



Dell Technologies Partner Webinar Series: Legacy to Cloud-Ready Infrastructure

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

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DELL Technologies



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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

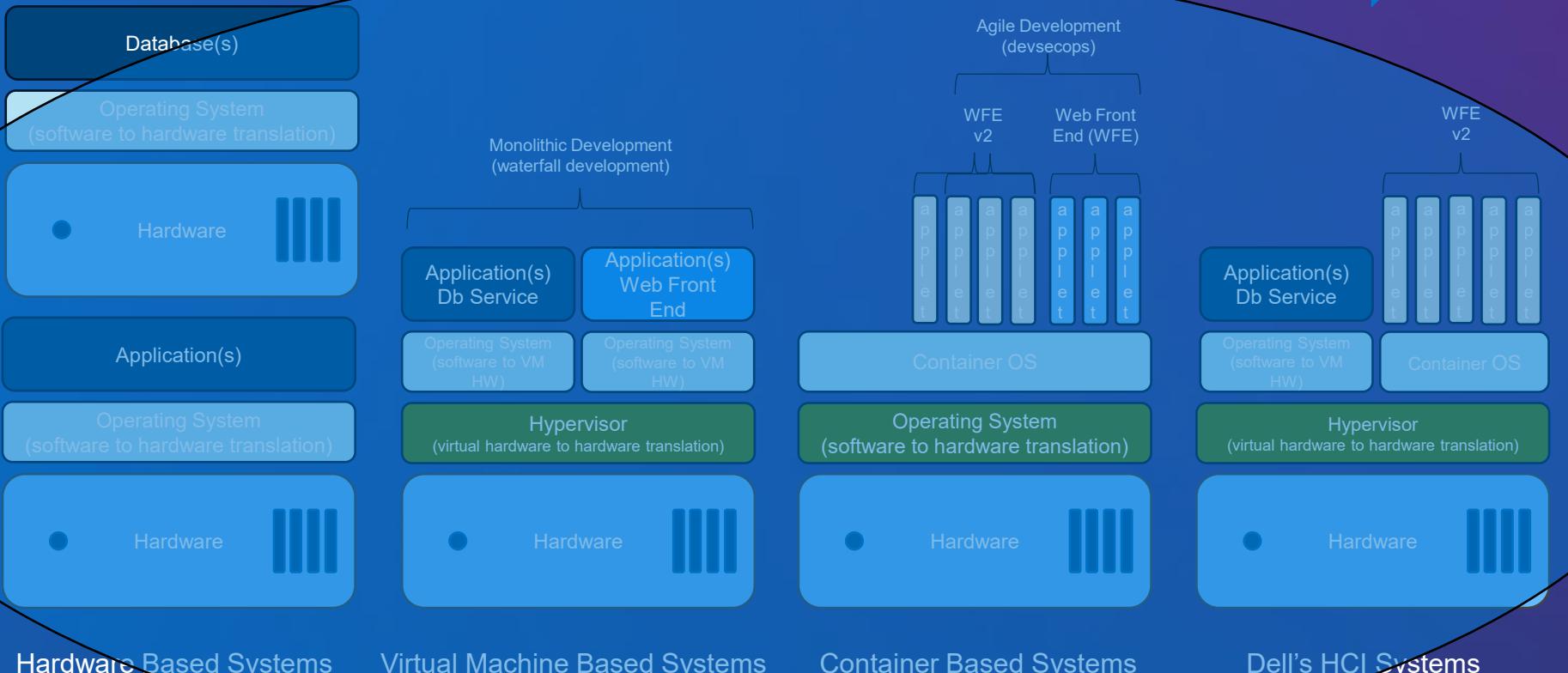
Sustainability



An industry leader in sustainable materials and packaging

Information Systems – Physical to Virtual to Cloud

Modernization



Hardware Based Systems

Virtual Machine Based Systems

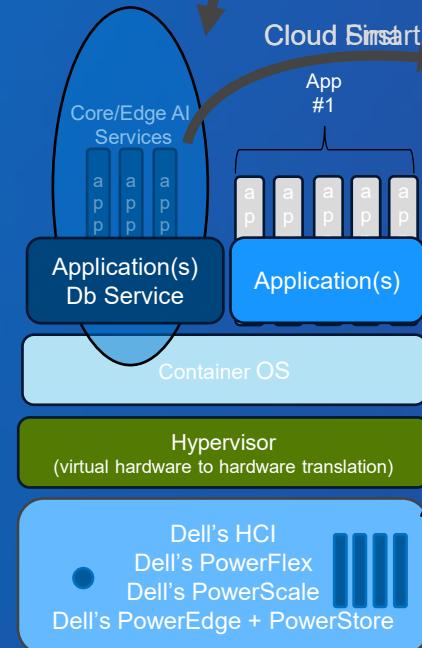
Container Based Systems

Dell's HCI Systems

Cloud Native Applications (AI + Security + Compliance)

