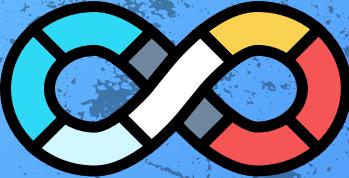


DEV OPS



TOP INTERVIEW QUESTIONS

YOU NEED TO KNOW

Top 50 Azure DevOps Interview Questions & Answers

1. What is Azure DevOps?

Answer: Azure DevOps is a cloud-based platform by Microsoft that provides development collaboration tools such as Azure Repos, Pipelines, Boards, Test Plans, and Artifacts to support the entire software development lifecycle.

2. What services are offered in Azure DevOps?

Answer: Azure DevOps includes:

- Azure Repos
- Azure Pipelines
- Azure Boards
- Azure Test Plans
- Azure Artifacts
-

3. What is CI/CD in Azure DevOps?

Answer: CI/CD stands for Continuous Integration and Continuous Deployment. Azure Pipelines automate the process of building, testing, and deploying applications, enabling faster and more reliable software releases.

4. How do you set up a pipeline in Azure DevOps?

Answer: You can set up pipelines using YAML or the classic UI. Link your code repository, define build and release stages, configure triggers, and add testing and deployment tasks.

5. What is the difference between build and release pipelines?

Answer: Build pipelines compile and package the application, while release pipelines deploy the build artifacts to target environments.

6. What are agents in Azure DevOps?

Answer: Agents are the workers that run the jobs defined in pipelines. Microsoft provides hosted agents, or you can use self-hosted agents.

Top 50 Azure DevOps Interview Questions & Answers

7. What is the purpose of Azure Repos?

Answer: Azure Repos provides Git repositories or Team Foundation Version Control (TFVC) for source control, enabling collaboration and code versioning.

8. What is Azure Boards?

Answer: Azure Boards is an agile project management tool that helps teams track work with Kanban boards, backlogs, sprints, and queries.

9. What is Azure Artifacts?

Answer: Azure Artifacts allows you to create, host, and share packages (e.g., NuGet, npm, Maven) and manage dependencies in one place.

10. How does Azure DevOps support Agile development?

Answer: Azure Boards supports agile processes with backlogs, boards, sprints, and customizable workflows to plan, track, and discuss work across teams.

11. What is a YAML pipeline?

Answer: A YAML pipeline is a pipeline defined in a YAML file that lives in your code repository, making it easier to track and version pipeline configurations.

12. What is the use of variable groups in Azure DevOps?

Answer: Variable groups store and manage values that can be used across multiple pipelines, including secrets, and can be linked to Azure Key Vault.

Top 50 Azure DevOps Interview Questions & Answers

13. What is a self-hosted agent?

Answer: A self-hosted agent is a build agent you set up and manage on your own infrastructure to gain more control over the build environment.

14. How do you implement IaC in Azure DevOps?

Answer: Use tools like ARM templates, Terraform, or Bicep within pipelines to define and deploy infrastructure as code.

15. What is a service connection?

Answer: A service connection allows Azure DevOps to connect to external services like Azure, Docker, or GitHub securely.

16. How do you handle secrets in pipelines?

Answer: Use secret variables or integrate Azure Key Vault to store and retrieve sensitive data securely during pipeline execution.

17. What are pull requests?

Answer: Pull requests are used to review and merge code changes between branches. Reviewers can comment, approve, or reject changes.

18. How do you enforce code quality in Azure DevOps?

Answer: Use branch policies, code reviews, build validations, static code analysis, and unit tests in your pipelines.

Top 50 Azure DevOps Interview Questions & Answers

19. What is a deployment group?

Answer: A deployment group is a set of target machines where you can deploy builds using agents installed on each machine.

20. What is a release gate?

Answer: A release gate adds a control point in a release pipeline to evaluate conditions before continuing deployment to the next stage.

21. What are artifacts in a pipeline?

Answer: Artifacts are the output of build pipelines (e.g., binaries, packages) that can be consumed by release pipelines.

22. What is a retention policy?

Answer: Retention policies define how long pipeline runs, logs, and artifacts are retained before being automatically deleted.

