



Dell Technologies Partner Webinar Series:

Merging Data Center and Cloud Native

Dell Technologies Merging Data Center & Cloud Native powered by Dell's Modernized Data Center

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Dell Technologies Advantage

One-stop-shop AND best-of-breed



Modern Workplace

- World's smallest,¹ thinnest, most powerful commercial AI PCs²
- World's #1 monitors³
- Most manageable and secure commercial PCs⁴
- Leading in use of sustainable materials



Modern Data Center & Multicloud

- #1 servers⁵
- #1 external storage⁶
- #1 storage software⁷
- #1 Purpose-Built Backup Appliances⁸



Artificial Intelligence

- The world's broadest AI solutions⁹
- Open ecosystem that continues to grow with proven, validated solutions
- World's best management consulting firms – Forbes 2024



Security / Resilience

Industries most secure supply chain

Sustainability



An industry leader in sustainable materials and packaging

Advance priority initiatives by modernizing the data center



EDGE

CORE

CLOUD



Accelerate
AI adoption



Modernize
application
platform



Optimize
multicloud
& edge



Improve
data center
efficiency



Strengthen
cyber
resilience

**Dell Infrastructure Solutions
&
Multi-Cloud Portfolio**

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Zero Trust – Dell Technologies

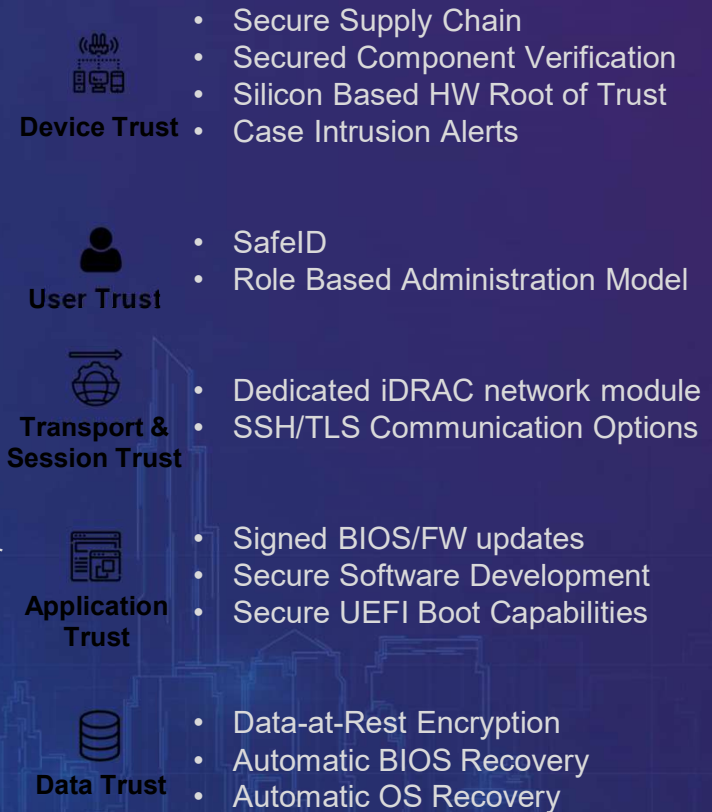
Dell Technologies can help your customer achieve Zero Trust

- A security model built on the following:

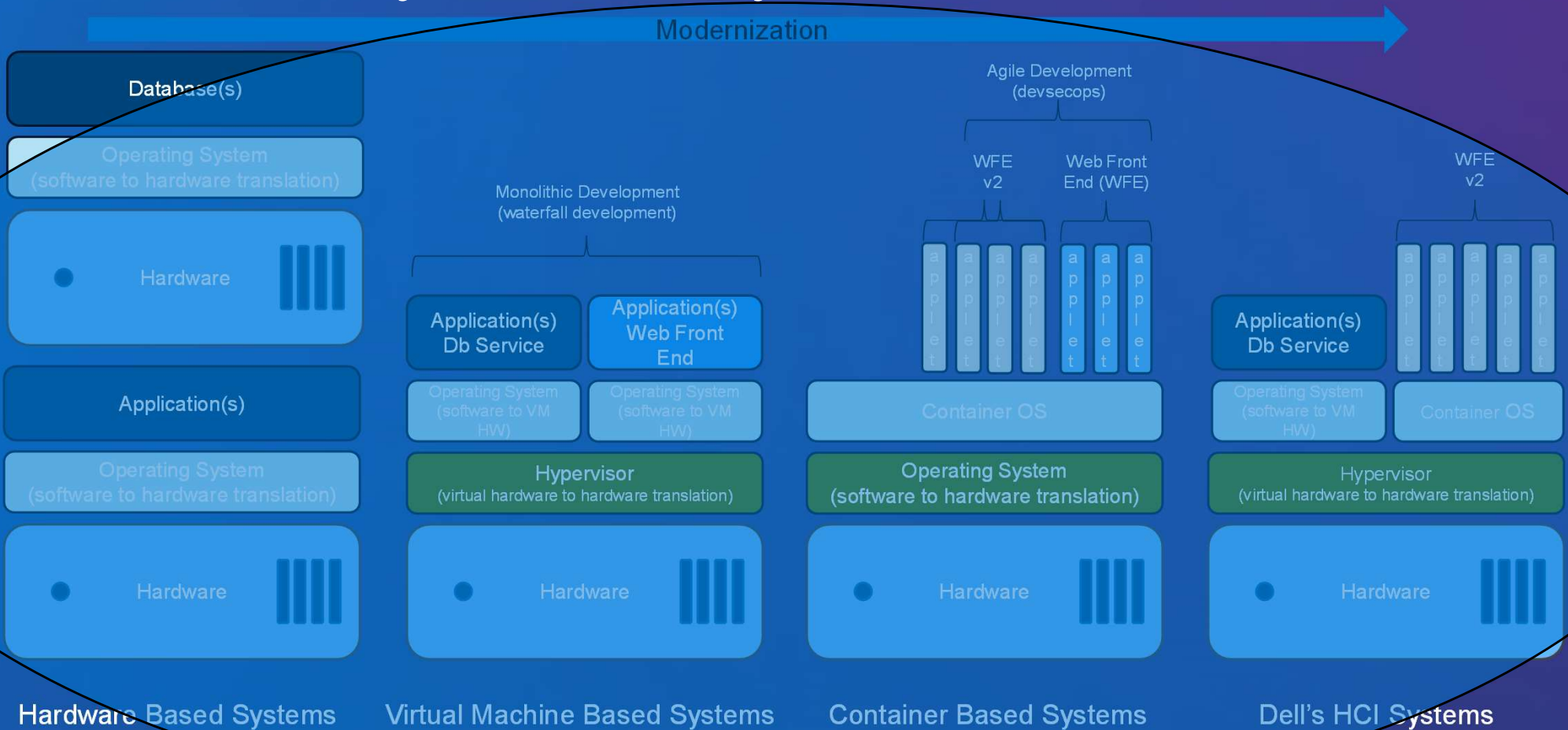
- Anything inside or outside the organization is not trusted by default
- Everything trying to establish a connection must gain / build trust
- Authentication and authorization must happen before trust can be built
 - and can be repeated to re-affirm trust

