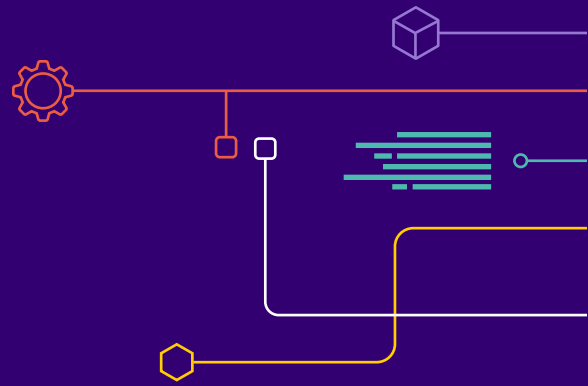# DKP Essential

Overview

DKP Essential is a single-cluster Kubernetes solution that gives you a feature-rich, easy-to-deploy, and easy-to-manage entry-level cloud container platform that can seamlessly expand and scale as your needs grow. For early adopters, DKP Essential enables you to gain the benefits of an enterprise-grade cloud-native Kubernetes environment in a smaller footprint, with less complexity and cost.

DKP Essential is an enterprise-grade Kubernetes distribution built on pure open-source software with the ancillary platform services needed for Day-2 production that are tightly integrated, secured, and tested at scale.

DKP Essential is designed for ease of use and to enable organizations to get into production quickly. An organization can be up and running in minutes and hours rather than weeks and months, with complete stability, reliability, military-grade security, and rapid time-to-value. Complexity is reduced through packaging, automation, integration, and elegant design.

DKP Essential operates across the full range of cloud, on-premise, edge, and air-gapped infrastructures and has support for various OSs, including immutable OSs. Deployment options include bare metal servers and VMware vSphere. Customers can deploy DKP Essential on the cloud of their choice, including Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP).

Also available as an add-on product is Kaptain AI/ML, which is a comprehensive artificial intelligence (AI) and machine learning (ML) platform that simplifies AI/ML operations, enabling data scientists to focus on attaining actionable business results rather than configuring complex Kubernetes and Kubeflow infrastructures.

Platform + People = Kubernetes Success

D2iQ enables customers to successfully deploy Kubernetes through a combination of simplified platform and expert support and training services.

Support Services

D2iQ provides a wide range of Kubernetes 24/7 support offerings to help you quickly resolve issues for core Kubernetes and its supporting platform services. Our team delivers a unique mixed workload testing methodology that ensures your stack of technologies are initially and continuously tested to ensure interoperability of key services.

Training Services

D2iQ is a Certified Kubernetes Training Partner (KTP) and delivers instructor-led courses that can equip your staff with the skills and knowledge to successfully plan, build, and operate on Day 2 in production, both for Kubernetes and its supporting platform services.

The DKP Difference

The hallmark of DKP is ease of use. DKP enables organizations to be up and running in minutes and hours rather than weeks and months, with complete stability, reliability, military-grade security, and rapid time-to-value. Complexity is reduced through packaging, automation, integration, and elegant design.

DKP enables provisioning and managing of clusters from a single command, making it easy to get your Kubernetes infrastructure up and running quickly. Through single-command provisioning, DKP reduces steps needed to provision or remove clusters from eight steps to one.

A unified graphical user interface and command-line interface simplify and enhance the customer experience from deployment to production.

DKP is the only distribution built on pure open-source Kubernetes, providing complete portability and enabling you to harness the innovation of the open-source community with no fear of lock-in and with lower total cost of ownership (TCO).

DKP is uniquely designed to provide a fully interoperable and Cloud Native Computing Foundation (CNCF)-conformant Kubernetes experience, which enables you to leverage the best innovation that the industry has to offer while ensuring the security, resilience, and cost efficiency that your organization demands.

As the leading independent platform for Kubernetes in production, the D2iQ Kubernetes Platform (DKP) provides a holistic approach and a complete set of enterprise-grade technologies, services, training, and support to build and run applications in production at scale.

Key DKP Essentail Features

Enterprise-Grade Capabilities	DKP Essential provides enterprise-level platform services for networking, storage, logging, monitoring, security, resilience, governance, and more, all of which have been carefully selected from the CNCF landscape and rigorously tested to work together. For customers with lighter and less complex workloads, DKP Essential provides everything needed to gain the maximum benefits from an easy-to-manage, easy-to-deploy, single-cluster Kubernetes solution.
Seamless Upgrade Path	A seamless and painless upgrade path is always available to the more robust, full-featured DKP Enterprise multi-cluster solution.
Observability	A centralized management plane enables you to visualize, monitor, and manage clusters across distributed multi-cloud, and hybrid cloud environments from a single point. Observability also includes user visualizations within three types of tenancy views for business units and developers.
Workspace-level Logging	DKP Essential provides the ability to manage logs by workspace for more granular control and simpler troubleshooting.

