



Cyber Security Summer School 2019



Introduction

Location and Program

KEA, Lygten 37, Room A150 (1st floor)

	Mandag 19/8	Tirsdag 20/8	Onsdag 21/8	Torsdag 22/8	Fredag 23/8
9:00-12:30	Welcome and introduction (CfCS, KEA, DTU) Basic security and network principles (DTU) * Internet og lokalnets principper * Firewall principper * Angrebstyper	DevOps and security (SDU) * Introduction to DevOps * DevSecOps * Tools overview	Network Security Fundamentals (DTU) * Introduction to networking and network protocols * Secure routing * Communication security, incl. confidentiality, integrity, availability and authenticity	Organizational and managerial perspectives on security I (CBS) - Security in the board room, - What are the principles for governance, - What happens to core business activities when security is compromised	Network security exercises - CTF style (AAU) * Group/classroom CTF style exercises of various sorts, e.g., for network security and/or web security
12:30-13:30	Lunch	Lunch	Lunch	Lunch	Lunch
13:30-17:00	Securing a system (DTU) * Sikkerhedsskanninger * Patching procedurer * Adgangssikkerhed	Microservices and security patterns with Jolie (SDU) * Microservice security patterns * Introduction to Jolie * Circuit breaker in Jolie	Data carving in forensics (KEA) * Carving as part of a forensic examination * File signatures in headers and footers * Manual file carving in Python * Maintaining integrity of evidence	Organizational and managerial perspectives on security II (CBS) - The afternoon is dedicated to working on a teaching case which focuses on a company which experiences that security is compromised due to a cyberattack	Introduction to reverse engineering (AAU) * Introduction to the radare2 framework (or possibly GHIDRA) * Basic reverse engineering techniques * Classroom work on a number of RE exercises, e.g., from well-known wargames
17:00	Welcome reception - with talk by Thorsten F. Johnsen from CFCS			Networking Dinner (extra fee) - starts at 18:00	

Introduction

Presenters/Tutors

Profiles, Part 1

Jacopo Mauro, SDU

Jacopo Mauro is an associate professor at the Department of Mathematics and Computer Science at the University of Southern Denmark (SDU). He is active in the Formal Methods, Cloud Computing, and DevOps fields. His research interests also include Service-Oriented Computing, AI Planning, and Machine Learning. He is a strong advocate of automation for a faster, secure, and efficient development and deployment of applications. He is the main developer of optimizations tools and utilities for application deployment, used both in academia and industry.

Christian Damsgaard Jensen, DTU

Lektor på DTU Compute og leder af cybersikkerhedssektionen. Han arbejder især med sikkerhed i åbne distribuerede systemer i stor skala, hvor man ikke kan antage at alle partner deler en fælles sikkerhedsinfrastruktur, som f.eks. "pervasive computing" og "IoT".

Henrik Tange, DTU

Lektor på DTU Diplom med specialer indenfor software sikkerhed, kryptografi og organisatoriske aspekter af sikkerhed. Han underviser indenfor disse områder og står forskningsmæssigt bag udviklingen af forbedringer til AES krypteringsalgoritmen og DH autentifikation.

Bo Holst-Christensen, DTU

Lektor på DTU Diplom med speciale indenfor praktisk hardening og usability af systemer, undervisningsmæssigt og forskningsmæssigt. Han har gennem årtider beskæftiget sig med udvikling af nye metoder til sikring af e-mail systemer.

Birger Andersen, DTU

Docent i Cyber Security på DTU Diplom med specialer indenfor netværkssikkerhed, IoT sikkerhed og 4g/5g sikkerhed. Han underviser indenfor disse områder og er projektleder i flere projekter med fokus på IoT og trådløs sikkerhed, som er hans primære forskningsfelt.

Profiles, Part 2

Steven Albury, KEA

Member of SANS advisory board and lecturer in information security at KEA. With over 25 years IT experience both in software development and business process design. Steven also has a PhD in systems design. He currently teaches IT Security Governance and Digital Forensics Investigation at KEA

Daniel Ellebæk, KEA

Certified Ethical Hacker with over 20 years software design and development experience. Daniel has extensive knowledge of penetration testing and secure software design. He currently teaches Digital Forensics Investigation at KEA.

Xiao Xiao, CBS

Xiao Xiao is an Associate Professor at Copenhagen Business School, Department of Digitalization. Her research areas include digital platform and digital entrepreneurship. She teaches mostly in the area of e-commerce with a case-based approach.

Irfan Kanat, CBS

Irfan Kanat is an Assistant Professor at Copenhagen Business School, Department of Digitization. His research focuses on digital business models in platform markets. He teaches Computer Networks and Security.

René Rydhof Hansen, AAU

Lektor på Institut for Datalogi, Aalborg Universitet. Arbejder primært indenfor formelle metoder og sprog-baseret sikkerhed, med særligt fokus på sikkerhed gennem automatiseret formel analyse af programmer og systemer.

Thomas K. Panum, AAU

Ph.D. studerende på Institut for Elektroniske Systemer, Aalborg Universitet. Arbejder med en maskinlærings-baseret tilgang til sikkerhed, fx netværkssikkerhed og phishing.

Introduction

Networking

Networking Events

- Reception Monday at 17:00 (same room) – and with a talk by Thorsten F. Johnsen, CFCS
- Dinner Thursday at 18:00 (start to walk and talk shortly after 17:00) – additional fee
– Restaurant La Buca degli Artist - <https://www.labuca.dk> - Godthåbsvej 209
- Long lunch breaks (sandwiches served)
- Optionally meet in one of the other rooms at the cooridor (just pick a vacant one)

Introduction

Handouts

Share with Handouts

- OneDrive at https://dtudk-my.sharepoint.com/:f:/g/personal/birad_win_dtu_dk/EiXqxfnRSFVKjAgjEFJr4_QBzmZop1PMtkqS_9UIhtUTZw?e=OGo6sx
(fine to click)
- Presentations, readings, cases, exercises
- Handouts will be removed from share shortly after end of Summer school.
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