- An architectural framework that is:

- User-centric: Everything starts and centers around the user accessing the service or resource
- Device Trust: Devices are secured, resilient and compliant
- Service-oriented: Makes it easier to create and consume reliable services
- Based on intrinsic security: Every action is scrutinized in the context of its risk



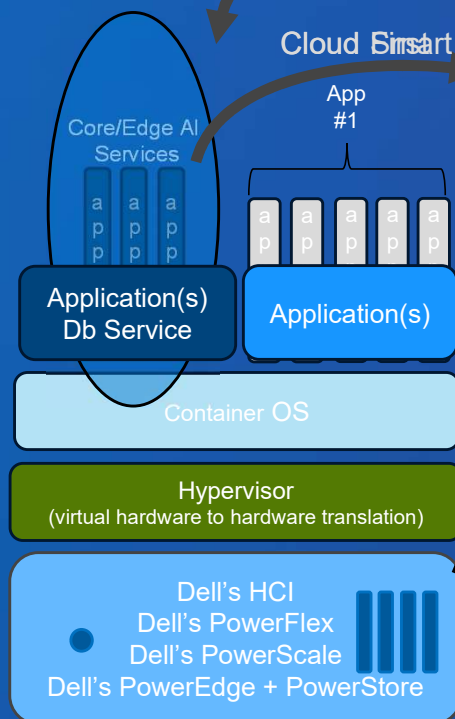
Information Systems – Physical to Virtual to Cloud



Cloud Native Applications (AI + Security + Compliance)

Re-patriotization

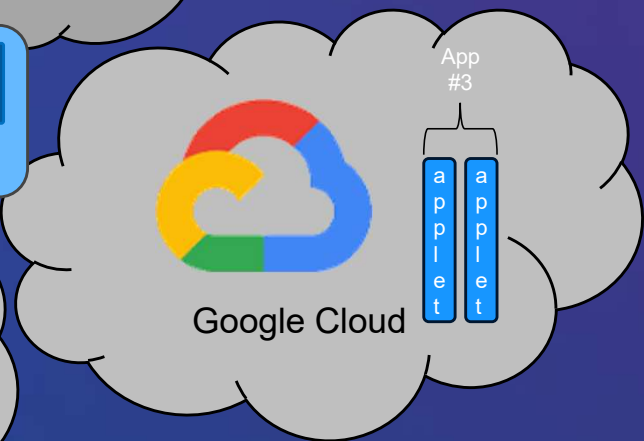
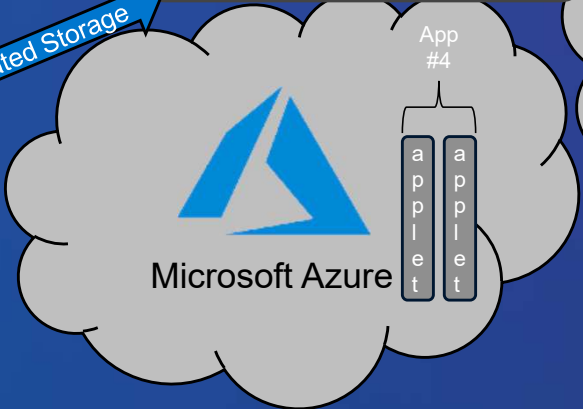
Cloud Smart



Dell's PowerScale
Dell's PowerFlex

Cloud Integrated Storage

Dell's Modernized Data Center



Multi-Cloud by Design

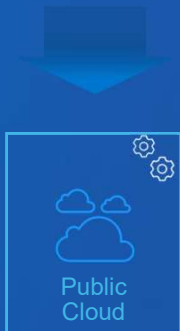
Dell's Vision – The Power of Choice: Deployment Models

