

P R E S E N T A T I O N

# TECHNOLOGY EXAMPLES OF VIRTUALIZATION

# VMware ESXi

# Today's Agenda

- What is Hypervisor?
- Benefits and types of Hypervisor
- Hypervisor Market leaders
- VMware ESXI
- Features and requirements
- Licensing model and cost
- Pros and cons of VMware ESXI

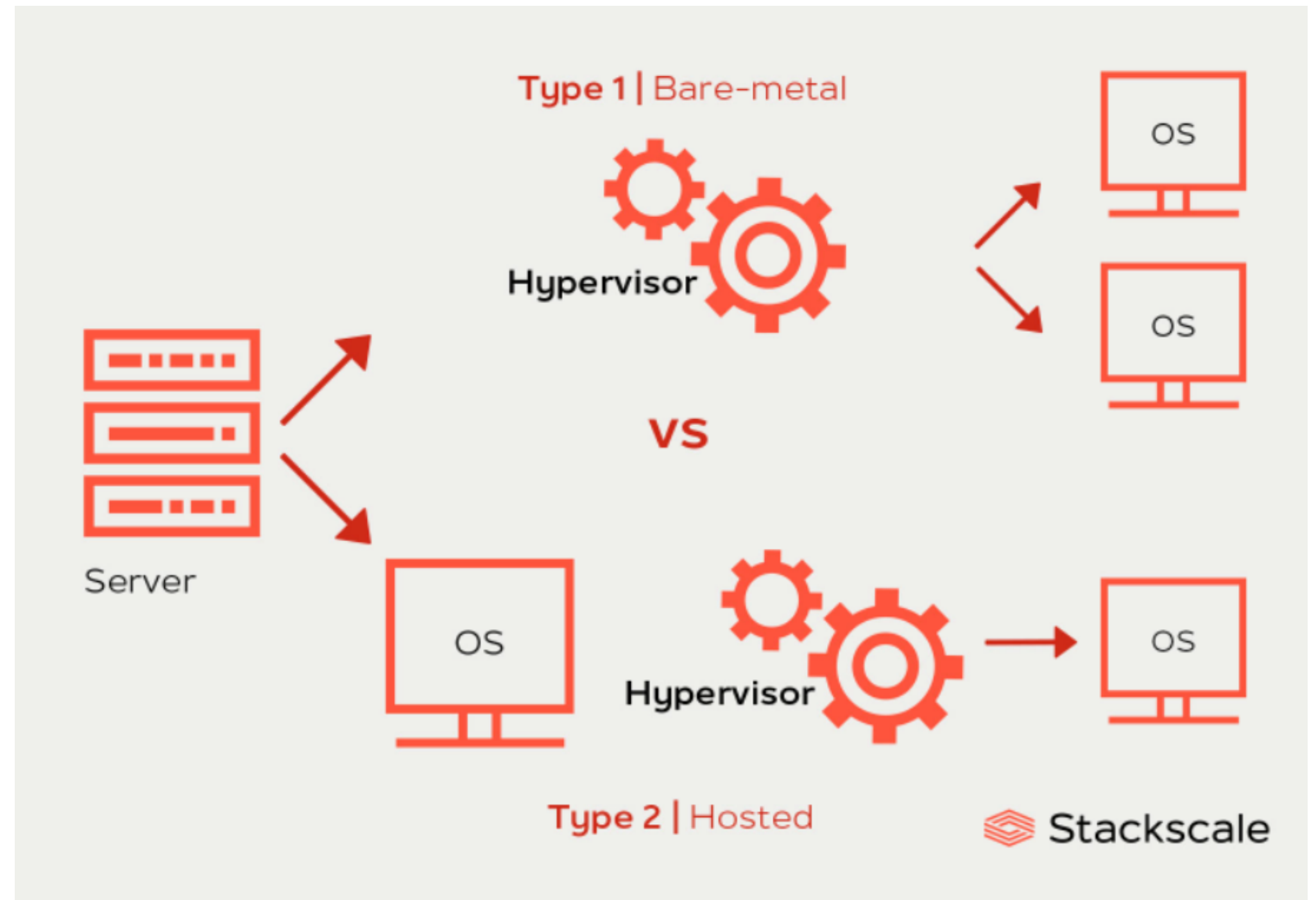
**6 April, 2022**

# Hypervisor

A hypervisor, also known as a virtual machine monitor or VMM, is software that creates and runs virtual machines (VMs). A hypervisor allows one host computer to support multiple guest VMs by virtually sharing its resources, such as memory and processing.

