**IBM Systems** 

IBM Storage Product guide



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Storage made simple IBM Storage is the right foundation for your data-driven hybrid cloud.

## Introduction

Every day you face a complex mix of events that can affect business outcomes, like managing growing data and LOB applications, maintaining core IT applications and uncovering competitive advantage. All of these demands put pressure on your storage infrastructure's performance, capacity and security.

IBM<sup>®</sup> Storage simplifies your data infrastructure using an underlying software foundation to strengthen and streamline the storage in your hybrid cloud environment, using a simplified approach to containerization, management and data protection.

## What's possible with IBM Storage



#### Storage for hybrid cloud

Reduce complexity with container-enabled enterprise storage, deployed seamlessly across on-premises and hybrid cloud storage environments.



#### AI and data

Simplify your infrastructure with optimized efficiency to drive faster results that are massively scalable and globally available from edge to inference.



#### Data protection and cyber resiliency

Maximize backup storage efficiency, data security and performance with maximum uptime and resiliency while lowering costs.



#### **Storage for containers**

services

Surpass your business goals with speed, productivity and agility, all enabled by a security-rich, persistent storage infrastructure with enterprise-class services for private cloud and Red Hat® OpenShift® Container Storage.

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## IBM Storage Portfolio

Storage for data and AI	Storage for hybrid cloud	Modern data protection	Storage for IBM Z
IBM Spectrum® Scale IBM Cloud® Object Storage IBM Spectrum® Discover IBM Elastic Storage® System	IBM FlashSystem® family IBM SAN Volume Controller IBM Storage Insights IBM Spectrum Control IBM Spectrum Virtualize for Public Cloud IBM Spectrum Storage™ Suite IBM Storage Suite for IBM Cloud Paks IBM FlashWatch	IBM Spectrum Protect IBM Spectrum Protect Plus IBM Spectrum Copy Data Management IBM Spectrum Archive IBM Tape Solutions	IBM DS8000 Storage systems IBM TS7700 Virtual Tape Library IBM Spectrum Scale
Storage for SAP HANA IBM FlashSystem family IBM Spectrum Protect IBM Spectrum Copy Data Management	Storage for containers IBM Storage for Red Hat OpenShift IBM Storage Suite for IBM Cloud Paks IBM FlashSystem family IBM DS8000 Storage systems IBM Spectrum Virtualize for Public Cloud IBM Spectrum Scale IBM Cloud Object Storage IBM Spectrum Discover IBM Spectrum Protect Plus	Storage networking SAN b-type family SAN c-type family	Converged infrastructure VersaStack VersaStack for Hybrid Cloud

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## Storage for Data and AI

#### Challenges

AI is a journey that begins with data. Data is the fuel for AI, and AI cannot exist without an information architecture, or IA. The best AI is built on a foundation of data that's collected and organized as carefully as it's analyzed, and finally infused into the business. Organizations are challenged with gaining insights from their data for many reasons. Data silos make it difficult to access a holistic view of all your information, limiting the value of AI. Current infrastructure that wasn't built for AI isn't flexible enough to respond to new demands without adding complexity.

#### Why IBM?

IBM Storage for Data and AI solutions are optimized for the AI journey and can help organizations streamline and transform data-intensive AI. HPC and large-scale analytics workloads into actionable insights. Additionally, they provide an AI information architecture with high-performance hybrid cloud data access and AI data modernization.

These solutions combine the global parallel file system of IBM Spectrum Scale and a container native storage interface with IBM Cloud Object Storage and IBM Spectrum Discover making hybrid cloud more accessible. With a massively scalable, globally

available enterprise container-native and flexible data service built on IBM software-defined storage (SDS), you can collect, organize, analyze and modernize AI-infused data across your enterprise to improve business outcomes. By providing advanced data management tools designed for speed and efficiency, these offerings can address skills gaps that would otherwise limit AI adoption across your organization, and help your enterprise better manage data volume and quality in a simpler and more efficient way.

The Mercedes-Benz Stadium is a destination venue for fans of major sports, concerts and other live events. IBM solutions provide a wide array of technologies integrated into a single, seamless, state-of-the-art system that provides fans with a unique, personalized experience that enhances the action on the field or stage. The system includes both on-premises and cloud-based IBM Storage solutions. IBM and Flagship Solutions Group created a powerful hybrid storage landscape built around IBM Elastic Storage Server with IBM Spectrum Scale, IBM FlashSystem 7200 and IBM Cloud Object Storage.

#### **Benefits**

Faster time to insights Unify data in a single global namespace

Accurate insights and analytics Employ a consolidated interface to more precisely manage data insights

*Increased efficiency and performance* Experience full use of graphics processing units (GPUs) with high throughput

*Optimized solutions for the AI journey* Provide storage solutions optimized for different stages of the AI journey

Scalable AI infrastructure Leverage the ability to start small and scale with virtually no limits

Enhanced data flow efficiency Reduce costs with built-in data life cycle management and policy-based optimization

Simplify data access Containerized for fast and easy deployment with container-native storage

#### Offerings

IBM Spectrum Scale IBM Cloud Object Storage **IBM Spectrum Discover** IBM Elastic Storage System® IBM Elastic Storage System 3000

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## Storage for Data and AI

Offerings

### **IBM Spectrum Scale**

IBM Spectrum Scale is an ideal foundation for building your AI journey and can deliver insights faster, while managing rapid infrastructure growth. IBM Spectrum Scale is now containerized and provides container-native storage access bringing simplicity and lower costs to data access for kubernetes and hybrid cloud applications. This solution helps support big data analytics, AI, machine learning and deep learning workloads along with traditional high-performance computing applications. IBM Spectrum Scale is designed to meet the demanding capacity, performance and data management needs of these workloads efficiently, reliably and with extreme scalability. The solution also includes in-place archive and analytics, data-aware intelligence, global collaboration and data integrity.

Learn more about IBM Spectrum Scale  $\rightarrow$ 

## **IBM Cloud Object Storage**

IBM Cloud Object Storage is designed to support exponential data growth with simplicity, high durability, security and efficiency for cloud-native and object-based workloads. This solution provides industry-leading software-defined hyperscale and cost-effective storage for data on the edge, the core data center, or the private or public cloud. With a unique shared-nothing parallel architecture, Cloud Object Storage can help you maintain and improve performance. As the solution grows from terabyte to petabyte or even to exabyte configurations, it's designed to never go down with geodispersed data protection. Commonly deployed as a storage solution for large data deployments with multiple concurrent applications or users, IBM Cloud Object Storage is also used for data archiving and backup for many traditional applications.

