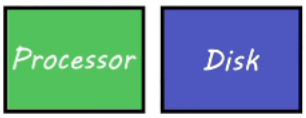

Memory

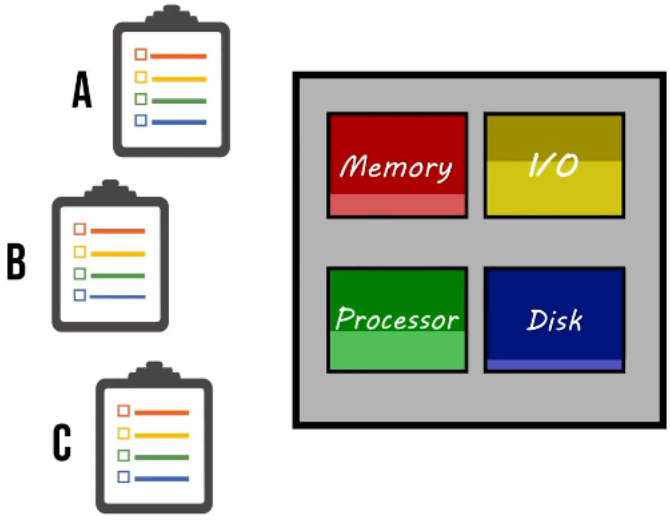

I/O

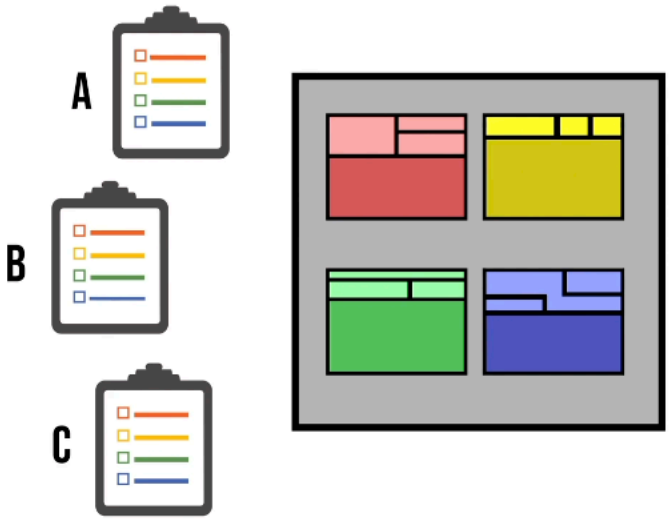

Processor


Disk

