

# Virtualization

## A brief overview

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# 01

## What is virtualization

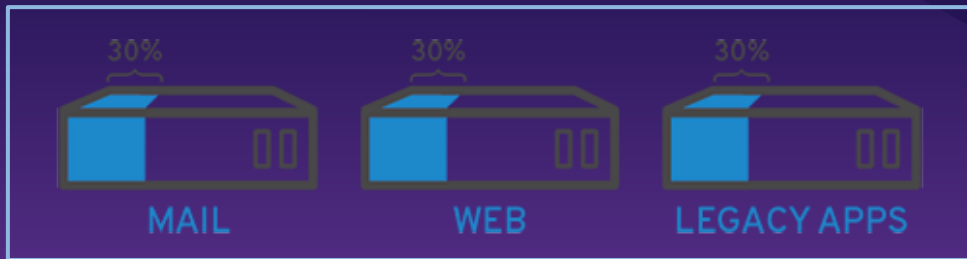
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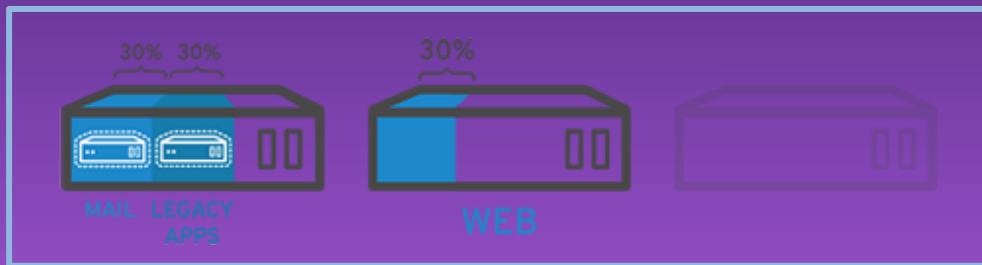


“Virtualization is the technology that lets you create useful IT services using resources that are traditionally bound to hardware. It allows you to use a physical machine’s full capacity by distributing its capabilities among many users or environments. .”



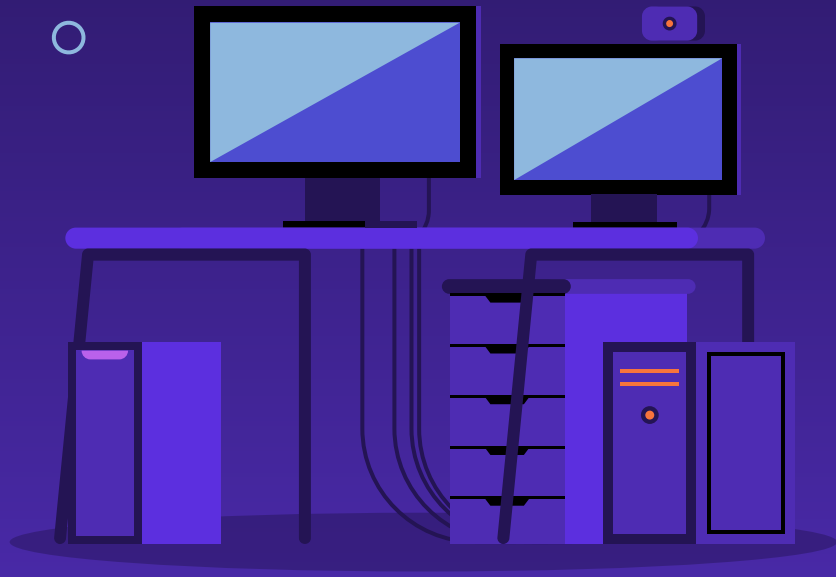


Traditional servers



Virtualized servers





# 02

## A brief history of virtualization



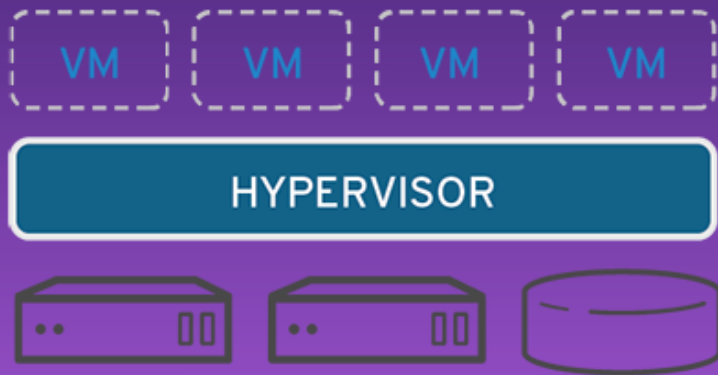


03

How does virtualization work



## Explanation of the Hypervisors







04

Virtual machine



# 05

## Key properties of virtualization





## Partitioning

Run multiple operating systems on one physical machine



## Isolation

Provide fault and security isolation at the hardware level.



## Encapsulation

Save the entire state of a virtual machine to files. And move them freely.



## Hardware Independence

Provision or migrate any virtual machine to any physical server.



