The Multi-Application Practical Learning Environment (MAPLE) range is a realistic network training range. Comprised of virtual machines simulating a ‘friendly’ network enclave complete with a firewall, intrusion detection software, and typical network web and email traffic. Malicious and unauthorized traffic also transits the simulated network. Teams of operators utilize common network monitoring tools to detect, identify and mitigate the malicious and/or unauthorized traffic on the friendly network while maintaining the legitimate web and email traffic. Throughout the scheduled range time, white force controllers monitor the range and provide support to the participants.

At the end of the experience, the 229 IOS white force provides a debrief of the team’s performance. The debrief provides truth data of what traffic traversed the network and reviews actions taken by the team. All of this is done to identify skills that require additional training, as well as highlight best practices and lessons learned that the team members can then apply to real world operations.

The MAPLE Mission
The MAPLE range is a training environment designed to emulate a realistic network where teams can safely exercise the following Defensive Cyberspace Operations (DCO).

1) Detect malicious/unauthorized network traffic
2) Identify the source of the ‘red’ traffic, and act to
3) Mitigate the threat traffic while maintaining essential ‘blue’ web and email services.

Philosophy
The range is tool agnostic and encourages team members to rely on DCO techniques as opposed to tool capabilities. Teams are not allowed to import their own tools onto the range. They are given Intrusion Detection System (IDS), a software firewall, and a network monitoring tool to meet their assigned objectives. This enables debrief of performance to focus on execution tactics, techniques, and procedures.

Requirements
The MAPLE range is available via the Internet using a standard web browser. Team members are provided with login credentials to virtual workstations on the range network.

The debrief is conducted from the 229 IOS, so teams are encouraged to have an internet conference capability or speaker phone as well as space enough for the team to review the provided truth data spreadsheet and PowerPoint slides during the debrief.

Specific software and connection requirements are provided to teams upon registration to use the range.

Scheduling
The range is open most days, including scheduled weekends. Teams can register and schedule range time at: https://badlnet.iovermont.org/MAPLEreg/
Multi-Application Practical Learning Environment (MAPLE) Range

Training Audience
The MAPLE range is available to the total force Cyber Mission Force. It was designed to provide tailored training to Active Duty Department of Defense (DoD) members, DoD contractors, as well as traditional National Guard members during their Unit Training Assembly. The range has been utilized by multiple cyber backgrounds and is tailorable to provide training managers and Weapons Officers choices on threat persistence and capabilities. Training options are tailored by emailing the whiteforce via the address provided on the registration page.

Teams
Teams can be up to five members and have been mixed between DoD and contractors and multiple career fields including intelligence career fields. Team leaders are required to complete a short range familiarization course prior to receiving range credentials. All team members are encouraged to complete the range familiarization. It provides training resources for the provided tools, as well as best practices for performing on the range.

Range Capabilities
• Distributed range capability
  ✓ Train from home station
• Range time is free to DoD members and affiliates
  ✓ Cost effective qualification or continuation training
  ✓ Flexible schedule
• Tailorable threat experience
  ✓ Range time customizable
  ✓ Threat capabilities customizable
• Realistic legitimate traffic generation
  ✓ Teams must separate the malicious/unauthorized traffic from legitimate traffic
• Truth data provided for team debrief and debrief focal point development
  ✓ Records and debriefs all red, blue, and white activity on the range
• Operational mission debrief
  ✓ Debrief can be 229 IOS or team led
  ✓ Quality training on mission debrief skills

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