

# Data Protection, the New Oil:

IOCL Leads the Way with Dell  
Technologies Cyber Recovery Solution

Customer Profile



**Indian Oil Corporation Limited**



## Fueling the Future and Empowering India

Indian Oil Corporation Limited (IOCL) is an energy catalyst of progress. It holds a prominent position in the Oil & Gas sector in India, solidifying its reputation as a leading player in the industry.

As one of the largest Public Sector Undertakings (PSUs) in the country, IOCL plays a pivotal role in meeting the nation's energy demands and contributing to its economic growth. With a vast network of over 30,000 fuel stations and a strong presence in more than 50 countries, IOCL stands tall as an international energy giant. It also ranked on the Fortune Global 500 list garnering for itself a strong position in the global landscape.

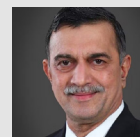
In 1997-98, nine top-performing public sector units, including IOCL, were granted Navratna status, enjoying full financial and managerial autonomy. As a trusted and reliable provider of petroleum products and services, IOCL's operations encompass the entire hydrocarbon value chain, such as refining, pipeline transportation, marketing, and exploration of oil and gas resources.

Achieving excellence within a gigantic realm of operations is no mean feat. IOCL's pursuit of innovation extends beyond this where it is igniting a green revolution in the energy landscape with a commitment to Net Zero operations by 2046.



"In this era where data is the new oil, ensuring its resilience becomes of utmost importance. As pioneers in a rapidly expanding energy sector, we have forged a strategic partnership with Dell Technologies, a leading technology provider.

Together, we take pride in being propelling India's energy landscape to unprecedented heights."



**Shrikant Madhav Vaidya**

Chairman, IOCL

## Pioneers in Implementing the Cyber Recovery Solution in the Energy Sector

Being a leading integrated energy major, IOCL consistently remains at the forefront in the realm of technological evolution. Given the dynamic changes in digital landscapes today, enhancing data security technology is a priority for them. By spearheading the implementation of Dell's Cyber Recovery Solution (CRS), IOCL stays a step ahead in keeping their ecosystem safe and secure.

The refinery headquarters (RHQ) of IOCL strategically oversees and manages the company's robust refining operations, driving efficient and sustainable energy production. At the helm of affairs is Ms. Shukla Mistry, Director (Refineries), who is also the first woman director on the IOCL board. With a wealth of experience, Ms. Mistry excels in executing a wide array of green-field and brown-field projects within the refineries.

Furthermore, she leverages her passion and belief in the power of technology to foster business growth and resilience. Under Ms. Mistry's able leadership is Mr. Manish Grover, Executive Director, Strategic Information Systems and Information Systems (SIS & IS) who has steadfastly assured the commitment of the SIS & IS team towards innovation, automation, and data analytics, while highlighting the preparedness of cybersecurity and RHQ's leadership in the digital landscape.

The IT Transformation journey at RHQ has seen the recent fruition of data center modernization undertaken by Dell Technologies. This has been followed by the implementation of the cyber recovery solution. A unified backup solution is in the offing aimed at bolstering business continuity at the RHQ. As a prominent customer of Dell Technologies, IOCL boasts a significant Dell footprint in its IT infrastructure/environment.

Dell Servers, Storage, and Backup and Data Protection solutions have been adopted by both the RHQ and the majority of individual refineries.

## Distilling the Right Solution

In recent years, there has been a significant increase in the number and severity of cyber-attacks. The potential impacts of such breaches are far-reaching, encompassing business disruption, permanent loss or theft of sensitive data, financial losses, reputation damage, legal and compliance issues, and hidden long-term costs.

IOCL, as India's largest PSU with strategic importance, possesses critical assets, including oil and gas refineries, and handles confidential data of customers and ecosystem partners. Considering the potential gravity of a security breach, having the ability to revert to an original state becomes crucial, which a CRS can provide by restoring the Golden copy of enterprise data.

Due to recent incidents in the Oil & Gas industry, where restoring operations was challenging after an attack, the RHQ seized the initiative to safeguard critical data and secure their business operations. This need was also necessitated by the recent compliance guidelines which mandated that cyber-attacks be reported to authorities within a certain duration depending on the severity of the attack.



"In our relentless pursuit of technological advancements, cybersecurity remains the bedrock of our operations.

With Dell Technologies ingenious solution, we fortify our refining landscape, igniting a sustainable energy revolution for India's future."



**Shukla Mistry**

Director (Refineries),  
IOCL

## Paving the Path to Success with Strategic Ingenuity

To ensure a comprehensive evaluation, leading OEMs were invited to present their Cyber/Isolated Recovery Solutions. As part of their rigorous assessment process, the RHQ team simulated a real-life cyber attack within a controlled environment. In a remarkable display of ingenuity, they crafted an outcome-driven RFP, with the desired business results guiding the technical specifications rather than a product-driven approach.