Learn more about IBM Cloud Object Storage →

### **IBM Spectrum Discover**

IBM Spectrum Discover is a data catalog and policy engine that helps organize the AI infrastructure and solve the data and AI puzzle faster. The software automatically and continuously catalogs or indexes objects and files from multiple sources in real time for exabyte-scale unstructured heterogeneous storage. It easily connects to IBM Cloud Object Storage, IBM Spectrum Scale, and many other data sources to rapidly ingest, consolidate, and index metadata for billions of files and objects. It can be used for faster AI analysis, compliance classification, image and video indexing and identifying personal data. Spectrum Discover is also used for AI data pipeline integration, real-time data discovery, and to provide new insights to optimize data and find bad or duplicated data.

Learn more about IBM Spectrum Discover →

#### Did you know?

Did you know? IBM Elastic Storage System 3000 is the one of the simplest ways to deploy IBM Spectrum Scale. Learn more about IBM Elastic Storage System 3000.

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## Storage for Data and AI

Offerings

### **IBM Elastic Storage System**

IBM Elastic Storage System (ESS) is a modern implementation of software-defined storage. The IBM Elastic Storage System 3000 and IBM Elastic Storage System 5000 make it easier for you to deploy fast, highly scalable storage for AI and big data. With the lightning-fast NVMe storage technology and industry-leading file management capabilities of IBM Spectrum Scale, the ESS 3000 and ESS 5000 nodes can grow to over YB scalability and can be integrated into a federated global storage system.

Learn more about IBM Elastic Storage System →

#### **IBM Elastic Storage System 3000**

IBM Elastic Storage System 3000 is a powerful data management solution that can speed time to value for AI, deep learning and high-performance computing workloads. It's designed to meet and beat the challenge of managing data for analytics. Using all Non-Volatile Memory Express (NVMe) storage this offering can help accelerate time to insights. Each 2U system delivers 40 GB per second of data throughput and is available in a wide range of capacities from tens to hundreds of terabytes. Capacity and throughput can be quickly and easily scaled by adding more servers to the system.

Learn more about IBM Elastic Storage System 3000 →

#### **IBM Elastic Storage System 5000**

IBM Elastic Storage System 5000 is the storage system for data lakes with market-leading performance, density and scalability. It combines the software-defined IBM Spectrum Scale storage with IBM POWER9® processor-based I/O-intensive servers. By consolidating storage requirements across your organization onto IBM ESS 5000 and the NVMe-based ESS 3000, you can reduce inefficiency, lower acquisition costs and support the demanding AI, HPC, analytics, or high-capacity storage requirements that are typical in the fields of healthcare, media, government or financial services. With IBM Spectrum Scale, you can eliminate data silos and bottlenecks, simplify storage management and get faster access to data.

Learn more about IBM Elastic Storage System 5000 →

#### Did you know?

IBM Elastic Storage System 3000 is one of the simplest ways to deploy IBM Spectrum Scale. Learn more about IBM Spectrum Scale.

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#### Challenges

Industry leaders are frustrated, trying to more easily manage storage and be ready for new workloads. Solutions need to have flash innovation, AI-infused management and data mobility on-premises and in the cloud.

#### Why IBM?

IBM Storage for hybrid multicloud environments creates a strategic storage foundation to help modernize existing storage infrastructure. While avoiding vendor and cloud-provider lock-in, enterprises can innovate and transition to a hybrid multi-cloud infrastructure with IBM solutions. Integrated with all-flash and hybrid storage systems, these offerings can scale up and scale down your storage capacity as application and data growth require.

**Orange Caraïbe** improved services for its different lines of business with a more eco-friendy, efficient and powerful data center using IBM FlashSystem storage technology. It gained twice the capacity and improved performance in a small, high-density footprint. This update resulted in a 94% drop in energy consumption, a decrease of 30% in processing times in the data warehouse, and freed up resources to work on innovative projects. Happier customers benefit from better and faster attention in stores. The right software platform is critical to the strategic storage choices your organization makes. IBM Spectrum Virtualize offer feature-rich, cost-effective, enterprisegrade storage solutions that support over 500 devices from a wide range of vendors, helping provide flexibility, cost efficiency and eliminating data silos.

With a unified set of tools, APIs and software, IBM FlashSystem addresses the entire range of storage requirements with one data platform extending enterprise functionality that works seamlessly across all deployment types—like bare metal, virtualized, container, and hybrid cloud—and support your existing storage, whether the storage is from IBM or other vendors.

Support for Red Hat Ansible, ensures IBM FlashSystem is ready for use in a hybrid cloud environment with automation to manage and provision storage resources in VMware, Windows, and Red Hat OpenShift or Kubernetes container environments.

IBM FlashSystem family simplifies storage for hybrid cloud. By combining enterprise-class software with AI-infused, cloud-based storage management and support, clients can experience many benefits across their hybrid cloud, including the following.

#### Benefits

#### Agility

Move data without disruption among storage systems and between on-premises and cloud environments regardless of vendor or provider having the right data or hardware

#### Bridge

Bring value to your legacy infrastructure, adapting to the shifts in technology from UNIX, Microsoft Windows or VMware to Linux®, Red Hat OpenShift, Kubernetes and containerized environments

#### Cloud

Deploy software capabilities and their application programming interfaces (APIs) across traditional and hybrid cloud environments

#### Data reduction

Save on infrastructure costs by extending data reduction techniques across all your existing storage hardware to help store more data

#### Encryption

Improve cyber resiliency by encrypting data at rest across all storage to help minimize the financial impact of cyber threats

#### Offerings

IBM FlashSystem family IBM SAN Volume Controller IBM Storage Insights IBM Spectrum Control IBM Spectrum Virtualize for Public Cloud IBM Spectrum Storage Suite IBM Storage Suite for IBM Cloud Paks IBM FlashWatch

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### IBM FlashSystem family

The IBM FlashSystem family is a portfolio of cloudenabled storage systems designed to be easily deployed and quickly scaled to help optimize storage configurations, streamline issue resolution and lower storage costs. IBM FlashSystem is built with IBM Spectrum Virtualize software to help deploy sophisticated hybrid cloud storage solutions, accelerate infrastructure modernization, address security needs and maximize value by leveraging the power of AI.

Тір

To help support hybrid cloud deployments, use IBM flash storage to deliver premier flash storage solutions with sophisticated functionality.

#### Entry enterprise IBM FlashSystem 5000

IBM FlashSystem 5015 and IBM FlashSystem 5035 are designed to provide enterprise-grade functionalities without compromising affordability or performance.

Built with the rich features of IBM Spectrum Virtualize and the AI-powered predictive storage management and proactive support of Storage Insights. IBM FlashSystem 5000 helps make modern technologies such as AI accessible to enterprises of all sizes.

