

Docker 100 days challenge

day 01

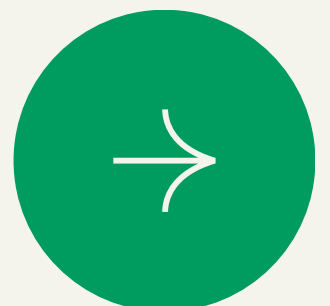


DhineshKumar Thirupathi

Introduction to *day* 01 docker

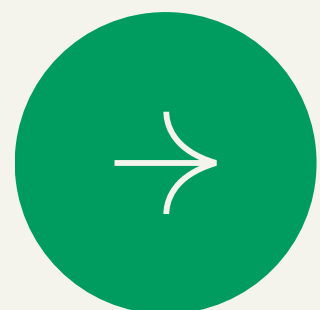
What is Docker ? (Docker is PaaS)

- 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.



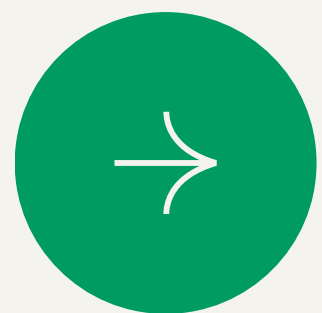
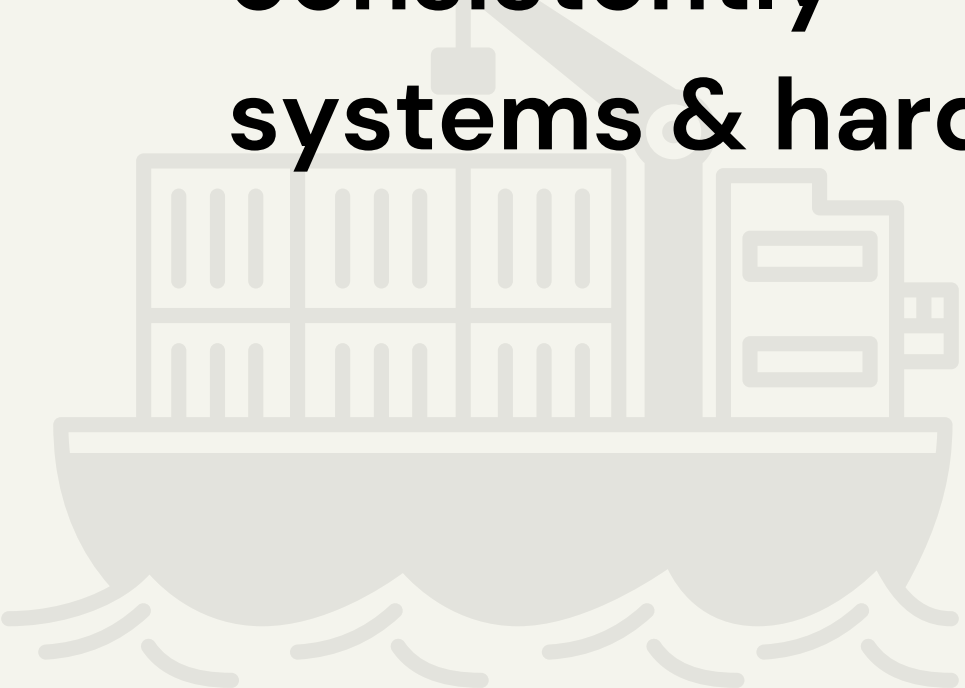
Docker isolated platform

