Final Exam	
Course & Sec: CPE31S4 - CPE212	Date: Nov 16, 2025
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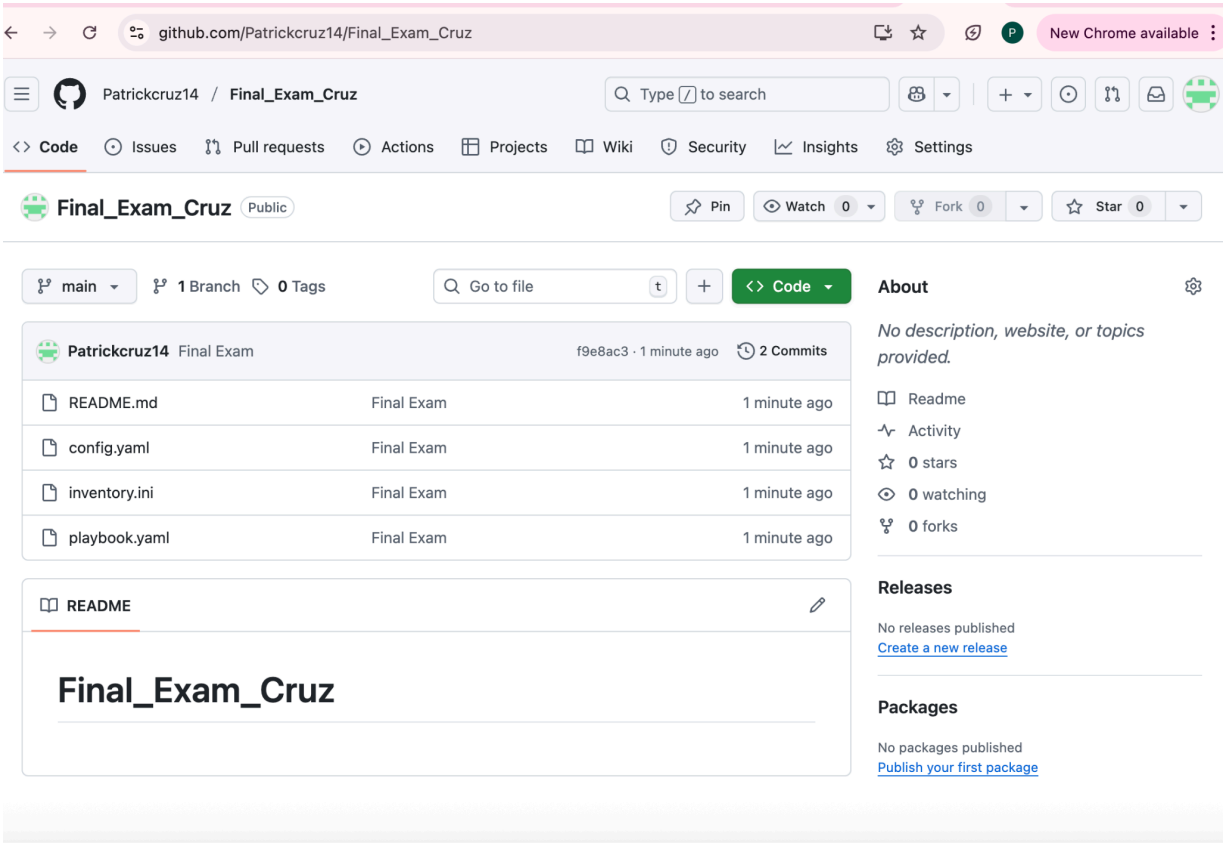
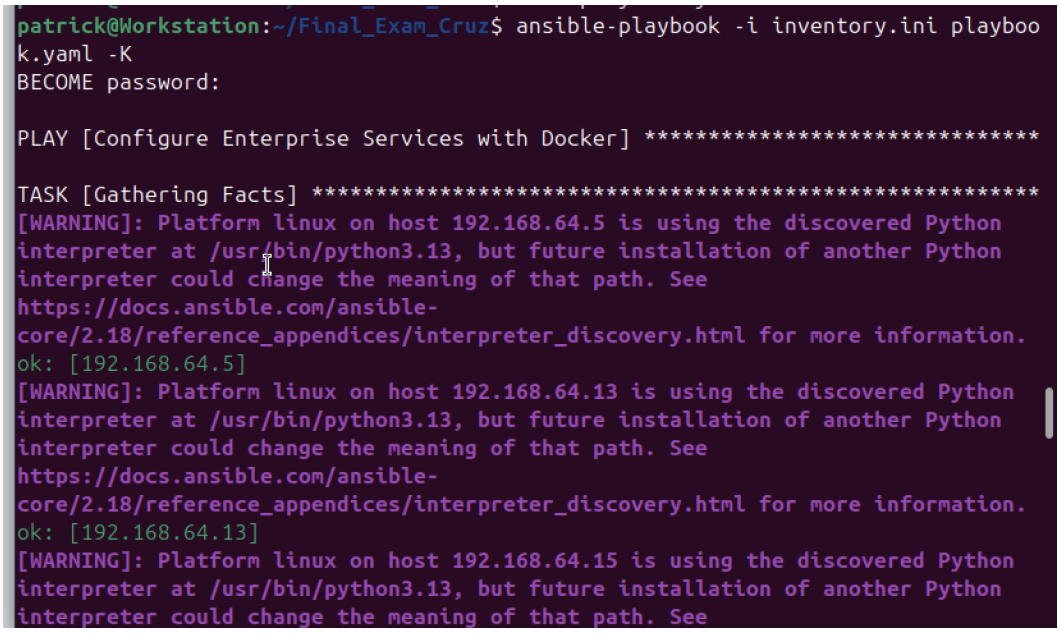
Tools Needed:	
1. VM with Ubuntu, CentOS and Ansible installed **2. Web browser**	
Procedure:	
1. Create a repository and label it as "Final_Exam_Surname" **2. Clone your new repository in your VM** **3. Create an Ansible playbook that does the following with an input of a config.yaml file and structure inventory file.** **3.1 Install and configure one enterprise service that can be installed in Debian and Centos servers** **3.2 Install and configure one monitoring tool that can be installed in Debian and Centos servers (if it is a stack there should be option of different host)** **4.4 Change Motd as "Ansible Managed by <username>"** **4. Push and commit your files in GitHub** **5. Make sure to show evidence of input (codes) process (codes successfully running) and output (evidence of installation)** **5. For your final exam to be counted, please paste your repository link as an answer in this exam.** **Note: Extra points if you will implement the said services via containerization.** **https://github.com/Patrickcruz14/Final_Exam_Cruz**	


github.com/Patrickcruz14/Final_Exam_Cruz
New Chrome available
Patrickcruz14 / Final_Exam_Cruz
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Final_Exam_Cruz
Public
Pin
Watch 0
Fork 0
Star 0
main
1 Branch
0 Tags
Go to file
t
Code
Patrickcruz14 Final Exam
f9e8ac3 · 1 minute ago
2 Commits
README.md Final Exam 1 minute ago
config.yaml Final Exam 1 minute ago
inventory.ini Final Exam 1 minute ago
playbook.yaml Final Exam 1 minute ago
README
Final_Exam_Cruz
About
No description, website, or topics provided.
