SYN413 - Microsoft Containers in a Citrix World

#SYN413 #citrixsynergy

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- 16,000+ members globally
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- Knowledge sharing, expert discussion
- Networking at local meetings, conferences and technology events
- Technical webinars, forums and blogs
- Opportunities to share, learn, mentor and lead

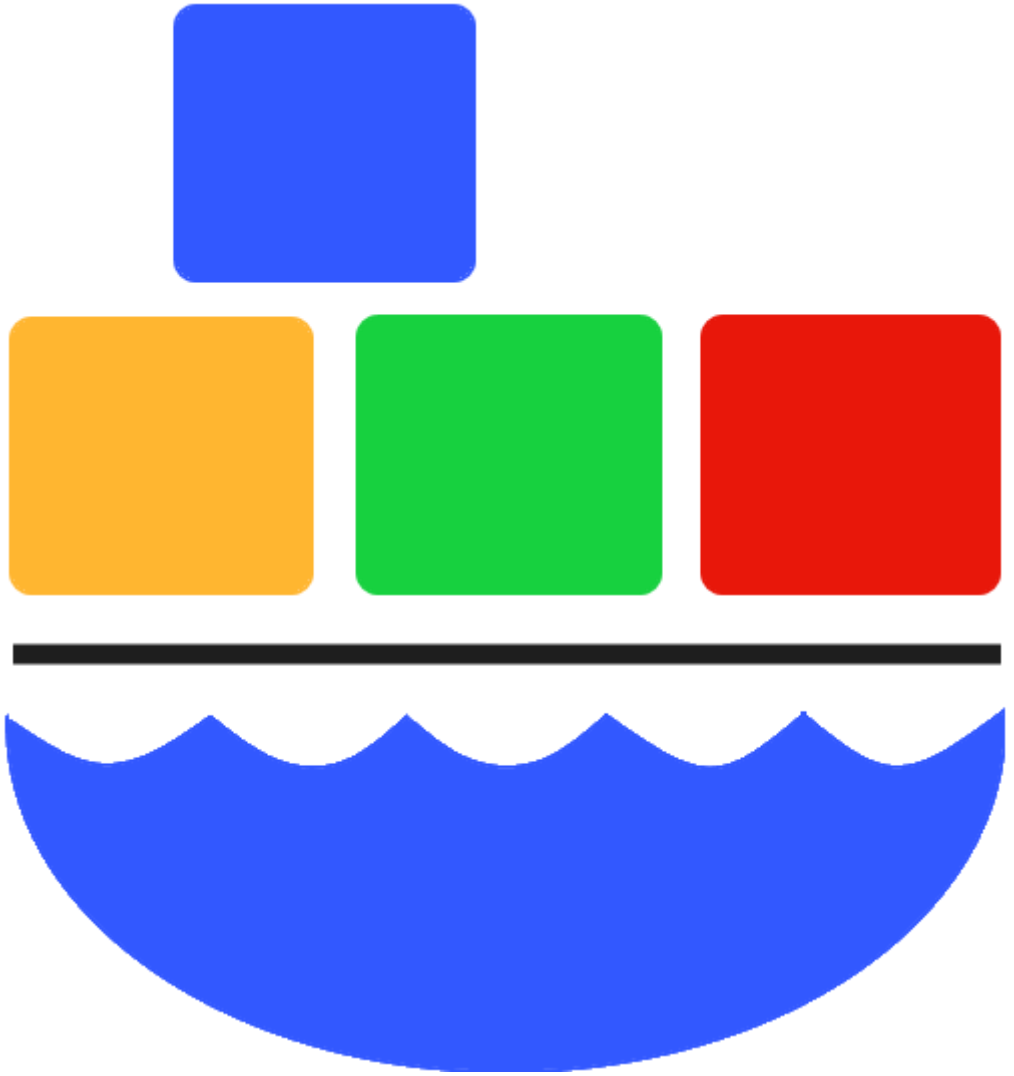
"It was an opportunity to bring together like-minded people, network, share stories, and help each other." – CUGC Member

Topics

Windows and Docker

Containers and Citrix

Some Alternatives



Why Are YOU Here?

