

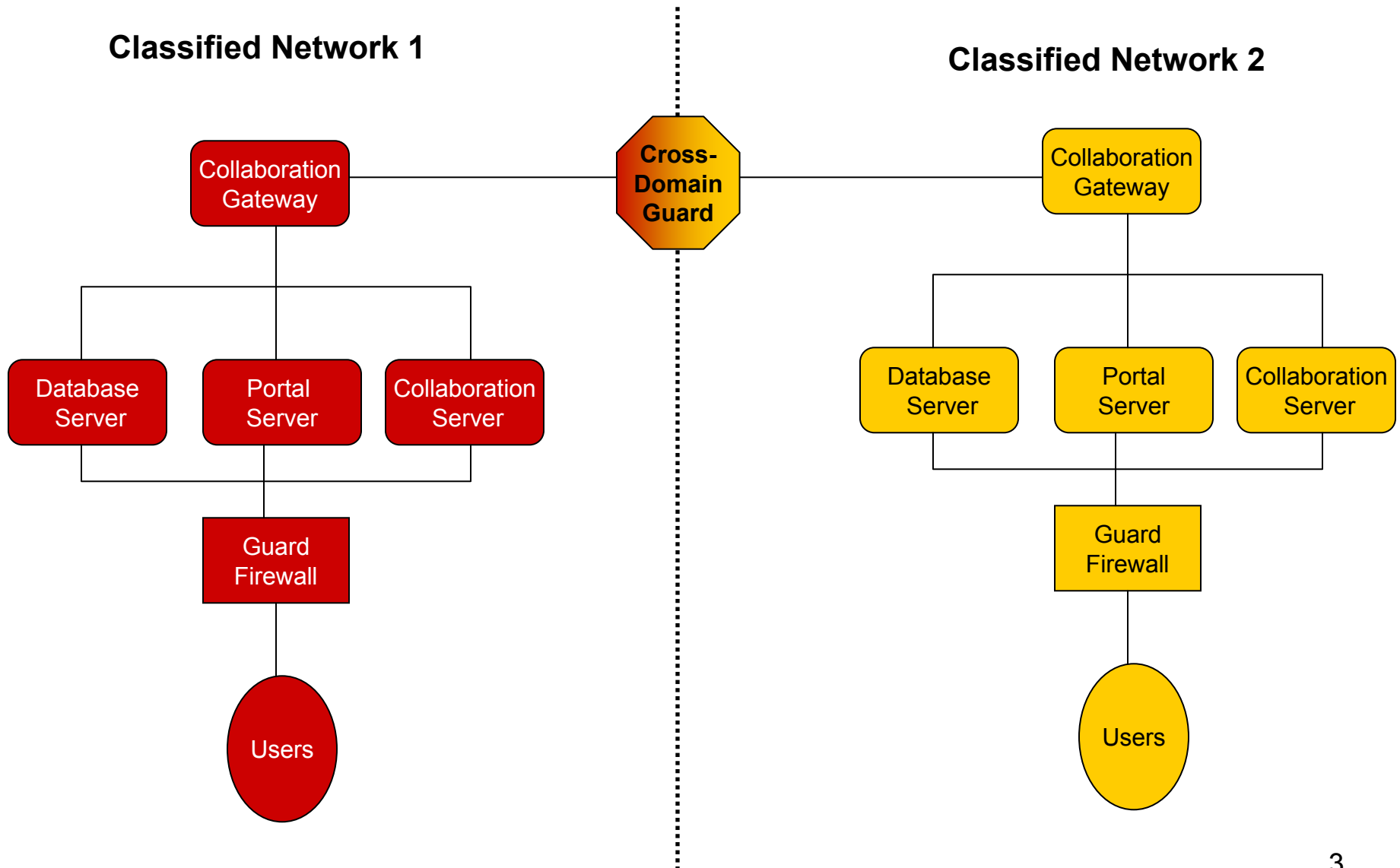
Multinational Force-Iraq Portal and Multinational Information Sharing

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Joint Prototyping Pathway
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Overview

- JFCOM J9 is pursuing cross domain solutions to allow information sharing and real time collaboration from one network / domain to another
- Deployed a single-domain instance to MNFI in February 2005
- Beginning certification, test, and evaluation (CT&E) with National Security Agency (NSA) in August 2005

