



# Delivering the Mission Partner Environment Now

Mobile data anywhere, anytime, any device

Panel Discussion

Terry L. Carpenter, Jr.

Services Development Executive (acting)

15 June 2017



## Panelist

### **Moderator:**

- Mr. Terry Carpenter, Services Development Executive (Acting)

### **Panelist:**

- Ms. Heidi Cotter, MNIS PM
- CW5 Bill Winkler, Technical Advisor to the Director
- Mr. Lenart Clark, DEC-TK Chief Engineer
- Dr. Brian Hermann, Enterprise Services Division Chief



# Multi-National Information Sharing

## Evolving to MPE-IS

Ms. Heidi Cotter

MNIS PM



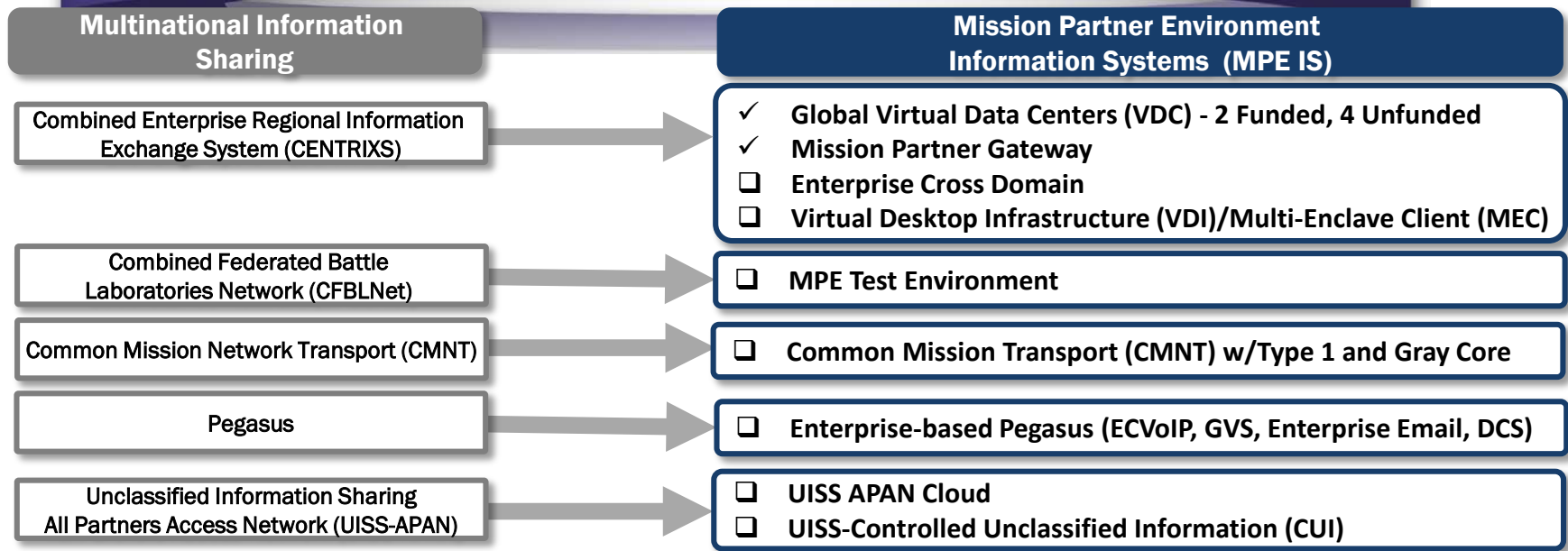
# Joint/Allied Coalition Information Sharing Capabilities

