

Information Security: Still A Growth Career

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Outline

- Discuss the evolution of IS/IA as a distinct career field
- Review current status of IS/IA professionals in public and private Sectors
- The (ISC)² Global Information Security Workforce Study—2008 and CISO Survey Reports 2009-10
- Examine current educational and professional certification opportunities
- Discuss current government programs

Growth of IS/IA as a Career Field

- First dedicated IS/IA officers began to appear in the early 1970s.
- National security community was leader
- Civil agencies and private sector followed
- Organizational placement/career advancement/recognition issues
- Higher education recognizes need for dedicated IS/IA programs

Growth—Cont.

- Slow growth in profession during 80s and 90s
- Real surge began with the advent of internet as the basis for E-gov/E-commerce
- Security problems create need for dedicated and qualified IT/IA security workforce
- Need for qualified workforce stimulates the higher education community
- Development of professional certifications for IT/IA security
- DOD IT/IA workforce improvement program

The (ISC)² Global Information Security Workforce Study--2008

- Respondents had:
 - Responsibility for acquiring or managing their organizations' information security
 - Involvement in decision-making process regarding use of security technology and services and/or hiring of internal security staff
 - Employment in the information security profession
- Study objectives:
 - Gain detailed insight into important trends and opportunities within the information security profession
 - Provide you with information you can use to further your career, such as a clear understanding of pay scales, skills gaps, training requirements, corporate hiring practices, security budgets, career progression and corporate attitude toward information security

Highlights from 2008 Global Information Security Workforce Study

- Conducted by Frost & Sullivan; sponsored by (ISC)²
- 1.66 million IS/IA professionals worldwide
- Number will grow to 2.7 million by 2012
- In North America the numbers are 749,470 going to 1,100,072 by 2012
- Information technology, financial services, government, & professional services are largest employers

Highlights (North Amer) —Cont.

- Level of Education—9% High School; 54% Bachelors; 31% Masters; 2% PhD
- Years of Experience—45% 5 to 9 Years
- Compensation—50% of respondents made \$90K or more after five years of experience

Government CISO Survey 2009-10

- Conducted by (ISC)2
- CISO and Senior level information security
- Trend in two years –
 - Einstein, Web 2.0, policies in place, collaboration
 - Enjoy position

Government CISO Survey 2009-10

- Staffing plans for hires
 - Contractor conversions (30.2 percent)
 - Internally (29.8 percent)
 - Private Sector (29 percent)
 - Other agencies (21.3 percent)
 - Scholarship for Service Program (20 percent)

IS/IA Security Has Many Facets

- Chief Information Security Officers
- Technical Specialists
- Policy Wonks
- Training Specialists
- Intrusion Monitoring Specialists
- Forensic Specialists
- Evangelists
- System/Network Security Administrators

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Career Levels and Traditional Paths
Senior Executive
CIO; CISO; CTO; CRO; COO

↑
EXPERT

Principal Consultant;
Senior/Chief Architect;
Senior Security Auditor; Etc.

↑
MANAGER/DIRECTOR

Consulting Manager/Director; Information
Security Manager/Director; Head of
Security Audit; Information Risk
Manager/Director; Operations
Manager/Director

Specialist (Technical/Business)

Security Consultant; Security
Designer/Architect; Security Auditor;
Information Risk Consultant; Security
Product Manager; Business Analyst

Specialist (Management) Project Manager;
Program Manager; Team Leader;
Account Manager; Sales Manager;
Marketing Manager

ENTRANT

Security Analyst; Security Developer; Security Administrator; Trainee Information Risk Consultant; Security Product
Sales; Etc.

Years of experience & ability

What is Happening in the Educational Environment?

