FNT

// when transparency matters.

DATA CENTERS ON THE EDGE

A GUIDE FOR OPERATING REMOTE SITES

IN THIS WHITE PAPER

Current predictions by various experts indicate a rapid growth of edge computing. Many companies have now recognized the advantages of the edge and are in various stages of implementing their own edge strategies.

While the edge presents numerous opportunities to enterprises, it also poses new challenges. IT departments now have to deal with a much larger number of sites, all connected to each other. In addition, other trends such as Hybrid Digital Infrastructure are further increasing the complexity for data center operators. IT departments therefore urgently need solutions to ensure the efficient management and operation of their data centers.

This white paper discusses how organizations can keep track of and efficiently manage their geographically dispersed sites.

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On the Edge

The global edge computing market is expected to reach $9 billion by 2024, a significant increase from the current level of $2.8 billion, according to a study by MarketsandMarkets. Gartner also considers edge computing to be one of the 10 most important IT trends in 2020. Enterprises that rely on edge computing benefit in many ways. They understand that a strong focus on edge computing will enable them to better connect remote enterprise locations, reduce latency and the risk of network downtime, and distribute loads across the network. In addition, edge sites enable companies to meet regional legal requirements – essential for companies that must adhere to government regulations and compliance requirements.

Once centralized networks are morphing into networks of distributed, dynamically interconnected systems spanning clouds, microservices and software defined networks. As a result, distributed edge data center sites, which are rooms with only a few racks or even "data centers in a box", are becoming a more critical component of the dispersed IT required in today's environment.

What this means for businesses is that edge has become a technical requirement and they must figure out how to work it into their operations. Compute, storage, and network connectivity at the edge is needed to deliver high-quality services with geographically distributed resources. As data moves to the edge of networks, businesses must right-size their data centers to fit the new demands. Centralized hubs, where processing for primary applications occurs, will remain the core of the data center's network. Edge data centers, which perform regional processing and caching, will become more prevalent with the surging demand for low-latency connections.

Edge sites will play an increasingly integral role in the overall architecture. The degree of distance from the core data center, where most processing, analysis and archiving occurs, varies. Edge sites just need to be within a local area to connect, integrate and re-route data back to the core data center.

EDGE SOLUTIONS are one of the top market segments data center leaders are focusing on. 57 % say they have either already adopted edge strategies or expect to deploy edge over the next three years, according to AFCOM's 2019 State of the Data Center Report.

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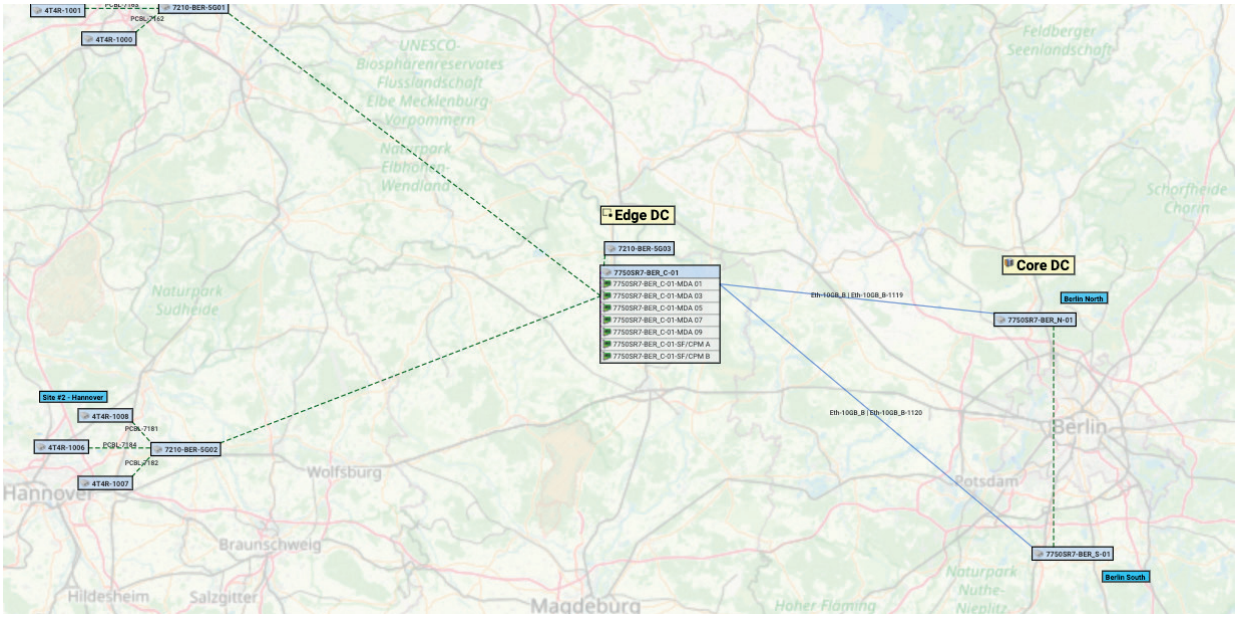
EDGE VISIBILITY

In this hybrid cloud architecture, a regional data center's capabilities are extended via connected edge sites. FNT's software shows the exact location of all edge sites and their connectivity back to the core data center.

Physical, logical and virtual resources can be connected to multiple edge sites for fully redundant paths between any edge location and the core data center. The expanded view of one edge site shows how FNT's software drills down from the map view to the actual equipment in the switch cabinet view of the rack that provides the edge connectivity.



The Benefits of Embracing the Edge

Efficient data center operation is becoming increasingly dependent on edge sites to ensure uninterrupted service, guarantee business continuity, low latency, and overall, the best user experience possible. End users are becoming more demanding when it comes to the immediate access of data and information. From a user's perspective, value is determined by service quality and performance. Since edge computing moves workloads and applications closer to end users, it allows data to be processed closer to where it is created instead of sending it across long routes to central data centers or clouds. This makes it possible for businesses to give users the level of service they desire. Not only does it enhance customer experiences, it enables organizations to offer new services faster and more efficiently at lower cost.

Large content delivery networks such as Google and Netflix have already adopted edge concepts. They cache content and services at the network edge through third party colocation data centers and specialized edge data center service providers to reach customers and to deliver extraordinary user experiences.

Keep in mind that while the performance quality increases – the associated costs should not. This is because edge computing doesn't deliver better services by laying newer cables.

Instead, edge computing is all about using a more efficient architecture for transferring and processing data in order to deliver content quickly to local users with minimal latency.

Learn more about Data Centers on the Edge

If you would like to learn more about Data Centers on the Edge visit our website and download the full version of the white paper.

Download the full version Now

About FNT

Powerful, reliable and flexible infrastructures are the basis for all digital business processes and applications, especially those supporting Smart Cities, Industry 4.0 or 5G. With FNT's integrated software solutions, organizations can record, document and manage complex and heterogeneous IT, telecommunications and data centre infrastructures from the physical level all the way up the stack to business services. FNT stores this information in a manufacturer independent, uniform data model. In this way, FNT provides the necessary transparency and tools to plan and manage the IT, data center and telecommunications landscape more easily, to eliminate faults faster, to optimize synchronization of resources and requirements and to automate delivery of new digital services. Over 500 companies and public authorities worldwide rely on FNT, including more than half of the DAX30-listed corporations. FNT is headquartered in Ellwangen (Jagst) and has offices in the USA (Parsippany, New Jersey), UK (London), Singapore, Dubai and Russia (Moscow). FNT offers its software in numerous countries through partnerships with market-leading IT service providers and system integrators.

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