

Technical Architect

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Abstract

Having a reliable backup & disaster recovery solution is key to ensuring business continuity in the event of such disasters and minimize their impact. Here is a list of some of the best backup and disaster recovery solutions available in the IT Infrastructure Domain today.

Keywords: Best Backup and Disaster Recovery Solutions, Top Disaster Recovery Solutions, best DR solution

INTRODUCTION

Virtually every business today incorporates some aspects of digitalization in their day-to-day processes. The protection and safety of data are essential to keeping a business's operation and workflow going, ensuring timely and error-free deliveries and outcomes as well as helping maintain its growth momentum. Data loss can occur not just as a result of exogenous attacks on a company's digital infrastructure but could also result from something as simple as a software error or an unintentional mistake on part of an employee.

Best Backup Solutions

A. Veritas NetBackup

The testament to the quality of this data backup solution can be highlighted by the fact that nearly 86% of Fortune 500 companies make use of it for their data protection need. Veritas Netbackup is an enterprise powerhouse, providing a fully scalable comprehensive package for your backup needs.

Its most notable appeal is its multi-cloud storage options (both public and private), allowing users great flexibility in creating a scalable hybrid cloud environment for data backup and recovery. Deduplication between a data center and multi-cloud is seamless and recovery times are instantaneous, even for high volumes of data. Its highly advanced automation tools and risk analytics help reduce the risk of VM sprawl, eliminates dark data, and helps prepare for digital compliance.

Veritas natively integrates with virtually all major platforms and partners with a number of top cloud vendors such as Google Cloud and AWS. This helps enable seamless migration and movement to and from the multi-cloud and avoid instances of lock-in. Protection is provided to a whole host of virtual

The consequences of data loss for a business can range from temporary hindrance in the daily workflow to completely losing years of progress. Having a reliable disaster recovery solution is key to ensuring business continuity in the event of such disasters and minimize their impact. Here is the most up-to-date list of the **best backup and disaster recovery solutions** in the market today.

environments including Microsoft Hyper-V, Nutanix AHV, Red Hat Virtualization, and OpenStack.

Overall, provided you can afford, this is the go-to solution for your data backup and recovery needs.

Pros

- Excellent integration capabilities
- Multi-cloud storage
- Comprehensive all-in-one backup solution
- Easy-to-use interface
- Little or no downtime in recovery

Cons

- Expensive

B. Commvault Complete

Commvault is a comprehensive data backup solution offering itself as a complete package integrating all aspects of data recovery including remote storage, networking, virtualization, endpoint protection, lifecycle data management, and analytics. Like Veritas Netbackup, Commvault also features multi-cloud storage options.

Thanks to its potent snapshot management framework for hardware orchestration, both RPOs and RTOs are considerably lowered. The risk of VM complexity and sprawl is minimized through its VM lifecycle management framework.

Security-wise, the platform is quite robust with strong end-point file-level encryption and accelerated eDiscovery and compliance search operations. Its powerful artificial intelligence and machine learning algorithms constantly analyze patterns and report on any anomalies in your data. And because data is always stored over and across multiple clouds, damages from a security breach at one of your systems can be successfully circumnavigated.

Pros

- Extensive security features
- Excellent integration capabilities
- Multi-cloud storage
- Little or no downtime in recovery
- Comprehensive all-in-one backup solution

Cons

- Expensive
- Confusing licensing model

C. Cohesity

With the company having been founded only back in 2013, Cohesity is a relatively new player on the scene. Nonetheless, they manage to bring a high degree of polish to what is a highly advanced yet affordable backup and data recovery solution. Their stellar rise within the industry is a clear indicator of it with the company currently valued at \$2.5 billion, more than double the valuation two years ago.

Their cloud-based solution features all the tools and resources necessary to secure the safety and continuity of your data. It features a sleek and simple-to-use UI that gives you convenient access to all the required information and facilitates easy navigation. The solution boasts advanced policy-driven automation and snapshot archival to ensure business compliance, streamlined workflow, and enhance data security.

Cohesity also has decent integration with support for such popular choices as Google Cloud, AWS, and S3/NFS. With a robust app ecosystem, you can modulate the solution according to your business specifications.

Pros

- Excellent integration capabilities

- Robust app ecosystem
- Affordable enterprise solution
- Easy-to-use interface

Cons

- Not the best customer support

D. Rubrik

Like Cohesity, Rubrik was also founded the same year and earned tremendous success by providing a superb data backup solution to the market. The most remarkable feature of the Rubrik platform is that is designed to be vendor-agnostic, meaning that broad support is provided for integration across traditional, modern, and next-gen applications. Not surprisingly, deployment of this hybrid cloud-based solution doesn't require extensive technical know-how and can be done in less than an hour.

Data recovery time is instant with recovery available at any point in time with considerably lowered RPOs and RTOs, thanks to natively integrated continuous data protection for VMs. Like Cohesity, Rubrik also features policy-driven automation to aid in compliance and workflow simplicity.