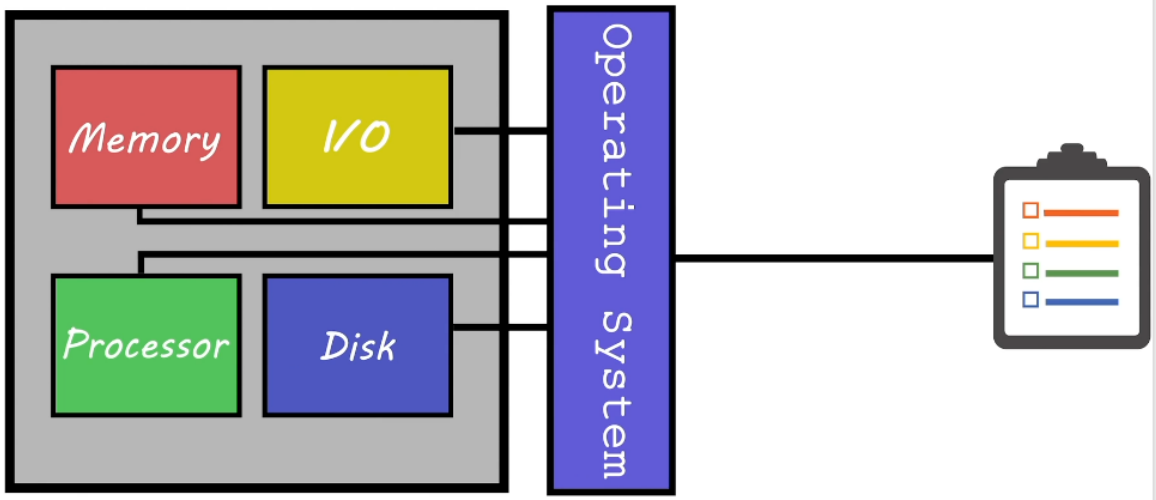

Memory
I/O

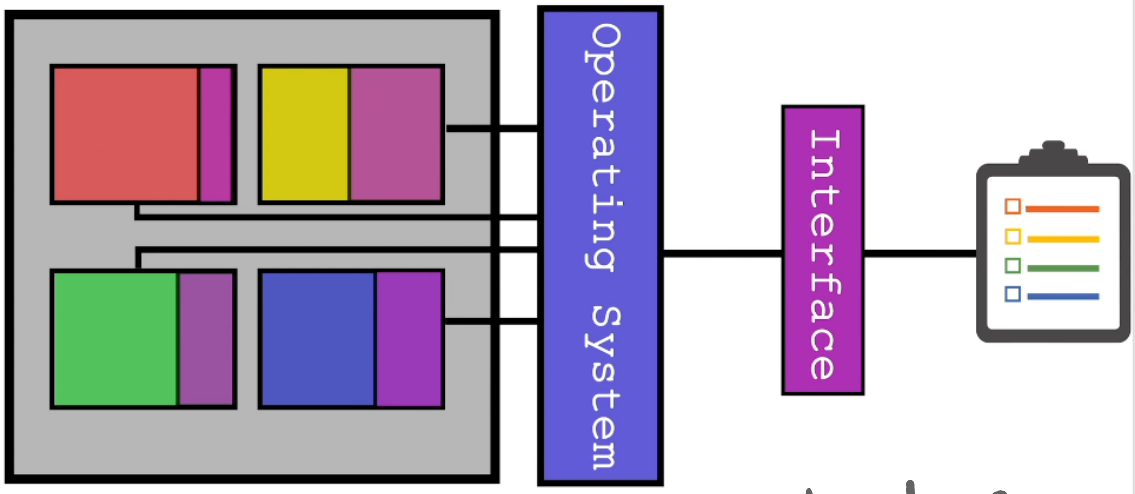

Processor
Disk



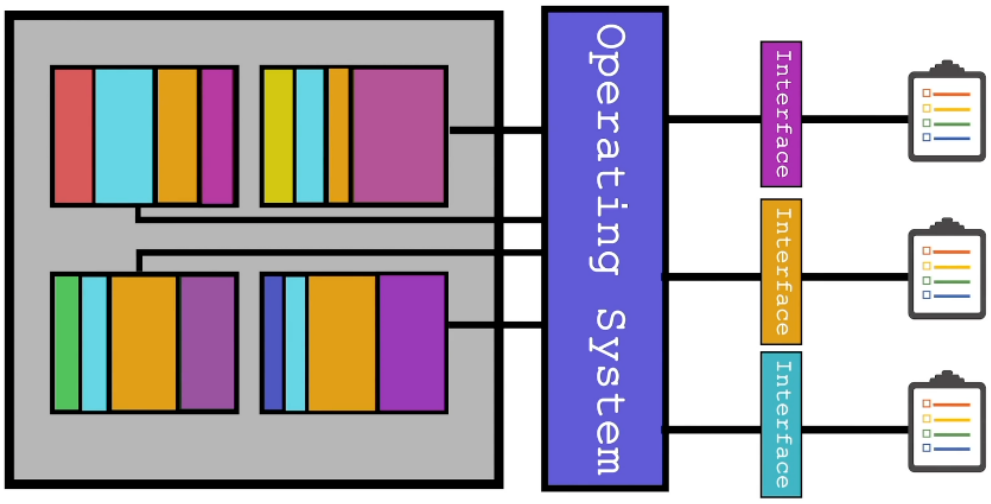


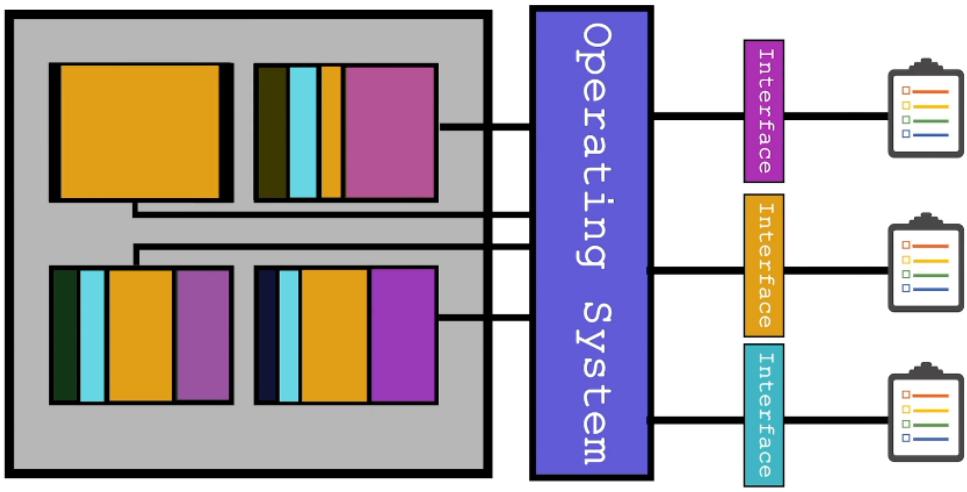
