Commercial Product Assurance: its relation to Common Criteria

ICMC 2017

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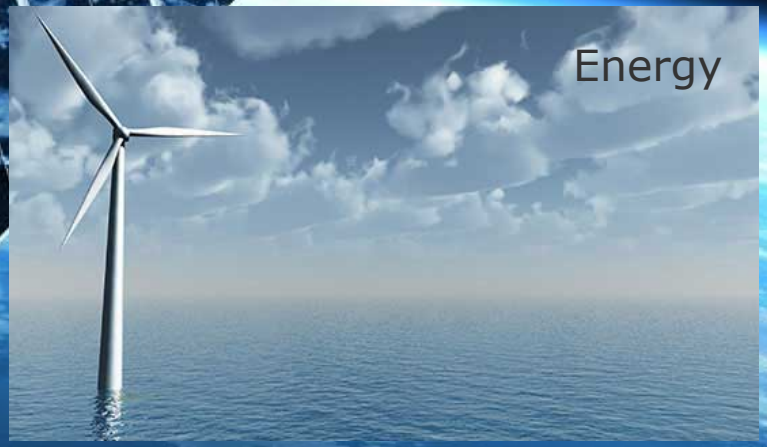
In an ever-more connected and digitized world…
…resilience to cyber incidents becomes increasingly important to address

Delivering certifications for over 150 years

Being **security ready**
has never been more critical



The threat is advancing and the cyber risks are real!

2016 German nuclear power plant	Computer viruses infection
2015 Ukraine power grid cyber attack	Outages resulted which lasted several hours and affected approx. 225,000 people in the regions
2014 Nuclear power plant in South Korea	The attackers released sensitive and confidential information online, including the designs and manuals for the plant's equipment
2014 US public utility network infiltrated	Chinese hacker "Ugly Gorilla" infiltrated the network
2013 US power company turbine control system	A technician inserted an infected USB drive into a computer on the network. The incident kept a plant off-line for three weeks
2012 Qatar's RasGas hit by virus	A virus which infiltrated 30,000 computer workstations forcing oil traders to revert to communicating by fax and telex
2010 Stuxnet worm targets Iran's Natanz nuclear facility	Reportedly ruined a fifth of the country's nuclear centrifuges

The role **DNV GL** plays is vital

CYBER SECURITY TEST LAB
75%
Smart grids
Smart meters
Commercial Product Assurance
Common Criteria

What is Commercial Product Assurance?

- A UK specific product assurance scheme
- Operated by NCSC (you'll know them as CESG)
- Based on pre-specified functionality
  - Known as Security Characteristics
- Has a defined methodology
  - Process for Performing Foundation Grade Evaluations
- Testing by Labs - Certification by NCSC
- Certificates valid for 2 years (6 for smart meters)

What is Common Criteria?

- An international product assurance scheme
- Operated by Governments around the world
- Based on pre-specified functionality
  - Known as collaborative Protection Profiles
- Has a defined methodology
  - Common Evaluation Methodology, and Supporting documents
- Testing by Labs - Certification by Governments
- Certificates valid for variable years!

Why am I talking about CPA and CC at ICMC?

