

# Denmark's leading liner company improves ship-to-shore communication services with Cisco

EXECUTIVE SUMMARY
<b>CUSTOMER NAME</b> · DFDS (Det Forenede Dampskibs- Selskab)
<b>LOCATION</b> · Copenhagen, Denmark
<b>INDUSTRY</b> · Transport
<b>COMPANY SIZE</b> · 4,500 employees
<b>BUSINESS CHALLENGE</b> · Remain competitive by offering new products and services to customers · Communication bandwidth to and from ships becoming overloaded · Deliver better services to on-board staff and crew
<b>NETWORK SOLUTION</b> · Cisco Data Center Network Architecture · Cisco Wide Area Application Services (WAAS)
<b>BUSINESS VALUE</b> · Maximizes the value and capacity of costly ship-to-shore satellite communications · Optimizes satellite communications bandwidth by a factor of three · Delivers a better than expected return on investment · Enables new services and applications to be delivered to ships

A Cisco Wide Area Application Services (WAAS) solution is helping DFDS – Denmark's largest liner company – maximize ship-to-shore satellite links to improve communications and data speeds, and deliver new services to customers.



## Business Challenge

DFDS (Det Forenede Dampskibs- Selskab – The United Steamship Company) is the oldest and large shipping company in Denmark. Founded in 1866, DFDS is now a leading North European liner shipping company, listed

on the Copenhagen Stock Exchange. It has a fleet of 68 ships providing both passenger and freight services around the North Atlantic and North European shipping region. Freight customers include international transport and shipping companies and manufacturers needing to transport large volumes of product by sea. Passenger vessels carry holidaymakers travelling by car, mini cruise passengers, group travel and transport and conference passengers. Besides Denmark, DFDS is present in Norway, Sweden, Finland, France, Latvia, Lithuania, Ireland, UK, The Netherlands, Belgium, Germany, and Poland.

DFDS manages six passenger vessels and five passenger/freight vessels carrying around two million passengers every year and among the facilities that these passengers now expect as standard on board ships are broadband Internet access and associated communication services. DFDS uses satellite to provide ship-to-shore communication services for its customers, but this is very expensive. With customers expecting more and more services and faster Internet access, DFDS was faced with the high cost of increasing satellite bandwidth or risk falling behind the competition in its ability improve services for customers. It was a similar problem for the company's 54 freight ships. Eighteen of the freight ships also use satellite communications, but with more information and applications being delivered to the ships, capacity was becoming limited.

## Network Solution

DFDS was already using a Cisco WAN (Wide Area Network) to integrate its land-based office locations around Europe and to its vessels, where it is using Cisco LANs (Local Area Networks). Each ship, for example, is like an office with a Cisco LAN supporting a variety of applications such as Internet cafes and validation for credit cards used in on-board retail outlets.

DFDS also uses Cisco VPNs (Virtual Private Networks) on board ship so that it can use a single infrastructure, but still create separate, virtual networks to segregate different functions such as email and Internet access for passengers, and financial information or shipping data for DFDS staff and crew.

DFDS has a Cisco-based data center at its headquarters in Copenhagen, which hosts a number of corporate applications such as the company's in-house designed shipping management system. One of the problems was limited network capacity to enable ship-based staff to have fast access to these applications.



DFDS turned to Cisco to help it resolve the problem of ship-to-shore bandwidth. DFDS ran a pilot project using Cisco Application Networking Services, which are part of the Cisco Data Centre architecture designed to improve the provision of business applications to branch offices and reduce demand on network capacity. DFDS installed Cisco Wide Area Application Services (WAAS) – an application acceleration and WAN optimization solution that improves WAN performance – on one of its ships.

“Cisco’s portfolio of products covers pretty much everything a business of our size needs, from basic network infrastructure to more advanced services and applications like data center solutions,” says Poul Daugaard, head of the Cisco WAAS project at DFDS. “When we looked at the Cisco WAAS solution, not only was it technically very good, we also got a strong sense that Cisco is very committed to this technology, that it has the expertise to deal with problems and it has proved very responsive in helping us design and deploy the solution.”

As a result of the success of the pilot in increasing network capacity between ships and the shore over a satellite communication link, DFDS is in the process of deploying Cisco WAAS across its entire shipping fleet.

## Business Results

“On today’s modern passenger ships, if you can’t provide customers with all the data communications they would expect on land, then you’re out of the picture,” says Daugaard. “Around 20 percent of our customers are business travelers or delegates using our vessels for conferences, and broadband is an absolute must. What the Cisco technology means to DFDS is the ability to deliver these services to customers without a significant increase in data communication costs. Ship-to-shore connections were too slow and it is much more cost effective to implement Cisco WAAS to improve communication speeds, than to increase satellite bandwidth.”



Daugaard estimates that the Cisco WAAS solution will deliver a better than expected return on investment.

Using the Cisco WAAS solution to increase communication bandwidth to ships also opens up opportunities to deliver new services to customers, further increasing DFDS’ competitive advantage. In addition to features such as email and Internet access, DFDS will be able to offer

passengers services such as video over IP services and more sophisticated business collaboration tools and applications that are hosted on land.

## PRODUCT LIST

### Routing and Switching

- Cisco Catalyst 6509 Series Switches
- Cisco Catalyst 2960 Series Switches

### Application Networking

- Cisco Wide Area Application Services (WAAS)

The Cisco technology will also increase bandwidth to its freight vessels so that information such as maps and weather forecasts can be delivered to the captain faster, and services for the crew such as email and Internet access to communicate with home can be speeded up.

Daugaard says that currently its freight vessels share a 1Mbit satellite communication connection. The Cisco WAAS, however, will optimize bandwidth by a factor of three, effectively increasing capacity by 3Mbits, and enable more applications to be delivered to ship. For instance, a simple example is an application that DFDS wanted to use for its on-board restaurants. Hosted in DFDS' data center in Copenhagen, this application is used to design and produce restaurant menus and maintain a common look and feel for menu design. With Cisco WAAS, bandwidth to and from ships has been optimized so that it is now possible to exchange large graphic images and files with ships so staff can retain corporate branding but still customize menus for each restaurant.

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**Poul Daugaard, Head of the Cisco WAAS project, DFDS**



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