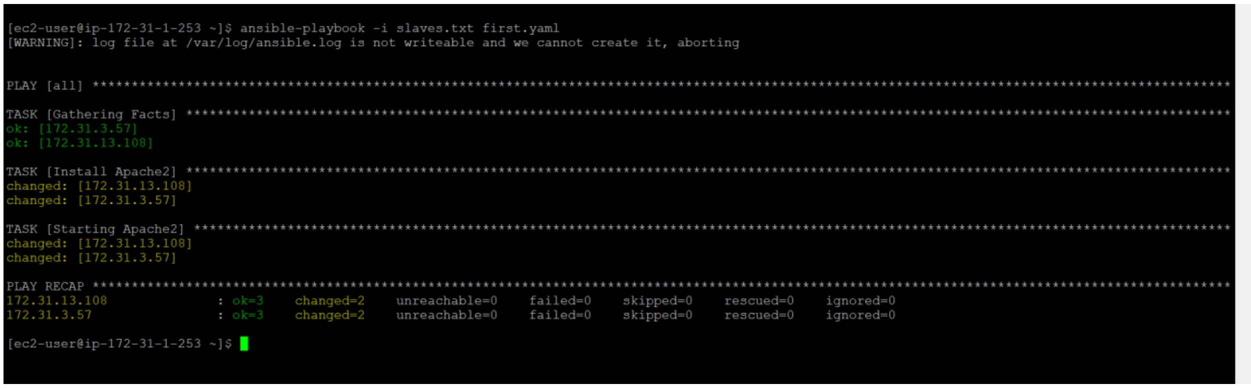
```
[ec2-user@ip-172-31-1-253 ~]$ cat first.yaml
- hosts : all
  remote_user : root
  become : yes

  tasks :
    - name : Install Apache2
      yum :
        name=httpd
        state=latest
    - name : Starting Apache2
      ansible.builtin.service :
        name=httpd
        state=started
```

2.check the syntax



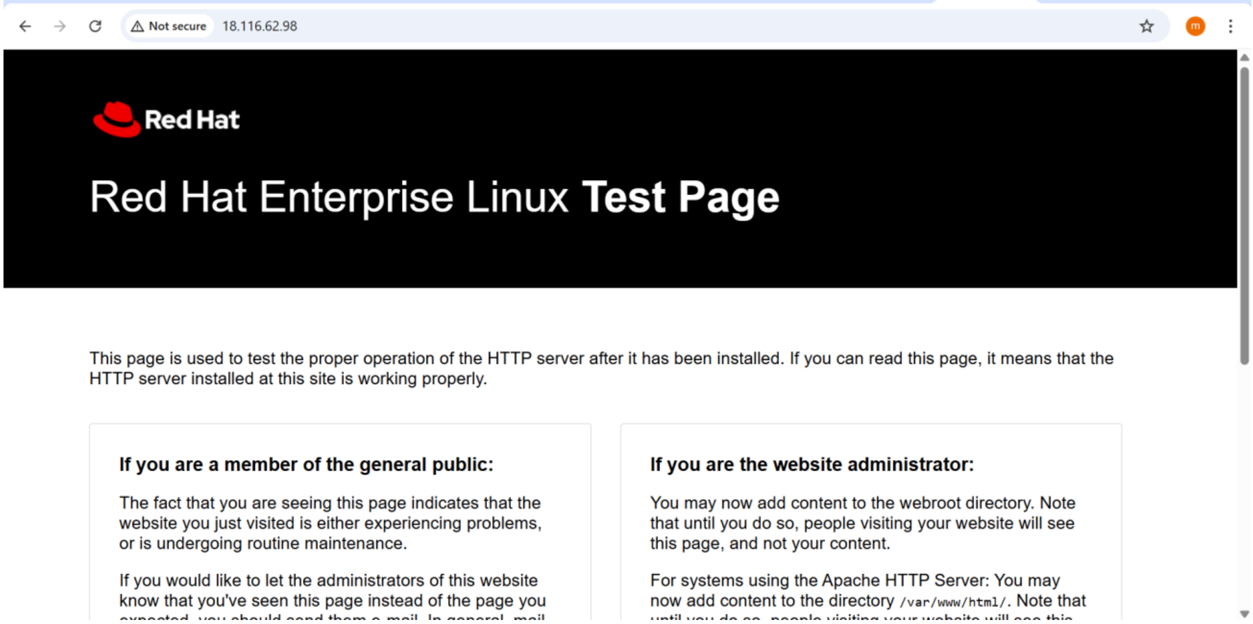
```
        state=started

[ec2-user@ip-172-31-1-253 ~]$ ansible-playbook -i slaves.txt first.yaml --syntax-check
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting


playbook: first.yaml
```

3.execute the play-book



```
[ec2-user@ip-172-31-1-253 ~]$ ansible-playbook -i slaves.txt first.yaml
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting


PLAY [all] ***********************************************************************************************************************************

TASK [Gathering Facts] ***********************************************************************************************************************
ok: [172.31.3.57]
ok: [172.31.13.108]

TASK [Install Apache2] ***********************************************************************************************************************
changed: [172.31.13.108]
changed: [172.31.3.57]

TASK [Starting Apache2] **********************************************************************************************************************
changed: [172.31.13.108]
changed: [172.31.3.57]

PLAY RECAP ***********************************************************************************************************************************
172.31.13.108              : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
172.31.3.57                : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[ec2-user@ip-172-31-1-253 ~]$
```

4.Result



Red Hat Enterprise Linux **Test Page**

This page is used to test the proper operation of the HTTP server after it has been installed. If you can read this page, it means that the HTTP server installed at this site is working properly.

