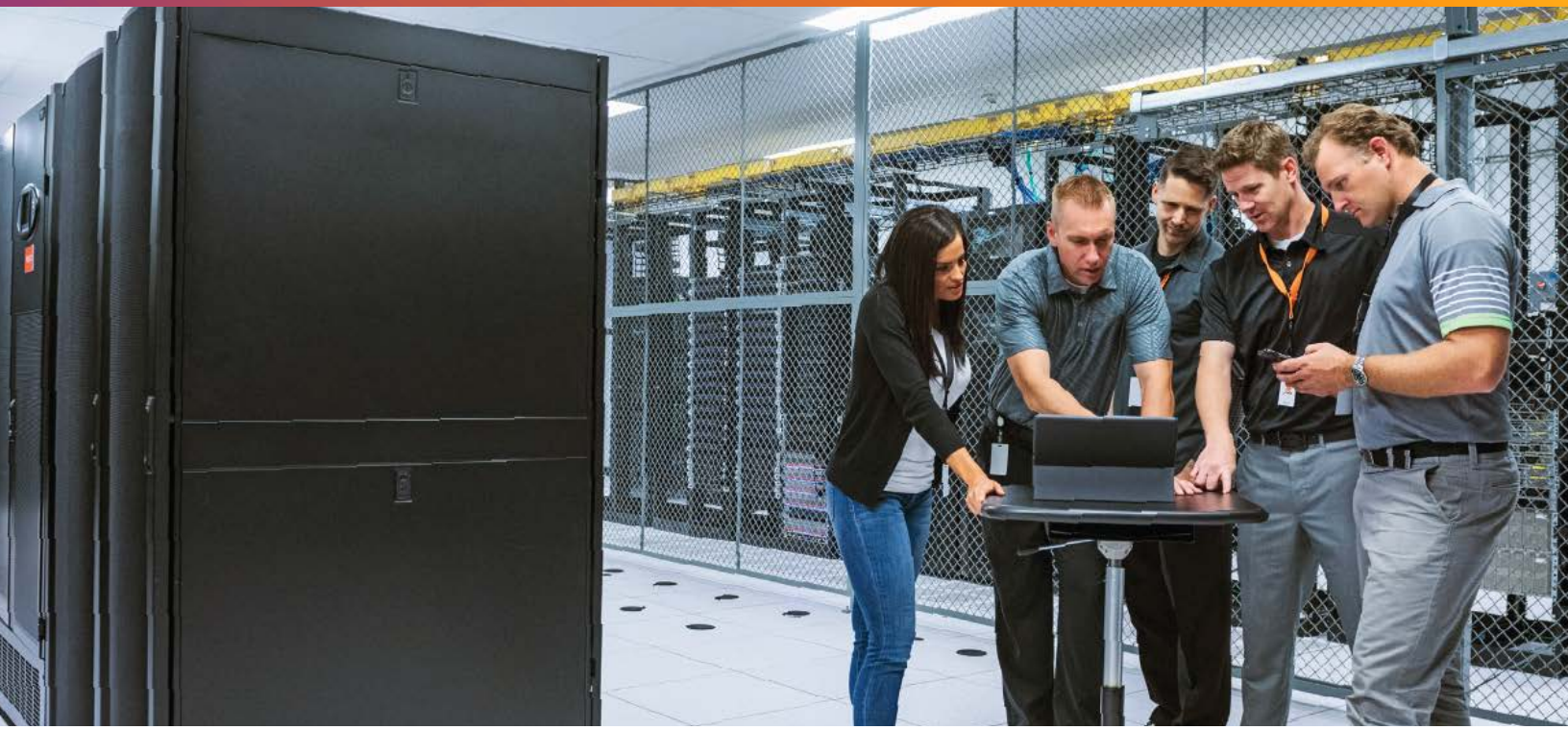
Power Transmission Operator Eliminates Logistical Challenges of IT Network Management for Improved Business Continuity

A Vertiv Case Study



Background

Known as one of the leading digital partners in Italy due to its strong stability, established expertise, and broad portfolio of services, Digital Value leads the digital transformation projects of hundreds of enterprises and public entities. In 2021, Digital Value began partnering with one of Europe's largest power transmission operators, which needed to access, control, and manage its edge network infrastructure deployed at thousands of sites across Italy to support business continuity.

The Digital Value and Vertiv collaboration began in the same year, following a market search for solutions that would best meet the needs expressed by the customer. After careful evaluations, Digital Value identified the services offered and the Vertiv™ Avocent® ACS8000 serial console as the optimal solutions, as used together they could provide speed and accuracy in responding to the customizations required, while also offering secure in-band and out-of-band visibility and control features over downstream equipment in the company's data centers, as well as cloud and colocation facilities.

Company Profile:
Founded in 2018, Digital Value comes to life from the union of entrepreneurial companies that share the idea of sustainable technological innovation as a driver of development for the country's businesses.

Digital Value is listed on the EURONEXT MILAN market, is part of EURONEXT TECH LEADERS and is one of 60 stocks on the FTSE MIB Mid Cap list of Borsa Italiana.
www.digitalvalue.it

Challenge

It was important to zero in on the logistical difficulties highlighted by technicians in accessing IT network devices in electrical stations and substations distributed in thousands of sites throughout Italy. The customer, therefore, having state participation, initiated a public tender for the necessary solutions and services. This activity concluded in November 2022, with the project awarded to Digital Value and Vertiv.

During the final selection, the decades-long market presence of the Vertiv™ Avocent® brand prevailed. Along with the functionality that completely meets the identified needs, the customer also appreciated the prompt responsiveness of Vertiv's research and development (R&D) team, which was able to make the necessary modifications and customizations to meet the stringent operational requirements indicated.

