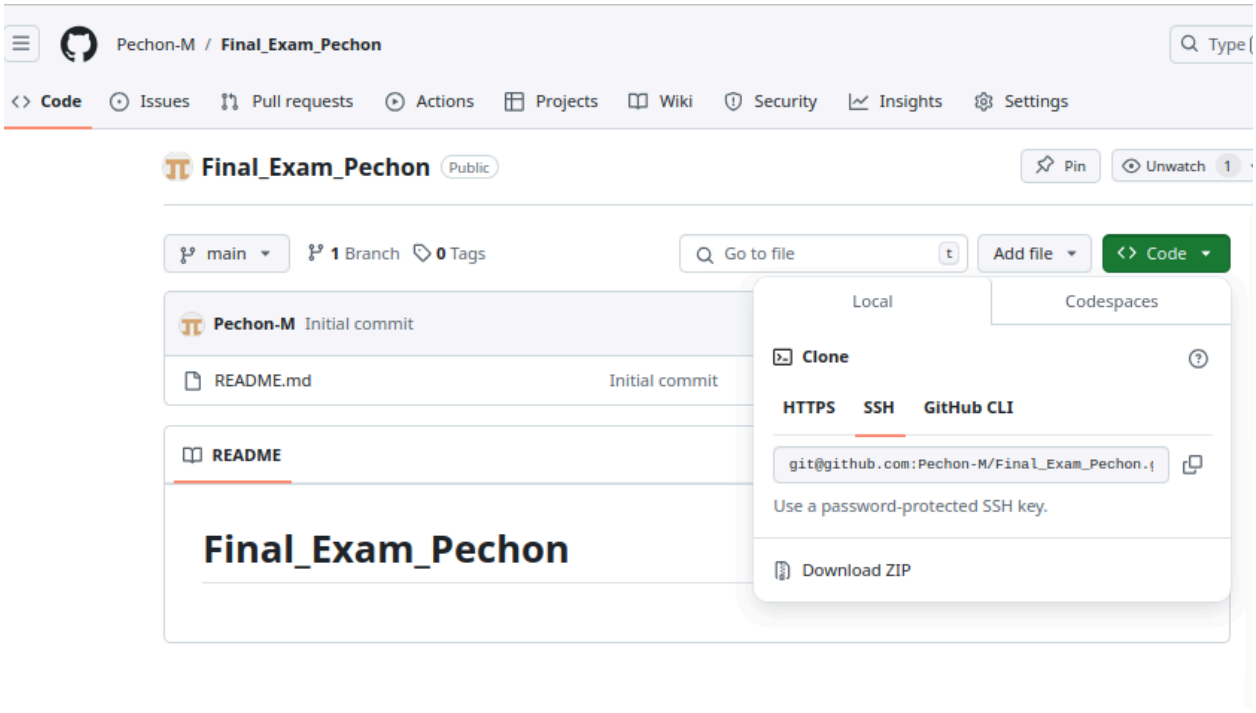
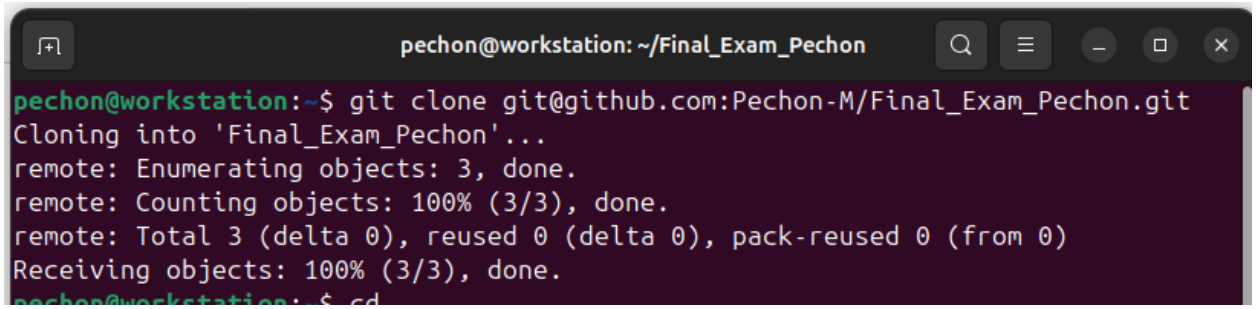
PECHON, MARIE
CPE32S2

Setting up Github:





Playbook.yaml:

pechon@workstation: ~/Final_Exam_Pechon

GNU nano 7.2 playbook.yml

```
- hosts: all
  become: true
  vars_files:
    - config.yaml
  tasks:
    - name: Install Apache (Ubuntu) or HTTPD (CentOS)
      package:
        name: "{{ apache_ubuntu if ansible_distribution == 'Ubuntu' else apache_centos }}"
        state: present

    - name: Start and enable Apache/HTTPD service
      service:
        name: "{{ apache_ubuntu if ansible_distribution == 'Ubuntu' else apache_centos }}"
        state: started
        enabled: true

    - name: Install prerequisites for Prometheus
      package:
        name: "wget"
        state: present

    - name: Download Prometheus tarball
      get_url:
        url: "https://github.com/prometheus/prometheus/releases/download/v{{ prometheus_version }}/prometheus-{{ >
        dest: /tmp/prometheus.tar.gz
```

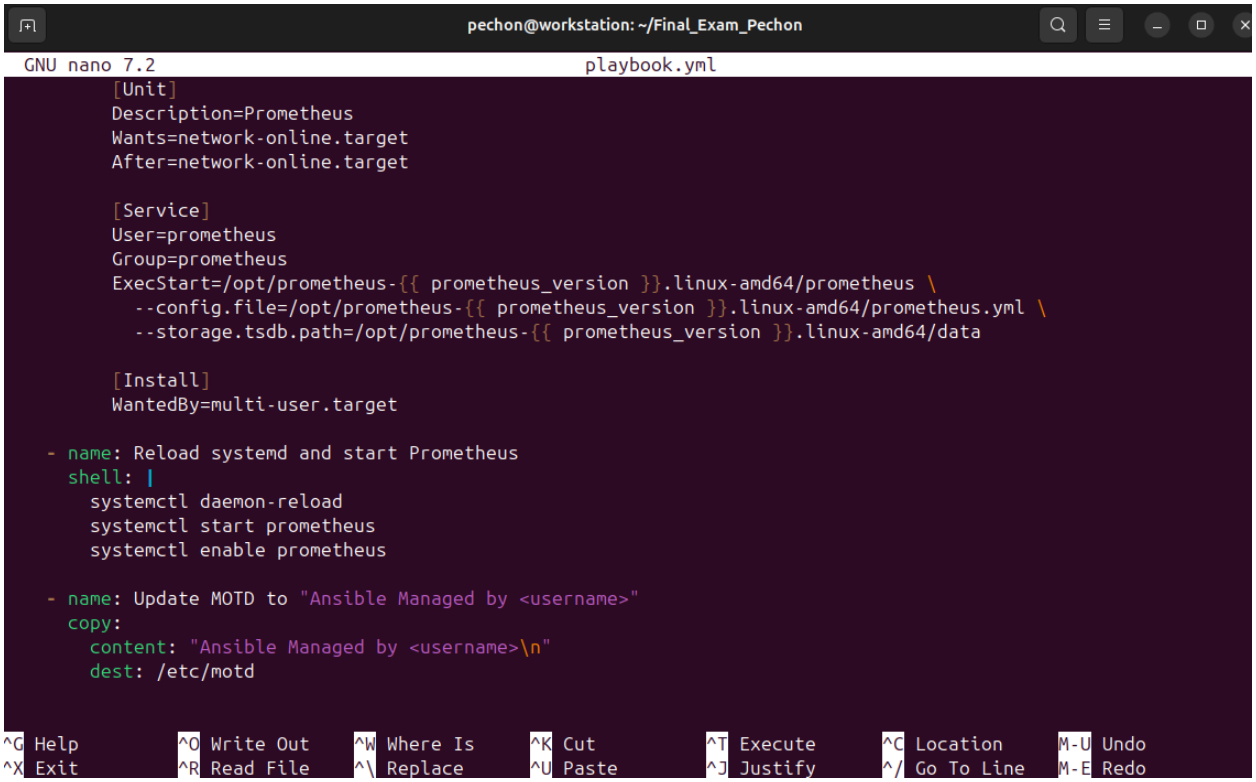
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

pechon@workstation: ~/Final_Exam_Pechon

GNU nano 7.2 playbook.yml

```
    - name: Extract Prometheus
      unarchive:
        src: /tmp/prometheus.tar.gz
        dest: /opt/
        remote_src: yes

    - name: Create Prometheus user
      user:
        name: prometheus
        system: yes

    - name: Set ownership for Prometheus directories
      file:
        path: "/opt/prometheus-{{ prometheus_version }}.linux-amd64"
        owner: prometheus
        group: prometheus
        state: directory
        recurse: yes

    - name: Create Prometheus systemd service file
      copy:
        dest: /etc/systemd/system/prometheus.service
        content: |
          [Unit]
          Description=Prometheus
          Wants=network-online.target
```

