docker | kubernetes

Kubernetes Made Easy with Docker Enterprise

The easiest way to securely run and manage Kubernetes.

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Kubernetes is a powerful orchestration technology for deploying, scaling and managing distributed applications and it has taken the industry by storm over the past few years. However, due to its inherent complexity, relatively few enterprises have been able to realize the full value of Kubernetes; with 96% of enterprise IT organizations unable to manage Kubernetes on their own*. At Docker, we recognize that much of Kubernetes' perceived complexity stems from a lack of intuitive security and manageability configurations that most enterprises expect and require for production-grade software.

In keeping with Docker's heritage of making complex technology easy to use, Docker Enterprise includes Docker Kubernetes Service (DKS), a unified operational model that simplifies the use of Kubernetes for developers and operators. This provides organizations ability to leverage Kubernetes for their application delivery environment, without the need to hire a team of Kubernetes experts. Docker Enterprise with DKS makes Kubernetes easier to use and more secure for the entire organization without slowing down software delivery.

*Cloud Native Comes of Age, Capgemini Report, 2019

A Seamless Experience for Dev and Ops

Docker Enterprise with DKS is the only complete Kubernetes offering that provides consistency across the full development lifecycle - from local desktops to servers. This ensures that developers can seamlessly leverage features like multi-stage builds, application composition (Docker Compose), and in-container development and have them run consistently from development all the way to production. Developers have the flexibility to write their application with Docker and then can choose their orchestrator without requiring any additional modification. Similarly, developers can maintain their Docker native workflows, while experimenting with Kubernetes native tools and commands.

"Our business is built on human relationships and providing trusted services to our customers. Every technology decision we make is aimed at improving the experience for our policyholders and employees. With Docker Enterprise, we've empowered our technology organization to quickly make choices that best align with their business needs – whether it is containerization of legacy apps, cloud native or IoT experimentation – enabling them to place their workloads in the most secure, cost effective and desirable operating environment."

JESSE ANTOSIEWICZ
SR. DIRECTOR, INFRASTRUCTURE AND APPLICATION SERVICES

Liberty Mutual

Simplify the Operational Experience for Kubernetes

Docker Enterprise with DKS simplifies day-to-day operational tasks when using Kubernetes. As the only enterprise container platform that allows you to leverage your existing team and processes to adopt and operationalize Kubernetes, offering:

Streamlined Lifecycle Management

For Day 1 and Day 2 operations, teams can easily deploy, scale, backup and restore, and upgrade a certified Kubernetes environment using a set of simple CLI commands. This delivers an automated way to install and configure Kubernetes applications across hybrid and multi-cloud deployments, including AWS, Azure, or VMware.

Secure by Design

Out-of-the-box configurations for security, encryption, access control, and lifecycle management — all without having to become a Kubernetes expert. Organizations can integrate their existing LDAP and SAML-based authentication solutions with Kubernetes RBAC for simple multi-tenancy.

Docker Enterprise with DKS streamlines managing Kubernetes; however, operations teams also have access to raw Kubernetes components that run atop a full-featured, CNCF-conformant Kubernetes stack. Accordingly, Kubernetes-native APIs, CLIs and interfaces are available to advanced users seeking to fine tune and troubleshoot the orchestrator.

Run Swarm and Kubernetes Interchangeably Across a Uniform Secure Supply Chain

Only Docker Enterprise with DKS brings a complete secure supply chain to Kubernetes in the same way it has for its built-in container orchestration technology, Docker Swarm. Running both Swarm and Kubernetes interchangeably in the same cluster means IT can build an environment that allows developers to choose how they want to deploy applications at runtime. Applications deployed by either orchestrator can be managed through the same control plane, allowing organizations to scale more efficiently. Teams can deploy applications to Swarm and migrate these same applications to Kubernetes, and vice versa, using the same Docker Compose file.

Combining Docker image signing and scanning with policy-based image promotions allows organizations to build governance over the container environment without impeding the speed of development and application delivery.