Re-patriotization

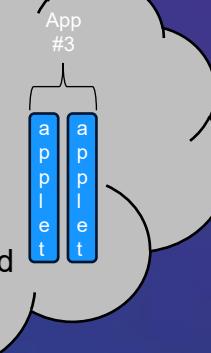
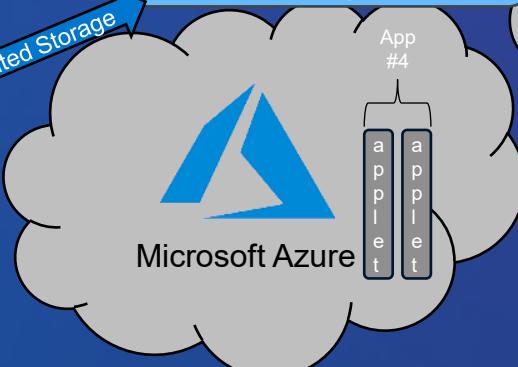
Cloud Smart



Dell's PowerScale
Dell's PowerFlex



Data Center, Cloud and Edge 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



HEAVY WORKLOADS

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



It's all about the workload

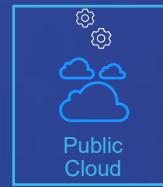
Multicloud

It's all about the workload



STANDARD WORKLOADS

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



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

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

Overcoming the Challenges

COMPLEX

Hyperscalers don't typically advocate for multi-cloud



LIMITED

No vendor can be best at everything

SILOED

Public clouds are closed ecosystems

INCOMPATIBLE

Interoperability issues lead to lock-in

CHAOTIC

Repatriation is a reality if rising costs outweigh benefits



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

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

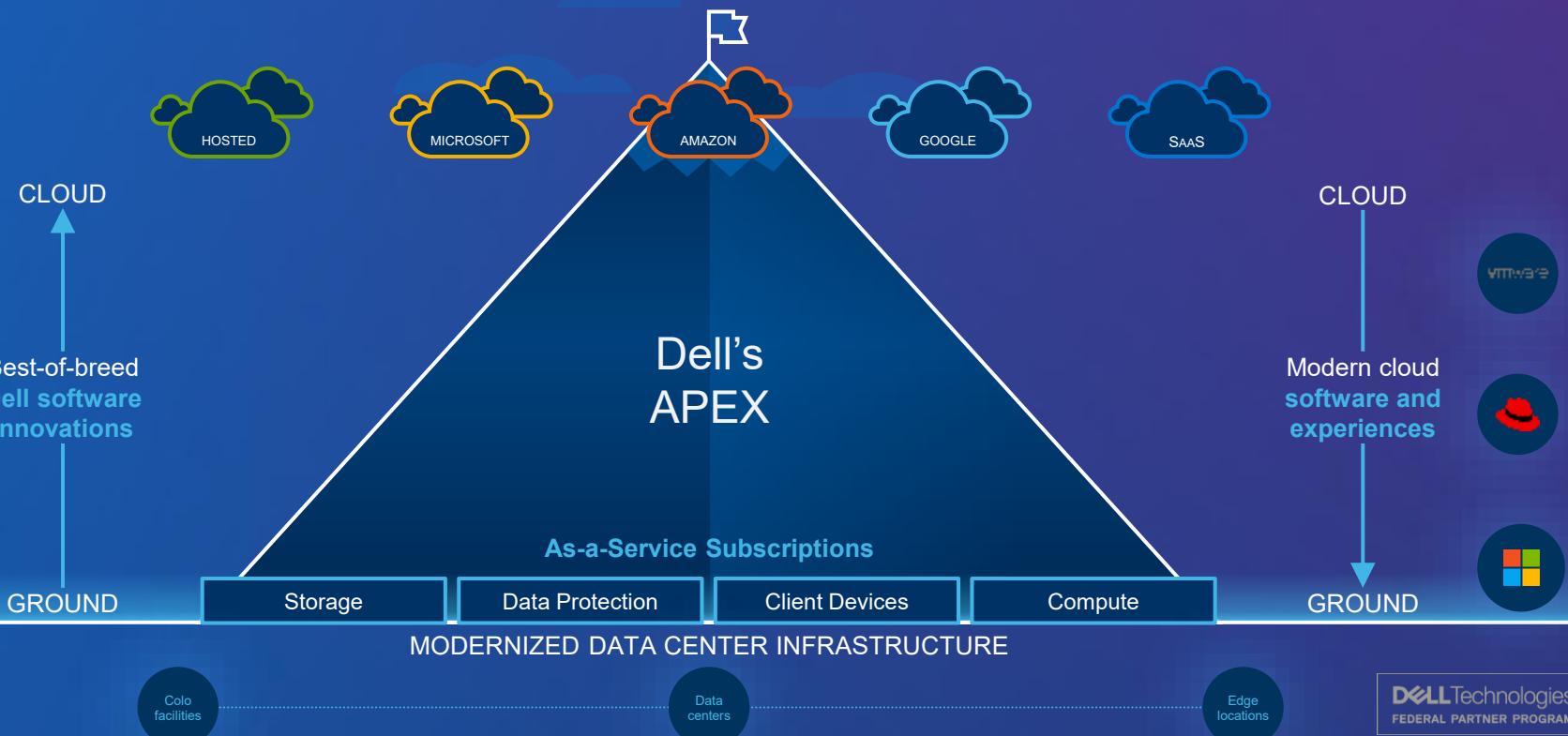
GOVERNANCE

Ease compliance obligations

PERFORMANCE

Achieve the speed you need

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



Customer workload mix is evolving at a rapid pace



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

Hyperconverged

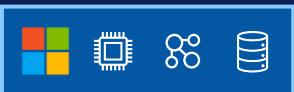
Interlocked Hypervisor,
Compute, Networking & Storage



