

This Briefing is: UNCLASS/FOUO

United States Central Command



Monitoring the Tactical Network

13 April 2010

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NetOps Intent

- As troop levels increase, demand for services will increase, NetOps elements must quickly meet current demand and posture for future demand based on force packages and planned movements
- The goal of the NetOps framework is to create a culture where unity of effort takes precedence over control of effort---a departure from past NetOps constructs
- NetOps elements focus on delivery and management of IT services within the AOR.
- NetOps will focus on the critical components of Enterprise Management, Content Management and Network Assurance using a Service Management framework

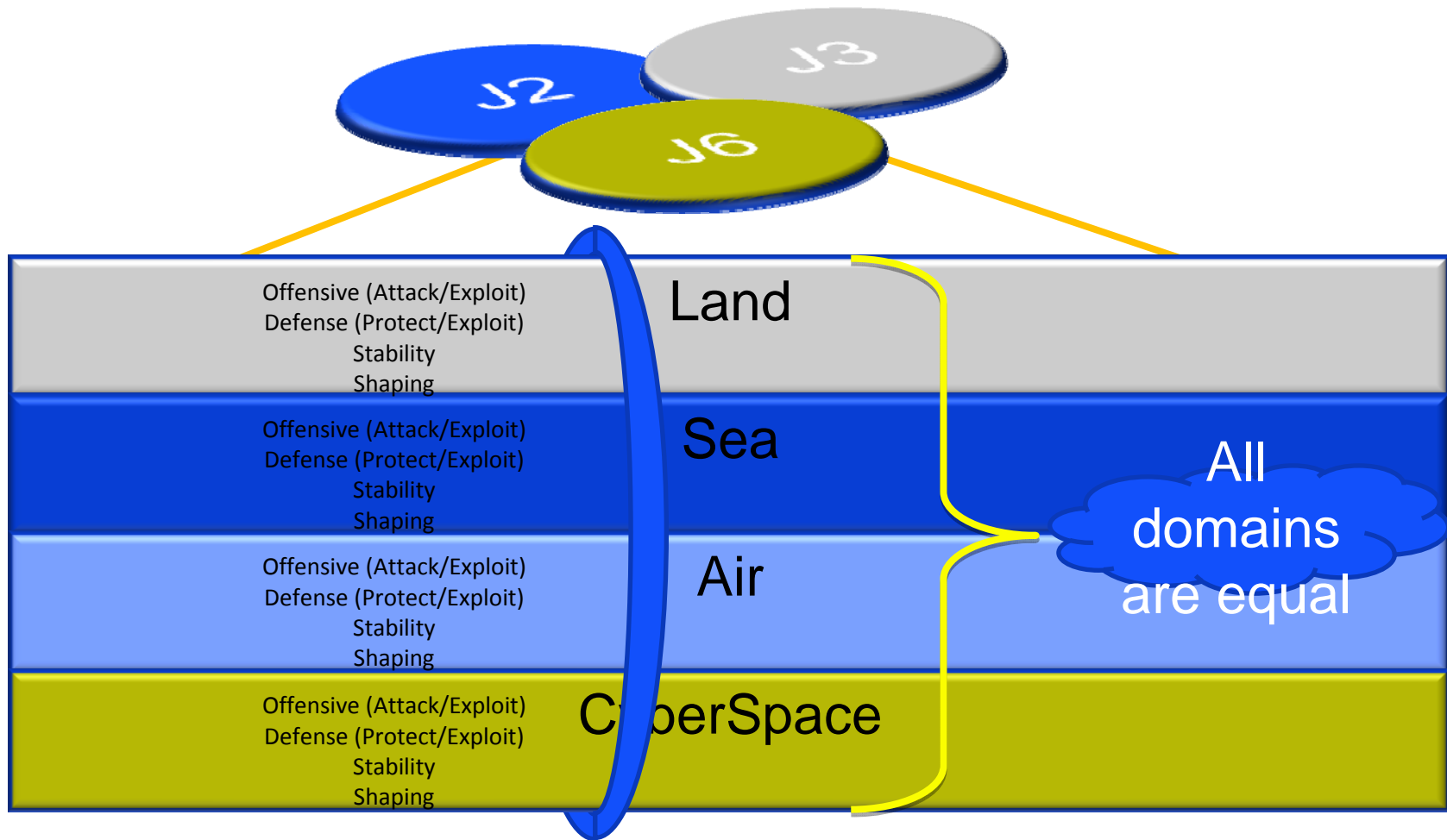


NetOps Governing Tenets

- NetOps framework must be consolidated to the operational chain of command
- NetOps authority can be delegated and delegation can vary by phase of operation
- Commanders with NetOps authority will:
 - Define NetOps authorities within his assigned battlespace or functional task force authorities
 - Be responsible for Information assurance/Computer Network Defense(IA/CND) posture of the network across the full scope of his NetOps authority



