



云原生实战

虚拟化技术介绍

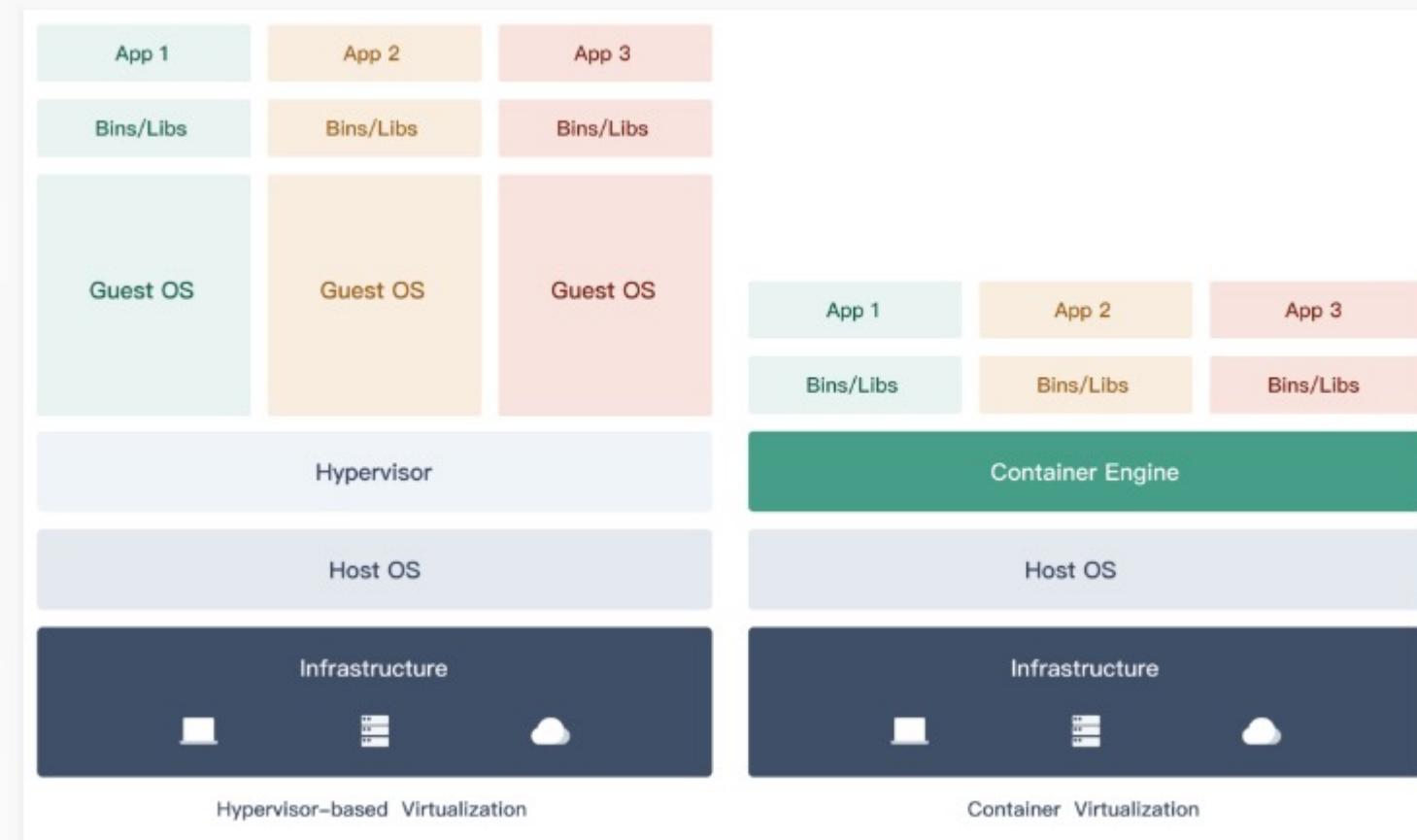
刘远清--KubeSphere Virtualization后端开发

Agenda

1. Cloud computing
2. Virtualization
3. Libvirt

在云计算发展过程中，有两类虚拟化平台技术：

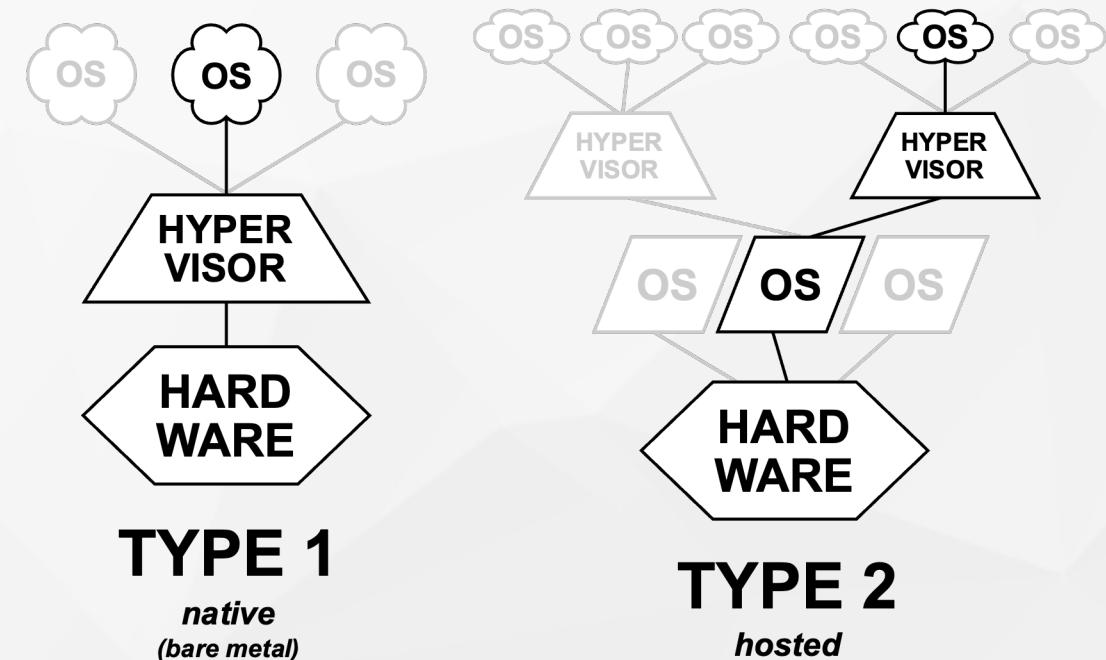
- OpenStack (IaaS)：关注虚拟机的计算、网络和存储资源管理
- Kubernetes (PaaS)：关注容器的自动化部署、编排调度和发布管理



Virtualization

Hypervisor (or virtual machine monitor, VMM, virtualizer) is a kind of emulator, classified two types of hypervisor:

- Type-1, native or bare-metal hypervisors,
 - Microsoft Hyper-V,
 - VMware ESXi,
 - KVM
- Type-2 or hosted hypervisors,
 - QEMU,
 - VirtualBox,
 - VMware Player,
 - VMware Workstation