Readme
Activity
0 stars
0 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package


patrick@Workstation:~/Final_Exam_Cruz$ ansible-playbook -i inventory.ini playbook.yaml -K
BECOME password:
PLAY [Configure Enterprise Services with Docker] ********************************
TASK [Gathering Facts] **
[WARNING]: Platform linux on host 192.168.64.5 is using the discovered Python interpreter at /usr/bin/python3.13, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.64.5]
[WARNING]: Platform linux on host 192.168.64.13 is using the discovered Python interpreter at /usr/bin/python3.13, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.18/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.64.13]
[WARNING]: Platform linux on host 192.168.64.15 is using the discovered Python interpreter at /usr/bin/python3.13, but future installation of another Python interpreter could change the meaning of that path. See

```
TASK [Install required packages for Docker (Debian/Ubuntu)] ********************
skipping: [192.168.64.12]
ok: [192.168.64.13]
ok: [192.168.64.5]
ok: [192.168.64.15]

TASK [Install required packages for Docker (CentOS)] ***************************
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]

TASK [Create keyrings directory (Debian/Ubuntu)] *******************************
skipping: [192.168.64.12]
ok: [192.168.64.5]
ok: [192.168.64.13]
ok: [192.168.64.15]

TASK [Add Docker GPG key (Debian/Ubuntu)] **************************************
skipping: [192.168.64.12]
ok: [192.168.64.15]
ok: [192.168.64.5]
ok: [192.168.64.13]
```

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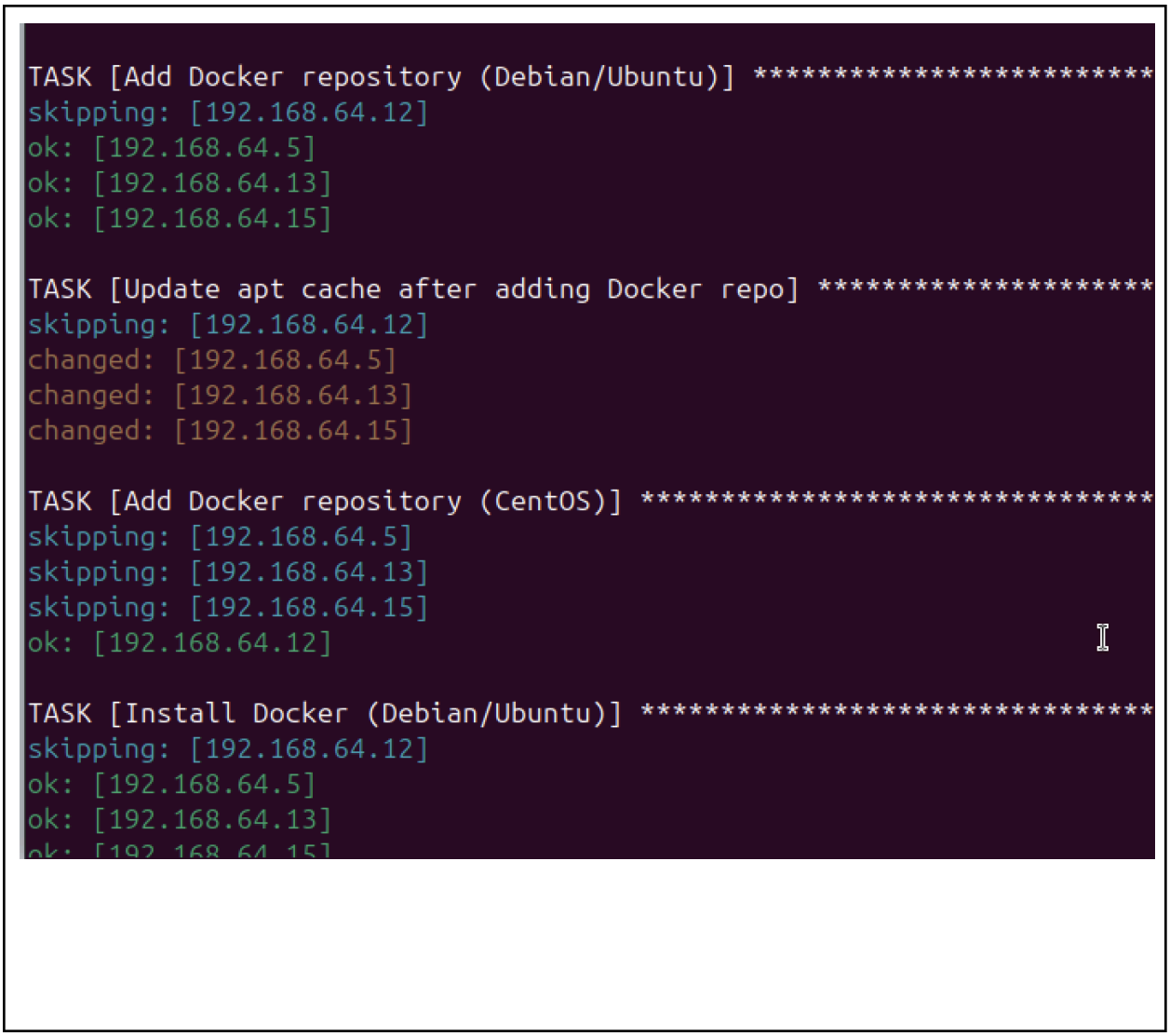
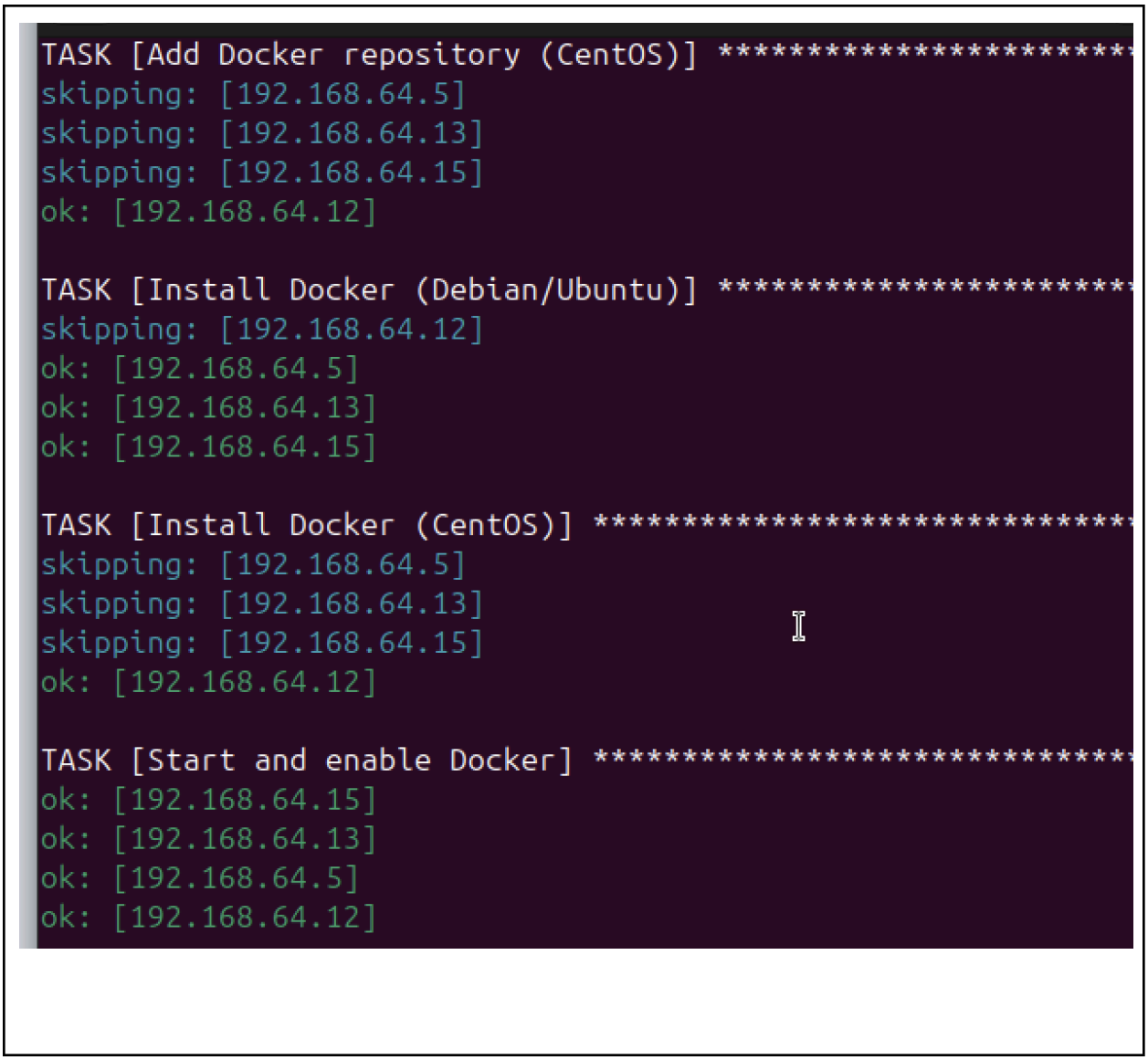
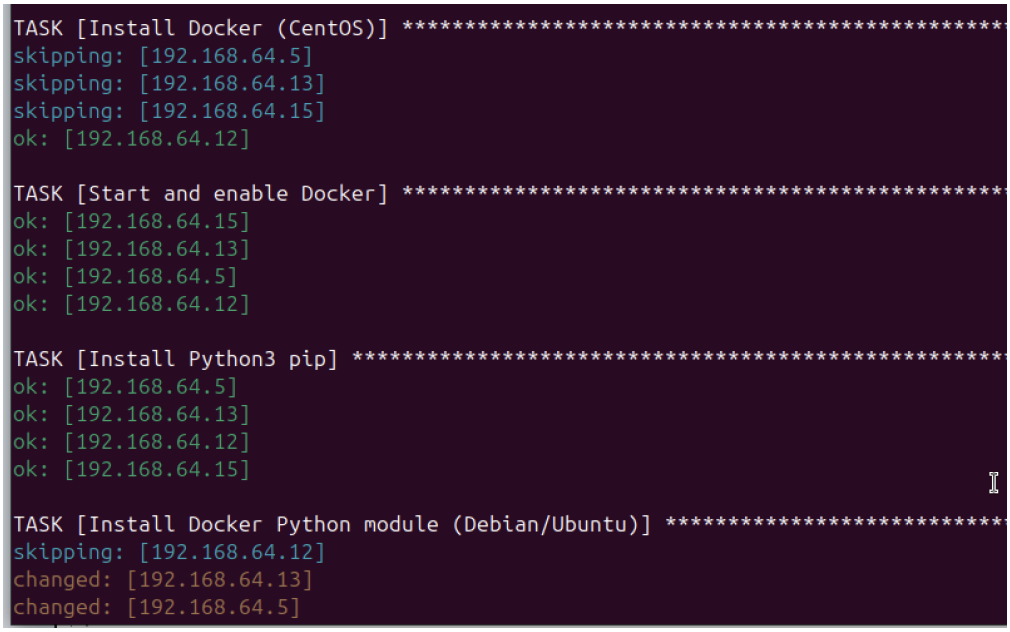

TASK [Add Docker repository (Debian/Ubuntu)] ************************
skipping: [192.168.64.12]
ok: [192.168.64.5]
ok: [192.168.64.13]
ok: [192.168.64.15]
TASK [Update apt cache after adding Docker repo] *********************
skipping: [192.168.64.12]
changed: [192.168.64.5]
changed: [192.168.64.13]
changed: [192.168.64.15]
TASK [Add Docker repository (CentOS)] ********************************
