



Homeland Security

Developing Cybersecurity Talent through Education, Training, and Workforce Development

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Department of Homeland Security (DHS)

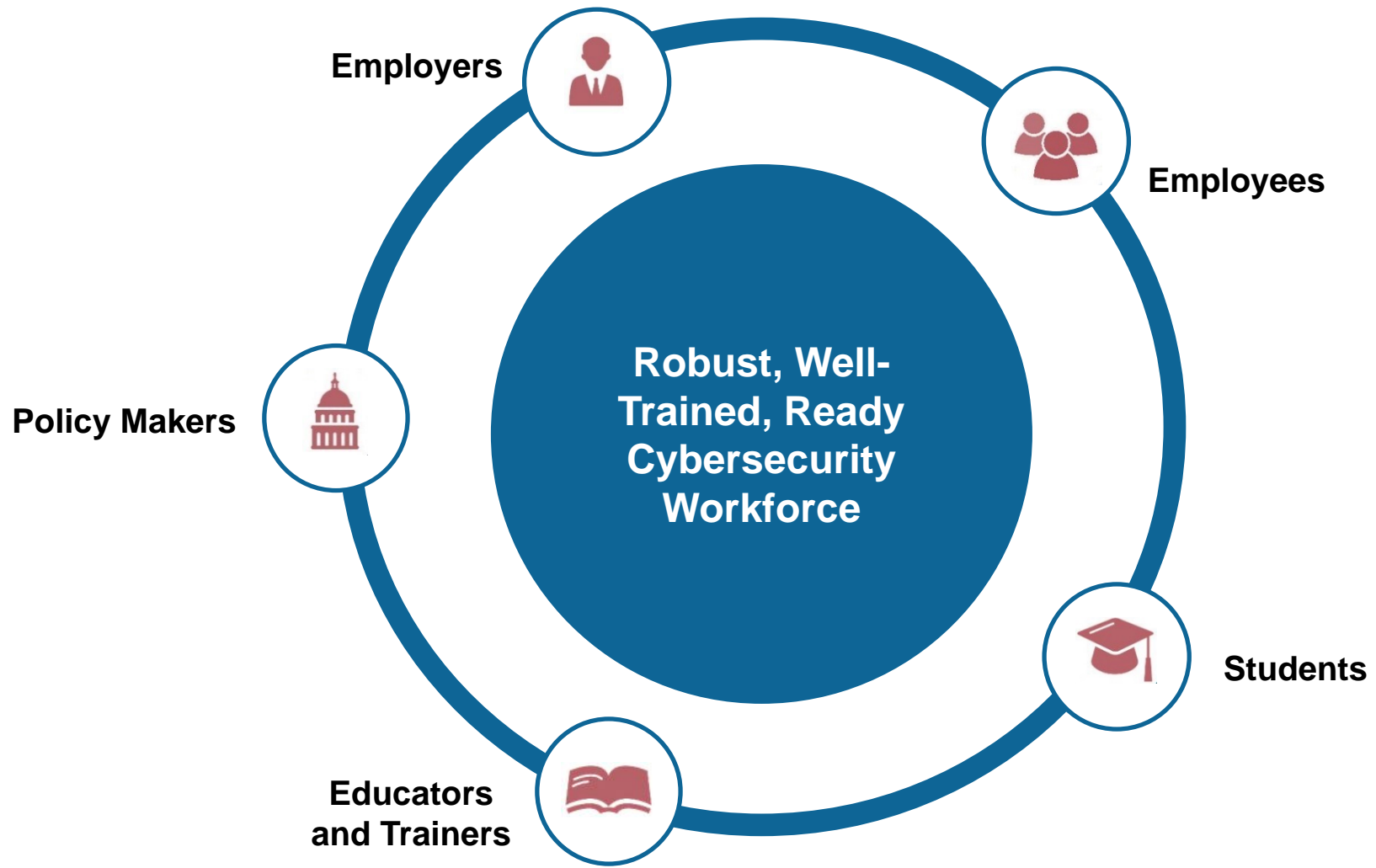
National Cybersecurity Education & Awareness Branch (CE&A)