NetOps Spectrum



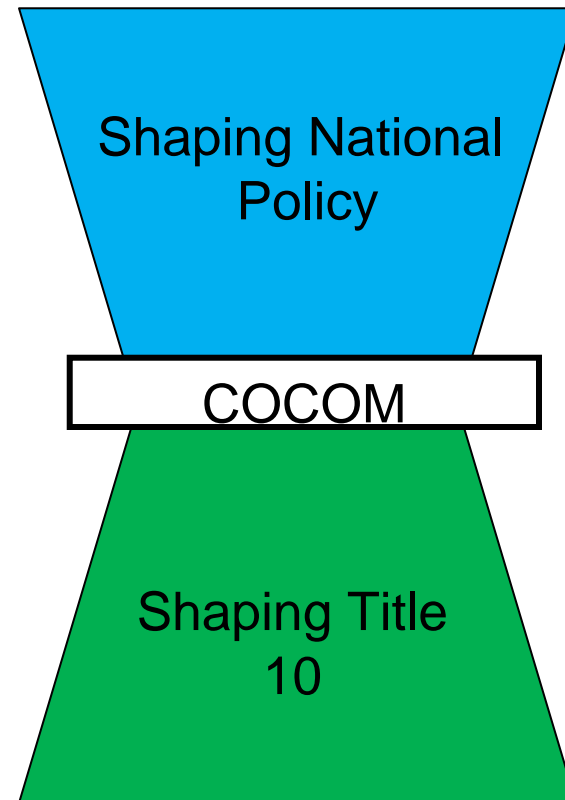
Integrate C4ISR approach into entire theater



Role of USCENTCOM in NetOps

- **C4ISR approach for entire theater**
- **Ensure the full spectrum of NetOPs is enabled**
- **Linkage to J2, J3/ Cyberwarfare and to AOR**

CyberCommand & other
National Command



Warfighter



- **Coordinate and synchronize efforts of J2, J3 and J6**
- **Provide network support to the CJOA**
- **Increase capacity, optimize and gain efficiency**
- **Improve information sharing by creating a common mission network**

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TF 236 Lines Of Operation

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OBJECTIVE: Improve Network Capacity in CJOA – to meet demand of Combined Joint Force Commander

Multi-pronged approach

LOO 1 – J6C Lead

Increase Capacity across all Tiers
(Max potential of each)

L1

Satellite Air Terrestrial

Integrated Framework

Define Current Network Capacity by Tier – by Echelon

L1-1

Define Capability Gap by Tier – by Operational Framework

L1-2

Define Potential by Tier By Operational Effect

L1-3

LOO 2 – J2 Lead

Increased Information Sharing
(Decrease demand separate networks)

L2

Consolidate networks into Common Mission environment

L 2-1

Leverage findings of Information Sharing TF

L 2-2

Decrease – minimize demand and capacity allocated to Multiple network environments

L 2-3

LOO 3 – J3 Lead

Improve effectiveness - efficiency and defensive posture of capacity we do have

L3

Define NETOPS Tenets

L 3-1

Establish JCOA/Theater C4ISR Network Planning – Execution Cells

L 3-2

Revamp Afghan CJOA C4 NETOPS framework

L 3-3

Revamp CENTCOM Theater C4 NETOPS framework

L 3-4

Engage National C4ISR Framework - Operationalize all 4 dimensions of CNO within Cyberspace framework

L 3-5

END STATE: Maximized and Integrated C4ISR multi-tiered network capacity Effectively and efficiency planned and executed through integrated C4ISR NETOPS framework Aligned to Operational Chain of command – responsive to CJF Commander That effectively - optimizes information sharing across combined – joint force.

