



Recommendations for Harmonized ICS Testing Capability in the EU

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SCADALAB - SCADA laboratory and testbed
as a service for critical infrastructure protection



*With the financial support of the Prevention, Preparedness and Consequence Management of
Terrorism and other Security-related Risks Programme.
European Commission - Directorate-General Justice, Freedom and Security*



Agenda

- 1) INTECO
- 2) SCADALAB project
 - ☐ Introduction
 - ☐ Main purpose
 - ☐ Main activities

Contact information



The National Institute of Communication Technologies (INTECO)



INTECO: Brief introduction



Who is INTECO?

Membership

- Cyber security centre at the national level. (NCP ICT PSP)
- Provision of services, research and coordination.
- INTECO-CERT. Preventive and reactive services:
Citizens + Entities (+ CCII)
(CCII with CNPIC).
- Participation in several European projects (ASASEC, ACDC, CloudCERT, SCADALAB, etc.)



AENOR



Asociación Española de Normalización y Certificación





SCADA LAB Project





Comparing ICS and IT Systems

IT Systems

Cyber security

- is at mature stage
- importance C(50%) I(30%), A(20%)
- patches are released regularly

Standards, regulations and methodologies

- ISO standards
- International regulations
- Well known methodologies

Architecture and protocols

- Standard architectures / protocols
- Proprietary/unknown components are present to a certain extent

ICS

Cyber security

- At a very early stage
- Importance C(5%) I(35%), A(60%)
- patches are released quite slow

Standards, regulations and methodologies

- Local standards
- Local regulations
- No well known methodologies

Architecture and protocols

- No standardized architectures / protocols
- Proprietary components

SCADALAB PROJECT: Main purpose



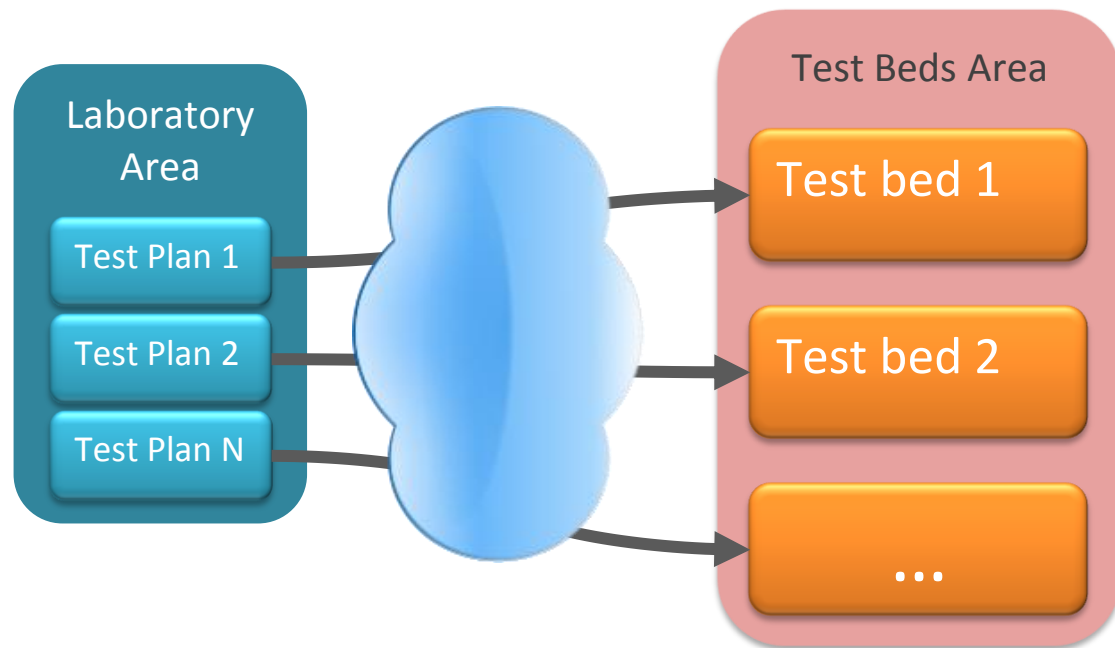
Purpose of the project

SCADALAB:

SCADA Laboratory and Test bed as a service for critical infrastructure protection.

- **LAB:** Framework to manage assessment plans and from where the tests will be carried out.
- **TEST BED:** Target of Evaluation.

