

## **IP Communications and Convergence for NMCI: Featuring IP Enabled Collaborative Applications and Services**

As DoD and NMCI continue the transformation to network-centric warfare, the power of convergence enables greater collaboration and ubiquitous access to network resources. This presentation focuses on a review of the drive to network-centric warfare, convergence as an underlying technology and capabilities for new collaboration and applications utilizing the NMCI Enterprise network.

The discussion includes studies on applications driving enhanced productivity, the benefits of convergence, and background information on IP Communications productivity gains. A review of previous Communications approaches and migration strategies provides a context to transition to next-generation approaches that provide basic and enhanced communication services. Capabilities of Convergence solutions to leverage the NMCI Enterprise network are discussed and the dramatic return on investment provided for NMCI constituents through deployment of IP Communications solutions.

IP Telephony, real-time videoconferencing, collaboration, land mobile radio interoperability and ubiquitous access to IP applications are discussed with an emphasis on phased deployments and interoperability with legacy systems. In addition to the application overview, several test cases featuring IP Communications impact on productivity are reviewed with lessons learned and best practices identified.

### **Optical Solutions for NMCI:**

Using Advanced xWDM and SONET Technologies as Optical Networking Solutions for the Federal Government. This session will begin with a brief technology overview of both xWDM and SONET technologies. Second, we will briefly discuss the Cisco ONS 15454 MSPP and MSTP solution sets. Third, we will review various Cisco xWDM and SONET applications within the Federal Government, with a focus on its use as a multi-service/service independent based infrastructure. Lastly, the session will conclude with a study of some actual Federal Government installations highlighting the benefits of using Optical as an alternative to traditional trenching/conduit methodologies.

### **Security Solutions for NMCI: "SELF DEFENDING NETWORKS: INTEGRATED SECURITY FOR NMCI"**

As Navy and Marine Corps network operations and systems become more complex and interconnected, the need for integrated security across the global network and extending down to the individual desktop has become a mission imperative. In today's security environment, where Internet worms spread across the world in a matter of minutes, security systems-and the network itself-must react instantaneously and have the ability to automatically detect, prevent, and respond to these new threats. This session addresses the need and practical application of building an NMCI Self Defending Network that provides integrated security across all network devices, from the network routers and

switches, to application servers and end-user desktop systems. This integrated security approach will directly enhance the NMCI Information Assurance capability, proactively defending Navy and Marine operations, the network, applications, and end users.

**Wireless and Mobility Solutions for NMCI:**

An overview of wireless technology solutions that will enable converged IP services for Mobile users and securing the Wireless Infrastructure. Technologies covered in this session are Wireless, Wireless Roaming, Wireless Management, 802.1x, Extensible Authentication Protocol (EAP) Methods (LEAP, EAP-TLS, PEAP, and EAP-FAST), Wi-Fi Protected Access (WPA) and 802.11i. This presentation will also discuss the business drivers and productivity gains associated with deployment of wireless on the NMCI enterprise network and how Cisco is working w/ EDS to deliver a comprehensive wireless and mobility solutions to the program.

**Storage/Data Center Solutions for NMCI:**

Extending the Enterprise SAN for Disaster recovery (DR), and Continuity of operations (COOP). This session will cover the need for enterprise customers to extend a SAN environment to multiple locations for Disaster Recovery/Continuity of Operations (DR/CoOP). Over the course of this session we will cover technologies, and design concepts for extending the SAN. Key technologies covered will include FCIP (Fibre Channel over IP), Fibre Channel over DWDM, and Sonet. During this session we will build on the knowledge of the underling technology, and provide a case study on how and when to use these technologies.

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