

EDUCATION AND TRAINING

CyberSecPro Training

We are creating cutting-edge education and training to advance competencies and professionalism in EU cybersecurity.

OUR VISION

Next level cybersecurity education and training



Co-funded by
the European Union

Network Protection for Energy Control Systems

CSP004_C_E

PRESENTATION BY:

- **CRISTINA ALCARAZ**
UNIVERSITY OF MALAGA, SPAIN

EDUCATION AND TRAINING

CyberSecPro Training

We are creating cutting-edge education and training to advance competencies and professionalism in EU cybersecurity.

OUR VISION

Next level cybersecurity education and training



Co-funded by
the European Union

Acknowledgement

- *Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.*
- *Project Agreement no. 101083594*

Topic-2: Common Security Weaknesses and Attacks in Energy Control Networks

Overview

- Weaknesses in the operational protocols and security deficiencies of TCP/IP communication protocols
- Offensive tools against confidentiality, integrity and availability
- Best practices, recommendations and guidelines
- Final remarks
- References and sources

Topic-2: Common Security Weaknesses and Attacks in Energy Control Networks

Overview

- Weaknesses in the operational protocols and security deficiencies of TCP/IP communication protocols
- **Offensive tools against confidentiality, integrity and availability**
- Best practices, recommendations and guidelines
- Final remarks
- References and sources

Offensive tools to be applied in energy control networks

- To increase 'practical' skills, a manual about "**offensive tools**" is available on the DCM platform
 - The aim of this is to be aware of
 1. The number of threats in communication channels
 2. The number of tools for corrupting communication channels
 3. And the **need to protect communication channels and interconnection devices**, including HMIs
- NOTE: these offensive tools (along with other defensive ones discussed later) will be essential for the final assignment of this module
 - Please refer to the DCM platform in order to start with the **final assignment**
 - This assignment intends to **intensify practical skills and knowledge** on network security issues

Connect with CyberSecPro: How to register and other practical information

1. Website:
www.cybersecpro-project.eu
2. X (Twitter):
https://twitter.com/CyberSecPro_eu
3. LinkedIn:
<https://www.linkedin.com/company/cybersecpro-euproject/>



**Co-funded by
the European Union**

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.

Project Agreement no. 101083594

 ACEEU ACCREDITATION COUNCIL FOR ENTREPRENEURIAL & ENGAGED UNIVERSITIES	 AIT AUSTRIAN INSTITUTE OF TECHNOLOGY	 APIROPLUS SOLUTIONS	 SINTEF	 SOCIAL ENGINEERING ACADEMY	 TAL TECH
ACEEU GmbH Germany Visit Website	AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH Austria Visit Website	APIROPLUS SOLUTIONS LTD Cyprus Visit Website	SINTEF AS Norway Visit Website	Social Engineering Academy GmbH Germany Visit Website	Tallin University of Technology Estonia Visit Website
Logo missing	 COFAC COOPERATIVA DE FORMAÇÃO E ANIMACÃO CULTURAL C.R.L.	 Consiglio Nazionale delle Ricerche	 Technische Universität Braunschweig	 TECHNICAL UNIVERSITY OF CRETE	 trustilio Enhance your Trustworthiness
C2B CONSULTING Italy Visit Website	COFAC Portugal Visit Website	Consiglio Nazionale delle Ricerche Italy Visit Website	Technical University of Braunschweig Germany Visit Website	Technical University of Crete Greece Visit Website	trustilio B.V. The Netherlands Visit Website
 focal point Cyber Defence Exercises as a Service	 GOETHE UNIVERSITÄT FRANKFURT AM MAIN	 ITML	 UNINOVA	 UNIVERSIDAD DE MÁLAGA	 NOVA UNIVERSIDADE NOVA DE LISBOA
FOCAL POINT Belgium Visit Website	Goethe University Frankfurt Germany Visit Website	Information Technology for Market Leadership Greece Visit Website	Uninova Portugal Visit Website	Universidad de Malaga Spain Visit Website	Universidade Nova De Lisboa Portugal Visit Website
 Institut Mines-Télécom	 LAUREA	 GRUPPO Maggioli	 University of Cyprus	 FACULTY OF SCIENCES NOVI SAD 1969 SERBIA	 UNIVERSITY OF PIRAEUS RESEARCH CENTER
Institut Mines-Télecom France Visit Website	Laurea University of Applied Sciences Finland Visit Website	Maggioli S.p.A. Italy Visit Website	University of Cyprus Cyprus Visit Website	University of Novi Sad Faculty of Sciences Serbia Visit Website	University of Piraeus Research Center Greece Visit Website
 PDMFC	 Security Labs Consulting Ltd	 SGI	 Zelus		
PDMFC Portugal Visit Website	Security Labs Consulting Ltd Ireland (Republic) Visit Website	Serious Games Interactive Denmark Visit Website	ZELUS P.C. Greece Visit Website		

Thank you

If you have any questions, please do not hesitate to contact:

- Cristina Alcaraz
Associate Professor
University of Malaga
alcaraz@uma.es