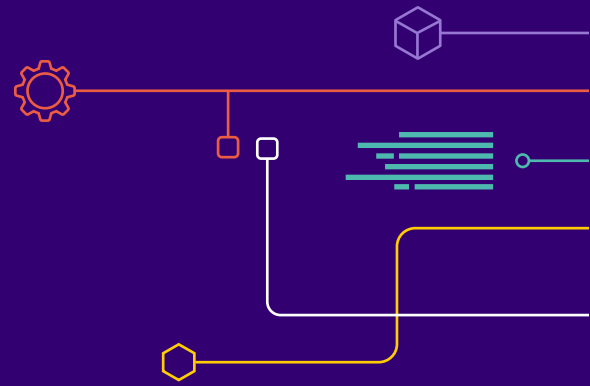




SOLUTION BRIEF

# DKP Edge/IoT



## Overview

DKP Edge/IoT is an enterprise-grade Kubernetes platform optimized for managing edge devices, including retail endpoints, remote data centers, manufacturing floor controls, medical devices, remote vehicles and ships, kiosks, environmental monitors, and scores of other IoT devices and sensors.

The D2iQ Kubernetes Platform (DKP) integrates the core functionality demanded for the edge, including lightweight deployment, monitoring, and logging. Edge sites can be managed through the centralized management plane that DKP Enterprise provides, with a reach that can span all environments, including firewalls and air-gapped environments.

## How DKP Delivers Success at the Edge

DKP is designed to handle the most demanding environments, including processing at the edge. Leveraging a cloud-native, centralized control plane, DKP can manage thousands of edge sites. Flexible environment support enables management to be unified across diverse environments. By leveraging declarative deployment, new instances are provisioned automatically when applications or IoT devices fail.

**Ensure Zero Downtime** — DKP leverages Cluster API (CAPI) to automate many of the formerly manual processes required to keep systems running as desired. If a node fails, CAPI automatically discards non-working nodes and provisions new ones. This self-healing capability significantly reduces the operational effort of cluster lifecycle management and gives you peace of mind that mission-critical IoT applications can run and be updated with zero downtime.

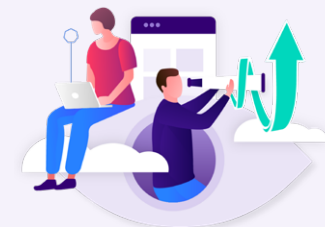
**Securely Connect to Edge and IoT Devices** — DKP's network tunneling feature is uniquely designed to provide centralized multi-cluster management of edge environments with limited connectivity or with firewall boundaries. With this unique capability, communication can take place unidirectionally, as needed, to remove the need for always-on bidirectional connectivity between the control plane and clusters. This makes it possible to securely and reliably connect to a large number of disparate IoT devices, no matter where you are, what environment you use, or where that environment lives.

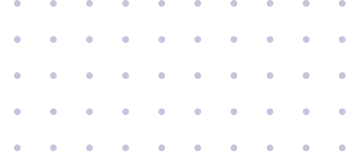
## The D2iQ Difference

DKP is built on pure upstream open-source Kubernetes, giving you complete portability and the freedom to leverage continual open-source innovation with immunity from lock-in to proprietary solutions, all while yielding the lowest total cost of ownership (TCO).

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.

Through automation, a centralized control plane, user-friendly interface, and expert training, D2iQ simplifies Kubernetes management and enables DevOps teams to manage a Kubernetes and Edge/IoT deployment with ease.





**Deploy Kubernetes to the Edge at Scale** — DKP’s CAPI-based auto-scaling feature automatically scales up and down infrastructure capacity based on the resource needs of the running workloads. This not only provides uninterrupted application availability, but dramatically reduces the time and cost of having to constantly monitor the system for resource constraints. The end result is better resource utilization.

**Centralized Management and Governance** — DKP provides centralized visibility and unified operational control for any edge infrastructure or Kubernetes distribution and provides standardized Kubernetes across devices, teams, and infrastructures. This capability ensures that an organization can deliver the management and governance needed to deploy and maintain edge and IoT applications repeatedly and reliably, accelerating time-to-value.

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## Key Features and Benefits

Operational Control Panel	Gives you instant visibility and operational efficiency into the Kubernetes landscape from a single-view management plane
Cluster Analytics	Enables you to collect, normalize, and infer cluster performance, workload metrics, data services, user and cluster activities, and more, to deliver better resource utilization
Centralized Observability	Enables you to gain deep insight into your Kubernetes clusters and applications with open-source metrics leveraging Telegraf, Prometheus, and Grafana
Service Catalog	Enables you to quickly and easily deploy applications and complex data services from a centralized service catalog to specific or multiple clusters, with governance
Cluster Auto-scaling	Enables you to minimize operational costs by scaling down capability when it’s not needed, and to add capacity when there is greater demand
Lifecycle Automation	Ensures consistent upgrades, deployment, and security policies for infrastructure (through CAPI) and applications (through FluxCD)
Networking and Routing	Enables unidirectional connectivity between the control plane and clusters with Kubetunnel
Governance Policy Administration	Enables you to meet the requirements of security and audit teams with centralized cluster policy management
Service Mesh Integration	Provides advanced networking capabilities such as multi-cluster and cross-cluster service discovery, load balancing, and security across hybrid, multi-cloud, and air-gapped environments
Centralized Authorization and Authentication	Enables single sign-on (SSO) across an organization’s cluster footprint and govern authorization with role-based access control (RBAC) and Open Policy Access to enhance security and reduce risk
World-Class Service & Support	DKP Edge/IoT 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

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## Platform + People = Kubernetes Success

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

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## 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.

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## 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.

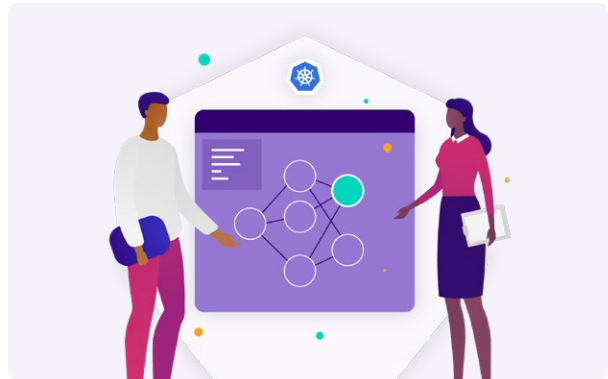
**Activate** — Our Activation Services are tailored to ensure that Kubernetes is customized to meet your cloud-native application needs for scalability, efficiency, and speed.

**Adopt** — Our Adoption Services are designed to help with Day-2 operations enablement and continuous support and improvement in the lifecycle of your applications.

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## 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 required to successfully plan, build, and operate on Day 2 in production, for Kubernetes and its supporting platform services.



To learn more about how D2iQ can be your partner in the cloud native journey, visit [D2iQ.com](https://d2iq.com)