Minimize Downtime and Data Loss with AWS Elastic Disaster Recovery

EBOOK
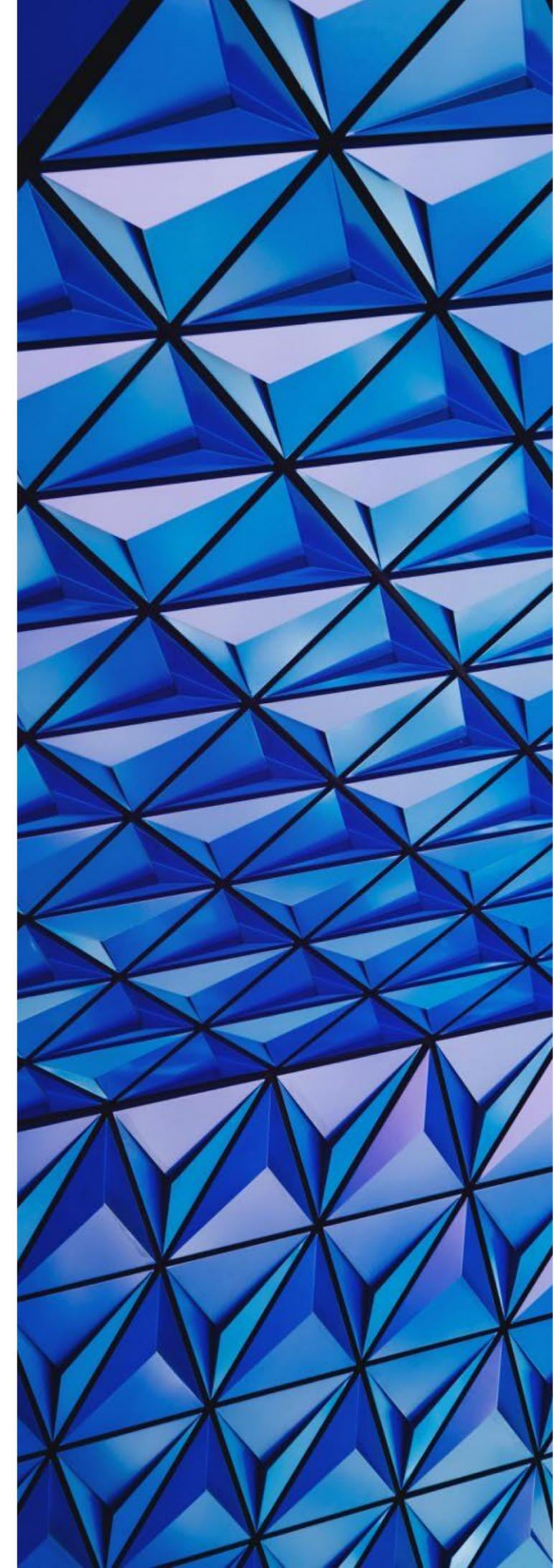
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Disaster recovery is business critical

From natural disasters to data center failures, it pays to plan for unexpected downtime. Considering the vulnerabilities that workloads routinely face-user errors, data corruption, bad patches, ransomware, and other malicious attacks-having a robust disaster recovery (DR) plan in place is a business-critical strategy. Most organizations know, backups of your data and applications are a critical part of a resilience policy. However, when it comes to getting your workloads up and running after an outage, you need an effective DR plan. This helps to quickly transfers access to your applications, data, and IT resources by performing a failover that transfers applications to your DR site. It also ensures that your business continues to function normally even if the production site is unavailable. A cloud-based DR service supports an effective and comprehensive DR plan. It minimizes downtime and data loss with fast, reliable recovery of applications using affordable storage, minimal compute, and point-in-time recovery (PTR). It also leverages the inherent advantage of the cloud to bring you the dual advantages of scalability and cost-effectiveness. AWS Elastic Disaster Recovery (AWS DRS) delivers all the above benefits to increase your IT resilience and achieve business continuity. Let's explore how AWS DRS can support DR at your organization.

