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DATA CENTRE VIRTUALISATION

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INVESTIGATION OUTLINE



POINTS FOR DISCUSSION

Virtualisation

Vmware

Windows VMs

Azure

Citrix

VIRTUALISATION

SERVER

NETWORKING

CLOUD

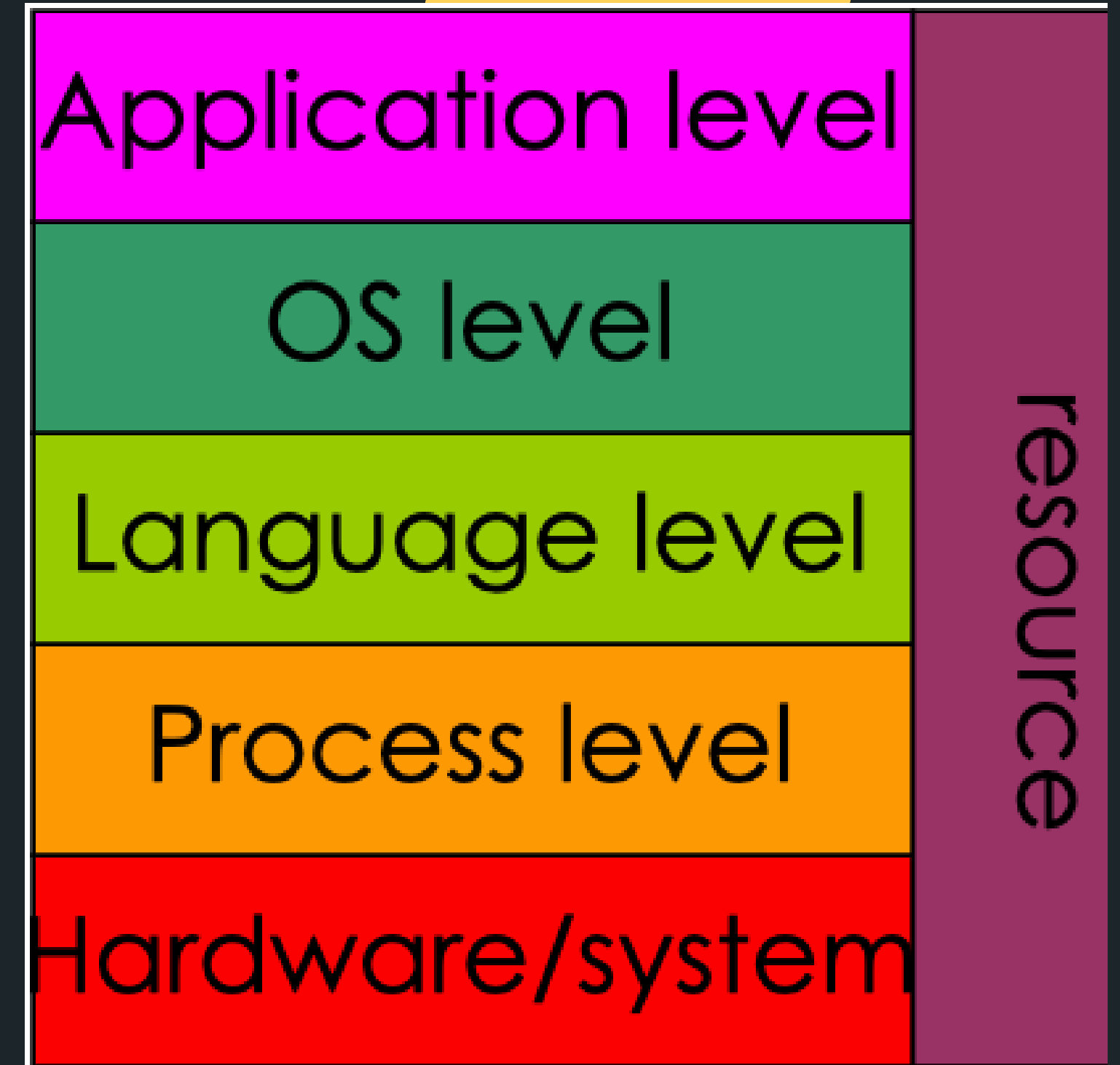
STORAGE

RACKS

This will lead us to an understanding of the benefits
and limitation of using virtualisation technology

