Largest Oil and Gas Player in Pakistan Completes Major Data Center Overhaul with Vertiv Solutions

A Vertiv Case Study

Background

Pakistan's largest exploration and production (E&P) company in terms of market capitalization, who also ranked multiple times in the Forbes 2000, is determined to carry out an extensive oil and gas exploration program with minimal risks. This includes fast-track seismic data acquisition, processing, interpretation, and 3D visualization, and followed by active drilling campaigns, ramping up oil and gas production in the country.

In line with its exploration-led growth, and as a response to the company's growing demand for IT services and operations, the company ventured into revamping and consolidating their existing facility infrastructure with cutting-edge critical power, thermal management, monitoring and management technologies from Vertiv.

Challenge

As a leading company in the oil and gas industry, the customer was looking to strategically refurbish and integrate its existing data center facility infrastructure to support their exploration program and drilling campaign, as well as to improve the quality of their service and responsiveness to the growing IT demands of their business operations. They specifically want a complete solution partner with in-depth knowledge and vast experience in making a resilient and state-of-the-art data center.

Solution

In the search for the best partner in this crucial digital transformation, the company sought solutions from all major global data center infrastructure manufacturers. After careful assessment, they decided to choose Vertiv, through its partner, Premier Systems in fulfilling the company's project requirements. It was clear to the company that Vertiv offers the most resilient and future-proof product line with the most advanced technology suitable for 24/7 data center operations and critical functions.

Challenge: Standardization and consolidation of existing data center facility infrastructure for a concurrently maintainable, scalable, and future-proof data center

Solution:

- Vertiv™ Liebert® APM modular uninterruptible power supply (UPS) 150kVA

- Vertiv™ Liebert® CRV4 in-row cooling with thermal containment

- Rack power distribution units

- Data Center Infrastructure Management (DCIM), Environment Monitoring System (EMS), Surveillance Solution, Access Control System, and Server and Network Rack Enclosures

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After a thorough discussion with Vertiv engineers and experts, the customer selected the Vertiv™ Liebert® APM, the Vertiv™ Liebert® CRV4 in-row cooling with thermal containment, rack power distribution units (rPDUs), DCIM, Environment Monitoring System (EMS), surveillance solution, and access control system, along with server and network rack enclosures.

Highly Efficient & Modular Uninterruptible Power Supply

The Liebert APM (150kVA) uninterruptible power supply (UPS) system provides 96% efficiency and is most suitable for midsize data centers with a growing need for high availability and energy efficiency. Its ability to be paralleled to another unit and its modular racks allow the company to swap or add power modules without disrupting the whole system operation and to meet their future demand whenever needed. It has a built-in monitoring for ease of management and maintenance. All these provide reliable, efficient, and highly available power protection for the company's mission critical infrastructure.

In-row Direct Expansion Cooling and Thermal Containment

One of the prime products of Vertiv, the Liebert CRV4, is an in-row cooling unit along with a thermal containment designed and deployed for the company's data center to cool down servers and to segregate the intake airflow from the exhaust airflow respectively. This resulted in a more optimized and energy-saving cooling operation. The containment solution from Vertiv allowed the company to place their existing pre-engineered third-party original equipment manufacturer (OEM) racks in the containment seamlessly.

Data Center Infrastructure Management (DCIM) and Environment Monitoring System (EMS)

Vertiv provides a complete infrastructure monitoring and management solution for the customer's data center infrastructure in their portfolio. The research centric approach allows the third-party integration of infrastructure components. Environmental monitoring is also a key aspect of the whole data center upgrade to ensure the safety and longevity of the installed units and components.

Surveillance and Access Control System

To fully integrate the security systems of the customer's data center with the DCIM, and to allow a centralized single window control, the Vertiv Biometric Access Control Solution, along with the Surveillance Solution were also deployed in line with the company's objectives and requirements.

Results

The company recognized the modular and scalable nature of Vertiv solutions, which allowed Premier Systems to provide their IT team the ability to right-size their data

center IT equipment, to manage cooling and power distribution more efficiently, allowing higher visibility of their operations, and achieve a much-improved PUE. The biggest value-adding feature of Vertiv solutions is the infrastructure monitoring software for management of both power and cooling, resulting in little to zero downtime and overall minimized energy consumption.management of both power and cooling, resulting in little to zero downtime and overall minimized energy consumption.
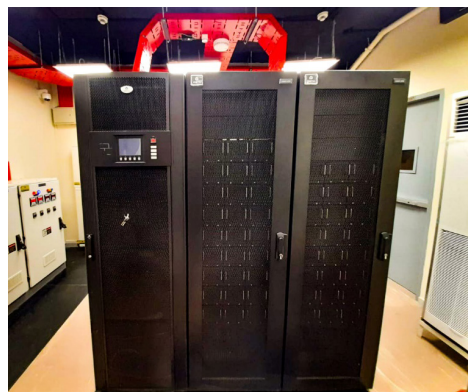
Results:

- Upgraded Data Center with 24x7 Efficient and Reliable Operation Integrated Facility Infrastructure
- Higher Uptime and Improved Power Usage Effectiveness (PUE)
- Ease of Expansion and Maintenance
- Centralized Data Center Visibility

Summarized below are the results of the overhaul and the benefits the company now reaps.

- State-of-the-art data center facility and infrastructure ensuring 24x7 Operations.
- Integrated components such as UPS, precision cooling, access control & DCIM etc.
- Higher uptime due to improved infrastructure Monitoring and Management.
- Future-proof modular solution for easy expansion and maintenance.
- Wide-ranging view of data center power and infrastructure resources/ assets.

To learn more about Vertiv complete portfolio of products and solutions, visit Vertiv.com.