To tailor these capabilities to globally distributed organizations, Docker Enterprise comes with functionality within its trusted registry for image caching and mirroring. These features ensure that centrally stored images can be propagated to regional registries for better performance and replicated for higher availability. The result is that organizations with software projects that span multiple continents can seamlessly and securely share their software within a given development team. When one part of the organization is done for the day, they can sign their content, push it to the private registry and then have the content changes automatically cached, for a hand-off, in other private registries around the globe.
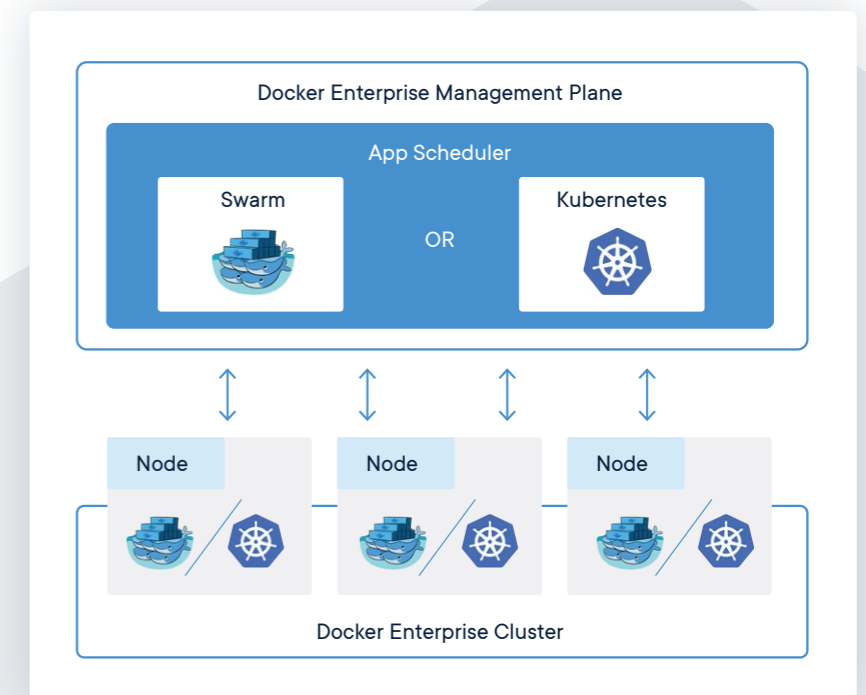
Eliminate Infrastructure Lock-in

Docker Enterprise with DKS eliminates risk for organizations by providing the freedom to choose how, when and where to innovate their applications without the fear of technology or infrastructure lock-in. Organizations can start big or small, with legacy or cloud-native applications, using any application stack on any OS, across any infrastructure, whether it be on-prem or across multiple clouds and still have the same Docker experience throughout the application lifecycle.

As part of Docker Enterprise, organizations have these capabilities:

Multi-OS Support: Availability across certified infrastructure platforms, including multiple Linux distributions (SLES, CentOS, RHEL, Ubuntu, Oracle Linux) and Windows Server.

Multi-Cloud: Organizations are not locked into an underlying infrastructure and get the greatest flexibility in hybrid cloud deployments across all major clouds including AWS and Azure.

Orchestration Choice: Docker Enterprise is the only platform that runs both Swarm and Kubernetes simultaneously on the same cluster - so developers do not need to make an orchestration choice. Operations teams have the flexibility to choose orchestrators interchangeably.

Networking: Consistent with Docker's "batteries included but swappable" model, Docker Enterprise offers integrated secure networking through Project Calico by and in collaboration with Tigera, Docker's integration partner for Calico. With this CNI integration, organizations get a fully-supported Kubernetes solution with Project Calico built-in - the only one that works uniformly across the leading Linux OSs and the major cloud providers. Companies with networking plugins that are certified or being certified on Docker Enterprise include: Cisco Contiv, Infoblox and Weaveworks.

Storage: Companies with volume plugins that are certified or being certified on Docker Enterprise include: Blockbridge, Dell EMC, Hedvig, HPE/Nimble, NetApp, Nexenta, Portworx, Pure Storage, StorageOS, Veritas, Virtuozzo.

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How to Get Started

Docker Enterprise is the easiest and fastest way to use containers and Kubernetes at scale and delivers the fastest time to production for modern applications, securely running them from hybrid cloud to the edge. Designed to give you the broadest choice around orchestrators, application types, operating systems, and clouds while supporting the requirements of global organizations, Docker Enterprise is the most advanced enterprise-ready container platform in the market

Over 750 enterprise organizations use Docker Enterprise for everything from modernizing traditional applications to microservices and data science.

Learn More at
www.docker.com/products/kubernetes

For More Information:
www.docker.com/enterprise

Contact Sales for More Information:
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