June 2018

The Cybersecurity Workforce Challenge



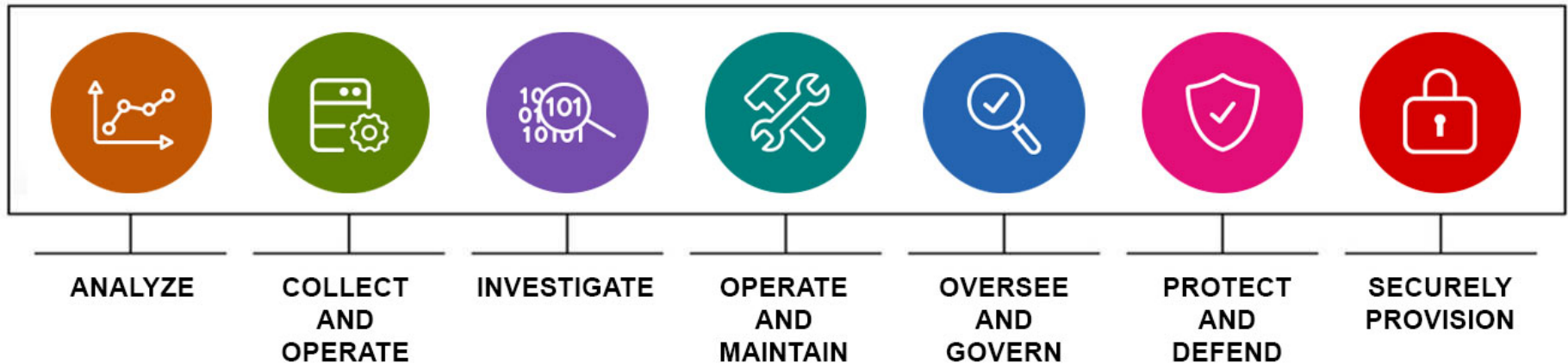
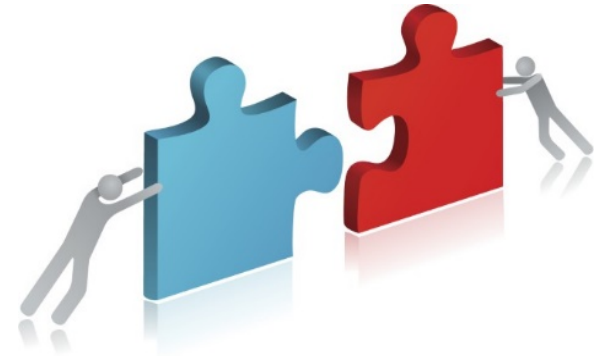
Vision for the Nation's Cybersecurity Workforce



Foundation for the Cybersecurity Workforce

NICE Cybersecurity Workforce Framework

- Describes cybersecurity work
- Supports strategic workforce development
- Includes 7 Categories, 30+ Specialty Areas, 50+ Work Roles



NICE Framework Work Roles

ANALYZE

- Warning Analyst
- Exploitation Analyst
- All-Source Analyst
- Mission Assessment Specialist
- Target Developer
- Target Network Analyst
- Multi-Disciplined Language Analyst

COLLECT & OPERATE

- All Source-Collection Manager
- All Source-Collection Requirements Manager
- Cyber Intel Planner
- Cyber Ops Planner
- Partner Integration Planner
- Cyber Operator

OPERATE & MAINTAIN

- Database Administrator
- Data Analyst
- Knowledge Manager
- Technical Support Specialist
- Network Operations Specialist
- System Administrator
- Systems Security Analyst

INVESTIGATE

- Cyber Crime Investigator
- Forensics Analyst
- Cyber Defense Forensics Analyst

PROTECT & DEFEND

- Cyber Defense Analyst
- Cyber Defense Infrastructure Support Specialist
- Cyber Defense Incident Responder
- Vulnerability Assessment Analyst

SECURELY PROVISION

- Authorizing Official/Designating Representative
- Security Control Assessor
- Software Developer
- Secure Software Assessor
- Enterprise Architect
- Security Architect
- Research & Development Specialist
- Systems Requirements Planner
- System Testing and Evaluation Specialist
- Information Systems Security Developer
- Systems Developer

OVERSEE & GOVERN

- Cyber Legal Advisor
- Privacy Compliance Manager
- Cyber Instructional Curriculum Developer
- Cyber Instructor
- Information Systems Security Manager
- COMSEC Manager
- Cyber Workforce Developer and Manager
- Cyber Policy and Strategy Planner

CYBERSECURITY PROGRAM / PROJECT MANAGEMENT

- Program Manager
- IT Project Manager
- Product Support Manager
- IT Investment/Portfolio Manager
- IT Program Auditor

EXECUTIVE CYBER LEADERSHIP

- Executive Cyber Leadership



NICCS™ Website

The Nation's One Stop Shop for Cybersecurity Careers and Studies!

