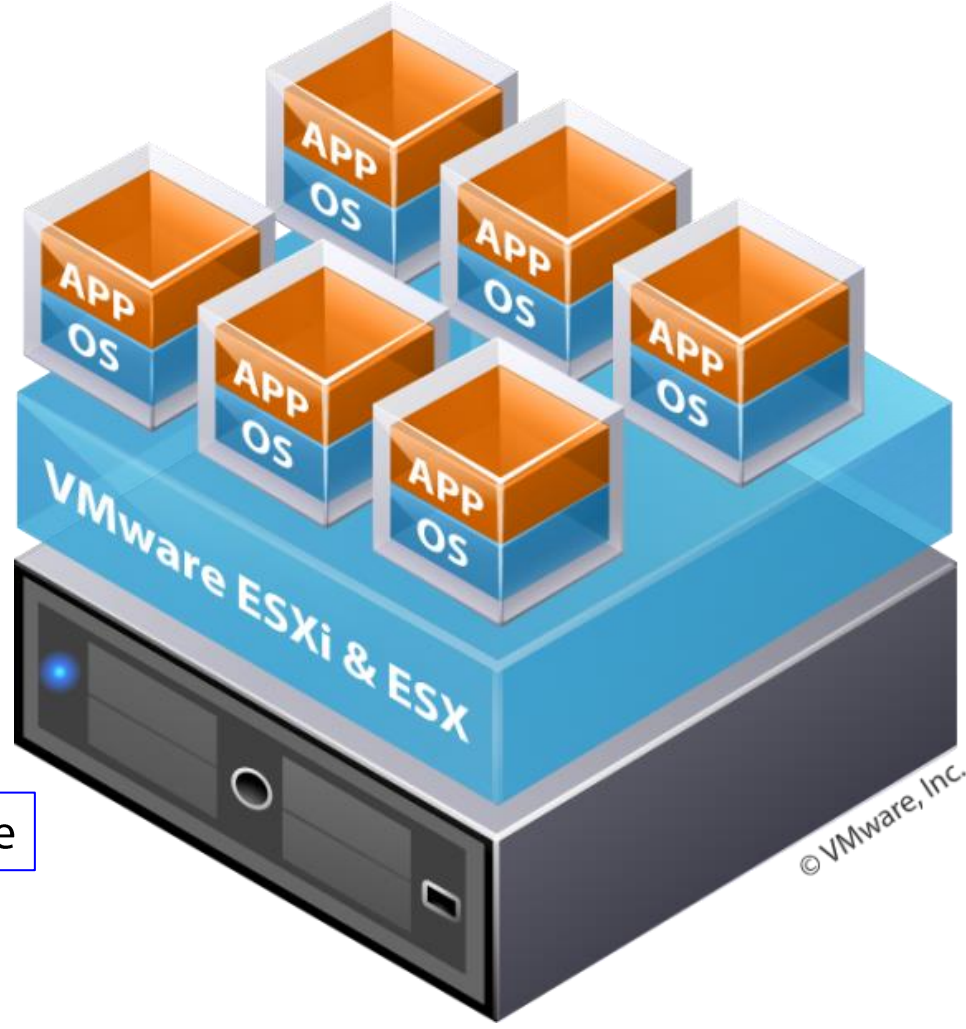
Virtualization Defined

Abstraction Layer

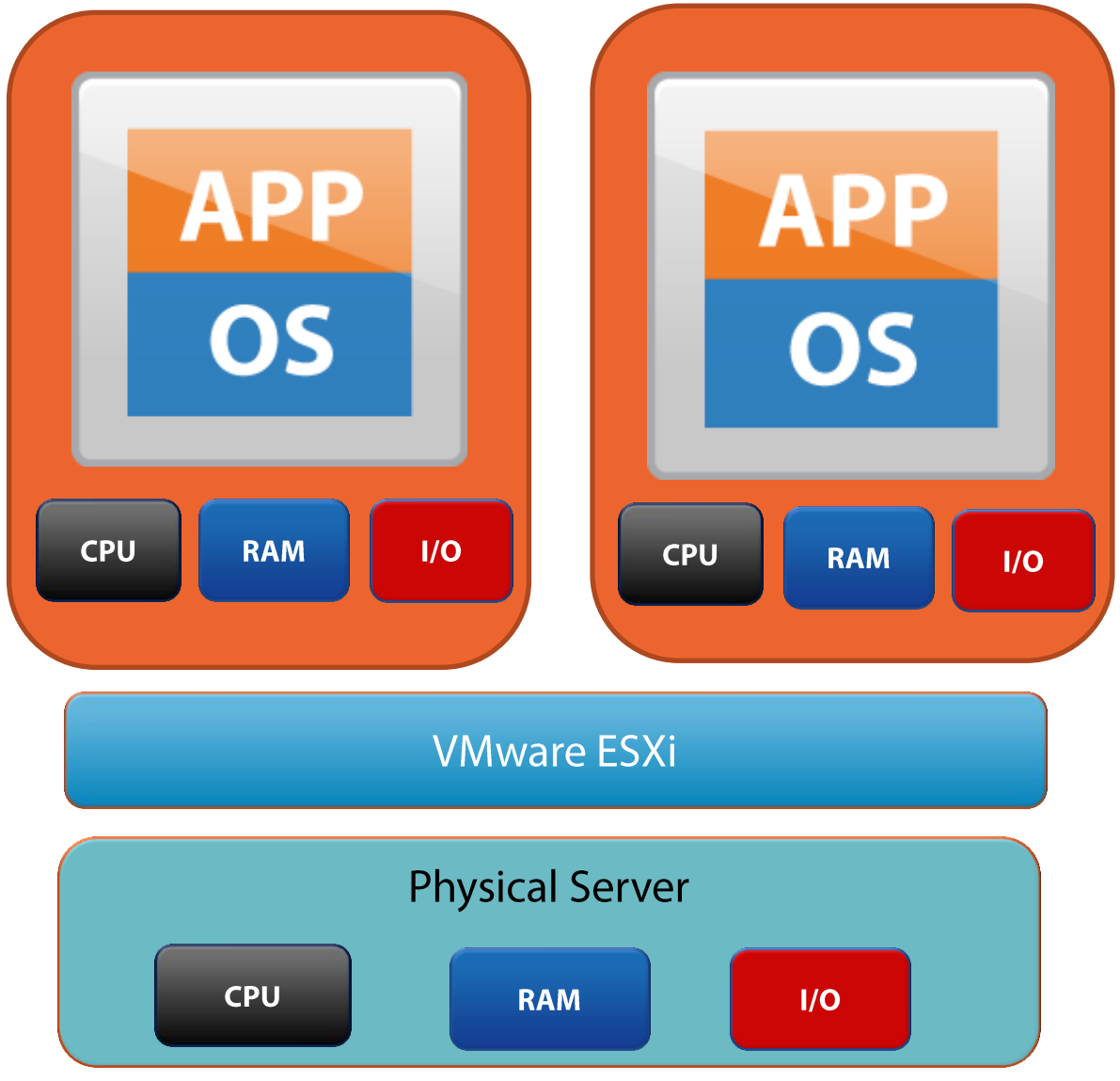
Most Well Known Form of Virtualization is Server Virtualization



OS No Longer Has to Be Bound to the Server or PC That it Runs on

The OS is Abstracted From the Hardware

Virtualization Defined



Graphic Thanks to VMware.com

Server Virtualization

- **Server Virtualization makes it possible for the OS of a physical server to run on a virtual layer (the hypervisor)**
- **This allows you to run multiple Virtual Machines (VMs), each with their own OS, on the same physical server**

