VMware Cloud Foundation
The simplest path to the hybrid cloud

What is VMware Cloud Foundation?
VMware Cloud Foundation is an integrated software platform that automates the deployment and lifecycle management of a complete software-defined data center (SDDC) on a standardized hyperconverged architecture. It can be deployed on premises on a broad range of supported hardware or consumed as a service in the public cloud (VMware Cloud™ on AWS or a VMware Cloud Provider™). With the integrated cloud management capabilities, the end result is a hybrid cloud platform that can span private and public environments, offering a consistent operational model based on well-known VMware vSphere® tools and processes, and the freedom to run apps anywhere without the complexity of app re-writing.

Figure 1. VMware Cloud Foundation Software Stack

What is unique?

**Integrated Stack:** An engineered solution that integrates the entire VMware software-defined stack with guaranteed interoperability, freeing organizations from dealing with complex interoperability matrices

**Standardized Architecture:** Automatically deploys a hyperconverged architecture based on a VMware Validated Design, ensuring quick, repeatable deployments while eliminating risk of misconfiguration
Automated Lifecycle Management: Includes unique lifecycle management services that automates day 0 to day 2 operations, from deployment to configuration of the cloud environment, to on-demand provisioning of infrastructure clusters (workload domains) to patching/upgrades of the complete software stack.

Simple Path to Hybrid Cloud: Dramatically simplifies the path to hybrid cloud by delivering a common platform for private and public clouds, enabling a consistent operational experience and the ability to quickly and easily move workloads at scale across clouds without re-architecting applications, leveraging VMware NSX® Hybrid Connect.

Key features and capabilities:

Enterprise-Grade Services: Delivers enterprise-ready services for both traditional and containerized apps, based on market-leading VMware technologies: VMware vSphere (compute), VMware vSAN™ (storage), VMware NSX (networking and security), and VMware vRealize® Suite (cloud management).

Storage Elasticity and High Performance: Implements a hyperconverged architecture with all-flash performance and enterprise-class storage services (e.g., deduplication, compression, and erasure coding).

Built-in Intrinsic Security: Delivers network-level micro-segmentation, distributed firewalls and VPN, compute-level encryption for VM, hypervisor and vMotion®, and storage-level encryption for data at rest and clusters.

Self-Driving Operations: Enables self-driving health, performance, capacity, and configuration management to scale and manage the environment efficiently.

Self-Service Automation: Automates the delivery of application services via blueprints (templates) that bind compute, storage, networking, and security resources through policies.

Automated Lifecycle Management: Delivers simple management of your environment with built-in automation of day 0 to day 2 operations of the software platform:

- Automated deployment: Automates the bring-up process of the entire software platform, including deployment of infrastructure VMs, creation of the management cluster, configuration of storage, cluster creation, and provisioning.
- Infrastructure cluster provisioning: Enables on-demand provisioning of isolated infrastructure clusters to enable workload separation.
- Simplified patching and upgrades: Enables a simplified patching/upgrading process of the software platform (including VMware vCenter Server®); cloud admins have the flexibility to choose the timing and scope of the updates.

Use cases:

- Cloud Infrastructure: Leverage the high performance, availability, and scalability of the VMware SDDC to run any mission-critical apps (i.e., database, web apps, VDI).
- IT Automation: Automate infrastructure and application delivery with self-service capabilities to enable infrastructure as a service on premises.
- Hybrid Cloud: Build a true hybrid cloud with common infrastructure and consistent operations, connecting your private and public clouds, that are compatible, stretched, and distributed.
- Virtual Desktop Infrastructure: Simplify the planning and design of a VDI environment based on VMware Horizon®, making VDI deployments faster and more secure.