

Ansible Interview Questions and Answers

1. What is control node?

Master machine where ansible is installed which is responsible to manage target servers.

2. What is playbook?

Playbook is a simple code file in which we define tasks that needs to be executed.

3. What is inventory?

Inventory is a text file that contains a list of target hosts and groups of hosts that Ansible can manage.

4. How can you pass variables to an Ansible playbook?

Variables can be passed through the command line using the **-e flag** or we can also defined in inventory files, inside playbooks and roles variable file vars.yaml.

5. What is handler in ansible?

Handler is a task that is triggered only if another task reports a change. but only runs when it is notified by other tasks. Handlers are typically used to perform actions such as service restarts or configuration reloads when specific changes are made on remote hosts.

6. How do you run an Ansible playbook?

You can run an Ansible playbook using the ansible-playbook command followed by the playbook filename.

For example: ansible-playbook myplaybook.yml

7. What is Ansible Galaxy, and how do you install roles from it?

Ansible Galaxy is a repository of Ansible roles contributed by the community. You can install roles from Ansible Galaxy using the ansible-galaxy command,

for example: ansible-galaxy install username.role_name

8. What is the Ansible Vault, and how is it used for securing sensitive data?

Ansible Vault is a feature that allows you to encrypt sensitive data like passwords and keys within Ansible playbooks or variable files.

9. Explain how you can handle errors and failures in Ansible playbooks.

Ansible provides error handling mechanisms such as ignore_errors, failed_when, and block/rescue/always constructs to manage errors and failures gracefully. These can be used in tasks to control the playbook's behavior when errors occur.

10. Explain the difference between Ansible ad-hoc commands and playbooks.

Ansible Ad-hoc commands are used for one-time tasks or quick operations, and Ad-hoc commands are run directly from the command line and are useful for tasks like checking system information, installing packages, or restarting services on remote hosts.

Playbooks are written in YAML and provide a structured way to define a series of tasks.

11. Explain the purpose of Ansible modules.

Modules are small programs that Ansible executes to manage various aspects of the infrastructure, such as file management, package installation, and service management.

12. How many modules have you used could you please explain?

yum : It is used to install/remove package

service : It is used to stop/start/restart/enable/disable service.

13. What is register?

Register is used to store the output from task execution in a variable.

14. What is the best way to make content reusable/redistributable?

15. What is Ansible Role?

We can use Ansible Roles to make content reusable, it is used to organize playbook.

For Example: If we need to execute 10 task on 5 systems, writing all of them in the playbook it can make it confusing, Instead we can create 10 roles and call them inside the playbook.

16. How to automate the password input in playbook using encrypted file?

We can store the password in a file and then we can encrypt that file and while executing playbook we can specify the –vault-password-file and file path.

17. Difference between Static Inventory and Dynamic inventory?

Static Inventory is a plain text file that contains information about the servers.

Dynamic inventory is generated by the script written in Python or any other programming language. In cloud environments static inventory can be failed because the IP addresses can be change if a virtual server is stopped and started again.

Static inventory file is a list of managed hosts declared under a host group using either hostnames or IP addresses in a plain text file. The managed host entries are listed below the group name in each line. For example,

```
[gatewayed]
staging1 ansible_host=10.0.2.1
staging2 ansible_host=10.0.2.2
```

Dynamic inventory is generated by a script written in Python or any other programming language or by using plugins(preferable). In a cloud setup, static inventory file configuration will fail since IP addresses change once a virtual server is stopped and started again. We create a demo_aws_ec2.yaml file for the config such as,

```
plugin: aws_ec2
regions:
ap-south-1
filters:
tag:tagtype: testing
```

```
ansible-inventory -i demo_aws_ec2.yaml -graph
```

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