Dell Solutions for Microsoft Azure Local

Alanata TECH 8.4.2025
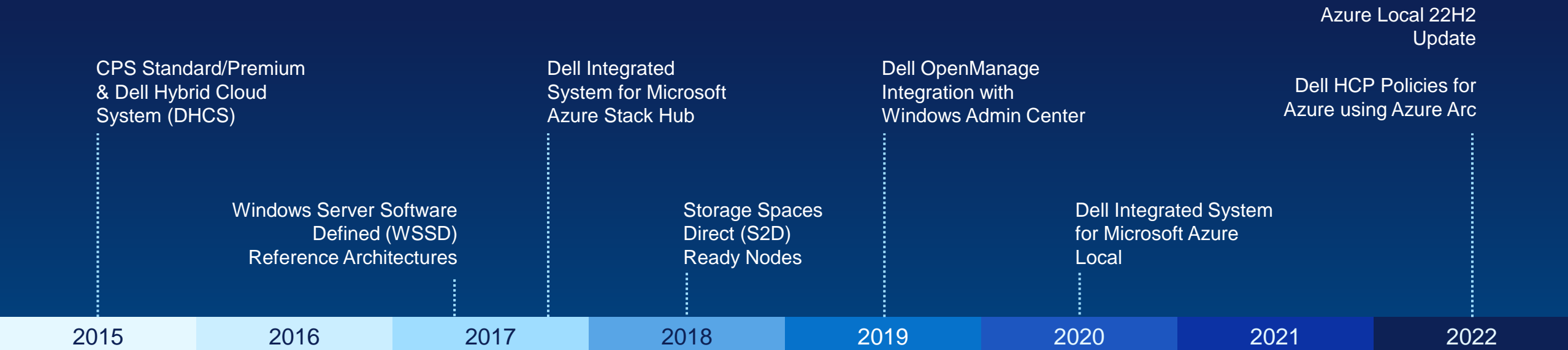
Martin Veselý
Data Center Sales Executive, Czech Republic & Slovakia

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DELLTechnologies

Dell has a history of innovation with Microsoft

Azure Local 22H2
Update

CPS Standard/Premium
& Dell Hybrid Cloud
System (DHCS)

Dell Integrated
System for Microsoft
Azure Stack Hub

Dell OpenManage
Integration with
Windows Admin Center

Dell HCP Policies for
Azure using Azure Arc

Windows Server Software
Defined (WSSD)
Reference Architectures

Storage Spaces
Direct (S2D)
Ready Nodes

Dell Integrated System
for Microsoft Azure
Local

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |

DELLTechnologies

Dell has a history of innovation with Microsoft Cont.

Dell Integrated System for Microsoft Azure Local introduced on 16G platforms

2023 **2024**

Dell APEX Cloud Platform for Microsoft Azure introduced

DELLTechnologies

Introduction to Azure adaptive cloud

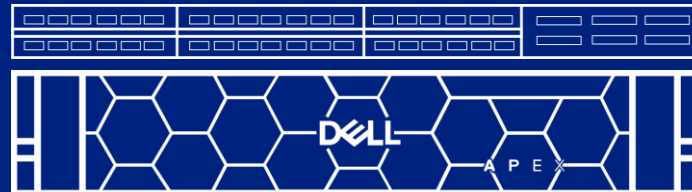Operations, management, & security

Services for all workloads

Intelligent data and AI

DevOps tools & experiences

Extend Azure platform to on-premises with **Azure Arc**

Modernize datacenters &
edge with **Azure Local**

DELL Technologies

Hybrid capabilities & benefits
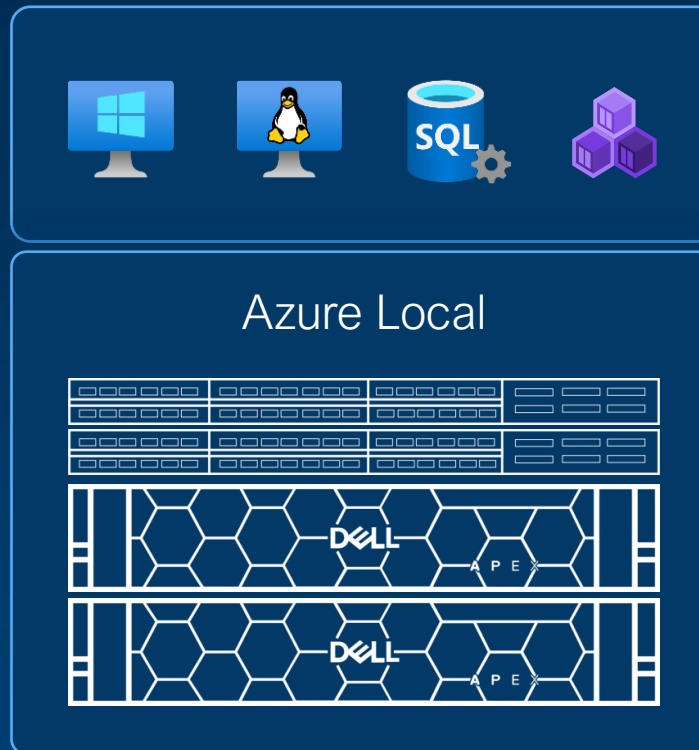## Powerful integration with select Azure services

Azure Services

Azure Monitor
Insights on health, performance, and usage

Azure Policy
Ensure compliance & governance at scale

Microsoft Defender for Cloud
Unified infrastructure security management

Azure Site Recovery
Replicate VMs to Azure for Disaster Recovery

Azure Local

Azure Benefits

WS Datacenter: Azure Edition
Azure-only guest OS with latest Windows Server innovations

Azure Policy: Guest Config
Audit or configure OS settings as code across host & guests

Azure Update Manager
Free update management for Arc-enabled Azure Local VMs

Extended Security Updates
Free security updates for End of Support SQL Server & Windows Server VMs

Bring Azure app, data and AI services anywhere
with Azure Local and Azure Arc

Management services

| Portal | Copilot | Graph | Identity | Defender | Monitor | Updates | Policy | Support | Billing |