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TF 236 Lines Of Operation (cont)

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OBJECTIVE: Improve Network Capacity in CJOA – to meet demand of Combined Joint Force Commander

Multi-pronged approach

LOO 4 – CTO Lead

Exploit Technology / TTPs

L 4

Identify Gaps to be filled by Tech

L 4-1

Determine appropriate Tech

L 4-2

Acquire Technology

L 4-3

Test Technology

L 4-4

Implement Technology

L 4-5

Assess OP Impact of Tech

L 4-6

LOO 5 – TF AMN Lead

Establish ISAF-S and CENTRIXS-ISAF
As The Afghan Mission Network

L 5

Establish Transport Requirements

L 5-1

Define Battlespace Functions

L 5-2

Enable C2 Applications

L 5-3

Decrease – minimize demand
and capacity allocated to
Multiple network environments

L 5-4

END STATE: Maximized and Integrated C4ISR multi-tiered network capacity
Effectively and efficiency planned and executed through integrated C4ISR NETOPS framework
Aligned to Operational Chain of command – responsive to CJF Commander
That effectively - optimizes information sharing across combined – joint force.

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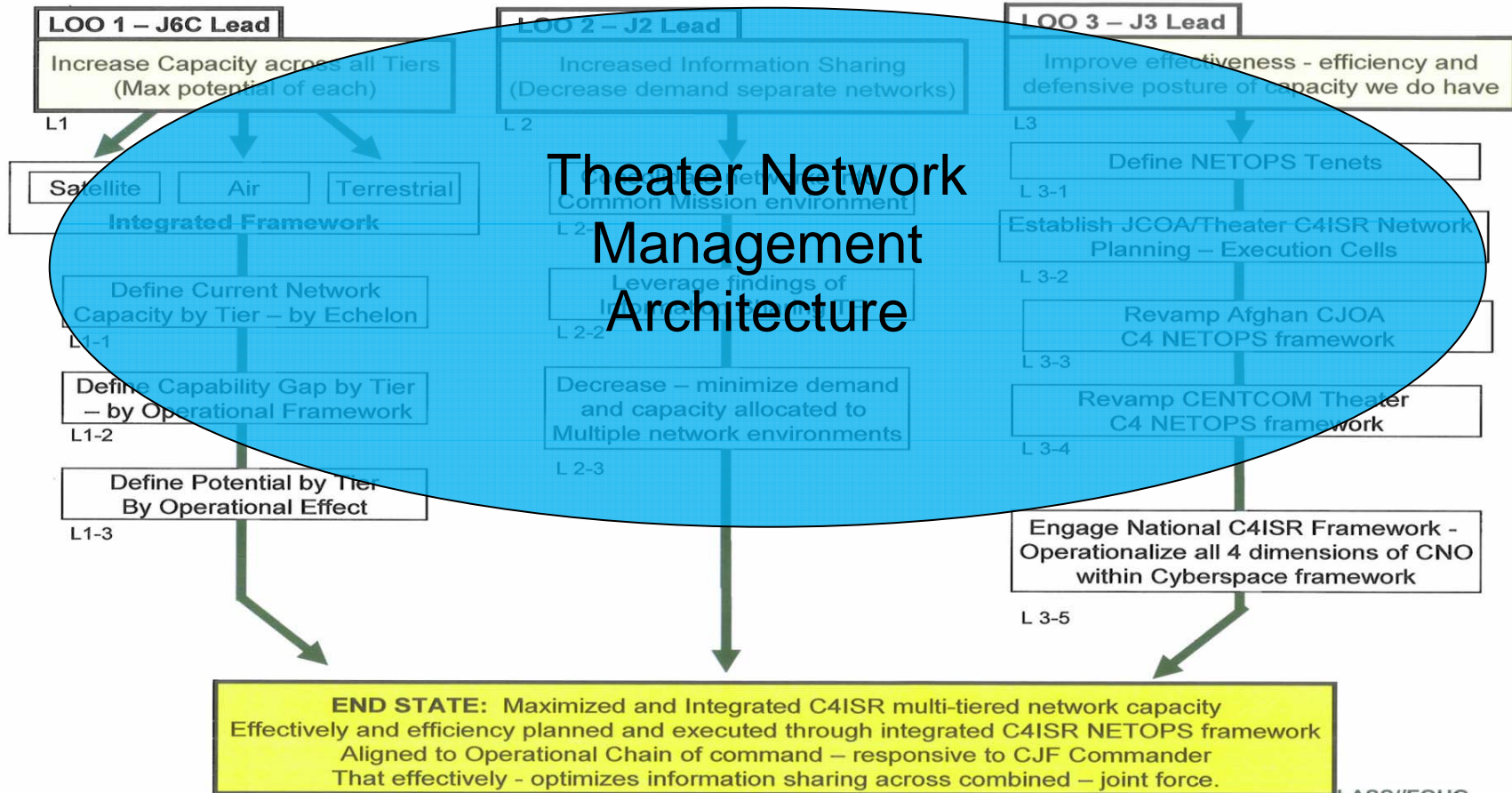