Learn more about IBM FlashSystem 5000 →

#### IBM FlashSystem 5200

IBM FlashSystem 5200 is a compact costefficient, secure and dense solution with the power of NVMe that addresses infrastructure transformation in only 1U. This solution includes IBM Spectrum Virtualize features, AI-powered predictive storage management and proactive support.

Providing cloud storage capacity, FlashSystem 5200 uses AI to simplify management and affordability while enabling cloud applications in containers.

Learn more about IBM FlashSystem 5200 →

## Midrange enterprise IBM FlashSysetm 7200

IBM FlashSystem 7200 offers the advantages of end-to-end NVMe, the innovation of IBM FlashCore technology and SCM for ultra-low latency. This solution includes IBM Spectrum Virtualize features, AI predictive storage management and proactive support of Storage Insights in a powerful 2U system.

Bringing high-end capability for clients needing enterprise mid-range storage, FlashSystem 7200 allows you to easily add in the cloud technology that best support your business.

Learn more about IBM FlashSystem 7200  $\rightarrow$ 

#### Did you know?

IBM FlashSystem 5000, 5200 and 7200 are available as all-flash and hybrid flash models to suit different workload mixes.

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### **IBM FlashSystem family**

#### High-end enterprise IBM FlashSystem 9200

IBM FlashSystem 9200 combines the performance end-to-end NVMe with the reliability and security of IBM FlashCore technology and SCM for ultra-low latency. This solution includes IBM Spectrum Virtualize features, AI predictive storage management and proactive support by Storage Insights, all in a powerful 2U enterprise-class and fast storage all-flash array.

Providing intensive data driven cloud storage capacity, FlashSystem 9200 allows you to easily add in the cloud solutions that best support your most critical demands.

Learn more about IBM FlashSystem 9200 →

#### Did you know?

Clustering capability with IBM FlashSystem 5035, 5200, 7200 and 9200 enables you to add performance and capacity while maintaining the advantages of a single system to manage.

#### IBM FlashSystem 9200R

Based on IBM FlashSystem 9200, IBM FlashSystem 9200R is an IBM tested and validated rack solution designed for the most demanding environments.

IBM FlashSystem 9200R delivers all the same capability of FlashSystem 9200 with up to four systems clustered in a single rack. Dedicated switches support that clustering, separate from the general-purpose SAN.

FlashSystem 9200R is delivered assembled and IBM representatives complete installation and configuration, allowing you to confidently add technologies to your cloud solutions.

Learn more about IBM FlashSystem 9200R →

#### Tip

The IBM FlashSystem storage family and IBM Spectrum Virtualize come with support for Red Hat Ansible. Find out more about the Red Hat Ansible Collection for IBM Spectrum virtualize and FlashSystem.

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### **IBM SAN Volume Controller**

IBM SAN Volume Controller is an enterprise-class system that consolidates storage from over 500 IBM and third-party storage systems to improve efficiency, simplify management and operations, modernize existing storage with new capabilities, and enable a common approach to hybrid cloud regardless of storage system type. By helping effectively maximize the economics of massive volumes of data, SVC helps improve data value, increase data security, enhance data simplicity and enable 100% availability with HyperSwap.

Learn more about IBM SAN Volume Controller  $\rightarrow$ 

## **IBM Storage Insights**

IBM Storage Insights provides a single pane of glass to monitor your storage environments either on-premises or in the cloud. Storage Insights helps you manage complex storage infrastructures, make cost-saving decisions and streamline support. It combines IBM data management leadership with proprietary AI-based analytics from IBM Research®.

Learn more about IBM Storage Insights → Try the live demo → **IBM Spectrum Control** 

IBM Spectrum Control provides monitoring and analytics across multivendor file, object, block and software-defined storage, cloud storage and SANs.

IBM Spectrum Control helps simplify storage management through data-driven capacity planning, performance tracking and reporting that can help reduce costs.

Learn more about IBM Spectrum Control  $\rightarrow$ 

Tip

Upgrade to IBM Storage Insights Pro for more detailed information, additional capabilities and support for non-IBM storage.

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## IBM Spectrum Virtualize for Public Cloud

IBM Spectrum Virtualize for Public Cloud is comprehensive software for managing storage in the cloud. Together with IBM FlashSystem or SAN Volume Controller on-premises, it enables sophisticated hybrid cloud storage for data and application mobility, disaster recovery, cyber resiliency, DevOps and more. IBM Spectrum Virtualize for Public Cloud is available on IBM Cloud or Amazon Web Services (AWS).

Learn more about IBM Spectrum Virtualize for Public Cloud  $\rightarrow$ 

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## IBM Spectrum Storage Suite

IBM Spectrum Storage Suite gives you unlimited access to the IBM Spectrum Storage software family and IBM Cloud Object Storage software with licensing on a flat, cost-per-TB basis. This approach makes pricing easy to understand and predictable as capacity grows. Structured specifically to meet changing storage needs, the suite is ideal for organizations just starting out with SDS as well as those with established infrastructures who need to expand their capabilities.

Learn more about IBM Spectrum Storage Suite →

## IBM Storage Suite for IBM Cloud Paks

IBM Storage Suite for IBM Cloud Paks is based on members of the IBM Spectrum Storage family and open source Red Hat offerings. It's designed to deliver enterprise data services to container environments while enabling a faster, more reliable way to modernize and move to the cloud.

Learn more about IBM Storage Suite for IBM Cloud Paks  $\rightarrow$ 

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### **IBM FlashWatch**

The IBM FlashWatch program provides outstanding peace of mind for IBM FlashSystem and IBM SAN Volume Controller that gives you the confidence to purchase, own and upgrade your IBM storage.

#### High availability guarantee

Proven 99.9999% availability with an optional 100% guarantee when using HyperSwap deploved by IBM Lab Services

Data reduction guarantee 2:1 self-certified, up to 5:1 with workload profiling \*

#### All-inclusive licensing

All storage functions are included in the licensing cost for internal storage

#### *Comprehensive care*

Up to 7 years of 24x7 support, with 3 years Technical Advisor, enhanced response times and managed code upgrades

#### Cloud analytics

IBM Storage Insights provides monitoring, reporting, alerting, and troubleshooting for onpremises and cloud storage to detect configuration errors and alert users before they cause an issue

#### Flash endurance guarantee

Flash media is covered for all workloads while under warranty or maintenance

IBM Flash momentum Refresh your controller and storage every 3 years with full flexibility

#### Cloud-like pricing IBM Storage Utility pricing has monthly payments for only the storage you use

No-cost migration 90-day, no-cost data migration from over 500 storage systems, both IBM and third party

#### Learn more about flash storage guaranteess $\rightarrow$

#### Tip

To learn more about the full benefits of IBM FlashWatch for your IBM flash storage, contact your IBM representative or IBM Business Partner for full details.

