IBM FlashSystem portfolio

Designed to Protect. Engineered to Adapt. Built to Perform.

Highlights

Amplifies human expertise through natural-language human-AI collaboration

Enables AI-driven proactive identification of cyber threats and exfiltration detection to speed response times

Optimizes performance autonomously based on real-time workload analysis

Helps reduce your data storage environmental impact

Organizations are under constant pressure to acquire, retain, and scale storage expertise as business demands evolve, all while controlling costs, delivering diverse SLA requirements, and reducing exposure to outages, cyberattacks, and regulatory risk. IBM FlashSystem elevates storage into an AI-assisted, intent-aware platform that simplifies operations, strengthens cyber resilience, and delivers consistent performance across mixed workloads, so you can protect what matters, adapt faster, and perform at scale.

IBM FlashSystem® can help you transform your storage from a passive and reactive repository into AI-Driven Dynamic Storage. It achieves this through pervasive intelligence enabled by FlashSystem.ai and the unique technology of the fifth generation FlashCore® Module (FCM), helping you to turn your storage operations into a strategic advantage.

FlashSystem.ai

The next evolution in storage intelligence, FlashSystem.ai transforms traditional arrays into an autonomous, intent-aware platform. It combines human–AI collaboration with decision-making to continuously optimize performance, enforce SLAs, and maintain compliance without manual intervention. By embedding AI-driven anomaly detection, dynamic policy enforcement, and predictive tuning directly into the storage layer, FlashSystem.ai helps IT teams amplify human expertise, accelerate response times, and reduce operational complexity. FlashSystem.ai in IBM's latest generation of **FlashSystem storage can reduce storage management effort by up to 90%** compared to doing those routine operations in the GUI.[1]

This intelligent foundation addresses today's most pressing IT challenges, from mitigating disruption and compliance risks, to scaling expertise and aligning resources with changing business demands, to delivering predictable performance across diverse workloads.

IBM FlashSystem, transforms your storage from passive infrastructure into an intelligent, adaptive storage solution, **designed to protect, engineered to adapt, built to perform.**



Protect

Stay resilient against outages and cyber threats with secure and compliant storage that can improve your operational resilience, powered by FlashSystem.ai and aligned to the recognized NIST Cyber Resiliency Guidance Framework.

Using AI and machine learning, IBM FlashSystem can detect potential ransomware quickly to minimize impact; the IBM-developed ransomware threat detection AI model running on the latest generation FlashSystem models executes in real time on the storage controllers and does not affect performance.[2]

The latest generation of IBM FlashSystem flags verified data exfiltration events after a 30-minute confidence window, with a false-positive rate below 1%[3] The alert reaches your security team while they can still act on it, narrowing the period in which sensitive data may be at risk and preserving more containment and response options.

IBM FlashSystem extends cyber resilience beyond ransomware detection by helping organizations identify potential data theft at its earliest stages. The unique technology of FlashCore Module keeps statistics on every single IOP and summarizes those statistics. The FlashSystem appliance aggregates all the FCMs and passes these summaries to an AI-trained model that is running inside the FlashSystem itself. Every 2 seconds, the model looks at all the data and raises an alert if it discovers a condition that matches ransomware patterns that it has been trained to recognize. When an alert occurs, these statistics are passed back to IBM Storage Insights Pro where they are then analyzed. Benign statistics are also sent back from each system.

Other notable capabilities of the IBM FlashSystem include the following:

- Guaranteed detection of potential risks in under a minute, safeguarding the integrity of an organization's data and **enabling the recovery of secured copies within 60 seconds**. Backed by the IBM Cyber Resiliency Guarantee, IBM FlashSystem is designed to provide advanced data protection, allowing you to recover quickly after a cyberattack to minimize impact.[4]
- Rapid and clean recovery with immutable and isolated copies that cannot be modified or deleted.
- Security based on 2-Person Integrity designed to help reduced risk of social engineering attacks.
- Cyber Vault enables fast recovery for IBM Power and IBM Z by combining safeguarded copies with automated analysis and validation for accelerated, trusted recovery.
- Post-quantum cryptography (PQC) built on ML-KEM (FIPS 203) and ML-DSA (FIPS 204) standards, developed by IBM Research, helps address emerging "harvest-now, decrypt-later" threats by protecting cryptographic key exchange, authentication, and data security against future quantum computing risks.
- FlashSystem Policy-based High Availability (PBHA) is designed to offer zero RTO and zero RPO for two storage systems in different locations, synchronously replicating data across metro-area distances, allowing concurrent data access for servers in each data center, providing seamless failover, and boosting disaster recovery over greater distances with asynchronous replication across regions.



Adapt

Empower your business with AI-Driven Dynamic Storage that amplifies human expertise through a natural-language interface, that can interpret and respond to user inquiries, enforce data contracts, and execute autonomous data services. **FlashSystem.ai accelerates decision-making** by reducing the time and effort required to identify issues and take corrective actions, delivering intent-aware automation with the right level of managed oversight.