Cloud region

Enabled by Azure Arc

Distributed location

Popular
- Windows and Linux
- Azure Virtual Desktop
- Azure IoT Operations

App services
- App Service
- Functions
- Logic Apps

Data services
- Arc-enabled SQL Server
- Managed instance
- PostgreSQL

AI services — NEW
- Video Indexer
- Local AI search (preview)
- Machine Learning

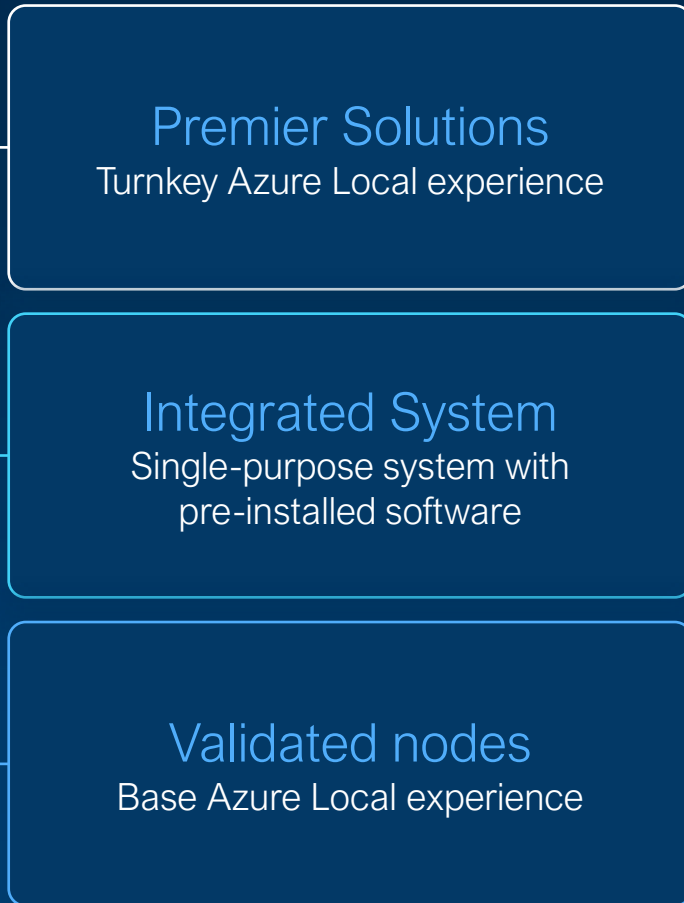**Foundational services**
- Virtual machines
- Kubernetes services
- Logical networks
- Storage paths

Solutions categories
for Azure Local

Premier Solutions
Turnkey Azure Local experience

Integrated System
Single-purpose system with
pre-installed software

Validated nodes
Base Azure Local experience

Microsoft Azure experience delivered on-premises
Increasing automation, integration, and
validation mean faster time to value and
increasing reliability

Azure Local solutions
High-level comparison

	Validated Nodes	Dell Integrated System for Microsoft Azure Local	Dell APEX Cloud Platform for Microsoft Azure
Validation	Once	4 times per year	Continuous
Lifecycle management[1]	Manual	Better	Best
End-to-end deployment automation	✗	✗	✓
Enhanced, automated expansion	✗	✗	✓
External storage support	✗	✗	✓
Azure Monitor Insights workbooks	✗	✗	✓
Azure Local pre-installed	✗	✓	✓
Secure by default	✗	✓	✓
Full-stack vendor support	✗	✓	✓
Integrated support queues	✗	✓	✓
Proactive call-home support	✗	✓	✓

[1] Validated node LCM is manual, with separate software and firmware/driver updates. Integrated systems require sideloading of drivers/firmware before full-stack update. Premier solutions orchestrate full-stack updates without additional steps.
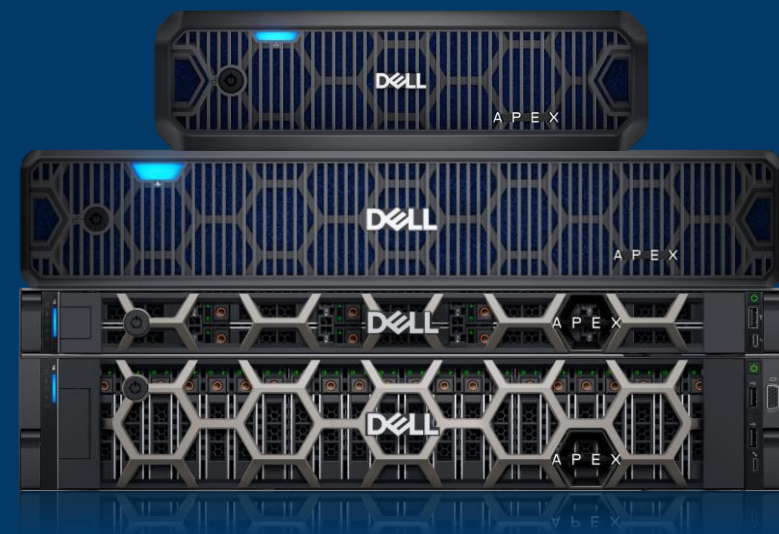
Dell solutions
for Azure Local

INTEGRATED SYSTEM
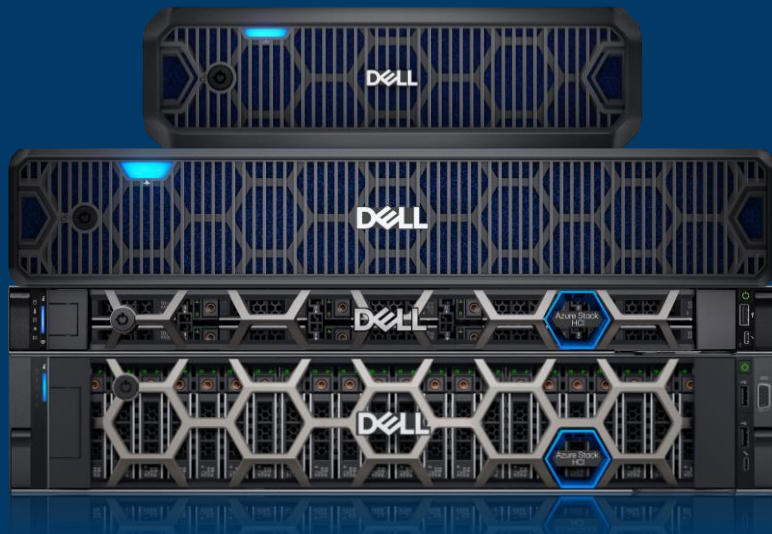
Dell Integrated System
for Microsoft Azure Local[1]

PREMIER SOLUTION

Dell APEX Cloud Platform
for Microsoft Azure

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Azure Local
replaces Azure Stack HCI

Lower-spec, lower-cost edge servers

Simpler, smaller hardware for light computing requirements.