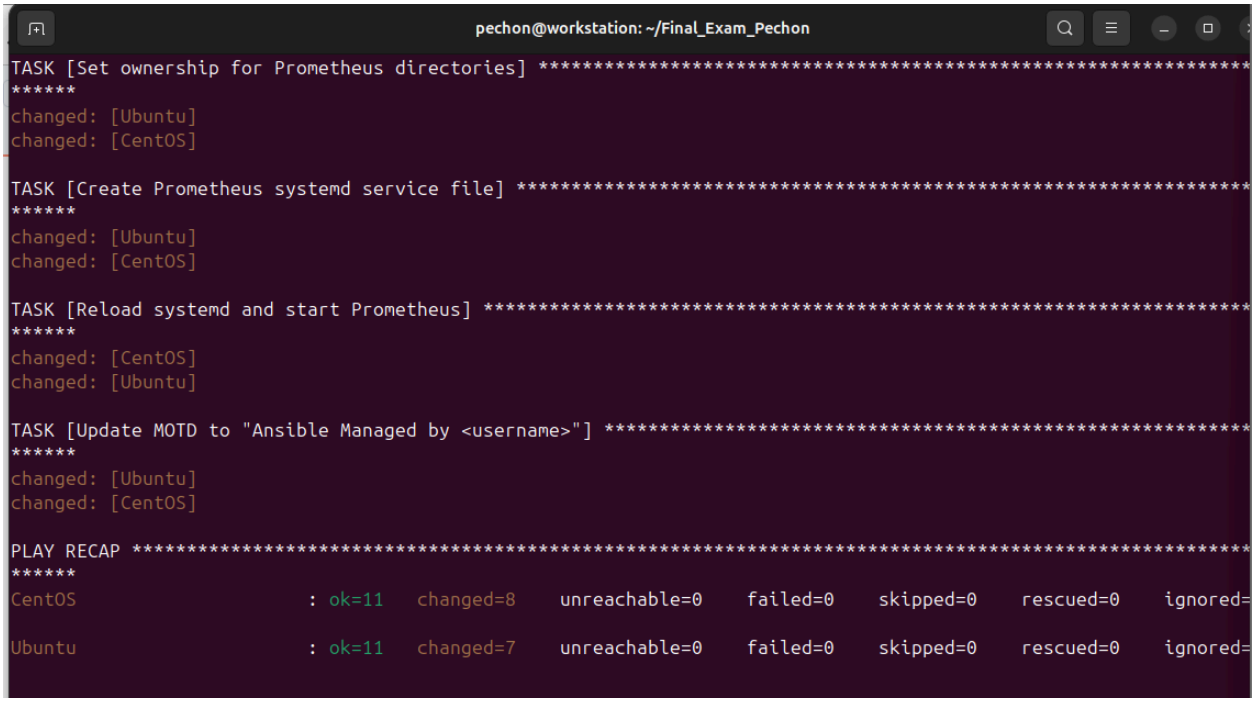
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo


pechon@workstation: ~/Final_Exam_Pechon
GNU nano 7.2 playbook.yml
[Unit]
Description=Prometheus
Wants=network-online.target
After=network-online.target
[Service]
User=prometheus
Group=prometheus
ExecStart=/opt/prometheus-{{ prometheus_version }}.linux-amd64/prometheus \
--config.file=/opt/prometheus-{{ prometheus_version }}.linux-amd64/prometheus.yml \
--storage.tsdb.path=/opt/prometheus-{{ prometheus_version }}.linux-amd64/data
[Install]
WantedBy=multi-user.target
- name: Reload systemd and start Prometheus
shell: |
systemctl daemon-reload
systemctl start prometheus
systemctl enable prometheus
- name: Update MOTD to "Ansible Managed by <username>"
copy:
content: "Ansible Managed by <username>\n"
dest: /etc/motd
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

