

# Kaminario K2.N All-Flash Array and Kaminario Flex™



## COST EFFICIENCY

K2.N takes advantage of the most advanced features of data reduction and eliminates over-provisioning of capacity and performance.



## SCALABILITY

Scale Up/Down/Out/In with the most agile and flexible storage platform. Reallocate resources on the fly with no physical movement of hardware.



## PERFORMANCE

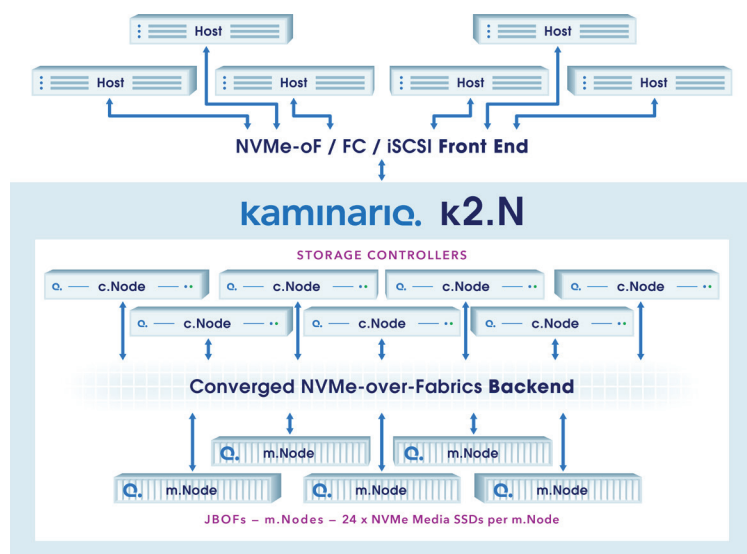
The K2.N is optimized for leveraging the low-latency NVMe interconnect delivering performance increases more than 2x and performance density by up to 4x.

Kaminario K2.N, the only all-flash storage array that builds on its strength as the high performance, all-flash backbone for cloud-scale applications, with a set of software-powered solutions that fully leverage the capabilities of emerging NVMe technologies.

## K2.N Overview

Kaminario K2.N is a true scale-out storage platform with a backend based on converged Ethernet and NVMe over Fabrics (NVMeF), supporting NVMeF, Fibre Channel, or iSCSI front-end connections. Powered by key enhancements to Kaminario VisionOS™, the K2.N supports the same set of enterprise-class data services as the existing sixth Generation of K2 including its industry-leading data reduction capabilities and native data protection features. The K2.N is comprised of Storage Controller Nodes (c.nodes) and Storage Capacity/Media Nodes (m.nodes) that support different configurations of x86 based servers and JBOFs respectively.

## K2.N Architecture

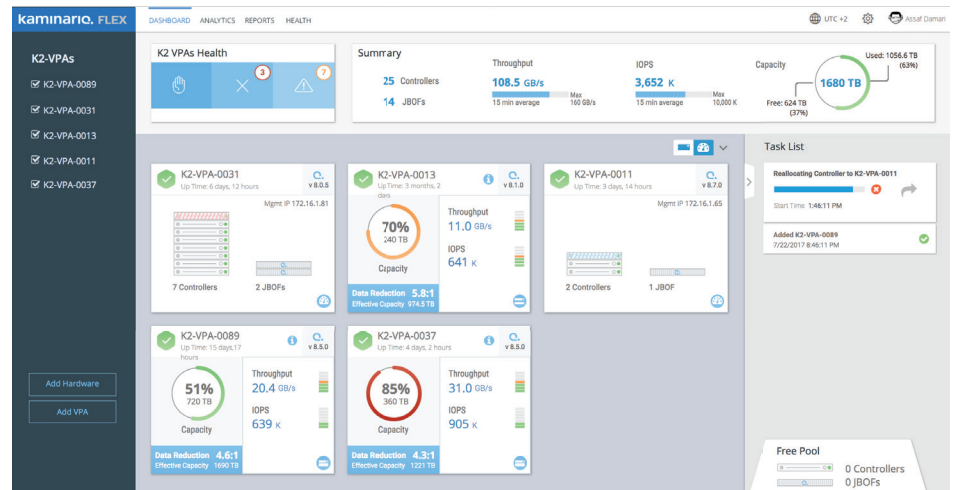


Composable infrastructure drives datacenter management to the next level of productivity. Manage policies instead of physical components with API driven orchestration and automation tools, to lower costs of application deployment.

kaminario.  
**FLEX**

**Kaminario Flex**

Kaminario Flex™ is K2.N's Dynamically Composable Orchestration Layer. Since K2.N's building blocks are all connected via NVMeF, discrete K2 virtual private arrays (VPAs) can be carved out from a mesh of K2.N resources. Flex is then able to dynamically reallocate resources between VPAs with no actual physical movement or re-cabling - everything is done via the network. Multiple VPAs can share resources and Flex can automatically schedule resource placement according to business units needs - end of month, year holidays etc. With a comprehensive set of APIs, Flex integrates with any REST based control platform to achieve seamless automation within the data center.



