

Delivering data to the tactical edge



Military organizations around the globe rely on iOra to deliver data over challenging networks

Background

At a time of unprecedented budget reductions, now more than ever the development of solutions delivering operational efficiency, whilst maintaining the accuracy of information, is paramount for Warfighters. Exploiting solutions such as data distribution in joint common operating environments, mission command software, C4ISR systems and handheld tablet devices are all part of this important conversation aimed at improving tactical communication and coordination.

The use of computers and their networks to support military operations has become a central constituent of modern warfare and planning. Not only do these systems support the essential command and control, the means by which military commands become spread out to the assigned forces, but these systems also record and

disseminate intelligence, circulate and control personnel information and manage logistics.

Increasingly these electronic records are also used to forensically record the decision making processes where complex military actions are essential. In addition, they provide historical records that can be legally reviewed later to recreate the information available to the battlefield commander at the point of action execution.

Consequently, for the military commander a key requirement is that any decision that s/he makes has to be made on the latest and most relevant operational data. Ensuring that information is current and consistent across all deployed operational sites, irrespective of location, and what is often called the 'single point of truth' is a vital information assurance goal. Providing this assurance is constrained by a number of

factors that affect data access such as:

Information portals – Portals such as Microsoft SharePoint and Alfresco are becoming the *de facto* standard for militaries to share and collaborate on data; but they depend on good network connections. In extreme, operationally sensitive deployments, the simple process of linking computers together is often just infeasible, which leads to isolated deployments.

Collaboration and the need to share – The need to share information towards a strategic objective is paramount but fraught with issues where security is top of the list. Controlling and managing electronic information is essential but problematic, particularly when Allied forces are using a mixture of platforms, versions and file formats.

Global deployments - Global deployments require the use of satellites, radio and other methods as the network backbone. These methods can suffer from high network latency and limited bandwidth, and therefore are unsuitable for modern web-based applications that were designed with the expectation of high capacity networks. These network bottlenecks can lead to failed communications, frustrations and, more importantly, operational risk.

Information congestion - Network resources are also impacted by the sheer volume of data that needs to be transmitted up the chain. As mentioned earlier, the huge volume of live field data is a major hog of the available network but essential in today's modern warfare.

Limited/intermittent networks – Highly restrictive mobile networks are often used by those on the front line, and they also suffer from long periods of network disconnection – this presents a major risk in maintaining information consistency and accuracy of data.

The commercial world has evolved to provide some technological solutions to ease difficult networking environments such as:

Network accelerators to speed up communications between two points in the network.

Data Compression to reduce the quantity of data being sent over the network.

Server virtualisation so the deployed user can access a virtual view of the data without the requirement for back-end infrastructure.

Data over Radio is a low-cost option compared to satellite and increases the number of usable data bearers.

The final issue in communicating in remote areas is with the modern Warfighter directly. They come from the information age where, in their civilian lives, they are used to interacting with responsive web tools delivering social networking, email and the web. Traditional applications built for the military by risk-averse system integrators take many years to reach operational service and as a result fail to share the same level of usability expected by the young Warfighter. Consequently users fail to adopt older format applications where costly training is required and at worst information is inconsistently updated leading to information inaccuracies.

iOra

iOra is a leading global provider of the portal and file based data replication technology for organizations that need to operate in the most demanding environments. Our technology enables an intelligent, complete and transparent data exchange strategy that is consistent and guaranteed, irrespective of location or network connection. Trusted by Governments, corporates, military and global organizations, iOra technology has been selected for its proven capabilities in hostile and remote environments. iOra



products replicate data between installed Microsoft SharePoint servers, or by creating virtualized servers or web applications for mobile users - thus enabling guaranteed access to up-to-date operational critical information.

Successfully deployed on tens of thousands of machines over networks with speeds as low as 8kbps.

The iOra Product Suite:

iOra Epsilon is the iOra patented compression engine that is the core component of all iOra replication configurations. The world leading cross file compression technology ensures that data replication over the network is highly efficient.

iOra Geo-Replicator is a replication platform using iOra Epsilon that provides the tools for defining the scope of what is replicated, as well as managing secure, efficient, automated and transparent data updates.

iOra Monitoring provides a diagnostic user interface to support the operational deployment of iOra technology. The iOra Monitor maintains a graphical indication of the operational health of all deployed replication - both local and remote. When iOra detects a warning or network error, iOra can be used to drill down to more detailed diagnostic information.

Key military benefits of iOra Geo-Replicator:

Improved collaboration and remote access to critical information
Faster access to SharePoint and portal content in remote areas of the world

Release of satellite bandwidth for other purposes

Offline, disconnected access to critical Microsoft SharePoint and portal content

Enhanced CooP capabilities

Customers

Over the years iOra has been deployed in applications with the following military organizations:

US Navy - Distance Support program and other associated programs

NATO - Document handling System (DHS) in addition deployment to NRF 1GNC

US Marine Corp (USMC) - Tactical Collaborative Work Suite (TCWS)

US Special Operations Command (USSOCOM)

UK MoD - Army, Navy and Royal Marines deployment of replication services as part of the Defense Information Infrastructure program (DII)

Australian Department of Defense

Norwegian Defense Force linked to NATO deployment

British Royal Air Force (RAF) - RAFCCIS

US Army and Army Corp of Engineers (ACE)

