

WHAT IS DOCKER?



Containerization with Docker



Why Docker?

Before Docker

Developer

THE CODE WORKS
ABSOLUTELY
FINE!



Tester

BUT, THE SAME
CODE DOESN'T WORK
ON MY SYSTEM!



Why Docker?

Before Docker

The code doesn't work on the other system due to the difference in computer environments
So, what could be the solution to this?

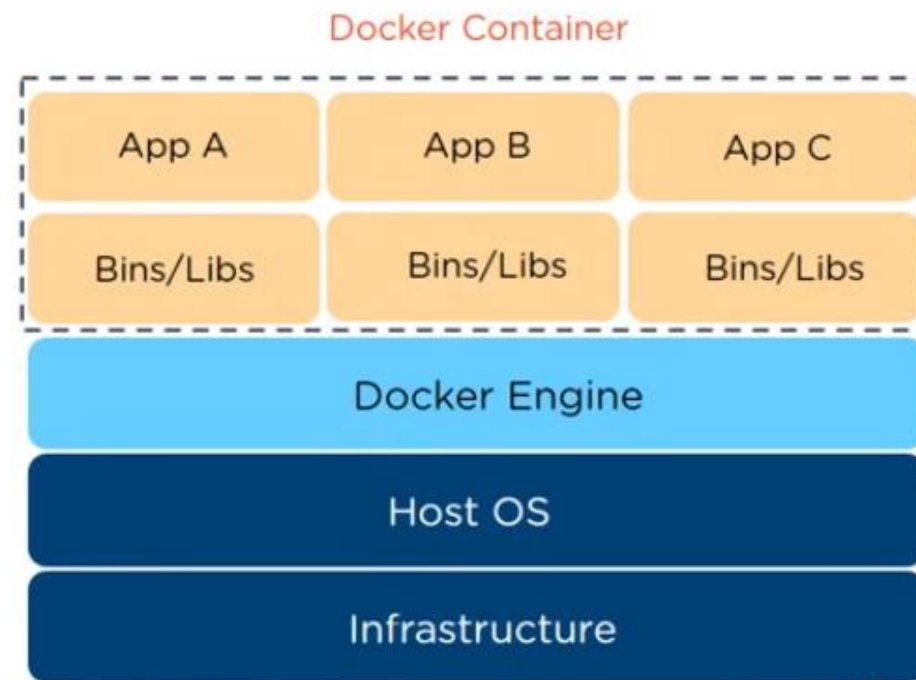
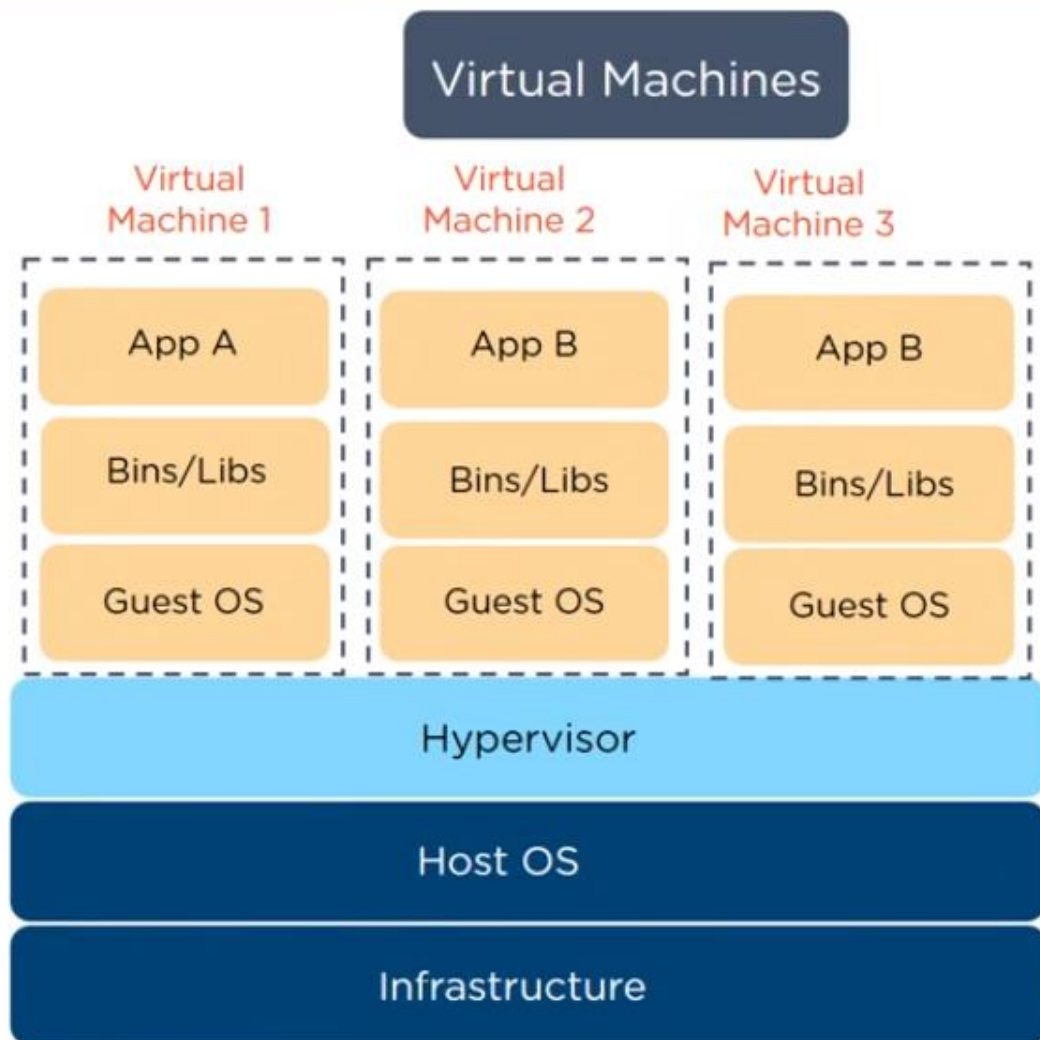
VIRTUAL MACHINE
CAN BE THE
SOLUTION





