Magic Quadrant for File and Object Storage Platforms

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Market demand for a single platform supporting both file and object storage workloads has led to significant changes in the vendor landscape in this Magic Quadrant. I&O leaders can use this research to shortlist vendors for unstructured data storage.

Strategic Planning Assumptions

By 2029, over 80% of unstructured data will be deployed on a consolidated storage platform instead of separate file and object products, up from 40% in early 2024.

By 2029, 60% of I&O leaders will implement edge caching appliances that support global access of unstructured data from a single repository on-premises or in the cloud, up from 15% in 2024.

By 2029, 100% of storage products will include cyberstorage capabilities focused on active defense beyond recovery from cyber events, up from 20% in early 2024.

Market Definition/Description

This document was revised on 9 October 2024. The document you are viewing is the corrected version. For more information, see the ***Corrections*** *page on gartner.com.*

Gartner defines file and object storage platforms as software and/or hardware platforms that offer object and distributed file system technologies for storing and managing unstructured data over NFS, SMB and Amazon S3 access protocols.

File and object storage platforms store, secure, protect and scale an organization's unstructured data with access over the network using protocols such as NFS, SMB and Amazon S3. Use cases include analytics, workload consolidation, backup and archiving, hybrid cloud, object-native applications, cloud IT operations, and high-performance files.

Mandatory Features

The mandatory features for this market include:

- A POSIX file system, a flat namespace or a key-value store
- Distributed architecture to scale the data store across multiple servers/nodes to linearly scale performance and capacity with each new node
- Data and metadata that are distributed over multiple nodes in the cluster to handle availability and data protection in a self-healing manner
- Distributed file system that presents a single namespace from capacity pooled across multiple storage nodes based on shared-nothing or shared-everything architectural principles
- Throughput and elastic capacity scaled nondisruptively with the addition or subtraction of each new node to the cluster
- Data access over NFS, SMB and Amazon S3 protocols
- Erasure coding or other forms of RAID to protect data from disk or node failures
- Snapshot and replication capabilities to protect from data loss

Common Features

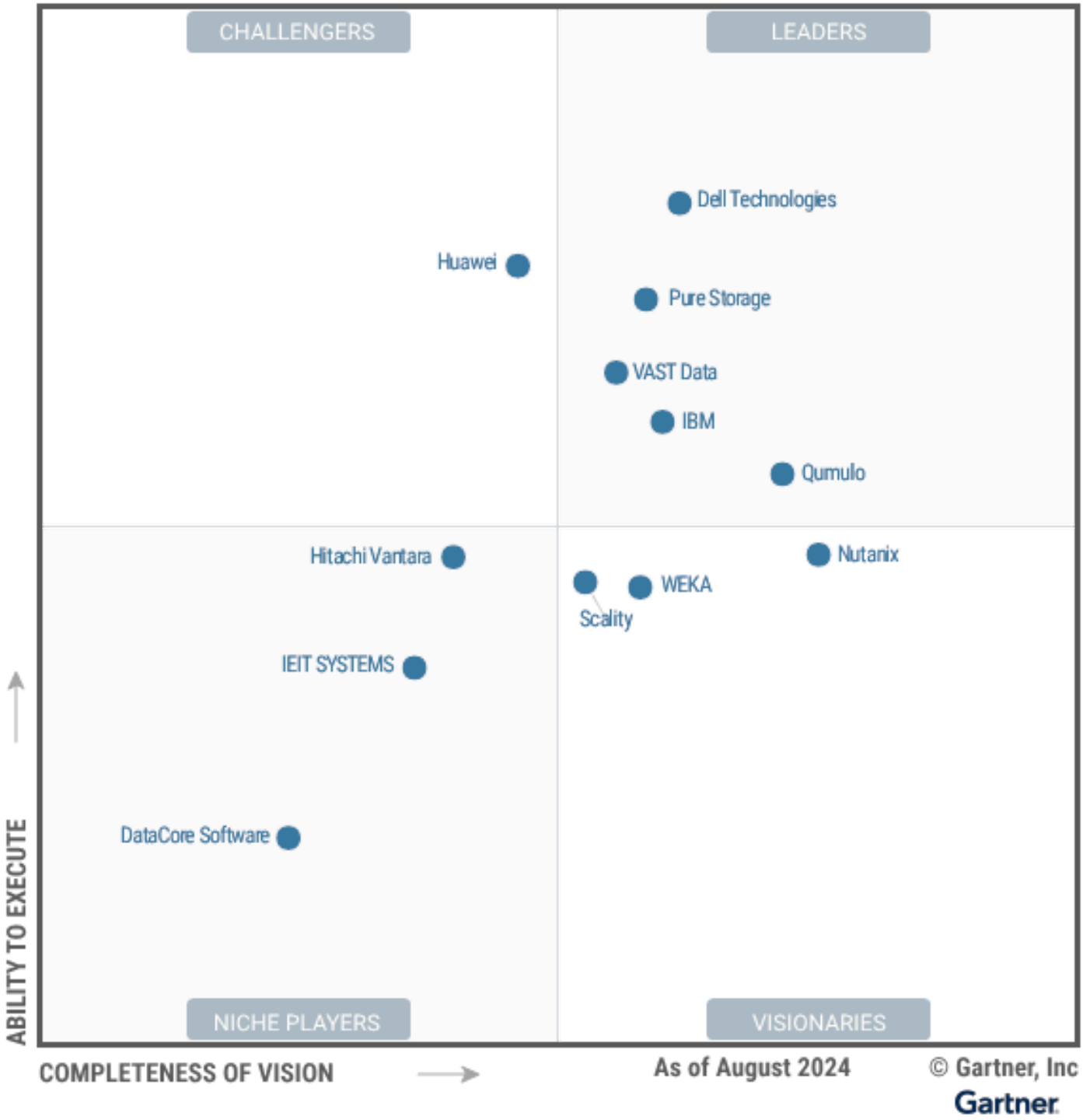
The common features for this market include:

- Support for a global namespace that can span across storage in multiple geographic locations at the edge, in on-premises data centers and on public cloud platforms.
- Deduplication and compression capabilities for storage efficiency.
- Data management services to create metadata classification enabling cost optimization, governance, mobility, analytics and security.

- Cyber resilience or cyberstorage active technologies to identify, protect, detect, respond and recover from ransomware attacks on unstructured data storage solutions.
- Ability to support hybrid cloud use cases such as burst for computing, burst for Capacity, global data orchestration and storage standardization.
- Artificial intelligence for IT operations (AIOps) capabilities that leverage AI and machine learning. These capabilities enable prescriptive health management, improved customer support, and support of proactive capacity management, nondisruptive workload simulation, placement and migration/tiering, and performance optimization.
- Storage-as-a-service (STaaS) models with multiple performance tiers for both file and object storage services.

Magic Quadrant

Figure 1: Magic Quadrant for File and Object Storage Platforms



Vendor Strengths and Cautions

DataCore Software

DataCore Software is a Niche Player in this Magic Quadrant. DataCore Swarm is a software-based offering, but it is also available as appliances through systems integrators. It is also delivered as a managed service through cloud service providers. DataCore's Perifery division is focused on the edge markets for media and entertainment (M&E), and healthcare workflow archive appliance solutions based on its Swarm object storage product.

Its operations are geographically diversified, with the majority of its installed base in North America. Its clients tend to be midsize enterprises with mainly media-centric workflow or

large volumes of digital content. Since the last version of this Magic Quadrant was published, DataCore has improved workload optimizations for Veeam backup and enhanced Swarm pay-for-use licensing for cloud service providers (CSPs).

DataCore is best suited for backup and archive storage use cases.

Strengths

- **Flexible CSP offerings:** S3 protocol standardization on backup and archive applications along with a flexible SDS hardware configuration make DataCore an ideal solution for CSP and managed service provider (MSP) provider offerings.
- **Workflow automation:** DataCore helps customers deploy and automate media workflows and repetitive tasks for the M&E and healthcare industries from its acquisition of Workflow Intelligence Nexus (WIN).
- **Energy efficiency:** When used in an active archive solution, Swarm's Darkive adaptive power consumption feature powers down disks on redundant copies of data to conserve energy.

Cautions

- **Weak file support:** DataCore's bolt-on file services are weak, with limited protocol and feature support, making them less applicable for any file-centric or high-performance workloads.
- **Limited fleet management:** DataCore lacks a global, centralized fleet management dashboard for multisite operations.
- **Limited AIOps:** DataCore does not offer a consumption-based storage as a service (STaaS), does not provide a written data efficiency guarantee, and does not monitor capacity usage in order to optimize storage efficiency.

Dell Technologies

Dell Technologies is a Leader in this Magic Quadrant. Dell's portfolio for unstructured data includes multiple task-specific offerings, including PowerScale for primarily file-centric workloads, ObjectScale and ECS object storage for primarily object-oriented workloads. Dell PowerScale is a distributed file system with support for file and object access protocols, and is delivered as an appliance for on-premises. It is also available as APEX File Storage in Amazon Web Services (AWS) and Microsoft Azure marketplaces, as well as Dell's APEX cloud

consumption models. Dell ECS is typically delivered as a hardware appliance for object native use-cases on-premises. Dell ObjectScale is a software-defined, containerized object-storage offering.

Dell Technologies' operations and customers are geographically diversified, and its customers range from small to large enterprises across all industry verticals. Since the last version of this Magic Quadrant was published, Dell has introduced new PowerScale software improvements and appliances with improved performance, density and enhanced security compared to previous versions. Dell also released customer-managed PowerScale in Microsoft Azure and expanded geoavailability in AWS.

Dell PowerScale is best suited for high-performance file, analytics and backup and archive use cases.

Strengths

- **Broad portfolio:** Dell has the broadest portfolio of software and hardware offerings in this market, addressing a wide range of unstructured data workloads with purpose-fit products.
- **Global supply chain:** Dell is considered a trusted provider, especially in emerging countries that depend on its global supply chain to provide mission-critical hardware and software support.
- **AI readiness:** Dell's close technology partnership with NVIDIA and investment in AI projects, such as Dell Data Lakehouse and DGX SuperPOD certifications, make Dell's storage infrastructure a good fit for AI workloads.

