Cybersecurity Workforce Structure

Briefing to the

Information Security and Privacy

Advisory Board

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Drivers and Direction

[We] will be unable to combat...threats without a more coordinated, sustained effort to increase cybersecurity expertise in the federal workforce.

Partnership for Public Service

All the Services are desperately short of people who have defensive and offensive cybersecurity war skills

Defense Secretary Robert Gates

Only about 1,000 people in the entire United States with the skills needed for...frontline cyber defense, but 20 or 30 times that many are needed.

NPR’s Morning Edition 7/19/10

“Develop a strategy to expand and train the workforce, including attracting and retaining cybersecurity expertise in the Federal government” (Cyberspace Policy Review, May 2009)
Objective: Ensure Federal agencies have HR tools needed to attract, hire and retain a skilled cybersecurity workforce

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Collaboration and input from Federal agencies are critical
Phase 1 – Define the Work

- Group cybersecurity work into 3 categories:
  - Network Operations and Defense
  - Law Enforcement and Counterintelligence
  - Specialized Computer Network Operations
- Ensure consistency and common taxonomy across NICE Tracks
- Challenges remain to scoping the overall workforce
Challenges

- Positions not easily identified in HR databases
- Federal employment data maintained by occupational series
- Cybersecurity positions currently classified in at least 18 different series, including IT management, criminal investigator, computer engineer
- Only some of the jobs in any of those series are cybersecurity
Occupational Series Included in Cybersecurity Workforce Definition

Preliminary Findings

- 854 computer eng
- 855 electronics eng
- 1550 computer science
- 391 telecom equip operator
- 13 other series, including security admin, acquisitions, program mgt, training, criminal investigation, intelligence
- 2210 IT Mgt
Phase 2 – Develop Competency Models

- Analyzed cybersecurity jobs, tasks, skill requirements and competencies (Jan 2010)
- Subject matter experts reviewed tasks and competencies (June 2010)
- Linked tasks to competencies
- Workforce survey (Oct 2010)
- Analyzed survey data (Nov 2010)
- Competency Model published (Feb 2011)
Phase 3 – Analyze Workforce Issues

- Working with agencies to identify and analyze barriers, challenges and successful practices
- Focus groups with hiring managers, employees, recruiters and cybersecurity experts
- Held 6 sessions in August, October & November (24 agencies, 90+ participants)
- Discussed challenges, successful practices and possible strategies
Phase 4 – Develop HR Strategies

- Supporting agencies’ current requirements:
  - Schedule A hiring authority granted to several agencies
  - Use of hiring flexibilities for recruitment needs
  - Direct Hire Authority for 2210, Information Security

- Future work includes assessing changes that may be needed for classification, recruitment, staffing and other HR policies
Summary

- Continue partnering to ensure Federal agencies can attract, recruit and retain skilled employees to accomplish cybersecurity missions
- Let OPM know about recruitment and retention challenges and successes:
  - How can Federal agencies compete for talent?
  - How can HR policies and tools better meet needs?
  - How are we communicating opportunities?
  - How can we work together to attract the right talent?
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Questions?
A New Day for the Civil Service