



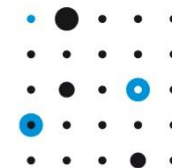
ENCs

European Network for Cyber Security



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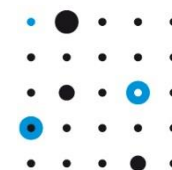
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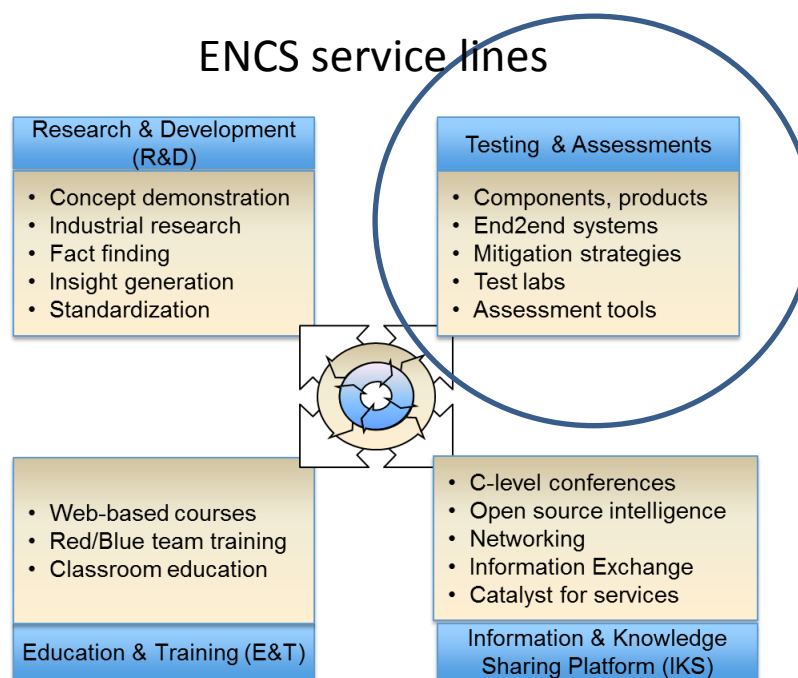
ENCS test facility

Prinses Beatrixlaan 800
The Hague
Netherlands



ENCS

- ENCS test facility
- Where we are today
- Next steps
- Challenges

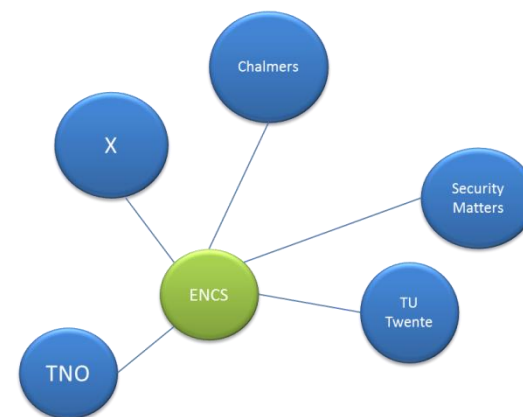


Two main facilities for ENCS testing:

1. A cyber test facility for R&D
2. Security validation test-bed for ICS, Smart grids systems and components

R&D test facility

- Semi open environment where researchers and developers have access to test resources like cyber tools, ICS equipment, SCADA systems and support of test professionals
- Remote Access Network for (inter)national researchers
- Support the ENCS R&D agenda where physical tests are required (e.g. PET, Monitoring)
- Facilitate security and privacy related research projects like Topsectoren, FP7 (Amadeos, Crisalis)
- Development of test tools and methodologies

