CORNING

Telehouse North, London

Flexible and Future-Ready Intrabuilding Connectivity

Telehouse North is Europe's first purpose-built, carrier-neutral colocation data centre. One of four Telehouse data centres located at the Docklands campus in London, it is the primary home of the London Internet Exchange (LINX) and one of the most connected data centres in Europe. It provides end-to-end information and communications technology (ICT) solutions including managed services, integrated communications services, virtualisation services, content management and system security services, as well as disaster recovery services.

The Requirements

Telehouse's cabling infrastructure required an update in order to maximise capacity in its 9,717 square metre, highly secure colocation centre, which consists of 32 suites over multiple floors. A central hub room required a new cable management solution that would provide flexible and future-ready, intra-building connectivity to each of the five floors and customer colocation suites.

Most importantly, the new central hub had to be ready for operations within three months.

From an infrastructure perspective, the design had to meet a number of objectives:

- **High density:** Optimise space by maximising port capacity within a small footprint.
- **Project delivery:** Complete delivery and installation within a strict project timeline.

- **Resilience:** Support 100 percent diverse routing of connectivity to customer suites for high availability 24 hours a day, seven days a week.
- **Flexibility:** Easy to manage and accommodate changing business requirements.
- **Scalability:** Provide flexible intrabuilding connectivity and the capacity for future growth.
- **Cost effective:** The solution and all installation tasks had to be managed within the given budget.

To meet this challenge, Corning enlisted the help of Kinetic IT, one of their preferred installers, to work closely with Telehouse on the design. The proposal was for a future-ready, passive cabling infrastructure solution, including planning and installation. In addition, Corning provided the consultation and training required to accelerate knowledge transfer and operational readiness to meet the strict deadlines for a complete turnkey solution.

The Solution

Telehouse required a resilient solution with flexibility to meet future growth and change. Key to the design was the addition of a central hub with 100 percent diverse routing of fibre connectivity to each floor and a customer colocation suite with enough capacity to meet future demand.

Corning was invited to tender for this project along with two other connectivity infrastructure suppliers. Telehouse informed Corning that they selected their solution because it offered the most value while also meeting all of the project requirements, including:

- 2.5 times increased port density, maximising capacity and saving space
- Guaranteed two-week delivery of solution components to site
- Competitively priced, including training and consultation
- A reputation for innovation with fibre cabling infrastructure

Corning proposed an infrastructure solution designed around its proven Centrix™ system. The innovative design of the Centrix system enables an ultra-high-density deployment in a compact footprint and provides a scalable fibre management solution for cross-connect applications in the data centre's central hub. The Centrix system supports up to 4,320 LC connector ports per 2200 mm frame with a 900 mm wide, 300 mm deep footprint. The highest density of 17,280 optical fibre ports in one square metre is possible in a quad configuration.

The frame design provides optimized routing paths for jumpers, reducing the risk of entanglement, while the operations staff can install or remove a single patch cable in less than two minutes regardless of the cable route.

The foundation of Centrix is a modular cassette that can be tailored in a variety of ways to provide flexibility and functionality without sacrificing density. Each cassette contains fibre guides and a splice section and can hold 24 or 36 LC connector adapters. Telehouse personnel can easily access the fibre ports as the cassettes have a sliding mechanism with drop-down handle.

Corning indoor/outdoor cables, typically 96 fibre, were terminated on cassettes within the Centrix frame and installed along diverse routes to each of the customer suites. These cables utilise low-loss SMF-28® Ultra optical fibre, which provides a solid foundation of high-performance for the newly upgraded infrastructure. SMF-28 Ultra optical fibre offers industry-leading specifications for attenuation and macrobend loss. Low attenuation enables extended reach of network connectivity between locations, while 33 percent better macrobend performance helps improve existing duct utilisation and the support of smaller enclosures.

The project, which began in late December 2015, involved the initial termination of over 16,000 fibre ports on the Centrix as well as the installation of cables to each suite. Completed in March 2016, within a 12-week timeframe, the installed system has the capacity to allow for expansion up to 130,000 ports with the use of additional cabinets.

Steve Gentle, Telehouse senior customer installations manager, commented, "We are very pleased with the level of technical assistance and support we received from Corning and their partner Kinetic for our fibre infrastructure project at Telehouse North. Corning offered excellent technology and product knowledge and Kinetic supplied a high level of practical design and installation expertise. Both organisations were easy to work with and surpassed our expectations – working with the combined team was a very positive experience."

Conclusion

The Centrix system combines extreme flexibility and simplicity with the ultimate in density. With superior jumper management and an innovative fibre routing system, the Centrix system is a cross-functional system that meets the requirements of multiple application spaces.

Telehouse was pleased with the installation, as it met all requirements and was delivered on time and within budget. Consultancy services and advice were provided to Telehouse throughout the project process to ensure its success. Project handover training was provided to the Telehouse operations team with further consultation and installation support being offered on an ongoing basis. Telehouse is now able to provide fast and flexible provisioning of connectivity to suites and respond quickly to the changing business needs of its business customers.

A successful execution and implementation of this installation will create the basis for future project stages, including the infrastructure in a new Telehouse building scheduled for completion later in the year.

"Kinetic IT was delighted to be selected to partner with Corning for the Telehouse project. By working closely with Steve Gentle and his team at Telehouse, we were able to understand how they would best utilise the infrastructure and take into account both their current and future capacity requirements. Close collaboration with Corning's design team and the quality Centrix product set ensured that this was achievable, making for a seamless installation that went without a hitch."

Tom Cella, Managing Director at Kinetic IT

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Get more information online:
www.corning.com/emea/centrix