- ✗ 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*

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

Disaggregated

Open, Simple and Flexible
Compute, Networking and Storage



VMware by Broadcom X Microsoft Red Hat NVIDIA AMD

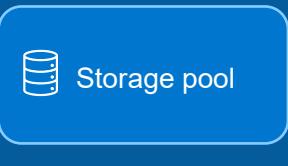
- ✓ No vendor lock-in
- ✓ Fewer servers required
- ✓ Lower SW licensing costs



- ✓ 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

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

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

Benefits of Dell's disaggregated infrastructure

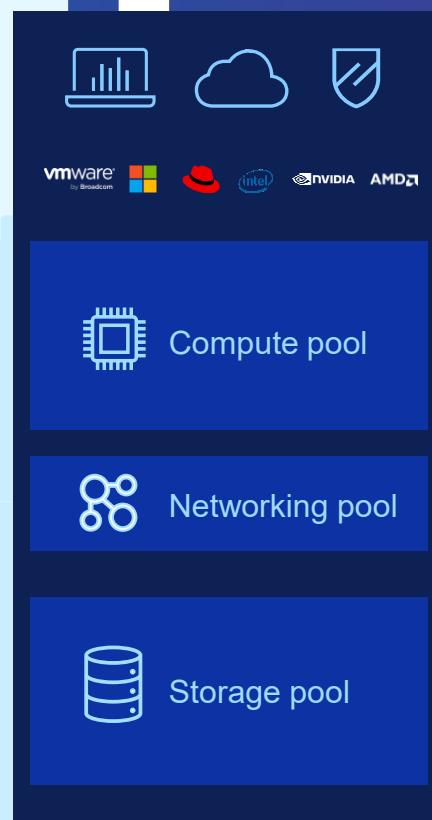
Open and Flexible Compute, Networking and Storage