All-In Public Cloud

When good enough works

STANDARD WORKLOADS

- Mobile applications
- Web / content hosting
- Analytics
- Software Development / DevOps



Application interdependencies across multicloud workload deployments, re-platforming costs, vendor lock-in risks

Multicloud

It's all about the workload



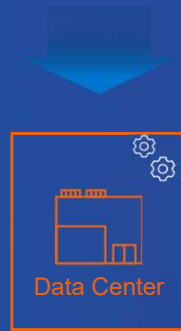
HEAVY WORKLOADS

- Traditional Workloads
- OLTP, DBMS, HPC
- Interdependent Workloads
- Repatriation Targets



STANDARD WORKLOADS

- Mobile applications
- Web / content hosting
- Analytics
- Software Development / DevOps



Control SLAs and control costs through dedicated – or sovereign - infrastructure. But application interdependencies, data egress, and network challenges drive risk

- Cost containment
- Performance, latency
- Security, compliance issues

Multicloud Sovereign-Adjacent

It's all about Interconnection & Locality



WORKLOAD OPTIMIZED

- Put the right workloads, in the right place, at the right time, without fear of crippling application interdependencies



SaaS
Providers
Partners
Suppliers

Solving for

- Performance, Latency
- Security, Compliance
- ...while reducing costs

Overcoming the Challenges

COMPLEX

Hyperscalers don't typically advocate for multi-cloud

CHAOTIC

Repatriation is a reality if rising costs outweigh benefits

RISKY

Scattered data expands the attack surface

UNGOVERNABLE

Inability to meet compliance requirements

SLOW

Some critical apps not ideal for public cloud

Moving to **Multi-Cloud by default** creates

CHALLENGES

LIMITED

No vendor can be best at everything

SILOED

Public clouds are closed ecosystems

INCOMPATIBLE

Interoperability issues lead to lock-in

CUMBERSOME

Traditional models don't measure up to new expectations

UNPRODUCTIVE

Lengthy planning and overprovisioning

SUBOPTIMAL

On-premises vs. public cloud tradeoffs

COST INEFFICIENT

CAPEX rigidity or data gravity issues

SIMPLICITY

Take advantage of cloud experiences everywhere

CHOICE

Achieve better outcomes

CONSISTENCY

Simplify IT operations

FREEDOM

Avoid vendor lock-in

AGILITY

React quickly to capture new opportunities

ADAPTABILITY

Align technology with needs

FLEXIBILITY

Deploy resources in more ways

PREDICTABILITY

Pay-as-you-go transparency

Dell APEX delivers multicloud by design

MODERN
CLOUD



MODERN
CONSUMPTION

CONTROL