Virtual Machine

Each guest OS running on the host

Virtual Host

Physical server with virtualization layer

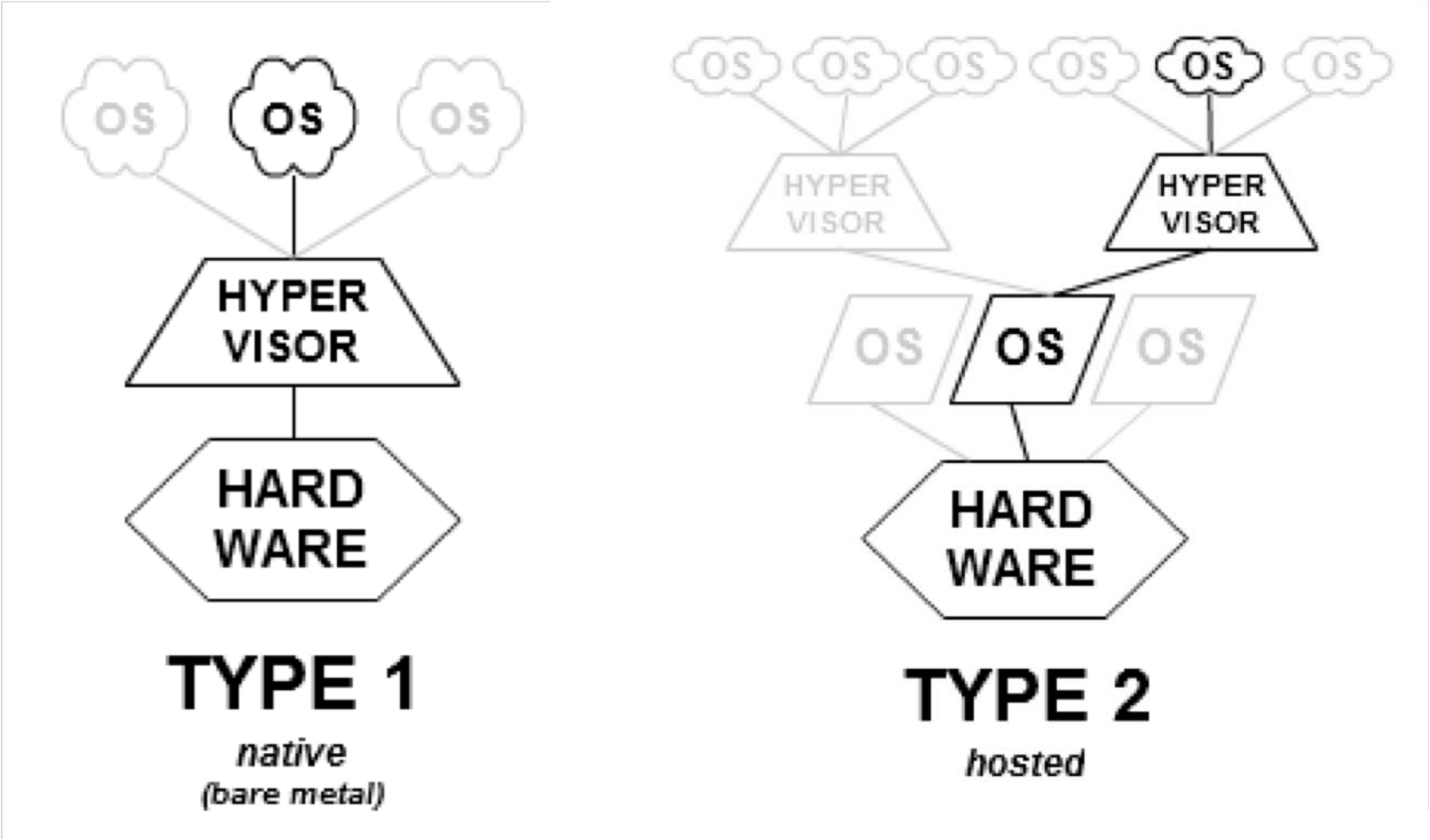
Definition of a Hypervisor

- **Hypervisor**
  - Creates the virtualization layer that makes server virtualization possible
  - Contains the Virtual Machine Monitor (VMM)
- **Examples of Hypervisors**