IBM FlashSystem helps you adapt to business requirements and scale expertise:

- Amplify your storage team's expertise with AI that continuously learns from feedback and suggests opportunities for improvement.
- Deliver seamless, self-service operations that performs a wide range of tasks on your behalf with minimal manual effort.
- Align your storage with business intent through data contracts, which helps to consistently deploy and manage storage aligned to business intent.
- Reduce manual work through self-service actions and AI recommendations.
- Enable **storage virtualization for over 500 external systems and third-party integrations** designed to help reduce storage management time while ensuring availability, performance, and capacity.
- Interoperability enables native integration with tools for IT service management (ITSM), IT lifecycle management (ITLM), and AI for IT operations (AIOps), including VMware vSphere Virtual Volumes.

Perform

Address performance demands by improving storage response times, lowering latency, and accelerating throughput with the unique technology of FCM.

Deliver increased efficiency by proactively optimizing storage with autonomous tuning, intelligent data usage and placement with both human and machine actionable recommendations.

The automated and seamless mobility of the FlashSystem grid architecture provides comprehensive control and insight over your entire data storage estate by allowing you to connect storage arrays to optimize data storage capacity, achieve data mobility, and perform migrations without disruption and at scale to meet your business needs.

IBM FlashSystem is designed to help organizations meet rising workload demands:

- Autonomously optimizes performance based on real-time workload analysis, ensuring consistent and efficient data access.
- Utilizes AI to automatically move data between different storage tiers based on access patterns, optimizing performance and cost.
- Dynamically scales resources up or down based on workload demands, delivering cost efficiency and flexibility.
- The 105TB IBM FlashCore Module delivers **approximately 33% better energy efficiency per terabyte, and two orders of magnitude higher IOPS, while performing on board data reduction** vs compared most recent enterprise HDD drives.[5]
- IBM FlashSystem **reduces the required storage footprint by 30% - 75%, depending on the model,** through optimized placement and consolidation, compared to its previous generation.[6]



IBM FlashSystem Portfolio Overview
IBM FlashSystem delivers a unified portfolio of high-performance, storage solutions engineered to meet a full spectrum of workload, scalability, and cost requirements. The family spans from the FlashSystem 5000 series, providing flexible, cost-efficient options for smaller mixed workloads, to the FlashSystem 5600, compact yet powerful systems built to accelerate growing environments with end-to-end NVMe efficiency and enterprise data services. For midrange deployments, the FlashSystem 7600 delivers ultra-low latency performance and advanced data management for diverse application demands. At the top of the portfolio, the FlashSystem 9600 provides extreme scale, sustained high throughput, and enterprise-class resiliency, making it ideal for mission-critical workloads requiring uncompromising performance and availability.

Furthermore, IBM offers the IBM FlashSystem C300, a solution designed for less frequently accessed data; its high density and high capacity make it an ideal choice for media streaming, archives, backups, and other data repositories. IBM FlashSystem C300 offers 5.5 times more write cycles than industry-standard QLC drives.[7]

In addition, IBM offers multiple purchase-over-time options to enable you to quickly scale your data storage solutions as needed. The IBM Storage Assurance perpetual consumption model provides access to IBM FlashSystem hardware and software innovations. It offers all-inclusive software upgrades, full-system automatic hardware refreshes, SLA-based workload performance guarantees, premium support, and guaranteed zero downtime and non-disruptive migrations – no swing box required.[8]

Simplify your infrastructure further with IBM SAN Volume Controller (SVC)
IBM SAN Volume Controller is an enterprise-class software-defined storage solution that enhances data economics by supporting critical large-scale workloads. SVC streamlines IT infrastructure with a unified approach to storage management, functionality, replication, and hybrid cloud operations regardless of storage type.

IBM FlashSystem Technical Specifications

Single enclosure product specifications	IBM FlashSystem 5000	IBM FlashSystem C300	IBM FlashSystem 5600	IBM FlashSystem 7600	IBM FlashSystem 9600
Maximum bandwidth (reads)	12 GB per second	37 GB per second	30 GB per second	55 GB per second	86 GB per second
Response times (reads)	< 70 microseconds	1-2 miliseconds	< 50 microseconds	< 50 microseconds	< 50 microseconds
Raw maximum capacity within single enclosure	737 TB	3.3 PB	633 TB	1.6 PB	3.3 PB
Effective maximum capacity within single enclosure+	573 TBe (2U enclosure)	11.8 PBe (2U enclosure)	2.4 PBe (1U enclosure)	7.2 PBe (2U enclosure)	11.8 PBe (2U enclosure)
Maximum I/O ports within a single enclosure	8	16	16	32	32
IBM FlashCore Module capacities supported	Not applicable (supports industry standard drives)	52.8 and 105.6TB	6.6, 13.2, 26.4 and 52.8 TB	6.6, 13.2, 26.4 and 52.8 TB	6.6, 13.2, 26.4, 52.8 and 105.6 TB
Use cases	Smaller mixed workloads, backup	Archive, backup, media repositories, capacity-intensive workloads, and other latency-tolerant data repositories	Mixed workloads, smaller OLTP databases	Larger mixed and OLTP workloads	Consolidated mixed and critical OLTP workloads
	Explore IBM FlashSystem 5000	Explore IBM FlashSystem C300	Explore IBM FlashSystem 5600	Explore IBM FlashSystem 7600	Explore IBM FlashSystem 9600

