DATWYLER

CASE STUDY

SWISSCOM IT SERVICES: MODULAR CABLING SYSTEMS FOR A MODERN HIGH-PERFORMANCE DATA CENTRE

In the new data centre of Swisscom IT Services in Zollikofen near Bern, the communications cabling solutions from Datwyler greatly contribute to smooth and rapid data transfer for the company's IT Outsourcing customers.

A tailor-made cabling concept with pre-harnessed fibre optic cables and LC duplex connections ensures high-speed connections between switching and storage components in the high-availability SAN (Storage Area Network) area of Swisscom IT Services. For server-to-server connections, also designed with built-in redundancy, the choice was a modular solution from Datwyler: Unilan 10 Gigabit Ethernet copper cabling, with data transfer handled by Uninet 7702 Category 7 data cables.

Swisscom IT Services, a solely owned subsidiary of Swisscom AG, operates two data centres in Bern-Ostermundigen and Zollikofen with nearly 10,000 servers. The new data centre is one of the most modern in Switzerland. Here, Swisscom IT Services offers a net useable area of about 1,800 square metres on six floors for server operation. The facility, designed for modular expansion, offers state-of-the-art IT infrastructure and sets new technical, environmental, and security standards.

Great attention is also paid to physical security: all security-relevant systems and equipment such as the power supply, UPS, diesel generators, and air conditioning and ventilation in the new data centre are designed with fault tolerance and redundancy. Datwyler's Pyrofil cable with extended functional integrity (E30) ensures that these systems will be continuously supplied with power for at least 30 minutes in the event of a fire.

Equipped for future demands
When evaluating cabling solutions, Swisscom IT Services was primarily concerned with being equipped for future infrastructure demands by having standardised products and a modular layout. This includes not only high system reserves for data transfer, but simple and fast handling in installation and operation. When optical fibres were being chosen, special attention was paid to select multimode OM3-grade fibres tested with the latest laser bandwidth measurement minEMBc (minimum effective modal bandwidth), and thus

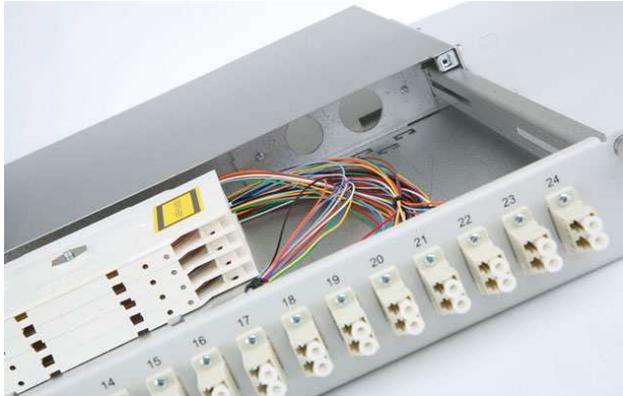also designed for upcoming standards like 40 or 100 Gigabit Ethernet.

The system was installed by the installation contractor Cablex AG. Thanks to the flexible and precise work of Cablex and the on-time logistics of Datwyler, the construction project was rapidly completed, and the facility promptly put into operation by Swisscom IT Services.

The new IT centre features modular design. If necessary, the building can be expanded by two more modules – providing the customers of Swisscom IT Services a total of over 6,000 square metres of net area for IT-outsourcing operations in the final configuration. Thus the IT service provider can easily meet the long-term needs of its customers for first-class data centre services, even if infrastructure business continues to grow at a strong pace.

State-of-the-art security technology
The building is continuously monitored with highly modern security systems. Various security zones with selective personal access authorisations for specialists of Swisscom IT Services re-

strict access to the data centre. Monitoring of these systems is automated, ensuring rapid intervention and solution-finding in case of a problem. In the event of a breakdown, for example a power interruption, the IT systems can operate autonomously for several days.

To technically manage further growth far into the future, a second state-of-the-art data centre is now available for customers.

The designed rating for power and climate control at the IT centre is about 4,500 kilowatts – enough to power a city of 15,000 people. For the machine rooms, cooling by air requires 1,200 W/m^2, and by water (direct) up to 2,000 W/m^2. A combination of both systems for each room is possible up to a capacity of 2,000 W/m^2. Thus the facility can react rapidly to any change in IT technology.

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