when multiple apps are running, need some isolation among the apps.





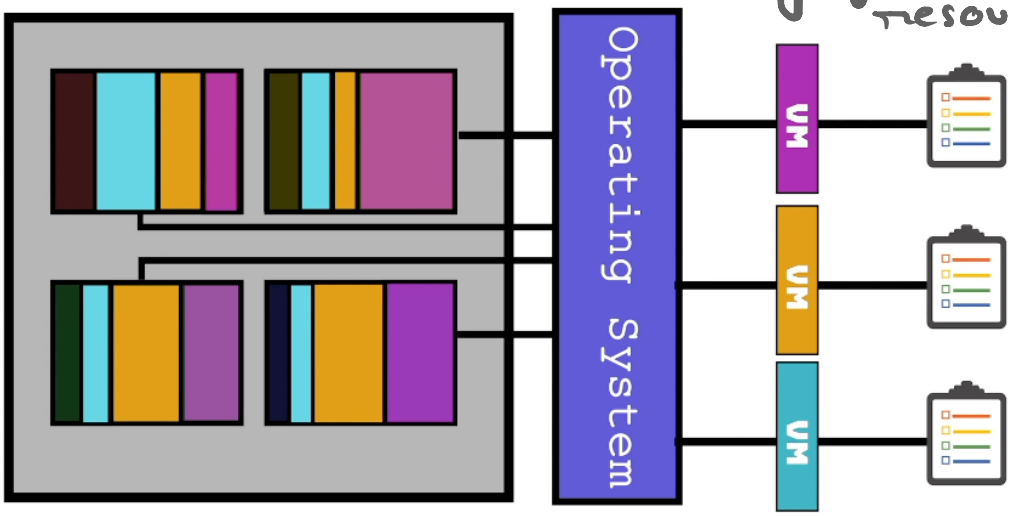
introduce interface to generate isolation

