



# VEXATA FILE SOLUTIONS WITH IBM SPECTRUM SCALE

Solution Brief

## Highest Performing NFS and GPFS Storage for the Enterprise

Vexata File Solutions combine the revolutionary Vexata VX-100F Flash Storage System and IBM Spectrum Scale™ NFS and GPFS clustered file system software to deliver the industry's highest performing and most scalable network-attached file storage. This solutions brief describes the Vexata File Solutions use cases, performance and configurations.

### USE CASES

- Electronic Design Automation
- Media and Entertainment – Ingest, Rendering
- Healthcare – PACS and EMR
- Lifesciences – Genomics
- Fraud and Risk Analysis
- Financial Trading Systems
- Oil and Gas Exploration

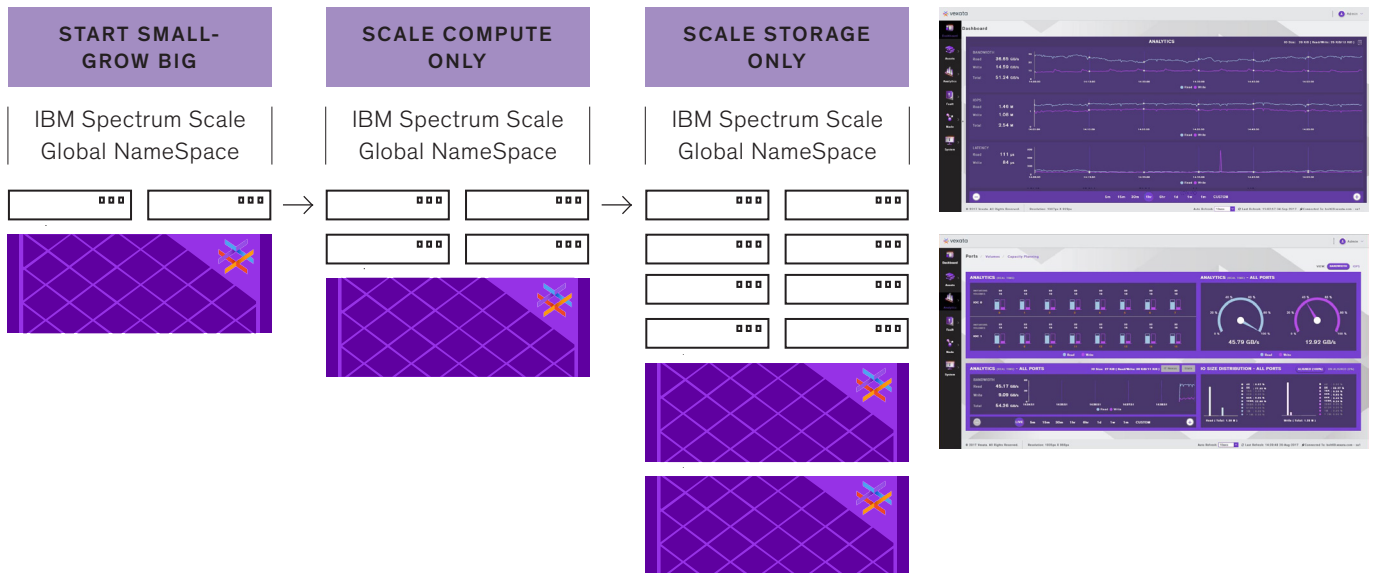
### DATABASE AND ANALYTICS PLATFORMS

- Kdb+
- SAS Grid and Viya
- SAP HANA

### INDUSTRIAL IoT

- Smart Manufacturing Processes
- Remote Predictive Maintenance

## SOLUTION OVERVIEW



## Solution Value Proposition

### HIGHEST IOPS AND BANDWIDTH, LOWEST LATENCY

IBM Spectrum Scale Parallel Filesystem provides the File semantics, global namespace, while the transformative Vexata VxOS on VX- 100F, provides massive parallelism to NVMe SSDs

### DATA PROTECTION AT SCALE

VX-100F provides data path accelerated RAID 5 and 6 capabilities. This eliminates File level re-builds and need for GPFS Native RAID (GMR)

### PAY AS YOU GO SCALE-OUT

Scale-out within the array or across arrays under the same global namespace. Boost performance and throughput with more Network Shared Disk (NSD) servers

### ENTERPRISE READINESS

Enterprise readiness with active-active controllers, NDU, in-line encryption, snaps and clones, system management and call home with cloud analytics

