EATING THE ELEPHANT

APPLICATION SECURITY WHEN YOU AREN'T A START-UP

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@ME

- Westpac New Zealand – Security Assurance Manager
  - Find and fix all the (security) things
  - Risk stuff
  - Annoy the SecOps team
  - Secure Development Initiatives
- Background:
  - Penetration Testing
  - Software Development
  - Risk and Policy

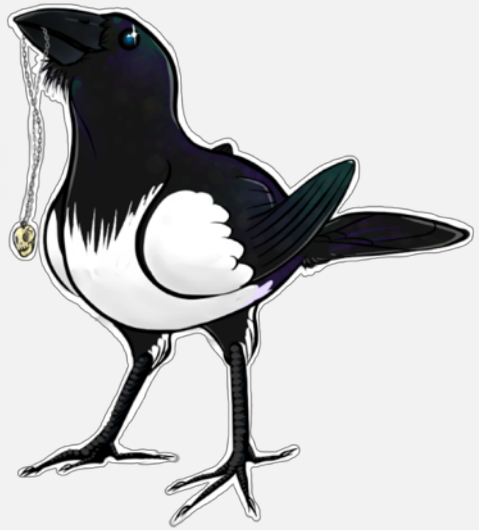
OUTLINE

- What is Good?
- The Reality
- Secure Development Menu
- Lessons Learnt

WHAT IS GOOD?

The Current Dogma:

- Application Security Engineers



- DevSecOps

WHAT IS GOOD?

Application Security Engineers

- Pros:
  - A security teams snake in the grass
  - Catch issues early
  - Passively upskills the rest of the squad
  - Very popular with large tech companies
- Cons:
  - Don’t exist or are gold plated
  - Large tech companies practically have constantly open vacancies
  - Seriously these people are unicorns (and probably all in this room)

WHAT IS GOOD?