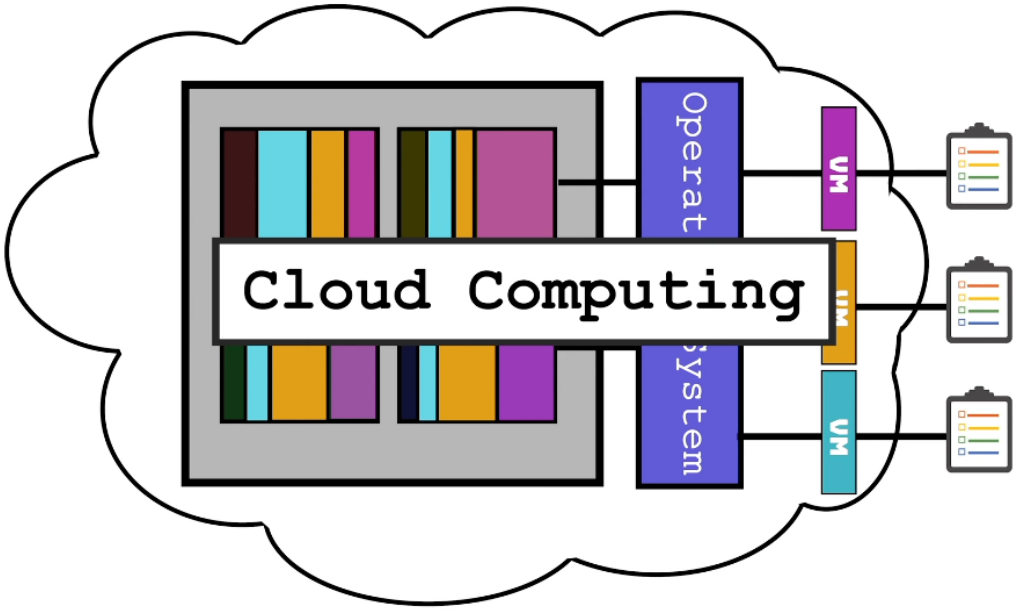


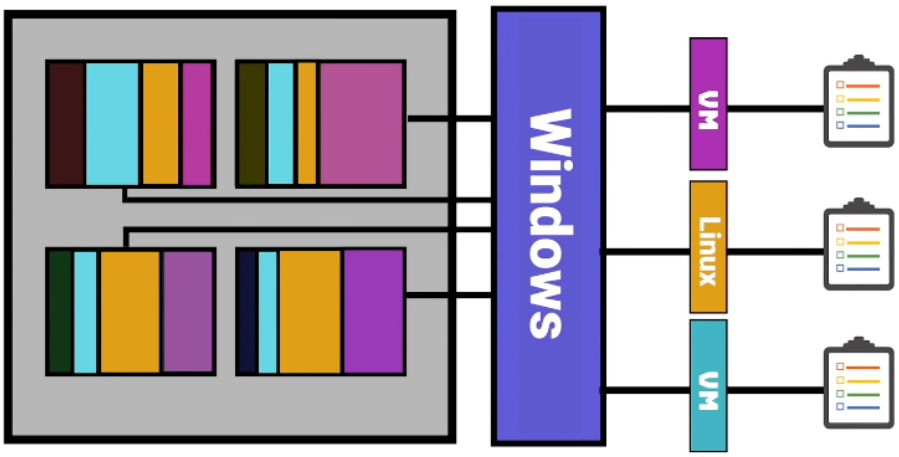


But the issue is one particular app might use up the whole resource (say memory) but other resources are available

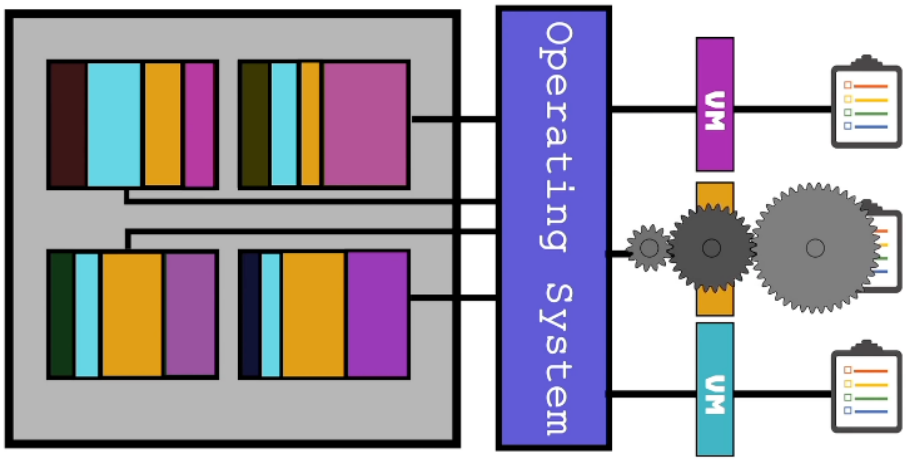
Idea: create VM. VM run isolated on top of the OS. They give separate resources for the services.



