Full speed ahead for safer cruise ships

Transas wins deal to equip world’s largest and most sophisticated marine training centre with a next-generation simulation solution

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Business need
To supply the largest and most technologically advanced marine simulation centre in the world, Transas needed a tier-1 IT partner that could provide a complete, cutting-edge infrastructure.

Solution
Working with Dell OEM Solutions, Transas built a fully virtualized ship-handling simulation solution backed by a portfolio of Dell hardware, software and services.

Benefits
• End-to-end partnership to build a multimillion dollar maritime training centre
• Innovative virtual simulation solution reduces hardware by 77 per cent and energy consumption by 30 per cent
• Complete solution from one supplier reduces complexity of support and maintenance, ensuring better interoperability
• OEM-specific services simplify configuration, logistics and billing

Solutions at a glance
• OEM Solutions
• Cloud Client-Computing
• Enterprise and Client Deployment
• Enterprise and Client Support
• Networking

Customer profile

Company | Transas
Industry | Maritime
Country | Ireland
Employees | 900
Website | www.transas.com
We chose Dell OpenManage to help give us a single-pane-of-glass view of the entire solution, which greatly reduces management overheads.

Tobias Lehnert, Project Manager, Transas

Transas develops marine technology solutions for offshore and onshore use. These include navigation, coastal surveillance, and simulation and training systems. It operates worldwide with more than 20 regional offices and has a global network of partners in around 120 countries.

Transas simulation systems – which are used by crew from commercial fleets, navies and coastguards to train in all aspects of seafaring – are installed at 1,500 training centres worldwide, representing 45 per cent of the market.

Transas is currently constructing a new simulator at the Centre for Simulator Maritime Training (CSMART) in Almere, the Netherlands, which is run by the Carnival Corporation. This is the world’s largest travel and leisure company, with nine global brands and a fleet of 101 cruise ships. Carnival Corporation is in the process of expanding and upgrading the centre, making it three times as large, and providing capacity to train 6,500 deck and engineering officers a year.

CSMART will offer training and assessment facilities for all crew. It will include navigational and engine-room simulators, for which Transas is developing 12 cruise ship models, 60 sailing areas and three new cruise ship engine models – all specific to Carnival Corporation’s operations.

Captain Hans Hederstrom, Managing Director of CSMART at Carnival Corporation, says: “Our number one priority is the safety and comfort of the nearly 11 million guests who sail with us every year. Providing the best training to our deck and engineering officers is essential in helping us meet that priority. We have formed important partnerships with companies such as Transas to provide our instructors with state-of-the-art technology for high-quality training.”

The search for the perfect partner
Alex Ponomarev, U.K. and Netherlands Account Manager at Transas, says: “Our knowledge of the market and our constantly evolving software put us in a leading position to work with Carnival, but we’re always looking for the right IT partner for any project.” This will be the largest marine simulation centre ever built, and Transas was looking for an

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**Products & Services**

**Services**
- Dell Configuration Services
- Dell Central Purchasing Facility
- Dell Deployment Services
- Dell Support Services
  - Dell ProSupport with Mission Critical

**Hardware**
- Dell Precision Rack 7910 workstations
- Dell PowerEdge R730 servers
- Dell Storage PS6100X arrays
- Dell Networking S6000/S4820/S4810 and N4032T/N4032/N3048/N2048 switches
- Dell Wyse thin clients

**Software**
- Dell OpenManage
- Dell SonicWALL TZ215 firewall

**Partner**
- NVIDIA GRID™ K1 graphics cards
innovative, customised IT solution from one partner. The biggest challenge was cutting the amount of physical hardware, thus reducing the cost of investment and ownership, but the solution had to meet specific technical criteria to run the Transas simulation software. “We wanted a partner – not just a supplier – that could understand the needs of the project and provide an end-to-end solution,” says Tobias Lehnert, Project Manager at Transas.

Transas had never worked with Dell before, and only knew of Dell as a supplier of PCs. “It was a revelation to us that Dell is making significant investments in the maritime industry and could provide a full range of services and solutions, in this case via its OEM division,” says Lehnert. Transas first spoke with Dell during the request for proposal phase to establish a technical design. Together, the two companies worked out a solution that required a virtualized architecture and intensive graphics capabilities for the 270-degree simulation screen. In addition, the solution had to be flexible, with any device capable of taking over from another in case of failure.

Joint approach impresses cruise bosses
Once the joint tender was submitted, all the companies that were competing for the contract attended a face-to-face event with Carnival Corporation to present their solutions. “This was one of the milestones in us winning the project,” says Ponomarev. “We felt it was a strong statement for Dell to participate in our proof of concept as a partner. The senior management of Carnival said that our solution was by far the most innovative. The design helped us exceed the customer’s technical requirements and win the contract.”

By using virtualized Dell workstations, Transas reduced the number of physical machines by 77 per cent from 650 to 150, and cut energy consumption by 30 per cent compared to a traditional deployment. “It’s absolutely fair to say that Dell helped us to win this contract,” he says. “Dell was the only supplier that understood the concept, came to us with solutions, and had the complete portfolio to deliver everything we needed.”

Dell services portfolio critical to success
The Dell OEM Solutions team offered a number of services that contributed to the uniqueness of the solution’s design and delivery. “Having the graphics card pre-installed clinched the deal,” says Lehnert. “Without Dell Configuration Services – where each workstation comes pre-configured with the card – we wouldn’t have been able to achieve the architecture we wanted.” Dell’s Central Purchasing Facility also simplified operations. This allowed Transas to procure the equipment centrally via its Ireland subsidiary, while having it delivered to a location in Hamburg.

Although CSMART is in the Netherlands, the entire infrastructure was installed in Hamburg at a test site before being shipped to Almere for launch. Dell Deployment and Project Management Services assisted in getting the infrastructure live in Hamburg, and will lead the move to Almere, which will also involve training for CSMART staff. The environment is designed to be low maintenance, requiring only two members of staff to look after it part-time. “We chose Dell OpenManage to help give us a single-pane-of-glass view of the entire solution, which greatly reduces management overheads,” explains Lehnert.
Dell ProSupport with Mission Critical four-hour response ensures that the solution will achieve high levels of uptime if a component fails. The redundant architecture also minimises the impact of any failures.

Dell Storage PS6100X arrays host all the virtual machines and Dell PowerEdge R730 servers with NVIDIA GRID™ K1 graphics cards provide a grid host system with eight virtual machines per host. Dell Precision Rack 7910 workstations also with NVIDIA GRID K1 graphics cards serve as a Kernel-based Virtual Machine host layer, with Dell Wyse thin clients as the compact, low-maintenance endpoint devices connected to Dell monitors. Dell Networking N and S series switches provide a backbone for a high-speed, redundant infrastructure. A Dell SonicWALL TZ215 firewall combines intrusion prevention, gateway anti-virus, anti-spyware, content filtering and anti-spam services to ensure that the centre is protected from external threats.

**A foundation for the future**

Lehnert and Ponomarev believe that having one end-to-end supplier for all aspects of the solution will make the CSMART simulator one of the world’s leading facilities of its kind. “When you have five or six manufacturers involved and something goes wrong, nobody wants to take responsibility,” says Lehnert. “It’s refreshing to have one supplier to contact, plus the Dell team’s support attitude has been impressive.” He also believes that sourcing all the components from one supplier has simplified the design, configuration and installation process, because all the parts are designed to work together.

He continues: “This is the start of a great technology and business partnership that may be expanded to other allied lines of business.”

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Tobias Lehnert, Project Manager, Transas

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