TECHNICAL WHITE PAPER:
December 2024

VMware Cloud Foundation

Cloud Maturity Model – Services

Adoption Path for VCF 5.2

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Maturity Stage 1: IaaS

vSphere Supervisor

Transform existing infrastructure into a platform capable of running modernised workloads alongside the traditional ones. Virtual Machines, containers, and Kubernetes clusters, all running on one platform, managed by a unified set of tools.

To learn more about it:

- YouTube: vSphere Supervisor Overview
- YouTube: Supervisor Enablement
- Explore Session (Level 200): Kubernetes 101 and vSphere Supervisor
- Explore Session (Level 300): Kubernetes 101 and a Practical Guide to vSphere Supervisor
- Documentation: vSphere Supervisor Concepts and Planning
- Hands-on Lab: vSphere Supervisor

Maturity Stage 2: XaaS

Supervisor Services

Extend the service offering with additional services, such as private OCI image registry to store their images, or ingress controller for workloads.

To learn more about it:

- YouTube: Enabling Local Consumption Interface
- Documentation: Managing Supervisor Services

Maturity Stage 2: XaaS

Supervisor Services Lifecycle Management

Easily add new versions of Supervisor Services.

To learn more about it:

- YouTube: Updating vSphere Kubernetes Service
- Documentation: Managing Supervisor Services

Maturity Stage 3: CaaS

vSphere Kubernetes Service (VKS)

Deploy upstream aligned conformant Kubernetes clusters on demand. vSphere Kubernetes Service (formerly known as TKG Service) makes Kubernetes cluster deployment very quick and easy.

To learn more about it:

- YouTube: Deploying a Kubernetes cluster with VKS

- YouTube: Using Cluster Autoscaler
- Explore Session (Level 300): VKS Deep Dive
- Documentation: Using VKS with vSphere Supervisor

VM Service (VMS)

VM Service is a modern consumption interface through which any persona can self-service deploy and manage Virtual Machines. It allows users to declaratively define their Virtual machine configuration in a manifest and deploy it using the same APIs as they would deploy Kubernetes clusters. The desired state of the VM is then managed by the Supervisor. Consumers can also directly access these Virtual Machines without needing to have access to vCenter.

To learn more about it:

- YouTube: Deploying a Virtual Machine using VM Service
- YouTube: Creating a Content Library for VM Images
- YouTube: Creating a Custom VM Class
- Explore Session (Level 300): VM Service Deep Dive
- Documentation: Deploying and Managing Virtual Machines in vSphere Supervisor

Maturity Stage 3: PaaS

Tanzu Platform - PaaS

VMware Tanzu Platform helps organizations accelerate delivery of applications by simplifying and integrating the processes and tools used by developers and IT operations. Platform teams can offer simple code-to-deployment pipelines and support continuous delivery practices, while Developers get a frictionless experience, from onboarding to prod with baked-in patterns and enhancements for Spring.

To learn more about it:

- Solution Brief: Introducing VMware Tanzu Platform
- Landing Page: VMware Tanzu Platform
- Video: Easily build and deploy apps and manage Kubernetes at scale

Maturity Stage 3: App Runtime Services

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Maturity Stage 4: Data Services

Data Services/Databases

VMware Data Services Manager™ offers modern database and data services management for vSphere. It is a solution that provides a data-as-a-service toolkit for on-demand provisioning and automated management of PostgreSQL and MySQL databases in vSphere environment.

To learn more about it:

- YouTube: DSM Technical Overview
- YouTube: Creating a Database
- YouTube: Scaling Out Database
- YouTube: Configuring Infrastructure Policy
- Hands-on Lab: VMware Data Services Manager

