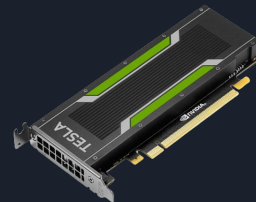
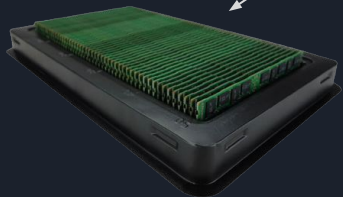




Virtualization

Resource



You can NOT use one physical server for one service with this huge resource



Virtualization

“Virtualization is a process that allows for more efficient utilization of physical computer hardware and is the foundation of cloud computing”

IBM

Benefits:

- **Slash your IT expenses**
- **Reduce downtime and enhance resiliency in disaster recovery situations**
- **Increase efficiency and productivity**
- **Control independence and DevOps**
- **Move to be more green-friendly (organizational and environmental)**



Virtualization & Virtual Machine

What we means when we're talking about virtualization:

- Assigning portion of host's CPU to a VM
- Assigning portion of host's memory to a VM
- Maybe some direct access to other host's resources
- Some sort of storage
- Some sort of network
- ...

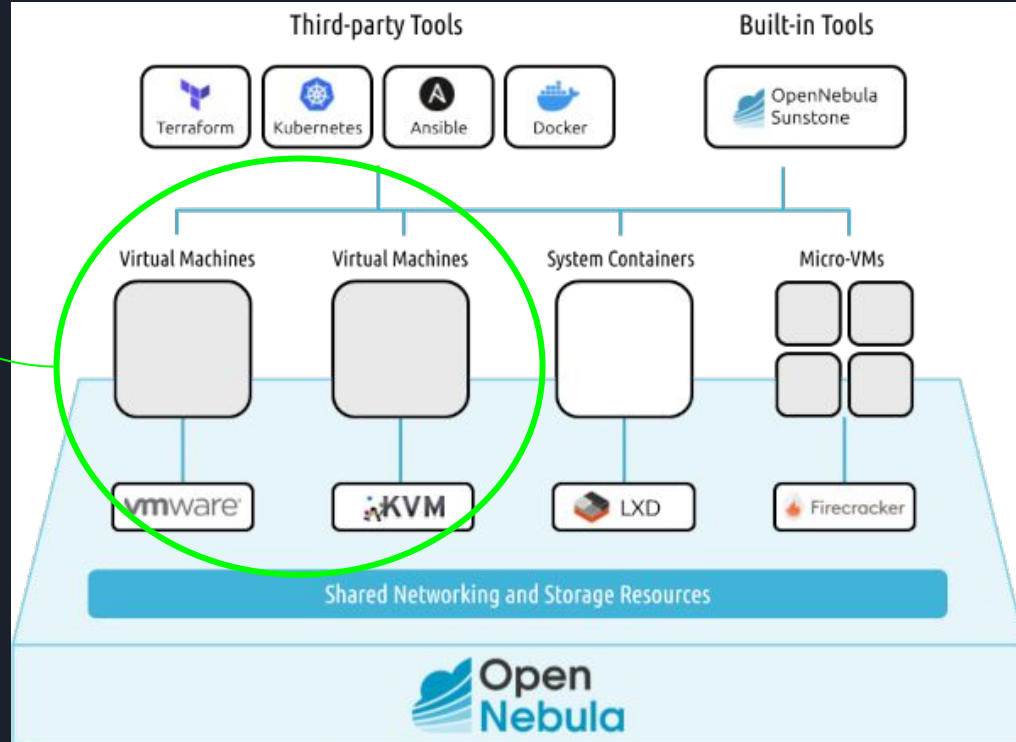
Hypervisor

So which resources are virtualized?

- Any resources attached to MB (e.g. CPU, Memory, GPU, ...)
- Remote storage
- Network
- ...