NEW PREVIEW

Connected servers
(formerly Azure Stack HCI)

Dell Integrated System for Microsoft Azure Local
Dell APEX Cloud Platform for Microsoft Azure

✓ **GA**

Disconnected operations

Meet strict data residency regulations with a permanently disconnected option.

NEW PREVIEW

Existing customers of Azure Stack HCI will transition seamlessly to Azure Local with the next software update.

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Azure Local
Disconnected operations

Satisfy regulatory requirements by operating permanently disconnected from the cloud

Host backend Azure resource manager, portal, and services in local appliance VM

Subset of services available:

Portal	ARM	Local	Machines	Kubernetes	Registries

Key Vaults	Policy [2]	Copilot	Defender	AVD	Others

Azure Local
(connected)
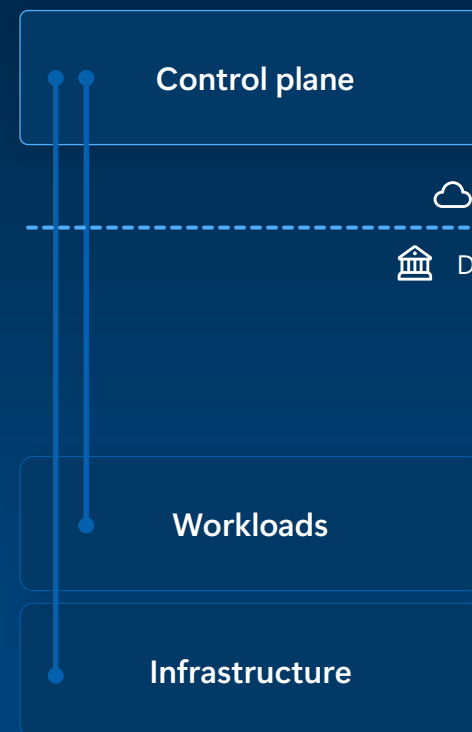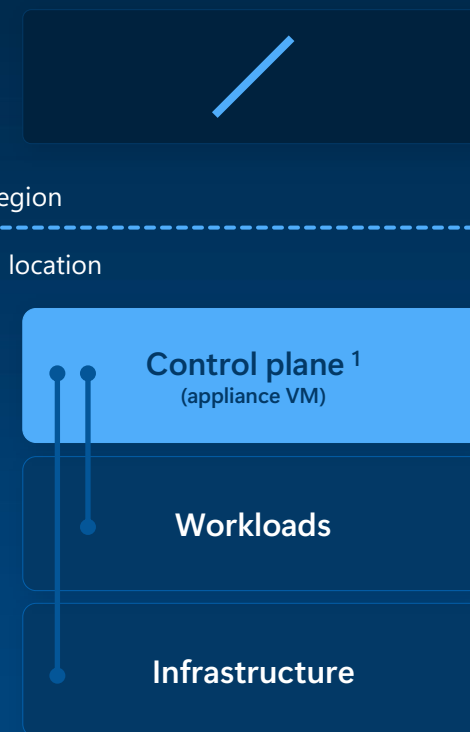
Control plane

☁ Cloud region

🏛 Distributed location

Azure Local
disconnected

Control plane [1]
(appliance VM)

Workloads

Workloads

Infrastructure

Infrastructure

D∈LL Technologies

Dell Integrated System for Microsoft Azure Local
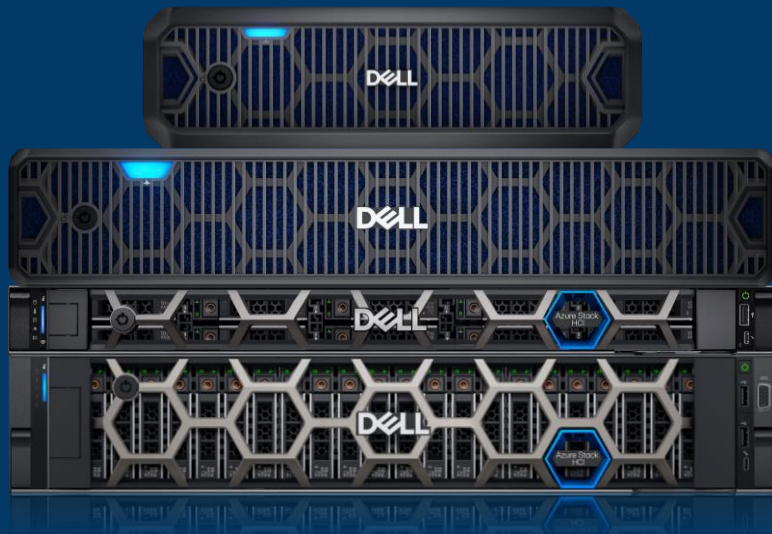
INTEGRATED SYSTEM

Dell Integrated System
for Microsoft Azure Local[1]

Reduced time to market
Preconfigured, factory-ready solution

Ease deployment and management
Microsoft-native experiences with Dell integration

Reliable upgrades
infrastructure compatibility checks and preparation for software updates and infrastructure upgrades

Regular infrastructure assessment
Validation 4 times per year

Single source procurement and support
Hardware and software backed by Dell Technologies experts

[1] AX-660 (1U) available Q2 CY2025

Dell Integrated System for Microsoft Azure Local
Management experiences

Microsoft-native deployment
Cloud-driven deployment experience for distributed infrastructure

Granular local management
Dell OpenManage Integration for Windows Admin Center

Centralized updates
Orchestrated, automated, multi-cluster lifecycle management from the Azure portal

Granular visibility
Multi-cluster telemetry and insights through Azure Monitor

Security recommendations
Enhanced security posture with Microsoft Defender for Cloud

Microsoft Azure

Home > Microsoft Defender for Cloud

Microsoft Defender for Cloud | Recommendations
Showing 4 subscriptions

↻ Refresh   ↓ Download CSV report   Open query   Governance report   Guides & Feedback   ⇄ Switch to classic view

Search by title / resource   Risk factors == All ✕   Risk level == All ✕   Recommendation maturity == All ✕   ⊽ Add filter

Title	Affected resources	Risk factors
Machines should have a vulnerability assessment solution	49/106 resources	
Storage accounts should restrict network access using virtual network rules	47/53 Storage accounts	Exposure
Machines should be configured securely (powered by MDVM)	19/21 resources	Exposure
Diagnostic logs in Key Vault should be enabled	15/29 Key vaults	
Azure Local machines should meet Secured-core requirements	9/11 Azure Local	
Vulnerabilities in security configuration on your Linux machines should be remediate...	6/21 resources	Exposure
Non-internet-facing virtual machines should be protected with network security gro...	6/14 Virtual machines	
Immutable (read-only) root filesystem should be enforced for containers	5/11 Kubernetes - Azure Arc	
Guest Attestation extension should be installed on supported Windows virtual machi...	5/5 Virtual machines	
Services should listen on allowed ports only	5/11 Kubernetes - Azure Arc	