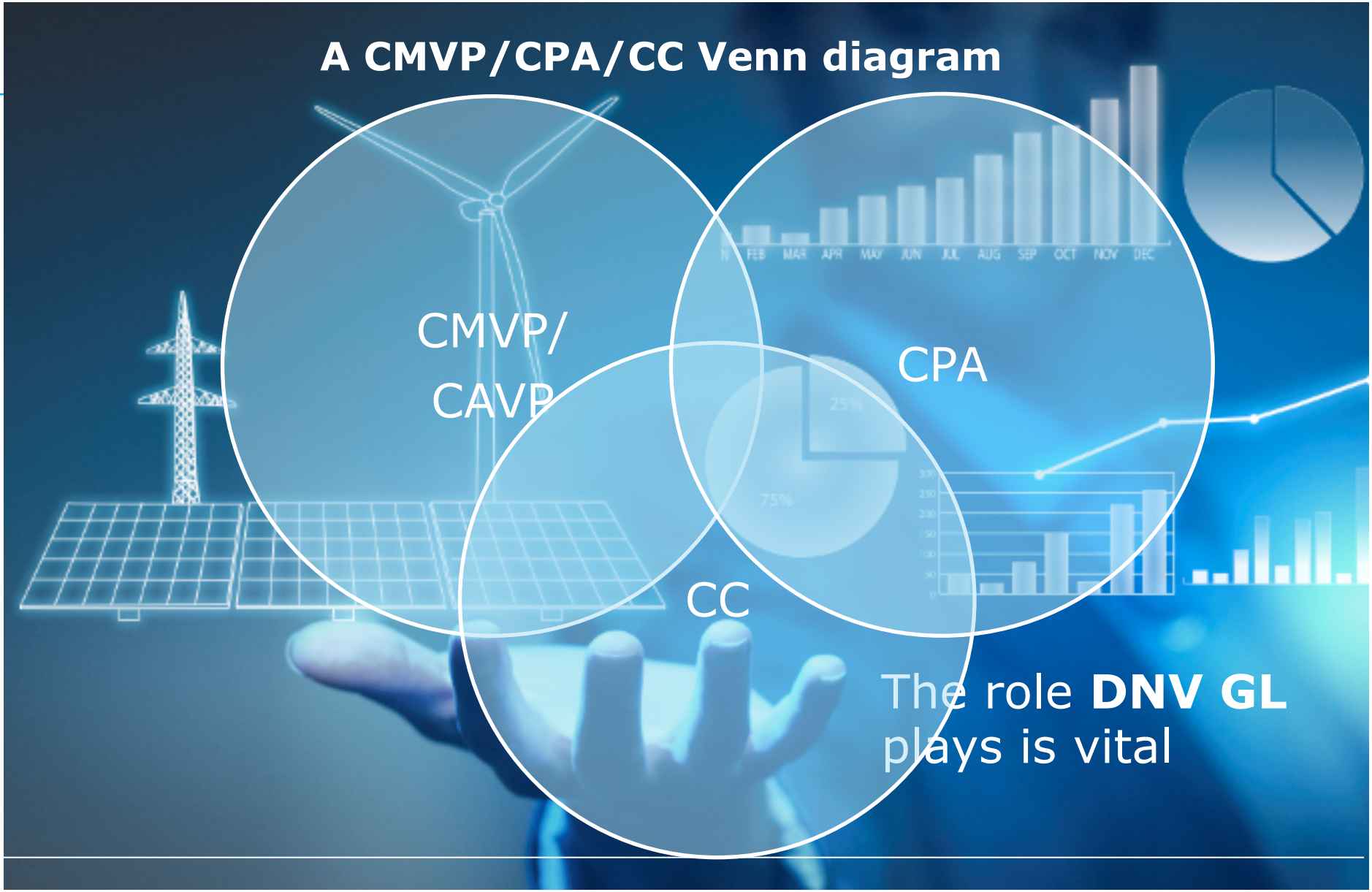
Most CC and CPA need crypto assurance	CPA formally recognizes CAVP/CMVP	ROI for your CAVP/CMVP investment
CAVP/CMVP generally not enough for product assurance	We all need product assurance	All could be used for IoT components

What are the differences between CPA and CC?

