Make Security Sprint Along

DevSecOps Is a Thing

~# whoami

- ↳ Current
  - ↳ Penetration Tester
  - ↳ Team Leader
- ↳ Experience
  - ↳ 2 years Software Developer
  - ↳ >8 years Linux System Engineer
  - ↳ 1½ years Information Security Management

~# more goals.txt

Integrate security into DevOps workflow

Bring security team up to speed with DevOps

Security + DevOps = <3

goals.txt {END}

~# more agenda.txt

⟹ State of the Teams

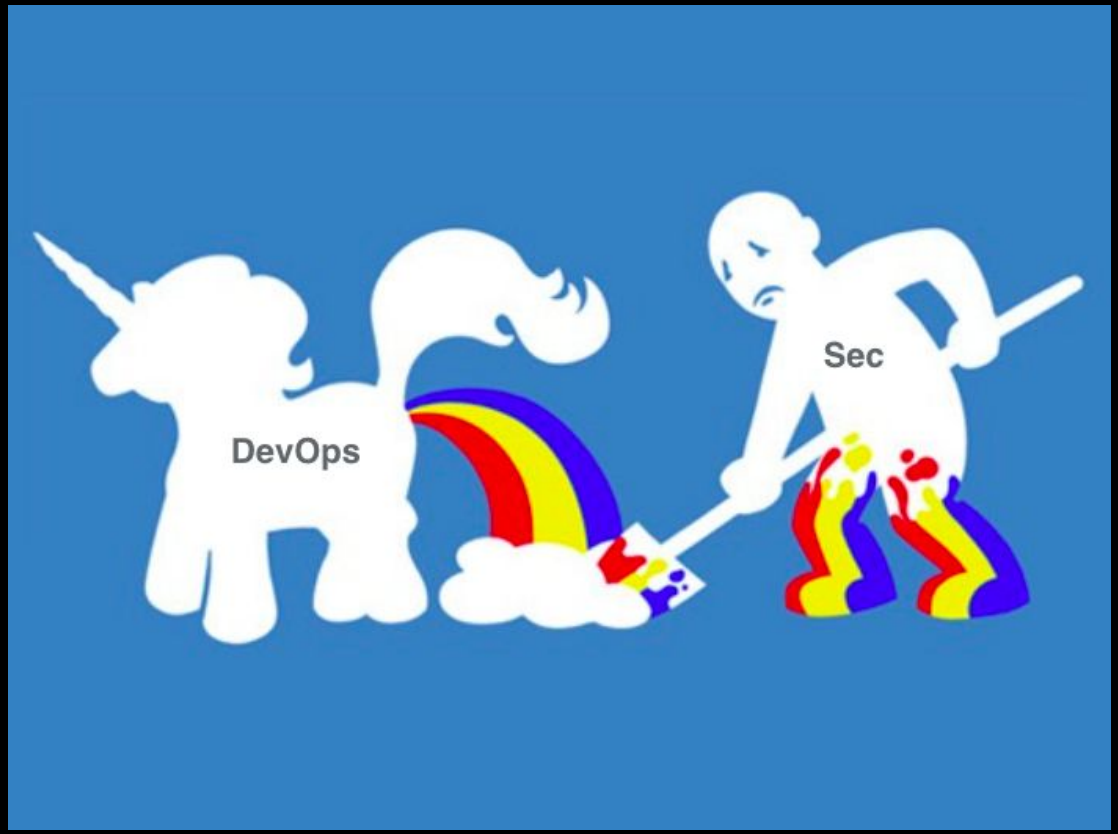
⟹ AppSec

⟹ DevOps

⟹ Integrating Security

⟹ Wrap Up

agenda.txt {END}



How Security sees DevOps[1]

