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WHY MOVE FROM VMWARE TO BARE METAL?

Why did we decide to move from VMWare to
bare-metal OpenShift

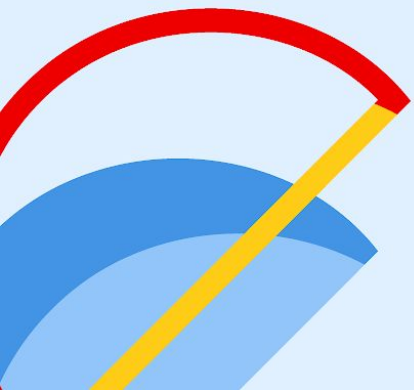
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WHY MOVE FROM VMWARE TO BARE METAL?





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Reasons...

- ▶ REGULATORY CONSIDERATIONS:
 - Inappropriate workload for Exoscale (private cloud)
 - Data residency and compliance requirements.
- ▶ COST REDUCTION:
 - VMware license costs have increased
 - Prompting the need to reduce operational expenses.
- ▶ OTHER:
 - Eliminating the virtualization layer.
 - Exploring new features like OpenShift Virtualization

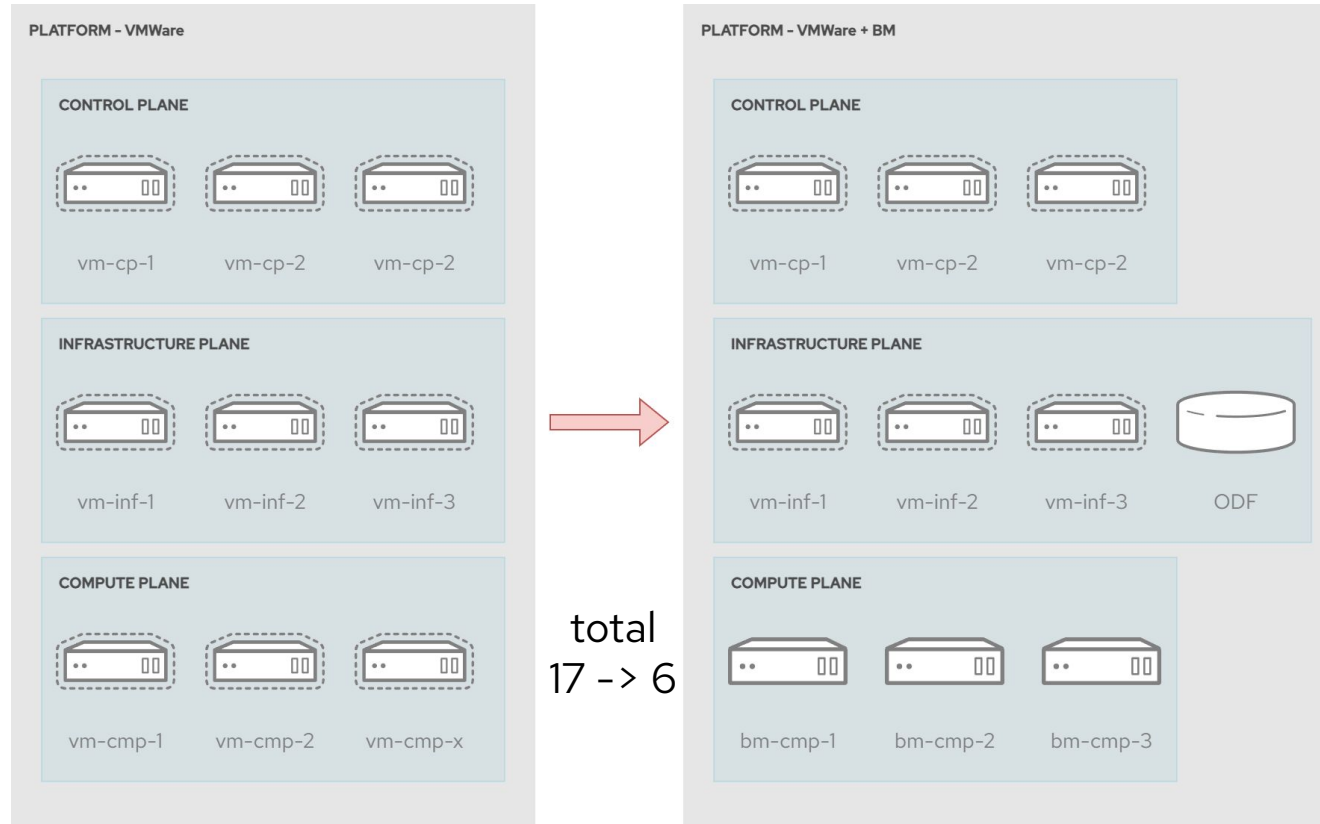
ARCHITECTURE CHOICE COMPARISON

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OPENSIFT ON VMWARE VS. BARE METAL

► **OpenShift on VMware:**

- **Control plane:**
 - virtualized
- **Infrastructure nodes:**
 - virtualized
- **Compute nodes:**
 - virtualized



► **OpenShift on Bare Metal:**

- **Control plane:** virtualized
 - Harnessing VMWare enterprise features
 - Backup
 - VM migration
- **Infrastructure nodes:** virtualized
- **Compute nodes:** bare-metal
 - Harnessing bare-metal features
 - No hypervisor overhead
 - Less worker nodes – same workload

OPERATIONAL AND MANAGEMENT DIFFERENCES AND CHALLENGES

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▶ **DIFFERENCES**

▪ **Provisioning:**

- Differences in setting up OpenShift worker nodes on bare metal vs. virtual machines.
- Changes in infrastructure management tools.

▪ **Maintenance:**

- Expanding resources (memory, storage)
- Hardware lifecycle

▶ **CHALLENGES**

- Storage -> OpenShift Data Foundation
- Networking configurations specific to bare metal environments.
- Memory overcommitment:
 - Unavailable
 - Needs upfront scaling calculations with workload resource utilization analysis

FINAL THOUGHTS

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Technical

- ▶ More resources for less price
- ▶ Better resource utilization on bare metal compared to virtualized environments.
- ▶ Memory overcommitment unavailable (but avoidable)
- ▶ **Application Development and migration**
 - Resource utilization
 - Preparing for future Kubernetes and OpenShift API changes
 - Planning migrations

FINAL THOUGHTS

Organizational

- ▶ **License savings:**
 - Avoid the increased licensing fees imposed by VMware (Broadcom acquisition impact).
 - Licence cost reduction ~50-70%
 - Reduced number of OpenShift subscriptions
- ▶ **Organizational**
 - Coordination between Dev and Ops
- ▶ **Vendor support**

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