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]
TASK [Install Docker (Debian/Ubuntu)] ********************************
skipping: [192.168.64.12]
ok: [192.168.64.5]
ok: [192.168.64.13]

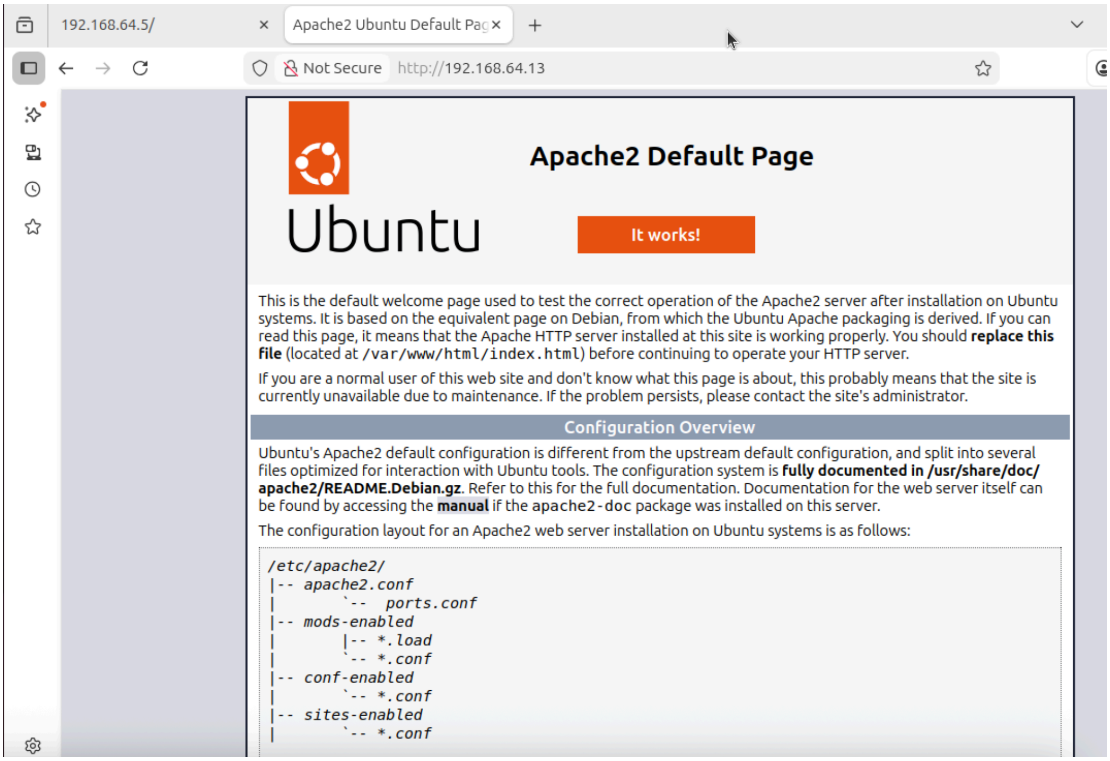

TASK [Add Docker repository (CentOS)] **********
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]
TASK [Install Docker (Debian/Ubuntu)] **********
skipping: [192.168.64.12]
ok: [192.168.64.5]
ok: [192.168.64.13]
ok: [192.168.64.15]
TASK [Install Docker (CentOS)] **********
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]
TASK [Start and enable Docker] **********
ok: [192.168.64.15]
ok: [192.168.64.13]
ok: [192.168.64.5]
ok: [192.168.64.12]

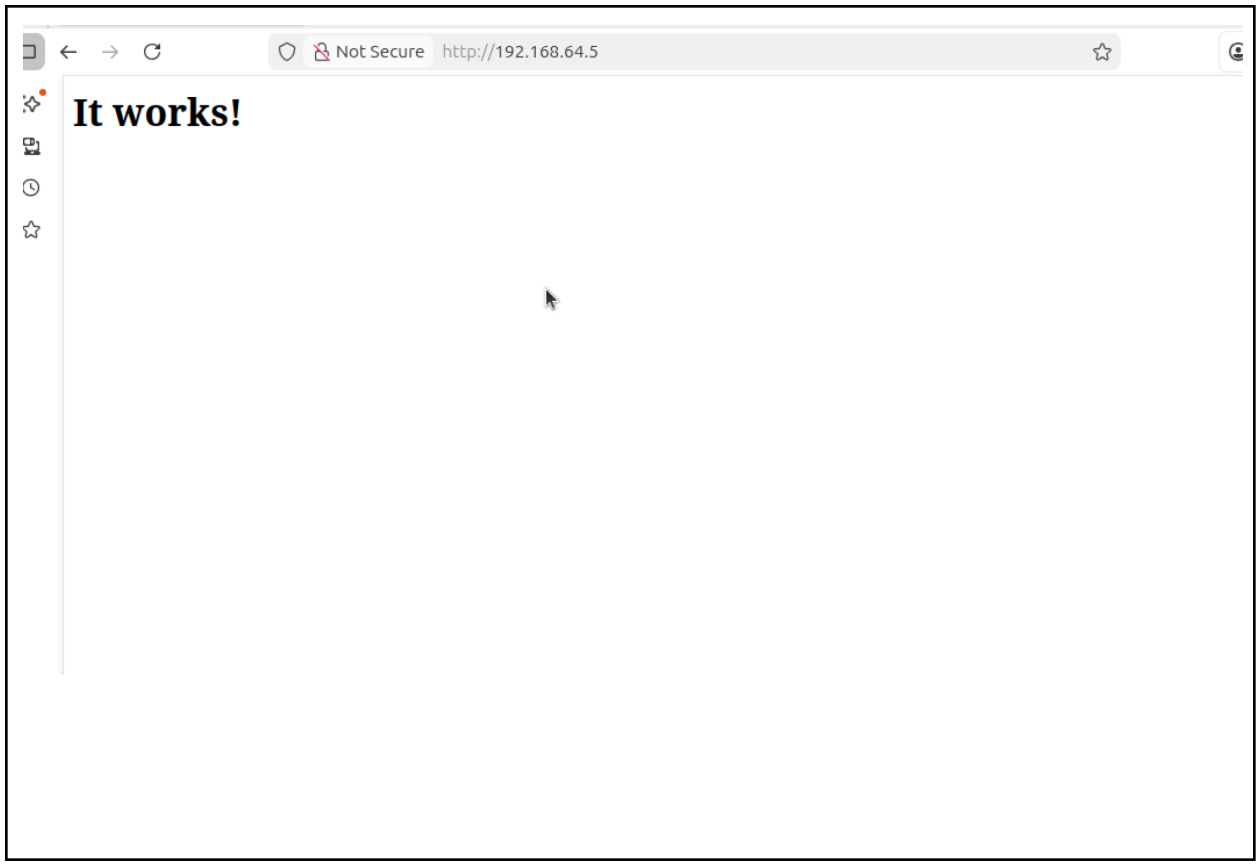

TASK [Install Docker (CentOS)] **
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]
TASK [Start and enable Docker] **
ok: [192.168.64.15]
ok: [192.168.64.13]
ok: [192.168.64.5]
ok: [192.168.64.12]
TASK [Install Python3 pip] **
ok: [192.168.64.5]
ok: [192.168.64.13]
ok: [192.168.64.12]
ok: [192.168.64.15]
TASK [Install Docker Python module (Debian/Ubuntu)] **
