Overview of Infrastructure for Cyber, Interoperability, and Distributed Test

For

LTC Richard Dixon
Mission Control Complex, Bde Modernization Command
The JMETC Mission

JMETC provides the *persistent, robust infrastructure (network, integration software, tools, reuse repository)* and the *technical expertise* to integrate Live, Virtual, and Constructive systems for test and evaluation in a Joint Systems-of-Systems and Cyber environments.

You Worry About Your Test…

JMETC Worries About the Infrastructure
JMETC Infrastructure

• Dual Infrastructure Solutions
  • JMETC SECRET Network (JSN)
  • JMETC MILS Network (JMN)*

* MILS = Multiple Independent Levels of Security
Dual Infrastructure Solutions: JMETC SECRET Network (JSN)

- Objective is to provide persistent connectivity
  - Standing IA Agreements
  - Daily full mesh, end-to-end network characterization ensure optimized performance
  - On demand usage with little to no coordination necessary

- Operates at SECRET Collateral
  - Leverages SECRET Defense Research & Engineering Network (SDREN) for connectivity

- Limitation
  - Does not support Cyber and Coalition requirements
  - Does not support higher security classifications

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JMETC SECRET Network (JSN)

- Functional Sites: 79
- New Sites Planned: 8
- Connection Points to Other Networks: 5

- Leverages the SECRETDefense Research and Engineering Network (SDREN) for connectivity
- Operates only at the SECRET classification
- Continuous monitoring, troubleshooting, and optimization of the end-to-end network infrastructure
- Capable of supporting numerous simultaneous test events

As of 12 Nov 2015

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JMETC MILS Network (JMN)

- Objective is to provide 1) user access to **enterprise resources, tools and services** at **higher classifications** and 2) **isolated distributed testbeds** to meet growing Cyber T&E requirements
  - Accredited by DIA to operate up to TS//SCI/SAP/SAR (included NSA Red Team assessment)

- Employs Multiple Independent Levels of Security (MILS) architecture
  - Allows for segregation of data streams by protocol, system, event, COI, etc.
  - Ability to create “sandboxes” for Cyber events
  - Capable of supporting multiple simultaneous events at multiple classifications concurrently
  - Utilizes Defense Research & Engineering Network (DREN) for network transport

- Limitations
  - Requires security agreements for each event (valid up to 1yr)
  - Some tools and services may not be available unless JMN support personnel are “read on”
JMETC MILS Network (JMN) Site Map

- Leverages the Defense Research and Engineering Network (DREN) for transport
- Operates up to and including TS//SCI
- Managed by the JMETC NOSC at Redstone Arsenal, AL
- Capable of simultaneously supporting numerous test events at varying classifications

Functional Sites: 13
New Sites Planned: 11
RSDPs: 2 Operational and 3 Planned
Regional Service Delivery Points (RSDPs) Capability Overview

- Provides enterprise resources focused on generating virtualized representative cyber environments
  - Cloud based computational and storage assets to host virtualized representations of Red, Blue, and Gray environments
  - Platform for tools and services (e.g., planning, traffic generation, instrumentation, visualization, integrated event management, collaboration)
  - Can also be utilized for more conventional types of testing
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