Navigating the Pathways to VMware Cloud Foundation 9.1

With VCF Professional Services

GET STARTED

vmware by Broadcom

Introduction

Are you ready to start delivering a true, unified private cloud experience?

Moving to VMware Cloud Foundation® (VCF) 9.1 is your key to unlocking advanced features, superior performance, and unmatched operational efficiency. With more frequent patch releases, you can keep your environment current to defend against sophisticated AI-driven threats.

While VCF 9.1 deployment and upgrade processes are designed to be streamlined, careful planning and execution is essential. The reality is, the exact path to VCF 9.1 is unique to you. It depends on your current infrastructure maturity, your specific business objectives, and your IT strategy.

- Infrastructure Maturity
- Business Objectives
- IT Strategy

Do you know what you need to do for your specific situation?

Discover the three primary pathways to VCF 9.1, their individual use cases, and typical activities our VCF Professional Services experts perform for each. Get the clarity and insights that will empower you to successfully achieve your transition.

vmware by Broadcom

1

Pathways to VCF 9.1

vmware by Broadcom

Pathways to VCF 9.1

The journey to VCF 9.1 depends on where you're starting from. There are three primary pathways, each tailored to a specific environment and business objective.

1 Converge VMware vSphere to VCF

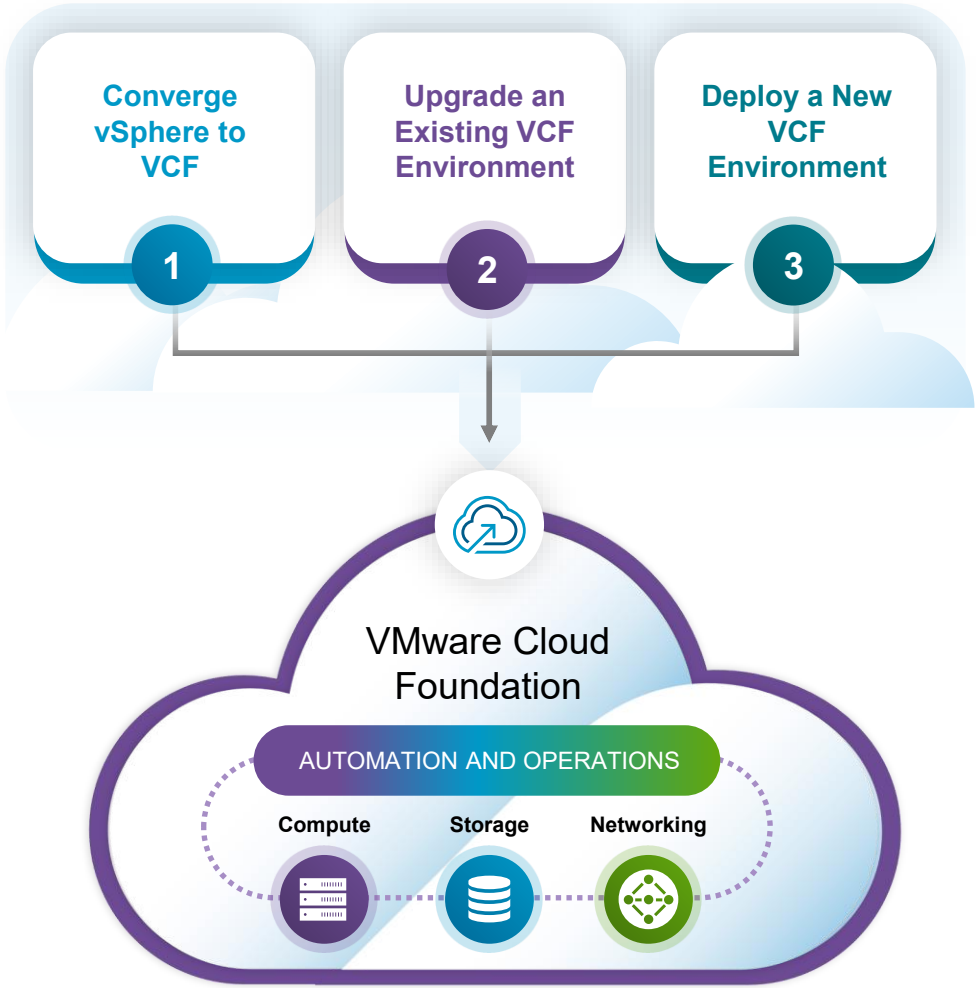
You've already standardized on the backbone of the private cloud – VMware vSphere®. This pathway is about taking your existing foundation and supercharging it with the full power of VCF. You can consolidate existing components and infrastructure into a seamless VCF experience.

