

Docker 100 days challenge

day 01

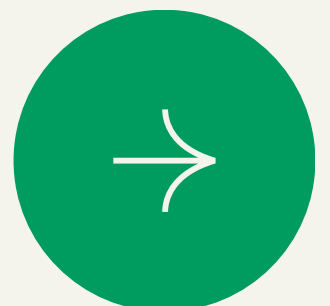


DhineshKumar Thirupathi

Introduction to *day* 01 docker

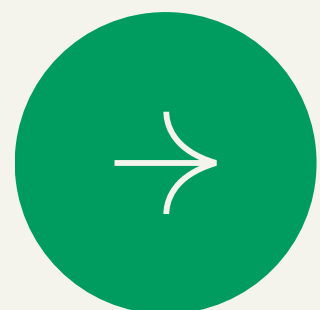
What is Docker ? (Docker is PaaS)

- Docker enable developers to create , ship and run applications in lightweight containers.
- Docker released in 2013 by docker,inc.
- Containers include everything needed to run an application, making them portable and standalone.
- it's uses namespaces to provide isolated workspace (containers) for running applications.



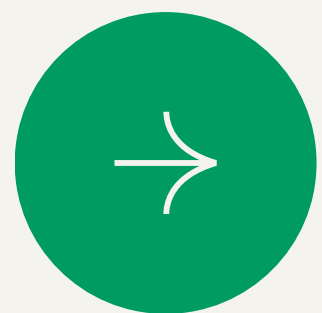
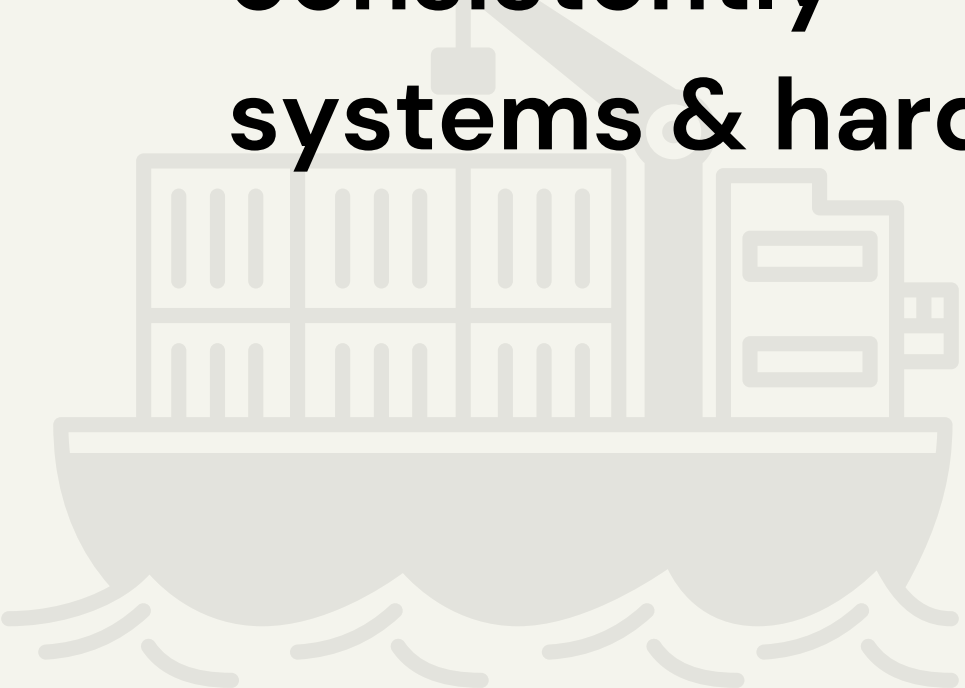
Docker isolated platform

- **Docker Provides an isolated platform for running applications within containers.**
- **example:**
 - **Running a web server in one Docker container & database server in another.**
- **each container has its own isolated env, including fs, network and resources. Prevents conflicts & ensures reliability and security.**
- **enable running multiple application independently on same host interface**

