OWASP Romania

InfoSec Conf - Bucharest 2013



The OWASP Foundation

http://www.owasp.org



Scanning Romania with Nessus (web part)

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Introduction

What is this all about?

- ☐ The results of a <u>passive</u> vulnerability scan against ALL Romanian public IP addresses.
- Vulnerability scan:
 - Use an automated tool to detect vulnerabilities on a target system
 - Send probe → Receive response → Match against a signature database
 - Obtain a list of vulnerabilities that are not validated by exploitation
- Passive vulnerability scan:
 - Search for vulnerabilities on a target system without actually touching the system
 - The input data is provided by other systems

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Introduction

Objectives of this research

- Perform a quantitative analysis of the security state of Romania's Internet
- Answer a few questions such as:
 - How many vulnerable systems are directly reachable?
 - Which are the vulnerable systems? What is their role?
 - What types of vulnerabilities affect Romania's Internet?
 - How easily are they exploitable and what is the risk?

Introduction

Scope of this research (1)

- ALL Romanian public IP addresses
 - Source: RIPE^[1] and MaxMind^[2]

```
whois 109.166.152.145
inetnum: 109.166.128.0 - 109.166.255.255
org: ORG-ORS1-RIPE
netname: RO-DIALOG-20091022
descr: Orange Romania S.A.
country: RO
admin-c: ORRO1-RIPE
tech-c: ORRO1-RIPE
% This query was served by the RIPE Database Query Service version 1.69 (WHOIS3)
```

RO = 0.32% of Total IPv4 address space

Rank 28 of 200 by the nr. of IPs per country^[3]

Total: 1170 network ranges

Total: 13,847,000 IP addresses belonging to Romania

[1] http://www.ripe.net

[2] http://www.maxmind.com

[3] http://en.wikipedia.org/wiki/List of countries by IPv4 address allocation

Introduction

Scope of this research (2)

- Only port 80 for now

~2,500,000 web servers

= 18% of total RO IPs

- Vulnerabilities obtained from the HTTP response headers
 - Server type

(e.g. Apache, IIS, nginx, lighttpd)

Server version

(e.g. Apache 2.2.3, IIS 5.0)

- Powered by:

(e.g. PHP 5.1.3)



21 - FTP

22 - SSH

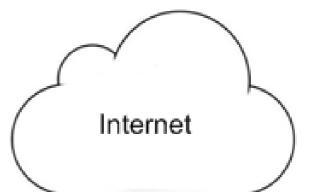
23 - TELNET

25 - SMTP

80 - WWW

110 - POP3

.