If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

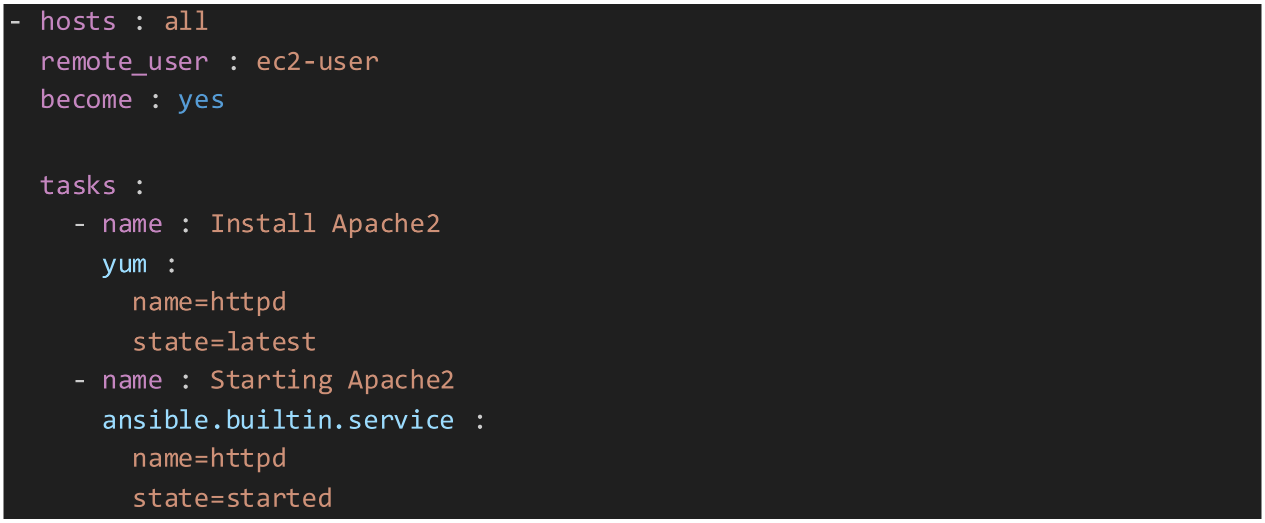
If you would like to let the administrators of this website know that you've seen this page instead of the page you

If you are the website administrator:

You may now add content to the webroot directory. Note that until you do so, people visiting your website will see this page, and not your content.

For systems using the Apache HTTP Server: You may now add content to the directory `/var/www/html/`. Note that

Adding the html page and copy paste the file from master to slave



```
- hosts : all
  remote_user : ec2-user
  become : yes

  tasks :
    - name : Install Apache2
      yum :
        name=httpd
        state=latest
    - name : Starting Apache2
      ansible.builtin.service :
        name=httpd
        state=started
    - name : copy index.html
      copy :
        src=index.html
        dest=/var/www/html/index.html
```

