

Overview

Country or Region Australia

Industry Defence

Also applicable to
Mining, Maritime,
Exploration & Government

Customer Profile

The Australian Government Department of Defence aims to promote the security of Australia, and to protect its people and its national interests.

Business Situation

The Australian Department of Defence needed to communicate and collaborate between deployable joint force (mobile, sea bearing HQ), brigade (established remote HQ) and battle group headquarters (temporary, mobile remote HQ) remote locations. Issues with connectivity were a frequent issue, resulting in unreliable transmission of communications.

Solution

With Myriad Technologies, the Australian Department of Defence created a stable SharePoint replication solution to provide connectivity to their troops in the field.

Benefits

- Stable end user utilisation even when using low bandwidth and high latency satellite connections.
- Greatly reduced data usage that minimises the cost of data transfers.
- Allow SharePoint to be always available regardless of connectivity.



The Australian Department of Defence has undertaken field trials to deploy Microsoft SharePoint into their tactical theatre. The tests have specifically focused on deploying SharePoint within low and unstable bandwidth environments and the initial results are extremely positive.

The main focus of the project is the modernisation and strategic planning of communication and collaboration systems for Defence to increase the effectiveness of sharing information, collaborating and communicating. The communications team worked with the consultants at Myriad Technologies to perform initial proof of concept design and ultimately real world field trials of the technology.

SharePoint's open architecture also provided an ideal platform for ancillary objectives focused on interoperability and provided consultants the ability to integrate the platform with cisco messaging software and a three-dimensional, geo-spatially aware real time battle planning suite.

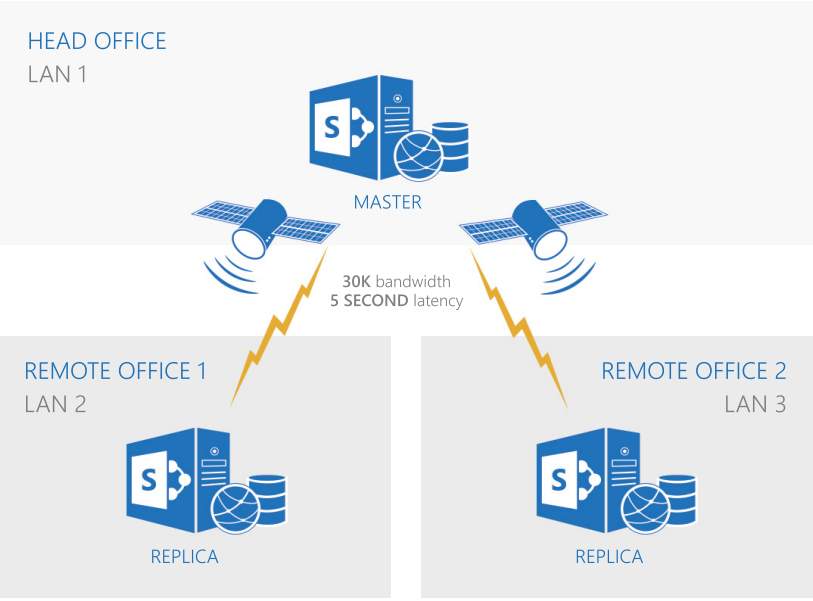
The Challenges

Defence has traditionally relied on manual; paper based process or built bespoke solutions for its communication and collaboration environments. Project sponsors identified opportunities available to the organisation through the implementation of Microsoft SharePoint.

Some of the key challenges facing Defence is the geographically dispersed networks both in Australia and abroad. Network connectivity between these sites is provided through FDMA/CDMA Satellite links made possible through temporary and portable satellite dishes. Subsequently, network connectivity and/or signal strength cannot be guaranteed as the medium and associated kit is subject to intermittent power and volatile weather patterns. Sharing information in these hostile environments has previously been limited and the need to exchange intelligence, mission and command data about operations in the field is critical.

Finally, out of the handful of applications and suite's chosen for use in the tactical network, SharePoint was the only non-defence specific application reliant on Microsoft Active Directory services. As a result and as part of the overall solution, Myriad Technologies designed, implemented and continues to support the underpinning Active Directory infrastructure.

SharePoint in the Theatre



SharePoint is replicated to multiple locations over low bandwidth connections using a highly evolved byte level that differentiates engine to drive interchange rates to the lowest possible level

The Solution

The solution needed to be able to operate completely autonomously in the event of network outage or complete node isolation, allowing collaboration on documents to occur in multiple locations regardless of the network status. To achieve this Microsoft SharePoint 2010 technology combined with Iora's Geo-Replicator server to server technology is utilised.

iOra provides a highly advanced 'Epsilon' level of replication. This goes way beyond simply doing a 'delta' replica of data and provides the bare minimum bandwidth necessary to achieve replication of content. It is important to understand that the technology employed is not doing just compression (aka PKZIP). It is utilising a highly evolved byte level differencing engine to drive data interchange rates to the lowest level possible.

Using the open architecture provided by the Microsoft SharePoint platform, Myriad Technologies extended the solution to see hand-held images taken from a GPS aware camera automatically published into a custom KML map layer overlayed within the 3 Dimensional battle planning interface. Troops on the front line would upload pictures into a local instance of SharePoint and in conjunction with the replication, the integration piece provided decision makers (back at HQ) key information in the form of detailed imagery to make the right decisions without leaving their battle planning interface.

The Benefits

The replicated site structure provides a seamless and common site structure for users regardless of their location. This means that the same information can be accessed at the same time in the same way from any one of the regions, allowing teams to collaborate, reducing duplication and providing a "point of truth".

By replicating the SharePoint content from one site to another, the solution provides an "always on" service which enables the users to access their content at LAN speeds rather than having to go through the slow, unreliable WAN connections.

A significant and clear financial benefit can be identified by comparing the cost of data being transferred across expensive links (or full upgrades to provide better links).