

# Passport to Multicloud Success

*With Dell Technologies*

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*Solution Architect*

**DELL** Technologies

# Agenda

Multicloud as the path to transformation

Passport to multicloud success with Dell APEX

- *Ground to Cloud*
- *Cloud to Ground*

# Projected application growth

**750  
million**

Apps built using modern  
development tools  
by 2025<sup>1</sup>

# The promise of containers & Kubernetes

## Speed



Boost environments  
rapidly

## Lightweight



Minimal resources  
needed

## Portability



Ability to move  
containers freely

## Transformation

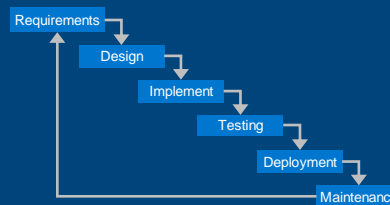


Micro-services &  
app modernization

# Emergence of cloud-native applications

## Traditional

### Dev and IT Operations



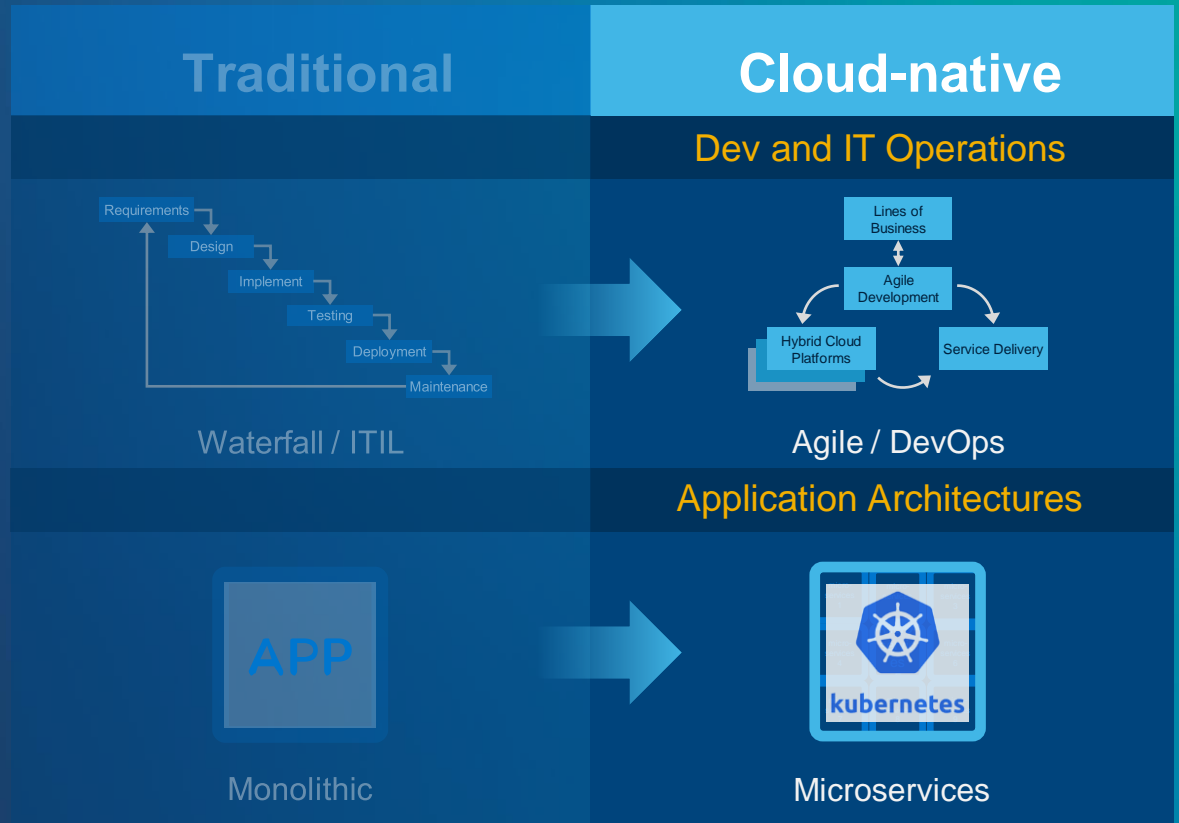
Waterfall / ITIL

### Application Architectures

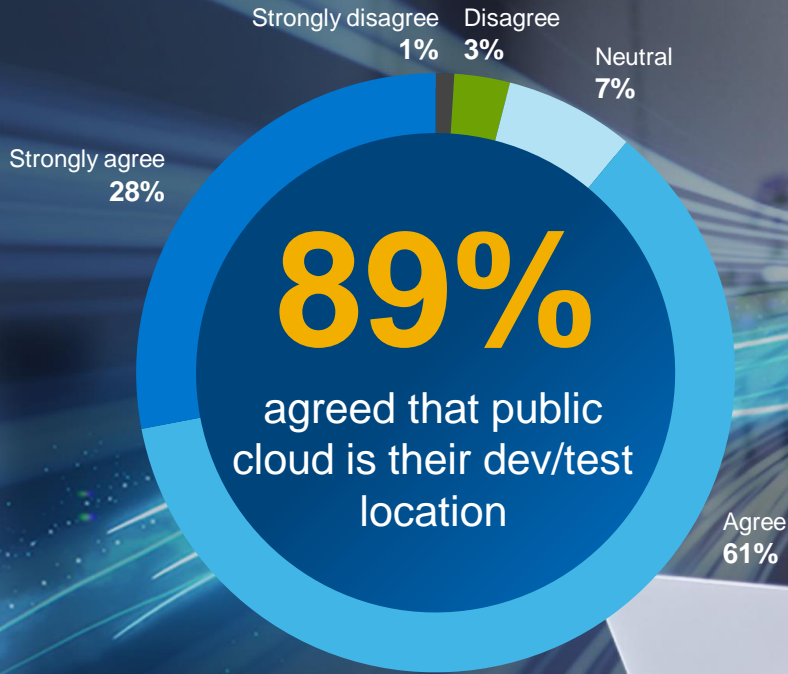


Monolithic

# Emergence of cloud-native applications



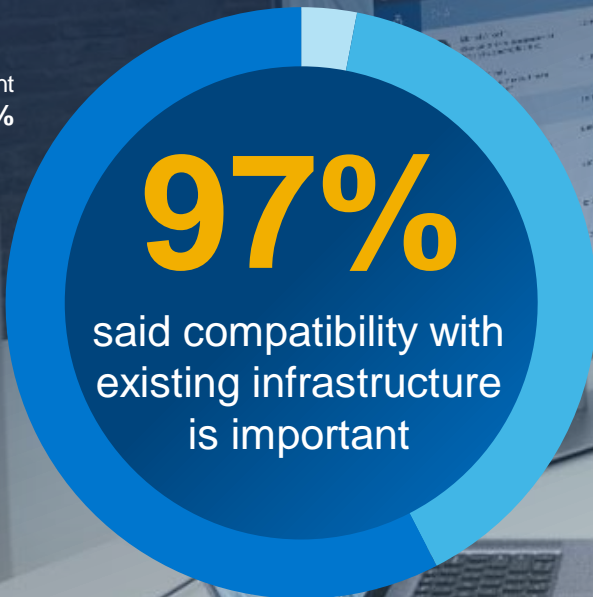
# Dev and testing happen in the public cloud



# The ability to run and manage containers across clouds is non-negotiable

Very important  
58%

Neutral  
3%



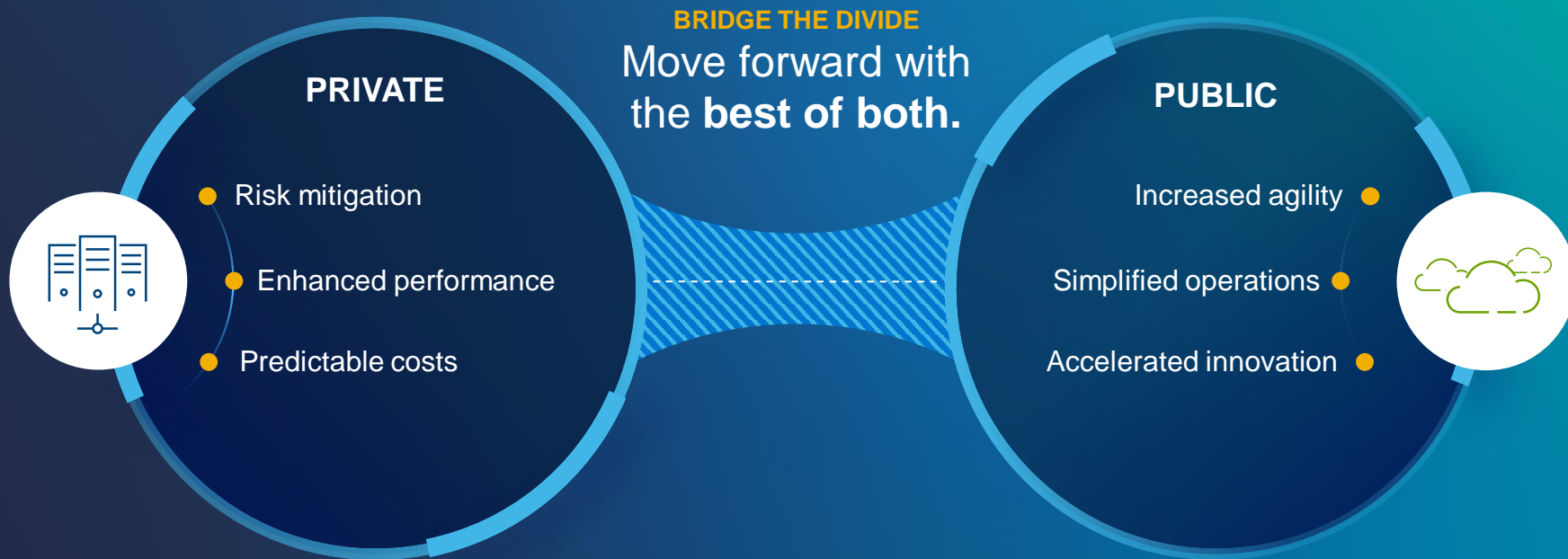
97%  
said compatibility with  
existing infrastructure  
is important

