Docker Assignment 4

1. What are features possible only under Docker Enterprise Edition compared to the Docker community edition?

In docker enterprise edition we have features like container app mangement,image security scanning,image management and certified infrastructure plugins and ISV Containers.

2. How to create a user-defined bridge network?

- **Create a Bridge Network**

Let's create a bridge network called my-bridge using the following command.

sudo docker network create --driver bridge my-bridge

- **List all the networks using the following command**

sudo docker network ls

- **Inspect alpine-net using the below command.**

sudo docker network inspect my-bridge

- **Create Containers**

We can create containers and associate them with different network specifications.

- **Inspect the network.**

3. Does Docker support IPv6?

Yes, Docker supports IPv6. IPv6 networking is only supported on Docker daemons running on Linux hosts.Support for IPv6 address has been there since Docker Engine 1.5 release.

4. How to deploy your images with azure container instances?

- First, we need to create resource group in some location.
- We need to create a Azure container registry to store container images.
- We need to create a docker file in the registry.
- Now, we are going to deploy containers on Azure Container Instance.

5. What is the docker swarm?

Docker Swarm is native clustering for Docker. It turns a pool of Docker hosts into a single, virtual Docker host. Docker Swarm serves the standard Docker API, any tool that already communicates with a Docker daemon can use Swarm to transparently scale to multiple hosts.

6. What is a memory-swap flag?

The amount of memory the container is allowed to swap to disk is called mempry swap.memory swap is a modifier flag that only has meaning if --memory is also set. Using swap allows the container to write excess memory requirements to disk when the container has exhausted all the RAM that is available to it.

7. Can you explain the different volume mount types available in Docker?

There are three mount types available in Docker

Volumes are stored in a part of the host filesystem which is managed by Docker. Volumes are the best way to persist data in Docker.

Bind mounts may be stored anywhere on the host system. They may even be important system files or directories.

tmpfs mounts are stored in the host system's memory only, and are never written to the host system's filesystem.

8. How to share data among Docker hosts?

One is to add logic to your application to store files on a cloud object storage system like Amazon S3.

Another is to create volumes with a driver that supports writing files to an external storage system like Amazon S3.

9. How to backup, restore, or Migrate data volumes under docker containers?

1) Launch a new container and mount the volume from the dbstore container

2) Mount a local host directory as /backup

3) Pass a command that tars the contents of the dbdata volume to a backup.tar file inside our /backup directory.

10. Why does the docker service take 10 seconds to recreate or stop?

Docker compose stop attempts to stop a container by sending a SIGTERM.
It then waits for a default timeout of 10 seconds.
After the timeout, a SIGKILL is sent to the container to forcefully kill it.