- ✓ 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



powered by
PowerEdge servers

powered by
PowerSwitch networking

powered by
PowerStore storage
PowerFlex SDS

PowerFlex – Universal Infrastructure

Flexibility unleashed



Harness Software



Fluidity



Performance



Scale

Embrace Change



Platform Support



Consumption Options



Public Cloud Offerings



Deployment Architectures



Data Services

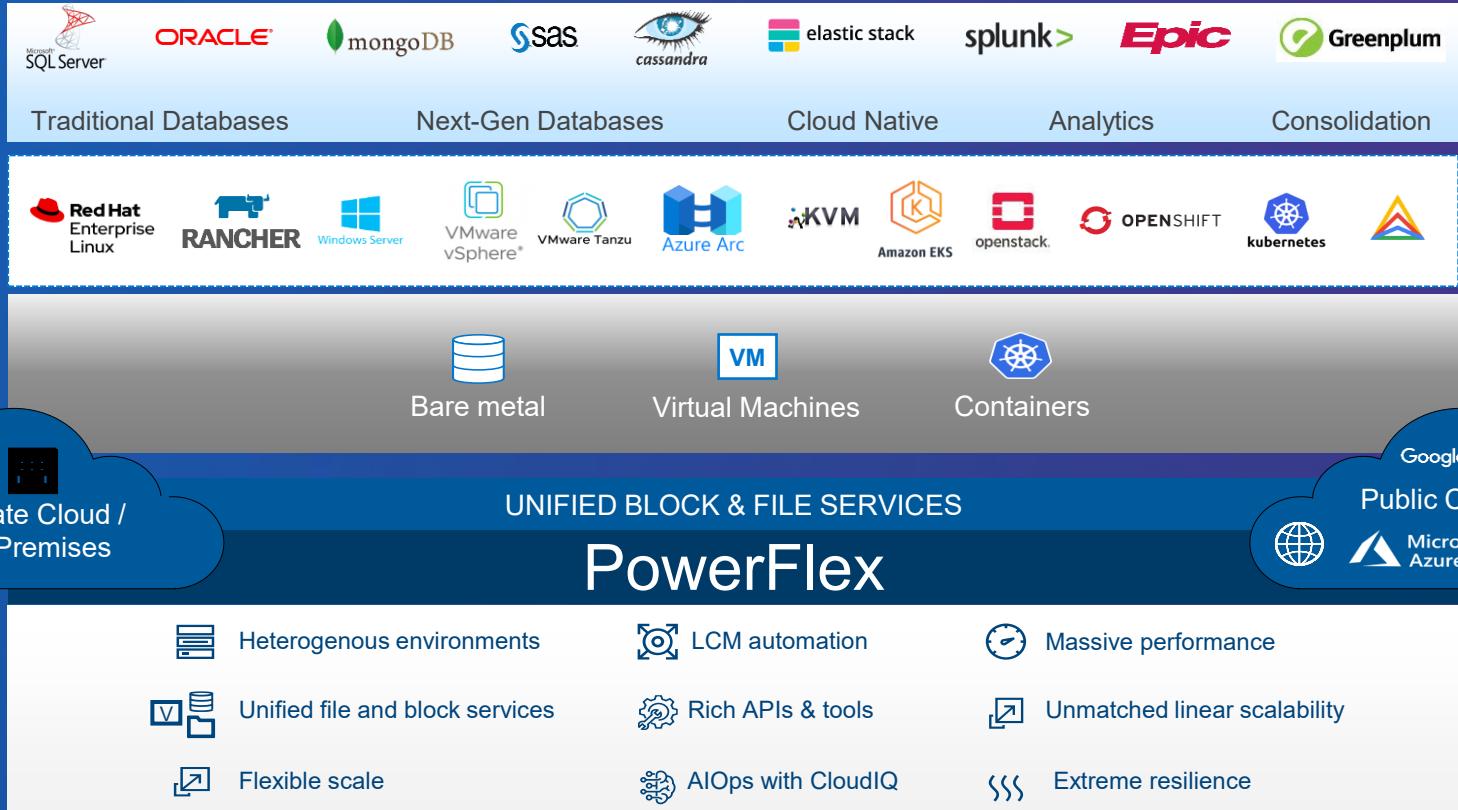


Automation

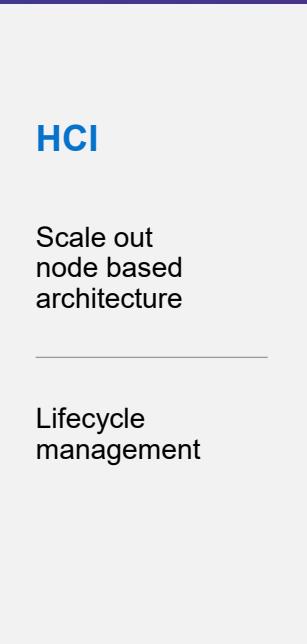
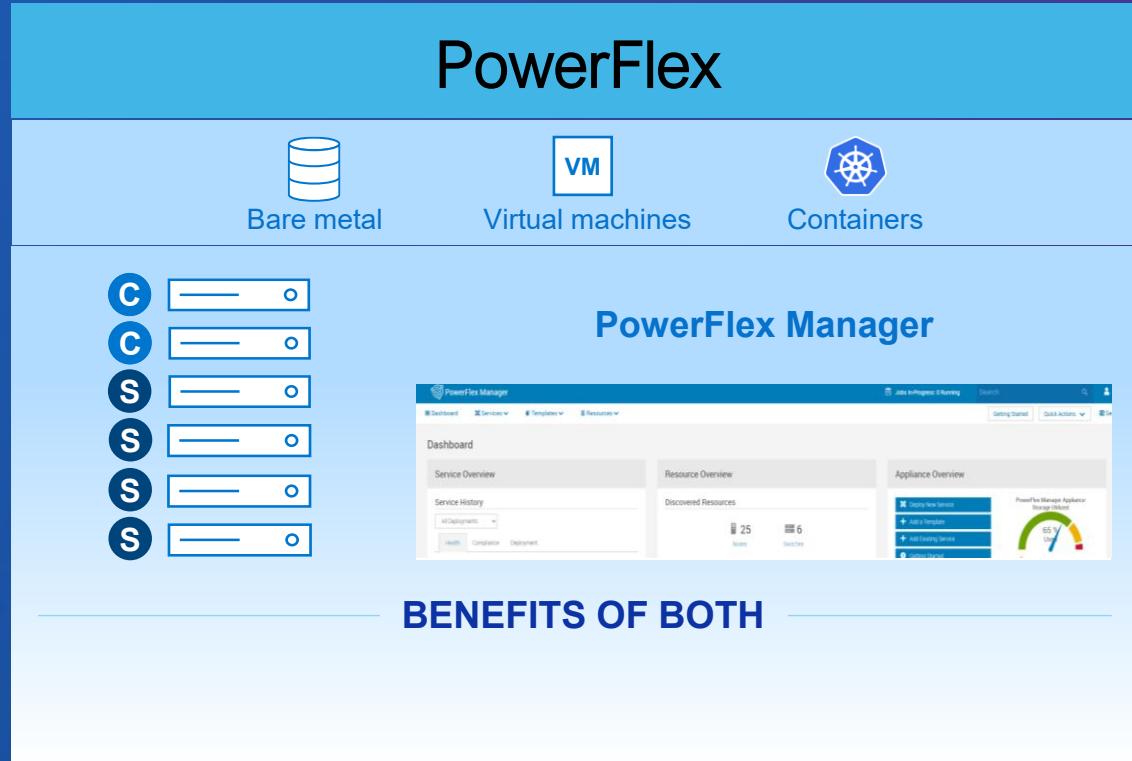
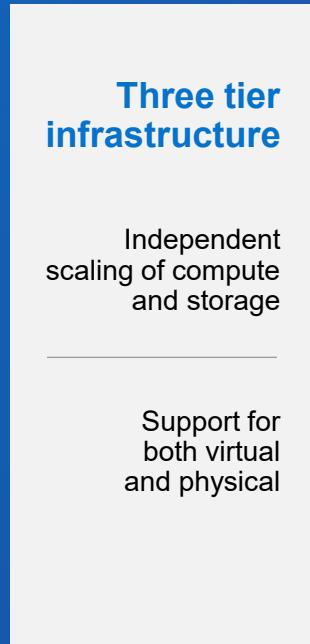