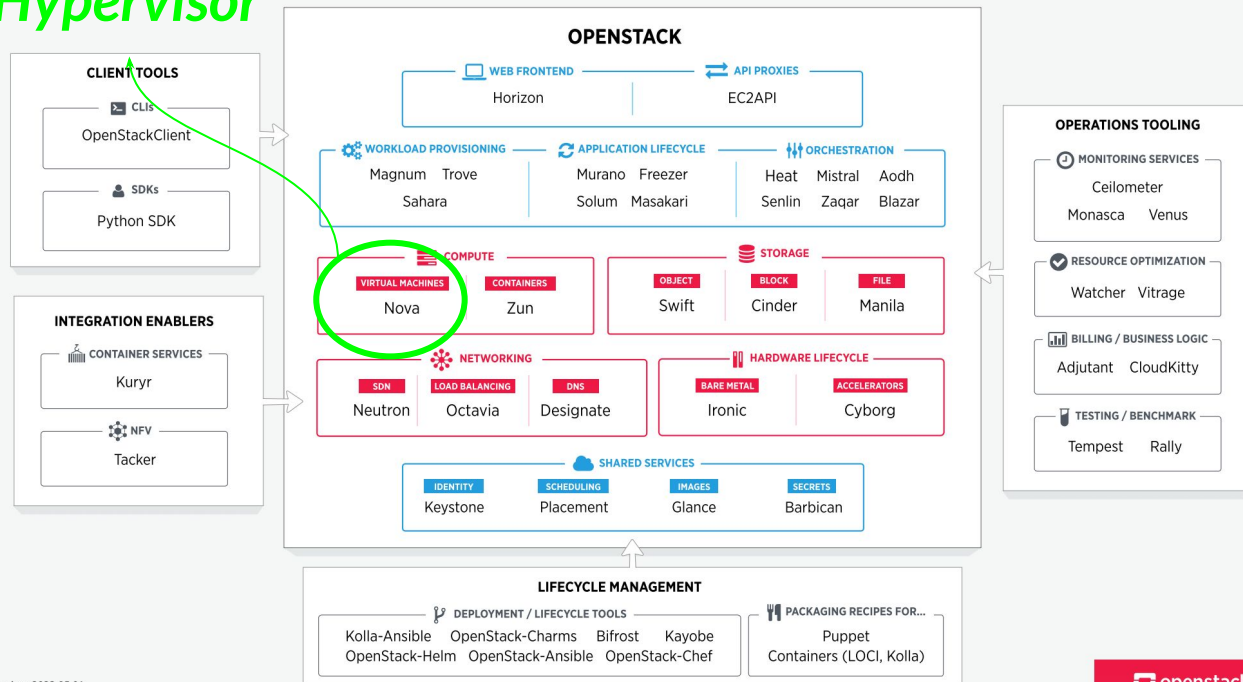
Opennebula

Hypervisor

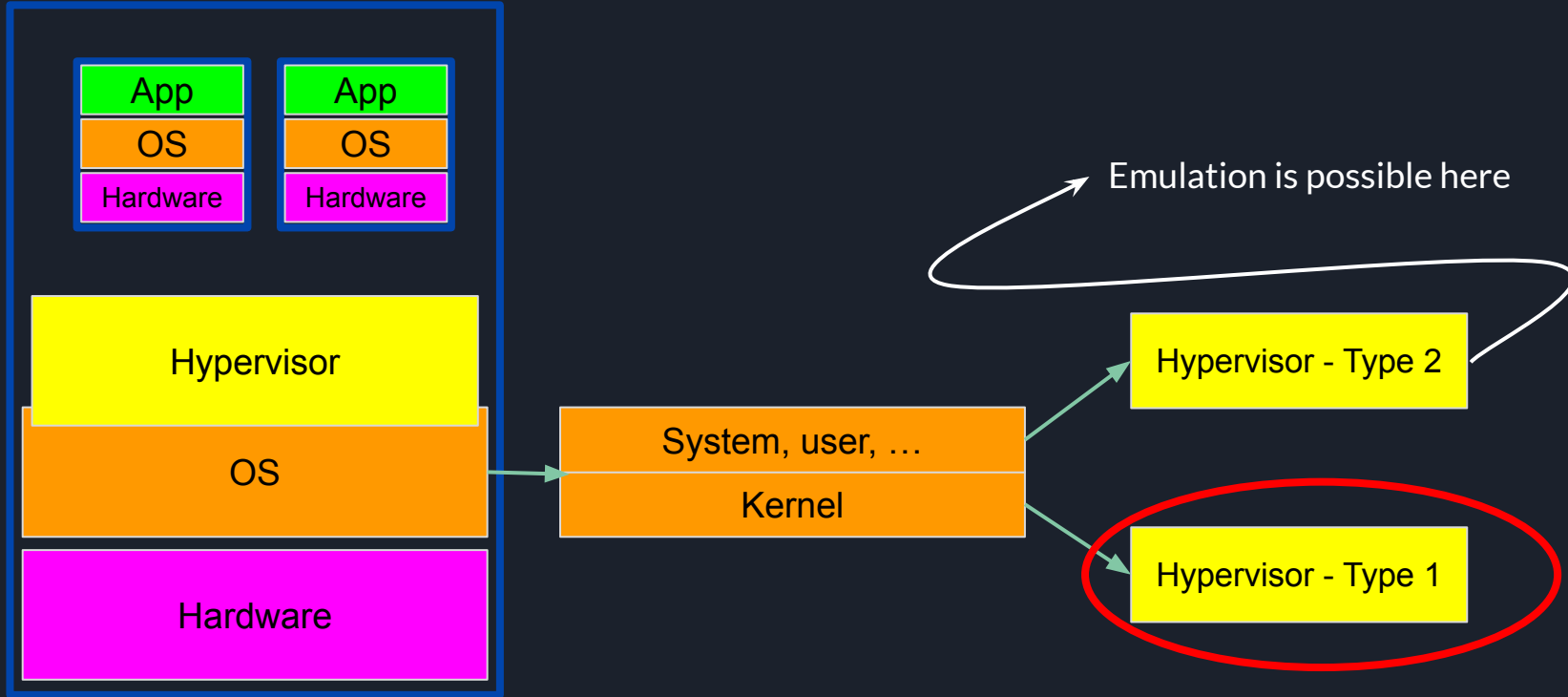


Openstack

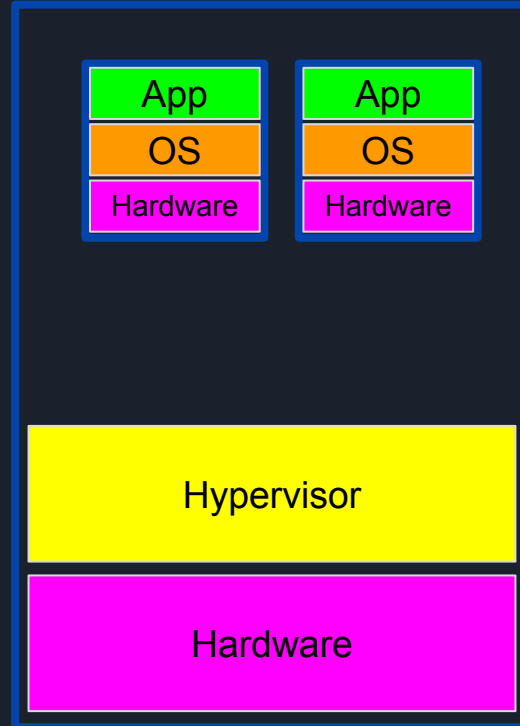
