





IBMSpectrum Protect provides scalable data protection for physical file servers, applications, and virtual environments. Organizations can scale up to manage billions of objects per backup server. They can also reduce backup infrastructure costs with built-in data efficiency capabilities and migrate data to tape, public cloud services and on-premises object storage. IBMSpectrum Protect can also be a data offload target for IBMSpectrum Protect Plus, providing ability to leverage your existing investment for long-term data retention and disaster recovery.



## Simplified backup administration

Backups can be managed by IBM Spectrum Protect Operations Center, VMware vSphere Client or third-party software. IBM Spectrum Protect Operations Center delivers breakthrough visibility and ease of use for backup administrators, reducing the level of expertise required. Server administrators can restore individual virtual machines from the VMware vSphere Client or launch the IBM Spectrum Protect VMware graphical user interface to schedule, monitor and perform backups.

IBM Spectrum Protect blueprints and configuration scripts are designed to help reduce deployment time and guesswork by automating deployment steps and integrating best practices for small, mid-sized and large environments.

Simplified solution bundles – such as IBM Spectrum Protect Suite and IBM Spectrum Storage Suite – help clients get up and running fast with easy-to-manage licensing for IBM Spectrum Protect that includes snapshots and popular backup agents for virtual environments, databases, email and enterprise resource planning.

## Built-in cloud integration

Backup to the cloud or backup in the cloud is simple, secure and cost-effective with IBM Spectrum Protect. IBM Spectrum Protect container storage pools enable external cloud and object storage without additional hardware or gateways on popular cloud environments such as IBM SoftLayer, IBM Cloud Object Storage, Amazon Simple Storage Service (Amazon S3), and now Microsoft Azure Blob storage. These container storage pools include in-line deduplication for efficient use of space and bandwidth as well as encryption to ensure that your data is secure.

IBM Spectrum Protect also provides Representational State Transfer (REST) application programming interfaces (APIs) and OpenStack backup drivers. Front-safe portal software, available from IBM, enables multi-tenancy, on-boarding and billing for IBM Spectrum Protect. IBM Resiliency Services and IBM Business Partners offer a number of cloud-based data protection solutions for pay-as-you-go backup and recovery in the cloud.<sup>2</sup>

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*IBM Spectrum Protect Operations Center provides an advanced visual dashboard, built-in analytics and integrated workflow automation features to dramatically simplify backup administration.*

## Reduced backup infrastructure costs

IBMSpectrum Protect can help users save up to 53 percent<sup>1</sup> in backup infrastructure costs. Savings are typically found in storage media, backup servers, data center floor space, power and cooling. IBMSpectrum Protect high-performance deduplication, compression and incremental forever capabilities work together to reduce backup storage requirements.

IBMSpectrum Protect efficiency capabilities are enabled entirely in software. Additional hardware-based appliances aren't needed for deduplication, encryption, network acceleration or cloud access.

For maximum cost flexibility, IBMSpectrum Protect enables a broad choice of storage options for backup data, including flash, disk, tape, object stores and public clouds.

## Scalable performance

Organizations of all sizes need advanced data-protection capabilities. Organizations with fewer than 50 managed servers or less than 100 terabytes of backup data can choose specially priced IBMSpectrum Protect entry-level solution bundles.

IBMSpectrum Protect servers can expand to manage billions of objects per server, so there is less disruption and complexity as backup workloads grow.

As data grows, IBMSpectrum Protect backups can be augmented with advanced agents and snapshots that can reduce backup and restore times for large applications and virtual machines. For example, IBMSpectrum Protect Snapshot can back up 500 VMware virtual machine images





## Virtualized, software-defined infrastructures

IBMSpectrum Protect for Virtual Environments and IBMSpectrum Protect Snapshot can back up and restore data residing in virtual, software-defined environments without negatively impacting applications and operations that share the underlying physical resources. IBM offers a choice in data protection options, including incremental forever backups and hardware-assisted snapshots.

## Flexible restores

Flexible recovery options in IBMSpectrum Protect are designed to simplify common restore requests, including:

- Self-service restore portal, initially for VMware data
- Individual item, database, volume-level, and data store restores from snapshots
- Near-instant access to backup data for Microsoft Windows and Linux Intel-based servers and Windows workstations
- Snapshot copying, browsing and recovery
- Automatic restores from an alternate backup server, if the primary backup server is unavailable
- Simplified disaster-recovery audits, recovery simulators and guided recovery from disasters

## Multi-site replication

IBMSpectrum Protect Extended Edition enables backup data to be replicated on an incremental, scheduled or per-client basis from one IBMSpectrum Protect server to another. Replication is policy-driven, so on-site and off-site retention policies can be different. Plus, replication can be performed with deduplicated data, which improves network efficiency. It can also be scheduled during relatively quiet times to help reduce the impact on production applications.

