

- Sandia National Laboratories is a global leader in cyber security with an annual government investment of over \$150M per year
- Five decades of making nuclear weapons safe and secure from constantly evolving, sophisticated threats
  - Sandia developed a deep understanding of digital system (cyber) security and reliability through decades of experimentation, testing, and validation
- For over four decades, cyber security has been an integral part of the wide range of national security systems that we build for the US Government
  - Trustworthy monitoring technologies for nuclear treaty verification, even when placed in untrusted environments
  - Battlefield technologies for the Department of Defense
  - Counter terrorism technologies for the Department of Homeland Security
- For over three decades, Sandia has been developing and operating secure networks for our Department of Energy missions
  - In many cases our Ph.D. researchers divide their time between network security analysis and developing tools to improve and automate that security analysis
- For over three decades, Sandia has been providing the US Government with dedicated cyber security expertise
  - Threat and vulnerability analysis
  - Adversarial-based assessments
  - Specialized digital forensics
  - Specialized data analysis tools
  - Technologies and approaches that address sophisticated threats
- Sandia partners with Universities and other research laboratories to address fundamental research questions
  - Security metrics
  - Privacy preserving data analytics
  - Bringing physical and cyber risks under a single risk management framework
  - Cyber security approaches that can hand the advantage to the defender
- Sandia's Center for Cyber Defenders (CCD) is an internship program, structured like a medical residency program, that operates in close partnership with several universities
  - Over 400 student interns since 1998
  - All participants develop cyber security tools or assist in security assessments
  - Serves as a pipeline for key cyber security roles at Sandia, various government agencies, and industry
- Sandia's Cyber Engineering Research Laboratory (CERL) brings multi-disciplinary teams into a collaborative environment to address the most difficult cyber challenges
  - Building the safest Internet economy on Earth requires skills that span human performance to information technology to materials science.
  - CERL is designed to bring universities, industry, and government together to solve the most difficult cyber security problems