Among the contenders, Dell Technologies emerged as the frontrunner, boasting an exhaustive and superlative scanning capability, setting them apart from the competition. Additionally, Dell's open architecture offered seamless integration with third-party solutions, enabling compatibility with existing products used in some refineries.

RHQ partnered with Dell Technologies, for the deployment of the CRS and the establishment of a secure vault to isolate their critical data. The objective was to ensure thorough scanning of the data, enabling RHQ to recover a pristine copy in the event of any unforeseen incidents. With the implementation of this solution, critical data from ransomware and other sophisticated threats remain protected.

This was the first time that the top brass at RHQ took direct lead and ownership of an IT project of this scale, highlighting the strategic significance and unwavering commitment to enhance its cybersecurity posture.

## The Masterstroke: Executing the Project Plan with Precision and Finesse

At the forefront of RHQ's IT initiative was Mr. Yatish Kumar, Chief Manager, Information Systems. He and his team were instrumental in managing RHQ's backup infrastructure and the CRS vault.

The team demonstrated clinical precision in preparing and ensuring the successful deployment of the solution. They exhibited exceptional clarity in identifying critical data and applications, tailoring the system to their specific business requirements, and rigorously testing it.

Dell Technologies certified partner F1 Infotech Pvt. Ltd. played a pivotal role, encompassing system documentation and third-party component implementation, deploying skilled technical resources, and creating additional test cases. The implementation of the solution by Dell Technologies surpassed expectations, having been seamlessly completed



“Our team at IOCL believes in prioritizing and owning risk projects and critical endeavors, ensuring they receive the utmost priority and attention. Dell's expertise and their advanced cybersecurity solutions has been instrumental in strengthening our data protection and the overall IT posture. Through this collaborative effort, Dell Technologies has become an invaluable partner, empowering us to deliver on our strategic vision and business goals in our IT transformation journey.”



**Manish Grover**

Executive Director,  
Strategic Information Systems  
and Information Systems  
(SIS & IS), RHQ, IOCL

within a much shorter timeframe than initially planned. The entire process, from equipment delivery to installation and User Acceptance Testing (UAT), was executed with a high degree of efficiency.

Following the successful system deployment, the on-site team received comprehensive training, empowering existing resident engineers to maintain the CRS system alongside the prevailing Dell IT infrastructure. Dell Technologies undertook direct responsibility for all Service Level Agreements (SLAs).

## Unveiling the PowerProtect Cyber Recovery Solution

The solution in use was the Dell PowerProtect Cyber Recovery, equipped with CyberSense Software, PowerEdge Rack Servers, Data Domain (PowerProtect) and Dell Network Switches. The solution was sized at 50 TB of data being scanned, along with Data Domain of 120 TB Raw with server and network.

PowerProtect Cyber Recovery secures critical data from ransomware and advanced threats by implementing an operational air gap that ensures data isolation and immutability. Data integrity is actively monitored through machine learning and CyberSense analytics, enabling a swift recovery in case of a cyber attack.

## Fortifying Data with Advanced Security Features

**Isolation:** Data is physically and logically separated within an air-gapped vault.

**Immutability:** Data integrity and confidentiality is preserved through robust security layers and controls.

**Intelligence:** Machine learning and analytics ensure seamless recoverability.

Given Dell Technologies commitment to sustainability, the solution deployed is optimized hardware with respect to power consumption. This is also in sync with IOCL's sustainability mandate.

Following the solution launch, RHQ hosted a two-day training program for stakeholders from all refineries, imparted digital knowledge and enhanced operational efficiency, aligned with the organization's digitalization endeavors.

This accomplishment positioned RHQ as the central hub for this new initiative, allowing other IOCL departments to capitalize on RHQ's expertise and their first mover advantage.



"We are honored to spearhead the Cyber Recovery Solution for IOCL Refineries, reinforcing their stand against evolving cyber threats. Collaborating with an industry behemoth like IOCL empowers us to implement new approaches and secure the country's energy landscape."

**Dell Technologies Representative**

## The Roadmap Ahead

RHQ recognized the importance of uniformity and consistency in their backup processes across multiple locations. All nine refineries will soon get integrated with the CRS implementation done at the RHQ.

The critical data from the Refineries locations will be synced to the centralized RHQ Disaster Recovery (DR) and moved to the cyber vault. RHQ aims to establish a comprehensive DR solution at a third site to further ensure business continuity in the face of unforeseen events.

## Conclusion

Being the first to implement the Cyber Recovery Solution in the Oil & Gas sector in India, IOCL continues to set a benchmark as an industry leader, creating a ripple effect and influencing other energy players. By leveraging Dell's comprehensive portfolio of solutions and services, IOCL is well-equipped to enhance operational resilience and drive continued success in a highly intensive Oil & Gas industry.

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