

Diamanti Spektra™

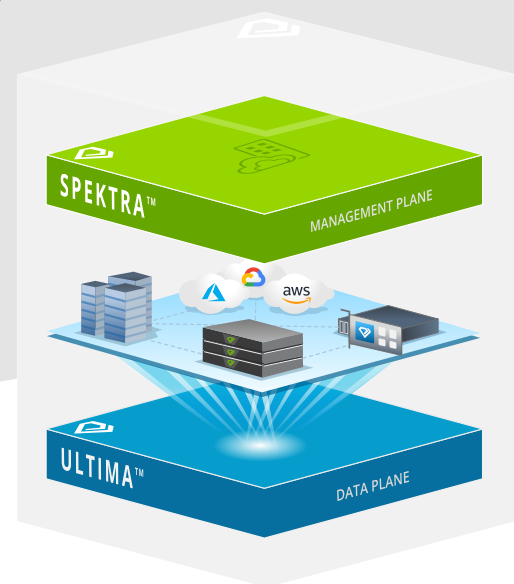
Supercharge Your Enterprise Kubernetes Platform

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 delivers 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.

DIAMANTI SPEKTRA™ USE CASES

- Application modernization
- Microservices
- Hybrid cloud
- Multi-cluster Kubernetes
- Databases
- Logging and analytics
- Streaming data processing
- AI/ML
- DevOps
- Edge
- IoT



Key Benefits

✓ Simple

- Ready to deploy cloud native applications in minutes with pre-installed CNCF-certified Kubernetes on validated infrastructure
- Fully integrated management and data planes eliminate the complexity of separate vendor solutions, separate control planes
- Easily adopt and expand Kubernetes both on-premises and in public clouds, centrally managing multiple Kubernetes clusters from a single console
- Pre-integrated with Diamanti's best-in-class Container Networking Interface (CNI) and Container Storage Interface (CSI) plugins

🔒 Secure

- Optimized for enterprise security and high availability at scale
- Built-in volume snapshots, backup and disaster recovery
- Fault tolerant for node and availability zone failures
- Enterprise-ready role-based access controls (RBAC) integration with Active Directory (AD) and LDAP systems
- Policy-based secure multi-tenancy for enterprises and Managed Service Providers (MSPs)
- TLS encryption protects the cluster traffic

🕒 Efficient

- Bare-metal container deployments remove unnecessary layers of abstraction
- Guaranteed performance with hardware-enforced quality of service (QoS) for storage and networking
- Avoid overprovisioning of resources and eliminate "noisy neighbors"
- 70% reduction in overall data center footprint and TCO
- Diamanti Ultima delivers a powerful, yet simple, data plane software to run data-intensive applications on premises and public cloud environments

Diamanti Central

Diamanti is revolutionizing how developers get started on Kubernetes and making it widely adopted within their organizations. By launching Diamanti Central, large and small organizations can access to best practices, a library of curated Helm charts and Diamanti Operators, documentation, reference architectures, and technical support.

Best of all, once registered, developers will receive a free trial of Diamanti Spektra and Diamanti Ultima. No upfront investment. No hassle.

Diamanti Spektra



Figure 1: Diamanti Spektra™ at a Glance

Unified Management Plane

The management plane makes it easy to support multiple teams and projects spread across a hybrid cloud environment. 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.

Open-Source Flexibility

Diamanti Spektra includes a CNCF-certified Kubernetes distribution and container runtime and an integrated CentOS or Red Hat Enterprise Linux operating system. The platform leverages other open source components like Prometheus as well, packaging all of these components together with quality and integration testing. By leveraging these open source components without modification, Diamanti Spektra provides an extensible platform for CI/CD, container security and other software integrations.

Spektra Management Plane

Centralized Management Console

The Diamanti Spektra console is the portal for deploying and managing Kubernetes infrastructure. The console offers a rich set of container configuration capabilities, multi-tenancy, resource and user management features, detailed real-time dashboards, and enterprise-class data protection and security.

