



DevOps Shack

50 Ansible Interview Questions & Answers

1. What is Ansible?

Ansible is an open-source automation tool used for configuration management, application deployment, and task automation.

2. What is the difference between Ansible and Puppet/ Chef?

Ansible is agentless, while Puppet and Chef require agents installed on managed nodes. Ansible uses SSH for communication, whereas Puppet and Chef use their own agents.

3. What is an Ansible playbook?

An Ansible playbook is a YAML file that defines a series of tasks to be executed on remote hosts. It describes the desired state of the system.

4. How do you install Ansible?

```
sudo apt-get install ansible    # For Ubuntu/Debian
sudo yum install ansible        # For CentOS/RHEL
```

4. What is an Ansible role?

An Ansible role is a collection of tasks, variables, files, and templates organized in a predefined structure to simplify the management of configurations and applications.

6. How do you run an Ansible playbook?

```
ansible-playbook <playbook_file.yml>
```

7. What is an Ansible inventory?

An Ansible inventory is a file that lists the managed hosts and groups them according to different criteria. It can be static or dynamic.

8. How do you specify which hosts to run Ansible commands against?

You can specify hosts using the `-i` option followed by the path to the inventory file or by using the `--limit` option followed by the host or group name.

9. What is the default location for the Ansible configuration file?

The default location for the Ansible configuration file is `/etc/ansible/ansible.cfg`.

10. How do you check the syntax of an Ansible playbook without executing it?

```
ansible-playbook <playbook_file.yml> --syntax-check
```

11. How do you install a package using Ansible?

You can use the `yum` or `apt` module depending on the package manager of the target system.

```
- name: Install package
  yum:
    name: <package_name>
    state: present    # or latest, absent, etc.
```

12. How do you restart a service using Ansible?

```
- name: Restart service
  service:
    name: <service_name>
    state: restarted    # or started, stopped, reloaded, etc.
```

13. How do you copy a file to a remote host using Ansible?

```
- name: Copy file
  copy:
    src: /path/to/local/file
    dest: /path/to/remote/file
```

14. What is Ansible Vault used for?

Ansible Vault is used for encrypting sensitive data such as passwords or keys within Ansible playbooks or files.

15. How do you encrypt a file using Ansible Vault?

```
ansible-vault encrypt <file_name>
```

16. How do you decrypt a file encrypted with Ansible Vault?

```
ansible-vault decrypt <file_name>
```

17. How do you pass variables to an Ansible playbook?

You can use the `-e` option followed by a key-value pair.

```
ansible-playbook -e "var=value" playbook.yml
```

18. How do you loop over a list of items in Ansible?

You can use the `loop` keyword along with the `with_items` directive.

```
- name: Loop over items
  debug:
    msg: "Item is {{ item }}"
  loop:
    - item1
    - item2
```

19. How do you define a variable in Ansible?

You can define variables in the playbook or in separate variable files.

```
vars:
  my_var: value
```

20. How do you include a task file in an Ansible playbook?

```
- include: tasks/main.yml
```

21. How do you register the output of a command in Ansible?

You can use the `register` keyword.

```
- name: Run command and register output
  shell: <command>
  register: result
```

22. How do you access registered variables in Ansible?

You can access them using the result variable name.

```
- debug:
  msg: "Output is {{ result.stdout }}"
```

23. How do you debug in Ansible?

You can use the `debug` module to print messages during playbook execution.

```
- debug:
  msg: "Debug message"
```

24. How do you ignore errors in Ansible?

You can use the `ignore_errors` directive.

```
- command: <command_that_might_fail>
  ignore_errors: yes
```

25. How do you run tasks only on specific operating systems in Ansible?

You can use the when directive with the ansible_os_family variable.

```
- name: Run only on Debian-based systems
  debug:
    msg: "This task runs only on Debian-based systems"
  when: ansible_os_family == "Debian"
```