Cautions

- **Global namespace/edge caching:** Dell PowerScale lacks certain advanced data management capabilities, such as global namespace and edge caching, which are required for some global enterprises' use cases.
- **Increased competition:** Modern flash storage competitors with distinctive architectures, features and ease of use are winning over PowerScale on price in large-capacity deals.
- **ISV partner dependency:** Dell depends on independent software vendor (ISV) technology partners to address specific critical requirements like advanced data management, data analytics and ransomware detection, which could impact delivery or roadmap of these technologies.

Hitachi Vantara

Hitachi Vantara is a Niche Player in this Magic Quadrant. The Hitachi Content Platform (HCP) is an object storage product that can be deployed as a physical appliance, a virtual machine, or a managed service. HCP scales performance and capacity independently to support a wide range of workloads.

Hitachi Vantara's operations are in the Americas, EMEA and Asia/Pacific (APAC). Clients tend to be Fortune 100, large enterprise to midsize and cloud service providers in financial services, healthcare and life sciences verticals. Since the last version of this Magic Quadrant was published, Hitachi Vantara has added a new S32 S Series Node with higher input/output operations per second (IOPS) performance for small and large objects. Additionally, it has increased the maximum hard-disk drive (HDD) drive size to 24TB while lowering energy cost per terabyte through greater density. It has also enhanced both its Ops Center Analyzer viewpoint, the operational status of Hitachi resources, and its AIOps tool Clear Sight.

HCP is best suited for backup and archive, object-native applications and hybrid cloud use cases.

Strengths

- **Storage modernization:** Hitachi Vantara VSP One Modern Storage Assurance provides clients with a data platform services program for life cycle management and nondisruptive upgrades.
- **Sustainability:** Hitachi HCP all-flash storage systems improve overall operational sustainability metrics by providing very low carbon emissions per terabyte over the useful life of the storage.
- **Comprehensive searches:** Hitachi's Content Intelligence data discovery tool unlocks data insights that improve operational efficiencies, lowers administration costs and improves responsiveness with automated workflows.

Cautions

- **OEM-dependent performance:** Hitachi depends on a third-party partner to provide support for high-performance computing (HPC) use-case-specific workloads. Additionally, its native file services are weak compared to leading vendor offerings.

- **Public cloud absence:** HCP is not present in any of the public cloud marketplaces, and as a result, has minimal to no hybrid cloud support with the major hyperscalers, including AWS, Azure and Google Cloud Platform (GCP).
- **Complex user experience:** The complexity of Hitachi Vantara's documentation requires an expert to set up, configure and manage their products, potentially leading to operational disruptions.

Huawei

Huawei is a Challenger in this Magic Quadrant. Huawei offers OceanStor Pacific as a distributed file system, block and object storage appliance product. OceanStor is available as physical appliances in different capacity/performance models, as a service in Huawei and Deutsche Telekom clouds, and as part of Huawei Cloud Stack private cloud. It is also available as part of Huawei hyperconverged system FusionCube.

The company has large operations in the Asia/Pacific region, with increasing presence in EMEA and Latin America. Huawei is restricted from selling in North America due to U.S. sanctions. Its clients tend to be from large to midsize enterprises in the public sector, automotive, manufacturing and financial services verticals. Since the last version of this Magic Quadrant was published, OceanStor Pacific has added Multilayer Ransomware Protection, synchronous replication for object storage, enhanced compression specific to industry vertical applications, support for Infiniband network and updated all nonvolatile memory express (NVMe) appliances. It has improved its data management engine (DME) AIOps platform to add metadata operations and simplify management.

OceanStor Pacific is best suited for analytics, workload consolidation and cloud-native applications use cases.

Strengths

- **Unified platform:** Huawei's OceanStor Pacific offers a unified storage platform without add-on software layers to support multiple use cases.
- **AI traction:** OceanStor Pacific is well-positioned to address the needs of AI infrastructure buyers, from the performance to data management aspects of AI workloads. Huawei uses proprietary hardware technology, including chipsets and flash drives, to increase density and improve cost efficiency.

- **Customer experience:** Gartner clients give OceanStor Pacific high ratings for its customer support and services experience.

Cautions

- **U.S. sanctions:** U.S. sanctions and the U.S.-China geopolitical situation have created challenges for Huawei, which in turn affect buyers by limiting global product availability and market expansion.
- **Limited cloud support:** OceanStor Pacific has limited integration with other hyperscale public cloud providers, such as AWS, Azure and Google Cloud Platform, and as a result, lacks support for deep hybrid cloud storage integration beyond Huawei Cloud.
- **Limited SDS flexibility:** OceanStor Pacific does not offer flexible software-defined solutions because it is delivered as an appliance. Its STaaS consumption model is only available as part of Huawei Cloud Stack offering.

IBM

IBM is a Leader in this Magic Quadrant. IBM's portfolio for unstructured data includes three key offerings: Storage Scale for high-performance, file-centric workloads; Storage Ceph for unified block, file and object services with cloud-like operations; and IBM Fusion, an integrated application platform optimized for OpenShift. IBM Storage Scale is available as software-defined storage, in the AWS Marketplace, and as an IBM-branded hardware appliance called the Storage Scale System.