Hypervisor



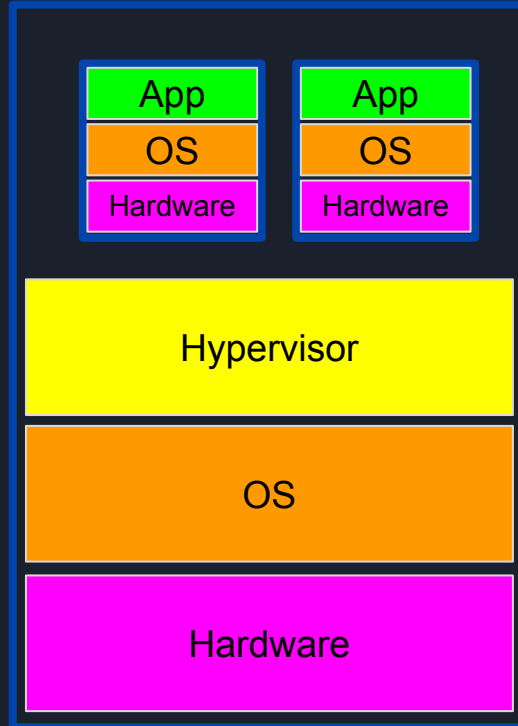
What is Hypervisor



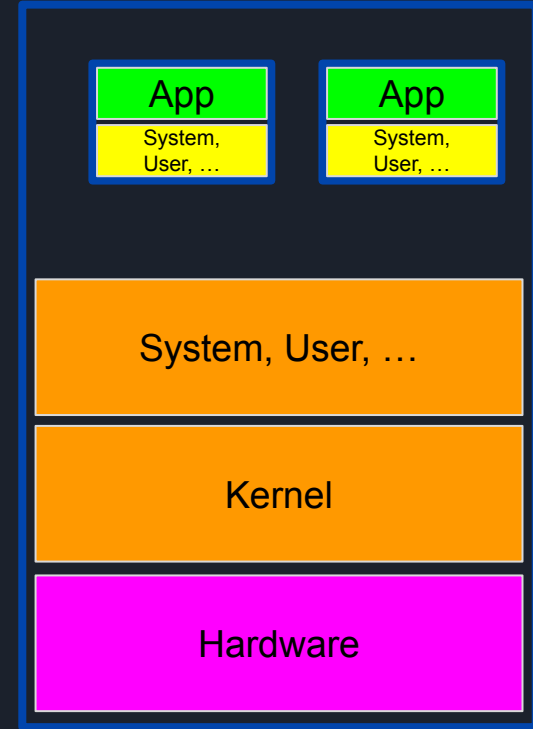
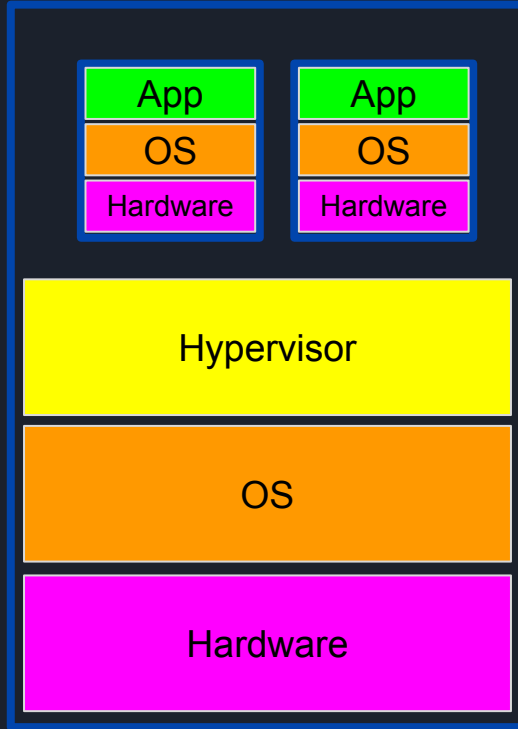
Hypervisor Type 1



Hypervisor Type 2



Similarity of virtualization & containerization



How about network?

Let's check these out

