

Build and Migrate Kubernetes

VCF Professional Services

At a glance

Design and implement VKS on VCF and migrate Kubernetes clusters to VKS.

Key Benefits

- Rapidly deploy Kubernetes on VCF
- Migrate faster and with less risk
- Minimize disruptions and downtime
- Reduce complexity and cost
- Gain more efficient operations
- Free up IT staff to work on business-critical tasks

Transitioning containerized applications to VMware vSphere® Kubernetes Service (VKS) on VMware Cloud Foundation® (VCF) offers compelling advantages in cost reduction, efficiency, and simplified management. Yet, implementing a new environment and migrating containerized applications between platforms requires careful consideration. Working with experts who have experience, best practices, and specialized tools can make it easy while reducing risk. Our VMware Pro Cloud Service™ to Build and Migrate Kubernetes can help.

Service overview

VCF Professional Services can help you implement VKS on VCF along with the efficient migration of your Kubernetes clusters to VKS.

Build Kubernetes

Our experts design and implement VKS on your existing VCF environment. To prepare your environment we configure external and core services such as ingress controllers, load balancers, secure identity services, scalable persistent storage solutions, public IP addresses, DNS records, and any necessary service meshes.

Develop a migration strategy

Our container migration approach begins with a deep dive into your business goals and priorities. We work collaboratively to define desired outcomes and identify all critical constraints – be it timelines, budget, or specific application requirements. This leads to the development of a tailored, high-level migration roadmap with clear tasks, ownership, and schedules.

Central to success is building the right migration team. We partner with you to select key internal stakeholders and subject matter experts from network and security, operations, infrastructure, and application teams. Our experts then integrate with your chosen team to collaboratively drive and execute the entire migration process.

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Discover and analyze the environment

Evaluate Platforms: We confirm that the target platform supports all the components and integrations currently on the source platform.

Inventory Containers: We identify all containerized applications and related services, microservices, and dependencies that need migration. This includes databases, networking configurations, and external services.

Evaluate Dependencies: We map out all dependencies, such as database connections, external APIs, persistent storage, and networking configurations. Identify potential compatibility issues and data transfer needs.

Create a migration plan

To create a detailed container migration plan, we start by mapping the source infrastructure (container orchestration platforms, network settings, and storage) to the target infrastructure. We develop migration runbooks which are a comprehensive list of the containers that need to be migrated and the sequence of migration. Considering the dependencies between services (e.g., databases before applications) and the impact of downtime, we create a testing schedule and contingency plans including a rollback strategy to mitigate risk, in case the migration encounters problems.

Perform migrations

We perform migrations in waves, starting with non-critical containers, to minimize risks. Each wave involves transferring containers and associated services while ensuring proper configurations for networking, storage, and dependencies. After each wave, you can validate that the migrated containers function correctly regarding performance, security, and reliability.

Benefits

VCF Professional Services has the experience, best practices, and proven methodologies to make your transition of Kubernetes clusters to VKS smooth and efficient. Our specialized toolchains and factory-migration methodology support large scale migrations with minimal downtime and reduced risk. Leverage our experts to free up your staff to work on business-critical tasks.