### CLOUD ANALYTICS FOR PERFORMANCE AND USAGE MONITORING

Call home with analytics stack



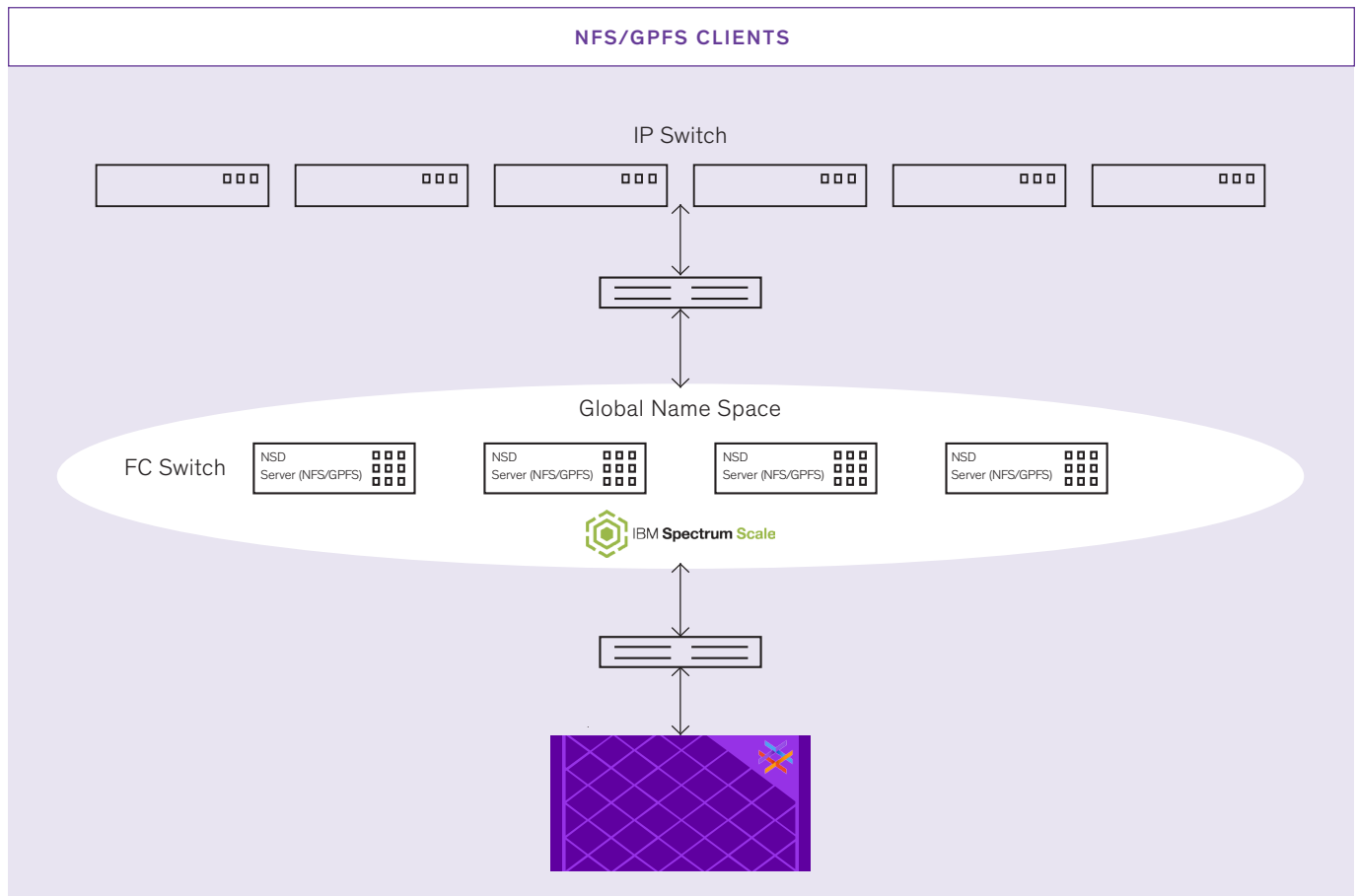
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Vexata File Solutions with IBM Spectrum Scale, provide an enterprise class, high performance NFS v3 and GPFS, scale-out solution for modern day workloads. Industry leading performance at low latencies make this the ideal solution for EDA workloads, streaming media and machine learning.

This solution enables all the IBM Spectrum Scale features including compression for best storage efficiency, geo-distributed access with Active File Management, policy based ILM to disk Tier and Cloud etc.

	VEXATA FILE SOLUTION – 2 NSD	VEXATA FILE SOLUTION – 3 NSD	VEXATA FILE SOLUTION – 4 NSD	LEADING FILE AFA COMPETITOR
IOPS	500K	750K	1M	500K
READ BANDWIDTH	14 GB/s	20 GB/s	25 GB/s	15 GB/s
WRITE BANDWIDTH	7 GB/s	12GB/s	15 GB/s	5 GB/s
50% MIXED READ/WRITE BANDWIDTH	20 GB/s	25 GB/s	30 GB/s	Hard to achieve
SCALE-OUT FILESYSTEM	IBM Spectrum Scale with 4000+ production customers	IBM Spectrum Scale with 4000+ production customers	IBM Spectrum Scale with 4000+ production customers	Unproven, early adopter customers





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## Fully Qualified Solution

- Vexata's IBM Spectrum Scale solution is a fully qualified solution with the following Specifications.
- 8\*40 GbE host ports provide sufficient client connectivity for enterprise application clients
- 4 dual socket NSD Servers provide global namespace and expose NFS and GPFS protocol
- Vexata's VxOS provides massive storage media parallelism to IBM Spectrum Scale Parallel filesystem, leveraging fast NVMe drives
- 16\*32Gbps FC ports provide sufficient bandwidth to expose 64 NVMe drives
- 32G FC switch provides multi-pathing to the drives, which provides redundancy at the active-active controller level

	SOLUTION TECHNICAL SPECIFICATIONS
PROTOCOLS	NFS v3, GPFS
NETWORK CONNECTIVITY	8*40 GbE Host ports
FILE SERVERS	4 dual socket, 14 core Intel Xeon NSD Servers
STORAGE SYSTEM	Vexata VX-100F Flash system with 180TB usable capacity
SUPPORTED RAID LEVELS	RAID 5/6
DATA & SYSTEM MGMT.	Vexata System Manager, IBM Spectrum Scale GUI
PARALLEL FILE SYSTEM	IBM Spectrum Scale 4.2.2
INTERNAL STORAGE INTERCONNECT	16*32G FC

### ABOUT VEXATA

Vexata is the leader in active data management solutions. Vexata's unique breakthrough enterprise offerings enable transformative performance and scale from database and analytics applications. With unparalleled ability to consume the latest in media like NVMe Flash and now with Optane™ SSDs, Vexata systems deploy simply and seamlessly into existing storage environments. Learn more at [www.vexata.com](http://www.vexata.com)