## K2 Value Across Use Cases

### RDBMS

K2's sub-millisecond latency dramatically increases productivity for databases such as Oracle and SQL Server. OLTP and OLAP workloads can run concurrently without impacting one another to achieve real consolidation.

### Virtual Environments

K2's adaptive block size algorithm eliminates the I/O blender effect for virtual workloads. Consolidation of virtual servers and desktops is now possible on a single storage platform that is integrated with hypervisors such as VMware ESXi, Microsoft HyperV and Citrix XenServer.

### NoSQL

Non-relational databases such as MongoDB and Cassandra benefit from the economics of shared storage and take advantage of K2's inherent scalability.

### Private Cloud

K2 matches the agile nature and the scalability of private cloud platforms such as OpenStack. K2's RESTful API facilitates automating storage processes such as provisioning and capacity quota management.

### Containerized Apps

Container platforms such as Docker can utilize the K2 for persistent storage via K2's Flocker plug-in.

## Kaminario ForeSight™

Kaminario ForeSight is the storage industry's most comprehensive, most straightforward, most valuable business guarantee program. It combines six simple guarantees to give customers certainty and predictability as their business scales:

**ASSURED CAPACITY** - Guaranteed effective capacity – or capacity provided at zero-cost.

**ASSURED PERFORMANCE** - Guaranteed performance across mixed workloads – or zero-cost compute provided.

**ASSURED AVAILABILITY** - Guaranteed 99.999% availability – or zero-cost support extensions provided.

**ASSURED SCALE** - No forklift upgrades or data migrations. Scale the array with new hardware seamlessly.

**ASSURED MAINTENANCE** - Support and maintenance will always be the same proportional cost to the hardware purchase.

**ASSURED SSD LIFE** - SSD wear-out will be covered in perpetuity with a valid support contract.



### Contact

Contact a business development representative to answer any questions you may have.



### Schedule a Demo

Schedule a demo with an engineer and learn if Kaminario's solution works for you.



### Request a Quote

Request a quote for your application from our business development team.

K2.N Compute Nodes*		K2.N Media Nodes*	
IOPS	Up to 400K	SSD Capacity	JBOF Effective Capacity
Throughput	Up to 5GB/s	960GB	75TB
Latency	100µs	1.92TB	150TB
Host Connectivity	FC/iSCSI/NVMeF	3.84TB	300TB
Backend Connectivity	25/50GbE RoCE	7.68TB	600TB

VisionOS™ - Shared Services Across a True Scale-Out Storage Platform	
DataShrink	Global selective inline deduplication, inline compression, thin provisioning, Zero detect.
DataProtect	Native array-based snapshots and replication, key-less AES256 data-at-rest encryption, K-RAID that protects each SSD shelf independently up to 3 SSD failures, no SPoF, NDU and 99.999% of data availability.
DataManage	CLI (SSH), HTTP/HTTPS GUI, Scripting (SSH), RESTful API, SNMP, Syslog.
DataConnect	Microsoft VSS, VMware vCenter Plug-in, VMware SRM, VMware LogInsight, Flocker (containers), OpenStack Cinder, Cisco UCS driver.

Kaminario Flex™ - Dynamically Composable Orchestration Layer	
Real Time Resource Allocation	Dynamically reallocate storage controllers and storage capacity between K2 arrays that share the same converged NVMeF backend. No physical movement - It is a network play!
Scheduling	Automatic, suggestion-based, API driven, 15 minute granularity.
Scale Out/Up/In/Down	K2 arrays can grow and shrink according to business needs. Resources are highly utilized in the shared K2.N platform.
New Array Creation	Carve out new K2 arrays from the K2.N platform resource mesh. Use new components or reallocate resources from existing arrays.

\*Specifications are subject to change pending GA release.



## About Kaminario

Kaminario, the leading all-flash storage company, is redefining the future of modern data centers. To learn more, please visit [www.kaminario.com](http://www.kaminario.com).

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