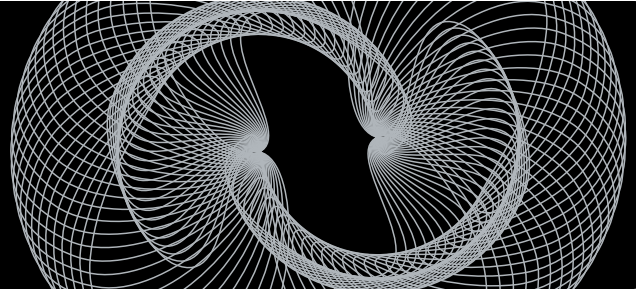


Server Virtualization & Consolidation



Challenge

With the large-scale enterprise shift from monolithic proprietary systems to lower-cost, powerful, commoditized hardware, IT environments are dealing with a massive influx of many separate servers running independent applications which is commonly known as “server sprawl.” Server virtualization software has brought major relief to server sprawl and, combined with powerful clustering technologies, has taken enterprises one step closer to realizing the next-generation data center.

Server clustering and virtualization allows an IT organization to pack more computing power into a smaller footprint through increased utilization—from the average 10–20% per machine up to 80%. It also reduces power consumption, cuts hardware and operating costs in half, significantly increases compute power and eases server management while increasing uptime.

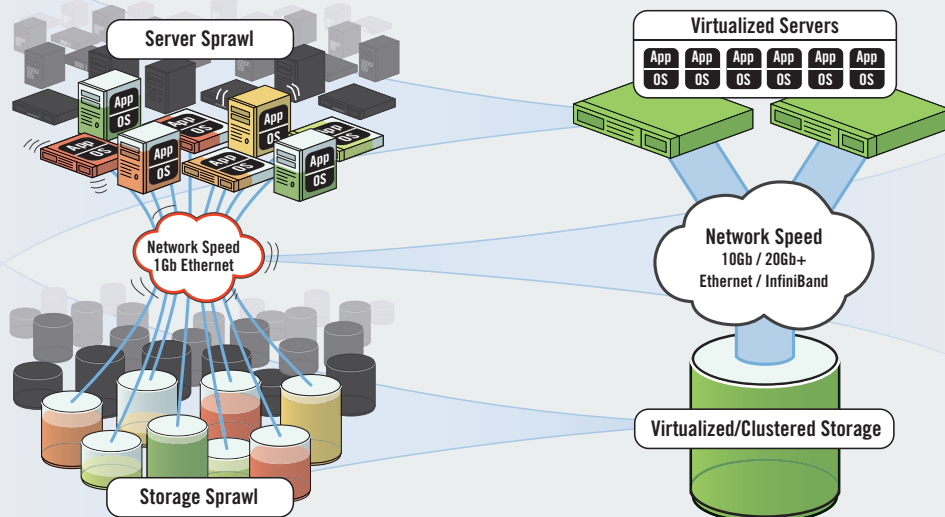
IT organizations across industries are turning to server virtualization technology from companies such as VMware, Microsoft, and Citrix XenSource to simplify management and reduce costs associated with distributed applications and server management.

One by-product of server sprawl—storage sprawl—challenges both physical and virtualized environments, especially for enterprises consolidating or deploying large numbers of applications. Storage sprawl affects both physical and virtual environments. As physical systems are converted to guest Virtual Machines (VM), the storage for each server—and in some cases each VM—must be managed independently.

Solution

By combining server virtualization with Isilon IQ clustered storage—which vastly simplifies managing virtual machines through a single, shared pool of storage—enterprises can complement their virtual server infrastructure with a virtual storage environment. This new type of storage virtualization eliminates barriers associated with traditional SAN and NAS storage systems.

Powered by the OneFS® operating system, Isilon IQ delivers the industry’s first single file system that unifies and provides instant and ubiquitous access to rapidly growing stores of virtual machines, eliminating the cost and complexity of traditional storage architectures.



Key Benefits

Massive Scalability—up to 2.3 PB in a Single File System

Isilon IQ clustered storage can scale from 4 terabytes to 2.3 petabytes of capacity, enabling unprecedented scalability to meet the intensive computing demands of the virtualized data center. Isilon IQ enables data-intensive businesses to fuel innovation by addressing two critical challenges facing today's enterprises—cost effectively managing storage growth and delivering instant access to large, file-based data.

Industry-Leading Performance

Isilon IQ delivers unmatched aggregate throughput with up to 20 GB/second. By combining high-performance Isilon clustered storage with industry-standard server virtualization solutions, enterprises can eliminate the bottlenecks caused by traditional SAN and NAS storage architectures and create a fully virtualized infrastructure—from servers to storage—which maximizes data center performance and utilization while reducing the costs and complexity of storage sprawl. In addition, Isilon IQ Accelerator-x platform extension nodes enable single stream performance of up to 400 MB/second, concurrent performance of up to 700 MB/second and delivery of over 26,000 transaction I/Ops.

Simplified Management

IT infrastructure is consolidated to a single point of management and administration, removing unneeded complexity from the virtual environment. When combined with Isilon products, overall (including storage) resource management is further simplified as Isilon's OneFS® operating system software creates a single, shared pool of storage available to all servers. This eliminates multiple points of storage management and reduces complexity within the virtual data center.

Unprecedented Flexibility Through Fully Symmetric, Modular Architecture

Integrating Isilon IQ clustered storage into the virtual environment enables automated load balancing to maximize storage resources while freeing IT administrators from the constraints of complicated management and provisioning tasks.

As more capacity or performance is required for applications, administrators can simply add Isilon IQ nodes or IQ Accelerator-x nodes to the cluster in less than 60 seconds—and rebalance applications across those new storage resources. This “right-sizing” of clustered storage for consolidated server environments greatly maximizes storage efficiencies and simplifies capacity planning.

Data Protection and High Availability

All-active failover and load balancing through Isilon's SmartConnect software application ensures all virtual machines remain active during planned and unplanned storage outages.

Related Products

- Isilon IQ X-Series 1920, 3000, 6000, 9000 & 12000 Platform Nodes
- OneFS® Operating System
- IQ Accelerator-x
- SmartConnect™
- SnapshotIQ™
- SmartQuotas™

About Isilon Systems

Isilon Systems is the worldwide leader in clustered storage systems and software for file-based data, enabling enterprises to transform data into information and information into breakthroughs. Isilon's award-winning family of IQ clustered storage systems combines Isilon's OneFS operating system software with the latest advances in industry-standard hardware to deliver modular, pay-as-you-grow, enterprise-class storage systems. Isilon's clustered storage solutions speed access to critical business information while dramatically reducing the cost and complexity of storing it.