VIRTUALISATION

Virtualisation is a technology that allows the abstraction of physical resources (hardware) by switching them to allocatable virtual resources and therefore the simultaneous use of even different operating systems.[1]

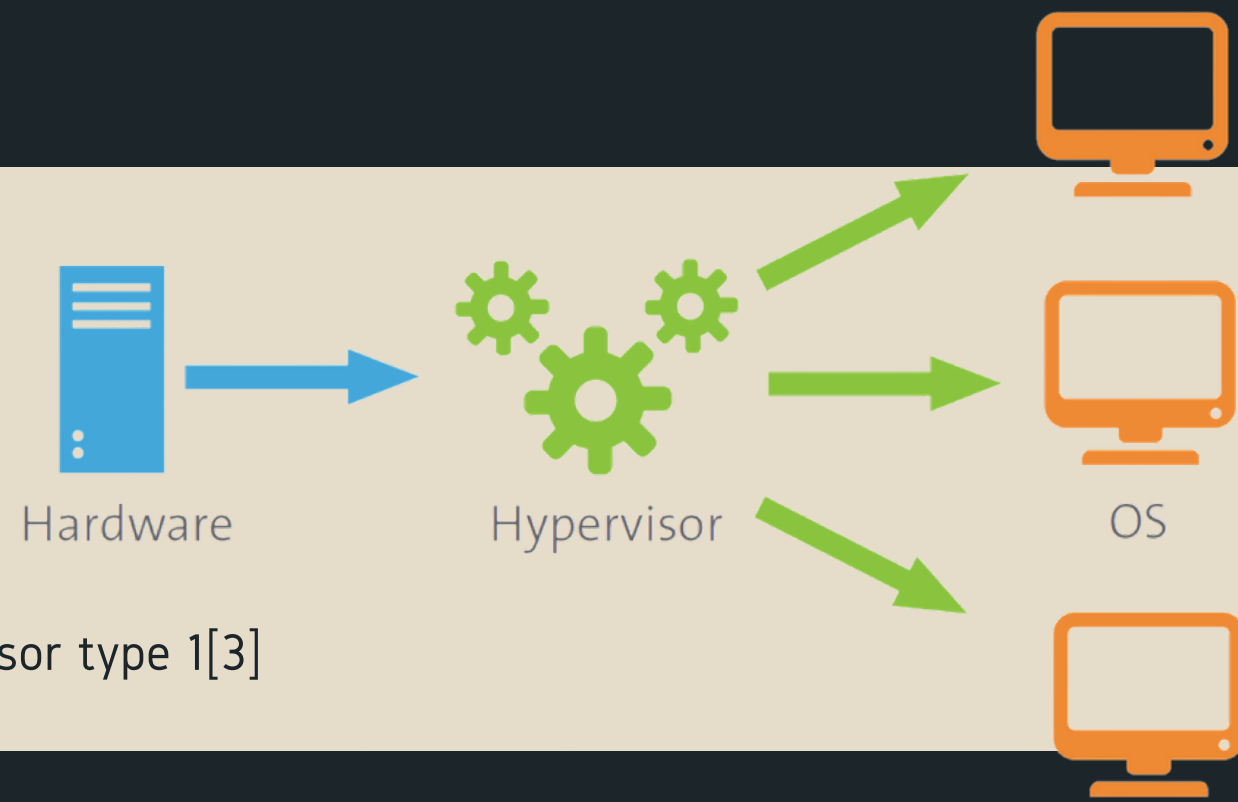


VIRTUALISATION



TYPE

- Desktop Virtualisation
- Application Virtualisation
- Server Virtualisation
- Network Virtualisation
- Storage Virtualisation[1],[2]



TYPE 1 HYPERVISOR
Is called Bare Metal and it runs through the physical hardware[3]

FIG 2: hypervisor type 1[3]

TYPE 2 HYPERVISOR

is called Hosted and it runs through an operating system[3]