skipping: [192.168.64.12]
changed: [192.168.64.13]
changed: [192.168.64.5]

```
TASK [Install Docker Python module (CentOS)] ************************
skipping: [192.168.64.5]
skipping: [192.168.64.13]
skipping: [192.168.64.15]
ok: [192.168.64.12]

TASK [Run Apache container] *****************************************
ok: [192.168.64.12]
changed: [192.168.64.13]
changed: [192.168.64.5]
changed: [192.168.64.15]

TASK [Run PostgreSQL container] *************************************
ok: [192.168.64.12]
changed: [192.168.64.15]
changed: [192.168.64.13]
changed: [192.168.64.5]

TASK [Run Node Exporter container] **********************************
ok: [192.168.64.12]
changed: [192.168.64.13]
changed: [192.168.64.15]
changed: [192.168.64.5]
```

```
TASK [Update MOTD] **************************************************************
ok: [192.168.64.15]
ok: [192.168.64.13]
ok: [192.168.64.5]
ok: [192.168.64.12]

PLAY RECAP **********************************************************************
192.168.64.12              : ok=11   changed=0    unreachable=0    failed=0    s
kipped=7    rescued=0    ignored=0
192.168.64.13              : ok=14   changed=5    unreachable=0    failed=0    s
kipped=4    rescued=0    ignored=0
192.168.64.15              : ok=14   changed=5    unreachable=0    failed=0    s
kipped=4    rescued=0    ignored=0
192.168.64.5               : ok=14   changed=5    unreachable=0    failed=0    s
kipped=4    rescued=0    ignored=0
```

```
enterprise_db=# CREATE TABLE test_table (
    id SERIAL PRIMARY KEY,
    name VARCHAR(100),
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
CREATE TABLE
enterprise_db=# INSERT INTO test_table (name) VALUES ('Ansible Test'), ('Docker
Test');
INSERT 0 2
enterprise_db=# SELECT * FROM test_table;
 id |     name     |         created_at
----+--------------+----------------------------
  1 | Ansible Test | 2025-11-16 05:39:03.681784
  2 | Docker Test  | 2025-11-16 05:39:03.681784
(2 rows)

enterprise_db=# \dt
          List of relations
 Schema |    Name    | Type  | Owner
--------+------------+-------+-------
 public | test_table | table | admin
(1 row)
```




Not Secure
http://192.168.64.5
It works!