

IT SERVICE PROVIDER ANEXIA SIMPLIFIES AND SCALES NETWORK WITH INNOVATIVE ROUTING SOLUTION



PROJECT OVERVIEW

CHALLENGE

- Accelerate service creation and simplify service delivery
- Accommodate more customers consuming more bandwidth
- Ensure service uptime and network integrity

TECHNOLOGY SOLUTION

- MX480 3D Universal Edge Routers
- QFX5100 Switches
- vMX Virtual Router

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Anexia is an IT service provider based in Austria, providing cloud and managed hosting solutions as well as software and application development. It supports more than 10,000 customers, including multinational companies such as Teamviewer, Trusted Shops, PCCW, and Lufthansa Systems.

The company has 170 employees in 11 offices across Europe and the USA, and supports over 80 international server locations, including its own independent data centers. It offers a broad range of services over its own worldwide infrastructure.

Business Challenge

Anexia's existing backbone network was running out of capacity, and its resiliency and security capabilities were becoming outdated. Anexia began investigating an upgrade that would not only accommodate more customers consuming more bandwidth, but also accelerate service creation and automate service delivery to ensure service uptime and network integrity.

"We needed to significantly strengthen the network, which included new switching and routing systems as well as an optical capacity upgrade," explains Theo Voss, head of network and infrastructure at Anexia. "We wanted to be able to protect ourselves and our customers against large-scale DDoS attacks. We also wanted to allow network customers to take advantage of our self-service portal—the Anexia Engine—to place orders and configure settings."

In addition to reducing service delivery lead times, the project would also have to increase the backbone capacity from tens of Gbps to hundreds of Gbps. Rather than just upgrade its existing equipment, Anexia decided to renew its backbone network completely, starting with its European hubs in Vienna and Frankfurt and then extending out to Amsterdam.

Technologie-Lösung

"This was one of the biggest infrastructure projects we've ever undertaken," recounts Voss. "We selected Juniper because of its well proven record of routing innovation, easy-to-use automation features—which our engineers love—and the simplicity of an open application programming interface (API)."

We use the Juniper Extension Toolkit (JET) API to automate configurations via our Anexia Engine, so there is no longer any need for an engineer to log in and configure physical interfaces via the complex command line interface (CLI)."

Anexia built its new network with Juniper Networks® MX480 3D Universal Edge Routers and high capacity Modular Port Concentrator (MPC7) line cards that provide high-density 100GbE.

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“The MX480 gives us the best space, power, and bandwidth combination,” Voss says. “And the MPC7 offers us high throughput and density per slot, as well as component level telemetry. So now, we’ll have plenty of capacity for the foreseeable future.”

MX480 3D Universal Edge Routers are SDN-ready routers that deliver high performance, reliability, and scalability for service provider and cloud applications, enabling the simplified delivery of advanced business and residential applications and services. The MX480 offers 5.76 Tbps of system capacity in support of high-density 10GbE, 40GbE, and 100GbE interfaces. It includes support for a wide range of L2/L3 VPN services and advanced broadband network gateway functions, along with innovative routing, switching, and security services.

Anexia also selected the Juniper Networks vMX Virtual Router as a high-performance virtual route reflector (VRR) that is easily scaled to address future growth. vMX is a full-featured virtualized MX Series 3D Universal Edge Router that runs as licensed software on x86-based servers, providing an innovative, Network Functions Virtualization (NFV)-based approach to building cloud-grade networks.

Anexia also used Juniper Networks® QFX5100 Switches in a Juniper Networks Junos® Fusion architecture to aggregate its 10 Gbps customer interfaces at its provider edge. All the upstream and interconnect interfaces are 100 Gbps. QFX Series switches are high-performance, high-density platforms that are designed for top-of-rack, end-of-row, and spine-and-core aggregation deployments in modern data centers.

Juniper and its local partner, Xantaro Deutschland GmbH, supported Anexia during the design and configuration of the network, but the ease-of-use of the Juniper systems allowed Anexia to complete the implementation with its in-house resources, and to integrate the network with its existing automation tools. All of the equipment was configured and tested before a seamless roll-out.

Business Results

Anexia now has the increased capacity and agility it needs to confidently deliver high-quality IP-based services to thousands of customers. The company has efficiently interconnected its Frankfurt and Vienna data centers with multiple redundant 100 Gbps optical wavelengths, and has done the same between data centers in Nuremburg and Klagenfurt. In total, it has 2 Tbps of backbone capacity, with 100 Gbps connections to all major ISPs, benefiting its European and U.S. customers alike and ensuring room for future growth.

Anexia can also offer selected customers access to the Anexia Engine, which accelerates new service provisioning and service modification to mere seconds. “We like to call this Network-as-a-Service,” says Voss. “From our point of view, automation is one of the key features of modern networks. Many of our competitors are still configuring systems manually. By contrast, we can offer customers a single interface where they can deploy new connectivity, routers, or domains in seconds.”

PROJECT OVERVIEW

RESULT

- Automated and simplified service provisioning provides service delivery in seconds
- Increased protection prevents failures and DDoS attacks
- Increased capacity benefits thousands of customers

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Next Steps

Anexia sees its new European backbone as the blueprint for future phased expansions of its entire World Wide Cloud. It is planning to extend its new backbone network to Amsterdam, Zurich, and Munich and plans to put in a redundant transatlantic connection to the USA.

“The partnership with Xantaro and Juniper has worked very well, and the new network has delivered performance, scale, and reliability, for us and our customers,” concludes Voss. “And equally important, it has efficiently accelerated service delivery with automation and Zero Touch Provisioning.”

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