Devops Questions

1. How to stop Target folder to be pushed to git everytime.

Ans: Add target folder in .gitignore file or which ever files you want, you can easily move them to above said file.

1. Difference between git fetch and git pull

Ans: **Git Fetch** is the command that tells the local repository that there are changes available in the remote repository without bringing the changes into the local repository. fetch will never manipulate, destroy, or screw up anything. This means you can never fetch often enough.

**Git Pull** on the other hand brings the copy of the remote directory changes into the local repository. This means that pull not only downloads new data; it also directly **integrates** it into your current working copy files. This has a couple of consequences too.

1. How clone a specific branch in git?

Ans: git clone -b <branch-name> <remote-repo>

OR

git clone -b <branchname> --single-branch <remote-repo-url>, --single-branch option was introduced in Git version 1.7.10 and later. It allows you to only fetch files from the specified branch without fetching other branches.

1. What will happen when mvn install command is entered?

Ans: Nutshell version: it will build the project and install it in your local repository.

As you might be aware of, Maven is a build automation tool provided by Apache which does more than dependency management. We can make it as a peer of Ant and Makefile which downloads all of the dependencies required.

On a mvn install, it frames a dependency tree based on the project configuration pom.xml on all the sub projects under the super pom.xml (the root POM) and downloads/compiles all the needed components in a directory called .m2 under the user's folder. These dependencies will have to be resolved for the project to be built without any errors, and mvn install is one utility that could download most of the dependencies.

Further, there are other utils within Maven like dependency:resolve which can be used separately in any specific cases. The build life cycle of the mvn is as below: [LifeCycle Bindings](http://maven.apache.org/guides/introduction/introduction-to-the-lifecycle.html" \l "Built-in_Lifecycle_Bindings)

**Validate, Compile, Test, Package, Integration test, Verify, Install and Deploy**

1. What are the settings you need to do before running mvn deploy?

Ans: We need to specify the version and plugin in the <pluginManagement> tag of the pom. xml file to define the version of the plugin in parent pom and specify the version and plugin in the plugins section of the pom file to use the goals of the plugin by your project or your parent project.

In .m2 folder there should be setting.xml, which has username and password, nexus repo and in pom.xml, distribution management, should have url where data has to pushed and id should be matching.

1. Why maven takes much time for 1st execution and from 2nd execution it will take less time?

Maven has 3 levels form where it fetches dependencies:

* 1. It fetches from local - .m2
  2. It goes to central repo.
  3. It goes to internet to find

Once its cached, it takes lesser time in next

1. How to get present working folder?

Ans: basename “$PWD”

OR

pwd | rev | cut -d ‘/’ -f 1 | rev

1. How to copy files from local windows machine to cloud based Linux machine and I don’t have admin related machine in my local?

Ans: Using pscp command, and .pem key, for windows to local ,vv is also possible

1. A shell script named test.sh can accept 4 parameters i.e, a,b,c,d. the parameters wont be supplied in order always and number of parameters might also vary( only 2 parameters user might supply sometimes), how to identify position of letter c?

Ans: Write a for loop usng $@ and put a if condition if c is not there

1. Why we need ad-hoc ansible commands, scenario where you have used ansible ad-hoc command?

Ans: Ansible ad-hoc commands used /usr/bin/ansible CLI to automate a single task on one or more managed nodes, These commands are not reusable.

1. When i need detailed logs on executing ansible playbook what option i need to use?
2. what is ansible.cfg file?
3. what are the modules have you worked on? which module will you use for getting the file from node to master?
4. Lets say i have a playbook which has 5 tasks in playbook, first 2 tasks should run on local machine and other 3 tasks should run on node?

**Jenkins**

1. How to save only last 5 builds of jenkins job?

Ans: go to ~/.jenkins/ folder and ls > Go to job/Jenkins/builds. It will show all the previous builds. In confiure in jenkins, there is an option to Discard old builds and give the # which we want to be saved.

1. Have you worked on Jenkinsfile? can we use docker container as a node in Jenkinsfile? Who will handle docker container creation and deletion? If i am building a maven project always docker container is fresh instance it will try to download dependency from repository, what measures you will take to reduce build time?

