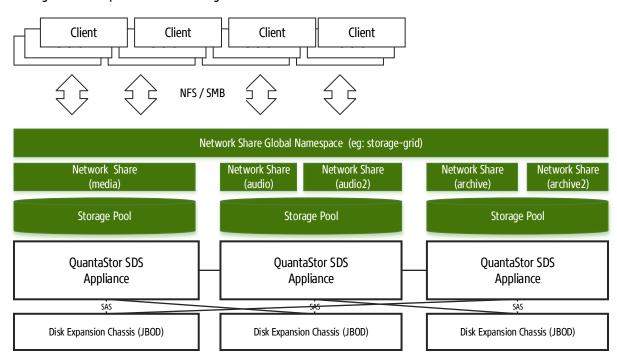




## Simplifying NAS storage management with Global Namespaces

As storage environments grow and appliances are added to expand capacity it becomes increasingly difficult for users to manage their data across a disparate set of appliances which in turn slows productivity. One approach to solving this has been to use scale-out NAS solutions like EMC's Isilon or QuantaStor's Scale-out NAS configurations which provide visibility to all NAS shares from all appliances which are part of a given scale-out volume. But scale-out NAS solutions introduce a number of new problems including spindle-contention, large failure domains, poor performance for small block IO, higher latency and higher up-front costs due to the need for the additional high-speed 40GbE+ backend network to interconnect appliances.

How does one keep the performance benefits of a highly-available scale-up NAS while getting the ease of management that comes with the global-namespace / single namespace capability of a scale-out NAS? QuantaStor combines the best of these two technologies through innovations in the SDS control-plane and data-plane. QuantaStor's control-plane solves the ease-of-management issues through its unique grid management technology which enables up to 64 appliances to link together across sites and datacenters enabling homogeneous management of all appliances as a single grid. Second, QuantaStor's data-plane supports global namespaces (aka Network Share Namespaces) which implement Microsoft DFS and NFSv4 referral technologies to enable users to group together network shares across any number of appliances in a QuantaStor grid and present them from all appliance nodes as if they were scale-out NAS. Now users get the performance benefits, high-availability and ease of use that comes with global namespaces without having to suffer from all the issues and costs that come with scale-out NAS solutions.



## Summary

Namespaces make it easy for users to group together NAS shares by topic so that NAS storage is presented by all or a subset of appliances within a grid. End-users can then access all their Network Shares via a single hostname/IP. QuantaStor's grid technology redirects NFS/SMB connections dynamically and grids can span sites and co-los enabling hyper-scale NAS to over 64PB per grid. Adding appliances and disk-expansion chassis are done as needed with zero downtime. Grids support heterogeneous mixing of server hardware and asymmetrical appliance configurations enabling customers to efficiently scale without the hardware vendor lock-in issues posed by traditional storage systems.