

Summary Report: Cross-Region Backup Replication for EC2 using AWS Backup

Objective:

Configure an AWS Backup Plan to automatically back up an EC2 instance and replicate the backups to another AWS region. This ensures data durability and disaster recovery readiness across geographical locations.

Project Steps:

1. EC2 Instance Setup:

- Launched an EC2 instance in the primary AWS region.
- Uploaded sample files to test backup and recovery integrity.

2. AWS Backup Plan Creation:

- Created a backup vault in the primary region.
- Defined a backup plan with daily backup rules.
- Assigned the EC2 instance to the backup plan.
- Configured lifecycle rules to transition backups to cold storage.

3. Enable Cross-Region Backup Replication:

- Enabled copy to a destination region.
- Created or selected a destination backup vault.
- Set copy frequency and retention policies.

4. Validation:

- Triggered an on-demand backup for immediate testing.
- Verified successful local and cross-region backup jobs.
- Confirmed recovery point creation in the destination region.

Benefits of Cross-Region Backup:

- High durability of backups.
- Protection against regional outages and disasters.

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- Compliance with backup retention and replication policies.
- Fully managed service with auditability and lifecycle automation.

Issues Encountered:

- Recovery point in destination region took some time to appear.
- Needed to ensure IAM roles had proper permissions for cross-region replication.

Conclusion:

This project demonstrates how AWS Backup can be used to ensure EC2 data protection across regions with minimal setup and full automation. It is a reliable approach to achieving disaster recovery readiness.