IBM's operations are geographically diversified, and its clients range from midsize to very large enterprises across all industry verticals. Since the last version of this Magic Quadrant was published, IBM has released new models of Storage Scale System with higher performance and capacity density compared to previous versions. Also, a new capability in Storage Scale called Data Acceleration Tier, which allows high-performance cache for AI/machine learning (ML) use cases demanding extreme IOPS. Multiple enhancements were provided for IBM Storage Ceph and IBM Fusion.

IBM is best suited for analytics, high-performance files, and backup and archiving use cases.

Strengths

- **AI leadership:** IBM's leadership in the high-performance computing (HPC) market, with its parallel file system combined with IBM FlashCore Modules and IBM AI ecosystem of

software for AI workloads, establishes it as a leading AI infrastructure provider.

- **Global namespace:** IBM Storage Scale's active file and object management provides local read/write performance at the edge, irrespective of the location of the source data — whether in a data center, cloud or edge locations, including non-IBM storage solutions.
- **Product innovation:** IBM continues to enhance Storage Ceph, which is optimal for customers looking for an open-source-based unified platform for all types of data (file, block or object).

Cautions

- **Portfolio complexity:** Customers must carefully navigate the overlapping portfolio of IBM Storage Scale, IBM Fusion, IBM Cloud Object Storage and IBM Storage Ceph to choose the right underlying storage product(s) for their use cases.
- **Lack of cloud support:** Storage Scale is not simple to deploy and consume in the public cloud, limiting its adoption in public cloud and hybrid cloud use cases.
- **General-purpose file storage:** Storage Scale continues to be a HPC and analytics-centric solution with limited adoption in general-purpose enterprise file use cases.

IEIT SYSTEMS

IEIT SYSTEMS is a Niche Player in this Magic Quadrant. The IEIT SYSTEMS AS13000 series provides a unified software solution for both file and object storage. IEIT SYSTEMS offers hybrid and all flash, software-only (SDS), and appliance models for petabyte-scale applications.

Its operations are focused in Asia/Pacific and EMEA, and its clients tend to be small to very large enterprises across telecom, government, internet service providers and education institutions. Since the last version of this Magic Quadrant was published, IEIT SYSTEMS has enhanced multitenant functionality, including tenant isolation, tenant quotas and quality of service (QoS). Additionally, it has introduced new video deduplication technology; added support for Network File System (NFS) and Server Message Block (SMB) over remote direct memory access (RDMA); and added NVIDIA GPUDirect Storage support.

IEIT SYSTEMS is best suited for high-performance file, hybrid cloud and object-native applications use cases.

Strengths

- **Flash SSD innovation:** IEIT SYSTEMS' unique Quad-level Cell (QLC) NVMe solid-state drive (SSD) technology enables price, performance, density and power advantages compared to traditional SSD drives.
- **Application functionality:** IEIT SYSTEMS provides integrated third-party video and image processing application software on its storage node as an integrated virtual machine application.
- **Upgrade flexibility:** IEIT SYSTEMS' data management InView AIOps tool simplifies upgrades from third-party storage vendors by supplying its own data storage migration capability.

Cautions

- **Limited growth:** IEIT SYSTEMS lacks brand visibility outside of its main region China, making it challenging for customers to justify its selection over global competitive options.
- **Lacks advanced SLAs:** InfiniStor AIOps functionality is limited in its capabilities to support advanced platform SLAs, such as cyber protection and recovery.
- **Limited edge caching**: IEIT SYSTEM has limited support for organizations that depend on access to centralized data from several edge locations.

Nutanix

Nutanix is a Visionary in this Magic Quadrant. Nutanix Files and Nutanix Objects are integrated with the Nutanix Cloud Platform to provide a unified storage offering. Nutanix Unified Storage (NUS) can be deployed in two ways: either across server nodes, utilizing existing Nutanix hyperconverged infrastructure (HCI), or on dedicated storage-only nodes. It can also be implemented as part of Nutanix Cloud Clusters in AWS or Azure infrastructure as a service (IaaS), extending its deployment capabilities to the edge and the cloud.

Nutanix's operations are global, relying on server OEM and channel partners for delivery. Nutanix has customers across all verticals, sizes and geographies. Since the last version of this Magic Quadrant, Nutanix has added Files Metro Sync for zero recovery point objective (RPO), low recovery time objective (RTO) replication and improved cyber resilience and data security governance. Nutanix added a SaaS-based global management portal to manage all Nutanix instances globally and in the cloud.

NUS is best suited for workload consolidation, hybrid cloud and cloud IT use cases.

Strengths

- **Enterprise storage platform:** Nutanix's NUS platform enables the consolidation of all customer storage workloads for the hybrid cloud centralized management.
- **Simplified operations:** NUS offers simplified implementation, maintenance, monitoring and scalability. This design approach caters to the needs of IT generalists who may not possess extensive expertise in storage management.
- **Strong customer experience:** Nutanix's customer support experience is consistently recognized by Gartner clients for its reliable and prompt responsiveness.

