

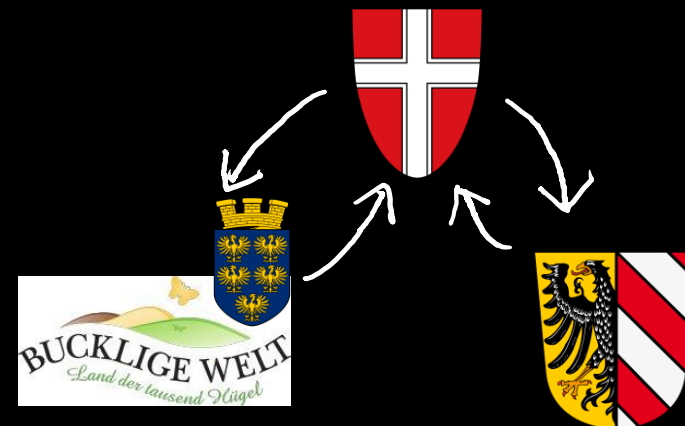
# Web (and) Application Security

WUAPS

# whoami

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Education:



Prof. Exp.:



Who are you?

# Hacking webapplications is illegal

([https://www.oesterreich.gv.at/themen/bildung\\_und\\_neue\\_medien/internet\\_und\\_handy\\_\\_\\_\\_sicher\\_durch\\_die\\_digitale\\_welt/3/Seite.1720213.html](https://www.oesterreich.gv.at/themen/bildung_und_neue_medien/internet_und_handy____sicher_durch_die_digitale_welt/3/Seite.1720213.html))

But it's also fun!

just become a whitehat and get  
legally paid for it

and help making the internet a  
safer place

Why is web (application) security  
important?