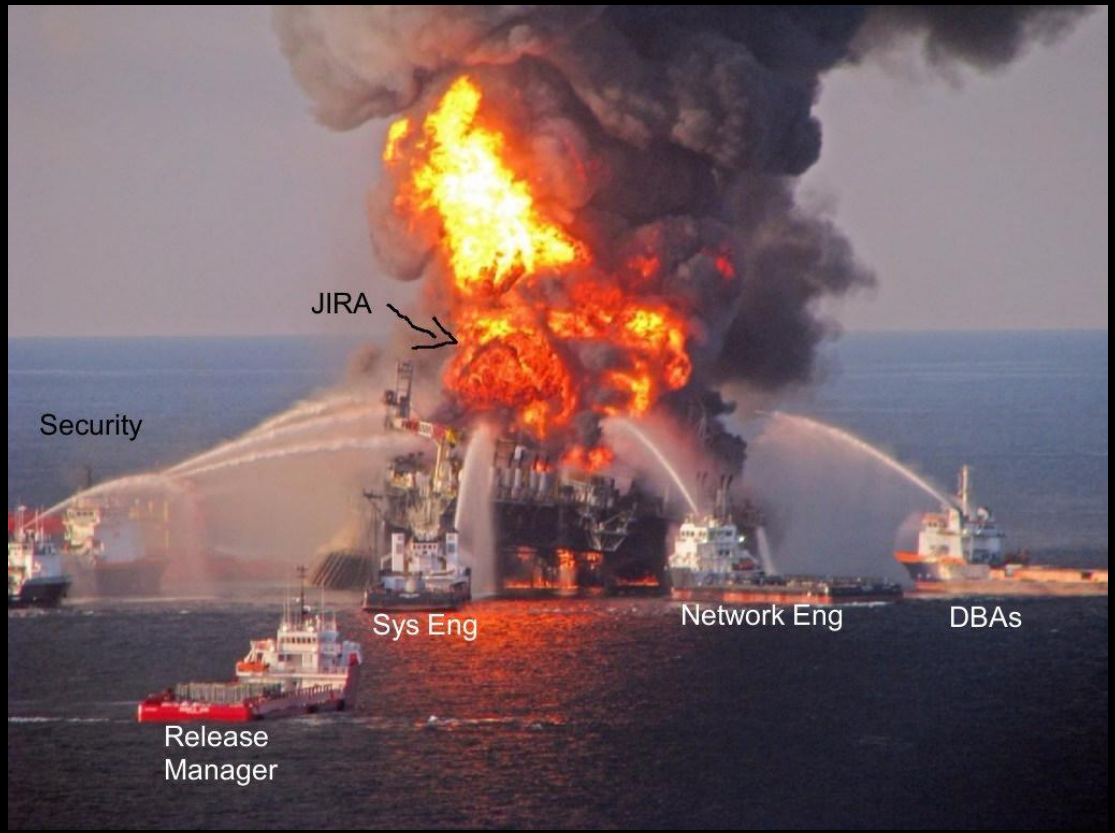
[1]https://twitter.com/petecheslock/status/595617204273618944

How Security sees DevOps[2]

[2] Also some twitter.

How DevOps see Security[3]

[3]https://www.flickr.com/photos/philwolff/3788258352



Enterprise DevOps[4]

[4]https://twitter.com/pczarkowski/status/1006208448101535745?s=19

This is how it should be![5]

