VMware Cloud on Dell EMC and Faction

Partnership Solution Guide

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VMware Cloud on Dell EMC

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VMware Cloud on Dell EMC

VMware Cloud on Dell EMC Overview
Key Reasons Customers Still Invest In On-Premises

**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
Introducing 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
Overview of the VMware Cloud on Dell EMC Service
Cloud Consumption Model Delivered as-a-service

**Hardware + Software**
- 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 subscription payment terms
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 transparancy
- **Increased Performance**: Low data latency and high performance networking
Understanding the Hybrid Cloud Control Plane

Current State
Multiple Control Planes

Hybrid Cloud Control Plane
✓ VMware Managed
✓ Full Transparency of Operations
✓ Single Pane of Glass

Cloud Connectivity
Compute | Storage | Networking
## Hardware Specs for VMware Cloud on Dell EMC

*Exact configurations are subject to ongoing refinements*

### Rack Specifications

<table>
<thead>
<tr>
<th>Rack</th>
<th>R1 (24U)</th>
<th>R2 (42U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of VxRail E560F Nodes</td>
<td>3 → 5</td>
<td>3 → 12 or 26</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>1 x NEMA L5-30 30 amp single-phase 1 x NEMA L6-30 30 amp single-phase</td>
<td>4 x NEMA L6-30 30 amp single-phase 2 x IEC 309 60 amp three-phase</td>
</tr>
<tr>
<td>Power Source Location</td>
<td>Floor</td>
<td>Floor or ceiling</td>
</tr>
<tr>
<td>Top of Rack Switches</td>
<td>2 x 10GbE</td>
<td>2 x 25GbE</td>
</tr>
</tbody>
</table>

### Host Configuration

<table>
<thead>
<tr>
<th>Host Configuration</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>Sockets / Physical Cores</td>
<td>1 / 24</td>
<td>1 / 24</td>
<td>2 / 24</td>
<td>2 / 24</td>
<td>2 / 28</td>
</tr>
<tr>
<td>Virtual Cores (vCPUs)</td>
<td>48</td>
<td>48</td>
<td>96</td>
<td>96</td>
<td>112</td>
</tr>
<tr>
<td>Physical Memory</td>
<td>256 GB</td>
<td>384 GB</td>
<td>768 GB</td>
<td>1536 GB</td>
<td>768 GB</td>
</tr>
<tr>
<td>vSAN Disk Groups x Cache</td>
<td>1x 800GB SAS 2x 800GB SAS 2x 1.6TB NVMe 2x 1.6TB NVMe</td>
<td>2x 1.6 TB NVMe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Flash Capacity Storage</td>
<td>11.5 TB (SATA) 23 TB (SATA) 23 TB (NVMe) 61 TB (SATA)</td>
<td>61 TB (SATA)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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
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.
Faction Storage Services for VMware Cloud on Dell EMC

• Faction and VMware Cloud on Dell EMC have partnered to address the expansive storage needs of some modern workloads

• Faction Cloud Storage Services expand the storage capacity of VMware Cloud on Dell EMC

• Flexibly provides added capacity to support storage-hungry applications such as databases and data warehousing

• Storage consumption-based billing that scales with business needs.

More Information:

More Information:

Note: Faction storage services are only available today for VMware Cloud on Dell EMC when deployed at an Equinix Colocation facility.
VMware Cloud on Dell EMC

Introduction to Faction Storage Services
Faction pioneered cloud-attached storage solutions that integrate natively with VMware Cloud on AWS, and now brings that experience to VMware Cloud on Dell EMC.

Faction, a VMware Cloud Verified provider, is also recognized as an Advanced AWS Consulting Partner and VMware Premier Cloud Provider. Follow Faction on Twitter (@FactionInc) and LinkedIn. For more information, please visit www.factioninc.com.
A Legacy of Hybrid and Multi-Cloud Innovation

FOUNDED
Denver, Colorado

2006

Proven Expertise

PATENTS
US 9,571,301
US 9,621,374
US 9,798,570
US 10,037,224

PATENTS
US 10,355,881
US 10,382,229
US 10,554,446
US 10,560,283

PATENTS PENDING
US 16/711,315

FINANCIALLY BACKED BY DELL TECHNOLOGIES CAPITAL
The Faction Difference – Faction Internetwork Exchange (FIX)
A single IP and single namespace, across all clouds and on-premises locations.

