CASE STUDY

The Oil & Gas major trusts Perpetuuiti to achieve comprehensive recovery automation for its distributed IT infrastructure

Client Profile

Our customer is the largest crude oil and natural gas Company in India, contributing around 71 per cent to Indian domestic production. Crude oil is the raw material used by downstream companies like IOC, BPCL, HPCL and MRPL to produce petroleum products like Petrol, Diesel, Kerosene, Naphtha, and Cooking Gas LPG.

The Oil and Gas giant has a unique distinction of being a company with in-house service capabilities in all areas of Exploration and Production of oil & gas and related oil-field services. Winner of the Best Employer award, this public sector enterprise has a dedicated team of around 28,500 professionals who toil round the clock in challenging locations.

In a survey by the government of India for fiscal year 2019–20, it was ranked as the largest profit making Public Sector Undertaking (PSU) in India. It is ranked 7th among the Top 250 Global Energy Companies by Platts.

Success Highlights

- Continuity Patrol (CP) is installed in the DR site located in Vadodara whereas, the Production site is located in Delhi.
- CP is configured to support Oracle 12c as Metadata DB.
- The communication from CP to all applications, databases and servers are encrypted and updated into the Metadata DB.
- CP workflow has been configured according to the application run-book of customer.
- CP went through successful DR drills for 5 major applications with 50% less RTO time (2 hours of RTO reduced to 1 hour with automation).

Problem Statement

- Customer has heterogeneous IT infrastructure which is running on HP-UX 11.31 & Windows 2019, VMWare 6.7 with SRM configured with HP 3PAR FullDB Replication & VMWare V-Sphere replication along with involvement of complex network activities.
- Customer has employed SMEs to manage the IT infrastructure specific to technologies such as Storage, Servers, Application etc.
- Customer needs DR automation to reduce the current RTO of their applications spread across 100+ branches and minimizing the dependency on SMEs for conducting DR drills.
- Customer conducts DR drills on every 5 applications (out of 20 applications) each month during the week ends; The existing RTO is 2 hours due to manual co-ordination.

Their Challenges

- Handling complex infrastructure.
- Critical timelines to bring up the application in DR site.
- Allocation and coordination of SME resources across geographies.
- Manual validation and verification process to confirm the application availability.
- Huge dependency on subject matter experts.
- Managing appliances for DNS and Arcos Password vault management.

Business Requirements

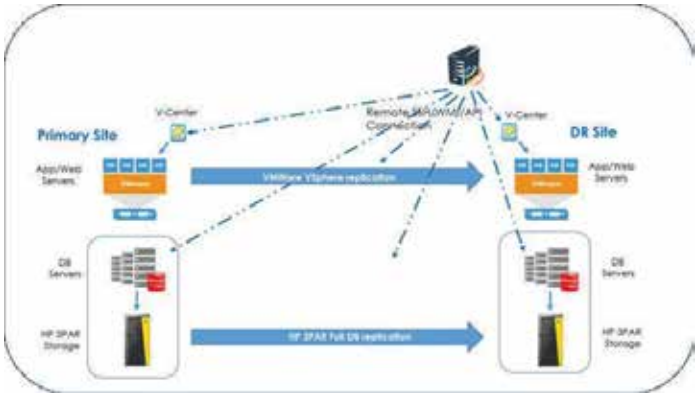
- Disaster Recovery Software to supports heterogeneous platform (Windows and HP-UX, VMWare SRM, HP 3PAR Storage replication) .
- Run DR operations seamlessly with Monitoring, Automating, Orchestrating and Managing applications from IT service availability standpoint.
- The software to run parallel execution of DR operations' management with single click of button.
- ISO 22301 compliant Reporting.
- Remove or minimize the dependency on SMEs to run DR drills every month.

Solution Offered

- Implementation will be performed in test environment provided by the Customer as a first milestone.
- Customer will setup Server Operating Systems, Configure Oracle 19c Database, and Configure storage replication, configure Application at DR and get them tested thoroughly before start of the project.
- Perpetuuiti will install Continuity Patrol software and configure it to demonstrate the functionalities of DR automation, orchestration and monitoring.
- Continuity Patrol will be configured to perform RPO & RTO monitoring and automated DR Drill (switchover/switchback) activities.
- Continuity Patrol will be integrated with VMWare to orchestrate the management of VMware DR Solution and perform DR Drill related activities.
- All activities related to Storage replication – HP 3PAR will be automated and monitored by Continuity Patrol. Task related to Data Consistency check; switchover / switchback; failover will be automated using Continuity Patrol.
- Any patch/ fix or additional software installation related to application or database making changes in OS parameter such as kernel and OS file systems need to be manually applied on DR site as well.
- A set of Change Management procedures need to be put in place to ensure any changes to the primary systems are also carried out on the systems at the DR site.

High Level Architecture Diagram

High level architecture diagram



Results Achieved

- Management dashboard for DR health and proactive correction through BIA.
- Integration with HP 3PAR Storage replication & VMWare SRM to manage the Applications.
- Integration with VSphere to manage VMWare replication and orchestration.
- Automation of HP-UX, VMWare & Windows based applications, DNS/ NATing and Firewall policies.

Key Metrics

50% REDUCTION IN RTO

50% REDUCTION IN TOTAL COST OF OWNERSHIP

1-Click SINGLE-CLICK DR DRILL EXECUTIONS

Benefits to Business

- DR runbook executions are automated without dependency of SMEs.
- Adherence to Business continuity compliance as per ISO 22301 standards.
- Reduced RTO by 50%.
- Has brought in major visibility to the Business on the overall DR.
- IT is able to release the application systems to users on time after completing the DR drills without any business impact.

READY FOR YOUR OWN SUCCESS STORY?

Get in touch with our automation experts and learn how you can fast-track your digital transformation initiatives.

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About Perpetuuiti

Perpetuuiti empowers people and businesses alike. We deliver the world's most-comprehensive and urbane automation platforms making work more human. Our platforms deliver leading-edge automation solutions for modernizing resiliency management, and turbocharging the performance of your applications, IT and business operations at speed and scale to drive exponential efficiencies.

For more information, visit www.ptechnosoft.com