2 Upgrade an Existing VCF Environment

For those already benefiting from VCF, this is the most straightforward route. By utilizing the built-in intelligent lifecycle management workflows, you can perform an in-place upgrade with zero workload migration required. Your critical applications stay running while the platform beneath them is seamlessly enhanced.

3 Deploy a New VCF Environment

This is a chance to build a new private cloud from the ground up. It's ideal for organizations undergoing a hardware refresh, planning a data center expansion, launching a new private cloud initiative, or that have an existing environment that does not meet the requirements for upgrading.



vmware by Broadcom

2

Converge vSphere to VCF

vmware by Broadcom

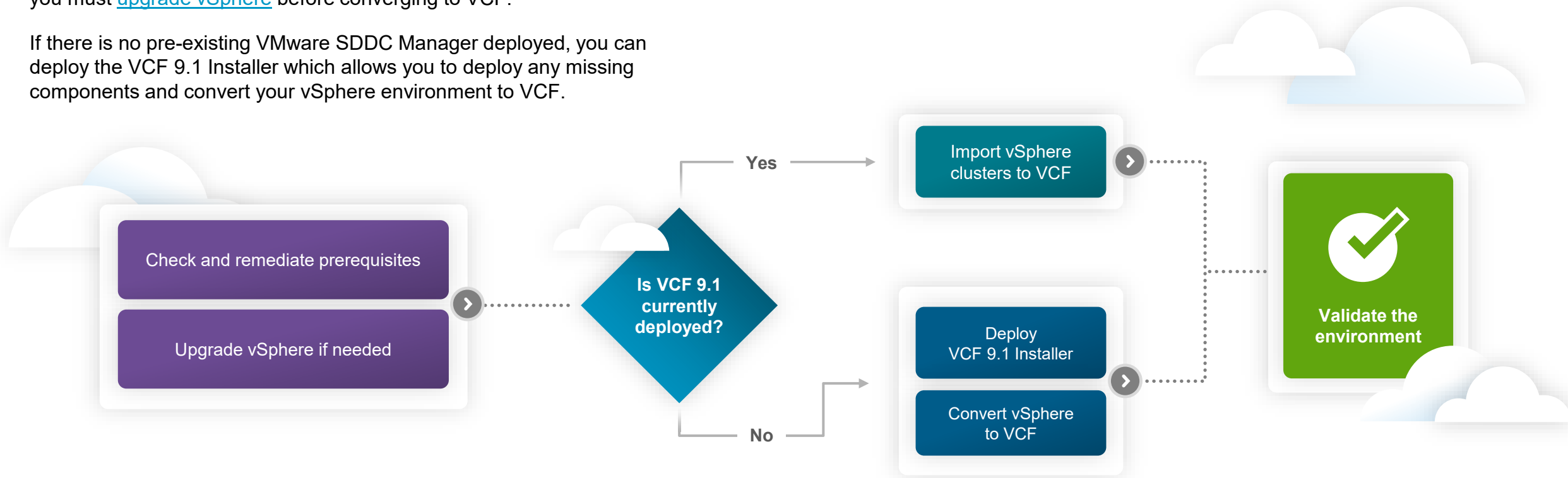
Converge vSphere to VCF

The first step in converging your existing vSphere environment to VCF 9 is to check and remediate all prerequisites to ensure your current environment is ready for the transition. This includes minimum component versions and supported configurations. For example, your current vSphere environment must be on version 8.0 U3a or above. If you are running an earlier version, you must upgrade vSphere before converging to VCF.

If there is no pre-existing VMware SDDC Manager deployed, you can deploy the VCF 9.1 Installer which allows you to deploy any missing components and convert your vSphere environment to VCF.