- Significant Growth of IS/IA Classes and Programs at Universities and Colleges
- NSA/DHS Academic Centers of Excellence Program
- Scholarship for Service Programs
- Interesting Developments at the Community College Level
- Need for Continuing Education

Rockefeller/Snowe Bill incorporated into Lieberman/Collins/Carper Bill

- Introduced in April 2009—builds on existing program
- Section 12 focuses on Federal Cyber Scholarship-for-Service Program
- Scholarships for up to 1000 students/ year
- Provides for summer and part-time employment for K-12 students
- Authorizes \$50M in FY-1010 going to \$70M by FY 2014

Role of Professional Certifications

- Growth in IA/IT Profession has been accompanied by growth of professional certifications
- ISO 17024 adds value to certifications
- Department of defense professional certification program
- State department program
- Growing reliance on certification as an employment criteria

The Future of the IS/IA Career Field

- IS/IA career field has bright future
 - Continued growth in integration of technology into all facets of life
 - IT security concerns will not be solved in our lifetime
- Career field is both wide and deep—plenty of opportunity for many participants

Advice to Interested Students

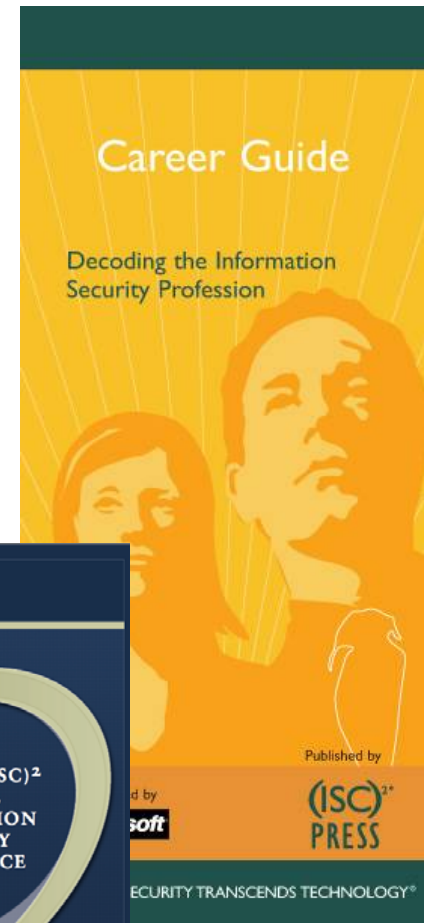
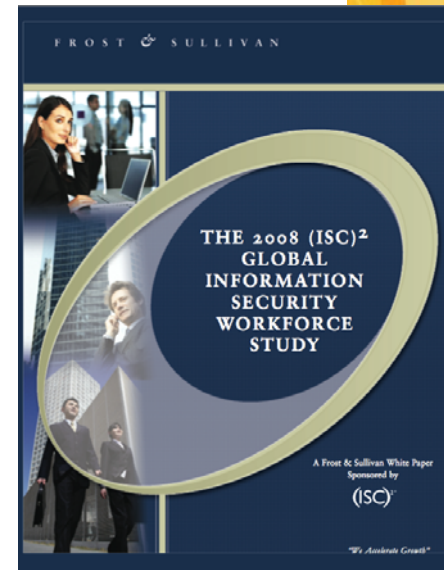
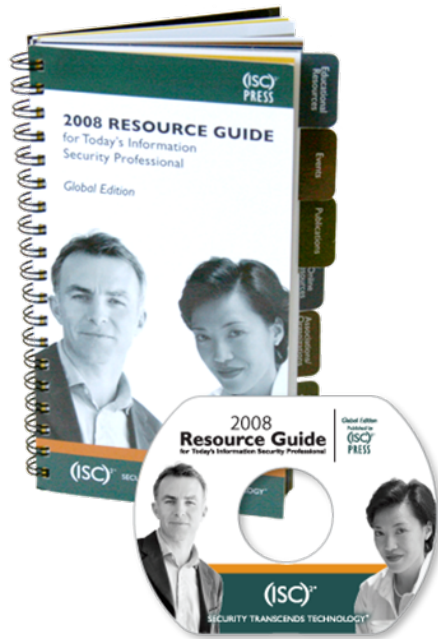
- Don't get involved in hacking
- Keep a clean record—many IA/IS positions with government or government contractors require a security clearance
- Opportunities to work in career field
 - Internships
 - Volunteer Positions

Advice—Cont.

- Develop soft skills—IS/IA is not just about the technology.
 - Ability to write clearly and speak effectively is very important
- Understand the business impact of IT security

(ISC)² Publications of Interest

- (ISC)² Resource Guide for Today's Information Security Professional
 - ◆ (ISC)² Hiring Guide to the Information Security Profession
 - ◆ (ISC)² Career Guide: Decoding the Information Security Profession
 - ◆ 2008 Workforce Studies (Builds on previous reports)



Questions

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