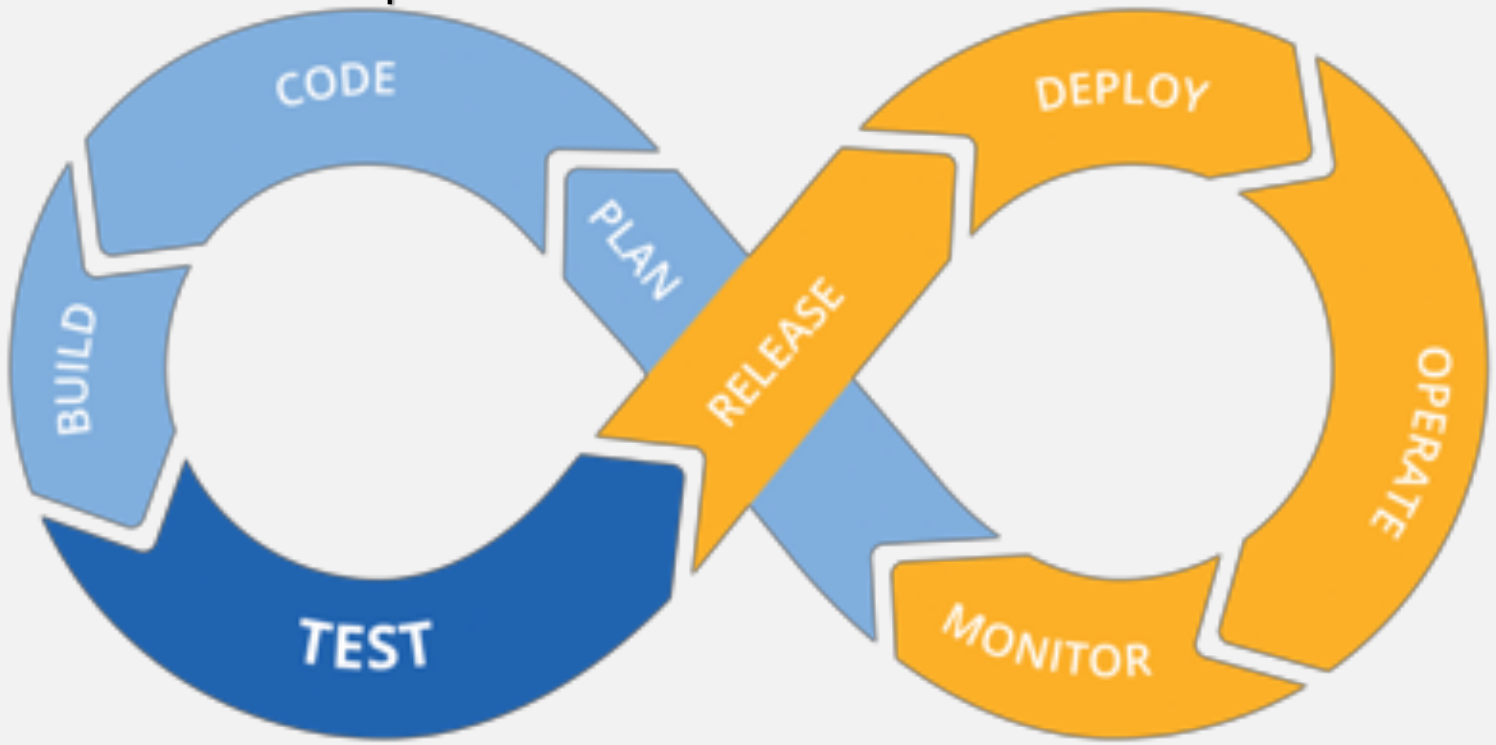
Pull Requests

Scale Out

Fresh Image

Latest Dependencies

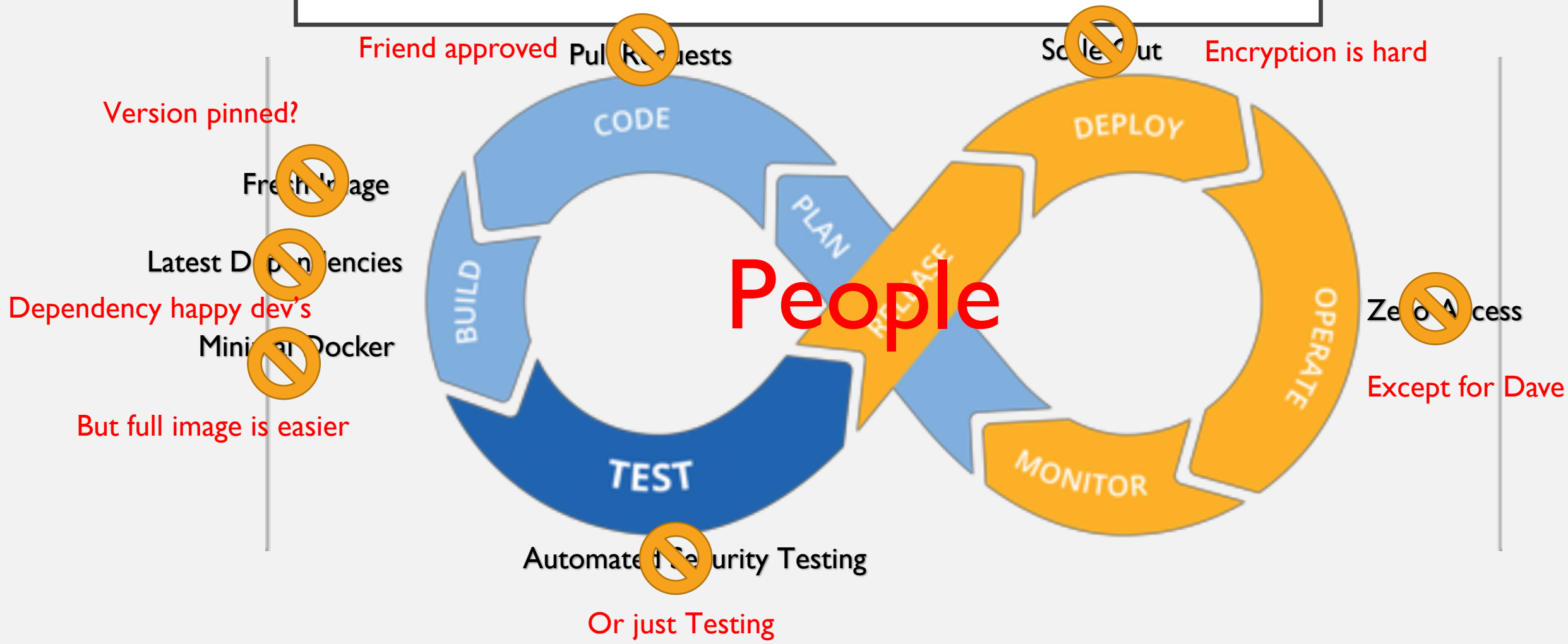
Minimal Docker



Zero Access

Automated Security Testing

THE REALITY


Friend approved
Pull Requests
Scale Out
Encryption is hard
Version pinned?
Fresh Image
Latest Dependencies
Dependency happy dev's
Minimal Docker
But full image is easier
CODE
PLAN
BUILD
TEST
RELEASE
DEPLOY
OPERATE
MONITOR
People
Zero Access
Except for Dave
Automated Security Testing
Or just Testing

START AT THE START

We can solve this with basic principles:

- Education and Awareness
- Visibility

If you can't have an App Sec Engineer

And you can't commit to DevSecOps…

SECURE DEVELOPMENT MENU

Education and Awareness:

- ❑ Introduction to Secure Development - OWASP Top 10
- ❑ Secure Code Warrior
- ❑ Introduction to Penetration Testing – OWASP Juice Shop
- ❑ Capture the Flag – FBCTF
- ❑ Help with Remediating Findings

SECURE DEVELOPMENT MENU

Visibility:

- ❑ Attend Stand-Ups
- ❑ Threat Modelling – Elevation of Privilege
- ❑ Pull Requests
- ❑ Static Code Analysis – HP Fortify, OWASP SonarQube (findsecbugs)
- ❑ Dependency Scanning – JFrog X-Ray / OWASP dependency check (maven, node) / snyk
- ❑ Vulnerability Scanning - Nessus
- ❑ Compliance Scanning – Chef Automate; authenticated VMS

LESSONS LEARNT

- Iterate – don’t try it all at once
- Let squads pick and choose

- Build rapport – Previous encounters with Security team may not have gone well
- Build trust - Squads may be scared of you
- Track it

THANKS

- Special mention to O'Reilly Agile Application Security