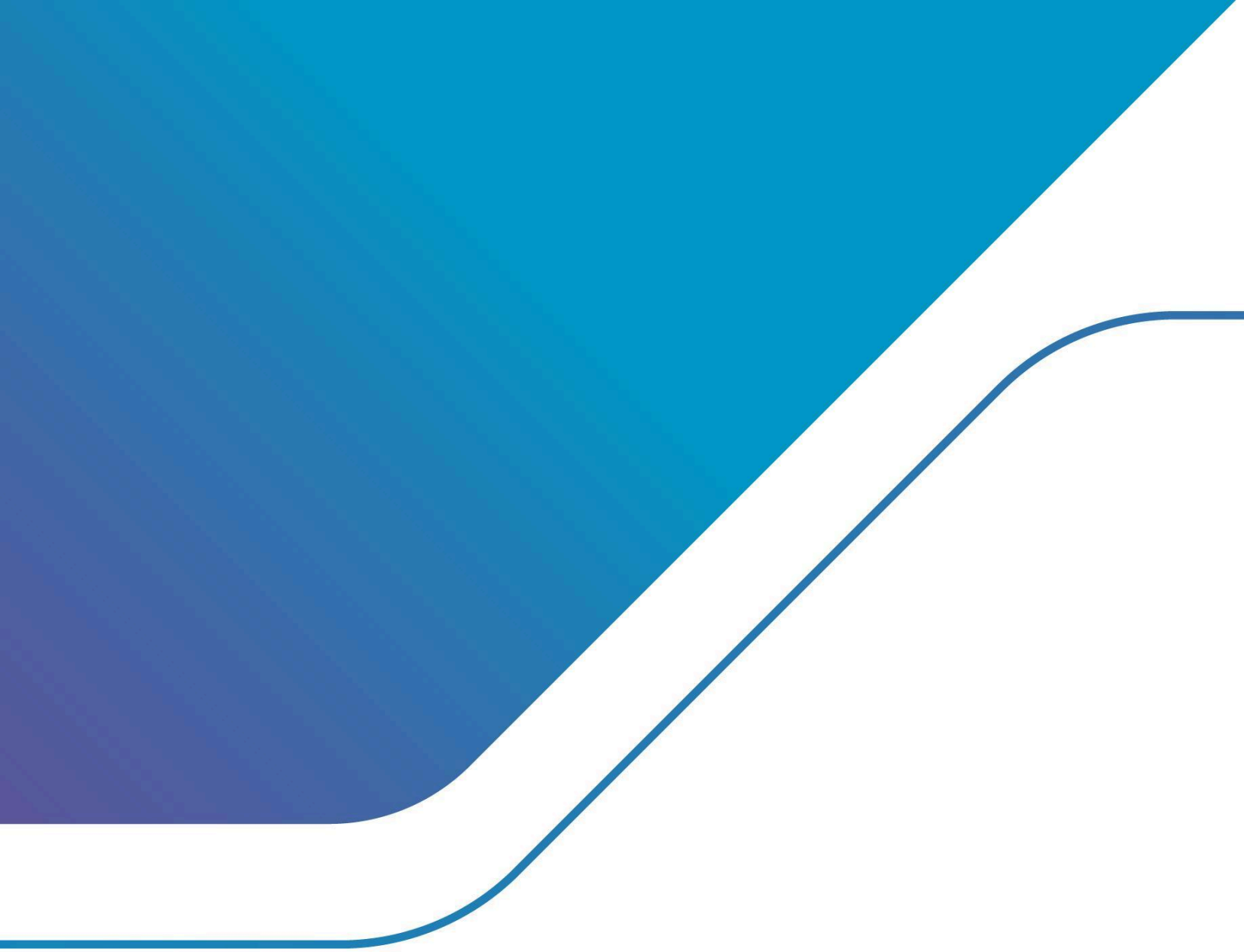
Maturity Stage 5: AI/ML Services

PAIF (Private AI): NVIDIA

VMware Private AI Foundation with NVIDIA provides a platform for provisioning AI workloads on ESXi hosts with NVIDIA GPUs. In addition, running AI workloads based on NVIDIA GPU Cloud (NGC) containers is specifically validated by VMware.

To learn more about it:

- Blog: VMware Private AI Foundation with NVIDIA – a Technical Overview
- Blog: Use Cases for Implementing VMware Private AI Foundation with NVIDIA – Part 1
- Blog: Use Cases for Implementing VMware Private AI Foundation with NVIDIA – Part 2
- Blog: Using NVIDIA's AI/ML Frameworks for Generative AI on VMware vSphere
- Blog: Building Production-grade Applications with VMware Private AI Foundation with NVIDIA
- Blog: VMware Private AI with NVIDIA - Server Guidance
- YouTube: VMware Private AI Foundation - Overview
- Video: VMware Private AI Foundation with NVIDIA Technical Overview and Demo
- Documentation: VMware Private AI Foundation with NVIDIA Guide
- VMware Validated Solution: Private AI Ready Infrastructure for VMware Cloud Foundation



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