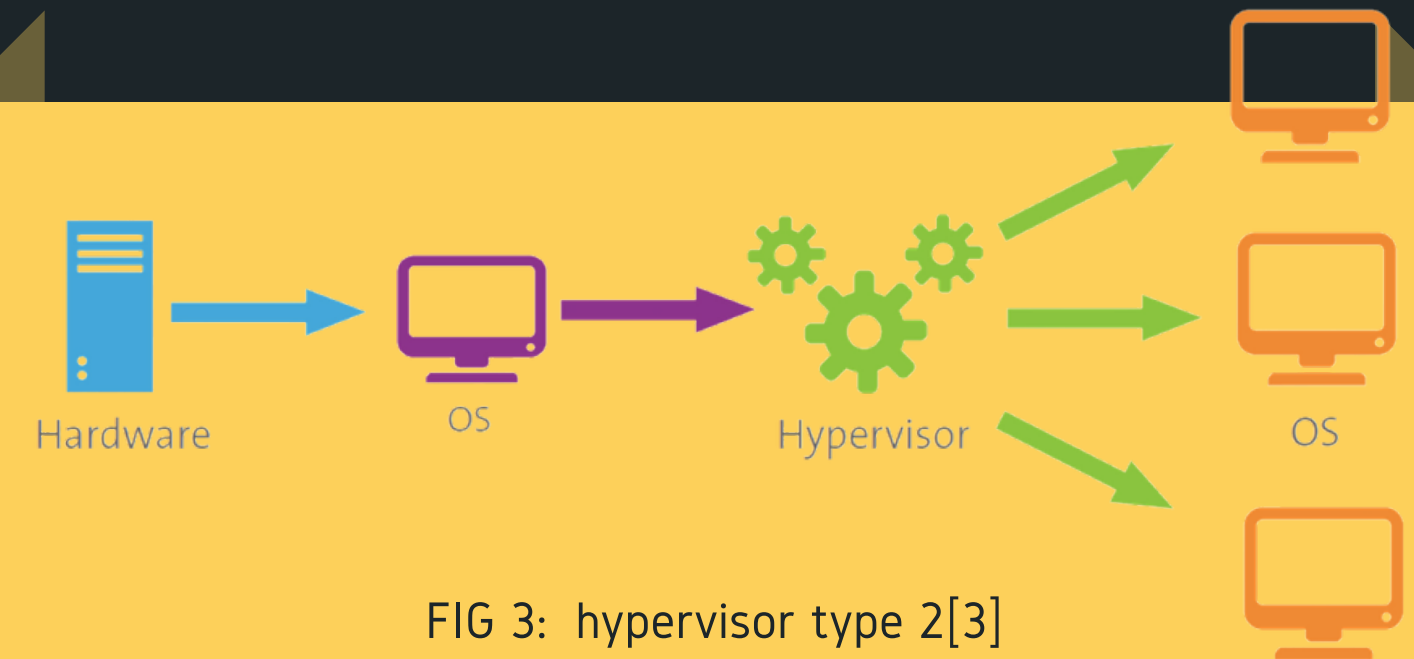
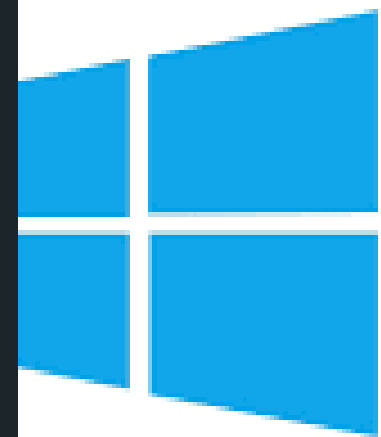


FIG 3: hypervisor type 2[3]

VIRTUALISATION PROVIDER



Microsoft
Hyper-V

vmware

citRIX

VMWARE

VMware is a suite that includes a collection of products and features, which together offer a full range of Enterprise-level virtualisation features. One of the biggest surprises released with this version is full support for Kubernetes containers.[4]

The VMware logo, featuring the word "vmware" in a lowercase, rounded, sans-serif font. The "v" and "m" are joined together, and the "w" is also joined to the "a". A registered trademark symbol (®) is located at the top right of the "e".