DevOps or ITPro?

"As a system Administrator, one of the scariest things I ever encounter is a server that has been running for ages.
If you absolutely know a system has been created via automation and never changed since the moment of creation, most of the problems disappear."

- Chad Fowler, *Trash Your Servers and Burn Your Code*, 2013

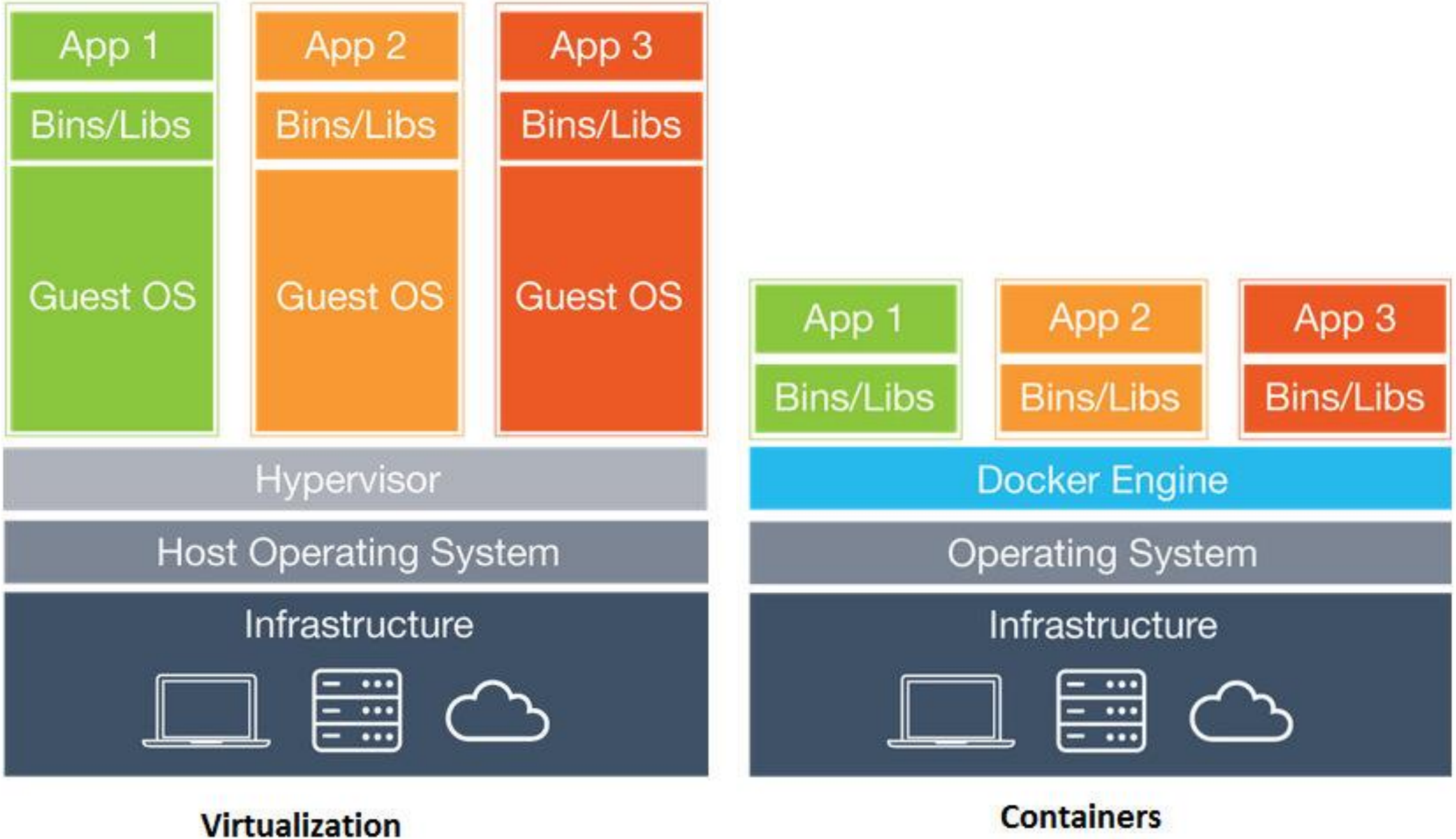
VMs and Containers

VM's

Containers

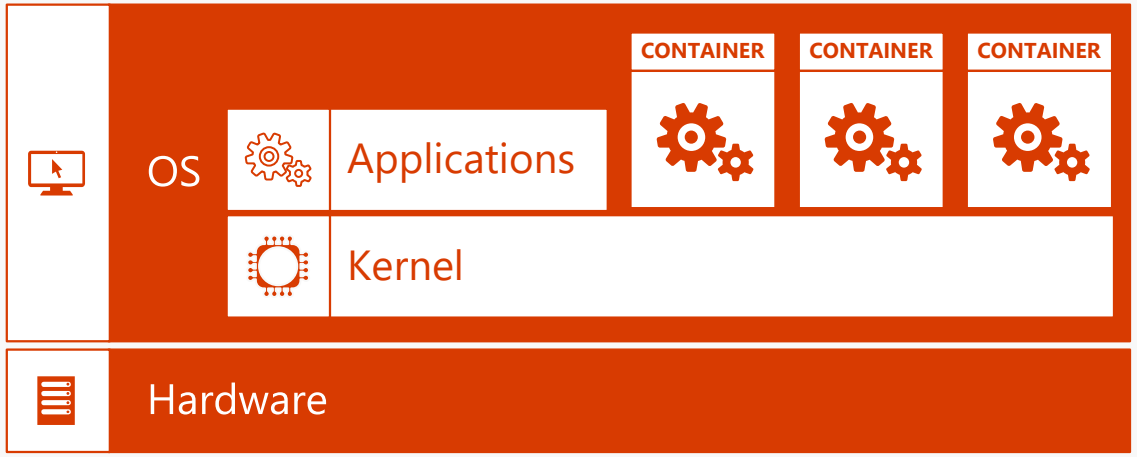