Minimize risk and maximize performance on your terms

SECURITY

Protect against cyberattacks

GOVERNANCE

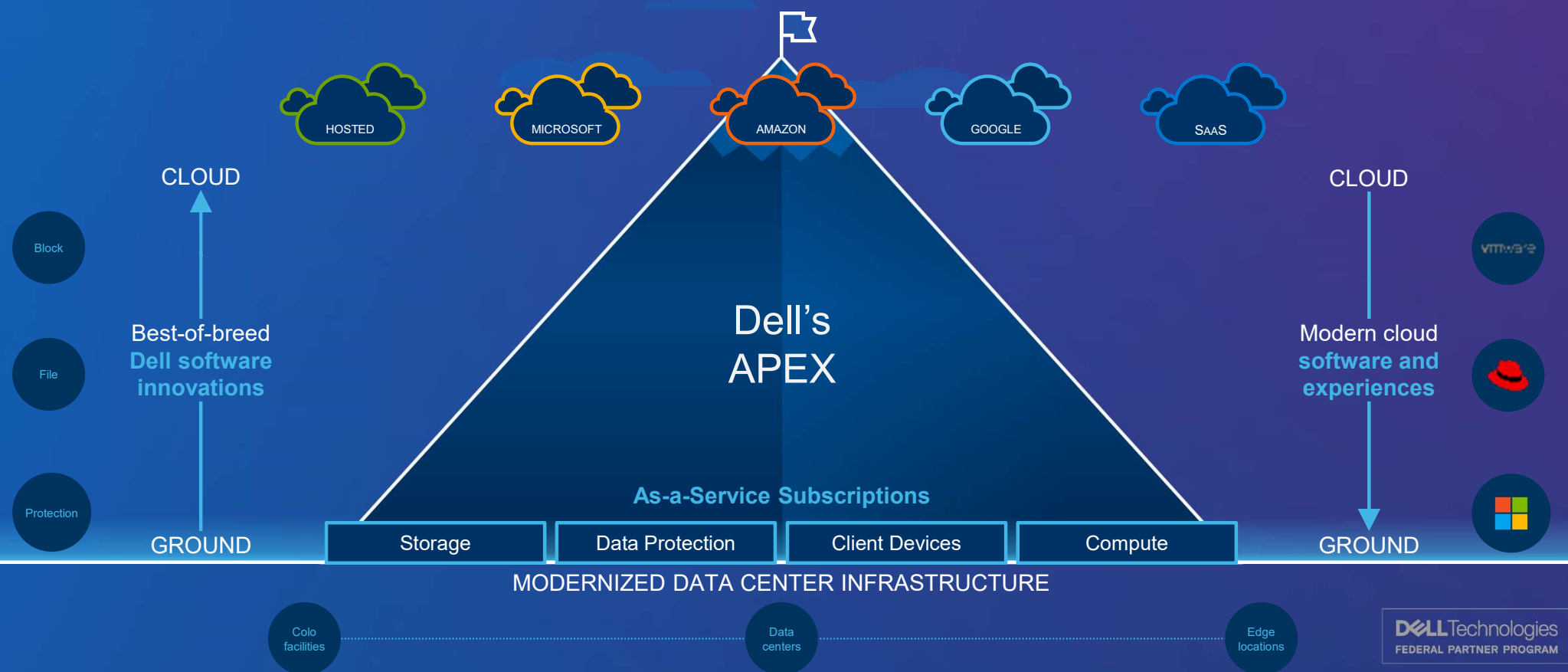
Ease compliance obligations

PERFORMANCE

Achieve the speed you need

DELLTechnologies | A P E X

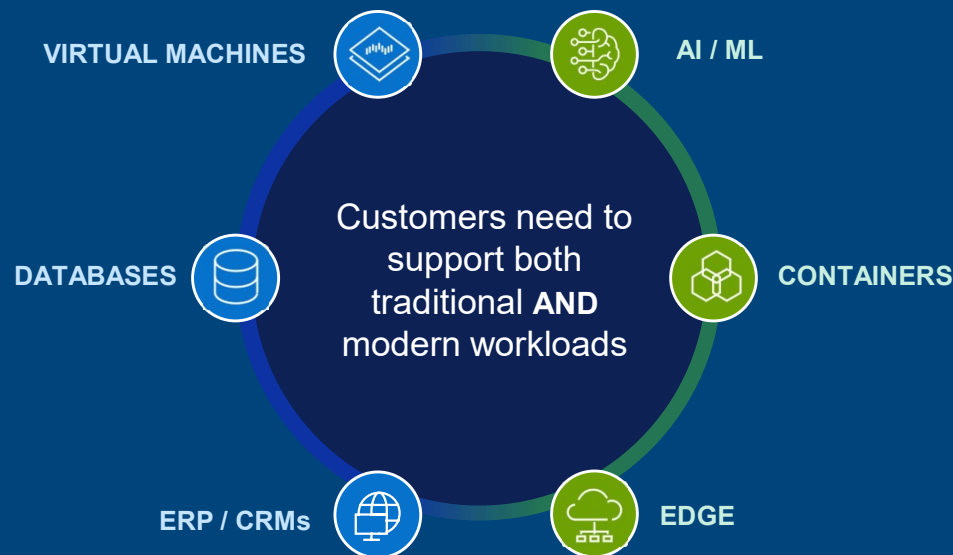
Take advantage of multicloud by design.
Get simplified cloud experiences with technology you trust.



Customer workload mix is evolving at a rapid pace

Evolving workload mix...

TRADITIONAL and MODERN



... leading to evolving mission needs



Avoid vendor lock-in



Support for VM, Containers, and Bare Metal



Efficient resource utilization



Consistent, shared data layer



Independent resource scaling to dynamically match needs of each workload

HCI may **NOT** be optimal for evolving customer needs

Hyperconverged

Interlocked Hypervisor,
Compute, Networking & Storage



- × Locked into a single ecosystem
- × Not optimal for AI
- × More servers required to scale
- × Higher SW licensing costs
- × More network ports required
- × Low storage utilization
- × Higher storage \$/GB
- × Lower storage availability
- × Creates more silos

< 20%

Average CPU
Utilization*

< 35%

Average RAM
Utilization*

< 45%

Average Storage
Utilization*

*based on 9,095 HCI Clusters dialing home to Dell

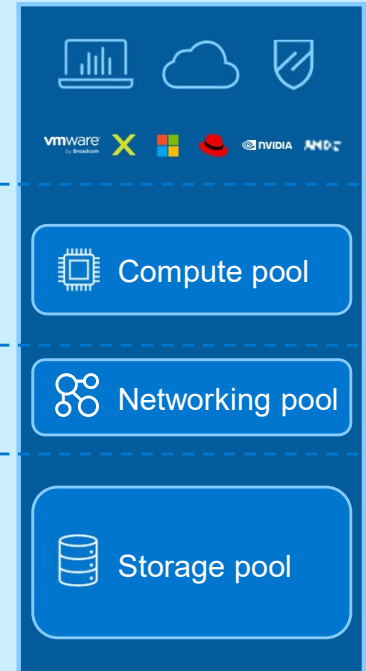
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Disaggregated infrastructure is the **right choice** for customers

Disaggregated

Open, Simple and Flexible
Compute, Networking and Storage

- ✓ No vendor lock-in
- ✓ Fewer servers required
- ✓ Lower SW licensing costs
- ✓ Fewer network ports
- ✓ Higher utilization
- ✓ Lower \$/GB with 5:1 DRR
- ✓ Better storage availability, easier patching and LCM
- ✓ Reduces siloed stacks



Up to **32%** Lower cost than hyperconverged infrastructure¹

¹Dell internal analysis – calculations based on comparisons between vSAN Ready Nodes (HCI) and PowerEdge + PowerStore

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Benefits of Dell's disaggregated infrastructure

Open and Flexible Compute, Networking and Storage



- ✓ Open ecosystem
- ✓ Fewer servers required
- ✓ Lower SW licensing costs

- ✓ Fewer network ports
- ✓ Lower \$/port

- ✓ Higher utilization
- ✓ Easier patching and LCM
- ✓ Lower \$/GB
- ✓ Better storage availability
- ✓ Reduces siloed stacks



