

Computer Services

Continuously evolving the group's virtualization platform

Nisshin IT Field Service Co., Ltd.

Boosting the flexibility of parent company Nippon Signal's virtualization platform with a scalable, easy-to-manage hyperconverged infrastructure based on Lenovo ThinkAgile HX Series.



Lenovo

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Who is Nisshin IT Field Service?

Nisshin IT Field Service Co., Ltd. provides consulting, design, construction, and maintenance services of IT networks, platforms, and security for corporations throughout Japan. Headquartered in Tokyo, the company employs 294 people (as of May 1, 2023). Part of Nippon Signal Co., Ltd., Nisshin IT Field Service serves as the group's central IT service provider.

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The Challenge

Nisshin IT Field Service's parent company, Nippon Signal, develops technologies for transportation infrastructure. These include railway signal systems and ticket gates. Nippon Signal must ensure that its products meet strict safety and security regulations at every stage of their product lifecycle—from design and development to manufacture to operation.

In recent years, Nippon Signal has adopted advanced digital technologies such as IoT. This led to growing demand for higher scalability and flexibility of IT resources. To meet Nippon Signal's business needs, Nisshin IT Field Service built a virtualization platform based on VMware technology. This was based on a three-tier architecture consisting of servers, storage, and networking systems.

According to Mr. Akira Miyajima, Deputy Manager, Solution Business 2 Department at Nisshin IT Field Service, the original virtualization platform had many issues. He elaborates: "Every time the product maintenance period expired, about once every five years, we had to reconfigure the entire platform. While looking for a way to solve this problem, we came across the concept of hyperconverged infrastructure [HCI] which offered much easier system expansion and scalability."

Adopting HCI with Lenovo ThinkAgile HX Series

After comparing various HCI solutions, Nisshin IT Field Service decided to adopt Nutanix HCI software on hyperconverged appliances based on Lenovo ThinkAgile HX Series hardware.

Nisshin IT Field Service installed four Lenovo ThinkAgile HX3310 appliances as the basis for a new virtualization environment to support Nippon Signal's production systems. Initially, the company created four virtualized servers. Based on positive feedback from users, demand grew.

Nisshin IT Field Service soon increased the number of virtual servers to support Nippon Signal's analysis and security systems too, as well as IoT gateways. Resource usage grew at 20% per annum, exceeding expectations. In response, Nisshin IT Field Service installed two additional Lenovo ThinkAgile HX3320 appliances just a year after the initial deployment.

Hardware

Lenovo ThinkAgile HX3310
Lenovo ThinkAgile HX3320

Software

Nutanix Cloud Platform

Services

Lenovo Premier Support



Mr. Masayoshi Uchida

Solution Business 2
Department, Nisshin IT
Field Service Co., Ltd.



“The older HX3310 and newer HX3320 appliance models coexist seamlessly in the same cluster. Compared to our previous three-tier architecture, system expansion is simple. Since we still use Nutanix HCI software, Lenovo hardware, and VMware for virtualization and middleware, it took a little time to sort out version dependencies between the software solutions. But adding nodes to the cluster was very easy. If you need more resources, you simply add more nodes to **increase capacity.**”

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Results

Since then, a total of six Lenovo ThinkAgile HX Series models—old and new—had been in operation. Nisshin IT Field Service continued to operate the virtualization platform until the end of the product maintenance period, when resource usage was over 60% and, if the company had continued that trajectory, would have reached 70% before long. At one point, Nisshin IT Field Service ran the risk of approaching 80% resource usage and running out of capacity. Therefore, the company decided to enhance the two additional nodes at the same time as replacing the older four nodes.

Nisshin IT Field Service began to plan capacity sizing, equipment procurement, and a work schedule. Lenovo completed the installation after conducting a comprehensive evaluation of migration risks. This left the Nisshin IT Field Service team free to focus on project management and migration work, in-house coordination of system downtime, and network environment adjustments.



Mr. Akira Miyajima

Deputy Manager,
Solution Business 2
Department, Nisshin IT
Field Service Co., Ltd.



“Ever since we first introduced Lenovo ThinkAgile HX Series to our data center, Lenovo has supported us. They are familiar with our environment, which gives me peace of mind for the upcoming node replacement project. And unlike a multi-vendor three-tier architecture, vendor management is no longer an issue because we rely on Lenovo for everything. It’s always easy.”

Nisshin IT Field Service scheduled downtime for a weekend so that Lenovo could replace the nodes in two batches. Aside from some node detachment work taking longer than expected, everything went smoothly. The Lenovo ThinkAgile HX Series platform continues to operate stably even following the node replacements.

Mr. Akira Miyajima says: “The HCI platform is backed by Lenovo Premier Support so in the event of an issue or critical failure, Lenovo will be there for us. Naturally, we also monitor the platform ourselves. But keeping the lights on is no easy task, so it’s reassuring to know that Lenovo Premier Support is there for us.”



Easy scalability



Simple management



Comprehensive support

Easy scalability for the future

Since upgrading its Lenovo ThinkAgile HX cluster by replacing the older nodes, Nisshin IT Field Service has gained considerably more capacity and resource usage has decreased by 30-40%. But the company is already looking to expand the cluster even further in the future.

Mr. Akira Miyajima says: “There is continuous user demand for new virtual servers. To meet this demand swiftly, we will continue to expand the cluster in the future. Because adding and replacing nodes in the Lenovo ThinkAgile HX cluster is so easy, we have peace of mind that we can continue to meet the needs of our users.”

He continues: “I would like to continue operating this virtualization platform in the long term. Therefore, we need to train young engineers so that they gain experience of Nutanix HCI software. This will help to simplify operations and keep costs down. We know that Lenovo will continue to support us and help us realize our future vision.”

Why **Lenovo**?

For Nisshin IT Field Service, it was the combination of Lenovo server hardware and Nutanix HCI software that made the ThinkAgile HX Series stand out from the crowd.

Mr. Akira Miyajima recalls: “Nutanix is a pioneer in the HCI space while Lenovo has a strong reputation for reliability. Another key deciding factor was the competitive pricing.”



How do you boost the flexibility of group IT?

Gaining more capacity and decreasing resource usage with Lenovo ThinkAgile HX Series.

[Explore Lenovo ThinkAgile](#)

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