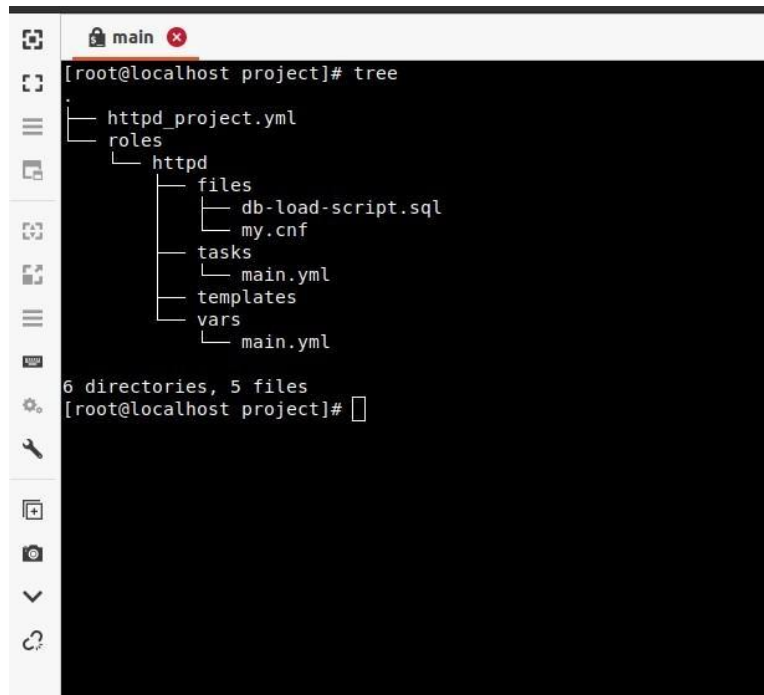


Ansible Simple Ecommerce Project

Firstly we need to create files (httpd_project.yml) and a directory (roles) in the same directory. Under the “roles” directory we created another directory which is called “httpd”. Under this “httpd” directory we created four directory (vars, tasks, templates, files). We created “main.yml” files in the vars and tasks directory. In the files directory we created two files “db-load-script.sql” and “my.cnf”.

A terminal window titled 'main' with a red close button. The prompt is '[root@localhost project]#'. The command 'tree' has been executed, showing a directory tree. The root directory is 'project', which contains 'httpd_project.yml' and a subdirectory 'roles'. The 'roles' directory contains a subdirectory 'httpd'. The 'httpd' directory contains four subdirectories: 'files', 'tasks', 'templates', and 'vars'. The 'files' directory contains 'db-load-script.sql' and 'my.cnf'. The 'tasks' directory contains 'main.yml'. The 'templates' directory is empty. The 'vars' directory contains 'main.yml'. The terminal output shows '6 directories, 5 files' and the prompt '[root@localhost project]#'.

```
[root@localhost project]# tree
.
├── httpd_project.yml
└── roles
    └── httpd
        ├── files
        │   ├── db-load-script.sql
        │   └── my.cnf
        ├── tasks
        │   └── main.yml
        ├── templates
        └── vars
            └── main.yml

6 directories, 5 files
[root@localhost project]#
```

Now in the “httpd_project.yml” file we have added the below lines:

```
- name: project
  hosts: centos
  roles:
    - httpd
```

Note: We have provided the host name and roles information in this files. So it will go to “httpd” roles and execute the tasks.

We have mentioned the below lines in “roles/httpd/tasks/main.yml”. This is our main task file.

```
- name: Installation Services
yum:
  name:
    - libselinux-python
    - libsemanage-python
    - mariadb-server
    - MySQL-python
    - httpd
    - git
    - php
    - php-
mysql state:
installed tags:
install
```

#note: all the mentioned name will be installed by this section.

```
- name: Start firewalld
service: name=firewalld state=started enabled=yes
tags: start firewalld
```

#note: This task will enable the firewall.

```
- name: insert firewalld rule for httpd
firewalld: port={{ httpd_port }}/tcp permanent=true state=enabled immediate=yes
tags: enable httpd port
```

#note: This task will enable the port of httpd_port in the firewall. Port is mentioned in the “roles/httpd/vars/main.yml” file.

```
- name: insert firewalld rule for mysql
firewalld: port={{ mysql_port }}/tcp permanent=true state=enabled immediate=yes
tags: enable mysql port
```

#note: This task will enable the port of mysql_port in the firewall. Port is mentioned in the “roles/httpd/vars/main.yml” file.

```
- name: Restart firewalld
service: name=firewalld state=reloaded enabled=yes
tags: restarted firewalld
```

#note: This task restarted the firewall after enabling the port.

```
- name: Copy Mysql configuration file
copy: src=files/my.cnf dest=/etc/my.cnf
tags: mysql conf copy
```

#note: This task will copy the mysql configuration file from source to destination.

