Introduction

The objective of this publication is to introduce existing practical information security qualifications and serve as an easy-to-use reference for both prospective students of information security and their organisations. Developed by Danielyan Consulting LLP, an information security consultancy, at the request of the International Relations and Security Network (ISN) at the Swiss Federal Institute of Technology Zurich, this publication aims to continue and contribute to ISN's training activities in the information security field launched by the ISN Information Security Fundamentals seminar held in Zurich on 25–27 August 2003.

Unlike most other arts and sciences, where established institutions of higher education are usually the primary or even the only source of education and training, information security as a relatively new discipline at the crossroads of diverse, yet equally important subjects such as cryptography, electrical engineering, computer science and law does not enjoy, for better or for worse, such a situation. What we have now in the information security profession is a number of different organisations, both non-profit and commercial, offering information security training and qualifications. While some traditional higher education institutions are now offering degrees and certificate programs in information security, most of them are usually theoretical in nature and do not prepare the students for a practical information security work at their organisations. As a result, non-academic – professional and/or practitioner – qualifications coupled with relevant work experience offer more in terms of readily usable skills and knowledge than most academic venues of study.

Naturally, not all training and qualification programs are created equal – aside from the obvious differences in specialisation, focus and professional level, they also differ in aspects such as costs and recognition, so it is not easy to choose the most appropriate and rewarding qualification to pursue. For an IT specialist, to gather the necessary details and understand all the pros and cons of all available qualifications and choose the one which is the most appropriate given their experience, prior knowledge, job responsibilities and career goals, is a considerable task. The aim of the ISN Information Security Qualifications Handbook is to guide and assist in this matter.

For the purposes of this handbook information security qualifications are grouped into two broad categories: vendor-neutral (presented in Part One) and vendor qualifications (introduced in Part Two of this handbook).

By definition vendor-neutral qualifications focus on universal information security principles, skills and knowledge, which do not depend on particular system, solution, or IT environment. Vendor qualifications, in contrast, mainly offer in-depth coverage of particular vendor's products and solutions and focus less on general information security concepts and knowledge than vendor-neutral qualifications. Vendor qualifications may be seen as specialisations which may be pursued, if appropriate, after gaining a vendor-neutral qualification in information security. In this case general information security skills and knowledge would be complemented by the in-depth mastery of the particular vendor's solutions.

All in all, 81 qualifications awarded by 29 organisations are covered in this handbook, of which 45 qualifications are vendor-neutral and 36 are vendor qualifications.

I hope this publication will be of assistance to those interested in information security studies and will contribute to the security and reliability of our societies' information systems and infrastructures.

Edgar Danielyan
Danielyan Consulting LLP

Comparison of vendor-neutral general information security qualifications

Qualification	Awarded by	Approx. level	Requirements	CPE	Cost *
Security+	CompTIA	Entry-level	Examination	No	US$ 225
TICSA	TruSecure	Entry-level	Examination and work experience or approved training	Yes	US$ 395
CIWSP	CIW	Entry-level	Two examinations	No	US$ 320
GISF	GIAC	Entry-level	Two examinations and practical assignment	Yes	US$ 250 + training
$(ISC)^2$ Associate	$(ISC)^2$	Practitioner	Examination and subscription to code of ethics	No	US$ 369 or US$ 499
GSEC	GIAC	Practitioner	Two examinations and practical assignment	Yes	US$ 450
SSCP	$(ISC)^2$	Practitioner	• Examination • Subscription to code of ethics • Minimum 1 year of work experience	Yes	US$ 369
SCNP	SC	Practitioner	Two examinations	No	US$ 300
CIWSA	CIW	Practitioner	Minimum three examinations	No	US$ 320 + variable
CISSP	$(ISC)^2$	Professional	Examination Subscription to code of ethics Minimum 4 years of work experience Professional sponsorship and verification	Yes	US$ 499
SCNA	SC	Professional	Four examinations	No	US$ 330
CISA	ISACA	Professional	• Examination • Subscription to code of ethics • Professional sponsorship and verification • Minimum 5 years of work experience	Yes	US$ 495
CISM	ISACA	Professional	• Examination • Subscription to code of ethics • Professional sponsorship and verification • Minimum 5 years of work experience	Yes	US$ 495
GSE	GIAC	Professional	Number of requirements – please see the entry for GSE	Yes	US$ 2,250

* Please note that costs depend on candidate's circumstances (such as examination location, membership and so on), do not include preparation, training or travel expenses, and are subject to change. For up to date information please contact the awarding organisation.

CPE = Continuing Professional Education requirements

Vendor-neutral general information security qualifications by level

Entry-level qualifications

- CompTIA Security+
- TruSecure ICSA Certified Security Associate
- CIW Security Professional
- GIAC Information Security Fundamentals

Practitioner qualifications

- (ISC)² Associate
- GIAC Security Essentials Certification
- Systems Security Certified Practitioner
- Security Certified Network Professional
- CIW Security Analyst

Professional qualifications

- Certified Information Systems Security Professional
- Certified Information Systems Auditor
- Certified Information Security Manager
- GIAC Security Engineer
- Security Certified Network Architect

Vendor-neutral information security qualifications by specialisation

Architecture:	ISSAP
Management:	CISSP, ISSMP, GSLC, CISM, CISMP
Engineering:	ISSEP, GSE
Firewalls:	GCFW
Intrusion detection:	GCIA
Incident handling:	GCIH, CERT
Audit:	GSNA, CISA, GSAE, BS7799 LA, BS7799 IA
Forensics:	GCFA, CCFT, CIFI, CFCE
Physical security:	CPP, PSP
Investigations:	PCI, CCCI, CCCP, CCCA, CIFI
Business continuity:	ABCP, CBCP, MBCP
Fraud:	CFE

Testing organisations

Examinations mentioned in this handbook are either administered by the awarding bodies themselves (sometimes with the assistance of specialised testing and knowledge measurement advisors), or by one or both of the following two worldwide testing organisations:

Pearson VUE (www.vue.com)

Pearson Virtual University Enterprises (VUE) is a part of the Pearson Group. VUE administers both professional licensure and information technology certification examinations. Visit www.vue.com for more information on examination fees, testing centre locations and list of offered examinations. Online exam registration and payment available.

Thomson Prometric (www.prometric.com)

Thomson Prometric is a subsidiary of Thomson Corporation and has testing centres in over 120 countries around the world. Prometric provides professional and academic examination services in addition to IT certification examinations. Visit www.prometric.com for more information on examination fees, testing centre locations and list of offered examinations. Online exam registration and payment available.

Form of examinations

All examinations administered by VUE and Prometric use computer-based testing (CBT) technology. Examinations administered by awarding bodies themselves may take form of either computer-based testing or pen and paper examinations.