

Leading Broadband Service Provider in Malaysia



A Vertiv Case Study



About The Company

The customer is one of the leading broadband service providers in Southeast Asia, boasting of providing speeds of up to 1Gbps to its customers. It offers complete fibre network solutions and other services to meet demands for fast, reliable and secure bandwidth to users.

In addition, the customer also offers a full suite of data centre solutions to enterprise and retail customers in the region.

Background

Faced with growing demands for high-speed broadband services, the customer was looking at expanding the capacity of its upstream connection bandwidth with the international internet gateway. Increasing the bandwidth, however, means more power is required to support the new infrastructure.

During the design stage, the customer was met with a few challenges. First, the new server room is located at the building's second floor, making it difficult to use traditional 48V DC power equipment due to cabling concerns and possible high voltage drop as the power room is situated at the ground floor with some 50 meters from the server room. In addition, the server room space is small and has limited floor area for IT equipment.

Case Summary

Location: Malaysia

Critical Needs: The customer was looking for a cost-effective, yet high-efficient power solution to support its capacity expansion, while addressing existing infrastructure challenges.

Vertiv Solution:

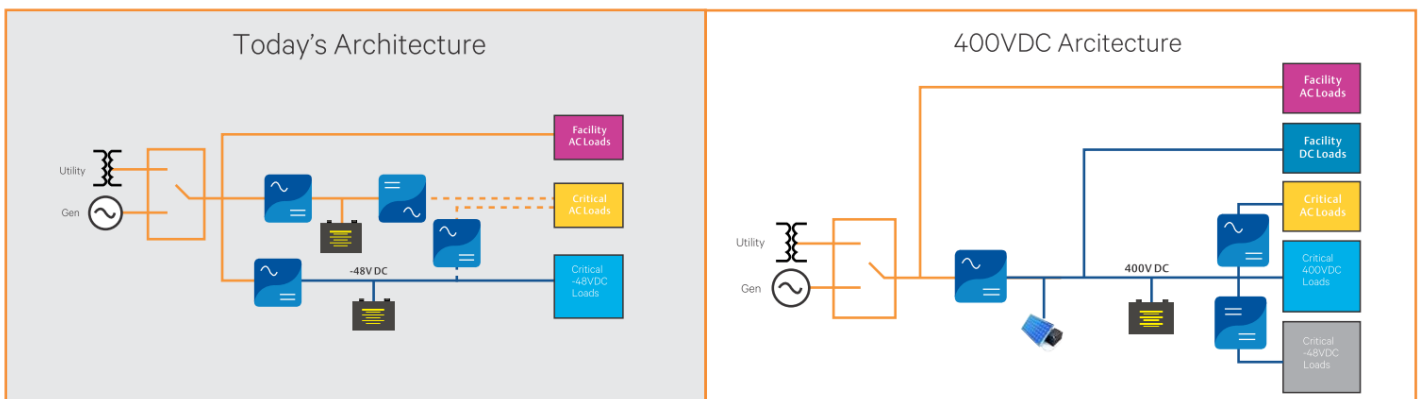
- Netsure™ HVDC series

What is HVDC?

HVDC, or high-voltage direct current, utilises 240-400V DC energy to distribute power within a facility or data centre. Traditionally, a facility utilises power from a grid that is converted and distributed throughout the facility. However, in telecom or high-density applications, utilising energy from the grid can be inefficient due to multiple energy conversions that result in wasted energy. In this instance, DC power is the best alternative to optimise the unnecessary conversion steps thereby reducing the power losses.



Traditional -48VDC versus 400V DC architecture.



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The Solution

Recognizing these challenges, Vertiv proposed the deployment of its NetSure™ HVDC series solution. The NetSure HVDC 400V series combines the proven benefits of conventional 48V DC power including scalability, ease of integration and modularity, with the cable and installation savings from higher voltage distribution. This results in cost savings while providing the highest efficiency and availability for telecom or data centre sites.

The NetSure HVDC solution also has integrated intelligent monitoring capabilities that provide real-time remote access and web-based monitoring. Redundancy capabilities also provide the customer with added power protection against outages for increased availability.

In addition, the NetSure HVDC solution offers the following benefits:

1. **CapEx reduction** - eliminates the need for inverters and reduces need for copper in power distribution
2. **OpEx reduction** - conversion efficiency gains of up to 5%; reduced heat dissipated and distribution losses; increased reliability while lowering maintenance cost
3. **Space-saving** - reduced power conversion volume means reduced footprint
4. **Improved power quality** - eliminates phase balance issues

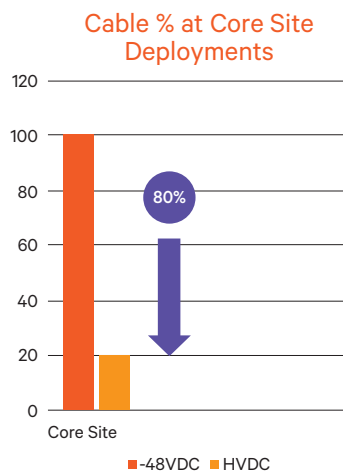
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CABLE SAVINGS

- Savings in Core site deployments due to 80% reduced current vs -48V DC
 - » Reduced cabling
 - » Lower installation costs
- Improved cable management
- “Future-proof”: ability to power both existing -48V loads and new 400V loads



Other Benefits:

Smaller Footprint

Reduced Distribution Losses

Lower Total Cost of Core Infrastructure vs. -48V

The Results

This marks the first NetSure HVDC solution deployment in Southeast Asia. Since the installation of the solution, the customer has seen the benefits as compared to traditional DC power deployments. It was able to gain up to 80% in savings in cabling costs as compared to traditional 48V DC power equipment. In addition, the NetSure HVDC solution offers up to 85% savings in footprint due to its compact and integrated design.

In total, the customer was able to achieve maximum savings by deploying the NetSure HVDC solution as compared to traditional DC power designs.

For more information on the Netsure™ HVDC 400V and other infrastructure solutions, please visit

[Vertiv.com/HVDC-Asia](https://www.vertiv.com/HVDC-Asia)