General
- Overview
- Setup
- Recommendations
- Attack path analysis
- Security alerts
- Inventory
- Cloud Security Explorer
- Workbooks
- Community
- Diagnose and solve problems

Cloud Security
- Security posture
- Regulatory compliance
- Workload protections
- Data security
- Firewall Manager
- DevOps security

Dell APEX Cloud Platform for Microsoft Azure

Collaboratively engineered with Microsoft
Delivering the ultimate platform for Azure Local

First Premier Solution
Raising the bar for Azure hybrid solutions with a turnkey, purpose-built system powered by proven software IP

Comprehensive automation
Accelerated deployment, simplified, reliable ongoing operations, increasing administrator effectiveness

Continuous solution validation
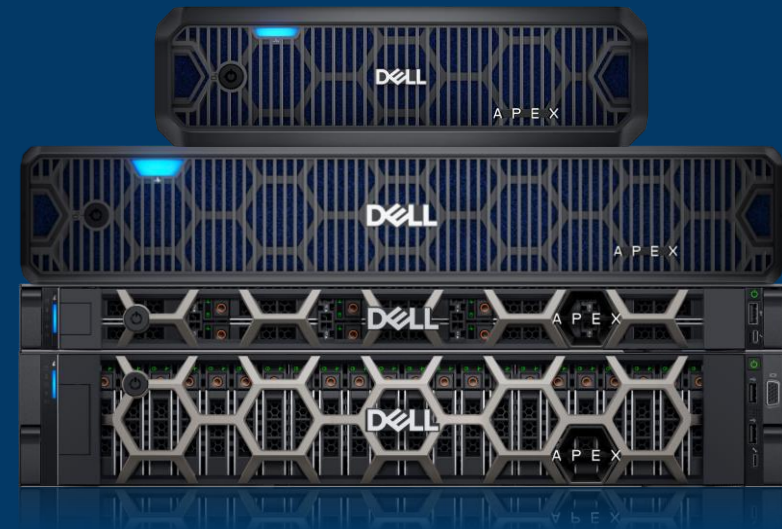Automated CI/CD pipelines battle-test each release, resulting in higher reliability, reduced testing costs and faster updates

PREMIER SOLUTION

Dell APEX Cloud Platform
for Microsoft Azure

Dell APEX Cloud Platform for Microsoft Azure
Unique management experiences

End-to-end Dell experience
From OS provisioning through to instance deployment
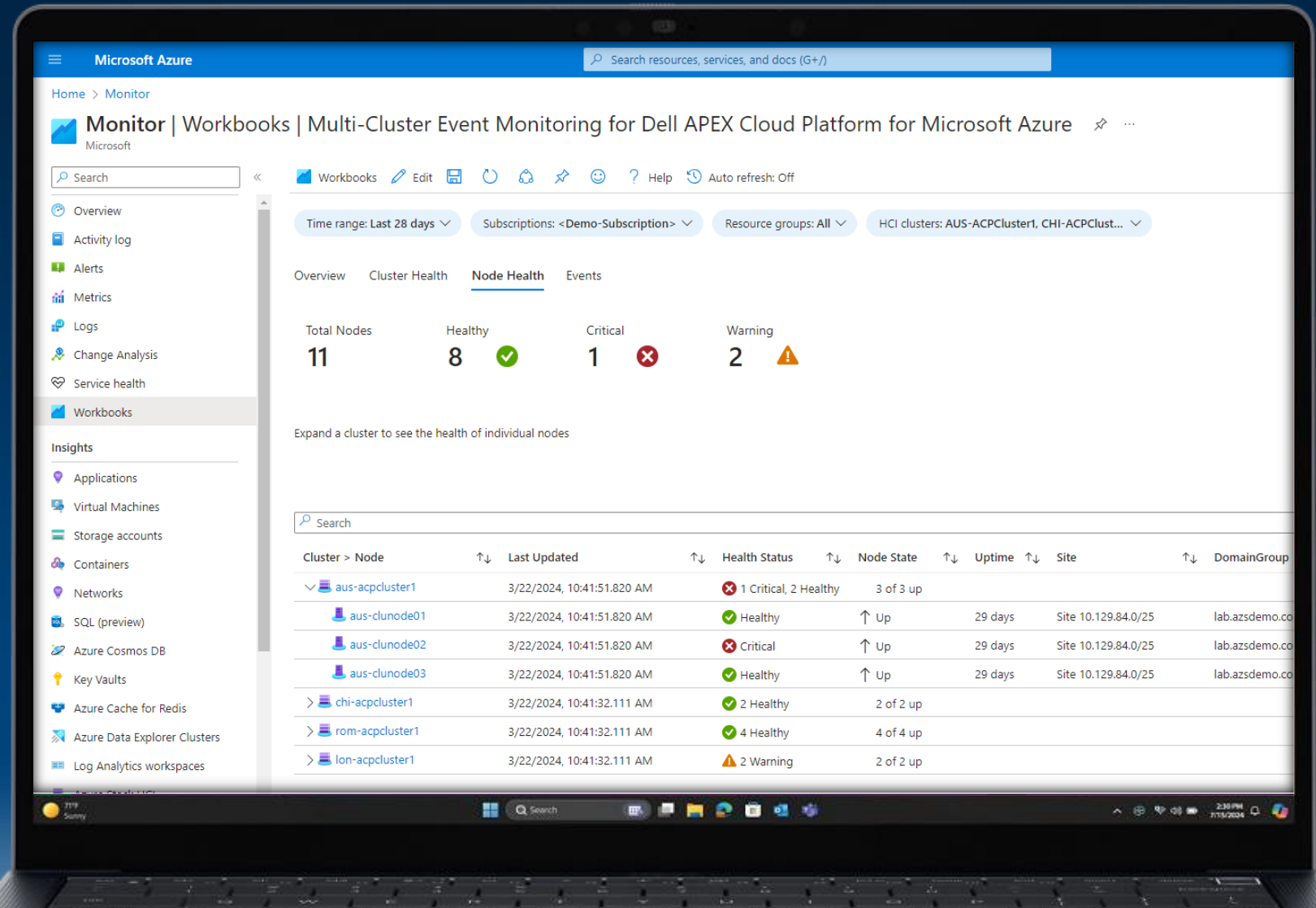
Automate, standardize
JSON configuration blueprints and REST APIs for automation at scale