[5]me

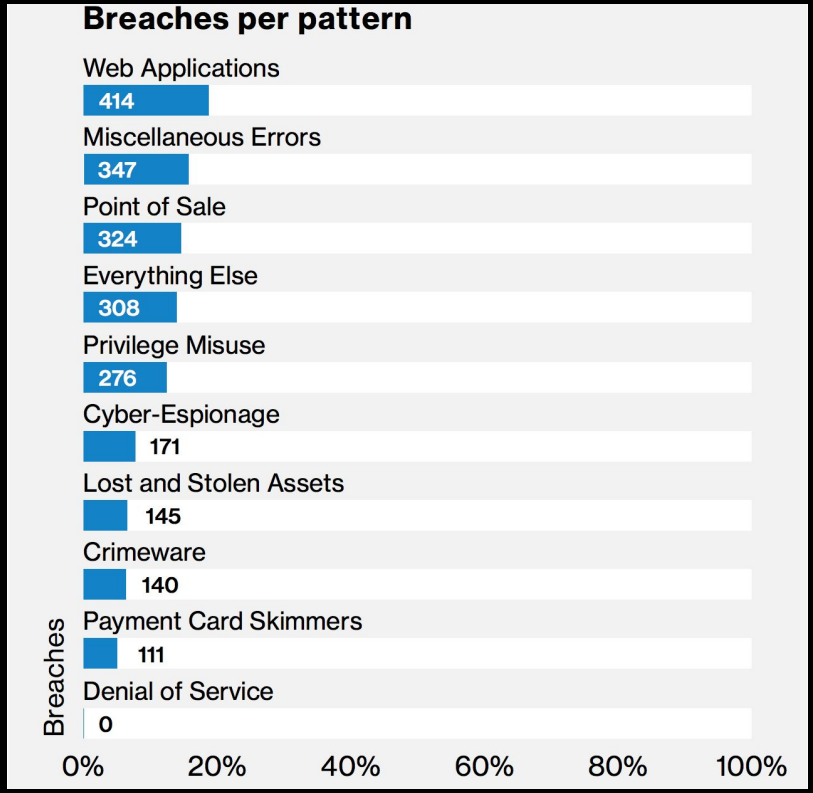
AppSec

“Application Security is the art (or is that battle?) of making an application secure”

– Tanya Jance
Senior Cloud Developer Advocate

~# cat AppSec.txt | column

- ↳ WebApplications account for ~18% (n=2,216) of breaches in 2018[6]
- ↳ 23.244 WebApplications compromised as a mean to attack something else[6]



[6]https://www.verizonenterprise.com/resources/reports/rp_DBIR_2018_Report_en_xg.pdf

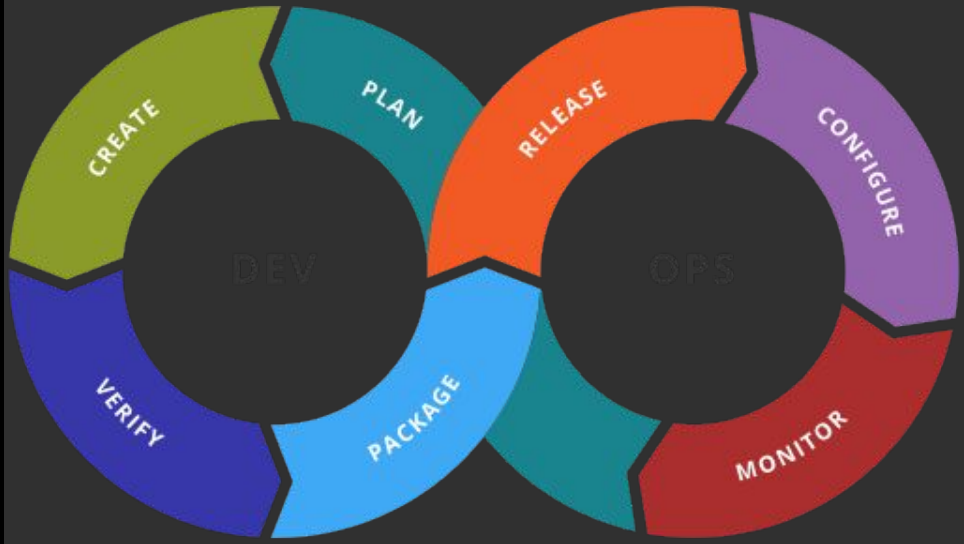
~# display education.png

Very little to no AppSec courses in higher education.

Biggest techn. uni in AT:

- ↳ 2 courses
- ↳ ~25% AppSec each
- ↳ 1.5/180 ECTS
- ↳ if elected

DevOps


CREATE
PLAN
RELEASE
CONFIGURE
DEV
OPS
VERIFY
PACKAGE
MONITOR

~# cat speed.txt | column

Decrease time from implementation to deployment.

