



Modules

1. For this lab come back to your directory. Then create a new exercise.

```
cp -r exc4/ exc5
```

2. Then after listing them, you can all the files that are present in your directory.
3. Now what are you are going to do is that you need to change the name of YAML file to something else.

```
mv demoplaybook.yaml demoweb.yaml
```

```

ubuntu@ip-172-31-12-170:~/ + ~
ubuntu@ip-172-31-12-170:~/demodirectory$ cd demodirectory
ubuntu@ip-172-31-12-170:~/demodirectory$ cp -r exc4/ exc5
ubuntu@ip-172-31-12-170:~/demodirectory$ ls
exc1 exc2 exc3 exc4 exc5
ubuntu@ip-172-31-12-170:~/demodirectory$ cd exc5
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ ls
demoplaybook.yaml demousrkey.pem inventory
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ cat demoplaybook.yaml
---
- name: demoplaybook setup
  hosts: webservers
  become: yes
  tasks:
    - name: Install httpd
      ansible.builtin.yum:
        name: httpd
        state: present

    - name: Start service
      ansible.builtin.service:
        name: httpd
        state: started
        enabled: yes

- name: DBserver setup
  hosts: dbservers
  become: yes
  tasks:
    - name: Install mariadb-server
      ansible.builtin.yum:
        name: mariadb-server
        state: present

    - name: Start mariadb service
      ansible.builtin.service:
        name: mariadb
        state: started
        enabled: yes
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ mv demoplaybook.yaml demoweb.yaml
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ ls
demousrkey.pem demoweb.yaml inventory
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ |

```

4. Now you need to open the YAML file and change the code.

vim demoweb.yaml

```

---
- name: Webserver setup
  hosts: webservers
  become: yes
  tasks:
    - name: Install httpd
      ansible.builtin.yum:
        name: httpd

```

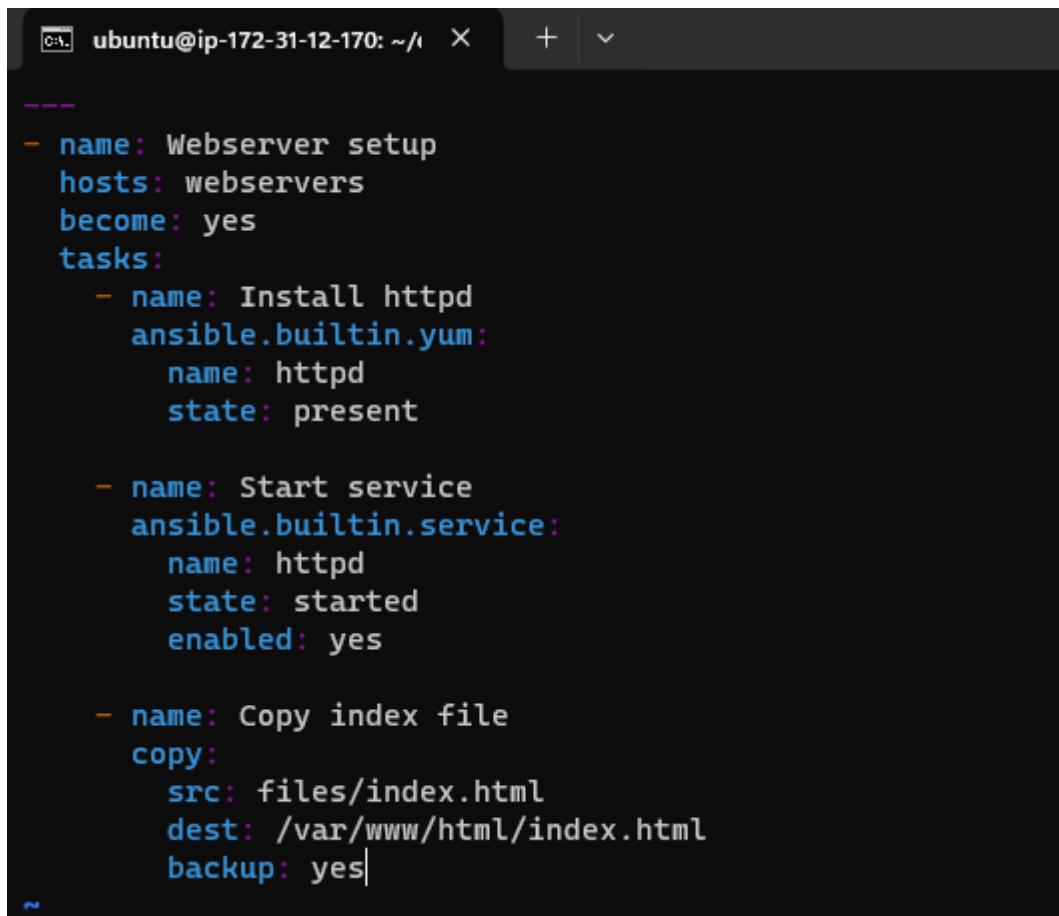
```

state: present

- name: Start service
  ansible.builtin.service:
    name: httpd
    state: started
    enabled: yes

- name: Copy index file
  copy:
    src: files/index.html
    dest: /var/www/html/index.html
    backup: yes

