

# Kaminario Delivers Shared Data Services in the Hybrid Cloud

## Kaminario Cloud Data Platform

Kaminario delivers superior data services running on any private or public cloud. By appearing as shared block data instances to application hosts, Kaminario delivers the data reduction, performance acceleration, and resiliency that enterprises demand.

The Kaminario Cloud Data Platform helps organizations accelerate the move to the public cloud and reduce the risk of running mission critical applications in cloud-agnostic environments, while delivering advanced agility, cost-efficiency, and performance SLAs regardless of where the workloads run.

With the boundaries between private and public cloud blurring, Kaminario offers the capability to implement Kaminario software instances on-premise or any major public cloud platform, including AWS (Amazon Web Services), GCP (Google Cloud Platform), and Microsoft Azure. Kaminario's hybrid (private and public) cloud environments are managed within the same framework and software stack. Kaminario VisionOS data hypervisor software runs in your hybrid cloud to deliver a full stack of rich data services. Kaminario's native snapshot and replication utility can be used to easily move data around within your hybrid cloud environment. Kaminario Clarity provides management and analytics utilities across the hybrid cloud implementation, which can be utilized to proactively monitor resources and implement self-healing policy-based resource orchestration. Furthermore, changing requirements is a reality of any organization – with Kaminario Flex customers can easily spin up and orchestrate new resources as needed to support SLAs or decommission unused resources to minimize wasted dollars.



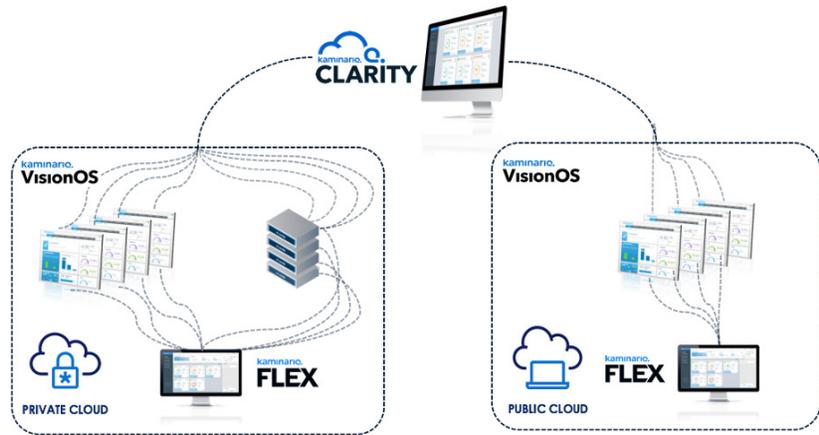
Google Cloud Platform



## Kaminario Architecture

Kaminario's mesh architecture enables users to introduce new compute and capacity resources as needed and on the fly. Private cloud resources are automatically introduced into Flex after being installed, while in the public cloud, Kaminario spins up cloud resources which are then utilized as different components. Individual VMs act as c.nodes for performance, while a group of 24 virtual SSDs can be presented as m.nodes for capacity .

## Kaminario Cloud Data Platform



*VisionOS turns common private or public cloud infrastructure resources into the world's most capable scale-out, data virtualization, management, and mobility platform.*

### Kaminario VisionOS

The Kaminario VisionOS data hypervisor is a software-defined data management architecture and framework for delivering advanced data services. VisionOS runs on any cloud platform to deliver enterprise class data services within a highly flexible scale-out shared services framework. VisionOS turns common private or public cloud infrastructure into the world's most capable scale-out, data virtualization, management, and mobility platform. Kaminario delivers unique functionality with compute resources logically decoupled from capacity. This results in an extremely scalable environment with the ability to commission or decommission any resource as needed.



#### DataShrink

With industry-leading data reduction including advanced compression and de-duplication, VisionOS-powered environments lead the industry in capacity and cost efficiency.



#### DataProtect

Native snapshots and replication allow customers to return to any point in time. Data-at-rest AES256 encryption makes sure that data is kept private and safe at all times.



#### DataManage

Kaminario is managed via intuitive web GUI, fully scriptable CLI, and a set of programmable RESTful APIs. SNMP and Syslog enable system data access for monitoring and reporting.



#### DataConnect

RESTful API allows for integration with external applications and frameworks including VMware vSphere and LogInsight, Microsoft VSS, OpenStack, and Kubernetes.

Clarity's big data platform analyzes over 150 million call-home data points from Kaminario deployments around the world every day to drive automation and predictive alerting.

Flex, dynamically commission, optimize, manage, and decommission resources as needed to support application SLAs, with no physical manipulation of the infrastructure.

## Kaminario Clarity

Kaminario Clarity is a cloud-based AIOps engine which delivers predictive analytics and includes a comprehensive set of management and monitoring functionalities, including a unique capability to leverage application-level intelligence, machine learning, and big data analytics. Clarity's big data platform analyzes over 150 million call-home data points from Kaminario deployments around the world every day to drive automation and predictive alerting. Clarity's advanced analytics provides recommendations on self-healing policies, preemptive resource optimization, and enables a whole new automated approach of managing business and application SLAs.



### Multi-System Management

Clarity provides a centralized cloud-based portal for effortless monitoring hybrid cloud management from a single pane of glass.



### AIOps-Driven IT

Applying machine learning to install base data, Clarity provides predictive analytics, proactive resource monitoring, and self-healing capabilities across your hybrid cloud environment.



### Automated Case Management

Clarity monitors real-time events to automatically initiate maintenance cases and ensures a seamless support experience.

## Kaminario Flex

Kaminario Flex is a data orchestration platform for managing resources in your hybrid cloud environment. Dynamically commission, optimize, manage, and decommission resources as needed to support application SLAs, with no physical manipulation of the infrastructure. Orchestrate resources either in the private cloud or in the public cloud as new workloads emerge, move, and evolve over time.

Flex is also the orchestration engine for building Data Pods, which encapsulate your data in a virtual construct and then deliver the ability to move that data within your hybrid cloud environment.



### Orchestrated Hybrid Platforms

Dynamically compose and orchestrate resources across your hybrid cloud environment to address capacity and compute needs.



### Orchestrated Containers

Create, assign, and manage resources for applications on the fly. Leverage the Kaminario RESTful API to dynamically request and provision resources.



### Orchestrated Automation

Implement hybrid cloud automation by incorporating analytics and optimization from Clarity to automate resource management tasks based on a rules engine maintained within Flex.

## Performance and capacity details:

Performance		
Max Performance	Private Cloud	Public Cloud
IOPs	450K x N*	110K x N*
Throughput	5GB/s x N*	1.75GB/s x N*
Latency	150µs	250µs
Host connectivity	FC, iSCSI, NVMeOF	iSCSI
*N – number of compute nodes		

Capacity		
	Private Cloud	Public Cloud
Capacity (1:1)	Up to 240TB	Up to 80TB (Per Instance)
Media connectivity	100 Gb/s ROCE v2	iSCSI

Ready to get started? Visit [www.kaminario.com](http://www.kaminario.com) to learn more about the Kaminario Cloud Data Platform.

### About Kaminario

Kaminario enables organizations to accelerate the movement of business-critical applications to the cloud. Its pioneering data plane virtualization technology allows customers to decouple the management and movement of data from the infrastructure it runs on. Changing the economics and agility of business-critical data, Kaminario changes the relationship between applications and infrastructure. Headquartered in Boston, Kaminario works with a network of strategic partners, globally. For more information, please visit [www.kaminario.com](http://www.kaminario.com).