- name: Start MariaDB Service
service: name=mariadb state=started enabled=yes
tags: start mariadb

#note: This task will start the mariadb service.

- name: Create Application Database
mysql_db: name={{ dbname }} state=present
tags: create database

#note: This task will create the database. And dbname is mentioned in “roles/httpd/vars/main.yml” file.

- name: Create Application DB User
mysql_user: name={{ dbuser }} password={{ dbpassword }} priv=*.*:ALL host='localhost'
state=present
tags: create user

#note: This task will create the db user. Dbuser and dbpassword is mentioned in the “roles/httpd/vars/main.yml” file.

- name: Move db-load-script to db host
copy:
src: files/db-load-script.sql
dest: /tmp/db-load-script.sql
tags: copy sql

#note: This task will move the sql file which we created in “roles/httpd/files” in the “/tmp” directory.

- name: Load Inventory Data
shell: mysql -f < /tmp/db-load-script.sql
tags: run sql

#note: This task executed the sql which we mentioned in “db-load-script.sql” file

- name: Set index.php as the default page
replace:
path: /etc/httpd/conf/httpd.conf
regexp: 'DirectoryIndex index.html'
replace: '#DirectoryIndex index.html \nDirectoryIndex index.php'
tags: rename html file

#note: This task replaced the “DirectoryIndex index.html” string “#DirectoryIndex index.html \nDirectoryIndex index.php” by this line in “/etc/httpd/conf/httpd.conf” file.

- name: http service state
service: name=httpd state=started enabled=yes
tags: httpd start

#note: This task started the httpd services

- name: Copy the code from repository
git: repo={{ repository }} dest=/var/www/html/ force=yes
tags: clone

#note: This tasks cloned from the git repository in “/var/www/html/” directory.

- name: replace ip in index.php file
command: sed -i 's/172.20.1.101/localhost/g' /var/www/html/index.php
tags: replace ip

#note: This task replaced ip

we added the below lines in “roles/httpd/vars/main.yml” file

mysql_port: 3306

dbname: ecomdb

dbuser: ecomuser

dbpassword: ecompassword

httpd_port: 80

repository: https://github.com/Debaice06/Ansible_Projects_Ecommerce.git

Note: We have mentioned the variable in this file.

We added the below lines in “roles/httpd/files/db-load-script.sql” file.

USE ecomdb;

CREATE TABLE products (id mediumint(8) unsigned NOT NULL auto_increment,Name
varchar(255) default NULL,Price varchar(255) default NULL, ImageUrl varchar(255) default
NULL,PRIMARY KEY (id)) AUTO_INCREMENT=1;

INSERT INTO products (Name,Price,ImageUrl) VALUES ("Laptop","100","c-1.png"),
("Drone","200","c-2.png"),("VR","300","c-3.png"),("Tablet","50","c-5.png"),("Watch","90","c-
6.png"),("Phone Covers","20","c-7.png"),("Phone","80","c-8.png"),("Laptop","150","c-4.png");

Note: This will create the tables and add data to the tables.

We added the below lines in “roles/httpd/files/my.cnf” file.

```
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
symbolic-links=0

[mysqld_safe]
log-error=/var/log/mariadb/mariadb.log
pid-file=/var/run/mariadb/mariadb.pid
!includedir /etc/my.cnf.d
```

Note: This is for mariadb database configuration.