"Will containers replace VM's?" No.

Containers are not a virtualization technology.
Containers are an application deployment & delivery technology.

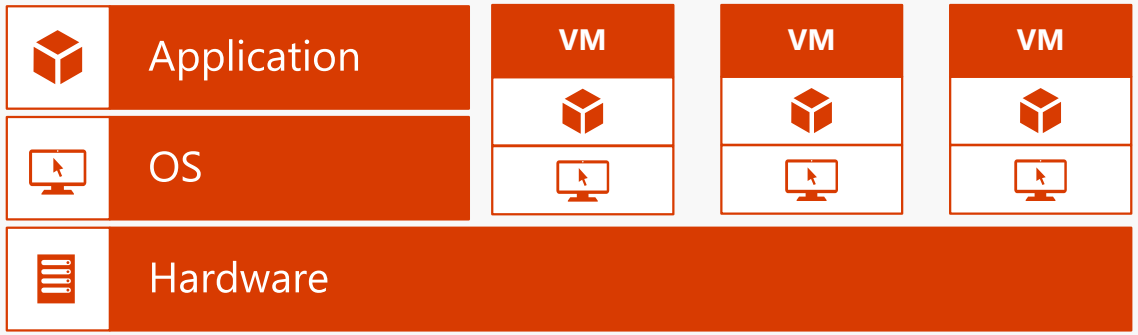

App 1
Bins/Libs
Guest OS
App 2
Bins/Libs
Guest OS
App 3
Bins/Libs
Guest OS
Hypervisor
Host Operating System
Infrastructure
Virtualization
App 1
Bins/Libs
App 2
Bins/Libs
App 3
Bins/Libs
Docker Engine
Operating System
Infrastructure
Containers