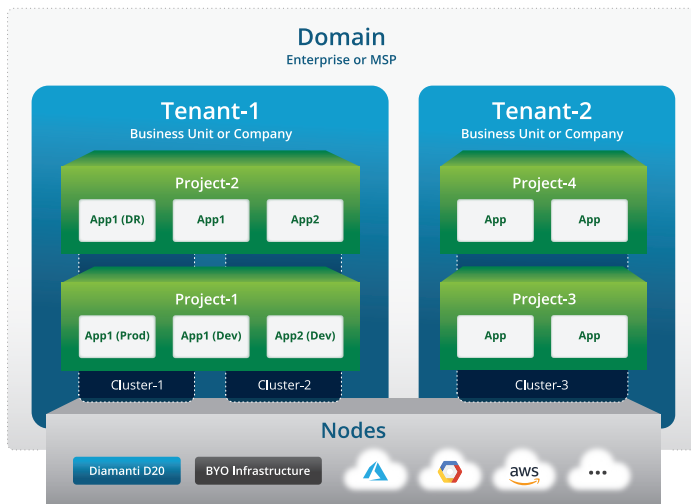


Figure 2: Multi-tenant Architecture

Cluster Management

Provision or attach Kubernetes clusters via the console for a centralized control plane. Add nodes, define Storage Classes, rotate certificates and perform other cluster management tasks as a Tenant Administrator.

Real-Time Monitoring Across Multiple Clusters

Monitor cluster, tenant, project, node, application, pod and container level metrics with intuitive dashboards that depict overall compute and memory consumption, GPU, network utilization, and storage performance and capacity. Diamanti Spektra provides long-term retention of metrics for querying and analysis.

Complete Application Lifecycle Management

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. Configure and manage applications using YAML and Helm charts.

Multi-Tenancy Management

Enterprises and managed service providers (MSPs) can operate in secure and isolated multi-tenant environments. Diamanti Spektra extends basic Kubernetes resource controls via the concept of 'Domains', 'Tenants' and 'Projects' to support some of the most complex organizations as they broaden their adoption of Kubernetes.

User Management And Access Controls

Diamanti Spektra supports role-based access control (RBAC) to ensure the right users have access to the right resources. Users can also be authenticated via LDAP and Active Directory (AD) and authorization is granted to different Kubernetes clusters based on roles - Service Provider, Tenant Administrator, Project Administrator, Project Member and Project Viewer.

Resource Management

Reserve capacity (CPU, GPU and DRAM) for different projects within a tenant as well as limit resources for containers to ensure efficient management of resources. Maximize resource utilization and ensure optimal performance for every user while monitoring usage for cost allocation.

Diamanti Insights

With Diamanti Insights, support teams can easily collect telemetry data about a customer's environment, quickly detect any technical issues, and take a proactive approach to resolving them.

Choice of Hardware

Modern Hyperconverged Platforms

Diamanti Spektra works with your choice of x86 hardware, including options directly from Diamanti or from leading server providers including Dell Technologies and Lenovo. Diamanti Spektra supports a wide range of hardware configurations. The Diamanti D20 family of modern

hyperconverged platforms consists of D20, D20X, G20T, and G20P each includes ultra-fast NVMe storage. The D20 series now comes with additional 2 x 10G ports increasing bandwidth by 100 percent.

The Diamanti D20X is equipped with the latest Intel® Xeon® Scalable Processors delivering unmatched performance for modern applications delivering a significant reduction in footprint and total cost of ownership (TCO).

Diamanti G20T and G20P are purpose-built to support artificial intelligence (AI) and machine learning (ML) use cases with maximum utilization and return on investment (ROI). G20T is ideal for AI/ML model training and supports Nvidia NVLink technology. G20P is intended for AI/ML inference to cater to the varying AI/ML use cases in production.

Diamanti D20 series now adds 2 ports, increasing network bandwidth by 100%. This enables enterprises to get the highest performance and TCO from investment in the infrastructure.



Diamanti is solving the challenge of container-based hybrid clouds with a simple and cost-effective platform that addresses enterprise requirements for managing Kubernetes data at any scale.

www.Diamanti.com
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