#### \* Requires signed contract

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## Modern data protection

#### Challenges

Organizations struggle with the cost and complexity of protecting data as they embrace digital transformation, manage massive data growth, and the need for always-on services. VMs are ubiquitous, and containerized workloads are becoming more prevalent. Providing backup and recovery for physical, virtual and containerized workloads on-premises and in the cloud is critical to an organization's success.

#### Why IBM?

The IBM Modern Data Protection Portfolio unifies data protection for physical servers, VMs, applications, containers and cloud-based workloads. Service-level agreements (SLA)-based policies, role-based access control, and REST APIs automate data protection processes and ensure continuous data access for storage administrators, developers and data owners across the organization. Integration with Amazon S3 Glacier, Azure Archive, and IBM Cloud Object Storage enables cost-effective data retention. Locking down data on object storage using write-once-read-many (WORM) technology and air-gapping data on physical tape helps support cyber resiliency.

#### The Computational Medicine Center at Jefferson

is breaking new ground in the understanding of disease by analyzing huge amounts of biological data with the help of high-performance computing. Dr. Rigoutsos, the Founding Director, concludes: "The resilience of the IBM solution was tested a little over a year ago when an accident severed a large portion of our storage system. With IBM Spectrum Protect, we were able to bounce back with no data loss. In a relatively short time, we recovered years' worth of data, which had been generated by dozens of people in the Center. And, before long, we were again able to shift our attention back to our research work. Built-in automation, high availability features, and seamless integration between the different components made that possible."

#### Benefits

#### Lower costs

Minimize data retention costs with multiple simpler, efficient, flexible and cost-effective storage options

#### Speed data backup and recovery

Newer technologies are providing near-instant data recovery and a searchable global catalog of VMs, files, databases and applications

#### Simplify management

Reduce administrative burden by providing self-service data access and end-to-end SLA-based policies

#### Seamless integration with the cloud

Unify data protection for VMs, files, databases, applications and containers in hybrid cloud environments

#### Faster deployment

Accelerate deployment and lower maintenance with a virtual appliance and agentless architecture

#### Protect with a plan

Lockdown data with security-rich object storage, or air-gap data on tape storage as part of a comprehensive cybersecurity plan

#### Offerings

IBM Spectrum Protect IBM Spectrum Protect Plus IBM Spectrum Copy Data Management IBM Spectrum Archive IBM Tape Solutions

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## Modern data protection

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## **IBM Spectrum Protect**

IBM Spectrum Protect is a proven data protection solution for physical file servers, virtual environments and a wide range of applications. Thousands of organizations have benefited from its exceptional scalability, broad application support, cost-saving data reduction technologies, flexible data retention on tape and immutable object storage and built-in support for cyber resiliency.

Learn more about IBM Spectrum Protect  $\rightarrow$ 

## **IBM Spectrum Protect Plus**

IBM Spectrum Protect Plus is a modern data protection solution for VM's, databases, applications, file systems, SaaS workloads, and containers in hybrid cloud environments. SLA-based policies automate the entire data protection process, including data backup, replication and secure data retention on-premises and in the cloud. This data retention includes IBM Cloud Object Storage WORM cyber-resilient retention vaults. Role-based access control (RBAC) and REST APIs enable self-service data reuse and seamless integration with third-party tools and services.

Learn more about IBM Spectrum Protect Plus  $\rightarrow$ 

## IBM Spectrum Copy Data Management

IBM Spectrum Copy Data Management manages and orchestrates hardware snapshot copies of data. It makes copies available when and where users need them by cataloging and managing copy data across hybrid cloud infrastructure. Data owners can use a self-service portal to create the copies they need, enabling business agility. Copy processes and workflows, including data masking, are automated to ensure consistency and reduce complexity.

Learn more about IBM Spectrum Copy Data Management →

### **IBM Spectrum Archive**

IBM Spectrum Archive, a member of the IBM Spectrum Storage family, gives you direct, intuitive, and graphical access to data stored in IBM tape drives and libraries. IBM Spectrum Archive incorporates the Linear Tape File System (LTFS) format standard for reading, writing and exchanging descriptive metadata on formatted tape cartridges. Also, it eliminates the need for additional tape management and software to access data. Spectrum Archive offers three software solutions for managing your digital files with the LTFS format: Single Drive Edition, Library Edition, and Enterprise Edition.

Learn more about IBM Spectrum Archive →

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## Modern data protection

### Offerings

### **IBM Tape Solutions**

A simple and inexpensive modern data protection solution virtually impervious to cyberattacks exists from one of the oldest technologies in the data center—tape. The solution requires users to simply remove the tapes storing their data from their networks and stack the tapes on the nearest shelf. The "air gap" thus created between the data and troublemakers provides a complete cyber-resilient defense that effectively prevents penetration by hackers. Air gaps are just one of several types of data protection that tape can offer. IBM tape-based data storage solutions provide a wide range of data protection features, including data encryption and compression, cloud-based disaster recovery, key management and WORM technology.

#### High-end enterprise

IBM enterprise-class tape storage products are designed to offer the high performance, availability, reliability and capacity needed for mass storage, data archiving, data backup and disaster recovery.

IBM TS7700 Virtual Tape Library for mainframe environments → IBM TS4500 Tape Library for open environments →

#### Midrange enterprise

IBM midrange tape storage products can provide reliable and flexible data backup, archiving and management for today and into the future.

## IBM TS7700 Virtual Tape Library Rackless solution for mainframe environments $\rightarrow$

IBM TS4300 Tape Library for open environments →

#### Entry enterprise

IBM entry-level tape products provide reliable, affordable data backup and protection.

Learn more about IBM tape drives and autoloaders  $\rightarrow$ 

#### Did you know?

When treasuring heritage, IBM Spectrum Archive on tape is a scalable, cost-effective archive solution.

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## Storage for IBM Z

#### Challenges

Operating in a mission-critical hybrid cloud environment is a reality and a challenge for most enterprises today. Enterprises need seamlessly integrated cloud platforms that are highly available to position themselves for greater competitive advantage and lower costs.

#### Why IBM?

Storage for IBM Z<sup>®</sup> provides a comprehensive portfolio of enterprise storage solutions designed to match the mission critical capabilities of IBM Z, adding next-level performance, modern data protection, resiliency and always-on availability. These offerings help organizations maximize the potential of their mainframe environments across the hybrid cloud. Brazil is changing. Rapid economic development has spurred demand for sophisticated banking and insurance solutions. This shift has also created the need for a new way of banking, focused on consumers and their needs for always-on mobile services. Banco Bradesco is poised to meet these needs with an innovative, reliable and secure platform using IBM Z and IBM Storage systems.

