```
ansible-apache-docker/
├── apache-server/
│   ├── Dockerfile
│   ├── index.html
├── ansible/
│   ├── Dockerfile
│   └── playbook.yml
├── docker-compose.yml
```

(apache-server/Dockerfile)

```
FROM ubuntu:20.04

# Minimize layer creation and reduce build time
RUN set -xe \
   && apt-get update \
   && DEBIAN_FRONTEND=noninteractive apt-get install -y --no-install-recommends \
      apache2 \
      openssh-server \
   && rm -rf /var/lib/apt/lists/* \
   && mkdir /var/run/sshd \
   && echo 'root:password' | chpasswd \
   && sed -i 's/^PermitRootLogin prohibit-password/PermitRootLogin yes/' /etc/ssh/sshd_config

# Expose Apache and SSH ports
EXPOSE 80 22

# Create a basic index.html for Apache
COPY index.html /var/www/html/index.html

# Start SSH and Apache in the background and keep the container running
CMD service ssh start && apache2ctl -D FOREGROUND
```

(apache-server/index.html)

```html
<!-- apache-server/index.html -->
<html>
 <head>
  <title>Apache Server</title>
 </head>
 <body>
  <h1>Welcome to Apache!</h1>
 </body>
</html>
```

(ansible/playbook.yml)

```yaml
# ansible/playbook.yml
---
- name: Install Apache and ensure it is running
 hosts: apache-server
 become: true
 tasks:
  - name: Install Apache
   apt:
    name: apache2
    state: present
    update_cache: yes

  - name: Start Apache service
   service:
    name: apache2
    state: started
    enabled: yes
```

(ansible/Dockerfile)

```dockerfile
# ansible/Dockerfile
FROM ubuntu:20.04


# Install Ansible and SSH client for remote communication
RUN apt-get update && \
    apt-get install -y ansible sshpass python3-pip && \
    apt-get clean


# Install necessary Ansible dependencies
RUN pip3 install ansible


# Set working directory
WORKDIR /ansible


# Copy the playbook and inventory into the container
COPY playbook.yml /ansible/playbook.yml


# Entry point for Ansible to run the playbook
CMD ["ansible-playbook", "/ansible/playbook.yml", "-i", "inventory"]
```

(docker-compose.yml)

```yaml
# docker-compose.yml
version: '3.8'


services:
 apache-server:
  build: ./apache-server
  container_name: apache-server
  ports:
   - "8080:80"
  networks:
```

```
    - app-network

  ansible:
   build: ./ansible
   container_name: ansible-container
   depends_on:
    - apache-server
   networks:
    - app-network

networks:
 app-network:
  driver: bridge
```

Set Up Ansible Inventory

ansible/inventory

```
[apache-server]
apache-server ansible_host=apache-server ansible_port=22

[apache-server:vars]
ansible_ssh_user=root
ansible_ssh_pass=password
```

docker-compose build apache-server

docker-compose build ansible

docker-compose up -d

docker-compose run --rm ansible

This will run the playbook and install Apache inside the apache-server container. The apache-server will also be started, and you can access it by navigating to http://localhost:8080 in your browser.

Visit http://localhost:8080 in your browser. If everything was set up correctly, you should see the "Welcome to Apache!" message served by the Apache web server running inside a Docker container.