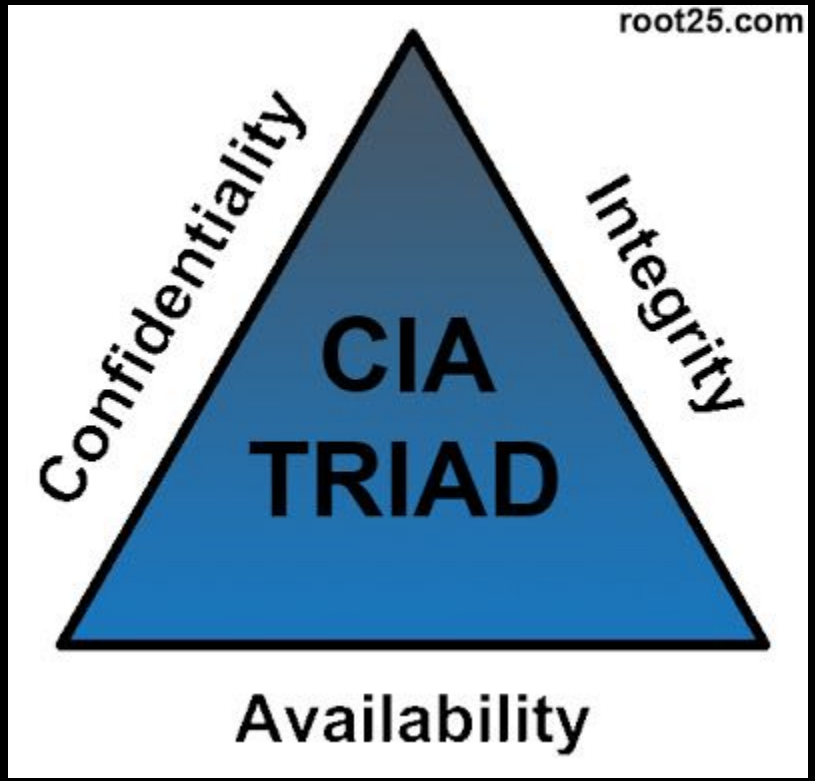
Security bugs can be fixed. NOW.

~# cat reliability.txt | column

Low Failure Rates

Security win: Availability

~# display cia.png



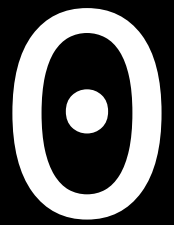
~# cat market.txt | column

Nobody wins, if we don’t ship

Security can’t win, if we do not ship.

Integrating Security

How to integrate security into your development life cycle



I assume this is the number of dedicated FTE security people in your company

~# display code.png

Static and Dynamic Analyzers
for Security Testing

~# more sast.txt

Static Analyzers for Security Testing (SAST)

- ↳ Scale well
- ↳ Often integrate into IDE
- ↳ high

sast.txt {END}

~# more sast_tools.txt

- ↳ Highly Platform dependent!
- ↳ Cross Platform
  - ↳ SonarQube
- ↳ Java
  - ↳ FindSecBugs
  - ↳ FindBugs
- ↳ Ruby
  - ↳ Brakeman
- ↳ Python
  - ↳ Bandit

sast_tools.txt {END}

~# more sast_selection.txt

- ↳ Must support your programming language
- ↳ Types of vulnerabilities detected? (OWASP Top 10; more?)
- ↳ Does it understand the Libraries you use?
- ↳ Require fully buildable set of source?
- ↳ Run against binaries or source?
- ↳ Can it be run continuously?
- ↳ License costs…

sast_selection.txt {END}

~# more dast.txt

Dynamic Analyzers for Security Testing (DAST)

