

CASE STUDY U.S. JOINT FORCES COMMAND

Headquartered in Norfolk, Virginia, U.S. Joint Forces Command (JFCOM) is one of nine combat commands in the Department of Defense (DoD). JFCOM develops and tests concepts for joint warfighting, ultimately advising the Army, Navy, Air Force and Marines on how to better integrate their warfighting capabilities. JFCOM also is an important hub of collaboration with the United States' military allies, such as its NATO partners.

Multinational Information Sharing Key to Future Military Success

For the last several years, the U.S. Department of Defense has been acutely aware of the opportunities and challenges that information technology has posed. Net-centric warfare and other DoD initiatives have sought to incorporate new computer and communications technologies into the heart of the U.S. military's doctrine, training, and procurement. The 9/11 terrorist attacks, military operations in Afghanistan and Iraq, and the worldwide struggle with Al Qaeda and its allies have shifted and sharpened the DoD's focus on the role of information.

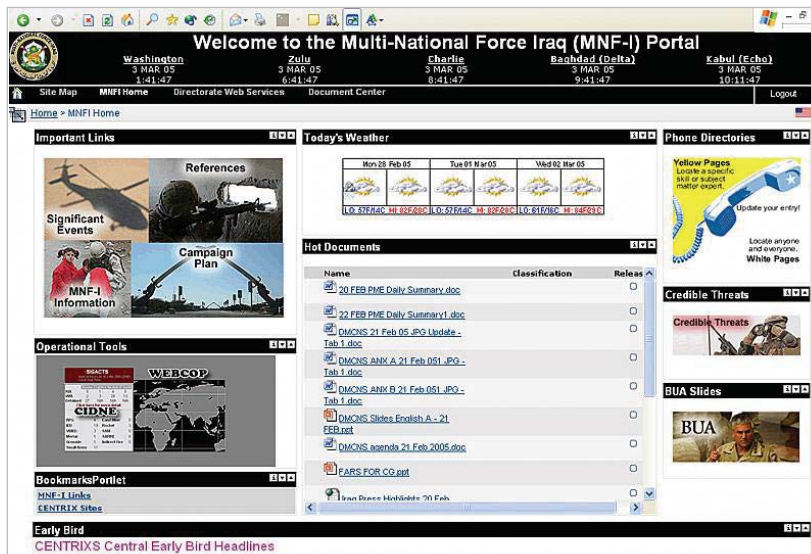


Figure 1: Portal screen shot shows common portlets, including "Hot Documents" that were stored in the Xythos WebFile Server.



Key Facts

Industry: Federal Government

Product: Xythos WebFile Server

Audience: U.S. and Coalition forces across Iraq

Benefits

- Increases collaboration and knowledge exchange among coalition forces
- Provides real-time tactical information to dispersed troops
- Provides portal-based access to critical data
- Reduces strain on bandwidth and e-mail storage space
- Streamlines operational planning with real-time information
- Integrates with JFCOM's heterogeneous technology

Why Xythos?

- Open standards-based technology
- Integrated content and metadata search engine
- Granular control of permissions to documents and folders
- Supports common methods



“Xythos' product provides everything one would expect from an enterprise-class document management application.”

Jim Rapoza
eWEEK

Collecting, sifting, analyzing, and organizing information is only one part of the work; modern warfighters need to share information across traditional organizational boundaries with dispersed troops and worldwide allies. The flow of information must be free, but it also must not compromise security. Herbert Strauss, a Gartner vice president and principal national security analyst states, “There's far more attention paid to the ability to share information with agility than ever before.”

As a result of the need to improve multinational information sharing, JFCOM developed a web portal prototype, known as the Cross Domain Collaborative Information Environment (CDCIE), to directly support U.S. and Coalition combat forces in Iraq. The portal includes a News and Group Calendar portlet, as well as an Expert Locator and Help Desk portlet. In addition, the portal provides web-based document and file management capability, based on Xythos' WebFile Server. Previously, the only way for personnel stationed in Iraq to share files outside the unit was to send an email attachment or copy the file to whatever web server was available. Now, the Xythos-powered document collaboration capabilities within the CDCIE make critical operational documents immediately and easily available, without compromising security.

Xythos' Open Standards-Based Platform Integrates JFCOM's Heterogeneous Systems

In their search for a web-based document and file management application, JFCOM looked for a solution that was based on open web standards that could integrate with its heterogeneous databases, including Postgres, Oracle and Microsoft SQL, and its heterogeneous operating systems, including Windows, Linux, Solaris, and Mac OSX. JFCOM also searched for a commercial J2EE-compatible, WebDAV-based (Web-based Distributed Authoring and Versioning) document management system that would support common methods of system-wide authentication, improving content security.

