

Joint Mission Environment Test Capability (JMETC)



JMETC SECRET Network (JSN)

Tools and Services

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JMETC Mission



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



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
- JSN Connectivity is more than JMETC on SDREN
 - Peering points to Industry Partners
 - JTEN via the East & West Coast Integration Routers



JSN Connectivity: Reusable & Persistent



- Reuse enables the customer to avoid:
 - Acquiring network equipment
 - Processing the security agreements
 - Obtaining Authority to Connect (ATC)
 - 1 MOU for 3 years
 - Generating agreements to connect with test partners
 - Testing the equipment installation
 - Testing the network configuration
- Reuse enables the customer to:
 - Test capabilities early and often
 - Execute unscheduled / unplanned testing whenever needed
 - Focus on the test rather than the network

By leveraging JSN sites, customer time and dollars are not spent on infrastructure

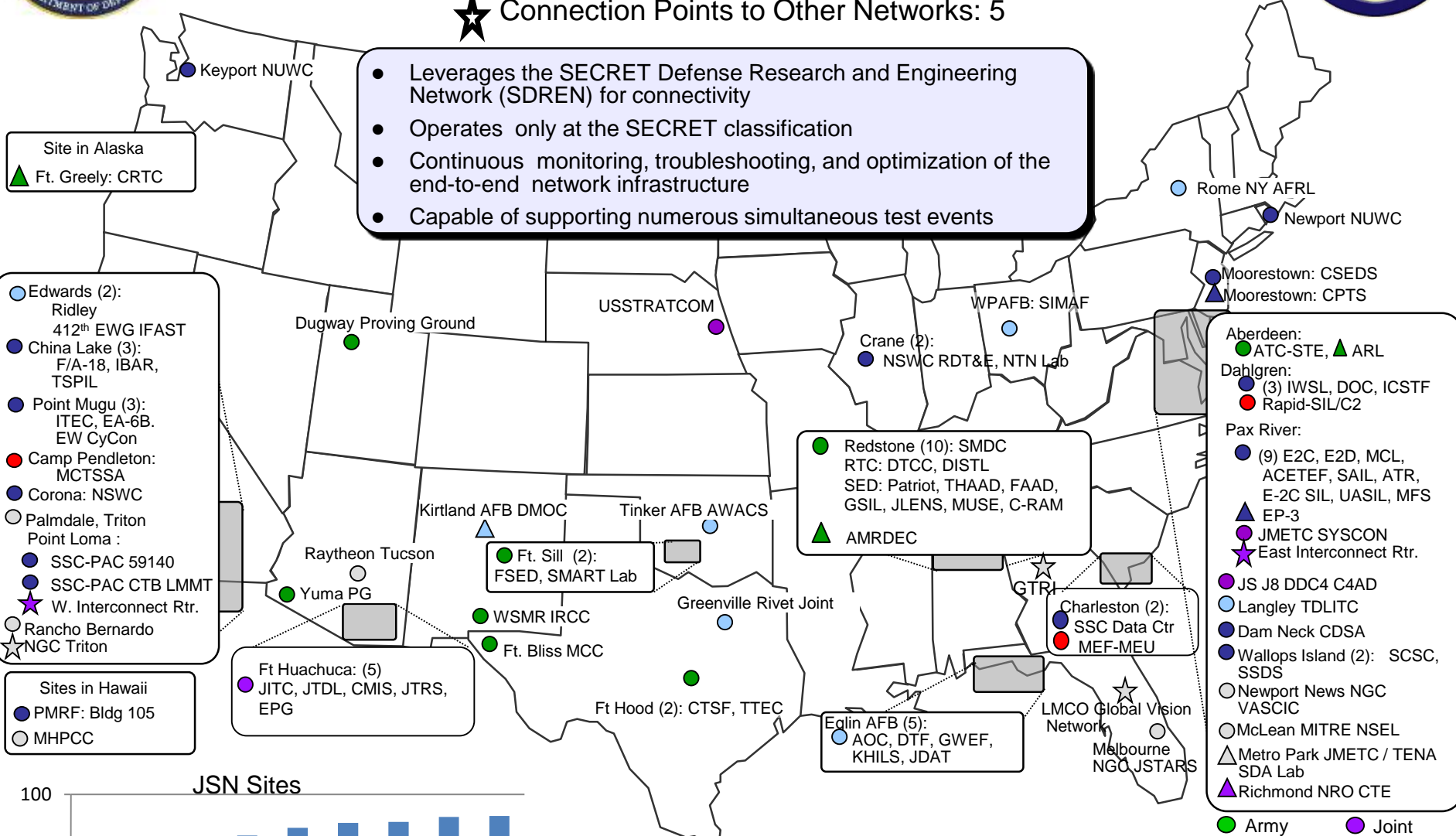


JMETC SECRET Network (JSN)



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

- Leverages the SECRET Defense 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



- Edwards (2): Ridley, 412th EWG IFAST
- China Lake (3): F/A-18, IBAR, TSPIL
- Point Mugu (3): ITEC, EA-6B, EW CyCon
- Camp Pendleton: MCTSSA
- Corona: NSWC
- Palmdale, Triton, Point Loma :
- SSC-PAC 59140
- SSC-PAC CTB LMMT
- ★ W. Interconnect Rtr.
- Rancho Bernardo, NGC Triton

