

**School of Computer Science**  
**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**DEHRADUN, UTTARAKHAND**



**System Monitoring and Configuration  
Management**

**Lab File**

**(2024)**

**for**

**6<sup>th</sup> Semester**

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## LAB EXERCISE 12

### Aim-Create Run Ansible Playbooks

#### Steps

1. Repeat the steps in Experiment 11 to create the initial setup
2. Test adhoc commands

```
ansible@ip-172-31-11-127:~  
[ansible@ip-172-31-11-127 ~]$ ansible upes --list-hosts  
  
hosts (1):  
  172.31.5.83  
[ansible@ip-172-31-11-127 ~]$  
[ansible@ip-172-31-11-127 ~]$
```

```
ansiblenode@ip-172-31-5-83:~  
[ansiblenode@ip-172-31-5-83 ~]$ which httpd  
/usr/bin/which: no httpd in (/usr/local/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/home/ansiblenode/.local/bin:/home/ansiblenode/bin)  
[ansiblenode@ip-172-31-5-83 ~]$
```

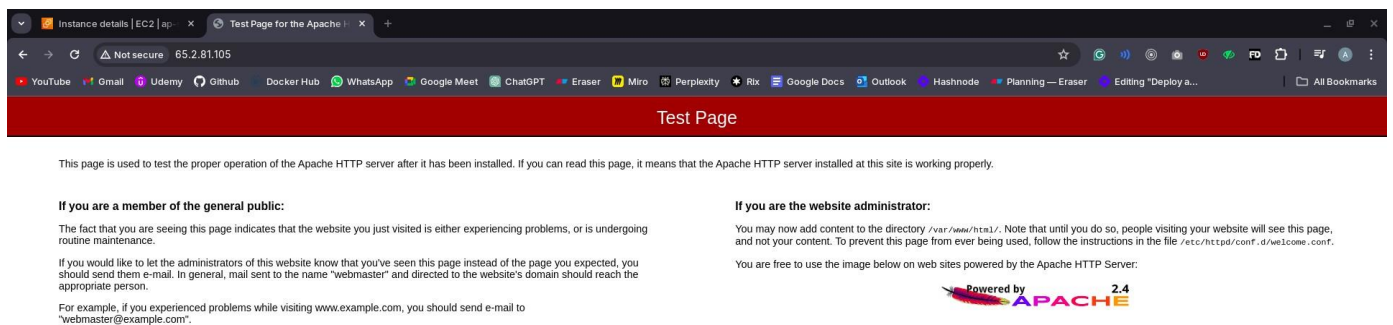
3. Install Apache server on node server using adhoc command

```
[ansible@ip-172-31-11-127 .ssh]$ ansible upes --list-hosts  
hosts (1):  
  172.31.5.83  
[ansible@ip-172-31-11-127 .ssh]$ ansible upes -a "sudo yum install httpd -y"  
[WARNING]: Consider using 'become', 'become_method', and 'become_user' rather than running sudo  
[WARNING]: Platform linux on host 172.31.5.83 is using the discovered Python interpreter at /usr/bin/python, but  
future installation of another Python interpreter could change this. See  
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.  
172.31.5.83 | CHANGED | rc=0 >>  
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd  
Resolving Dependencies  
--> Running transaction check  
--> Package httpd.x86_64 0:2.4.58-1.amzn2 will be installed  
--> Processing Dependency: httpd-filesystem = 2.4.58-1.amzn2 for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: httpd-tools = 2.4.58-1.amzn2 for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: httpd-filesystem for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: mod_http2 for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: system-logos-httpd for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.58-1.amzn2.x86_64  
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.58-1.amzn2.x86_64  
--> Running transaction check  
--> Package apr.x86_64 0:1.7.2-1.amzn2 will be installed  
--> Package apr-util.x86_64 0:1.6.3-1.amzn2.0.1 will be installed  
--> Processing Dependency: apr-util-bdb(x86-64) = 1.6.3-1.amzn2.0.1 for package: apr-util-1.6.3-1.amzn2.0.1.x86_64  
--> Package generic-logos-httpd.noarch 0:18.0.0-4.amzn2 will be installed  
--> Package httpd-filesystem.noarch 0:2.4.58-1.amzn2 will be installed  
--> Package httpd-tools.x86_64 0:2.4.58-1.amzn2 will be installed  
--> Package mailcap.noarch 0:2.1.41-2.amzn2 will be installed  
--> Package mod_http2.x86_64 0:1.15.19-1.amzn2.0.1 will be installed  
--> Running transaction check  
--> Package apr-util-bdb.x86_64 0:1.6.3-1.amzn2.0.1 will be installed  
--> Finished Dependency Resolution
```

```
ansible@ip-172-31-5-83:~  
[ansible@ip-172-31-5-83 ~]$ which httpd  
/usr/sbin/httpd  
[ansible@ip-172-31-5-83 ~]$
```