IBM Z, in combination with IBM DS8900F, provides tools that enable Bradesco to offer a secure banking experience 100% of the time, including two-factor authentication. These solutions ensure security of confidential information. In addition, Bradesco uses 12 two-way grids of TS7700 tape libraries, each with 240 TB cache, connected to tape libraries.

#### Benefits

*Maximize mainframe performance* Optimize mainframe power across mission-critical, hybrid cloud environments

Speed up your cloud native app environment Accelerate tasks associated with developing, deploying and maintenance

Data encryption everywhere 100% data protection wherever it resides by extending z15 pervasive encryption

*Cyber resiliency* continuous enterprise protection despite user errors or ransomware attacks

*Business continuity* Provide the highest level of business uptime

*Flexibility* Flexible racked and rack mounted configurations for organizations of different sizes with different needs

#### Offerings

IBM DS8000 Storage systems IBM TS7700 Virtual Tape Library IBM Spectrum Scale

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## Storage for IBM Z

### Offerings

### IBM DS8000 Storage systems

#### IBM DS8900F family

IBM DS8900F is the next generation of enterprise data systems built with the most advanced POWER9<sup>™</sup> processor technology. Designed for data-intensive and mission-critical workloads, DS8900F adds next-level performance, data protection, resiliency and availability across your hybrid cloud solutions through ultra-low latency, better than seven 9's availability, transparent cloud tiering and advanced data protection against malware and ransomware.

Learn more about IBM DS8900F family →

#### High-end enterprise

This enterprise class storage solution provides superior performance and higher capacity, enabling the consolidation of all your missioncritical workloads in just one place.

#### IBM DS8950F 3D tour $\rightarrow$

#### Did you know?

IBM DS8900F can provide 100% data encryption at-rest, in-flight and in the cloud.

#### Midrange enterprise

This flexible storage solution can be integrated into IBM z15 model T02, IBM LinuxONE III model LT2, or existing racks, providing powerful enterprise capabilities at the lowest entry family cost.

#### IBM DS8910F 3D tour →

#### Тір

Help improve business efficiency by consolidating all your mission-critical workloads for IBM Z servers, IBM Power Systems and distributed systems under a single all-flash storage solution with more than 99.99999 (seven 9s) availability.

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## Storage for IBM Z

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## IBM TS7700 Virtual Tape Library

#### IBM TS7700 family

IBM TS7700 virtual tape library ensures that data is protected and accessible anywhere, anytime on mission-critical workloads. IBM is the leader in tape virtualization, and the flagship TS7700's virtualization engine provides unique capabilities that are specifically tied to how z/OS operates and how typical tape workloads operate.

With no additional software required for integration and full access to the proprietary tape library command set, the TS7700 offers 8 times redundancy in terms of the data that's produced, complete z/ OS-compliance from a DFSMS perspective, and full support for small- and large-scale data retention, backup and recovery. The TS7700 is the only in-market virtual tape library that also supports physical tape. This provides the added data protection of true, best-in-class air gap recovery, which is completely hacked proof. Additionally, the TS7700 is built with some of the most advanced POWER9 processors. These are the main reasons why 17 of the top 20 banks in the world use this storage technology for their core business operations.

Learn more about IBM TS7770 family → High-end enterprise

#### Did you know?

IBM TS7770 offers a cloud native experience using transparent cloud tiering for long-term data retention with the server-less direct data transfer from TS7770 to a cloud. This solution can protect data up to 8 times redundancy in the grid for continuous and maximum availability

#### IBM TS7770 3D Tour →

#### Midrange enterprise

This 19-inch customer-provided rack-mountable solution can help meet advanced storage needs with powerful capabilities at a lower cost.

IBM TS7770 rack-mountable solution 3D tour →

### **IBM Spectrum Scale**

IBM Spectrum Scale can deliver superior performance, while helping provide industryleading disaster-recovery capabilities and server-less direct data transfer to cloud environments. This offering can perform archive and analytics in place. By helping ensure securityrich, reliable and high-performance experiences, this solution can manage data and enable extreme scalability, data aware intelligence, global collaboration and data integrity.

Learn more about IBM Spectrum Scale  $\rightarrow$ 

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## Storage for SAP HANA

#### Challenges

Many SAP infrastructure leaders and application owners are concerned about migrating from traditional databases to an accurately sized SAP HANA in-memory database by 2027, without interrupting operations and data availability. Enterprises require persistent storage solutions that meet SAP HANA data demands deployed on premises, on SAP HANA cloud or across a hybrid cloud infrastructure. This helps IT leaders deliver on key performance indicators (KPIs) and SLAs for SAP applications running on SAP HANA.

#### Why IBM?

The IBM Storage portfolio includes a comprehensive set of SAP HANA Tailored Datacenter Integration (TDI)-certified solutions, to address the full range of data delivery, management, protection and budget requirements needed by modern enterprises. High availability configurations, integrated modern data protection capabilities and built-in cyber-resiliency features help address the ever-increasing demands for greater data availability in mission-critical SAP environments. Blanc und Fischer IT Services GmbH wanted to enable new, innovative business models across BLANC & FISCHER Family Holding. The company chose to optimize business operations by moving SAP Manufacturing Execution to SAP HANA on Red Hat Enterprise Linux, IBM Power Systems, IBM FlashSystem and IBM Spectrum Virtualize.

IBM and SAP have a long-standing relationship, with IBM receiving many SAP Pinnacle Awards over the years. IBM continues to develop award-winning data storage solutions that can accommodate and even accelerate SAP HANA advantages.

#### Benefits

#### Unparalleled flexibility

Implement smarter storage that scales easily and affordably, is simple to manage and can match the price, capacity and performance needs of any SAP HANA data demand

#### Increased resiliency

Eliminate SAP application downtime with a broad set of high availability, cyber resiliency and next generation data backup and recovery options for the most mission-critical SAP applications

#### Open standards

Ready your data infrastructure for any requirement with storage that can integrate easily and is designed for the complexities of hybrid cloud SAP HANA deployments

#### End-to-end synergy

Integrate with IBM Power System to deliver an SAP HANA-optimized data and compute infrastructure

#### Offerings

IBM FlashSystem family IBM Spectrum Protect IBM Spectrum Copy Data Management

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## Storage for SAP HANA

### Offerings

### IBM FlashSystem family

IBM FlashSystem family is a portfolio of SAP TDI-certified, cloud-enabled storage systems designed to be easily deployed and quickly scaled to help optimize SAP configurations, streamline issue resolution and lower storage costs. Built with IBM Spectrum Virtualize software to help increase the cloud readiness and mobility of data, and including Storage Insights for AI predictive storage management and proactive support, these solutions help accelerate infrastructure modernization, address security needs and maximize value of SAP HANA implementations.

