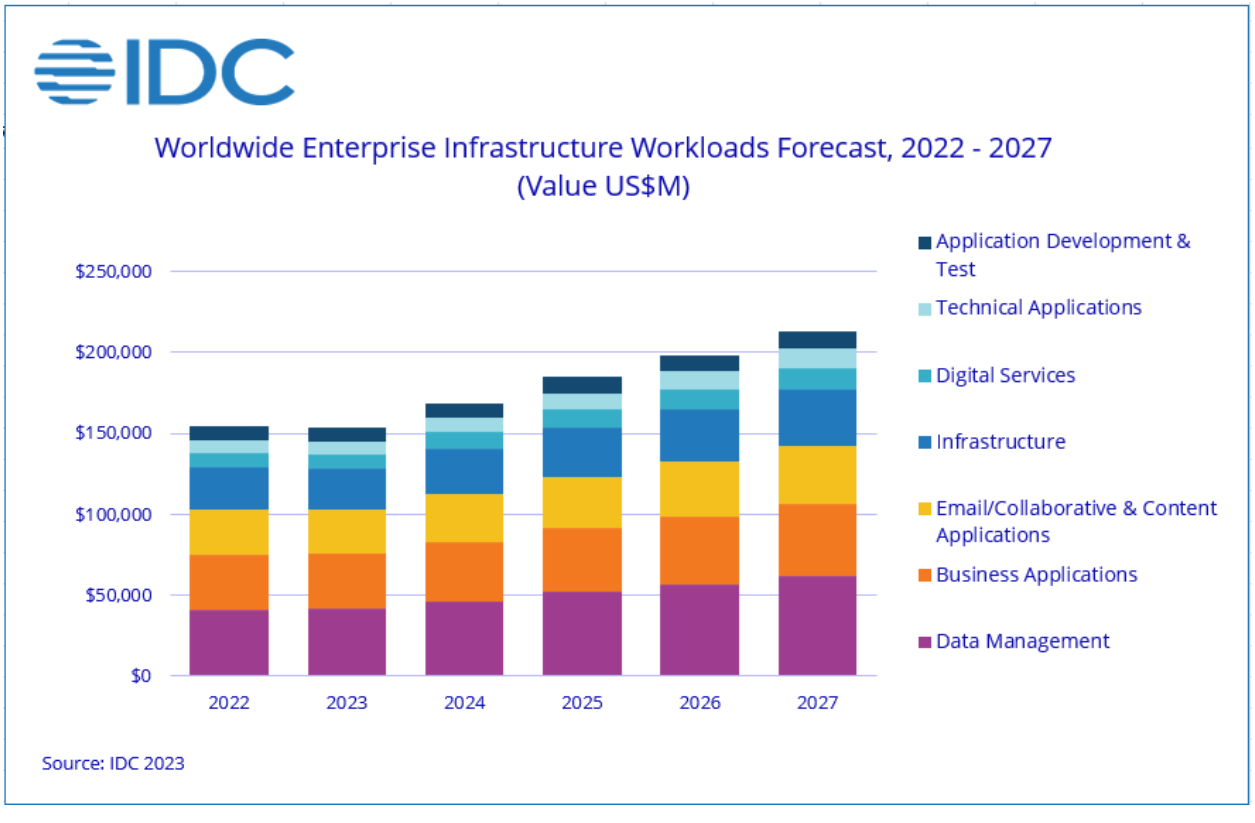
Highlights

6 Enterprise Storage Market Trends

Posted by Karen Heumann, June 15, 2023

The enterprise storage market will continue to experience significant growth through 2027 with a 6.5% CAGR according to IDC estimates. The increased volume and complexity of data is driving the need for more efficient and scalable storage solutions.



