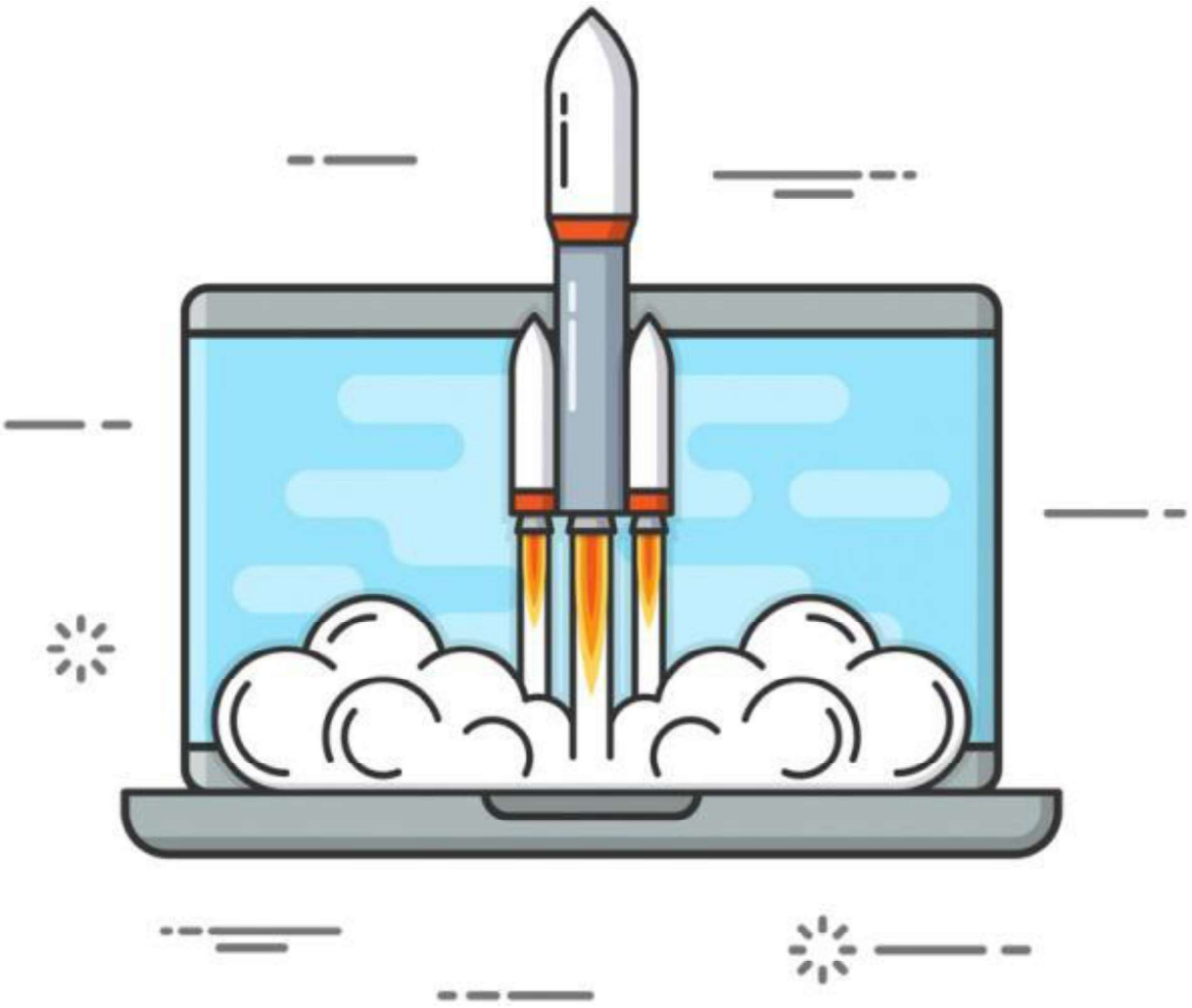

Everything About Devops

Thanks for the patience
pls share with friends

Q1) what is DevOps?

By the name DevOps, it's very clear that it's a collaboration of Development as well as Operations. But one should know that DevOps is not a tool, or a software or framework, DevOps is a Combination of Tools which helps for the automation of whole infrastructure.

DevOps is basically and implementation of Agile methodology on Development side as well as Operations side.

Q2) why do we need DevOps?

To fulfil the need of delivering more and faster and better application to meet more and more demands of users, we need DevOps. DevOps helps deployment to happen really fast compared to any other traditional tools.

Q3) Mention the key aspects or principle behind DevOps?

The key aspects or principle behind DevOps is:

Infrastructure as a Code

Continuous Integration

Continuous Deployment

Automation

Continuous Monitoring

Security

Q4) List out some of the popular tools for DevOps?

Git

Jenkins

Ansible

Puppet

Nagios

Docker

ELK (Elasticsearch, Logstash, Kibana)

Q5) what is a version control system?

Version Control System (VCS) is a software that helps software developers to work together and maintain a complete history of their work.

Some of the feature of VCS as follows:

Allow developers to wok simultaneously

Does not allow overwriting on each other changes.