If you already have a VCF 9.1 environment, then you can import your vSphere environment into that environment using VMware Cloud Foundation Operations.

After the import or convert process has completed perform any required post-conversion tasks, such as assigning licenses, and validate the environment.



3

Upgrade an Existing VCF Environment

vmware by Broadcom

Upgrade an Existing VCF Environment

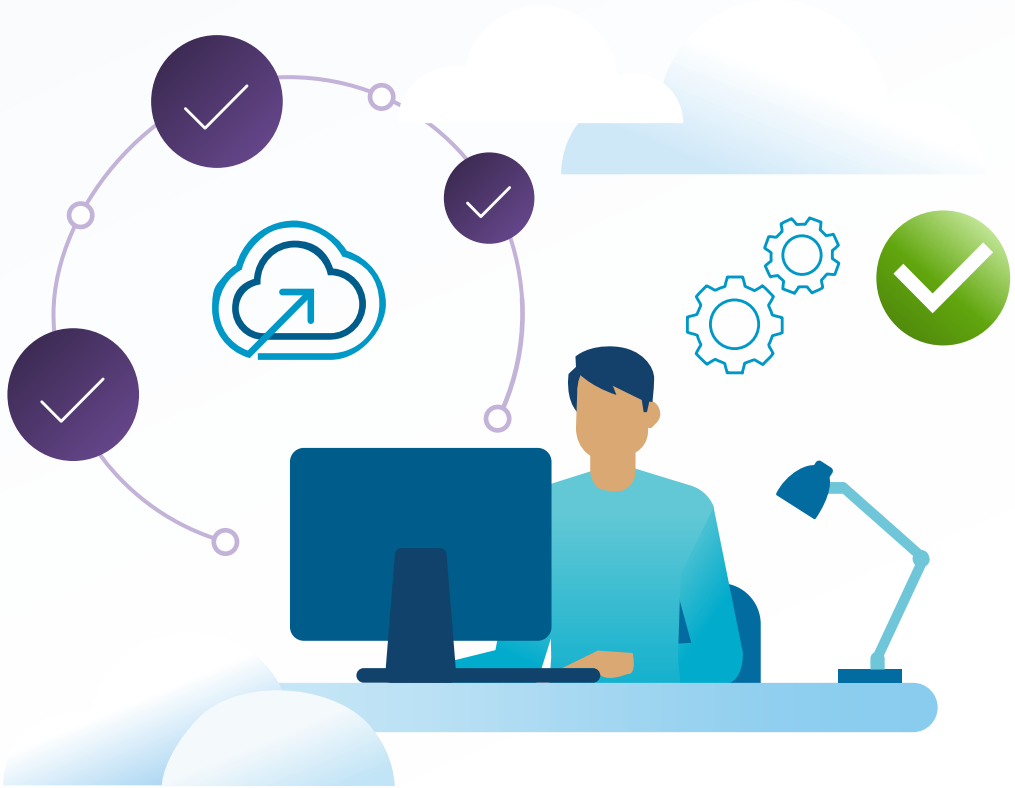
Upgrading to VCF 9.1 is a multi-step process. If you are currently running VCF 4.x, you must first upgrade to VCF 5.2. After the upgrade to VCF 5.2 is complete, your environment can then be upgraded to VCF 9.1.

The first step to upgrade VCF 5.2 to VCF 9.1 is to ensure your environment is ready for the upgrade. Check existing component versions and configuration specifics against the Planning and Preparation Workbook. Validate hardware against the VCF compatibility list. Review and remediate core component requirements.
Run the automated upgrade prerequisite check in VMware SDDC Manager.

Next, upgrade existing VCF 5.2 automation and operations components. Upgrade VCF management domain core components. This includes SDDC Manager, VMware NSX®, VMware vCenter®, and VMware ESX® hosts.

Note that VCF Operations is required in VCF 9.1 so it must be installed if there was no VCF 5.2 operations component to be upgraded.

After all components are upgraded or deployed, additional activities are needed to finalize the upgrade. This includes deploying VCF management services, upgrading VMware vSphere distributed switch and VMware vSAN™ filesystem versions, configuring licensing, and upgrading workload domains and any third-party or non-core VCF components. The final step is validation to ensure the upgraded environment is stable, performing optimally, and running as designed.



