



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

CYBER PATHWAYS FOR GOVERNMENT

Economic development relies on a skilled productive workforce, secure infrastructure, and education systems that yield the skills in demand by employers. State, local, tribal, and territorial (SLTT) governments can be innovative and take a leadership role in aligning resources across public and private-sector programs, industry sectors, and education systems to support development of the cyber workforce. The Federal government is in a position to accelerate the innovative ideas of SLTT entities. The National Cyber Workforce and Education Strategy calls for stakeholders to prepare the workforce across all industries with the cyber skills to securely design, build, and operate information and operational technologies (IT and OT). The actions below are intended to spark ideas on how SLTT governments can help achieve the goals in the Strategy.

LEVERAGE SKILLS-BASED HIRING AND WORK-BASED LEARNING

Meet with high schools, community and technical colleges, and universities to create or expand work-based learning programs in your agencies. Survey local businesses to determine their cyber needs and assist employers with adopting skills-based hiring approaches with help from the public workforce development system in your area. Facilitate conversations between employers and educators to reduce barriers to starting work-based learning programs. Provide paid opportunities for teachers to gain cyber skills in your agencies. Join or sponsor a cyber range to enable learners to develop cyber skills in simulated environments.

INCREASE TRAINING OPPORTUNITIES

Review cyber training programs to ensure they align with the skills needed in your organization. Invest in the development of a cyber career pathway program to enhance the workforce in your agencies with the cyber skills needed to continue their government service and advance their careers. Search online for “Federal Virtual Training Environment,” “NICCS Portal,” and “NICE Framework Resource Center” for a sampling of the Federally-funded content and resources available to complement your training programs.

While the Strategy contains lines of effort for all stakeholders, some of the key lines of effort for SLTT governments include:

- 1.1.2 Foster ecosystem approaches to enhance cyber skill learning opportunities.
- 2.1.2 Increase engagement in cyber education ecosystems.
- 2.3.1 Increase the cyber teaching capacity of K-12 systems and postsecondary institutions.
- 3.2.5 Increase on-ramps to cyber careers through work-based learning opportunities.



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

EXPAND YOUR LOCAL ECOSYSTEM

Host or join a reception to connect with employers, school districts, community and philanthropic organizations, to share information on existing investments and programs, expand collaboration, and explore partnerships to pursue new funding opportunities. Include ecosystem stakeholders, including families, in the development of cyber education and training content, tools, and programs. Schedule public events at times and locations convenient to educators, employers, and workers to keep your ecosystem informed of your activities and resources. Add cyber skill development programs to newsletters, public meetings, and outreach activities to increase awareness.

FEDERAL CYBER RESOURCES FOR GOVERNMENT

The Federal government offers a range of programs to ensure that both the Federal government and state, local, tribal, and territorial (SLTT) governments have the cyber workforce needed to protect their citizens. Governments, including government-owned and managed public utilities, face significant cyber threats that require a trained and capable workforce. To assist governments in recruiting, training and filling these cyber job vacancies, Federal government programs offer the following: fellowship and internship programs, certifications and academies, job search tools, career expos, and scholarship for service programs where recipients agree to work in the federal government or in state, local, tribal, and territorial (SLTT) governments for a period equal to the length of the scholarship, among many other programs.

HELPFUL LINKS

Education and Training

Department of Homeland Security – Cybersecurity and Infrastructure Security Agency

[CISA: Cyber Defense Education and Training \(CDET\)](#)

[CISA: Non-Traditional Training Grant \(NTP\)](#)

[CISA: National Initiative for Cybersecurity Careers and Studies \(NICCS\)](#)

[CISA: Cybersecurity Apprenticeship Program for Veterans](#)

[CISA: NICCS-Federal Virtual Training Environment \(FedVTE\)](#)

Department of Commerce – National Institute of Standards and Technology

[Regional Alliances and Multistakeholder Partnerships to Stimulate \(RAMPS\) Cybersecurity Education and Workforce Development](#)

[Cyberseek.org*](#)

[National K12 Cybersecurity Education Conference*](#)

[NICE Conference and Expo*](#)

[National Cybersecurity Career Ambassadors Program](#)

[Cybersecurity Career Week](#)



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

[NICE Framework and Resource Center](#)

[US Cyber Games*](#)

[Free or Low Cost Cybersecurity Resources](#)

[Cybersecurity Apprenticeship Finder](#)

National Telecommunications and Information Administration

[Tribal Broadband Connectivity Program](#)

Department of Defense

[Department of the Navy \(DoN\) Historically Black Colleges and Universities/Minority Institutions \(HBCU/MI\) Program](#)

[Technology for Advanced Manufacturing Projects \(STAMP\)](#)

[Army Educational Outreach Program \(AEOP\) - College Qualified Leaders \(CQL\)*](#)

[Air Force Research Laboratory \(AFRL\) Scholars Program*](#)

[Air Force Visiting Scientist Program](#)

[Consortium Research Fellows Program \(CRFP\)*](#)

[National Defense University – College of Information and Cyberspace](#)

Department of Education

[Small Business Innovation Research \(SBIR\) Program](#)

[Native American Career and Technical Education Program](#)

