Modernize and Transform IT with Converged and Hyperconverged Infrastructure

Jeremy Tan
Sales Manager, Cloud and Converged Systems, Singapore
Dell Technologies
Changing needs of workloads are driving cloud strategies
Cloud strategies must match the needs of each workload

<table>
<thead>
<tr>
<th>Existing Workloads</th>
<th>Cloud Native Workloads</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Modernize</strong></td>
<td><strong>Revert to Cloud</strong></td>
</tr>
<tr>
<td>Optimize workloads using modern infrastructure</td>
<td>Move to SaaS version of packaged application</td>
</tr>
<tr>
<td><strong>Utilize Hybrid Infrastructure</strong></td>
<td><strong>Develop for Cloud</strong></td>
</tr>
<tr>
<td>Shift portions of multi-tier workload to public cloud</td>
<td>New cloud native workload deployed on-prem &amp; IaaS</td>
</tr>
<tr>
<td><strong>Refactor</strong></td>
<td><strong>Replace</strong></td>
</tr>
<tr>
<td>Modify workload, new environment, on-prem or in the cloud</td>
<td>Move to SaaS version of packaged application</td>
</tr>
</tbody>
</table>
Introducing the Dell Technologies Cloud

#1 Global Provider of Cloud Systems Management Software

#1 Globally in Cloud IT Infrastructure Revenue

1 IDC Worldwide Quarterly Cloud System Management Software Market Shares September 2018 – Doc #US44282218
2 DC Worldwide Quarterly Cloud IT Infrastructure Tracker, March 2019
Dell Technologies Cloud

The complete portfolio for the Hybrid Cloud Journey

Consistent Value Added Services

Security Services/Consulting

Cloud-Enabled Infrastructure - Consumption

Consistent Operations • Automation • Across Clouds

Private Cloud

Public Cloud

Consistent Infrastructure

VM Infrastructure • Container Infrastructure • Systems Infrastructure

Consistency

VISIBILITY

OPERATIONS

SECURITY

GOVERNANCE

CONTAINER MANAGEMENT

VISIBILITY

OPERATIONS

CONTAINER MANAGEMENT

VM Infrastructure

Container Infrastructure

Systems Infrastructure

VMware Cloud on Dell EMC

HCI (VxRail)

DT Validated Compute, Networking & Storage
# VXRAIL

**FASTEST GROWING HCI SYSTEM**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Revenue</td>
<td>$1B</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>178%</td>
</tr>
<tr>
<td># of Customers</td>
<td>4,700+</td>
</tr>
</tbody>
</table>

1. For Q4 2019 year-over-year among TOP 10 product brands. IDC Converged Systems Tracker, Q4-2018, April 2019.
2. On an orders basis.

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VMware Cloud Foundation on Dell EMC VxRail

Flagship Dell Technologies Cloud Platform offering

Only
VMware Cloud Foundation infrastructure offering with full stack integration*

Only
Jointly engineered integrated HCI system with VMware Cloud Foundation

"The integration between VxRail Hyperconverged appliances and Dell EMC/VMware Cloud stack (like VMware Cloud Foundation) as a set of integrated software, provides a roadmap for GraceKennedy to optimally run our business-critical applications in private and public environments."

- Nicole Case, Chief Information Officer, GraceKennedy Financial Group

Learn more DellEMC.com/VxRail

*Based on internal analysis in April 2019
Introducing VMware Cloud on Dell EMC

Dell Technologies Cloud Data Center-as-a-Service

- Cloud infrastructure delivered as-a-service on-premises
- Co-engineered and delivered by Dell Technologies; ongoing service fully managed by VMware
- Hybrid control plane to provision and monitor resources
- Built on VxRail – Dell EMC’s enterprise-grade cloud platform
- Monthly subscription model
Making it real – Dell EMC’s HCI portfolio
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<table>
<thead>
<tr>
<th>VxRail</th>
<th>VxFlex</th>
<th>Ecosystem alliances</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New</strong></td>
<td><strong>New</strong></td>
<td>Microsoft &amp; Nutanix</td>
</tr>
<tr>
<td>[Image of VxRail]</td>
<td>[Image of VxFlex]</td>
<td>Cloud for Microsoft</td>
</tr>
<tr>
<td></td>
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<td>Azure Stack</td>
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<td></td>
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<td>Consistent Azure</td>
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<tr>
<td></td>
<td></td>
<td>experience on-premises</td>
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<td></td>
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<td>XC Series &amp; XC Core</td>
</tr>
<tr>
<td></td>
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<td>Based on Nutanix</td>
</tr>
</tbody>
</table>