VSPHERE 7.0

vSphere 7 is the biggest release of vSphere in over a decade and delivers these innovations and the rearchitecting of vSphere with native Kubernetes.[5]

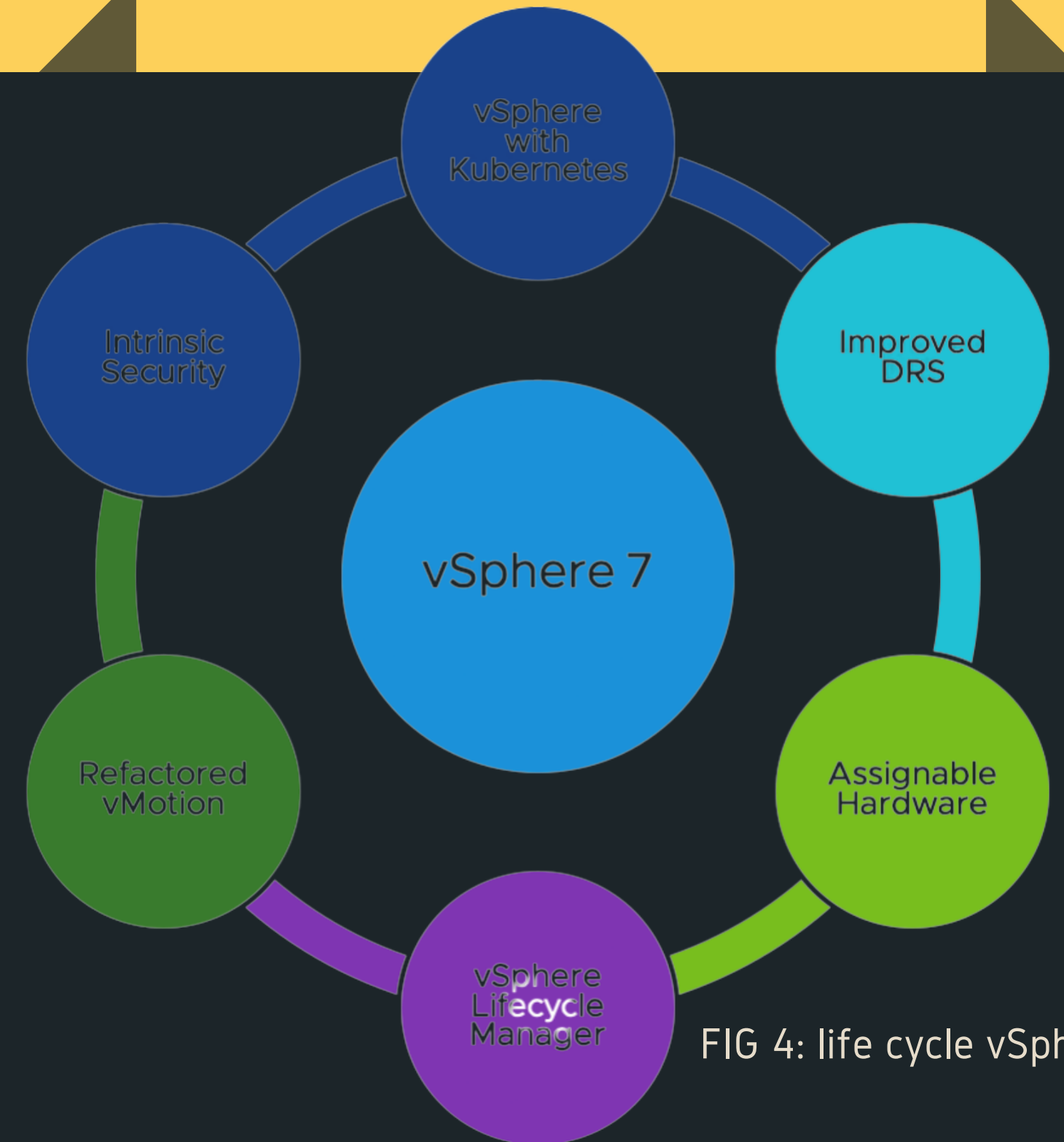


FIG 4: life cycle vSphere[5]

VSPHERE FEATURE



VSPHERE WITH
KUBERNETES



IMPROVED
DISTRIBUTED
RESOURCE
SCHEDULER (DRS)



ASSIGNABLE
HARDWARE



VSPHERE
LIFECYCLE
MANAGER



INTRINSIC
SECURITY[5]

WINDOWS

HYPER-V

Since Microsoft Hyper-V was released on Windows Server 2008, hypervisor has been one of the most popular virtualisation options on the market. With Microsoft Hyper-V, you can create and run virtual machines without maintaining physical hardware.[6]

