



Mission Assurance: Operating The Network

IDGA Net-Centric Warfare Conference 2011

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24 AF/CV**



Overview



- **24 AF Mission**
- **Mission Assurance**
- **Strategy-Based Architecture**
- **Weapon-System Mindset**
- **Training**
- **Way Ahead**



24 AF Mission



- **Mission statement**

Extend, operate and defend the Air Force portion of the DoD network and to provide full spectrum capabilities for the Joint warfighter in through and from cyberspace

- **Mission Essential Tasks**

- **Provide shared cyberspace situational awareness**
- **Assure Freedom of Action for Friendly Operations and deny adversaries the same**
- **Synchronize Network Operations and Defense**
- **Project trained Cyber warriors in support of military operations**
- **Enable full spectrum cyber operations**

Support the Joint Fight



Assumptions



- **Cyberspace will remain a contested domain**
- **The threat's intent may be impossible to ascertain**
- **Nation and non-nation state actors will use cyber operations to support a larger strategy**
- **The network is complicated, heterogeneous and cannot be absolutely secured**
- **Operations will drive relationships / connections we may not be able to control or secure**

“Potential adversaries have taken note of our reliance on this critical domain.”

**- General Norman Schwartz,
U.S. Air Force Chief of Staff**

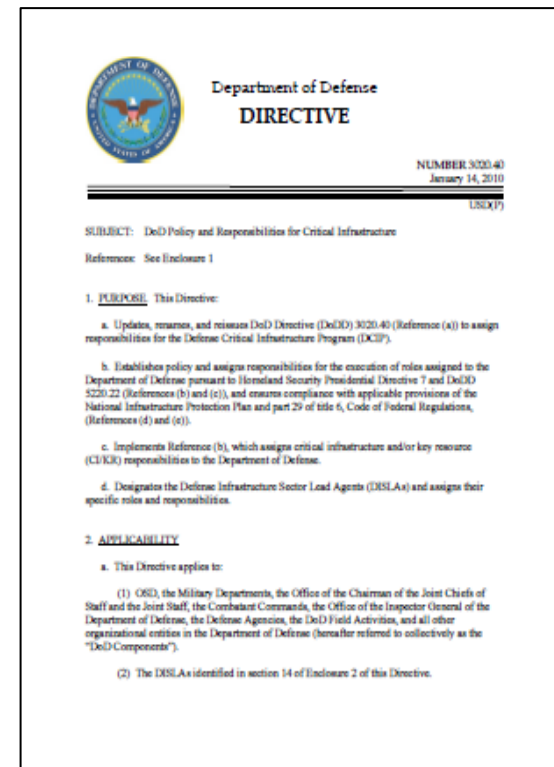


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Mission Assurance



Mission Assurance: A summation of the activities and measures taken to ***ensure that required capabilities and all supporting infrastructures are available to the DoD to carry out the National Military Strategy*** to create the synergistic effect required for DoD to mobilize, deploy, support, and sustain military operations. (DoD Directive 3020.40)



Our Mission Is To Make Sure The Warfighter Can Perform The Joint Mission



Mission Assurance vs. Network Assurance



<u>Mission Assurance</u>	<u>Network Assurance</u>
• Operational focus (A3)	• Service provider focus (A6)
• Assure mission	• Assure the network
• Focuses on operational need	• Focuses on service availability
• Prioritize defense based on critical asset lists	• Attempts to defend entire network
• Proactive based on intelligence preparation	• Reactive based on observed enemy activity
• Fight through the attack	• Disconnect if attacked
• Strategy-based architecture	• Technical and systems approach to architecture

