



# New Era of a Modern Private Cloud with VMware Cloud Foundation 9.0 on ThinkAgile VX Series

## Article

In this digital-first era, many organizations went all-in on the public cloud. Cloud operating models offer enhanced scalability and self-serviceability while unifying the silos that were previously present in IT environments. However, the public cloud introduced new significant challenges such as security and compliance issues, high unpredictable costs (operations, migration, egress, and hidden service costs), lack of data sovereignty, and interoperability complexities.

For example, according to Forrester Research report, "[Cloud Security - Reality Strikes After Migration](#)", 39% of customers now see public cloud costs as a major issue and 51% are concerned with the privacy of public cloud infrastructure. In addition, a VMware study "[Private Cloud Outlook 2025 - the Cloud Reset](#)" 90% of enterprise technology decision makers surveyed, revealed that their organization's ideal set up is a private cloud that delivers all the benefits a cloud operating model with all the control, security and predictability of a dedicated environment.

These challenges have resulted in a lot of risks, complexities, and delays in an organization's digital transformation journey, and they threaten to shift the focus of organizations from innovation to operations. As a result, many organizations have reconsidered their cloud strategies, repatriating workloads from public cloud to on-premises where they are seeking a platform approach that delivers rich services with scale and agility, but also greater governance, security, privacy, and cost efficiency. Customers do not have to tolerate or compromise with the unpredictable cost of the public cloud.

In June 2025, VMware by Broadcom announced [VMware Cloud Foundation 9.0](#), a platform that will help customers accelerate innovation, control cloud costs and enforce security and sovereignty by delivering a single unified platform that supports all applications—traditional, modern, or AI—with consistent operations, governance and controls across the private cloud environment.

## New Architecture to Empower IT Admins and Application Teams

VCF delivers a single unified platform for cloud operations with transparent consumption and cost control while supporting all applications in a secure and transparent way.

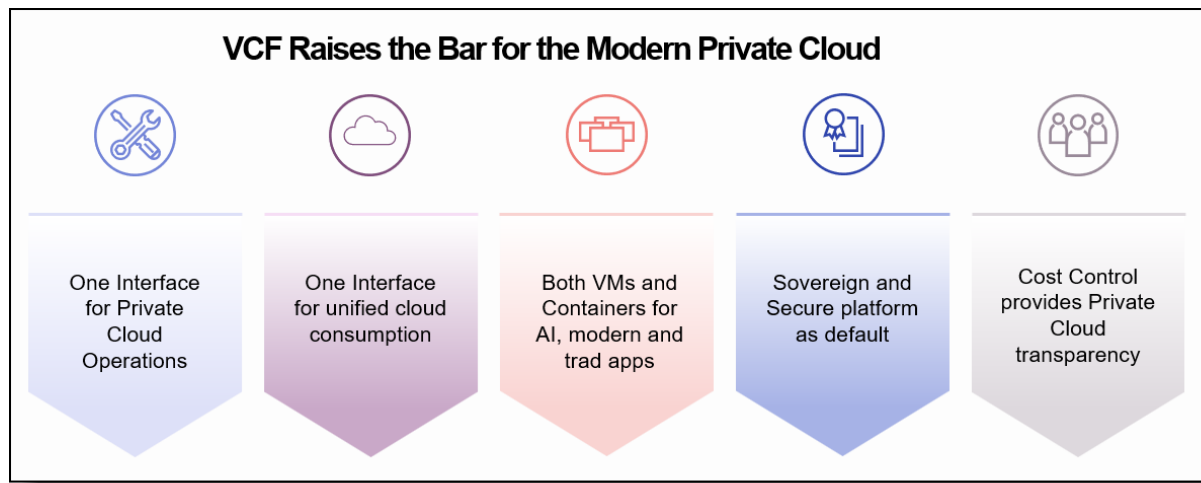


Figure 1. VCF Raises the Bar for the Modern Private Cloud

In VCF 9 you will experience the following capabilities:

- **One Interface to Private Cloud Operations**

VMware Cloud Foundation 9.0 (VCF) offers a streamlined experience for building, operating, and securing private cloud - all from a single interface. *VCF Operations* provides a new Operate Experience, and along with *VCF Installer*, a new build experience for quick deployments, reducing setup time and complexity while ensuring compliance and operational efficiency

- **One Interface for a Cloud Consumption Experience**

Offers a frictionless and transparent, cloud-like experience for teams consuming infrastructure—delivered through a single, unified interface. The all new **VCF Automation** enables IT teams and Cloud Service Providers to deliver a self-service private cloud for application teams.

- **Unified VM, Container and Kubernetes Platform**

A significant leap forward as a unified platform for traditional, cloud native and AI applications. The embedded vSphere Kubernetes Service (VKS) enables both virtual machines (VMs) and containers to be treated equally. This allows customers to build, deploy, and run Kubernetes and virtualized workloads together and eliminates complex DevOps stacks and integrations.

- **Data Sovereignty and Security**

The new SecOps dashboard, offering a quick view of platform security and data controls, along with integrated compliance policies. Regulatory guardrails facilitate consistent governance.

## Accelerate Private Cloud Era with Lenovo ThinkAgile VX Series

Customers can rely on Lenovo ThinkAgile VX Series, co-engineered solution with VCF, as the ultimate on-premises hardware of choice to experience the latest capabilities of VCF 9.0. ThinkAgile VX Series is built on the most reliable and secure Lenovo servers that are tested, optimized, and validated for compliance to handle various workloads, including demanding AI projects.