Granular local management
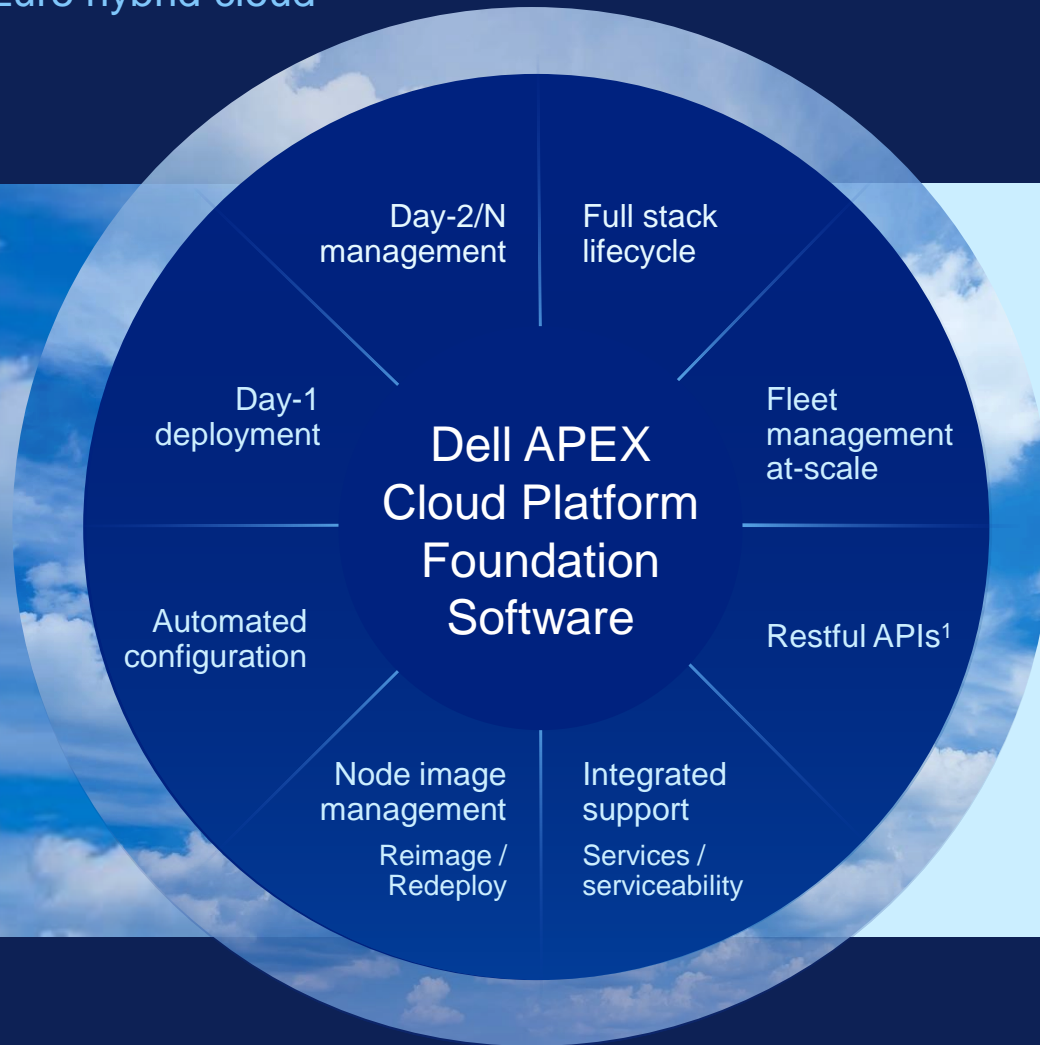Dell APEX Cloud Platform Manager Windows Admin Center extension

Event monitoring
Visualize hardware-level event data across instances in Azure Monitor

---

Microsoft Azure

Search resources, services, and docs (G+/)

Home > Monitor

Monitor | Workbooks | Multi-Cluster Event Monitoring for Dell APEX Cloud Platform for Microsoft Azure
Microsoft

Search

Workbooks   Edit   Help   Auto refresh: Off

- Overview
- Activity log
- Alerts
- Metrics
- Logs
- Change Analysis
- Service health
- Workbooks

Insights

- Applications
- Virtual Machines
- Storage accounts
- Containers
- Networks
- SQL (preview)
- Azure Cosmos DB
- Key Vaults
- Azure Cache for Redis
- Azure Data Explorer Clusters
- Log Analytics workspaces

Time range: Last 28 days | Subscriptions: <Demo-Subscription> | Resource groups: All | HCI clusters: AUS-ACPCluster1, CHI-ACPClust...

Overview   Cluster Health   Node Health   Events

Total Nodes	Healthy	Critical	Warning
11	8 ✅	1 ❌	2 ⚠️

Expand a cluster to see the health of individual nodes

Search

Cluster > Node	Last Updated	Health Status	Node State	Uptime	Site	DomainGroup
∨ aus-acpcluster1	3/22/2024, 10:41:51.820 AM	❌ 1 Critical, 2 Healthy	3 of 3 up			
aus-clunode01	3/22/2024, 10:41:51.820 AM	✅ Healthy	↑ Up	29 days	Site 10.129.84.0/25	lab.azsdemo.co
aus-clunode02	3/22/2024, 10:41:51.820 AM	❌ Critical	↑ Up	29 days	Site 10.129.84.0/25	lab.azsdemo.co
aus-clunode03	3/22/2024, 10:41:51.820 AM	✅ Healthy	↑ Up	29 days	Site 10.129.84.0/25	lab.azsdemo.co
> chi-acpcluster1	3/22/2024, 10:41:32.111 AM	✅ 2 Healthy	2 of 2 up			
> rom-acpcluster1	3/22/2024, 10:41:32.111 AM	✅ 4 Healthy	4 of 4 up			
> lon-acpcluster1	3/22/2024, 10:41:32.111 AM	⚠️ 2 Warning	2 of 2 up			

APEX Cloud Platform Foundation Software

Simplify Azure hybrid cloud

Day-2/N management

Full stack lifecycle

Day-1 deployment

Fleet management at-scale

Dell APEX Cloud Platform Foundation Software

Automated configuration

Restful APIs[1]

Node image management

Integrated support

Reimage / Redeploy

Services / serviceability

Accelerate time to value

88% Fewer deployment steps[2]

