

MULTI-NODE ACTIVE ARCHIVE FOR HIGH AVAILABILITY AND MASSIVE SCALABILITY

THE CHALLENGES

For many industries High Availability is critical to business operations. In addition, some organizations that rely on “just-in-time” data recall need active archive content to be available when needed. In the High Performance Computing world massively scalable archives, with capacities into exabytes, are becoming more common place. These environments require tens or hundreds of tape drives and thousands of tape media to store and retrieve massive datasets in the shortest period of time. This type of Active Archive must be accessible through common file interfaces such as SMB and NFS but also through S3 cloud interface, as this pseudo-standard becomes more mainstream.

THE SOLUTION

QStar Technologies has created a new multi-node software solution which includes global namespace, high availability, load balancing and fast access to extremely large tape libraries and other archive technologies, such as object storage, private or public cloud or NAS/RAID. Global ArchiveSpace™ software uses a minimum of three computer nodes in a cluster to create one or many file systems each with a Global Namespace. The software product is built on the well established QStar Archive Manager, and allows the utilization of large tape libraries supporting the numbers of tape drives beyond capabilities of a single node. Every node can access any tape media and use any tape drive to read or write data. Content can be replicated for data protection to same or different archive technologies, and presented a unified view of the archived data through SMB or NFS file systems and / or S3 cloud interfaces.

ACCESS TO SHARED RESOURCES

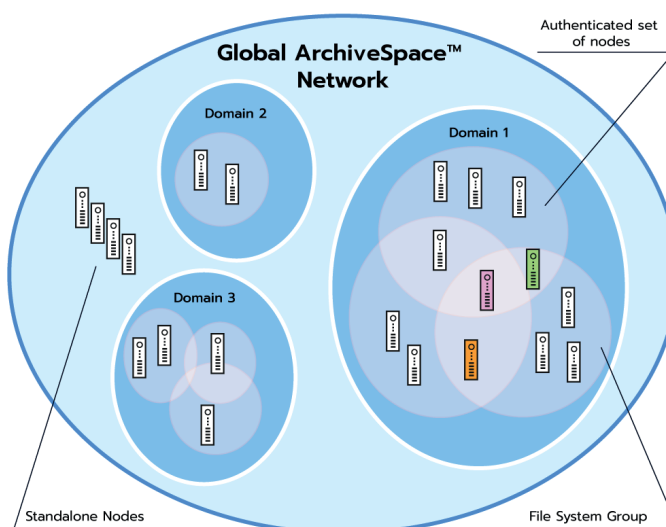
To support access to large tape libraries, without library partitioning, Global ArchiveSpace™ provides Physical Library Manager (PLM). The PLM is a service which is assigned to one domain node, and provides coordinated medium changer and global tape drive pool management. The node requests a drive for operation and PLM selects an appropriate drive for the version of tape media and provides access to the requesting node. Once the requesting node releases the drive it is returned back to the global drive pool. The PLM is automatically reassigned in the event the original domain node is no longer available.

DOMAIN

The Global ArchiveSpace™ file system (FS) is created on the top of the standard hardware resources. The hardware resources which could be used to create are organized into the domain. In a single Global ArchiveSpace™ domain there

may be multiple file systems created.

Cloud storage accounts (Amazon S3, Google GCP, Microsoft Azure) are globally accessible and do not require special coordination. These resources are defined for all domain nodes and are assigned to nodes based on storage buckets (containers).



HIGHLIGHTS

Access ALL Data from archive via SMB/NFS file share(s) or S3 Cloud protocols

- Highly available active-active multi-node architecture
- Supports exabyte archives based on shared resources
- Scales from 3 to 64 nodes to provide high performance, high availability and high capacity
- Linux or Windows based for preferred user authentication methods
- Support for largest tape libraries with hundreds of tape drives through unique library sharing service
- Support for cloud/object storage is provided through administrative bucket assignment
- Extensive Web Services command option

NOTE

- Data Availability is provided through node failover mechanisms and data replication / mirroring with online and offline media options
- Client load balancing is provided using DNS or other balancing technologies.

REMOVES BOTTLENECKS

The user application(s) are accessing the file system or bucket through many nodes of the chosen domain. Depending on the access protocol, the load can be automatically balanced between domain nodes (supported by S3, HTTP/HTTPS protocols) or dedicated to a particular node with IP failover support (NFS, SMB). The files in the aggregated file system may be accessed from any domain node. If any node in the domain does not own the file it will be requested through the back-end network from the owner node and delivered to the user.