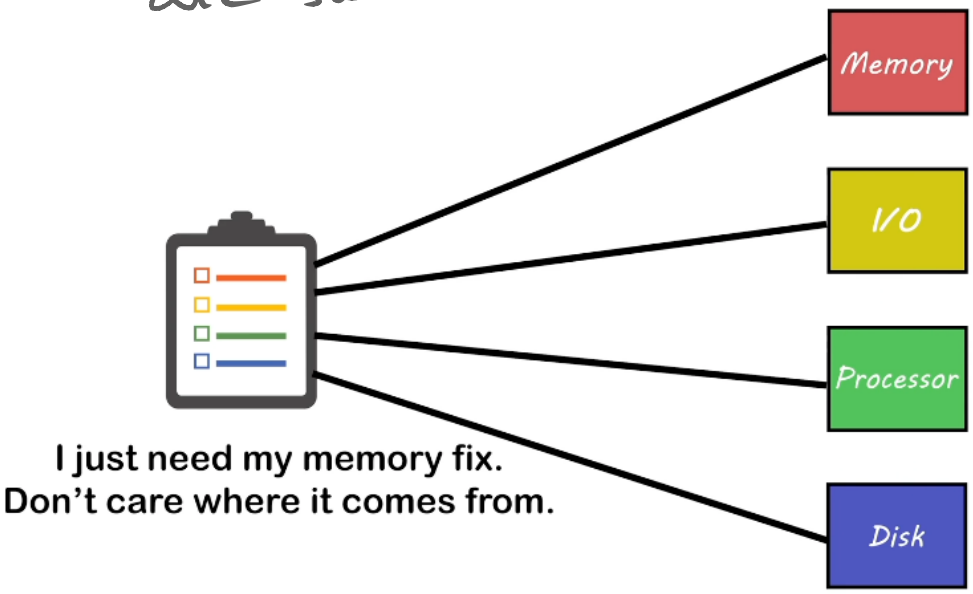




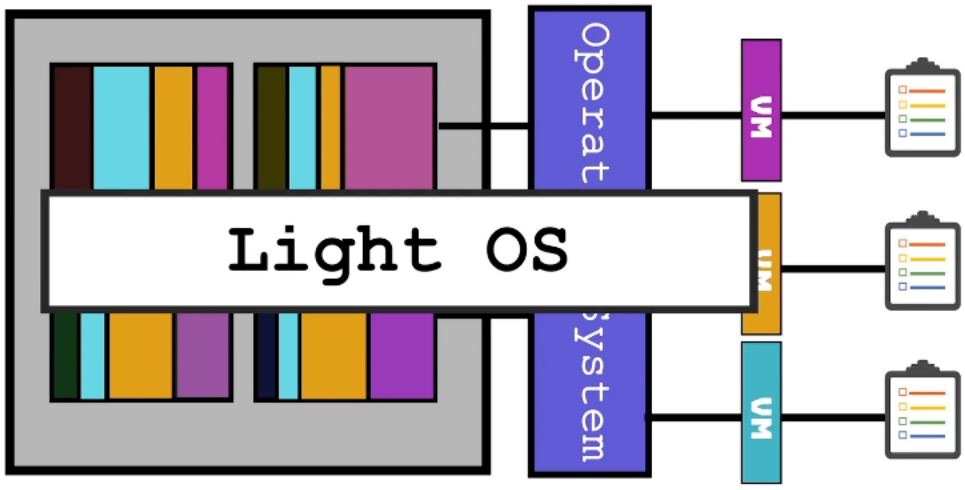
1) App Isolation
2) Platform Independence
3) Cost saving

