

Automotive

# Empowering product engineers to collaborate more effectively

ZKW Group

Using a comprehensive range of Lenovo solutions and services to increase cost-efficiency and streamline scalability for highly demanding CAD workplaces.

Lenovo  
**TruScale**

Infrastructure as a Service



Lenovo

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## Who is ZKW Group?

ZKW Group develops and manufactures innovative premium lighting systems and electronics for the global automotive industry. Headquartered in Wieselburg, Austria, the company is a system supplier and strategic partner to most of the leading automotive brands around the world.

A member of the LG Corporation group of companies, ZKW Group employs over 9,200 people at 12 locations in eight countries including Austria, Korea, Mexico, and the US.



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## The Challenge

Designing state-of-the-art lighting systems for high-tech cars is what ZKW Group does best. For the early stages of product development, the company relies on the latest 3D computer-aided design (CAD) modeling and visualization tools to evaluate and present new solutions to client teams—requiring powerful workstations.

Individual engineering teams have set up their own local CAD workstations with remote-access capabilities. However, this approach quickly became unsustainable when 40 workstations were crammed into offices without central management or control.

“The workstations took up a lot of valuable space and the setup was simply not scalable. Close collaboration between different locations and teams is becoming more and more important in our international business environment. Our engineers needed more flexibility to work together with colleagues and clients more effectively.”

**Dominik Ringler**

Business Service Management / Project Management, ZKW Group



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“We needed a scalable solution that would provide high performance for our product engineers while requiring minimum attention from our lean IT team. With IT specialists in short supply, we knew that efficiency was key. Our goal was to standardize our CAD workstations globally to streamline operations and offer the flexibility that our development engineers needed.”

**Dominik Ringler**

Business Service Management / Project Management, ZKW Group

# Delivering fully managed dynamic infrastructure innovation

ZKW Group joined forces with Lenovo to prepare a proof of concept to evaluate the virtualization of CAD workstations. In a pilot project, the team deployed six Lenovo servers to provide 96 virtualized CAD workstations to teams located at the company's headquarters.

“Our development engineers were very happy with the new virtual CAD workstations, but now our IT team had to manage many new systems,” explains Ringler. “When we learned about Lenovo TruScale Infrastructure as a Service, we immediately knew that this was the ideal way of getting the scalability we needed to grow more dynamically and cost-efficiently.”

## Services

Lenovo TruScale Infrastructure as a Service  
Lenovo Managed Services  
Lenovo Professional Services