Cautions

- **Low deployment awareness:** As a hyperconverged infrastructure enterprise platform, Nutanix is typically not considered by buyers looking for storage-only isolated infrastructure solutions.
- **Limited cloud adoption:** Nutanix Files and Object have seen limited adoption in hybrid cloud deployments because customers have a hard time identifying use cases to effectively utilize cloud for unstructured data flow.
- **Low latency:** Nutanix is not a good fit for low-latency transactional workloads at large scale. It does not support network file systems over remote direct memory access.

Pure Storage

Pure Storage is a Leader in this Magic Quadrant. Pure FlashBlade is a unified file and object storage appliance. Pure Storage offers a single key-value storage designed to handle large file and object throughput and parallelism by adding blades to scale capacity and/or performance. All FlashBlade appliances are available with Pure Storage Evergreen//One for storage as a service.

Pure FlashBlade customers are in all geographies with the majority in North America. Its clients tend to be midsize to Fortune 100 enterprises across all major verticals. Since the last version of this Magic Quadrant was published, Pure Storage has improved its usable-to-raw capacity utilization and reengineered its erasure coding to boost storage efficiency with its DirectFlash Modules (DFMs). It also has introduced an in-line deep compression algorithm on

all FlashBlade models to maximize data density per terabyte, benefiting read-intensive applications, with increased DFM capacity to 75TB.

Pure Storage is best suited for analytics, high-performance file and backup, and archiving use cases.

Strengths

- **Flash innovation:** FlashBlade offers the industry's highest density and lowest power and carbon emissions per terabyte using NVMe QLC SSD, at a price point that enables a shift from HDD hybrid arrays.
- **IT SLA benefits**: Evergreen//One and Pure1 AIOps features and telemetry monitoring provide clients with advanced SLA capabilities that yield favorable IT operations outcomes.
- **Hybrid colocation operations:** FlashBlade's partnership with Equinix Metal provides clients with an effective platform strategy to extend on-premises infrastructure to a global colocation, thereby increasing capacity or facilitating data center exits.

Cautions

- **High CapEx:** FlashBlade's capital expenditure (capex)-based Evergreen//Forever support offering markedly increases the cost of the storage array over the first three years period of the Evergreen//Forever program.
- **Limited ransomware detection:** FlashBlade has limited native capabilities to detect ransomware encryption, malware or suspicious behavior, leading to potential operational issues.
- **Limited hybrid cloud:** FlashBlade can't be deployed as a virtual machine or a container in AWS, Azure and GCP, limiting access to public cloud applications and tools.

Qumulo

Qumulo is a Leader in this Magic Quadrant. Qumulo's Scale Anywhere platform is a software-defined offering that is available as a hardware appliance with third-party vendor hardware, and also in Azure as a Qumulo-managed service. It is a scale-out file system that supports both file and object workloads. Qumulo is designed for large-scale, high-throughput file workloads with built-in performance analytics and capacity management.

Most of Qumulo's customers are in North America. It has customers from small to very large enterprises across all verticals, with a stronger presence in media and entertainment, healthcare and life sciences verticals. Since the last version of this Magic Quadrant was published, Qumulo has released Nexus, a cloud-based portal to monitor and manage all of Qumulo systems from a single pane of glass. Additional enhancements include Qumulo managed service in AWS in limited availability, Run Anywhere to support a wider range of commodity hardware vendors, and Azure Native Qumulo Cold, a cloud-native, managed SaaS solution for storing and retrieving cold file data.

Qumulo is best suited for high-performance file, workload consolidation and hybrid cloud storage use cases.

Strengths

- **Cloud-native:** Qumulo in Azure offers SaaS simplicity and cloud elasticity and leverages Azure Blob for long-term storage, and NVMe for performance and cache.
- **Scale anywhere:** Qumulo's software provides the same features, performance, scale and ease of use, whether deployed on-premises on standard x86 servers or in the public cloud.
- **Global Namespace:** Qumulo's Global Namespace provides local access to remote data from Qumulo instances spanning on-premises locations and multiple clouds.

Cautions

- **Lacks ransomware detection:** Qumulo lags behind the leaders in this market in offering comprehensive ransomware detection and high-speed recovery capabilities.
- **Third-party appliances:** Qumulo does not offer its own hardware appliances and is dependent on server vendor partnerships to bring innovation in flash storage and networking hardware.
- **Limited global coverage:** Qumulo's lack of in-field support outside of North America and EMEA is a concern for customers in other regions.

Scality

Scality is a Visionary in this Magic Quadrant. Scality offers RING, an object storage platform with an integrated POSIX file system, for storing exabyte-scale unstructured data

repositories. It runs as software on commodity hardware and includes tools to deliver storage as a service.

Scality's operations are focused in North America, EMEA and Asia/Pacific, across all verticals. Its customers are primarily large-scale enterprise IT, government agencies and cloud service providers, addressing issues of massive data growth and data distribution/silos.

Since the last version of this Magic Quadrant was published, Scality has delivered metadata performance and efficiency enhancements for very large buckets to address data lake and large-scale backup repository use cases. Other enhancements include Active-Active S3 replication, VMware vCloud director integration and a security-hardened operating system.

Scality is well-suited for backup and archiving, object-native apps, and data lakes for analytics use cases.

