Detailed Walk Through of the VMware Cloud on Dell EMC Service

Ken Smith
Sr. Product Marketing Manager
Cloud Platform Business Unit, VMware
April 2021
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
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.
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

VMware Cloud Console provides familiar workload provisioning tools and information dashboards

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
- ✓ Jointly operated with the HW partner
- ✓ VMware is the “single point of contact”
- ✓ Freedom from asset ownership
- ✓ Subscription based pricing
- ✓ Choice of payment terms
## Advantages of VMware Cloud on Dell EMC

<table>
<thead>
<tr>
<th>Cloud Advantages</th>
<th>On Premises Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increased Agility</strong>&lt;br&gt;Self service provisioning and elasticity of resources</td>
<td><strong>Mitigate Risks</strong>&lt;br&gt;Comply with data residency and regulatory requirements</td>
</tr>
<tr>
<td><strong>Simplified Operations</strong>&lt;br&gt;Offload management and automated version mgmt</td>
<td><strong>Controlled Costs</strong>&lt;br&gt;Predictable cost model and resource transparency</td>
</tr>
<tr>
<td><strong>Accelerated Innovation</strong>&lt;br&gt;Increased developer velocity and access cloud services</td>
<td><strong>Increased Performance</strong>&lt;br&gt;Low data latency and high-performance networking</td>
</tr>
</tbody>
</table>
Regional Expansion of Service

VMware Cloud on Dell EMC Expands Its Service to UK, Germany, and France
# Simple Pricing Model: VMware Cloud on Dell EMC Subscription

**Predictable Pricing - No Hidden Costs – No CapEx Expense**

## Node / Instance Cost Component

- Monthly Node base cost determined by type of Node and term: 1 or 3 years
- Node cost includes:
  - VxRail Node
  - VMware SDDC software for that node
  - Share of rack infrastructure cost
  - Share of fully managed support and service

## Subscription Term Component

- 1-Year or 3-Year Subscription Terms
- 3-Year term commitment pricing generally is 33% less than 1-Year
- Monthly ‘Cloud-like’ Billing – Pay by credit card or invoice

---

<table>
<thead>
<tr>
<th>Monthly Node Cost</th>
<th>Number of Nodes</th>
<th>Subscription Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>x</td>
<td>12 (1 Year Subscription) or 36 (3 Year Subscription)</td>
</tr>
</tbody>
</table>

---

**White Glove Customer Experience**

- 1-Year or 3-Year Subscription Terms
- 3-Year term commitment pricing generally is 33% less than 1-Year
- Monthly ‘Cloud-like’ Billing – Pay by credit card or invoice

**Total monthly Subscription cost – includes:**
- Infrastructure hardware
- SDDC Software and updates
- Security Updates
- 24x7 Fully managed service/support including required onsite visits
Global and Vertical Regulatory Certification / Compliance

- VMware Cloud on Dell EMC continues to expand its broad compliance certification portfolio with new releases.

- Certifications ensure compliance for the implementation, management, and maintenance for information security within an organization.

- Compliance certifications and address information security needs specific to various regions and industries.
Key VMC on Dell EMC Use Cases

Advanced VDI Workloads
- Powerful Infrastructure for VDI
- Delivers Enterprise-class security
- Provides optimal workspace density

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 developments
What’s New In Our Latest Release

Cloud Universal Subscription provides licensing flexibility across VMware’s Multi-Cloud technologies

VMware Cloud Console provides single-pane, unified environment providing access to VMware hybrid services and tools
VMware Cloud Universal

- VMware Cloud Universal subscription provides licensing flexibility allowing customers to migrate towards VMware multi-cloud services
- SPP credits are applicable for services from the VMware Cloud Universal portfolio
- Portfolio includes:
  - VMware cloud on Dell EMC
  - VMware Cloud on AWS
  - VMware Cloud Foundation
  - VMware Tanzu Standard
  - VMware vRealize Cloud Universal
  - VMware Success 360

VMware Cloud Console

- Announcing VMware Cloud Console
- Provides single-pane of glass access to VMware Cloud on AWS and Dell EMC services
- Unified access to tools and workload services including Tanzu Kubernetes, HCX, and vRealize Suite
- Dashboard access to health, performance, and status information
- Allows scheduling of non-critical patches and updates as well as requests for additional capacity

For more information on VMware's Cloud Console: http://vmc.vmware.com/home
Where Should You Deploy VMware Cloud on Dell EMC?