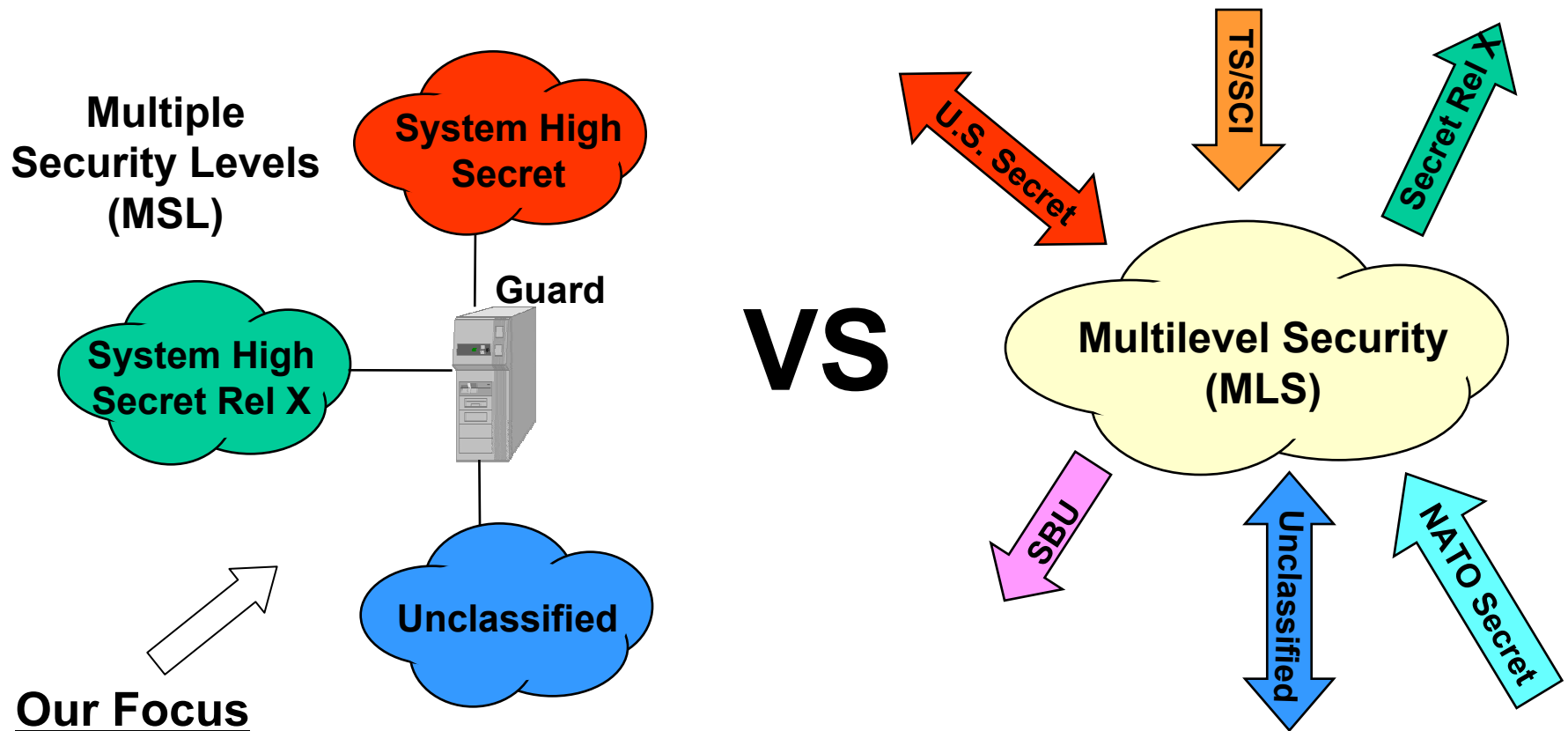
Architecture Concept



Additional domains are supported depending on guard capabilities.