## Entry enterprise IBM FlashSystem 5000

These highly flexible virtualized all-flash or hybrid storage solutions are designed for ease of use and provide advanced functions that help overcome SAP HANA storage challenges through increased performance, functionality and cost-efficiency.

Learn more about IBM FlashSystem 5000 →

#### IBM FlashSystem 5200

This NVMe all-flash, compact entry enterpriseclass storage solution is designed to deliver high performance that can lead to competitive advantage in SAP HANA environments.

Learn more about IBM FlashSystem 5200 →

#### Midrange enterprise IBM FlashSystem 7200

These systems provide the foundation for a cost-efficient, high-performance SAP HANA storage infrastructure, allowing you to accelerate analytics and insights by boosting bandwidth and slashing latency while minimizing costs.

Learn more about IBM FlashSystem 7200 →

## High-end enterprise IBM FlashSystem 9200

IBM FlashSystem 9200 combines the performance of end-to-end NVMe with the rich features of IBM Spectrum Virtualize. Providing intensive data-driven cloud storage capacity for SAP HANA instances, FlashSystem 9200 allows you to seamlessly integrate with cloud resources to best support your SAP application needs.

#### Learn more about IBM FlashSystem 9200 $\rightarrow$

#### IBM FlashSystem 9200R

**IBM Storage** 

services

Based on IBM FlashSystem 9200, IBM FlashSystem 9200R arrives assembled and IBM representatives complete installation and configuration, allowing you to confidently add technologies to your cloud solutions.

Learn more about IBM FlashSystem 9200R  $\rightarrow$ 

#### Did you know?

The FlashSystem family provides numerous measures to eliminate SAP application downtime with six 9s availability and active-active support designed to deliver peace of mind with the IBM FlashWatch guarantees.

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## Storage for SAP HANA

Offerings

### **IBM Spectrum Protect**

IBM Spectrum Protect can provide data protection for billions of SAP objects on physical file servers, applications and virtual environments. Use built-in data efficiency to help reduce backup infrastructure costs, migrate data on premises, off premises or in the cloud. Optimize existing investments for long-term data retention and disaster recovery of mission-critical SAP environments.

Learn more about IBM Spectrum Protect  $\rightarrow$ 

#### Did you know?

Moving to IBM Storage can reduce unplanned downtime by more than 4 hours per year over previous environments.

### IBM Spectrum Copy Data Management

IBM Spectrum Copy Data Management manages and orchestrates hardware snapshot copies of SAP HANA data. It makes copies available when and where users need them by cataloging and managing copy data across hybrid cloud infrastructure. Data owners can use a self-service portal to create the copies they need, enabling business agility. Copy processes and workflows, including data masking, are automated to ensure consistency and reduce complexity.

Learn more about IBM Spectrum Copy Data Management →

#### Did you know?

Automation features across the IBM Storage for SAP HANA portfolio reduce the effort needed from backup administrators by an average of 15%.

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#### Challenge

Providing developers with persistent self-service storage capabilities to deliver faster, more flexible application delivery continues to be a challenge for enterprises. DevOps and hybrid cloud applications require persistent storage. IT leaders need standard service catalogs that automate and orchestrate while accelerating application development, testing and delivery, and protecting data across hybrid cloud deployments.

#### Why IBM?

IBM Storage unifies traditional and container-ready storage and provides cloud-native agility, with the reliability, availability and security to manage enterprise containers in a production environment. As clients scale containerized applications beyond development, testing or departmental use, awardwinning IBM Storage delivers enterprise data services to containers. This means mission-critical infrastructure is now possible, delivering sharedstorage operational efficiency, price-performance leadership and data resource and storage protection. A key component of ZF Friedrichshafen AG's hybrid cloud strategy, the Hybrid Data Bridge is based on full virtualization and supports multiple providers in a public and private cloud. The Hybrid Data Bridge enables highly efficient transmission, storage and archiving of large amounts of data. Its cloud architecture is based on the hybrid cloud foundation RedHat OpenShift to create and scale containerized applications, which speeds up data reception and video transformation. IBM Spectrum Scale stores the data. A scalable, high-performance data and file management solution, it provides integrated information lifecycle tools that manage petabytes of data and billions of files. Choose between flash, disk, tape or cloud object storage based on timing and budget needs.

#### **Benefits**

Tight integration Deliver simplified deployment and management for an integrated experience

Higher enterprise availability and performance Harness six 9s data assurance and resiliency. and up to 2.5x higher throughput for DevOps and database workloads

#### Data protection

Automated enterprise back up and data reuse support for container environments

#### Simplify data access

Containerized for fast and easy deployment with container-native access

#### Infrastructure agility

Deploy a multi-compute architecture using Red Hat OpenShift and a storage portfolio with block, file and object storage for workload and infrastructure flexibility

#### Offering

IBM Storage for Red Hat OpenShift IBM Storage Suite for IBM Cloud Paks IBM FlashSystem family IBM DS8000 Storage systems IBM Spectrum Virtualize for Public Cloud IBM Spectrum Scale IBM Cloud Object Storage **IBM Spectrum Discover** IBM Spectrum Protect Plus

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Offerings

## IBM Storage for Red Hat OpenShift

Engineered to open standards, IBM Storage for Red Hat OpenShift delivers persistent storage bringing enterprise data services to containers. This enables customers to build and deploy enterprise class scale-out microservices applications where they couldn't before. This offering provides the infrastructure foundation and storage orchestration for a full-platform, on-premises hybrid cloud environment supporting the container storage interface (CSI) specifications while increasing productivity, security, enterprise availability and infrastructure agility.

Learn more about IBM Storage for Red Hat OpenShift →

### IBM Storage Suite for IBM Cloud Paks

IBM Storage Suite for IBM Cloud Paks is a flexible software-defined storage solution. The suite is made up of members of the IBM Spectrum Storage family, IBM Cloud Object Storage, and open-source offerings from Red Hat. This brings unprecedented flexibility for enterprise data services to all container environments. This solution provides a highly flexible, comprehensive set of SDS offerings to satisfy almost any size workload requirement regardless of the need for block, file or object storage data resources.

Learn more about IBM Storage Suite for IBM Cloud Paks  $\rightarrow$ 

## **IBM FlashSystem family**

The IBM FlashSystem family is a portfolio of cloud-enabled storage systems designed to be easily deployed and quickly scaled to help optimize storage configurations, streamline issue resolution and lower storage costs. These offerings support Red Hat OpenShift and Kubernetes container environments, accelerating deployment of persistent volumes with the IBM block storage CSI driver, certified by Red Hat and IBM.