Important  
39%



# The new path to digital transformation

Organizations prefer this approach because they want the flexibility to choose the right path to best meet their objectives



# Multicloud adoption

VMware 2021

**73%** of enterprise technology decision-makers are standardizing on multi-cloud<sup>1</sup>



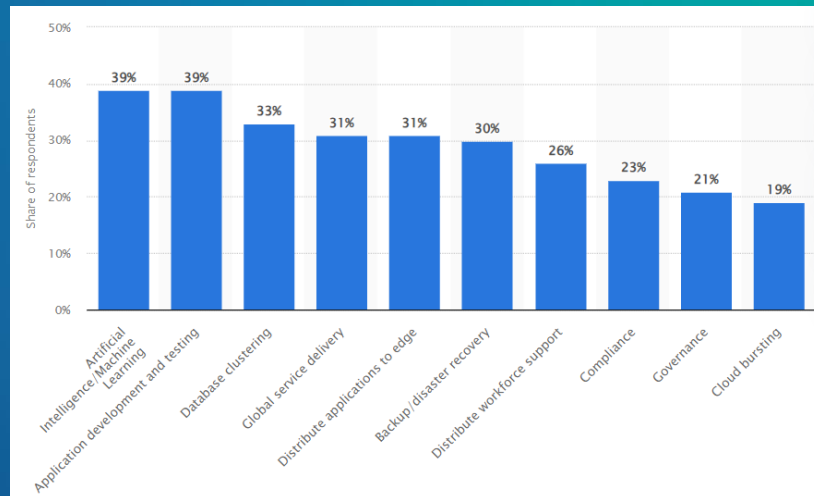
Today's enterprises want consistency, not complexity

91% of enterprise executives<sup>2</sup> are looking to improve "consistency across their public cloud environments."

VentureBeat2022

**Report: 77% of enterprises have adopted multicloud hosting**

Statista: Workload requirements leading to embracing multi-cloud 2023



Rackspace: Most popular public cloud combinations

16% use (or plan to use) AWS and Azure, but not Google Cloud  
 14% use (or plan to use) AWS and Google Cloud, but not Azure  
 12% use (or plan to use) Google Cloud and Azure, but not AWS  
 9% of respondents indicated use of (or intention to use) all three hyperscalers