50% improvement in administrator effectiveness[3]

- Seamless automation through single interface
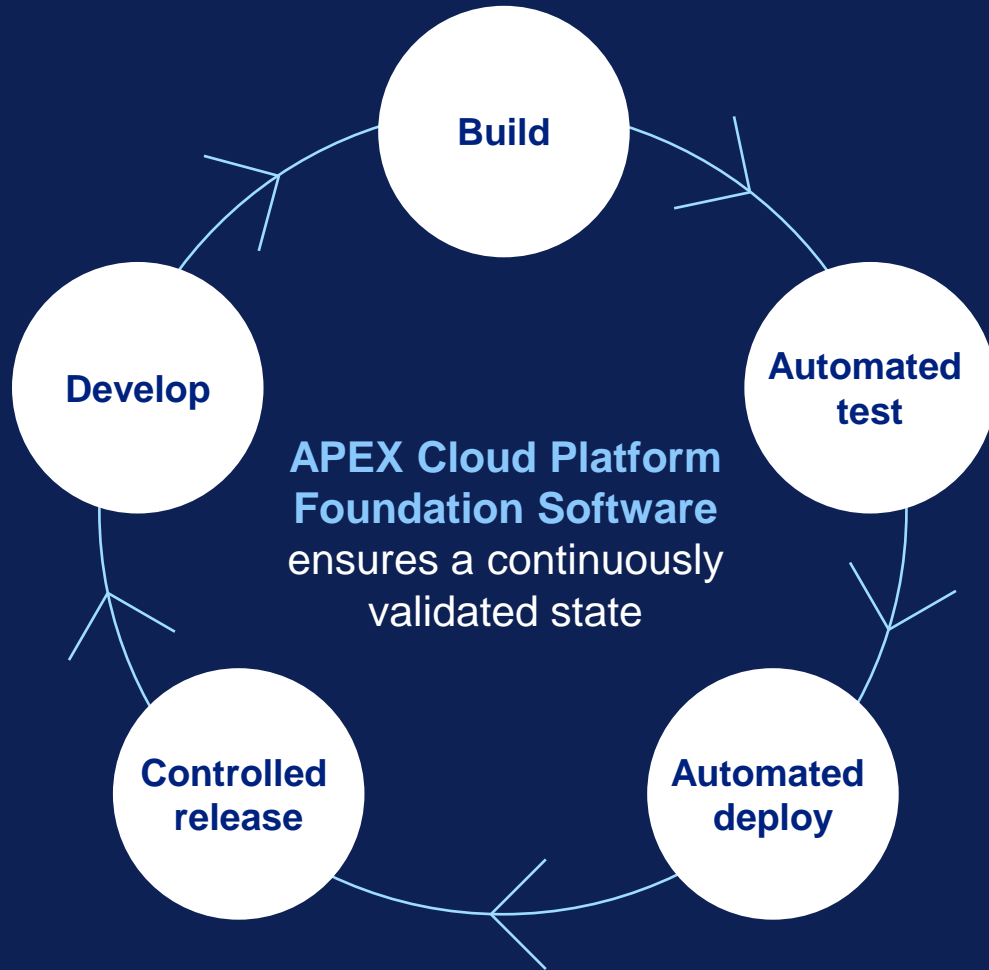
- Familiar tools to bridge the skills gap

Rapid availability of updates

Dell drives continuous collaboration with Microsoft

Build

Develop

Automated test

APEX Cloud Platform Foundation Software ensures a continuously validated state

Controlled release

Automated deploy

480,000

test hours
for every major release

85%

lower costs
of testing since deploying Dell APEX Cloud Platform for Microsoft[1]

Updates available in just four hours[2]

- Automated, non-disruptive full-stack upgrades

- Sequencing eliminates disruption and ensures predictable upgrades

- Keep up with the latest updates with continuously validated state assurance

- Collaboratively tested and validated using mature CI/CD practices

- Single interface for simplified management experience

1 ESG Economic Validation, sponsored by Dell Technologies and Microsoft "Analyzing the Economic Advantages of APEX Cloud Platform for Azure." May 2024. Actual results may vary.

2 Based on continuous joint CI/CD testing with Microsoft. Results may vary. September 2023

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Dell APEX Cloud Platform for Microsoft Azure
Flexibility to scale with Dell PowerFlex

Azure Local

Dell PowerFlex[1]

Software-defined
block storage
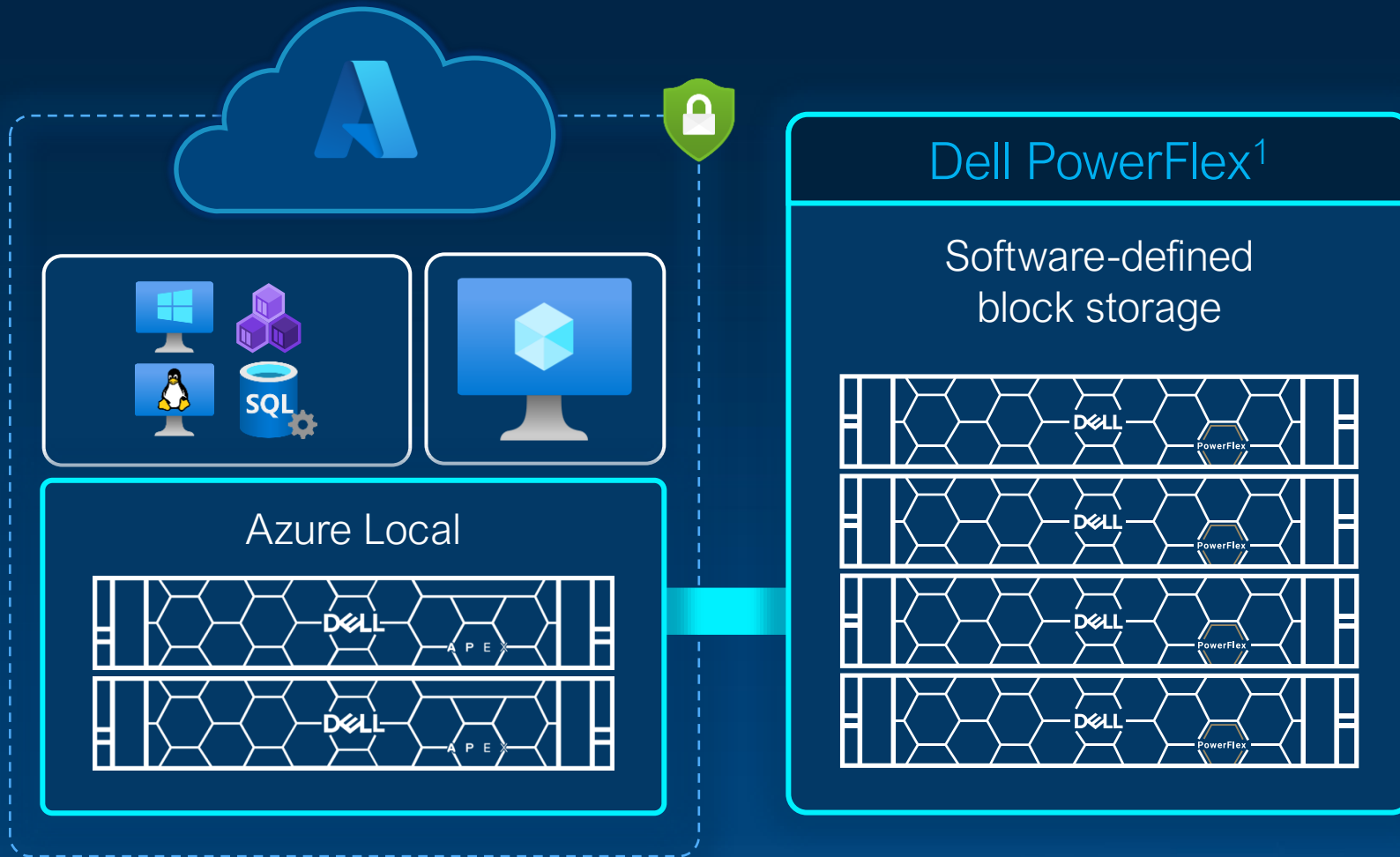
Independent scale
Grow compute and storage separately
across one, or multiple clusters