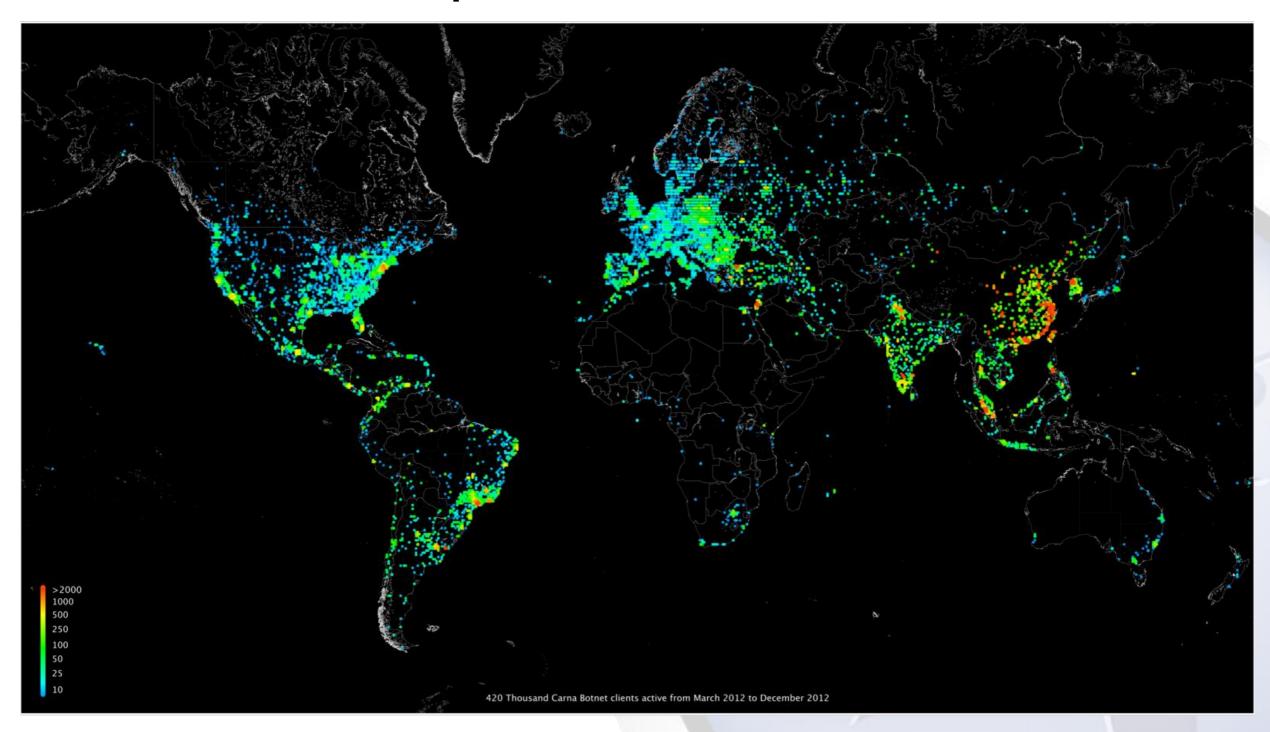


Source data

- CARNA Botnet Internet Census 2012^[1]
- Distributed scanner that used ~420K insecure devices to scan ALL internet (/0)
 - For each IP address:
 - ICMP ping
 - Reverse DNS
 - Scan 632 TCP ports + service probes
 - Scan 110 UDP ports + service probes
- Results are publicly available: 568 GB of compressed data ~= 9TB decompressed [2]

- [1] http://internetcensus2012.bitbucket.org/
- [2] http://internetcensus2012.bitbucket.org/download.html