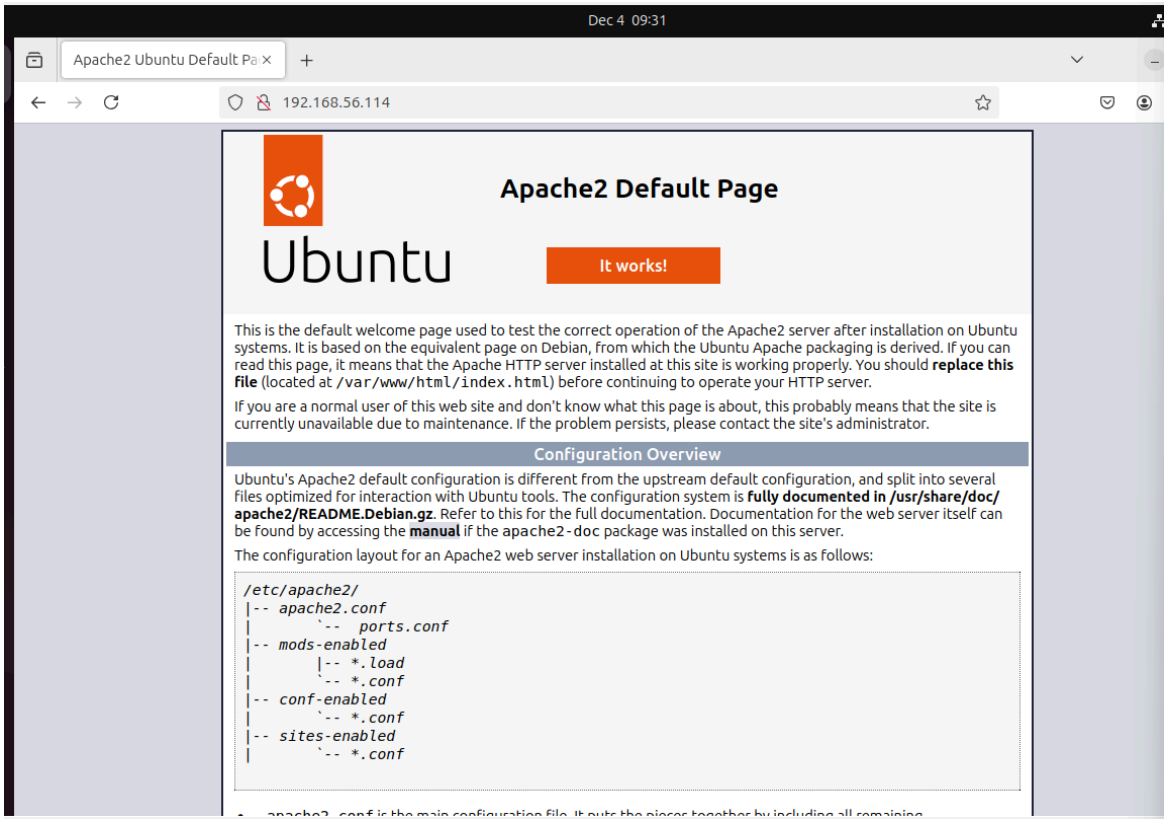
```
pechon@workstation:~/Final_Exam_Pechon$ ansible-playbook --ask-become-pass playbook.yml

BECOME password:

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

TASK [Gathering Facts] ********************************************************************************************
******
[WARNING]: Platform linux on host Ubuntu is using the discovered Python interpreter at /usr/bin/python3.12, but f
ture
installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/an
ible-
core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [Ubuntu]
[WARNING]: Platform linux on host CentOS is using the discovered Python interpreter at /usr/bin/python3.9, but fu
ure
installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/an
ible-
core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [CentOS]

TASK [Install Apache (Ubuntu) or HTTPD (CentOS)] ******************************************************************
******
ok: [Ubuntu]
ok: [CentOS]

TASK [Start and enable Apache/HTTPD service] **********************************************************************
```