4

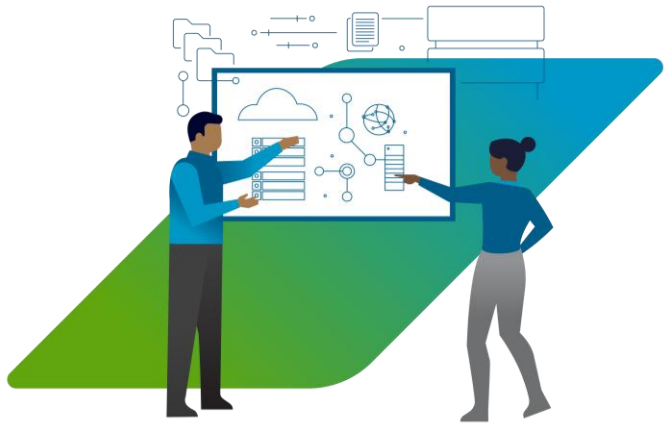
Deploy a New VCF Environment

vmware by Broadcom

Deploy a New VCF Environment

Deploying a new VCF environment is not a one-size-fits-all process. The effort and activities required are proportional to the complexity and strategic importance of the resulting environment.

Tailored Design and Deployment



This approach is necessary when the VCF environment will be used for large-scale operations. It applies to production environments, complex multi-site deployments (including disaster recovery and stretched clusters), or scenarios involving a data center hardware refresh. The approach requires a full, rigorous architecture and design phase, including deep validation of networking, storage, security policies, and integration with existing enterprise services (like identity management and monitoring). The goal is maximum resilience, scale, and performance.

Accelerated Deployment

This approach is perfect for quickly validating VCF 9.1 capabilities in your existing environment, or supporting focused workloads such as pilots, development/test labs, or single-instance deployments. This is a prescriptive deployment that leverages VCF's standardized components and automation tools to rapidly stand up the foundation. Complexity is significantly reduced by avoiding detailed cross-site and enterprise integration, leading to a munch faster time to value.

