Virtualized, Greener Data Center Operations

Customer Case Study

Energy-saving, cloud-computing platform enables Dutch IT service provider to cut costs and time-to-market

EXECUTIVE SUMMARY

Customer Name: Previder

Industry: Service provider

Location: The Netherlands

Company size: 35 employees

Challenge

- Maximize and execute on high-growth market opportunities
- Move to two new data centers, while protecting existing IT investment

Solution

- Cisco Data Center Business Advantage vision, architecture, and technologies
- Cisco Unified Computing System with Nexus 5000 Series Switches

Results

- Consolidation from 30 server racks to two; and from 20 switches to four
- Quicker provisioning, from days to hours
- Greater server utilization and agility to scale up

Challenge

Previder is at the very center of the IT value chain. Drawing on proven expertise in virtualized services, the Dutch-based company partners with other service providers and IT organizations, enabling them to offer reliable and cost-effective data center, managed cloud hosting, connectivity, and Internet Service Provider solutions to their customers. These end users include schools, local government departments, and finance and healthcare institutions.

Technology leadership and being at the forefront of cloud computing innovation are central to Previder's plans for growth. But first Previder needed to re-architect its data centers. This evolution involved moving away from using an array of different servers, switches, and storage systems, all of which consumed a significant amount of the data center's physical space, power, and cooling capacity, and were very time-consuming to manage.

Aligned with this strategy, the company decided to build two state-of-the-art, energy-saving data centers: PDC2 with over 800 racks and a surface area of 2500 square meters, making it the largest carrier neutral facility in Eastern Netherlands, and PDC1, a back-up site for disaster recovery.

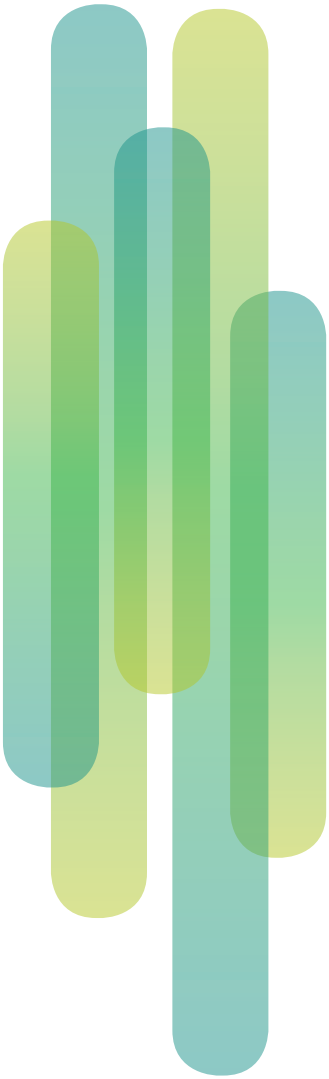
The success of the move depended on finding a cloud-computing platform that could virtualize over 150 physical servers, while also enabling hosted services to be scaled more quickly and efficiently than previously possible.

"Our vision is to become a key player in the software-as-a-service and cloud computing market," says Ewald Lucas, commercial manager for Previder. "To achieve this, we needed a solution that offered our customers more innovative services, more flexibly and faster, while transforming our data center into a new revenue stream."

The company has a highly efficient engineering team, so reducing provisioning time, points of management, and troubleshooting was also important. Other key considerations included lowering total cost of ownership (TCO) by increasing server utilization and saving on cabling, space, power, and cooling.

"Our Cisco cloud computing platform has enabled us to not just cut costs significantly, but also to open up new revenue opportunities by delivering competitive new services to our customers and freeing up assets for further growth."

Ewald Lucas
Commercial Manager
Previder



Solution

Previder has made the transformation using an architectural approach based on the Cisco® Data Center Business Advantage framework. The solution, comprising a Cisco Unified Computing System™ (UCS) and Cisco Nexus® 5000 Series Switches, has united server, network, storage, and virtualization capabilities into one energy-efficient system that significantly reduces the cost and complexity of IT infrastructure.