I THINK DOCKER WILL
BE A BETTER
SOLUTION



Why Docker?

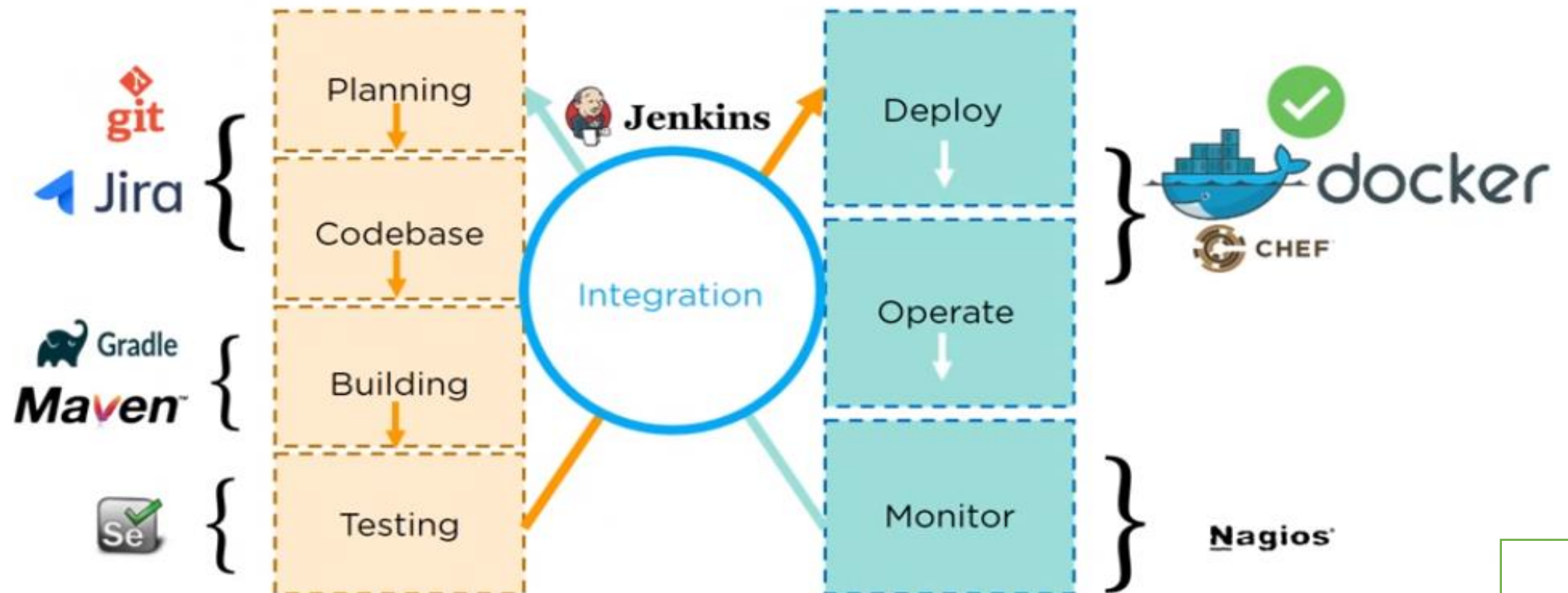


Why Docker?

Criteria	 Virtual Machine	Docker 
OS support	Occupies a lot of memory space	Docker Containers occupy less space
Boot-up time	Long boot-up time	Short boot-up time
Performance	Running multiple virtual machines leads to unstable performance	Containers have a better performance as they are hosted in a single Docker engine
Scaling	Difficult to scale up	Easy to scale up
Efficiency	Low efficiency	High efficiency
Portability	Compatibility issues while porting across different platforms	Easily portable across different platforms
Space allocation	Data volumes cannot be shared	Data volumes can be shared and reused among multiple containers

DevOps and its tools

DevOps is a collaboration between development and operation teams which enables continuous delivery of applications and services to our end users



What is Docker?

Docker is a tool which is used to automate the deployment of applications in lightweight containers so that applications can work efficiently in different environments



Note: Container is a software package that consists of all the dependencies required to run an application

What is Docker?

Let's take an example where you plan to rent a house in Airbnb

Because every individual has different preferences when it comes to the cupboard and the kitchen usage

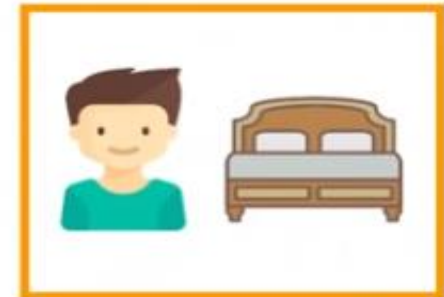
And none of the guests are ready to share the cupboard and the kitchen



Room



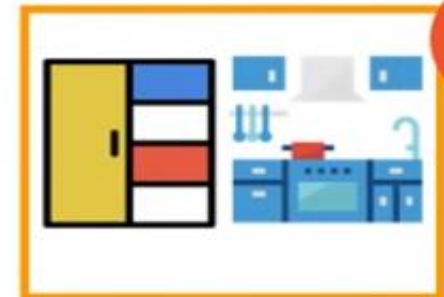
Room



Room



Cupboard and Kitchen



What is Docker?

Let's use this example with computers, where all the three applications use different frameworks

WHAT IF I WANT TO RUN ALL
MY APPLICATIONS WITH
THEIR SUITABLE
FRAMEWORKS?