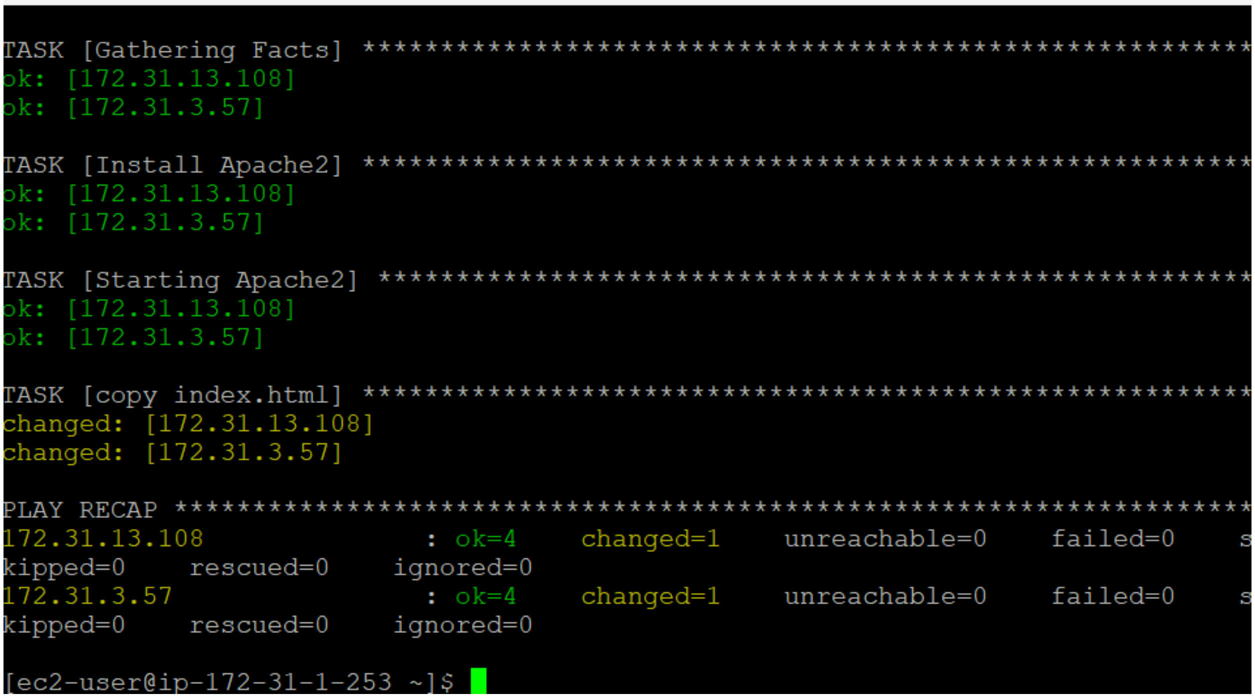
Adding an HTML Page to the Web Server

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>DevOps Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin: 50px;
    }
    h1 {
      color: blue;
    }
  </style>
</head>
<body>
  <h1>Welcome to DevOps Automation!</h1>
  <p>This page is managed by Ansible.</p>
</body>
```

</html>

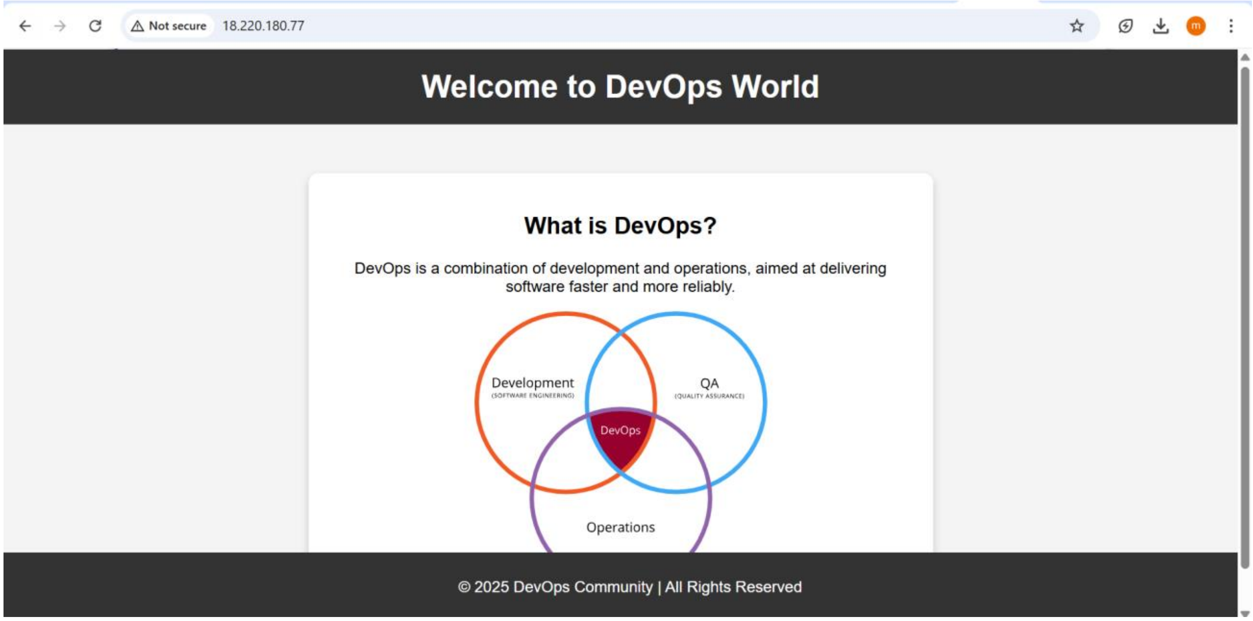
Run the Playbook to Copy the HTML File

ansible-playbook -i inventory_prod apache_setup.yml



```
TASK [Gathering Facts] **********************************************************
ok: [172.31.13.108]
ok: [172.31.3.57]

TASK [Install Apache2] **********************************************************
ok: [172.31.13.108]
ok: [172.31.3.57]

TASK [Starting Apache2] *********************************************************
ok: [172.31.13.108]
ok: [172.31.3.57]

TASK [copy index.html] **********************************************************
changed: [172.31.13.108]
changed: [172.31.3.57]

PLAY RECAP **********************************************************************
172.31.13.108              : ok=4    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.3.57                : ok=4    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0

