

DEFENSE INFORMATION SYSTEMS AGENCY:

GLOBAL COMBAT SUPPORT SYSTEM: FOCUSED LOGISTICS; RED HAT'S METAMATRIX ENTERPRISE DATA SERVICES PLATFORM ENABLES THE TRANSITION TO A SERVICE-ORIENTED ARCHITECTURE

FAST FACTS

Industry	Government
Geography	North America
Business Challenge	Fusion of information, logistics, engineering, planning and transportation technologies to enable military mobility and versatility.
Software Solution	MetaMatrix Enterprise Data Services Platform
Benefits	SOA allows the Defense Information Systems Agency to better support the joint warfighter in times of war and peace <ul style="list-style-type: none">• Information is securely shared across agencies and task forces• America's troops are able to be more mobile and versatile, in any location, at any time



BACKGROUND

The Defense Information Systems Agency (DISA) is responsible for planning, developing, fielding, operating, and supporting command, control, communications, and information systems. DISA serves the needs of the President, Vice President, the Secretary of Defense, the Joint Chiefs of Staff, the Combatant Commanders, and the other Department of Defense components under all conditions of peacetime and war.

CHALLENGE

Fast developing problems and hot spots around the world require governments to respond quickly with the right teams and the proper support. Many of the systems in place today need to be leveraged to maximize their value in support of troop deployment, the ability to capture essential data, transform it into usable information, and gain information superiority is paramount to the success of maintaining force readiness and winning conflicts.

Recognizing the need to provide commanders in the field with a better and more integrated source of logistics information, DISA has developed the Global Combat Support

System-Joint (GCSS-J-J), a current operational capability. GCSS-J is an initiative that integrates existing combat support information to gain efficiency and interoperability in support of the warfighter. One of the major elements of war is ensuring the flow of personnel and supplies to and from the battlefield throughout all phases of an operation across military commands. In order to develop and sustain this flow, logistics commanders in the field need to have information that will allow them to completely see and understand both the tactical and logistical situation. The current combat support environment does not fully achieve system interoperability and asset visibility because of several shortfalls, including:

- Stovepipe information systems
- Lack of visibility and limited access
- Inability to present a common picture
- Limited joint decision support tools

SOLUTION

DISA selected Red Hat's MetaMatrix Enterprise Data Services Platform to support the GCSS-J Program in its transition to a new Enterprise Information Integration (EII) strategy. MetaMatrix enables the transition from stove-piped systems to a loosely coupled service-oriented architecture, DISA's Net-Centric environment.

Information integration and management solutions from MetaMatrix enable the GCSS-J to provide real-time information from transportation, supply, maintenance, personnel, acquisition, health services, finance, and engineering systems. MetaMatrix makes distributed data accessible and manageable, breaking through the traditional barriers of location, structure, semantics and context.

BENEFITS

MetaMatrix supports GCSS-J data integration and legacy migration requirements.

MetaMatrix Enterprise Data Services Platform ensures that all information is visible, accessible, and understandable.

The MetaMatrix Enterprise Data Services Platform is the only comprehensive EII solution to address both data management and information integration in a scalable, standards-based manner. The MetaMatrix metadata repository enables users to discover, share, and analyze information and the way information is being used. Through standard interfaces reporting tools can provide the visibility developers need so they can find information entities, understand the context of those entities, and provide access to the right information.

MetaMatrix Enterprise Data Services Platform creates loosely coupled data environments, eliminating the development of stove-piped solutions.

MetaMatrix uses a model-driven approach to integration. Authoritative information sources and data entities are represented in metadata models; the integration of information is achieved through these models. This approach decouples the information consuming applications from the authoritative information sources, creating a flexible information environment. MetaMatrix delivers uncompromising security.

A key requirement in information integration is information security and information ownership. MetaMatrix does not move data; the data is stored and maintained on its native system. The MetaMatrix Enterprise Data Services Platform integrates with the data sources security systems. MetaMatrix enforces security on the Virtual Databases within the system and offers

features to manage users, groups, and entitlements. In addition to the run-time security, MetaMatrix also supports design-time security, ensuring that developers have access to only data entities for which they are entitled.

MetaMatrix Enterprise Data Services Platform provides integrated real-time access to disparate information.

With unsurpassed extensibility and the most complete set of information source connectors, MetaMatrix enables organizations to integrate information across physical and political bounds. With MetaMatrix, organizations can create cross-agency applications to support joint responsibilities. The MetaMatrix system provides bidirectional access to information on native systems, delivering the most up-to-date information possible.

MetaMatrix retrieves and aggregates data from multiple data sources and makes it available to client applications through a single query against the virtual database. This provides a simple client interface and contributes to a modular architecture with applications loosely bound to data sources.

MetaMatrix Enterprise Data Services Platform extends legacy applications to modern Service-Oriented Architectures.

MetaMatrix is unique in its ability to expose integrated information, including legacy or proprietary data, as standard Web Services. One key feature of the MetaMatrix System is that it does not impose an XML Schema on the user; instead, the user selects a schema as an end-point or goal of the integration and maps data entities to the schema. In addition to publishing data as a Service, the MetaMatrix System provides query access to integrated data sets through a SOAP interface, and supports both SQL and XQuery. In Service-Oriented Architectures, MetaMatrix can be both a consumer and a provider of Web Services.

MetaMatrix Enterprise Data Services Platform supports migration to the Net-Centric Environment.

Driven by transformation, U.S. forces now enjoy rapid decision superiority, streamlined logistic support, and effective information operations in a true joint forced world. The DOD is transforming intranets into Service-Oriented Architectures under the Net-Centric Enterprise Services (NCES) program. The Global Combat Support System is one example of the agency modernizing its information technology systems under this program. MetaMatrix provides a common data environment capable of integrating and including virtually any information source. The MetaMatrix System couples the metadata management and the information integration capabilities necessary to support this modernization effort.



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