SCADA LAB



SCADALAB PROJECT: Main activities (I)



STARTING POINTS

1. ICS Base architecture.
2. Test bed and laboratory area requirements
3. Analysis of existing methodologies
4. Type of security assessment
5. Approach of the test inventory

Definition of testing methodology

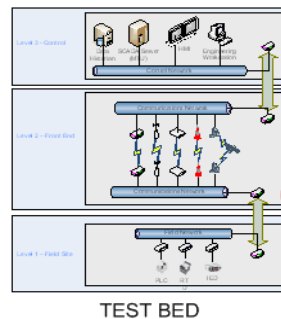
	Phases	Activities
1	PLANNING	a) ORGANIZATIONAL LEVEL b) OPERATIONAL LEVEL c) TECHNICAL LEVEL
2	ASSESSMENT	a) SET THE LAB b) EXECUTION
3	REPORTING	a) CALCULATION OF THE METRICS b) REPORT OF FINDINGS

SCADALAB PROJECT: Main activities (II)



Design of the laboratory architecture

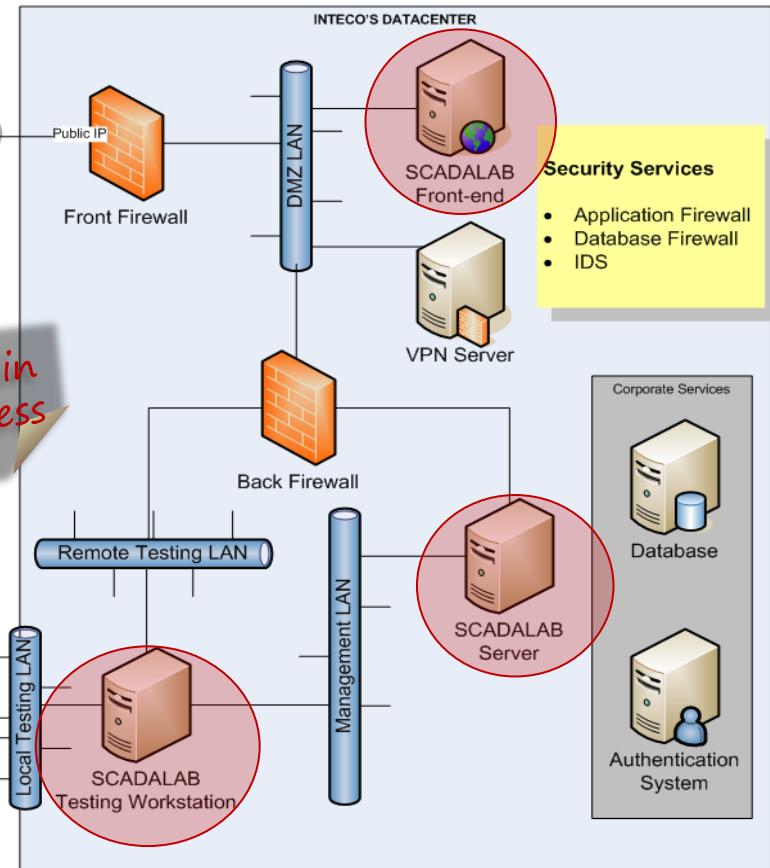
LABORATORY AREA



TEST BED



Work in Progress



Word cloud containing various project components and tools:

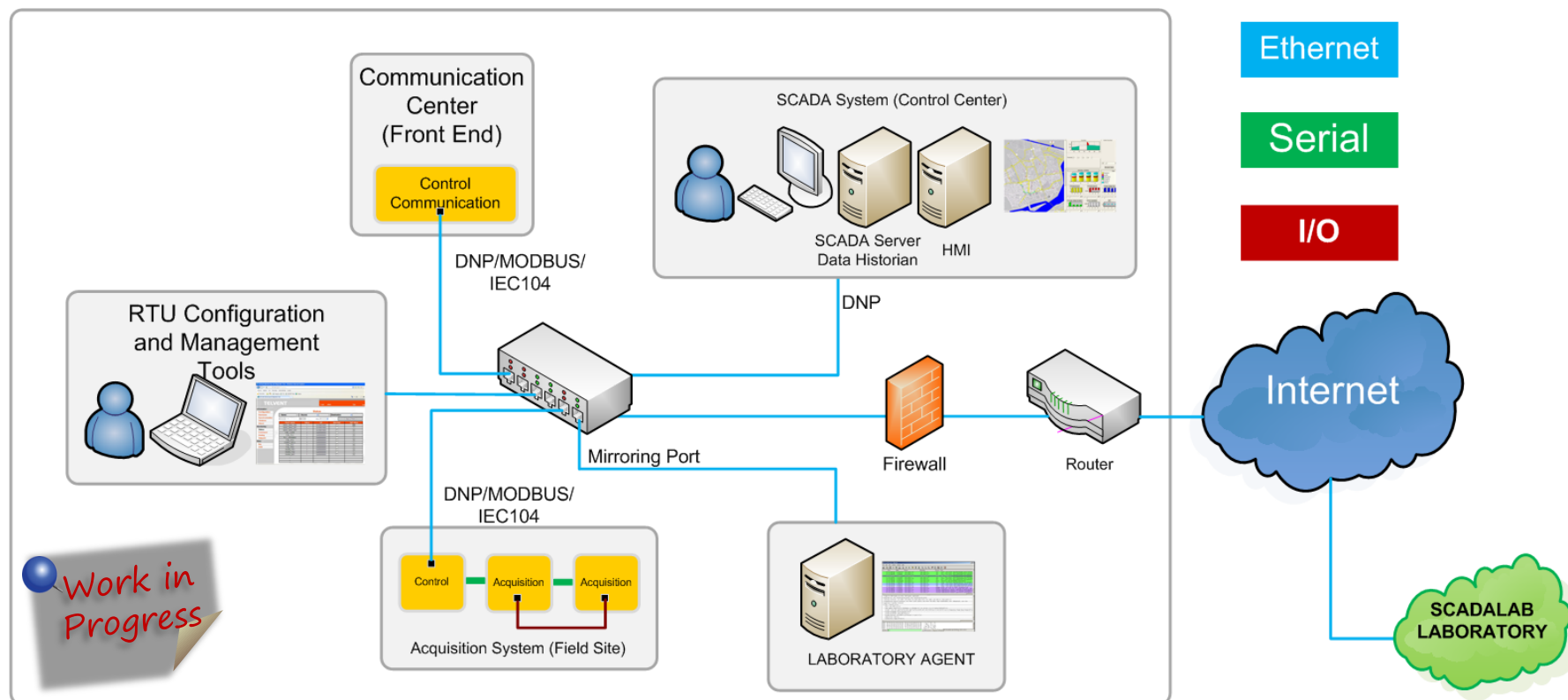
- GNS3 - Graphical Network Simulator
- Modelica - Modelica Simulation Environments Core Impact
- OpenVPN
- Achilles Test Platform
- Nessus
- OSSAMS - Open source Security Assessment Management System
- EMANE - Extendable Mobile Ad-hoc Network Emulator
- Immunity CANVAS with GLEG SCADA+ Exploit Kit
- IP Ethernet Serial Pipe
- VTUN - Virtual tunnel
- ns-3 - discrete-event network simulator for Internet systems
- Modbus PLC Simulator - Free Modbus PLC Simulator
- CORE - Common Open Research Emulator
- USB IP - USB device sharing system over IP network
- SCORE - Smart-grid Common Research Emulator

SCADALAB PROJECT: Main activities (III)



