

Hybrid Cloud Data Protection Benefits

IBM Spectrum Protect and IBM Spectrum Protect Plus Enable Hybrid Cloud Data Protection and Data Management

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Evaluator Group

Enabling you to make the best technology decisions



Executive Summary

Hybrid cloud computing environments are here today and represent the future for deploying IT solutions going forward. Most IT organizations implement a hybrid IT environment because it balances traditional IT requirements and infrastructure with the capabilities and flexibility of the cloud. These hybrid environments represent both opportunities for and challenges with protecting and managing company data that is stored in multiple locations, from on-premises to the cloud.

Support for multi-cloud environments is a more recent trend as solution vendors and cloud providers recognize that IT organizations can't be locked into a single cloud provider. Applications and solutions are being developed to help customers navigate the complexities of a multi-cloud environment and leverage the potential. As IT organizations re-evaluate their data protection strategies around the use of multiple clouds, they should consider all aspects of managing their data including security and compliance, optimization and future growth, and application and data migration between on-premise and cloud environments.

The definition of what constitutes a "hybrid cloud" varies depending on perspective. There is no standard definition nor one all-encompassing hybrid cloud product one can buy. Evaluator Group defines a hybrid cloud as a cloud computing environment with a mix of traditional on-premises, private cloud and public cloud resources with orchestration and interfaces between. We believe the on-premises aspect of a hybrid cloud has a long future for most IT organizations and needs to be part of the conversation. Ultimately, the goal is to combine the features of on-premises backup and recovery solutions (location, performance, security, etc.) with the advantages of cloud resources (flexibility, economics, separation, etc.).

In this Technical Insight, we look at IBM Spectrum Protect and IBM Spectrum Protect Plus, IBM's solutions for data protection and data management for physical, virtual, software-defined and cloud environments. IBM Spectrum Protect has been delivering enterprise backup and recovery for decades while IBM Spectrum Protect Plus is one of the newest solutions for protecting, retaining and reusing data in virtualized environments. Together, these products provide a foundational component of using hybrid clouds – knowing that data is protected and recoverable.

Data Protection and Hybrid Clouds

The Evaluator Group recently completed an extensive study on the use of the hybrid cloud by enterprise customers (*The Enterprise Hybrid Cloud – a Work in Progress*, August 2017). In that study, the predominate hybrid cloud use case cited by 58% of the respondents was disaster recovery / business continuance, which includes data protection. The results are shown in Figure 1 below.

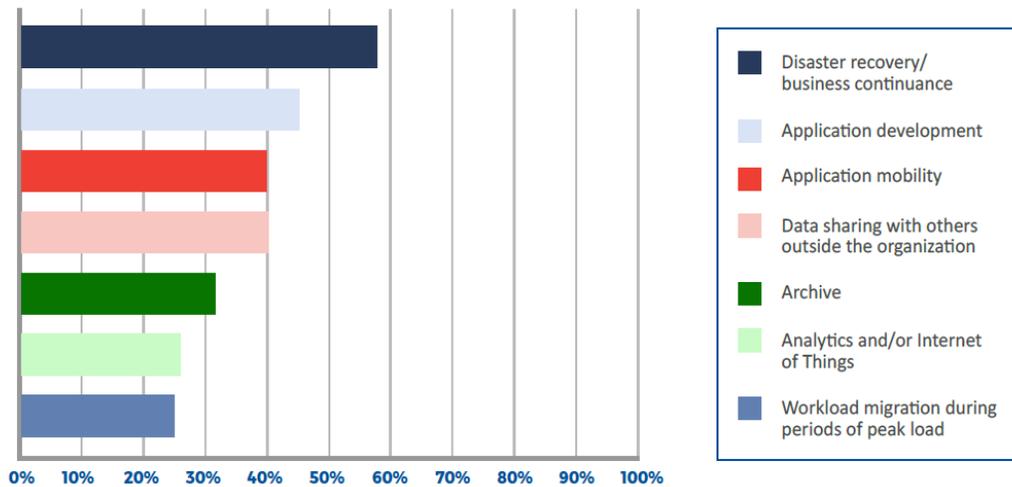


Figure 1. Top Enterprise Hybrid Cloud Use Cases (Source: Evaluator Group)

Evaluator Group believes this will expand as more companies use the public cloud for disaster recovery and business continuance activities. Solutions that help IT organizations work across on-premises and multiple clouds will be important in building and operating hybrid cloud environments.

There are many aspects to data management with hybrid clouds, making data protection more complex. Protecting physical assets and data in the datacenter remains a key requirement. Protecting virtual assets and data is a more recent requirement, but possibly more important since VMs are a fundamental technology of hybrid clouds. Cloud resources add another dimension to the discussion around the location of the data for both source and target. Hybrid also applies to more than on-premises and off-site. It can also mean a mix of disk, tape, object and cloud storage. It should also include a strategy of backup, long-term retention, archive and compliance. Putting all these components to work in the right ratios for each situation is key to a successful hybrid cloud strategy.