CARNA Botnet - clients map



http://internetcensus2012.bitbucket.org/images/

Sample data

Quoted-printable encoded

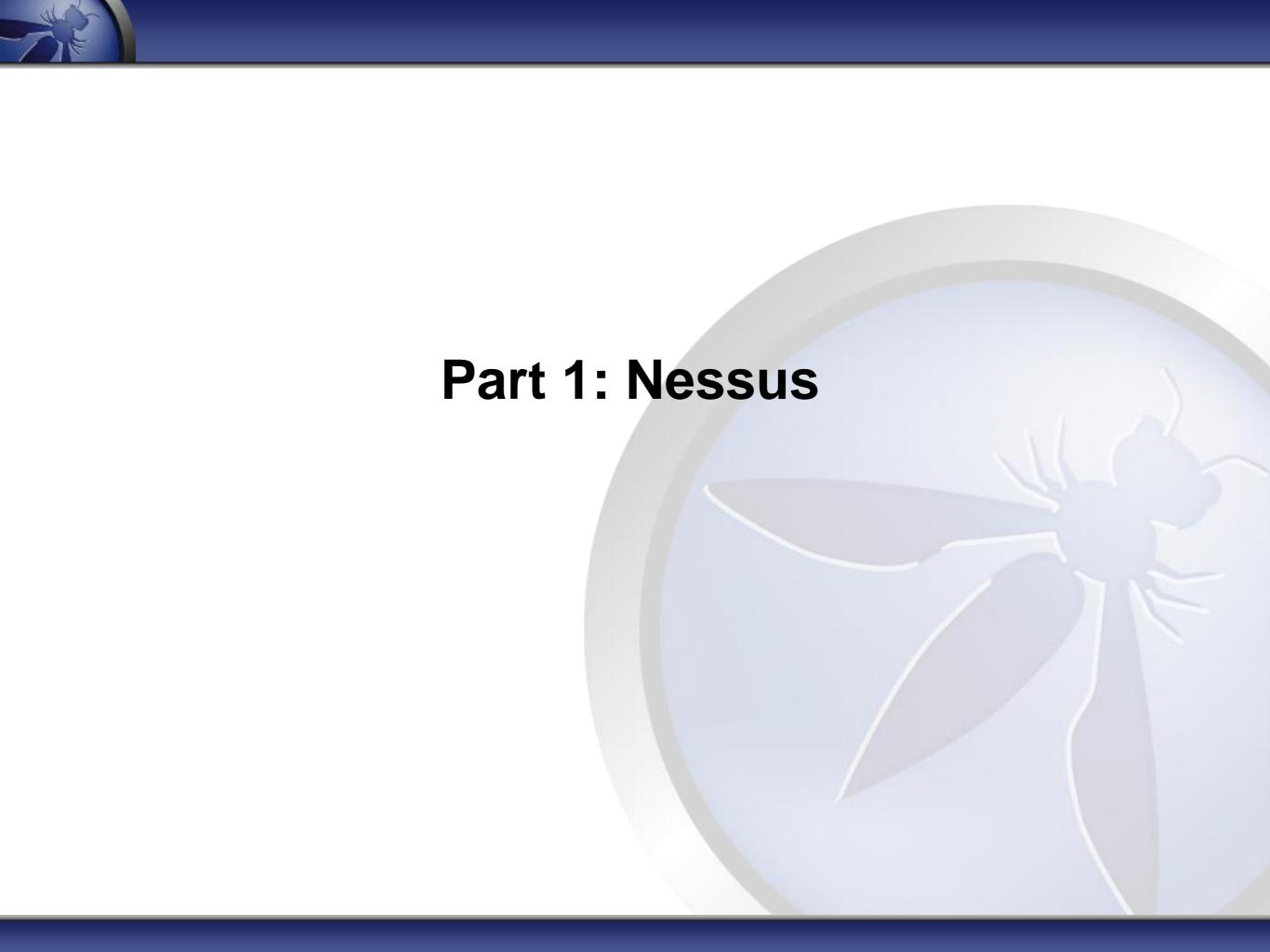
```
109.98.98.38 1343252700 1 HTTP/1.0=20200=200K=0D=0AConnection:=20close=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0AContent-Length:=20181=0D=0
```

HTTP response decoded as:

```
HTTP/1.1 200 OK
Date: Fri, 14 Dec 2012 20:24:38 GMT
Server: Apache/2.2.21 (Win32) PHP/5.3.10
X-Powered-By: PHP/5.3.10
Set-Cookie: d51feb2af457c7c12fce0d8a532ae256=ktsulpg2qginr4kqiscohjvdo5; path=/
P3P: CP="NOI ADM DEV PSAi COM NAV OUR OTRO STP IND DEM"
Cache-Control: no-cache
Pragma: no-cache
Connection: close
Content-Type: text/html; charset=utf-8
<html>
   <font size='1'>
      <span style='background-color: #cc0000; color: #fce94f; font-size: x-large;'>( ! )</span> Notice:
Undefined index: HTTP HOST in C:\wamp\www\libraries\joomla\environment\uri.php on line <i>173</i>
            Call Stack
```

Vulnerability scanners

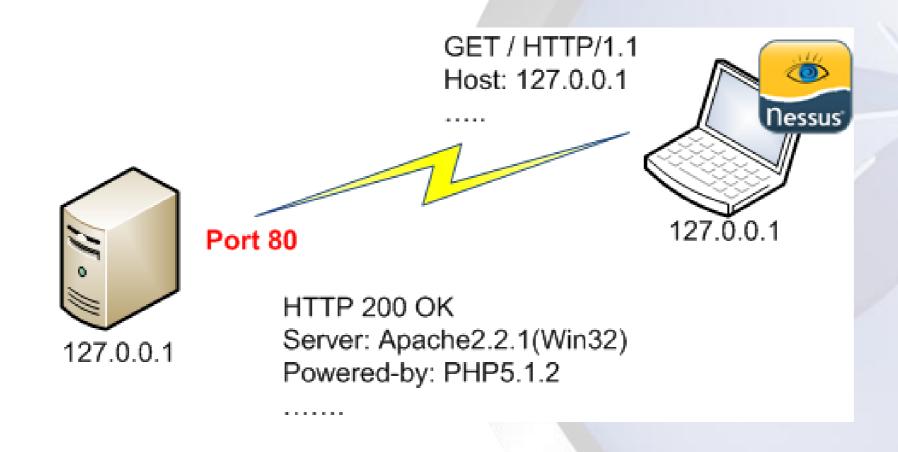
- 1. Nessus
- 2. Grep search for vulns described in OWASP Top 10



