

Datrium introduces *Open Convergence*: Convergence Done Right

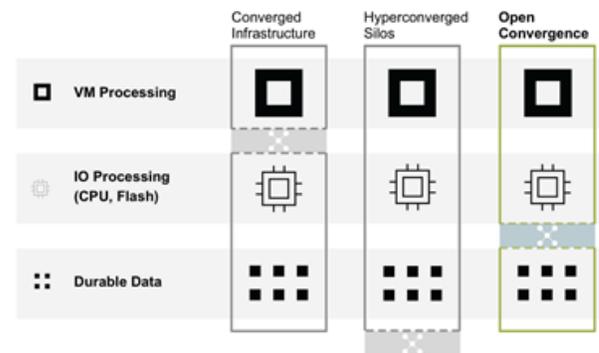
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Now that the dust has settled on the initial wave of converged and hyperconverged infrastructure technologies, many companies have hands-on experience with designing and implementing private clouds using either--or in some cases – both technologies. And, that experience has not always been a stable, manageable or fiscally responsible one. Turns out that convergence and hyperconvergence may look great in PowerPoint but can be expensive to deploy, challenging to implement and very difficult to manage on an ongoing basis. Performance and storage issues with converged and hyperconverged infrastructure when expanding to cloud-scale levels has led to the continued use of expensive hybrid storage arrays that convergence was supposed to reduce or eliminate altogether. Datrium now has a better way to converge your infrastructure...

Datrium Pioneers Open Convergence

Open convergence differs from converged and hyperconverged solutions by decoupling IO processing from durable capacity, while utilizing existing servers and server-side flash as compute nodes rather than ripping out your existing server infrastructure and replacing it with expensive hyperconverged hardware. Datrium's DVX software and BYO hardware moves your data from an expensive SAN or inefficient hyperconverged appliances to economical server nodes, paying immediate performance dividends while also lowering data storage costs and simplifying data management. Unlike limited storage array controllers' performance, which actually *reduces* the amount of I/O dedicated to compute nodes as they scale-out, adding a compute node to the DVX system *expands* the available I/O resources because all I/O is handled in server-side flash, increasing storage performance instead of reducing it. And, unlike hyperconverged infrastructure, durable data is not merged with servers but kept in a highly redundant data node, which eliminates neighbor noise, excess spare capacity requirement for failure rebuilds and data-at-risk situations when a host needs to be serviced.

DVX supports x86 industry-standard servers--even blades--with between one and eight SSDs with a total capacity between 800GB and 16TB, regardless of server manufacturer. You can use DVX to quickly and easily create a private cloud using your existing server hardware, using both compute and storage hardware purchased from Datrium, using new compute hardware purchased elsewhere, or a combination of all three. Flexible is DVX's middle name!



Comparison of converged infrastructure, hyperconverged silos and open convergence.

Datrium DVX Components

The Datrium solution is comprised of compute nodes, data nodes and DVX software. The compute nodes can be purchased independently or from Datrium. The data node is available from Datrium only. The DVX software handles communication between DVX compute and data nodes while leveraging compute node resources for all I/O processing functions such as erasure coding, deduplication, compression, encryption, snapshots and replication. DVX systems can scale from one to 32 compute nodes per DVX data node.

Datrium DVX Rackscale

For those looking for a plug-and-play private cloud with single point of support, DVX Rackscale Systems combine a DVX compute node with a DVX data node in a single enclosure and can be purchased directly from Datrium. DVX Rackscale configurations range from 16 to 28 Xeon processors, up to 768GB of RAM and up to eight cache SSDs. DVX data node offers 30TB usable storage capacity and between 60 – 180TB effective storage capacity with deduplication and compression. Data is

deduplicated and compressed before it's stored on cache SSDs, which allows host cache to scale up to 64TB effective capacity. Leveraging these pre-configured DVX hardware nodes is the quickest and easiest way to deploy a DVX-based turnkey private cloud.

Datrium Data Cloud

Datrium Data Cloud features provide policy-based VM data management, copy data management for Dev/Ops, Blanket Encryption, Elastic Replication, backup/restore and disaster recovery (DR), search, compliance, monitoring and offsite archiving of data. The learning curve should be minimal for those with experience in managing virtualized environments. Due to its VM-centric design, virtualization admins with experience managing ESXi environments will find Data Cloud very intuitive and easy-to-use.

Blanket Encryption provides data security in-use, at-rest and in-transit, a feature that few other converged or hyperconverged vendors support due to the complexity of implementing this level of encryption.

Elastic Replication provides easy, inexpensive data protection of one-to-many and many-to-one architectures via efficient bi-directional asynchronous replication of VM snapshots between DVX sites. It features bandwidth efficient transfers, throttling controls and end-to-end encryption to protect business-critical data. Data Cloud also provides sophisticated search capabilities by VM, vDisk or datastore-file name, while providing analytics of any process issues.

DVX/Data Cloud Use Cases

It might be easier to list the use cases where DVX is not a qualified solution but let's take a look at several popular use cases for DVX. Utilizing DVX as your primary storage solution is the most compelling use case, considering the ultra-low cost of data storage and the robust integration with VMs and applications. DVX is also an excellent SQL Server platform, considering the performance improvements offered by moving IO into

server-side local flash. With up to a 5X improvement in performance versus all flash arrays, your databases will provide extremely fast backend processing of data when running on a DVX platform. DVX and Data Cloud also shine in Test or Dev environments by leveraging extensive support for snapshots, backup catalogs and datastore copies. These same features also offer strong use cases for backup/restore and disaster recovery strategies utilizing DVX and Data Cloud. The ability to define automated snapshots of DVX Protection Groups, a collection of VMs and data resources related to a virtualized application, allows admins to easily create policies that control how those resources are backed up in a DVX-based data protection or DR strategy.

Our Take

Datrium's DVX private cloud architecture offers efficient, VM-centric data management that is to configure via group policies. The flexibility of the DVX system, utilizing industry-standard servers or compute and data servers from Datrium gives companies an easy entrée into the world of private cloud by making the transition from a traditional server-storage architecture as easy as loading the DVX software on any existing server that you want to add to the DVX cloud. This unique approach preserves existing investments in servers while drastically lowering data storage, management, archiving and data retention costs. With performance enhancements up to five times faster than all-flash arrays, DVX offers a scalable, extensible, resilient cloud platform that actually gets faster as you add compute nodes. With a VM-centric management paradigm, there is no SAN, LUN or tier administration, just VM administration. Thus, there is little additional training required for existing virtualization admins to understand and begin using the DVX system. In our view, Datrium DVX Open Convergence is what convergence and hyperconvergence should have always been but never was...before now. ●

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