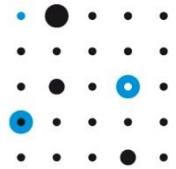


Security validation test-bed

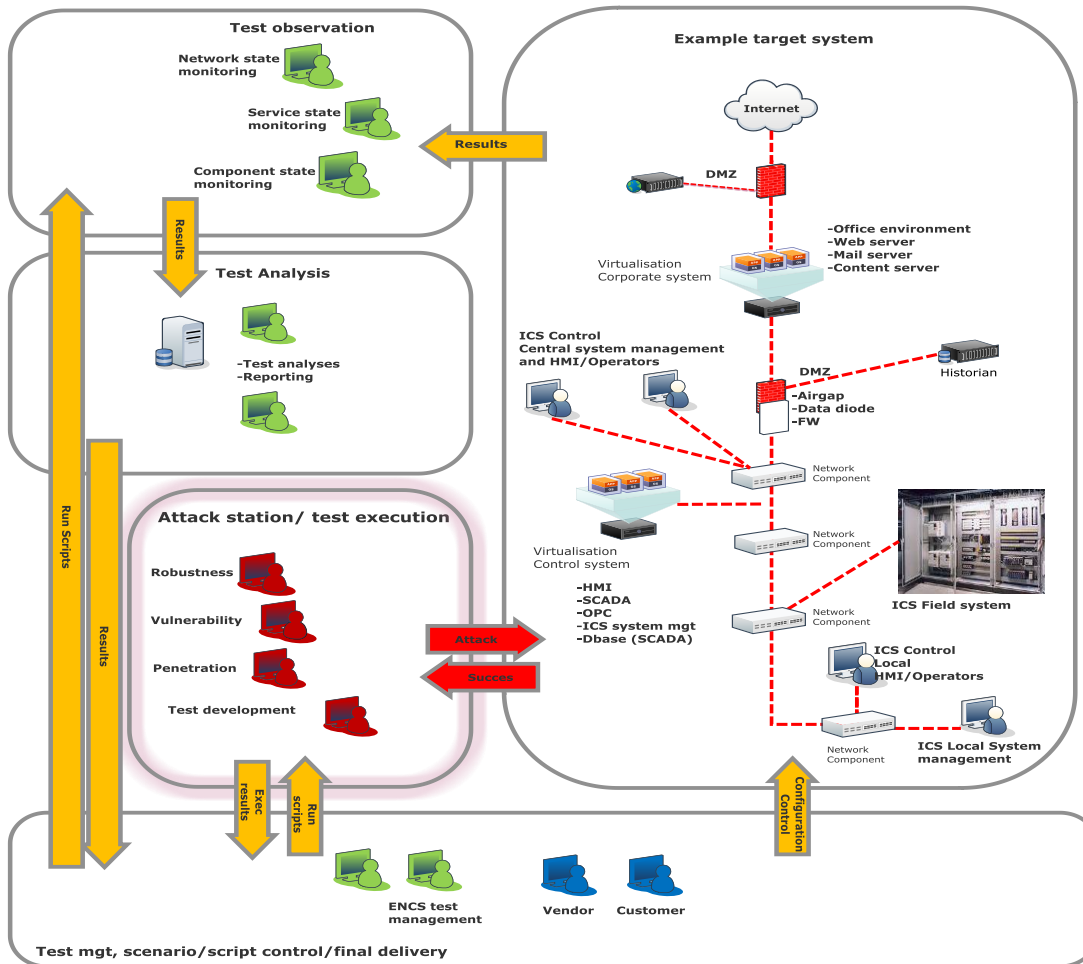
- Providing security test services on-site and in ENCS test-bed
- Focus on critical infra structure owners, initial focus on DSO's and TSO's
- Integral approach of system testing in ENCS test-bed
- Development of existing and new methodologies for testing on-site and in ENCS test-bed
- ENCS test-bed is a restricted area for testing ICS, networks and systems, by specific cyber testers, ethical hackers, test tools, methodologies, processes, scripts.



ENCS test bed



ENCS



ENCS Toolbox

metasploit[®]
pro

wurldtech[™]

tenable
network security
Nessus pro

KALI LINUX
Toolbox

Ettus
Research
GNU

Ettercap, Py-SCAPY,
Nmap Py-openOPC, etc etc

Under evaluation:

CODENOMICON defensics[™]



Where are we today

- R&D
 - R&D facility ready
 - Internal and external researchers working in the R&D lab
 - Network connections for external R&D partners
- Test-bed
 - Building validation test bed ongoing, first test services available
 - Methodologies, processes, toolset , equipment, trainings... ongoing

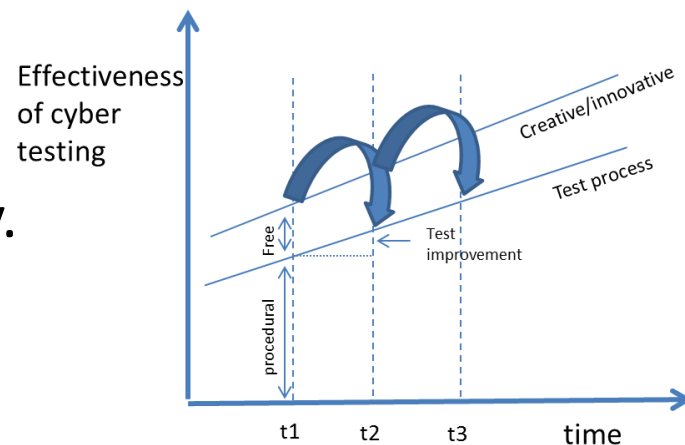
Next steps

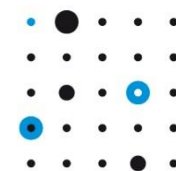
- Finalization validation test-bed
- Further development processes and working procedures
- ENCS toolbox development
- Staffing



Challenges

- Complexity of methodologies for integral ICS testing
- Required flexibility for different technical setups
- How close can you get in the test-bed to real production systems?
- Validation of cyber tools and test processes
- Strong market need for accreditation
- How to fit the required creativity and innovation into a test methodology.





ENCS

Thanks !