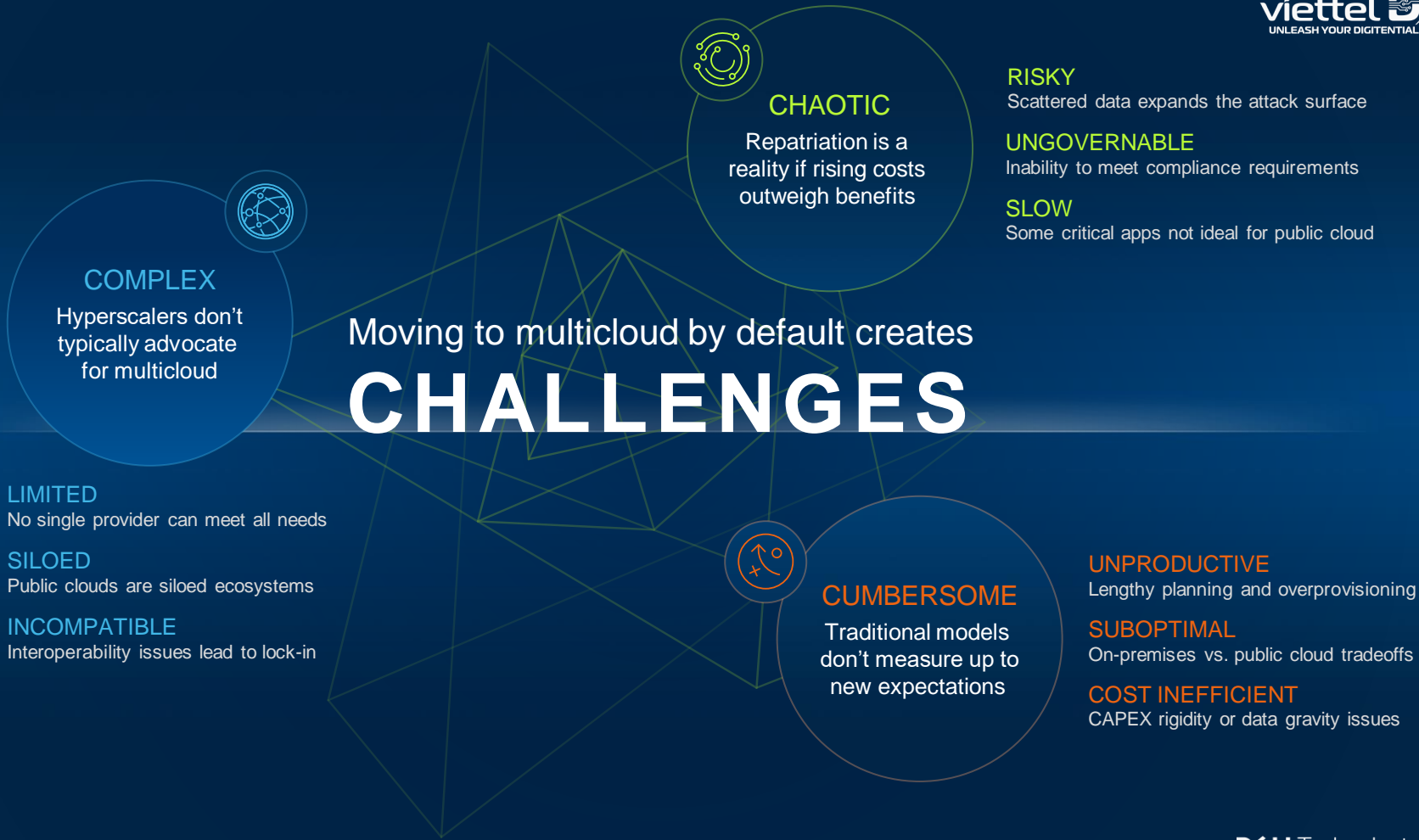
# It's a multcloud world

IT leaders want best-of-breed capabilities to achieve differentiated outcomes. They love the ease and agility of the cloud experience and expect it everywhere.

Public  
cloud

Data  
center

Edge  
locations



**COMPLEX**

Hyperscalers don't typically advocate for multicloud

**LIMITED**

No single provider can meet all needs

**SILOED**

Public clouds are siloed ecosystems

**INCOMPATIBLE**

Interoperability issues lead to lock-in

**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

**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

Moving to multicloud by default creates  
**CHALLENGES**

# DELLTechnologies | A P E X

MODERN CLOUD



MODERN CONSUMPTION



## SIMPLICITY

Take advantage of cloud experiences everywhere



## AGILITY

React quickly to capture new opportunities



## CONTROL

Minimize risk and maximize performance on your terms

# Broad portfolio of cloud and aaS offerings

**DELL**Technologies | **A P E X**



## STORAGE



## DATA PROTECTION



## COMPUTE

Public  
**CLOUD**  
AWS  
Microsoft Azure  
Google Cloud

Block storage	Backup	Containers
File storage	Backup target	Cloud platforms
Unified block & file storage	Data protection	High performance computing
Object storage	Cyber recovery	Machine learning operations
Cloud mobility	Snapshot management	PCs