Military-Grade Security	DKP is security hardened following enterprise security best practices, including access control through single sign-on, encrypted data addresses, and a network policy quota. DKP meets NSA/CISA Kubernetes security hardening guidelines and validates Federal Information Processing Standards (FIPS) compliance. The container images that are shipped as part of the platform, including Day-2 applications, are scanned for Common Vulnerabilities and Exposures (CVE) before every major and minor release.
Cluster API (CAPI)	DKP is architected around CAPI, an innovative CNCF technology. CAPI simplifies declarative infrastructure management using GitOps, automating many of the formerly manual processes required to keep systems running and scaling. CAPI auto-scaling automatically scales infrastructure capacity based on the resource needs of the running workloads to reduce operational costs.
Flux	Flux enables the use of cloud-native GitOps for application and infrastructure lifecycle management. In DKP Essential, Flux is used to deploy applications.
Single-Command Cluster Provisioning	Through the reduction of steps needed to provision or remove clusters, from eight steps to one, DKP enables provisioning and managing of clusters from a single command, making it easy to get your Kubernetes infrastructure up and running quickly.
Enhanced Diagnostic Bundles	DKP can collect enhanced diagnostics for Kubernetes components and node-level instrumentation around CPU, memory, disk usage, and operating system (OS) health, to reduce the time needed to diagnose and fix problems, resulting in less downtime for customers.
Automated Cloud Service Provider Deployment and Enhancement	DKP deployment and management options include Amazon Elastic Container Service for Kubernetes (EKS), Azure Kubernetes Service (AKS), and Google Kubernetes Engine (GKE). DKP enables customers to provision, spin up, and de-provision EKS and AKS in a fully automated way. The result is a consistent, repeatable approach to managing the end-to-end lifecycle of EKS and AKS clusters from a single, centralized point of control.
Deployment Flexibility	Besides a full range of cloud, hybrid cloud, on-premise, edge, and air-gapped environments, DKP deployment options include bare metal servers and VMware vSphere. DKP provides integration with Cluster API Provider for VMware vSphere to enable enterprises to deploy and manage a DKP cluster in a VMware environment, simplifying lifecycle management for infrastructure operation teams and improving productivity and speed of deployment.
Eliminates Kubernetes Skills Gap	Through automation, a centralized control plane, user-friendly interface, and expert training services, D2iQ simplifies Kubernetes management and enables DevOps teams to manage a Kubernetes deployment with ease.

| World-Class Support	DKP provides consulting services, training, and end-to-end support for Kubernetes and your entire cloud-native stack of services and applications. By leveraging our expertise and operational guidance, you can avoid common pitfalls and ensure faster time-to-market. DKP Essential is available with Premium 24x7 support or Confirmed Stateside Support (CSS) 24x7 options. Your success is ensured by the dedicated service of an expert support team with years of experience developing and implementing Kubernetes technology.
Professional Services	D2iQ's professional services team provides expert guidance from Day-0 design to Day-2 operations — and beyond: **Advise** — Our Advisory Services answer your most pressing questions and guide your wide-ranging cloud-native endeavors to achieve enterprise-grade outcomes. **Activate** — Our Activation Services are tailored to ensure that Kubernetes is customized to meet your cloud-native application needs for scalability, efficiency, and speed. **Adopt** — Our Adoption Services are designed to help with Day-2 operations enablement and continuous support and improvement in the lifecycle of your applications.
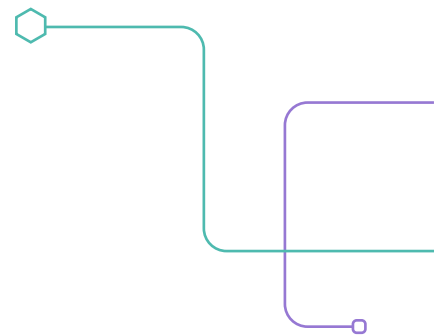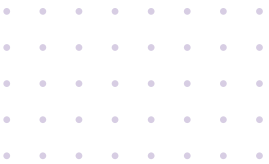
D2IQ

To learn more about how D2iQ can be your partner
in the cloud-native journey, visit **D2iQ.com**