The Second Generation of Data Center as a Service

VMware Cloud on Dell EMC

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Cloud Platform Business Unit, VMware

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Modern Business will run on Modern Applications
Point Cloud Tools and Silos Impact Agility and Economics
The Dell EMC and VMware Partnership

• VMware is the industry leader for compute, storage, and networking infrastructure software in the data center.

• VMware infrastructure runs over 25 Million workloads on Dell EMC solutions today.

• Dell EMC VxRail is the only fully integrated, pre-configured, and pre-tested VMware hyper-converged appliance on the market.

• Dell EMC Enterprise Class services enable an organization for end-to-end data protection and enterprise integration.
The Key Role of On-Premises Infrastructure

Data Sovereignty

- Regulatory and privacy requirements
- Sensitive data located on-premises
- Custom security standards
- Need to prove compliance to auditors

Workload / Data Proximity

- Low data latency requirements
- Workloads with local data processing
- Data Center workloads tightly integrated with backend systems

Command and Control

- Keep control over critical workloads
- Leverage existing IT investments
- Maximize value of existing talent and processes
VMware Cloud on Dell EMC

Delivering the Cloud Model to the Data Center

- Fully managed infrastructure solution for compute, storage, and networking.
- Managed for tight security requirements, through automated patching and system maintenance.
- Operated and controlled through a hybrid Cloud Control Plane.
- Operated in a cloud model, delivering subscription financials and on-demand services.
Advantages of VMware Cloud on Dell EMC

Cloud Advantages

- **Increased Agility**
  Self service provisioning and elasticity of resources

- **Simplified Operations**
  Offload management and automated version mgmt.

- **Accelerated Innovation**
  Increased developer velocity and access cloud services

On Premises Advantages

- **Mitigate Risks**
  Comply with data residency and regulatory requirements

- **Controlled Costs**
  Predictable cost model and resource transparency

- **Increased Performance**
  Low data latency and high performance networking
Introducing the Second Generation of VMware Cloud on Dell EMC

Cloud infrastructure delivered as-a-service on-premises

Co-engineered and delivered by Dell Technologies; ongoing service fully managed by VMware

VMware SDDC including compute, storage and networking

Built on VxRail – Dell EMC’s enterprise-grade cloud platform

Hybrid control plane to provision and monitor resources

Monthly subscription model
How does VMware Cloud on Dell EMC work?
Cloud Consumption Model Delivered as-a-service

- **HW + SW**
  - VMware branded service
  - VMware takes first level support call from customer
  - Operated by VMware cloud SREs

- **Services**
  - Dell EMC supply chain
  - HW + SW rack & Stack
  - Shipping and on-site activation

- **Support**
  - VMware support
  - Dell EMC support with 4-hour on-site break fix service

All inclusive Service - HW, SW, Support, and Managed Services

- ✓ VMware branded service
- ✓ Freedom from asset ownership
- ✓ Jointly operated with the HW partner
- ✓ Subscription based pricing
- ✓ VMware is the “single point of contact”
- ✓ Choice of payment terms
Use Cases

Data Center Modernization
Streamlined Operations
Switch from CAPEX to OPEX
Hardware Refresh

Data Latency and Sovereignty
Low Data Latency Requirements
Data Sovereignty Requirements
Data Governance and Security

Application Modernization
Development Agility
Kubernetes and Modern Applications
Traditional Application Deployments
Unique Capabilities of the Second Generation of VMware Cloud on Dell EMC

Capacity and Power for the most Advanced Workloads

Integrated Back Up and Disaster Recovery with Industry Leading Solutions

Optimized for the Most Advanced and Distributed VDI Workloads

Automatic Expansion of Capacity as Customer Needs Grow
# Increased Capacity and Performance

<table>
<thead>
<tr>
<th>Instance Type</th>
<th>G1s.small</th>
<th>M1s.medium</th>
<th>M1d.medium</th>
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</thead>
<tbody>
<tr>
<td>Chassis Form Factor</td>
<td>VxRail E560F 1U</td>
<td>VxRail E560F 1U</td>
<td>VxRail E560F 1U</td>
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<tr>
<td>CPU sockets and cores</td>
<td>1 x 24</td>
<td>1 x 24</td>
<td>2 x 24</td>
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<td>vCPU</td>
<td>48 (24 Cores)</td>
<td>48 (24 Cores)</td>
<td>96 (48 Cores)</td>
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<td>3.1 GHz All Core Turbo</td>
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<td>RAM</td>
<td>256GB</td>
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<td>2 (1.6TB NVMe)</td>
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<td>All flash Capacity Storage</td>
<td>11.5TB (SATA)</td>
<td>23TB (SATA)</td>
<td>23TB (NVMe)</td>
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<tr>
<td>Networking</td>
<td>2 x 10Gb</td>
<td>2 x 10Gb</td>
<td>2 x 25Gb</td>
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</table>
Capacity and Performance for the most Advanced Workloads