Passive vulnerability scan (1)

Scanning approach:

- Simulate the target server on the local machine
- Scan the local machine with Nessus
- Respond to HTTP GET requests with the response of the real server



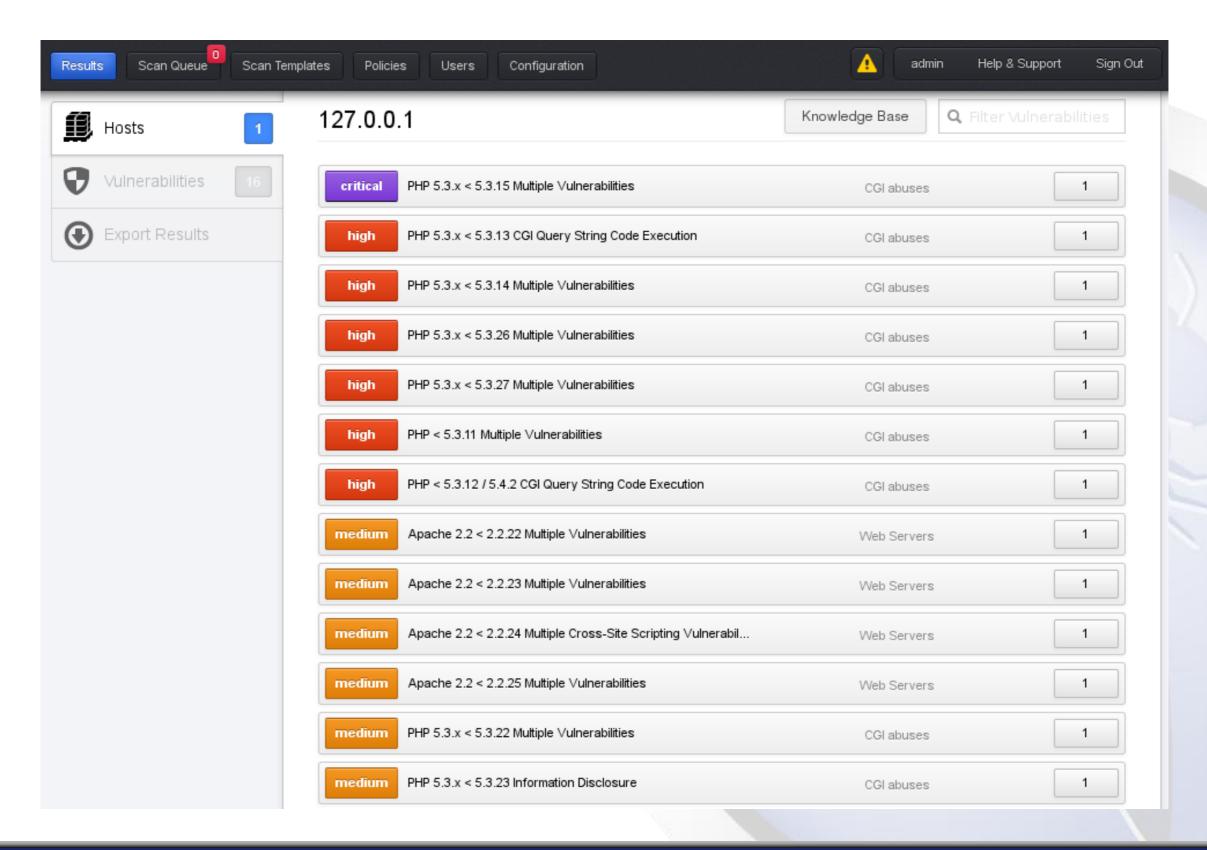
Passive vulnerability scan (2)