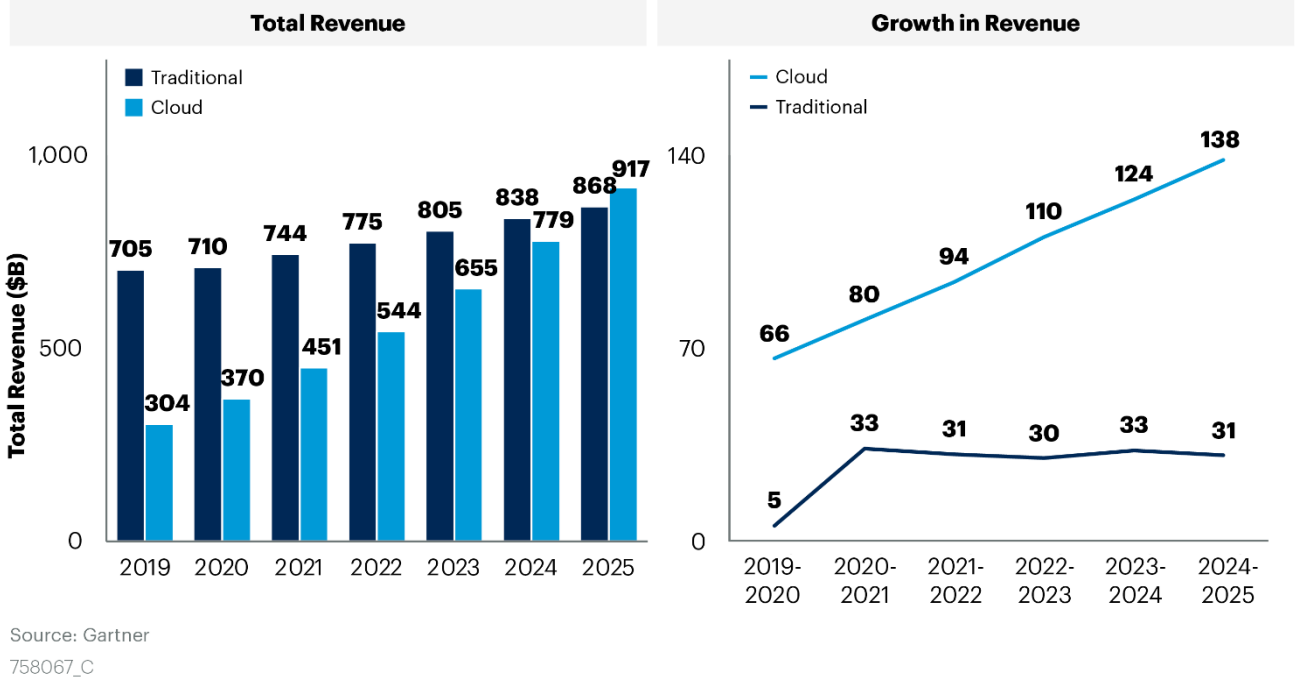
Trends this year:

1. **Multi-cloud and On-Premises**

The trend is not cloud versus on-premises but, rather, properly maximizing the value and utility of each. "More businesses will continue to leverage multi-platform, multi-cloud, and hybrid-cloud architectures to get the best of all worlds and serve the many consumers of data in their organizations," said Ben Gitenstein, Group Product Manager for Hyperdisk at Google.

However, Greg Schulz, an IT Analyst at StorageIO, adds, “As enterprises optimize their storage assets from the edge to the core, they are not housing everything in the cloud—much of the data belongs there, but not all. On-premises storage is regaining ground, and some enterprises are moving workloads back to on-premises systems from the cloud.” And, in fact, organizations are increasingly keeping data on premises or moving data from the cloud back into their own data centers. In addition, organizations generate a lot of data at the edge. Depending on the volume and how IT uses that data, it does not always make sense to send the data to the cloud.”

There is no longer a "cloud good, on-premises bad" mindset. By 2025, 75% of enterprise storage will be deployed in a consumption-based model, and 70% of enterprise storage will be hybrid according to Gartner.



2. Storage as a Service

Instead of paying an upfront price for an enterprise storage array, organizations can opt for consumption-based pricing instead. The benefits include reduced complexity, simplicity, resilience, automation, performance, efficiency, and being able to do more with less are part of the value proposition of storage-as-a-service. Organizations have to consider minimum spending requirements and the potential for price increases when it is time to renew a contract.

David Friend, President and CEO at the storage provider Wasabi Technologies, explains that hyperscalers like Amazon, Microsoft, and Google will gain the bulk of business due to the extent of their platforms and the sheer number of functions and integrations. However, some organizations want easy, quick and inexpensive access to data as well as a more personalized approach to as-a-service infrastructures. “This will leave room for niche cloud vendors offering best-of-breed services,” Friend said, “and we will see the cloud market continue to diversify with more flexible, personalized, and cost-effective cloud storage solutions.”