VM Density (Medium VMs (# of 4 vCPU / 8 GB / 500GB))

- M1d.medium: 24
- M1s.medium: 12
- G1s.small: 12

Resource Intensive Workloads (8 vCPUs / 128GB / 500GB)

- M1d.medium: 6
- M1s.medium: 3
- G1s.small: 2

**2X**

More VM Density

More Workloads

Assumptions:
- vCPU : physical Cores overcommit ration 2:1
- No memory overcommitment
- RAID1 storage, 50% of the total capacity
Integrated Backup and Disaster Recovery

- Certified to deliver data protection and disaster recovery with Dell EMC PowerProtect Cyber Recovery solution and Veeam.

- Ensure all data is managed efficiently with unified secondary storage strategy, with global deduplication and integrated with existing data center processes.

- Ensure immutable security against modern malware threats, including Ransomware and other data-targeted efforts.

✓ Realtime Backup
✓ Disaster Recovery
✓ Data De-duplication
✓ Regulatory Compliance
Optimized for Advanced and Distributed VDI Workloads

- Delivers powerful infrastructure for virtual desktops and applications to power remote workspaces.
- Certified support for VMware Horizon to deliver enterprise class security and compliance with organizational requirements.
- High performance for strong workspace density and end user experience for the most demanding applications.
Automatic Expansion of Capability as Customer Needs Grow

- Expansion up to 16 hosts within the Data Center deployment via the cloud portal.

- Automatic migration of workloads via VMware HCX under technical preview. VMware HCX enables customers to migrate hundreds of live workloads at once, with no downtime, to dramatically reduce time to deployment and simplify operational complexity.

- Sophisticated sizing tool for current and future capacity planning needs.
VMware Cloud on Dell EMC Experience Walkthrough

Order

Deploy

Support
The IT Architect can add new VMware Cloud locations to their architecture.
The IT Architect can specify the location of where they want to provision the SDDC.
The IT Architect selects the rack configuration.
The IT Architect selects the host type, and No. of Hosts.
The Network Administrator can configure network requirements for the SDDC.
The IT Architect selects the term commitment, confirms pre-requisites, and reviews the order.
The IT Architect confirms the order
The IT Architect completes the order, and receives an anticipated delivery date.
The IT Architect is informed that the order has been processed.
The IT Architect is informed that the equipment is shipped.
**SDDCs**

<table>
<thead>
<tr>
<th>SDDC Name</th>
<th>Order additional hosts</th>
<th>Hardware health</th>
<th>Network health</th>
<th>Location</th>
<th>Status</th>
<th>CPU</th>
<th>Memory</th>
<th>Storage</th>
<th>Hosts</th>
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<tbody>
<tr>
<td>fc-addon-pilot</td>
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<td>3</td>
</tr>
</tbody>
</table>

When needed, customer can add extra nodes.
Select how many of extra nodes needed
## Confirm order of extra nodes

### SDDC West #1: Order additional hosts

**1. Hosts**

- **GLS_small**, No. of hosts: 2

**2. Review**

Review your selections and order hosts

### SDDC Location

- SDDC West #1
  - 345 N. 9th St., San Diego CA, 74509

### Contacts

- **John Smith**
  - Project Lead
  - jsmith@acme.com
  - +1 650-345-0988

### Notes

- None

### Hardware

- **Host instance type**: GLS_small
- **Number of hosts**: 2
- **Current capacity**: 72 cores, 576 GiB, 34.5 TiB
- **Capacity to be added**: 48 cores, 384 GiB, 23 TiB
- **New total capacity**: 120 cores, 960 GiB, 57.5 TiB

### Term commitment

- **Term**: 3-Year term
- **Start date**: approx. Dec 2019
- **End date**: approx. Dec 2022

**ORDER HOSTS**
VMware Cloud on Dell Experience Walkthrough

Order  Deploy  Support
The IT Architect receives the appliance and needs to activate the system.
Once Activated, the IT Architect has the ability to start deploying workloads.
Using the same familiar vSphere interface, the IT Architect can setup the needed VMs and Containers.
Using HCX migration, the IT Architect can easily migrate workloads to the new appliances.
VMware Cloud on Dell EMC Experience Walkthrough

Order  Deploy  Support
Leveraging the Hybrid Cloud Control Plane, the IT Architect can observe the health of the system.
Leveraging the Hybrid Cloud Control Plane, the IT Architect can see the status of tickets proactively being worked on by VMware managed services.
The IT Architect can easily see maintenance windows for the system to be updated and patched as to not interfere with critical periods.