

## جامعة الدمام UNIVERSITY OF DAMMAM



### ABOUT THE COMPANY

The University of Dammam is a renowned research-based institution with a student population of over 50,000. Led by its medical and architectural colleges, the University, located in the Eastern Province of Saudi Arabia, is comprised of 21 colleges and a University Hospital.

[www.uod.edu.sa](http://www.uod.edu.sa)

### Background

As the University of Dammam continues to grow and develop its academic capabilities, their data center needed to be expanded accordingly. Along with supporting the increased use of data, the University's key goal was to boost efficiency in IT operations and maintenance. To address these growing demands, the University of Dammam found Vertiv to be the ideal partner for their new, state-of-the-art data center.

### Achieving Energy Efficiency in a Sizzling Climate

The University of Dammam was looking for a new data center solution to be able to face the growing IT demand and optimize the numerous computer rooms distributed across its various campuses. Moreover, the data center had to serve the University Hospital which was recently expanded to an eleven-story building with a capacity of over 600 beds.

Given Saudi Arabia's challenging temperatures, the institution's most crucial requirement was energy efficiency. A reduced footprint, rapid deployment, reliability and sustainability were also among the University's primary needs.

"The main objective of building this data center is to increase efficiency by utilizing resources in smart and innovative ways," says Dr. Saad AlAmri, CIO for the University of Dammam. "Vertiv has a full range of highly advanced solutions and a strong local presence in Saudi Arabia, that helped us achieve our goals."

The new data center, provided by Vertiv and certified by the Uptime Institute as a Tier III facility, is powered by six **Liebert® 80-NET** UPS units. These are configured to offer up to 1000 kVA of dual power and multiple independent distribution paths to the IT equipment. The system design provides a concurrently maintainable infrastructure with an expected availability of 99.982%.

To be able to face the extreme climate conditions of up to 52°C, the thermal management equipment is meticulously arranged deploying **Vertiv SmartAisle™** containment, coupled with **Liebert PDX** and **Liebert CRV** units. Outfitted with more than a hundred **Vertiv Knürr® DCM® Heavy-Duty Racks** and **Liebert MPH** power distribution units (PDU), the Vertiv SmartAisle containment allows for optimized air flow in a reduced footprint.

Moreover, the Liebert MPH is a flexible rack PDU which offers the industry's leading operating temperatures by monitoring the receptacle as well as the strip and environmental inputs, i.e., temperature and humidity. This detail is fundamental in ensuring system availability despite the harsh ambient temperatures. To further minimize data center energy consumption, six Liebert PDX and four Liebert CRV direct expansion systems are installed.

These ultimate thermal management units, coupled with the Vertiv SmartAisle containment, are able to cool servers while keeping power usage effectiveness (PUE) to a minimum, going beyond customer expectations.

The University of Dammam also highlighted the need for a data center infrastructure management (DCIM) tool that could control the entire infrastructure. With the **Vertiv SiteScan® Web** monitoring system, the University can now take advantage of having a centralized overview as well as monitor and control any piece of critical support equipment remotely and in real-time, whether it's located in the next room or in another facility.

Thanks to this new Tier III facility, the University of Dammam is now able to efficiently manage the growing influx of data and provide thousands of users with a highly available and reliable IT service.

### Facts & Figures on the Data Center

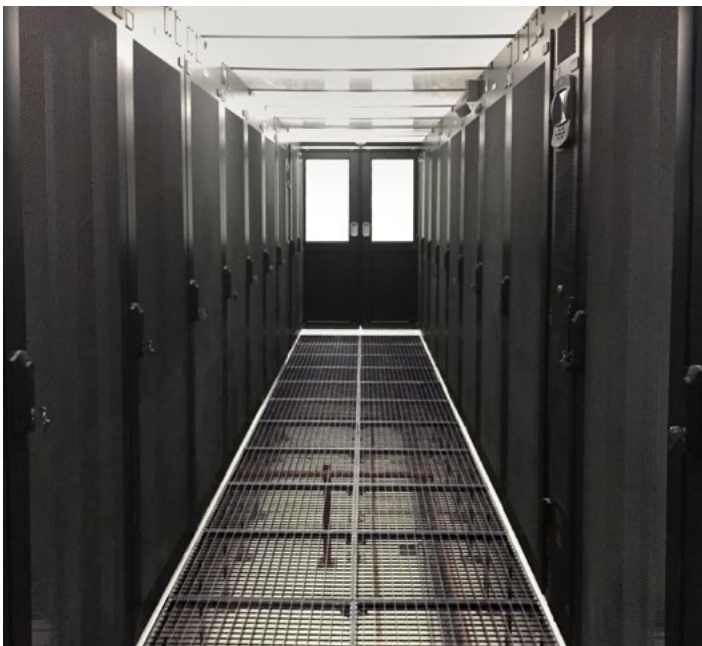
- Uptime Institute Tier III certification
- Expected availability of 99.982%
- High ambient temperature up to 52 °C
- 1000 kVA of dual power
- 250 m<sup>2</sup> IT room

#### Vertiv Solutions:

- 1 x Vertiv SiteScan Web monitoring system
- 4 x Vertiv SmartAisle containment
- 4 x Liebert CRV direct expansion units
- 4 x Liebert FDC power distribution cabinets
- 6 x Liebert PDX direct expansion units
- 6 x Liebert 80-NET UPS
- 84 x Vertiv Knürr DCM Heavy-Duty Racks
- 168 x Vertiv MPH Rack PDU

*One of the key parameters in order for this project to succeed, is the power usage effectiveness. Vertiv SmartAisle containment, the Vertiv SiteScan monitoring solution, coupled with all the power, cooling and rack equipment provided, proved to be fundamental in reaching our PUE target.*

**Salah ElShekeil, network & information security manager for the University of Dammam**



Vertiv equipment installed at the University of Dammam data center