Computer

Software application 1

Flask



Software application 2

Rails



Software application 3

Perfect



Framework

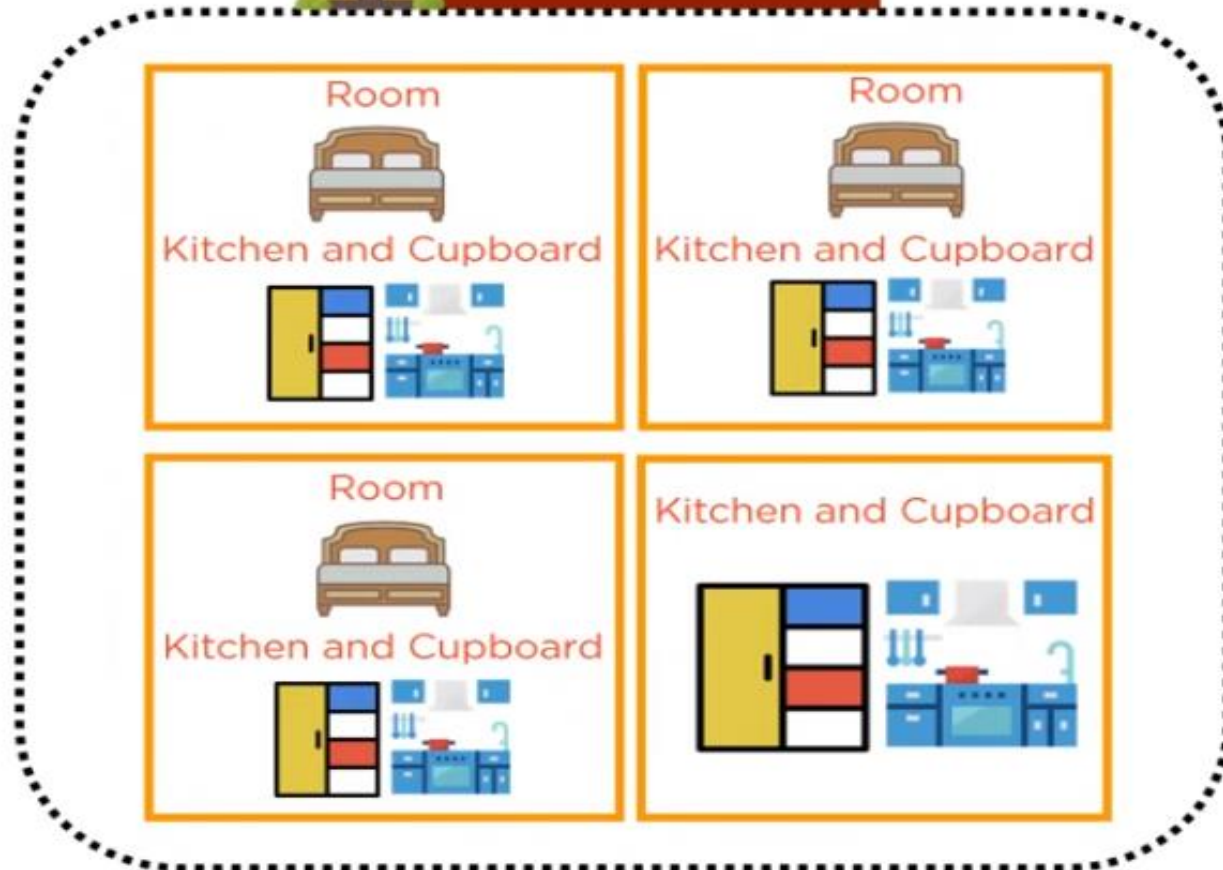


What is Docker?