The top data protection use-cases utilizing hybrid cloud environments include:

- **Backup to the Cloud.** For a number of IT organizations, backing up data to the cloud is one of their first cloud activities. This allows customers to have an optimized data protection infrastructure onsite and leverage cloud resources to make storage less costly and easier to manage while assuring backup, recovery and compliance requirements are met.
- **Disaster Recovery in the Cloud.** The complexity of disaster recovery processes put pressure on IT resources so many IT organizations are using the cloud for disaster recovery to alleviate the burden of having to establish off-site data centers for DR.
- **Data Reuse in the Cloud.** Similar to DR in the cloud, using copies of the data in the cloud for additional purposes such as analytics, reporting or DevOps, increases the value of the data to an enterprise and adds flexibility to the location of where the data is used, while eliminating the need for additional on-premises infrastructure.

- **Backup of Native Cloud workloads.** Many of today's workloads are born in the cloud and need the same data protection and recovery as on-premises workloads. While cloud providers take extraordinary care of the data in their keeping, IT organizations must be responsible for data protection of these workloads.
- **As-A-Service offerings.** Backup-as-a-Service (BUaaS) has been provided by vendors and multiple channels for some time and is a critical service for many IT organizations. Disaster Recovery-as-a-Service (DRaaS) provides the system infrastructure, required services and applications together with the backup data to recovery operations in the cloud when needed. DRaaS enables many IT organizations to eliminate the cost of a secondary data center for DR and business continuance.

The Benefits of Hybrid Cloud Data Protection

The benefits of using hybrid cloud environments for data protection depend greatly on what the IT organization's goals are. Hybrid clouds offer so much flexibility and capability that can be very specific to an organization. Some of the key benefits that most see include:

Lower storage infrastructure costs. The cloud can reduce capital costs needed to provide for disaster recovery. It can provide flexibility in scaling resources and provide options for paying for storage. It can also provide location options for data, moving data offsite and offering opportunities for geographic distribution. This allows customers wherever they are to recover their data wherever it is.

Air gap protection from cyber-attacks and ransomware. Air gaps are not a new concept as IT organizations have stored tapes off-site for decades to perform that function. Hybrid clouds enable air gaps to be more

Cobalt Iron Case Study

Evaluator Group spoke with Cobalt Iron CEO Richard Spurlock and COO Mark Ward about their partnership with IBM and their use of IBM Spectrum Protect as the engine for their hybrid cloud, data protection SaaS – ADP.

Cobalt Iron ADP is a cloud scale, software-defined enterprise backup solution for files and databases in physical and virtualized environments. ADP customers include long term IBM Spectrum Protect users looking to simplify their backup processes to new customers wanting to consolidate silos of deduplication platforms with ADP.

Leveraging the backup and recovery capabilities of IBM Spectrum Protect, ADP delivers an integrated view of all policies, operations, scheduling and reports. This management layer continuously monitors and analyzes the environment and performs all updates and upgrades. It also fully integrates backup processes with management platforms like ServiceNow.

The top benefits that Cobalt Iron customers experience with ADP include:

- Simplifies data protection. Runs as a service and allows organizations to focus on managing applications not backups saving hours weekly.
- Removes the technology treadmill of deploying and managing backup servers and software, improving success rates.
- Eliminates acquisition and licensing costs associated with over provisioning backup hardware and software.
- Provides a single pane of glass for all backup management and reporting. Many customers do not know they are using IBM Spectrum Protect underneath the ADP user interface.

nimble, higher performing, and provide the flexibility to recover in the cloud.

Address cloud mandates. Using a hybrid cloud environment for a variety of secondary storage workloads such as data protection is a good way to deal with corporate directives to use the cloud for something or for everything.

Reuse of data copies. Repurposing traditionally idle backup copies for other workloads such as DevOps, reporting, analytics, and training is enabled with the availability of compute and storage resources in cloud alongside the backups.

Infrastructure flexibility. Hybrid cloud models allow IT organizations to plan for a fixed amount of resources in on-premises and using the cloud to flex resources up and down as needed. Testing backup and recovery plans in the cloud can minimize the impact on production environments.

As-a-Service delivery models. The use of hybrid clouds brings a new level of capabilities and features to solutions providers delivering data protection Software-as-a-Service (SaaS), Backup-as-a-Service (BUaaS), and Disaster Recovery-as-a-Service (DRaaS). The benefits of delivering IT operations as a service have been known to many IT organizations long before there was a cloud. The availability of hybrid cloud environments enhances the flexibility and scalability of these delivery models.

