

# Diamanti Solution Overview

## DIAMANTI AT A GLANCE

- ✓ **ENTERPRISE KUBERNETES AT SCALE**
  - Accelerate Kubernetes expansion and support multiple teams and projects in a secure and resilient manner
  - Provision, attach and centrally manage multiple Kubernetes environments across on-premises and public cloud
- ✓ **COMPLETE TURNKEY SOLUTIONS**
  - Get up and running quickly with the only Kubernetes-native platform with integrated management and data planes
  - Future-proof your transition to Kubernetes with enterprise-grade security, resiliency and high availability built-in
- ✓ **TRANSFORMATIONAL APPLICATION PERFORMANCE**
  - Turbocharge the performance of data-intensive applications including databases, data analytics, messaging applications and AI/ML with patented I/O acceleration technology

Diamanti is solving the challenge of container-based hybrid clouds with the best enterprise-grade platform for managing Kubernetes at any scale. Diamanti's Kubernetes management platform breaks from legacy architectures to deliver turnkey solutions that are simple and cost effective on-premises and in the cloud, allowing enterprises to focus on their applications and not on infrastructure complexity.

Diamanti addresses tomorrow's enterprise security, availability, resilience, and performance requirements. With Diamanti, enterprises can rapidly expand Kubernetes across public/private clouds while providing a purpose-built platform on-premises that delivers transformational application performance. Diamanti's patented acceleration technology and simplified multi-cluster operations deliver significant performance improvements and cost savings that fuel enterprise modernization efforts.

## WHY DIAMANTI

Diamanti is making it easier for enterprises to transition to microservices and container-based applications. Key differentiators include:

- **Hybrid Cloud Flexibility** - Centrally manage Kubernetes clusters across public clouds and on-premises.
- **Application Freedom Across Clouds** - The most advanced federated Kubernetes platform for stateful applications.
- **Future-Proof for the Enterprise** - Protect your applications and your infrastructure with enterprise-grade security and availability features.
- **Supercharged Performance** - Get 10x to 30x performance improvement for your data-intensive applications.

## FUELING ENTERPRISE DIGITAL TRANSFORMATION

The imperative to modernize applications and infrastructure is only increasing in urgency. The industry has chosen Kubernetes as the platform of choice for microservices and distributed applications, but it's a significant transition from previous generations of technology. The Diamanti platform is designed to accelerate results and drive the rapid adoption and expansion of Kubernetes. With Diamanti, enterprises can deliver on their key IT priorities:

- **Hybrid cloud** - Diamanti Spektra makes it easy to provision, attach and manage Kubernetes clusters on-premises and in the cloud, and operate these environments through a single pane-of-glass.
- **Application modernization** - Built on a complete cloud-native architecture with standard open source tools, developers get fast access to a pure Kubernetes environment that "just works". Focus is on the application without having to worry about infrastructure availability and performance.
- **DevOps** - Implementing DevOps in your organization requires a consistent methodology for building and shipping applications to any destination. Diamanti delivers a Kubernetes platform that can integrate to your choice of Continuous Integration (CI) and Continuous Delivery (CD) tools, spanning all different types of infrastructure. This gives you a single operations workflow that can work both on-premises and in the cloud.
- **Improved availability and uptime** - IT services are critical to the ongoing operations of a company. With Diamanti, Day 2 operations are simplified and meet enterprise requirements around backup, high availability and disaster recovery, protecting both your applications and its data.
- **Cost efficiency** - Budgets are always being tightened. With Diamanti, the most demanding applications are less expensive to run, delivering significant cost savings from licensing and footprint reductions. These savings can be reinvested into the organization, fueling additional modernization projects.

## SOLUTION DETAILS

### Diamanti Spektra

Diamanti Spektra is a hybrid cloud Kubernetes platform that includes both a multi-cluster, multi-cloud management plane and an industry-leading cloud-native data plane solution.

The management plane makes it easy to support multiple teams and projects spread across a hybrid cloud. With certified Kubernetes and Docker and a management console built-in, Diamanti Spektra enables administrators to easily manage large-scale, multi-cluster Kubernetes deployments. It offers enterprise-ready Role-Based Access Controls (RBAC) with integrations to Active Directory (AD) and LDAP systems and advanced resource and access controls to support secure multi-tenancy.

The data plane provides a container-native distributed storage layer and integrated Container Networking Interface (CNI) and Container Storage Interface (CSI) plugins, making it possible to deliver advanced data services. Diamanti Spektra includes built-in storage backup and restore, volume snapshots, synchronous replication for stretched clustering, and asynchronous replication for offsite disaster recovery (DR).

Users can deploy and migrate applications to other managed clusters and configure replication policies for disaster recovery from a unified management console, providing a single-pane-of-glass for multi-cluster operations.



## Diamanti Ultima

For on-premises environments, the Diamanti platform offers patented I/O acceleration technology that significantly improves the performance of data-intensive applications including databases, data analytics, messaging, or AI/ML workloads. Diamanti Ultima is a pair of second-generation PCIe based [I/O acceleration](#) cards that offload networking and storage traffic freeing up compute resources to power modern applications. It helps avoid overprovisioning of resources by eliminating “noisy neighbors” and assures guaranteed performance with hardware-enforced quality of service (QoS) for storage and networking.

## Choice of Hardware

The Diamanti platform works with your choice of x86 hardware, including options directly from Diamanti or from leading server providers including Dell Technologies and Lenovo. The Diamanti D20 series of modern hyper-converged platforms consists of D20, D20X, G20T, and G20P with varying configurations of Intel CPUs, memory, and NVMe storage. G20T and G20P also support Nvidia GPUs for AI/ML use cases.

**For more information on use cases, visit the following links:**

### Product Information

[diamanti.com/product/](https://diamanti.com/product/)

### Spektra Data Sheet

[diamanti.com/resources/diamanti-spektra-datasheet/](https://diamanti.com/resources/diamanti-spektra-datasheet/)

### Additional Resources

[diamanti.com/resources/](https://diamanti.com/resources/)



Diamanti delivers purpose-built infrastructure for modern applications, enabling transformational application performance from on-premises to hybrid cloud with Kubernetes out-of-the-box.

[www.Diamanti.com](https://www.Diamanti.com)  
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