Data Center

- Maintain on-premises security of data and proximity to users
- Avoid CapEx infrastructure investment
- Divert management cost to growth – VMware fully manages hardware

Edge

- Bring Enterprise-class compute power to the network edge.
- Allows data to be processed near where it's generated or requested
- Fully managed nature of service avoids costly localized IT service / support.
VMware Cloud on Dell EMC – On Premises Data Centers

Refresh, Expand, Consolidate, Relocate

VMware Cloud on Dell EMC ideal for:

- **Refresh / Modernization**
  - Infrastructure built around Dell EMC VxRail
  - Delivered infrastructure is Hyper Converged
  - Latest Intel SP Processor technology
  - Shift from CapEx to Opex

- **Expansion**
  - Expand Data Center resources: No CapEx or additional management responsibility
  - Allows gradual expansion of nodes or slow refresh

- **Consolidation / Budget Reduction**
  - Migrate workloads to modern, OpEx expensed service

- **Relocation**
  - VMware is partnered with several leading Co-location providers – Deploy this service in a ‘CoLo’ facility that offers premium connectivity services
## VMware Cloud on Dell EMC - Edge Compute Use Cases

### Geographically diverse manufacturing environments with Compute intensive needs

- **Manufacturing Edge**

### Profession-diverse private practice offices with application compute and storage needs

- **Practice Offices**

### Healthcare facilities (hospitals, clinics) with patient-oriented compute / storage hungry application needs

- **Healthcare**

### ‘Brick and Mortar’ retail storefronts running product tracking and/or customer-oriented digital promotion or services applications

- **Big Box Retailers**
VMware Cloud on Dell EMC – Manufacturing Edge
Providing Compute Power for Intelligent, Real-Time Factory Automation

VMware Cloud on Dell EMC: Ideal for Remote Factory Automation

- Compute power necessary to run next-generation Industrial automation
- Compute and storage to leverage IoT in the factory environment for instrumentation and/or production process tracking of assemblies
- Ability to make real-time manufacturing / process changes and decisions and track production
- Ability to optimize and automate supply chain process
- Fully managed, proactively monitored infrastructure including support and break-fix service
VMware Cloud on Dell EMC – Practice Offices
Provides Compute Power for Today’s Digitally-Rich Private Practices

VMware Cloud on Dell EMC: Power for Today’s Private Practices
- Private Dentistry, medical, legal, Counselling, Civil Engineering businesses
- Compute needs for billing, patient or customer records, record compliance, imaging, Engineering applications
- Often a franchise or chain business
- IT needs traditionally met by a third-party IT service and support provider - so accustomed to full IT support
- Typically running business-specific applications not seen in corporate IT.
VMware Cloud on Dell EMC – Healthcare
Ensuring Always On Health Care Access

VMware Cloud on Dell EMC: Perfect for Healthcare Edge Compute

• Power to allow application access patient records, imaging, telemetry from a single device anywhere and anytime
• Allows recording of patient telemetry records to meet regulatory or health organization policies and provide enhanced patient record depth.
• Allows use of IoT for tracking equipment, expendable patient medicals supplies, and simplifying supply chain and patient billing processes
• Ability for remote or satellite clinics continue to fully serve patients in the event communications link is lost
VMware Cloud on Dell EMC – Edge Compute for Big Box Retailers
Digitally Improving Customer Shopping Experience