[ec2-user@ip-172-31-1-253 ~]$
```

Check the Web Page



Welcome to DevOps World

What is DevOps?

DevOps is a combination of development and operations, aimed at delivering software faster and more reliably.

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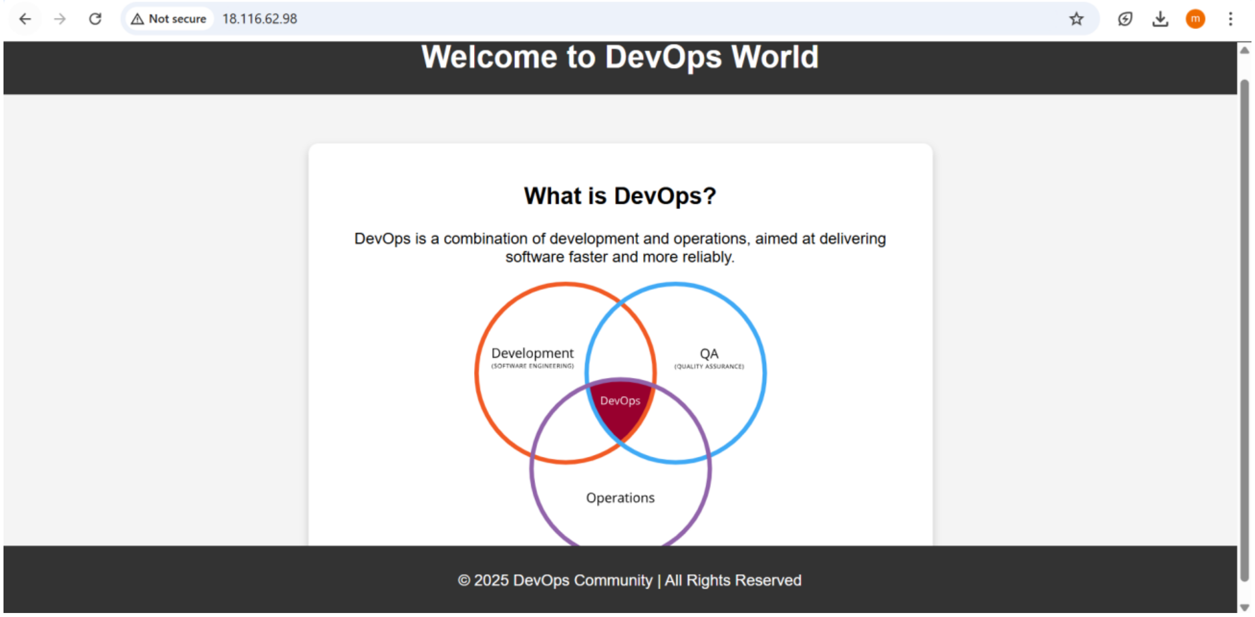

Welcome to DevOps World

What is DevOps?

DevOps is a combination of development and operations, aimed at delivering software faster and more reliably.

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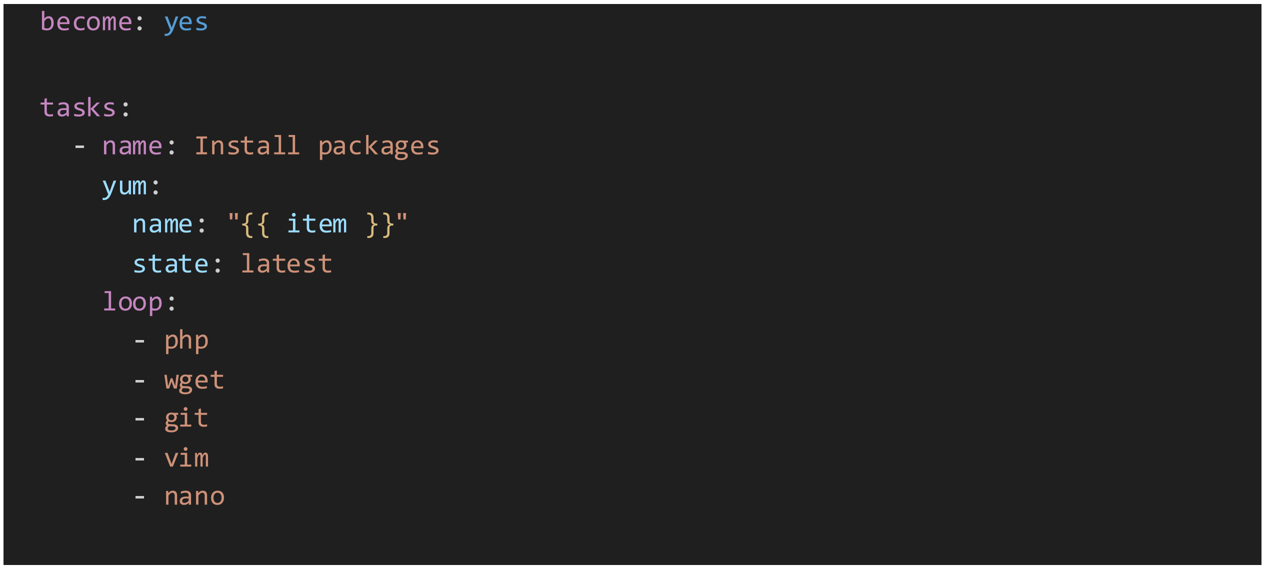
Playbook 2: Install Multiple Packages

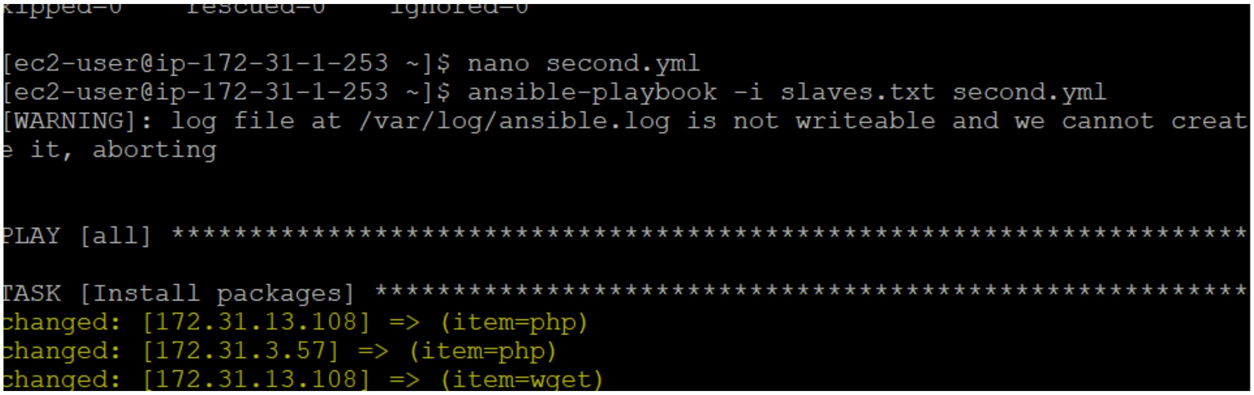
This playbook installs multiple utilities like PHP, wget, git, vim, and nano.

Second.yml

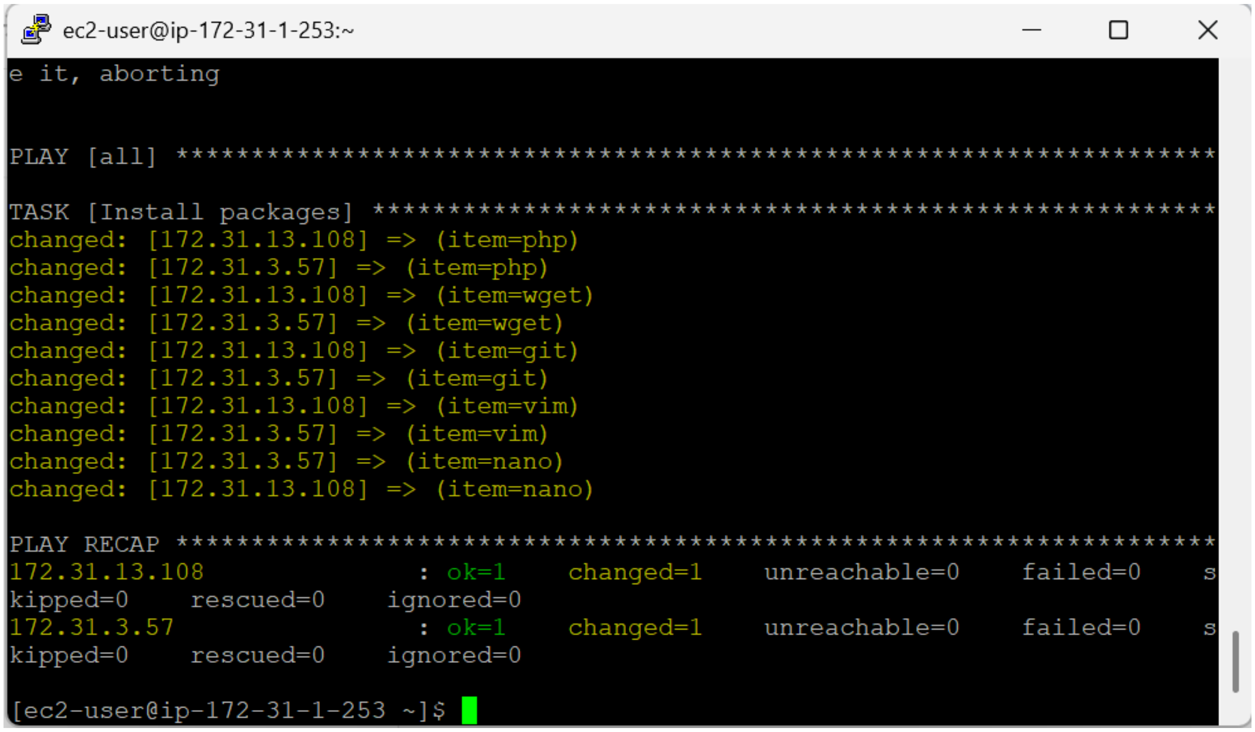
```yaml
- hosts: all
  remote_user: ec2-user
```



