# Ansible - Playbooks

Playbooks are the files where Ansible code is written. Playbooks are written in YAML format. YAML stands for Yet Another Markup Language. **Playbooks** are one of the core features of Ansible and tell Ansible what to execute. They are like a to-do list for Ansible that contains a list of tasks.

Playbooks contain the steps which the user wants to execute on a particular machine. Playbooks are run sequentially. Playbooks are the building blocks for all the use cases of Ansible.

## Playbook Structure

Each playbook is an aggregation of one or more plays in it. Playbooks are structured using Plays. There can be more than one play inside a playbook.

The function of a play is to map a set of instructions defined against a particular host.

YAML is a strict typed language; so, extra care needs to be taken while writing the YAML files. There are different YAML editors but we will prefer to use a simple editor like notepad++. Just open notepad++ and copy and paste the below yaml and change the language to YAML (Language → YAML).

A YAML starts with --- (3 hyphens)

## Create a Playbook

Let us start by writing a sample YAML file. We will walk through each section written in a yaml file.

```
---

  name: install and configure DB

  hosts: testServer

  become: yes


  vars:
```

```
    oracle_db_port_value : 1521


  tasks:

  -name: Install the Oracle DB

     yum: <code to install the DB>



  -name: Ensure the installed service is enabled and running

  service:

     name: <your service name>
```

The above is a sample Playbook where we are trying to cover the basic syntax of a playbook. Save the above content in a file as **test.yml**. A YAML syntax needs to follow the correct indentation and one needs to be a little careful while writing the syntax.

## The Different YAML Tags

Let us now go through the different YAML tags. The different tags are described below −

### name

This tag specifies the name of the Ansible playbook. As in what this playbook will be doing. Any logical name can be given to the playbook.

### hosts

This tag specifies the lists of hosts or host group against which we want to run the task. The hosts field/tag is mandatory. It tells Ansible on which hosts to run the listed tasks. The tasks can be run on the same machine or on a remote machine. One can run the tasks on multiple machines and hence hosts tag can have a group of hosts' entry as well.

### vars

Vars tag lets you define the variables which you can use in your playbook. Usage is similar to variables in any programming language.

tasks

All playbooks should contain tasks or a list of tasks to be executed. Tasks are a list of actions one needs to perform. A tasks field contains the name of the task. This works as the help text for the user. It is not mandatory but proves useful in debugging the playbook. Each task internally links to a piece of code called a module. A module that should be executed, and arguments that are required for the module you want to execute.

## Common Playbook Issues

In this section, we will learn about the a few common playbook issues. The issues are −

- Quoting
- Indentation

Playbook is written in yaml format and the above two are the most common issues in yaml/playbook.

Yaml does not support tab based indentation and supports space based indentation, so one needs to be careful about the same.

**Note** − once you are done with writing the yaml , open this site(https://editor.swagger.io/) and copy paste your yaml on the left hand side to ensure that the yaml compiles properly. This is just a tip.

Swagger qualifies errors in warning as well as error.