

## Security Evaluation Laboratory

Common Criteria (CC) Testing and Evaluation

*Cygnacom Solutions, an Entrust company, has been providing professional computer security services and cryptographic solutions to government and business since 1994. With a staff of highly qualified engineers, Cygnacom has the depth and experience to offer clients a complete package of security risk assessment and consultation services, as well as cost-effective security evaluation through our testing laboratories. Cygnacom operates two security testing laboratories: the **Security Evaluation Lab (SEL)** and the **Cryptographic Evaluation and Assessment Lab (CEAL)**. Both are accredited by NVLAP (National Voluntary Laboratory Accreditation Program) — a program of NIST (National Institute of Standards and Technology). Cygnacom's laboratories perform compliance testing to verify that product design, implementation, and documentation meet certain security requirements recognized by the U.S. government. Typically, commercial products submitted for validation include operating systems, firewalls, and cryptographic modules. Cygnacom is a one-stop provider of comprehensive U.S. standards-based security testing and evaluation of both computer and cryptographic products.*

### Security Evaluation Laboratory (SEL)

The SEL is a certified National Information Assurance Partnership (NIAP) Common Criteria Testing Laboratory (CCTL) authorized to conduct product evaluations according to the Common Criteria (CC) (ISO/IEC 15408) and the Common Evaluation Methodology (CEM) under the U.S. Scheme. NIAP is a collaboration of the National Institute of Standards and Technology (NIST) and the National Security Agency (NSA).

The SEL is accredited to conduct independent evaluations up to Assurance Level 4 (EAL4) and can work with the NSA to evaluate products up to EAL7. Currently, 14 countries accept the results of SEL evaluations (at EAL4 and below) under NIAP's Mutual Recognition Arrangement (MRA). The Cygnacom SEL was among the first CCTLs to be accredited by NIAP, in August 2000.

The SEL was previously certified to perform both Common Criteria and Trusted Computer System Evaluation Criteria (TCSEC, or Orange Book) evaluations under the Trust Technology Assessment Program (TTAP). NSA has since replaced the TTAP with the CCTL program.

### SEL Services

The SEL offers a full range of NIAP accredited services. These consist of evaluating Protection Profiles (PPs), Security Targets (STs), and IT products (called Targets of Evaluation, TOEs, in CC terminology) at EAL1 through EAL7. Each of these activities is conducted under various levels of U.S. government participation — a requirement of a NIAP accreditation (and U.S. government recognition, in the cases of EAL5 through EAL7 evaluations). PPs and STs are the security requirement specifications required by the CC for evaluations. In addition to the NIAP accredited services, the SEL offers guidance and assistance in preparing for a Common Criteria evaluation, including help in preparing criteria and documentation. The SEL also offers general security consulting services.



Our experience in writing and evaluating PPs and STs allows us to produce these documents very efficiently. SEL staff can extract security-relevant product features from design documents, source code and engineering staff, and prepare evaluation evidence that can lead to significant savings for subsequent evaluations — allowing customers to continue developing products with minimal interruption and diversion.

### **SEL Accomplishments**

- As a TTAP lab and as a CCTL, the SEL has completed the evaluation of the Dragonfly Guard, the ITT Guard and Guard Companion (at EAL2) and the Sybase Adaptive SQL Server Anywhere (at C2). Evaluations are currently underway of a smart card product at EAL4, two remote trust components at EAL3 and EAL4, and a cryptographic server at EAL4.
- The SEL has written and/or evaluated Protection Profiles for a Public Key Infrastructure (certificate authority, key recovery, registration authority, client, and end systems), a High Assurance Guard, a Virtual Private Network, and a Peripheral Sharing Switch.
- Protection Profiles are currently being written for a remote trust product, to capture the FIPS 140-2 cryptographic module criteria (for NIST), and an X.500 Directory PP for the NSA.
- We have written and/or evaluated Security Targets for a Palladium modem, the ITT Dragonfly guards, and three others are underway.
- CygnaCom also supports the certification of High Assurance Guards for the NSA.

### **Protection of Proprietary Information**

Due to the sensitive nature of product evaluation, CygnaCom is committed to protecting customer information. In addition, as an accredited SEL, we are required by the National Voluntary Laboratory Accreditation Program (NVLAP) to protect vendor proprietary information from disclosure. Any breach of the information protection policy may result in termination of the SEL's accreditation status. A combination of physical security controls, Microsoft® Windows NT™ operating system security controls, and Entrust/PKI™ software-based encryption are used to protect vendor information and the systems that process it.

### **Staff Experience and Expertise**

CygnaCom's dedicated team of professionals have world-renowned expertise in third party assurance, cryptography, Public Key Infrastructure (PKI), operating systems, and data base management systems. They possess a history of computer security evaluation that extends back to the early days of the NSA's efforts to evaluate the security of commercial computing equipment. Many were involved in the development and refinement of the criteria, in the evaluation and certification of computing products, in ensuring even application of the criteria (as part of the Technical Review Board), and more recently, in refining the Common Criteria specification and developing evaluation methods and establishing accreditation requirements.

### **One-Stop Security Testing**

CygnaCom's SEL offers a full range of services to help clients navigate computer security standards and evaluation requirements including:

- An accredited Common Criteria (CC) product evaluation laboratory
- Product architecture, design, implementation, and documentation review
- Training for security product design and development teams
- Security product design and engineering-related consulting services
- An accredited FIPS 140-1/2 cryptographic module evaluation laboratory.

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CygnaCom Solutions Inc. was acquired by Entrust Technologies in March 2000. Entrust Technologies Inc. is the leading global provider of Trust Relationship Management™ software and managed services that enable organizations to optimize their business relationships by providing the confidence and convenience to exchange information and conduct transactions via the Internet. For more information, please visit [www.entrust.com](http://www.entrust.com).

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