Compute pool



Networking pool



Storage pool

powered by
PowerEdge servers

powered by
PowerSwitch networking

powered by
PowerStore storage
PowerFlex SDS



PowerStore

Data-centric



Intelligent



Adaptable



Designed for the Data Era



Any Workload

Physical and virtual Apps and DBs, Containers and File



Performance Optimized

Scale up and scale out with end-to-end NVMe*



Efficiency Without Compromise

Always-on inline data reduction



Programmable Infrastructure

Streamlines development and automates workflows



Autonomous Appliance

Built-in automation and ML optimizes system resources



Flexible Architecture

Enables speed and application mobility



Flexible Deployment

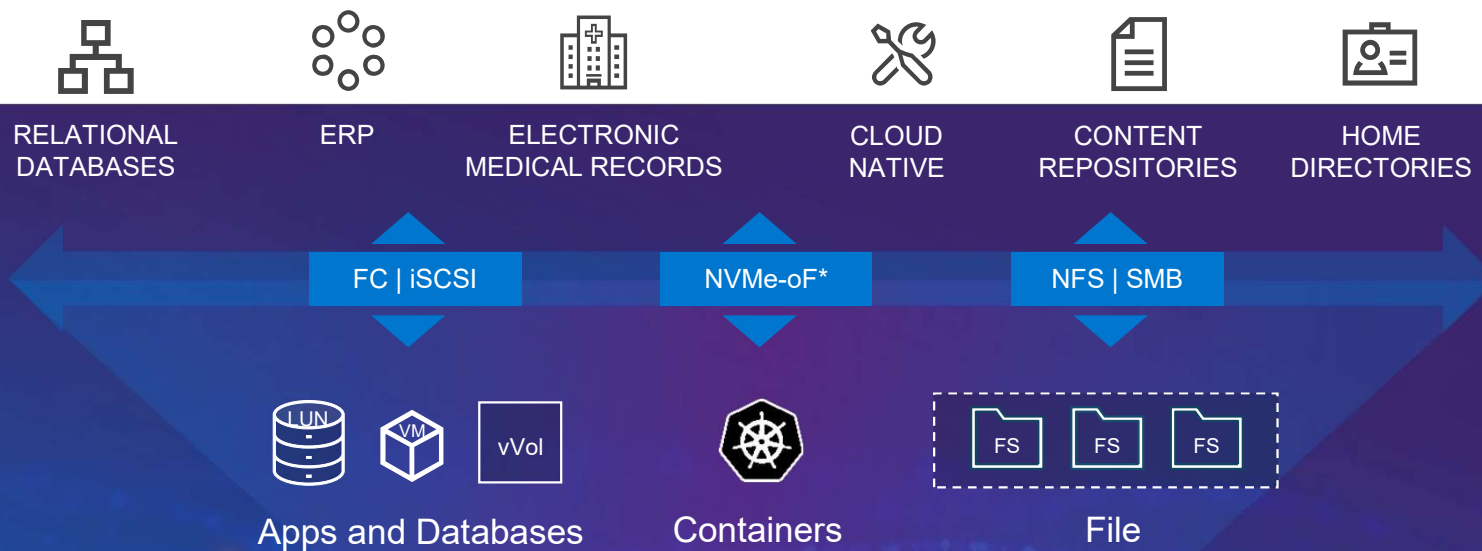
Modernize the core, edge, and cloud without disruption