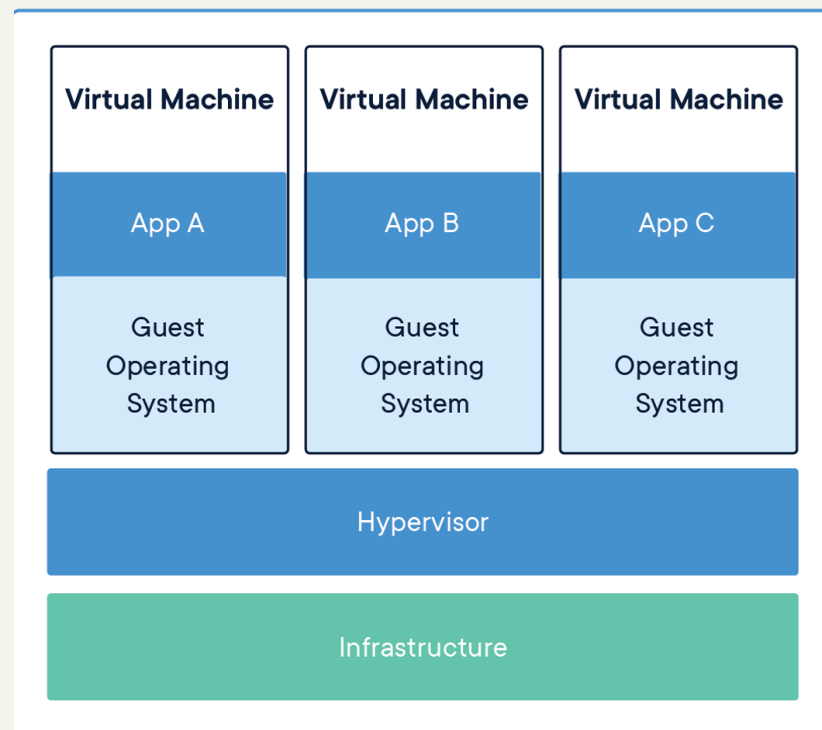
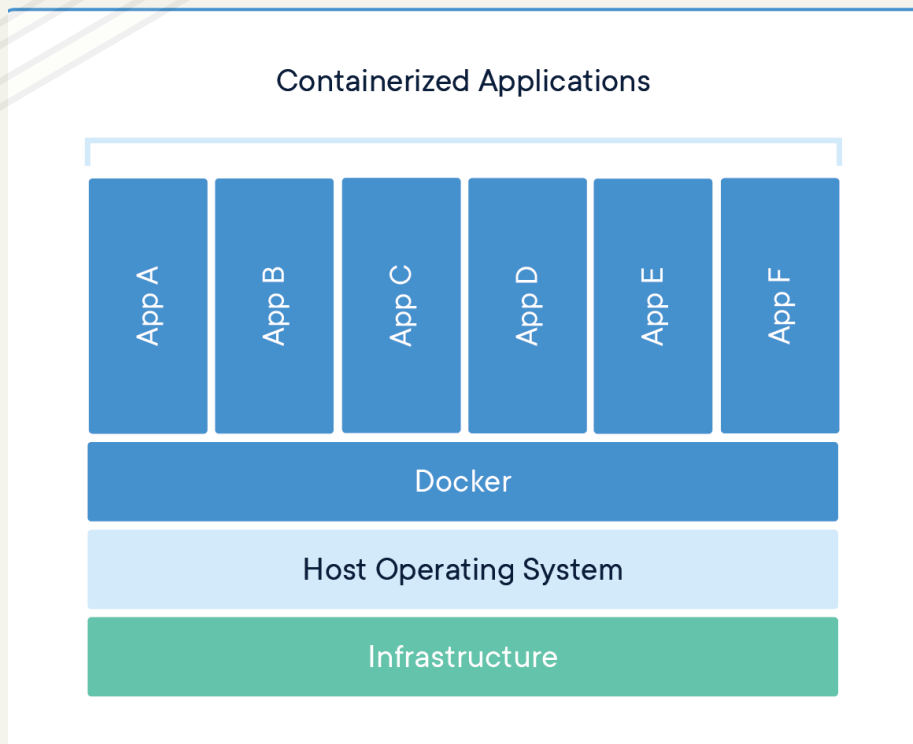


Docker Containers:

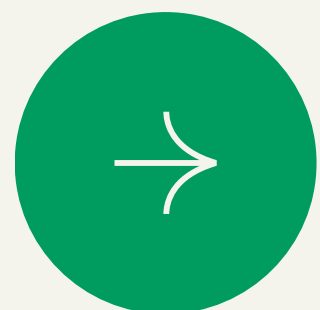
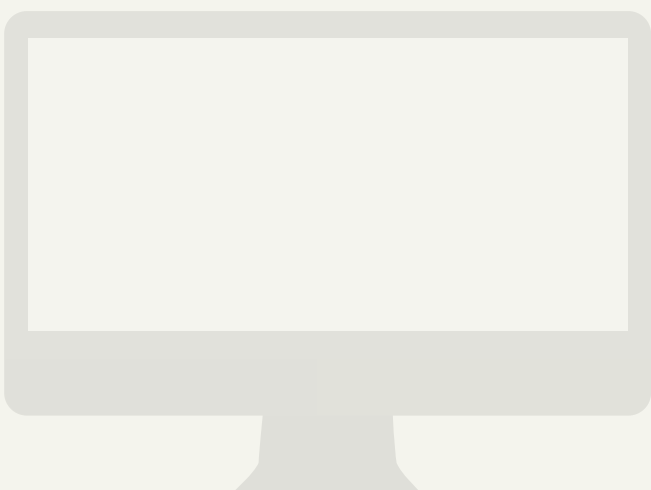
- **Docker container:** lightweight, standalone pkg for running application.
- **Contains:** Code, runtime, system tools, lib – everything needed for the app.
- **easy development and management.**
- **Isolated :** containers are separate from each other & the underlying infrastructure.
- **Concurrent execution :** multiple container can run simultaneously on the same host.
- **Consistent env:** applications run consistently across different host systems & hardware



