PLATFORM9

Case study

Fortune 500 global enterprise migrating 40,000 VMs from VMware to Platform9 Private Cloud Director

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Customer situation overview

A Fortune 500 global enterprise operating in multiple sectors, including industrial automation, energy, transportation, and health technology, needed a viable and cost-effective enterprise-grade alternative to VMware. With a vast global IT infrastructure footprint, the organization manages four large data centers, each with thousands of servers, as well as over 90 smaller regional sites, each with its own set of workloads and operational complexities.

The primary drivers behind this migration included:

- **Cost avoidance:** Escalating VMware licensing costs was no longer sustainable for the enterprise.
- **Executive mandate:** A corporate decision was made to completely transition away from VMware within a defined timeframe to ensure long-term financial predictability.
- **Need for a robust VMware alternative:** The organization needed a solution that could match VMware's capabilities, integrate with their existing infrastructure, and provide a more predictable cost structure and flexibility.

Despite VMware meeting their functional requirements, the impending price hikes made it an unsustainable solution. The organization sought a solution that would reduce their dependency on a proprietary solution.

> During the proof-of-concept, their IT leaders told Platform9: "We are evaluating virtualization vendors for the purpose of cost avoidance."

After evaluating several competitors, the company chose Platform9 for the following three critical factors:

- **Drop-in replacement for the critical VMware features** such as DRS, VM-HA, and vMotion.
- **Deep integration with Tintri storage:** ensuring storage consistency and maintaining existing investments
- **Automated migration:** vJailbreak enables bulk VM migration at scale. A phased migration plan over several months ensures business continuity.

Scale of infrastructure and migration scope

The migration required a strategic and phased approach to ensure business continuity while transitioning from VMware to Platform9. Given the enterprise's vast infrastructure, a detailed plan was necessary to manage the complexity of hardware, workloads, and operational needs.

The enterprise's existing environment for the initial scope of migration included:

- **3,000 VMware hosts** in the initial migration phase, with an additional 1,000 planned for a later phase.
- **40,000 VMs** with another **40,000 dynamically created and destroyed** for Dev/Test purposes.
- **4 primary data centers,** each housing thousands of servers.
- **More than 90 smaller regional sites** worldwide, ranging from single-host deployments to environments with hundreds of hypervisors.

The workloads included databases, enterprise applications running on Windows and Linux, high-performance computing (HPC) workloads, and Dev/Test environments used by thousands of engineers. Given the critical nature of these workloads, the migration had to be carefully managed to prevent downtime and operational disruptions.

To ensure a smooth transition, the company is implementing a phased, rolling migration strategy. VMware clusters will be decommissioned in stages, with each server reconfigured using Platform9 Private Cloud Director (PCD). Workloads will then be migrated systematically using Platform9's tool vJailBreak. The entire migration is scheduled to take several months, with ample time for rigorous testing and adjustments at each stage.

Existing virtualization environment and admin/ user requirements

The organization‘s current IT operations and VMware administrators oversee a massive infrastructure that supports a variety of applications. A critical requirement for any future transition is to reduce the need for extensive retraining while ensuring integration with existing infrastructure and easier migration of existing workflows. Developers and engineers rely on virtualization for application development and testing, which necessitates a user-friendly, intuitive UI/UX that simplifies operations without adding complexity.

Primary users

- **IT Operations and VMware Administrators:** Responsible for maintaining and optimizing the existing VMware environment, ensuring stability, and managing resource allocation.
- **Engineers and Developers:** Utilize virtual environments for application development, testing, and continuous integration, benefiting from automation and streamlined workflows.

Current use cases

The organization’s existing virtualization environment supports a range of workloads across multiple teams:

- **Dev/Test Environments using CI/CD pipelines:** Engineers create and destroy thousands of virtual machines dynamically for testing and software development.
- **Enterprise Virtualization:** The infrastructure hosts a mix of Windows and Linux applications, enterprise databases, file storage, and business-critical applications run on virtualized infrastructure.
- **High-Performance Computing (HPC) :** Workloads requiring significant compute power or memory for large-scale simulations.

Rigorous Proof of Concept (PoC) evaluation

The customer required a robust Proof of Concept (PoC) process to determine whether Platform9 could be a viable alternative to VMware while meeting stringent operational, performance, and cost requirements. The PoC aimed to assess Platform9's ability to handle large-scale enterprise workloads, automate operations, and ensure seamless migration from the existing infrastructure using the following key decision criteria:

Migration capabilities

With tens of thousands of VMs in scope, the ability to migrate workloads—especially live migrations—was paramount. Platform9 demonstrated bulk and parallel migration capabilities, allowing the customer to test migration of their sample workloads without significant downtime.

> **"We asked for live migration of multiple VMs in the UI, and you delivered it in a day. The vJailbreak tool was very impressive."**

Equivalent VMware features and integrations

Several must-have capabilities were identified as essential for a successful PoC:

- **DRS-like automation:** Automated workload balancing across hosts to optimize resource utilization.
- **VM High Availability (VM-HA):** Matched VMware's HA capabilities to maintain business continuity.
- **Tintri storage integration:** Essential due to the organization's existing storage investments.