Figure 2. Lenovo ThinkAgile VX650 V4 with Intel Xeon 6 processors

Features of ThinkAgile VX include:

- ThinkAgile VX supports all NVMe based configurations on both Intel and AMD platforms, and this will ensure that customers can take advantage of the latest compute enhancements that VMware offers. Refer to the [ThinkAgile VX Series Product Datasheet](#) for the latest supported configuration
- Demanding workloads like SAP supported on ThinkAgile VX SAP will be optimized for dense core processing while achieving exceptional power efficiency and maximize resource utilization by supporting monster VM capabilities up to 960 vCPUs and 16TB of memory, delivering the highest scale in the market today.
- Lenovo ThinkAgile VX delivers seamless lifecycle management and monitoring with Lenovo XClarity system management software that is fully integrated with VMware vLCM that continues to be the platform of choice in the latest VCF release.

Whether you were using vSphere and vSAN only, or were on a previous version of VCF, VMware now provides multiple upgrade paths for customers to easily transition to the all-new VCF 9 platform. Lenovo is committed to ensuring that our systems, including ThinkAgile VX, support the latest version.

## Continued Innovation in Core Platform Capabilities

The all new VCF 9 offers new features in compute, storage and networking.

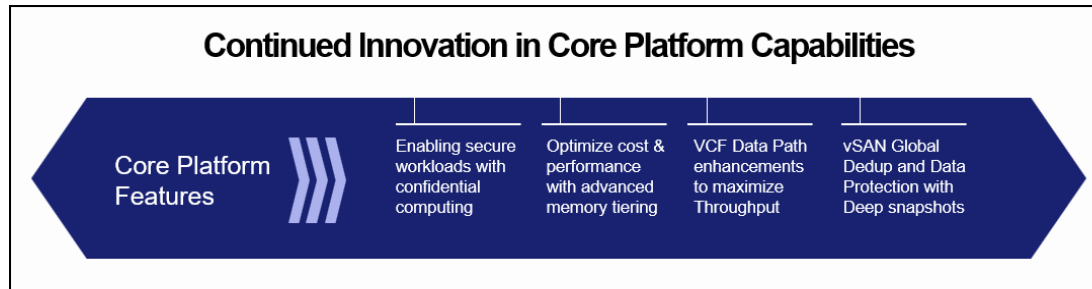


Figure 3. VCF: Continued Innovation in Core Platform Capabilities

vSphere within VCF 9.0 (compute):

- [Advanced Memory Tiering](#) now production ready, includes DRS and vMotion awareness, improved performance, a default improved 1:1 DRAM:NVMe ratio. These features deliver up to 38%<sup>3</sup> TCO savings for most workloads, increased CPU utilization of up to 30%<sup>3</sup> more cores for workloads and offers better VM consolidation ratios meaning more VMs per server.
- [Enhanced improvements to vMotion](#) for vGPU-aware VMs and containers allow users to confidently migrate running LLM apps and models from one host to another within the data center both for load balancing and zero downtime maintenance.

vSAN within VCF 9.0 (storage):

- VMware vSAN ESA with Global dedupe<sup>2</sup> can reduce storage TCO by 34%<sup>4</sup>. This new capability is designed to have minimal impact on CPU performance by running in the background opportunistically (e.g., nights and weekends) when CPU needs are low.
- New vSAN-to-vSAN replication built on top of vSAN data protection with deep immutable snapshots enables more efficient, native recovery from disasters or ransomware attacks thus providing strengthened data resilience and security.
- Storage cluster network separation not only frees up networking for storage but allows customers to use existing investments for compute network traffic.

NSX within VCF 9.0 (networking):

- VMware NSX enhanced data path can deliver as much as 3X switching performance to maximize throughput.
- VCF 9.0 supports a common networking framework aligned with industry standards for consumption from vCenter, VKS NSX, and VCF Automation. This feature allows administrators to consume natively from vCenter Networking pane virtual networks through VPCs.
- Platform updates include an upgrade to TLS 1.3 for enhanced security in communications between network components, providing stronger encryption and third-party validation of VCF Networking, with DISA STIG and FIPS 140-3, reinforces compliance with government regulations.

Footnotes:

1. Forrester Research. [Cloud Security—Reality Strikes After Migration](#). July 2024.
2. [VMware Private Cloud Outlook 2025 – The Cloud Reset](#)
3. Based on internal Broadcom estimates or test results, subject to change. March 2025. Comparison to VCF 5.2 offering
4. vSAN Global Dedupe requires RPQ. Contact VMware account team for details.

## For More Information

To learn more about the Lenovo ThinkAgile VX and other Lenovo solutions with VMware for the new era of Modern Private Cloud, go to <https://www.lenovo.com/us/en/servers-storage/sdi/thinkagile-vx-series/> or contact your Lenovo Sales Representative or Business Partner.

## Author

**Catherine Maina** is the Worldwide Product lead for Lenovo ThinkAgile VX Series, a co-engineered solution with VMware Cloud Foundation - tested, optimized, and validated for compliance to handle various workloads in a VMware environment. Catherine is responsible for leading ideation to commercialization of solutions that leverage joint Lenovo and VMware technology.

## Related product families

Product families related to this document are the following:

- [VMware Alliance](#)
- [VMware vSphere](#)

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