

Datrium DVX System

Datrium Benefits

- Fast**
Performance scaling: Achieve higher performance and lower latency than all-flash arrays.
- Effortless**
VM and Container-Centric: DVX ends storage management.
- Efficient**
Open CPU and Flash: Leverage underutilized CPUs with installed server infrastructure.
- Predictable**
Mixed Workload Isolation: Strong host IO isolation eliminates host/host neighbor noise.

The Datrium DVX system converges storage and compute in a radical new way to enable a simpler journey to hybrid clouds, but without the rigidity of 3-tier convergence, and without the lock-in and scaling unpredictability of hyperconvergence (HCI). DVX integrates CPU and flash performance on ESXi and Linux hosts with VM and Container-centric, high-efficiency, scalable cloud data management tools (Data Cloud software) to enable VM and Container administrators to effortlessly accelerate, backup, copy and recover VMs and Containers across their data lifecycle.

DVX separates on-host, software-driven IO services and performance from an off-host durable data repository, so speed and persistent capacity can each be provisioned incrementally. While it takes advantage of host CPU and local flash performance, compute node availability is independent of data availability. DVX is simple and cost-effective, combining the use of underutilized server capacity with always-on, end-to-end dedupe, compression, data management and encryption. With DVX it is possible to effortlessly deploy rackscale infrastructure. Combine DVX Data Nodes and from 1 to 32 DVX Compute Nodes for a turnkey, purpose-built solution that simplifies both primary storage and secondary data management. Mix and match with existing servers and blades for a seamless Open Converged system without silos.

Effortless

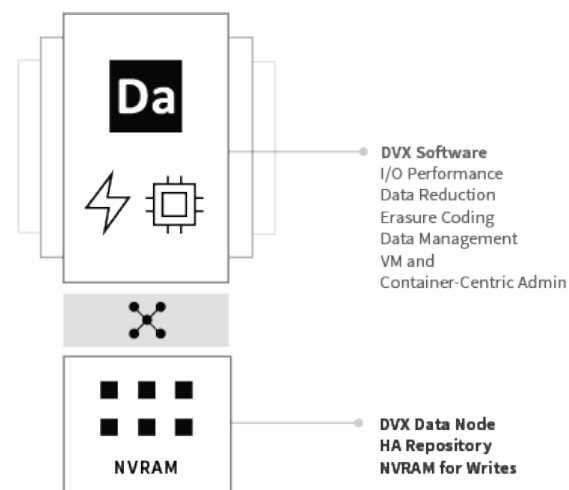
- Turnkey private cloud:** Easily deploy rackscale infrastructure—from 36 TB up to 1 PB—with Datrium as the single point of support, including firmware update tools for Datrium nodes¹. And advanced features like erasure coding and global dedupe are always-on for a more config-free experience.
- VM and Container-Centric:** DVX ends storage management. Provisioning capacity for VMs and Containers is simple. No LUNs, no zones, no wondering what’s making workload IO slow or how to fix it. DVX IO and fault isolation vastly simplifies workload optimization, analytics and troubleshooting as the environment scales, including an in- depth real-time view of all Hosts, VMs, and Containers.
- Integrated Data Management.** Data Cloud scales and simplifies backup, restore, clone and recover across private and hybrid clouds. Combine with Blanket Encryption with the flip of a switch for end-to-end secure data cloud management.

Fast

- Performance Scaling:** Achieve higher performance and lower latency than all-flash arrays because reads never need to leave the host, avoiding SAN queuing delays. Adding a host adds up to 100,000 IOPS with sub- millisecond latency to DVX performance, versus dividing the shared resources of an array.
- On-demand acceleration:** IO processing leverages underutilized local CPU, so per-host performance can be doubled in-place and on-demand by reserving more available CPU resources (Insane Mode). If IO resources are strained on a host, simply move the workload to a host with more resource headroom to boost VM/ Container performance online.

Efficient

- Open CPU and Flash:** Leverage underutilized CPUs with installed server infrastructure, including both rack and



¹vSphere software support provided by VMware

blade servers. Take advantage of low cost, commodity server flash devices that are often one-eighth of the cost of array flash.