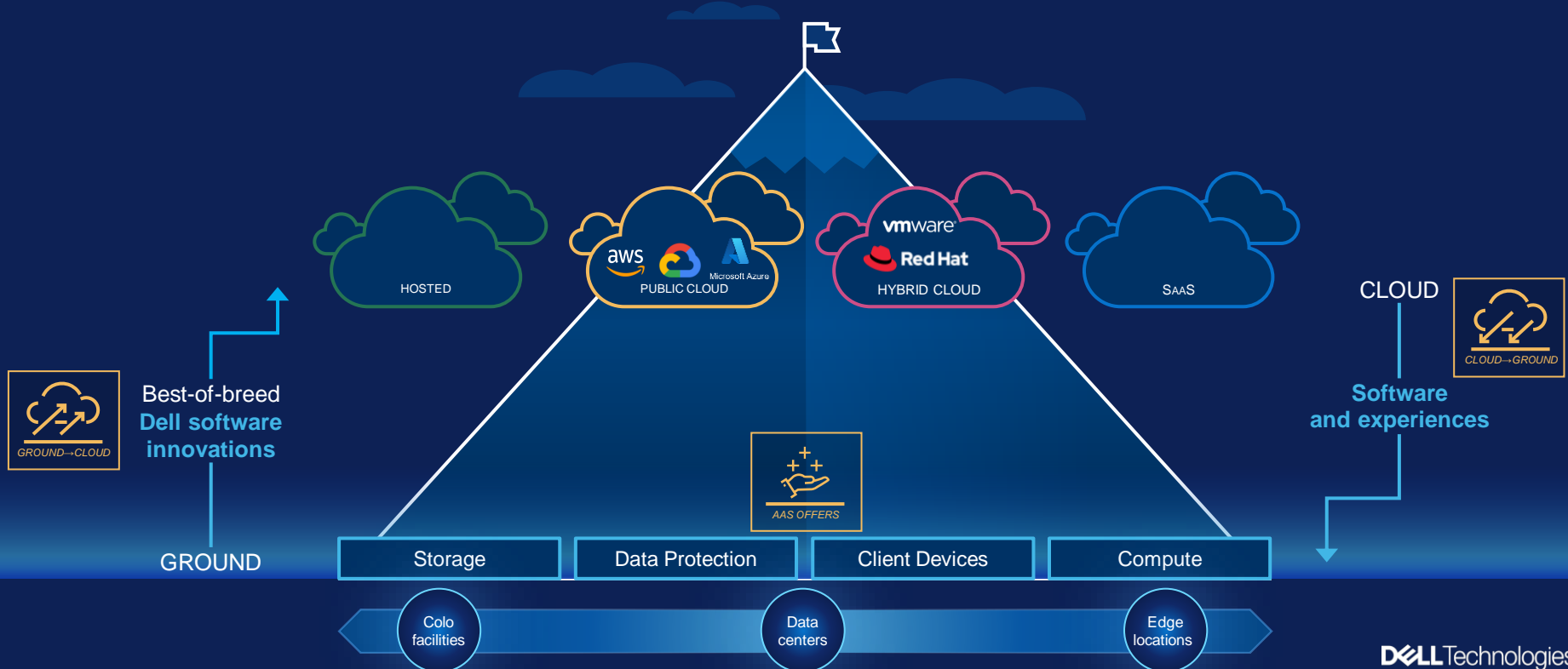
On-premises  
**GROUND**  
Data center  
Colocation  
Edge

Select the outcomes you need in the environment of your choice.

**ACTIVATE**

# DELLTechnologies | A P E X

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



# APEX Storage for Public Cloud



# APEX Storage for Public Cloud



**Enterprise Class**

**Extreme Flexibility**

**Enhanced Productivity**

# APEX Block Storage for AWS and Microsoft Azure



**ENTERPRISE BLOCK STORAGE**

**Dell Technologies – A 4x Leader**  
in a Gartner® Magic Quadrant™<sup>1</sup>

**300%**

More performance per dollar<sup>2</sup>

- |                                     |                        |
|-------------------------------------|------------------------|
| Extreme performance and scalability | Seamless data mobility |
| Flexible deployments                | Multi-AZ durability    |

**Use cases**

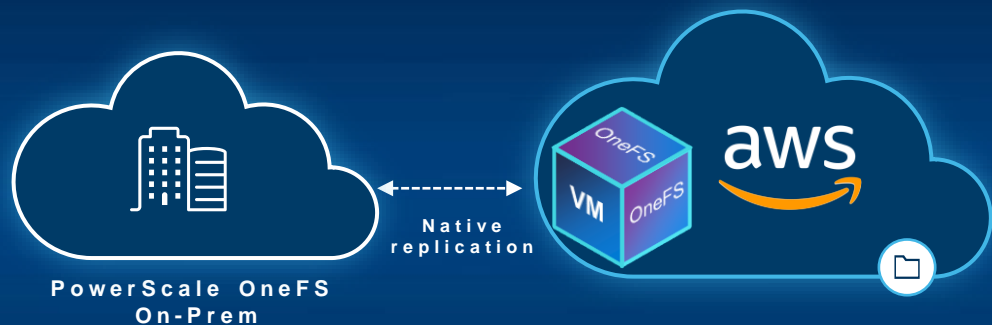
- |   |  |   |   |   |
|---|--|---|---|---|
|  Databases |  Containers |  Analytics |  General compute |  Consolidation |
|---|--|---|---|---|

1) Dell Technologies has been positioned as a Leader in 2022 Gartner Magic Quadrant Primary Storage report. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally, and MAGIC QUADRANT is a trademark of Gartner, Inc. and/or its affiliates and are used herein with permission. All rights reserved.

2) Based on Dell's internal price comparison of APEX Block Storage on EBS gp3 vs. AWS native EBS io2 specs for 500 TB provisioned capacity.

