**Docker:**

* Docker is containerization program which is used for process isolation.
* Docker creates containers which can be used to run the individual application as a separate process.

**Virtualization:**

Diagram

Description automatically generated

* This is the process of running the multiple operating systems on one single operating system.
* This can be done by using software is called hypervisor.
* The hypervisor installed on the host Operating system (OS) and on the hypervisor we install the guest operating systems.
* This guest operating system will have application install on it.
* The problem of virtualization the application on the guest operation system should pass through multiple layers to access the hardware resources.

**Containerization:**

Diagram

Description automatically generated with medium confidence

* Docker is installed directly on the (OS) in the form of a thin Linux kernel which is a docker engine.
* On the docker engine we can directly install the required application.
* These applications have to pass through very less no. of layers in order to access the hardware resources.

**Docker image:** it is a combination of binaries and libraries which are necessary for an application.

**Container:** It is a running instance of a docker image.

**Docker workflow:**

* The terminal where we can execute the docker command.
* This docker client is forwards the Docker Daemon.
* Docker Daemon is background process running the docker engine.
* it is responsible for executing the docker commands on docker image and containers.

Diagram

Description automatically generated

* **Docker cloud is two types:**
* **Public could**
* **Private cloud**

**Public cloud:**

* It is Hub.docker.com where all the docker images are present.
* And anyone can be able to access the public cloud.

**Private cloud:** it is exclusively for an organization server.

**Docker host:**

* This is the machine where the docker is installed.