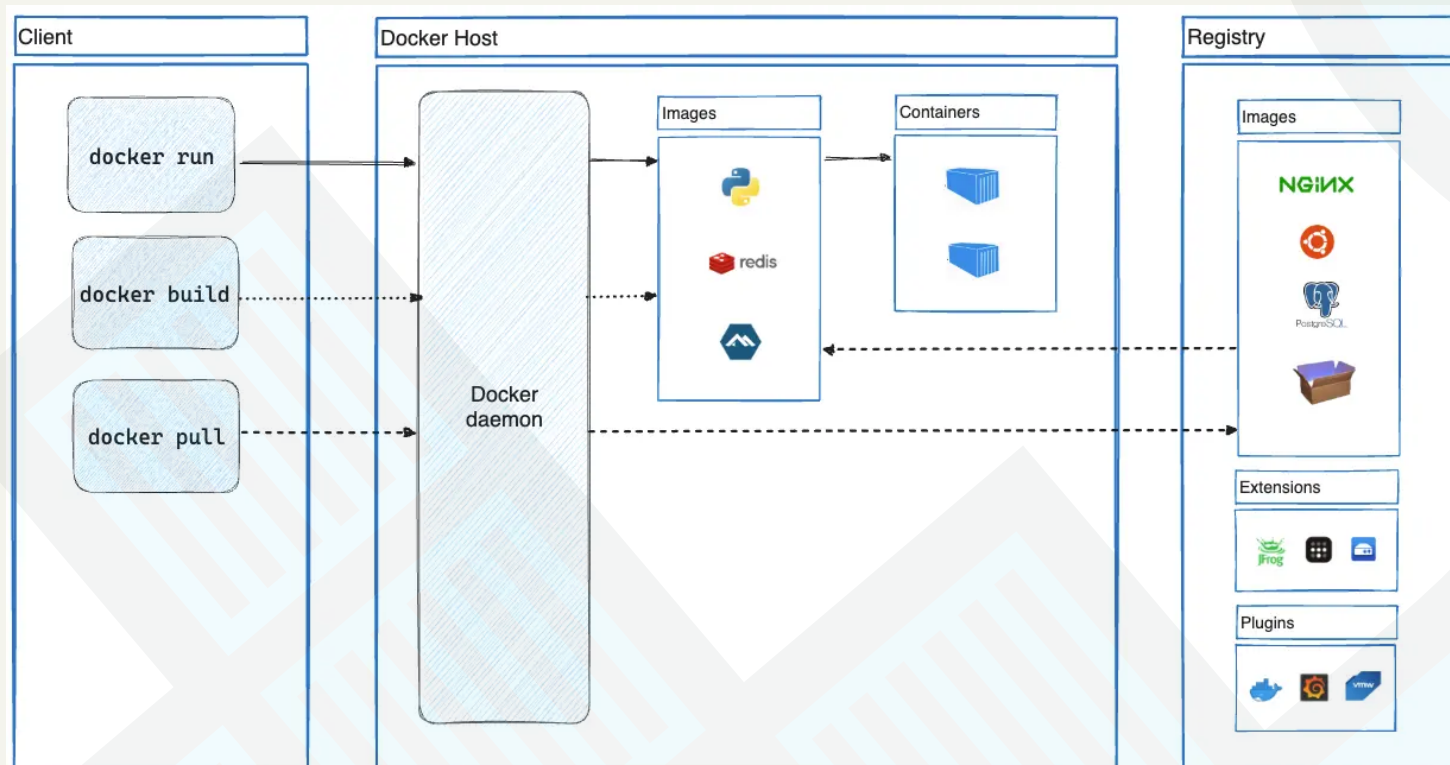
Container vs VM



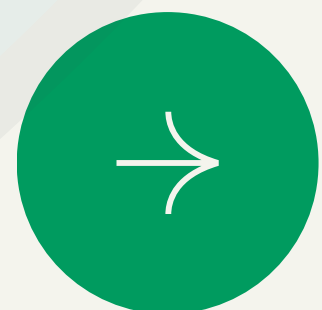
click hear for detail info



Docker Arch

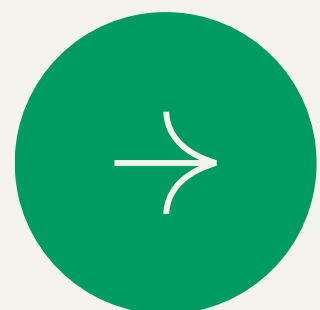


- **Docker Engine:** The hearts of Docker that helps in creating & managing containers.
- **Docker daemon:** handle container operations, like create, running, stopping.
- **Docker client tool:** user interact with give cmds to dockers.
- **Container:** a lightweight, portable pkg that holds and application & its dependencies.
- **Image:** A snapshot of container, including all files needed to run and application.
- **Docker registry:** Store space for docker images, like an online lib
- **Docker file:** set of instructions used build Docker image automatically



Benefits of Docker

- 1. Portability**
- 2. Isolation**
- 3. Efficiency**
- 4. Consistency**
- 5. Scalability**
- 6. Rapid Deployment**
- 7. version control**
- 8. ecosystem**

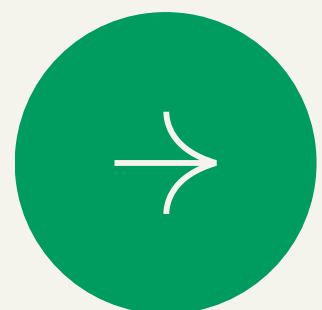


Topics *day* 02


1. Docker basic

2. Docker

Commands





Reference



Docker overview

Get an in-depth overview of the Docker platform including what it can be used for, the architecture it employs, and its underlying technology.

 Docker Documentation / Nov 22, 2023



What Is Docker?

Docker is an open source platform that enables developers to build, deploy, run, update and manage containerized applications.


ibm.com



What is Docker? | AWS


Docker is a software platform that allows you to build, test, and deploy applications quickly using containers. Learn about how Docker works, why and when to use Docker, and how to run containers on AWS.

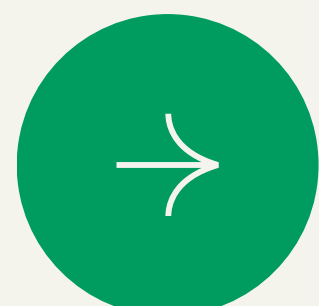
 Amazon Web Services



What is a Docker Image? Introduction and use cases

Learn about Docker images: What they're used for, their anatomy, how they compare to Docker...

 IT Operations



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