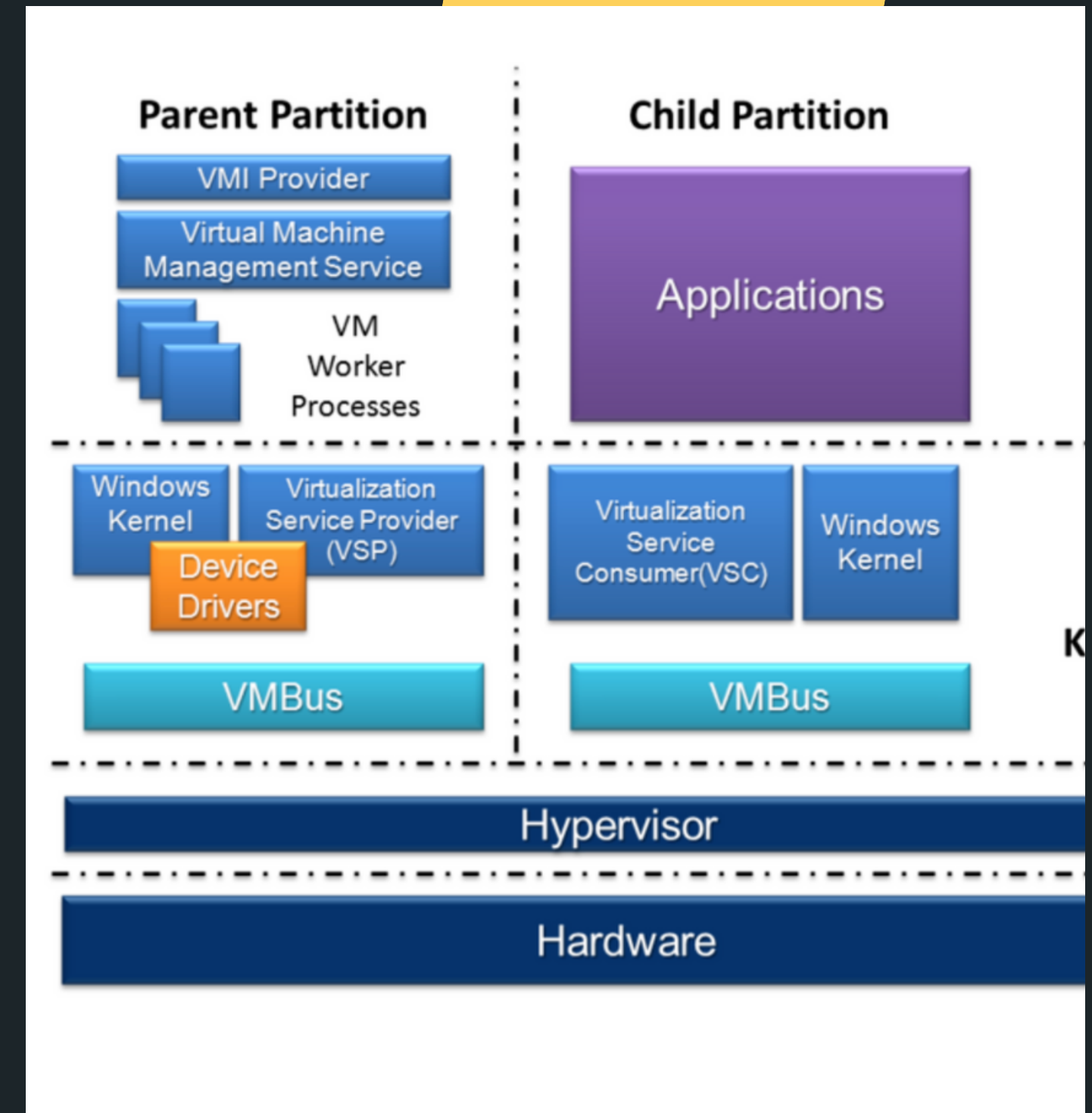


FIG5: Hyper-V architecture[7]

Advantages Hyper-V

A COMPUTING
ENVIRONMENT

OPTIMIZATION

PORTABILITY

FLEXIBILITY

AZURE

Microsoft azure is a cloud services, hosted in a hyper scale infrastructure which include:

- computing
- Hydric
- Networking
- Storage[8]

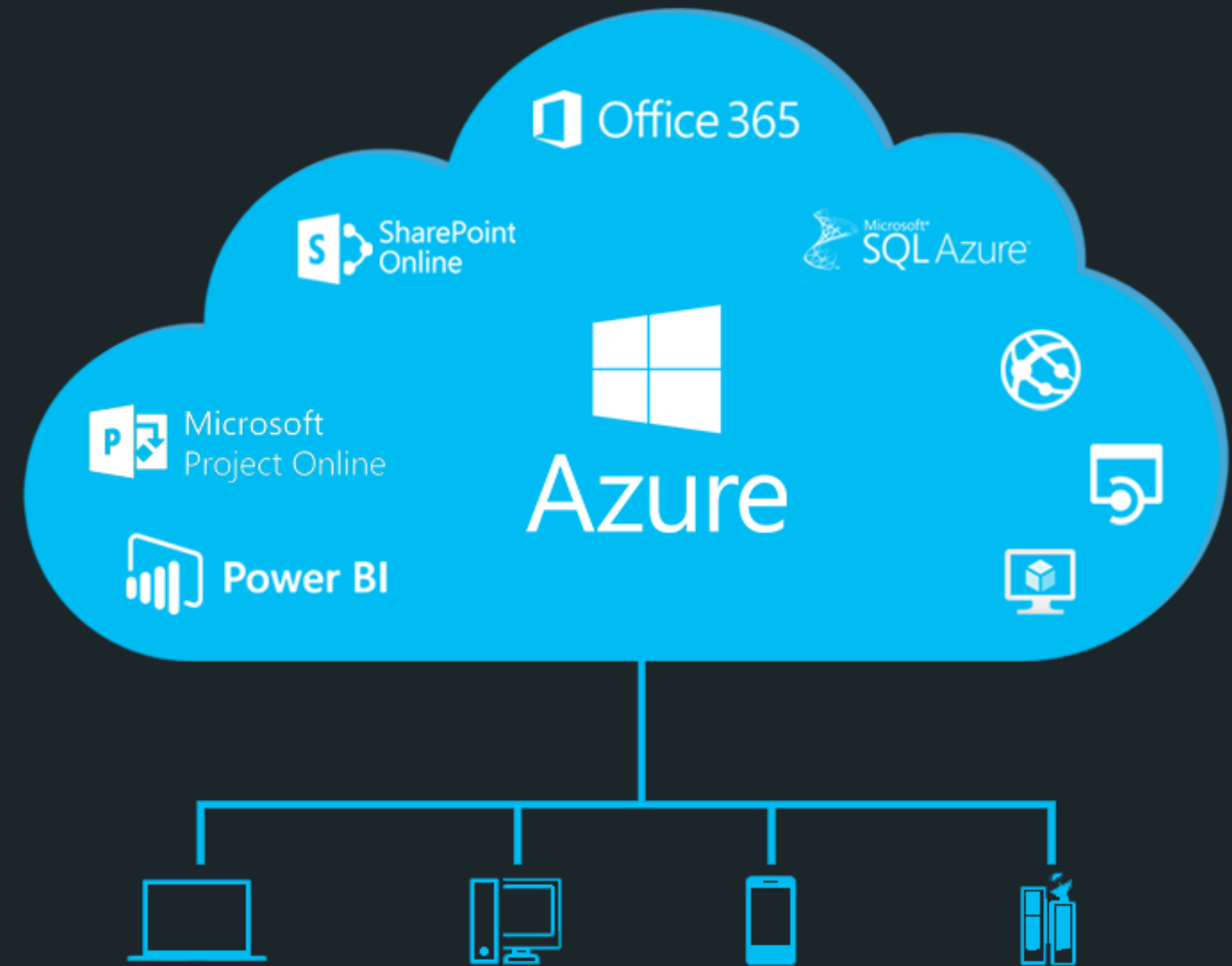


FIG 6: Azure modern architecture[9]

AZURE ADVANTAGES FOR ORGANISATION

Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) capabilities

Pay-as-you-go

Analytic and Intelligence capability

Cost Efficient Platform

Identity & Access Management (IAM)

CITRIX

Citrix System allows any organisation an on-demand facility where information is easily and instantly protected and accessible from anywhere and with any device[10]