Workload Execution

PowerFlex is the Universal Infrastructure Platform



PowerFlex Unique Architecture





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



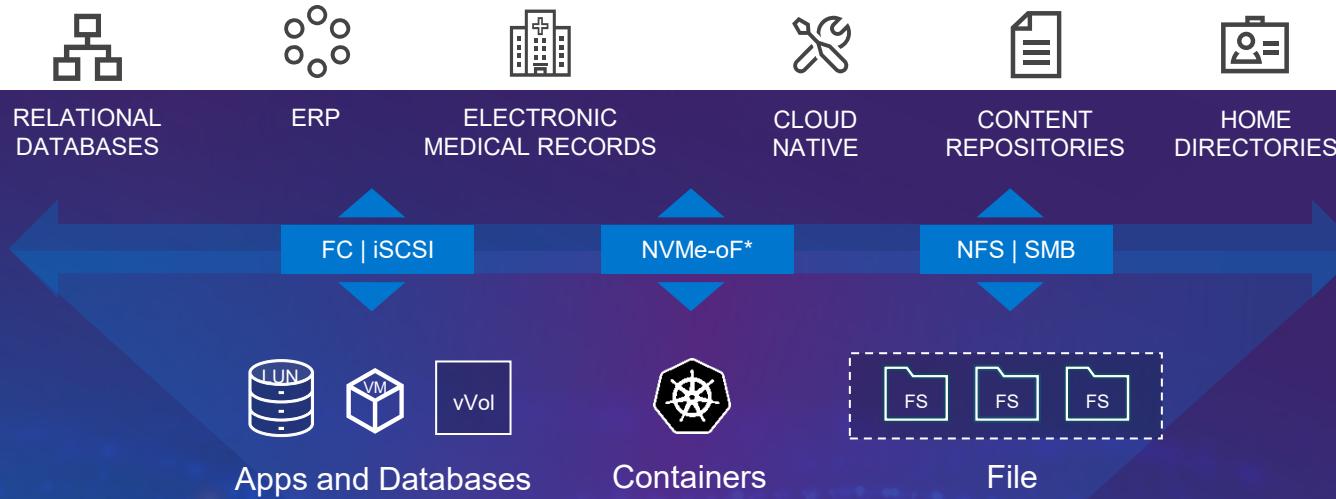
Flexible Deployment

Modernize the core, edge, and cloud without disruption

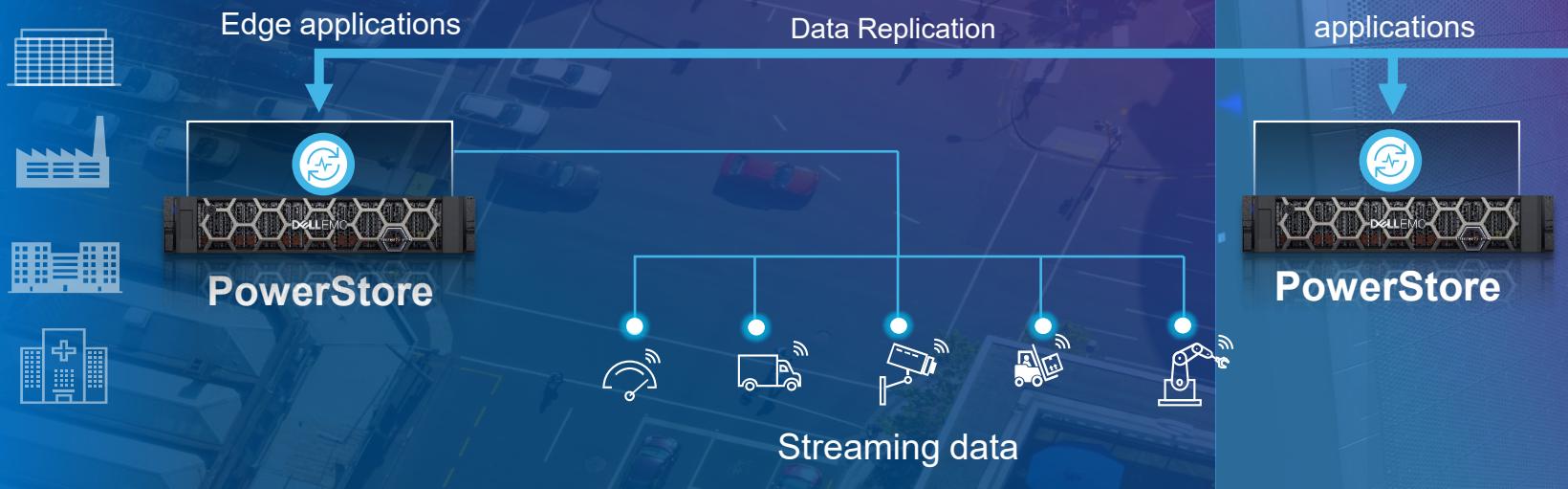
PowerStore – Any workload



Traditional and modern workloads



PowerStore



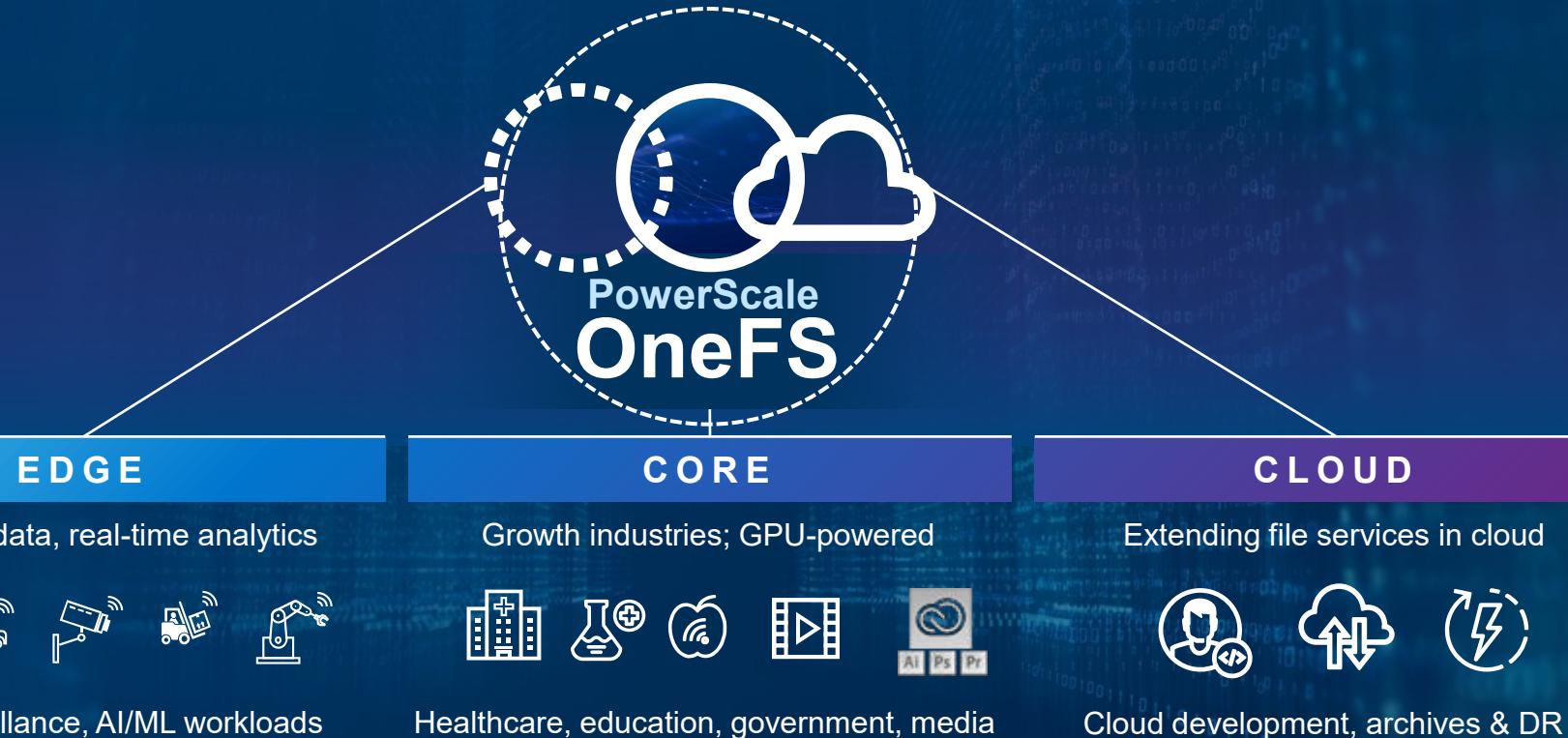
Small footprint,
easy to deploy

Optimized for data
retention and flexibility

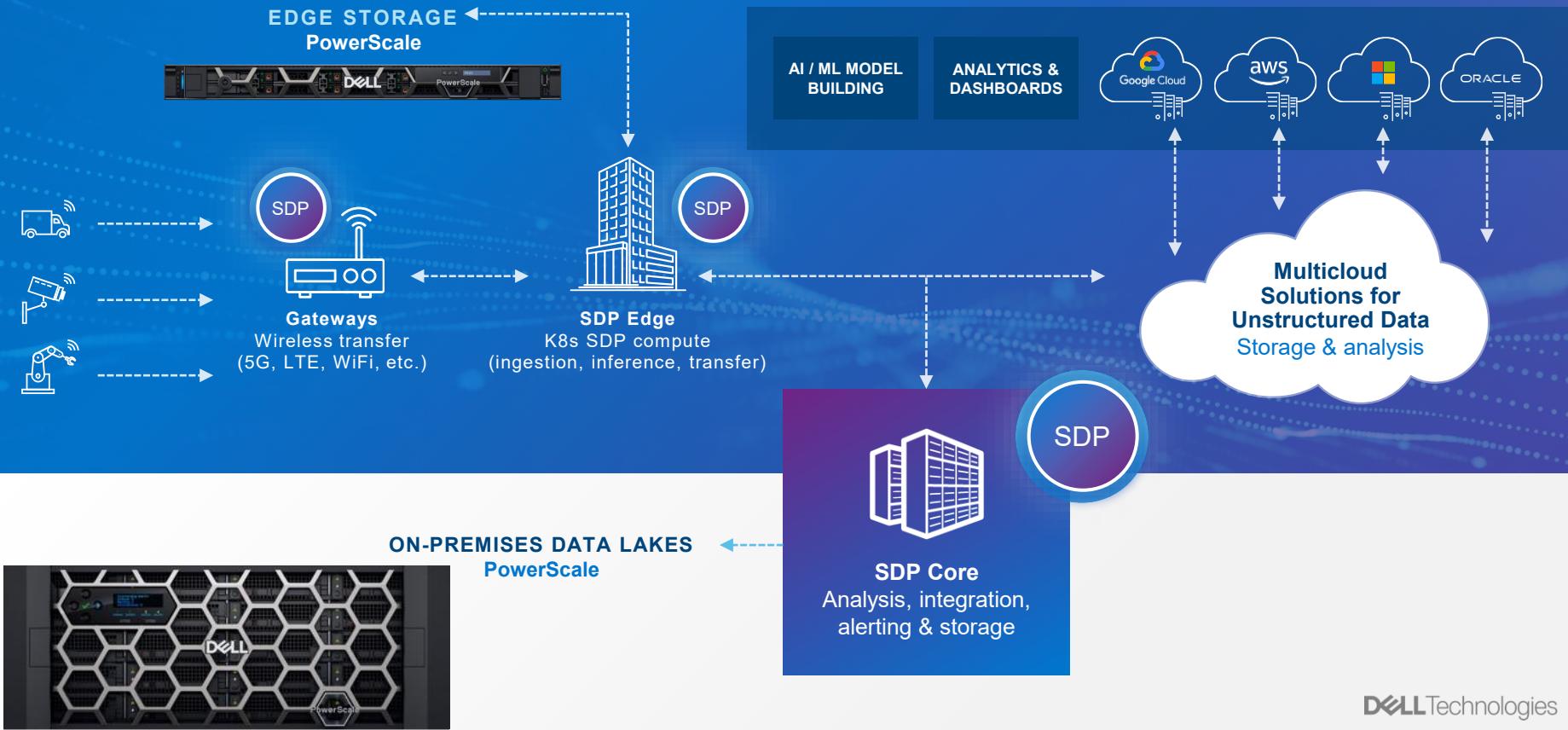
Data can be replicated
to core data center

PowerScale: Any data, anywhere

- Uniting the Core, the Cloud and the Edge



From edge, multi-cloud and to the core



PowerEdge Servers

Purpose-built | Intelligent | Cyber Resilient



Purpose-built

Scale AI, Edge & Performance Anywhere