IBM Spectrum Protect and Spectrum Protect Plus

IBM is embracing the cloud as a foundational technology and as a vehicle for delivering a number of strategic solutions in artificial intelligence, analytics, security, serverless computing, DevOps, and data management. IBM is also focused on delivering a broad set of software-defined storage capabilities to solve a variety of modern datacenter challenges. By delivering storage capabilities as software and separating them from the hardware, it provides the flexibility to have one storage solution that can be deployed anywhere – on-premises, in private clouds, and in public clouds.

IBM Spectrum Protect has provided enterprise data protection and recovery for organizations and service providers for decades. IBM Spectrum Protect Plus is designed from the ground up for protecting virtualized environments. Together they cover the full gambit of physical, virtual, software-defined and cloud resources. When it comes to providing data protection beyond physical and virtual environments, IBM supports data protection in the cloud and to the cloud for multiple use cases mentioned above.

IBM Spectrum Protect and IBM Spectrum Protect Plus provide many features and capabilities that deliver the benefits mentioned in the last section. Some of the key areas include:

- **Enterprise trusted solution.** IBM Spectrum Protect has a long history of delivering data protection solutions to exacting enterprise customers. It works with all types of data in physical, virtual, software-defined and cloud environments. Customers only have to implement one data protection solution to protect all on-premises workloads and all cloud workloads.

- **Software-defined flexibility.** IBM Spectrum Protect and IBM Spectrum Protect Plus provide all their capabilities in software which provides flexibility in the design, location and deployment of a data protection strategy. As a result, they allow multiple options for the location of the backend storage pools – on-premises, private cloud or public cloud and support multiple media types as well – flash, disk, tape, object stores, and clouds.
- **Built-in cloud integration.** IBM Spectrum Protect and IBM Spectrum Protect Plus provide built-in cloud integration with software-based capabilities that require no hardware-based appliances or gateways for deduplication, encryption, network acceleration or cloud access. Administrators can define policies to store the most recent backup copies on site while tiering the older copies off to cloud storage. These capabilities support all popular cloud environments including IBM Cloud, IBM Cloud Object Storage (COS), Amazon S3, and Microsoft Azure Blob storage.
- **Simplified administration.** IBM Spectrum Protect and IBM Spectrum Protect Plus provide an integrated data protection platform with simplified administration designed to allow non-backup specialists to create and manage their own backups with a Service Level Agreement (SLA)-centric approach. Server and application admins define and apply protection policies to the data which are managed through their interface of choice (VMware vSphere, Spectrum Protect user interface, Spectrum Protect Operations Center, etc.).
- **Self-service restores.** IBM Spectrum Protect and IBM Spectrum Protect Plus also enable non-backup admins to recovery their own data through a self-service restore portal. These solutions provide item-level recovery of an individual file or email, to recovery of a database or mailbox, to a full system restore.
- **Multi-site Replication.** Policy-based, multi-site replication of the IBM Spectrum Protect storage pools provide additional data protection and enhance compliance. Replication is done with deduplicated data, reducing the need for network bandwidth. IBM Spectrum Protect and IBM Spectrum Protect Plus can provide automated recovery from a secondary backup server if the primary server is not available. This also better enables recovery testing and backup audits.
- **Enables Copy Data Management.** IBM Spectrum Protect can be integrated with IBM Spectrum Copy Data Management to facilitate the use of data copies for multiple purposes. IBM Spectrum CDM enhances data visibility by cataloging and indexing all the data managed to provide search and reporting capabilities.
- **Service Provider deployments.** Many service providers have used IBM Spectrum Protect as the engine inside their BUaaS and DRaaS offerings for many years (see the Cobalt Iron case study). IBM Spectrum Protect provides the manageability and consumability at scale, together with the security and self-service recovery capability needed to effectively and efficiently provide backup and recovery as a service.

Conclusion

IBM Spectrum Protect and IBM Spectrum Protect Plus fit a trend we are seeing in the industry with data protection moving towards various aspects of data management, which is increasingly important as the data can be located anywhere in a hybrid cloud environment. The benefits of utilizing the hybrid cloud infrastructure for data protection are clear and the IBM Spectrum Protect family provide the platform

for realizing those benefits. In addition, IBM has a comprehensive storage portfolio (on-premises flash and disk, tape, file and block, object storage, cloud-ready, software-defined storage, SaaS, etc.) and a range of complementary cloud solutions (public and private clouds, security, analytics, etc.) and an array of professional and support services to completely help customers deploy and manage a hybrid cloud environment. IBM is well positioned to help enterprises and Service Providers architect, build and deliver hybrid cloud storage solutions for data protection and data management.

About Evaluator Group

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