Learn more about IBM FlashSystem family  $\rightarrow$ 

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Offerings

## IBM DS8000 Storage systems

#### IBM DS8900F family

IBM DS8900F is the next generation of enterprise data systems built with the most advanced POWER9 processor technology. Designed for data intensive and mission-critical workloads, IBM DS8900F provides persistent storage for mission-critical containers with support for Container Storage Interface (CSI). IBM DS8900F also supports IBM Cloud Pak solutions to enhance and extend the functionality and capabilities of Red Hat OpenShift. These solutions are designed to give you an open, faster and more secure way to move core business applications to the cloud and containerbased deployments. Additionally, it provides nextlevel performance, security and resiliency across your hybrid cloud solutions through ultra-low latency, better than seven 9s availability, transparent cloud tiering and advanced data protection against malware and ransomware.

Learn more about IBM DS8900F family →

### IBM Spectrum Virtualize for Public Cloud

IBM Spectrum Virtualize for Public Cloud is the public cloud-based counterpart of the software at the heart of IBM FlashSystem, IBM Spectrum Virtualize.

Existing data center architectures must be modernized, providing a single data fabric on a cloud native architecture such as Red Hat OpenShift that can extend existing infrastructure into the latest AI and public cloud environments. The data fabric can provide a single control point with consistent enterprise-class performance and management, and a consistent user experience between on-premises clouds or public clouds like AWS and IBM Cloud. IBM Spectrum Virtualize for Public Cloud and IBM FlashSystem are container-ready storage for Red Hat OpenShift that can free enterprises from silos and modernize their current infrastructure through virtualization.

Learn more about IBM Spectrum Virtualize for Public Cloud →

### **IBM Spectrum Scale**

IBM Spectrum Scale is a high-performance, parallel file system for managing unstructured data for cloud, big data, analytics, objects and more. It offers a full-featured set of file data management tools, including advanced storage virtualization, global collaboration for dataanywhere access that spans storage systems and geographic locations, and intelligent storage tiering. IBM Spectrum Scale is now containerized and provides container-native storage access bringing simplicity and lower costs to data access for Kubernetes and hybrid cloud applications. It's designed to support a wide range of application workloads at scale using a variety of access protocols and has been proven extremely effective in large, demanding environments.

Learn more about IBM Spectrum Scale →

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## **IBM Cloud Object Storage**

IBM Cloud Object Storage is a highly scalable cloud storage solution for unstructured data that provides both on-premises and cloud-based optimized application and container-based solutions. IBM Cloud Object Storage enables enterprises to store and manage massive amount of data more efficiently and securely, with 15-nines of system reliability and accessibility from any location. IBM Cloud Object Storage uses an innovative concurrent parallel access approach for cost-effectively storing large volumes of unstructured data. It delivers the capabilities required to provide continuous data with no downtime or data migrations. Customers can start with less than 100 TB and grow to hundreds of PB or even to EB configurations.

Learn more about the IBM Cloud Object Storage solution story  $\rightarrow$ 

### **IBM Spectrum Discover**

IBM Spectrum Discover is a data catalog and policy engine that helps organize the AI infrastructure and solve the data and AI puzzle faster. It continuously catalogs or indexes objects and files from multiple sources in real time for exabyte-scale unstructured heterogeneous storage. IBM Spectrum Discover can be easily deployed in Red Hat OpenShift environments making its deployments more portable and flexible across clouds and in any environment supported by OpenShift. Red Hat OpenShift Container Storage is now integrated with real-time ingest into Spectrum Discover to help organize data in containerized environments..

Learn more about IBM Spectrum Discover →

### **IBM Spectrum Protect Plus**

IBM Spectrum Protect Plus delivers an all-in-one data protection solution that provides an easy to use interface to manage VM's, databases, applications, file systems, SaaS workloads, and containers in hybrid cloud environments. Features include automated enterprise backup and data reuse support for containers. IBM Spectrum Protect Plus also provides the ability to store container data in security-rich, immutable IBM Cloud Object storage or air gap data using IBM tape, using IBM Spectrum Protect for increased cyber resilience.

Learn more about IBM Spectrum Protect Plus →

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## Storage networking

#### Challenge

Organizations of all sizes are challenged with efficiently managing their expanding volumes of data, while making this data accessible across the entire enterprise. IT leaders are making storage a strategic investment priority to better enhance flexibility and scalability.

#### Why IBM

IBM SAN solutions help create smarter data centers by connecting servers and storage with a high-speed and intelligent network fabric. By implementing IBM SANs, the leading storage infrastructure, clients can achieve improved economics of IT.

IBM has one of the industry's broadest range of offerings and IBM SAN solutions support virtualization, hybrid cloud and big data requirements.

With data volumes growing after the introduction of new digital services, the General Treasury of the Kingdom of Morocco (TGR) set out to ensure that it could recover critical data quickly if a system failure ever occurred.

To increase storage capacity and backup performance, TGR deployed two IBM Storage arrays in each of its three data centers—two located at its Rabat headquarters and a third in Tangier. TGR also uses IBM Storage Networking SAN24B-6 switches to connect its storage devices, with two switches installed in each of its three environments.

By simplifying and consolidating infrastructure management, IBM solutions can provide an operating environment that's designed to be smarter, faster, greener, open-source and easy to manage.

#### Benefits

*Flattened and converged data network* Use an open, standards-based approach to implement the latest advances in the data center network

#### Unified fabric architecture

Deploy a high-speed, low-latency, unified fabric architecture across your hybrid cloud infrastructure

Optimized and automated virtualization

Advance virtualization awareness and help reduce the cost and complexity of deploying physical and virtual data center infrastructures

Simplified and consolidated infrastructure management Employ data center networks that are designed to be easily deployed, maintained, scaled and virtualized

#### Offerings

SAN b-type family SAN c-type family

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## Storage networking

### Offerings

## SAN b-type family

## Entry enterprise **Extension switch models**

These SAN extension switches can deliver capabilities ranging from connecting heterogeneous SAN fabrics, to enabling distance extension using Fibre Channel over Internet Protocol and help address disaster recovery, performance.

IBM System Storage SAN18B-6 → IBM System Storage SAN42B-R →

#### Did you know?

Compliment IBM Z mainframes by offering the industry's fastest, most reliable, and scalable FICON infrastructure, along with unique, innovative features—all of which help deliver the greatest ROI. Gen7 Directors with b-type extension enhances overall IBMs cyber resiliency initiatives. Read the ESG Report.

## Entry and midrange enterprise SAN switch models

These SAN switches are designed to provide affordable and scalable solutions for small and midsized businesses.