AWS DRS: a complete recovery service

Key considerations to keep in mind while planning your DR strategy.

- How much data can you afford to lose?
- How much time can you afford to be down?
- What level of complexity do you have across your source infrastructure, operating system (OS), and regions?
- Does your current DR solution offer multiple point in time recovery options?
- Is your current DR solution easy to install?
- Is your current DR solution simple to use?
- Have you tested your DR solution and was it successful?

Fast comprehensive recovery

AWS DRS helps you to recover applications within minutes with low recovery time objectives (RTOs). It also provides the ability to recover your data from its most up-to-date state or from a previous point in time with low recovery point objectives (RPOs) of seconds.

Point-in-time recovery (PTR)

With PTR, AWS DRS also allows you to launch previous healthy versions of applications in case the most up-to-date version data was corrupted, deleted, or suffered from a ransomware attack.

Comprehensive coverage:

Further, AWS DRS offers comprehensive coverage—across your environments, OS, and geographical regions—to bring flexibility and depth to your DR strategy. You can recover your applications on AWS from physical infrastructure, VMware vSphere, Microsoft Hyper-V, and cloud infrastructure from other cloud providers. You can also use AWS DRS to recover Amazon Elastic Compute Cloud (Amazon EC2) instances in a different Availability Zone or a different AWS Region. Additionally, the service supports application and database recovery from supported Windows and Linux operating system versions.

Unified process:

With a unified process to test, recover, and fail back a wide range of applications, Amazon Web Services (AWS) streamlines the recovery process for your IT team. The AWS DRS console offers a single dashboard where you can monitor your replicating servers and view related events and metrics and test or activate your DR plan.

Automatic conversion:

Additionally, AWS DRS automatically converts your source servers when you launch them on AWS. This allows your recovered applications to run natively on AWS as Amazon Elastic Compute Cloud (Amazon EC2) instances. You can choose to keep them in AWS after a disaster situation, or to fall back to the source infrastructure after conditions are restored to normal operations.

RTO

Recovery time objective (RTO) is the maximum acceptable delay between the interruption of an application and the restoration of its service. This recovery objective determines what is considered an acceptable time window when an application is unavailable.

RPO

Recovery point objective (RPO) is the maximum acceptable gap between the data in the DR site and the latest data stored in the application when the disaster occurs. This recovery objective determines what is considered an acceptable loss of data (measured in time units) that can be caused by a disaster.

Cost-effective disaster recovery

Historically, DR plans were very expensive. An on-premises DR approach often entails hefty expenses for maintaining a redundant recovery site that remains passive most of the time.

AWS DRS, however, uses cost-efficient AWS resources to continuously uphold an up-to-date replica of your source servers on the AWS platform. With AWS DRS in play, you achieve substantial cost savings by optimizing the need for idle DR site resources and their associated upkeep expenses, like duplicate hardware and software licensing along with having to manage multiple assets and maintenance contracts.

The flexibility of AWS infrastructure enables rapid scaling of your DR site, aligning your expenses with actual usage. You can seamlessly add or remove source servers for replication from your primary environment to AWS. Opting for AWS as your DR site also brings you the inherent advantages of the AWS Cloud, including enhanced agility, cost-effective operations, a global-scale infrastructure, and a robust suite of security and compliance tools at your disposal.
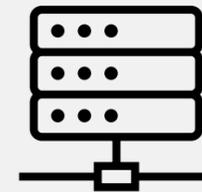
Save costs with AWS DRS and:

- Remove idle recovery site resources
- Only pay for what you use
- Eliminate the cost for additional on-premises DR data centers

Leverage all the inherent benefits of the AWS Cloud, including access to over 200 AWS services.