## Hardware

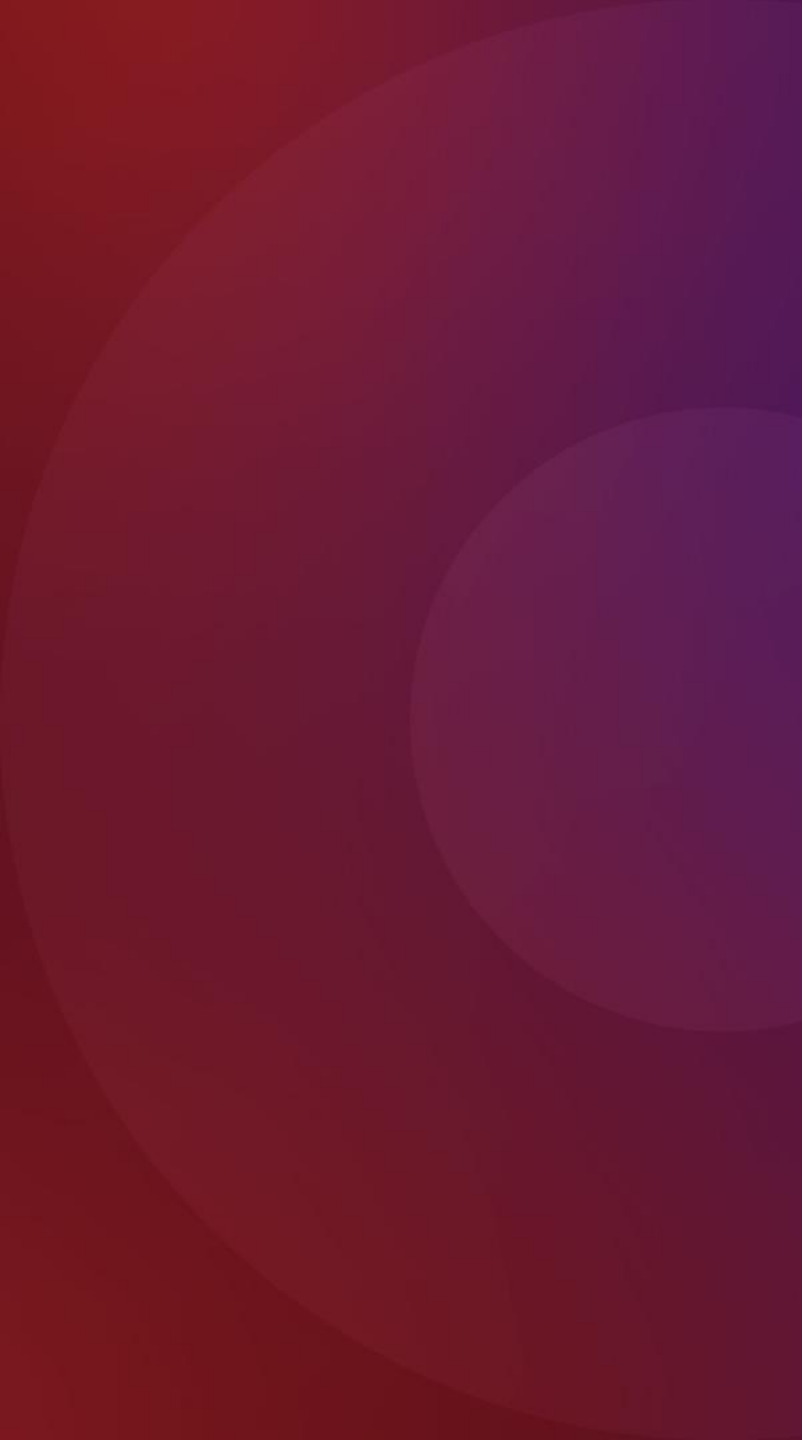
Lenovo ThinkAgile VX Series

## Software

Citrix Virtual Apps and Desktops  
Lenovo XClarity  
NVIDIA vGPU Manager  
VMware vCenter  
VMware vSAN

