



BlueArc Network Storage Servers

HIGHLIGHTS

- BlueArc clusters scale-out from two to eight nodes
- Clusters can scale one node at a time to quickly and flexibly grow with the business
- Multiple petabytes in a cluster namespace for scalable data access
- Mirrored NVRAM for transactional high availability protection
- Multi-protocol support with mixed-mode security
- Integrated data replication, recovery, and NDMP backup
- Antivirus scanner support
- Automated read caching for linear performance scalability
- Disaster Recovery and Business Continuity support for remote sites up to 100 km

BLUEARC'S COMPREHENSIVE SCALABLE ENTERPRISE CLUSTERED STORAGE SOLUTION

Enterprise customers have grown to depend on clustering technologies to ensure availability and protection of important business data assets. Additionally, this functionality has quickly become one of the most basic requirements for the enterprise market. However, today's clustered storage systems must now offer significantly more sophistication in their ability to enable consolidation, provide optimization for variable workloads, and deliver a deeper level of integrated file services.

BlueArc offers a differentiated method to provide storage services across multiple nodes in addition to an accelerated hardware architecture that scales vertically as performance and capacity needs change over time. With a marketplace now offering so many different storage clustering solutions, BlueArc stands apart by ensuring customers have the right set of enterprise clustering features that are essential to improved management of data and increased performance. The BlueArc scalable clustered storage solution ultimately provides a comprehensive method to consolidate, manage, and protect data resources. BlueArc scalable clustering solutions are not entry level clusters. Rather, they are designed from the ground up for the most sophisticated applications in which protecting transactions is critical. The BlueArc solution enables ease of scale for I/O performance, capacity, and data access in one seamless solution.

A Comprehensive Scale-Up and Scale-Out Clustering Solution

BlueArc's clustered storage solution is optimized for enterprise storage infrastructures. The data resources managed within the storage cluster can be flexibly consolidated, distributed, migrated, and tiered according to policy-based profiles. At the same time, the data is protected through integrated high availability fail-over, local and remote site replication and backup support of disaster recovery and business continuity strategies. The solution optimizes application availability and adjusts to unplanned changes in performance, capacity expansion, and tiered data placement over time. The BlueArc servers unique NVRAM mirroring architecture enables clusters to scale one node at a time to enable better scaling of resource utilization and workload balancing.

To simplify and speed data access and to minimize administrative overhead in these scalable N-Way storage clusters, the BlueArc solution enables users to create a unified multiple petabyte namespace across all nodes within a common cluster. This enhancement allows any node within the cluster to present a single and persistent virtual file system that is accessible by any client for all data resources and mount points supported by the cluster.

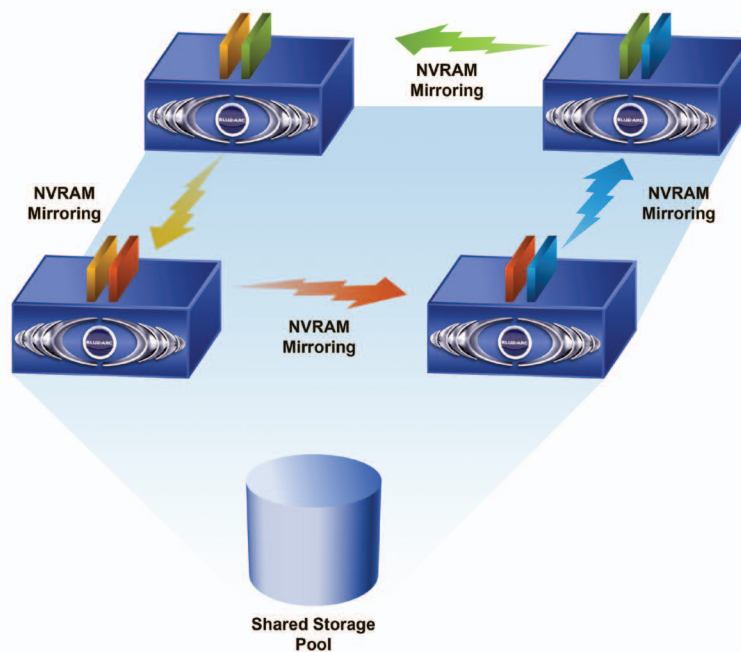
Performance can be further increased for enterprise applications in which sustained read performance is typically limited by the number of disk drives in the system. In these scenarios, the BlueArc solution can automatically cache data to any other node in a cluster, scaling read performance nearly linearly with each node added to the cluster.

BlueArc clustered storage solutions stand apart, with an end-to-end architecture that empowers users with unprecedented performance and transaction protection. Designed for enterprise consolidation projects, the BlueArc solution requires fewer nodes and provides simple modular in-place upgrades for long-term growth and investment protection over time.

Scalable N-Way High Availability Clustering

One of BlueArc's key differentiators is its mirrored, high-speed, low latency, battery backup-protected NVRAM that can store transactions for high availability—before those transactions are written to disk. Data stored in NVRAM is synchronously mirrored across cluster nodes in a round-robin fashion over a high-speed, 10 Gigabit Ethernet transport network so there is no chance for transaction integrity to ever be compromised.

Scalable Storage Cluster Solution



Another critical benefit of BlueArc's N-Way storage clusters is a server virtualization technology that allows each cluster to support a total of 64 virtual servers. This enables continuous data access in the event that a cluster node fails, provides broad flexibility to load balance and migrate storage resources, and protect data in a way that best meets changing enterprise requirements. The virtual servers can dynamically migrate between nodes within a cluster, allowing customers to optimize resource utilization, and the virtual server content can be replicated to another virtual server across remote sites for data protection and archiving.

Cluster Namespace

The optional cluster namespace enhances BlueArc's N-Way storage clustering solution by allowing a single virtual file system to be created uniformly across all cluster nodes. Commonly referred to as a global namespace, but dedicated to the cluster, the cluster namespace virtualizes all individual file systems under a common root. This virtual file system can be used to consolidate multiple petabytes and scales the number of application servers and users by allowing access to all storage resources through a single mount point to be uniformly accessed by any node in the cluster. As a

result, administrators can migrate, rename, or otherwise manage individual file systems within the cluster without impacting client access.

With BlueArc, performance, scalability, and capacity are never impacted when a virtual clustered namespace is established.

Dynamic Read Caching

For enterprise environments in which high volume read workloads are limited by single physical node performance, BlueArc's storage clustering solution can be enhanced with a Dynamic Read Caching capability. By automatically and transparently distributing read-only data caches across nodes, the number of users, aggregated throughput, application productivity, and cluster utilization can all be optimized.

BlueArc's optional Dynamic Read Caching feature overcomes disk-bound performance limitations by automatically distributing cached data across cluster nodes concurrently. IT administrators can leverage read caching to uniquely scale and customize workflow environments and access to common data sets that are typically confined by physical limitations such as the number of disk or ports on a node.



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