Tailored Design and Deployment

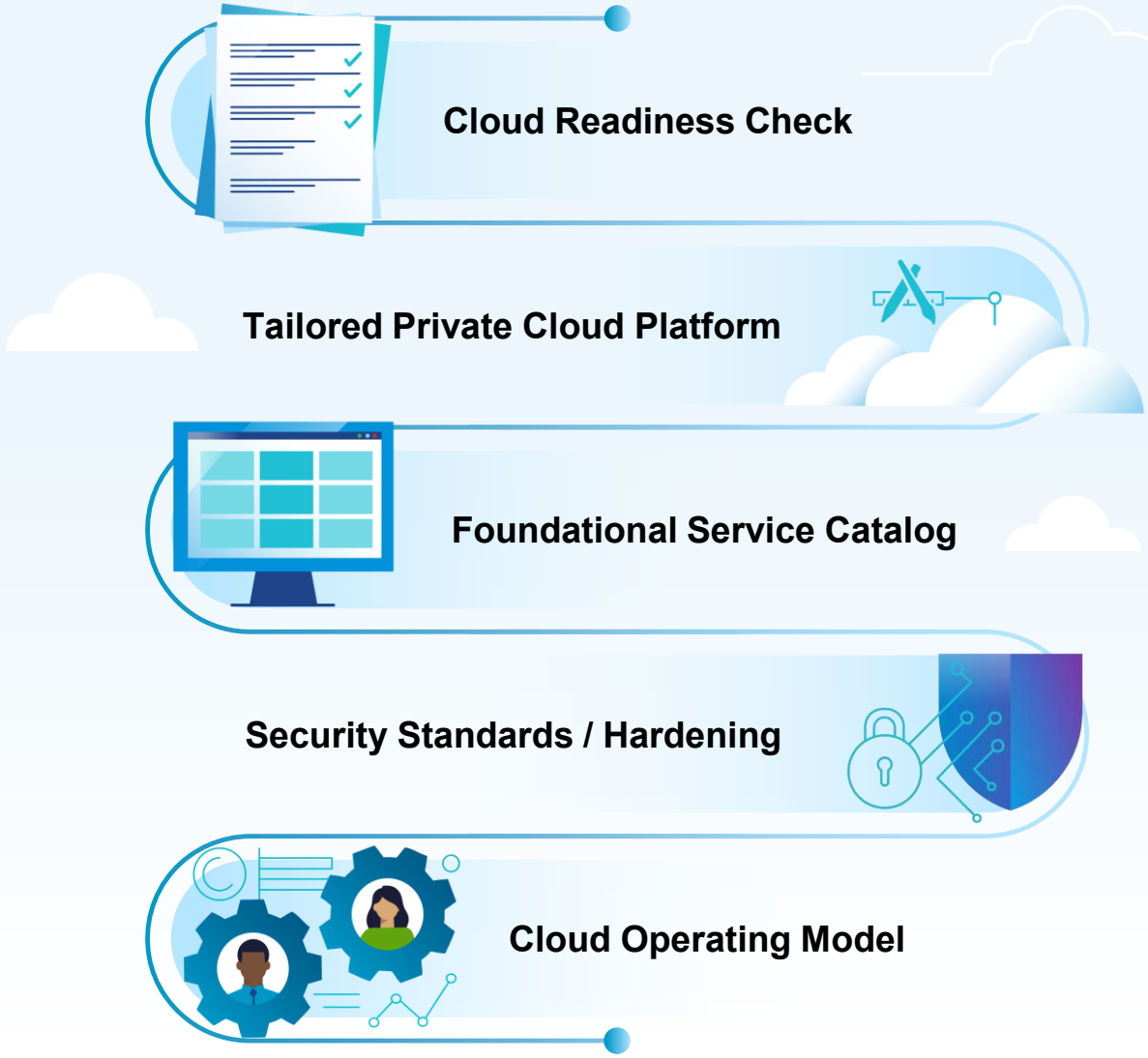
Successful implementation of a private cloud starts with a comprehensive assessment of existing infrastructure, operational processes, and strategic objectives.

After you understand where you are now and where you want to go, develop a fit-for-purpose architecture for your specific requirements. Deploy and configure VCF and integrate it into your existing IT ecosystem. To help realize immediate value, it's crucial to set up a foundational service catalog for fast access to IT resources and increased efficiency.

Security is paramount in an enterprise cloud environment. Implement security standards such as NIST and ISO 27001 for your compute, storage, and network components, as well as your automated installation and configuration tools.

Operating and managing your new private cloud requires a new cloud operating model. Define what new roles and skills are needed. Assess your current team's abilities and identify any knowledge gaps. Provide targeted knowledge transfer and training to ensure the team is fully prepared to run the new environment.

Define and implement processes to optimize day-to-day operations. For example, implement streamlined processes for capacity management and performance management to ensure the cloud runs smoothly and efficiently.



Accelerated Deployment

Using an accelerated deployment approach prioritizes core functionality based on VCF standard reference architecture to deliver fast private cloud capabilities.

Streamlined Readiness Check

Start with a streamlined readiness check to confirm basic compatibility and verify all essential prerequisites are met.

Prescriptive Private Cloud Platform

Perform a prescriptive deployment that strictly adheres VMware reference architectures. This eliminates custom design time, leveraging proven configurations for stability. Utilize automated deployment tools for swift configuration and setup of the core cloud infrastructure, enabling rapid deployment and essential integrations in days, not weeks.

Foundational Service Catalog

Establish a foundational service catalog enabling immediate self-service capabilities, allowing your team to begin testing and demonstrating value right away.