- ✓ 28,000+ visitors per month
- ✓ 3,000+ courses in the NICCS Training Catalog mapped to the National Cybersecurity Workforce Framework
- ✓ 100+ links to cybersecurity resources
- ✓ 15+ tools for managers, including a Cybersecurity Workforce Development Toolkit
- ✓ 10+ monthly events
- ✓ 10+ links to customized job searches

Official website of the Department of Homeland Security

NICCS™
NATIONAL INITIATIVE FOR CYBERSECURITY CAREERS AND STUDIES

Categorizing and Describing Cybersecurity Work for the Nation

As of Friday, September 1, 2017, NICCS has integrated the latest National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework into our NICCS Cybersecurity Workforce Framework and Education and Training Catalog.

[Continue Reading >](#)

Training Formal Education Workforce Development

Training Catalog

The NICCS Training Catalog provides a robust listing of cybersecurity and cybersecurity-related training courses offered in the U.S. The Training Catalog contains over 3,000 courses, with more courses being added every day!

[Search Courses](#)

Your Location Providers Courses Course and Provider Quantity

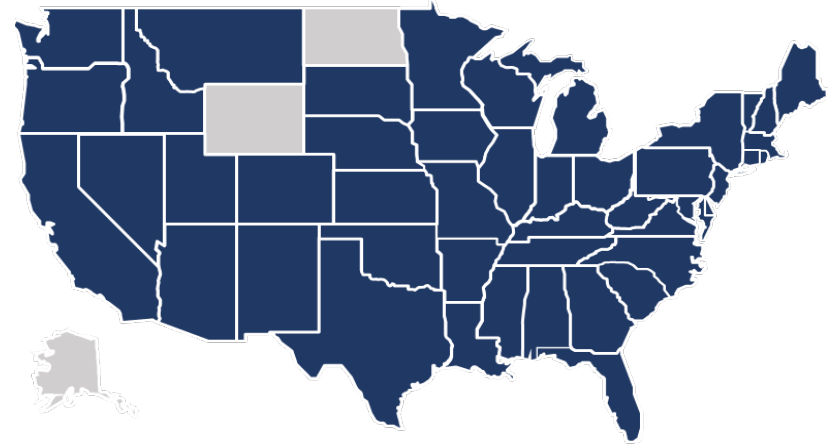
niccs.us-cert.gov

Workforce Development Toolkit and Tools



College Opportunities and Scholarships

Encourage students to apply to **National Centers of Academic Excellence (CAE)** institutions with top cybersecurity programs



240+ CAEs in 47 states,
D.C., and Puerto Rico



Share information about the **CyberCorps® Scholarship for Service (SFS)** program with college students looking for careers in cybersecurity

Federal Virtual Training Environment (FedVTE)

DHS offers free cybersecurity training for U.S. government employees, contractors, and veterans!

- ✓ Available to Federal, State, Local, Tribal, and Territorial government employees, approved contractors, and U.S. veterans
- ✓ Courses that range from beginner to advanced levels
- ✓ Over 210,000 registered users
- ✓ 31,000+ veteran users (through our non-profit partner Hire Our Heroes™)
- ✓ Over 60 courses and growing!



[Fedvte.usalearning.gov](https://fedvte.usalearning.gov)

Cybersecurity Training for Veterans

Build and strengthen key knowledge and skills

Federal Virtual Training Environment (FedVTE) offers free, online, 24-hour on-demand training available to U.S. government employees and veterans

Sign up for an account at fedvte.usalearning.gov

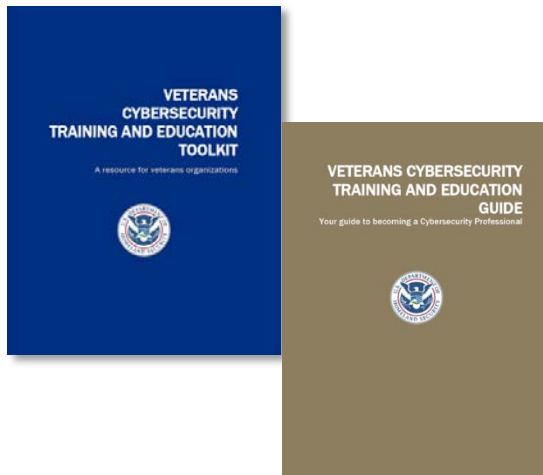


The **Cybersecurity Training and Education Guide** helps veterans:

- Assess if a career in cybersecurity is the right path
- Plan the career transition
- Use DHS training resources