VMware Cloud on Dell EMC: Ideal for Compute-Hungry Retailers

- Provides edge infrastructure as a fully managed service – eliminating need for 3rd party IT services
- Built on Enterprise-scale Dell EMC VxRail architecture
- Resources to host Inventory Tracking (IoT), supply chain control and other automated functions
- Provide the infrastructure to host a digitally rich, visually enhanced mobile-involved shopping experience for customers. This includes:
  - Store Navigation to locate products
  - On demand product availability, information, reviews, comparisons, automated warranty registration.
  - Digitalized product visual advertisement and promotions
  - Proximity sensed personalized shopper experiences
The VMware Cloud on Dell EMC Experience Walkthrough

Order  Deploy  Support
Three Easy Steps – #1: Ordering

Order  Deploy  Support
Ordering starts with the IT Architect accessing the VMware Cloud Console showing the different services supported – including VMware Cloud on Dell EMC.
After selecting VMware Cloud on Dell EMC – the IT Architect is presented an informative overview of this service and the major parts of this offering.
Next, The VMware Cloud Console shows the IT Architect the steps along the journey to ordering VMware Cloud on Dell EMC, providing guidance and education along this path.
The IT Architect now specifies the location of where they wish to locate the VMware Cloud on Dell EMC infrastructure rack.
The IT Architect is then prompted to select the rack and power configuration for the infrastructure.
Multiple Infrastructure Rack Options

R1 Rack
- Best suited for small satellite data center or edge applications.
- UPS included for locations that lack power backup or experience unreliable power.
- Compact: fits in small areas.
- Power Support: 1xNEMA L5-30 (100-120VAC) or 1xNEMA L6-30 (200-240VAC)

R2 Rack
- Best suited for Enterprise-scale deployments.
- Will accommodate up to 26 primary + 1 standby instances.
- PDU power inputs consistent with Enterprise data center power connectivity.
- Power Support: 4x NEMA L6-30 (Single Phase 200-240VAC) or 2x IEC 309 60A (Three Phase 200-240VAC)

R1 Half Rack
- Redundant VeloCloud SD-WAN appliances (enables remote management access)
- Management plane switch
- Redundant Top of Rack (ToR) server aggregation switches
- ‘Standby’ instance for expansion
- Configured number of VxRail instances (appliances)
- Uninterruptable Power Supply (R1 Only)
- Redundant Smart Power Distribution Units (in rear). R1: floor power. R2 floor/ceiling power
- Rack enclosure: R1: 24 RU, R2: 42 RU

Note: For the latest specifications and options – please see the VMware Cloud on Dell Data Sheet
Next, the IT Architect selects the instance type, number of instances, and cluster configuration.
## VMware Cloud on Dell EMC HW Instance Types

<table>
<thead>
<tr>
<th>Instance type</th>
<th>G1s.small</th>
<th>M1s.medium</th>
<th>M1d.medium</th>
<th>X1d.xLarge</th>
<th>M1d.xLarge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chassis Form Factor</td>
<td>VxRail E560F 1U1N</td>
<td>VxRail E560F 1U1N</td>
<td>VxRail E560N 1U1N</td>
<td>VxRail E560F 1U1N</td>
<td>VxRail E560F 1U1N</td>
</tr>
<tr>
<td>CPU sockets and cores</td>
<td>1 x 24</td>
<td>1 x 24</td>
<td>2 x 24</td>
<td>2 x 24</td>
<td>2 x 28</td>
</tr>
<tr>
<td>vCPU</td>
<td>48 (24 Cores)</td>
<td>48 (24 Cores)</td>
<td>96 (48 Cores)</td>
<td>96 (48 Cores)</td>
<td>112 (56 Cores)</td>
</tr>
<tr>
<td>CPU frequency</td>
<td>3.1 GHz All Core Turbo</td>
<td>3.1 GHz All Core Turbo</td>
<td>3.1 GHz All Core Turbo</td>
<td>2.9 GHz All Core Turbo</td>
<td>2.2 GHz All Core Turbo</td>
</tr>
<tr>
<td>RAM</td>
<td>256GB</td>
<td>384GB</td>
<td>768GB</td>
<td>1536GB</td>
<td>768GB</td>
</tr>
<tr>
<td>vSAN Disk Groups</td>
<td>1 (800GB SAS)</td>
<td>2 (800GB SAS)</td>
<td>2 (1.6TB NVMe)</td>
<td>2 (1.6TB NVMe)</td>
<td>2 (1.6TB NVMe)</td>
</tr>
<tr>
<td>All flash capacity storage*</td>
<td>11.5TB (SATA)</td>
<td>23TB (SATA)</td>
<td>23TB (NVMe)</td>
<td>61TB (SATA)</td>
<td>61TB (SATA)</td>
</tr>
<tr>
<td>Networking</td>
<td>2 x 10Gb</td>
<td>2 x 10Gb</td>
<td>2 x 25Gb</td>
<td>2 x 25Gb</td>
<td>2 x 25Gb</td>
</tr>
</tbody>
</table>