# Types of Hypervisor

- Type1 Hypervisor
- Type2 Hypervisor



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# Benefits of Hypervisor

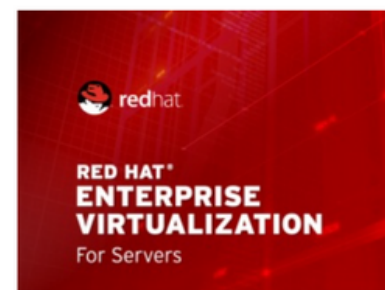
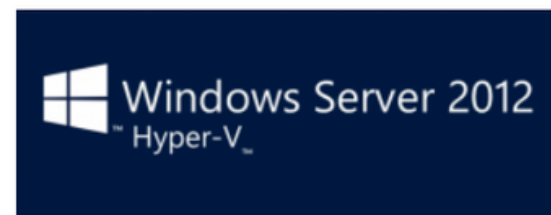
- Speed
- Efficiency
- Flexibility
- Portability

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# Virtualization Market Leaders

In the world of Virtualization, it's safe to assume that the two biggest players are VMware and Microsoft (Hyper-V).

VMware  
vSphere™ 5.0

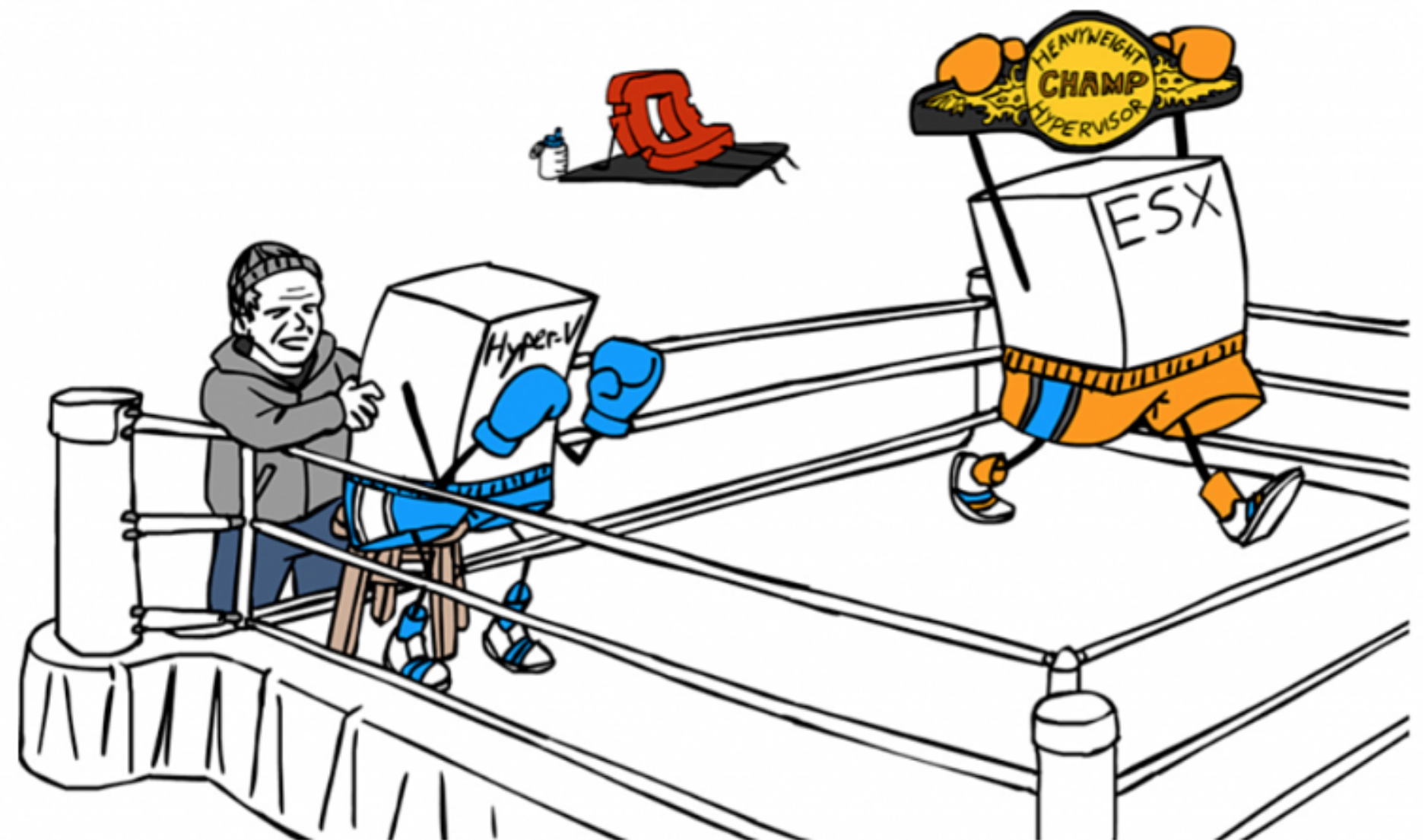


SOURCE: Gartner Magic Quadrant x86 Server Virtualization Infrastructure 2015 Gartner (July 2015)



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If you know anything about the industry, VMware is the current market leader.