Ans: Yes, no one is using freestyle these days, So Jenkinsfile are used mostly. Docker is a node, but In declarative it’s an agent, In docker we can use docker . Jenkins takes care of creation and deletion.

What to be done so that Jenkins take lesser time for subsequent builds:

Download dependencies that your project uses in Jenkins host, copy all the repo of dependencies in local repo for container. This will decrease runtime

args ‘-v /root/.m2:/root/.m2’.

1. Why we need multi branch pipeline?

Ans: Multibranch pipeline project type enables you to implement different JenkinsFiles for different branches of the same project.

In multibranch pipeline project, Jenkins automatically discovers manages and executes pipelines for branches which contain a Jenkinsfile in source control.

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1. If you forget Jenkins password, how would you login back?

Ans: cd ~/.jenkins/

Ls

Vim config.xml > usersecurity – setoff

Kill the process ps -eaf | Jenkins pid

Kill -9 jenkins pid

Cd /home/spovedd/Jenkins > Jenkins.war

java -jar Jenkins.war

Refresh Jenkins nad user is directly

**Docker**

1. Any 3 best practices of docker?

Ans: Always keep Dockerfile in empty directory and make sure directory where Directory where Dockerfile present with required files.

Use official message when possible

Use more specific tags

Look for minimal flavors – Using a base image with minimum size

Multi stage builds to remove build deps

1. Difference between docker stop and docker kill?

Both are used to stop the containers, but docker stop: gives grace period to container to stop it properly. Signal 9 and 15

Docker kill: Doesn’t give any grace period to the container, It sends a signal immediately and doesn’t give time to container to do anything furhter. Only signal 9

1. Command to list conatiners which state is exited?

Docker ps -a -f status= running

Docker rm $ (Docker ps -a -f status= running)

command to clean-up docker host (deleting stopped containers, dangling images and unused networks)?

Docker system prune

1. What version of docker you have used? Specific reason to use that particular version?
2. Can we have multiple CMD in Dockerfile?

We can have it, but its of no use, Only the last CMD will take in account.

1. Have you worked on docker swarm and docker compose?

**Swarm:**

The difference between Docker Swarm and Docker Compose is that **Compose is used for configuring multiple containers in the same host.** **Docker Swarm is different in that it is a container orchestration tool**. This means that Docker Swarm lets you connect containers to multiple hosts similar to Kubernetes.

**Kubernetes**

1. Can we have multiple container’s in a pod? Can we have similar conatiners in a pod? Lets say i have 4 container’s, one of them has failed how would you check which container has failed?

Ans: Yes we can multiple containers in a pod – init container, multi container, but not similar container.

Kubectl get all

Kubectl describe podname

1. What is liveness and readiness probe? Why we need them?

Liveness Probe

Suppose that a Pod is running our application inside a container, but due to some reason let’s say memory leak, cpu usage, application deadlock etc the application is not responding to our requests, and stuck in error state.

Liveness probe checks the container health as we tell it do, and if for some reason the liveness probe fails, it restarts the container.

Readiness probe

In some cases we would like our application to be alive, but not serve traffic unless some conditions are met e.g, populating a dataset, waiting for some other service to be alive etc. In such cases we use readiness probe. If the condition inside readiness probe passes, only then our application can serve traffic.

1. Have you worked on kubernetes monitoring? Which tools you have used?

* [1. Sematext](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-1-sematext-0)
* [2. Kubernetes Dashboard](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-2-kubernetes-dashboard-1)
* [3. Prometheus](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-3-prometheus-2)
* [4. Grafana](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-4-grafana-3)
* [5. Jaeger](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-5-jaeger-4)
* [6. Elastic Stack (ELK)](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-6-elastic-stack-elk-5)
* [7. cAdvisor](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-7-cadvisor-6)
* [8. Kubewatch](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-8-kubewatch-7)
* [9. Kube-state-metrics](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-9-kube-state-metrics-8)
* [10. Datadog](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-10-datadog-9)
* [11. New Relic](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-11-new-relic-10)
* [12. Sensu](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-12-sensu-11)
* [13. Dynatrace](https://sematext.com/blog/kubernetes-monitoring-tools/#toc-13-dynatrace-12)

1. Can we deploy a pod on particular node?

By using nodeSelector,**nodeName**: kube-01