3. All things NVMe

The global non-volatile memory express (NVMe) market grew from $49.96 billion in 2022 to $67.32 billion in 2023 at a compound annual growth rate (CAGR) of 34.7% from the Global Market Report 2023 by Reportliner. The non-volatile memory express (NVMe) market is expected to grow to $205.76 billion in 2027 at a CAGR of 32.2%. Non-Volatile Memory Expess (NVMe) and NVMe over Fabrics (NVMe-oF) provide speed and automation for data management while reducing complexity and resolving storage bottlenecks.

Complexity is a major challenge for storage personnel that inhibits digital transformation, according to Peter Corbett, Senior Storage Architect at Dell. Corbett sees NVMe-oF as a way to: Rapidly scale infrastructure, without having to proportionally add skilled administrators; speed delivery of services to end users, reduce friction and latency in the business workflows; and reduce errors, which are costly to identify, diagnose, and resolve. “NVMe-oF is an enabler for flexible provisioning of software-defined storage, allowing richer connectivity with good security,” he said. “Combining smarter management software with intelligent infrastructure allows businesses to free themselves from the monotony of storage management and focus more on driving outcomes that impact their bottom line.”

Greg Schulz believes that NVMe-oF as well as NVMe-over-TCP are “no-brainers” in modern storage management, given their flexibility, performance, interoperability, and deployment capabilities.

4. The Unstructured Data Deluge

Drew Robb, explains in his Top Trends in Data Storage Management for 2023 analysis:

> The growth of unstructured data continues to be a storage management trend which is driving adoption of intelligent and automated data management solutions that can handle massive data sets, provide real-time insights, and optimize data workflows. Data management platforms must become more intelligent, must be cloud-enabled, must have more intelligence built in, and must be able to cope with ever larger data sets. Gaining insight and proactively managing huge amounts of unstructured data will allow organizations to address the complex mixture of cost control, management of risk, and operationally sustainability—all while extracting maximum value from rapidly accumulating data.

5. **Which leads to Trend #5- Automated Data Management Using AI/ML**

David Liberman, Co-founder and CTO of productscience.ai, sees automation in data collection and storage optimization as a major trend in data management. "By leveraging modern ML algorithms, organizations can identify opportunities for optimizing data collection and traffic at the client level of the application," Liberman said. "ML and AI automation enable in-depth code analysis that was previously unattainable." Liberman said it is now possible to automatically analyze the code of each event and detect issues such as: Suboptimal production of events by different modules within the application, Lack of compression in frequently occurring events, Presence of unoptimized formats, such as using a string format for a Universal Unique Identifier (UUID), which negatively impacts the cost of storing and processing events in Google Cloud Bigtable.

Jensen Huang, the co-founder, current president and CEO of chipmaker NVIDIA, says the world is at the "tipping point of a new computing era" propelled by artificial intelligence (AI). IDC estimates AI will account for 40% of all data center workloads by 2025 and notes that 70% of storage decision-makers are planning to adopt AI-powered storage solutions in the next 3 years.

6. **Efficiency**

Organizations have been struggling with data silos for decades, and it's costing them time, money, and efficiency. "Businesses often experience delays in outcomes, sub-optimal processes and high

associated costs due to silos," explains Vcinity CTO Steve Wallo. "You're forced to move or copy your data to be near an application to optimize its performance." Organizations have to find ways to move or remotely access data to centralize it in one location while still retaining the ability to access and use it from anywhere. "Whether data sits on-prem, in the cloud, or at the edge, there are ways to allow businesses to completely eliminate data silos altogether, ultimately enhancing cost efficiencies, workflows, and security," Wallo said.

Kumar Goswami, Co-founder and CEO of data management company Komprise believes that attempts to eliminate silos take too much time and energy, and it's unlikely a business can fully get rid of them. He says, "The answer is solutions that look across the data—search, classify, secure, visualize it in place—without forcing you to put all your data into one location or technology."

Customers want simplified monitoring, management and protection of data from the edge to cloud through automation, common interfaces and managed services. Drew Robb eloquently explains in his analysis of Trends in Data Storage Management for 2023 that "data has become the driver of competitive advantage, compelling organizations to adopt innovative storage solutions to meet business objectives."