- ↳ Scan for vulnerabilities like
  - ↳ Cross-Site Scripting
  - ↳ SQL Injection
  - ↳ Command Injection
  - ↳ ....
- ↳ Mostly Web Applications

dast.txt {END}

~# more dast_tools.txt

- ↳ Nikto
- ↳ OWASP ZAP
- ↳ Burp Suite
- ↳ …

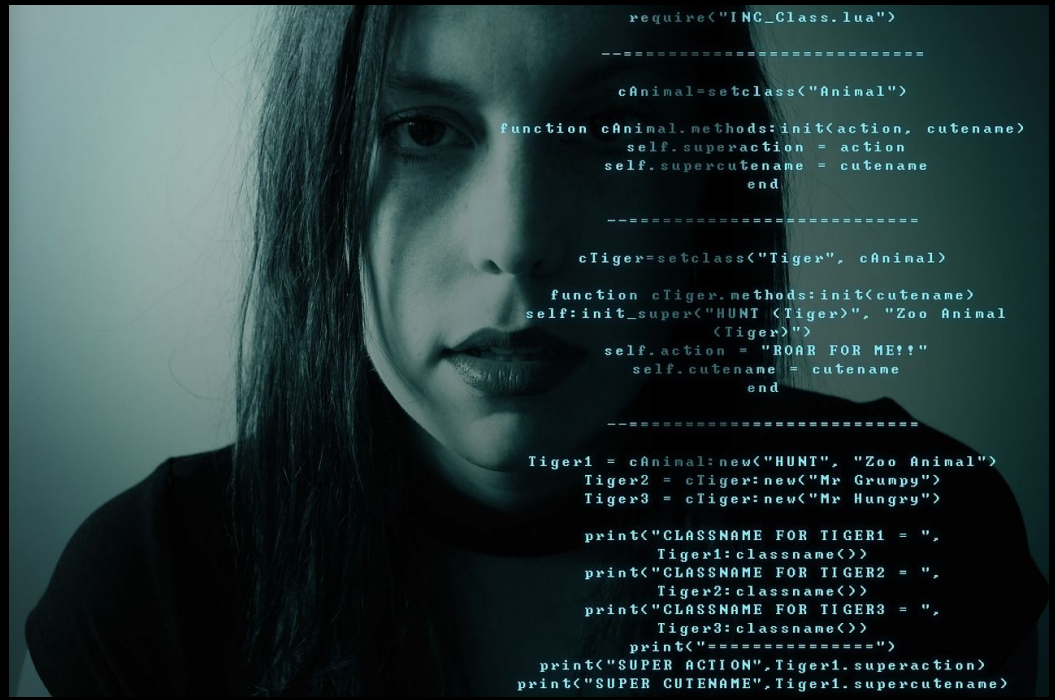
dast_tools.txt {END}

~# display approved.png

Use only up-to-date and approved images

~# display unit_tests.png

Make negative unit-tests



~# display ci.png

Severe security bugs break the build

~# display sprint.png

Fit activities in a sprint

~# display dependency_mgmt.png

- ↳ Retire.js
- ↳ Snyk.io
- ↳ OWASP dependency check
- ↳ ...

~# more vuln_mgmt.txt

↳ Start managing early
↳ Easier to convince management

For example: OWASP DefectDojo

vuln_mgmt.txt {END}

~# more security_builtin.txt

- ↳ Logging of security events
- ↳ Monitoring of said events
- ↳ Make APIs for security mechanisms
- ↳ Collect metrics

security_builtin.txt {END}

Wrap up

Last key messages.

