



Program Update

NAVSEA Cybersecurity Industry Day

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PEO LCS



PEO LCS Portfolio



IN SERVICE
SUPPORT
(SHIPS &
MISSION
PACKAGES)



LCS TRAINING



Frigate (FF)



LCS 1



LCS 2

PEO LCS SUMMARY

- 3 – ACAT I
- 4 – ACAT II
- 4 – ACAT III
- 5 – ACAT IV
- 7 – Non ACAT



SUW MISSION
PKG



ASW MISSION
PKG



MCM MISSION
PKG



MVCS



MPCE



RMMV



AQS-20



KNIFEFISH



MHUs



LDUUV



UISS



ALMDS



MEDAL



AMNS



LEGACY
SYSTEMS





Littoral Combat Ship



Two different ship variants that meet the same requirements:

- Lockheed Martin Monohull
- Austal Trimaran
- 52 Small Surface Combatants Planned
 - Ships 1-32 Modular LCS (MCM, SUW, ASW)
 - Ships 33-52 Frigate (FF) (Multi-mission SUW/ASW)
- Common MP to Seaframe Interface; governed by an Interface Control Document (ICD)



Modular Mission Packages

- Mine Countermeasure (MCM), Surface Warfare (SUW), Anti Submarine Warfare (ASW)
- Acquired from multiple sources (gov't/industry)
- Advanced manned /unmanned vehicles & sensors
- Embarked for single, focused missions
- Conformance to ICD provides for embarkation of any Mission Capability



Fleet Introduction and Sustainment

- Readiness; Manpower, Personnel, and Training; Fleet Introduction; Logistics; Mission Package Support