* Significant capacity storage needs can be addressed through VMware Partnership with Faction storage services.
The Network Administrator can now configure the network requirements for the SDDC.
The IT Architect selects the subscription term (1 or 3 years) and confirms pre-requisite information entered.
Subscription Options for VMware Cloud on Dell EMC

1 Year and 3 Year Term Subscription Options

1 Year Commitment

• 1 Year term subscription commitment by customer
• Includes VMware VCF software and fully managed Dell EMC VxRail Infrastructure
• Pricing reflects a lower price than pilot, however, is more expensive than 3 Year Term

3 Year Commitment

• 3 Year term subscription commitment by customer
• Includes VMware VCF software and fully managed Dell EMC VxRail Infrastructure
• Pricing reflects a ~33% discount over the shorter 1 Year term
Finally, the IT Architect reviews and 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.
Three Easy Steps – #2: Deploy

Order  Deploy  Support
Service Infrastructure Build and Deployment Details

• After VMware Cloud on Dell EMC order is placed:
  • Customer Infrastructure is built in the Dell EMC Order Fulfillment Center
  • It is pre-loaded with VMware SDDC Software
  • Customer network configuration is pre-configured
  • System is run through a battery of tests and burnt in
  • System is packaged for delivery and shipped to customer site

• A Dell EMC Technician arrives on site to install Infrastructure
  • Rack is uncrated and moved into position
  • Power and networking connections are made
  • Testing of the network connections and system are completed
  • Infrastructure is formally handed off to customer and becomes ‘live’
  • VMware begins management of the infrastructure
  • Customer can begin migrating workloads to their new service infrastructure

There is no additional cost for deployment - Cost is included in subscription
A Dell Technician will install the Infrastructure, connect power and networking, and test the deployment before activating the service. Once live, the IT Architect is free to move workloads to the new, fully managed infrastructure.
Using the same familiar vSphere interface, the IT Architect can setup the needed VMs and Containers.
The IT Architect can now activate HCX, allowing migration of VM’s to the new service infrastructure.
Using HCX migration, the IT Architect can easily migrate workloads to the new service infrastructure.
Three Easy Steps – #3: Support

Order

Deploy

Support
Understanding the VMware Cloud Console

Current State

Multiple Control Planes

Compute | Storage | Networking

VMware Cloud Console
- VMware Managed
- Full Transparency of Operations
- Single Pane of Glass

Cloud Connectivity

Compute | Storage | Networking
When needed, the IT Architect can order additional instances.
The IT Architect select how many additional instances are needed and how they will be applied to the clusters.
The IT Architect confirm order of additional instances. These instances are installed onsite by a Dell Technician in about a week.
Leveraging the VMware Cloud Console - the IT Architect can observe the health of the system at any point.
The IT Architect can also check the status of service tickets being worked on by VMware managed services.
The IT Architect can access the maintenance and update page – showing information on updates and patches requiring deployment and is able to schedule these actions as to not interfere with critical periods.
Learn more about VMware Cloud on Dell EMC

Additional Resources are available

• VMware.com Product Page: Here

• VMware Cloud on Dell EMC Overview Video: Video

• VMware Cloud on Dell EMC Solution Brief: Brief

• VMware Cloud on Dell EMC Overview Deck: Deck
Thank You