

Assignment-2 Softlab

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DOCKER Information and Theory

Docker is an [open source software platform](#) to create, deploy and manage virtualized application containers on a common operating system ([OS](#)), with an ecosystem of allied tools. Docker container technology debuted in 2013; Docker Inc. was formed to support a commercial edition of [container management software](#) and be the principal sponsor of an open source version. Mirantis acquired the Docker Enterprise business in November 2019.

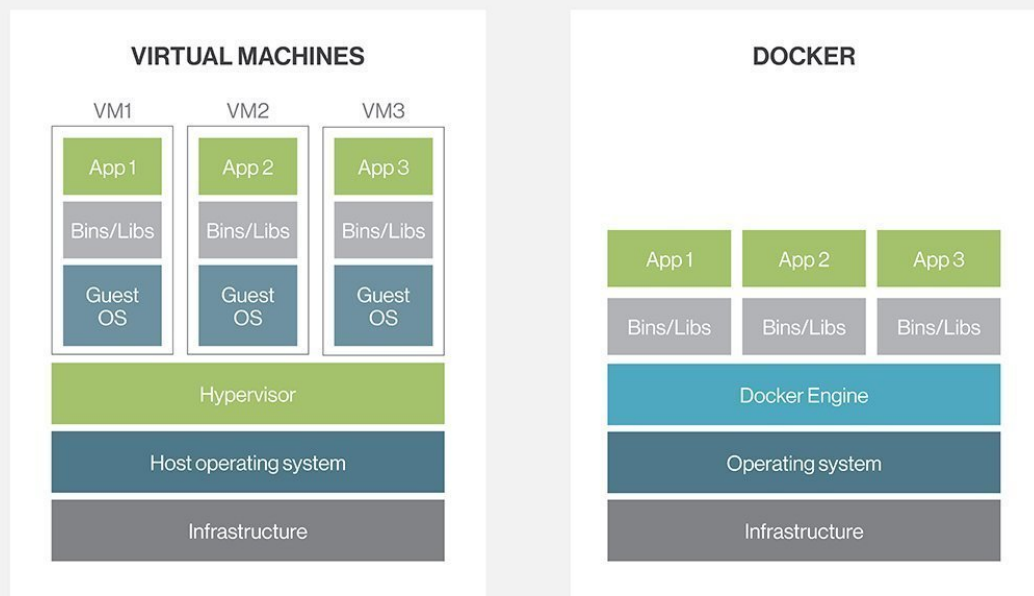
How Docker works

Docker packages, provisions and runs containers. [Container](#) technology is available through the operating system: A container packages the [application](#) service or function with all of the libraries, configuration files, dependencies and other necessary parts and parameters to operate. Each container shares the services of one underlying operating system. Docker images contain all the dependencies needed to execute code inside a container, so containers that move between Docker environments with the same OS work with no changes.

Docker components and tools

Docker Hub is a [software-as-a-service](#) tool that enables users to publish and share container-based applications through a common library. The service touts more than 100,000 publicly available applications, as well as public and private container registries. Similar to Hub, Trusted Registry is a repository with an extra layer of control and ownership over container image storage and distribution.