Migrate Workloads to the New Environment

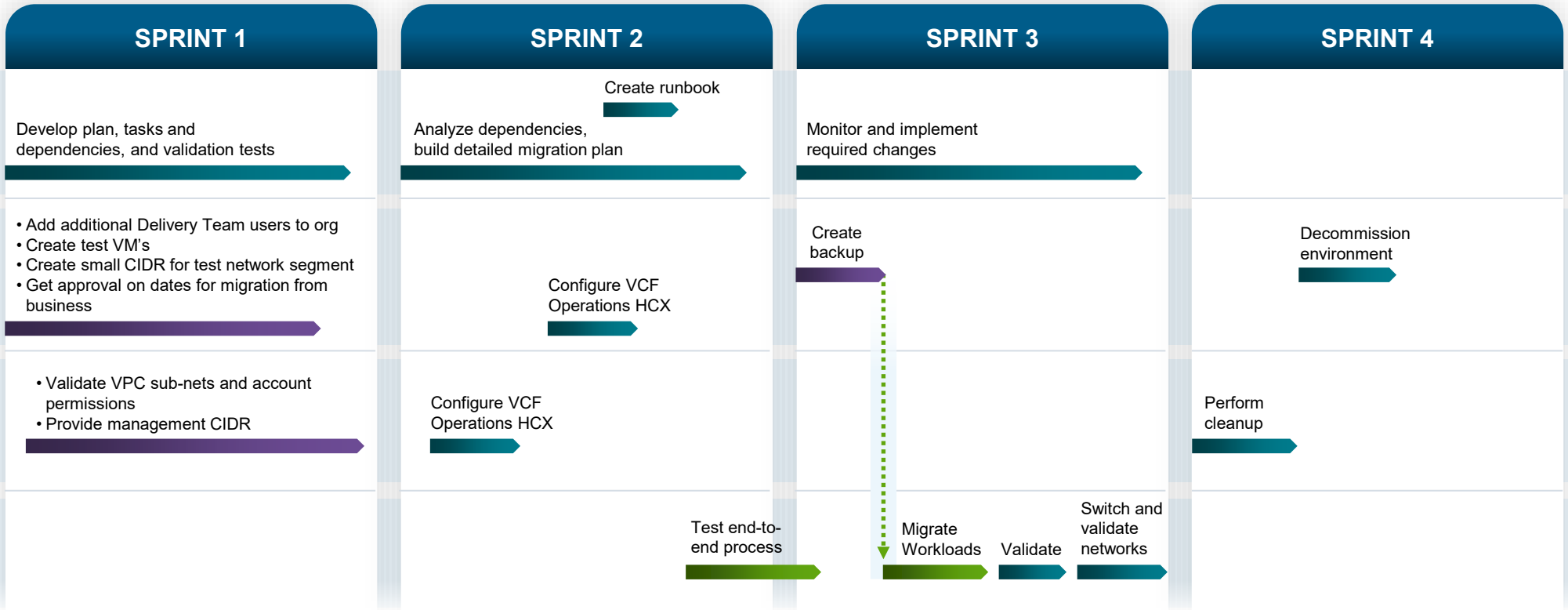
A new VCF 9.1 environment, whether a carefully tailored design or an accelerated deployment, truly delivers its value when your critical applications and data are running on it.

- Start by developing a migration approach based on your business goals and priorities and develop a high-level migration plan with specific tasks that identifies who will do what and when.
- Discover and analyze information on the applications and workloads in scope, and map application dependencies to avoid potential conflicts.
- Create a detailed migration plan. This includes a testing schedule, contingency plans, and a rollback strategy to mitigate risk if the migration execution encounters problems.
- Create a comprehensive migration runbook outlining every step, responsibility, expected outcome, and validation check to help ensure consistency and accountability. Then bundle, schedule, perform and verify the migration in waves. Be sure to perform a post-migration validation to confirm accuracy and completeness.

Provide Clarity with a Visual Migration Plan

It's helpful to develop a visual representation of your migration plan. This is the core project management and communication artifact that governs your workload migration. It provides sequencing and dependencies to ensure that prerequisite tasks are completed before applications are scheduled to move. It's the single source of truth for tracking progress against key milestones.