- **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**

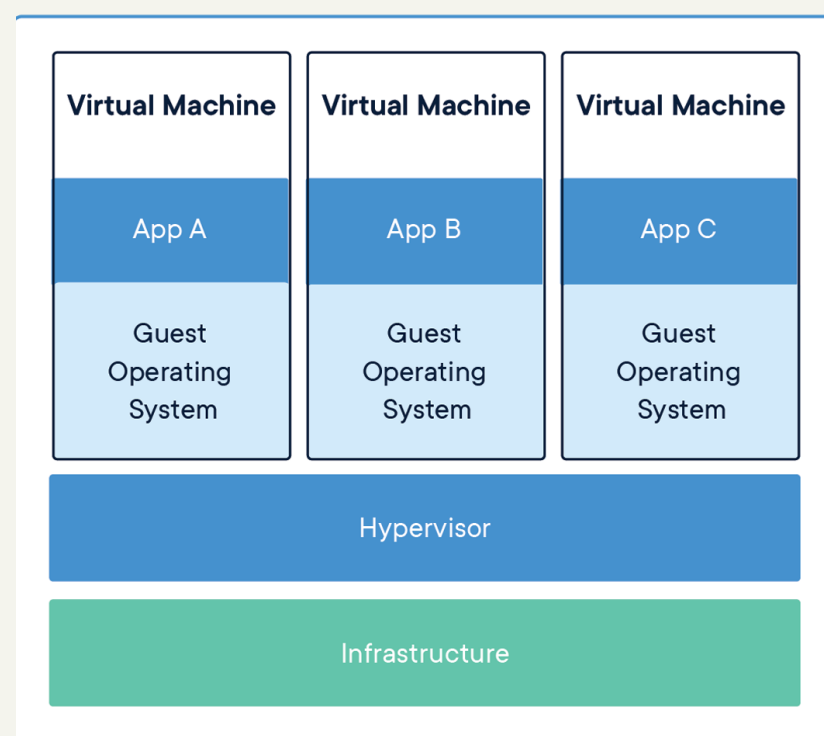
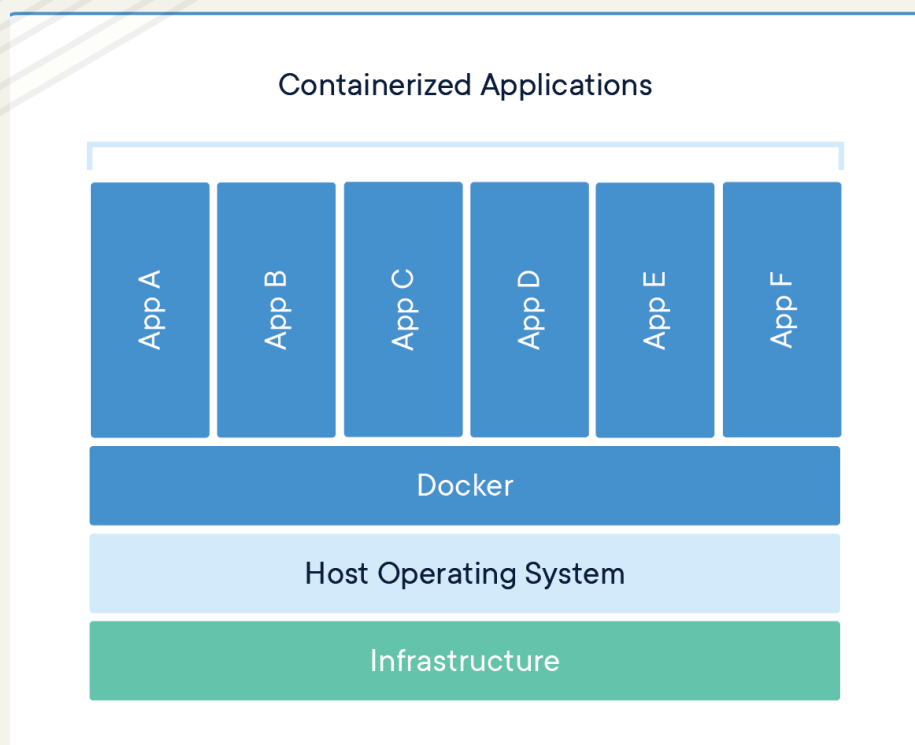


Docker Containers:

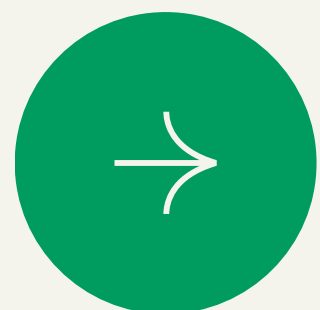
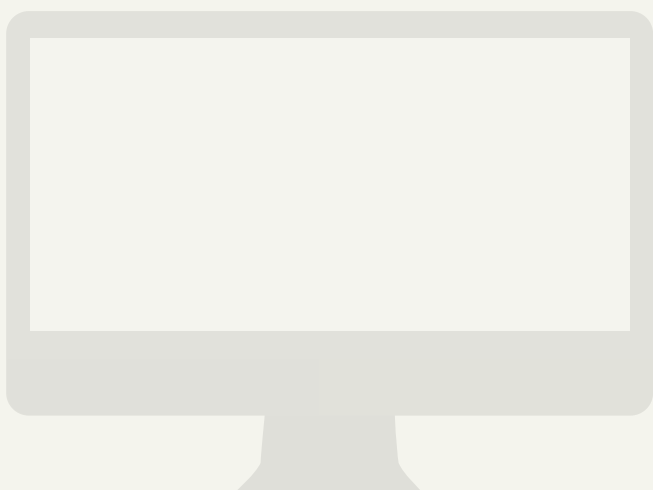
- **Docker container:** lightweight, standalone pkg for running application.
- **Contains:** Code, runtime, system tools, lib – everything needed for the app.
- **easy development and management.**
- **Isolated :** containers are separate from each other & the underlying infrastructure.
- **Concurrent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



