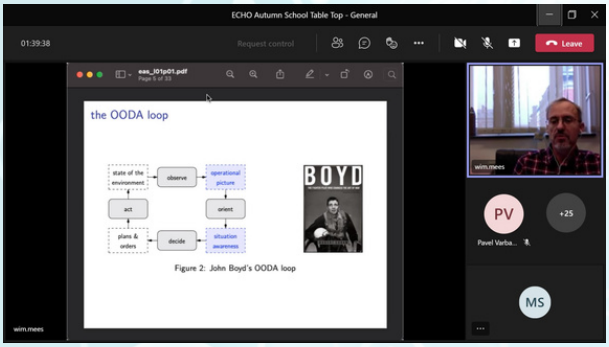
ECHO Newsletter special edition

28 MARITIME CYBERSECURITY PROFESSIONALS FROM 8 EUROPEAN COUNTRIES ATTENDED THE FIRST EDITION OF THE

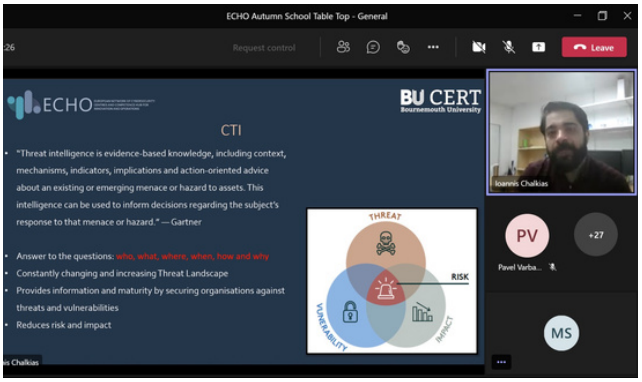
ECHO FEDERATED AUTUMN SCHOOL

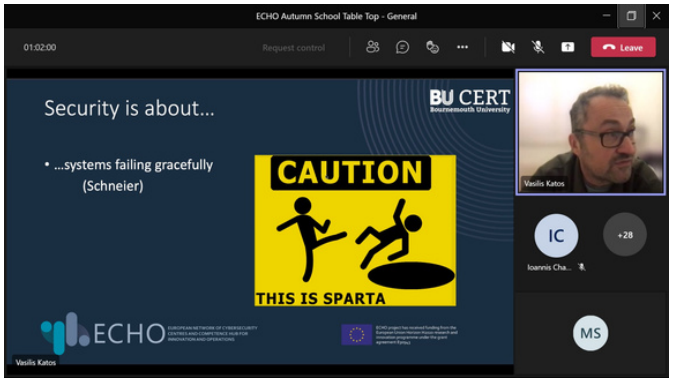


The last week of November gathered twenty-eight cybersecurity professionals from Belgium, Bulgaria, Greece, Estonia, Italia, Norway, Romania, and the UK for the first edition of the 3-day ECHO Federated Autumn School (EFAS-2021), organized by the ECHO consortium.

The training tested the delivery of one of the ECHO training programs, that are designed to leverage the ECHO cybersecurity toolset, namely the ECHO Early Warning System, Federated Cyber Ranges, and solution prototypes.

The mission of the autumn school was to respond to and support the strategic goal of the EU to build more efficient cyber defense capabilities and to strengthen Europe's resilience against cyber threats, through the prism of the ECHO sector-based approach. Thus, EFAS-2021 concentrated its efforts on the maritime sector, providing relevant use cases and practical challenges, which were highly appreciated by the participants who joined the event to learn more about passenger ships' cybersecurity.



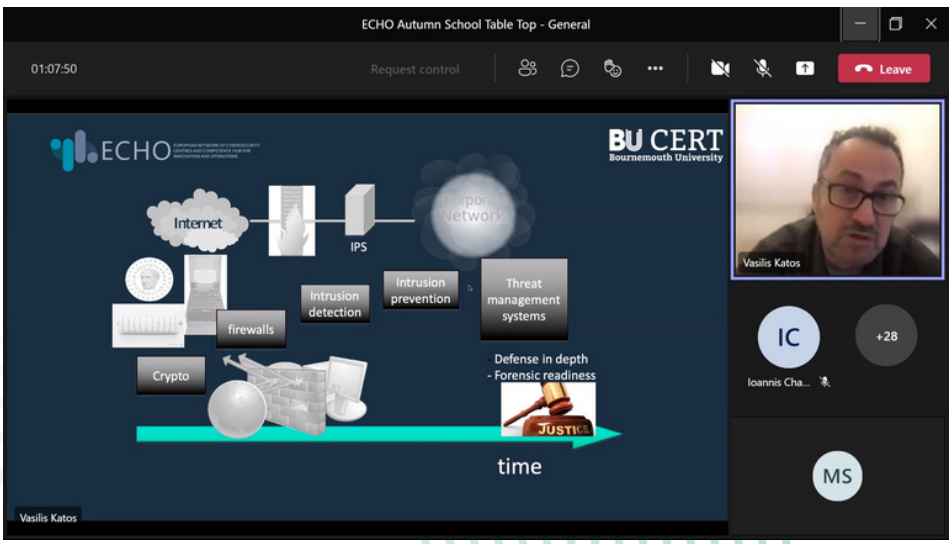


The heterogeneity of the experience and qualifications of the learners made the content curation the most challenging part of the organization, but also the most rewarding. By carefully selecting relevant delivery technologies, tasks, and learning content, the organizers managed to find the balance between the competencies and knowledge of experts in leading positions (such as security officers in the maritime industry), and those of Ph.D. students in naval academies and universities, and cybersecurity experts and enthusiasts with interests in the maritime industry.