Intelligent

Accomplish more with Automation & Improve Operational Efficiencies



Cyber Resilient

Accelerate Zero Trust Adoption

Dell PowerEdge 17th Generation - Purpose-built

XR-Series

Engineered for Extreme Environments



R-Series

The Ultimate Data Center Workhorse



XE-Series

AI Powerhouse for Extreme Acceleration



T-Series

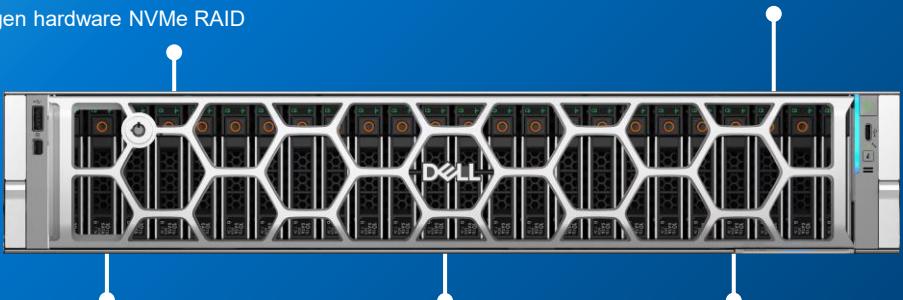
Enterprise-Class Computing, Anywhere



PowerEdge R770 / R7725

Support for up to 28 Drives

- Up to 40 x EDSFF E3.S Gen5 NVMe
- Gen5 NVMe* & SAS4 support
- Rear Hot-Plug BOSS-N1 (2 x M.2 NVMe) for boot
- Next-gen hardware NVMe RAID



Support for high-speed and memory capacity

- Up to 32 DDR5 DIMMs
- Up to 6TB

2 Socket Capable

- Intel / AMD processors
- High-bandwidth memory CPUs

Support for GPU

- 2 x 450W (DW) or 6 x 75W (SW)

Flexible I/O

- Up to 8 x PCIe Slots
- Optional 2x OCP 3.0 slot

- Smart Cooling
- Designed for growing scale-out solutions and air-cooled support
- Industry-leading manageability and security

MAINSTREAM

Data Center
(private cloud)

TARGET WORKLOADS

High Performance Scale-Out Databases

Architect for growth and scalability using high core count CPUs with the latest DDR5 memory technology, high-bandwidth networking and Gen5 based NVMe storage.



Next Level of Virtualization

6TB of memory combined with >192 cores of the latest generation Intel/AMD CPUs enables high-density virtualization in a 2S server..



AI Training

With the latest Gen5 PCIe enabled AMD GPUs and NVMe drives designed to offer the highest throughput on the largest datasets, customers benefit from reduced training cycles and faster AI deployments.