Baselining the Network

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OBJECTIVE: Improve Network Capacity in CJOA – to meet demand of Combined Joint Force Commander

Multi-pronged approach



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Challenges

- **Vendors traditionally prefer appliance based solutions**
- **Rack, Power, Ping are a scare resource within the CJOA**
- **Tiered information sharing and access to Network Management information**
- **Visibility to Security devices and information, has traditionally been second hand through the Title 10 organizations**
- **Interoperability with indigenous tools**
- **Training and Sustainment**



Virtualized and Ruggedized

THEATER NETWORK MANAGEMENT ARCHITECTURE (TNMA)

Total Amps: 27A
Total Heat Dissipation: 18000 BTU/h
Half-Load UPS Backup: 7min

1 U

2 U

2 U

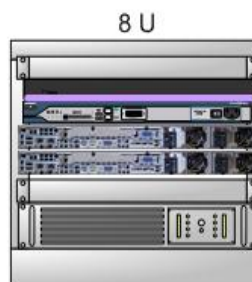


Total Amps: 14A
Total Heat Dissipation: 9000 BTU/h
Half-Load UPS Backup: 10min

1 U

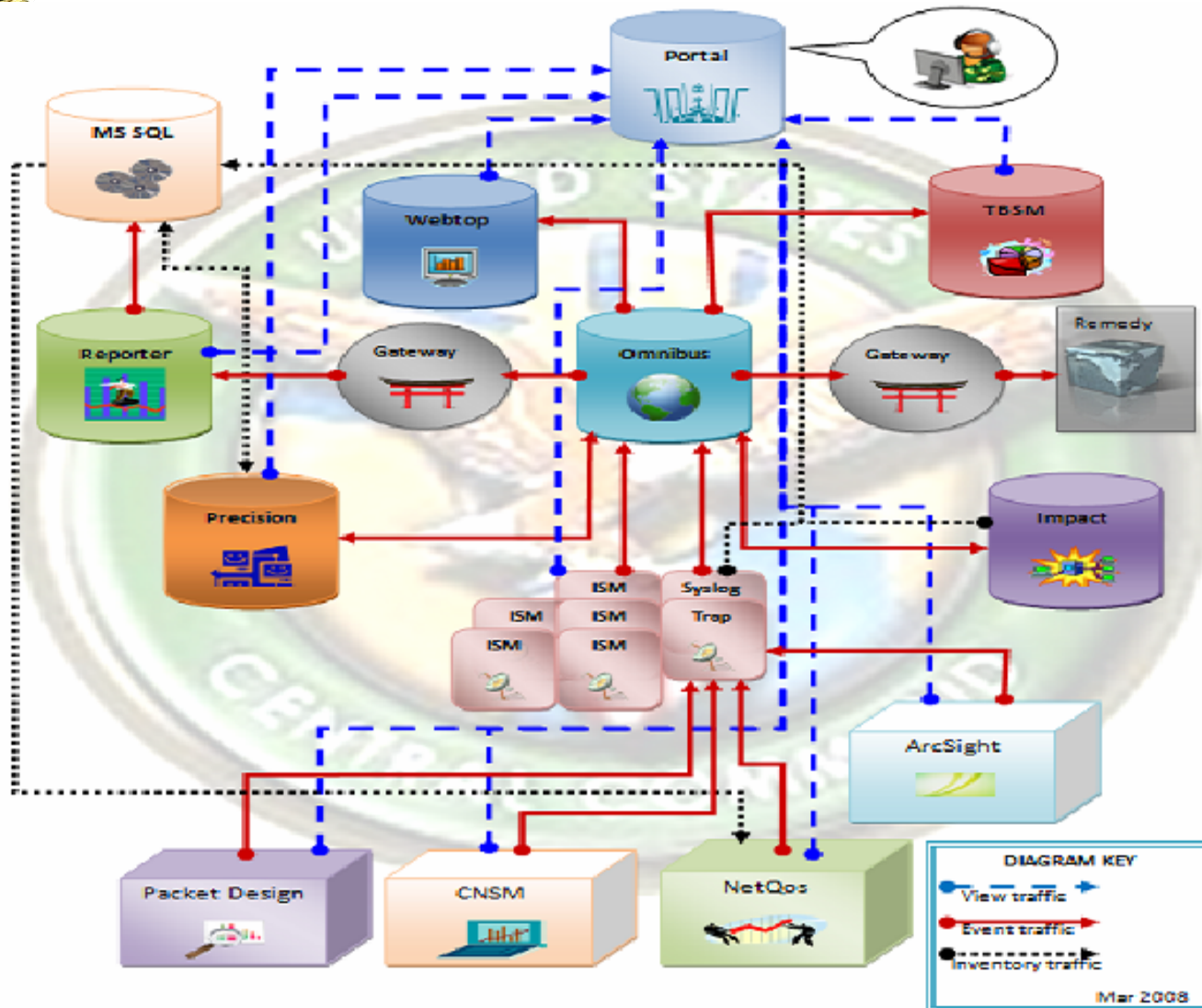
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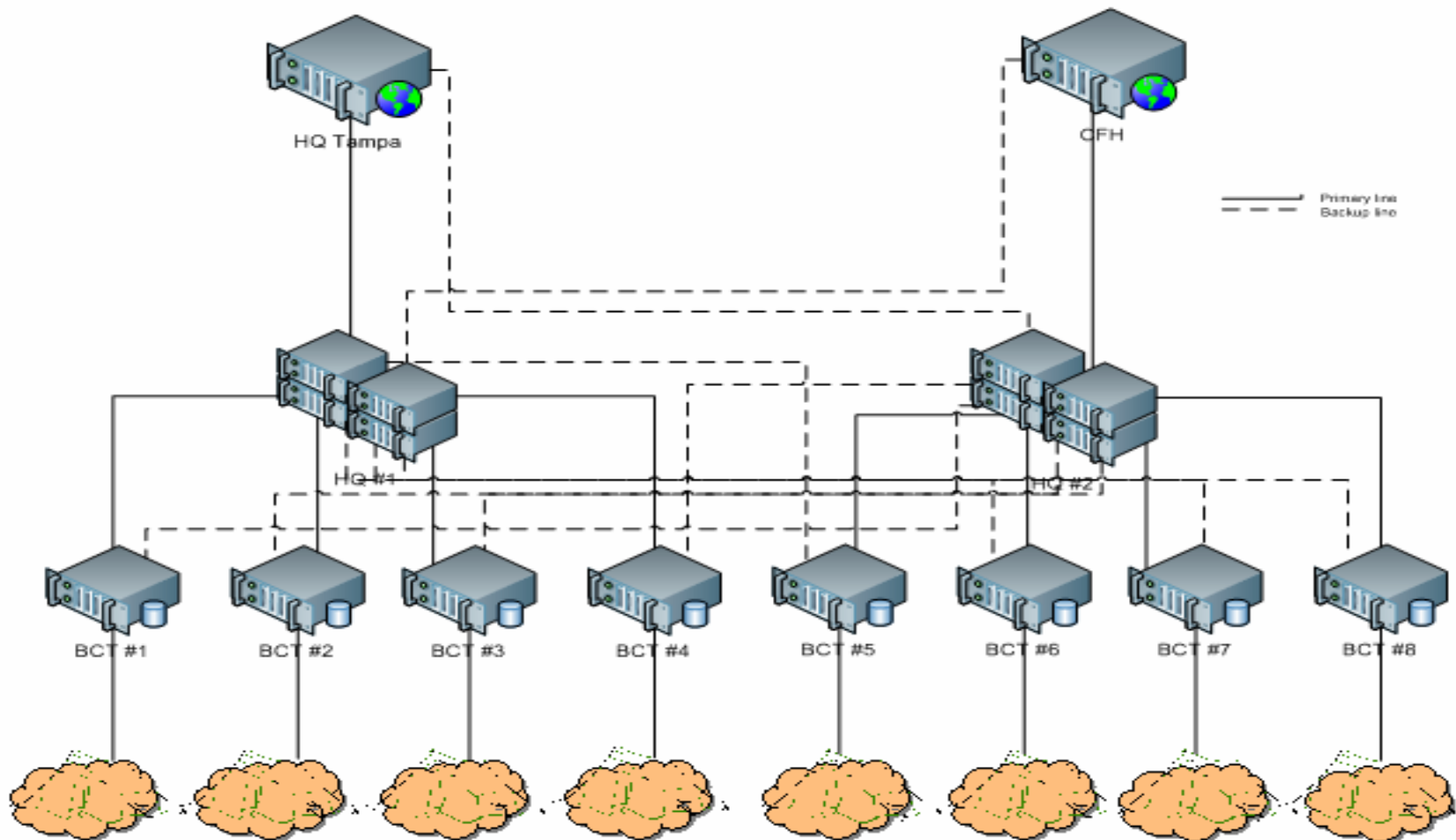


