



# EMC STORAGE SOLUTIONS FOR TACTICAL DEPLOYMENT

Information is critical to the fight

## ESSENTIALS

- Delivers compact, light weight, and highly available storage, optimized for the field
- Requires little training and is easy to use even for those with only basic technical skills
- Features exceptional capacity utilization and data management capabilities
- Simplifies storage management and configuration
- Supports virtualization and cloud-based tactical services

Nowhere is the intersection of operational data and storage technology more dramatic than on the battlefield. While commercial enterprises rightly claim that information is the key to business success, in war fighting it can literally be the difference between mission accomplishment or failure.

The military requires transportable data storage that has been optimized for deployment in the field—where challenging conditions are the norm. This means compact, light weight, and highly available storage that requires little training and is easy to use even for those with only basic technical skills. It needs to be scalable, cloud-ready, and designed to maximize virtual environments. Finally, access to data has to be fast, secure, and reliable. Back-up windows are short. And bandwidth is limited.

EMC storage solutions for expeditionary operations and tactical deployment redefine networked storage for military, delivering an unequaled combination of features, reliability, simplicity, and efficiency. Based on the EMC® VNXe™ Series of storage units, which comply with the Army's Common Operating Environment (COE) Architecture guidelines, these solutions deliver seamless management and a unique application-driven approach that eliminates the boundaries between applications and storage.

## A STORAGE PLATFORM DESIGNED FOR THE EDGE

In any mobile environment—shipboard, aircraft, vehicle, transit case—space and power are at a premium. That's why the VNXe3150™ and VNXe3300™ pack highly available, power efficient, and easy-to-use storage into a compact form factor. The VNXe3150 delivers up to 36 TBs of unified block and file storage in a sub-26.4 kg package (2U/8.64 cm x 44.45 cm x 50.8 cm), which can be deployed in standard IT racks or ruggedized racks or cases. The VNXe3300 includes the same ease of use and application-driven management features of the VNXe3150, coupled with increased performance, scalability, and I/O expandability.

### EMC storage solutions for tactical deployment may include:

- EMC® VNXe3150™
- EMC® VNXe3300™
- Themis RuggedStore 3100
- EMC® Avamar™
- EMC® Atmos™

While compact, the VNXe series scales seamlessly as needed—from six to 150 disk drives and 360 terabytes of capacity (VNXe3300). Both systems feature exceptional capacity utilization and data management capabilities including file deduplication and local/remote replication.

Unisphere Remote is also available to provide support for monitoring large numbers of remote VNXe systems from a central site.

For harsh conditions, EMC partner Themis offers the RuggedStore 3100, based on the EMC VNXe3100. The RuggedStore 3100 boasts an advanced, ruggedized thermal and mechanical design that functions reliably when subjected to extreme shock, vibration, operating temperatures, and humidity. The RuggedStore 3100 meets military specifications for shock and vibration (MIL-STD-810G) and for quiet operation of 54 db or less (MIL-STD-740). The RuggedStore 3100 also reduces weight for a fully-populated 12-drive base unit by almost half when compared to competitive offerings (35.2 lbs. versus 66 lbs.). At a depth of 17 instead of 20 inches, the RuggedStore 3100 takes up less space, making the Themis RuggedStore 3100 a great fit in military and commercial environments requiring ruggedized equipment to save space and weight.

## APPLICATION-DRIVEN STORAGE MANAGEMENT THAT WORKS THE WAY YOU DO

Too often the increased capabilities of advanced network storage come at the price of new interfaces to master, new terminology to decipher, and new processes to learn. But, by aligning storage management with applications, avoiding arcane terms for plain language, and embedding storage wizards and application best practices in the intuitive graphical user interface, solutions based on the VNXe series are simple to configure and manage. They shorten time to proficiency, simplify operations, and reduce training overhead. Integration of local data protection, snapshot, and replication with storage management workflows provide uniform data protection coverage.

VNXe is also built with virtual environments in mind. EMC has over 60 points of integration with VMware® vSphere™ 4.1 and is vSphere 5 ready. EMC also supports all the vStorage API families. The VNXe management interface provides users a comprehensive view into the VMware environment and how it relates to the storage infrastructure.

Whether you need to consolidate TOC storage to better manage resources and protect data, or improve IT resource utilization with server virtualization, the VNXe series is built to perform. With the VNXe, you'll be power-on to provision-ready in only 30 minutes.

## **KEEPING STORAGE MANAGEMENT SIMPLE**

Every VNXe unified storage solution includes EMC Unisphere™ management software. By organizing raw capacity into pools of high-performance 10,000 rpm and 15,000 rpm SAS drives and high capacity 7,200 rpm near-line SAS drives, Unisphere takes the complexity out of storage management and supports the iSCSI block and NFS and CIFS file protocols.

VNXe Series models are available which support self-encrypting drives (SED) for use cases requiring data-at-rest encryption.

This 'click and provision' software provides storage management from the application's point of view, with one clear way to handle any task—from installation to provisioning storage for virtual servers. Provisioning storage for 500 mailboxes or 100 gigabytes of virtual server storage can be done in less than 10 minutes. You can shift from managing file shares to creating application storage without missing a beat. The bottom line—you save time and steps. Unisphere also enables file-level deduplication and compression that can reduce physical capacity requirements by 50 percent or more.

## **OPTIMIZING BANDWIDTH USAGE THROUGH CLIENT-SIDE DEDUPLICATION**

With EMC Avamar, tactical environments can back up data to brigade or national datacenters even when bandwidth is constrained. The unique EMC Avamar deduplication technology eliminates duplicate sub-file segments in the tactical environment before they're transferred across the network, reducing network bandwidth requirements by up to 99 percent and enabling fast daily backups across WAN and virtual infrastructure. Backup data can be encrypted in flight and at rest, ensuring secure, cost-effective retention.

Avamar backups can be quickly recovered in just one step—eliminating the hassle of restoring full and subsequent incremental backups to reach the desired recovery point. In addition, Avamar's centralized web-based management and at-a-glance dashboard view make it easy to protect hundreds of sites from a single location over existing network bandwidth.

## **LEVERAGING CLOUD TECHNOLOGIES TO ENSURE HIGH AVAILABILITY**

Operational units across the battlespace are often widely dispersed yet need access to the same data. EMC Atmos offers a purpose built cloud storage platform that reduces the risk of failure from dedicated resources and serves multiple tenants securely and dynamically in a single system. Atmos cloud services intelligently automate management of content through highly flexible policies. They provision quickly, enable workloads to be moved or duplicated across different locations, and offer rapid and secure access from any Internet-connected device.

## REDEFINING TACTICAL NETWORKED STORAGE

Anchored by the VNXe series and backed by the worldwide leader in storage technology, EMC storage solutions deliver an unequaled combination of operational benefits including compact form factor, minimal training costs, and impressive ease of use. They begin with the hardware—highly available, scalable, and adaptable to constantly changing conditions and future needs such as cloud-based tactical service delivery. The VNXe hardware platform takes advantage of the latest processor technology from Intel and includes features that provide true storage consolidation with rapid access and seamless management. Whether your expeditionary challenges are in the air, on the ground, or at sea, EMC tactical storage solutions are critical for success.

## ABOUT EMC

EMC is a leader in enabling governments to transform their operations and deliver IT as a service. Fundamental to this transformation is cloud computing. Through innovative products and services, EMC accelerates the journey to cloud computing, helping IT departments to store, manage, protect and analyze their most valuable asset — information — in a more agile, trusted and cost-efficient way.

## CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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