Support diverse workloads
Meet the performance needs of
mission-critical databases and more

Exceptional availability
99.9999% availability to minimize
downtime for key apps and workloads

Modular scale-out architecture
Seamlessly expand as data growth
accelerates

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Built on latest generation PowerEdge

Purpose-built
Scale AI, Edge & Performance Anywhere

Intelligent
Accomplish more with Automation & Improve Operational Efficiencies

Cyber resilient
Accelerate Zero Trust Adoption

Sustainable
Maximize power efficient performance

Unleash your AI advantage with PowerEdge

Up to **10x faster**[1] model generation

Up to **4.5x faster**[2] than prior generation GPU

Up to **50% more** cores

Up to **121%** Increased performance

Industry's most comprehensive accelerator-enabled Server Portfolio

1 Forrester. Dell PowerEdge servers with NVIDIA GPUs boost productivity TEI Spotlight, August 2022
2 NVIDIA. Full-Stack Innovation Fuels Highest **MLPerf** Inference 2.1 Results for NVIDIA, Sep 2022, URL.

D&LL Technologies

Azure Local solutions
Flexible, factory-ready configurations for distributed locations

	CPU-dense nodes in a small 1U footprint	Balanced CPU/Storage for demanding workloads	Flexible, ruggedized multi-node edge solution
	AX[1] / MC-660	AX / MC-760	AX / MC-4000x/45x0x
Form factor:	1U rackmount	2U rackmount	2U rack or flex mount, ruggedized multi-node chassis
OS Support:	AX: Azure Local & Windows Server | MC: Azure Local		
Use cases:	Compute-dense edge, ROBO and core use cases with moderate storage capacity	High performance app consolidation with balance of performance and capacity	Compute optimized for space-constrained, challenging edge and ROBO locations
CPU cores:	Intel 5th Gen Xeon Scalable - up to 128 per server		Intel 3rd Gen Xeon D - up to 20 per server
Memory:	Up to 8TB		Up to 512GB
Storage:	NVMe | SSD	NVMe | SSD | Hybrid	NVMe
Nvidia GPU[2]:	2 x A2 | L4	6 x A2 | 4 x L4 2 x A16 | A30 | A40 | L40 | L40S	2 x A2 | L4 1 x A30

[1] AX-660 (1U) available Q2 CY2025
[2] GPU support varies between AX and MC nodes, refer to spec sheets for confirmation: AX | MC

20

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Backed by Dell services experts[1]

Benefits of support services[1]

Single source of solution-level support for Microsoft solutions from Dell. Includes collaborative support for Microsoft Azure Local if required.

ProSupport
Next Business Day or 4-hour response

Minimum required: ProSupport Next Business Day

Comprehensive 24x7 proactive and predictive support for Dell hardware and software

ProSupport Plus
4-hour with Mission Critical support

Adds Mission Critical support, including a 6-hour repair objective for hardware issues and a Service Account Manager

62% Maximized workload availability
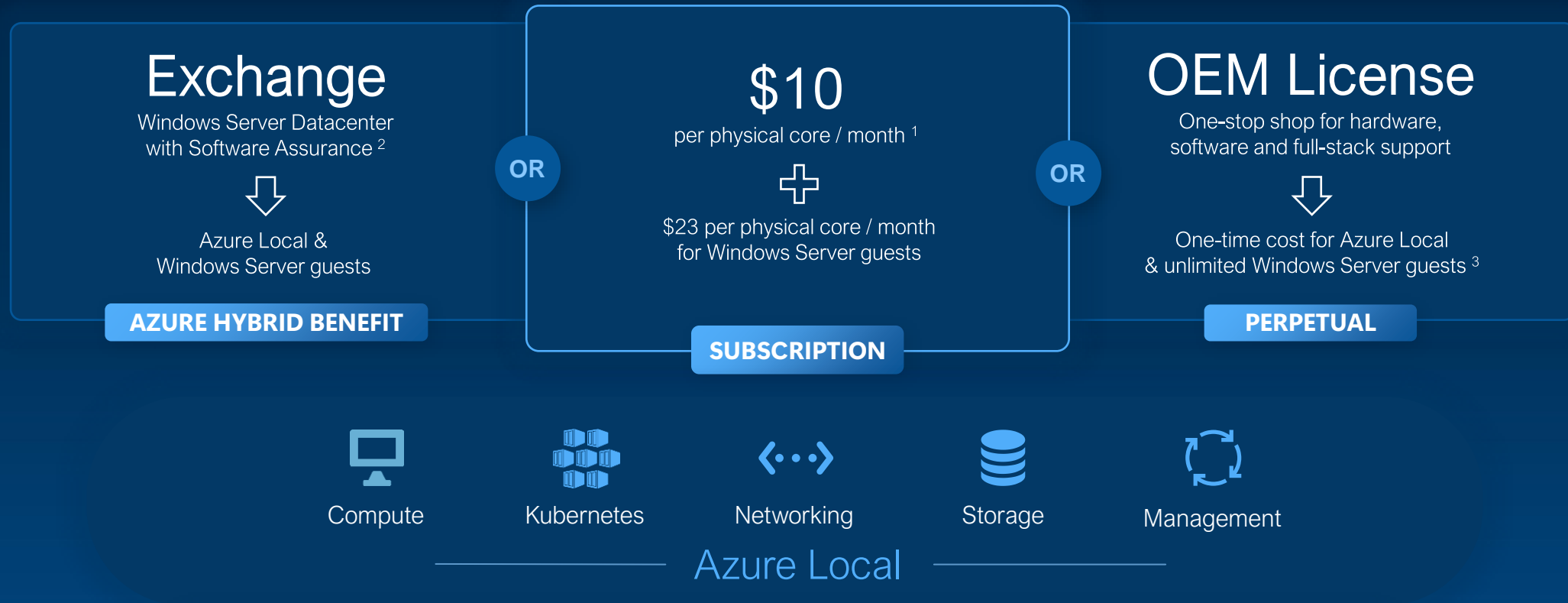
58% Increased IT staff productivity