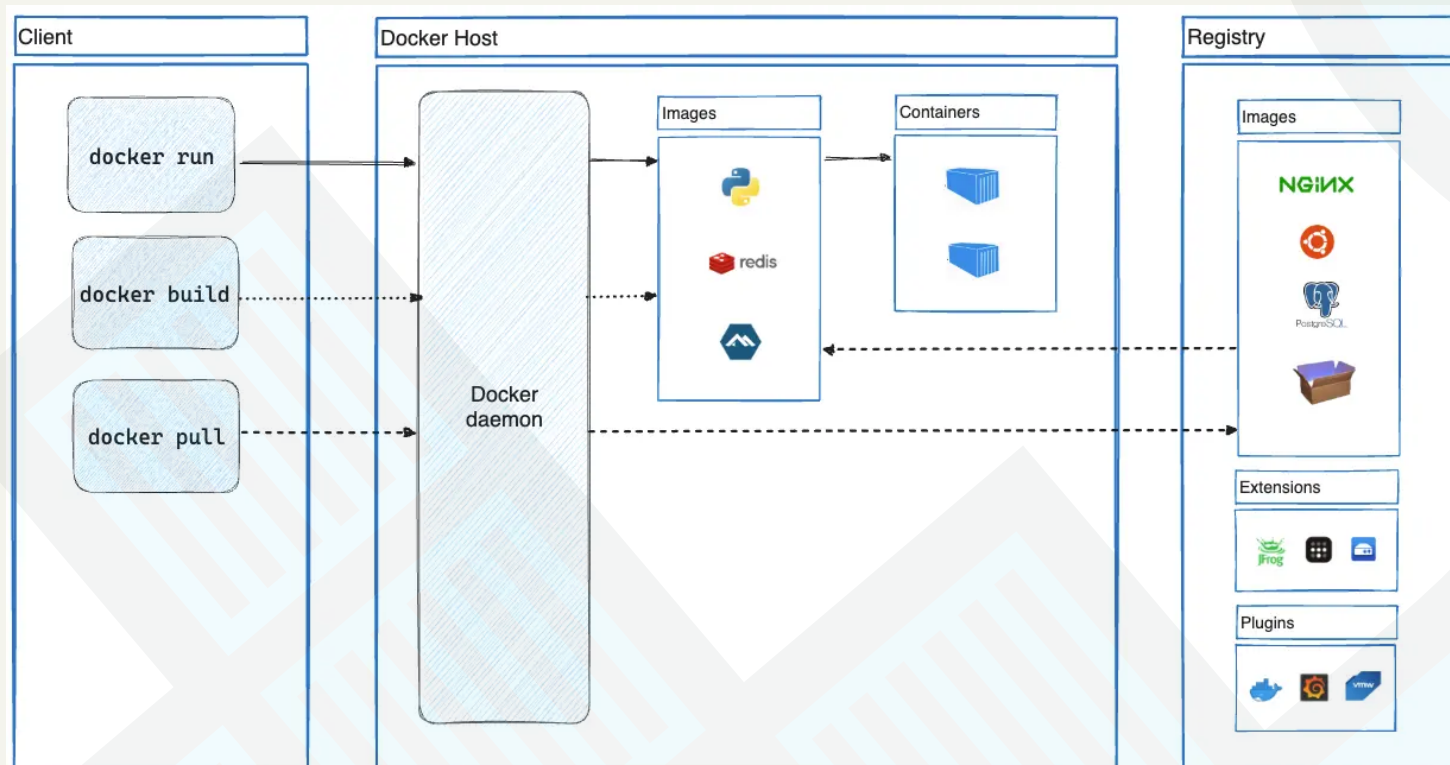
Container vs VM



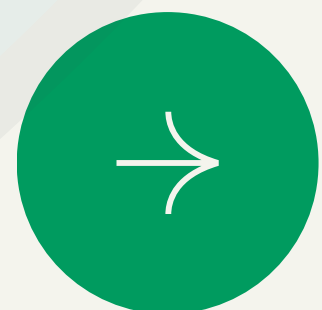
click hear for detail info



Docker Arch

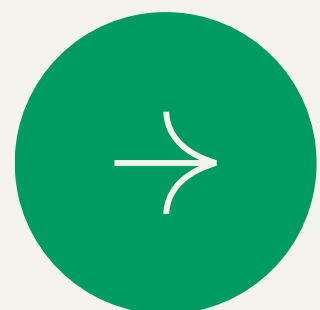


- **Docker Engine:** The hearts of Docker that helps in creating & managing containers.
- **Docker daemon:** handle container operations, like create, running, stopping.
- **Docker client tool:** user interact with give cmds to dockers.
- **Container:** a lightweight, portable pkg that holds and application & 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**