Now we executed the ansible playbook by the below lines -
ansible-playbook httpd_project.yml

```
[root@localhost project]# ansible-playbook httpd_project.yml

PLAY [project] *****
TASK [Gathering Facts] *****
ok: [10.0.0.6]

TASK [httpd : Installation Services] *****
changed: [10.0.0.6]

TASK [httpd : Start firewalld] *****
ok: [10.0.0.6]

TASK [insert firewalld rule for httpd] *****
changed: [10.0.0.6]

TASK [httpd : insert firewalld rule for mysql] *****
changed: [10.0.0.6]

TASK [httpd : Restart firewalld] *****
changed: [10.0.0.6]

TASK [httpd : Copy Mysql configuration file] *****
changed: [10.0.0.6]

TASK [httpd : Start MariaDB Service] *****
changed: [10.0.0.6]

TASK [httpd : Create Application Database] *****
changed: [10.0.0.6]

TASK [httpd : Create Application DB User] *****
[WARNING]: Module did not set no_log for update_password
changed: [10.0.0.6]

TASK [httpd : Move db-load-script to db host] *****
changed: [10.0.0.6]

TASK [httpd : Load Inventory Data] *****
changed: [10.0.0.6]

TASK [httpd : Set index.php as the default page] *****
changed: [10.0.0.6]

TASK [httpd : http service state] *****
changed: [10.0.0.6]

TASK [httpd : Copy the code from repository] *****
changed: [10.0.0.6]

TASK [httpd : replace ip in index.php file] *****
[WARNING]: Consider using the replace, lineinfile or template module rather than running 'sed'. If you need to use command because replace, lineinfile or template 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: [10.0.0.6]

PLAY RECAP *****
10.0.0.6 : ok=16 changed=14 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0

[root@localhost project]#
```

fig: all task results results

```
PLAY RECAP *****
10.0.0.6 : ok=16 changed=14 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
[root@localhost project]#
```

fig: Total task summarize details

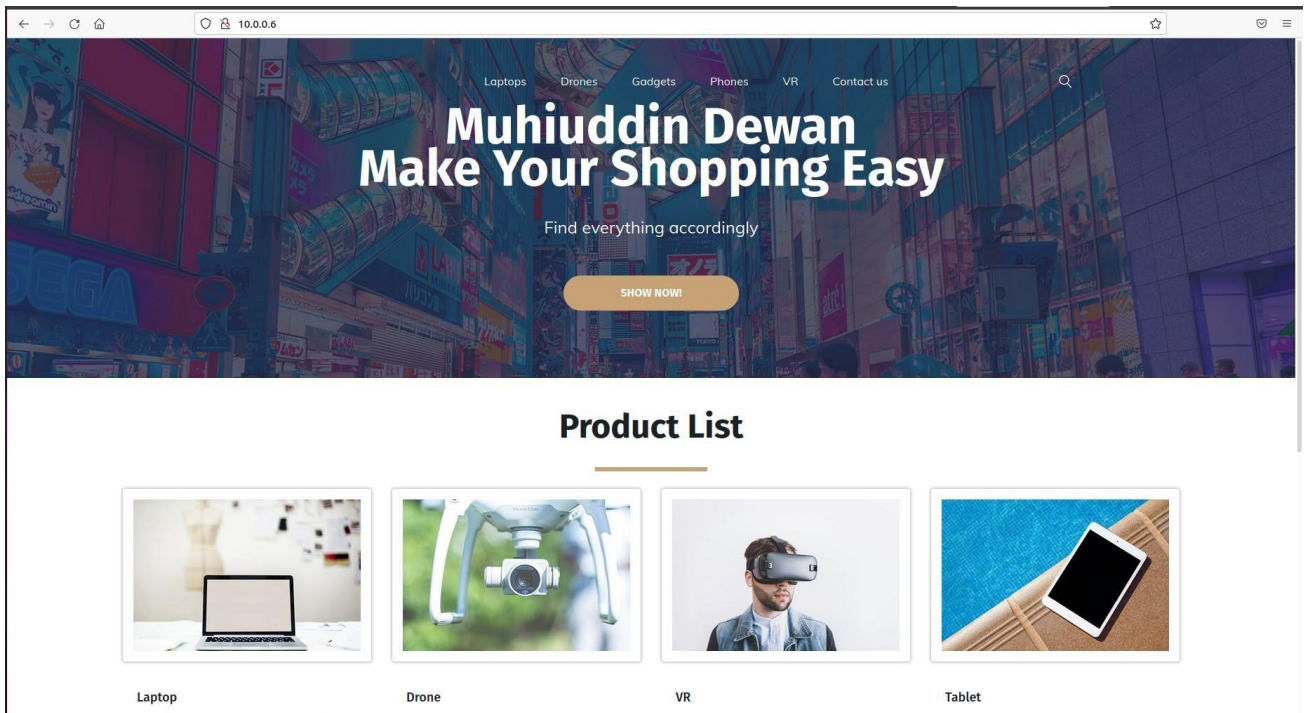


fig: View of the site with my name