Strengths

- **Exabyte scale:** Scality's RING architecture supports exabyte size deployments, scaling in multiple dimensions, and independent scaling of performance and capacity.
- **Software flexibility:** Scality appeals to prospects seeking software-only solutions that are capable of running on a wide range of industry-standard hardware, both at the edge and in the data center.
- **Strong reliability:** RING has advanced data protection capabilities, supporting geographically distributed storage across multiple data availability zones and achieving zero RPO/RTO, 100% availability and 14 nines of durability.

Cautions

- **External providers reliance:** Similar to other software-defined products, users must engage with vendor channel partners and OEMs to acquire comprehensive infrastructure solutions and access capabilities delivered as a service.
- Turnkey appliances: Scality does not offer a turnkey appliance delivery model, leaving customers to deploy the solution on their own or, more commonly, with assistance from one of Scality's services partners.
- **Light files only:** Scality is an object-storage-centric offering with an integrated POSIX file system, but it is not designed for traditional file-heavy data manipulation workloads, such as HPC or simulation-type workloads.

VAST Data

VAST Data is a Leader in this Magic Quadrant. VAST is a unified distributed file system and object storage software platform that has been designed for large-scale multiprotocol deployments targeted at high-performance workloads. VAST achieves higher scalability, reduced latency and improved global efficiency by connecting its front-end stateless protocol nodes and persistent all-flash NVMe QLC media enclosures through NVMe over fabric (NVMe-oF) protocols.

Its operations have been mostly focused in North America, with some recent expansion in EMEA. Its customers tend to be service providers or large enterprises that target data-intensive applications. Since the last version of this Magic Quadrant, the vendor has added global namespace capabilities, metadata compression, a multicluster manager and QoS.

VAST Data is best suited for AI/ML analytics, life sciences and other large-scale, performance-sensitive use cases.

Strengths

- **Market traction:** VAST's strategic partnerships, marketing initiatives and sales campaigns have resulted in an increasing number of large customers, which in turn has had a positive impact on product improvements.
- **Efficiency at scale:** VAST's implementation of low-latency storage using cost-effective QLC flash, advanced data reduction algorithms and high rack density deliver cost-efficiency and high performance for large-scale deployments.
- **Customer experience:** VAST end users recognize the outstanding support, extensive knowledge and assistance they receive during the presales, architecture, ordering and deployment phases.

Cautions

- **Limited appliance strategy:** VAST's lack of branded, integrated and supported appliance offerings limits its consideration by risk-averse global organizations that prioritize long-term hardware and software solution support and prefer appliance-based infrastructure delivery worldwide.
- **Frequent updates:** Gartner clients cite concern with high-frequency software releases, as they pose challenges in ensuring stability in production environments.

- **Lacks features:** The VAST Data Platform lacks enterprise features like synchronous replication, stretched cluster, geodistributed erasure coding and active cyber defense. In addition, it has limited traction for hybrid cloud deployment for production customers.

WEKA

WEKA is a Visionary in this Magic Quadrant. The WEKA Data Platform provides a unified software-defined file and object storage platform that can be deployed on-premises through OEM server partners, in the public cloud, or in hybrid cloud configurations. The WEKA Data Platform provides an NVMe-based, I/O-intensive, low-latency parallel file system that can also extend to object storage in a single namespace. WEKA also offers a proprietary parallel file system client for extreme throughput file workloads and supports NFS and SMB, and S3 access. The WEKA Data Platform can also be deployed in a converged mode, where the compute for the application and the underlying storage are running on the same server.

WEKA operates in North America, APAC and EMEA. Its customers are mainly large enterprises across all industries, using it for HPC or analytics workloads. Since the last version of this Magic Quadrant, WEKA has added support for nondisruptive upgrades, Advanced RISC Machine (ARM) support, converged mode for cloud, and automated cluster-wide installation are key features.

The WEKA Data Platform is well-suited for analytics, high-performance file and hybrid cloud use cases.

Strengths

- **Parallel file system:** The WEKA Data Platform is a modern parallel file system suitable for the most demanding and large-scale HPC and enterprise AI workloads, where standard NFS access does not meet throughput requirements.
- **WEKA converged mode:** WEKA Converged mode allows its file system to run alongside applications on the same servers to reduce compute costs and increase graphics processing unit (GPU) utilization.
- **Hybrid cloud:** The WEKA Data platform is broadly available in AWS, Azure, Google Cloud Platform and Oracle public clouds to address hybrid cloud storage use cases and deliver high-performance file services.

Cautions

- **Specialized storage:** WEKA's solutions are not cost-effective for backup and archiving, and lack the necessary integrations and certifications to be deployed as an application storage repository.
- Limited S3 protocol and object storage support: WEKA supports S3 protocol access and can integrate with an external object storage to extend its namespace, but its support for full S3 protocol and object storage is limited.
- **Limited functionality:** The WEKA Data Platform lacks some general-purpose features, such as native cyber resilience and advanced ransomware protection, AI-based operations, synchronous replication, data efficiency guarantees, advanced S3 APIs, and geodistributed object storage.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

- No vendors were added to this Magic Quadrant.