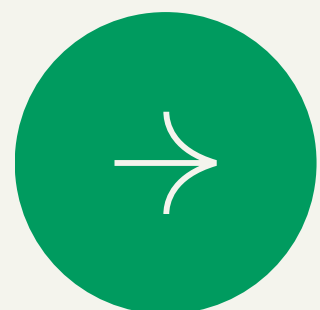


Topics *day* 02

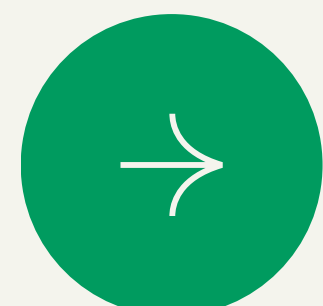
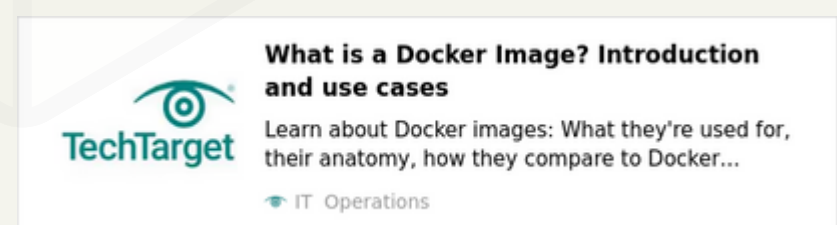
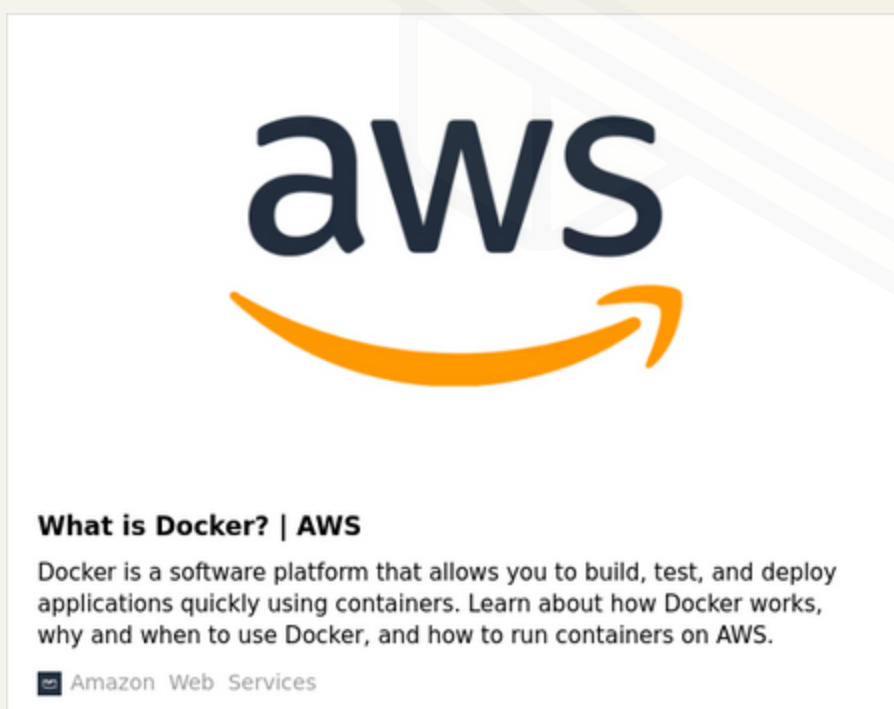
