**Basic DevOps Interview Questions For Freshers**

**1. What is the use of SSH?**

[SSH(Secure Shell)](https://www.geeksforgeeks.org/introduction-to-sshsecure-shell-keys) is an access credential used in the SSH Protocol. In other words, it is a cryptographic network protocol that transfers encrypted data over the network. It allows you to connect to a server, or multiple servers, without having to remember or enter your password for each system that is to log in remotely from one system to another.

**2. What is CI/CD?**

[CI And CD](https://www.geeksforgeeks.org/what-is-ci-cd) is the practice of automating the integration of code changes from multiple developers into a single codebase. It is a software development practice where the developers commit their work frequently to the central code repository (Github or Stash).

* **Continuous Integration**: With Continuous Integration, developers frequently commit to a shared common repository using a version control system such as Git. A continuous integration pipeline can automatically run builds, store the artifacts, run unit tests, and even conduct code reviews using tools like Sonar.
* **Continuous Delivery**: Continuous delivery helps developers test their code in a production-similar environment, hence preventing any last-moment or post-production surprises. These tests may include UI testing, load testing, integration testing, etc. It helps developers discover and resolve bugs preemptively.

**3. What is Hypertext Transfer Protocol Secure(HTTPS)?**

[Hypertext Transfer Protocol Secure is a protocol](https://www.geeksforgeeks.org/explain-working-of-https) that is used to communicate between the user browser and the website. It also helps in the transfer of data. It is the secure variant of HTTP. To make the data transfer more secure, it is encrypted. Encryption is required to ensure security while transmitting sensitive information like passwords, contact information, etc.

**4. What is the Blue/Green Deployment Pattern?**

Blue Green Deployment is just like we deploy two versions of our application, one is the stable version, and another is a new feature or bug fix let’s say, forwarding a certain percentage of traffic to the second version as well in production to ensure that everything is working fine.

* **Blue Deployment**: It’s the primary Deployment that is stable, and being used as production.
* **Green Deployment: I**t’s a kind of clone version, but it has additional changes in it, we can route the traffic to the Green deployment so that if any issues are there in the Deployment we can fix them and then promote it to Blue, so that reducing the chances of failures in production environment.

**5. What's the difference between DevOps & Agile?**

| **Agile** | **DevOps** |
| --- | --- |
| Agile is a method for creating software. | It is not related to software development. Instead, the software that is used by DevOps is pre-built, dependable, and simple to deploy. |
| An advancement and administration approach. | Typically a conclusion of administration related to designing. |
| The agile handle centers on consistent changes. | DevOps centers on steady testing and conveyance. |
| Agile relates generally to the way advancement is carried out, any division of the company can be spry on its hones. This may be accomplished through preparation. | DevOps centers more on program arrangement choosing the foremost dependable and most secure course. |

**6. What is the continuous testing process?**

Continuous testing is a process of automated testing done on software continuously as soon as a piece of code is delivered by the developers. This testing is done at every stage starting from the initial stages of development until the deployment of software.

**7. What is ‘Pair Programming’?**

Pair programming is a development technique in which two programmers work together at a single workstation. A person who writes code is called a driver and a person who observes and navigates each line of the code is called a navigator. They may switch their role frequently.

**8. What do you mean by Configuration Management?**

The process of controlling and documenting change for the development system is called Configuration Management. Configuration Management is part of the overall change management approach. It allows large teams to work together in s stable environment while still providing the flexibility required for creative work.

**9. What is Infrastructure as Code (IaC)?**

[Infrastructure as Code (IaC)](https://www.geeksforgeeks.org/what-is-infrastructure-as-code-iac) is a method of managing and provisioning IT infrastructure using code, rather than manual configuration. It allows teams to automate the setup and management of their infrastructure, making it more efficient and consistent. This is particularly useful in the DevOps environment, where teams are constantly updating and deploying software.

**10. Explain the concept of branching in Git.**

Branching means diverging from the mainline and continuing to work separately without messing with the mainline. Nearly every VCS has some form of branch support. In Git, a branch is simply a reference to the commit, where the following commits will be attached.