

Protects
Power for
Leading
Czech
Colocation
Datacentre

**Case
Study**

Czech Republic
Colocation Datacentre
TTC TELEPORT

centiel.com



Location

Czech Republic
Colocation Datacentre, TTC TELEPORT

Challenge

The installation needed to be completed quickly and efficiently due to the interruption of Christmas.

Power Protection Solution

6 x CumulusPower™ 300kW frames populated with 12 x 60kW Intelligent UPS Modules

1 x CumulusPower™ 300kW frame populated with 3 x 50kW Intelligent UPS Modules

3 x CumulusPower™ 300kW frames populated with 15 x 60kW Intelligent UPS Modules

1 x CumulusPower™ 300kW frame populated with 3 x 50kW Intelligent UPS Modules

Results

CumulusPower™ now protects the load at the two new electrical power substations called Module 2 and Module 6 at TTC TELEPORT.

This installation now offers the maximum safety and highest availability for the critical application, providing power protection for the datacentre and its extensive global customer base.

Protects Power for Leading Czech Colocation Datacentre

Leading Swiss UPS manufacturer CENTIEL's three phase, true modular UPS CumulusPower™ has recently been selected and installed to protect the power at the Czech colocation datacentre TTC TELEPORT.

Approximately 60% of all Czech internet traffic originates in TTC TELEPORT datacentres which are some of the most modern facilities of this type in Europe. Companies from all over the world host their data with TTC TELEPORT, which offers a wholly independent datacentre service based on 20 years' experience.

In October 2015, TTC TELEPORT built the largest modular data centre in the Czech Republic in Prague. Initially, much of the 8,000m² facility was left empty, ready to accommodate future customers. Recently, as a result of client demand, further significant investment in equipment has been made to complete two new data halls (Module 2 and Module 6), including the installation of CENTIEL's state of the art UPS technology to protect the power to this area of the facility.

CENTIEL's flexible, scalable, true modular UPS CumulusPower™ was selected. CumulusPower™ is known for its '9 nines' (99.9999999%) industry leading system availability and low total cost of ownership achieved through its Maximum Efficiency Management (MEM) and low losses of energy.

CumulusPower's Distributed Active Redundant Architecture (DARA) means the entire architecture, even the control logic (the decision-making technology) is distributed, ensuring if any part of the system fails, it is automatically isolated ensuring the load continues to be supported. The communication lines also have inbuilt redundancy so if one line fails the communication continues to run through the UPS.

CumulusPower™ also encompasses safe-hot-swap capability. This means a module being added to a system can be fully isolated and tested within a running frame before it accepts any load. As a result, CumulusPower™ provides the highest level of availability possible and is currently the safest and most reliable UPS available for critical power protection.



TTC TELEPORT's electrical power substation: Module 2, now sees the installation of 6 x CumulusPower™ 300kW frames populated with 12 x 60kW Intelligent UPS Modules (IM) and 1 x CumulusPower™ 300kW frame populated with 3 x 50kW IM. These units will support the IT and control and monitoring elements of the datacentre.

In the electrical power substation: Module 6, 3 x CumulusPower™ 300kW frames populated with 15 x 60kW IM have been installed alongside 1 x CumulusPower™ 300kW frame populated with 3 x 50kW IM. CENTIEL, with its local partner, also provides full service and warranty support for the UPS solutions installed. Four 1,600kVA FG Wilson by Caterpillar motor generators back up the high demands for power to the entire facility.

Challenges that needed to be overcome at Module 6 included the need to protect the technology from dust as the hall was still a construction site. In addition, the install needed to be completed quickly and efficiently due to the interruption of Christmas 2020 which fell during the project timeline. It was also important to secure the ongoing processes of the TTC TELEPORT



datacentre to ensure there was no disruption during the set up.

The development and smooth running of the project was managed by CENTIEL's local partner. Responsibilities included compliance with legislation, security, and coordination of sub-contractors. CENTIEL's partner also ensured the datacentre back-up power design adhered to the Uptime Institute's Tier 3 security standard.

During 2015 the technical infrastructure of the datacentre was redesigned due to challenges with the original design. Re-work of the entire project was completed in record time of just four months. The concepts of some of the sections were retained but most had to be re-designed from scratch. The newly developed data centre required a modular UPS that offered flexible, scalable, reliable, and efficient power protection to support the increasing power capacity without jeopardising the availability of the IT technologies already installed.

In 2020 CENTIEL's partner was asked to complete the expansion phase of the project as a trusted partner of TTC TELEPORT. It was after this that CENTIEL's UPS was introduced to provide a secure and efficient



power supply while supporting the scalability of the datacentre.

System testing and commissioning of the new UPS was ultimately completed in February 2021. Testing was rigorous and included both the new and existing areas of the facility. More than 800 partial functional tests of individual systems and load tests of the technologies were performed with a simulated operating load of 700kW IT/module. Testing was concluded by a general integration test of all technologies, simulating standard operation as well as non-standard random defects. CENTIEL's UPS was load tested for several

hours with 100% success.

The result is that CENTIEL's leading UPS solution, CumulusPower™ now protects the load at the two new electrical power substations called Module 2 and Module 6 at TTC TELEPORT.

This installation now offers the maximum safety and highest availability for the critical application, providing power protection for the datacentre and its extensive global customer base.

For more information please see:

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