Companies are looking for data storage options that deliver the optimal balance of performance, resilience, efficiency, and simplicity, explains Andrew Russell, CRO of Nyriad. "With the growth in the amount of data being produced, storage systems that efficiently handle all data types seamlessly will simplify the operational environment by reducing complexity," Russell said. "Ensuring the right balance between performance, resilience, efficiency, and simplicity will allow organizations to achieve better decision-making capabilities in the digital business era."

SSDs Compatibility with Adaptec Host Bus, SmartRAID Adapters from Microchip

KIOXIA

Posted by Mike Heumann, June 15, 2023

KIOXIA America, Inc. announced that its NVMe™/PCIe® and SAS SSDs have been successfully tested for compatibility and interoperability with the Microchip Technology's Adaptec® HBA 1200 Series, SmartHBA 2200 Series host bus adapters (HBAs) and SmartRAID 3200 Series RAID adapters.

As one of the broadest portfolios of SSDs in the industry, KIOXIA drives are available for client PCs, as well as data center, hyperscale and enterprise servers and storage systems. KIOXIA PM6 and PM7 Series 24G SAS SSDs and CD6, CD8, and CM6 Series PCIe 4.0 SSDs all successfully completed compatibility testing performed by Microchip.

Microchip's Smart Storage Adapters bring market-leading performance, capabilities, management and interoperability with design flexibility due to the ability to operate NVMe, SAS and SATA storage devices in a single connection. They offer a wide range of Tri-mode HBA solutions, including a 32-port variant.

Steve Weinger, Senior Director of Marketing and Product Management for KIOXIA America Inc. explains, "The overall success of next-generation data center infrastructures is dependent on ecosystem collaboration and interoperability efforts to ensure that current and future products and technologies work together seamlessly." "With our comprehensive portfolio of storage solutions and design support, we are enabling the modern, scalable, data centers of the future," said Samer Haija, Associate Director of Marketing of Microchip's Data Center Solutions business unit. "By collaborating with KIOXIA to rigorously test their best-in-class SSDs with Microchip's Smart Storage Platform, customers can rest assured that our combined solution will deliver as promised."

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“Empowering Real-Time Interactions for Modern Business Applications” custom Pliops webinar featured industry experts Tony Afshary, Global Vice President of Products and Marketing for Pliops XDP Data Services and William Bell, Executive Vice President of Products at phoenixNAP. According to IDC 30% of the business application will be real-time by 2025. The user responsiveness is the major factor that determines customers’ behavior, retention, and loyalty. All modern digital interactions are going to be seamless; and, customers expect real-time responses to their requests and transactions. Furthermore, Business applications demand low-latency, persistent, and scalable platforms to serve the business needs. Pliops demonstrates how organizations can build highly scalable platforms with in-memory like performance using Redis and Pliops XDP-AccelKV Data Service. The webinar video is available to view and a copy of the slidedeck is available here.

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GPUs, SSDs, & Shared Memory: Accelerating Computing?	August 22
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The Open Compute Platform (OCP) Movement – Providing Compute-At-Scale Value to On-Premises Deployments	October 24

Storage Architectures for HPC Clusters	November 21
2024 Trends – Cloud, On-Premises, & Hybrid Compute/Storage	December 12

Cybersecurity

xDR- The Promise versus the Reality	August 3
10 Features of an Effective Attack Surface Management Tool	September 7
How Secure is the Cloud for Your Workloads?	October 12
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Upcoming Conferences

June 20-22	HPE Discover, Las Vegas
June 20-22	Info Security Europe, London
July 14-19	School Transportation Network Expo, Reno, NV
August 5-10	Black Hat USA, Las Vegas
August 8-10	Flash Memory Summit, Santa Clara, CA
August 28-31	VMWare Explore, San Francisco, CA

August 30-Sept 1	Security Expo, Sydney, Australia
September 11-13	Gartner Security & Risk Management, London
September 11-13	Global Security Exchange, Dallas, TX
September 18-20	Crowdstrike fal.con, Las Vegas
September 18-21	SDC 2023, Fremont, CA
October 2-4	DattoCon, Miami, FL
October 3-4	CyberTech Europe, Rome
October 16-19	Gartner IT Symposium/Xpo, Orlando, FL
November 15-16	Microsoft Ignite, TBD
Nov 27- Dec 1	AWS re:Invent, Las Vegas