- Jointly engineered, synchronous full stack integration from edge to core to cloud
- Most flexible and resilient appliances and engineered rack-scale systems
- Fully integrated racks and appliances
- Ready Node building blocks

<table>
<thead>
<tr>
<th>vSAN Ready Nodes</th>
<th>VxFlex Ready Nodes</th>
<th>Azure Stack HCI Ready Nodes*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-validated &amp; optimized for vSAN</td>
<td>Pre-validated &amp; optimized for VxFlex OS</td>
<td>Pre-validated &amp; optimized for WSSD</td>
</tr>
</tbody>
</table>

* A component of Dell EMC Solutions for Microsoft Azure Stack HCI

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Introducing VxFlex family – flexibility unleashed
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VxFlex OS
Scale-out block storage service to create a scale-out Server SAN or HCI infrastructure

VxFlex Ready Node
Scalable, reliable and highly configurable HCI building block

VxFlex appliance
Simplified, economic form factor

VxFlex integrated rack
The most flexible HCI rack-scale system

VxFlex OS GUI, iDRAC, OME, AMS
Manage and monitor node clusters

VxFlex Manager
Comprehensive ITOM software
Converged Infrastructure
VxBlock for Mission Critical Cloud

~ 4,500 systems installed worldwide

SAMPLE HIGH VALUE WORKLOADS

ORACLE, Microsoft, SQL Server, VMware, SAP, Epic

PROVEN LEADERSHIP

VMware, DELL EMC, Cisco
DELL EMC

VxBlock 1000

Turnkey system for high value workload consolidation built on powerful Dell EMC storage and data protection

<table>
<thead>
<tr>
<th>HIGH VALUE WORKLOADS</th>
<th>CLOUD OPERATIONS</th>
<th>LIFE CYCLE MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consolidate, optimize &amp; protect</td>
<td>Automate &amp; proactively manage</td>
<td>Simplify &amp; lower risk</td>
</tr>
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</table>

Powered by Intel® Xeon® Scalable Processors
A fast and trusted way to modernize IT

**Flexibility**
- Choose the right mix of resources and data services based on application needs

**Efficiency**
- Maximize utilization and eliminate stranded capacity with flexible resource pools

**Choice**
- Select from industry-leading Dell EMC storage and data protection technology
Automate & proactively manage

66% more efficient IT operations*


Automate the entire stack with VxBlock Central and VMware vRealize

Awareness
• Monitors overall status of system
• Real-time alerts simplify troubleshooting & lifecycle management

Automation
• Engineered workflow for vRealize Orchestrator
• Workflow automation reduces daily tasks

Analytics
• Delivers system metrics to vRealize Operations (vROps)
• Proactive performance and capacity management
Simplify & lower risk with life-cycle management

Turnkey infrastructure created, managed, supported & sustained as one

- Engineered: Engineered according to your needs
- Manufactured: Built in ISO-certified factory
- Managed: Centralized management
- Supported: Single call support
- Sustained: Ongoing certified code upgrades

6x Faster upgrades and patches*

*Compared to traditional 3-tier system management. Source: ESG sponsored by Dell EMC. "Simplifying IT Infrastructure Upgrades with Dell EMC Converged Infrastructure Systems and VxRail Intelligent Operations Software, 2018." Results may vary.

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Applications are faster with Dell EMC VxRail. That means we can help people make reservations, check in and pay for services quicker.

- Chris Stanley, IT Manager
  Celtic Manor Resort

By using the VxBlock System to transform our data center, we now have the ability to deploy solutions in hours as opposed to weeks.

- Ryan Deppe, Network Operations Supervisor
  Cianbro Corporation

The system manages storage and capacity itself, which allows my team to focus on more strategic activities. We’re delivering better value.

- Paul Bunker, Business Systems & ICT
  Melbourne Airport

*Source: https://www.dell EMC.com/en-us/converged-infrastructure/customers/index.htm#scroll=off&customer=none*