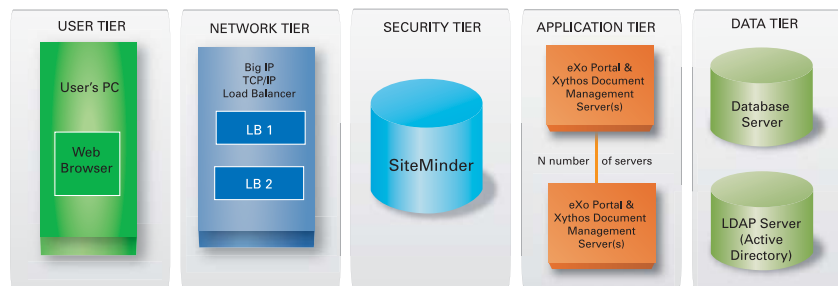


Figure 2: CDCIE Portal Architecture

After reviewing several products, JFCOM found that Xythos was best able to address each of its system requirements. The Xythos WebFile Server was selected after JFCOM successfully integrated and tested it within the CDCIE. User's liked the Xythos user interface because it was easy and intuitive to use. Based entirely on open standards (WebDAV, Java, LDAP, etc.), the Xythos WebFile Server runs with the most common application servers, databases and file systems. As a result, JFCOM is able to extend the utility of its technology investments well into the future.



“Overall, Xythos overcomes the security and workflow problems of manual document and file sharing with a well-executed, open solution that rivals many legacy EDM products.”

Mike Heck
InfoWorld

Xythos WebFile Server's seamless support for Microsoft Office 2000 and Microsoft Web Folders, combined with a scalable collaboration application, created a rich information-sharing environment within the portal. Now, through Xythos, authorized officers and field personnel can read, write and administer documents over a distributed worldwide network. Other Xythos features that JFCOM has found most useful include:

- Granular control of permissions to documents and folders
- Subscriptions which allows users to be notified via email of changes to directories and files
- Tickets, a method that allows users without accounts to securely send a link to specific files in the directory for a specified time and/or number of accesses
- The ability to use Microsoft Web Folders to directly access the Xythos document management system without having to use the web browser; users can just drag-and-drop files and directories directly into the Xythos WebFile Server.

JFCOM also developed a JSR 168-compliant portlet using Xythos' APIs so that Xythos could be integrated into its portal platform. Now, at-a-glance, military personnel can access the latest information and communications. The portlet also features a specific folder's contents including its files and subdirectories.

Xythos Creates Rich Collaboration Environment within JFCOM's Portal

Personnel accessing documents from the portal are, quite literally, on the front lines of the war in Iraq. From a laptop inside an armored fighting vehicle in Najaf, or from a desk back at JFCOM headquarters in Norfolk, Virginia, users can search for or browse to a document they need. All that is required is an Internet connection and approved system authentication, while document collaboration remains encrypted at all times.

Xythos saves operations center personnel both time and effort on a daily basis; before the portal was installed, it was common for personnel to send email with a large number of attachments, which overloaded mailboxes and caused some messages to bounce. Xythos WebFile Server allows an individual to send an email with a secure link to a document with one click of the mouse. Posting a master document within the document system instead of emailing copies also reduces strain on bandwidth and email storage space.

With Xythos, the CDCIE now facilitates information and knowledge exchange among members of the Joint Forces and its supporting organizations, reducing planning times and enhancing operational effectiveness. Because Xythos' document management solution is web-based, it can be extended to operations throughout Iraq's combat



System Requirements

Servers

Any platform supporting J2SE or J2EE including: Windows NT®, 2000, 2003, Linux, Solaris®, IBM AIX®, HP/UX® and Mac OS X®

Web/Application Servers

Apache Web Server, Microsoft IIS®, BEA Weblogic®, IBM WebSphere® and Tomcat

Client Systems

HTTP-enabled devices, including those running Windows®, Mac OS® and Linux

Database

IBM DB2®, Oracle®, Microsoft SQL Server®, PostgreSQL

zones. Although U.S. military personnel can access Xythos from the United States, the heart of the system, including the databases where documents are stored, is managed from Iraq.

In the future, customizations can easily be added to the Xythos platform to extend collaborative functionality in other CDCIE applications. Xythos WebFile Server APIs offer an unparalleled level of flexibility with its simple, yet powerful set of interfaces and objects, allowing JFCOM developers to easily integrate a standard set of library services. Success with CDCIE has already encouraged JFCOM to use Xythos in other projects to address a variety of other challenges.

**For more information please call 1.888.4XYTHOS
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