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PowerStore – Any workload



Traditional and modern workloads



EDGE

PowerStore

CORE

CLOUD



Edge applications

Data Replication

Data-intensive applications

Block @ Equinix



PowerStore



Streaming data



PowerStore



Small footprint,
easy to deploy

Optimized for data
retention and flexibility

Data can be replicated
to core data center

PowerEdge 16G/17G Server Portfolio

Purpose-built | Intelligent | Cyber Resilient | Sustainable



Purpose-built

AI, for the Edge and Scale
Anywhere



Intelligent

Accomplish more with
Automation & Improve
Operational Efficiencies



Cyber Resilient

Zero Trust &
Verifiable Confidence



Sustainable

Maximize power
efficient performance

Dell Technologies HCI and SDS offerings



Modernize IT, simplify operations & lower risk



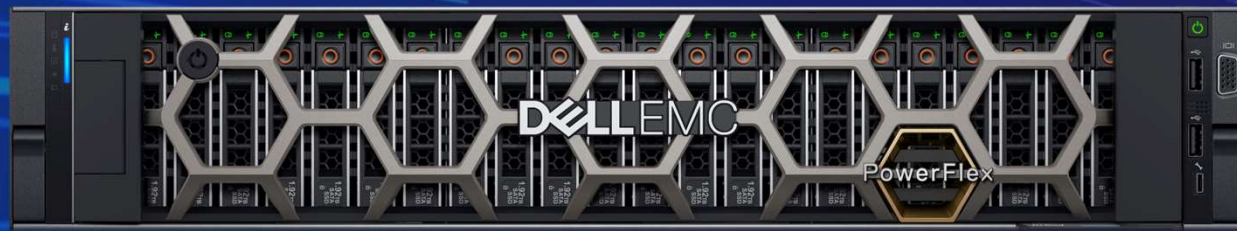
Unmatched breadth & flexibility



Enable Multi-Cloud for mission agility & IT efficiency

PowerFlex – Universal Infrastructure

Flexibility unleashed



Harness Software



Fluidity



Performance



Scale

Embrace Change



Platform
Support



Consumption
Options



Deployment
Architectures



Public Cloud
Offerings

Deliver Predictability



Data
Services

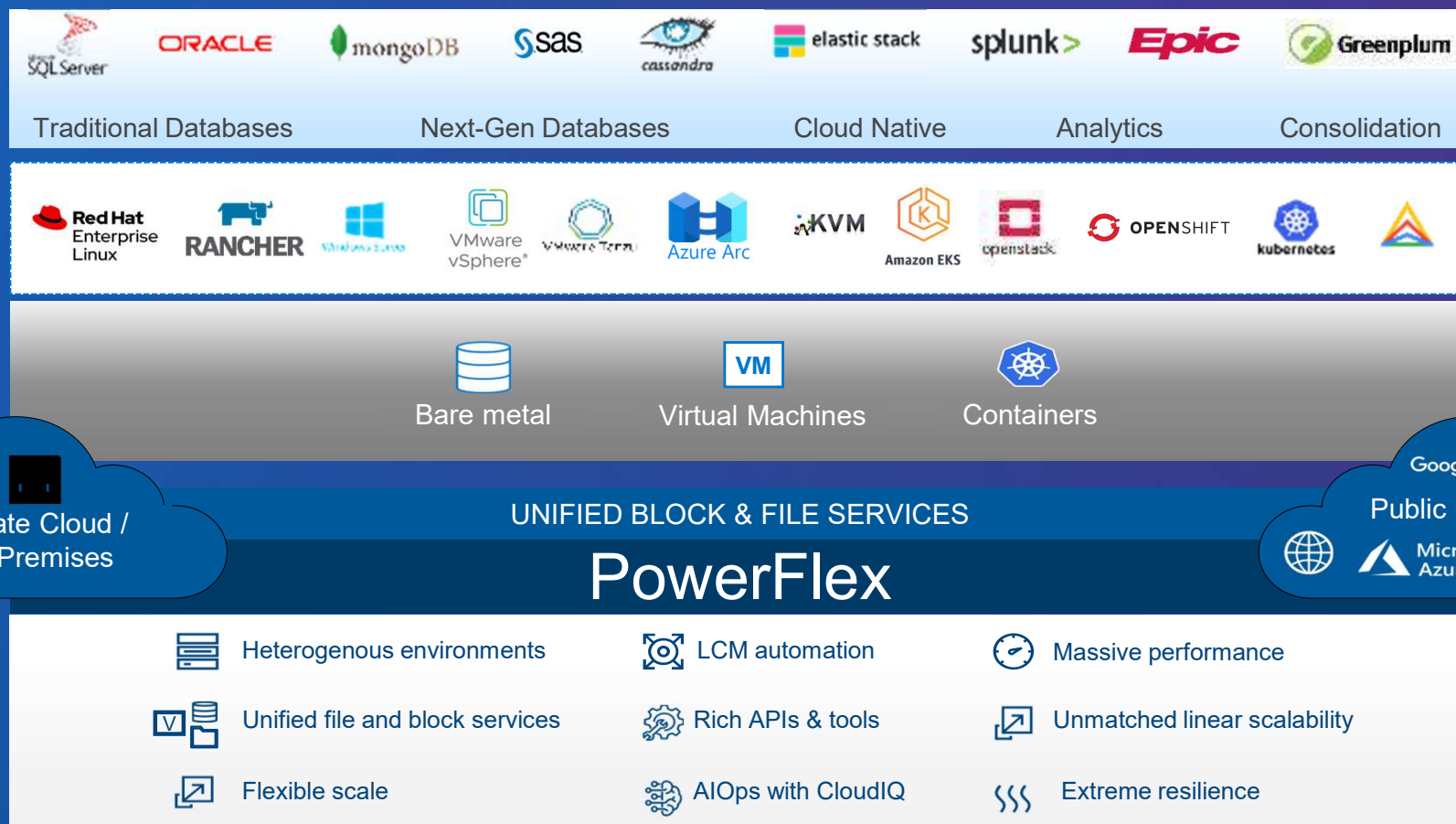


Automation



Workload
Execution

PowerFlex is the Universal Infrastructure Platform

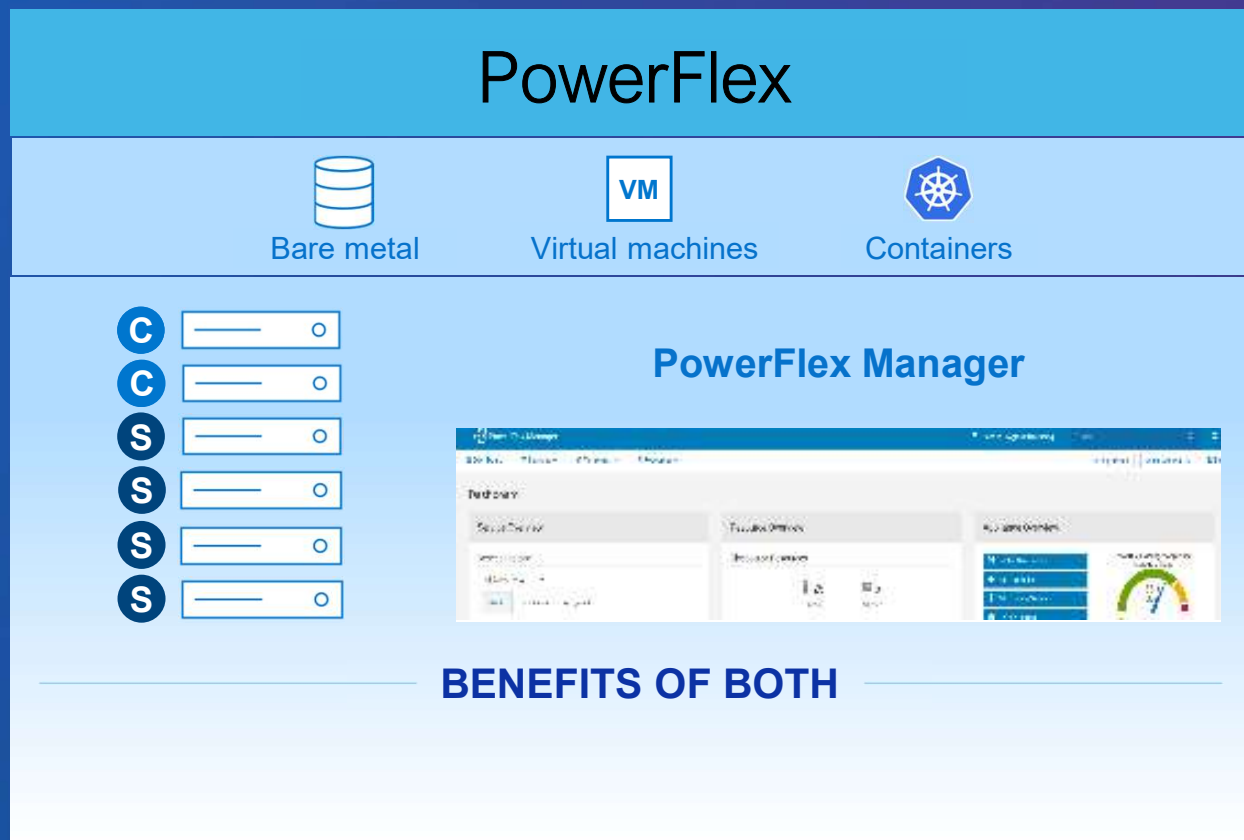


PowerFlex Unique Architecture

Three tier infrastructure

Independent scaling of compute and storage

Support for both virtual and physical



