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through Cloud technology

The Pawa IT Buyer's Guide to Cloud Backup and Disaster Recovery

Your guide to a successful and cost-effective move to cloud backup and disaster recovery

Google Cloud

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Introduction

There's an author that speaks to me each time I think about cloud backup and disaster recovery, A.A.Milne. He wrote, and I quote,

"They're funny things, Accidents. You never have them till you're having them."

I think of the same principle when it comes to how companies store and protect their systems, applications, and data. Some companies take cloud backup and disaster recovery seriously; others neglect the threat of physical hardware failures, site crashes, virus attacks, malware, software malfunctions, and human errors until disaster strikes. Companies that have experienced data loss know the importance of preventing such problems. The rest are sitting on a ticking time bomb.

In today's world, data protection and security are critical to the success of many businesses. Various factors can corrupt, destroy, or cause data loss, making prevention challenging but possible. While natural disasters used to be the primary concern, the fear of security threats, like ransomware attacks, are at the forefront. Regulatory compliance and security are equally driving factors in this market. Google's Cloud Backup and Disaster Recovery (DR) options offer solutions for ensuring data resilience, recoverability, and security-related capabilities during unexpected events.

Cloud backup and disaster recovery are often used interchangeably but are not similar. Cloud backup is a component of disaster recovery, where data is backed up to the cloud. Disaster recovery includes restoring data and systems in the event of an outage. Disaster recovery plans include backup strategies, but they also include strategies for failover and failback. This guide, created by Pawa IT Solutions, aims to aid individuals and organizations in finding the most suitable tool for their cloud backup and disaster recovery needs. In the guide, we will discuss the basics of cloud backup and disaster recovery, ten key questions that should be asked during the purchase process, and an overview of Google Cloud's solution, its advantages, and its components.

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What is Cloud Backup?

Cloud backup is storing data on remote servers accessed via the internet instead of using physical storage devices like hard drives or tapes. The data is encrypted and transferred to the cloud provider's servers, where it is stored securely and can be retrieved when needed. Cloud backup services offer automatic backups, version control, and data replication to ensure data integrity and availability.

Benefits of Cloud Backup

- **Scalability**: Cloud backup allows you to increase or decrease storage capacity as per your needs without investing in new hardware.
- **Cost-effective:** You only pay for the storage you use, and there are no upfront costs.
- **Accessibility:** You can access your data from anywhere with an internet connection.
- **Automated:** Cloud backup solutions offer automatic backups, reducing the risk of human error.
- **Security**: Cloud backup providers use advanced encryption and security protocols to ensure data protection.

What is Disaster Recovery?

Disaster recovery is restoring data and systems after an unexpected event like a natural disaster, cyber-attack, or hardware failure. Disaster recovery plans aim to minimize downtime and data loss and ensure business continuity. A disaster recovery plan includes identifying critical systems, determining recovery time objectives, and testing the plan regularly.

Benefits of Disaster Recovery

- **Minimizes downtime:** A disaster recovery plan helps recover systems and data quickly, minimizing downtime and loss of productivity.
- **Reduces data loss:** Regular backups and replication ensure minimal data loss.
- **Improves reliability:** Disaster recovery plans to ensure that critical systems are available, increasing reliability.
- **Ensures compliance**: Disaster recovery plans are essential for regulatory compliance in some industries.

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Creating a Cloud Backup and Disaster Recovery Plan

Creating a cloud backup and disaster recovery plan involves several steps

Step 1: Identify Critical Systems and Data
Identify critical systems and data that require backup and recovery in case of an outage. Determine the recovery time objectives and recovery point objectives for each system and data set.

Step 2: Choose a Cloud Backup and Disaster Recovery Solution
Choose a cloud backup and disaster recovery solution that meets your business needs. Consider factors like cost, scalability, security, and reliability.

Step 3: Set Up the Solution
Set up the cloud backup and disaster recovery solution and configure backup schedules and retention policies. Test the backup and recovery process regularly to ensure that it meets the recovery time and recovery point objectives.

Step 4: Develop a Disaster Recovery Plan
Develop a disaster recovery plan that includes strategies for failover and failback. Test the plan regularly to ensure that it meets the recovery time and recovery point objectives.

Step 5: Train Employees
Train employees on the cloud backup and disaster recovery plan and ensure that they understand their roles and responsibilities in the event of an outage.

