

Manufacturing

Empowering teams to work at their best

Lyric Robot

How Lyric Robot used a virtual desktop infrastructure from Lenovo and VMware to help thousands of employees work more effectively while cutting IT costs and complexity.

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Lenovo

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Who is Lyric Robot?

Guangdong Lyric Robot Automation Co. Ltd. (Lyric Robot) designs, produces, and sells high-end, intelligent automation equipment. Founded in 2002, Lyric Robot currently employs more than 6,000 people. It counts many of the world's top 500 companies among its customers, including leading battery, automotive, and electronics manufacturers, as well as energy and transit firms.

Lyric Robot specializes in industrial robotics, factory automation, and precision laser equipment, combined with a proprietary software development platform. Its solutions can be found in smart factories, on automated production lines, and integrated with intelligent warehousing and logistics chains.



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The Challenge

Lyric Robot has a large, distributed workforce that supports operations from product design to customer support—and its goal is to help each and every one of these teams work at their best. As part of this drive, Lyric Robot recently decided to introduce an extensive virtual desktop infrastructure (VDI) to make it easier for employees to access key systems and information.

As a first step, the company deployed a VDI based on H3C and Citrix software, configuring around 450 virtual desktops. However, it soon encountered issues operating this new environment. The VDI utilized open-source virtualization, which came with a steep learning curve and limited capabilities for supporting an environment as large as the one at Lyric Robot.

The hardware infrastructure underlying the VDI presented its own challenges. Lyric Robot had opted for a mix of servers, storage, and switches from multiple providers. While this largely high-end hardware delivered strong individual performance, poor integration between the different components resulted in low utilization and difficulties around day-to-day management.

Yongsheng Zhong, IT Manager at Lyric Robot, elaborates: “As we scaled up the VDI, we experienced growing issues around usability and management. Our environment was especially overwhelmed by boot storm problems. With hundreds of users booting up virtual desktops simultaneously, our computing resources quickly became overwhelmed. It often took several minutes for the VDI VMs to start up, which caused a great deal of frustration for users.”

“We had invested considerable resources in establishing the VDI, and we were eager to overcome our initial issues and get the most out of the environment.”

Yongsheng Zhong
IT Manager, Lyric Robot

VDI gets a new lease on life

Lyric Robot was keen to keep expanding its VDI, with plans to accommodate an additional 500 desktop users in the next phase of the project. The company decided to start fresh with a more robust architecture that could help maximize hardware utilization while driving down management complexity.

Working closely with Lyric Robot, a dedicated Lenovo team mapped out an extensive plan for renewing the company's VDI. It started with identifying the weak points of the original VDI set-up and redeploying the environment, supported by new Lenovo and VMware solutions.

Hardware

Lenovo ThinkSystem SR660 V2
Lenovo Cloud Client T50S

Software

Lenovo XClarity
VMware Horizon®
VMware vSAN™

As the base of its renewed VDI, Lyric Robot deployed a fresh back-end hyperconverged infrastructure platform, featuring six high-performance Lenovo ThinkSystem SR660 V2 servers. The company also adopted a distributed storage architecture based on VMware vSAN™, which is flexible to configure, easy to use, and supports both horizontal and vertical expansion.

On the front end, Lyric Robot introduced 100 Lenovo Cloud Client T50S cloud terminals alongside 400 existing PCs. In parallel, the company deployed VMware Horizon® as its new strategic VDI software platform. In all, Lyric Robot has configured some 500 virtual machines and 1,000 VDI points. It plans to continue phasing out physical PCs while adding 500-1,000 new virtual desktops to its environment each year.

Today, Lyric Robot's VDI runs entirely on Lenovo hardware. The company also makes use of Lenovo XClarity software to provide centralized deployment, monitoring, and management of its hardware estate, reducing complexity and improving hardware availability and utilization.

“Unifying on Lenovo as our sole hardware provider has simplified the way we procure and manage IT systems. We no longer have to wrangle with different suppliers or worry about integrating different components, and we now have a single point of contact for support issues.”

Yongsheng Zhong
IT Manager, Lyric Robot



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“Lenovo showed great dedication right from the start of this engagement. The sales team brought in a VDI expert who took the time to understand our experiences with VDI, explained the capabilities of the Lenovo-VMware offering, and showed how Lenovo could work with us to solve our issues. This level of commitment convinced us that Lenovo was the right partner for this undertaking.”

Yongsheng Zhong

IT Manager, Lyric Robot

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Results

Thanks to Lenovo and VMware, VDI performance and manageability problems are now a thing of the past for Lyric Robot. The new infrastructure leverages a 3.84 TB solid-state drive with high I/O performance that's optimized for read-write-intensive operations. This means the company can now avoid the bottlenecks that led to boot storms and long startup times. As a result, employees enjoy a much smoother experience, even at times of peak demand.

At the same time, Lyric Robot has established a centralized pool of computing and storage resources by adopting a VMware vSAN distributed architecture. IT teams can efficiently adjust configuration parameters and allocate resources on demand to meet the changing requirements of different business departments, which has massively improved hardware utilization and performance.

- ✓ 50% reduction in data center footprint
- ✓ 50% lower operation and maintenance costs
- ✓ Improves VDI performance and overall hardware utilization
- ✓ Simplifies hardware configuration, monitoring, and management

Likewise, the entire environment is much easier to operate and manage. Administrators can now clearly see the overall resources of the cluster and the resources of each virtual machine. At the hardware level, Lenovo XClarity software provides at-a-glance views of Lyric Robot's entire infrastructure and automates many management tasks, saving time and effort for the administrative team.

The Lenovo-VMware solutions have also unlocked valuable cost savings for Lyric Robot. Compared to the company's previous infrastructure, Lenovo hardware takes up 50% less data center space. Unifying on the Lenovo and VMware platform has also cut operation and maintenance costs in half.



“Our experience with Lenovo has been extremely positive. With other providers, it can sometimes feel like they just want to sell you a product. In contrast, Lenovo put in the effort to design and deploy a truly tailored solution for us, and we are very pleased with the results.”

Yongsheng Zhong
IT Manager, Lyric Robot

Why **Lenovo**?

After evaluating several solutions available on the market, Lyric Robot ultimately chose a joint offering from Lenovo and VMware.

Yongsheng Zhong explains: “Lenovo is actually one of our customers: they use Lyric Robot automation solutions on several PC production lines. We already had an established relationship and a good sense of who Lenovo is as a company. Combined with the strong reputation that Lenovo has built as a hardware manufacturer, it gave us confidence to partner with Lenovo to optimize and expand our VDI.”



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