Changing A 30-Year-Old Mindset



Mission Assurance First Steps



ATO Cyber Escort Mission

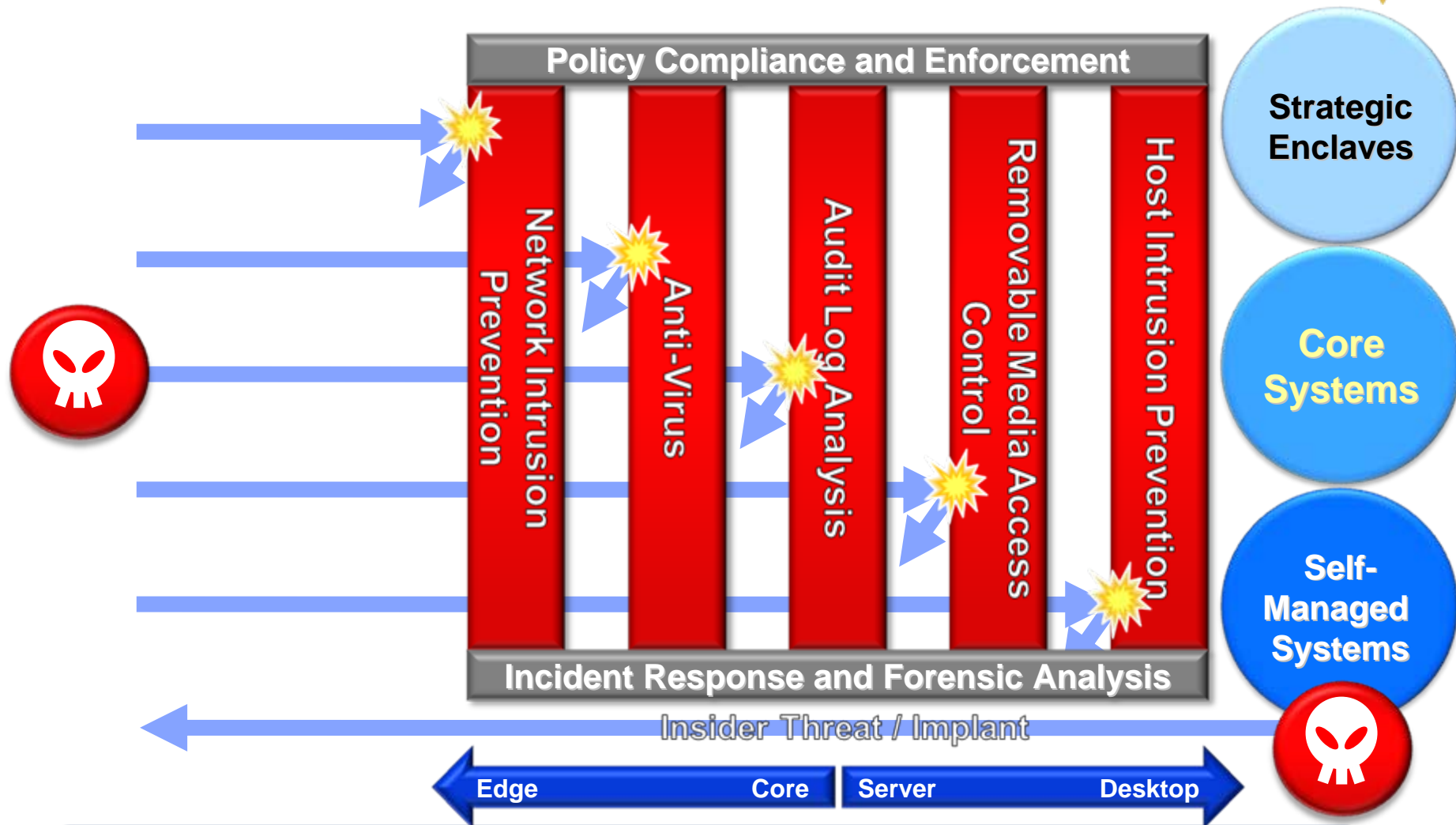


Launch Range & Command Destruct





The Old Defensive Strategy



Perimeter Defense Concept...Not Defense in Depth



The Problem With Perimeter Defense





The Case For Strategy Based Architecture