Run non-disruptive DR drills

With a solid resilience recovery strategy in place, the next step is to test it out through DR readiness drills. These exercises help you assess the operational readiness of your disaster response. The goal is to ensure that your recovery plan can seamlessly deliver business continuity while adhering to your specified RPOs and RTOs. Without periodic testing, there is no way to validate your DR preparedness or demonstrate your ability to meet strict compliance mandates. This can potentially leave you unprepared for an IT outage.

However, conducting frequent DR drills often comes with a hefty price tag. In many cases, traditional DR solutions require you to disrupt ongoing operations for testing. AWS DRS enables simple and nondisruptive drilling that does not interfere with the ongoing data replication of your source servers. Further, launching a recover instance using AWS DRS will take a few minutes, regardless of the volume size, thanks to the Amazon Elastic Block Store (Amazon EBS) snapshotting technology.

With AWS DRS, you can:

- Execute easy-to-conduct, frequent DR readiness drills without impacting ongoing replication or user activities
- Verify DR readiness
- Prove your audit readiness by meeting stringent compliance requirements

About ePlus

Fueling digital transformation

ePlus partners with our customers to build next-generation services in AWS that transform IT into a service provider back to the business, increasing agility and accelerating adoption of new technologies. As an AWS Advanced Tier Consulting Partner, ePlus focuses on helping organizations build the right foundation to speed AWS adoption, increase security, and optimize for cost. Through our AWS Resilience Practice, ePlus works with customers of all sizes to craft and hone their resiliency efforts to provide high availability and data protection for the most important of workloads. We have a proven methodology of assisting customers with protecting their critical datasets and ensuring availability for applications across both planned and unplanned events. ePlus offers expertise in areas such as disaster recovery from on-premises, AWS, and other cloud platforms with Elastic Disaster Recovery (DRS); backup and recovery of critical workloads with AWS Backup; and design, deploy, and configuration of resilient systems.

Benefits of building your recovery plan with ePlus

ePlus enables our customers to translate business requirements into technical solutions on the AWS ecosystem that deliver unprecedented scale, decreased risk, and highly-performant systems.

Less risk

Recover critical applications and data as well as better adhere to regulatory compliance frameworks and audits. After understanding your application SLAs and respective RPO/RTO and identifying your business requirements, we harness the power of the AWS ecosystem to build solutions that ensure business continuity.

Better efficiency

Increase operational efficiency via automation and heightened observability patterns. By integrating resilience activities into software pipelines, ensure and test resilience on a regular basis for peace of mind. This data can also be viewed in the AWS Resilience Hub for continuous overviews of critical apps and services.

Lower cost

Reduce costs by leveraging automation and auto-scaling. AWS Recovery services such as DRS coupled with recovery automation and runbooks can offer exponential cost savings while improving RPO and RTO.

Bolster Continuity

Medical Tech Organization
CIO

"ePlus helped us operationalize our disaster recovery and lower costs while providing us with runbooks and reusable templates that enabled our skillsets while at the same time saving precious resource time and effort."

Challenge

The medical technology organization was running multiple workloads in a single region of AWS without disaster recovery (DR) capabilities. They lacked in-house automation skillsets to effectively monitor the replication environment and needed to maintain stringent security and regulatory requirements.

Solution

ePlus engaged with the customer to review and configure an AWS Elastic Disaster Recovery (DRS) environment. ePlus created automation to monitor the health of the replication as well as aid in the recovery. ePlus assisted with runbook creation and custom integration to further aid both recovery drills and failover events.

Benefits

Business continuity was enhanced as the organization was able to take advantage of its existing investment in AWS and successfully operationalize workload disaster recovery. They were able to lower costs due to proper sizing of storage volumes, point in time snapshot scheduling, and replication server architecture optimization.

Learn more

AWS Elastic Disaster Recovery

ePlus and AWS

ePlus' AWS Resilience Practice

Medical Technology Organization Leverages the Experience of ePlus and the Power of AWS to Bolster Business Continuity