HCI

Scale out node based architecture

Lifecycle management

Dell Technologies VxRail



Automate



Remove complexity

with automated operations via unique VxRail HCI System Software



Simplify operations

through native integration with vCenter and VMware Cloud Foundation



Optimize infrastructure

with consistent ease of use while lowering exposure with full stack lifecycle management

Innovate



Harness hybrid cloud

with simple and direct path due to unique integration with VMware Cloud Foundation



Empower developers

with lock-step support for VMware Kubernetes advancements – K8s your way



Evolve workloads

with thousands of configuration options and support for mixed generation nodes

Accelerate



Drive productivity

with 6x9s and 92% less unplanned downtime to focus on differentiated IT activities



Surge ahead

by rapidly integrating new VMware updates with 30-day synchronous releases



Accelerate Multi-Cloud

by rapidly enabling VMware on AWS

Simplify IT operations with a common operational model

Dell EMC Solutions for Microsoft Azure Stack

- Two comprehensive hybrid solutions



Consistent Experience Azure Stack Hub



Azure consistent
services
on-premises



Fully automated
lifecycle
management



Edge
use cases

Cloud Disconnected

Modern Infrastructure Azure Stack HCI



Flexible
options



Connect to
Azure services



Rich management
integration

Cloud Connected

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Dell EMC Integrated System for Microsoft Azure Stack HCI