Vertiv and Digital Value worked closely together to provide the customer with a solution that would enable maximum cellular connectivity while also including support for secondary failover. Power distribution in the thousands of sites consists of large cities, towns, and remote mountain locations. In terms of its characteristics and potential, this infrastructure is comparable to that of a service provider. There was also a need to enable access and troubleshooting at remote locations through automatic failover over cellular, Ethernet, or analog modem networks.

The customer also required an environmental sensor with multiple customizable access levels to provide visibility into local conditions and compliance with data center access and security procedures.

Solutions

Vertiv™ Avocent® ACS8000 serial consoles provide an innovative platform that integrates important connectivity features such as cellular, gigabit fiber, USB, and sensors. Technicians can thus take advantage of secure, remote data center management and out-of-band IT resource management features from anywhere in the world. Featuring a dual-core ARM processor with expanded memory capabilities, the upgraded Linux operating system and the Vertiv™ Avocent® DSView™ management software provided the Avocent® ACS8000 with optimal performance, security and reliability for a complete out-of-band management solution.

In detail, operators could remotely and securely access the IT communications equipment of the existing edge infrastructure to manage and maintain it without depending on the network's state of connectivity. This out-of-band management connection "bridge" to the serial consoles of such equipment will be able to take advantage of the 4G/LTE technology built into the Vertiv™ Avocent® advanced console servers.

Cellular connection security is guaranteed by tunneling protocols compatible with the technology architecture the customer uses. Since hundreds of edge installations are distributed over thousands of locations throughout the country, the customer will use the zero-touch provisioning feature to automate updating and entering configurations, which can be activated on Vertiv Solutions Implemented Avocent® ACS8000 equipment. This will simplify solution deployment activities and, from the outset, enable specialized personnel to operate simultaneously in multiple remote locations without the need to travel there for the first activation.

The Vertiv™ Avocent® DSView™ software also consolidates all the customer's IT resources connected to the Avocent® ACS8000 serial consoles, managed from a single platform. This allows users to reduce profiling errors and permissions granted — depending on the IT resources assigned and intended functions — and maps the operating status of all Avocent® hardware deployed across the territory.

Along with deployment of hardware and software, Vertiv provides the end customer with support services, either through Digital Value or directly. In this first phase, Vertiv provided consulting for the preparation of customized configurations.

The implementation and first rollout of the solutions began in 2023, and the first installations went underway in late June and will continue through 2024. The use of high-value, high-quality Vertiv solutions and Digital Value's excellent reputation as a partner certainly opened new prospects for future winning partnerships.

Vertiv Solutions Implemented

- Vertiv™ Avocent® ASC8000 16-port cellular with 4G/LTE dual AC power supply
- Avocent® ACS8000, 48-port cellular with 4G/LTE dual AC power supply
- Vertiv™ Avocent® DSView™ software
- Hardware and software maintenance service for a duration of five years

Results

- Increased visibility and control through full remote connectivity with excellent mobile-activated features that provide redundancy and easy management of all assets
- Eliminated logistical difficulties associated with mountainous or remote areas by enabling the customer to intervene and shut down faulty equipment in seconds, compared to the days that were previously required
- Simplified authorization features for user access, further expanding security features through the use of VPN protocol and Generic Routing Encapsulation (GRE)
- Flexibility and maximum reliability with keyboard/video/mouse (KVM) controls that can be activated from a standard server with proprietary connection functionality to the service processor and MIB-based controls for infrastructure such as rack power distribution units (rPDUs)
- Improved logging steps for each activity with granular access control and device recovery from virtual media for guaranteed protection through site authentication and web certificates
- Enabled external network controls for protected web browsers with simplified management of operations from any location, offering complete operational accountability and business continuity security

"Logistical difficulties due to the geographic distribution of the customer's sites and the issue of IT staff presence being limited to primary sites in major cities, were solved with the implementation of a parallel network of Vertiv equipment, which in most cases, allows for rapid and effective intervention, and a marked improvement in actual service level agreements.

Right from the start, Avocent's product was the one that best met the customer's needs, and the partnership with Vertiv exceeded goals, ensuring additional enhancement features.

The expertise demonstrated by the Vertiv team in the evaluation and testing phases of the offered solutions gave even more value to the solution's features, which are unquestionable. This is the first project we have implemented with Vertiv in the Italian market, but the results we are getting confirm that we can develop future collaborations together. Suffice it to say that this large customer in the energy sector is in the process of restructuring its data centers, and in collaboration with Vertiv, we are working on proposing new cutting-edge products and services."

— Maurizio Brun,
Chief Revenue Officer,
Digital Value

"The mission of IT teams for modern data center operators is to ensure efficient applications that provide continuity of operation with targeted solutions to diagnose and manage any issues remotely and in a timely manner while also adopting the best standards and most innovative technologies to support cybersecurity. In addition, facilities that have multiple locations or those that must provide for increasingly distributed data contexts must also be able to address the critical issues associated with the multiplicity of vendors and partners activated in the past. Vertiv and Digital Value won the project by winning the entire technical score of the tender. There were many specifications, and it was necessary to totally meet the technical requirements without underestimating the planned budget. Together, we managed to achieve the perfect technical-economic combination required by the customer."

— Andrea Ferro,
VP Channel, IT & Edge Applications,
Vertiv EMEA

Vertiv.com | **Vertiv Infrastructure Limited,** Fraser Road, Priory Business Park, Bedford, MK44 3BF, United Kingdom

MKA4L0UKITDS-EN (05/24)