Design of the test bed architecture

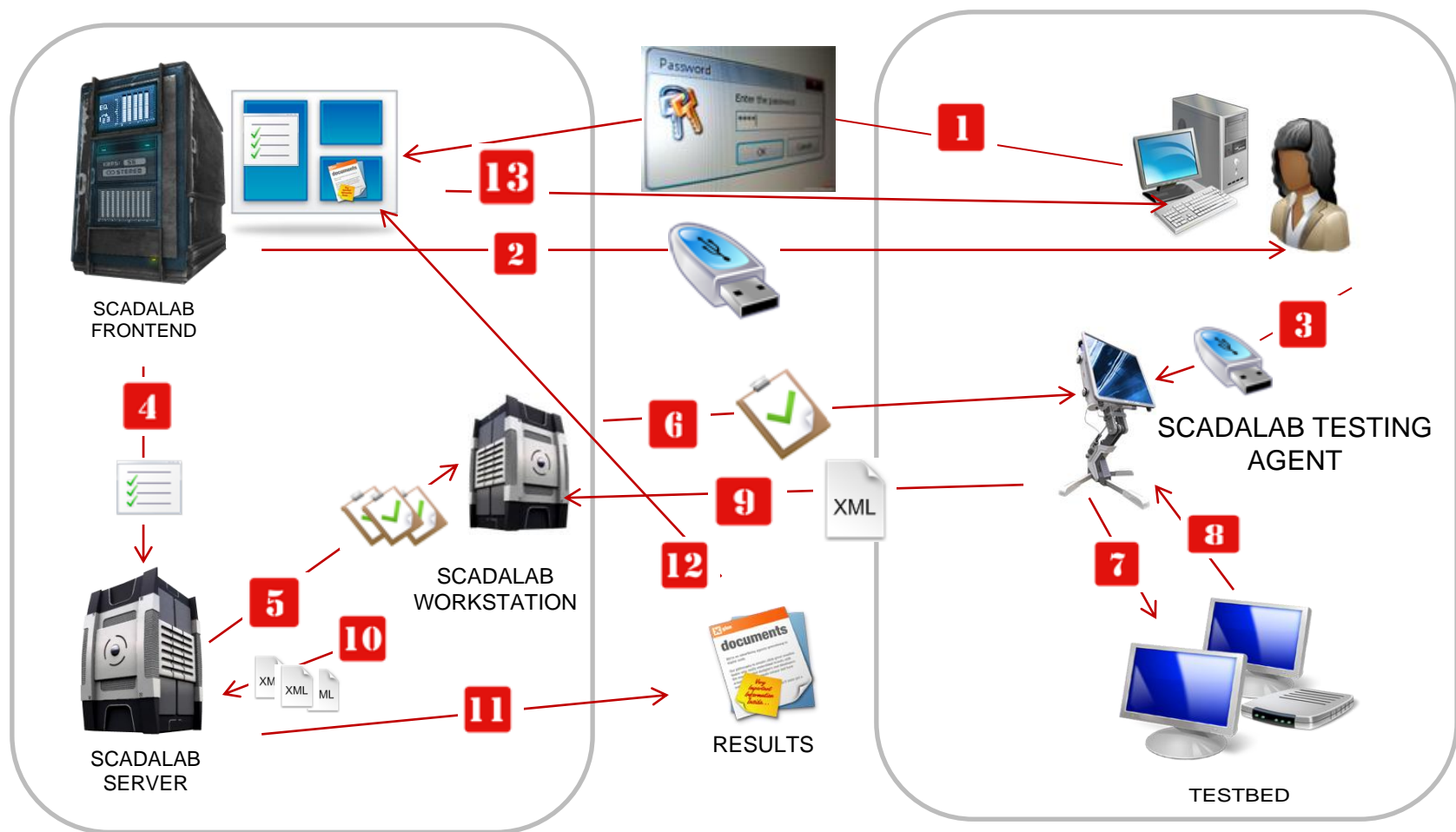
TEST BED AREA



SCADALAB PROJECT: Main activities (IV)



Workflow of the security assessment



WANT TO KNOW MORE?

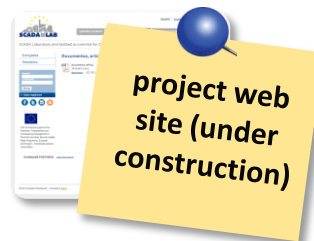


Contact us



Web: <http://scadalab.eu>

Email: info@scadalab.eu



Thinking
safety

ScadaLab Project would like to invite you to the **1st International Workshop** that will be held in Madrid (EVERIS Building, Avenida de Manóteras, 52) the next 10th October 2013.

Please send your **confirmation** to everis.group@everis.com before 4th October 2013.

Flight and 1 night accommodation will be cover by the **ScadaLab Consortium**.

For further information and travel expenses contact Mr. José María Balboa: jose.maria.balboa.toribio@everis.com

Agenda

10.00-10.30h ● **Attendees welcome**

10.30-11.30h ● **ScadaLab Project Presentation**

11.30-12.00h ○ Coffee Break

12.00-13.00h ● **ScadaLab Group Dynamic validation exercise**

12.30-13.30h ● **Related Projects presentation**

13.30-14.30h ○ Lunch / networking

14.30-15.30h ● **Training module 1: Remote platform for research and experimentation with industrial equipment and technologies (Speaker: Instituto de Automática y Fabricación - IAF)**

15.30-16.30h ● **Training module 2: Security in industrial frameworks (Speaker: The Spanish Technology Platform on Industrial Safety)**



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European Commission - Directorate-General Home Affairs



aeiseguridad
Agrupación Empresarial Innovadora
para la seguridad de las redes
y los sistemas de información



inteco



Instituto Nacional
de Tecnologías
de la Comunicación

Zanasi & Partners



CNPIC
CENTRO NACIONAL PARA LA PROTECCIÓN
DE LAS INFRAESTRUCTURAS CRÍTICAS



Schneider
Electric

TELVENT



Thank you!



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