- Sites in Hawaii
- PMRF: Bldg 105
- MHPCC

- Ft Huachuca: (5) JITC, JTDL, CMIS, JTRS, EPG

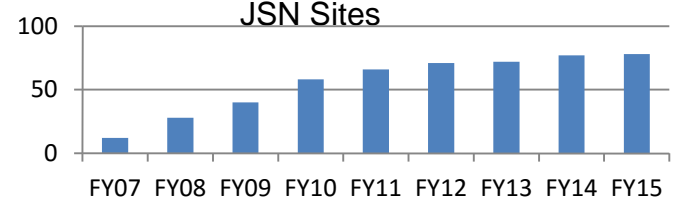
- Ft. Sill (2): FSED, SMART Lab

- Redstone (10): SMDC, RTC: DTCC, DISTL, SED: Patriot, THAAD, FAAD, GSIL, JLENS, MUSE, C-RAM
- ▲ AMRDEC

- Eglin AFB (5): AOC, DTF, GWEF, KHILS, JDAT

- Aberdeen: ● ATC-STE, ▲ ARL
- Dahlgren: ● (3) IWSL, DOC, ICSTF, ● Rapid-SIL/C2
- Pax River: ● (9) E2C, E2D, MCL, ACETEF, SAIL, ATR, E-2C SIL, UASIL, MFS, ▲ EP-3, ● JMETC SYSCON, ★ East Interconnect Rtr.
- JS J8 DDC4 C4AD
- Langley TDLITC
- Dam Neck CDSA
- Wallops Island (2): SCSC, SSDS
- Newport News NGC VASCIC
- McLean MITRE NSEL
- ▲ Metro Park JMETC / TENA SDA Lab
- ▲ Richmond NRO CTE

- Army
- Air Force
- Navy
- Marines
- Joint
- Industry



As of 12 Nov 2015

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Subject Matter Expert Support



- Pre-event / Event Integration Phase
 - Test Development / Design
 - Help users leverage JSN capabilities and services to meet their infrastructure requirements
 - Event / User Support
 - Ensures JSN sites have the knowledge, skills, abilities, and site-specific examples to successfully conduct distributed events
 - Support event planning activities
 - Network / Cybersecurity
 - Provide remote and onsite support to ensure optimized connectivity



Subject Matter Expert Support



- **Event Execution Phase**

- **Infrastructure Support**

- Verify infrastructure readiness and troubleshoot problems as they are discovered
 - Provide collaboration tools
 - Development and instantiation (and re-instantiation) of virtualized environments

- **Event / User Support**

- Provide remote and/or onsite support to customer test activities on an as-requested basis

- **Post Event Phase**

- Support data dissemination and analysis
 - Capture lessons learned and infrastructure gaps & limitations



JMETC Teams



- JMETC teams provide direct onsite or remote test activity support regarding test planning / design, execution and post-test lessons learned and infrastructure gaps / limitations as needed
 - JSN SYSCON – Tier 1 help desk, full mesh network characterization testing, proactive troubleshooting, test event collaborative systems (VoIP, Adobe Connect, chat, file server), security patches
 - JSN Connectivity Team – Tier 2 network support, daily network characterization and analysis, walk-the-wire trouble resolution, assistance with site installation, ports and protocols management, Connection Approval Process (CAP), cybersecurity, Comprehensive Security Assessment (CSA)
 - JSN User Support Team – Test planning, test event support tools, Test and Training Enabling Architecture (TENA), test execution, on-site event assistance
 - JMETC OPS Team – Developing and planning for distributed test requirements



JSN Services

- Cisco Unified Call Manager Cluster -- Redundant VOIP Telephone and Voice Conferencing Servers Servicing JSN Sites
 - Supports Cisco phones and IP Communicator
 - Also have Call Manger Express for additional capacity
- Voice Conferencing -- Cisco Unified MeetingPlace Autonomous Session Initiate Protocol (SIP)
- Adobe Connect
 - Used for event team collaboration on JSN / SDREN
 - Similar capability as DCS with desktop sharing, file sharing, whiteboard sharing, video and chat)
 - Adobe Connect User Guide posted on JMETC Website
 - Valuable for event teams to view briefings, schedules, test points, hotwashes
- Extensible Messaging and Presence Protocol (XMPP) Chat
 - Used for tactical chat



JSN Services

Continued



- Secure File Transfer Protocol (SFTP) Server
 - Used extensively for file transfer
- YUM (Yellowdog Updater, Modifier) Server
 - Used to update RPM capable versions of Linux
 - JSN YUM Server supports Fedora and REL
 - YUM Server User Guide posted on JMETC Website
- Windows Server Update Services (WSUS) at SDREN NOC
- AV updates (McAfee and Symantec) at SDREN NOC
- Domain Name Service (DNS) -- both JSN and SDREN provided
- Registered IP Address Space
 - Must use DoD routable IP Addresses
 - Request IP Addresses through the JSN SYSCON



Managing Event Ports & Protocols



- Understanding the mechanisms your systems use to exchange information is key to a successful distributed test
- Unknown or undocumented Ports / Protocols / IP information is a leading cause of SYSCON trouble tickets
- If you do not define your data communication requirements in advance, your test has a much higher failure rate
 - Problem magnifies when peering to industry networks or through the integration router
- JMETC maintains a master ports & protocols spreadsheet
 - “One-stop shop” for PPS during distributed tests on JSN
 - Sites can add their requirements to the master spreadsheet for dissemination across the community
- JMETC is willing to help ensure your test is successful
 - Provide firewall / ACL setup guidance / expertise
 - Confirm proper configuration at all test sites during integration testing
 - Pre-test network configuration testing
 - Proactive troubleshooting as problems arise



Typical JSN Site Configuration