In replicated environments, a remote IBMSpectrum Protect server can be used as a hot standby. Alternatively, two active IBMSpectrum Protect servers can replicate to each other. A single replication target can be used to consolidate data from multiple active IBMSpectrum Protect backup servers.



<sup>1</sup> Based on IBM assessments using Butterfly Software.

<sup>2</sup> IBM Cloud Managed Backup services can be found here: [ibm.com/services/us/en/it-services/business-continuity/cloud-managed-backup](https://ibm.com/services/us/en/it-services/business-continuity/cloud-managed-backup); IBM Business Partners offering IBM Spectrum Protect-based cloud services can be found here: [ibm.com/partnerworld/wps/servlet/ContentHandler/!sv\\_com\\_dvm\\_tivoli\\_BackupByTSM](https://ibm.com/partnerworld/wps/servlet/ContentHandler/!sv_com_dvm_tivoli_BackupByTSM)

<sup>3</sup> Performance based on IBM measurements in a controlled environment.



Advantages of IBM data protection for virtual machines

Feature	Benefits	VMware	Hyper-V
Auto-discovery of new virtual machines	Helps ensure that all data in the virtualized environment is protected		
Self-service restore portal	Enables data, server and application owners to easily recover their data		
Item-level recovery	Enables fast recovery of individual files, Microsoft Exchange mailboxes, emails and Microsoft SQL Server databases		
Application-consistent backup and recovery	Helps ensure complete application backups and simplifies restore processes		
Copy management	Enables a single virtual-machine snapshot to be used for data recovery, testing, development, etc.		
Integration with hardware snapshots	Enables faster snapshots with less impact on application performance		
Incremental forever backups	Reduces the need for extra backup system capacity		
Data deduplication	Enables high-performance space reduction on the virtual machine or backup server		
Nondisruptive file-acs			





## IBMSpectrum Protect at a glance

### Backup server components

IBM Spectrum Protect - Automates data backup and restore functions, supports a broad range of platforms and storage devices, reduces the data storage footprint and maintains a catalog of protected data

IBM Spectrum Protect Plus - Provides near-instant recovery, replication, reuse, and self-service for virtual machines, databases, and applications in hybrid multicloud environments

IBM Spectrum Protect Extended Edition - Adds disaster-recovery management, node replication, network data management protocol (NDMP) backup and large tape library support

IBM Spectrum Protect Operations Center - Provides an at-a-glance view of the IBM Spectrum Protect environment, which simplifies reporting and enables faster problem resolution; included with IBM Spectrum Protect

IBM Spectrum Protect High Speed Data Transfer - Improves throughput over high latency, high-packet-loss wide area networks

IBM Spectrum Protect for Data Retention - Enables long-term record retention with flexible hold and release processing

IBM Spectrum Protect for SAN - Enables SAN-attached IBM Spectrum Protect servers and user systems to use Fibre Channel connections to storage systems for data backup

Front-safe Cloud Portal - Enables multi-tenancy, on-boarding, and billing for IBM Spectrum Protect

Backup agent for virtual environments and core applications - Enables high-performance, online backups and flexible restores, which can increase application availability

IBM Spectrum Protect for Virtual Environments - Works with VMware and Microsoft Hyper-V virtual servers and hosted applications

IBM Spectrum Protect for Mail - Works with IBM Domino and Microsoft Exchange

IBM Spectrum Protect for Databases - Works with Oracle and Microsoft SQL Server; IBM DB2 and IBM Informix include IBM Spectrum Protect backup agents

IBM Spectrum Protect for Enterprise Resource Planning - Works with SAP and SAP HANA

DocAve Backup and Restore for Microsoft SharePoint Backup - Works with Microsoft SharePoint

OpenStack IBM Tivoli Storage Manager backup driver - Included in OpenStack distribution

### Snapshot management

IBM Spectrum Protect Snapshot - Enables application-aware, virtual machine-aware, hardware-assisted snapshot backup and recovery management for most major IBM and non-IBM storage systems

Rocket Device Adapter Pack for IBM Tivoli Storage FlashCopy Manager - Expands IBM Spectrum Protect



[IBMSpectrum Protect solution bundles at a glance](#)



## Why IBM?

IBM data protection solutions offer a simplified user experience that helps deliver superior business outcomes. IBM is using applied analytics to make backup and storage management software more intelligent, so users can deliver global data availability. IBM continues to innovate, bringing first-to-market capabilities built on a solid foundation of trusted technology to increasingly complex backup and recovery environments.

## For more information

To learn more about IBM Spectrum Protect, including platforms supported and system requirements, contact your IBM representative or IBM Business Partner, or visit:

[ibm.com/systems/storage/spectrum/protect](https://ibm.com/systems/storage/spectrum/protect)



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