# Da trium®

DVX Product Brochure

At-a-glance

- **Primary data in the host flash**
  where it belongs, for lowest possible latency. 10x faster than Hyper-converged*. 5x faster than All Flash Arrays*.

- **Simple at scale**
  your management, security, and protection are VM-centric from a vCenter plug in. Split provisioning of performance and capacity for simple scaling.

- **Always-On Efficiency and Security**
  Constant compression, deduplication, encryption, and highly resilient erasure coding with no performance impact.

- **Integrated backup & DR**
  Instant recovery from application consistent snaps, no separate silos, single pane of glass, optional cloud DR.
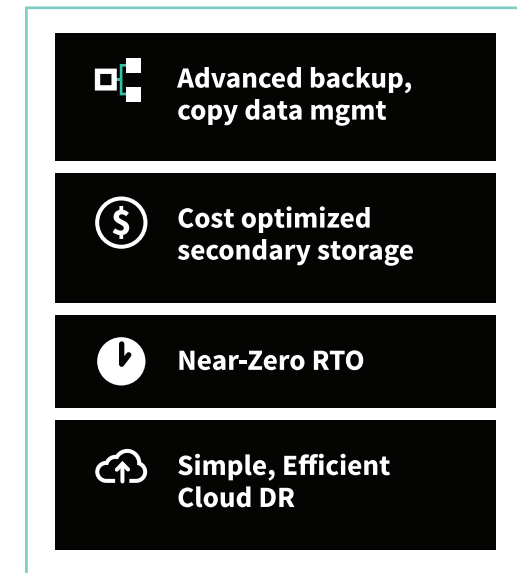
A New Breed of Convergence with Two Tiers

Performance tier delivers 5-10x improvement*

- Business application and its active data converged
- All active data in flash on the server with the application
- VM processing and IO processing converged
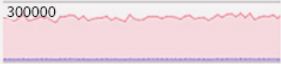- Performance scales linearly with incremental hosts

| Business Application |
| VM Processing |
| IO Processing |
| Primary Data |

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Server Powered Performance Tier
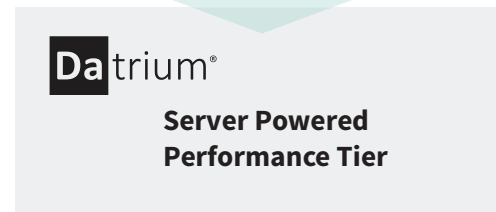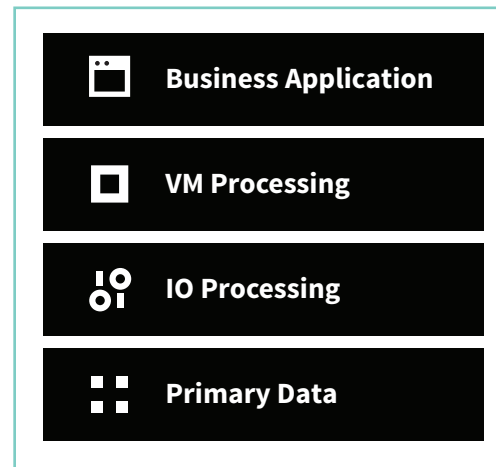
Protection tier lowers cost over 50%

- Simple management at VM/container granularity
- Always on data efficiency, erasure coding, and encryption
- Resilient storage tolerates dual drive failures
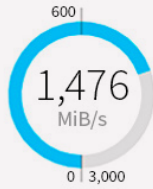- Built in backup with instant restore

| Advanced backup, copy data mgmt |
| Cost optimized secondary storage |
| Near-Zero RTO |
| Simple, Efficient Cloud DR |

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Cost-Optimized Protection Tier

*Independently verified by IOMark and Storage Review

Left panel (dashboard)

VM IOPS

60,000

252k

0 | 300,000

300000

VM throughput

600

1,476
MiB/s

0 | 3,000

2000

DAVG latency

● 0.1 ms read

● 0.9 ms write
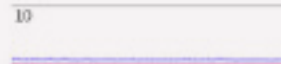
Host flash hit rate

80

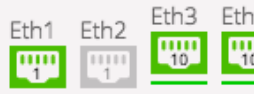100.00 %

0 | 100

10

100
50
0

Beacon   Ambient   Data Node details

Model   D12X4   2x10G-48TB
Serial number   SHX1009007G01VQ
Raw capacity   48.0 TB (43.7 TiB)
Software   3.1.1.3

27 °C

Power/cooling 1
✓

Eth1   Eth2   Eth3   Eth
1   1   10   10

Battery 1
⚡

Controller 2 (active)
✓

DVX Software

At the heart of Datrium DVX is powerful DVX Software that simplifies management, scales the system with improving performance, and simplifies all cloud data management including scalable local, remote and cloud backup, and delivers the economics only available from a new breed of convergence.

Split Provisioning

Inspired by post-2010 hyperscalers, Split Provisioning separates IO performance and persistent storage for simpler administration, flexible scaling, and reduced costs.

