Customer
Case Study

HOLINGER Amplifies Engineer Productivity with 'Active-Active' Data Centers

HOLINGER has been providing consultancy, planning and engineering services to customers in Europe for more than 90 years. Established in 1933, its team of 600 experts are based across Switzerland, Germany and Luxembourg.

Industry

Business Services

Strategic priorities

- Cloud Transformation
- Anywhere Workspace

Partner

soulTec is a VMware-accredited partner providing managed services and support from its Dübendorf headquarters.

VMware footprint

- VMware® Horizon®
- VMware vCenter®
- VMware vSAN™
- VMware Unified Access Gateway™
- VMware App Volumes™
- VMware Dynamic Environment Manager™
- VMware Skyline Collector™

Engineering consultancy, HOLINGER, provides leading expertise around resources, risks and development. With VMware, it has transformed access to business-critical apps and data for 600 workers across 12 countries, replacing multiple on-premises environments with a centralized data center set up to support remote working, and mirrored at a second site 100 kilometers away. This provides redundancy in the event of an outage while increasing performance by 40 percent with the scalability to accommodate company growth for the next five years.

Reducing risks for new developments

From collecting natural spring water to working on renewable energy projects, HOLINGER provides progressive solutions to society's most pressing challenges. The consulting, planning and engineering company was founded in 1933. The company operates more than 30 offices in Switzerland, Germany and Luxembourg and is working on almost 2,000 projects per year in more than 12 countries.

The company is owned by its employees, which creates a culture of continuous improvement and creativity. The 600-strong workforce includes the region's leading engineers with expertise in water, infrastructure, the environment and energy.

To accommodate growth, digitization is a core strategy at HOLINGER. However, with specialist resource-intensive applications and a large volume, availability is a challenge.

> "With VMware, we have a future-proofed, scalable environment."
>
> Ismaele Giunca, ICT and Services Lead, HOLINGER

Breaking down silos and reducing latency

In 2015, every HOLINGER site had a standalone infrastructure to ensure that people working at that location could access engineering tools and data. As the volume of data generated grew, IT performance and latency became a problem.

"There are nine of us on the IT team, and manually maintaining on-premises infrastructure at multiple locations was complex," says Ismaele Giunca, ICT and services lead at HOLINGER. "Each site had its own servers, backup servers, domain controllers, a virtual private network (VPN) and firewall to manage."

Without a central storage solution, collaboration between locations was also difficult. CAD files were too large to email, and when the team stood up a dedicated storage solution with its own network, sharing files was slow and impacted productivity.

"We ended up mailing DVDs of files between sites. The only benefits of having a fragmented approach were that it offered some protection if one branch was hit by an outage—the rest of the company could still work," explains Giunca. "However, to get our environment future-ready we wanted a more scalable solution that offered the same level of security without the hassle."

Built-in redundancy for peace of mind

HOLINGER has used VMware virtualization software for 15 years, so when it migrated to a central data center in 2019, it ran a pilot with VMware Horizon to implement virtual desktop infrastructure (VDI) and VMware vCenter to manage three virtual servers.

While this addressed storage and latency issues, Giunca quickly realized he needed higher levels of performance and a stronger disaster recovery strategy.

"If we were hit by an earthquake or flood, an outage at our data center could take weeks or months to fix, especially if socio-economic factors, such as the pandemic, disrupted supply chains. We simply couldn't afford to wait weeks for spare parts to be delivered. If engineers couldn't work, our revenue would take a significant hit and it would damage our reputation," he explains.

After turning to implementation partner, soulTec, for support, HOLINGER set up an "active-active" dual-site data center. It increased the number of servers at its Basel data center to 21 and established a second site with the same hardware in Zurich.

"soulTec worked closely alongside our team to understand our challenge and design the best solution for our needs. While my team is responsible for system updates, knowing soulTec is there to provide ongoing support gives me peace of mind," says Giunca.

> "VMware Dynamic Environment Manager also runs our NVIDIA vGPU License Server, which is vital to make sure user devices have the right graphics cards to run 3D engineering software."
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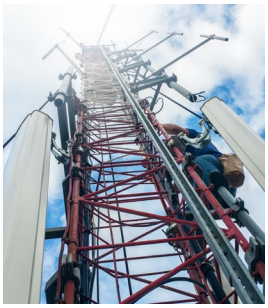
> Ismaele Giunca, ICT and Services Lead, HOLINGER

Four VMware Horizon Connection servers were implemented to run in parallel and ensure high availability in the event of an outage, while VMware vCenter visualizes and manages VMware ESX servers. VMware Horizon Kemp Load Balancers are set up to provide redundancy if one fails and balance connection servers, LAN and access management solutions.

To establish remote access for 600 users, VMware App Volumes is used on top of VMware Horizon to assign applications to staff based on their roles, while VMware Unified Access Gateway provides secure, two-factor authentication to the network and internal resources.

This proved particularly valuable during the COVID-19 pandemic, as staff were able to continue working from home and, thanks to VMware Dynamic Environment Manager—which enables central sharing on a file server—they had access to all the data they needed.



“When a user logs out of a virtual machine, their data is uploaded to a file server so they can access it quickly next time they log in,” says Giunca. “VMware Dynamic Environment Manager also runs our NVIDIA vGPU License Server, which is vital to make sure user devices have the right graphics cards to run 3D engineering software.”

Finally, VMware Skyline Collector aggregates and analyzes data in the HOLINGER environment so VMware can improve technical support.

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Higher performance, higher productivity

With VMware, HOLINGER has a secure, fit-for-purpose environment that safeguards business continuity, mitigating the risks of disruption in the event of a disaster while providing highly available systems for workers who use resource-intensive apps. Leading experts are free to focus on important work such as helping clients achieve sustainability goals and develop better infrastructure for communities across Europe.

The new “active-active” approach has enabled HOLINGER to increase IT performance by 40 percent while providing redundancy in the event of an outage at one location.

“We support a 70 percent load at each data center and have 40 terabytes of highly available data stored centrally using VMware vSAN hyperconverged infrastructure,” explains Giunca. “Our engineers are much happier and we receive fewer complaints in the IT department.”

With a stable system, the IT team can also carry out maintenance without impacting performance, providing a better work-life balance as they no longer need to work weekends and nights.

“We now have a future-proofed, scalable environment that will accommodate company growth for five years,” Giunca says. “As we grow through mergers and acquisitions, being able to onboard large influxes of people quickly and easily is a real benefit for me, and it’s much less complex to manage licenses.”

As the team continues to replace servers and optimize its environment, security is also front of mind. The organization is planning to issue staff with company laptops to ensure they’re accessing the VDI securely and not using unauthorized personal computers. This will provide additional protection from cyberattacks and security breaches.

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