A Microsoft View of Containers

Containers = Operating system virtualization

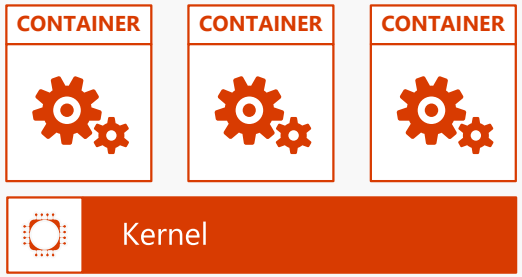


Traditional virtual machines = hardware virtualization



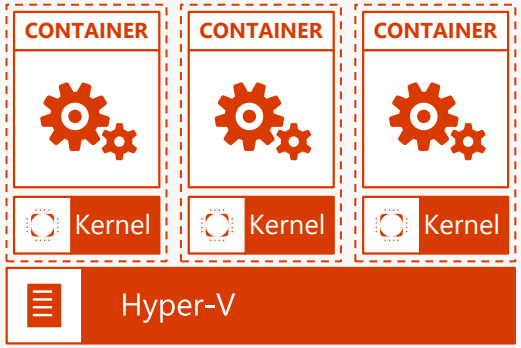
Windows Server Containers

Maximum speed and density

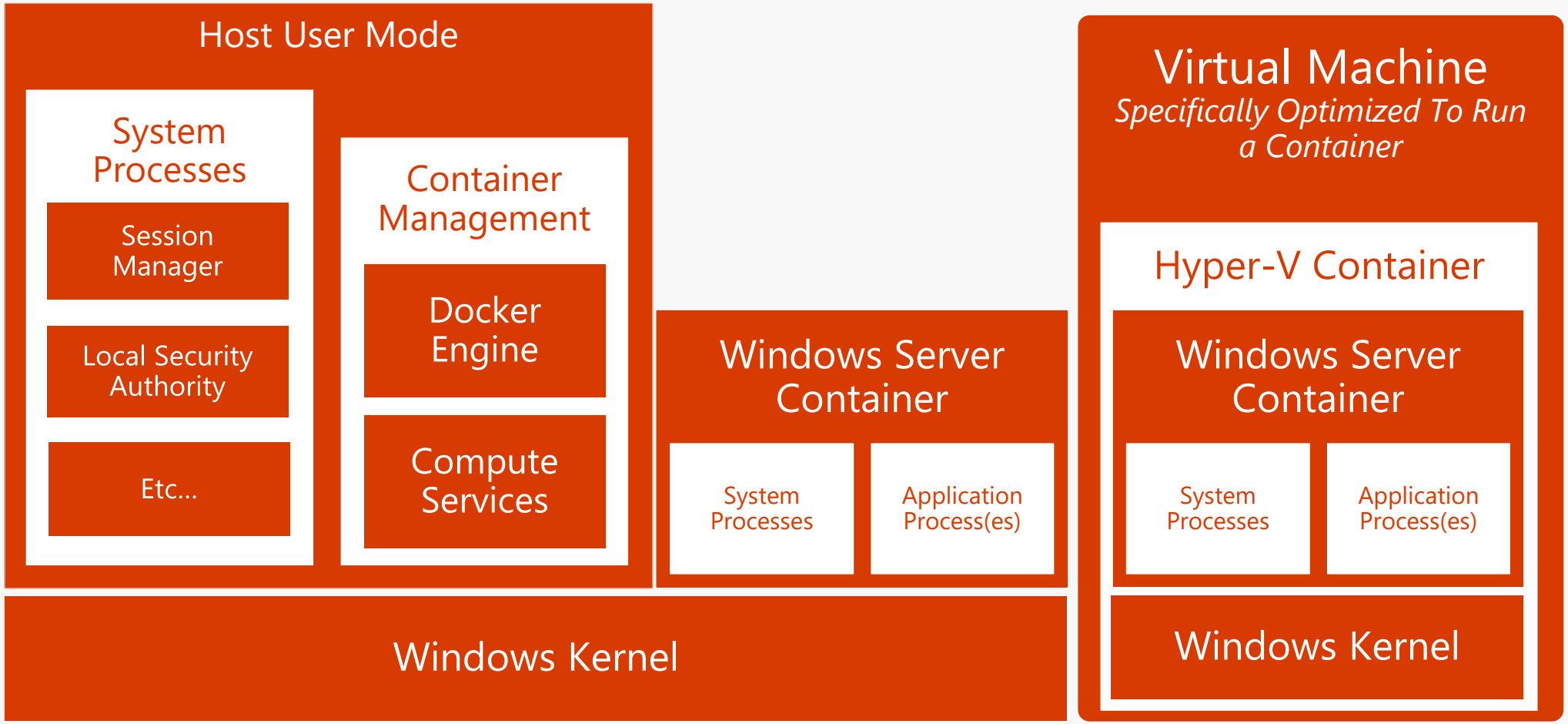


Hyper-V Containers

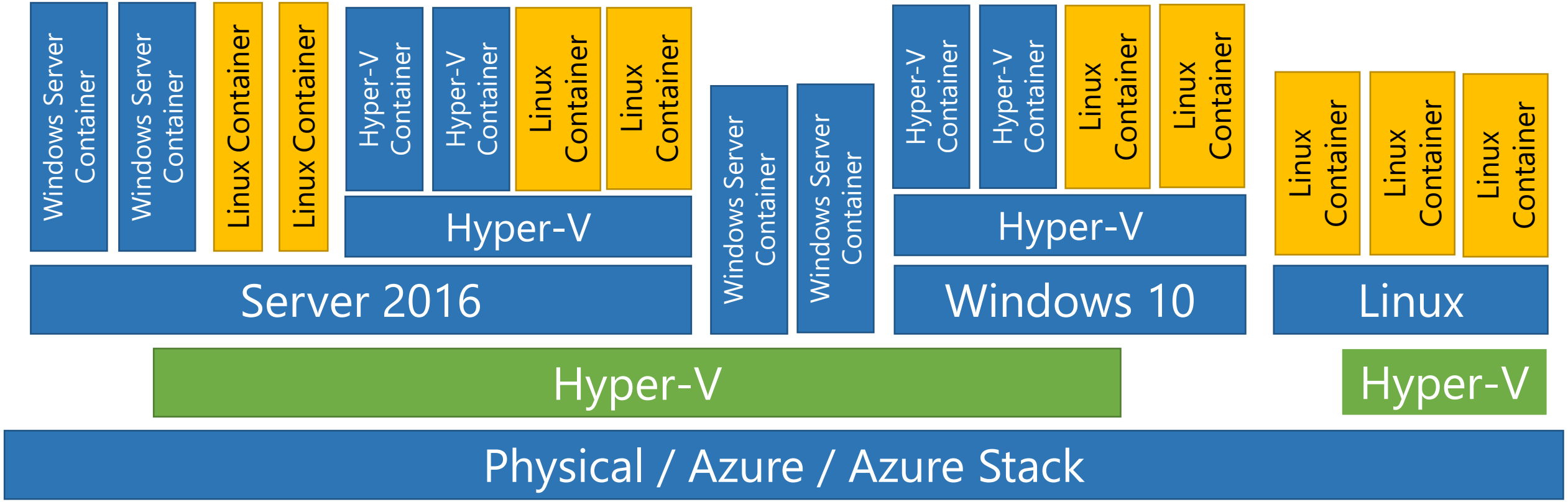
Isolation plus performance



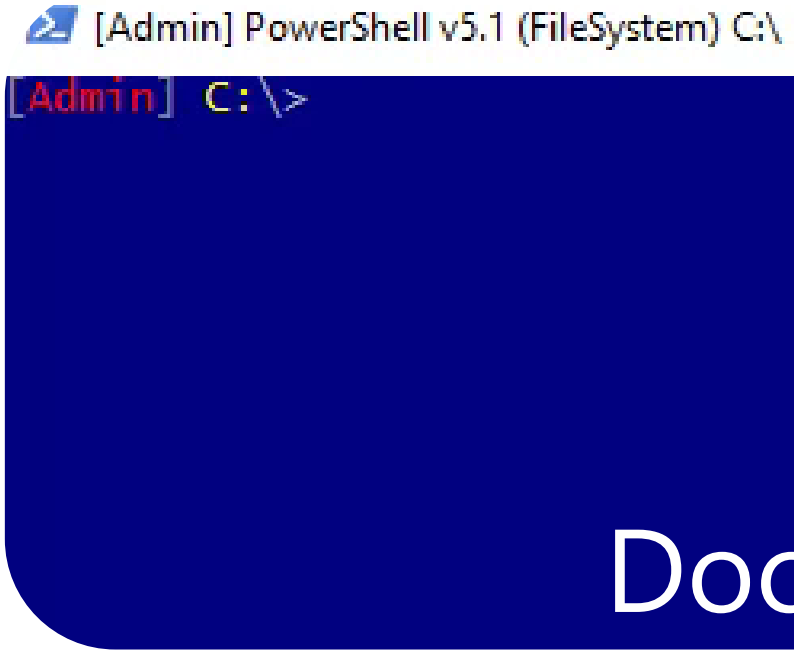
Windows Containers – It's All About User Mode



Windows Server & Hyper-V Containers Mix



Hyper-V = Different OS Releases and Builds
Server OS = Release version must be the same, while Build version can be different



Dockercon 2017

Windows + docker + LINUX KIT

Using Containers

Can I run the “Control Plane” in Containers?

How about Desktops?

And then there are the apps.

CITRIX
+
Microsoft
+
docker

Windows
Server Core

NanoServer

Windows 10

Docker on Windows

Server Core & Nanoserver only (for now…)