The **Toolkit** provides sample language to connect with veterans

Visit niccs.us-cert.gov/training/veterans to download the guide and toolkit



Integrating Cybersecurity in the Classroom

Encourage early knowledge and interest

Cybersecurity Curriculum funded by DHS

- ▶ The **Cybersecurity Education and Training Assistance Program (CETAP)** grant equips teachers with learning tools

Download curricula: nicerc.org



Coming Soon! Work Role Capability Indicators

NICE Framework

Categories

Specialty Areas

Work Roles

CAPABILITY INDICATORS

Education

Training

Certifications

Experiential Learning

Continuous Learning

PROFICIENCY LEVELS

Entry

Intermediate

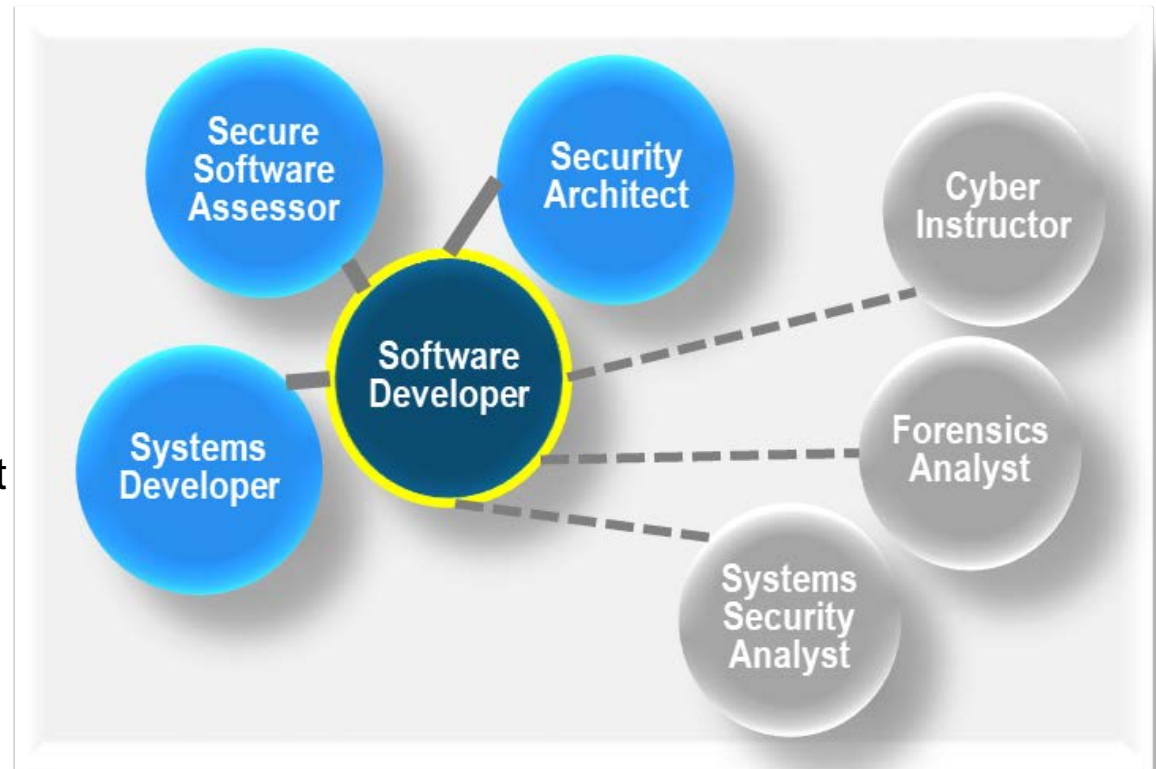
Advanced



Coming Soon! Career Pathways

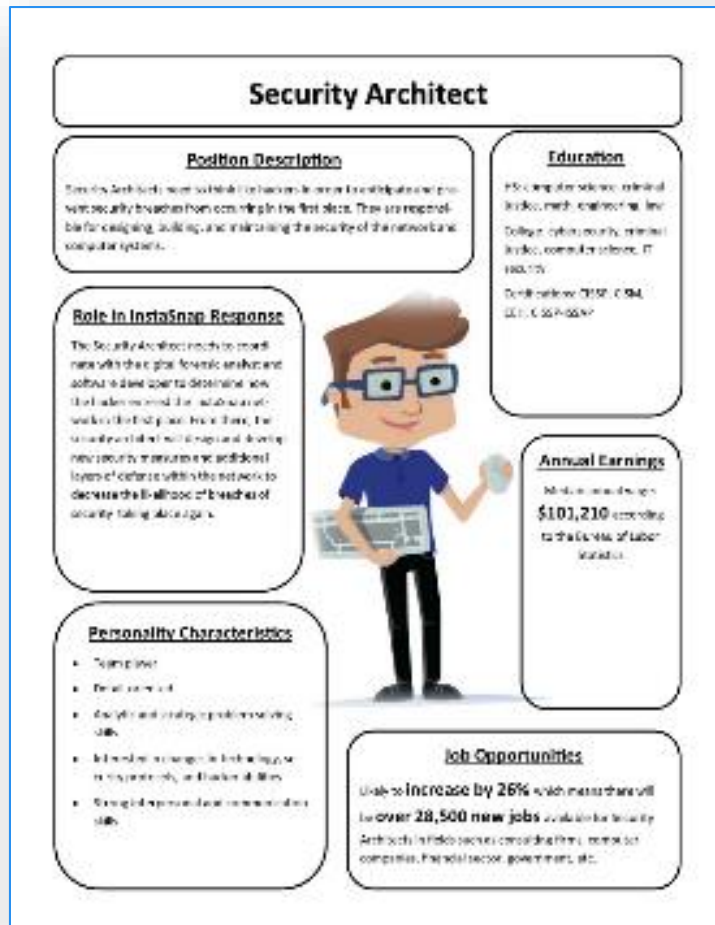
...Coming this year to help explain cybersecurity careers

- ✓ Plot your current role based on your knowledge, skills, abilities, and capabilities
- ✓ Find similar Work Roles and learn the types of education, experience, and learning you will need to get there
- ✓ Plan your next career milestone using the data provided to enhance your skillset!



Coming Soon! Cybersecurity Career Profiles

...Coming this year to help explain cybersecurity careers



Security Architect

Position Description
Security Architects work to build or enhance systems to mitigate network security threats from computers in the first place. They are responsible for configuring, building, and maintaining the security of the network and computer systems.

Education
BSc in computer science, criminal justice, math, analytical, law
College: cybersecurity, criminal justice, computer science, IT security
Certification: CISSP, CISM, CCIS, CCSP, CEH


Role in Incident Response