```



A screenshot of a terminal window titled "ubuntu@ip-172-31-12-170: ~/" showing Ansible playbooks. The terminal has a dark background with light-colored text. The code is color-coded: blue for variables like 'name' and 'src', purple for module names like 'ansible.builtin.service' and 'copy', and black for other text. The terminal window has a standard Linux-style title bar with a close button.

```

---  

- name: Webserver setup  

  hosts: webservers  

  become: yes  

  tasks:  

    - name: Install httpd  

      ansible.builtin.yum:  

        name: httpd  

        state: present  

    - name: Start service  

      ansible.builtin.service:  

        name: httpd  

        state: started  

        enabled: yes  

    - name: Copy index file  

      copy:  

        src: files/index.html  

        dest: /var/www/html/index.html  

        backup: yes

```

5. After that you need to create a file with name 'files'.
6. Then you need to create a new file index.html in the files folder.

```

mkdir files
vim files/index.html

```

7. Now inside index.html you can write anything you wish.

```
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ mkdir files
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ vim files/index.html
```

8. After the index.html file is created now you need to run the ansible playbook command.

```
ansible-playbook -i inventory demoweb.yaml
```

```
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ ansible-playbook -i inventory demoweb.yaml
PLAY [Webserver setup] ****
TASK [Gathering Facts] ****
ok: [demoweb01]
ok: [demoweb02]

TASK [Install httpd] ****
ok: [demoweb01]
ok: [demoweb02]

TASK [Start service] ****
ok: [demoweb01]
ok: [demoweb02]

TASK [Copy index file] ****
changed: [demoweb01]
changed: [demoweb02]

PLAY RECAP ****
: ok=4    changed=1    unreachable=0    failed=0    skipped=0
: ok=4    changed=1    unreachable=0    failed=0    skipped=0
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ |
```

9. After that you need to SSH into your instance.
10. Then you need to access the root user and go to this location there you will see your index.html file and if you do a cat into it, you can also see the contents of this file.

```
ssh -i demousrkey.pem ec2-user@yourIP
sudo -i
cd /var/www/html
ls
cat index.html
```

```
ubuntu@ip-172-31-12-170:~/demodirectory/exc5$ ssh -i demousrkey.pem ec2-user@172.31.9.178
Last login: Fri Feb  2 19:49:06 2024 from 172.31.12.170
[ec2-user@ip-172-31-9-178 ~]$ sudo -i
[root@ip-172-31-9-178 ~]# cd /var/www/html
[root@ip-172-31-9-178 html]# ls
index.html  index.html.14019.2024-02-02@19:49:06~
[root@ip-172-31-9-178 html]# cat index.html
Demo ansible modules
[root@ip-172-31-9-178 html]# |
```

11. This index.html with time and date is your old file which you created earlier.

```
[root@ip-172-31-9-178 html]# cat index.html.14019.2024-02-02@19:49:06~
This is a demo for ad hoc commands of Ansible.
[root@ip-172-31-9-178 html]# |
```

12. Now you need to exit from that instance and come back to your main instance which has the full control over the others.
13. Now create a new exercise again. This time use the file which was previous to the previous file.

```
cp -r exc4/ exc6
```

14. After that do a listing of that file and then change the name of YAML file.

```
mv demoplaybook.yaml demodb.yaml
```

15. After that go into that file.

```
vim demodb.yaml
```

```
ubuntu@ip-172-31-12-170:~/demodirectory$ ls
exc1 exc2 exc3 exc4 exc5 exc6
ubuntu@ip-172-31-12-170:~/demodirectory$ cp -r exc4/ exc6
ubuntu@ip-172-31-12-170:~/demodirectory$ ls
exc1 exc2 exc3 exc4 exc5 exc6
ubuntu@ip-172-31-12-170:~/demodirectory$ cd exc6
ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ ls
demoplaybook.yaml demousrkey.pem inventory
ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ mv demoplaybook.yaml demodb.yaml
ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ ls
demodb.yaml demousrkey.pem inventory
ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ vim demodb.yaml|
```