```
  become: yes

  tasks:
    - name: Install packages
      yum:
        name: "{{ item }}"
        state: latest
      loop:
        - php
        - wget
        - git
        - vim
        - nano
```



```
kipped=0    rescued=0    ignored=0

[ec2-user@ip-172-31-1-253 ~]$ nano second.yml
[ec2-user@ip-172-31-1-253 ~]$ ansible-playbook -i slaves.txt second.yml
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot creat
e it, aborting


PLAY [all] **********************************************************************

TASK [Install packages] *********************************************************
changed: [172.31.13.108] => (item=php)
changed: [172.31.3.57] => (item=php)
changed: [172.31.13.108] => (item=wget)
```

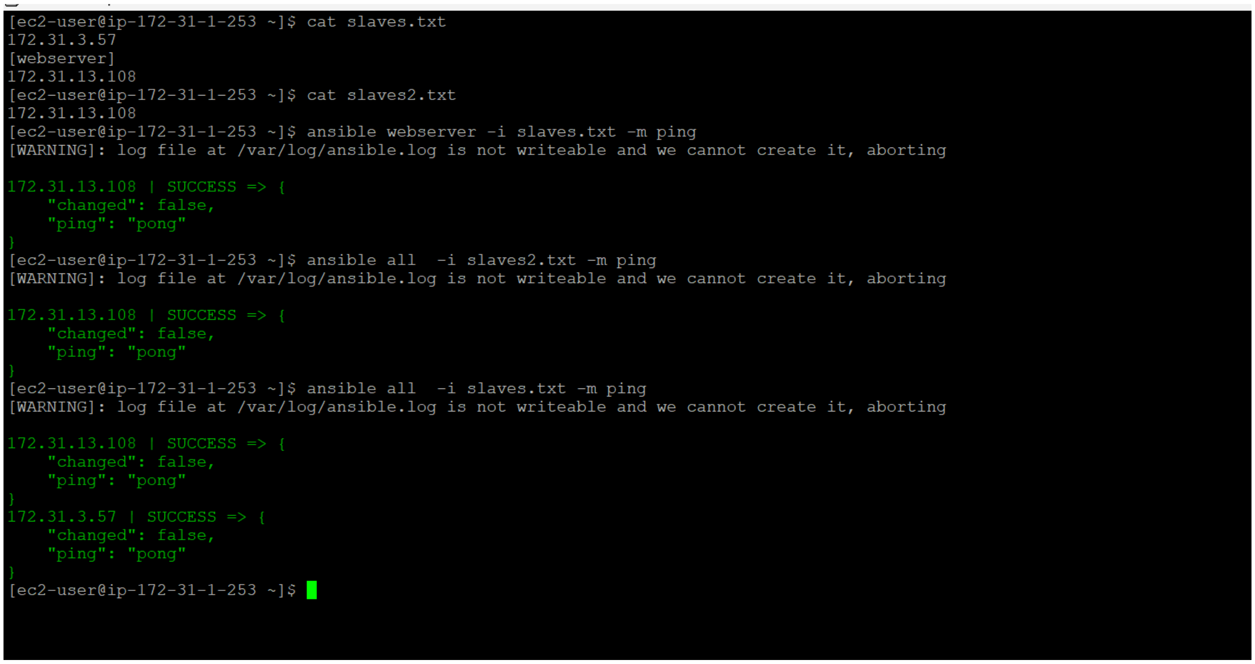