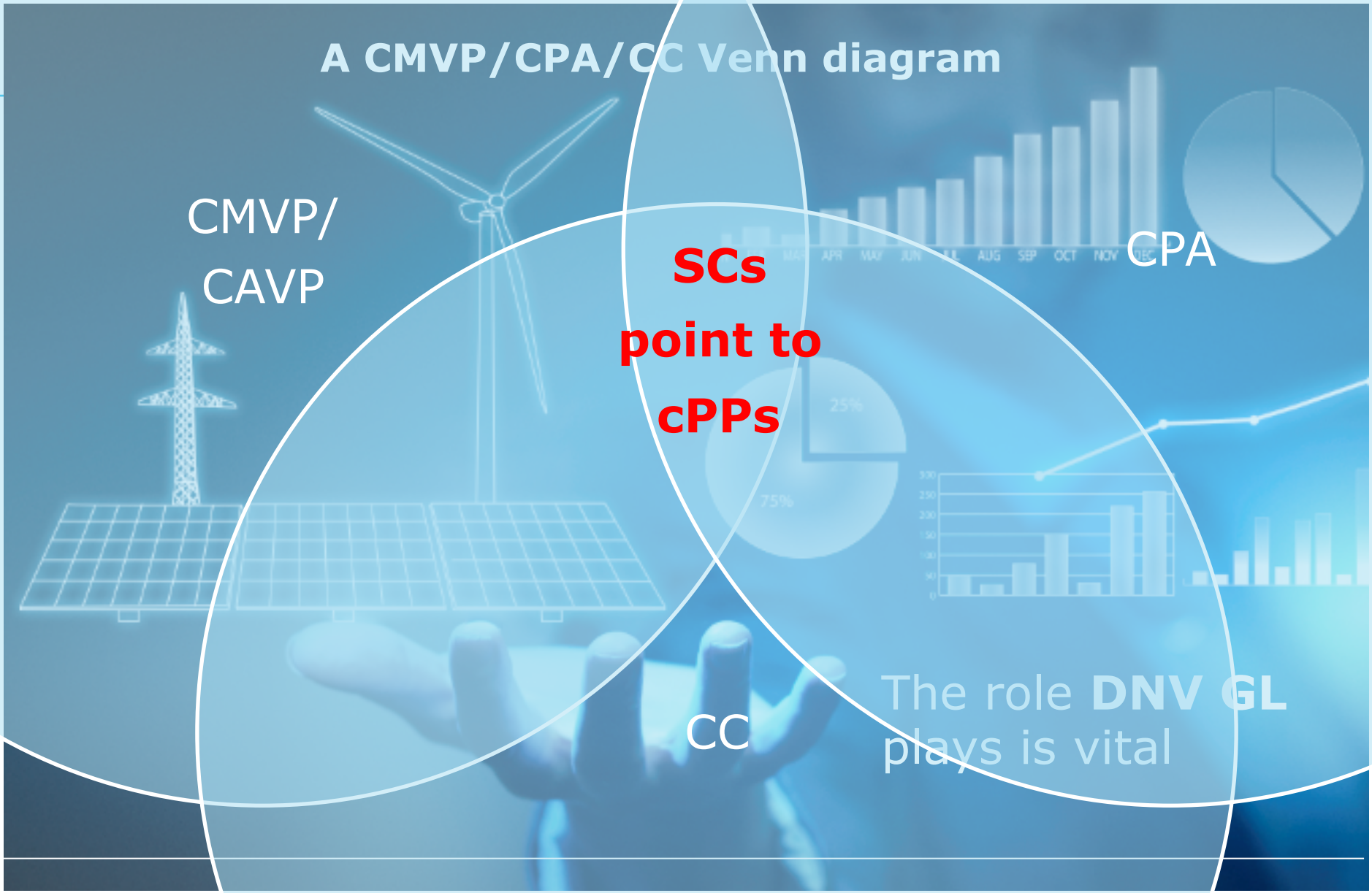
- National v International recognition
- CPA quicker (but some would dispute that…)
- cPPs are written by industry groups – SCs are written by NCSC
- There is a process to get new cPPs developed

- CC specifies assurance activities in the cPP
- CPA requires labs to define assurance activities for agreement with NCSC
- CPA requires vulnerability analysis – e.g. fuzz testing
- CPA has a Build Standard – CC generally deprecates predictive assurance

A CMVP/CPA/CC Venn diagram



A CMVP/CPA/CC Venn diagram



Progression …

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Security Characteristics collection

Created: 26 Aug 2016
Updated: 26 Aug 2016
Part of: CPA scheme library

Security Characteristics (SCs) for use with Commercial Product Assurance (CPA) assessments. Product developers and purchasers can use these to fully understand what security functions have been assessed by the test labs.