Dropped

- Cloudian was dropped for not meeting the 2024 inclusion criteria of a single platform for file and object workloads.
- DDN was dropped for not meeting the 2024 inclusion criteria of a single platform for file and object workloads.
- NetApp was dropped for not meeting the 2024 inclusion criteria of a single platform for file and object workloads.
- Quantum was dropped for not meeting the 2024 inclusion criteria of a single platform for file and object workloads.

Inclusion and Exclusion Criteria

To qualify for inclusion, vendors must meet all of the following requirements:

- **Revenue:** Above $75 million of recognized platform revenue (single offering not multiple products) between 15 June 2023 and 15 June 2024.
- **Customers:** Should have at least 150 active production customers, each consuming more than 500TB raw capacity through either distributed file or object storage protocols only. Vendors must provide a signed letter from the CFO or equivalent leader for the business attesting the financials and customers to support this requirement.
- The platform must be in production use in at least three (out of four) major geographies. Vendors must provide evidence of a minimum of 25 production customers brought to revenue in each of the four geographies (North America, EMEA, Asia/Pacific and South America). This requires proof in the form of a confidential list of representative customers from a diverse geography (25 customers of at least 500TB each in each of four geographies).
- The platform should be deployed and active in production across at least five out of the seven use cases that are outlined in Critical Capabilities for File and Object Storage Platforms. Vendors must provide reference materials to support this criterion.
- The platform must be designed for primarily on-premises workloads and not as a pass-through solution where data will be permanently stored elsewhere.
- The vendor should own the storage software intellectual property and be the platform developer. If a platform is built on top of open-source software, the vendor must be one of the top 10 active contributors to the community (in terms of code contribution over the last 12 months).
- Vendors should not rely on third-party software for the filesystem, object store or the underlying key-value store to be commercially usable in a production environment.
- The vendor must have a platform that includes features and capabilities generally available before 15 June 2024 that meet the following criteria:

Packaging:

- Platform must be sold as either an appliance or software-based storage solution.
- Platform must be available for purchase and consumed as a stand-alone file and/or object service and not as part of an integrated, converged or hyperconverged system with compute and hypervisor bundle.

Platform capabilities:

- Platform must support NFS and SMB and S3 access protocols. The protocol support must be native to the platform, not through a gateway or external product.
- Platform must have a fully distributed architecture (see note below), where data and metadata are distributed, replicated or erased coded over the network across multiple nodes in the cluster.
- Platform must have the ability to handle disk, enclosure or node failures in a graceful manner without impacting availability.
- Single file system capable of expanding beyond 500TB.
- Global namespace capable of 2PB expansion.
- Cluster must span more than four nodes.
- Support for horizontal scaling of capacity and throughput by node additions in a single namespace/file system.

Note: *A fully distributed architecture is a distributed computing architecture in which each node is independent and self-sufficient, and there is no single point of contention across the system. More specifically, none of the nodes share memory or disk storage. People typically contrast distributed design systems with systems that keep a large amount of centrally stored state information, whether in a database, an application or metadata server, or any other similar single point of contention.*

Evaluation Criteria

Ability to Execute

We analyze the vendor's capabilities across broad business functions. Ability to Execute reflects the market conditions and, to a large degree, it is our analysis and interpretation of

what we hear from the market. Gartner analysts evaluate vendors on the quality and efficacy of the processes, systems, methods and procedures that enable IT provider performance to be competitive, efficient and effective, thereby positively impacting revenue, retention and reputation within Gartner's view of the market.

Ability to Execute Evaluation Criteria

Evaluation Criteria	*Weighting*
Product or Service	High
Overall Viability	High
Sales Execution/Pricing	Medium
Market Responsiveness/Record	High
Marketing Execution	Low
Customer Experience	High
Operations	Low

Source: Gartner (October 2024)

Completeness of Vision

Completeness of Vision distills a vendor's view of the future, the direction of the market and the vendor's role in shaping that market. We expect the vendor's vision to be compatible with our view of the market's evolution. A vendor's vision of the evolution of the data center and the expanding role of distributed file and object storage are critical criteria. In contrast with how we measure Ability to Execute, the rating for Completeness of Vision is based on direct vendor interactions and Gartner's analysis of the vendor's view of the future.

Completeness of Vision Criteria

Evaluation Criteria	*Weighting*
Market Understanding	High
Marketing Strategy	Medium
Sales Strategy	High
Offering (Product) Strategy	High
Business Model	Medium
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Medium

Source: Gartner (October 2024)

Quadrant Descriptions

Leaders

Leaders provide mature offerings that meet market demand and have demonstrated the vision necessary to sustain their market position as requirements evolve. The hallmark of Leaders is that they focus on and invest in their offerings to the point where they lead the market and can affect its overall direction. As a result, Leaders can become the vendors to watch as you try to understand how new market offerings might evolve.

Leaders typically possess a large, satisfied customer base (relative to the size of the market) and enjoy high visibility within the market. Their size and financial strength enable them to

remain viable in a challenging economy. Leaders typically respond to a wide market audience by supporting broad market requirements.

Challengers

Challengers have a strong Ability to Execute but may not have a plan that will maintain a strong value proposition for new customers. Larger vendors in mature markets may be positioned as Challengers because they choose to minimize risk or avoid disrupting their customers or their own activities.

