

AIOPS Assignment 4

1. What is Docker, and why is Docker used?

Docker is a set of platform as a service products that use OS-level virtualization to deliver software in packages called containers. In simple words we can say that docker promises to encapsulate the process of creating distributable artifacts for application, deploying it at scale into any environment, and streamlining the workflow and responsiveness.

2. Explain the Docker architecture?

Docker follows Client-Server architecture, which includes the three main components that are Docker Client, Docker Host, and Docker Registry.

Let's have a look at each component.

1. Docker Client

Docker client uses commands and REST APIs to communicate with the Docker Daemon (Server). When a client runs any docker command on the docker client terminal, the client terminal sends these docker commands to the Docker daemon.

2. Docker Host

Docker Host is used to provide an environment to execute and run applications. It contains the docker daemon, images, containers, networks, and storage.

3. Docker Registry

Docker Registry (Public Registry, Private Registry) manages and stores the Docker images.

3. What do you mean by a Dockerfile?

Docker can build images automatically by reading the instructions from a Dockerfile. A Dockerfile is a text document that contains all the commands a user could call on the command line to assemble an image.

4. What do you mean by Docker Images?

Docker Image is nothing but a snapshot of configuration of particular time. It acts as a set of instructions to build a Docker container like template.

5. What do you mean by Docker Hub?

Docker Hub is a hosted repository service provided by Docker for finding and sharing container images with your team.

6. Which command can be used to check Docker Client and Docker Server Version?

Docker Hub is a hosted repository service provided by Docker for finding and sharing container images with your team. Docker Hub is the world's largest library and community for container images.

7. How to create a Docker container from an Image?

Below are the steps to create a container from an image.

1. Create a Dockerfile
2. Build a container using command : `docker build -t <<Image_Name>> .`
3. Run a container for the created image using the below command.
`docker run -p 8000:8000 getting-started`