Legacy  
Current



Joint/Allied Coalition Information Sharing Customers

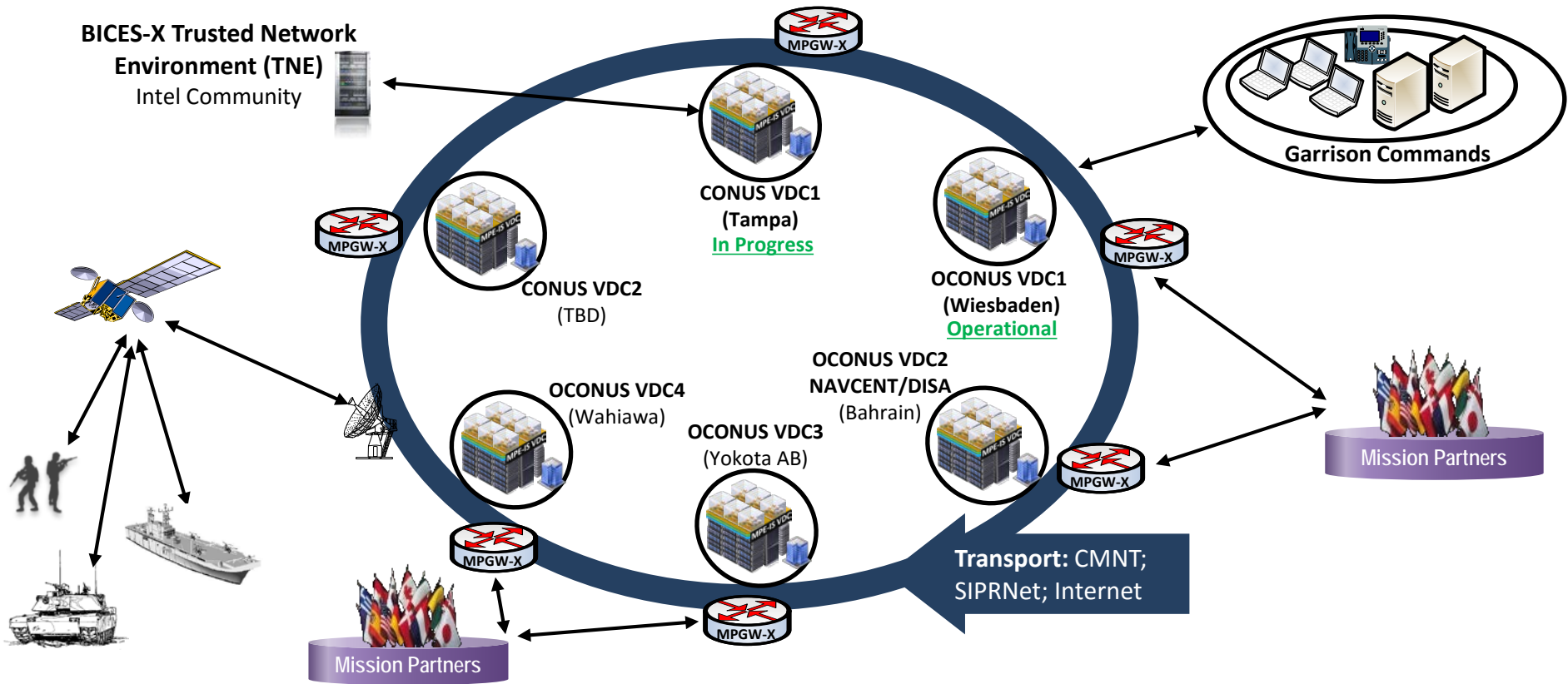
Immediate Target  
FY17-FY24



Deployed and Operational  
 Under Development



# MPE-IS Global Laydown Plan (FY16-22 Projected)





# Current DISA-Managed Coalition Information Sharing Systems

## VDC (MPE IS)

### Mission Partner Environment Information System (MPE IS) Virtual Data Center (VDC)

- Provides a multi-enclave virtualization system that delivers the same functions as a physical data center and can host multiple discreet mission enclaves
- Currently supports AFRICOM's AMNET
- 13 standard COTS applications

## CENTRIXS

### Combined Enterprise Regional Information Exchange System (CENTRIXS)

- Allows US and coalition Nations and their forces to securely share operational and intelligence information in mission enclaves
- Bi-lateral and Multi-lateral enclaves connecting 200+ organizations 24/7/365
- Chat, Email and other COTS services



## CFBLNet

### Combined Federated Battle Laboratories Network (CFBLNet)

- Provides network infrastructure to test technologies and training exercises with mission partners
- Partnership with 31 core mission partners and 4 guest mission partners
- 11 network service tools

## CMNT

### Common Mission Network Transport (CMNT)

- Provides a transport for coalition information sharing (Replaces the use of SIPR)
- CMNT is available at any Defense Security Service (DSS) location

## Pegasus

### Pegasus

- Provides the means for disseminating classified information between coalition partners.
- Pegasus services (Web browsing, Emails, SharePoint, Unified Communications, Chat)
- Pegasus National Network Operation Center (NNOC) and Coalition NOC

## UISS-APAN

### Unclassified Information Sharing (UISS) All Partners Access Network (APAN)

- Provides the single enterprise solution for sharing non-classified info supporting DOD Exercises and Humanitarian Assistance / Disaster Relief Mission
- >150K+ users, 100+ nations and 4K+ COIs
- Services (Blogs, Wikis, Conferencing,, language translation, chat, email)