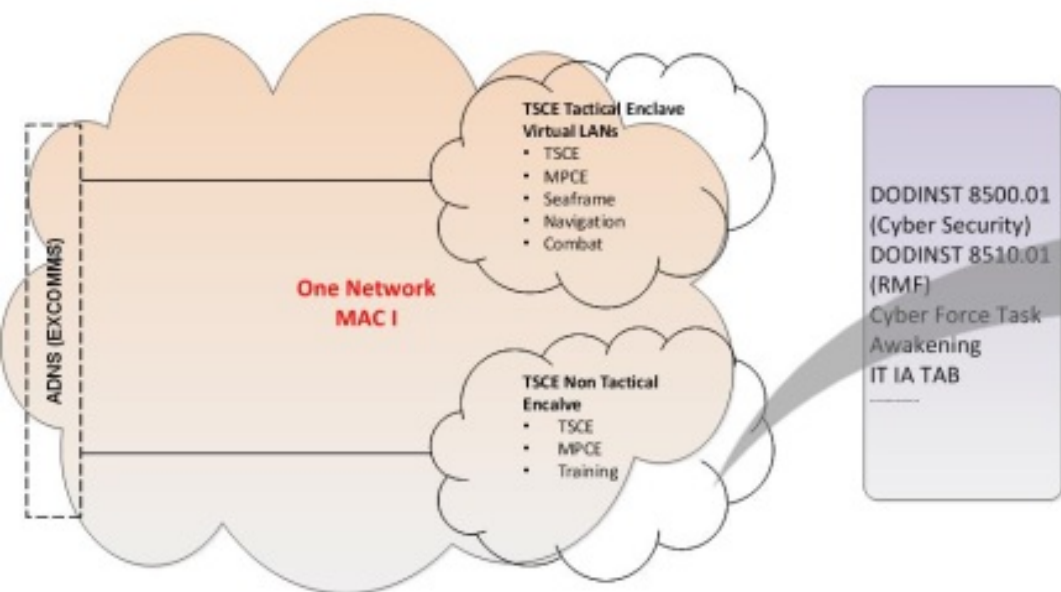




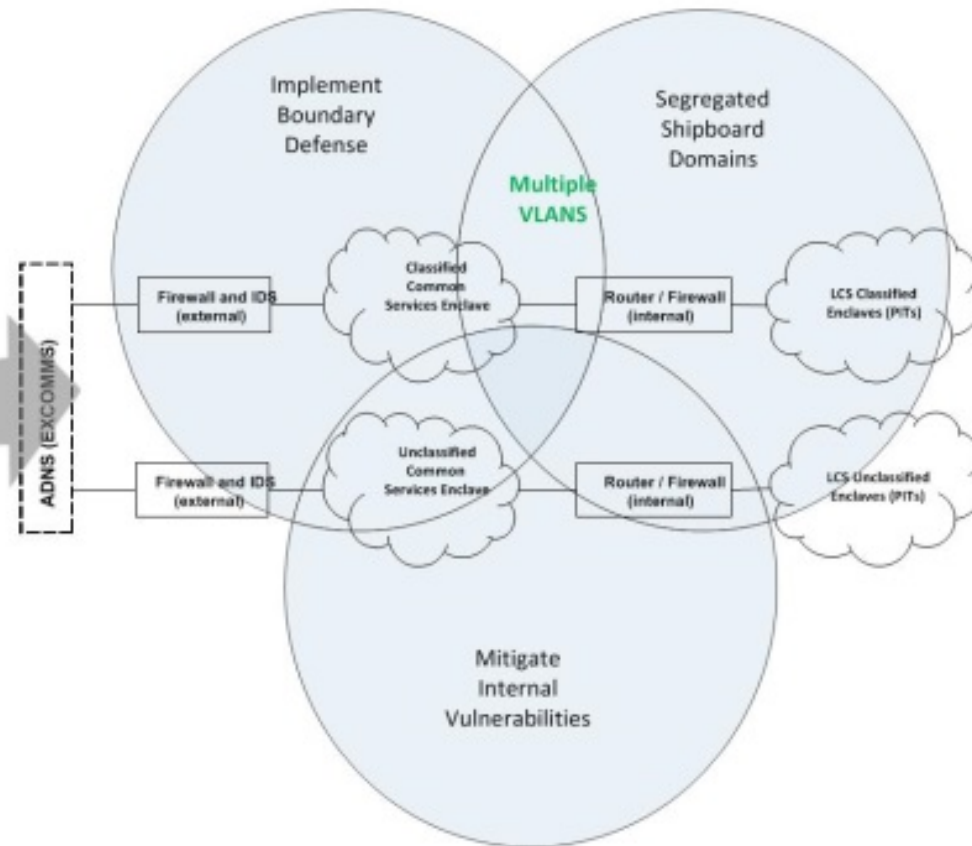
LCS Cyber ROADMAP



TODAY



FUTURE



- One network – multiple functions/systems
- One Authority to Operate (ATO) for platform

- Enclaves for boundary defense
- Updated network infrastructure
- One ATO for network plus various Platform IT accreditations for systems



Opportunities at the Ship Level



- Two ships variant network infrastructures alignment
- Cyber Interoperability Shore Based and Lab Testing
- Cyber certification requirements management and consistency documentation
 - New Anti-tamper Requirements
 - Support for obsolete technology
 - Configuration management



Mission Packages Opportunities



- Alignment with the seaframe Cyber Security implementation to avoid duplication of effort
 - Host Based Security System (HBSS)
 - Private Key Infrastructure (PKI) Authentication
- Streamline patching (Software/Information Assurance) strategy utilizing best practice
- Net-ready KPPs (Key Performance Parameter)



Overall PEO LCS Cyber Priorities



- Understand and frame the problem
- Bring onboard the right expertise
- Fix what we have; design with the future in mind



Frigate - the Future Cyber Hardened LCS



- Frigate = Modified LCS (Surface Warfare and Anti-Submarine Warfare multi-mission)
- Design for:
 - Platform Network Architecture (PNA) that incorporate future cybersecurity methods and standards
 - Defense-In-Depth Functional Implementation Architecture
 - Opportunities for multi-mission vice focused-mission capabilities

Cyber Security is a part of acquisition for design, development, maintenance and sustainment of our systems



Cybersecurity Point of Conduct



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