  - VMware ESXi
  - Hyper-V

Type 1 vs. Type 2 Hypervisors

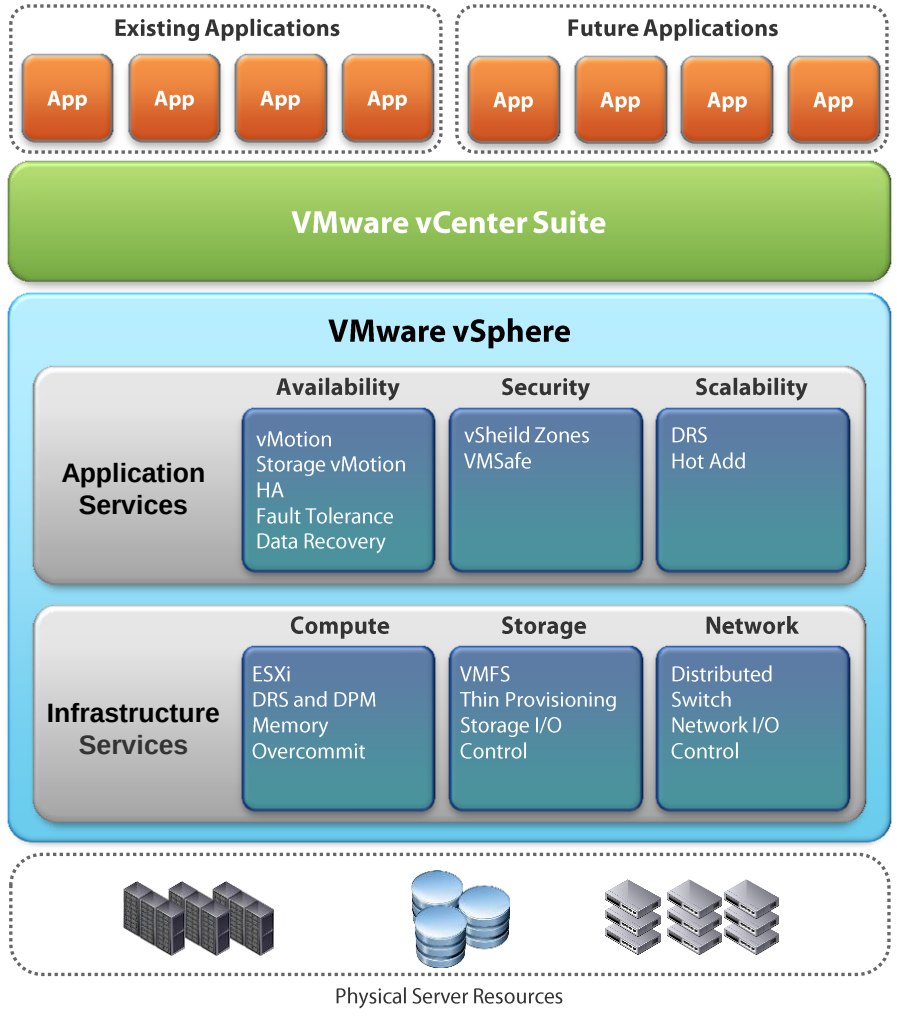
- **Type 1 Hypervisor**
  - Loaded directly on the hardware
    - Hyper-V
    - ESXi
    - KVM
- **Type 2 Hypervisor**
  - Loaded in an OS running on the hardware
    - Workstation
    - Oracle VM (Virtual Box)
    - Parallels
    - Fusion