[Native Hawaiian Career and Technical Education Program](#)

Department of Energy

[Cyber Fire Foundry*](#)

[CyberForce Competition](#)

[US Department of Energy \(DoE\) Cyber Defense Competition](#)

[DOE STEM](#)

[BSSW Fellowship Program](#)

[Center for Global Security Research Student Intern Program](#)

[Cybersecurity Summer Institute](#)

[OMNI Technology Alliance Internship Program](#)

Department of Homeland Security

[The Secretary's Honors Program \(SHP\) Cyber Student Volunteer Initiative \(CSVI\)](#)

[Tribal Cybersecurity Grant Program](#)

Department of Labor

[Cybersecurity Apprenticeships](#)

[Apprenticeship Sprint](#)

[Youth Apprenticeships](#)

[National Apprenticeship Week](#)

[Apprenticeship Standards Builder](#)



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

[Apprenticeships.Gov](https://www.apprenticeships.gov)

Department of Labor – Employment and Training Administration
[Cybersecurity Competency Model](#)*

Department of State
[Global Engagements to Counter the Misuse of Advanced and Emerging Technologies](#)
[Global Biosecurity Engagement Activities](#)

Federal Bureau of Investigation
[Cyber Investigator Certification Program \(CICP\)](#)*
[CISO Academy](#) (*Contact your local FBI Field Office for more information about how to participate in an upcoming CISO Academy session.*)

National Security Agency
[National Centers of Academic Excellence in Cybersecurity \(NCAE-C\) Program](#)
[National Security Agency \(NSA\) Student Programs](#)
[National Security Agency's GENCYBER Program](#)
[Center of Academic Excellence \(CAE\)-Cyber Operations Summer Intern Program](#)
[Cooperative Education Program \(NSA\) Hawaii](#)
[Cooperative Education Program \(NSA\) STEM](#)
[Cryptanalysis and Signals Analysis Summer Program \(CASA SP\)](#)
[Cyber Scholarship Program \(CYSP\)](#)
[Cyber Summer Program \(CSP\)](#)
[WIN Cyber](#)
[Cyber Kids Day](#)
[NSA Codebreaker Challenge](#)
[NSA-funded CyberSkills2Work Program](#)*
[NSA Cybersecurity Exercise \(NCX\)](#)
[NSA Careers Portal](#)

US Agency for International Development
[Innovative Workforce Activity Grant Program](#)

Veterans Affairs
[VA-Office of Information and Technology \(OIT\) Career Development Portal](#)
[Veteran Employment Through Technology Education Courses \(VET TEC\)](#)
[Veteran Readiness and Employment \(VRE\)](#)



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

Military

Air Force

[Cyber Science Program](#)

[Cyber Direct Commissioning](#)

Army

[Reserve Pilot Project](#)

Department of Defense

[DOD Cyber Excepted Service \(CES\)](#)

National Security Agency (NSA)

[NSA Experiential Tour \(NET\)](#)

Federal Civilians

Department of Homeland Security – Cybersecurity and Infrastructure Security Agency

[Intelligence and Cybersecurity Diversity Fellowship Program \(ICDF\)](#)

[Cybersecurity Talent Initiative \(CTI\)*](#)

[President's Cup Cybersecurity Competition](#)

[Federal Skilling](#)

Department of Defense

[Cyber Workforce Management \(CWM\)](#)

Department of Energy

[CyberForce Program](#)

[Office of the Chief Information Officer \(OCIO\) Cybersecurity Education Program](#)

[Tracer FIRE*](#)

Department of Health and Human Services, Centers for Medicare & Medicaid Services

[CMS CyberVets Program](#)

Department of Homeland Security

[Cybersecurity Talent Management System \(CTMS\)](#)

[Strategic Talent, Recruitment, Inclusion, Diversity and Engagement \(STRIDE\)](#)

Department of Defense, Department of Homeland Security, Veteran Affairs, &

Department of Homeland Security – Cybersecurity and Infrastructure Security Agency

[Interagency Federal Cyber Career Pathways](#)

Department of Justice

[Cyber Fellowship Program](#)



NATIONAL CYBER WORKFORCE AND EDUCATION STRATEGY

Federal Bureau of Investigation

[Accelerated Cyber Training Program \(ACTP\)](#)

[Cyber Executive Training Program \(CETP\)](#)

[Computer Scientist Field Operations Training \(CSFOT\) Program](#)

[Data Science Curriculum: Onboarding Series \(DSCOS\)](#)

[Data Analytics Support Hub \(DASH\)](#)

General Services Administration

[Digital Corps](#)

Office of Personnel Management

[Federal Cybersecurity Reskilling Academy](#)

[Tech to Gov](#)

[Cybercareer.gov](#)

[The Presidential Management Fellows \(PMF\) Program](#)

[Federal Rotational Cyber Workforce Program](#)

National Security Agency

[National Security Agency \(NSA\) Development Programs](#)

**An asterisk indicates a government affiliated program that may receive funding from the federal government.*

For more information about these Federal Cyber Resources, please reach out to the Office of the National Cyber Director's Cyber Workforce Directorate at: workforce@ncd.eop.gov