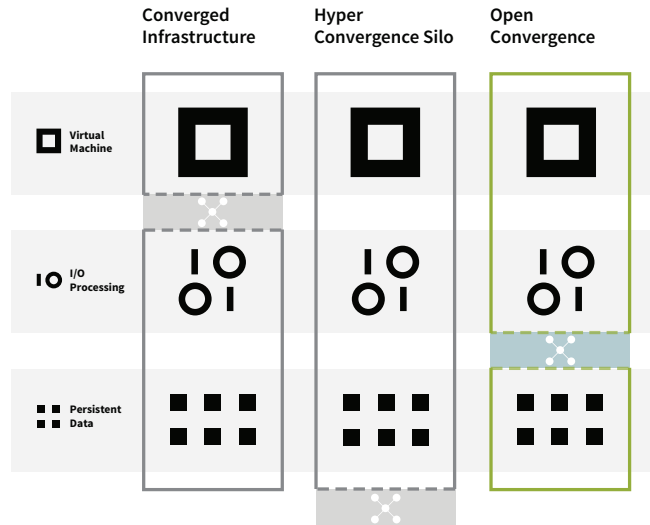
- **Always-on Data Reduction for Hot/Cold Data:** Ultra-efficient erasure coding, inline deduplication and compression on flash per host, combined with global deduplication across all hosts, provides the smallest durable data footprint possible (2x to 6x data reduction typical, often higher for VDI).
- **Network-optimized:** Adaptive Pathing provides smarter path aggregation for improved bandwidth utilization and resiliency.

Predictable

- **Mixed Workload Isolation:** Strong host IO isolation eliminates host/host neighbor noise, even when scaling and mixing diverse workloads. Provision workload-specific hosts without neighboring host workloads affecting desired SLAs.
- **N-1 Host Failure Tolerance:** Any number of hosts can be down simultaneously, yet data is always safe and accessible with the DVX off-host data node. DVX compute nodes remain stateless and easily serviceable--much simpler for enterprise administrators versus HCI. DVX includes 24x7 proactive monitoring and notifications.
- **Efficient, End-to-End Data Security:** End-to-end data security with full data reduction secures data in-use on the host, in-flight across the network, and at rest on the data node. With no hardware dependencies, turn on encryption instantly when needed.

Open Convergence for Hybrid Clouds

Datrium DVX solves the converged infrastructure problem in a revolutionary way, modeled on public cloud IaaS services



instead of traditional converged infrastructure or HCI. DVX delivers higher IO performance and lower latencies than all flash arrays. It eliminates compromises with HCI including server and configuration rigidity as well as noisy neighbor issues that have limited its fit for predictable SLAs with low-latency scaling and mixed workloads. DVX modularity simplifies granular provisioning and VM/Container troubleshooting.

Datrium Data Cloud adds highly efficient data management for effortless, efficient snapshots and replication. Combine that with Blanket Encryption for end-to-end secure cloud data management infrastructure that supports both primary storage and secondary data management in a single integrated solution.



Private Cloud Consolidation

- DVX Data Nodes and Compute Nodes provide a purpose-built, turnkey solution for rackscale infrastructure.
- Scale performance and capacity independently.
- Predictably lower VM and Container latencies for reads on local flash versus all flash arrays.
- Configure hosts to specific workloads for IO performance, isolated from other hosts.
- Grow IO speed on demand with Insane Mode or workload movement to hosts with more available CPU.
- Efficient, secure snapshots and replication with dynamic policy-based management.



VDI / End User Computing

- Boot/login storms are handled in local flash, off-SAN, with ultra-low latency.
- Scale a few desktops to thousands with little to no latency increase.
- 4X faster desktop provisioning versus LUN based systems.
- Below \$2 per desktop per month when leveraging installed server infrastructure and below \$5 per desktop per month when deployed with DVX Compute Nodes.



High Performance SQL and Data Warehousing

- Flash-resident data enables up to 4x faster queries.
- Sequential query workload isolated from neighboring transactional applications for high performance for all DVX-based applications.
- Snapshots and replication provide simple data protection and copy data management.