Although Challengers typically have significant size and financial resources, they may lack strong vision, innovation or an overall understanding of market needs. Challengers may offer products nearing the end of their lives that dominate a large but shrinking segment.

Challengers can become Leaders if their vision develops. Over time, large companies may fluctuate between the Challengers and Leaders quadrants as their product cycles and market needs shift.

Visionaries

Visionaries align with Gartner's view of how a market will evolve, but their ability to deliver against that vision is less proven. In growing markets, this status is typical. In more mature markets, it may reflect a competitive strategy for a smaller vendor — such as selling an innovation ahead of mainstream demand — or a larger vendor trying to break out of a rut or differentiate itself.

For vendors and customers, Visionaries fall into the higher-risk, higher-reward category. They often introduce new technologies, services or business models, and they may need to build financial strength, service and support, and sales and distribution channels. Whether Visionaries become Challengers or Leaders may depend on customers accepting new technologies or the vendor's ability to develop partnerships that complement its strengths. Visionaries are sometimes attractive acquisition targets for Leaders or Challengers.

Niche Players

Niche Players do well in a single segment of a market, or have a limited ability to innovate or outperform other vendors in the wider market. This may be because they focus on a particular functionality or geographic region, or because they are new entrants to the market. Alternatively, they may be struggling to remain relevant in a market that is moving

away from them. Niche Players may have reasonably broad functionality, but with limited implementation and support capabilities and relatively limited customer bases. Compared to vendors in other quadrants, they do not demonstrate a strong vision for their offerings.

For end users, assessing Niche Players is more challenging than assessing vendors in other quadrants. Some could make progress, while others do not execute well and may not have the vision and means to keep pace with broader market demands.

A Niche Player may be a perfect fit for your specific requirements. However, if it goes against the direction of the market — even if you like what it offers — then it may be a risky choice because its long-term viability will be threatened.

Context

The challenges with managing unstructured data are expanding from scale, performance or availability to include cyber resilience, data management, hybrid cloud, single platform for file and object workloads and storage as a service. The ability to scale to a large number of objects and to scale for high throughput are critical, as are simplicity of operations, global presence and cyber resilience. Large organizations are more concerned with making sense of the massive amounts of data they are storing and protecting than with other challenges.

To address these challenges, vendors have responded with a number of new capabilities and partnerships. Increasingly, vendors are offering a single platform to manage all of the unstructured data in an organization. A single platform could be as basic as offering an AWS S3 interface on top of a distributed file storage system, or it could be a truly unified key-value store providing both file and object services. Object storage systems offering a file interface are not suitable for addressing file-intensive workloads, but are good solutions for mostly read-only data, such as backups or image repositories across all industries.

Vendors are providing new indexing and cataloging tools that include the ability to add custom metadata, which makes data easier to search and find. Few vendors are tackling the problem of accessing data stored in a centralized location from a large number of remote locations. For cyber resilience, vendors are expanding capabilities from restoring data to detecting ransomware and identifying the point in time of data compromise.

To reduce the burden of managing storage, vendors are offering storage as a service on their own or in partnerships with CSPs. Most vendors now offer their file storage in the public

cloud to address gaps in the native public cloud file services but also to create a hybrid cloud environment.

Market Overview

The market for unstructured data has been slowly converging from separate file and object products to a single platform that can support all unstructured data workloads. In 2024, there are more vendors supporting a single platform as opposed to separate products. The shift from product to platform is more than supporting all unstructured data workloads. It is also about integrated capabilities to provide cyber resilience, global namespace and file systems and storage as a service.

The following capabilities are the top priorities for I&O leaders responsible for purchasing and operating infrastructure for unstructured data storage. These capabilities significantly contributed to vendor positions in this Magic Quadrant report:

- **Single platform to handle all unstructured data workloads:** File or object access, large or small files, sequential or random workloads, throughput heavy or latency sensitive, high performance and long-term retention.
- **Hybrid cloud support:** Data management across on-premises, public clouds and edge locations. Key use cases include burst for compute, burst for capacity, storage standardization, and backup and disaster recovery.
- **Ability to detect cyberattacks (both known ones and Day 0 attacks):** Recovery and protection are equally important and are standard capabilities. Detection is where some vendors do more than others.
- **STaaS capabilities:** Vendor-managed infrastructure with consumption-based pricing and AIOps to deliver storage-as-a-service with cloud-like elasticity.
- **Data management:** Ability to extract insights for speeding up analytics workflows and for life cycle management. This is typically powered by building metadata index and file or object labeling/tagging capabilities.
- **Edge caching and global namespace:** Ability to read/write data files from any location to a centralized storage pool.

- **AI and GenAI readiness:** ISV integrations, NVIDIA certification and partnerships, and data management and performance capabilities to support AI.
- **Single platform:** Handles both high-performance and data lake workloads.
- **Platform efficiency:** Performance, space and power efficiency. This is important because it translates to improved sustainability.
- **Software-defined storage:** Allows vendors to offer the same storage anywhere — on-premises, edge locations or in the public cloud. It also enables enterprises to deploy the storage on their preferred server and networking hardware to take advantage of the latest innovations.

⊕ Evidence

⊕ Evaluation Criteria Definitions