26. How do you install multiple packages in Ansible?

You can use the yum or apt module with a list of packages.

```
- name: Install multiple packages
  yum:
    name:
      - package1
      - package2
    state: present
```

27. How do you create a directory using Ansible?

```
- name: Create directory
  file:
    path: /path/to/directory
    state: directory
```

28. How do you set up passwordless SSH for Ansible?

You can use SSH key-based authentication.

```
ssh-keygen -t rsa
ssh-copy-id <user>@<host>
```

29. How do you check if a file exists using Ansible?

```
- name: Check if file exists
  stat:
    path: /path/to/file
  register: file_info
```

30. How do you conditionally execute tasks based on file existence in Ansible?

```
- name: Task executes only if file exists
  debug:
    msg: "File exists"
  when: file_info.stat.exists
```

31. How do you perform a rolling update with Ansible?

You can use the serial keyword to define the number of hosts to update simultaneously.

```
- name: Rolling update
  hosts: all
  serial: 1
```

32. How do you set up a cron job using Ansible?

- name: Set up cron job
- ```
cron:
 name: "My cron job"
 minute: "0"
 hour: "*/2"
 job: "some_command"
```

### 33. How do you manage users and groups using Ansible?

You can use the user and group modules.

- name: Add user
- ```
user:
  name: username
  state: present
```

34. How do you manage file permissions using Ansible?

- name: Set file permissions
- ```
file:
 path: /path/to/file
 mode: 0644
```

### 35. How do you manage SELinux using Ansible?

- name: Set SELinux mode
- ```
selinux:
  policy: targeted
  state: enforcing
```

36. How do you manage firewalls using Ansible?

You can use the firewalld or iptables module.

- name: Open port in firewalld
- ```
firewalld:
 port: 80/tcp
 state: enabled
```

### 37. How do you perform a dry run of an Ansible playbook?

- name: Dry run
- ```
debug:
  msg: "This is a dry run"
check_mode: yes
```

38. How do you manage Docker containers using Ansible?

You can use the docker_container module.

- name: Manage Docker container
- ```
docker_container:
 name: my_container
 image: nginx
 state: started
```

### **39. How do you manage AWS resources using Ansible?**

You can use the `ec2` module.

```
- name: Provision EC2 instance
 ec2:
 key_name: my_key
 instance_type: t2.micro
 image: ami-12345678
 state: present
```

### **40. How do you manage Azure resources using Ansible?**

You can use the `azure_rm_virtualmachine` module.

```
- name: Provision Azure VM
 azure_rm_virtualmachine:
 resource_group: my_rg
 name: my_vm
 vm_size: Standard_DS1_v2
 image: UbuntuLTS
 admin_username: azureuser
 admin_password: Password123!
 state: present
```

### **41. How do you manage variables in Ansible Tower?**

You can define variables in inventories, projects, or job templates.

### **42. How do you schedule jobs in Ansible Tower?**

You can schedule jobs using job templates in Ansible Tower's web interface.

### **43. How do you scale Ansible Tower?**

You can add more Tower nodes to an existing cluster or set up a load balancer in front of multiple Tower instances.

### **44. How do you manage secrets in Ansible Tower?**

You can use Ansible Vault or integrate Tower with external secret management systems like HashiCorp Vault.

### **45. How do you monitor Ansible Tower?**

You can monitor Tower using its built-in dashboard or integrate it with external monitoring tools.

### **46. How do you configure custom credentials in Ansible Tower?**

You can define custom credential types and add them to job templates.

### **47. How do you handle errors in Ansible Tower job runs?**

You can set up notifications for failed jobs or configure retry and failure policies.

#### **48. How do you integrate Ansible with version control systems?**

You can use Git to manage Ansible playbooks and roles.

#### **49. How do you manage secrets in Ansible Tower?**

You can use Ansible Vault to encrypt sensitive data in Tower.

#### **50. How do you troubleshoot Ansible playbooks?**

You can use the `-vvv` option to enable verbose output or review logs in Tower for failed jobs.