KALRAY
NGenea®

Global unstructured data management and storage solutions for AI, HPC, and data intensive workloads

THE CHALLENGES

- **Scalability**
  Need to scale both performance and capacity to meet application requirements.

- **Multiple, disparate data sources**
  Manage data across highly diverse infrastructures, including legacy systems and new technologies. Support complex hybrid storage systems that span multiple locations and a combination of on-premises infrastructures and various cloud platforms.

- **Exponential data growth**
  Effectively scale infrastructure to meet the demands of growing cohorts of AI workloads and data intensive applications.

- **Unify heterogeneous storage**
  Maximize the value of storage infrastructure and capitalize on the flexibility and cost-effectiveness of cloud services by integrating on-premises storage with cloud storage.

- **Data intensive workloads**
  Ensure your highest performance storage meets all requirements, including performance, scalability, cost-efficiency, and ease-of-use.

THE SOLUTION

As an innovator and leading provider of hardware and software solutions for data intensive applications and next generation data centers, Kalray enables smarter, more efficient, and energy-wise applications and infrastructures. The NGenea product suite offers complete global unstructured data management and storage solutions for AI, HPC, and data intensive workloads.

The NGenea Difference

- Single view of all data: Support complex existing and new environments, whether they're multi-location, multi-silo, multi-cloud, on-premises; or a mix of new and old infrastructures.

- Efficient scaling: Scale infrastructures to efficiently meet performance and capacity requirements of data intensive workloads and AI applications.

- Optimize TCO: Gain infrastructure TCO efficiency from a storage platform that gets data to exactly the right place at the right time according to performance and cost needs.

- No lock-in: No data or vendor lock-in given NGenea's open and pluggable architecture without proprietary formats.

- Centralized control: NG-Hub is an easy-to-use web interface featuring an array of tools that allow centralized control of all storage within a global namespace; including monitoring, management, and bandwidth allocation, with the ability to customize and automate sequences at the click of a button.

- Unify heterogeneous storage: Transparently get your data as close to end users and applications as possible, anywhere, and still deliver performance without a layer that "sits in front" of your data. Not having a layer in front of your data means no data lock in and no tax for storing data outside of NG-Stor.

Global unstructured data management and storage solutions

The Kalray NGenea product suite offers innovative solutions for data intensive workloads. It combines storage tiers to enable better insights and accelerated workflows while automating data management, ensuring that data is available wherever it is needed across the global workflow.

NGenea supports all major cloud vendors including AWS, Azure, and Google Cloud Platform as well as on-premises environments. NGenea can be extended with integrated high performance storage software and Kalray's all-NVMe storage nodes.

- Manage complex existing & new environments
- Efficient support of data intensive workloads such as AI and HPC
- Global view of all unstructured data across data centers and cloud infrastructures
- Powerful search across all unstructured data

NG-Hub

Next generation data management layer that brings all storage solutions together into a single global data namespace.

Automated data management - While ensuring that data is available wherever it is needed across the global workflow, NG-Hub empowers customers to leverage all storage, all the time. Demanding workloads get what they need without compromise and expanding datasets always have room to grow.

Centralized control – NG-Hub is an easy-to-use web interface featuring an array of tools that allow centralized control of all storage within a global namespace; including monitoring, management, and bandwidth allocation, with the ability to customize and automate sequences at the click of a button.

NG-Stor

Next generation high-performance storage tier for the most data intensive workloads. Powered by a proven high-performance parallel file system, trusted by thousands of organizations worldwide, NG-Stor can easily manage petabytes of data and billions of files, all under a single global namespace.

NG-Box

Next generation DPU and NVMe-powered Dell servers for high performance, data intensive storage that allows Kalray to meet the storage requirements of the most demanding HPC and AI/ML workloads.

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Use cases

- **Generative AI**

  Kalray NGenea provides leading performance, scalability, and efficiency for generative AI data management. NG-Hub enables automated data transfer between on-premises and cloud storage and supports all data sizes. Intelligent caching minimizes data transfer costs and ensures instant data access. NG-Stor features a high-performance parallel file system that can easily manage petabytes of data to support the most demanding AI models.

- **Workload acceleration**

  NG-Stor meets the storage requirements of the most demanding AI/ML, HPC, and data intensive workloads. It leverages the fastest components (NVMe) to feed the most data-hungry compute processors. NG-Hub supports easy management of petabytes of data and billions of files, all under a single global namespace. The end result is the ability to easily manage complex workloads on-premises and in multi-cloud and hybrid environments with data portability and required performance.

- **Global collaboration**

  Quickly and easily provide applications and users access to any data in the global environment, regardless of where they're located. NG-Hub enables organizations to securely share data between remote teams and across sites via a single namespace with supported CSPs.

- **Cloud bursting**

  Gain control to fully and easily leverage resources no matter where they're located. Burst to the cloud when needed and scale back when done.

- **Scale-out NVMe storage**

  Designed from the ground up to leverage the full potential of NVMe flash devices at massive scale, NG-Box ensures the lowest storage total cost of ownership without performance or durability trade-offs.

- **Extend existing investments**

  Extend your investment in existing data-intensive and high-performance environments such as Dell PowerScale and ECS by powering them to go faster.

FEATURES	BENEFITS
Unified view of all unstructured data via global namespace	• Efficiency via simplicity • Easier management • Right-sized • More sustainable
Automated data movement	• Ease of use • Minimized complexity • Performance where you need it • Accelerated workflows • Hybrid cloud strategy enabled • Enhanced collaboration
Single pane of glass data analysis and management	• Intelligence to scale performance & capacity as needed
Strong search & instant access to all data	• Faster time to insights
Transparent data architecture	• No lock in of data, no vendor lock-in
Integrated backup, DR, data protection	• Reliability (availability + durability + integrity)

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