Data at the Network Edge.™

Case Studies

US Navy

No network? No problem

Project Summary

Market Sector
Navy

Client
United States Navy

Location
USA

Industry
Defence

Profile
The world's largest naval force, founded in 1775 and operating around the world

Key Drivers
Improving on-board engineers' access to the Navy's "Distance Support" SharePoint portal while at sea

Distance Support, Sailor to Engineer program - Connecting Sailors to expert technicians on shore

iOra's Geo-Replicator experts provides the bandwidth optimisation that makes the updating of the "Distance Support" portal possible across the entire fleet via satellite. This enables the Navy to run an up-to-date portal on all of its ships, substantially reducing demand on the Navy's satellite network, as well as the cost of transporting technology to ships.

Background

The United States Navy performs the bulk of its vessel maintenance at its naval bases. Between those scheduled overhauls, however, there remains periodic maintenance that must be performed at sea to keep the ships and equipment ready for deployment.

While the Navy trains its on-board technicians to handle the majority of these maintenance scenarios, there are inevitably some tasks that are more complicated and the onboard technicians need additional expertise. The technician would typically complete these more complex tasks with the advice of a land based expert or, in very complex cases, an expert will be lown to the ship to complete the work required.

Maintenance issues and the delays they can cause are a signi icant burden on Navy resources. Ferrying experts to ships is expensive and the downtime is detrimental to leet operations.

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The Challenge

To enhance the efficiency of its on board technicians, the Navy has created the "Distance Support" web portal, which gives personnel on ships instant access to full and up-to-date maintenance documentation. Through the Naval Surface Warfare Center's (NSWC) "Sailor to Engineer" initiative, this portal also gives Sailors instant access to engineering and logistics experts at the NSWC in Port Hueneme.

The Sailor to Engineer page of the portal enables sailors to get expert answers to questions regarding the maintenance of weapons, hull, mechanical, and electrical systems by putting fleet technicians in contact with knowledgeable experts at any time, anywhere.

Whilst the portal was highly effective it was limited by bandwidth availability over the Navy's satellite network. With enormous fleet demand for bandwidth, it was impossible to update the portal effectively over the available network. Therefore updates to maintenance documentation had to be sent out to the ships on CDs and then manually uploaded into the portal. This process was cumbersome and unreliable.

The iOra Geo-Replicator® Solution

iOra's Geo-Replicator technology provides the bandwidth optimisation that enables the "Distance Support" portal to be updated across the entire fleet via satellite. So the Navy can run an up-to-date portal on all of its ships, substantially reducing demand on the Navy's satellite network and the cost of transporting experts to ships.

Having the ability to contact an expert immediately when the need arises, allows the fleet to remedy problems rapidly and keep their operations running smoothly.

Only iOra Geo-Replicator offered the efficient server to server replication that the Navy required to provide a LAN speed portal experience to its on-ship users. iOra's unique software allows the Navy to efficiently provide information to its users, wherever they are in the world. Delivering efficient replication of content between ship and shore and back again by dramatically reducing the size of the data being sent.

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The Result

The Navy's objective was to provide up-to-date portal information on-board each of its vessels. Through using iOra's unique patented Epsilon differencing technology, the maintenance manuals in the Navy's "Distance Support" portal are now updated every few hours instead of every few months.

iOra Geo-Replicator® Benefits

Faster access to SharePoint in very remote areas of the world where bandwidth is limited using iOra Geo-Replicator can result in a dramatic reduction in the cost of data transmission, as well as ensuring satellite bandwidth is left available for other mission critical purposes.

For the U.S Navy our software provides improved at-sea access to maintenance manuals and documentation, more effective and efficient collaboration between on-ship technicians and land based experts, and the availability of more up-to-date portal content.