Pros

- Excellent integration capabilities
- Easy-to-use interface
- Continuous data protection
- Easy to setup

Cons

- Relatively expensive
- UI could use a little rework

E. Acronis Backup

Acronis Backup isn't much known but is a tremendously remarkable and cost-effective backup recovery tool. It boasts a high integration level, providing data security on over 20 platforms, both on-premise and remote servers as well as to those on clouds and mobile devices. It offers a 15-second Recovery Time Objective (RTOs), which is decent for its price offer.

Among its notable features include virtual server assurance for VMware vSphere, Microsoft Hyper-V, Citrix XenServer, Red Hat Virtualization, Linux KVM, and Oracle VM Server. Replication is provided through VMware vSphere Replication with WAN enhancement. Oracle database backup is achieved via disk imaging and bare-metal recovery.

To augment its data protection, its small algorithms constantly file over the files for any behavior's indicative of ransomware, malware and other cyber-attacks. Once detected, Acronis will restore the files to the latest instance before the attack, eliminating any damage done due to the attack.

The backup tool also boasts a strong verification mechanism powered by blockchain that helps ensure that the copy of your data restored had not been modified from its original state.

Pros

- Extensive security features
- Excellent integration capabilities
- Powered by Blockchain
- Affordable enterprise solution

Cons

- Relatively slow recovery time

F. Microsoft Azure Backup

Azure Backup is a powerful built-in cloud-based solution for the Azure platform with backup support for Azure Virtual Machines, SQL workloads, and on-premises VMware machines. Multi-factor authentication allows for data retention for extended periods, even after legitimate deletion. Built-in contributor allows for role-based access control and thanks to its recovery service vault, you can stay more organized with your backups and configurations.

Dynamic reporting allows you to be continuously in the track of your assets and databases. Its enhanced automated monitoring looks for anomalies in backup activities and immediately notifies the user. Since it is natively integrated with the platform, deployment is a simple one-click affair.

Pros

- Easy-to-use interface
- Turnkey data backup solution for the AWS platform
- Strong security
- Affordable

Cons

- Complicated billing structure

G. AWS Backup

AWS Backup is a built-in fully managed backup service for the AWS platform, allowing you to centrally configure policies and monitor data backup operations for all AWS services as well as significantly lower your

TCOs. Little technical knowledge is required with its utilization thanks to its extensive automation and consolidation of backup tasks, logs, and processes. This, along with its excellent transit and endpoint data encryption with separate keys, also makes it easier to address backup compliance and ensure more robust data security.

Through a simple click on the central console, AWS backup also allows you to copy backups across multiple AWS services to different regions, manually, on-demand or automatically.

Pros

- Easy-to-use interface
- Native and optimal data protection solution for the AWS platform
- Strong security

Cons

- Limited only to the AWS ecosystem

H. Carbonite Server Backup

For small businesses, Carbonite could be among the **top disaster recovery solutions out there**. Being in the market since 2005, ancient in IT years, Carbonite's backup solution today is a result of years of experience and continuous process of refinement.

It offers superb ease of you, regardless of which client you are on, with an excellent automation facility and an intuitive interface. All data is stored online on its servers and get encrypted. In addition, Carbonite offers a whole host of additional security features that helps safeguard your data and privacy. You don't require much technical knowledge to run this platform.

The biggest downside is its terrible recovery time, both in terms of backup and restoring of data. Another is its lack of support for certain features on clients other than Windows. For instance, backing up of a previous iteration of data (versioning) is not available for macOS. In addition, its desktop client is unsupported on Linux.

Pros

- Easy-to-use interface
- Strong security
- Relatively Inexpensive
- Little or no technical knowledge required

Cons

- Not as flexible as the other solutions listed.
- No integration for some popular clients

Best DR Solutions

A. Zerto IT Resilience Platform

With a highly intuitive interface, incredible RTO/RPO time and powerful automation features, Zerto's IT Resilience Platform is easily one of the **top disaster recovery solutions** out there for enterprise-level applications.

This software-based DR platform hosts an extraordinary level of replication capabilities and allows you to automatically capture and track data modifications, saving every instance of user-created data locally or at a target data center. This allows you to restore data at a point in time; even a few seconds back in case of a malicious attack compromising the present data. Recovery time, even for unplanned disasters, is minimal, making for a little downtime in business operations.

The platform also features superb testing capabilities, allowing you to verify the robustness of your formed recovery plans. Thanks to its automated systems, it is a fairly hassle-free platform to use. Setup and configuration are quite easy. This, coupled with a superbly designed interface makes it more accessible for the less technical folks on the front side. Integration capabilities are also excellent with a wide variety of third-party clients.

One drawback is that you need an external storage option for the data it backs up. This could be servers at your facility or a third-party service such as Amazon Web Services; ultimately, this will require the need of a dedicated IT staff, making it less viable of an option for smaller organizations. If they can provide true backup storage, it could easily be the **ultimate DR solution**.