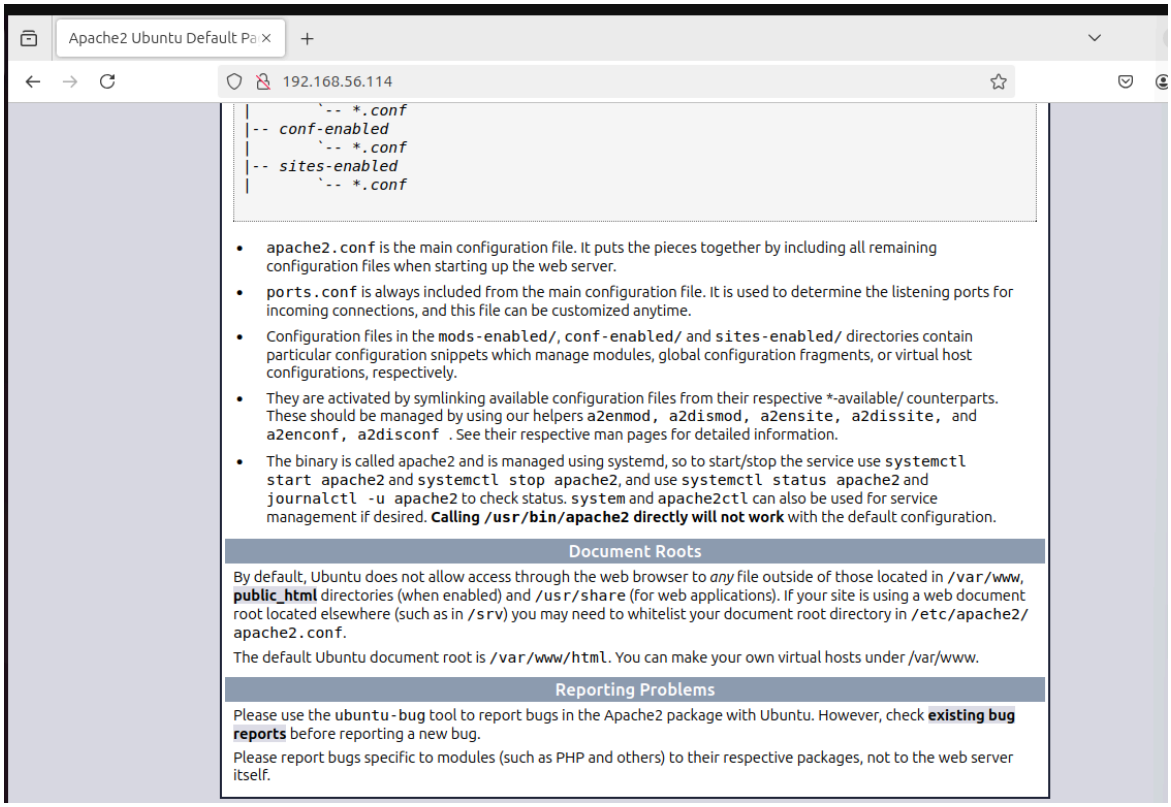
pechon@workstation: ~/Final_Exam_Pechon

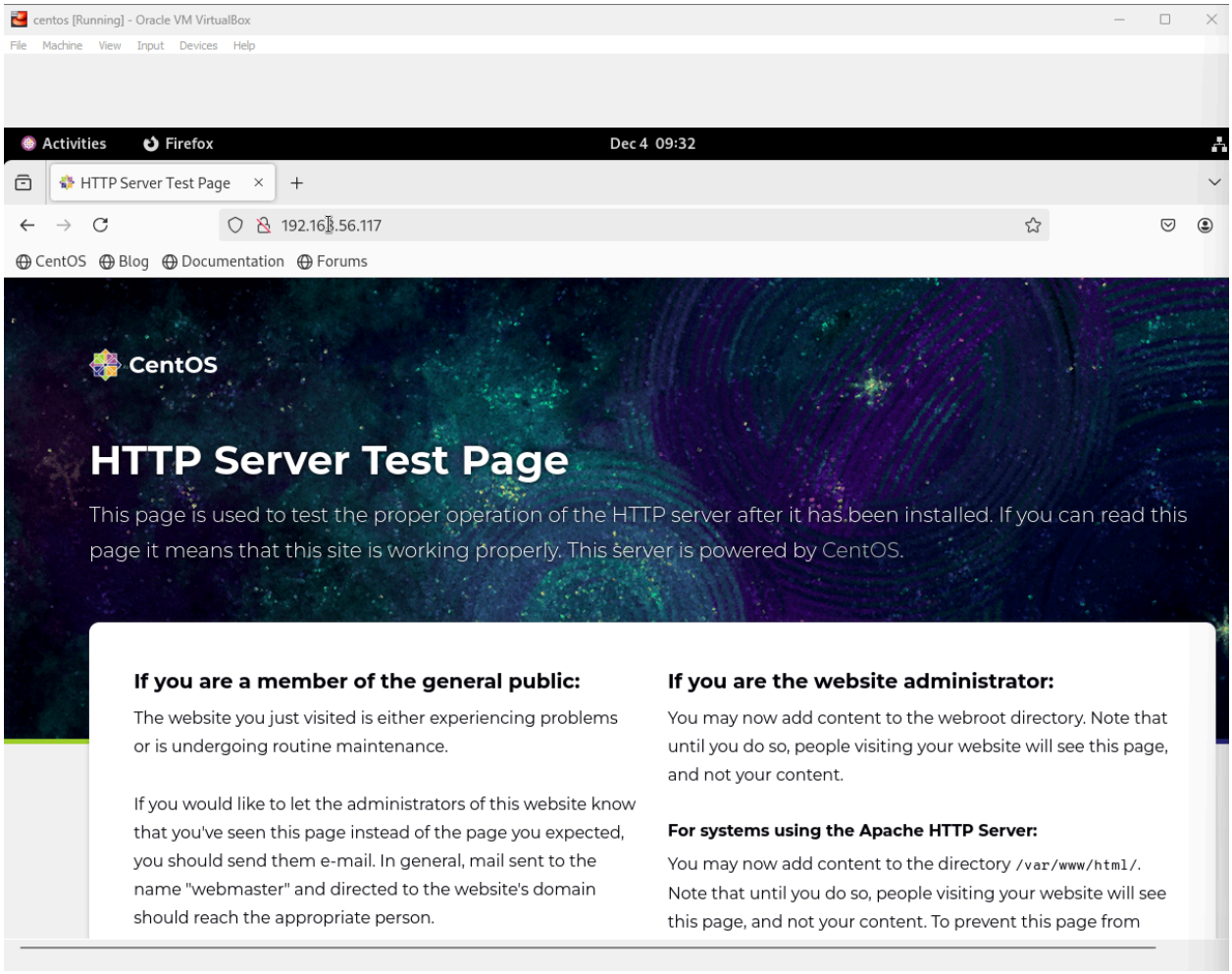
```
ASK [Install prerequisites for Prometheus] ************************************************************************
*****
k: [Ubuntu]
k: [CentOS]

ASK [Download Prometheus tarball] *********************************************************************************
*****
hanged: [CentOS]
hanged: [Ubuntu]

ASK [Extract Prometheus] ******************************************************************************************
*****
hanged: [CentOS]
hanged: [Ubuntu]

ASK [Create Prometheus user] **************************************************************************************
*****
hanged: [Ubuntu]
hanged: [CentOS]

ASK [Set ownership for Prometheus directories] ********************************************************************
*****
hanged: [Ubuntu]
hanged: [CentOS]

ASK [Create Prometheus systemd service file] **********************************************************************
*****
hanged: [Ubuntu]
hanged: [CentOS]
```