# VMware ESXi

- VMWARE ESXI IS AN ENTERPRISE-CLASS
- TYPE-1 HYPERVISOR
- DEVELOPED BY VMWARE FOR DEPLOYING AND SERVING VIRTUAL COMPUTERS.
- ESXI IS NOT A SOFTWARE APPLICATION THAT IS INSTALLED ON AN OPERATING SYSTEM



# VMware ESXi

- Bare-metal (Type1) hypervisor in the VMware vSphere virtualization platform.
- Creating and running virtual machines (VMs), VMware ESXi runs on top and accesses the hardware directly without the need to install an operating system.
- Direct access to hardware allows it to perform better, run faster and be more scalable than other types of hypervisors.
- Makes VMware ESXi ideal for use in a large-scale virtual desktop infrastructure (VDI), in conjunction with the other components in the VMware vSphere platform.

# Architecture

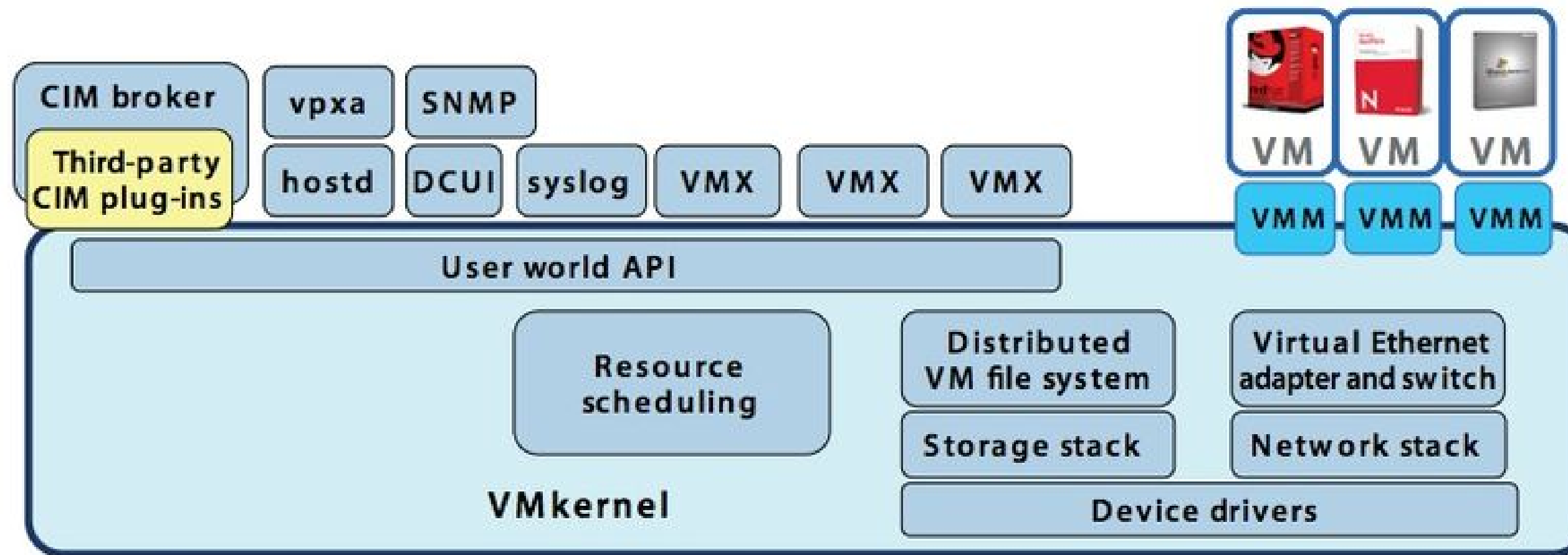


Figure 1: The streamlined architecture of VMware ESXi eliminates the need for a service console.

# Features

- Small size
- Convenient installation
- User friendly administration tools
- Secure design
- Scalable reliability
- Extensive support and compatibility

# Requirements

- Two CPU cores
- A single 64-bit x86 processor released after September 2006
- 4 GB of RAM, a gigabit network adapter.

# Licensing model and cost

- Free to use
- For better manageability, might want to use vSphere server along with vSphere management tools
- Paying licensing fees on a per CPU basis
- License valid for up to 32 physical cores
- Least expensive costing \$ 510 for 3 servers and 2 processors per server
- Most expensive costing \$ 6545

# Pros

- Infinite number of physical processors per ESXI host.
- Unlimited physical memory
- Allows efficient use of hardware processor performance
- Easy accessibility and licensing as when needed



# Cons

- No official VMware technical support
- vStorage API function not available
- Maximum 8 number of virtual processors that can run on each machine
- Cannot centrally manage VMs using vCenter

# References

- <https://www.vmware.com/topics/glossary/content/hypervisor.html>
- <https://www.parallels.com/blogs/ras/vmware-esxi/>

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The slide features a white background with a dark purple border. The border is composed of several segments: a horizontal line at the top, a vertical line on the right, a diagonal line at the bottom right, a horizontal line at the bottom, a diagonal line at the bottom left, and a vertical line on the left. In the top right corner, there is a solid purple shape that looks like a stylized arrow pointing down and to the left. In the bottom left corner, there is a solid purple shape that looks like a stylized arrow pointing up and to the right.

# Thank You!

**5 April, 2022**