

Network Security

General information about this course

Radboud University, The Netherlands



Spring 2018

About this course

- ▶ Lecture (hoorcollege): Monday, 13:30–15:30 in HG00.304
- ▶ Exercise class (werkcollege): Wednesday, 13:30–15:30 in MERC I 00.28
- ▶ Exam on Monday, June 25, 12:30–14:30 in HG00.304 and HG00.307
- ▶ Exam grade is your final grade for this course
- ▶ 3 EC points
- ▶ Website: <http://cryptojedi.org/peter/teaching/network-security-2018.shtml>
- ▶ Language of the lectures: English

Teachers

Lecturers

Peter Schwabe

Office: Mercator I, 3.18
peter@cryptojedi.org

Pol Van Aubel

Office: Mercator I, 3.20
radboud@polvanaubel.com

Student assistant

Daan Sprenkels

hello@dsprenkels.com

Homework

- ▶ Homework assignments will be online (at the latest) Wednesday morning
- ▶ Homework assignments are due Wednesday (one week later) by midnight (sharp!)
- ▶ Homework submission through Blackboard
- ▶ Homework submission in groups of 2 (preferably)
- ▶ Grading of homework in **g**, **v**, **o**, and **NSI**
- ▶ Grading has no effect on final grade, but:
More than one NSI and you're not admitted to the exam!

Homework environment

- ▶ Programming courses need a computer (with compiler etc.)
- ▶ Network security course needs a network

Homework environment

- ▶ Programming courses need a computer (with compiler etc.)
- ▶ Network security course needs a network. . . that you can break

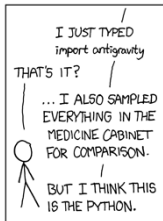
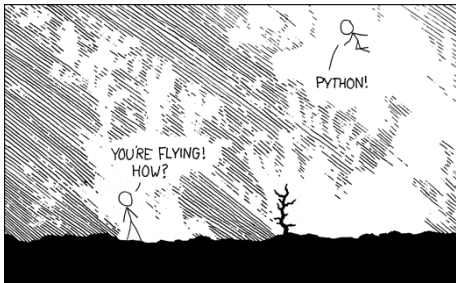
Homework environment

- ▶ Programming courses need a computer (with compiler etc.)
- ▶ Network security course needs a network. . . that you can break
- ▶ Breaking into a network typically needs a computer in this network with root rights
- ▶ Tools we use are Linux tools
- ▶ Idea: Use your own (Linux) laptop
- ▶ Alternative: Use Linux in a virtual machine

Homework environment

- ▶ Programming courses need a computer (with compiler etc.)
- ▶ Network security course needs a network. . . that you can break
- ▶ Breaking into a network typically needs a computer in this network with root rights
- ▶ Tools we use are Linux tools
- ▶ Idea: Use your own (Linux) laptop
- ▶ Alternative: Use Linux in a virtual machine
- ▶ Small wireless network set up in Mercator I (ground floor)
- ▶ Mercator I has restricted opening times: 8:00–18:00, Mon–Fri

Programming for homework



Python

- ▶ Network programming in Python
- ▶ Primary target is to get stuff done
- ▶ Python is a script language (interpreted language, no compiler)
- ▶ Python is easy
- ▶ Python has many things built-in
- ▶ You *can* use other languages (but we don't recommend it)

Source: <http://xkcd.com/353>

What is this course about?

Becoming Eve

Examples of what you will learn

- ▶ How to break into (badly protected) WiFi networks
- ▶ How to read others people's e-mails
- ▶ How to set up firewalls (and circumvent them)
- ▶ How to get free WiFi in various places
- ▶ How to DOS other computers
- ▶ How to be anonymous on the Internet

Disclaimer

- ▶ Many things taught in this course are illegal when you do it “in the wild”
- ▶ You’re grown up, use your skills responsibly
- ▶ If you want to try something out, get consent

Disclaimer

- ▶ Many things taught in this course are illegal when you do it “in the wild”
- ▶ You’re grown up, use your skills responsibly
- ▶ If you want to try something out, get consent
- ▶ In this course (homework), don’t break more stuff than necessary
- ▶ The (vulnerable) toy network is needed for everybody