GAS INDUSTRY

DISASTER RECOVERY SOLUTION

CASE STUDY

RH ACM | OPENSHIFT | S3

THE CLIENT

An Italian gas distributor market leader with an annual revenue of around 1 billion euro is looking for a robust remote Disaster Recovery (DR) site with stringent Recovery Time Objective (RTO) and Recovery Point Objective (RPO) targets. The main challenges included ensuring minimal data loss, rapid system recovery, and reduced manual intervention to avoid human errors in the failover process. The client is seeking a cost- effective, automated solution capable of handling backup rotations efficiently while maintaining high availability for critical applications.

TECHNICAL SOLUTION

After assessment activities, SORINT implemented a Disaster Recovery solution leveraging Red Hat Advanced Cluster Management (RH ACM) to automate the deployment and failover processes. 3 key pillars covered the implemenation phase.

CLUSTER DEPLOYMENT & CONFIGURATION

- A secondary OpenShift cluster was deployed and configured at the remote DR site to mirror the production environment.
- RH ACM was set up to orchestrate application deployments seamlessly between clusters.

BACKUP IMPLEMENTATION & DATA CONSISTENCY

- A dedicated S3 bucket was provisioned to store and synchronize critical data across both clusters, ensuring accessibility in the event of a failover.
- A scheduled backup system was established to regularly copy all required namespace resources from the production cluster to the recovery cluster, ensuring data consistency.
- A daily CronJob was implemented to delete outdated backups, optimizing storage utilization and ensuring compliance with data retention policies.

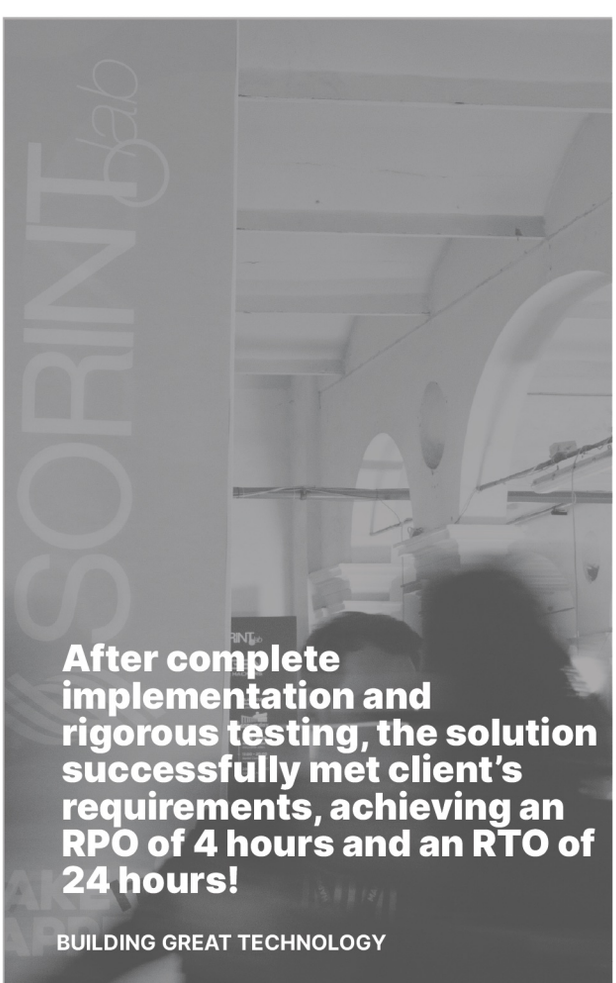
AUTOMATED FAILOVER PROCESS

- RH ACM was configured to monitor the state of the primary cluster and, in the event of failure, automatically redeploy applications onto the DR cluster.
- Automated scripts ensured that dependencies, configurations, and networking components were correctly re-established to minimize downtime.
- The failover process was thoroughly tested to validate efficiency and adherence to the defined RTO and RPO targets.

PRECISELY MONITORED FOR COMPLIANCE BY **SALAZAR!**

SORINT.LAB'S PROPRIETARY SOFTWARE

RPO Recovery Point objective	4 HOURS
RTO Recovery Time Objective	24 HOURS



After complete implementation and rigorous testing, the solution successfully met client's requirements, achieving an RPO of 4 hours and an RTO of 24 hours!

BUILDING GREAT TECHNOLOGY

BUSINESS OUTCOME

01 AUTOMATION & EFFICIENCY

RH ACM streamlined the DR process, reducing manual intervention and significantly improving response times

02 DATA RESILIENCE & SECURITY

The backup system ensured data integrity and minimized the risk of loss during failover scenarios

03 OPTIMIZED STORAGE & COST MANAGEMENT

The automated backup rotation mechanism prevented unnecessary data accumulation, maintaining storage efficiency and reducing costs

04 IMPROVED BUSINESS CONTINUITY

The implementation provided a reliable, repeatable, and scalable Disaster Recovery solution, ensuring seamless application recovery and operational resilience

05 ENHANCED SCALABILITY & FLEXIBILITY

The solution was designed to accommodate future expansions, supporting additional clusters and workloads as required

In compliance with the predefined technical and business requirements for the project,
SORINT aimed for automation as core to design and deliver a cost-effective, high-performance Disaster Recovery solution.

Allowing the client to recover effectively from exceptional situations.