16. Now you need to change the code again.

```
---
- name: DBserver setup
  hosts: dbservers
  become: yes
  tasks:
    - name: Install mariadb-server
      ansible.builtin.yum:
        name: mariadb-server
        state: present

    - name: Install pymysql
      ansible.builtin.yum:
        name: python3-PyMySQL
        state: present

    - name: Start mariadb service
      ansible.builtin.service:
        name: mariadb
        state: started
        enabled: yes
```

```
- name: Create a new database with name 'accounts'  
  community.mysql.mysql_db:  
    name: accounts  
    state: present  
    login_unix_socket: /var/lib/mysql/mysql.sock
```

```
ubuntu@ip-172-31-12-170: ~/i  + |   
----  
- name: DBserver setup  
  hosts: dbservers  
  become: yes  
  tasks:  
    - name: Install mariadb-server  
      ansible.builtin.yum:  
        name: mariadb-server  
        state: present  
  
    - name: Install pymysql  
      ansible.builtin.yum:  
        name: python3-PyMySQL  
        state: present  
  
    - name: Start mariadb service  
      ansible.builtin.service:  
        name: mariadb  
        state: started  
        enabled: yes  
  
    - name: Create a new database with name 'accounts'  
      community.mysql.mysql_db:  
        name: accounts  
        state: present  
        login_unix_socket: /var/lib/mysql/mysql.sock
```

17. Now run the ansible playbook command.

```
ansible-playbook -i inventory demodb.yaml
```

```

ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ ansible-playbook -i inventory demodb.yaml

PLAY [DBserver setup] ****
TASK [Gathering Facts] **** ok: [demodb01]

TASK [Install mariadb-server] **** ok: [demodb01]

TASK [Install pymysql] **** changed: [demodb01]

TASK [Start mariadb service] **** ok: [demodb01]

TASK [Create a new database with name 'accounts'] **** changed: [demodb01]

PLAY RECAP ****
demodb01 : ok=5    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-12-170:~/demodirectory/exc6$ |

```

18. This time you need to add an extra pair of lines in your code where you have defined a database which has username and password.

```

---
- name: DBserver setup
  hosts: dbservers
  become: yes
  tasks:
    - name: Install mariadb-server
      ansible.builtin.yum:
        name: mariadb-server
        state: present

    - name: Install pymysql
      ansible.builtin.yum:
        name: python3-PyMySQL
        state: present

    - name: Start mariadb service
      ansible.builtin.service:
        name: mariadb
        state: started
        enabled: yes

    - name: Create a new database with name 'accounts'
      community.mysql.mysql_db:
        name: accounts
        state: present
        login_unix_socket: /var/lib/mysql/mysql.sock

    - name: Create database user with name 'demodbansible'
      community.mysql.mysql_user:
        name: demodbansible
        password: 'pass123'

```

```
priv: '*.*:ALL'
state: present
login_unix_socket: /var/lib/mysql/mysql.sock
```

```
ubuntu@ip-172-31-12-170: ~/i + - v

---
- name: DBserver setup
  hosts: dbservers
  become: yes
  tasks:
    - name: Install mariadb-server
      ansible.builtin.yum:
        name: mariadb-server
        state: present

    - name: Install pymysql
      ansible.builtin.yum:
        name: python3-PyMySQL
        state: present

    - name: Start mariadb service
      ansible.builtin.service:
        name: mariadb
        state: started
        enabled: yes

    - name: Create a new database with name 'accounts'
      community.mysql.mysql_db:
        name: accounts
        state: present
        login_unix_socket: /var/lib/mysql/mysql.sock
    - name: Create database user with name 'demodbansible'
      community.mysql.mysql_user:
        name: demodbansible
        password: 'pass123'
        priv: '*.*:ALL'
        state: present
        login_unix_socket: /var/lib/mysql/mysql.sock
```

19. Again, run the ansible playbook command.

```
ansible-playbook -i inventory demodb.yaml
```

```
ubuntu@ip-172-31-12-178:~/demodirectory/exc6$ ansible-playbook -i inventory demodb.yaml
PLAY [Dserver setup] ****
TASK [Gathering Facts] ****
ok: [demodb01]
TASK [Install mariadb-server] ****
ok: [demodb01]
TASK [Install pymysql] ****
ok: [demodb01]
TASK [Start mariadb service] ****
ok: [demodb01]
TASK [Create a new database with name 'accounts'] ****
ok: [demodb01]
TASK [Create database user with name 'demodbansible'] ****
[WARNING]: Option column_case_sensitive is not provided. The default is now false, so the column's name will be uppercased. The default will be changed to true in community.mysql 4.0.0.
changed: [demodb01]

PLAY RECAP ****
demodb01      : ok=6    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-12-178:~/demodirectory/exc6$
```