```
e it, aborting

PLAY [all] **********************************************************************

TASK [Install packages] *********************************************************
changed: [172.31.13.108] => (item=php)
changed: [172.31.3.57] => (item=php)
changed: [172.31.13.108] => (item=wget)
changed: [172.31.3.57] => (item=wget)
changed: [172.31.13.108] => (item=git)
changed: [172.31.3.57] => (item=git)
changed: [172.31.13.108] => (item=vim)
changed: [172.31.3.57] => (item=vim)
changed: [172.31.3.57] => (item=nano)
changed: [172.31.13.108] => (item=nano)

PLAY RECAP **********************************************************************
172.31.13.108              : ok=1    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0
172.31.3.57                : ok=1    changed=1    unreachable=0    failed=0    s
kipped=0    rescued=0    ignored=0

[ec2-user@ip-172-31-1-253 ~]$
```

Multiple inventories

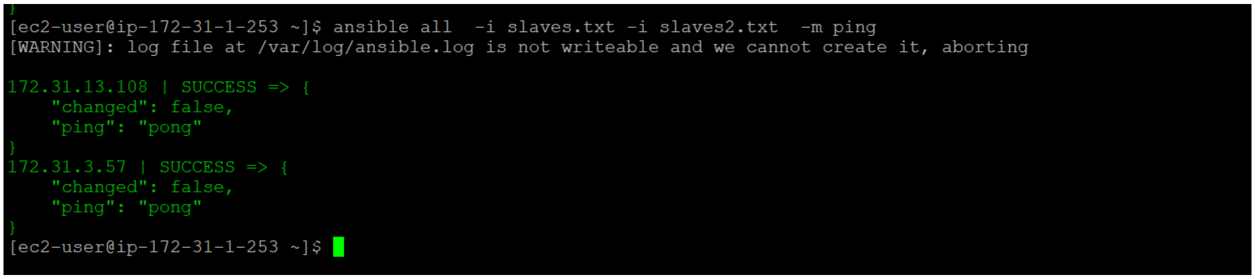
Multiple inventory files in Ansible help you **manage different environments efficiently, improve security, and scale infrastructure management.** By combining **static inventories, dynamic inventories, and inventory directories,** you can automate infrastructure deployment effectively

You can specify the inventory file using the `-i` flag in the `ansible`



```
[ec2-user@ip-172-31-1-253 ~]$ cat slaves.txt
172.31.3.57
[webserver]
172.31.13.108
[ec2-user@ip-172-31-1-253 ~]$ cat slaves2.txt
172.31.13.108
[ec2-user@ip-172-31-1-253 ~]$ ansible webserver -i slaves.txt -m ping
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.13.108 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
[ec2-user@ip-172-31-1-253 ~]$ ansible all  -i slaves2.txt -m ping
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.13.108 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
[ec2-user@ip-172-31-1-253 ~]$ ansible all  -i slaves.txt -m ping
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.13.108 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
172.31.3.57 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
[ec2-user@ip-172-31-1-253 ~]$
```

Running a Ping Test on Different Inventories

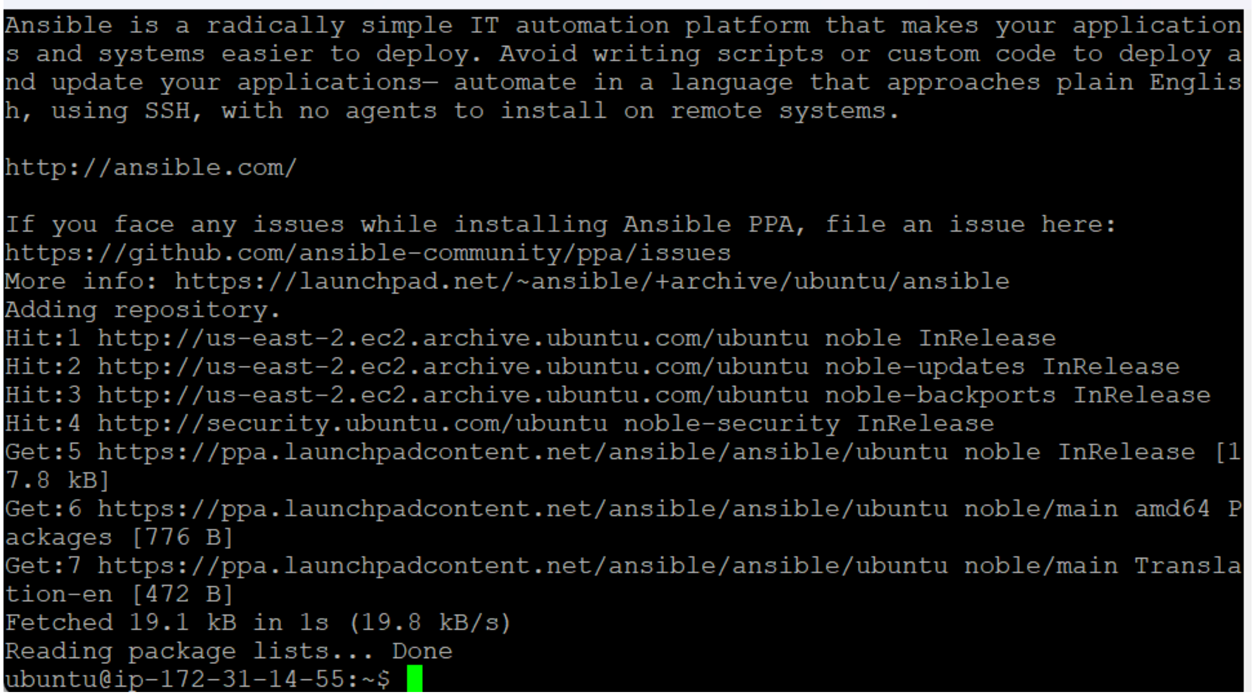


