IBM.

IBM's Powerful Foundations of Modern Data Protection

Highlights

- Advanced capabilities to address the challenges of today's world

- Data backup, recovery, retention and reuse for hybrid cloud environments

- Near instant recovery anywhere, anytime.

- Native support for tape and immutable object storage

- Simple and easy to deploy in containerized or virtualized environments

- Efficient data reuse for DevOps, analytics and reporting

- Increased automation with end-to-end SLA-based policies

Standing above the rest

The evolution of data protection with IBM sees data protection strategies transform from functional two-way *backup* and *restore* paradigms to something much more cost-efficient, multi-directional, dynamic, and resilient. In addition, enterprise data protection strategies that empower organizations with insights to enable responsive agility cut directly to the edge of modern data protection.

It is because there is a lot more to consider in today's world when it comes to data recovery that IBM's modern data protection strikes the right balance. The requirement to solve the backup and recovery needs for exponential data growth while simultaneously empowering organizations with the five foundations of modern data protection for a digital transformation in today's world is what makes IBM's solutions hit the target and make the difference.
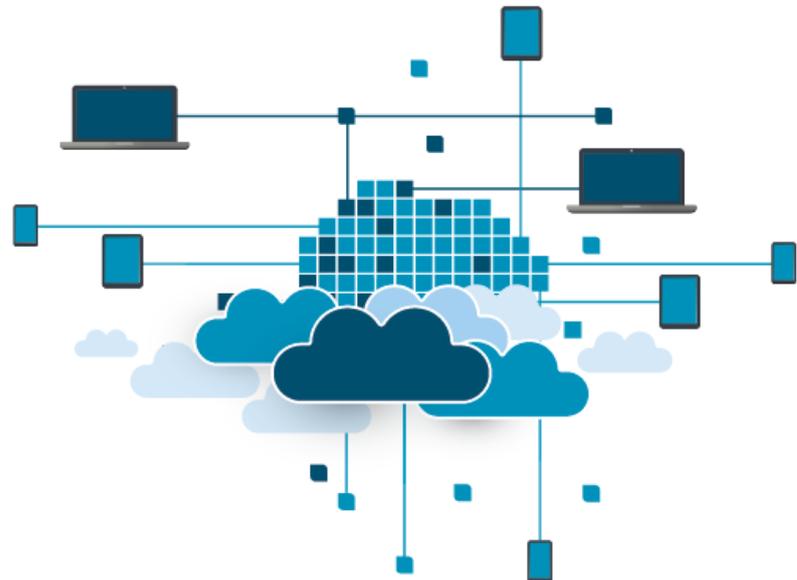
Modern data protection in today's world

As data management evolves, recovery must go further and add new depths. Operational recovery from cyberattacks and disasters is a must for business continuity. In addition to that, modern organizations need to recover data for data reuse for multiple and strategic business purposes. Reusing stores of data for DevOps, analytics, and reporting adds depths of insight for data management, often making the difference for organizations who strive for success.

Our continuing reliance on data and how it can be used to inform our strategic business direction are central to competitive survival. IBM's modern data protection continues to evolve with technology trends in order to provide solutions that go beyond the *backup and restore* paradigm. Built on the five foundations of modern data protection, IBM's solutions enable organizations to reach forward with cost-efficiencies, performance realization, hybrid cloud, containerized workloads, cyber resiliency, and business agility.

> *"The functionality of IBM Spectrum Protect Plus is indispensable. As our environment grows, we've been adding new functions and using the solution in different, innovative ways."* — Aki Kemppi, Group IT Manager, Huhtamaki Oyj

https://www.ibm.com/case-studies/huhtamaki

IBM evolves for your success

In 2019, practitioners ranked data protection modernization in the top-five of the most critical IT strategic priorities for business. With modernization comes an expectation that expense is reduced and that cost-efficiencies can be met[1].

IBM listened and developed a modern data protection solution based on five key foundations that offer secure self-service, insightful data reuse, solutions that cater to hybrid cloud capabilities and containers.