EXAMPLE MIGRATION PLAN

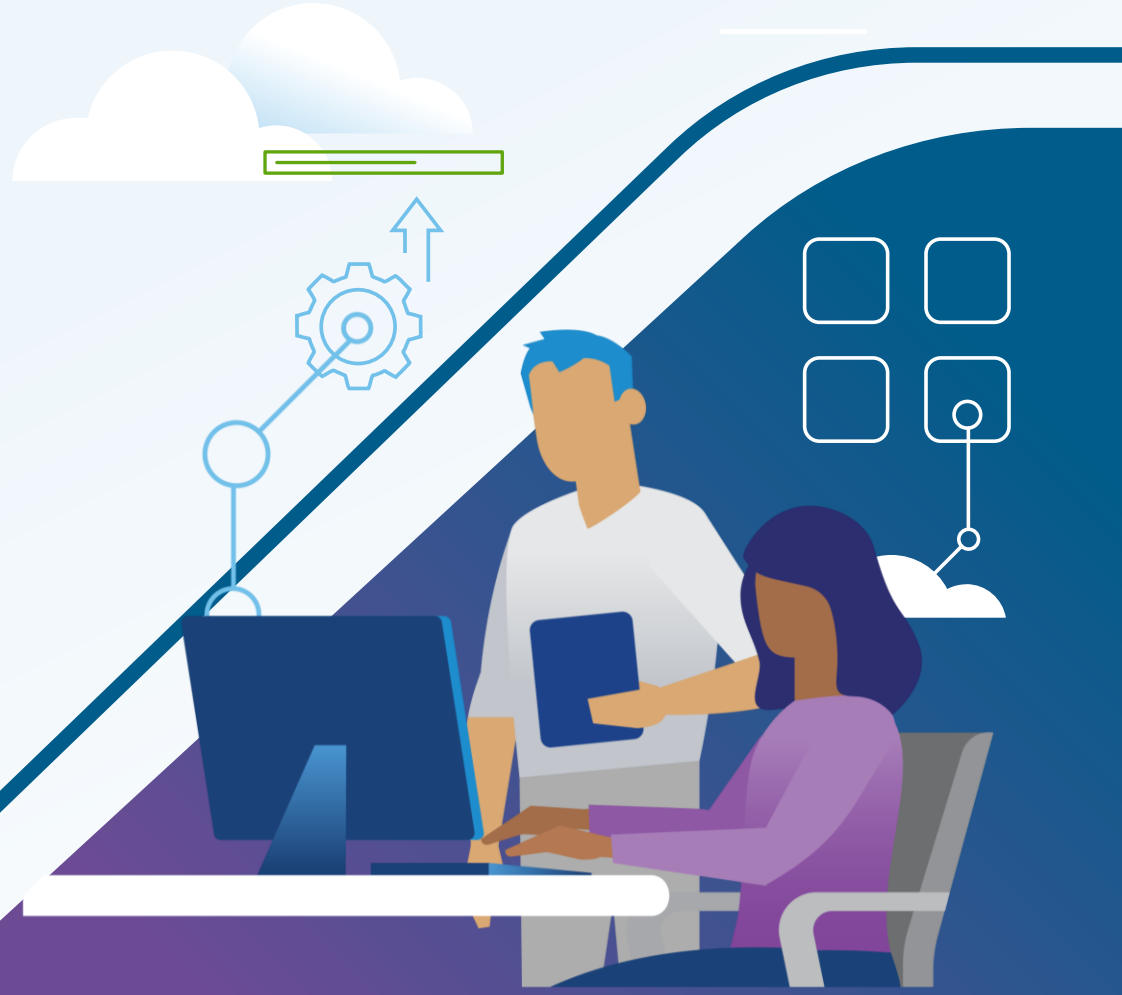


DELIVERY TEAM TASKS | CUSTOMER TASKS | JOINT TASKS

Accelerate Your VCF 9.1 Journey With Expert Guidance

Ready to harness the power of VCF 9.1 but want to skip the pitfalls?
Don’t navigate the course alone.

VCF Professional Services is your partner for private cloud success.
We bring more than just technical skill – we deliver the experience, best practices, proven methodologies, and VMware technology expertise necessary to transform your vision into reality. We eliminate the guesswork, ensuring your architecture is right from day one. We help minimize complexity and disruption, keeping your business running smoothly while we build or upgrade your environment. From initial architecture and design to seamless deployment and integration, we can help you achieve your private cloud initiatives faster.



Contact your Broadcom Account Director to learn more about how VCF Professional Services can help your organization.

vmware by Broadcom