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Top 5 Questions to Ask When Evaluating a Cloud Backup and Disaster Recovery Solution

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Top 5 Questions to Ask When Evaluating a Cloud Backup and Disaster Recovery Solution

1 What problem am I trying to solve?

Selecting the optimal cloud backup and recovery solution from various providers can be a formidable challenge. However, creating a comprehensive outline of the specific recovery problems you aim to address simplifies the process. Since each provider has a unique cloud backup, replication, and recovery approach, you must align your potential options with your overarching goals. This involves evaluating factors such as the Recovery Time Objective (RTO), Recovery Point Objective (RPO), and the type of data and applications you need to protect. Doing so helps you streamline the selection process and find a solution that best suits your recovery needs.

2 What capabilities do I need to have?

To determine the capabilities needed in a backup and disaster recovery solution for your business, it's essential to consider the diverse features available. What was once considered advanced functionality a few years ago, such as failback and orchestrated recovery, is now a bare essential. To streamline the decision-making process, you should list must-have capabilities and compare them against various solutions. This involves assessing the organization's IT infrastructure, business needs, and compliance requirements. Doing so helps you select a solution that aligns with your needs and optimize your backup and disaster recovery operations.

3 What disasters do I need protection from?

In addition to cyber-attacks, ransomware, and natural disasters, other risks can disrupt business operations. Power outages, network connectivity issues, and unforeseen equipment failures or actions or inactions of people are common examples. Such events can cause significant problems, including revenue loss, increased operational costs, and damage to credibility. Therefore, it's essential to consider all potential disasters to determine what capabilities are necessary to mitigate their impact. This involves conducting a comprehensive risk assessment and implementing disaster recovery solutions that address various scenarios. By doing so, you can ensure business continuity in the face of unforeseen events and minimize the adverse effects they can have on your organization.

4 How much support will I need?

During implementation, you will likely require some support, which providers offer in various ways. These range from standard technical support to self-service or fully managed service options. It's essential to consider which service option works best for your organization and its IT team when selecting your backup and disaster recovery solution. Furthermore, managing backup solutions takes up a significant amount of time. Therefore, having fewer products and consoles and simpler designs is better. You also need to factor in the level of design and capacity planning required and the time and cost associated with patching and upgrading hardware and software. With robust support and management before, during, and after the process, you can streamline backup and DR operations and minimize downtime during disasters.

5 What is my budget?

When implementing a backup and disaster recovery system, it's important to take the budget and associated expenditures into account. Due to the variety of services each supplier offers, prices differ. Understanding pricing structures and prospective expenses, such as cost per TB and data transfer egress fees, is essential. While some providers rely on acquired technology, others employ their original technology. Some methods are more flexible and feature-rich, but they cost more.

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Top 5 Questions to Ask Your Potential Cloud Backup and Disaster Recovery Solutions Provider

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Top 5 Questions to Ask Your Potential Cloud Backup and Disaster Recovery Solutions Provider

1 Data Location: Where Will My Information Be Stored?

Selecting a provider for your backup and disaster recovery needs requires assessing their data center and infrastructure. Determine where your data will reside and the ownership of the underlying infrastructure to evaluate potential compliance and data sovereignty risks. Having multiple data centers in various geographical locations is also critical since it can impact accessibility, latency, and network outages. Assess if the site is susceptible to natural disasters and ensure your data exists in separate locations to prevent unexpected downtime. Implementing a multi-site strategy with geographically dispersed data centers will enhance resilience and minimize the risk of data loss or prolonged downtime.

2 User References: Can You Provide Testimonials from Satisfied Customers?

Testimonials from satisfied customers can help determine if a company is reliable and trustworthy. So, does the company or service provider have user references? Gaining insights from another user's experience can offer valuable perspectives into the effectiveness of a backup and disaster recovery solution provider. Testimonials or user reviews can help you gauge vendor performance, their staff, and their ability to manage your infrastructure.

3 Data Restoration Time: How Quickly Can Data Be Recovered?

Your service provider has backed up your data in the cloud and has a disaster recovery plan. If you face data loss or corruption, you might wonder, "How quickly can my data be restored?" The speed of data restoration is crucial, as every minute of downtime can cost you valuable time and money. Therefore, knowing how quickly your data can be recovered is essential. When choosing a data recovery provider, ask about their Recovery Time Objective (RTO) – is it immediate, hours, or days? By doing so, you can ensure that your data is recovered as quickly as possible, minimizing the potential for data loss and disruption.