Enable only the following plugin families in Nessus:

- CGI Abuses
- Web Servers

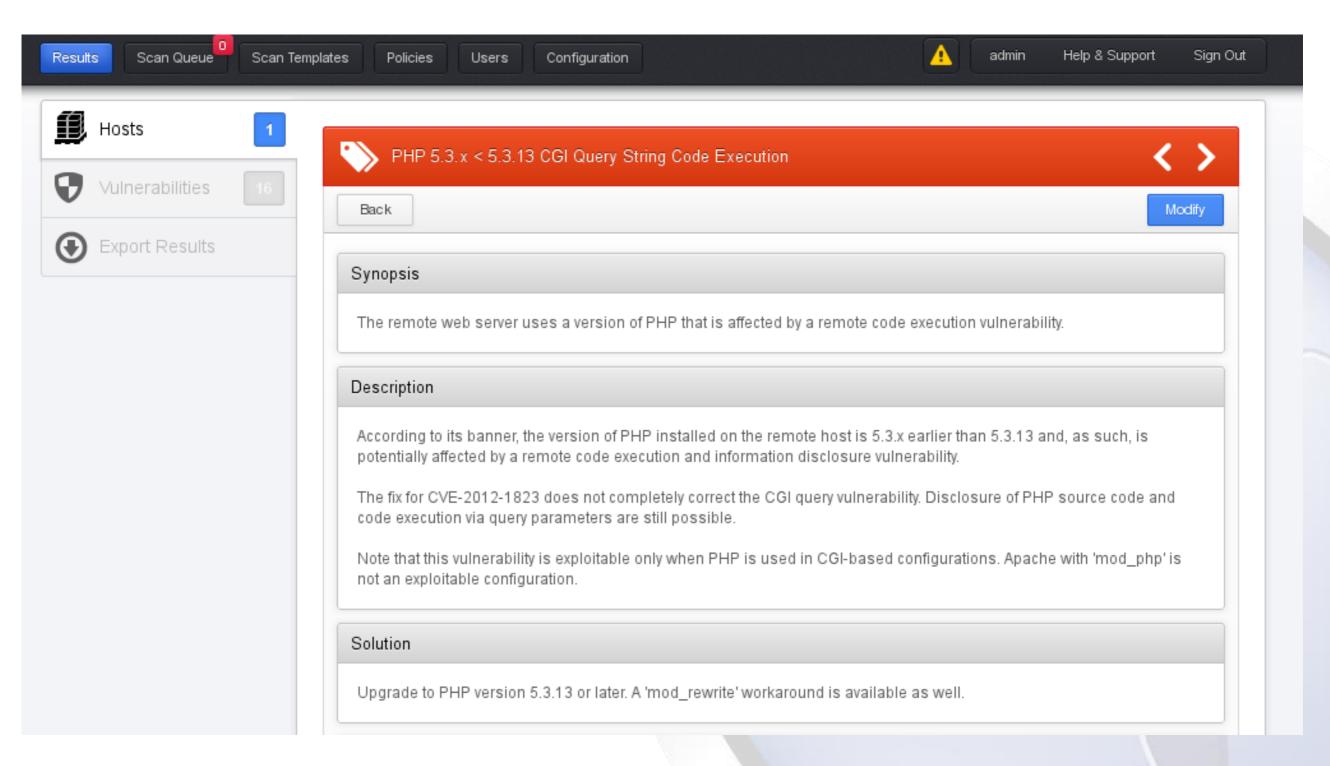
Total 3527 plugins

Nessus report on a single web server





Sample High risk vulnerability



Top of Critical-risk vulnerabilities discovered

	L	L		L		_
	Severity	Plugin Name	CVE		Nr Servers	- -
-	Critical Critical Critical Critical Critical Critical	PHP 5.3.x < 5.3.15 Multiple Vulnerabilities PHP Unsupported Version Detection Apache 2.2 < 2.2.15 Multiple Vulnerabilities Apache 2.2 < 2.2.13 APR apr_palloc Heap Overflow PHP 5.4.x < 5.4.5 _php_stream_scandir Overflow PHP 5.3.9 'php_register_variable_ex()' Code Execution Apache mod_proxy Content-Length Overflow	CVE-2012-2688 CVE-2007-6750 CVE-2009-2412 CVE-2012-2688 CVE-2012-0830 CVE-2004-0492	60085 58987 45004 57603 60086 57825 15555	1959657 9249 4902 2833 371 335 264	
	Critical Critical Critical	PHP 5.1.x < 5.1.5 Multiple Vulnerabilities Apache < 2.0.48 Multiple Vulnerabilities (OF, InfoDisc Apache < 1.3.42 mod_proxy Integer Overflow	CVE-2006-1017 CVE-2003-0789 CVE-2010-0010	17713 11853 44589	121 56 1	
_	_					Г

10 rows in set (0.30 sec)

Top of High-risk vulnerabilities discovered (1)

+		+	+	
Severity	Plugin Name	CVE	PlugID	Nr Servers
High	PHP < 5.3.12 / 5.4.2 CGI Query String Code Execution	CVE-2012-1823	58988	1967941
High	PHP < 5.3.11 Multiple Vulnerabilities	CVE-2011-1398	58966	1967914
High	PHP 5.3.x < 5.3.14 Multiple Vulnerabilities	CVE-2012-2143	59529	1959046
High	PHP 5.3.x < 5.3.13 CGI Query String Code Execution	CVE-2012-2311	59056	1958619
