



Enabling Joint Distributed Testing

Joint Mission Environment Test Capability

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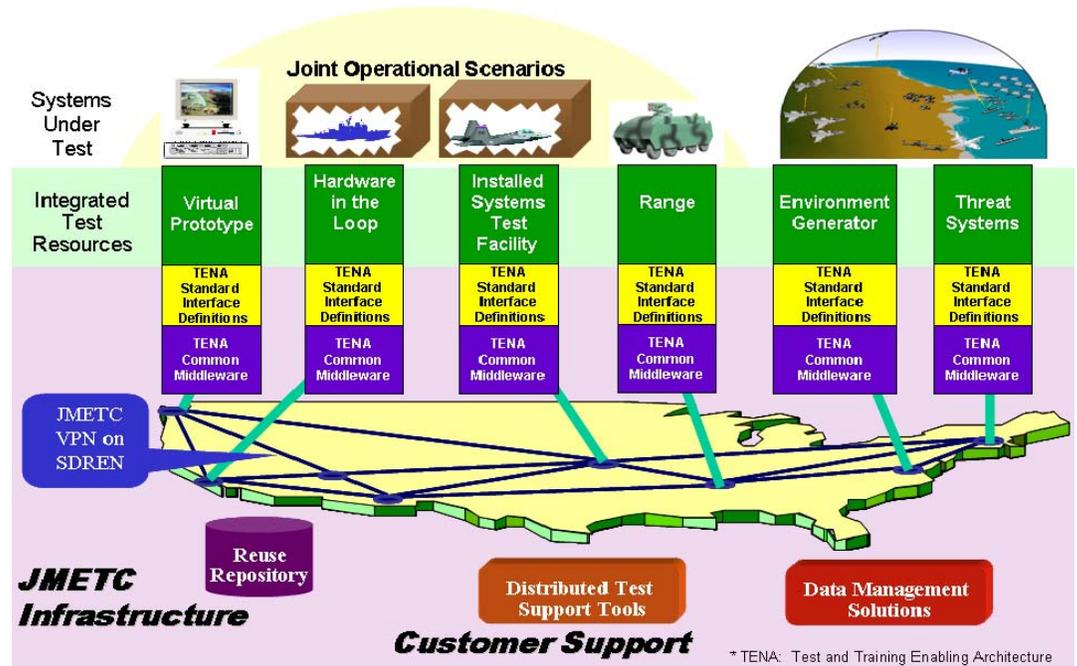


The Joint Mission Environment Test Capability (JMETC) program is using the Test and Training Enabling Architecture (TENA) to prototype new testing support infrastructure. Fielding the Joint Force requires a corporate Joint Force Testing Capability that reflects the realization that “if we fight jointly, we must train and test jointly.” Being successful in the development of that Joint testing capability requires a supporting and guiding activity, and in December 2005, the JMETC program element was formed. JMETC is a distributed live, virtual, and constructive (LVC) testing capability developed to support the acquisition community during program development, developmental testing, operational testing, interoperability certification, and including demonstration of Net Ready Key Performance Parameters (KPP) requirements in a customer-specific Joint Mission Environment (JME). JMETC provides readily available connectivity to the Services’ distributed test capabilities and simulations, as well as Industry test resources. JMETC, although a testing capability, is aligned with and complemented by the Joint National Training Capability (JNTC) integration solutions

to foster test, training, and experimental collaboration.

JMETC uses the Secret Defense Research and Engineering Network (SDREN), which is the network established to support research, development, testing, and engineering (RDT&E) and science & technology (S&T) activities in the Department of Defense. Currently, JMETC has activated 49 customer sites with more in the connection process to be completed during 2010. JMETC’s persistent network infrastructure is encrypted for Secret operation and includes sites at Defense industrial facilities. This infrastructure also can be connected to the JNTC sponsored Network Aggregation Router to further increase connectivity by bridging to sites on other classified networks to include JNTC Joint Training and Experimentation Network (JTEN), and other classified enclaves.

JMETC is partnered with the Joint Integrated Air & Missile Defense Office (JIAMDO) to provide test support for Air & Missile defense related tests in 2010. JIAMDO testing consists of many interoperability and sensor integration tests and track correlation tests between various sen-



* TENA: Test and Training Enabling Architecture

Figure 1. JMETC Infrastructure.

sor systems. Risk mitigation events with various scenarios will take place using JMETC connectivity in 2010.

Another project using JMETC connectivity is the Interoperability Test and Evaluation Capability (InterTEC) project, an initiative of the Central Test Evaluation Investment Program (CTEIP). InterTEC is an integrated test solution for end-to-end interoperability test and evaluation of C4ISR systems and provides some of the net-centric test tools available within JMETC. JMETC furnishes the persistent network infrastructure, additional distributed tools and middleware; the Test and Training Enabling Architecture (TENA) for InterTEC testing. The combination of InterTEC and JMETC connectivity provides the test infrastructure to support Joint net-centric testing over various phases of an acquisition life cycle. During 2008 and 2009, InterTEC test events included over 20 JMETC sites per single test event.

JMETC connectivity was used by the Joint Expeditionary Force Experiment (JEFX) 09-2/3 and is being used in JEFX 10-2/3. JEFX is an Air Force Chief of Staff directed series of experiments that combines live, virtual, and constructive forces to create a near-seamless warfighting environment to assess the ability of providing needed capabilities to warfighters. The focus was on live fly communications and airborne data links. The main sites included the Combined Air Operations Center-Nellis (CAOC-N) at Nellis AFB, the 505 Command and Control Wing (CCW) at Hurlburt Field, Global Cyberspace Integration Center (GCIC) at Langley AFB, the Eglin AFB Guided Weapons Evaluation Facility (GWEF) and Eglin AFB Command Control Test Facility – Datalink Test Facility (C2TF-DTF).

TENA is an important component in the value JMETC brings to distributed testing. Developed as a Central Test and Evaluation Investment Program (CTEIP) project, TENA has been an active force in achieving range interoperability and range resource reuse across the Department of Defense (DoD) range community. TENA, used in major field exercises as well as numerous distributed test events, provides JMETC a technology already being deployed in DoD.

TENA's continuing development and refinement is managed by the TENA Software Development Activity (SDA), a DoD Test Resource Management Center (TRMC) office. The TENA Middleware, currently at Release 6, is government owned, free and available for download, along with supporting documentation, at the TENA SDA web site. The web site offers information, documentation and software downloads, helpdesk, and on-line TENA event and training class registration. Be-

yond the web site, TENA users and prospective users are further supported by a TENA SDA User Support team, which includes the functions of event design, event integration and coordination.

For more information about JMETC and TENA, contact George Rumford, JMETC Senior Technical Advisor / TENA Software Development Activity (SDA) Director, or Ryan Norman, JMETC Systems Engineer, E-mail: feedback@jmetc.org or feedback@tena-sda.org or go to the JMETC Web Site: <https://www.jmetc.org> or TENA Web Site: <https://www.tena-sda.org>.