Five reasons to modernize with IBM's modern data protection

Foundation 1: Financial savings

Organizations need to care about cost for survival. IBM's modern data protection solutions establish cost as one of the foundations of its solutions such that organizations can architect solutions with storage efficiencies to help reduce costs. With modernized architectures, storage efficiencies, performance tuning, and process improvements are part and parcel of the cost management benefits that organizations can enjoy. Here's how:

Capital Expense:

IBM's data protection solutions adopt storage efficiencies so that you can reduce your overall capital expenditure as data grows. Incremental forever, compression, and deduplication, provide intelligent policy-driven data management that helps reduce the overall expenditure for data management. Also, automated protection that includes automated tiering helps reduce the overall cost of storage, and the capacity required for data protection. IBM's modern data protection solutions are quicker, easier, and cheaper than other solutions on the market.

IBM's data protection solutions modernize the structure of data protection allowing storage efficiencies cut through day-to-day operational expenses.

Additionally, the cost of managing enterprise data is reduced with Role-based Access Control (RBAC) and secure self-service.

In summary, operational modernizations that can save money and add value with IBM's modern data protection are as follows:

- Easy deployment as a virtual machine in a virtual environment.

- Integration of the automation process and orchestration to save cost of repetitive manual tasks associated with legacy backup solutions.

- Ensuring that the required people who manage data protection have the correct access controls with RBAC and secure self-service capabilities. This capability ultimately enables people to run administrative tasks, saving organizations time and money, and removing blockages in the workflow.

- Tailored deployments designed to fit your business now and in the future with RESTful API and industrial blueprints.

- Intelligent policy management so that data lives on the most appropriate storage tier allows organizations to build data storage strategies that fit their budgets.

- With enviable recovery objectives, IBM data protection technology operates at scale requiring fewer servers and less complexity, so that it is easier to manage enterprise environments. With this reduction in complexity comes easier management and lower costs.

"With the IBM solution, we have the flexibility to use disk or cloud as secondary storage instead of tape and can schedule automatic backups in line with our data protection policies. Thanks to Spectrum Protect Plus, we expect to complete backup jobs 75 percent faster than previously, cutting the time taken from eight to just two hours." — Daniel Tjandra, IT Division Head, PT Wings Surya

https://www.ibm.com/case-studies/pt-wings-surya-systems-software-recovery

Foundation 2: Performance at scale

IBM modern data protection solutions place enterprise recovery plans from either traditional or emerging threats to center stage. Organizations cannot predict when an attack *will* occur and often cannot confirm the exact time when an attack *has* occurred. The requirement for near-instant Recovery Time Objectives (RTO) is critical to business continuity in an environment where threats are frequent and costly. Organizations need the flexibility to recover any version they need, anywhere, and at any time. With the IBM data protection portfolio, data is stored in native format so that any data version can be recovered almost instantly for any use case, in any location.

Global search catalog

As well as achieving rapid Recovery Point Objective (RPOs) and Recovery Time Objectives (RTOs) with minimal disruption to business continuity, IBM's data protection solutions provide organizations with a global catalog of backed-up copies that helps organizations to minimize time-to-recovery, keeping the business moving at the speed it needs to.

Objectives to meet organizations' needs

Version Recovery Objectives (VROs) provide organizations with robust cyber resilience recoveries from attacks that can be undetected in environments for any amount of time before becoming active. They are also useful for recovering and reusing a specific version of data that can be used to build an application.

Geographic Recovery Objectives (GROs) enable recovery to anywhere a client needs to recover to for any business use case. GROs built into IBM's modern data protection solutions enable data replication to anywhere in the world for that extra safety net if you need to recover to an entirely different geography from a disaster with the loss of your data. In other cases, an international administrator may need access to the latest copies of the data for DevOps, reporting, or analysis.

Foundation 3: Hybrid cloud and container workloads

As business strategy evolves to move to cloud-based solutions with born on the cloud applications and containerized workloads, IBM's data protection helps organizations to build strategies that embrace and protect these new workloads. IBM's solutions give organizations the same level of protection they are accustomed to, with added flexibility, agility, and ease of use with hybrid cloud.

Organizations that are modernizing

The IBM data protection portfolio supports organizations that have modernized their infrastructures with hybrid cloud, IBM Cloud, Amazon, and Azure. As more providers are added, companies that have developed hybrid infrastructures can continue to rely on a modern data protection strategy that they can trust.

Organizations that are planning to modernize

IBM's solutions help organizations along their journey to cloud, working with the infrastructures that are already in place in many organizations. Organizations that develop hybrid storage strategies come to trust datacenter controls that can work with scalability that can be achieved off-premises and in cloud storage. Clients have the flexibility to run applications where they want, and can adopt flexible backup strategies for their applications.