This collection comprises the various SCs that are produced for CPA.

For historical purposes, see also Security Characteristics archive.

Security Characteristics

Common Criteria

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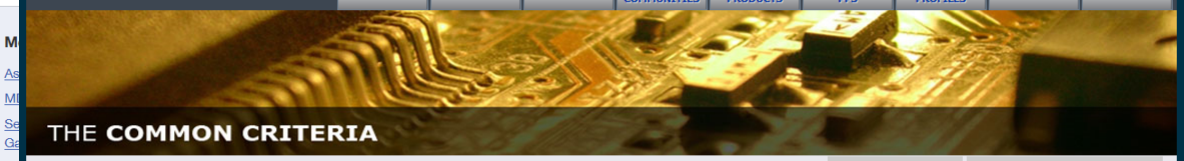


Protection Profiles | Archived Protection Profiles

Collaborative Protection Profiles (cPP) and Supporting Documents (SD)

The lists below contain collaborative Protection Profiles and related Supporting Documents developed openly by international Technical Communities (iTC) consisting of vendors, test laboratories, CCRA nations, and academia.

cPPs with SDs that have completed review by the CCDB for compliance with the CC and CEM

The cPPs below include SDs that have completed CCDB review for compliance with the CC and CEM and are therefore available for use under the terms of the Common Criteria Recognition Arrangement (CCRA). Evaluations conducted against cPPs on this list are mutually recognized according to the terms of the CCRA.

<This list currently has no items.>

cPPs with SDs that are currently being reviewed by the CCDB for compliance with the CC and CEM

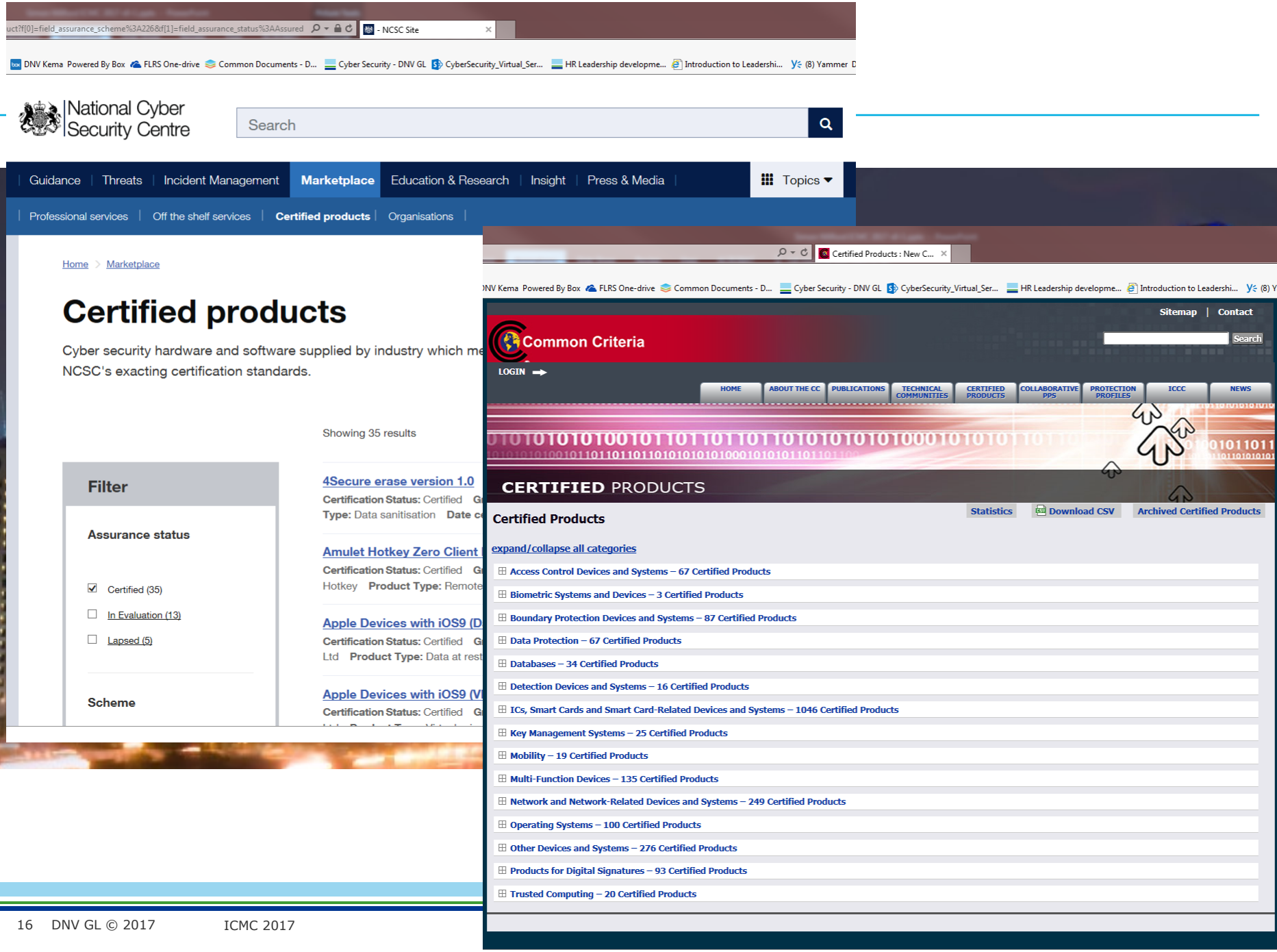
The following list contains collaborative Protection Profiles (cPPs) available for use. However, each Supporting Document (SD) listed below is currently being reviewed by the CCDB for compliance with the CC and the CEM. These documents are made available here in order to assist the iTC and to enable evaluations to take place as quickly as possible while the (necessarily thorough) CCDB review and voting process takes place. Not all schemes need to use these documents (although national endorsement statements may of course mandate their use). Those that do are encouraged to share experiences/recommendations with the iTC.

