

Structured cabling for a digital future

Rosenberger OSI is supporting envia TEL during the construction of a colocation datacenter

SUCCESS STORY



The digital future of industry and the economy depends entirely on the provision of a range of high-quality telecommunications services. This is a fundamental prerequisite for the introduction of new applications such as IoT, Industry 4.0 or Smart Office. With a high-performance fiber-optic network, the telecommunications service provider envia TEL, which is located in central Germany, is ensuring that the regional economy remains competitive in the digital era. In this innovative company's seven inhouse datacenters, forward-looking cabling technology from Rosenberger OSI ensures trouble-free, continuous operation.

Some 6,000 kilometers of fiber-optic cabling, ultra-fast Internet, seven inhouse datacenters and a round-the-clock service available 365 days a year have catapulted envia TEL to its position as one of the top telecommunications service providers in central Germany. The company was created in February 2000 as the result of the merger of estel (Chemnitz), WesTel (Taucha) and LausitzNET (Cottbus), the former telecommunications

subsidiaries of the earlier regional energy providers EVS AG (Chemnitz), WESAG (Markkleeberg) and ESSAG (Cottbus). The company has so far connected some 350 industrial and commercial sites in Saxony, Saxony-Anhalt, Brandenburg and Thuringia to its fiber-optic network. In 2019, envia TEL generated turnover of 59.2 million euros, thus continuing its successful growth of the previous years.

Colocation datacenter with certification

envia TEL's new Leipzig 2 datacenter was only recently taken into service and has been designed as a pure colocation datacenter. It now fulfils the protection class 3 requirements in accordance with the EN 50600 certification for colocation datacenters.

The infrastructure in the older datacenters, by contrast, was based on cabling products sourced from a variety of manufacturers. This hybrid network came about because the colocation

customers preferred different solutions. This meant that it was not possible to develop a vision of a structured cabling approach.

The new site primarily provides free spaces which the service provider makes available to its customers for their own IT components. In this professional datacenter environment, customers not only enjoy the space they need for their own IT infrastructure but can also call on a range of support services as and when they require them.

Modern site with a new concept

For this new construction project, envia TEL was able to implement a concept never before adopted by the company in order to fulfil all the AC3/PC3 requirements necessary for EN 50600 certification. The plan included structured cabling with uniform components. In order to develop a coherent structure, envia TEL wanted to work with a single supplier for the passive components. Alongside quality, flexibility and future-proofing, another criterion for deciding on the products was that they should be highly cost-effective. For envia TEL, the available packing density was also important because this had a decisive influence on

the space savings that the company wanted to achieve in the new datacenter. What is more, the telecommunications service provider wanted to benefit from expert consulting and support from the supplier's specialist personnel during the entire project phase. Rosenberger OSI not only perfectly fulfilled the requirements profile specified in the RFP but was also able to present a convincing concept with which envia TEL will be able to press forwards with digitalization in the future. After a short selection procedure, the cabling specialist was awarded the contract for the project.

Tight implementation schedule

One challenge lay in the tight schedule demanded for the project. Immediately after receiving the order, the Rosenberger OSI technical consulting team started to plan the equipment for the new datacenter. Some three weeks later, all the components had been delivered to the site and installation could get underway without delay.

During the initial project step, the basic structure for construction phase 1.1 was established. Here, the plan required the use of fiber-optic single-mode, multimode and Cu-cat in the two meet-me areas. This made it possible to implement the Network Operation Center technology which was required for the basic supply in the new datacenter.

During this phase, the team from Rosenberger OSI also installed the first components for the standard customer cabinets. A 36-channel PreCONNECT® STANDARD trunk with 72 fibers was used to connect the meet-me rooms to the zone distributor.

To avoid installing any excessive cable lengths in the ducts when developing the copper structure, PreCONNECT® COPPER trunks of 10GBE class EA were installed. These cables are assembled with modules at one end and are screened in accordance with RJ45 Cat.6a. A variety of 19" 1HU PreCONNECT® distribution panels with 96, 72, 48 or 24 fibers were used to implement the solution in the customer racks.



View into the new colocation datacenter

Providing special dimensions

One particular challenge when planning and setting up a colocation datacenter lies in the fact that the supplier does not plan the passive racks in the customer environment itself, as is usually the case in enterprise datacenters. Instead of this, so-called zone distributors are used which permit flexible installation and can be connected to trunks from the meet-me rooms. These zone distributors have special dimensions. They cannot be filled with standard products. Given these circumstances, Rosenberger OSI installed its 200-mm rack, thus allowing it to overcome the problem.

Compared to its previous solutions, envia TEL is now able to generate a range of benefits thanks to the

structured cabling.

Thus, for example, IB trunks are now used and help achieve considerable space savings over the entire area. The old structure was set up using breakout cables which, however, are only of value when the number of fibers is very low. Compared to a complete trunk with trunk cable divider, breakout cables also have the disadvantage that they have no strain relief. Using trunks and panels from Rosenberger OSI, this problem does not even arise. In this solution, the square interface for locking at the trunk cable divider is already fixed in place in the basic variant and can be inserted in the panel without the need for any tools.

A dynamic growth schedule

envia TEL's new colocation datacenter is designed for dynamic growth and is due to be gradually extended. The planned growth will respond to the customers' requirements and will take place in four construction phases. Because a fixed portfolio of products is now used at the new site, envia TEL is able

to implement new projects for its customers faster and more efficiently. With the structured cabling planned and installed by Rosenberger OSI, the telecommunications service provider can adapt its site to its customers' growth and requirements within a modular approach.



“With the solution from Rosenberger OSI, we have been able to construct an infrastructure that is oriented towards our specific individual requirements and is also designed to allow future growth,”

explains Michael Freitag, Group Manager for Datacenter Planning/Construction/Operation at envia TEL and Project Manager for this new construction project.

“We were won over not just by the excellent value for money of the solution but also by the commitment and on-schedule conduct of the project and, last but not least, the personal consulting we received throughout the entire project phase.”

Rosenberger OSI:

Since 1991, Rosenberger **Optical Solutions & Infrastructure** (Rosenberger OSI) has been a recognized expert for fiber-based connectivity, cabling solutions and infrastructure services in the areas of data centers, local area networks, mobile networks and industrial applications. As an integrated solution provider, we have high expertise in the development and operational excellence in the production of system solutions for communication networks. Our comprehensive services enable the secure and efficient operation of digital infrastructures. This combination, combined with our strong customer focus, makes us unique and a strong partner in the global market.

Rosenberger OSI employs around 740 people in Europe and North America and has been part of the globally operating Rosenberger Group since 1998. The Rosenberger Group is a leading global provider of high-frequency, high-voltage and fiber optic connectivity solutions with headquarters in Germany. Further information is available at: www.rosenberger.com/osi

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