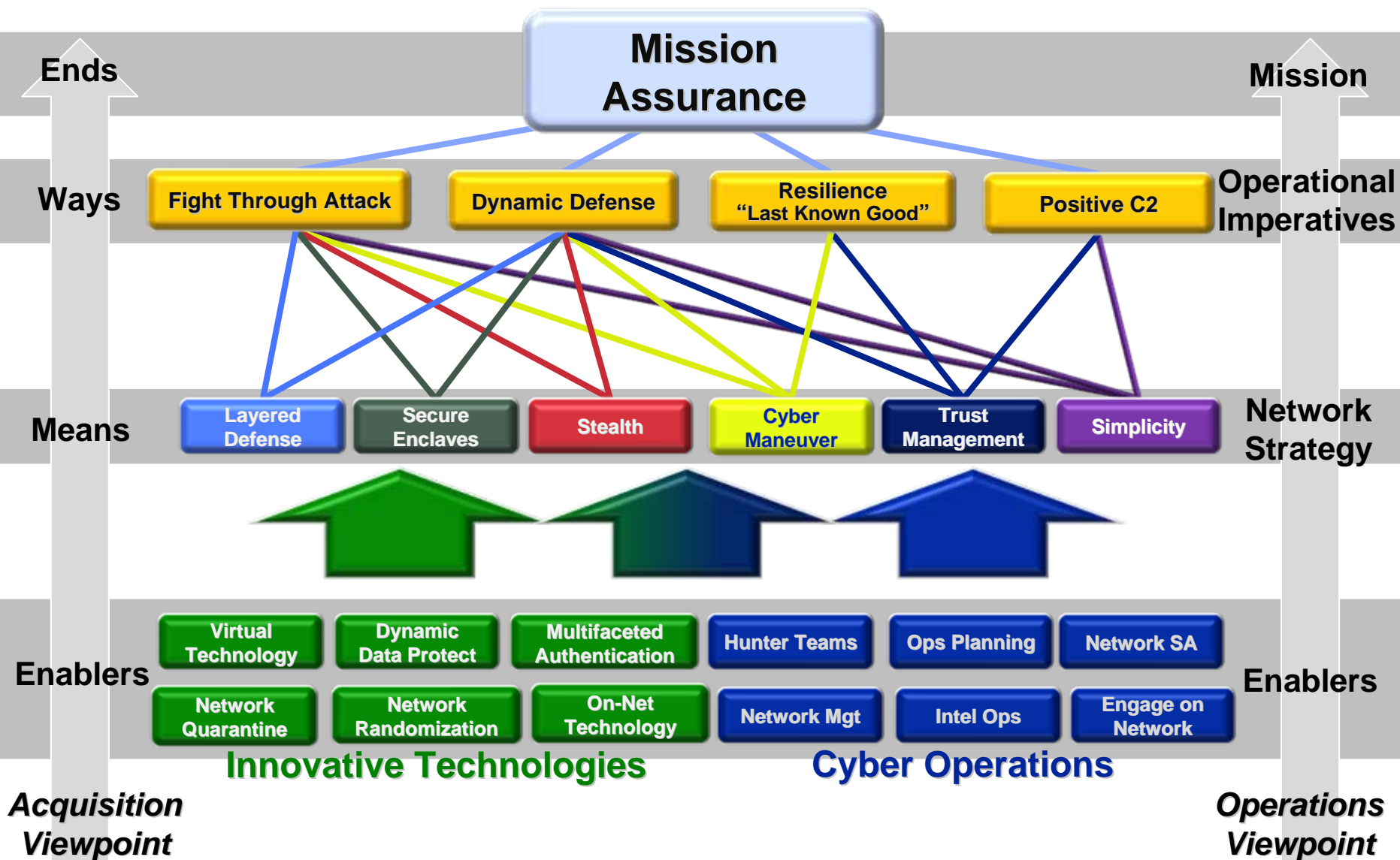


- **Strategy must drive operational planning**
- **Operational imperatives must drive technical and systems decisions**
- **Cyber superiority is essential to operational success**
- **The warfighter must be able to configure the battlespace to support his operational scheme**