> "We recently restored a 2.5 TB VM in less than three minutes with Spectrum Protect Plus. Since the user had rapid access to the data they needed promptly, they were able to focus on serving citizens." — Bryan Holmes, Team Lead of Backup and Recovery Services, Office of Information Technology, Ohio Department of Administrative Services, State of Ohio

https://www.ibm.com/case-studies/state-of-ohio-systems-software-data-recovery-data-availability

The benefits of hybrid

One of the key advantages of adopting hybrid cloud with IBM's modern data protection is the flexibility that it offers. It helps organizations break away from a one-size-fits-all design to one that flexes to best fit the client's environment with supported workload requirements. Organizations can then realize business agility and flexibility to choose to cloudburst workloads from on-premises to public or private cloud infrastructures while managing everything as one unified infrastructure. This ease of management renders the job of managing applications and workloads in multiple virtualized machines across large organizations much less complex, costly and onerous.

IBM's modern data protection supports containerized workloads

For organizations with large workloads, containers can help improve application performance and reduce OpEx and CapEx. Running containerized workloads require only a subset of the operating system to run the code, meaning they are portable and platform-independent so are ideal for distributed development environments. Container orchestration platforms, such as Kubernetes can help organizations to automate deployment of containerized workloads across hybrid infrastructures, allowing organizations to easily deploy and run containers on clusters of servers in different locations quickly and easily.

Foundation 4: Cyber Resilience and Disaster Recovery

One of the greatest challenges today for organizations is protecting the business against cyber threats. In the event of a cyberattack, organizations need a disaster recovery strategy that returns them to the point-in-time prior to the attack.

According to the Ponemon Institute, the average cost of a data breach in 2020 costs organizations $3.86 million USD. Organizations operate for up to 280 days without detecting that they have suffered a breach[2].

As our reliance on data increases, and data continues to grow exponentially, the integrity of that data and its recoverability are critical for business success. This is why IBM has evolved its data protection solutions to include cyber resiliency as a core tenant of its modern data protection solutions.

Here is how:

• The IBM data protection portfolio offers solutions that separate your business-critical backups from your network and protect your data with immutable or WORM (write once, read many) backend storage.

• True air gap protection with tape support.

• Front-end anomaly detection monitoring your data flow and deduplication patterns for suspicious activity.

• Cyber Incident Response services that advise, provide updated configuration recommendations, and assist with recovery planning in addition to reviewing deployment for currency on an ongoing basis.

As cybercrimes continue to evolve, IBM's modern data protection solutions will also continue to ensure that organizations have the cyber resilience needed to ensure business continuity.

> "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. Thanks to IBM Spectrum Protect we were able to bounce back with no data loss. " — Dr. Isidore Rigoutsos, Director of the Computational Medicine Center, Jefferson (Philadelphia University + Thomas Jefferson University)

https://www.ibm.com/case-studies/jefferson

Foundation 5: Business Agility

The fifth foundation of IBM's modern data protection is business agility. In addition to securing backed up data, and ensuring that data is protected from cyberthreats, providing organizations the capability to utilize existing data for multiple use cases is critical.

Data Insights

Modern data protection enables businesses to adapt to data growth while predicting and preparing for future storage requirements. The ability to fine tune storage management based on performance, and to provide robust interactive tools with vendor support are some of the benefits of IBM's data protection solutions.

IBM's data protection portfolio is driving forward to leverage common back-end storage and common monitoring and management technologies, while integrating with IBM's support organization to provide the best-in-class support so that organizations experience rapid help to resolving any issues that may arise.

Compliance and business governance

In today's world it is critical for organizations to be compliant with rules and within the law of the geography. The integration with IBM Spectrum Discover ensure that data stored in various repositories is compliant and meets corporate governance. This also ensures that business data is stored to the letter of the law avoiding costly repercussions down the line.

GDPR regulations award business clients the right to be forgotten. Wherever the backup data is stored, organizations must comply with their clients' wishes. This can prove a challenge for some organizations with stores of backed up data. With IBM's data protection, organizations can more easily ensure compliance to GDPR and CCPA laws.