Insane Mode

Dynamically boost VM and Container storage performance by doubling the number of host cores reserved for IO processing.

Always-On Efficiency

Erasure coding, compression, and global deduplication eliminate complexity and painstaking planning. No need to worry about hot vs. cold tiers, erasure coding vs. triple mirroring, or compression vs. deduplication.

Cloud DVX

Store native backups directly to public cloud. Simple to use, highly efficient with global deduplication for lowest RTO.

Enterprise Resilience

Can tolerate multiple host and disk failures and continue serving data. Constant end to end data integrity checks to identify and repair errors.

Built-In Backup & Instant Restart

DVX provides built-in, scalable and highly efficient copy data management. Near-instantaneous snapshot can be performed at datastore file-level granularity. Snapshots can be used for backup, archive, and DR. Customers can instantly restart from application-consistent snapshots and restore VM-granular assets and guest files in seconds.

Blanket Encryption

Blanket Encryption delivers high-speed encryption end-to-end, protecting data in-use at the host, in-flight across the network and at-rest on persistent storage with full data reduction.

Zero-Click Management

DVX is architected to eliminate management overhead and cluster sprawl. All your workloads will run with high performance without the need to tune or balance performance with other data services. Full data efficiency and workload isolation is built-in. Management is VM and Container-centric, eliminating the complexity of LUN and zone management. Backup is simple and integrated, eliminating the need for separate backup products and environments.

Datrium DVX System

Performance Tier

ESX, Linux/KVM, Containers

Efficient, low cost server flash

Continuous operation with host and SSD failures

Up to 200 GB/s 32K Random

Up to 18M 4K Random Read IOPS

Datrium Compute Nodes

Choose from models pre-configured for general purpose, data warehousing, or VDI

NVMe support

Turnkey solution with single point of support

3rd party Compute Nodes

Full support for servers from your vendor of choice

Mix and match server types, sizes, and manufacturers

Deploy Datrium Host Licenses for full integration into DVX

NVMe Support

Protection Tier

Always-on compression, global deduplication, erasure coding, and encryption

Up to 8 GB/s 32K Random Writes

Store up to 1.2M Snapshots

DVX Data Nodes

High Performance and Cost optimized with up to 1.7 PB capacity

Ideal for consolidation of mixed workloads in a single system

Common deployments include databases, data warehousing and VDI

DVX with Flash E2E

Up to 960 TB effective all-flash capacity

2X write performance relative to DVX

Predictable low latencies, even under failure conditions

The all-flash datacenter is a reality

Ideal for the most write-intensive workloads such as multi-thousand seat VDI and IOT

Additional tier 1 features ideally suited for mission critical deployments such as Oracle RAC

Solutions and Partners

Private Cloud Consolidation

Private Cloud Consolidation with Open Convergence in one word is: Effortless. Datrium has eliminated management of the storage infrastructure and has incorporated backup-class data management into a simple, VM-centric, rackscale system. Simple yet scalable snapshots, cloning, policy management and elastic replication are built-in into Open Convergence as these requirements are the foundation for cloud data management.

Microsoft SQL Server

Open Convergence delivers high performance virtualized SQL Server with effortless management. Our customers get low latency performance without performance tuning and disruptive reconfigurations. VM-Centric administration and real-time VM analytics without sacrificing performance. There are no LUNs to manage, so you don't have to deal with the annoying LUN tuning every time you add an Availability Replica or vMotion.

Virtual Desktop Infrastructure

VDI consolidation with Open Convergence improves end-user experience. A Datrium solution for VDI allows you to scale up to 32 hosts per DVX Rackscale system while delivering up to 4x faster desktop provisioning. VDI desktop provisioning is simple and fast because you can offload the process to DVX and leverage our zero-clone copy feature.

Cloud Data Management

Datrium has introduced a robust set of integrated data management capabilities in the DVX system to enable backup/restore, disaster recovery, archive and compliance, test/development and analytics offload. At the center of the new Datrium provided data management technology is data security and policy management as well as VM and vDisk-level snapshots, cloning and replication.

Oracle Database and Oracle RAC

Oracle databases running on Datrium enjoy exceptional performance. However, it is with simple and app-centric management, as well as extensive data protection, that Datrium provides a cost-effective and easy-to-deploy solution.

DevOps

Delivering high-quality, modern applications requires DevOps tools and processes. Datrium's native container implementation, via a Docker Volume Plugin, enables customers to seamlessly include Continuous Integration/Delivery and Micro-services solutions as part of the delivery infrastructure, while still leveraging storage data services from Datrium, such as deduplication, compression, erasure coding, encryption, replication, snapshots, clones, etc.

Healthcare Industry

As the healthcare industry evolves, IT professionals are challenged to deliver infrastructure solutions to maximize return from innovative EHR and PACS applications while maintaining security, compliance, availability, and performance. For organizations virtualizing core applications or VDI, Datrium provides optimal infrastructure to deliver world-leading performance for healthcare applications with simplified management and reduced cost.