```
}
[ec2-user@ip-172-31-1-253 ~]$ ansible all  -i slaves.txt -i slaves2.txt  -m ping
[WARNING]: log file at /var/log/ansible.log is not writeable and we cannot create it, aborting

172.31.13.108 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
172.31.3.57 | SUCCESS => {
    "changed": false,
    "ping": "pong"
}
[ec2-user@ip-172-31-1-253 ~]$
```

TASK 4 :

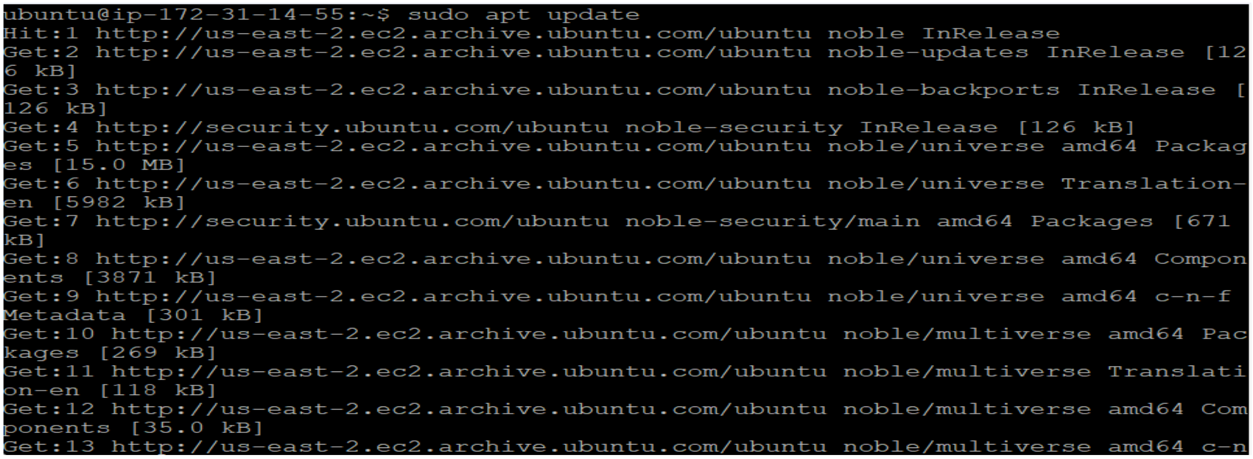
Automatic install on any os and test the ping

```
sudo apt update
```



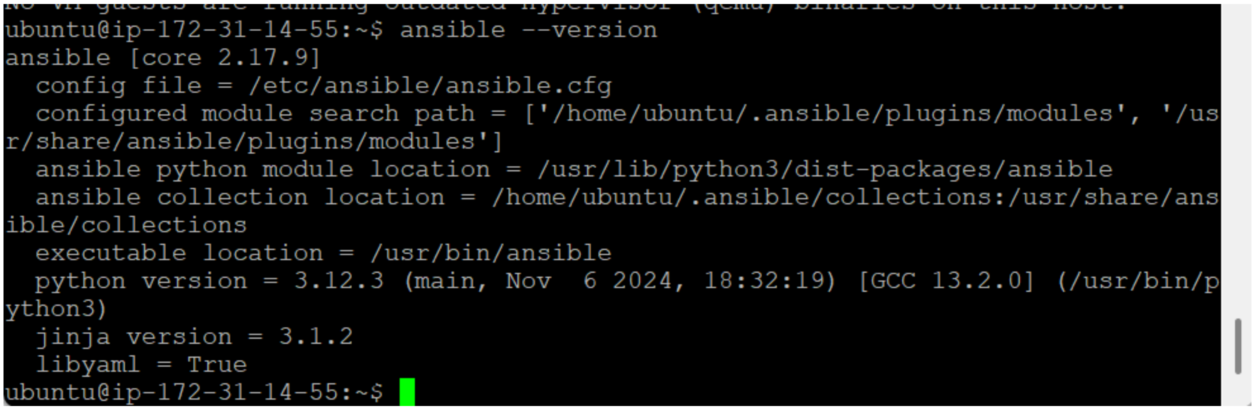
```
Ansible is a radically simple IT automation platform that makes your application
s and systems easier to deploy. Avoid writing scripts or custom code to deploy a
nd update your applications— automate in a language that approaches plain Englis
h, using SSH, with no agents to install on remote systems.