The Security Architect needs to coordinate with the global forensic analysis and software development to determine how the hacker entered the network and how to prevent it from happening again. They also coordinate with the incident response team to develop new security measures to address layers of defense within the network to decrease the likelihood of breaches of security taking place again.

Annual Earnings
Median annual wage: **\$101,210** (according to the Bureau of Labor Statistics)

Personality Characteristics

- Team player
- Detail oriented
- Analytical and strategic problem-solving skills
- Ability to communicate technical issues to non-technical staff
- Strong interpersonal and communication skills

Job Opportunities
Likely to increase by **26%** which means there will be **over 28,500 new jobs** available for Security Architects in the sectors consisting of the private sector, companies, the public sector, government, etc.



- ✓ View various career profiles across the cybersecurity field
- ✓ Understand capabilities and characteristics of each profile
- ✓ Dive deeper into day-to-day position duties as well as incident response roles
- ✓ View career projections within the profile



STOP. THINK. CONNECT.™ Resources

The Campaign provides **FREE** resources available to the public, with toolkit full of materials designed for a wide variety of audiences.

✓ **Download materials** covering topics including:

- Online safety for kids
- Mobile security
- Social Media and Online Privacy
- Phishing and Identify Theft
- Malware

✓ **Share resources** with your colleagues, family, and community

✓ **Join today!**



Download @ www.dhs.gov/stopthinkconnect



National Cyber Security Awareness Month

October is National Cyber Security Awareness Month (NCSAM)

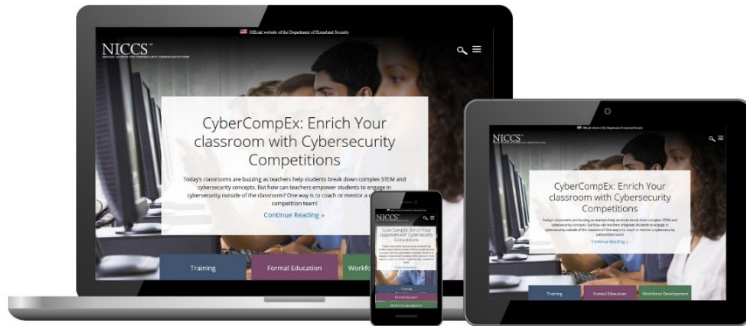


National Cyber Security
Awareness Month

GET INVOLVED @ DHS.GOV/STOPTHINKCONNECT



Contact



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