10.0.0.0/8
Bring your network “as is”
Avoid changing IP addresses, vLANs or routing when extending applications to multi-cloud

Application mobility across clouds
No need to change backend database IP addresses or connectivity as apps move between clouds

Balancing of Cloud Network costs
Faction efficiently blends cloud connect ports to offer a balance of high and low speeds, driving down TCO

Low latency, dedicated fiber connectivity to all clouds
Managed data center locations to offer the lowest latency connectivity to multi-cloud

BACKED BY 9 PATENTS
## Available Storage Tiers

### Choose the Right Performance for Your Workloads

<table>
<thead>
<tr>
<th>Premier</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Read-Access or Performance Sensitive</strong></td>
<td><strong>Economical, with frequent data access</strong></td>
</tr>
<tr>
<td>Choose File Scale Out or File for apps that require high amount of read access including video streaming, big data, and file servers</td>
<td>Choose File Scale out or File for storage that is similar to the Archive Tier, but with a need for more active access of data.</td>
</tr>
<tr>
<td>Choose Block for performance-sensitive applications like enterprise apps, NoSQL databases, and top tier relational DBs like SQL and Oracle</td>
<td>Choose Block for workloads with non-critical infrequent access of data such as backups, archives, DR, and content storage.</td>
</tr>
<tr>
<td>File Protocol (NFS)</td>
<td>File Protocol (NFS)</td>
</tr>
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VMware Cloud on Dell EMC

Faction-Applicable Use Cases
### Key Use Cases

When might your organization need additional storage decoupled from VMC nodes?

<table>
<thead>
<tr>
<th>Data-Intensive Workloads</th>
<th>Virtual Desktops and Apps</th>
<th>Data Center Extension</th>
<th>Tanzu for Kubernetes Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Non-linear growth requirements between storage and compute</td>
<td>• Deploy VDI infrastructure using a fully managed IaaS offering with certified support for VMware Horizon.</td>
<td>VMware Cloud Foundation SDDC platform, built on VxRail, simplifies operations with a consistent infrastructure across on-premises, collocated, and cloud locations.</td>
<td>Deploying and managing Kubernetes is simple using VMware Tanzu's tight integration with VMware Cloud on Dell.</td>
</tr>
<tr>
<td>• Storage needs far exceed local storage provided by compute nodes</td>
<td>• Optimize your VDI’s reliability and performance</td>
<td></td>
<td>CCVs, which scale independently of compute, are a cost-effective way to add storage capacity.</td>
</tr>
<tr>
<td>• Performance capabilities match workload demands</td>
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VMware + Faction

What Makes VMware Cloud on Dell EMC + Faction’s solution unique
Faction Cloud Control Volumes
For VMware Cloud on Dell EMC

- Access to your data is over a secure, low-latency, high throughput connection
- **Scale** your storage to petabyte-scale or above, independent of compute, as the volumes are attached and accessed directly from the hyper-converged VxRail infrastructure
- Ability to connect, via our patented Layer 2 connectivity, to all the major clouds
Why VMware Cloud on Dell EMC + Faction?

Flexible Storage Tiers
Standard, Premier
Faction Cloud Node Locations

Single Cloud
Multi-Cloud
Multi-Cloud (Pending)
Multi-Cloud Conceptual
Learn more about VMware Cloud on Dell EMC + Faction Solutions

Additional Resources are available

VMware Cloud on Dell EMC Resources
- VMware Cloud on Dell EMC Product Page
- VMware Cloud on Dell EMC Overview Deck
- VMware cloud on Dell EMC Service Data Sheet
- VMware Cloud on Dell EMC Solution Brief
- VMware Cloud on Dell EMC + Faction Partner Webinar

Faction Resources
- Faction Cloud Control Volumes
- Faction Webinars on Cloud Storage, VMware Cloud, and More
Thank You