



Full Syllabus



Course Title

Workshop in Information Security

Lecturer

Reuven Plevinsky

Semester

2020/1

Course requirements

Main subjects:

- Intro to firewalls
- Firewall implementation
- Virtual machines and virtual networks
- Network tools
- TCP/IP
- Firewall functionality
- Software vulnerabilities
- Linux kernel
- Intro to Kernel Modules
- User-kernel interfaces
- Packet journey through the kernel
- Misc. implementation details in kernel programming
- Application level protocols
- Application-level stateful inspection
- Quick overview of today's firewall capabilities

Assignments

There will be about 5 "Hands-on" assignments in the following subjects:

- TCP/IP traffic recording and crafting
- Protocol enforcement
- Linux user-kernel interface
- Packet filtering
- Attack protection

Final grade components

- First and second assignments: 15% each
- Third and fourth assignments: 20% each
- Fifth assignment: 30%



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Course schedule

Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
1	Intro - Linux and Networking
2	Linux Devices
3	Stateless Packet Filtering
4	Stateful Inspection, Advanced Protocols
5	Final Project - Advanced Security Blade

Required course reading

[Linux Kernel Development](#)
[Linux Device Drivers](#)

Optional course reading

Comments

General Rules:

- Mandatory attendance for all the frontal lectures
- No answers by email
- No extensions for submissions. Each assignment should be completed within 2 weeks
- The workshop will end at the end of the semester. No extension for the final submission after the semester ends