

Automating Web Server Setup with Ansible and Docker

Ansible Playbook (`web.yml`)

```
``yaml
- hosts: all
  tasks:
    - name: "Install HTTPD Server"
      package:
        name: "httpd"
        state: present

    - name: "Copy HTML File"
      copy:
        src: "ayush.html"
        dest: "/var/www/html/index.html"

    - name: "Start HTTPD Service"
      service:
        name: "httpd"
        state: started
        enabled: true
```

Explanation:

- Install HTTPD Server: Installs the Apache HTTP Server (httpd) on all hosts specified in the playbook.
- Copy HTML File: Copies the local file ayush.html to the Apache document root (/var/www/html/index.html).
- Start HTTPD Service: Ensures that the Apache service is started and enabled to start on boot.

Dockerfile

FROM centos:7

RUN yum install httpd -y

RUN `yum install net-tools -y`

RUN `echo "hello" > /var/www/html/index.html`

CMD `["httpd", "-DFOREGROUND"]`

Explanation:

- Uses a CentOS 7 base image.
- Installs the httpd package and net-tools to set up the Apache web server.
- Creates a simple HTML file with the content "hello" in the document root.
- Configures the CMD instruction to start Apache in the foreground.

Docker Build Command

`docker build --ulimit nofile=1024000:1024000 -t myweb .`

Explanation:

- Initiates the Docker build process with the specified ulimit for the number of file descriptors.
- Builds the Docker image named myweb using the provided Dockerfile.

To execute the automation, follow these steps:

Ensure Ansible is installed on the control machine.

Create the web.yml file with the Ansible playbook content.

Run the Ansible playbook: `ansible-playbook web.yml`.

Ensure Docker is installed on the target machine.

Create the Dockerfile with the specified content.

Execute the Docker build command: `docker build --ulimit nofile=1024000:1024000 -t myweb .`