Information Systems Security Engineering Professional (ISSEP)
Presentation Outline

• What is ISSE
• Why ISSEP
• Development of the ISSEP
• Concentration Content
• Certification Specifics
Systems Security Engineering Definition

The art and science of discovering users security needs and designing and making, with economy and elegance, (information) systems so that they can safely resist the forces to which they may be subjected.
Systems Security Engineering Process

- Discover Needs
- Define System Requirements
- Design System Architecture
- Develop Detailed Design
- Implement System
- Assess Effectiveness
- Plan Technical Effort
- Manage Technical Effort
- Users/Users’ Representatives

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Why was the ISSEP created

• Enhance the field of information systems security engineering

• Promote a common process

• NSA/IAD has committed itself to promoting this certification to its employees and vendors
Why was the ISSEP created (continued)

• Fill a need that NSA has identified to recommend and use approved contractors to support our customers.

• While a specific policy statement has not been issued at this time, it is not known if the NSA/IAD will require, or simply prefer, individuals with the ISSEP in connection with certain information assurance projects.
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Development of the ISSEP

- Joint effort with NSA/IAD and International Information Systems Security Certification Consortium, Inc. (ISC)$^2$
- Initiated in April 2002
- Test development started in October 2002
- First exam available in June 2003
NSA’s Role

- NSA/IAD provides the Subject Matter Experts

- Motivation and justification for this project is found in NSD 42 and the Federal Technology Transfer Act of 1986 (15 U.S.C. Section 3710A)
(ISC)²’s Role

- (ISC)² will own and manage the certification

- The development of concentration examinations is a direct response to (ISC)² research indicating that these needs of information security professionals were not being met.
Candidates for the ISSEP

- Candidates for the ISSEP will have to successfully complete the Certified Information Systems Security Professional (CISSP) exam and be in good standing.

- The Common Body of Knowledge (CBK) covered by the 10 domains is considered foundational to the role of the ISSE.
CISSP Domains

- Security Management Practices
- Security Architecture and Models
- Access Control Systems & Methodology
- Application Development Security
- Operations Security
- Physical Security
- Cryptography
- Telecommunications, Network, & Internet Security
- Business Continuity Planning
- Law, Investigations, & Ethics
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What the ISSEP Covers

• The ISSEP exam will include the additional domains of:

  - Systems Security Engineering
  - Certification and Accreditation
  - Technical Management
  - U.S. Government Information Assurance Regulations
Systems Security Engineering Process

1. Describe the Information Systems Security Engineering (ISSE) process as documented in the Information Assurance Technical Framework (IATF). (Knowledge)

2. Describe systems engineering processes in general and infer how security engineering integrates with these processes. (Comprehension)

3. Construct network architectures according to the principle of Defense-in-Depth. (Application)

4. Construct proper documentation for each phase of the ISSE process. (Application)
Certification and Accreditation

Sub-Domains
1. Definitions
2. Applicability to U.S. Government agencies
3. NIACAP, DITSCAP, Risk Management/Assessment

1. Describe the National Information Assurance C&A Process (NIACAP) and the Department of Defense Information Technology Security C&A Process (DITSCAP). (Knowledge)
2. Explain key roles in the C&A process. (Comprehension)
3. Differentiate the applicability of U.S. Government regulations with respect to C&A. (Analysis)
Technical Management

Sub-Domains

1. Plan technical effort
2. Manage technical effort

1. Identify the responsibilities of a program manager. (Knowledge)
2. Describe processes and tools used to manage technical efforts. (Knowledge)
3. Predict personnel, funding, and other needs based on the level of effort and technical complexity of the project. (Comprehension)
Sub-Domains
1. National policies - Committee on National Security Systems (CNSS)
2. Civil agency policies
3. Defense agency policies

1. Define common IA terminology used by the U.S. Government. (Knowledge)
2. Interpret all regulations dictating IA requirements for civil and defense agencies. (Application)
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Training Availability

- Training is available
- The course is two days and covers the four new domain areas
When and Where the ISSEP Exam is Available

• As of 1 June 2003, candidates can request to take the ISSEP exam on a space available basis wherever the CISSP exam is being administered
Cost of the Exam and Credential

• The introductory cost of the exam is $295.00

• The annual maintenance fee for the credential is $35.00

• There are no additional Continuing Professional Education (CPE) requirements, but 20 of your 120 required CPEs must be in the new domain areas
For More Information

• (ISC)² website for the study guide and test dates and locations
  – www.isc2.org

• NSA website for more information on efforts of the Information Assurance Directorate
  – www.nsa.gov