pechon@workstation: ~/Final_Exam_Pechon
TASK [Set ownership for Prometheus directories] **
******
changed: [Ubuntu]
changed: [CentOS]
TASK [Create Prometheus systemd service file] **
******
changed: [Ubuntu]
changed: [CentOS]
TASK [Reload systemd and start Prometheus] ***
******
changed: [CentOS]
changed: [Ubuntu]
TASK [Update MOTD to "Ansible Managed by <username>"] **
******
changed: [Ubuntu]
changed: [CentOS]
PLAY RECAP ***
******
CentOS : ok=11 changed=8 unreachable=0 failed=0 skipped=0 rescued=0 ignored=
Ubuntu : ok=11 changed=7 unreachable=0 failed=0 skipped=0 rescued=0 ignored=

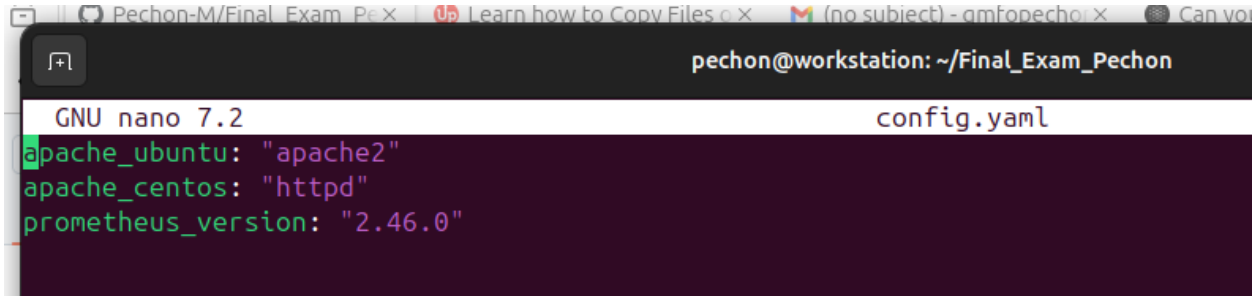
Output:


Dec 4 09:31
Apache2 Ubuntu Default Pa
192.168.56.114
Apache2 Default Page
Ubuntu
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:
/etc/apache2/
|-- apache2.conf
| `-- ports.conf
|-- mods-enabled
| |-- *.load
| `-- *.conf
|-- conf-enabled
| `-- *.conf
|-- sites-enabled
| `-- *.conf


Apache2 Ubuntu Default Pa
192.168.56.114
| `-- *.conf
|-- conf-enabled
| `-- *.conf
|-- sites-enabled
| `-- *.conf
apache2.conf is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
ports.conf is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
Configuration files in the mods-enabled/, conf-enabled/ and sites-enabled/ directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
They are activated by symlinking available configuration files from their respective *-available/ counterparts. These should be managed by using our helpers a2enmod, a2dismod, a2ensite, a2dissite, and a2enconf, a2disconf . See their respective man pages for detailed information.
The binary is called apache2 and is managed using systemd, so to start/stop the service use systemctl start apache2 and systemctl stop apache2, and use systemctl status apache2 and journalctl -u apache2 to check status. system and apache2ctl can also be used for service management if desired. Calling /usr/bin/apache2 directly will not work with the default configuration.
Document Roots
By default, Ubuntu does not allow access through the web browser to any file outside of those located in /var/www, public_html directories (when enabled) and /usr/share (for web applications). If your site is using a web document root located elsewhere (such as in /srv) you may need to whitelist your document root directory in /etc/apache2/apache2.conf.
The default Ubuntu document root is /var/www/html. You can make your own virtual hosts under /var/www.
Reporting Problems
Please use the ubuntu-bug tool to report bugs in the Apache2 package with Ubuntu. However, check existing bug reports before reporting a new bug.
Please report bugs specific to modules (such as PHP and others) to their respective packages, not to the web server itself.