During the 3-day school, the tutors and learners discussed the generic concepts related to establishing and enhancing the cyber defense capabilities onboard a ship, including:

- threat intelligence and analysis,
- threat monitoring and detection,
- information sharing
- incident response,
- forensic processes and procedures,
- the top threats and vulnerabilities in the ICT systems on a ship,

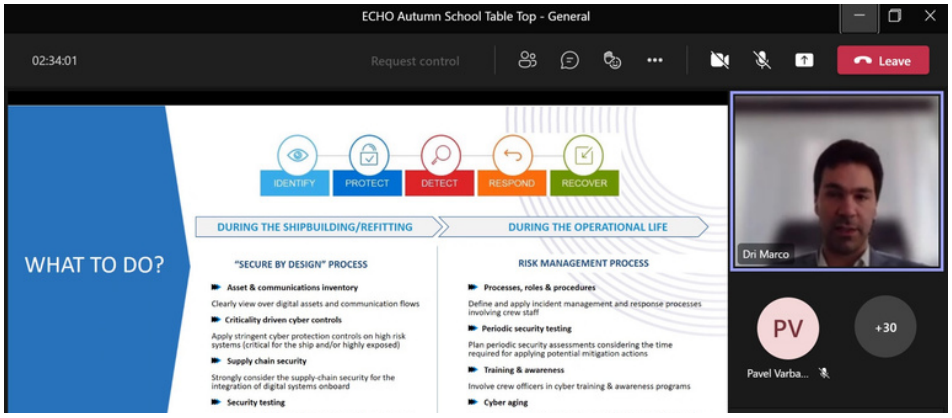
passed step-by-step through the response cycle of a simulated cyber-attack against the ship's network, addressed the possible impacts for the passengers and ecosystem on such an attack, reflected on possible mechanisms for restoring the affected ship's systems, and demonstrated abilities for analyzing and sharing information about a cyber-incident.



The work of the tutors and participants illustrated the importance of collaborative efforts and information sharing when it comes to rapid reaction based on exhaustive information, gaining time against invisible adversaries, alongside negative impact reduction for the ship's crew and passengers.

The discussion of these topics with a focus on the ship's defense capabilities proved crucial, as in most cases, even the biggest cruise and cargo ships rarely have a cybersecurity professional onboard. In case of a cyber-incident, the vessels rely on the guidance provided by a cyber-operation center or emergency response team physically located onshore. The onboard ICT expert needs to have the technical and procedural knowledge on how to cover the key front-line defense actions against a cyber-incident that could endanger the safety of the crew and passengers. The onshore SOC or CERT members are responsible for the transfer of this knowledge to ICT officers, and educating them to recognize the indicators of compromise, how to communicate them or what type of additional information and data they may need, which part of the processed information they need to communicate and to whom.

In conclusion, the role of education for cybersecurity is critical not only in isolated and dangerous environments, such as the ocean but also in all socio-economic domains to ensure the resilience of modern society. An important outtake of the ECHO Autumn school is that cybersecurity education and training programs and methods must be made compliant with individual capabilities and competences, along with the careful curation of practical tasks against professional roles, and functions, to ensure a complex, yet seamless approach to cybersecurity education, and thus, building and enhancing cybersecurity defense capabilities across sectors.



https://echonetwork.eu/echo-federated-autumn-school/

MEET THE LECTURERS OF ECHO FEDERATED AUTUMNS SCHOOL

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23-25 NOVEMBER 2021.

EXPERT ZONE

DR. WIM MEES

is Professor in computer science and cyber security at the Royal Military Academy and is leading the Cyber Defence Lab. He is also teaching in the Belgian inter-university Master in Cybersecurity, and in the Master in Enterprise Architecture at the IC Institute. Wim has participated in and coordinated numerous national and European research projects as well EDA and NATO projects and task groups. He is currently project coordinator for ECHO.

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EXPERT ZONE

IOANNIS CHALKIAS

Cyber Threat Intelligence Analyst at Bournemouth University. He is involved in research and development of Early Warning Systems. His research interests and teaching activities also include digital forensics, information sharing and cyber warfare, ethical hacking and countermeasures, cyber situational awareness etc.

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EXPERT ZONE

VASILIS KATOS

(MBA, PhD) is a certified Computer Hacking Forensic Investigator (CHFI). He has worked in the industry as Information Security Consultant and served as an expert witness in Information Security for a criminal court in the UK and a misdemeanour court in Greece.

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EXPERT ZONE

DR CAGATAY YUCEL

is a Postdoctoral researcher and Threat Intelligence Analyst at Bournemouth University CERT. Yucel received his PhD in 2019 with the thesis titled "Imaging and Evaluating the Memory Access for Malware". He has specialised and published in malware analysis, reverse engineering, network security, cyber threat intelligence and cyber warfare.

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EXPERT ZONE

MARCO DRI

Head of Maritime Cyber Solutions at Fincantieri, is leading the unit in charge to develop cybersecurity strategies, solutions and products to support market players in securing ships and maritime infrastructures from cyber threats. Customers include the main cruise shipowners and State Navies. He has more than a decade of experience in the cybersecurity consultancy field, supporting medium and large worldwide organizations belonging to manufacturing, industrial, telco and banking markets.

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MORE LECTURERS AND ORGANIZERS

PAVEL VARBANOV - ESICEE
MASCIA TOUSSAINT - ENQUIRYA BV
VERONICA ROSA - ENQUIRYA BV
STEN MASES - TALLINN UNIVERSITY OF TECHNOLOGY

MERRY CHRISTMAS

Happy New Year

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