High	PHP < 5.3.9 Multiple Vulnerabilities	CVE-2011-3379	57537	12823
High	PHP < 5.2.11 Multiple Vulnerabilities	CVE-2009-3291	41014	4703
High	PHP 5.2 < 5.2.14 Multiple Vulnerabilities	CVE-2007-1581	48244	4149
High	Apache 2.2 < 2.2.14 Multiple Vulnerabilities	CVE-2009-2699	42052	4092
High	PHP < 5.2.8 Multiple Vulnerabilities	CVE-2008-5814	35067	3081
High	PHP 5.3 < 5.3.7 Multiple Vulnerabilities	CVE-2011-1148	55925	2288
High	PHP 5 < 5.2.7 Multiple Vulnerabilities	CVE-2008-2371	35043	1950
High	Unsupported Web Server Detection		34460	1918
High	PHP 5.3 < 5.3.6 Multiple Vulnerabilities	CVE-2011-0421	52717	1916
High	Apache 2.0 < 2.0.65 Multiple Vulnerabilities	CVE-2011-3192	68914	1393
High	PHP < 5.2.6 Multiple Vulnerabilities	CVE-2007-4850	32123	1344
High	PHP 5.3 < 5.3.4 Multiple Vulnerabilities	CVE-2006-7243	51140	1151
High	PHP < 4.4.9 Multiple Vulnerabilities	CVE-2007-4850	33849	1091
High	PHP < 4.4.5 Multiple Vulnerabilities	CVE-2006-4625	24906	1056
High	PHP < 4.4.3 / 5.1.4 Multiple Vulnerabilities	CVE-2006-0996	22268	755
High	Apache < 1.3.37 mod_rewrite LDAP Protocol URL Overfl	CVE-2006-3747	31654	721
High	PHP 5.3 < 5.3.3 Multiple Vulnerabilities	CVE-2007-1581	48245	711
High	PHP < 4.4.4 Multiple Vulnerabilities	CVE-2006-1017	17710	662
High	Apache 2.0 < 2.0.64 Multiple Vulnerabilities	CVE-2008-2364	50069	579
High	PHP < 4.4.1 / 5.0.6 Multiple Vulnerabilities	CVE-2002-0229	20111	539

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Top of High-risk vulnerabilities discovered (2)