# APEX File Storage for AWS

Simplify your cloud experience with file storage that you know and trust



Up to **4.3x**<sup>1</sup>

Better writes performance than  
the closest competitor

Seamless data mobility to  
the cloud

Same user experience  
as on-prem

OneFS enterprise  
features & security

Scale-out architecture for  
performance and scale

**#1 NAS**<sup>2</sup>

Dell Technologies:  
Gartner® Magic Quadrant™  
**Leader**<sup>3</sup>

## Designed for



Hybrid Cloud



File Shares



Directories



Video



Archive



Cloud Burst



Media &  
Entertainment



Life Sciences



Artificial  
Intelligence



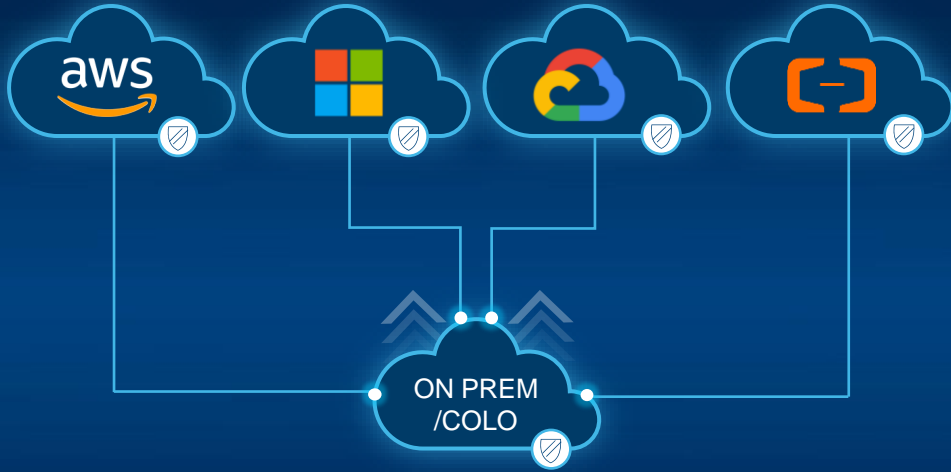
Analytics

<sup>1</sup> When comparing APEX File Storage for AWS with NetApp Cloud Volumes ONTAP HA configuration per server cluster; May 2023 Prowess White Paper. [LINK](#)

<sup>2</sup> Dell is ranked #1 globally in NAS solutions for external OEM storage in Q4/CY23 per IDC's Quarterly Enterprise Storage Systems Tracker, 2022Q4

<sup>3</sup> APEX File Storage for AWS is based on Dell's file storage solution. Dell Technologies has been positioned as a Leader in the 2022 Gartner® Magic Quadrant™ for Distributed File Systems and Object Storage for the 7th consecutive year. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally, and MAGIC QUADRANT is a registered trademark of Gartner, Inc. and/or its affiliates and are used herein with permission. All rights reserved.