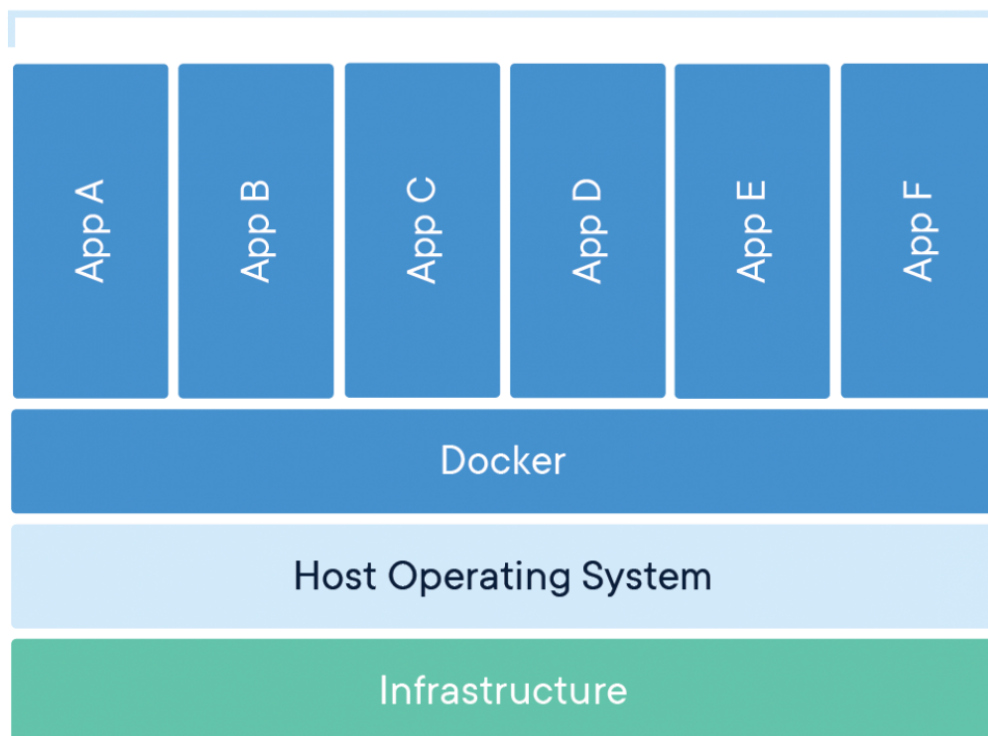
Virtual machines versus Docker

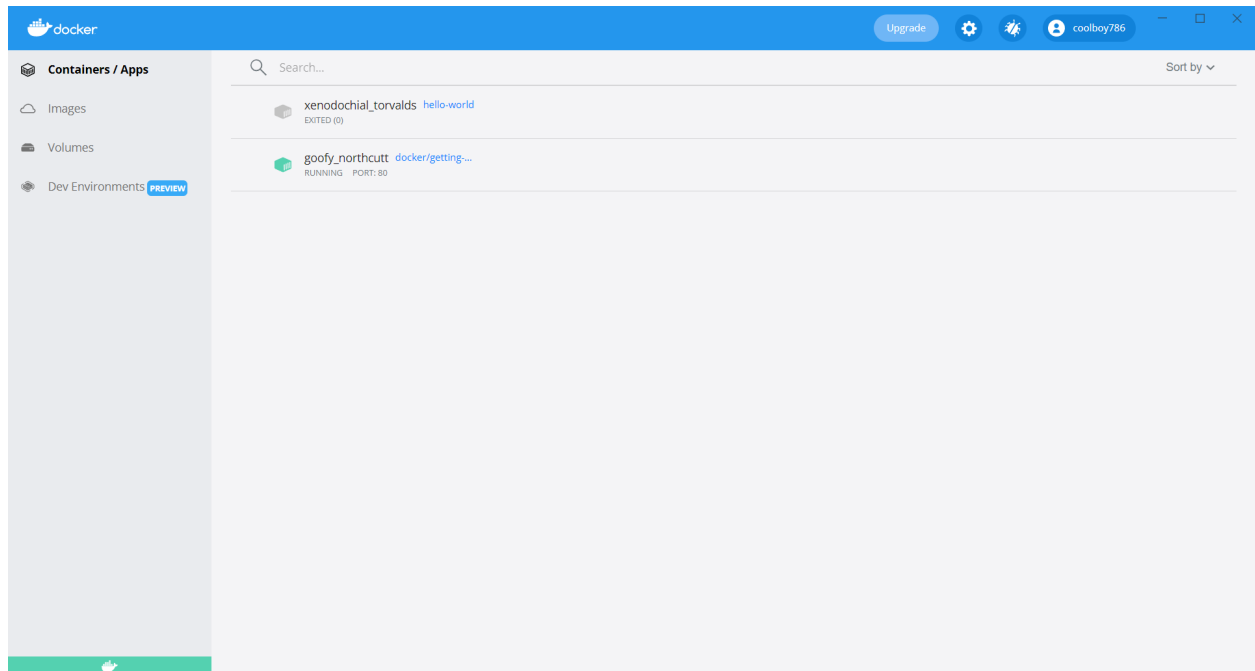


DOCKER Containers

A container is a standard unit of software that packages up code and all its dependencies so the application runs quickly and reliably from one computing environment to another. A Docker container image is a lightweight, standalone, executable package of software that includes everything needed to run an application: code, runtime, system tools, system libraries and settings.

