HEALTHTECH (ONLINE PATIENT CONSULTATION)

CASE STUDY

Introduction

In today's data-sensitive healthcare landscape, ensuring robust, automated backups and disaster recovery (DR) is vital—not only for business continuity but also for regulatory compliance. This case study details how a fast-growing HealthTech platform successfully modernized its backup and disaster recovery processes to meet HIPAA standards and improve operational resilience.

OBJECTIVES

Implement Automated and Compliant Backup Strategy
Deploy automated, encrypted backups across EC2, RDS, and S3 resources.

Enable Cross-Region Disaster Recovery
Establish cross-region replication for critical data to ensure business continuity.

Enhance Monitoring and Alerting
Implement real-time alerts and visibility for backup health.

Compliance with HIPAA Standards
Ensure 15-day data retention, encrypted storage, and documented recoverability.

Validate Disaster Recovery Process
Simulate full DR recovery to verify RTO/RPO metrics.

APPROACH

- Executed a full audit of infrastructure and classified workloads by criticality.
- Engineered and secured executive approval for a compliant backup and disaster recovery strategy.
- Deployed automated daily backups with 15-day retention and encryption enforcement.
- Orchestrated cross-region replication and optimized storage using lifecycle policies.
- Validated disaster recovery readiness through a full-scale simulation and real-time monitoring.

RESULT

Increased Backup Consistency and Automation
Manual, inconsistent weekly backups replaced by daily automated backups across RDS, EC2, and S3.

Validated Disaster Recovery Readiness
Successfully restored infrastructure in simulation with <30-minute RTO.

Enhanced Compliance and Retention
Achieved HIPAA-aligned 15-day backup retention and encryption-at-rest via AWS KMS.

Improved Monitoring and Incident Response
Real-time alerting for backup anomalies and errors via integrated CloudWatch and SNS.

CONCLUSION

By implementing a fully automated backup and disaster recovery strategy, the HealthTech platform significantly improved its resilience, compliance, and operational readiness. The project not only aligned the company with HIPAA standards but also positioned it to scale securely and confidently, setting a strong foundation for future growth.