

Network Security

General information about this course

Radboud University, The Netherlands



Autumn 2015

About this course

- ▶ Lecture (hoorcollege): Wednesday, 10:30–12:30 in HG00.071
- ▶ Exercise class (werkcollege): Thursday, 8:30–10:30 in HG00.068
- ▶ Exam on Friday, November 6, 8:30–11:30 in E 0.51 (zijzaal De Rafter)
- ▶ Exam grade is your final grade for this course
- ▶ 3 EC points
- ▶ Website: <http://cryptojedi.org/peter/teaching/network-security-2015.shtml>
- ▶ Language of the lectures: English

Teachers

Peter Schwabe
Office: Mercator I, 2.14
peter@cryptojedi.org

Pol Van Aubel
Office: Mercator I, 2.13
radboud@polvanaubel.com

Yorick van Pelt
Y.vanPelt@student.science.ru.nl

Homework

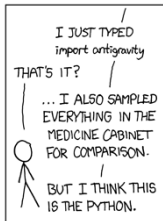
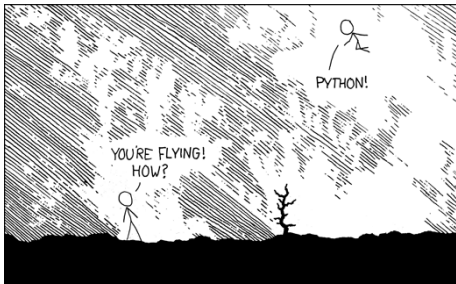
- ▶ Homework assignments will be online (at the latest) thursday early morning
- ▶ Homework assignments are due Thursday (one week later) by midnight (sharp!)
- ▶ Homework submission through Blackboard
- ▶ Homework submission in groups of 2 (preferably)
- ▶ Grading of homework in **g**, **v**, **o**, 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. . . 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 (1st 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>

Network Security before Networks?

- ▶ Third semester (now): “Network Security” (NWI-IBC022)
- ▶ Fourth semester (next year): “Netwerken en Gedistribueerde Systemen” (NWI-IBC021)
- ▶ Probably not ideal. . .
- ▶ Maybe this changes in the future, probably not

What is this course about?

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
- ▶ In this course (homework), don’t break more stuff than necessary
- ▶ The (vulnerable) toy network is needed for everybody