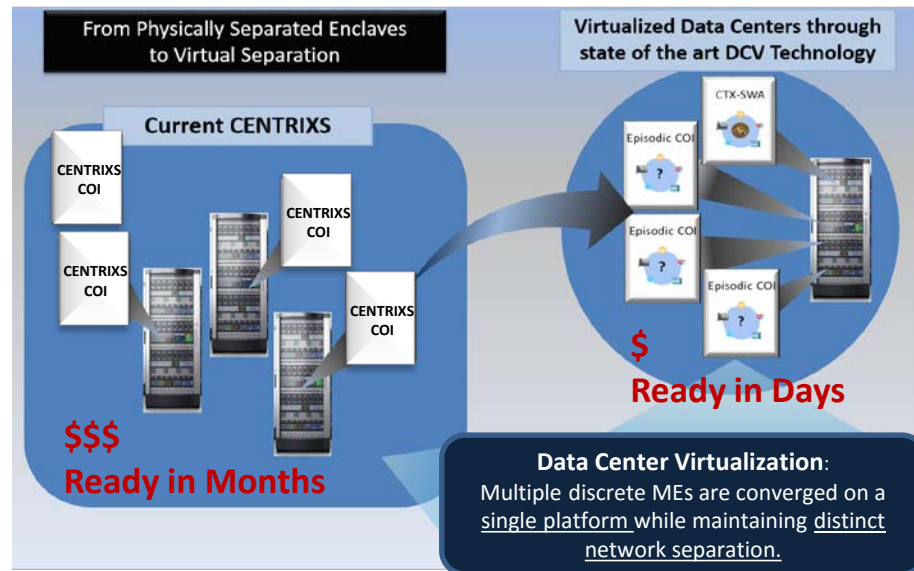
# Virtual Data Center Overview

VDC provides a multi-mission enclave virtualization system that delivers the same computing, networking, and data storage functions of a physical data center

- ✓ Enduring computing infrastructure
- ✓ Episodically ready
- ✓ Rapid stand up mission enclave in days vs months (Meet “Fight Tonight” Rapid Response)
- ✓ Reduces hardware
- ✓ Centrally managed, de-centrally executed
- ✓ Standard set of services

## Current Deployment:

- ✓ 1 node deployed
  - ✓ 3 Mission Enclaves
- ❑ 1 node funded and under development





# Operational Use Cases

## Mobile data anywhere, anytime, any device

**CW5 Bill Winkler**

**Technical Advisor to the Director**





# Priority Use Cases

## **Use Case 1:**

Headquarters user with a single workstation with access to multiple enclaves.

## **Use Case 2:**

In theatre ability for tactical service component travel teams to provide the warfighter unified capabilities by working through multi-network enclaves when connected, as if in HQ, and working on single enclave in disconnected environment.

## **Use Case 3:**

Privileged executive in theatre/on travel with ability to work on multi-network enclaves when connected, as if in HQ, and ability to work on single enclave in disconnected environment on a mobile device at classified level, to be treated as FOUO when off.



# Priority Use Cases

**Use Case #3:** Privileged executive in theatre/on travel with ability to work on multi-network enclaves when connected, as if in HQ, and ability to work on single enclave in disconnected environment on a mobile device at classified level, to be treated as FOUO when off.