#### 4. Start the httpd service using ansible

```
complete!  
[ansible@ip-172-31-11-127 .ssh]$ ansibleupes -a "sudo systemctl start httpd"  
[WARNING]: Consider using 'become', 'become_method', and 'become_user' rather than running sudo  
[WARNING]: Platform linux on host 172.31.5.83 is using the discovered Python interpreter at /usr/bin/python, but  
future installation of another Python interpreter could change this. See  
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.  
172.31.5.83 | CHANGED | rc=0 >>  
[ansible@ip-172-31-11-127 .ssh]$
```



## 5. Remove ansible and then reinstall using ansible playbook

```
[ansible@ip-172-31-11-127 .ssh]$ ansible upes -a "sudo yum remove httpd -y"
[WARNING]: Consider using 'become', 'become_method', and 'become_user' rather than running sudo
[WARNING]: Platform linux on host 172.31.5.83 is using the discovered Python interpreter at /usr/bin/python, but
future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.
172.31.5.83 | CHANGED | rc=0 >>
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package httpd.x86_64 0:2.4.58-1.amzn2 will be erased
--> Processing Dependency: httpd-mm = 20120211x8664 for package: mod_http2-1.15.19-1.amzn2.0.1.x86_64
--> Running transaction check
--> Package mod_http2.x86_64 0:1.15.19-1.amzn2.0.1 will be erased
--> Finished Dependency Resolution

Dependencies Resolved
```

```
ansible@ip-172-31-11-127:~/ssh
[ansible@ip-172-31-11-127 .ssh]$ cat pb1.yml
- hosts: upes
  user: ansible
  become: yes
  connection: ssh
  vars:
    pkgname: httpd
    currstatus: present
  tasks:
    - name: Install HTTPD
      yum:
        name: '{{ pkgname }}'
        state: '{{ currstatus }}'

    - name: Start HTTPD service
      service:
        name: httpd
        state: started

[ansible@ip-172-31-11-127 .ssh]$ ansible-playbook pb1.yml

PLAY [upes] *********************************************************************

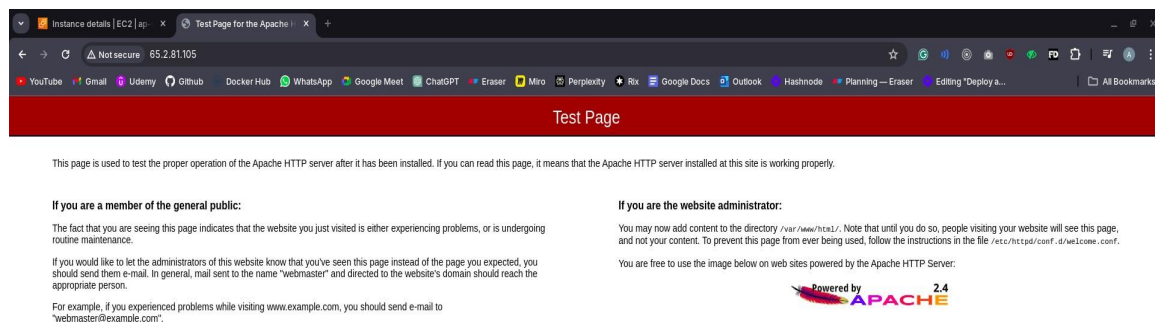
TASK [Gathering Facts] *********************************************************
[WARNING]: Platform linux on host 172.31.5.83 is using the discovered Python interpreter at /usr/bin/python, but
future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference\_appendices/interpreter\_discovery.html for more information.
ok: [172.31.5.83]

TASK [Install HTTPD] *********************************************************
ok: [172.31.5.83]

TASK [Start HTTPD service] *************************************************
changed: [172.31.5.83]

PLAY RECAP *********************************************************************
172.31.5.83 : ok=3  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

[ansible@ip-172-31-11-127 .ssh]$
```



## 6. Testing other playbooks

```
[ansible@ip-172-31-11-127 .ssh]$ nano pb2.yml
[ansible@ip-172-31-11-127 .ssh]$ cat pb2.yml
---
- hosts: upes
  user: ansible
  become: yes
  connection: ssh
  tasks:
    - name: Debian Family
      command: apt-get install apache2 -y
      when: ansible_os_family == "Debian"
    - name: RedHat Family
      command: yum install httpd -y
      when: ansible_os_family == "RedHat"
[ansible@ip-172-31-11-127 .ssh]$ ansible-playbook pb2.yml

PLAY [upes] *****

TASK [Gathering Facts] *****
[WARNING]: Platform linux on host 172.31.5.83 is using the discovered Python interpreter at /usr/bin/python, but
future installation of another Python interpreter could change this. See
https://docs.ansible.com/ansible/2.9/reference_appendices/interpreter_discovery.html for more information.
ok: [172.31.5.83]

TASK [Debian Family] *****
skipping: [172.31.5.83]

TASK [RedHat Family] *****
[WARNING]: Consider using the yum module rather than running 'yum'. If you need to use command because yum is
insufficient you can add 'warn: false' to this command task or set 'command_warnings=False' in ansible.cfg to get rid
of this message.
changed: [172.31.5.83]

PLAY RECAP *****
172.31.5.83 : ok=2 changed=1 unreachable=0 failed=0 skipped=1 rescued=0 ignored=0

[ansible@ip-172-31-11-127 .ssh]$
```