06

## Types of virtualization



# There are five kinds of virtualization:



Data virtualization



Desktop virtualization



Server virtualization



Operating system virtualization



Network functions virtualization

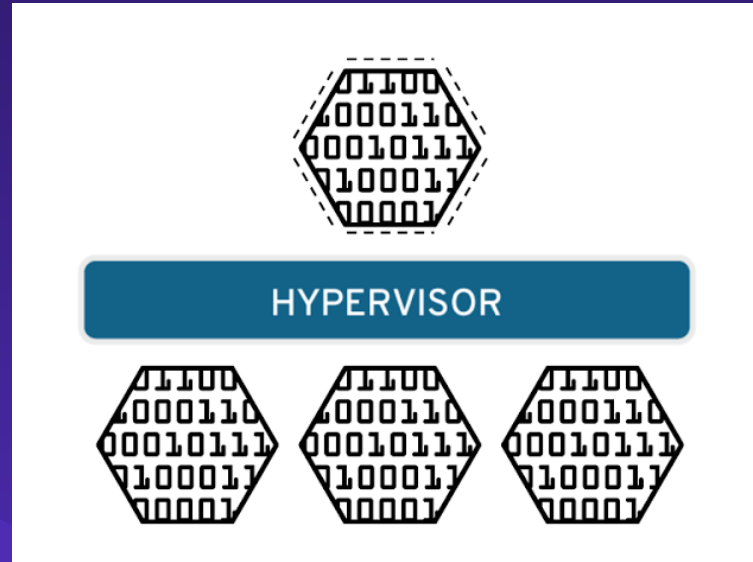




# Kinds of virtualization



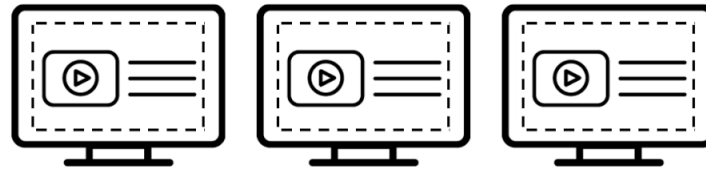
## Data virtualization



# Kinds of virtualization



## Desktop virtualization

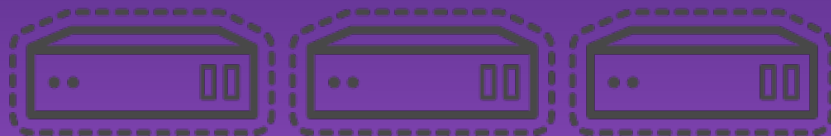




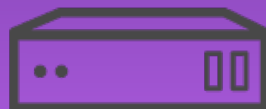
## Kinds of virtualization



### Server virtualization



HYPERVISOR



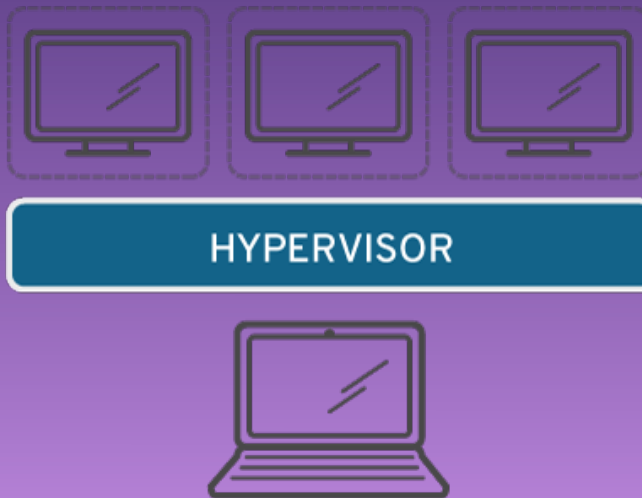




# Kinds of virtualization



Operating system virtualization

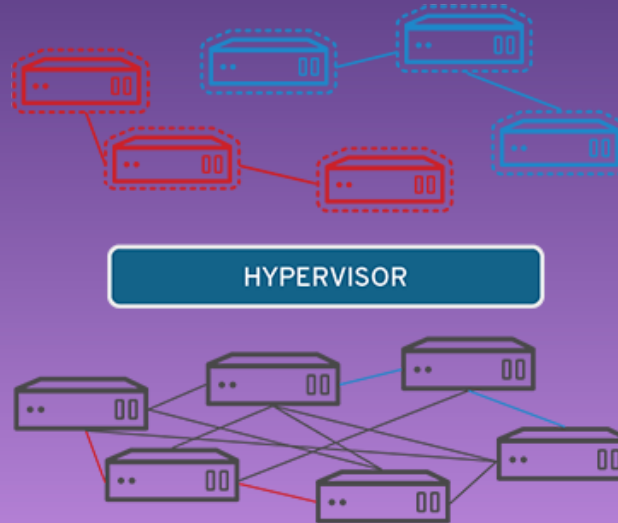




# Kinds of virtualization



## Network functions virtualization





Thanks for listening

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# For more information

You can visit the sites below

- <https://www.vmware.com>
- <https://www.redhat.com/en/topics/virtualization/what-is-virtualization>
- <https://www.sciencedirect.com/topics/computer-science/virtualization-technology>