CLASSIFIED



UNCLASSIFIED





# Global Gray Core Service

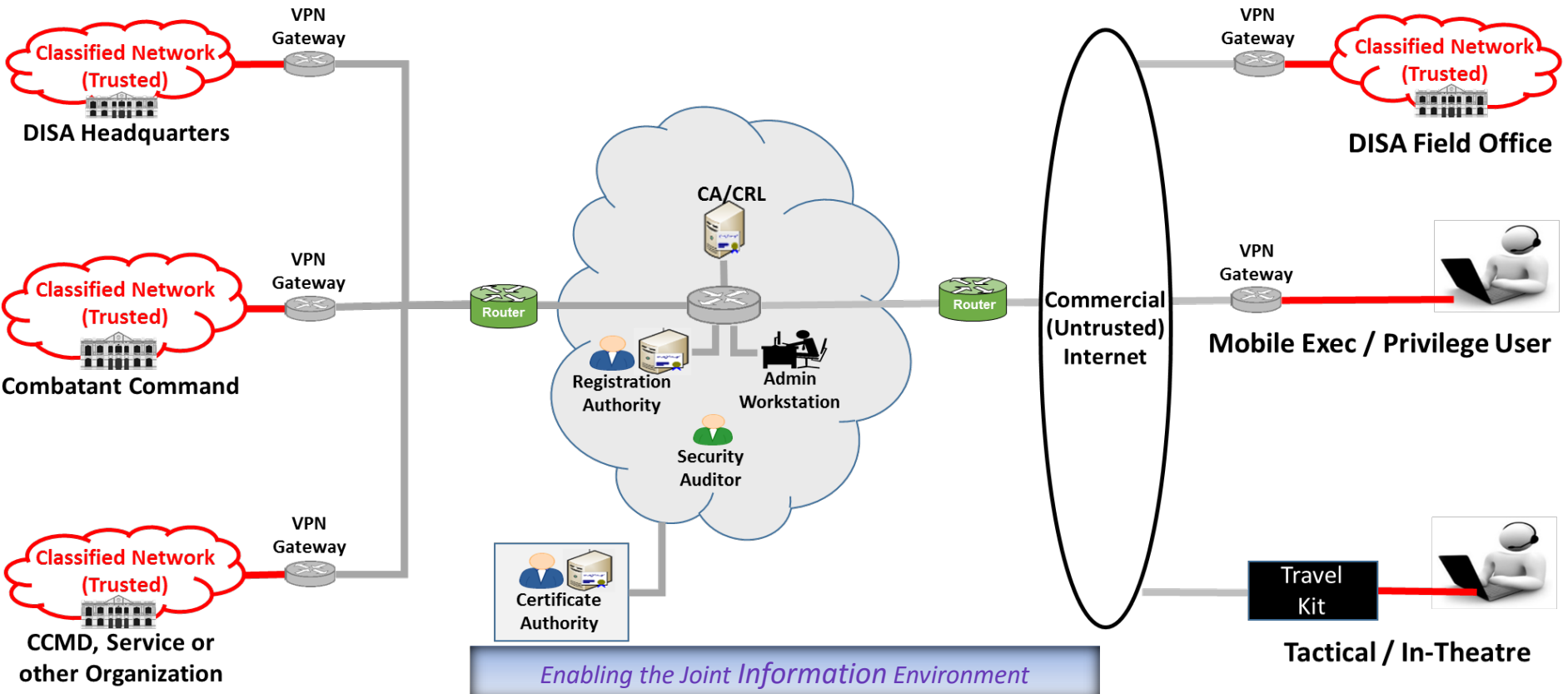
## Scaling DEC-TK Gateways

Mr. Lenart Clark

DEC-TK Chief Engineer



# Global Gray Core (GGC) Service Concept





# Enterprise Voice & Video

## Cross Domain Service

**Dr. Brian Hermann**

**Enterprise Services Division Chief**

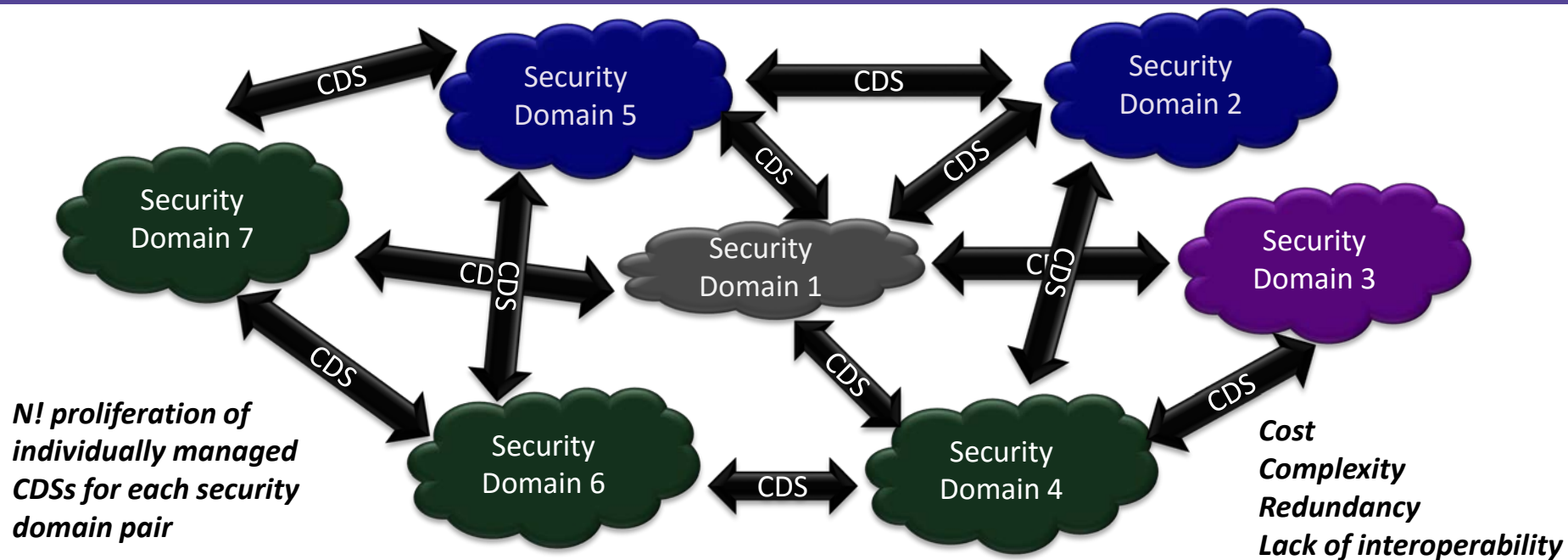


# Enterprise Voice and Video Cross Domain Service

- Current environment increases costs, creates conferencing challenges, and impedes internal/external collaboration.
- Existing telephone infrastructures provide limited cross-domain interoperability, resulting in multiple independent devices at each workstation (i.e., MANY phones to MANY networks).