IBM Storage Networking SAN128B-6  $\rightarrow$ IBM Storage Networking SAN96B-5  $\rightarrow$ IBM Storage Networking SAN64B-7  $\rightarrow$ IBM Storage Networking SAN64B-6  $\rightarrow$ IBM Storage Networking SAN24B-6  $\rightarrow$ 

#### High-end enterprise SAN director switch models

Enterprise SAN directors can provide increased capacity, greater throughput and higher levels of resiliency for large enterprises.

IBM Storage Networking SAN512B-6 and IBM Storage Networking SAN256B-6 → IBM Storage Networking SAN512B-7 and IBM Storage Networking SAN256B-7 → Resources for SAN b-type family:

ESG Technical Validation: Optimizing Oracle Database Efficiency and Performance with 32G End-to-end NVMe  $\rightarrow$ 

ESG Technical Validation: Solve Cyber Resilience Challenges with Storage Solutions  $\rightarrow$ ESG White Paper: Maximizing Performance and Security of IBM Z Replication Solutions  $\rightarrow$ IBM Redpaper: Introduction to Storage Area Networks  $\rightarrow$ 

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## Storage networking

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### SAN c-type family

#### Entry enterprise SAN switch model

The entry-level SAN switch model helps organizations deploy cloud-scale applications and deliver flexibility through a unique port expansion module designed to increase cost-effectiveness.

IBM Storage Networking SAN32C-6 →

#### **Extension switch model**

The extension switch model is an optimized platform that can deploy high-performance and cost-effective connectivity for open systems and mainframe environments.

IBM Storage Networking SAN50C-R  $\rightarrow$ 

#### Midrange enterprise SAN switch models

These SAN switch models are designed to address the requirements for a scalable and virtualized SAN infrastructure.

IBM Storage Networking SAN96C-6 → IBM Storage Networking SAN48C-6 →

#### High-end enterprise SAN director switch models

SAN director switch models are designed to provide the highest availability and scalability when deployed across large-scale storage networks.

IBM Storage Networking SAN768C-6  $\rightarrow$ IBM Storage Networking SAN384C-6  $\rightarrow$ IBM Storage Networking SAN192C-6  $\rightarrow$ 

#### Did you know?

SAN50C-R is an ideal solution for depart-mental and remote branch-office SANs, with its compact form factor and advanced capabilities, normally available on director-class switches exclusively.

In conjunction with the IBM Storage Networking SAN384C-6 Director, SAN50C-R is also a solution for large-scale SANs.

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## Converged infrastructure

Help deliver extraordinary efficiency, performance and economics

#### Challenge

With constrictive budgets and resources, providing IT solutions that enable enterprises to easily and cost-effectively scale computing, network and storage capacity is a difficult task for IT leaders.

The right converged solution can provide preconfigured and pretested solutions that help deliver faster returns on investment through reduced overhead, lowered TOC and simplified scalability.

#### Why IBM

VersaStack solutions harness the innovation of IBM Storage and the power of Cisco compute and networking to help address the latest IT trends, such as data center modernization, AI, hybrid cloud and SDS. Arizona State Land Department generates revenue for the state's education services—yet sluggish information access threatened to drag efficiency downwards. To boost performance and enable mobile access to business-critical data and tools, the department deployed VersaStack from IBM and Cisco, including IBM Storage.

The new platform delivers the speed, agility and efficiency that the department was seeking, enabling it to provide IT services as rapidly as staff across various business units need them. By adding compute, network and storage resources as needed, clients can access resource options to scale infrastructure up or down while helping support current functionality and decrease TCO.

#### Benefits

Simple and flexible deployment model Fewer components to manage without requiring infrastructure modifications

*Higher performance and efficiency* Faster input/output response times complete more work from each server

#### Availability

Help ensure applications and services availability at all times with no single point of failure

#### Manageability and extensibility

Ease deployment of ongoing management to minimize operating costs with support for various applications and configurations

#### Scalability

Expand and grow with significant investment protection

#### Compatibility

Minimize risk by ensuring compatibility of integrated components

#### Offering

VersaStack VersaStack for Hybrid Cloud

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## Converged infrastructure

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### VersaStack

Jointly developed by IBM and Cisco, VersaStack solutions help drive data center efficiency, boost performance and deliver dynamic resource allocation.

VersaStack solutions combine a comprehensive set of converged infrastructure and software-defined technologies from IBM and Cisco to help organizations accelerate digital transformation.

Learn more about VersaStack  $\rightarrow$ 

Tip

One of the key benefits of the IBM converged infrastructure solution, VersaStack, is that it can provide enterprises the ability to maintain consistency in both scale-up and scale-down models for greater performance and capacity.

## VersaStack for Hybrid Cloud

VersaStack for Hybrid Cloud can provide the flexibility to choose the best deployment option for a wide variety of enterprise IT workloads while freeing up resources in the data center for new-generation applications and cognitive workloads.

This solution is designed to help enable enterprises easily and cost-effectively scale compute, network and storage capacity as needed.

Download the data sheet  $\rightarrow$ 

#### Did you know?

VersaStack for Hybrid Cloud uses simplified architecture and validated design to help reduce deployment time, increase asset use, and decrease capital and operating expenses.

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# IBM Services for storage

## Experience 24x7 support across your enterprise

As IBM clients move towards the next chapter of digital transformation, IBM can provide the resources your team needs to support the reinvention of your organization through scalable AI and a security-rich hybrid cloud infrastructure. IBM works with you to integrate solutions designed for your needs that transform your business into a cognitive enterprise and provide 24x7 support across various service providers. IBM can deliver deep technological expertise and rich industry insight to help you align your IT and business objectives with the following services:

## Technology consulting and services for enterprises

Expertise and innovative technology that enable digital transformation.  $\rightarrow$ 

Create a strong foundation for your hybrid

cloud environment with private cloud





#### Single-source technology support services for hybrid IT environments

Managed private cloud IaaS

infrastructure management. →

Keep mission-critical systems running smoothly, including hardware and software from IBM and other OEMs. →



#### IBM Solutions for Server, Storage, Middleware and Service Management

Plan, implement and optimize IT infrastructure and service management. →



#### **IBM Business Resiliency Services**

Enable resilient models to mitigate risks and ensure business continuity. →



#### **IBM Systems Lab Services**

Infrastructure services to help you build the foundation of a smart enterprise. →



#### IBM Garage

A faster route to IT innovation with technical experts and the IT infrastructure to unlock your business' potential. →

#### IBM Global Financing

Flexible payment solutions for IBM and Red Hat products and services. →

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#### — Steve McDowell

Senior Technology Analyst covering storage technologies at Moor Insights & Strategy



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