> **"Tintri integration was a must-have. Without it, this wouldn't have moved forward."**

- **VLAN/SDN functionality:** Required to maintain flexible, secure, and segmented networking across multiple sites.

Automation & self-service

A critical requirement was the ability to provide automated provisioning and lifecycle management that met or exceeded VMware's capabilities. Platform9 delivered an intuitive UI, API-driven automation, and self-service portals that allowed both IT operations and development teams to spin up and retire workloads efficiently.

Highlights of the successful PoC experience

The PoC was conducted over two weeks with daily two-hour sessions to accelerate testing and feedback loops. The evaluation focused on proving Platform9's ability to match VMware's core functionality while simplifying management and reducing operational overhead. The following were evaluated during the PoC.

- **Live migration demos:** Windows-based VMs moved seamlessly between hosts.
- **Bulk provisioning via Ansible:** Hundreds of VMs were automatically created to validate automation workflows.
- **Tintri storage integration:** Demonstrated storage provisioning, snapshots, and performance metrics matching existing VMware workflows.
- **Key VMware features** such as DRS, vMotion, and VM-HA

The PoC demonstrated that Platform9 could provide VMware-equivalent functionality that the customer needed at a lower Total Cost of Ownership (TCO) and complexity. IT operations teams found the transition manageable, and VMware administrators were able to use Platform9 Private Cloud Director without extensive training. The PoC's success reinforced the decision to move forward with a production-scale migration to Platform9.

> During the evaluation phase, one of their IT operations leaders remarked, **"We gave Platform9's Private Cloud Director to one of our VMware admins, and with zero training, he was creating and managing VMs."**

Key differentiators and decision to adopt Platform9

The customer conducted PoCs with multiple vendors, including, Red Hat, and Nutanix, before determining that Platform9 delivered the most tangible results and met all of their enterprise requirements within just two weeks. The rapid validation of key capabilities set Platform9 apart from competitors and demonstrated its ability to handle enterprise-scale workloads effectively.

Platform9's team guided the customer through a meticulously planned PoC, ensuring that all milestones and success criteria were met efficiently. Daily two-hour sessions provided hands-on experience and accelerated feedback loops, enabling a faster evaluation of the platform's capabilities.

Compared to VMware's renewal costs, Platform9's Total Cost of Ownership (TCO) was significantly lower, making it the most cost-effective option without sacrificing performance, automation, or ease of use.

Summary of the migration plan

A structured migration plan has been established to ensure a smooth transition from VMware to Platform9 while minimizing disruptions and maintaining business continuity. The steps for a staged migration over several months include:

1. **Onboarding –** Identify stakeholders, establish success criteria.
2. **Infrastructure assessment –** Inventory VMware resources and analyze performance baselines.
3. **Application mapping –** Document dependencies and determine migration order.
4. **Infrastructure design –** Architect compute, network, and storage resources under PCD.
5. **Migration testing –** Pilot with a subset of workloads using vJailbreak.
6. **Production migration –** Execute phased rollouts aligned with business schedules.
7. **Training & ongoing support –** Ensure smooth transition and continuous optimization.

With Platform9, this customer is migrating 200 VMs per day using vJailbreak at 1/10th of the cost of industry analyst estimates. The overall cost to migrate 40,000 VMs is just $35 per VM.

Conclusion

This Fortune 500 enterprise selected Platform9 Private Cloud Director to replace VMware due to cost concerns and the need for an alternative scalable, enterprise-grade virtualization platform. The PoC process validated Platform9's ability to meet key requirements.

Three critical factors for the decision were:

- **Drop-in replacement for the critical VMware features** such as DRS, VM-HA, and vMotion.
- **Deep integration with Tintri storage:** ensuring storage consistency and maintaining existing investments
- **Automated migration: vJailbreak** enables bulk VM migration at scale. A phased migration plan over several months ensures business continuity.

These other factors provided added benefits:

- **Turnkey solution** eliminating complex and time-consuming configurations and reducing operational overhead.
- **SaaS-managed model,** simplifying remote monitoring, upgrades, patches, and troubleshooting.
- **Centralized management,** providing a single interface for bare-metal provisioning and VM lifecycle management across multiple data centers and distributed sites.
- **Comprehensive training and enablement,** supporting IT operations and VMware administrators with workshops and hands-on sessions.

With a phased migration plan in place, Platform9 is set to become the foundation of the enterprise's global virtualization platform and power their next-generation private cloud infrastructure.

Platform9 is the leader in simplifying enterprise private clouds. The company's flagship product, Private Cloud Director, has all of VMware's enterprise-grade features today along with private cloud features for the future. Platform9 was founded by a team of VMware cloud pioneers and has over tens of thousands of nodes in production at some of the world's largest enterprises. Platform9 is an inclusive, globally distributed company backed by prominent investors, committed to driving private cloud innovation and efficiency.

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