Type 1 vs. Type 2 Hypervisors



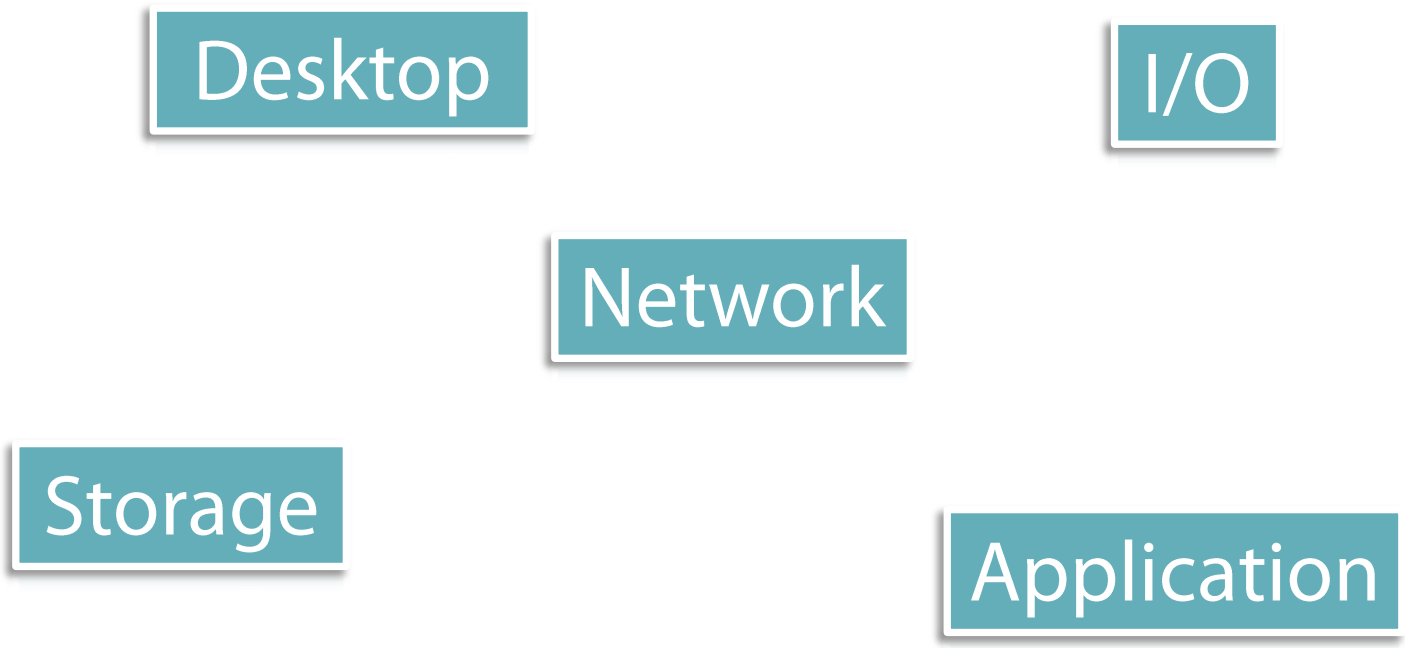
Graphic Thanks to http://en.wikipedia.org/wiki/Hypervisor

How You Administer Enterprise Virtualization



Graphic Thanks to VMware.com

Other Types of Virtualization – Desktop, Network, I/O, Storage, and Application



What We Learned

- Definition of Virtualization
- Server Virtualization
- Definition of a Hypervisor
- Type 1 vs. Type 2 Hypervisors
- How You Administer Enterprise Virtualization
- Other Types of Virtualization