PowerEdge XE9780 / XE9785



8-way H100 SXM or
8-way B300 SXM



Intel / AMD
CPU



PCIe
Gen5



DDR5



NVME
Gen5



8-way SXM GPU server that provides leading AI performance in a dense air-cooled design

Purpose-built for the most demanding AI – ML/DL training, modeling and simulation workloads

7U air-cooled design chassis supports the highest wattage next-gen technologies in up to 35C ambient

Massive flexibility with 8-way B300 SXM or A100 SXM, 10 Gen5 x16 PCIe slots, and up to 16 drives

Data Center
(private cloud)

TARGET WORKLOADS



High Performance Computing

Architect for growth and scalability using high core count, 8x CPU Capable, CPUs with the latest DDR5 memory technology, high-bandwidth networking and Gen5 based NVMe storage.



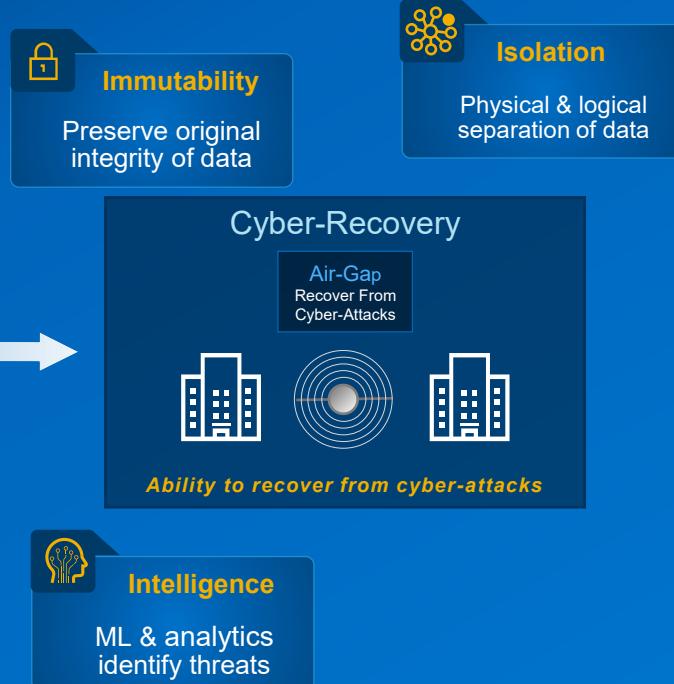
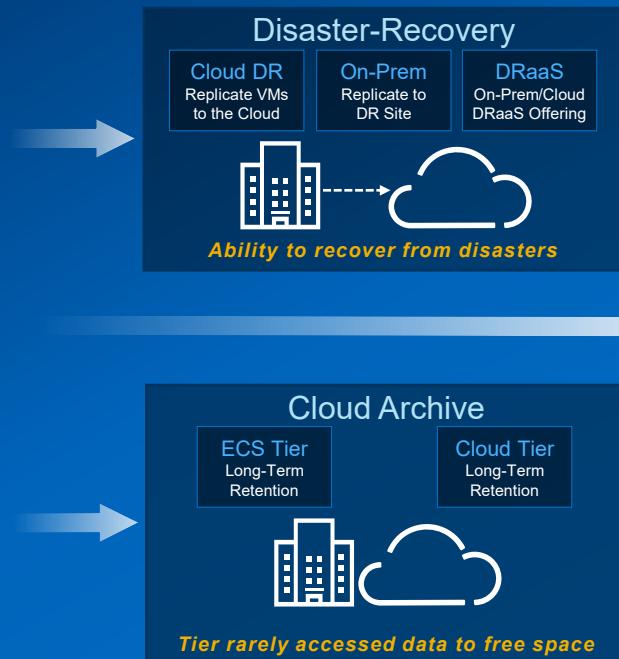
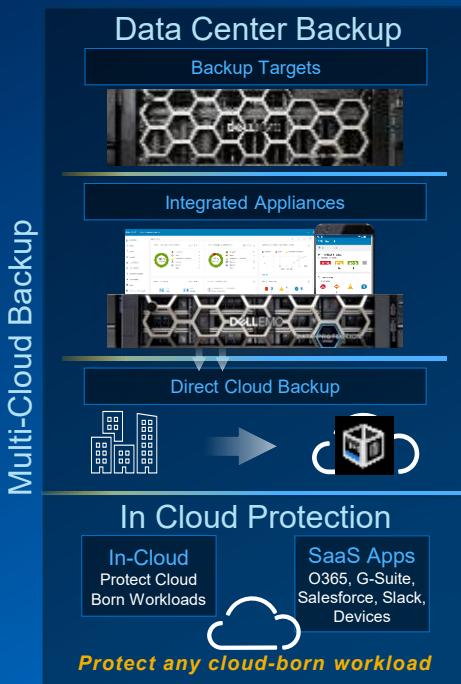
Accelerated AI Training

With the latest Gen5 PCIe enabled NVIDIA GPUs and NVMe drives designed to offer the highest throughput on the largest datasets, customers benefit from reduced training cycles and faster AI deployments.

AI / ML & HPC

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



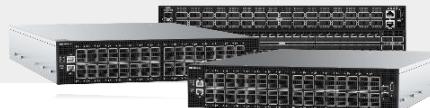
Colocation partners



Storage & Data Protection



Server



Networking

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

DELL Technologies
FEDERAL PARTNER PROGRAM

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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