An Architecture Designed for Memory-Speed Big Data Solutions

Kodiak Data MemCloud™ Starts at $100 Per Week

MemCloud™ Delivers Memory Speeds

Just having the fastest NVMe memory and 100GbE interconnect is not enough: you need an architecture which can take advantage of this cutting edge performance. Kodiak Data's patent-pending Virtual Cluster Interconnect (VCI) brings the full capabilities of all levels of the hardware to big data in the cloud, for an environment that runs up to 10X faster than anything else!

Kodiak Data VCI Fabric

VCI creates a distributed data-plane fabric. VCI disaggregates memory, storage and networking into memory based objects, or tiles, and forms a data-swarm of potentially millions of these tiles with internet style routing between them.

All I/O transactions are performed by those objects. In this way, all of the servers, storage and network controllers, storage and network paths, and physical storage devices, are being used in parallel for each and every application instance on every server.

Kodiak Data VCI Composer

VCI also enables the entire environment to be managed as a single cluster. Clusters are no longer in the domains of specialists; they are an everyday business tool. The cluster hypervisor logically isolates the physical infrastructure from the virtual machine or container running the application.

DataContainer XML manifests specify attributes like the application to be run, the processors, memory and storage capacity required which are drawn from the cluster as a whole, and the policies which control these resources. This allows one-click deployment of very large application sets across very large fabrics, greatly simplifying the management of your entire environment.

File	Reads			Writes		
Size	3 Files	6 Files	9 Files	3 Files	6 Files	9 Files
10 GB	5.33x	7.52x	9.08x	4.55x	5.93x	6.24x
30 GB	5.44x	7.62x	8.71x	4.72x	5.91x	6.99x

Each value is the throughput per second of MemCloud when compared to the throughput per second of a similar hardware solution using standard cloud software. 1.0x would be the same performance, 2.0x would be twice the performance, etc. As the MemCloud environment gets bigger, the performance advantage grows much more than linearly.

MemCloud is Far Better than Alternatives

"The public clouds were built for Webby apps..."

Simon Crosby, Founder of Xensource and the hypervisor behind AWS

Public clouds are state-less and rely heavily on the fact that not much data goes in and out of the instances.

Kodiak Data MemCloud was designed to run big data clustered apps and to get to results faster.

Advantages for You

Data Scientists: *"You're not coding web servers! Run at memory speed. Run NOW."*

Our DNA is performance and MemCloud is designed with big data performance in mind.

- Kodiak Data fabric for speed and scale
- Super-fast hardware with Terabytes of RAM and NVMe memory
- Non-blocking 40/100GE networking on every node

DevOps: Create clusters and orchestrate. On demand. In minutes.

- Get your cluster today – no waiting for IT to spin up a cluster
- Provision, test and deploy any stacks or distros at memory speed
- Stop wasting valuable time chasing spot pricing and hidden cloud costs

Central IT: Self-service for users. Self-service for admins. Scorching speed at hero budget for IT.

- Just-in-time clusters for users—don't waste money in buildout months in advance
- Share costs with multi-tenant MemCloud with hosted or on-prem choices
- Industry-first SLA options for clusters to match user performance needs with budget
- Clear your backlog of user requests now

Features

Turnkey Big Data—Runs just like a metal cluster. Without the headaches of maintaining your own metal.

Super High Speed—Enjoy the 10x10 MemCloud advantage at million+ IOPs on every node!

- Patented messaging-based technology to unlock all the performance of the hardware
- 10X faster net—100Gb per node vs 10Gb typical
- 10X faster memory—Terabytes of PCI-attached non-volatile memory vs typical SSD
- All I/O is spread across many controllers and volumes - no bottlenecks on individual paths

Easy Data In/Out—Upload/download data from network or in bulk

No Jargon—No cloud alphabet-soup. No wasting time with spot prices!

Simple Cost Model—Flat rates starting at $100 per week

No Change for Software—Runs like metal. Just faster. Much faster. Period.

MemCloud is Simply Easier, Faster and More Cost-Effective

	MEMCLOUD	ROLL YOUR OWN	AWS
Up-Front Planning	None. On-demand. Choose a cluster with required nodes and capacity.	Drawn-out preplan of bare metal clusters. Authorize budget. Wait for HW acquisition, delivery.	Learn AWS. Maintain AWS. Constantly monitor"spot" prices. Re-code and re-code to save costs.
Speed of Deployment	Pre-populated environments with very quick time-to-run. Minutes to Hours.	Install, plumb, test, provision and tune by hand. Months.	Quick for web servers. Big Data clusters provision - heavy lifting one instance at a time. Weeks.
Cluster Performance	100Gb infrastructure. Fastest on planet. Really.	Limited by budget and speed of your current infrastructure.	10Gb infrastructure. Slow and expensive.
Value	Flat rate per week. Pay as you grow with linear scalability. Predictable costs.	Large up-front investment with cumbersome growth.	5-10X more expensive for similar size/performance clusters. Unpredictable cost.
Portability	Portable between hosted, on-prem and other cloud environments.	Locked into physical infrastructure with many nodes.	Locked into AWS.

About Kodiak Data

Kodiak Data is a leading cluster virtualization technology company that allows customers to easily deploy and scale Big Data infrastructure in both public and private clouds. The Kodiak Data Virtual Cluster Infrastructure (VCI) platform is the only solution than can create, within minutes, code-ready virtual clusters that run at memory-speed and scale to the needs of big data applications. For more information about Kodiak Data, visit www.kodiakdata.com.