"The Cisco solution helped to protect IT investment by integrating with VMware Vsphere virtualization software and NetApp storage solutions," says Peter Bult, manager consultancy for Previder. "This was very important."

Powered by the Intel® Xeon® processor 5600 series, combining industry-leading energy efficiency with intelligent performance, the new system provides higher levels of automation, combined with unified, centralized, embedded management of all software and hardware components across four chassis and hundreds of virtual machines.

Cisco UCS Manager, a key component of the new system, provides flexible role-and policy-based management using service profiles and templates, and facilitates processes based on IT Infrastructure Library (ITIL) concepts.

Every server that is provisioned in the Cisco Unified Computing System is specified by a service profile, a software definition of a server, and its LAN and SAN network connectivity characteristics. When a service profile is deployed to a server, UCS Manager automatically configures the server, adapters, fabric extenders, and fabric interconnects to match the configuration specified in the service profile.

This automation of device configuration reduces the number of manual steps required to configure servers, network interface cards (NICs), host bus adapters (HBAs), and LAN and SAN switches. Any change in server is transparent to the network, and there is no reconfiguration required to begin using the new server.

Previder can also benefit from LAN and SAN convergence. The introduction of Cisco Nexus 5000 Series Switches has created a low-latency, lossless, 10 Gigabit Ethernet unified fabric, resulting in any-to-any storage (network-attached storage, Small Computer System Interface over IP, and Fibre Channel over Ethernet can all travel on the same cable) and even less cabling, components, and points of management. The Cisco switches also enable virtual machines and network profiles to be moved together, making it easier for Previder to track and manage virtual machines.

Results

Using its virtualized, cloud-based data centers, Previder can now offer its customers new and competitive IT solutions such as web hosting, streaming media servers, DNS and mail servers, faster than ever before, while reducing its physical server count by 94 percent (from 30 racks down to just 2).

Previder also achieved an 80 percent consolidation of LAN switching (from 20 down to 4), delivering further savings on electricity, cooling, and maintenance costs.

The move to Cisco UCS, which remained completely invisible to customers, will enable Previder and its partners to develop and deploy more flexible and innovative hosted services to small and medium-sized organizations, in a fraction of the time previously required.

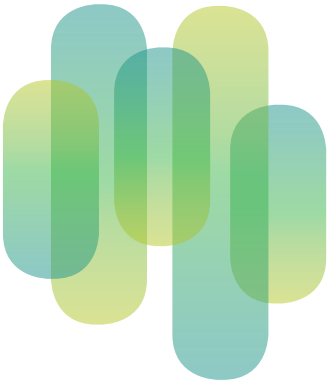
"We can get a new service up and running in a matter of hours, rather than days. There's less cabling, and we don't have to keep buying new hardware. If we need to scale up, we simply slide a spare blade into the chassis."

Peter Bult
Manager Consultancy
Previder

"Our Cisco cloud computing platform has enabled us to not just cut costs significantly, but also to open up new revenue opportunities by delivering competitive new services to our customers and freeing up assets for further growth," says Lucas.

Data center operations have become more environmentally friendly and much simpler. Cisco UCS allows servers and virtual machines to be easily managed as a single system with fewer personnel than before. For example, by creating service profile templates Previder has automated configurations for Palo and Menlo Virtual Interface Cards.

"The ease of provisioning is really great," says Bult. "It's real plug-and-play stuff. We can get a new service up and running in a matter of hours, rather than days. There's less cabling, and we don't have to keep buying new hardware. If we need to scale up, we simply slide a spare blade into the chassis."



For More Information

To discover how Cisco can help you to transform your data center, go to: www.cisco.com/go/datacenter

PRODUCT LIST

Data Center

- Cisco Unified Computing System

Routing and Switching

- Cisco Nexus 5000 Series Switches

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