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.
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble InRelease [1
7.8 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main amd64 P
ackages [776 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu noble/main Transla
tion-en [472 B]
Fetched 19.1 kB in 1s (19.8 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-14-55:~$ 
```

```
sudo apt install software-properties-common

sudo add-apt-repository --yes --update ppa:ansible/ansible
```



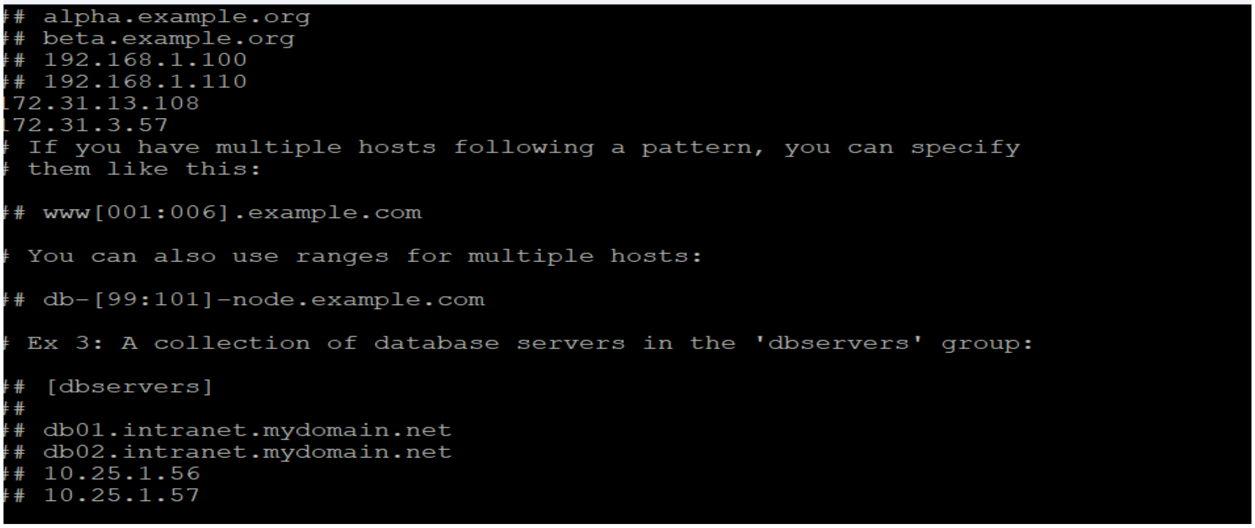
```
ubuntu@ip-172-31-14-55:~$ sudo apt update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [12
6 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [
126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packag
es [15.0 MB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-
en [5982 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [671
kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Compon
ents [3871 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f
Metadata [301 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Pac
kages [269 kB]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translati
on-en [118 kB]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Com
ponents [35.0 kB]
Get:13 http://us-east-2.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n
```

```
sudo apt install ansible
```



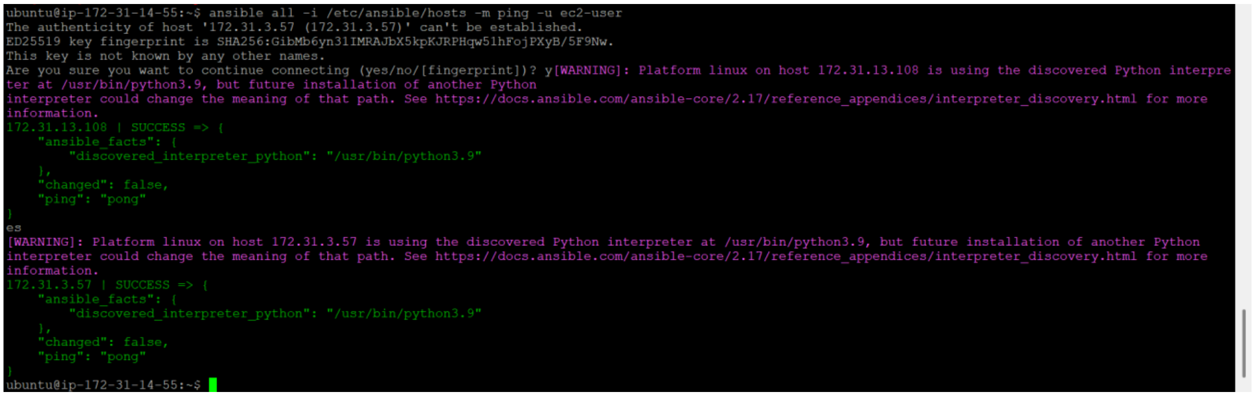
```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-14-55:~$ ansible --version
ansible [core 2.17.9]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/us
r/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ans
ible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Nov  6 2024, 18:32:19) [GCC 13.2.0] (/usr/bin/p
ython3)
  jinja version = 3.1.2
  libyaml = True
ubuntu@ip-172-31-14-55:~$
```

Sudo nano /etc/ansible/hosts



```
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110
172.31.13.108
172.31.3.57
# 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
```

Ansible all –i /etc/ansible/hosts -m ping –u ec2-user



```
ubuntu@ip-172-31-14-55:~$ ansible all -i /etc/ansible/hosts -m ping -u ec2-user
The authenticity of host '172.31.3.57 (172.31.3.57)' can't be established.
ED25519 key fingerprint is SHA256:GibMb6yn31IMRAJbX5kpKJRPHqw51hFojPXyB/5F9Nw.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? y[WARNING]: Platform linux on host 172.31.13.108 is using the discovered Python interpre
ter at /usr/bin/python3.9, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more
information.
172.31.13.108 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.9"
    },
    "changed": false,
    "ping": "pong"
}
es
[WARNING]: Platform linux on host 172.31.3.57 is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another Python
interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more
information.
172.31.3.57 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.9"
    },
    "changed": false,
    "ping": "pong"
}
ubuntu@ip-172-31-14-55:~$
```