# APEX Protection Storage for Public Cloud



## ENTERPRISE DATA PROTECTION

**#1**  
in Data Protection  
Appliances and Software<sup>1</sup>

**17+ EB**

of data protected in the cloud<sup>2</sup>

Over **1700**

Companies trust Dell Technologies to protect their data in the cloud<sup>3</sup>

Deploy directly from cloud marketplaces

Broad backup application ecosystem

Ensure data immutability

Consistent user experience

## Use cases

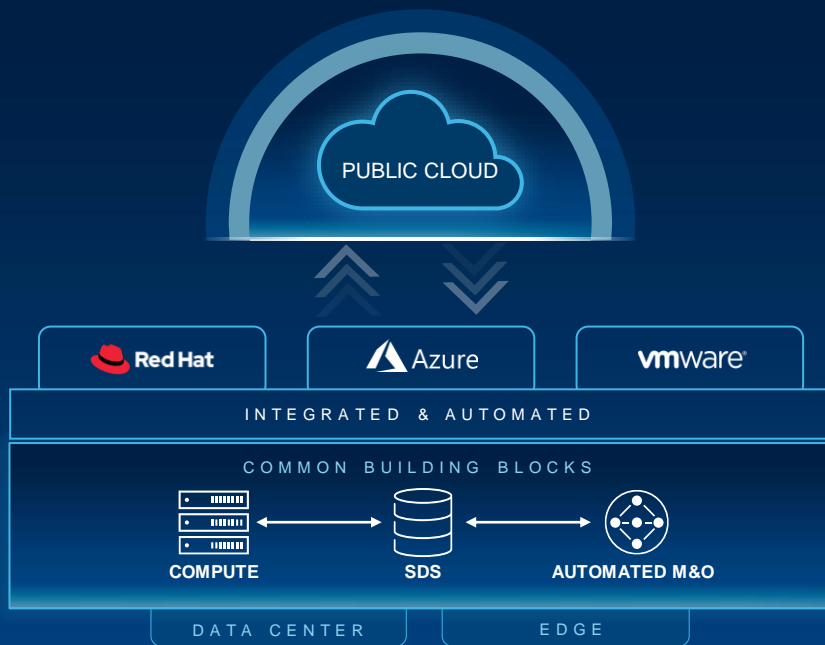


1. Based on combined revenue from the DC 1Q23 Purpose-Built Backup Appliance (PBBA) Tracker, with select Storage Software segments from the 1Q23 Storage Software and Cloud Services Qview  
 2. Based on Dell Technologies analysis, February 2023  
 3. Based on Dell Technologies analysis, February 2023

# APEX Cloud Platforms

# APEX Cloud Platforms

Empower unrestrained innovation



Choice

Extend and optimize your choice of cloud ecosystem on-premises

Consistency

Achieve operational excellence with common platforms and automation

Commonality

Accelerate productivity with familiar operational and developer experiences

Compatibility

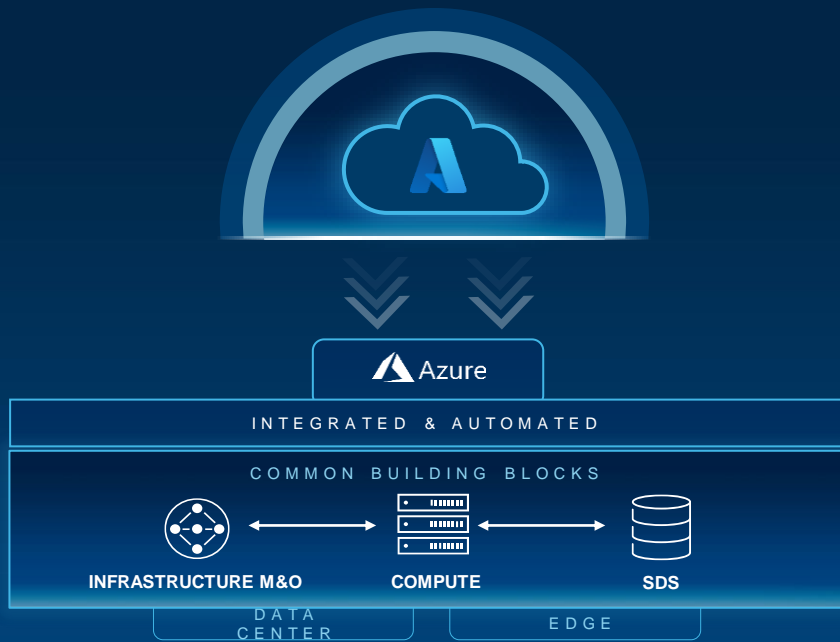
Flexibly extend data and applications across multicloud environments

Control

Enforce consistent cloud governance and compliance on-premises

CHOICE | COMMONALITY | CONSISTENCY | COMPATIBILITY | CONTROL

# APEX Cloud Platform for Microsoft Azure



**1<sup>st</sup>** only cloud platform collaboratively built to optimize Azure hybrid cloud experience



Expanding the **35-year** Dell partnership



Accelerate app modernization with Arc-enabled services on-prem

## Bridge the Cloud Divide

Deliver consistent Azure operations - everywhere

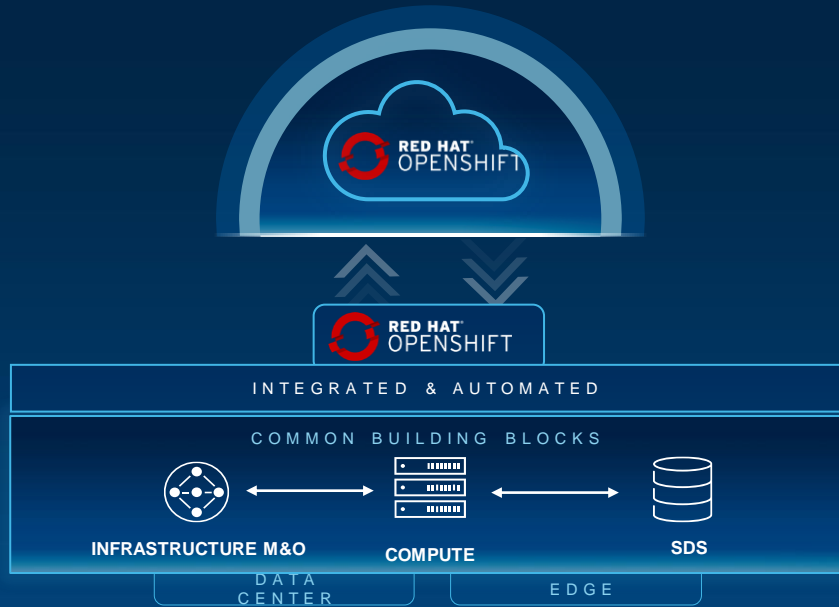
## Unleash Application Value

Accelerate productivity with familiar developer experiences

## Harden Security and Governance

Enforce consistent Azure management and governance from cloud to edge

# APEX Cloud Platform for Red Hat OpenShift



# 1

Designed collaboratively to optimize and extend the leading Kubernetes distribution



