

## YAML

- This a data representation format.
- YAML uses name value pairs to represent data.
- Each name value is represented as

```
<name>: <value>
```

- Values can be of multiple types
  - Simple (Scalar) Types:
    - number: `price: 100`
    - text: `item: notebook`
    - boolean: `ebill: yes` or `ebill: true`
  - Complex
    - list or array:

```
fav_colors:
  - white
  - black
fav_movies: ["ironman", "Avengers"]
```

- map/dictionary/object

```
address:
  flatno: 601
  building: nilgirim
  landmark: ameerpeta metro
```

- YAML file

```
---
course: DevOps
tools:
  - Ansible
  - Docker
  - Kubernetes
  - Jenkins
  - Azure DevOps
  - Git
categories:
  - name: versioncontrol
    tools:
      - git
```

```
- name: cicdengine
  tools:
    - Jenkins
    - AzureDevOps
```

- [Refer Here](#) for official docs
- Yaml files generally have extension of `.yaml` or `.yml`

## Ansible Playbook syntax

- Playbooks are expressed in yaml format.
- [Refer Here](#) for official docs

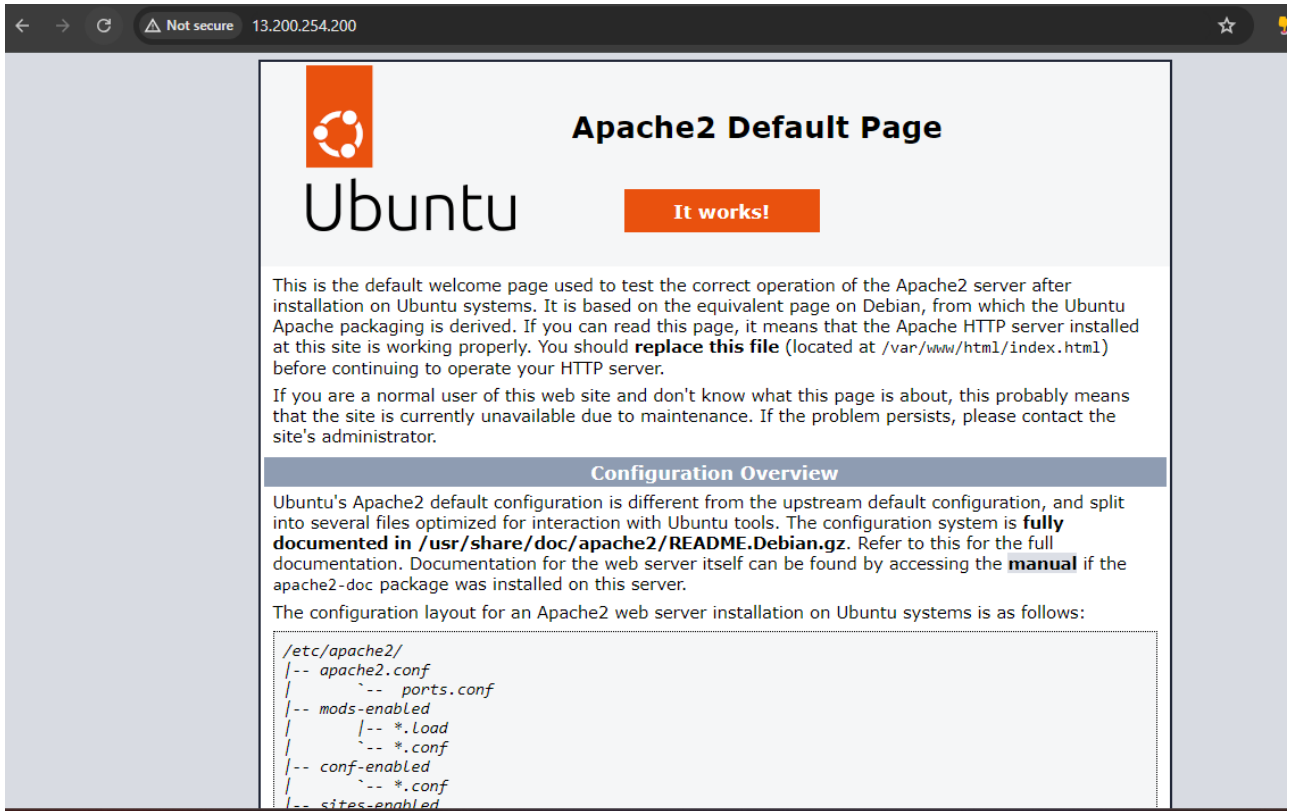
```
---
- name: <name of your play>
  hosts: <where to execute from inventory passed>
  become: yes # become sudo user
  tasks:
    - name: <name of your task>
      module_name:
        paramter1: value1
        ..
        paramtern: valuen
        state: <desired state>
    - name: <name of your task>
      module_name:
        paramter1: value1
        ..
        paramtern: valuen
        state: <desired state>
```

### Activity 1: Create a php enabled apache server (LAMP)

- Activity:
  - Install Apache server
  - Install necessary modules to run php
  - deploy a sample php page
- Working Manual steps

```
sudo apt update
sudo apt install apache2 -y
sudo apt install php php-fpm
sudo nano /var/www/html/info.php
# add the following line excluding hash
# <?php phpinfo();?>
```

