

Amazon Web Services Cloud Application Resilience

OVERVIEW

Cloud Rewind is a fully integrated service within AWS and available in AWS Marketplace. Go beyond traditional backup and recovery of simple compute instances, filesystems, and databases to offer end-to-end protection of composable, cloud-native applications. Cloud Rewind enables automated, point-in-time rebuild capabilities of full application environments, including data and their dependencies establishing cyber resiliency for your operations. This provides true cloud-native cyber resilience, minimizing downtime and MTTR, and accelerating the restoration of business operations.

CURRENT CHALLENGES

AWS offers numerous advantages for securely storing cloud data and infrastructure, including scalability, cyber recovery, and robust monitoring tools. In the event of a cyber incident, what measures will you take to rebuild your environment to avoid downtime? Application resilience is critical to address the threats posed by cyber criminals and to overcome operational challenges. (like software patching, accidental deletions, errors pushing new code, and application change management). Additionally, many new regulations require proven application resilience for compliance. Cloud Rewind automates all of this for simple management, fast recovery, and robust testing with auditable recovery reporting.

Even with Terraform and AWS services like CloudFormation, CodePipeline, and Elastic Disaster Recovery, (DRS), testing is complex and often not done frequently. Change management through manually managed Terraform and similar services can leave your application less resilient. To maintain cyber resiliency, we need to first recognize some of the key challenges for protecting modern cloud native applications such as:



Complexity
of rebuilding
cloud apps



Operational
Downtime



Lack of
Visibility



Recovery
Process

INTRODUCING CLOUD REWIND FOR AWS

Cloud Rewind lends applications in your AWS environment flexibility and resilience, a nimbleness allowing you to control and restore your infrastructure to wherever you prefer on AWS. It enables you to rewind and rebuild your infrastructure to a healthy state in minutes, rather than days or weeks. This means that your environment is always synchronized and ready to handle any situation with confidence.

- Automate recovery testing reduces the manual effort and time required thus allowing for more frequent testing and improved cyber resiliency.
- Protect and recover entire application environments, including containers, VMs, database, cloud network configuration, firewalls, etc., for true cloud application resiliency.

- Reduce compliance risk with entire app environment testing for various disruptions, disaster recovery, system patching, and cyber security scanning with a copy of your production environment.
- Instantly rollback application environments to known good state from bad system deployments.
- Release high quality software by creating test environments with real world data.



Not designed for Disaster Recovery

Manual execution or automated pipelines

No inherent knowledge of app dependencies

Cross region replication requires complex scripting

No RPO or RTO management

Significant maintenance



Manage drift +
Disaster recovery
and **Cyber recovery**

Purpose-Built for Disaster Recovery

Automated Recovery Workflows

Application-Aware Protection

Cross-Region Replication

RPO and RTO Optimization

Ease of Use and Maintenance

One click multi-stack entire environment rebuild with dependencies and application data at a point-in-time in any region



Cloud Rewind is a game-changer. It's replaced our disparate backup host replication, data center storage snapshot reliance systems with a single AWS native app-centric SaaS solution to satisfy our stringent RPO and RTO requirements.

HOW IT WORKS

Cloud Rewind orchestrates native snapshots of application data and integrates them with configuration data from related services, including cloud metadata, all configuration items (CIs), and their dependencies.

For example, if APIs, CloudFormation, Terraform, the Console, or CloudShell are used to create resources like EC2 instances, VPCs, and, more importantly, connections between these services, they are described in JSON-like format. Cloud Rewind discovers these resources, protecting them in a manner similar to data backup copies. It does this as an Assembly, maintaining everything is a single unit.

During recovery, Cloud Rewind automatically generates the multi-nested CloudFormation code on the fly to

swiftly rebuild the environment. This app-centric approach means that all relevant data is extracted, backed up as code, and securely stored enabling recovery of the complete application stack—including all associated services—to a specific point in time.

- 1 Cloud Rewind adapts to your continuously changing AWS application environment, including auto-scaled cloud resources.
- 2 Cloud Rewind automatically creates and Application Environment Time Machine to help you recover from any application downtime instantly!
- 3 No agents, nothing to install. With Cloud Rewind, you can discover, protect and recover entire application environments quickly—maintaining cyber resilience.

KEY BENEFITS

- Delivers significant application reliability without agents, additional data management, network management, or handwritten cloud automation scripts on AWS cloud-native platform services.
- Discovers entire cloud application environments to quickly rebuild in other Regions/accounts and rollback.
- Significantly increases application resiliency with complete cloud app environment protection.
- Rebuilds cloud environments from unexpected downtime with a few clicks.
- Performs system patch testing with a copy of application production environments in minutes.
- Reduces application risks from cloud misconfigurations with predictable recoveries.

KEY FEATURES

- Automated discovery of applications cloud infrastructure services.
- Automated discovery of applications data infrastructure without affecting production.
- Automated VPC, network, security, load balancer, and gateway discovery.
- Flexible automated cloud assembly creation with infrastructure-as-Code (IaC)
- Automated cloud-native infrastructure-as-Code (IaC) based app environment recovery.
- Application post-recovery verification with health checks.



Cloud Rewind established rapid failover and fallback of AWS application environments protecting 2030 total resources and established RTO < **15 minutes**

A Leading Global Cruise Line

GitHub

github.com/appranix

AWS Marketplace

aws.amazon.com/marketplace

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