

Nominee: DDN Storage

Nomination title: DDN's Web Object Scaler (WOS)

DDN's Web Object Scaler (WOS) is the most comprehensive object storage solution that is purpose-built to address the relentless growth of data in the most adaptable and efficient manner. Designed for a wide range of applications and use cases, WOS enables the creation of an almost limitless storage pool that delivers predictable and reliable high-performance at any scale.

WOS is the only object storage platform that offers full flexibility in data protection schemes. It simplifies deployment including support for a broad set of plug-and-play data access protocols including S3, Swift, NFS, SMB, Spectrum Scale and Lustre using an embedded or highly scalable gateways.

WOS is available as software or delivered as a density optimised appliance, it offers multiple user configuration settings to make it the ideal solution for applications ranging from web origins and collaborative workflows to content delivery, data protection, and active archives.

WOS scales out in clusters of up to 256 nodes, and supports clustering of up to 8,192 nodes across multiple geographies – organisations can combine up to 32 clusters to build out an Exabyte global namespace.

Distinguishing features:

DDN's WOS is proven, with more than 500+ billion objects stored globally – second in relative size only to AWS. WOS delivers 20 percent better disk efficiency and density over its closest competitor, and is 1.25x faster thanks to a No File System (NoFS) architecture. It also offers the most flexible data protection models in order to tune availability, reliability and performance to the needs of applications.

The unique NoFS architecture of DDN's WOS solutions up-level the management and scalability TCO gains of object storage and offers hard cost savings versus competitive solutions, up to 99 percent efficiency, and significant operational cost savings in space, heating, cooling and administration.

The simplicity of the WOS architecture allows organisations to start as small as a single WOS appliance in four standard rack units and scale in single-node increments. WOS can deliver up to a quarter-million drives in a solitary, shared namespace and provide a single view of files and objects, thus allowing it to provide high-performance storage for active archive and collaboration environments seamlessly.

Customer and market impact:

DDN has experience helping its customers scale WOS from a few 100 terabytes to systems with 100s of billions of objects and 100s of petabytes under management, seamlessly and simply. Customers include Public Health England, University College London, Van Andel Research Institute and Children's Mercy Hospital. The WOS software-only solution has given customers like Weill Cornell, Guosen Securities and Compute Canada the ability to specify industry-standard hardware from suppliers like HPE, Supermicro and Dell that fits specific requirements for their use cases.

Public Health England (PHE) is pioneering a next-generation, centralised sequencing service to generate and analyse the near-complete genetic code of pathogenic bacteria and viruses using WOS. PHE achieved 16x faster processing of genomic data, were able to leverage massive parallel I/O capabilities to turn around results in hours instead of days.

Competitive differentiators:

WOS is a true object storage solution, enabled through DDN's underlying NoFS architecture, which minimises disk operations with as little as a single-disk operation for reads, and two for writes (sharply contrasting the 8-10 I/O operations that POSIX file systems require which result in additional performance and network overhead).

In April 2017, DDN announced updates to WOS Data Protection and Multi-site Connectivity options, lowering archive and disk backup costs and outperforming public cloud for data transfer speed and reliability. Extended ObjectAssure expands customer choice of protection methods, resulting in the industry's widest variety of data-protection options. WOS's extremely low overhead expense makes the cost of object storage competitive with tape storage alternatives. It also enables faster build times that lower the risk of data loss during a rebuild and eliminate, or limit, performance impacts of drive failures.

WOS can be configured to rebuild failed drives within a single node, thus reducing rebuild time and risk of data loss. This unique capability is crucial as larger drive sizes are boosting rebuild times and challenging organisations abilities to meet line-of-business data availability SLAs.

Supportive quotes:

Amita Potnis, research manager at IDC's storage team: "The new digitised world demands infrastructure solutions that are extremely scalable and flexible in terms of delivery performance and connectivity models and that offer full data protection with a wide choice of user-selected protection methods. With continual innovation in object storage technologies and features, DDN's object storage platform is leading end users along this path of digitisation."

Chris M Evans, technology analyst and co-founder, Langton Blue Ltd: "Object storage is a rising star in data storage. DDN is making object storage solutions practical for many uses beyond Web 2.0 and Enterprise IT to include collaboration communities, software-as-a-service and active archives. This is excellent news as it translates into big cost savings and new IT architectural options for many organisations across the world."

Zach Ramjan, research computing architect at Van Andel Research Institute: "Centralising out storage requirements with DDN has saved us hundreds of thousands of dollars as we replaced separate systems with a comprehensive storage solution ideally suited for a diverse mix of scientific workflows. As a result, our scientists now have unprecedented flexibility to explore and process research data using different instruments and varied workflows as needed."

Shailesh M Shenoy, Director of Engineering and Operations, Albert Einstein College of Medicine: "WOS integrates seamlessly into our high performance storage environment, by federating data sets from across multiple data centres into our research community, and helping meet our retention and data protection requirements."

Why nominee should win

- **DDN WOS is the most comprehensive object storage solution that is purpose-built to address the relentless data growth**
- **DDN's WOS data protection offers customers the industry's widest variety of data protection options**
- **WOS delivers 20 percent better disk efficiency and 20 percent higher density over its closest competitor**
- **WOS is 1.25x faster than its closest competitor thanks to its unique No File System architecture**
- **WOS scales out in clusters of up to 256 nodes and supports clustering of up to 8,192 nodes across multiple geographies allowing organisations to combine up to 32 clusters to build out an Exabyte namespace, globally**