+Assuming maximum possible data reduction achievable by the FlashCore Module's logical capacity

FlashSystem grid at a glance*	IBM FlashSystem C300	IBM FlashSystem 5600	IBM FlashSystem 7600	IBM FlashSystem 9600
Effective Maximum Capacity	377 PBe	77 PBe	230 PBe	377 PBe
Max I/O Ports	512	512	1024	1024
Max bandwidth (reads)	1,184 GB/s	960 GB/s	1760 GB/s	2752 GB/s

*Assuming FlashSystem grid contains 32 devices with the same configuration. FlashSystem grids can contain a mix of different models and configurations.

Explore all technical specifications →

IBM SAN Volume Controller at a glance

SAN Volume Controller grid*	**IBM SAN Volume Controller SV3**
Maximum Managed Capacity	256PB
Max I/O Ports in a grid	384

*Assuming SVC grid contains 8 systems with the same configuration. SVC grids can contain a mix of different models and configurations.

IBM SAN Volume Controllers	**IBM SAN Volume Controller SV3**
Maximum Managed Capacity	32PB
Max I/O Ports in a 2-node system	48
Storage system virtualization support	More than 500 flash, hybrid and disk storage systems from IBM and other vendors
Use cases	Simplify infrastructure while delivering agility, tiering, resiliency and data reduction across consolidated mixed and critical OLTP workloads



Conclusion

In a world where disruption, compliance pressure, and performance demands are constant, IBM FlashSystem stands out as the storage solution built for today and tomorrow. Through the advanced AI capabilities and breakthrough hardware innovations, IBM FlashSystem empowers organizations to stay resilient, scale intelligently, and deliver consistent results. Don’t settle for yesterday’s architecture, make storage a catalyst for business success.

For more information

To learn more about IBM FlashSystem, contact your IBM representative or IBM Business Partner or visit ibm.com/FlashSystem

1. Based on internal, task-based evaluations of representative routine operations (multi-volume provisioning with Safeguarded Copy and DR policies) under lab-controlled conditions on latest generation FlashSystem models (5600, 7600, 9600) with FlashSystem.ai, versus the latest generation of IBM FlashSystem (5600, 7600, 9600) without FlashSystem.ai. Actual results vary by environment, integrations, policies, and user proficiency.
2. This statement reflects the design of AI-based ransomware threat detection models developed by IBM and deployed on the latest generation FlashCore Modules and FlashSystem models (5600, 7600, 9600), where evaluations are performed on-array using IBM Snap ML–based techniques with minimal controller CPU and memory overhead under tested conditions. “Affect performance” is based on internal assessments of representative workloads and system headroom.
3. Data exfiltration detection based on real field telemetry from customers running firmware 9.1.2+ on FlashSystem models 5600/7600/9600. Individual results may vary.
4. IBM Cyber Resiliency Guarantee, IBM. https://community.ibm.com/community/user/storage/blogs/nat-prakongpan/2023/09/12/ibm-flashsystem-cyber-recovery-guarantee
5. Based on internal measurements of 105 TB FlashCore Modules (~21 W; ~0.20 W/TB) and public vendor specifications for ~28 TB enterprise HDDs (~7 W; ~0.25–0.30 W/TB). Efficiency and IOPS advantages reflect flash vs HDD technology and on-module data reduction on latest generation FlashSystem models (5600, 7600, 9600) populated with FlashCore modules. https://storedbits.com/hard-drive-power-consumption/. HDD information derived from . https://uneos.au/understanding-iops-and-optimising-storage-performance/ https://danielmalmer.medium.com/hard-drive-metrics-that-matter-439d07cd6306
6. Deduplication and compression data derived by using the latest report from IBM shipped FCMs and client systems that have been running from 3 months to 7 years as of January 2026 . Result specific to the compared configurations and drive sizes. Max configuration for FS 9600 and FS 9500 on usable capacities with a 14+2 parity; savings vary when comparing other systems. Deduplication is confirmed with internal lab testing.
7. Industry-standard QLC expects about 1,000 program/erase (P/E) (i.e.: write) cycles, https://www.techtarget.com/searchstorage/definition/write-cycle, ibm.com/products/flashsystem-C300. Based on IBM internal testing conducted in accordance with JEDEC retention standards
8. Data movements now have zero downtime and are non-disruptive, guaranteed for customers with the IBM Storage Assurance Perpetual program – no swing box required. Through IBM Storage Assurance Perpetual, IBM guarantees that data can be moved between FlashSystem devices while always maintaining an active path to data from servers and applications using the data when Storage Partitions are migrated as described in the IBM Storage FlashSystem documentation for the relevant Storage Virtualize release and FlashSystem platform.

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