4 What Security and Efficiency Features Does Your Cloud Backup and Disaster Recovery Service Provide?

To ensure the safety and accessibility of stored data, an ideal cloud backup and disaster recovery service should provide various security and efficiency features. These features include encryption of data both in transit and at rest, redundant storage locations, automated backup processes, scalability to meet changing storage needs, granular access controls to protect sensitive data, disaster recovery plans and procedures, and compatibility with a range of operating systems, devices, and applications. It's important to note that implementing Disaster Recovery as a Service can impact your network bandwidth. Look for features such as compression, WAN optimization, and data deduplication to help optimize network usage. These features help you avoid costly network upgrades needed to support the service. These features can help businesses protect their valuable data, streamline backup processes, and ensure that data is always accessible when needed.

5 Will I still be able to control my data?

Though your provider will be hosting your data, you should ensure you retain complete control of it. This means having the capability to remove your data from the provider's environment should you decide to move your disaster recovery on-premises or switch to another provider. Additionally, you should verify that you can transfer your snapshots in your preferred format if you need to relocate your data.

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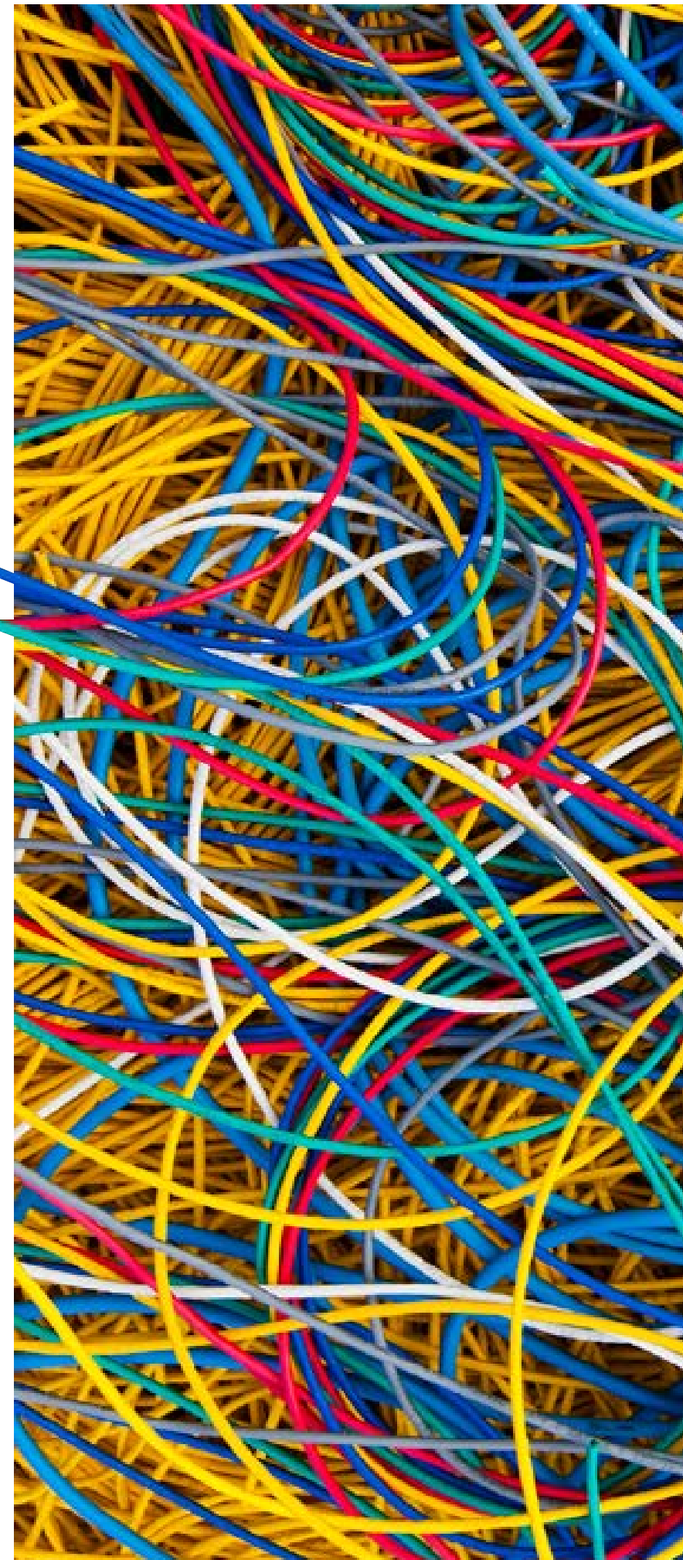