Extending our 24-year history as a Red Hat Premier Global Partner



Ideal for workloads performance-intensive workloads

## Bridge the Cloud Divide

Accelerate time to value with a purpose-built platform

## Unleash Application Value

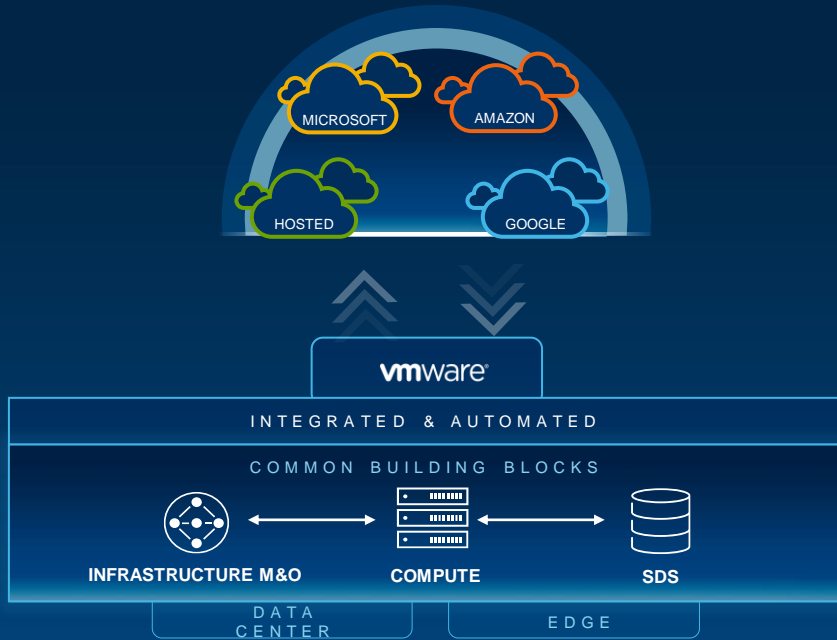
Seamlessly extend applications and data across the IT landscape

## Harden Security and Governance

Enhance control with multi-layer security and compliance capabilities



# APEX Cloud Platform for VMware



Broadest VMware multicloud deployment options



Expanding APEX partnership with VMware



Extend multicloud app modernization with enterprise SDS and Tanzu

## Bridge the Cloud Divide

Deploy ideal VMware multicloud to align with your needs

## Unleash Application Value

VMs and K8s running on-prem and public cloud

## Harden Security and Governance

Standardized layers of security across hardware, hypervisor, and multicloud

# Dell APEX – Customer success stories



## Customer:

One of the world's top 4 leading accounting firms, 300K employees worldwide



## Challenges:

- Save CapEx and Scale
- Support a New Business Venture Improve
- Performance



## Solutions:

- Dell APEX Private Cloud
- Dell APEX Data Storage Services



## Benefits:

- OpEx Consumption Model
- Built-in Lifecycle Automation Capabilities
- Faster Network Response



## Customer:

One of the world's biggest multinational energy solutions company based in US



## Challenges:

- Establish 3 new business lines which requires new IT infrastructure solutions
- Need speed and stability
- Save CapEx



## Solutions:

- Dell APEX Custom Solution



## Benefits:

- Save capital with APEX, up to 30% as business as usual for 3 new organizations
- Gain agility and stability



## Customer:

A nutrition company in U.S, develops replacement shakes and dietary supplements, operates in 90++ countries



## Challenges:

- Limited CapEx budget
- Consolidate infrastructure to reduce data center footprint and associated costs



## Solutions:

- Dell APEX Flex on Demand



## Benefits:

- Has the on-premises cloud-like experience and multicloud capability
- Preserves capital to reinvest in lines of business, expanding supply chain and distribution channels



## Customer:

A big copper and gold mining company in South East Asia



## Challenges:

- Save CapEx
- Struggling in managing multiple cloud environment



## Solutions:

- Dell APEX Cloud Platform



## Benefits:

- OpEx Consumption Model
- Reduce human resource with built-in Lifecycle Automation Capabilities
- Multicloud capability



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