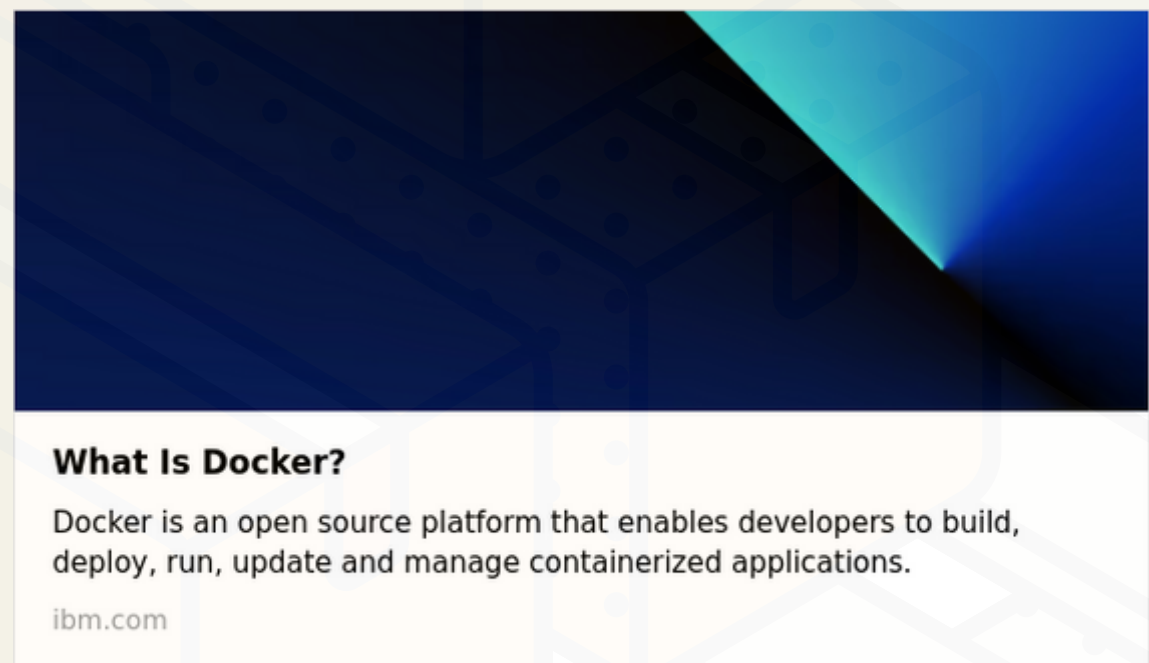
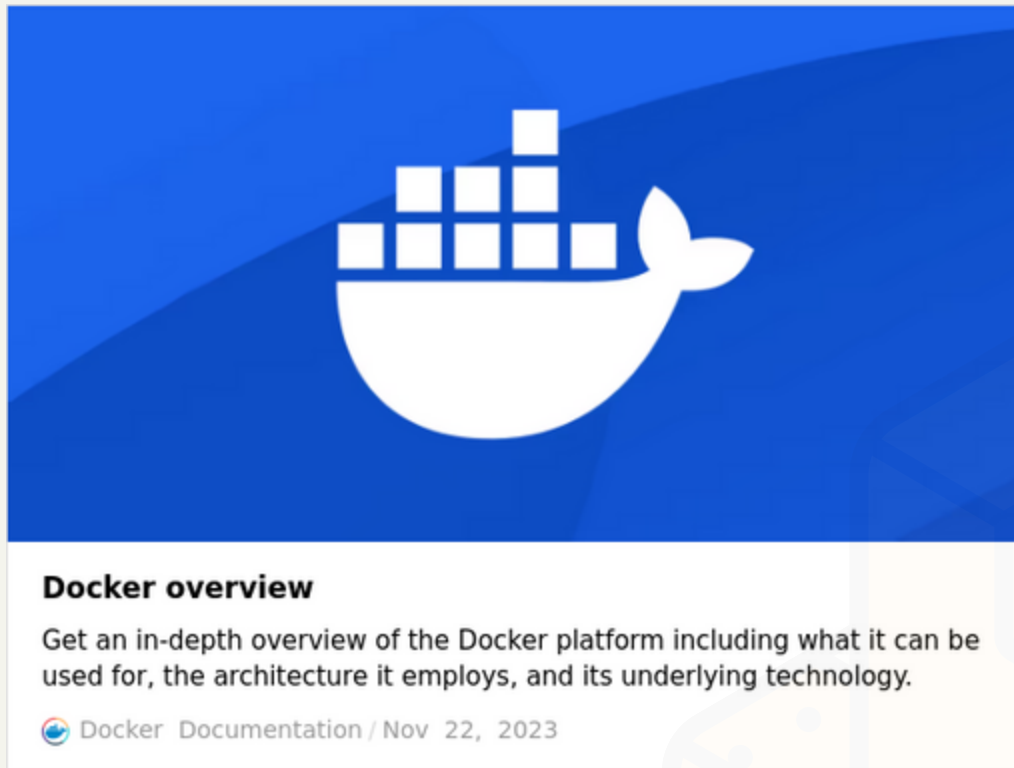
1. Docker basic

2. Docker

Commands



Reference



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