Products evaluated and certified using these documents are mutually recognized under the CCRA since the scheme performing the evaluation will ensure consistency with the CC and the CEM. Should the wider CCDB review find that an SD is not fully compliant; the iTC will be given notice of the necessary changes and a reasonable time to incorporate these before resubmitting to the CCDB review process. If an SD requires multiple CCDB reviews prior to approval, until the SDs are approved, the non-compliant parts of the SDs will be replaced by CEM activities. Once the documents have been approved by the CCDB they will be moved to the upper section and become mandatory.

expand/collapse all categories

- Boundary Protection Devices and Systems – 1 Protection Profile
- Data Protection – 4 Protection Profiles
- Network and Network-Related Devices and Systems – 2 Protection Profiles

* A cPP without a Certification Report indicates that no determination of compliance to the CC/CEM (APE class) has yet been made. Consequently, the cPP is outside CCRA mutual recognition. Some schemes may certify a cPP upon first use in combination with an IT product evaluation. In that case, an evaluation of an IT product where the Security Target claims compliance to these collaborative Protection Profiles must include the relevant work units related to the ASE class.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Showing 35 results
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Hotkey Product Type: Remote
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Biometric Systems and Devices – 3 Certified Products
Boundary Protection Devices and Systems – 87 Certified Products
Data Protection – 67 Certified Products
Databases – 34 Certified Products
Detection Devices and Systems – 16 Certified Products
ICs, Smart Cards and Smart Card-Related Devices and Systems – 1046 Certified Products
Key Management Systems – 25 Certified Products
Mobility – 19 Certified Products
Multi-Function Devices – 135 Certified Products
Network and Network-Related Devices and Systems – 249 Certified Products
Operating Systems – 100 Certified Products
Other Devices and Systems – 276 Certified Products
Products for Digital Signatures – 93 Certified Products
Trusted Computing – 20 Certified Products

150+ years
certification experience
Product
assurance
expertise
Questions?

Thank you

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