- ISDN/PSTN technology is ending.
- Legacy STEs need to be collapsed and tech refreshed into a common voice/video environment.



# Current Trajectory if We Don't Work Together

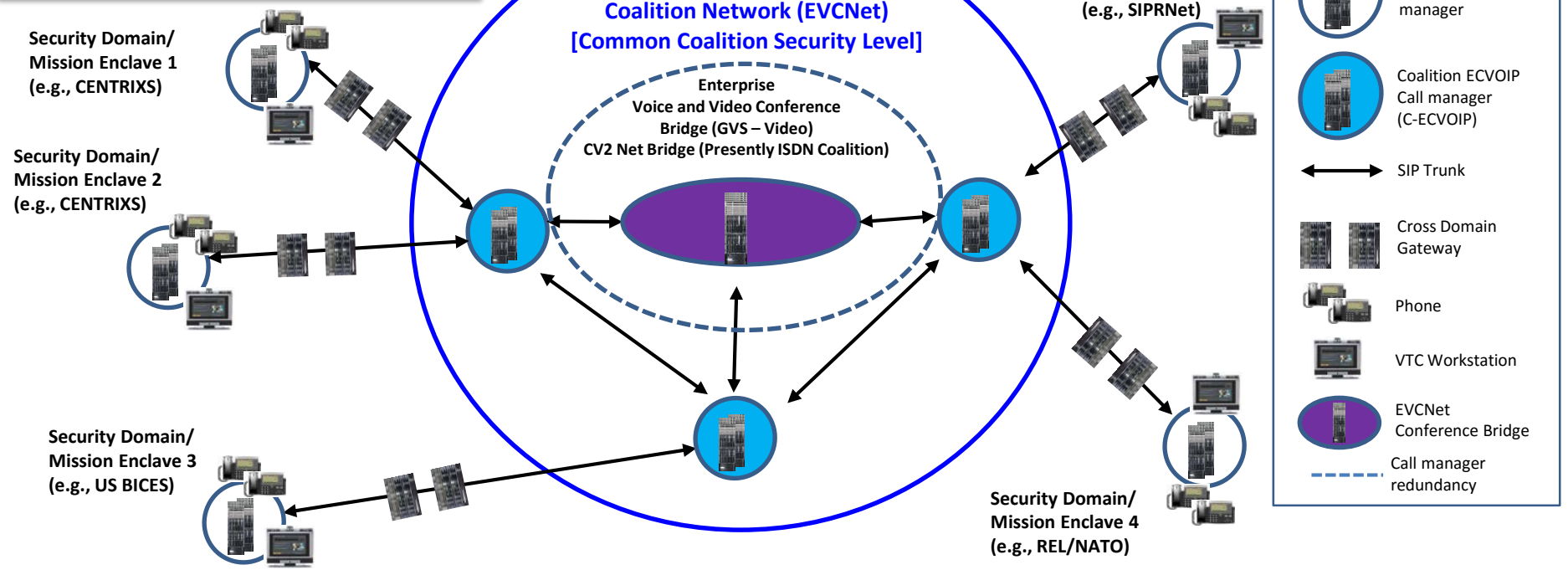


**We need to coordinate across voice/video cross domain owners and relevant infrastructure service providers to create a global \*enterprise\* voice and VTC cross domain capability**



# Proposed Enterprise Solution (Notional) – Architecture

Plan is to establish a core interconnected set of voice and video networks and expand as capability matures







# Information Data Encryption Service (IDES)

Terry L. Carpenter, Jr.