SIMPLE INSTALLATION AND SCALABILITY

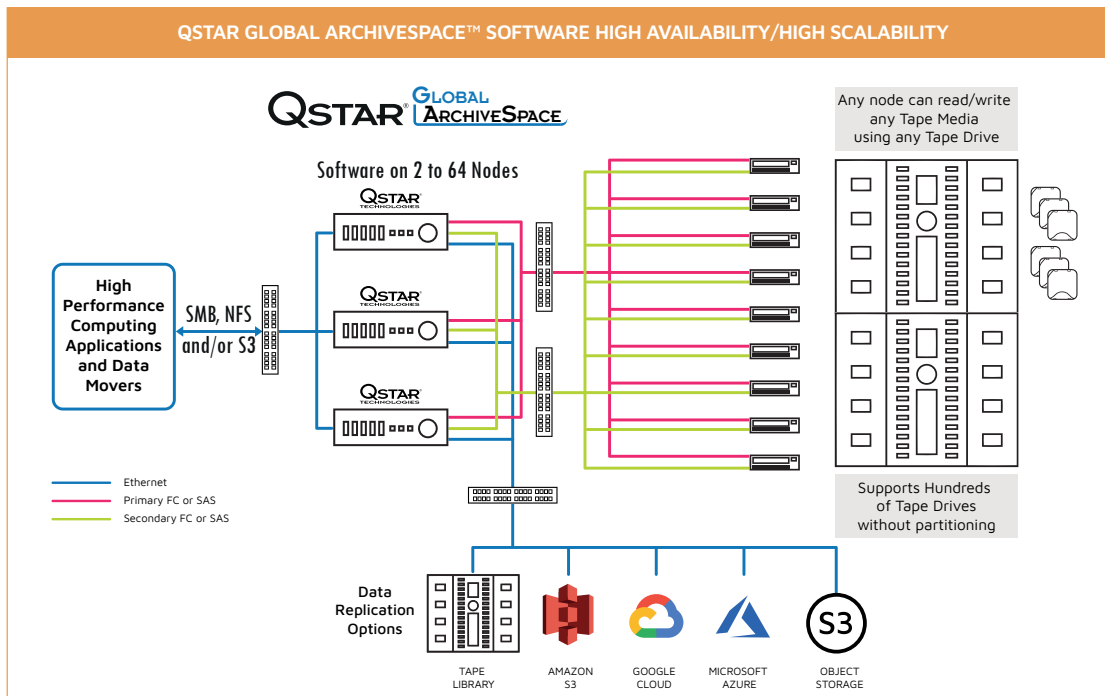
The software may be initially installed on three computer nodes, running Windows or Linux operating systems and additional nodes added for improved performance and/or capacity to a maximum of 64 nodes. It is possible for current users of QStar Archive Manager to upgrade to Global ArchiveSpace™.

MULTIPLE OPTIONS FOR DATA PROTECTION

For data protection, mirroring or replication options are available. For environments with a single tape library identical media can be created through mirroring and the duplicate set exported as an air-gapped copy. For environments with two or more tape libraries or who wish to use other archive technologies (public or private cloud), synchronous replication is used to store the same data to up to 4 destinations.

FAST DATA ACCESSIBILITY

Multi-drive option allows data to be written to multiple tape drives, allowing significant performance improvements over single tape drive writes, but without the complexities of RAIT. Data can be written in a round-robin method where all media needs to be read, or based on a subdirectory location, where perhaps, only one media need be read. This allows fast time to data as fewer tape media loads are required.



PLATFORM COMPATIBILITY

Windows or Linux Server from any Manufacturer (HPE, Dell, Super Micro etc)

PROTOCOLS SUPPORTED

Front-end Access through: SMB, NFS, S3, HTTP, FTP

HARDWARE SUPPORT

All archival storage providers of LTO and Proprietary Tape, Object Storage, Private or Public cloud

SOFTWARE SUPPORT

QStar software integrates transparently with High Performance Computing environments and data migration software

CUSTOMER SUPPORT SERVICES

Full range of maintenance programs, customer support services and training available worldwide

More detailed information about system requirements, supported hardware and technology partners is available on www.qstar.com

Since 1987, QStar Technologies, Inc. has been a trusted global provider of enterprise-class data management, archiving and cloud solutions. Delivering reliable, highly scalable and secure solutions for long-term access and preservation of valuable digital assets. Visit www.qstar.com for more information.

For more information, please contact the archiving experts at QStar:



QStar Technologies, Inc.
600 17th Street, Denver, CO 80202
Phone: +1 850 243 0900
info@qstar.com www.qstar.com

QStar Technologies Europe
Viale Italia, 12 - 20094 Corsico Milano (Italy)
Phone: +39 02 451 711
info@qstar.it www.qstar.com

© Copyright 2024 by QStar Technologies, Inc. All rights reserved. QStar, the QStar logo and QStar Network Migrator are trademarks or registered trademarks of QStar Technologies, Inc. All other trademarks are owned by their respective companies.