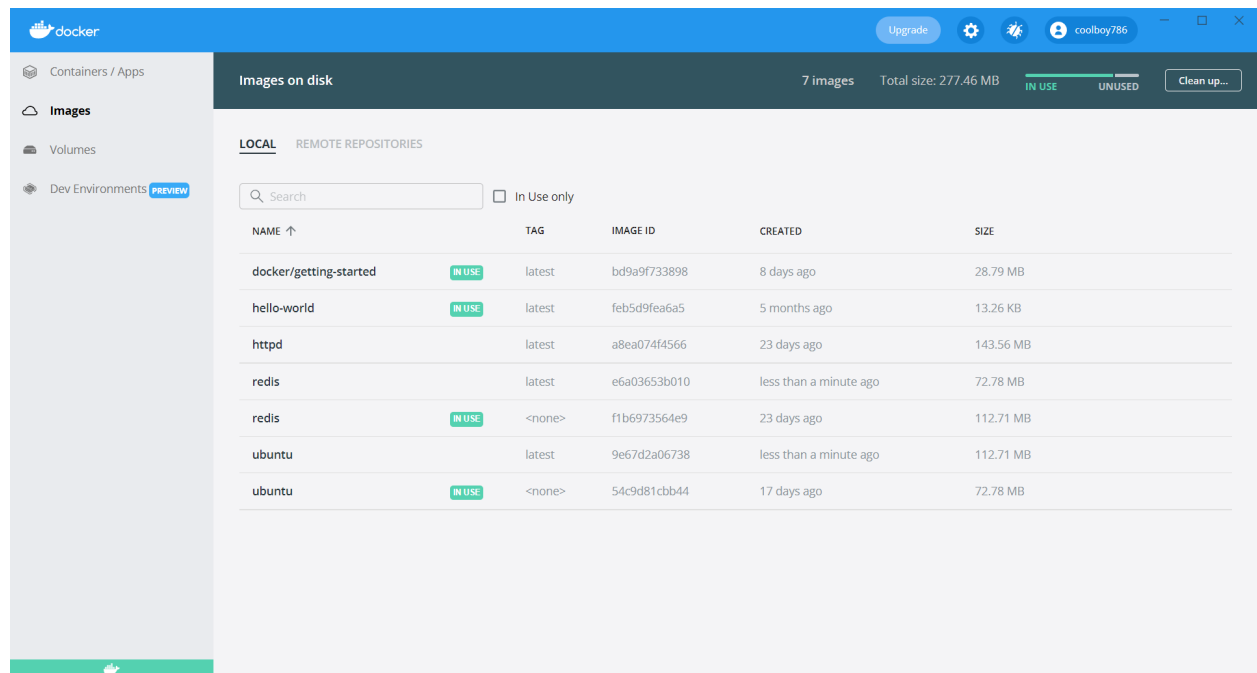
Containerized Applications





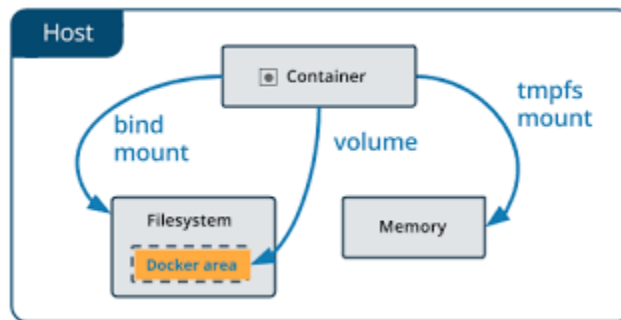
DOCKER Images

A Docker image is a read-only template that contains a set of instructions for creating a container that can run on the Docker platform. It provides a convenient way to package up applications and preconfigured server environments, which you can use for your own private use or share publicly with other Docker users



Docker Volumes

Docker volumes are file systems mounted on Docker containers to preserve data generated by the running container. The volumes are stored on the host, independent of the container life cycle. This allows users to back up data and share file systems between containers easily.



The screenshot shows the Docker Desktop application window. The 'Volumes' tab is selected in the sidebar. The main panel displays a table of Docker volumes. The table has columns for 'NAME', 'CREATED', and 'SIZE'. There are six volumes listed, with three of them marked as 'IN USE'.

NAME	CREATED	SIZE
5efbd2cda9c9fc67f66886f0ca2a44c2ad8297675b833c8599ddeed80273e878	about 12 hours ago	8 kB
77ccf8b7709c602a11161c5fb997b57ec16337d0f75622d4b440472390d16a93	about 12 hours ago	12 kB
8def846f67d824e1180e37a336fae8d23ed2451218c7e57f3bcd9c9fbabe9f2	about 9 hours ago	12 kB
9f4b17a8fe8bfc9caaf656e3d5ecdc57fc26a3316813be7d270a74831a40da68	about 12 hours ago	12 kB
de6bdb488002f2645322f5fdf6c7e6048cd0844a2a6f313e57e28fe8084559e2	about 12 hours ago	8 kB
ef15cdf05072101c11c78a3823023ed5a9ebf7b337dd739806b472b011b6d3cf	about 12 hours ago	12 kB