- Now navigate to `http://<ipaddress>`



- Now navigate to `http://<ipaddress>/info.php`

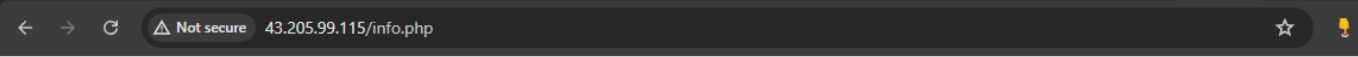
The screenshot shows a web browser window with the address bar displaying '13.200.254.200/info.php'. The page content includes the title 'PHP Version 8.1.2-1ubuntu2.18' and the PHP logo. Below the title is a table with the following information:

System	Linux ip-172-31-39-250 6.5.0-1022-aws #22-22.04.1-Ubuntu SMP Fri Jun 14 16:31:00 UTC 2024 x86_64
Build Date	Jun 14 2024 15:52:55
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.1/apache2
Loaded Configuration File	/etc/php/8.1/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.1/apache2/conf.d
Additional .ini files parsed	/etc/php/8.1/apache2/conf.d/10-opcache.ini, /etc/php/8.1/apache2/conf.d/10-pdo.ini, /etc/php/8.1/apache2/conf.d/20-calendar.ini, /etc/php/8.1/apache2/conf.d/20-ctype.ini, /etc/php/8.1/apache2/conf.d/20-exif.ini, /etc/php/8.1/apache2/conf.d/20-ffi.ini, /etc/php/8.1/apache2/conf.d/20-fileinfo.ini, /etc/php/8.1/apache2/conf.d/20-ftp.ini, /etc/php/8.1/apache2/conf.d/20-gettext.ini, /etc/php/8.1/apache2/conf.d/20-gd.ini, /etc/php/8.1/apache2/conf.d/20-gmp.ini, /etc/php/8.1/apache2/conf.d/20-imagick.ini, /etc/php/8.1/apache2/conf.d/20-ldap.ini, /etc/php/8.1/apache2/conf.d/20-ldap_sasl.ini, /etc/php/8.1/apache2/conf.d/20-mbstring.ini, /etc/php/8.1/apache2/conf.d/20-mcrypt.ini, /etc/php/8.1/apache2/conf.d/20-mysqlnd.ini, /etc/php/8.1/apache2/conf.d/20-openssl.ini, /etc/php/8.1/apache2/conf.d/20-sockets.ini, /etc/php/8.1/apache2/conf.d/20-sysmsg.ini, /etc/php/8.1/apache2/conf.d/20-sysvsem.ini, /etc/php/8.1/apache2/conf.d/20-sysvshm.ini, /etc/php/8.1/apache2/conf.d/20-tokenizer.ini
PHP API	20210902
PHP Extension	20210902
Zend Extension	420210902
Zend Extension Build	API420210902.NTS
PHP Extension Build	API20210902.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled

- Lets Create an ansible playbook
- [Refer Here](#) for the playbook
- Now create an inventory file `hosts` with entries `localhost`
- Now execute ansible playbook

```
ansible-playbook -i hosts phpinfo.yaml
```

```
devops@ip-172-31-42-239:~$ ansible-playbook -i hosts phpinfo.yaml
PLAY [install php on apache server] *****
TASK [Gathering Facts] *****
ok: [localhost]
TASK [install apache and update packages] *****
changed: [localhost]
TASK [install php modules] *****
changed: [localhost]
TASK [create info page] *****
changed: [localhost]
PLAY RECAP *****
localhost : ok=4 changed=3 unreachable=0 failed=0 skipped=0 rescued=0
ignored=0
devops@ip-172-31-42-239:~$ ansible-playbook -i hosts phpinfo.yaml
```



PHP Version 8.1.2-1ubuntu2.18 

System	Linux ip-172-31-42-239 6.5.0-1022-aws #22-22.04.1-Ubuntu SMP Fri Jun 14 16:31:00 UTC 2024 x86_64
Build Date	Jun 14 2024 15:52:55
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.1/apache2
Loaded Configuration File	/etc/php/8.1/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.1/apache2/conf.d
Additional .ini files parsed	/etc/php/8.1/apache2/conf.d/10-opcache.ini, /etc/php/8.1/apache2/conf.d/10-pdo.ini, /etc/php/8.1/apache2/conf.d/20-calendar.ini, /etc/php/8.1/apache2/conf.d/20-ctype.ini, /etc/php/8.1/apache2/conf.d/20-exif.ini, /etc/php/8.1/apache2/conf.d/20-ffi.ini, /etc/php/8.1/apache2/conf.d/20-fileinfo.ini, /etc/php/8.1/apache2/conf.d/20-ftp.ini, /etc/php/8.1/apache2/conf.d/20-gettext.ini, /etc/php/8.1/apache2/conf.d/20-iconv.ini, /etc/php/8.1/apache2/conf.d/20-phar.ini, /etc/php/8.1/apache2/conf.d/20-posix.ini, /etc/php/8.1/apache2/conf.d/20-readline.ini, /etc/php/8.1/apache2/conf.d/20-shmop.ini, /etc/php/8.1/apache2/conf.d/20-sockets.ini, /etc/php/8.1/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.1/apache2/conf.d/20-sysvsem.ini, /etc/php/8.1/apache2/conf.d/20-sysvshm.ini, /etc/php/8.1/apache2/conf.d/20-tokenizer.ini
PHP API	20210902
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Zend Extension Build	API420210902.NTS
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