

# EMC CLARiiON AX4: Most capable and affordable entry-level SAN for VMware



The simple, scalable, and reliable storage system for VMware virtualized server environments, starting at \$8,599.

## The Big Picture

- Ease of use for dynamic virtualized infrastructures: simple wizard-based installation and management
- Scales as your VMware environment grows: from 1.2 TB to 60 TB and 64 hosts
- Simple, cost-effective iSCSI deployments for VMware
- Highest availability for virtualized IT environments: based on EMC CLARiiON technology with proven five-nines (99.999 percent) availability
- Alter performance characteristics and expand capacity of your virtual machine file system without disruption: CLARiiON virtualLUN and metaLUN technologies
- Accelerate end-to-end deployments with EMC best-practice white papers for VMware environments

## Extend the benefits of VMware deployment with EMC CLARiiON AX4

With VMware<sup>®</sup> you realize the significant tangible benefits of server consolidation, including increased resource utilization, energy savings, and reduction of operational costs.

A storage area network (SAN) featuring EMC<sup>®</sup> CLARiiON<sup>®</sup> AX4 storage brings even further VMware benefits by enabling and supporting new functionality, such as VMotion<sup>™</sup>, DRS, and HA, that make Virtual Infrastructure 3 such a powerful solution. A solution that combines VMware with the affordable, simple, scalable, and reliable CLARiiON AX4 system provides enterprise-class capabilities and efficiencies in an easy-to-use storage platform starting at \$8,599.

## Simple installation and management support virtualized infrastructures

It's important to complement VMware's ability to deploy new virtual assets on the fly with an appropriate storage platform. Keeping this in mind, EMC has introduced ease-of-use features for the AX4 designed to improve management in a VMware environment and support a growing virtualized information infrastructure. You can easily self-install the AX4 using the interactive installation wizard to facilitate rapid VMware deployments. Using Navisphere<sup>®</sup> Express, the included web-based management application, you can quickly provision, deploy, migrate, or expand volumes associated with their ESX virtual servers. You also have the option to deploy the full Navisphere Management Suite as your VMware deployment evolves to provide additional management functionality and multiple CLARiiON platforms. When the Navisphere Management suite is deployed with VMware, you can access integrated technologies such as Site Recovery Manager using CLARiiON MirrorView<sup>™</sup> replication software and automate the process for site failover.

## Highest performing and easy iSCSI deployments for VMware

VMware customers who leverage the simple, scalable CLARiiON AX4 SAN for storage consolidations enjoy the most flexible and highest performing deployments available for virtualized data centers. You can choose the iSCSI connectivity option to leverage your LAN infrastructure and get outstanding performance. The Fibre Channel (FC) connectivity option is ideal for customers who have an existing Fibre Channel SAN. This flexibility continues to your choice in disk drive technologies with low-cost/high-capacity SATA drives for applications such as backup-to-disk and file sharing, and SAS drives



for performance-sensitive applications. The benefits of the AX4's network and drive options extend into the platform's scalability where you can begin with as few as four drives or 1.2 TB capacity and scale up to 60 TB. Server connectivity can grow to 64 concurrent highly available host connections. Qualified and listed on VMware's compatibility/support matrix, the CLARiiON AX4 provides choice without compromise and the scalability for your organization's growing VMware virtualized environments.

### **CLARiiON AX4 provides the highest availability for virtualized IT environments**

The CLARiiON AX4 has inherited many advanced software capabilities that have proven to deliver five-nines availability on the CLARiiON CX3 storage platform. In addition to the fully redundant hardware architecture, the unique software capabilities of the FLARE® operating environment provide the CLARiiON AX4 with cache destage-to-disk and end-to-end data integrity checking technologies to maximize system resiliency. Leveraging Intel® Xeon® processors, the AX4 provides a flexible, reliable storage solution for your business. The availability of your virtual machines is ultimately only as good as the storage on which they reside. The CLARiiON AX4 is the only entry-level SAN with advanced technologies to deliver the highest levels of reliability and availability required for VMware environments.

### **Efficient provisioning and storage for VMotion integration**

Being able to quickly and non-disruptively deploy new virtual machines on the fly has literally changed the game in information technology. CLARiiON streamlines and expedites storage management with technologies such as metaLUN and virtualLUN which are included free of charge with the AX4. These features allow for realtime, online expansion of LUNs and transparent volume movement, respectively, with no interruption to host I/O.

Realtime LUN expansion also supports the creation of new virtual machines on the fly. This means that additional storage capacity is immediately available to the ESX Server™ without reboot and is non-disruptive to the host application. Both RDM and VMFS are supported with metaLUNs and users can leverage this key technology to make efficient use of their storage resources in a VMware environment.

The CLARiiON AX4 makes online non-disruptive moves of your virtual machines between drive types and RAID groups possible. This flexibility lets you move virtual machines within the array based on your performance requirements as they change over time. In the event that a virtual machine becomes less critical, you can migrate the VMFS file system from SAS to SATA drives while the virtual machines are online. You can also reconfigure the AX4 layout or add additional capacity non-disruptively. This technology makes CLARiiON AX4 systems the most flexible midrange networked storage systems, allowing you to manage and change the system configuration as your VMware environment changes and grows. Only CLARiiON AX4 enables you to leverage new VMware capabilities such as Storage VMotion which allows you to easily reinstantiate a single virtual machine or multiple virtual machines simultaneously.

### **Services and expertise**

EMC's extensive experience with VMware and comprehensive suite of virtualization services can help your organization transform its entire infrastructure by leveraging the capabilities of VMware along with CLARiiON AX4 SANs. Years of experience in deploying iSCSI SANs with VMware have been captured in the online library of best-practice white papers and solution guides designed to accelerate your deployment. The EMC E-Lab™ has also tested the CLARiiON AX4 with VMware, providing peace of mind that your implementation will work the first time. The E-Lab has validated

AX4 compatibility with all of the most popular operating environments; including Windows, Solaris, and Linux. If you require additional expertise, the following assessment and implementation services are available to help you accelerate deploying CLARiiON AX4 systems with VMware's virtualized infrastructure suite:

- **EMC Assessment for Virtualization** examines your current infrastructure and business objectives to provide an analysis of and design recommendations for the proposed virtualization initiative, as well as the financial impact.
- **EMC Design for Server and Storage Virtualization** provides a detailed design and migration plan for x86 server virtualization with storage consolidation based on the results of the Assessment Service and your future business needs.
- **Managed Services** provide world-class services for management of information and storage systems; and processes and reference architectures for individual company needs.



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#### Take the Next Step

Find out how the EMC CLARiiON AX4 can simplify and complement your VMware environment. Find out why more customers are choosing CLARiiON for their VMware environments than any other networked storage array. For more information, contact your local EMC Velocity<sup>2</sup> Partner or visit our website at [www.emc.com](http://www.emc.com)