

Build and Migrate Kubernetes

VCF Professional Services

At a glance

Configure VKS on VCF and migrate containers from OpenShift to VKS.

Key Benefits

- Enable Kubernetes container hosting
- Migrate containers to your unified private cloud faster
- Reduce complexity and cost
- Gain more efficient operations
- Minimize disruptions and downtime
- Free up IT staff to work on business-critical tasks

Reduce complexity, achieve cost savings, and improve operational efficiency by moving containers from OpenShift to VMware vSphere® Kubernetes Service (VKS) on VMware Cloud Foundation® (VCF). Migrating containers between platforms requires careful consideration. Working with experts who have the experience and 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 configure VMware vSphere® Kubernetes Service (VKS) on VCF and migrate your containers from OpenShift.

Develop a migration strategy

We start by developing a container migration approach based on your business goals and priorities. We identify what you want to achieve, any deadlines or time constraints, cost constraints, and application constraints. Then we develop a high-level migration plan with specific tasks that identifies who will do what and when.

A key aspect of your container migration strategy is building the migration team. We work with you to select the migration team who are champions in critical areas including network and security, operations, infrastructure, and applications. Our experts collaborate with your champions to drive the migration.

Discover and Analyze the Environment

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

Perform a Compatibility Check: We confirm that the target platform supports the container runtimes (e.g., Docker, containerd) and orchestrators that you are currently using.

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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.

Configure VKS for Kubernetes container hosting

We prepare VKS, configure external and core services, such as ingress controllers, load balancers, identity services, persistent storage solutions, public IP addresses, DNS records, and necessary service meshes.

Perform the migration

We perform the migration by moving containers to the target environment. This is typically done 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 with regard to performance, security, and reliability.

Define a new operating model

We can help define services, roles, and processes for managing your containers including developing compliance policies and standards for privacy and managing risk. We recommend best practices for container platform optimization, standardization and improvement of operational processes including preparing a platform and services lifecycle approach. We provide a knowledge transfer along with a training plan to enhance the container platform capabilities and skills of your team.

Benefits

VCF Professional Services can get your containers where they need to be, faster. Our specialized toolchains and standardized methodology support large scale migrations with minimal downtime and reduced risk. Leveraging our experts frees up your staff to work on business-critical tasks.