Jenkins Interview Questions

edureka!

1. What is meant by CI?

Answer: In software development, when multiple developers or teams are working on different segments of same web application, we need to perform integration test by integrating all modules. In order to do that an automated process for each piece of code is performed on daily bases so that all your code get tested.

2. Why we use Jenkins?

Answer: Jenkins is used for the following reasons:

- A Version Control Software
- Working Build Script (ANT/MAVEN/MSBUILD)

3. What are some of the benefits of using Jenkins?

Answer: Benefits of using Jenkins are:

- Complete Build history
- Easy integration of Version Control Software, Build, Reporting and Deployment Tools
- Integration with several plugins
- Customization and Extension via custom scripts and plugins
- Easy tracking of bugs at early stage in development environment than production

4. You are asked to backup Jenkins. How would you approach this task?

Answer: Use the backup plugin. To use this, determine first If you want to back up all data or just a subset. Alternatively, script a physical copy using shell commands/Java CLI for Jenkins.

5. You are required to run 2 jobs in parallel while a 3rd job is to run after these have completed. How will you achieve this in Jenkins?

Answer: Use the Pipeline plugin. (TIP: You may be grilled in more depth on knowledge of Groovy in doing this task). Alternatively, you can use the Build Flow Plugin (TIP: If you answer this question, be prepared to answer questions on the DSL syntax, including passing parameters and error handling. Just as a FYI, the pipeline plugin is motivated by the Build Flow Plugin – you do not need both)

6. As part of the unit testing process, you are required to run unit test cases in parallel. How do you do this?

Answer: The choice of testing suite is important. TestNG and Junit 4 do support running test suites in parallel. Note that this runs test cases in parallel on a single node. To further refine this, you could also use the Parallel Test Executor plugin for same purposes. In such a case, you can optionally split the cases and have it distributed across to multiple machines.

The Build Pipeline (see above question) has several build slave managed by Puppet and orchestrated by the Docker Swarm Plugin. When new slave is initialized, puppet installs everything to run the tests and slave joins the swarms. There are 2 jobs – a Distribution job and an actual execution job. The 1st job breaks down the test cases into sets (one set per slave) – and is written either in Groovy (Preferred) or Java. HERE IS THE CATCH - -- EXECUTION TIME OF EACH TEST IS RECORDED. New Tests are randomly assigned, but the idea is to distribute the tests based on duration so that each set takes roughly the same time. The execution job is is triggered on each slave using a Parametrized build (passing name of set). Number of slaves is determined by the Jenkins API and passed as a variable using the envinject Plugin.

7. This is great. What are the drawbacks you faced?
Answer: Dependent tests. If they are distributed to different sets so that they can be standalone

8. Name some common plugins you have used.
Answer: Common Plugins used are:
- Email Ext
- Git
- Build Pipelines
- Pipeline
- Flow
- Deployment Plugin
- OAuth

9. How will you secure Jenkins?
 Answer: We will ensure the following:

- Ensure global security is on.
- Ensure that Jenkins is integrated with my company's user directory with appropriate plugin
- Ensure that matrix/Project matrix is enabled to fine tune access
- Automate the process of setting rights/privileges in Jenkins with custom version controlled script.
- Limit physical access to Jenkins data/folders.
- Periodically run security audits on same.