Documentations on Ansible Playbook for installation of 5 Linux Packages on Slave Server

Detailed documentations on Ansible Playbook for installation of 5 Linux Packages

- *What is Ansible?*

Ansible is an open-source IT automation tool that automates provisioning, configuration management, application deployment, orchestration, and many other manual IT processes. Unlike more simplistic management tools, Ansible users (like system administrators, developers and architects) can use Ansible automation to install software, automate daily tasks, provision infrastructure, improve security and compliance, patch systems, and share automation across the entire organization.

- *What is Ansible Playbook?*

An ansible playbook is a file that contains a list of tasks that automatically execute against hosts. It is an organized unit of scripts that defines work for a server configuration managed by the automation tool Ansible. Each module within an Ansible Playbook performs a specific task, and contains metadata that determines when and where a task is executed, as well as which user executes it.

```
---
- hosts: server1
  user: himanshuw
  become: yes
  tasks:
```

- *First of all, we will specify the hosts name in /etc/ansible/hosts I.e server1 along with the IP of the slave server. Followed by specifying user and its name, then become: yes, for privilege escalation systems to execute tasks with root privileges or with another user's permissions. Because this feature*

allows you to 'become' another user, different from the user that logged into the machine (remote user), we call it become.

- *Then finally specify tasks: to perform.*

```
    #######Install-Postfix#######
- name: Postfix package installation
  apt:
   name: postfix
   state: present
- name: Ensure postfix service is running
  service:
   name: postfix
   state: started
- name: Enable postfix on System Boot
  service:
   name: postfix
   enabled: yes
```

- *Beginning with Installing Postfix as we have ubuntu server we use apt as a package manager, giving it a name as postfix where state is present.*
- *Next, we have to ensure postfix service is running fine and its state should be started.*
- *Here after, enabling postfix on System Boot so that package could get installed correctly.*

```
    #######Install-Git#######
- name: Git package installation
  apt:
   name: git
   state: present
   update_cache: yes
```

- *Now for installing Git package by apt, specifying name as git where state is present and update cache allows ansible's apt module to refresh the caches before applying whatever change is necessary (if any)*

```
    #######Install-JDK#######
- name: Update APT package manager repositories cache
  become: yes
  apt:
   update_cache: yes

- name: JDK package installation
  become: yes
  apt:
   name: openjdk-8-jdk
   state: present
```

- *Now installing JDK first of all by updating APT package manager repositories cache and become: yes, by allowing root privileges and apt for installing in ubuntu server & update_cache: yes*
- *Next step is to name the JDK package while allowing root privileges and giving name: openjdk-8-jdk and state: present for building stack/app whether app deploy or dependency version bump.*

```
    #######Install-tree#######
- name: apt update && apt install tree -y
  apt:
    update_cache: yes
    name: tree
    state: present
    #######Install-Nginx#######
```

- *Similarly, for installing tree package by apt-update (system update) and install tree –y (by command and allowing yes by –y)*
- *Also, update_cache: yes, giving name as tree and its state to be present to install successfully.*

```
    #######Install-Nginx#######
 - name: Nginx package installation
   apt:
    name: nginx
    state: present
```

- *Run the playbook in master server with ansible-playbook <playbook_name.yml> -kK with password to login via Secure SSH connection.*
- *At last ending with installing Nginx package with name: nginx & state: present.*

Complete Ansible Playbook as follows:

```
---
- hosts: server1
  user: himanshuw
  become: yes
  tasks:
     #######Install-Postfix#######
  - name: Postfix package installation
    apt:
     name: postfix
     state: present
  - name: Ensure postfix service is running
    service:
     name: postfix
     state: started
```

```
- name: Enable postfix on System Boot
  service:
    name: postfix
    enabled: yes
      #######Install-Git#######
- name: Git package installation
  apt:
    name: git
    state: present
    update_cache: yes
      #######Install-JDK#######
- name: Update APT package manager repositories cache
  become: yes
  apt:
    update_cache: yes

- name: JDK package installation
  become: yes
  apt:
    name: openjdk-8-jdk
    state: present
      #######Install-tree#######
- name: apt update && apt install tree -y
  apt:
    update_cache: yes
    name: tree
    state: present
      #######Install-Nginx#######
- name: Nginx package installation
  apt:
    name: nginx
    state: present
```