

IBM FLASHSYSTEM 5300

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CONTEXT



IBM launched its [new IBM FlashSystem 5300](#), a new entry-level storage solution with exceptional price performance, high availability, and enterprise-class data services within a compact 1U rack unit. The new array meets the needs of both small and large organizations facing the challenges of resource-constrained data centers and demanding workloads.

NEW: IBM FLASHSYSTEM 5300

The new IBM FlashSystem 5300 is an entry-level storage solution providing exceptional performance, high availability, and enterprise-class data services, all within a compact 1U rack unit.

What's New in FlashSystem 5300

Refining excellence

Improved performance	Greater connectivity	More secure	More predictable performance	In-place upgrades
Up to a 45% increase in IOPs and a 50% increase in bandwidth vs FlashSystem 5200	64Gb Fiber Channel support 2x more 32Gb Fiber Channel ports On-board, flexible high-speed Ethernet / Replication	FCM4 with Ransomware Threat Detection 2.5x Snapshot capacity (10PiB) – More than twice as many or twice as large SafeGuarded Copies Secure Boot	Dedicated CPU core to advanced software services (VASA Provider, PBR, SGC, etc) → Consistent latency	Extend the FS5200 flash investment with in-place canister upgrades
PCIe Gen4  Intel IceLake 				
IBM Storage Virtualize IBM Storage Insights				

Here's a detailed look at the key features and benefits of the IBM FlashSystem 5300:

1. **Storage Density and Capacity:** The system can achieve up to 1.81 petabytes of effective capacity in a fully populated 1U form factor system. This high density is supported by 2:1 deduplication and 3:1 compression ratios, optimizing storage efficiency.

2. **Exceptional Price/Performance:** The FlashSystem 5300 delivers outstanding performance at a competitive price. Compared to its predecessor, the FlashSystem 5200, it is designed to deliver up to 45% more throughput on a typical 70/30/50 production workload, such as databases.
3. **High Availability:** The system ensures high availability, minimizing downtime and ensuring critical business applications run smoothly and continuously.
4. **Enterprise-Class Data Services:** Despite its entry-level positioning, the FlashSystem 5300 offers a range of enterprise-grade features and services. These include advanced data management, data protection capabilities, and the integration of cutting-edge technologies such as AI and machine learning for enhanced operational efficiency.
5. **Enhanced Cyber Resilience:** One of the standout features of the FlashSystem 5300 is its enhanced data resilience. New technology enabled by IBM's recently revamped FlashCore 4 module uses machine learning to monitor data continuously and detect anomalies like ransomware attacks in real time. IBM stands alone among storage vendors with this functionality.
6. **AI-Powered Predictive Analytics:** Integration with IBM Storage Insights and IBM Spectrum Virtualize allows the FlashSystem 5300 to leverage AI for data placement and automation.
7. **VMware Integrations:** The system includes robust support for VMware environments, including features like immutable snapshot support, policy-based replication, and VMware virtual volumes 2.0 support.

ANALYSIS

IBM's new FlashSystem 5300 is a significant addition to its portfolio, offering a potent mix of performance, scalability, and data services in a remarkably compact form factor.

IBM has effectively condensed high-end storage capabilities into a 1U rack unit. This level of compactness is crucial for businesses operating within space-constrained data centers—a common scenario as companies increasingly move towards denser, more efficient infrastructure footprints.

With its promise of up to 45% more throughput and a 50% increase in bandwidth for sequential workloads compared to its predecessor, the FlashSystem 5200, IBM is setting a new bar for what enterprises should expect from entry-level storage systems. This performance enhancement and the system's scalability make it an attractive option for organizations looking to future-proof their storage capabilities without committing to extensive upfront infrastructure investments.



One of the most critical features is the FlashSystem 5300's enhanced data resilience capabilities. The integration of FlashCore Module 4, which employs machine learning to detect anomalies like ransomware, protects data and adds a layer of intelligence to the storage system. In an era where data breaches and ransomware attacks are increasingly common, such capabilities are invaluable.

The IBM FlashSystem 5300 is a well-rounded product that addresses both current and emerging needs within the data storage market. Its blend of performance, compactness, and intelligent features makes it a compelling option for a wide range of businesses and illustrates IBM's commitment to innovation and leadership in technology solutions for hybrid cloud.

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