New Paradigm -- Strategy Drives the Architecture

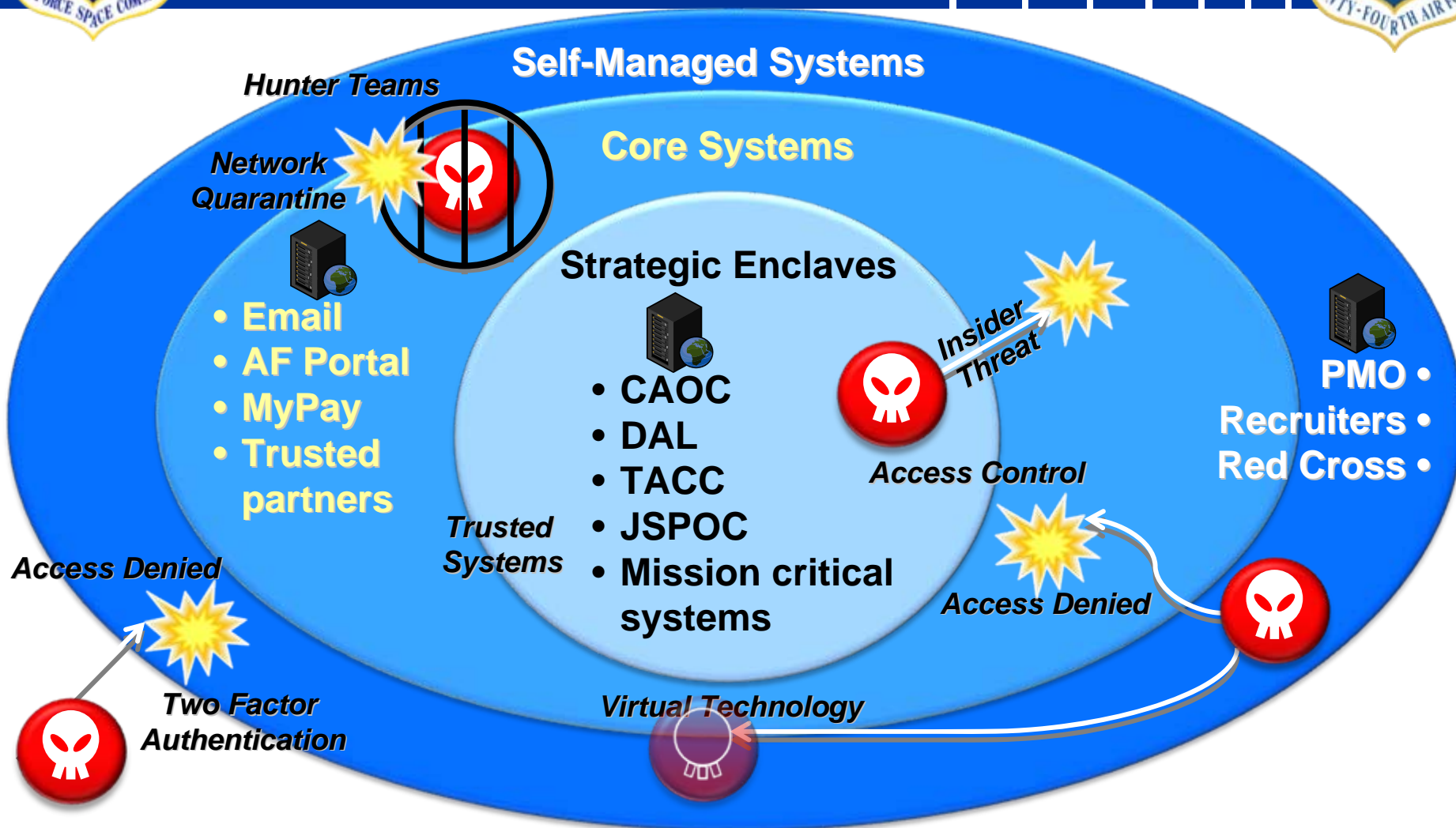


Relationship Between Operations, Strategy & Technology





New Defensive Strategy



Must Evolve From Perimeter Defense

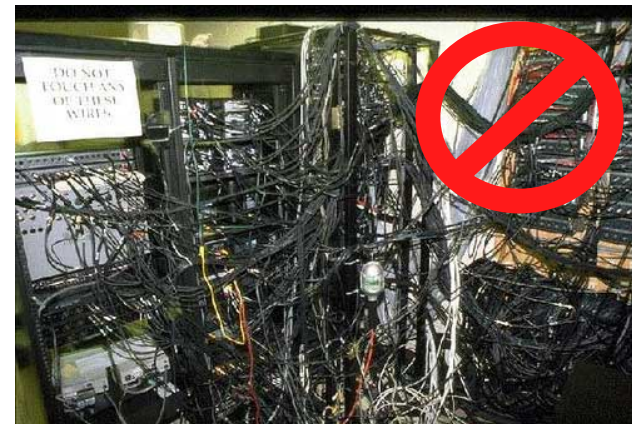


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Weapon System Mindset

- Treat network as a weapon system
- Deliberate process, not ad-hoc
 - No drive-by fieldings
- All fieldings / upgrades include:
 - Training
 - Tech data
 - TTPs
 - Sustainment tail
- Deployments must focus on operational requirements



Cyber operations reinforce and enable everything we do – from administrative functions to combat operations – and we must treat our computers and networks similar to our aircraft, satellites and missiles.

