

DevOps & Deployment Interview Q&A (Scenario-Based)

1. Jenkins & CI/CD Errors

1. Q: Jenkins pipeline shows "Waiting for next available executor".

A: All executors busy or node label mismatch. Free executors, increase count, or correct node label.

2. Q: Git checkout fails with "Selected Git installation does not exist".

A: Configure Git in Jenkins global tools or ensure Git installed on server.

3. Q: Pipeline fails at Docker pull with "pull access denied".

A: Use full image name with username: username/image:tag. Login required for private repo.

2. Ansible Errors

4. Q: Ansible still uses old EC2 IP.

A: Check inventory path, host_vars/group_vars, clear ansible cache, use correct ansible_host.

5. Q: Ansible "Host key verification failed".

A: Remove old key: `ssh-keygen -R <IP>` or disable host key checking: `ANSIBLE_HOST_KEY_CHECKING=False`.

6. Q: Ansible Docker container fails: "Invalid container name".

A: Container name cannot have /. Use image: username/image:tag and name: short-name.

7. Q: Ansible fails "Cannot create container when image is not specified".

A: Ensure image: field is set correctly in docker_container task.

8. Q: Jenkins warning: "Platform linux on host is using discovered Python interpreter".

A: Ansible found Python automatically. Ensure interpreter path consistent or define `ansible_python_interpreter`.

3. Docker Errors

9. Q: Docker image builds but container fails to start.

A: Stop & remove old container, correct container name, map ports properly, check logs.

10. Q: Pip warning during Docker build: "Running pip as root".

A: Use virtual environment inside Docker to prevent permission issues.

11. Q: Docker container fails due to port already bound.

A: Stop existing container or change host port mapping.

12. Q: Docker run fails due to invalid environment variable.

A: Ensure environment variable syntax correct in docker_container task.

13. Q: Docker pull fails for private repo.

A: Use credentials: docker login or Ansible login_username & login_password.

14. Q: Jenkins Docker build deprecated warning about BuildKit.

A: Install Docker Buildx plugin to use modern BuildKit builder.

4. AWS EC2 Errors

15. Q: EC2 instance status check failed.

A: Possible OS crash, network or resource issue. Reboot, check CloudWatch logs, review security groups.

16. Q: SSH fails with "Temporary failure in name resolution".

A: Wrong command. Correct: ssh -i key.pem user@<IP>; ensure DNS or host is reachable.

17. Q: EC2 private IP changes after restart causing Ansible failure.

A: Use ansible_host in inventory with dynamic lookup or Elastic IP for static access.

18. Q: EC2 cannot pull Docker image due to firewall restrictions.

A: Open port 443 outbound in security group; ensure NAT/IGW if private subnet.

5. Scenario-Based / Pipeline Deployment

19. Q: Jenkins pushes image but Ansible cannot deploy.

A: Ensure image name in Ansible matches Docker Hub repo; verify push stage completed; EC2 has internet.

20. Q: Deployment fails on SIT but works locally.

A: Check Docker installation on EC2, network/firewall, manual docker pull test, use -vvv with Ansible.

21. Q: How to make container deployment idempotent?

A: Stop and remove old container first, pull latest image, use docker_container state absent/started.

22. Q: Pipeline fails intermittently on Docker pull.

A: Could be network or rate-limiting issue. Use retries or authenticated registry login.

23. Q: How to verify Docker image is correctly pulled on EC2?

A: SSH into EC2 and run docker images or docker pull <image> manually.

24. Q: Jenkins pipeline succeeds but tests fail in container.

A: Check Docker context, dependencies in requirements.txt, and volume mounts if needed.

25. Q: Jenkins pipeline fails due to SSH timeout.

A: Check security groups, instance IP, firewall, ensure correct private key.