

CASE STUDY

Disaster Recovery on AWS for Chhattisgarh Data Center

How Vensysco Technologies built a resilient AWS disaster recovery environment for a 250+ server on-premises data center, achieving a 15-minute RTO and 5-minute RPO.

15 min

RECOVERY TIME
OBJECTIVE

5 min

RECOVERY POINT
OBJECTIVE

250+

SERVERS PROTECTED

100 Gbps

DIRECT CONNECT
LINE

SERVICES

AWS Direct Connect, DR & Replication

LOCATION

Chhattisgarh, India

USE CASE

Disaster Recovery on AWS for Chhattisgarh Data Center

OVERVIEW

Vensysco Technologies designed and implemented a comprehensive disaster recovery solution for an on-premises data center in Chhattisgarh running 250+ servers, establishing AWS Direct Connect over the data center's existing 100 Gbps line and live data replication to a fully provisioned disaster recovery environment in the cloud.

15 min

RTO
ACHIEVED

5 min

RPO
ACHIEVED

250+

SERVERS
REPLICATED

100 Gbps

DIRECT
CONNECTS

6 Mo.

DR DRILL
CYCLE

1

What We Have Done

Vensysco Technologies designed and implemented a comprehensive disaster recovery solution for an on-premises data center in Chhattisgarh running 250+ servers, establishing AWS Direct Connect over the data center's existing 100 Gbps line and live data replication from the data center to a fully provisioned disaster recovery environment in the cloud. We architected the solution to meet strict recovery objectives, achieving a Recovery Time Objective (RTO) of 15 minutes and a Recovery Point Objective (RPO) of 5 minutes, ensuring minimal downtime and data loss in the event of a data center outage. We also configured reverse replication and automated multi-DNS routing so traffic can shift to the DR environment when required and return safely once the primary data center is restored.

2

Challenges We Faced and Overcame

We navigated challenges including maintaining consistent, low-latency replication across 250+ servers while meeting aggressive RTO and RPO targets, ensuring the connectivity available at the data center could reliably sustain continuous live replication without impacting production workloads, and designing a failover mechanism that could detect a data center outage and redirect traffic automatically without manual intervention. We overcame these challenges by establishing Direct Connect over the 100 Gbps line available at the data center, deploying live replication agents at the source to continuously synchronize data, and setting up automated monitoring that triggers DR activation and traffic rerouting the moment an outage is detected.

3 New Implementations That Enhanced Solution Effectiveness

We implemented live replication agents on source servers to continuously stream data changes from the Chhattisgarh data center to AWS, established reverse replication so data can be synchronized back to the primary data center after recovery, and configured multi-DNS routing to automatically redirect traffic to the DR environment whenever the primary site becomes unavailable. We also introduced monitoring-driven automation that provisions and brings the DR environment fully online when a complete data center outage is detected and instituted a structured DR drill scheduled every six months to continuously validate recovery readiness.

4 Cost Optimization Through Pattern Analysis

Through analysis of replication and failover patterns, we designed the DR environment to stay right sized for standby operations, keeping cloud resources aligned with actual recovery requirements rather than running a full-scale duplicate environment at all times. Direct Connect was established over the 100 Gbps line available at the data center to sustain live replication traffic efficiently, avoiding the higher costs and variability of transferring the same volume over the public internet. Scheduled DR drills every six months validate readiness without incurring the cost of continuous full-scale testing, and reverse replication avoids costly manual data reconciliation after failback.

5 Service Alignment and Effective Orchestration

We orchestrated a coordinated flow between the on-premises data center and AWS, with live replication continuously synchronizing 250+ servers, automated monitoring detecting failures, multi-DNS routing redirecting traffic, and reverse replication restoring the primary site once recovered. When the data center experiences a partial disruption, traffic is automatically routed to the DR environment; when the data center goes fully down, monitoring-driven automation brings the DR environment online and traffic is redirected without manual steps. This orchestration ensures continuity of operations with minimal disruption and a clear, repeatable path back to normal operations.

6 Infrastructure & Management Architecture

The solution operates on a hybrid architecture connecting the Chhattisgarh on-premises data center, housing 250+ servers, to AWS through Direct Connect established over the 100 Gbps line available at the data center, with live replication continuously mirroring data to the disaster recovery environment in the cloud. Our certified team manages ongoing operations including replication monitoring, DR drills conducted every six months, and reverse replication validation, while automated monitoring and multi-DNS routing handle failover and failback without manual intervention. This architecture is designed to meet a 15-minute RTO and 5-minute RPO, ensuring critical workloads remain available and data loss is minimized even during a complete data center outage.

CONCLUSION

Vensysco Technologies successfully designed, deployed, and manages a robust disaster recovery solution connecting a 250+ server on-premises data center in Chhattisgarh to AWS, achieving a 15-minute RTO and 5-minute RPO through Direct Connect over the data center's 100 Gbps line, live replication, and automated failover. Through multi-DNS routing, reverse replication, and regular DR drills, we ensured the solution remains resilient, validated, and ready to protect business continuity. The solution provides a strong foundation for reliable disaster recovery, with continuous monitoring and automation supporting long-term operational confidence.

Vensysco Technologies