

VMware Pivotal Container Service (PKS)

Pivotal Container Service

Q. What is VMware Pivotal Container Service?

- A. VMware Pivotal Container Service (PKS) is a purpose-built product that enables enterprises and service providers to simplify the deployment and operations of Kubernetes-based container services. It provides a production-grade Kubernetes distribution with deep NSX-T integration for advanced networking and a built-in private registry with image replication, RBAC, LDAP, and vulnerability scanning.

Q. Why is it abbreviated VMware PKS?

- A. The K is for Kubernetes. VMware PKS offers a production-grade container solution that uses Kubernetes.

Kubernetes

Q. What is Kubernetes?

- A. Kubernetes is a platform for managing, or *orchestrating*, application containers. Containers package applications and their dependencies into a distributable image that can run almost anywhere, streamlining the development and deployment of software. Kubernetes orchestrates containerized applications to manage and automate resource utilization, failure handling, availability, configuration, scalability, and desired state. As an application and its services run in containers on a distributed cluster of virtual or physical machines, Kubernetes choreographs all the moving pieces so they operate in a synchronized way to optimize the use of computing resources and to maintain the desired state.

Q. Will PKS support mainline Kubernetes?

- A. Yes, VMware PKS will support mainline Kubernetes, ensuring rapid support of features that are released by the Kubernetes community.

Q. What is “mainline” Kubernetes and what’s the significance to customers?

- A. Mainline Kubernetes refers to how code will be kept up to date with Kubernetes releases. Some companies fork a Kubernetes release or use a version during development that becomes out of date by the time a product reaches

general availability. VMware and Pivotal will be developing to the mainline Kubernetes release so customers will get the latest version with only a few weeks of difference instead of a difference of a minor release or more.

Q. What does “constant compatibility with GKE” mean?

- A. Using mainline Kubernetes ensures that PKS will be in constant compatibility with Google Container Engine (GKE), which runs on Google Cloud Platform (GCP). Google provided the term “constant compatibility” in reference to PKS, and the term communicates the benefit of having the most up-to-date features, patches, and tools for customers using PKS on-premises and leveraging GCP for workload compatibility.

Supported Products and Projects

Q. Does VMware PKS run on vSphere?

- A. Yes, VMware PKS runs on VMware vSphere.

Q. What VMware products are supported with PKS?

- A. VMware is providing a comprehensive solution for customers to deploy containers in production. In addition to vSphere and NSX-T, PKS will support secure container registry services through Project Harbor and persistent storage through Project Hatchway. Harbor and Hatchway are open source projects from VMware. PKS will also integrate with vRealize Operations, vRealize Log Insight, and Wavefront for monitoring, logging, and analytics. Wavefront includes dashboards that deliver real-time data on operations and performance. For cloud providers, vCD will extend support for PKS, enabling operators to deploy containers as a service through Kubernetes.

Q. What is Project Harbor?

- A. Harbor is an open source, enterprise-class registry server from VMware that stores and distributes Docker images in a private registry behind a customer’s firewall. Harbor extends the open source Docker distribution by adding such functionality as security and management. Harbor can be set up with multiple registries, and images can be replicated across the registries.

Q. Do customers need to buy NSX-T for PKS?

- A. NSX-T will be included in PKS so customers do not need to make a separate purchase. PKS requires NSX-T to provide networking for Container Network Interface (CNI) services and for pods. In Kubernetes, a pod is the smallest deployable unit in which one or more containers can be managed.

Q. What is the persistent storage function?

- A. To run stateful, data-intensive containerized applications that include databases, customers need a persistent storage solution. Project Hatchway, an open source platform from VMware, provides persistent storage for cloud-native applications running on vSphere. With Hatchway, developers can consume storage infrastructure as code, including vSAN. In addition, data services like snapshot, cloning, encryption, de-duplication, and compression are available at the level of a container volume. Administrators can efficiently manage storage by setting policies that enforce service-level agreements and quality-of-service requirements.

Collaboration with Pivotal

Q. How are VMware and Pivotal collaborating on PKS?

- A. VMware and Pivotal are bringing together technologies that address enterprise needs to run containers in production. As container adoption increases, customers need production functions such as fault tolerance, security, auto-scaling, health checks, self-healing, monitoring, and logging. VMware and Pivotal are working together to help enterprises and service providers operationalize Kubernetes.

Q. Does PKS require PCF or are they separate offers?

- A. PKS and PCF are two separate products that have no dependencies.

Q. What is Kubo and how is it related to VMware PKS?

- A. Kubo, which stands for Kubernetes on BOSH, is an open source project hosted by the Cloud Foundry Foundation. Kubo combines the container scheduling and orchestration capabilities of Kubernetes with the release engineering and automation capabilities of BOSH. PKS uses Kubo to provide lifecycle management and automation, making deployments, maintenance and upgrades easy. Kubo was launched by Pivotal and Google in February 2017 and donated to Cloud Foundry Foundation in June 2017.

Q. What is BOSH?

- A. BOSH is an open source tool that simplifies lifecycle management of large distributed systems. It allows developers to easily version, package and deploy software in a consistent and reproducible manner. BOSH can support deployments across many different IaaS providers, such as VMware vSphere, Google Compute Platform, Amazon Web Services EC2, Microsoft Azure, and OpenStack.

Cloud Native Computing Foundation Membership

Q. The Cloud Native Computing Foundation Hosts Kubernetes. Is VMware a member?

- A. Yes, VMware is a member of the Cloud Native Computing Foundation (CNCF), where Kubernetes is being developed by a community of users, vendors, and ISVs. CNCF provides governance for hosted projects, such as Prometheus, Fluentd, Containerd, and Kubernetes. The CNCF, which is part of the Linux Foundation, organizes regular conferences to provide updates, best practices, and tech talks.

Packaging and Purchasing Information

Q. When will VMware Pivotal Container Service be available for purchase?

- A. PKS will become available calendar year 4Q17. Pricing and packaging will be available at general availability.

Q. How will VMware Pivotal Container Service be packaged and sold?

- A. VMware PKS will be sold by VMware and Pivotal. Pricing and packaging will be available at general availability.

Contact Information

Q. Who should I contact for more information on PKS?

- A. For product information, please visit our product page at : <https://cloud.vmware.com/pivotal-container-service>, or call your VMware representative.



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