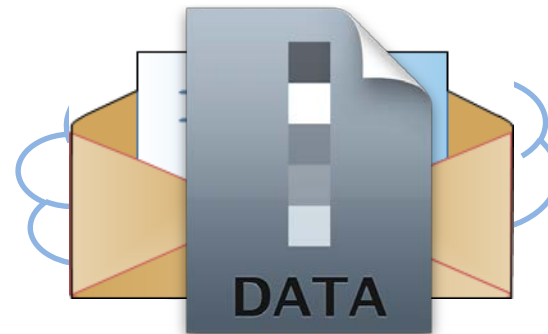
Services Development Executive (acting)



# Information Data Encryption Service (IDES)

## Information Protection Evolution

- NOT just at the **network** level
- NOT just at the **host** level
- NOT just at the **application** level
- At the **Data-Element** Level



### Data-Centric Protection

- Protection **in transit**
- Protection **at rest**
- Protection **in use**
- **Traceability** of information



# OV-1 Operational Concept (No Encryption/Data Tagging)

Confidential  
Role Key

U / LES  
Role Key

U / SBU  
Role Key

U / CUI  
Role Key

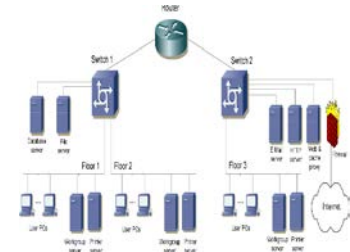
## Network Outage Report

Location: Ft. Bragg, NC

Incident#: 153512

REPORTING OFFICER: LT. JOHN DOE

This Incident Report details the Network Outage Reported in Ft. Bragg, NC. The affected nodes and users are depicted in the table below. This event was collected by the SolarWinds NNM, and has been confirmed by the Network Operations Team.



	Lat.	Long.	Nodes	Users
Base 1	30° 20'	40° 65'	10	25
Base 2	30° 40'	40° 38'	2	10
Base 3	30° 60'	40° 43'	15	65
Base 4	30° 80'	40° 82'	4	23
Base 5	40° 01'	45° 16'	2	9