Develop born in the cloud applications

Organizations today embrace data protection by refactoring applications to create *born in the cloud* applications. Protection of containerized workloads can take advantage of agility, speed, and ease of deployment. IBM Cloud Paks facilitate the speed of application deployment, and with IBM's modern data protection solutions clients can protect containerized environments providing a developer-friendly self-service interface and custom Service Level Agreement (SLA) policies that include Container Storage Interface (CSI) snapshots, copy backup, replication, object storage policies, and archive policies to protect persistent volumes.

Data reuse

Sixty-eight percent of data in today's organizations is used for data analysis that can lead to client insight, which helps grow business with emerging opportunity and other drives success[3].

IBM data protection solutions enable secure access to stored data in different repositories, whether it is on-premises or in the cloud, as a result, organizations can access data where and when it is needed. Also, this allows organizations to adopt strategies of accelerated processes, leading them to successfully meet the demands of today's competitive markets. With DevOps, reporting, and analytics, organizations can adjust and adopt agility to garner success.

It's not only about moving data to the cloud. IBM's data protection technology supports a number of instances where service providers build backup as a service (BaaS), utilizing IBM's solutions to service multiple customers.

Disaster recovery

Data reuse enables organizations to develop reliable disaster recovery strategies that ensure that downtime is minimized and business continuity is maintained. Organizations must be able to recover from disasters because even the smallest downtime can cost organizations and damage the company brand. IBM's solutions provide protection and recoverability for mission-critical software with intelligent automation and disaster recovery for workflows, which enables recovery testing, workflow monitoring, analytics, and reporting across hybrid environments. Organizations can rest assured that they can have reliable and faster recovery of physical and virtual workloads, including business processes, applications, systems, and databases.

Agility for growth

Industrial blueprints that are provided by IBM enable organizations to size for capacity now and into the future. End-to-end storage and management policies can automate data lifecycle management with operational data recovery, replication, and archiving to suit business needs.

In summary

The IBM modern data protection has not only been a leader 9 years in a row in the Gartner Magic Quadrant, but a leader in the quest to lead organization wishing to adopt digital transformations within their enterprises[4].

"IBM's ability to maintain its position as a Magic Quadrant Leader has been a result of continuous improvements to IBM's award-winning Modern Data Protection and cyber resiliency portfolio," — Eric Herzog, CMO and Vice President of Global Channel Sales for the IBM Storage Division

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https://www.ibm.com/blogs/systems/ibm-leader-gartner-magic-quadrant-data-center-backup/

IBM's five foundations of modern data protection bring enterprises along the roadmap to successful digital transformation. This transformation encompasses strategies based on the ability to gain deep insight into data, including fortressing enterprise data with cyber resilience, optimizing cost and storage efficiencies, which combined bring business to the next generation of data protection.

With 25 years' experience, IBM data protection solutions furnish users with proven blueprints that are specifically designed to help plan for current requirements as well as future capacity needs. In addition, it allows the freedom to choose the appropriate tiers for data storage whether that includes tape, cloud or a combination of both. The technology takes advantage of multiple capabilities including, snapshots, incremental forever, multi-threading, and parallel execution of hardware snapshots and inline data reduction while reducing the cost, increasing the efficiencies, and ensuring recovery with business continuity.

IBM has evolved by listening to its clients, by seeing and predicting the trends, and by providing robust modern data protection solutions for the world's evolving needs for data. With visionary solutions that build on the five foundations of modern data protection, organizations can join IBM while they set out on their journey to the cloud, and on the roadmap for digital transformation success.

Sources:

[1] ESG Research Insight Paper, Trends in Modern Data Protection, March 2019 https://www.ibm.com/downloads/cas/PJ0KE8PR

[2] Cost of Data Breach Report, IBM Security. https://www.ibm.com/security/digital-assets/cost-data-breach-report/#/pdf

[3] ESG: Trends in Modern Data Protection paper https://www.ibm.com/downloads/cas/PJ0KE8PR

[4] IBM blog https://www.ibm.com/blogs/systems/ibm-leader-gartner-magic-quadrant-data-center-backup/

Why IBM?

IBM offers a vast portfolio of hardware,software and services, including industry-leading data storage products and solutions.Innovative technology, open standards,excellent performance and a broad portfolio of proven storage offerings—all provided by IBM, a recognized industry leader—are just a few of the reasons to consider the IBM modern data protection portfolio.

For more information

To learn more about IBM modern data protection portfolio, please contact your IBM representative or IBM Business Partner, or visit: https://www.ibm.com/it-infrastructure/storage/data-protection