



**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.