54% Increased employee satisfaction with IT and support

[1]Source: A commissioned study conducted by Forrester Consulting on behalf of Dell Technologies Services, "IT Leaders Need IT Services To Achieve Business Outcomes", March 2023

DELL Technologies

Azure Local
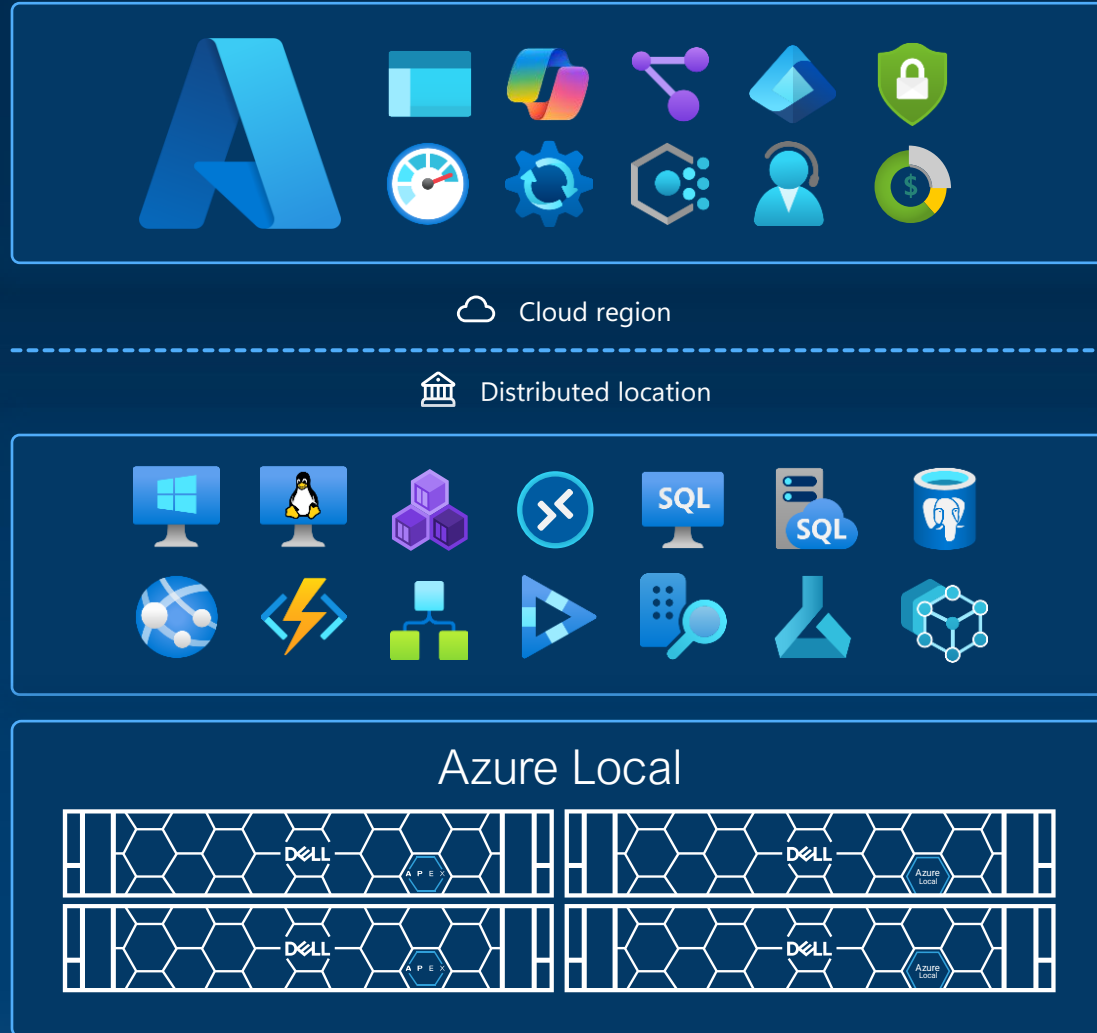## Packaging and pricing options

Exchange
Windows Server Datacenter
with Software Assurance [2]

⬇

Azure Local &
Windows Server guests

AZURE HYBRID BENEFIT

OR

$10
per physical core / month [1]

➕

$23 per physical core / month
for Windows Server guests

SUBSCRIPTION

OR

OEM License
One-stop shop for hardware,
software and full-stack support

⬇

One-time cost for Azure Local
& unlimited Windows Server guests [3]

PERPETUAL

Compute   Kubernetes   Networking   Storage   Management

Azure Local

Dell hardware and management
solutions available as CAPEX or OPEX

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Summary

Cloud region

Distributed location

Azure Local

Azure Local
Run virtual machines, containers, and select Azure services on a hyperconverged, distributed infrastructure solution in connected and disconnected environments.

Dell Integrated System for Azure Local
Preconfigured, tightly integrated hyperconverged infrastructure, certified and backed by Dell's engineering expertise.

Dell APEX Cloud Platform for Microsoft Azure
Collaboratively engineered, continuously validated Premier Solution, delivering the highest levels of automation and efficiency in a turnkey experience.

Industry-first disaggregated storage
Flexible, independent scaling of compute and storage, delivering the highest levels of availability and performance for your mission-critical workloads.