Multiple Security Levels (MSL) versus Multi-Level Security

Adapted from a brief by Elaine M. Caddick, The MITRE Corporation



Strategy

- Use open standards & open source to:
 - Get functionality working in one domain
 - Emplace the hooks in single domain to enable cross domain
- Test in the lab and in the field
- Develop and integrate cross-domain pieces
- CT&E with NSA

Situation Nov 2004

- Multinational Forces-Iraq (MNF-I) Information Technology division frustrated with on-hand information sharing technology
 - Disparate data sources
 - Proprietary, non-interoperable tools
- Iraqi Interim Government (IIG) network to be stood-up in next several months
 - Capability will crawl, walk, run
 - Need to share data from MNF-I with IIG
- MNF-I requests JFCOM help – Nov 04

Mission

- **Mission:** NLT 30 Jan 2005, JFCOM delivers and configures a user-friendly and largely open-standards / open-source portal, document management, and chat capability to MNF-I to enhance information-sharing, position MNF-I for interoperability with future systems, and enable near-term air-gap data sharing with the Iraqi Interim Government network
- **Endstate:** Open-standards systems used as the primary MNF-I information sharing medium NLT 30 March 05, leading to air-gap data sharing with IIG

Vision

- Customer: Seamless information sharing among all US and coalition partners, to include the upcoming IIG network. This effort is the first step toward that end.
- Joint Prototype Pathway:
 - Provide warfighter benefit NOW
 - Promote interoperability and transformation to Net-Centricity and Web-Services by delivering and supporting near-term robust, non-proprietary, standards-based capability directly to the warfighter

Timeline

- Oct 04 AO initial coordination
- Nov 04 Formal MNFI request to JFCOM
- Jan 05 Finish Dev & Test
- End Jan Deploy
- Feb Install / Debug
- March Support & enhance

Portal Requirements from MNFI

- Secure and rapid cross-domain replication w/IIG
 - Unclass only first until Policy changes in place
- Built to open standards as much as possible
- Scalable up to 5,000 users
- Integrate existing applications and databases
- Use standard ports/protocols
- Login tied to Active Directory for Single Sign On
- User configures preferences in portal profile
- Ability to configure based on roles, user groups
- Ability to collect metrics on performance & usage
- Centralize user functions (Collaborative Tools, Search etc.)

Tasks

- Provide portal, document management, text chat, and web-based common operational picture (COP)
- As much open standards & open source as possible
- Air gap replication of data to emerging Iraqi Interim Government (IIG) network
- Integrated search capability
- Seamless user experience
- Primary and backup sites

Technology Choices

- Portal: eXo; open standards; open source
- Document Management: Xythos: open standards; low cost
- Text Chat / Instant Messaging: Buddyspace; open standards; open source
- WebCOP: SPAWAR WebCOP: open standards
- Database: Oracle; industry standard

Open Standards

- Improve Interoperability
- Code Reuse
- Development Community
- Open Standards for J9 Prototypes:
 - ☐ JSR 168 -Open Source Java Portlet Specification
 - ☐ WSRP- Web Services for Remote Portals
 - ☐ XMPP- Extensible Messaging Presence Protocol
 - ☐ XML- eXtensible Markup Language for data tagging
 - ☐ SOAP- Simple Object Access Protocol messaging protocol to move XML
 - ☐ WSDL- Web Service Description Language
 - ☐ UDDI- Universal Description Discovery Integration
- J9's requirement is software packages that demonstrate how THEY interoperate with other software in an open standards framework
- Stating other software can interoperate with you is not sufficient...
 - Must demonstrate ability to interoperate
 - Must use proactive stance... If two pieces of SW do not interoperate, we expect both vendors to work the solution from the ends to the middle
 - Interoperability is not “the other guy’s problem”

Experience with Industry

- Industry support was exceptional, both from traditional vendors and open source community
- Solutions that religiously adhered to open standards...
 - Provided solid capability that met immediate customer requirements
 - Set stage for moving toward Net-Centricity

Challenges for Industry

- Make your software interoperate with others' IAW emerging open standards
- Multi-way standards-compliant database replication that works in connected and disconnected modes
- Bulletproof Active Directory (or similar) capability that works so seamlessly we don't have to worry about it... focus on emerging technology instead
- Robust gallery of Java Specification Request (JSR) 168-compliant portlets for most standard business processes; No proprietary extensions
- Applications capable of binding classification and release information to files and data elements in preparation for traversing a cross-domain XML guard
- Services-Oriented Architecture services NOW instead of in several years
- Continued support like we received in this mission
- *No Govt Commitment or Tasking Implied*

Way Ahead

- Support & maintain
- Air-gap installation
- Cross domain demo (Multinational Information Sharing demo)
- National Security Agency Certification, Test & Evaluation of cross domain
 - Chat – Aug 05
 - Portal & Document Management – Oct 05
- Install cross domain