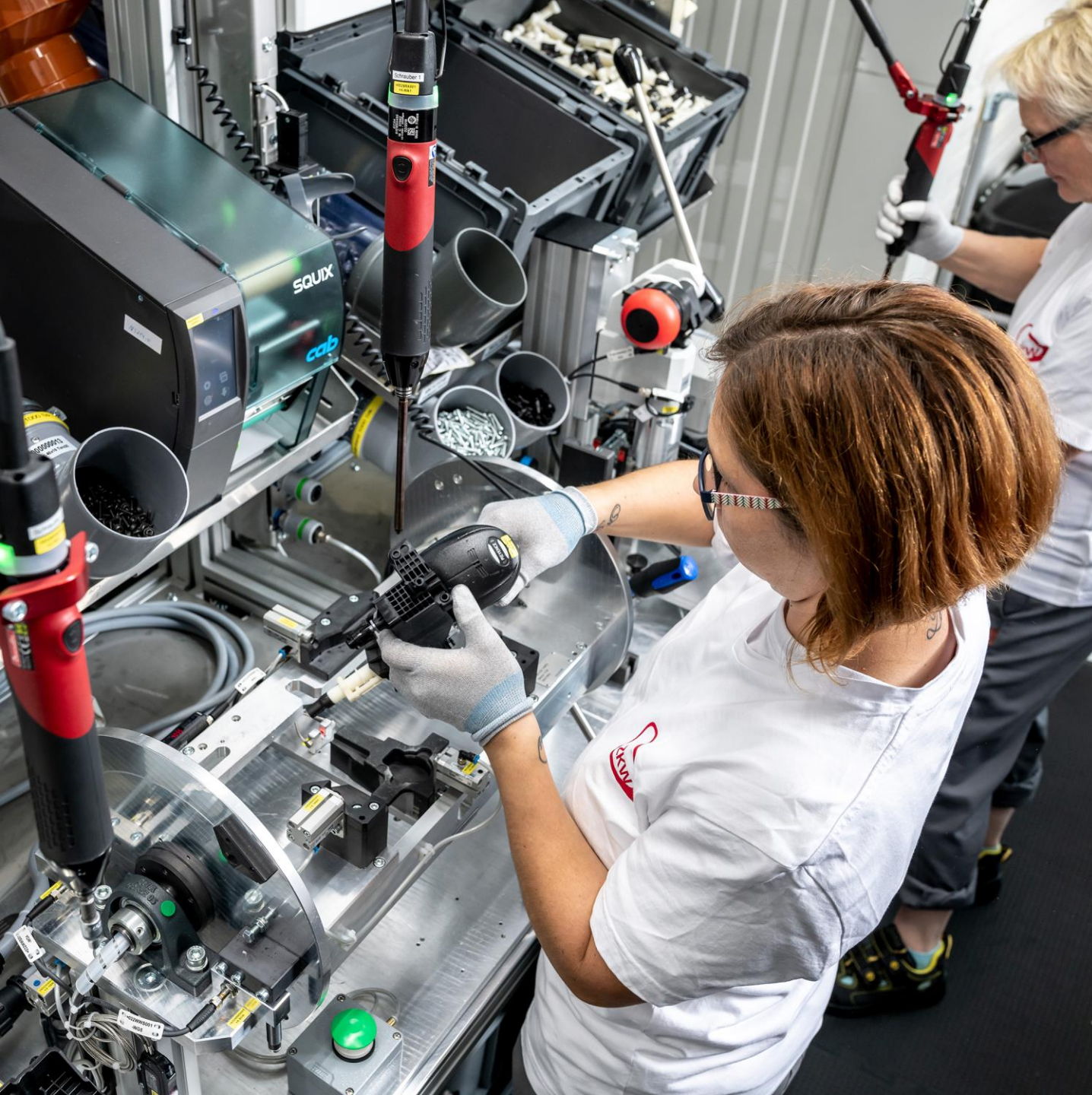
Working with Lenovo Professional Services, ZKW Group signed up for Lenovo TruScale Infrastructure as a Service—moving from buying and managing servers to purchasing subscriptions for users with monthly billing. “We’re now relying on Lenovo TruScale to provide more than 200 virtual CAD workstations to our development engineers,” confirms Ringler. “By moving to a service model, we have simplified our IT operations substantially. We have regular meetings with the Lenovo team to discuss next steps and, if necessary, coordinate maintenance windows.”

Behind the scenes, Lenovo Professional Services deployed a very energy-efficient Lenovo ThinkAgile VX Series hyperconverged infrastructure, based on VMware vSAN, at a co-location data center chosen by ZKW Group. The Lenovo team also set up NVIDIA vGPU Manager, giving multiple virtual machines simultaneous, direct access to a single physical GPU. A separate redundant two-node cluster delivers high reliability for all infrastructure and monitoring services. Lenovo Managed Services takes care of day-to-day management and maintenance, using VMware vCenter for management of the virtualized resources and Lenovo XClarity for monitoring the physical systems.



“Lenovo Managed Services really makes our lives much easier and increases the productivity of our staff,” adds Ringler. “The Lenovo team manages firmware updates as well as VMware hypervisor patches, and monitors the solution around the clock to ensure perfect reliability at all times.”

Thanks to the fully managed infrastructure service, ZKW Group only needs to manage the application layer using Citrix Virtual Apps and Desktops. Key applications that leverage the GPU acceleration include widely used design and simulation solutions such as Siemens NX and the product lifecycle management platform Siemens Teamcenter PLM.



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“We worked closely with Lenovo to tune the configuration for the best performance, maximizing energy-efficiency and sustainability while ensuring our engineers can complete their time-sensitive development tasks as productively as possible. Right now, Lenovo TruScale is the most innovative solution we use for our mission-critical business services. With two 25GB Ethernet network ports per server, Lenovo offers better network performance than any core system in our in-house data center.”

