The National Cyber Range Complex (NCRC)

Dr. Robert N. Tamburello
Deputy Director, NCRC
DoD Test Resource Management Center
March 26, 2019
NCRC at a Glance

Mission: Improve the resiliency of our nation in the cyber-contested battlespace by conducting testing, training, and mission rehearsal in operationally-representative cyberspace environments

Typical NCRC Use Cases
- Vulnerability Assessment
- Cyber Mission Force Training
- Product/Solution Evaluations
- Architecture Evaluations

Existing NCRC Sites
- Lexington, MA
- Patuxent River, MD
- Huntsville, AL
- Orlando, FL
- Camp Smith, HI

Expanding Capacity to Meet Demand

SME Available for Planning, Design, Execution, OPFOR and Analysis

Hi-fidelity Virtualized Representations of Networks, Platforms, C2, etc.

NCRC Key Capabilities
- Rapid emulation of complex, operationally representative network environments
- Automation provides significant efficiencies that enable high OPTEMPO
- Sanitization to restore all exposed systems to a known, clean state
- Support multiple concurrent events at varying classification levels
- Secure connectivity

Automation Maximizes Utilization of Range Resources
VISION: At maturity, the NCRC will consist of an integrated and interoperable constellation of facilities designed to enable the planning and execution of very large-scale, complex, distributed cybersecurity events to satisfy customer requirements in the domains of R&D, S&T, DT&E, OT&E, training, exercises, and mission rehearsal.

New NCRC Sites Currently in Development with the Services
- Patuxent River, MD
- Charleston, SC
- Eglin AFB, FL

NCRC Site Buildout Phases
- Facility Preparation
- NCRC Core Infrastructure Installation
- Workforce Acquisition and Training
- Initial Operational Capability
- Full Operational Capability
NCRC Expansion Sites

- Charleston
- Eglin
- Orlando
- PAX River
NCRC Event Planning, Operations and Support (EPOS)

- At each new NCRC site, the key workforce positions will only be partially filled by government personnel from the gaining Service organizations.
- Additional contractor personnel will need to be acquired in order for each site to become operational.
- The NCRC EPOS contracting strategy will enable the government to satisfy growing requirements in the cyber T&E, training, and mission rehearsal domains.
- EPOS will serve as the government’s mechanism to leverage the industry’s highly skilled workforce to conduct:
  - Event planning
  - Event design & engineering
  - Event execution
  - Event analysis & reporting
  - Range maintenance & supporting activities
  - Innovation Council

  • Promote Competition
  • Expand the Pool of Qualified Performers
Concluding Remarks

- TRMC is working collaboratively with the Services to augment the existing capacity and capabilities to satisfy growing DoD cyber T&E, training, and mission rehearsal requirements

- The end state for the buildout of the DoD’s cyber capabilities will be a National Cyber Range Complex that is
  - Seamlessly interoperable with HWIL, SIL, ISTF, and OAR facilities
  - Rapidly configurable
  - Distributed
  - Flexible
  - Expandable

**NCRC Capabilities and Capacity will continue to Evolve based on Emerging DoD Requirements**