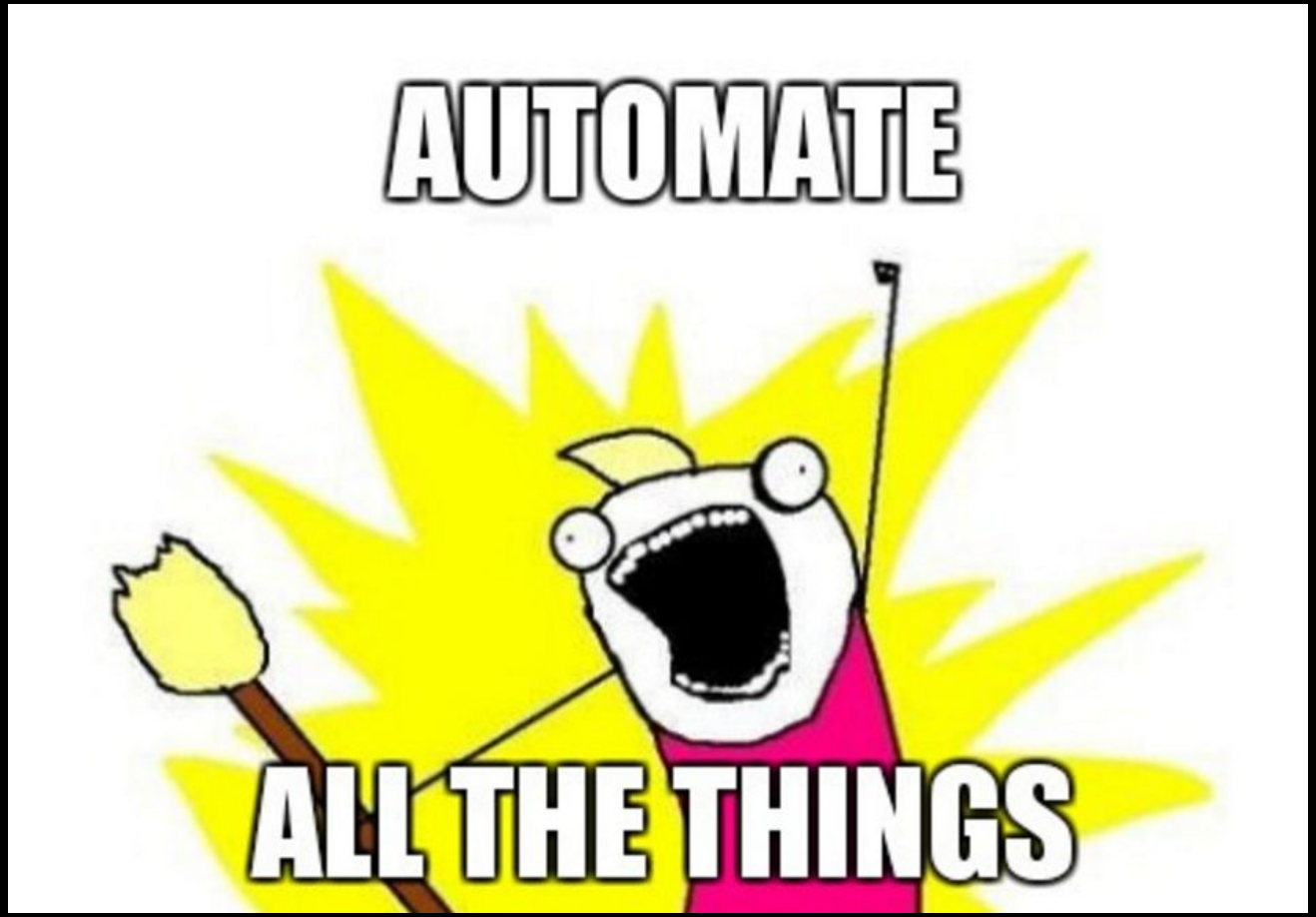
Me, Ex-Ops Guy

~# more wrap_up.txt

- ↳ No “throwing over the wall”
  - ↳ Neither to security
  - ↳ nor from
- ↳ There is no perfect time
- ↳ Start now
- ↳ Demand training
  - ↳ You got reports rights?

wrap_up.txt {END}

~# sleep 2; clear; display last_pic.png


AUTOMATE
ALL THE THINGS

~# more last_slide.txt

Thank you for your attention!

Questions?

last_slide.txt {END}