
With Citrix on board, Daewoo sails into next dimension

Shipbuilder moves from 2D to 3D design software without sacrificing user experience



Daewoo
Shipbuilding
& Marine
Engineering

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Moon Kyung Yoon | IT Manager

It goes without saying that it takes a lot of people to design a submarine. Or an oil rig. Or a container ship. But most people would probably be surprised by just how many designers contribute to these efforts. At South Korea-based Daewoo Shipbuilding & Marine Engineering (DSME)—the second largest shipbuilder in the world—2,000 designers collaborate on large projects. And they get help from another 1,800 external design vendors.

These designers all work with a computer-aided design (CAD) software called AVEVA Marine. For years, DSME designers used a 2D version of it. But when the company recently upgraded to a 3D version—which has a much higher graphics workload—its servers could support only half the designers who had to use it at a given time.

DSME needed to update their hosting infrastructure to let more of their design teams work together in real time, securely. They chose the Citrix app delivery solution, which helped them double the number of users who could work together. And it also helped them secure all project data in central storage. Now DSME can design, develop, and launch new products as quickly as ever.

Scaling up without slowing down

When DSME was using the 2D version of AVEVA Marine, their legacy platform could support only fifteen simultaneous 3D users per server—half the number they needed.

But it wasn't enough just to let more designers collaborate at the same time.

“Users needed to feel as if they were working

directly on their own desktops,” says Moon Kyung Yoon, DSME's IT manager. “So speed and a natural user experience were going to be important features.”

After looking at various hardware and software solutions, Moon and his team chose [Citrix XenApp](#)¹ for its GPU-sharing technology to help them break through the limitations of their existing solution. XenApp lets them share graphic-intensive applications while giving end users the experience they're used to.

DSME also chose [XenServer](#)², a server virtualization management platform that allows DSME to consolidate and centrally administer data center servers.

New solution doubles number of designers who can work together

Unlike the legacy platform, the new Citrix app delivery solution intelligently allocates CPU and GPU power depending on the changing needs of different users. The IT team chose the high-performance NVIDIA GRID K2 graphics board to create a powerful graphics platform comprising 18 HP ProLiant SL250 Gen8 servers powered by dual Intel Xeon processors.

Testing proved that the new platform lets thirty 3D designers work together at the same time per server. “When many users were connected,” says Moon, “the next-generation design collaboration system with Citrix XenApp resulted in higher performance and efficiency than the legacy system.”

Sensitive work is secure

DSME's drawings and designs are proprietary and very sensitive, so any solution they use has to be as secure as possible. The new platform checks all the boxes.

Sensitive work isn't stored on employees' individual computers. Instead, all project data remains in a secure central data center at all times. Even when internal design teams collaborate with external design partners, data never leaves the DSME servers. And designers can even use drawing tablets, 3D SpaceMouse, or other peripherals to manipulate complex models and drawings as they like, all within a secure container.

\$900,000 a year saved

DSME plans to roll out more than 1,000 users on the new platform. The company predicts that, by making engineers more productive, the new system will cut annual expenses by around \$900,000.

“We are making efforts to strengthen our global competitiveness by securing our own design technology and supplying better products in the future,” says Moon.

The solution:

- [XenApp](#) lets more people work with 3D CAD software at the same time.
- [XenServer](#) maintains the performance they are used to, even with a heavier graphics workload.

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1. 100 million users around the world rely on **XenApp** to access apps and desktops from any device, over any network. Apps and desktops are stored in the data center to protect sensitive data. [Find out more about XenApp.](#)
 2. **XenServer** provides a reliable, secure open source virtualization platform with near-native performance and best-in-class VM density. With the help of an intuitive, wizard-driven utility, the solution takes just 10 minutes to install. [Find out more about XenServer.](#)



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