- Gen Norton Schwartz, CSAF (May 09)



AF Training Construct



Functional Authority Oversees Requirements

UCT

Undergraduate Cyber Training

- Information Technology Fundamentals
- DoD 8570.1M Boot Camp & Certification
- Attacking & Exploiting Cyber Networks Fundamentals

Lead MAJCOM Sets Requirements

AETC/Formal Training

IQT

Initial Qualification Training

Unit Certification

MQT

Mission Qualification Training

- Mission Specific
- Senior Duty Officer
- Crew Commander

Bridge Course

- SIGINT
- National Sec. Structures
- Operational Techniques
- Network Operations

Build A Culture Of Cyber



24 AF Way Ahead



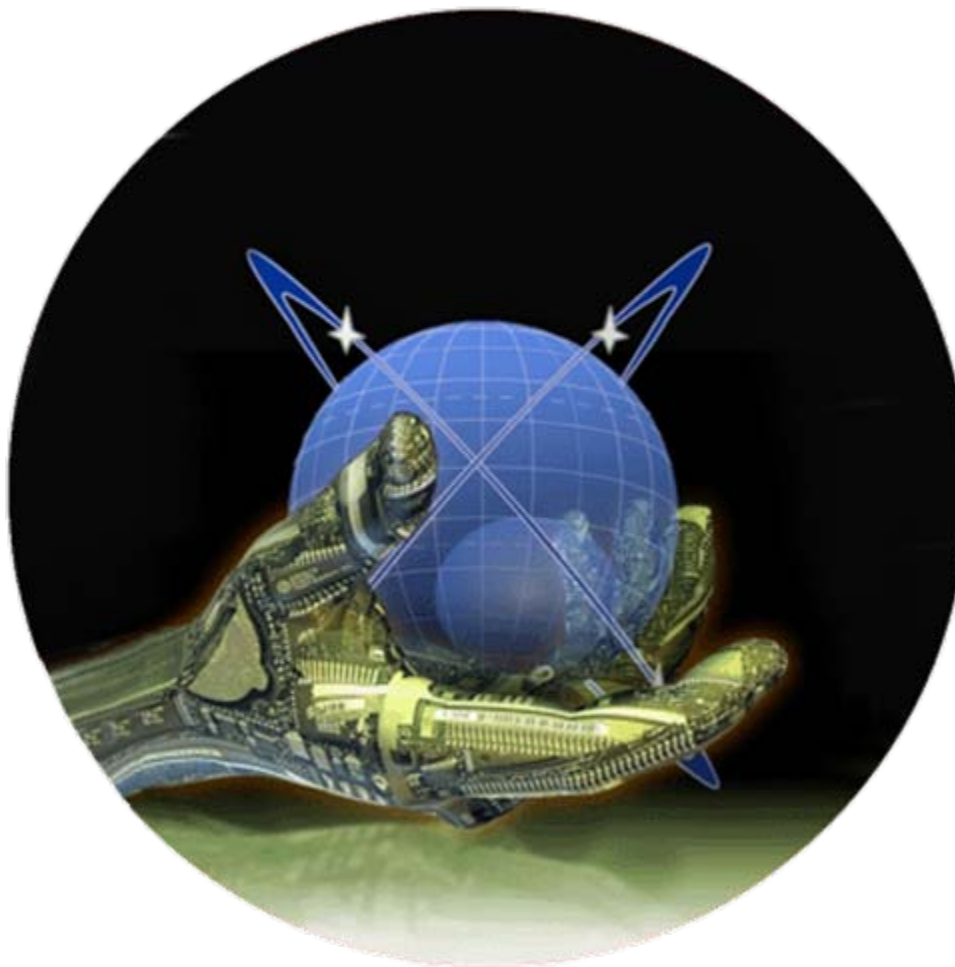
- Build Cyber Situational Awareness
- Create Mission Assurance Paradigm
- Normalize NetOps and Defense
- Complete Ops Center Transformation
- Operationalize Cyber C2
- Space and Cyber Integration
- Mature Joint Relationships
- Partner with Industry
- Industrial Control Systems
- Increase Capacity
- Total Force Integration



Enduring Priorities



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QUESTIONS?

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BACKUP SLIDES



The Problem With Perimeter Defense

