

Maxta Solution Brief

Maxta Storage Platform for Remote Offices and Branch Offices

The Challenge

Many Remote offices and Branch offices (ROBO) have deployed or are considering deployment of server virtualization to realize the benefits of improved cost, agility and availability. To fully realize these benefits, they cannot leverage the internal disk drives and internal SSD that are packaged within the servers. Just like datacenters, ROBOs need enterprise-class data services such as data sharing, high availability, data protection, capacity optimization and disaster recovery. Several storage arrays meet these requirements but introduce challenges in terms of acquisition cost, need for specialized storage skills, and consumption of physical space/power/cooling. These challenges are especially an issue for ROBOs due to limited budget, lack of specialized storage skills, limited space and other infrastructure constraints. The key storage challenges faced by ROBOs are:

- ▶ Provide a storage solution that complements the investment in server virtualization without compromising enterprise-class data services
- ▶ Enable existing staff to effectively and efficiently manage storage
- ▶ Minimize CAPEX and OPEX

The Solution

Maxta has developed a ground breaking, highly resilient, scalable distributed Software-Defined VM Storage platform (MxSP) that enables IT to fully realize the vision of the virtual data center. The innovative, peer-to-peer architecture aggregates storage resources from multiple standard servers, assimilating a global namespace and all the storage functionality that ROBOs need for leveraging the benefits of server virtualization. The key benefits of MxSP are:

- ▶ Eliminate Storage Arrays and Storage Networking
- ▶ Dramatically simplify IT by eliminating Storage Management
- ▶ Provide VM-centric Enterprise-class Data Services
- ▶ Optimize for flash performance and hard disk capacity
- ▶ Enable compute/storage convergence on standard servers maximizing capital and operational savings

Eliminate Storage Arrays and Storage Networking

MxSP delivers all the capabilities of storage arrays in software by leveraging internal drives, internal SSD, and/or JBODs connected to servers, thereby eliminating the need for storage arrays, storage networking, and all storage networking tasks such as zoning. By supporting the entire range of enterprise-class data services, ROBO locations don't have to compromise on storage features. Eliminating storage arrays provides up front CAPEX savings and removes the need for specialized skills for array-specific storage management and storage networking complexities thus significantly increasing OPEX savings.

Simplify IT

MxSP dramatically simplifies IT by eliminating the need for storage provisioning and managing volumes, LUNs, file systems, and RAID. MxSP management functionality seamlessly integrates into the virtualization UI providing the IT generalist with the VM-centric management that they are familiar with. Policies for all data services such as snapshots, zero copy clones, local and remote replication are configured at the VM granularity within the virtualization UI enabling VM administrators to leverage storage without the need for deep storage and vendor specific expertise.

Feature	Function	Benefit
High Availability	<ul style="list-style-type: none"> Failover VMs in case of server failures 	<ul style="list-style-type: none"> Application uptime
Unlimited number of snapshots and zero-copy clones	<ul style="list-style-type: none"> Create space and time efficient VM-level point in time copy Instantly provision VMs by cloning and leveraging VM templates 	<ul style="list-style-type: none"> Data Protection Agility Significantly reduce storage capacity requirements
Remote Replication	<ul style="list-style-type: none"> Asynchronously replicate delta changes at a VM-level granularity from ROBO location(s) to another data center 	<ul style="list-style-type: none"> Disaster Recovery
Thin Provisioning, Inline Compression and De-duplication	<ul style="list-style-type: none"> Ability to provision capacity several times larger than the size of raw physical storage Reduce capacity consumption by a factor of 3X-5X for all virtualized workloads 	<ul style="list-style-type: none"> Significantly reduce storage capacity requirements

Optimize for Flash Performance and Hard Disk Capacity

MxSP provides flash performance and hard disk capacity for virtual workloads by optimizing data layout and utilizing SSDs for read/write caching. MxSP eliminates the "I/O blender" challenge by transforming storage workloads dominated by short random reads and writes operations to workloads dominated by large sequential operations. As a result, MxSP removes the need for IT administrators to make difficult tradeoffs between performance and cost.

Deliver Converged Compute/Storage on Commodity Components

MxSP enables the convergence of compute and storage resources on standard commodity servers, without compromising performance or scalability. Converged compute and storage significantly reduces physical floor space, power, and cooling which are usually a constraint at ROBO locations. MxSP leverages any combination of commodity magnetic disk drives and consumer grade SSDs to deliver competitive performance and high capacity at an attractive price for all storage workloads in a virtualized environment, thus alleviating the pressure on constrained IT budgets. Additionally, MxSP provides the ability to leverage existing infrastructure providing investment protection.