Windows 10 for DEV/Test

Management

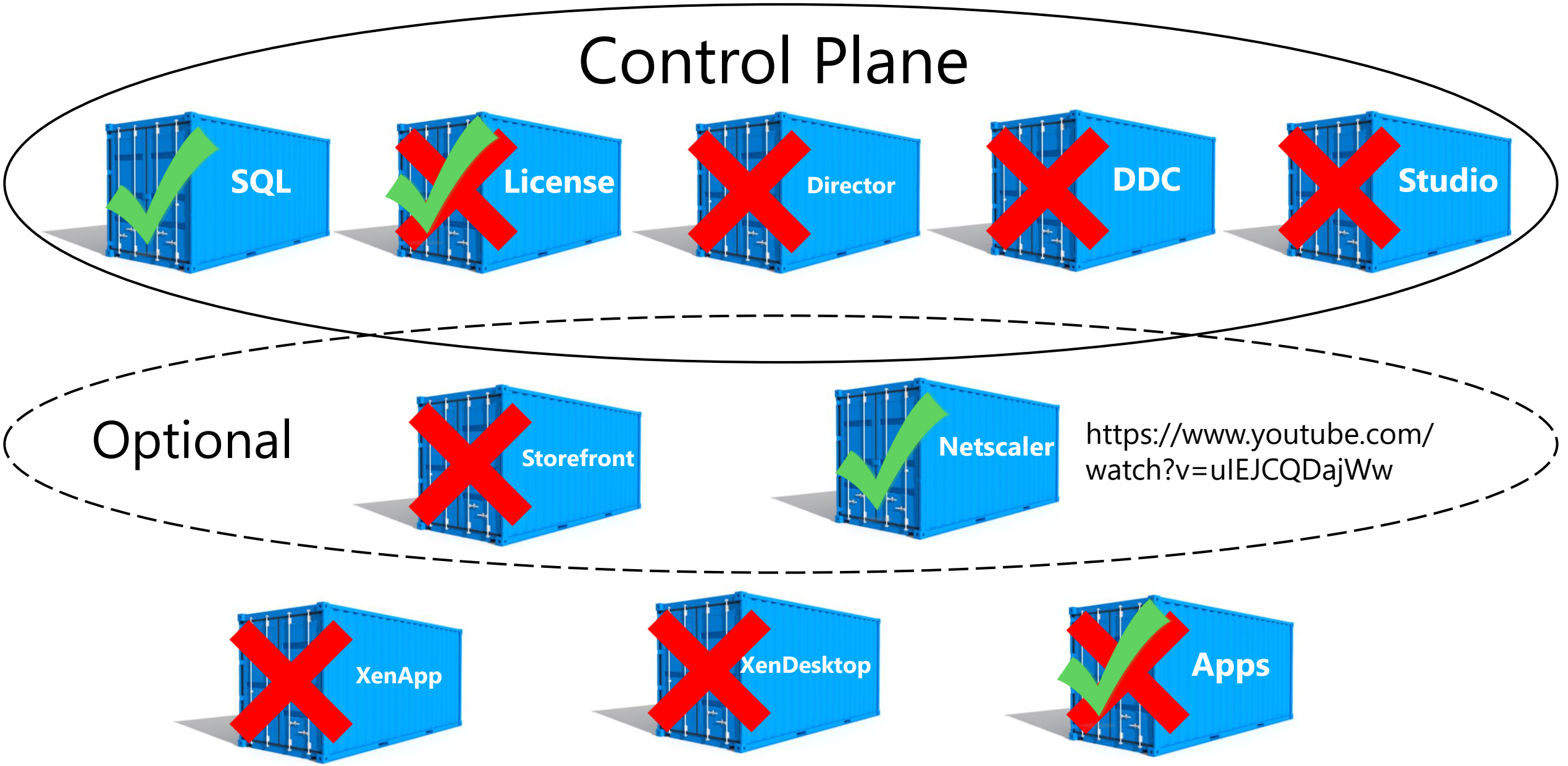
- Built-In Docker CLI & PowerShell
- Kitematic, Portainer, Panamax, Simple Docker UI, Shipyard (Linux)

Public or Private Hubs & Registries

Install Demo
Docker for Windows 10 & Server 2016

Windows Containers & GUI Apps

Containers Running XenDesktop & XenApp



"… Docker containers does encapsulate all the code and libraries necessary to run a service. But those services are fundamentally different than the applications that are delivered via traditional application virtualization technologies.

In the end Docker is not a direct replacement for application virtualization. It's a way to take many of the applications deployed using app virt technologies and recreate them in a manner that offers higher levels of agility, portability, and control." – Mike Coleman, Technical Evangelist @ Docker

Spoon.net
"Docker for Windows"
- Rory Monaghan 2014

www.xenappblog.com

"Containers" similar to Docker
- Pre-made or custom images
- CLI, Turbo Studio, Turbo Server
- Updating & Layering
- Importing from other formats
- Container "skinning" & streaming
- Desktop & server apps – XP to 2016 & beyond

Turbo Studio
- Virtualize app into EXE & publish - manual or via Register utility
- Register utility allows for app to be placed on machine or share & in 7.x it will appear in Citrix Studio Wizard

"XenApp Subscription"
- Channel -> Subscribe -> Publish
- XenApp Tools to automate setup are provided
- https://github.com/turboapps/citrix

Turbo.net Demo

Image2Docker

PoSH module that ports existing Windows app artifacts from VM's to Docker images

Artifacts currently supported –

- IIS
- ASP.NET
- MySQL, SQL
- Windows Features
- Apache
- DHCP
- DNS
- MSMQ

Discover -> Extraction -> Provisioning -> Generation

Containers are not VM's (and never will be)

Containers are about User Mode

Windows + LinuxKit = Multi-Platform

OS & GUI Limitations

Hyper-V for secure container isolation

Use Win 10 Docker for Dev/Test

There are alternatives for delivering apps

Citrix needs to support Core

Thank You!