Pros

- Easy-to-use interface
- Little or no downtime in recovery
- Excellent integration capabilities
- Little or no downtime in recovery

Cons

- Not viable for smaller organizations
- Expensive

B. VMware Site Recovery Manager

Site Recovery Manager is a **top disaster recovery solution** that has for years served as the industry's standard. Powerful policy-driven flexible automation allows for secure detection and protection of VMs. The solution natively integrates with and leverage other VM services as well as the AWS platform, creating a more robust data protection and recovery platform. This helps with not only reducing TCO and enhancing disaster recovery but also addresses other use cases such as disaster avoidance, planned data center migration, and site-level load balancing.

With SRM, you are allowed to create multiple protection plans to facilitate recovery of VMs based on priority. Since the SMP IP is pre-configured, after a failover all VMs bring up new Ips automatically with no further configuration required.

Non-disruptive testing ensures predictive recovery objectives, generating reports with time stamps and the sequence of each VM that is up and running. With access to VMware's extensive app ecosystem, its versatility and application are further expanded.

Pros

- Extensive app ecosystem
- Excellent scalability
- Flexible deployment options
- Leverages other VMware services to extend its utility
- Ease of use

Cons

- Not viable for smaller organizations
- Expensive

C. Microsoft Azure Site Recovery

Another **best DR solution** on the market today is Azure Site Recovery (ASR) from the software giant, Microsoft. What we particularly like about this software is its excellent integration capabilities. It offers integration for both Windows and Linux, VMware virtual machines and Windows Server and System Center management tools. This makes it a stellar option

for protecting complex workloads involving a diverse array of servers and services.

The service is cloud-based so you don't require any physical infrastructure for the service to store your data backup. All communication made through ASR gets encrypted. Furthermore, ASR gives you great leverage in terms of policies and automation rulebooks, allowing you to configure the recovery plan in a way that best replicates your business's IT environment.

The DR solution's Management Interface is also worth discussing. Over the years, Microsoft has done tremendous improvements to it. The latest management dashboard is highly responsive and intuitive, with easy navigation and one-click commands.

One downside is that ASR isn't exactly beginner-friendly. You require a fair bit of technical knowledge to implement all but the simplest of recovery tasks. Another is its middling performance; in case of an unplanned data failure, recovery isn't instantaneous but rather can range from a few minutes to up to an hour or more.

Pros

- Excellent integration capabilities
- Extensive policy and automation gallery
- Powerful cloud-based DR solution
- Easy-to-use interface

Cons

- Requires some technical knowledge
- Middling recovery time

D. IBM Cloud Object Storage System

IBM has long been a prominent player in the IT world, bringing within its products a level of refined quality born out of years of experience with the field. IBM Cloud Object Storage System is no different. It can integrate with a number of major platforms. The company's data storage by default enabled to meet the compliance and regulatory retention requirements, helping prevent object data from being deleted or modified from its original state.

A particularly notable feature of the system is a concentrated dispersal mode capability, which allows for easier and more streamlined scalability to larger configurations. IBM provides dedicated, private as well as public data centers with locations worldwide, offering you great flexibility in deployment options, with implementation within a region or across multiple regions.

Pros

- Excellent integration capabilities
- Excellent scalability
- Flexible deployment options.

Cons

- Requires some technical knowledge

E. Cloud Endure Disaster Recovery

Cloud Endure Disaster Recovery is an AWS service that allows for streamlined and rapid data migration to the AWS cloud system, with the option for cross-regional data backups. Rather than make use of snapshots, data protection is continuous, allowing for data recovery for any instant in time as well as heavily reduce RTOs and RPOs. Although, the recovery isn't as rapid compared to some of the other enterprise-level solutions presented on the list.

The DR solution features support for most database infrastructure and enterprise applications Microsoft SQL Server, Oracle, and MySQL, and SAP. Because replication is achieved in a low-cost staging area, it helps keep the compute and storage footprint to a minimum, helping greatly cut down on TCO.

Pros

- Excellent integration capabilities
- Powerful cloud-based DR solution
- Excellent scalability
- Easy setup

Cons

- Complicated billing structure

F. HYCU

HYCU is a purpose-built DR solution made for Nutanix's cloud services. It integrates with Nutanix's systems for its incremental implementation, automation compliance, and backup protocols. Because of the nativity of the framework, HYCU is able to greatly shorten the backup window time and in most cases, it is almost instantaneous. Rapid recovery is achieved thanks to leveraging Nutanix intelligent snapshots.

To protect against data breach and piracy, the company provides end-to-end encryption for NFS, SMB, and iSCSI/ABS targets. All data sent through its nodes gets encrypted all the way from source to the target. While HYCU's integration is limited, it isn't limited to the Nutanix platform alone. It also features support cloud storage from Google Cloud and Azure as well as added support for Cloudian and Scalify among others.

Pros

- Easy-to-use interface
- Best data protection solution for the Nutanix platform
- Strong security

- Little technical knowledge required

Cons

- Limited integration capabilities

Concluding Note

It is better to be prepared than regret later. A business can never know when a loss of data can occur but with a dedicated backup and disaster recovery solution implemented, much of the negative impact can be mitigated with no downtime in daily processes.