Maintain the history of every version.

There are two types of Version Control Systems:

Central Version Control System, Ex: Git, Bitbucket

Distributed/Decentralized Version Control System, Ex: SVN

Q6) What is Git and explain the difference between Git and SVN?

Git is a source code management (SCM) tool which handles small as well as large projects with efficiency. It is basically used to store our repositories in remote server such as GitHub.

GIT	SVN
Git is a Decentralized Version Control Tool	SVN is a Centralized Version Control Tool
Git contains the local repo as well as the full history of the whole project on all the developers hard drive, so if there is a server outage , you can easily do recovery from your team mates local git repo.	SVN relies only on the central server to store all the versions of the project file
Push and pull operations are fast	Push and pull operations are slower compared to Git
It belongs to 3rd generation Version Control Tool	It belongs to 2nd generation Version Control tools
Client nodes can share the entire repositories on their local system	Version history is stored on server-side repository
Commits can be done offline too	Commits can be done only online
Work are shared automatically by commit	Nothing is shared automatically

Q7) what language is used in Git?

Git is written in C language, and since its written in C language its very fast and reduces the overhead of runtimes.

Q8) what is SubGit?

SubGit is a tool for migrating SVN to Git. It creates a writable Git mirror of a local or remote Subversion repository and uses both Subversion and Git if you like.

Q9) how can you clone a Git repository via Jenkins?

First, we must enter the e-mail and user name for your Jenkins system, then switch into your job directory and execute the “git config” command.

Q10)What are the Advantages of Ansible?

Agentless, it doesn’t require any extra package/daemons to be installed

Very low overhead

Good performance

Idempotent

Very Easy to learn

Declarative not procedural

Q11) what’s the use of Ansible?

Ansible is mainly used in IT infrastructure to manage or deploy applications to remote nodes. Let’s say we want to deploy one application in 100’s of nodes by just executing one command, then Ansible is the one actually coming into the picture but should have some knowledge on Ansible script to understand or execute the same.

Q12) what's the difference between Ansible Playbook and Roles?

Roles	Playbooks
Roles are reusable subsets of a play.	Playbooks contain Plays.
A set of tasks for accomplishing certain role.	Mapps among hosts and roles.
Example: common, webservers.	Example: site.yml, fooservers.yml, webservers.yml.

Q13) How do I see a list of all the ansible_ variables?

Ansible by default gathers "facts" about the machines, and these facts can be accessed in Playbooks and in templates. To see a list of all the facts that are available about a machine, you can run the "setup" module as an ad-hoc action:

Ansible -m setup hostname

This will print out a dictionary of all the facts that are available for that particular host.

Q14) what is Docker?

Docker is a containerization technology that packages your application and all its dependencies together in the form of Containers to ensure that your application works seamlessly in any environment.

Q15) what is Docker image?

Docker image is the source of Docker container. Or in other words, Docker images are used to create containers.

Q16) what is Docker Container?

Docker Container is the running instance of Docker Image.

Q17) Can we consider DevOps as Agile methodology?

Of Course, we can!! The only difference between agile methodology and DevOps is that, agile methodology is implemented only for development section and DevOps implements agility on both development as well as operations section.

Q18) what are the advantages of using Git?

Data redundancy and replication

High availability

Only one. git directory per repository

Superior disk utilization and network performance

Collaboration friendly

Git can use any sort of projects.

Q19) what is kernel?

A kernel is the lowest level of easily replaceable software that interfaces with the hardware in your computer.

Q20) what is difference between grep -i and grep -v?

I ignore alphabet difference V accept this value

ex) ls | grep -i docker

Dockerfile

docker.tar.gz

ls | grep -v docker

Desktop

Dockerfile

Documents

Downloads

You can’t see anything with name docker.tar.gz

Q21) How can you define particular space to the file

This feature is generally used to give the swap space to the server. Lets say in below machine I have to create swap space of 1GB then,

dd if=/dev/zero of=/swapfile1 bs=1G count=1

Q22) what is concept of sudo in linux?

Sudo(superuser do) is a utility for UNIX- and Linux-based systems that provides an efficient way to give specific users permission to use specific system commands at the root (most powerful) level of the system.

Q23) what is a Jenkins Pipeline?

Jenkins Pipeline (or simply “Pipeline”) is a suite of plugins which supports implementing and integrating continuous delivery pipelines into Jenkins.

Q24) How to stop and restart the Docker container?

To stop the container: docker stop container ID

Now to restart the Docker container: docker restart container ID

Q25) What platforms does Docker run on?

Docker runs on only Linux and Cloud platforms:

Ubuntu 12.04 LTS+

Fedora 20+

RHEL 6.5+

CentOS 6+

Gentoo

ArchLinux

openSUSE 12.3+

CRUX 3.0+

Cloud:

Amazon EC2

Google Compute Engine

Microsoft Azure

Rackspace

Note that Docker does not run on Windows or Mac for production as there is no support, yes you can use it for testing purpose even in windows

Q26) what are the tools used for docker networking?

For docker networking we generally use kubernets and docker swarm.