# CASE STUDY

**Powering Global Engineering Excellence with Virtualized Infrastructure**

INDUS SYSTEMS AND SERVICES PVT. LTD.

# OVERVIEW

**Solution Area(s): Cybersecurity Solutions › Virtual Desktops**
**Industry Vertical: Engineering Services & Design**



## BACKGROUND

A global leader in plant and product engineering services, specializing in energy, oil & gas, process industries, and manufacturing, faced mounting challenges with their IT infrastructure. Operating across Europe and India, the organization's portfolio included engineering design, 3D modeling, and simulation applications supporting sectors like renewable energy, mining, and heavy equipment manufacturing.

To meet the growing demands of its globally distributed workforce, the organization relied on Citrix XenDesktop for delivering 3D applications such as CATIA. However, rapid expansion and increasing complexity of applications strained the legacy infrastructure, resulting in significant performance bottlenecks and operational inefficiencies. Recognizing the need for modernization, the organization partnered with Indus Systems and Services to implement a cutting-edge virtual desktop infrastructure (VDI) solution.

# CHALLENGES

The organization's IT team identified critical issues impeding their operations:





**Performance Bottlenecks:** Citrix XenDesktop struggled to handle resource-intensive engineering applications like CATIA, leading to sluggish performance and frustrated users.

**Scalability Constraints:** As the organization's user base and application complexity grew, the infrastructure lacked the flexibility to scale efficiently, creating operational bottlenecks.

**Geographical Inefficiencies:** Distributed teams across India and Europe experienced inconsistent access and collaboration challenges due to latency and infrastructure limitations.

**Operational Overheads:** Managing and maintaining the aging infrastructure consumed valuable IT resources, detracting focus from strategic initiatives.

These challenges necessitated a robust, scalable, and future-ready solution that could seamlessly support the organization's complex workflows and global operations.

# OUR COMPREHENSIVE SOLUTION

Indus conducted a detailed assessment of the existing infrastructure and the organization's business requirements. Based on this analysis, we proposed and implemented an integrated virtual desktop infrastructure (VDI) solution leveraging the following technologies:

**Dell Hyperconverged Infrastructure (HCI):** Consolidated compute, storage, and networking into a single unified platform, providing high performance and simplified management.

**VMware Software-Defined Storage (vSAN):** Delivered efficient and resilient storage to handle demanding 3D applications, ensuring consistent performance.

**VMware Horizon:** Enabled secure and seamless delivery of virtual desktops and applications to users worldwide, enhancing accessibility and collaboration.

**NVIDIA Virtual GPU (vGPU):** Provided GPU acceleration for resource-intensive applications like 3D modeling and simulations, ensuring optimal user experience.

# IMPLEMENTATION HIGHLIGHTS

The deployment of the virtualized infrastructure was executed meticulously to minimize disruption and maximize operational benefits. Key implementation highlights included:

**Detailed Assessment and Planning:**

- Conducted a comprehensive analysis of existing workloads, application dependencies, and user requirements.
- Designed a custom architecture to address performance bottlenecks and align with the organization's growth objectives.

**Phased Deployment:**

- Implemented the Dell HCI and VMware Horizon environment in stages, starting with non-critical workloads to ensure a smooth transition.
- Incrementally migrated key engineering applications, minimizing downtime and ensuring continuous access for users.

**Optimized Application Delivery:**

- Configured NVIDIA vGPU to accelerate 3D applications, delivering exceptional performance for CAD, modeling, and simulation tools.
- Deployed VMware Horizon to enable secure and consistent virtual desktop access across geographies.

**Training and Post-Implementation Support:**
- Provided hands-on training to the IT team, equipping them to manage and optimize the new infrastructure effectively.
- Established robust monitoring mechanisms for proactive issue detection and performance optimization.

# BUSINESS IMPACT

The transformation delivered substantial improvements across critical areas:

**Enhanced Application Performance:**

- Achieved a dramatic improvement in the performance of 3D engineering applications, eliminating prior bottlenecks and enabling faster workflows.

**Seamless Global Collaboration:**

- Empowered distributed teams across India and Europe to securely access and collaborate on engineering applications in real-time, driving operational efficiency.

**Simplified IT Operations:**

- Centralized management through VMware Horizon reduced administrative overheads, freeing IT resources for strategic initiatives.

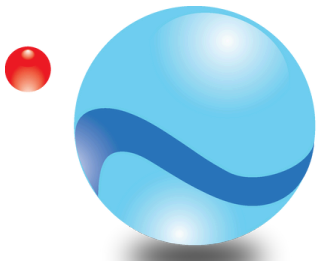**Scalability and Future-Readiness:**

- The modular Dell HCI architecture and VMware environment allowed the organization to scale resources on-demand, aligning with growth and evolving needs.

**Operational Resilience:**

- Enhanced reliability and availability of engineering applications ensured minimal disruption, even during peak workloads.

# CONCLUSION

By leveraging Indus' expertise and cutting-edge technologies, the global engineering services provider successfully transformed its IT infrastructure. The virtualized solution not only addressed immediate challenges but also empowered the organization to meet future demands with confidence.
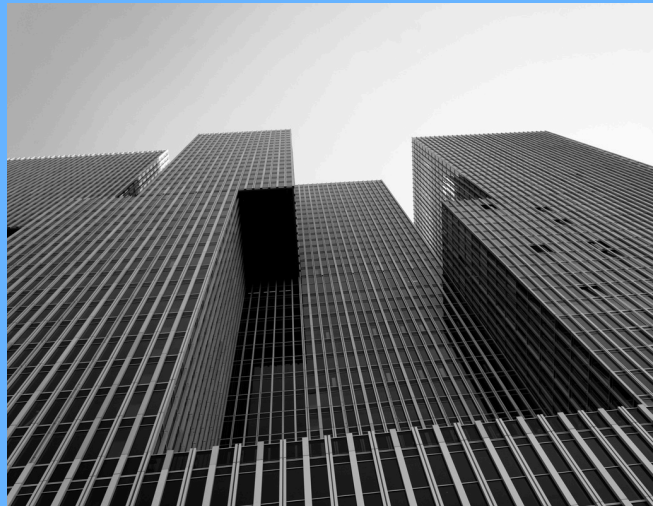
**INDUS SYSTEMS & SERVICES PVT. LTD.**

# THANK YOU!

Inspired by this company's success story?

Get in touch with us to start your journey towards
a robust and future proof IT infrastructure.



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