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tde - trans data elektronik GmbH cables new computer centre in Krefeld town hall

High-quality cabling for long-term durability



The current growing role of IT also affects local authorities. Digital transformation, stronger interconnection and a more customer-oriented administration are becoming increasingly important. Successfully coping with these trends places the highest demands on the data network in terms of reliability, bandwidth and transmission rates. The city of Krefeld knows this as well. For this reason, it placed great emphasis on the installation of a sustainably and durably designed passive infrastructure during the construction of the new data centre in the town hall. Together with the network specialist tde - trans data elektronik, the municipality has successfully implemented this goal: The tML cabling solution sets new standards.

Krefeld, as an important regional centre on the Lower Rhine, has about 226,000 inhabitants. The town hall of the city was built in 1794 by the silk baron family von der Leyen and is the main location of the city administration. The amount of data to be processed daily is therefore high. And the trend is still rising: As other municipalities, the Krefeld city council is also developing towards greater digitization. In order to be optimally equipped for this, the city administration provided high-quality

passive cabling for the newly built computer centre in the town hall.

All-round safety

The focus was on a long-term, sustainable cabling solution that would also meet future requirements. At the same time, it should take into account the building's fire protection measures: Since the cabling extends over several fire compartments, later extensions are difficult to implement.

With the most modern active components, the town hall computer centre has already ensured high availability and high speed. Now the passive infrastructure should also ensure these aspects. Requirements for commissioning and reliability were added, which are crucial in regard to digitization: If connections fail due to a technical defect of the network components used, they can paralyze entire office floors and departments. Occasional connections are also problematic because the sources of error are often undetectable. For the public sector the Federal Office for Security in the Information Technology now requires rigid precautions to be taken in all IT areas.

Prepared for all scenarios

As part of an analysis of the current situation and requirements, the city of Krefeld drew up a product-neutral service specification. Those responsible also took into account the long-term requirements and development forecasts that the town hall computer centre should be able to withstand. They then defined the group of applicants and carried out the call for tenders. tde - trans data elektronik also applied as a proven expert for passive network infrastructures. The Dortmund network expert was awarded the contract with the most economical bid. The detailed schedule for the commissioning of the new data center, which was subsequently drawn up by the city of Krefeld, was very tight. Moreover: "For the city of Krefeld,

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the scheduled commissioning of the new data center was indispensable," says the head of the Department of Information Technology and Telecommunications of the city of Krefeld.

In accordance with the requirements analysis, tde developed a tailor-made solution based on the tML system: The system, consisting of the three core components module, trunk cable and module carrier, has a modular structure. The system components, pre-assembled and tested under laboratory conditions at the factory, enable plug-and-play installation on site within a very short time. At the heart of the system are the rear MPO/MTP and Telco connectors, which allow network administrators to connect at least six or 12 ports at 10 GbE at a time. Fibre optic and TP modules can be used together in a module carrier with very high port density. The city of Krefeld uses the tML platform with 19-inch module carriers: when fully configured they offer space for 96x patch LC duplex ports with 192 fibres, 96x 12-fibre MPO with a total of 1152 fibres or 96x 24-fiber MPO with 2304 fibres within one height unit.

The tML solution is unique on the market in terms of packing density: modules can be exchanged easily at any time. This makes the platform the first choice if users want to keep all options open when migrating to high transmission rates. "Thanks to plug-and-play, all migration levels from 1 to 100G and more can be implemented on the same tML platform," explains André Engel, Managing Director of tde and continues: "When the data volumes increase every fibre can still be used. This makes the modular platform a neutral data highway for all future requirements."

The bar is high

Once the solution had been found, tde had to implement and install it promptly and in line with the requirements. tde acted as general contractor for the network technology and realised the installation with a tde-certified installer. During the project, construction management remained with tde. As IT consultant, Elmar Herwig led the project through the acceptance process to the system guarantee. With very short commission-

ing times of a few days, the city of Krefeld was able to start its new data center.

Krefeld IT is entirely satisfied with the quality of the installations carried out and the components used: "The cabling is completely solid. We expect that the structured cabling will meet the required long-term requirements and thus prove to be future-proof," says the head of the Department of Information Technology and Telecommunications of the city of Krefeld and can say for the project: "From the time of acceptance, the installations completely fulfilled the requirements of the city of Krefeld.

Thanks to the tML system, the cabling in the data center of the Krefeld city hall is now easy to handle: This is ensured by the orderly cables within the racks and in the data center rooms as well as the cleanly laid cables in the routes throughout the data center. The tML impresses with its high operational reliability. By using high-quality materials, the connector technology alone of the tde system solution provides the best possible commissioning and failure safety. To avoid interference at all levels, the network expert laid the trunk cables in specially designed cable runs. At the same time, the system platform offers high flexibility due to the rack-to-rack cabling.

"With the tML system we are sustainable in the long term and benefit from a high level of investment protection. When data volumes increase and we need connections with higher performance, the tML system can be easily expanded," sums up the head of the Department of Information Technology and Telecommunications of the City of Krefeld and adds: "With the passive cabling installed by tde, the City of Krefeld has set a high standard. In the future, comparable systems - such as the city's new central data center, which will go into operation in 2018 - will have to be measured against this standard".