

High-performance workplace at home and the office

Industry

Energy and Utilities

Service

Cloud

Technology

Azure Virtual Desktop

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Client Profile and the Initial Situation

About Powerlines Group

The Powerlines Group is an international group of companies, which operate in the RAIL, ENERGY, and PRODUCTS divisions. The RAIL division is a system provider and offers its international customers a wide range of services from consulting and engineering, through installation and maintenance, to product development and sales.

In the ENERGY business area, the Powerlines Group acts as a general contractor and offers the complete range of services from planning to installation and maintenance of medium-voltage, high-voltage, and extra-high voltage lines up to 400 kV. Powerlines PRODUCTS develops and sells products, components, and complete systems for electrification in local and long-distance transport, using a holistic development system that incorporates the latest production methods and the highest quality standards. In product development, reduced maintenance, and functional safety are the goals.

Location: Austria, Germany, UK, Belgium, Netherlands, Sweden

Employees: 1.100 Employees in Europe

Replacement of legacy systems due to reduced staff efficiency

Powerlines runs offices in Austria, Germany, UK, Benelux, & additional locations in Europe. The financial transactions were carried out from all locations via central accounting software (BMD) hosted on their own on-premises server. Due to the increased usage and a growing number of users (100+ user), this solution reached its limit. This had a negative impact on the performance and efficiency of the employees.

IT was looking for an easy-to-administer, scalable remote desktop system that could be used equally well in the office and for people working from home.





The Solution

High-Performance Computing via Remote Desktop, also from the Home Office

The solution recommended by Nagarro was an Azure Virtual Desktop application. Today, via a host pool, the accounting software is provided as a remote app for around 120 users. Using a master image, additional desktops/users can be provisioned at any time by IT within a few minutes via a versioned image from the Azure Shared Image Gallery. This significantly simplifies application management and minimizes the administrative effort of creating virtual desktops. The legacy software required an SQL server in the backend, so the accounting application was also migrated to the Azure Cloud. An application and database server were provided, for high-performance access.

In this virtual desktop environment, all necessary terminal services telemetry data is stored in Log Analytics. To ensure that load balancing can occur along the current usage and costs remain within limits through a pay-per-use model, predefined data sets are continuously retrieved. This is achieved with the help of log analytics queries to identify trends, analyze patterns, and gain a variety of additional insights from the data. Based on the analyses, automation runbooks are automatically triggered to start or stop the virtual desktops to keep total costs under control.

During the project, an additional application scenario arose. Due to widespread work from home caused by the COVID-19 pandemic, the need to virtualize CAD workstations became apparent. Performance problems also arose for users when processing large image data. Users were forced to download planning data while in the office and then process it offline in their home offices. Updating the planning data was also only possible upon returning to the office.

The solution: Here, too, a host pool was created that provides high-performance graphic processors for CAD users (GPU desktops). After intensive performance and benchmark tests, it was decided to use the NVv4 series for this purpose. The NVv4-series virtual computers are based on AMD Radeon Instinct MI25 GPUs. With the NVv4-series, Azure introduces virtual computers with partial GPUs. For the time being, 30 desktops will be made available in two regions (Europe West and UK South).



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Impact to Business

- High performance access for users of accounting software
- Reduced administrative efforts for IT
- Powerful graphics processors for processing image data, ensuring full performance even with large data volumes from the home office, especially for CAD users.
- Cost reduction by thin clients for CAD users and reduced maintenance costs
- Server replacement through 100% provision from the Azure Cloud
- Continuous software updates in the background - no downtimes, 24x7 availability
- Ongoing performance and usage monitoring - only resources currently required are provided, payment for active use only (pay per use, 100 MA/ 60 licenses)
- No additional licensing costs - virtual desktop licenses were already included in purchased license (part of E3 plan)

Client Testimonial



“By using the latest cloud technology, we are able to provide our employees with high-performance applications and services throughout Europe, which is crucial in times of home office and remote working. Through the simplified IT management and the pay-per-use model, we were also able to significantly reduce costs.”

*Harald Kraus
Head of IT
Powerlines Group*

About Nagarro

In a changing and evolving world, challenges are ever more unique and complex. Nagarro helps to transform, adapt, and build new ways into the future through a forward thinking, agile and caring mindset. We excel at digital product engineering and deliver on our promise of thinking breakthroughs. Today, we are 10,000 experts across 26 countries, forming a Nation of Nagarrians, ready to help our customers succeed. www.nagarro.com