Solution:



Airbnb

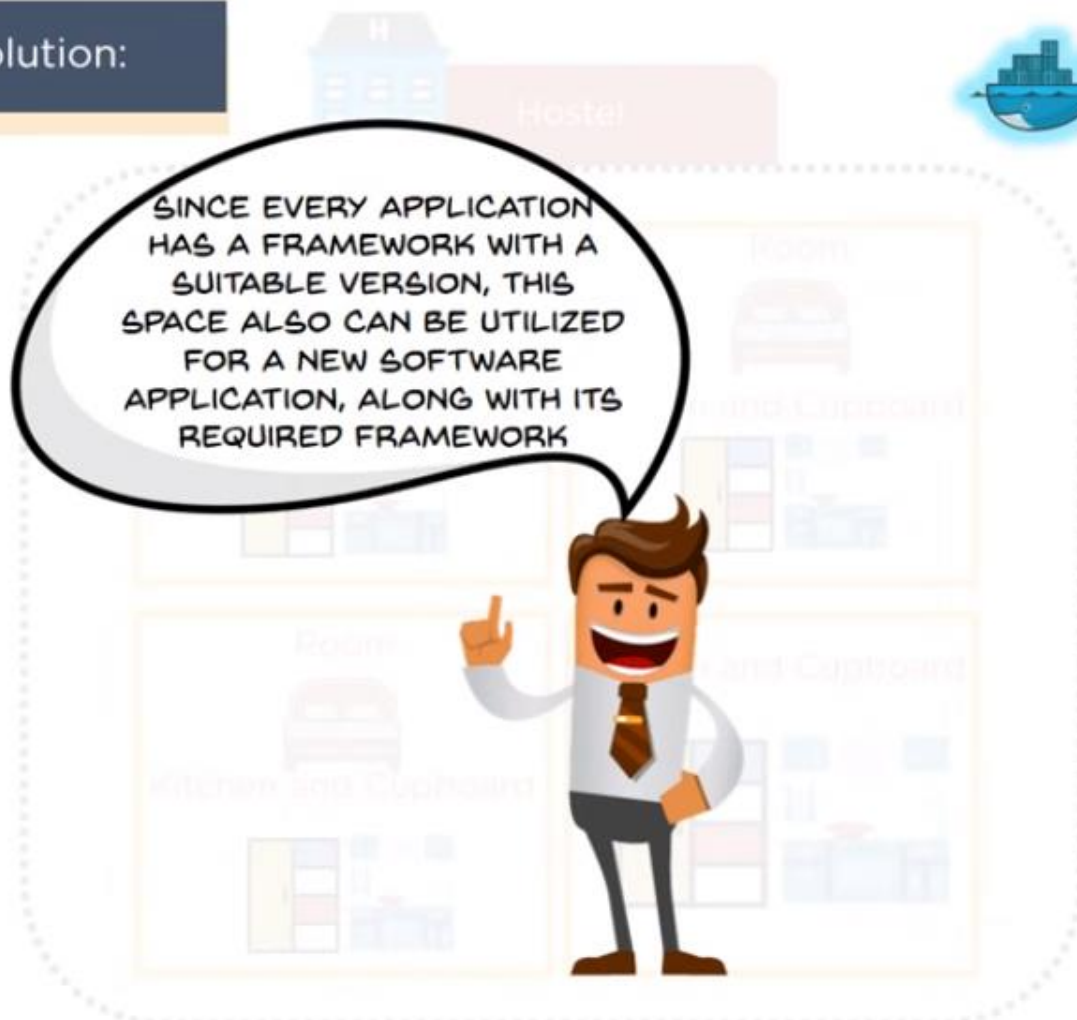


HERE, THE ISSUE GETS
RESOLVED, IF THE
OWNER PROVIDES A
KITCHEN AND A
CUPBOARD FOR EACH
ROOM



What is Docker?

Solution:



Computer

Software application 1

Flask



Flask

Software application 2

Rails



Software application 3

Perfect



perfect

Framework



Flask



perfect

References:

- What Is Docker? | What Is Docker And How It Works? | Docker Tutorial For Beginners | Simplilearn