

AWS Backup Implementation for Vedam Design



Executive Summary

Introduction

Vedam Design is a premier marine engineering and ship design consultancy, offering specialized services in naval architecture, marine structural design, and marine system engineering. Vedam Design have to replace manual, on-premises **backup** processes with an automated, secure, and cost-efficient **cloud archival solution** on AWS.

Customer Challenge

- Heavy reliance on on-prem NAS for long-term file storage creating capacity bottlenecks.
- Rapid, continuous data growth from CAD and simulation workstreams.
- No formal archival/disaster-recovery (DR) mechanism for long-term retention.
- Manual backup processes leading to delays and risk of missed backups.
- Need to optimize costs while maintaining data integrity and regulatory retention requirements.

Solution

Kainot implemented a hybrid, **automated backup** and archival solution with clear, testable steps:

- **AWS CloudSync** — secure efficient transfer of files from on-prem NAS to AWS.
- **Amazon S3 (Standard → Glacier Deep Archive)** — staging in S3 with lifecycle policies for automatic transition to Glacier Deep Archive for ultra-low-cost, long-term retention.
- **Encryption & Access Control** — IAM roles/policies, and least-privilege access.
- **Monitoring & Logging** — DataSync logs, S3 access logs, CloudWatch metrics and alarms, AWS CloudTrail.
- **Automation & Scheduling** — periodic CloudSync tasks and event-driven validation jobs.

About Vedam Design



Vedam Design is a premier

marine engineering and

ship design consultancy,

offering specialized

services in naval

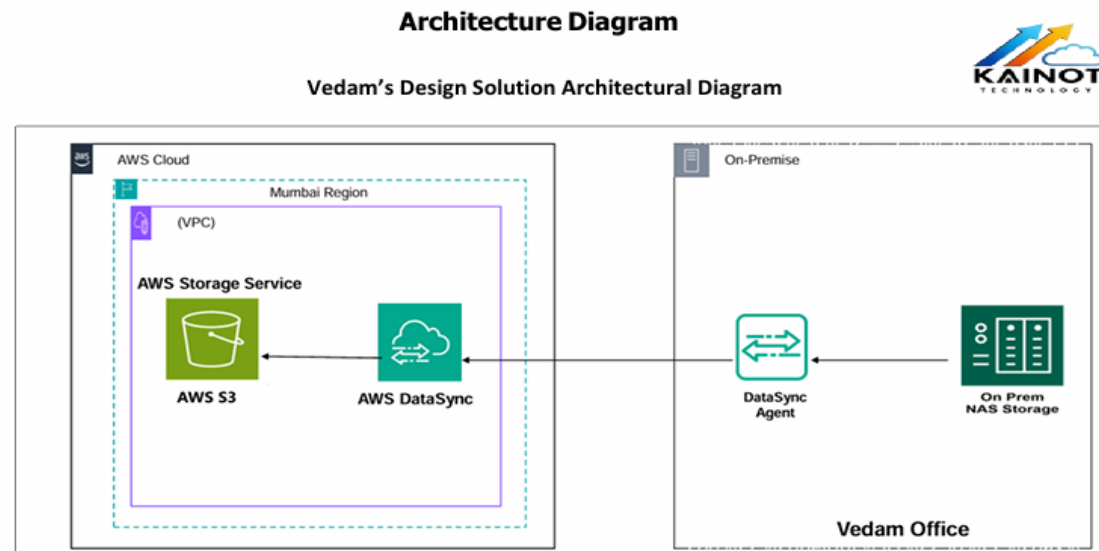
architecture, marine

structural design, and

marine system

engineering.

Architecture Diagram



The architecture ensures a **secure and scalable backup environment** for Vedam Designs. Incoming file updates on Vedam's on-prem NAS storage then **DataSync Agent** (on-prem) securely transfers files over TLS to **S3 archive bucket** (versioned) then S3 lifecycle rule transitions objects to S3 Glacier Deep Archive for long-term retention. CloudWatch and CloudTrail collect logs/metrics; Cost Explorer and Budgets monitor spend.

Outcome

- Successfully **backup NAS storage to Amazon S3 for long term retention.**
- **40+ TB** of critical design data archived into S3 / Glacier Deep Archive.
- **Automated & reliable backup process** replacing manual backups.
- **Backup windows reduced by ~40%** through efficient, incremental DataSync transfers.
- **Eliminated periodic manual backups**, reducing human error and operational overhead.
- **Improved data durability and security** with S3 durability guarantees, and bucket versioning.

About Kainot

Kainot Technology is an AWS Select Tier Partner that specializes in delivering secure, scalable, and cost-effective cloud solutions to enterprises, government, and organizations. As a System Integrator and Technology Provider, Kainot helps customers accelerate their digital transformation journey by leveraging AWS services across cloud migration, security, data management, and application modernization. With a mission to simplify IT and maximize return on investment, Kainot focuses on implementing premium AWS-based solutions that enhance operational efficiency, ensure compliance and drive innovation for its customers.