**Dominik Ringler**

Business Service Management / Project Management, ZKW Group



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## Results

Thanks to Lenovo TruScale's pay-as-you-go consumption model, ZKW Group has reduced the cost per user for CAD workstations. "We also evaluated public cloud offerings and Lenovo TruScale was clearly the more cost-efficient option for us," says Ringler. "We get the benefits of a cloud-like flexible consumption model with managed infrastructure in a data center of our choice—a unique combination that simplified our IT and reduced our overall costs."

As a result of the move to a fully managed solution, ZKW Group can scale its virtual CAD workstations faster and with greater flexibility. "In the past, procurement processes for new hardware were slow," recalls Ringler. "It would often take at least three months for a new solution to be delivered, deployed, and configured. This also was a drain on our resources, which are already stretched just for our daily operations. It was a lot of work and required a lot of internal coordination. Now with Lenovo TruScale, the whole process is at least 30% faster. We simply open a standard change request with the service team and within a maximum of 60 days, our new CAD workstations are ready to use."

The new solution makes routine tasks such as out-of-hours office security updates easier for ZKW Group's IT team, improving the security of its all-important engineering data.

“We recently opened a new engineering office in Czechia and could start our business operations there much faster,” remarks Ringler. “Using Lenovo TruScale, the provisioning of new virtual CAD workstations was quick and easy, without the need for complex local IT infrastructure. We’ve already onboarded 80 new development engineers and the location continues to grow to meet our needs.”

Based on the success of this project, the team at ZKW Group is considering moving more systems to Lenovo TruScale. “We are thinking about centralizing other services,” says Ringler. “We have at least two locations without any local IT staff, which means many small changes require business travel across Europe. With a centralized, managed service we could eliminate unnecessary travel and provide better services for our users more dynamically.”



Lower costs per user  
with a pay-as-you-go  
consumption model



>30% faster to  
scale virtual CAD  
workstations



200 virtual CAD  
workstations in use,  
rollout of 450 more  
planned



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“Our main business goal was to increase user satisfaction. We were surprised when one user who usually always had suggestions for improvements told us that his new virtual CAD workstation was actually faster and more reliable than before. Today with Lenovo TruScale, our engineers only need an internet connection and can securely access their fully configured, high-performance workstation from anywhere, at any time. For a global company, with engineers regularly traveling to meetings, this really makes a difference and boosts staff productivity.”

**Dominik Ringler**

Business Service Management / Project Management, ZKW Group

# Why **Lenovo**?

ZKW Group worked closely with Lenovo for the entire journey, from the deployment of high-powered local workstations to the adoption of a fully managed service. “We’ve been growing together with Lenovo and continuously improving our solution,” says Ringler. “Now that we were rolling out virtual CAD workstations as a service for all engineers worldwide, we need a truly global partner that can manage servers at any location around the world.”

The team at ZKW Group has agreed a comprehensive and customized service contract with Lenovo that can easily be extended. “We’re currently planning to add centralized virtual workstations for engineers in South America and Asia,” confirms Ringler. “Our contract is designed to support the transition of 450 virtual CAD workstations that we currently operate to Lenovo TruScale, and hand the reins over to Lenovo Managed Services.”



A major benefit for ZKW Group is that the same Lenovo team that currently manages the solution will continue to manage the global solution, spanning different hosting locations. This continuity simplifies scalability and ensures high service quality.

The company was also impressed with the fast delivery of the first batch of servers to its data center location. “The new, powerful and energy-efficient ThinkAgile VX appliances arrived directly from Lenovo’s new factory in Hungary,” says Ringler. “In fact, we recently visited the factory in Üllő, which is Lenovo’s first in-house manufacturing facility in Europe. This new site speeds up delivery times substantially, which is a great advantage for us as we scale and add more users.”

ZKW Group also relies on Lenovo for its notebooks and desktops. In total, the company uses around 6,000 Lenovo client devices to provide modern and reliable workspaces for its global workforce. Building on the success of this Lenovo TruScale and Lenovo Managed Services engagement, ZKW Group is now evaluating Lenovo Device as a Service (DaaS) to streamline operations even further.

# How do you enable teams to work together from anywhere?

Empowering employees with virtual workstations, powered by Lenovo TruScale.

[Explore Lenovo TruScale](#)

**Lenovo  
TruScale**  
Infrastructure as a Service