Role-based Access Control

Best Practices for Geospatial SOA

2008 NSDI CAP Project
Key Points

- Participants, Scope and Objectives
- Project Design
- Best Practices Use Case Examples
Participants

- U.S. Army Corps of Engineers, Water Resources Institute
- CubeWerx
- Potential participants include other CAP 2008 Category 2 Participants and Federal organizations like EPA
• Design, deploy and document reusable services and applications for one of the most important (but least understood) areas of Geospatial SOA – Role-based Access Control.

• Satisfy multi-agency requirements through modeling and deployment of business processes and related data/service components.

• Help the NSDI to shed rigid and inward-looking approaches and transform into a more agile, responsive and customer-centric framework driven by collaborative partnerships.

• Advance technology that can support regulatory data interoperability between organizations like USACE, EPA and USFWS.
• Geospatial SOA based on OGC®/ISO influencing Federal Enterprise Architecture (FEA) Geospatial Profile (esp. data access).

• Efforts have matured to a point where broad acceptance is now dependent on capacity to secure data resources.

• Organizations like USACE that are considering participation in the NSDI must also consider how to establish distributed security frameworks for role-based access control to SOA resources.

• Requirements will increase as data access transitions into collaborative data management - services like the Web Feature Server- Transactional (WFS-T).
• Define and document **Best Practices** in Geospatial SOA for Role-based Access to GeoData as a key component of USACE and NSDI Business Process requirements.

• Leverage CubeWerx’s investment in developing solutions to solve this important security challenge.

• Demonstrate capabilities that have value across all application and spatial data stewardship domains, including development of Access Control Rules.

• Collaboratively document **Best Practices** and the implemented operating capability to address common requirements of the NSDI and Geospatial Line of Business.
Project Design

- Community Outreach and Collaboration with other Category 2 participants - defining common SOA definitions, modeling approach and deployment strategies.

- Development & Integration of IMS and clients to work with the NSDI Framework Data Service and sample USACE resources.

- Definition of related USACE Business Process Requirements in coordination with regulatory data interoperability requirements between USACE, EPA and USFWS.

- Documentation of the USACE implementation including findings and recommendations as to “lessons learned” and Best Practices.
Use Case Examples

CubeWerx USA

NSDI Client

USACE Client

WFS Request & Response

Login

Cookie

WFS Request & Response

Cubewerx Identity Management Web Server

NSDI Feature Server

WFS Request & Response

Cubewerx Identity Management Web Server

NSDI Feature Server

WFS Request & Response

Cubewerx Identity Management Web Server

USACE Feature Server

WFS Request & Response

Cubewerx Identity Management Web Server

EPA and USFWS Servers

Map Request & Response

Other Agencies

US Army Corps of Engineers (USACE)

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Use Case Examples

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WFS Request & Response

WFS Request & Response

Cookie

Login

USACE Client

NSDI Feature Server

Access Control

CubeWerx Identity Management Web Server

Access Control

USACE Jurisdiction Access Control for WFS

USACE Client: Inland Water Build-up Area

NSDI Client: Political Boundary River

US Army Corps of Engineers (USACE)

Other Agencies

EPA and USFWS Servers

Access Control

USACE Jurisdiction Access Control for WFS

USACE Client: Inland Water Build-up Area

NSDI Client: Political Boundary River
ACL Editor and other tools will help drive out Best Practices
Role-based Access Control

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