23. How do you monitor Azure DevOps pipelines?

Answer: Use the pipeline dashboard, logs, run history, and integrations with Azure Monitor or Application Insights for advanced telemetry.

24. What is the difference between Hosted and Private agents?

Answer: Hosted agents are managed by Microsoft, while private (self-hosted) agents are managed by you and run on your own machines.

Top 50 Azure DevOps Interview Questions & Answers

25. How do you rollback a deployment in Azure DevOps?

Answer: Redeploy a previous successful build or use deployment slots to swap back to the last known good configuration.

26. What are approval gates in release pipelines?

Answer: Approval gates require manual validation from designated users before deployment can proceed to the next stage.

27. What is the difference between Classic and YAML pipelines?

Answer: Classic pipelines use a visual designer, while YAML pipelines are defined in code for versioning and easier collaboration.

28. How do you integrate Azure DevOps with GitHub?

Answer: Use GitHub service connections and configure pipelines to trigger builds and deployments from GitHub repositories.

29. What are environments in Azure DevOps?

Answer: Environments represent deployment targets (e.g., Dev, QA, Prod) and help manage approvals, resources, and security.

30. What is a multi-stage pipeline?

Answer: A multi-stage pipeline combines build, test, and deploy stages into a single YAML pipeline file for end-to-end automation.

Top 50 Azure DevOps Interview Questions & Answers

31. How do you secure a pipeline?

Answer: Implement permissions, use secret variables, restrict access to service connections, and audit logs for sensitive actions.

32. What is a pipeline trigger?

Answer: A trigger defines conditions that start a pipeline run automatically (e.g., on push, pull request, or schedule).

33. What are pipeline templates?

Answer: Templates are reusable YAML files that define steps or jobs, helping to standardize pipelines across projects.

34. What are conditional expressions in YAML?

Answer: Conditional expressions control the execution of pipeline steps based on variables, outcomes, or other logic.

35. What is an artifact feed?

Answer: An artifact feed is a centralized repository in Azure Artifacts for hosting packages and sharing them with teams.

36. How do you manage dependencies in Azure DevOps?

Answer: Use Azure Artifacts and lock file strategies to manage and version dependencies across projects.

37. What is the difference between a task and a job in a pipeline?

Answer: A task is an individual unit of work, while a job is a collection of tasks that runs on an agent.

Top 50 Azure DevOps Interview Questions & Answers

38. How do you perform automated testing in Azure DevOps?

Answer: Add test tasks in build/release pipelines or use Azure Test Plans for manual/exploratory testing.

39. How do you handle failed deployments?

Answer: Use rollback strategies, notifications, and monitoring tools to respond quickly and restore stable states.

40. What is code coverage, and how is it tracked?

Answer: Code coverage measures how much of your code is tested by unit tests. Use coverage tools integrated into pipelines.

41. How do you manage multiple environments?

Answer: Use separate stages or environments in pipelines with approval workflows and environment-specific variables.

42. What is artifact staging?

Answer: Artifact staging is the process of saving build outputs to be used in later pipeline stages or releases.

43. What is a build validation policy?

Answer: It ensures that code changes pass a build before being merged into the main branch.

44. How do you implement blue-green deployments?

Answer: Deploy to two identical environments (blue and green), then switch traffic to the new version after testing.

Top 50 Azure DevOps Interview Questions & Answers

45. What is a pipeline cache?

Answer: Pipeline caching stores dependencies or intermediate files to speed up subsequent pipeline runs.

46. How do you handle monorepos in Azure DevOps?

Answer: Use path filters, pipeline conditions, and modular pipeline templates to handle monorepo builds.

47. What is a job strategy in YAML?

Answer: Job strategy defines how jobs run (e.g., matrix builds, parallel execution) for efficient pipeline design.

48. How do you implement canary releases?

Answer: Deploy gradually to a subset of users or servers and monitor before full rollout.

49. What is the difference between Azure DevOps and GitHub Actions?

Answer: Azure DevOps offers a full suite of tools; GitHub Actions is more lightweight and integrated into GitHub.

50. What certifications are available for Azure DevOps?

Answer: Microsoft offers the AZ-400: Designing and Implementing Microsoft DevOps Solutions certification for DevOps engineers.

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