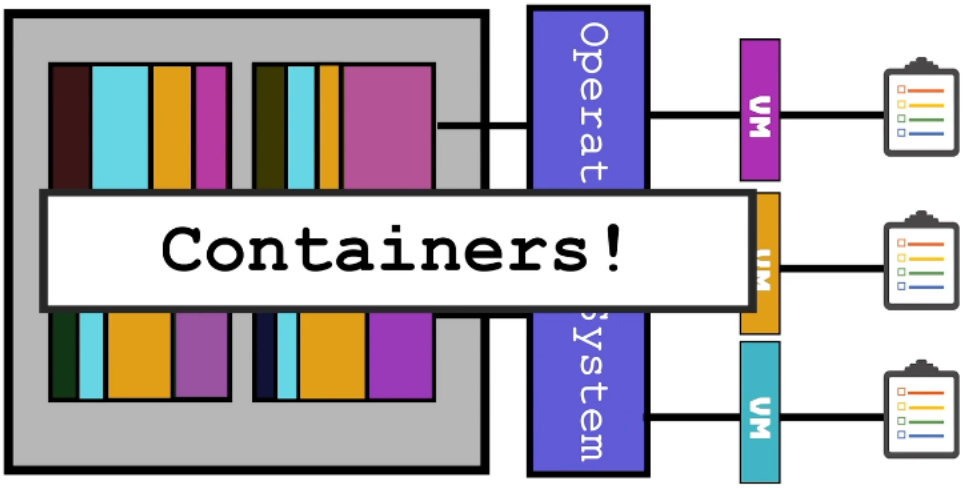


VMs take time to boot-up, so they are slow

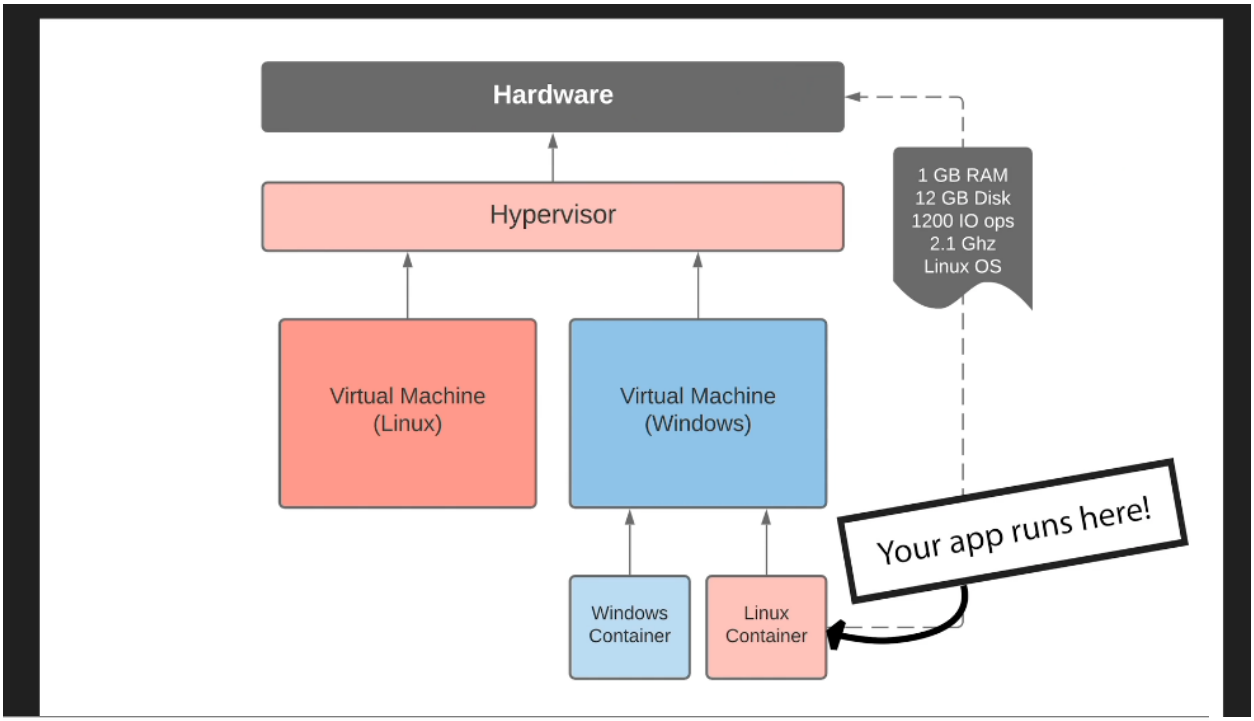


Light OS was precursor to container.