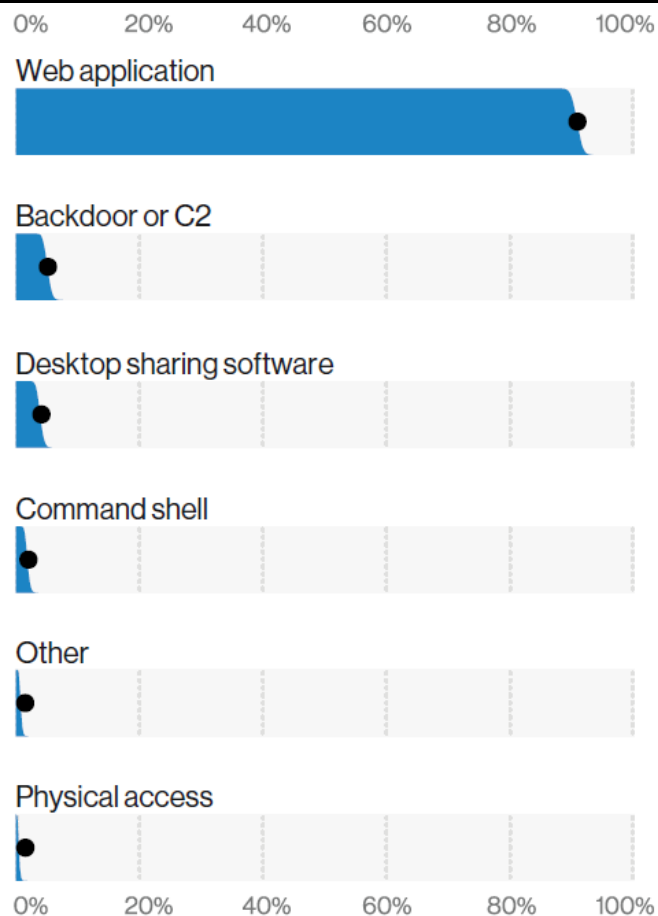
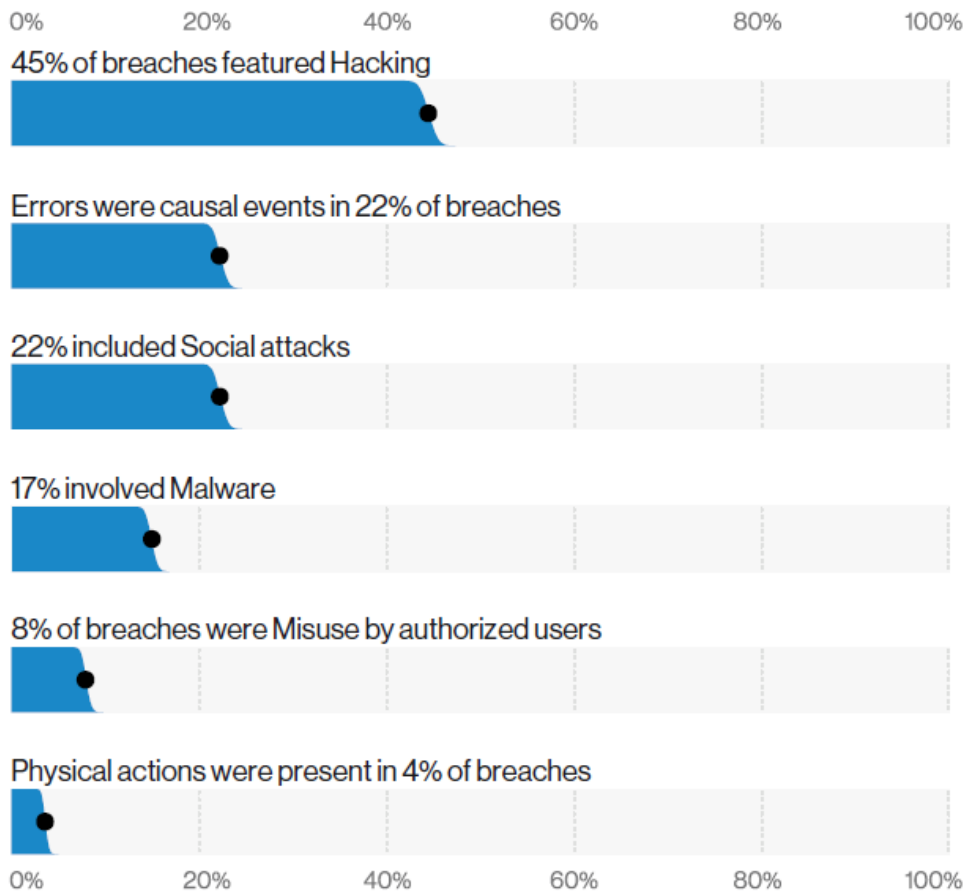


interesting  
story

*Last updated: 11th June 2020*



**Figure 2.** What tactics are utilized? (Actions)



**Figure 21.** Top Hacking vectors in breaches (n = 1,361)

Why is it so hard to do it right?  
= secure

The web is a complex combination of different technologies which evolved over time

You have to care about:

server-side code  
gets untrusted input

Browser  
runs different applications at the same time

client-side code  
runs in an untrusted environment

the user  
well... we all know them...

# Rough Overview

1. >> Introduction <<
2. Basic Principles and Resources
3. Architecture & Basic Web Procedure
4. Authentication and Session Management
5. Authorization
6. Server and Backend Attacks
7. Remaining Client Attacks
8. General Topics
9. Conclusions

# Overall Conditions

- Grading
  - 50% Lab
    - more about that later today
  - 50% Theory
    - eCampus exam at the end of this course
    - You need to collect more than 25 of 50 points for a positive grade
- Attendance
  - Needs to be recorded on eCampus
- Breaks
- Camera
- Recording
- Material
  - Released under CC Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)
  - <https://creativecommons.org/licenses/by-sa/4.0/>

# After this course, you will be able to...

- ... explain the most common vulnerabilities in today's web applications

- ... identify vulnerabilities in web applications and give recommendations how to fix them

- ... use some of the most important tools to efficiently examine web applications



Any questions before we start?