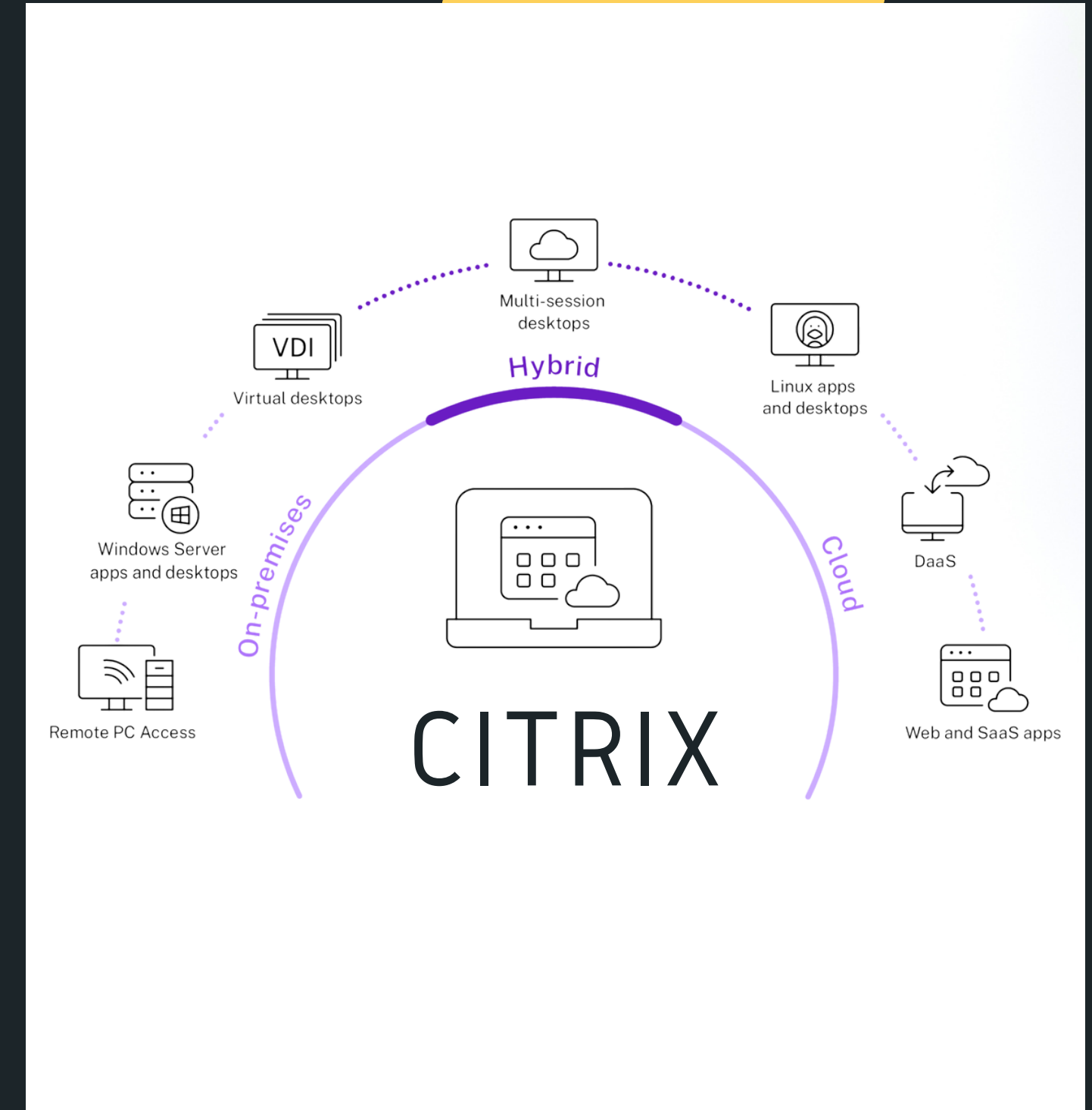


FIG7: Citrix Architecture[11]

Citrix Advantages

STRENGTHEN
SECURITY

BOOST
MOBILITY

REDUCE COST

SIMPLIFY IT

Conclusion

As technology evolves, most companies no longer have to think about losing their data, and virtualisation allows them to save costs and space to allocate their servers

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