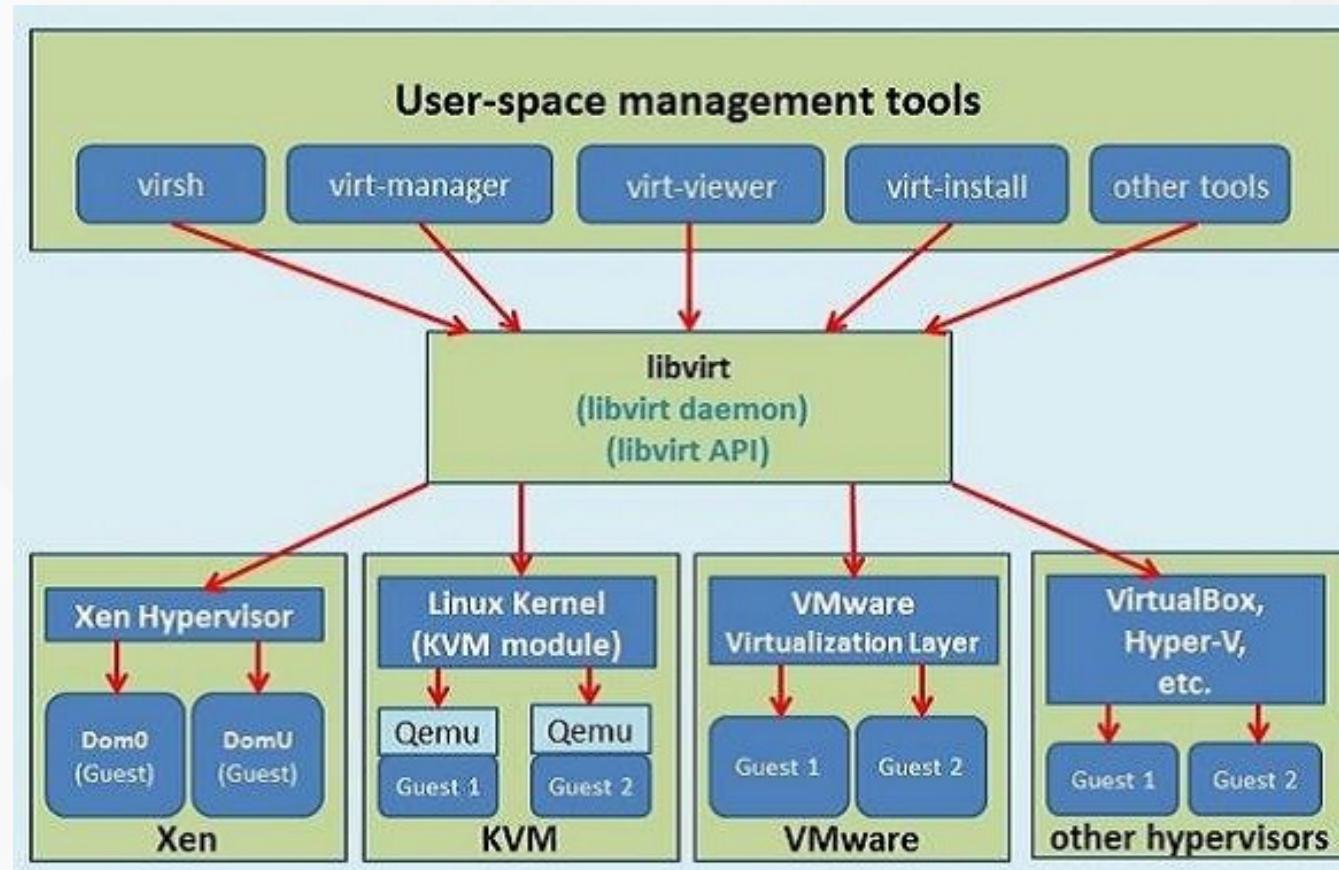
Virtualization includes CPU, Memory and I/O devices virtualization, Intel VT-x/AMD-X(CPU), Intel EPT/AMD-NPT(MMU),

I/O virtualization includes Full virtualization , para-virtualization and pass-through.

virtio , VT-d/AMD-Vi(IOMMU), VFIO, SR-IOV

Qemu-KVM

libvirt is an open-source API, daemon and management tool for managing platform virtualization. It can be used to manage KVM, Xen, VMware ESXi, QEMU and other virtualization technologies.



<https://en.wikipedia.org/wiki/Hypervisor>

<https://en.wikipedia.org/wiki/Libvirt>

<https://chowdera.com/2021/05/20210512132739845e.html>



谢谢观看