

Coraid Ethernet SAN for Server Virtualization Environments

Solution Brief

Server virtualization has brought undeniable benefits to enterprise IT – reduced costs, server consolidation, and increased flexibility. Coraid® EtherDrive® SAN storage is accelerating the same trend for the enterprise storage market.

For today's server virtualization deployments on Citrix® XenServer™, VMware® vSphere™, or Microsoft® Windows Server 2008 R2 Hyper-V®, Coraid's unique Ethernet SAN storage is the ideal shared storage solution. EtherDrive storage is purpose-built to maximize server virtualization ROI, allowing capacity and performance to scale linearly with user demand.

Server Virtualization Storage Challenge

Despite the many benefits of server virtualization, the technology creates challenges for storage in the data center. A survey of 254 storage and IT administrators asked respondents to identify their server virtualization challenges. Over half, a full 54%, reported that the cost of storage was three times higher than the cost of server virtualization software, diluting the benefits of server virtualization and stalling deployments. Two other notable findings show that post virtualization deployment, 36% said performance and I/O bottlenecks were a challenge and 28% listed configuration and management of storage as a challenge.

Organizations face these issues because legacy Fibre Channel and iSCSI storage architectures are rooted in rigid mainframe-era designs, and are fundamentally mismatched with the dynamic, shared modern data center.

Server Virtualization Storage Solution

Coraid EtherDrive storage is purpose-built to optimize virtual storage networking. It leverages Ethernet's low cost, simplicity, and performance and allows IT organizations to realize the greatest server virtualization ROI.

EtherDrive storage runs on Layer-2 Ethernet, a massively parallel infrastructure that provides near line-rate performance and delivers throughput that is up to 30% faster than Fibre Channel. A single Coraid EtherDrive storage appliance can deliver up to 1,800 MB/s of throughput for bandwidth-intensive virtualized applications.

Coraid EtherDrive storage also uses a single tier storage building block to create scale-out storage ideal for dynamic virtualization environments. This scale-out architecture allows administrators to deploy solid state disk (SSD), SAS and SATA disk in the same enclosure, efficiently growing storage capacity exactly in line with user demand (see Figure 1).



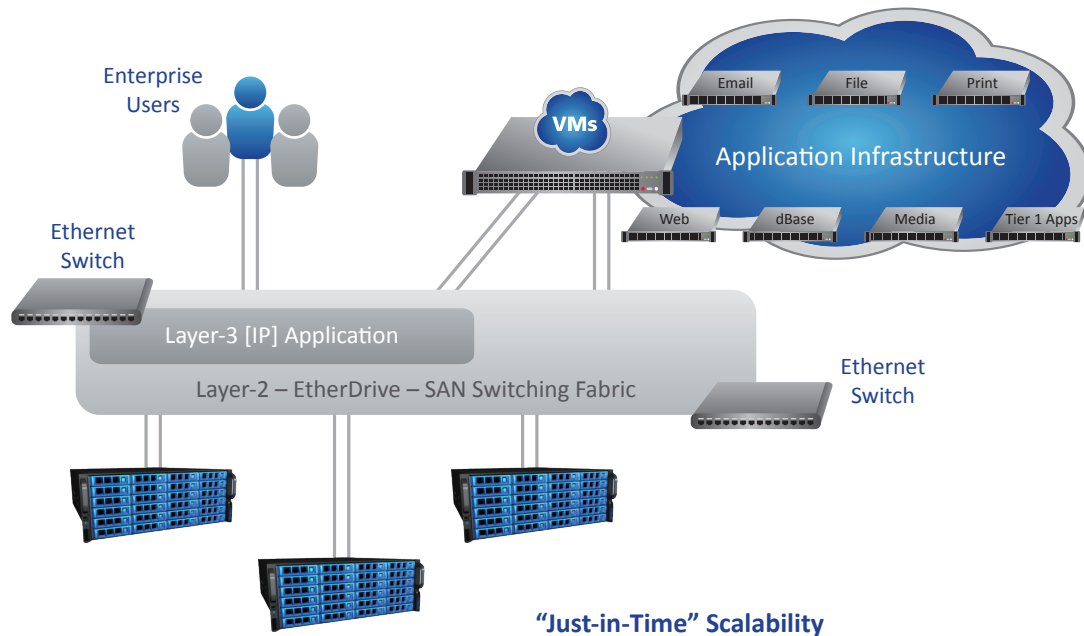


Figure 1. Virtual Server with Ethernet SAN Storage Solution

Ethernet Eliminates Storage Complexity

Ethernet SAN eliminates many of the layers of complexity in legacy SANs, like multi-pathing and port bonding. Without manual connections to maintain, EtherDrive storage appears as direct attached storage to virtual servers and is managed just as easily. By eliminating the many layers of complexity of legacy Fibre Channel SAN and iSCSI, Coraid EtherDrive storage can be configured in less than a minute and administered easily, freeing IT time to focus on strategic business priorities.

Ethernet Enables Lowest Total Cost of Ownership

The Ethernet SAN architecture also enables the lowest shared storage CAPEX and OPEX, a critical requirement for realizing real cost savings when virtualizing servers. Compared to Fibre Channel SAN, with its propriety and expensive hardware, the EtherDrive architecture utilizes off-the-shelf hardware and standard Ethernet to provide 80% lower upfront capital cost.

Since Ethernet SANs are so much easier to manage than Fibre Channel SANs, users are able to manage petabytes of storage with half the administration time, lowering OPEX by 50% or more.

Conclusion

Server virtualization has ushered in a new era of computing based on flexible, elastic computing architectures. Legacy storage networks have been holding back organizations from realizing the full ROI potential of the virtual data center. However, by eliminating the complexity and cost of mainframe era designs, EtherDrive combines the simplicity of direct attached storage with the benefits of shared storage to enable a single elastic storage tier that supports the wide variety of dynamic virtual server workloads.

Contact Coraid for Your Server Virtualization Storage Needs

Coraid delivers high-performance, rapidly scalable Ethernet SAN infrastructure that supports enterprise virtual infrastructure requirements. Contact your Coraid representative to learn more about Coraid EtherDrive storage solutions.

