Achieving Cybersecurity Excellence Through Evolution of the Nation's Cyber Workforce

Benjamin Scribner
Department of Homeland Security (DHS)
National Cybersecurity Education & Awareness Branch (CE&A)

October 2014
Mid-South Cyber Security Summit
According to the HP 2013 Cost of Cyber Crime Study, the average annualized cost of cybercrime for the 234 participating US companies incurred per organization was $7.2 million, with the maximum being $58 million.

This is an increase of 26 percent, or $2.6 million, over the average cost reported in 2012.
Organizations in defense, financial services and energy and utilities suffered the highest cybercrime costs.
As part of the Cyberspace Policy Review, President Obama identified cybersecurity education and awareness as a key gap.

CE&A leads activities filling this gap:

- Cyber Awareness, Training, and Education Programs
- Formal Cybersecurity Education
- Cybersecurity Education and Careers Research
- National Professionalization and Workforce Development Program
- Strategic Partnerships
NICE raises national cybersecurity awareness, broaden the pool of cyber workers through strong education programs, and seeks to build a globally competitive cybersecurity workforce.
Cybersecurity Workforce Needs

There is a growing need…

- By 2015, an estimated 2.5 million* new cybersecurity positions will exist. The US America needs clear requirements for job candidates and the positions they fill.
- The cyber community must develop a sustainable pipeline of high-caliber candidates with standardized, requisite skills and training across government, industry, and academia.

Workforce Challenges

- Lack of standardized language to describe and organize cybersecurity work.
- Colleges can't create programs that are clearly aligned to jobs.
- Employers often have to retrain new hires in the specific skills required.
- Students don’t have clear job prospects and career opportunities.
- Policy makers can’t set standards to promote workforce professionalization.

CYBERSECURITY IS NOT HOMEBUILDING
The National Cybersecurity Workforce Framework is the foundation for increasing the size and capability of the US cybersecurity workforce.

**The Workforce Framework:**
- Organizes work into Categories and Specialty Areas
- Baselines knowledge, skills, and abilities (KSAs) and tasks

**Supports strategic workforce development efforts:**
- Workforce Design
- Recruitment and Selection
- Employee Development
- Retention and Succession
**Benefits of Using the Workforce Framework**

When degrees, jobs, training and certifications align to the Workforce Framework…

- **Educators** can create programs that are aligned to jobs
- **Students** will graduate with knowledge and skills that employers need
- **Employers** can recruit from a larger pool of more qualified candidates
- **Employees** will have better defined career paths and opportunities
- **Policy makers** can set standards to promote workforce professionalization
WIDESPREAD IMPLEMENTATION UNDERWAY

**Government**

**Education**

**Industry**

- MITRE
- PwC
- Suntiva
- Secure Decisions
- Cisco
- McAfee Security
- Phoenix Technology Solutions, LLC
- Avaya
- John Deere
- Avaya
- SRA International Inc.
- Deloitte
- Northrop Grumman
- Electrosoft
- Verizon
- DISCOVER
- Windstream Communications
NICCS™ WEBSITE

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

Resources for everyone – employees, employers, students, educators, parents, policy makers

✓ 5,000+ visitors per month
✓ 1,500+ training courses mapped to the National Cybersecurity Workforce Framework
✓ 100+ links to cybersecurity resources
✓ 15+ tools for managers
✓ 10+ monthly events
✓ 10+ links to customized job searches

…and more coming soon!

www.niccs.us-cert.gov
For questions about NICE, the Workforce Framework, and other initiatives, please contact:

National Initiative for Cybersecurity Careers and Studies (NICCS) Mailbox at NICCS@hq.dhs.gov

Links

Workforce Framework:
www.niccs.us-cert.gov/training/tc/framework

NICCS:
www.niccs.us-cert.gov
HOW TO REACH US

DHS CYBERSECURITY EDUCATION & AWARENESS BRANCH

Robin “Montana” Williams
Branch Chief
Phone: (703) 235-5169
Email: robin.williams@hq.dhs.gov

Kristina Dorville
Deputy Branch Chief
Phone: (703) 235-5281
Email: kristina.dorville@hq.dhs.gov

Benjamin Scribner
Program Director,
Professionalization and Workforce Development
Phone: (202) 450-0169
Email: benjamin.scribner@HQ.DHS.GOV