\*Not An Actual Event. For illustrative purposes only\*

# DISA OV-1 Operational Concept (Encryption/Data Tagging)

Confidential  
Role Key

U / LES  
Role Key

U / SBU  
Role Key

U / CUI  
Role Key

## Network Outage Report

Incident#: 153512


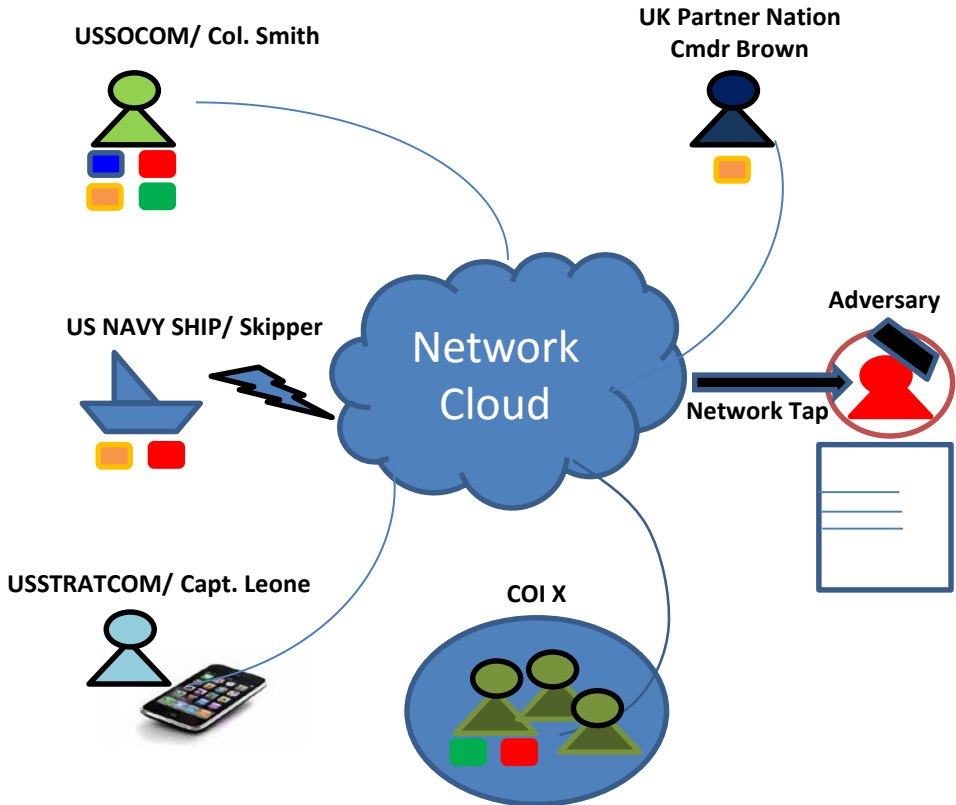


This Incident Report details the Network Outage Reported in [redacted]. The affected nodes and users are depicted in the table below. This event was collected by the [redacted], and has been confirmed by the Network Operations Team.


	Lat.	Long.	Nodes	Users
Base 3	30° 60'	40° 43'	[redacted]	[redacted]
Base 4	30° 80'	40° 82'		
Base 5	40° 01'	45° 16'		

\*Not An Actual Event. For illustrative purposes only\*

# OV-1 High-Level Operational Concept (Intercepted)



**Warning you are attempting access to a US Government document**



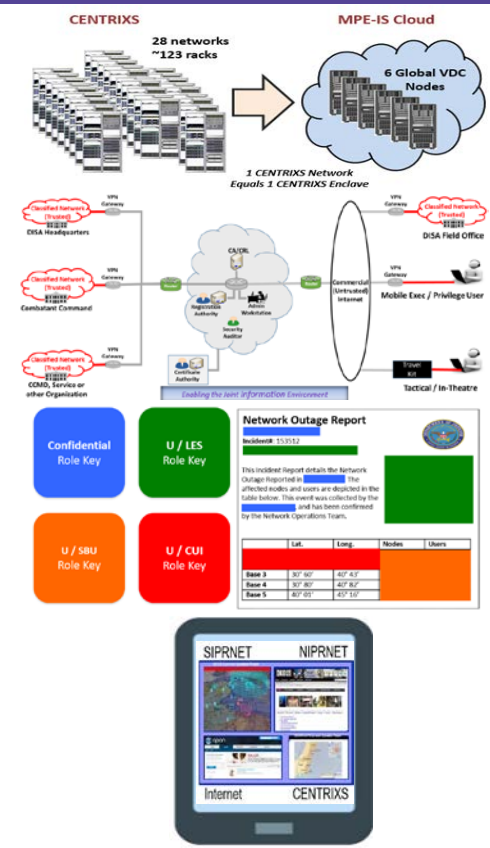
Adversary

\*Not An Actual Event. For illustrative purposes only\*



# Delivering the MPE-IS Now

- **Virtual Data Centers**
  - Multi-enclave virtualization system that delivers the same functions as a physical data center and can host multiple discreet mission enclaves
- **Global Gray Core (GGC) Service**
  - Commercial Solutions for Classified (CSfC) across public internet with multiple forms of encryption.
- **Information Data Encryption Service (IDES)**
  - Self-Protecting Data, and Differential Sharing while ensuring full data traceability.
- **Mobile C2**
  - Enterprise standards and solutions.
  - Access to various SIPR domains.
  - Access to secret releasable, coalition, and other non-DoD Mission Partners.



**DISA currently standing up pilot for standard configuration of end point on Win10.**



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The IT Combat Support Agency

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# DISA Support to MPE-IS End-to-End Pilot