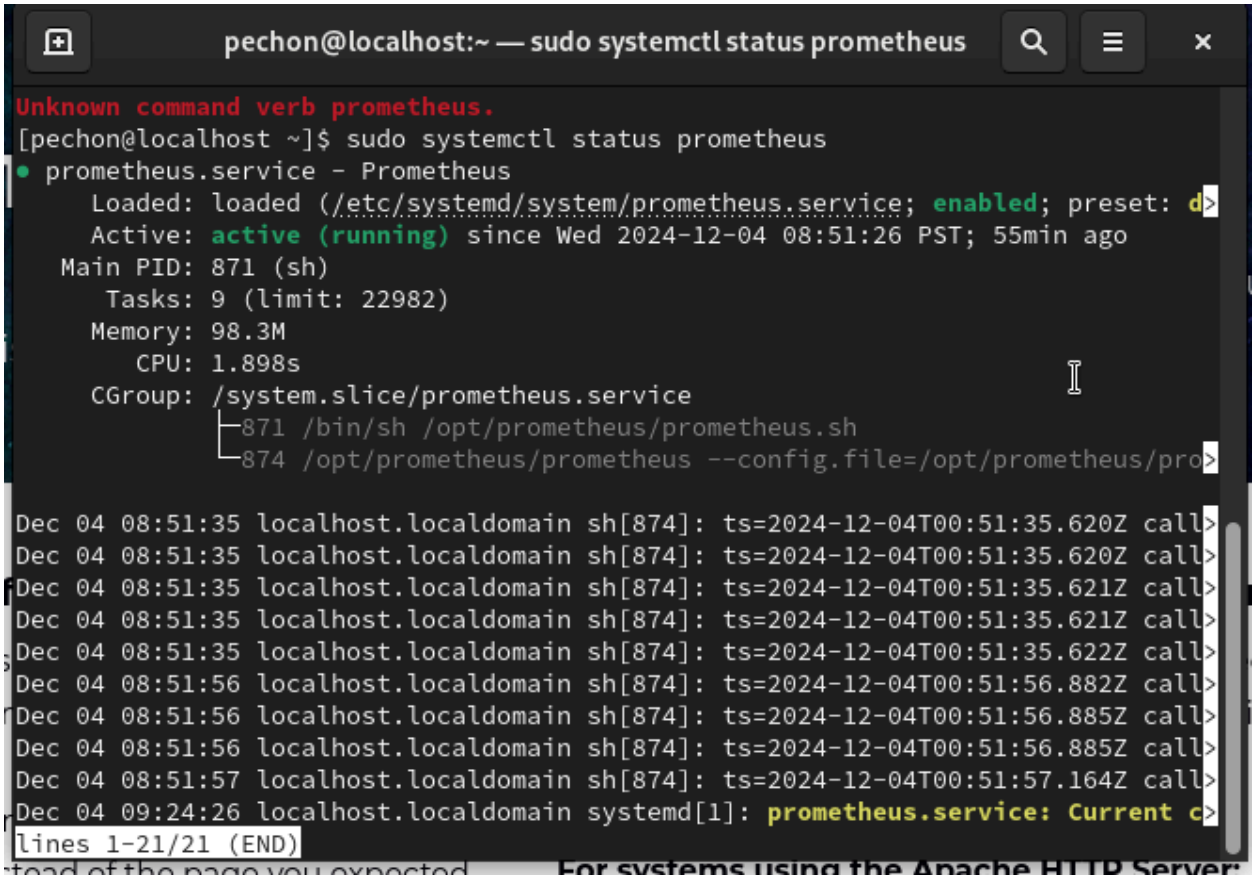
Config.yaml:



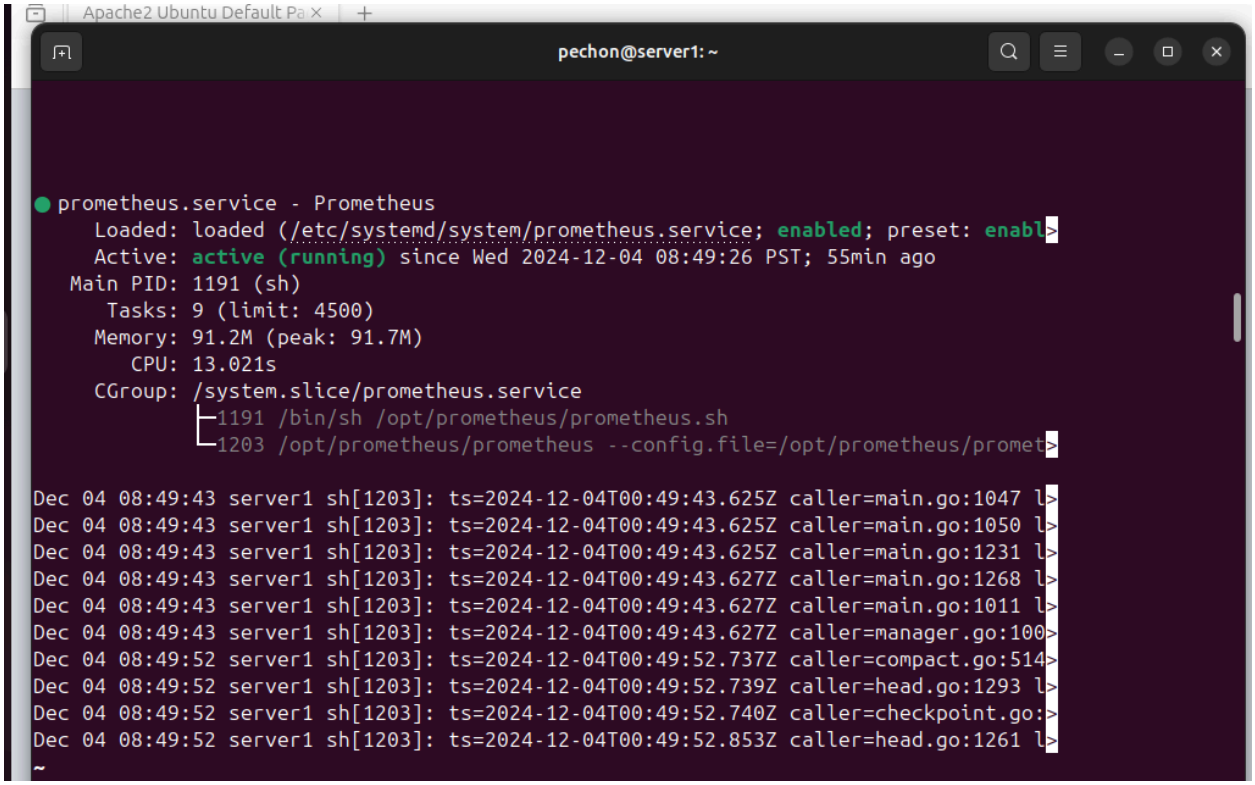
Git push & commit:

```
pechon@workstation:~/Final_Exam_Pechon$ git add .
pechon@workstation:~/Final_Exam_Pechon$ git commit -m "Finals"
[main 76b9ce2] Finals
 5 files changed, 164 insertions(+)
 create mode 100644 ansible.cfg
 create mode 100644 config.yaml
 create mode 100644 inventory.yaml
 create mode 100644 playbook.yaml
 create mode 100644 playbook.yml
pechon@workstation:~/Final_Exam_Pechon$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 2 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 1.62 KiB | 207.00 KiB/s, done.
Total 7 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To github.com:Pechon-M/Final_Exam_Pechon.git
   e323a1a..76b9ce2  main -> main
```

CentOS:



Server1:


Apache2 Ubuntu Default Pa
pechon@server1: ~
prometheus.service - Prometheus
Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabl
Active: active (running) since Wed 2024-12-04 08:49:26 PST; 55min ago
Main PID: 1191 (sh)
Tasks: 9 (limit: 4500)
Memory: 91.2M (peak: 91.7M)
CPU: 13.021s
CGroup: /system.slice/prometheus.service
1191 /bin/sh /opt/prometheus/prometheus.sh
1203 /opt/prometheus/prometheus --config.file=/opt/prometheus/promet
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.625Z caller=main.go:1047 l
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.625Z caller=main.go:1050 l
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.625Z caller=main.go:1231 l
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.627Z caller=main.go:1268 l
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.627Z caller=main.go:1011 l
Dec 04 08:49:43 server1 sh[1203]: ts=2024-12-04T00:49:43.627Z caller=manager.go:100
Dec 04 08:49:52 server1 sh[1203]: ts=2024-12-04T00:49:52.737Z caller=compact.go:514
Dec 04 08:49:52 server1 sh[1203]: ts=2024-12-04T00:49:52.739Z caller=head.go:1293 l
Dec 04 08:49:52 server1 sh[1203]: ts=2024-12-04T00:49:52.740Z caller=checkpoint.go:
Dec 04 08:49:52 server1 sh[1203]: ts=2024-12-04T00:49:52.853Z caller=head.go:1261 l
~