Why Google Cloud for Cloud Backup and Disaster Recovery

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Why Google Cloud

Google Cloud offers a managed backup and disaster recovery service that provides centralized, consistent data protection for workloads running in Google Cloud's data centers worldwide. This service caters to critical use cases such as data loss, corruption, ransomware recovery, or database cloning for test/dev. With a low Recovery Time Objective (RTO) and Recovery Point Objective (RPO), Google Cloud ensures quick restoration from backups to resume business operations. Additionally, Google Cloud only stores incremental changes after the initial backup, saving costs and accelerating restore time. Overall, Google Cloud's backup and disaster recovery service is a comprehensive, reliable, and efficient solution for businesses of all sizes.

Key features

- **"Incremental-forever" backups**

Significantly reduces the time it takes to back up, minimizes impact on production servers, and optimizes bandwidth and storage utilization for low RPO and costs.

- **Instant mount and recovery**

Instantly mount and access VMware Engine VMs and databases from backups stored in Cloud Storage for low RTO.

- **Application-consistent database backups**

Ensures databases are quiesced before data capture for application-consistent backups that can be recovered quickly.

- **Broad database support**

Application-aware backup and recovery for databases, such as IBM Db2, Microsoft SQL Server, MongoDB, MySQL, Oracle, SAP ASE, SAP HANA, SAP IQ, SAP MaxDB, and PostgreSQL.

- **Centralized management**

Centralized management of backups for various Google Cloud and hybrid workloads.

- **Plan-driven data management with automated retention**

Preconfigure, set, and forget your intraday, daily, weekly, monthly, and yearly backups. Specify backup locations and retention periods.

- **Cross-region backups**

You have complete control over your backup data. Store your backups in a multi-region or single region/location to meet disaster recovery and compliance needs.

- **Flexible backup storage options**

Supports Persistent Disk and Cloud Storage classes for backups thus giving you control to switch between backup performance and backup to meet your varying needs.

- **Instant data access on-premises or in the cloud**

Minimize recovery time objective (RTO) by recovering VMs and databases in minutes regardless of the workload size and environment

- **Cross-project recoveries**

Recover workloads to different projects—allows disaster recovery and migrating workloads to different projects.

- **Multi-region disaster recovery**

Enable disaster recovery in a single Google Cloud region or across regions with the ability to access hundreds of datasets in parallel. Perform automated bulk recoveries of protected workloads to alternate locations, enabling proactive DR testing with repeatable results.

- **Virtual clones for test data management and ransomware recovery**

Repurpose your backups to create virtual clones of your databases for test/dev/analytics purposes or access datasets in parallel to identify pristine copies to recover from a ransomware attack.

- **Data encryption in transit and at rest**

Ensure that data is safely secured in block and object storage to meet business and regulatory requirements.

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The Pawa IT Advantage

Your company cannot ignore backup and disaster recovery. If it takes hours to recover lost data following accidental deletion, your employees or partners will not complete mission-critical processes that rely on your technology. And if it takes days to bring your business back online after a disaster, you risk losing customers for good. Given the amount of time and money that could be lost in either case, our seamless approach ensures that your backup and disaster recovery investments are justified. We assess your IT landscape; plan what to backup, how to back it up, and set up a backup schedule; we implement the backup and disaster recovery plan and then optimize your backup strategy and recovery process

Pawa IT aims to walk with you, work with you and stand by you to take your organization to the next level day in, day out. It's not enough to move your tech to the cloud, it's about what value you get because of this decision. As an organization, our Cloud and Engineering expertise is something that we are very proud of. We demonstrate this passion in our work by advising you on the best technologies, plans, and applications to accelerate your business performance. We believe that having Google Cloud for your organization is Non- Negotiable.

Over and above what we can do for you, what makes us stand out is our people. It is the can-do attitude that originates from our modest beginnings as an African Homegrown Company, that has taken us to be considered one of the Top Tech Cloud Companies on the Continent. We have clients in over 21 African countries, in an array of industries from Government, Healthcare, Media and Advertising, Manufacturing, and Financial Services. We are the committed partner that always gets the job done.

Your success is our success. Let's get to work!

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