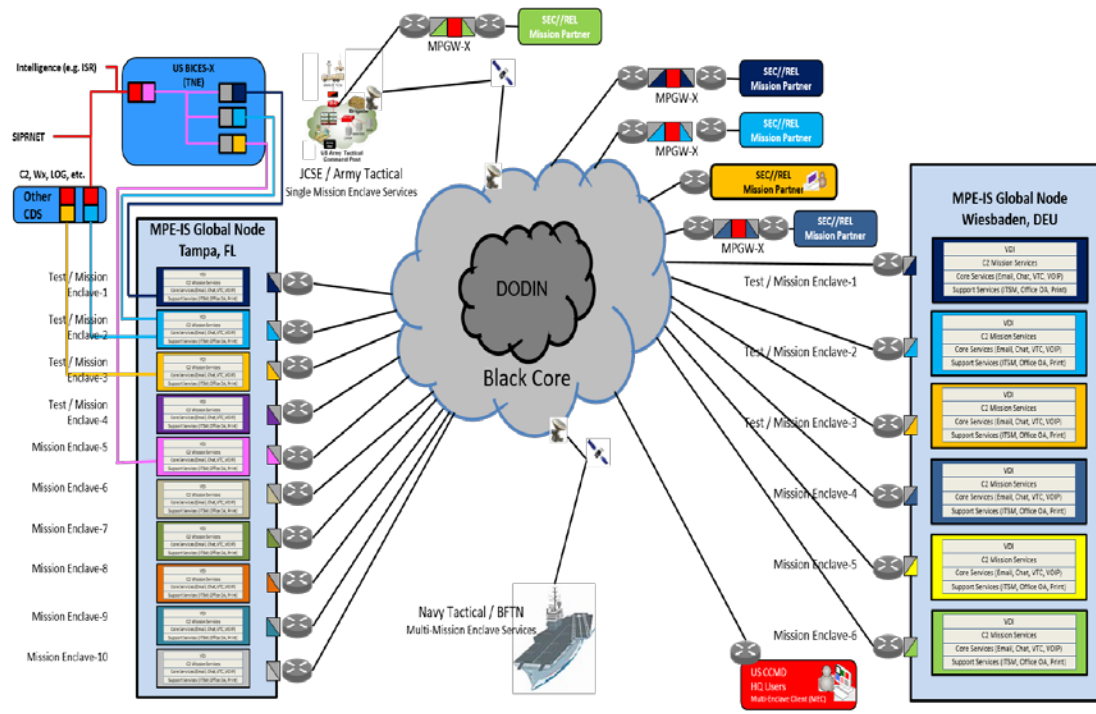
**CAPE Program Decision Memorandum Action:**  
Executing an end-to-end pilot to assess the effectiveness, suitability and survivability/security of the MPE-IS

**Development Test 1 (DT-1): Steadfast Cobalt 2017 Exercise (May 17)**

- VDC mission enclave at Wiesbaden Global Node
- Support building of JCSE enclaves
- JITC validation of service

**Development Test 2 (DT-2): TBD Exercise (Aug 2017)**

- 3 VDC mission enclaves at Tampa Global Node
- 1 VDC mission enclave at Wiesbaden Global Node
- MEC solution
- CSfC capability based on SOUTHCOM solution
- JITC validation of service



**Notional End-to-End Pilot Diagram**





# IDES Policy Challenges

Policy Document	Reference	Content	Challenges	Applies to:
<b>Application Software Extended Package for Redaction Tools (NIAP Version: 2.0)</b>	RED_REM_EXT.1 (Removal of Redacted Data)  Page 17	Application Note: Selected content must be removed, not obscured by encryption, encoding, conversion to a proprietary format, or any other method	<ul style="list-style-type: none"> <li>The policy prevents the Information Data Encryption Service solution from using encryption software to redact information from a document               <ul style="list-style-type: none"> <li>Current technology supports encryption for Top Secret data (e.g. AES-256)</li> <li>Latest technology has not been tested by the DoD, due to policy limitations</li> </ul> </li> </ul>	DoDIN, All Coalition and Non-Coalition networks.
<b>DoD Information Security Program: Controlled Unclassified Information (CUO) (Number 5200.01, Volume 4)</b>	Page 7 #2 DODM 5200.01 vol. 1 - 4	UNDER SECRETARY OF DEFENSE FOR POLICY (USD(P)). The USD(P) shall, in accordance with DoDD 5111.1 (Reference (g)), establish policies and procedures for disclosing DoD CUI to foreign governments and international organizations	<ul style="list-style-type: none"> <li>The policies prohibit the use of a single coalition enclave (flat network)               <ul style="list-style-type: none"> <li>MPE-IS provides implementable efficiencies through network and computing virtualization, but does not reduce number of computing environments or network enclaves</li> <li>Merging or collapsing of these bi-lateral and multi-lateral applications and enclaves is not practical without policy remediation</li> </ul> </li> </ul>	Controlled Unclassified Information (CUI)