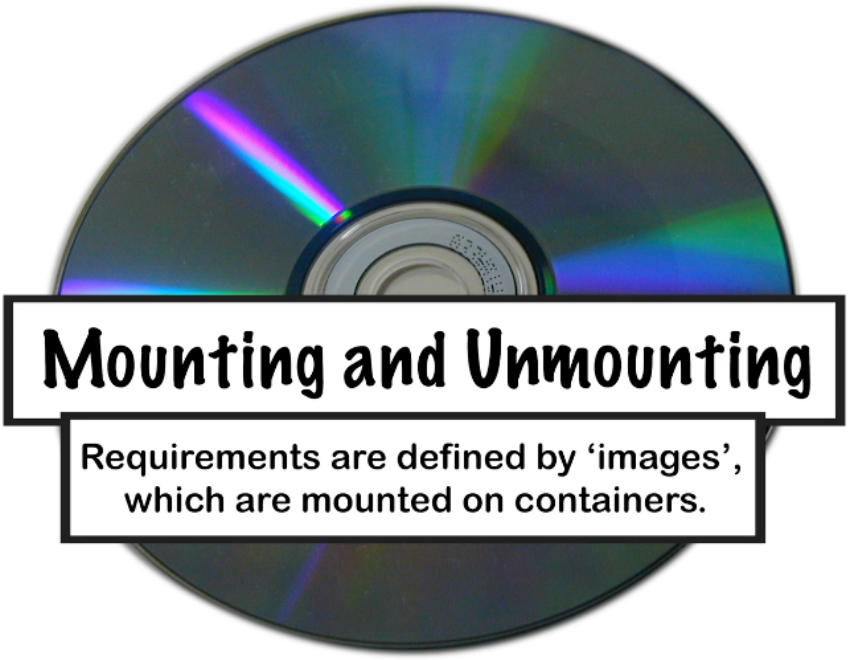


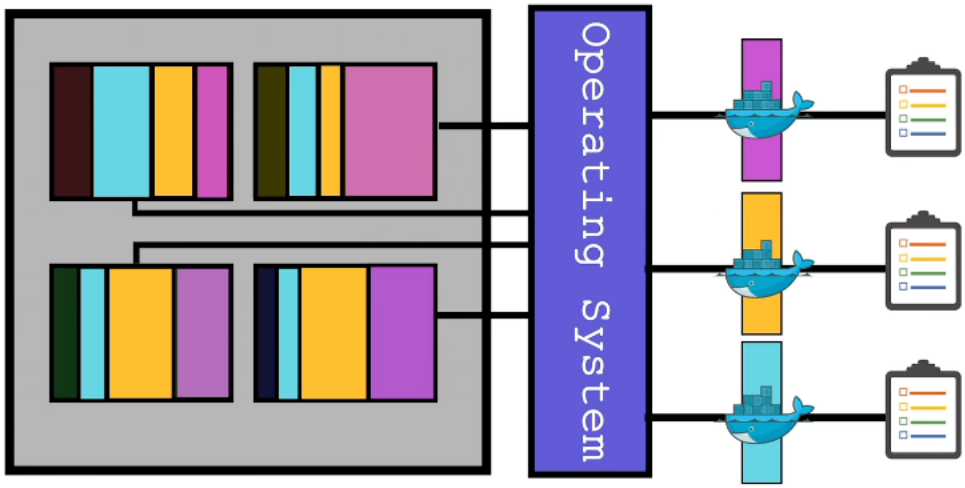


Containers are light packages with all code dependency and subset of required OS. This pushes the OS requirements back to the developer. You specify things like, library, open port, configs etc.


Hardware
Hypervisor
1 GB RAM
12 GB Disk
1200 IO ops
2.1 Ghz
Linux OS
Virtual Machine
(Linux)
Virtual Machine
(Windows)
Your app runs here!
Windows
Container
Linux
Container


Mounting and Unmounting


Mounting and Unmounting
Requirements are defined by ‘images’,
which are mounted on containers.


Operating System