USCENTCOM TNMA AV-1(U)





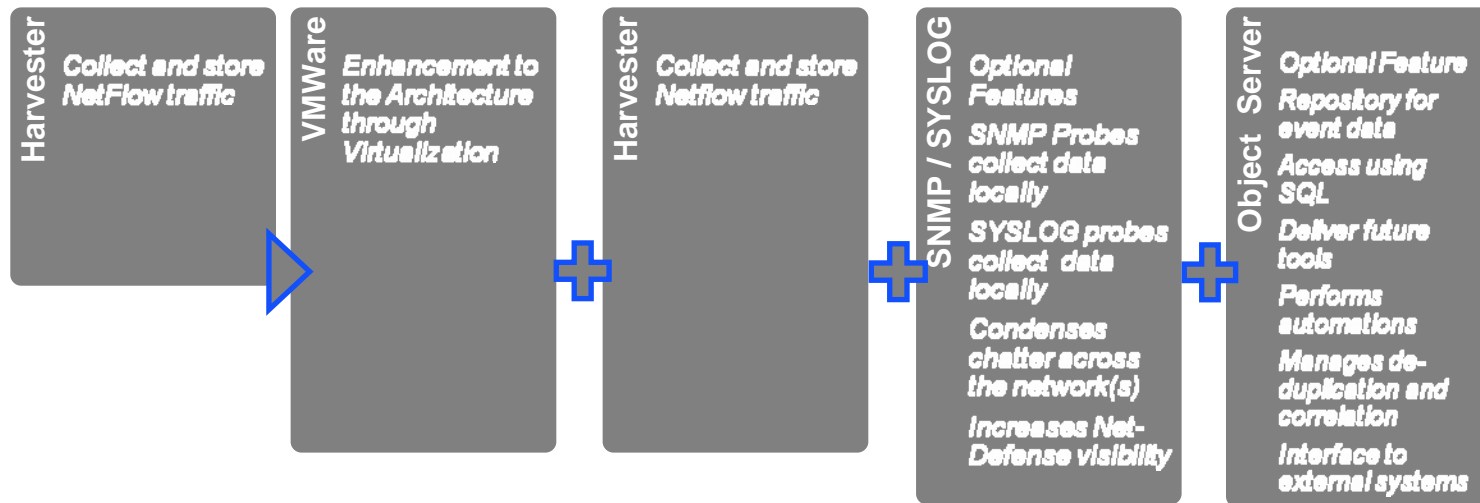
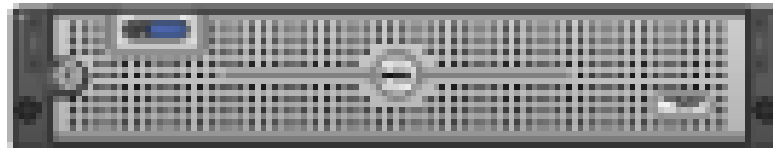
Mult-Tiered End-to-End Visibility





Collection Enhancement

Harvester





Theater Network Management Architecture

- **Implement a fully integrated, robust tool suite supporting real-time, correlated configuration, performance, status/event, and topology information in a common format enabling analysis and modeling capabilities available to all Components, JTFs, and Agencies**
- **Makes Service Assurance and Service Delivery possible across the network**
- **Enhances network defense through information exposure**
- **TNMA deployed on SIPR, NIPR and CX-I networks in the CJOA**

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Questions?



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