**Full stack
lifecycle
management**

Reduce time to
complete complex tasks



**Flexible
configuration
options**

Meet requirements
of a broad set of
use cases



**Global solution
level support &
services**

Accelerate time to
value



**Pay as you use
consumption
options**

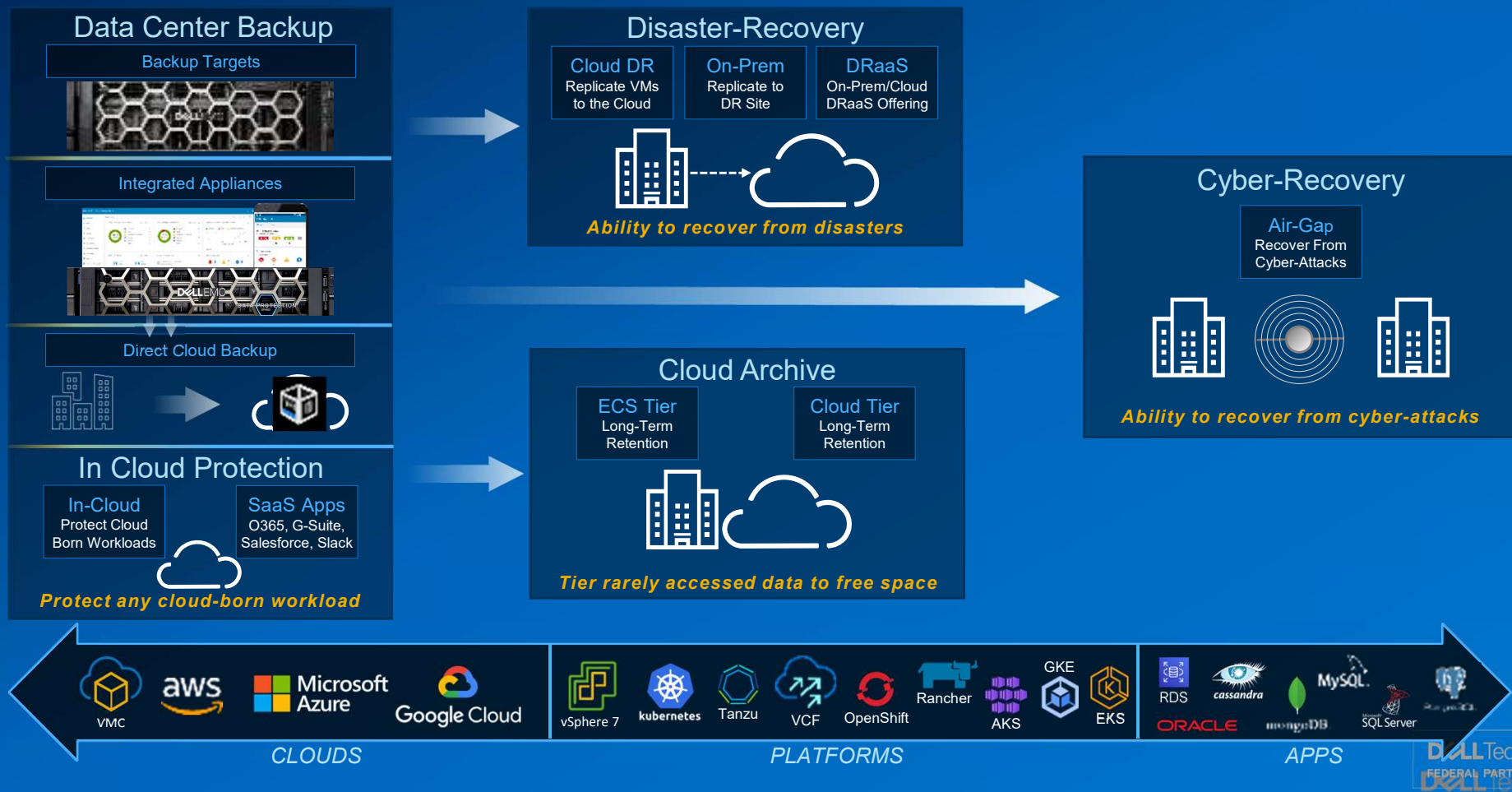
Pay for what you use,
when you use it



All-in-one, validated HCI system

Dell Technologies Data Protection Solutions

Comprehensive portfolio built to protect proven & modern workloads



Modernize your data center with Dell Infrastructure Solutions

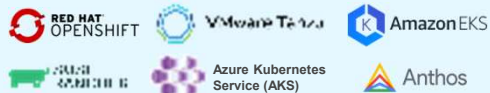
Accelerate innovation with
intelligent & efficient systems

Power any workload across the
edge, data center & public cloud

Deliver comprehensive data
protection everywhere

AIOps — Virtualization — NativeEdge — Dell APEX

Kubernetes distributions



Cloud platforms



Silicon partners



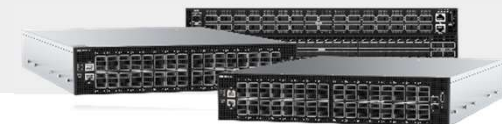
Colocation partners



Storage & Data Protection



Server



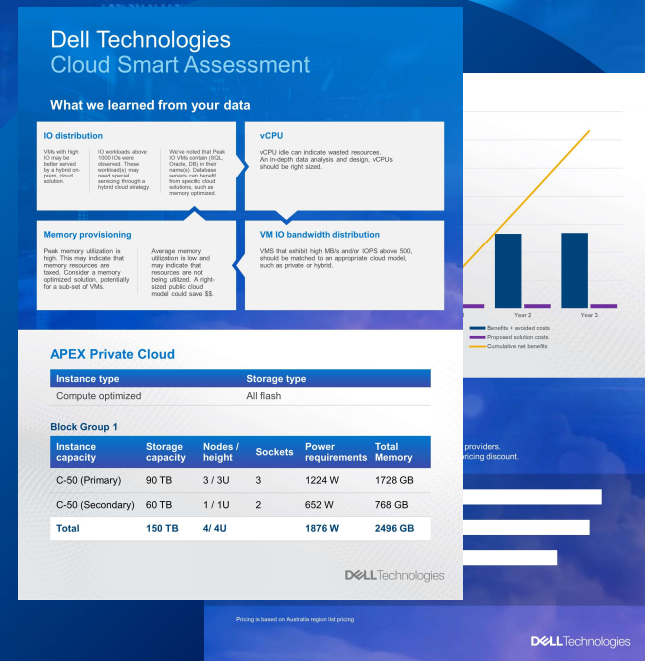
Networking

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Cloud Smart Discovery

Using data to make intelligent decisions about your cloud strategy

- IO distribution
- Memory provisioning
- xCPU provisioning
- VM IO bandwidth
- Compare cost – private cloud vs. public cloud



Move from multicloud by default to multicloud by design

A P E X

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Next Steps and Q & A

Architect your solutions to achieve
and assist your customer's missions

- Devices
- Applications
- Multi-Clouds
- Infrastructure

Next Steps

- Schedule a Test Drive
- Contact your Dell team



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