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High	Apache < 2.0.59 mod_rewrite LDAP Protocol URL Overf1	CVE-2006-3747	31655	334
High	PHP 5.x < 5.2.2 Information Disclosure	CVE-2007-1649	17797	323
High	PHP < 4.3.11 / 5.0.3 Multiple Unspecified Vulnerabil		18033	304
High	Apache < 2.0.55 Multiple Vulnerabilities	CVE-2005-1268	31656	282
High	PHP < 5.2.1 Multiple Vulnerabilities	CVE-2006-6383	24907	259
High	Apache < 1.3.29 Multiple Modules Local Overflow	CVE-2003-0542	11915	254
High	Apache < 1.3.28 Multiple Vulnerabilities (DoS, ID)	CVE-2003-0460	11793	231
High	PHP 5.x < 5.2 Multiple Vulnerabilities	CVE-2006-1015	31649	228
High	PHP < 4.3.10 / 5.0.3 Multiple Vulnerabilities	CVE-2004-1018	15973	179
High	PHP 5.4.x < 5.4.4 Multiple Vulnerabilities	CVE-2012-2143	59530	138
High	Apache <= 2.0.51 Satisfy Directive Access Ctl Bypass	CVE-2004-0811	14803	114
High	Apache Chunked Encoding Remote Overflow	CVE-2002-0392	11030	62
High	Apache < 1.3.27 Multiple Vulnerabilities (DoS, XSS)	CVE-2002-0839	11137	61
High	PHP < 4.3.3 Multiple Vulnerabilities	CVE-2002-1396	11850	54
High	mod_ssl ssl_util_uuencode_binary Remote Overflow	CVE-2004-0488	12255	42
High	Apache mod_ssl ssl_engine_log.c mod_proxy Hook Funct	CVE-2004-0700	13651	35
High	PHP 4.x < 4.3.0 ZendEngine Integer Overflow	CVE-2006-4812	17796	30
High	PHP 5.4.x < 5.4.3 Multiple Vulnerabilities	CVE-2012-2311	59057	19
High	Oracle GlassFish Server 2.1.1 < 2.1.1.14	CVE-2011-3559	58089	11
High	PHP 5.1.x < 5.1.2 Multiple Vulnerabilities	CVE-2006-0200	17712	10
High	PHP 5.3.7 crypt() MD5 Incorrect Return Value	CVE-2011-3189	55969	5
High	Apache-SSL SSLVerifyClient SSLFakeBasicAuth Certific	CVE-2004-0009	12046	3
High	PHP < 4.3.1 CGI Module Force Redirect Settings Bypas	CVE-2003-0097	11237	2
High	Apache mod_jk2 Host Header Multiple Fields Remote Ov	CVE-2007-6258	31786	1
High	Apache < 2.0.44 DOS Device Name Multiple Remote Vuln	CVE-2003-0016	11209	1
High	mod_python < 2.7.8 Module Importing Privilege Execut	CVE-2002-0185	10947	1
+	_+			

50 rows in set (0.48 sec)

Top of Medium-risk vulnerabilities discovered (1)

+			+	++
Severity	Plugin Name	CVE	PlugID	Nr Servers
Medium	Apache 2.2 < 2.2.23 Multiple Vulnerabilities	CVE-2012-0883	62101	10938
Medium	Apache 2.2 < 2.2.22 Multiple Vulnerabilities	CVE-2011-3368	57791	9672
Medium	Apache 2.2 < 2.2.21 mod_proxy_ajp DoS	CVE-2011-3348	56216	8571
Medium	Apache 2.2 < 2.2.18 APR apr fnmatch DoS	CVE-2011-0419	53896	7463
Medium	Apache 2.2 < 2.2.17 Multiple Vulnerabilities	CVE-2009-3560	50070	6713
Medium	Apache 2.2 < 2.2.16 Multiple Vulnerabilities	CVE-2010-1452	48205	6299
Medium	PHP 5.2 < 5.2.17 / 5.3 < 5.3.5 String To Double Conv	CVE-2010-4645	51439	6205
Medium	PHP < 5.3.2 / 5.2.13 Multiple Vulnerabilities	CVE-2010-1128	44921	5608
Medium	PHP < 5.2.12 Multiple Vulnerabilities	CVE-2009-3557	43351	4843
Medium	PHP 5.2 < 5.2.15 Multiple Vulnerabilities	CVE-2010-3436	51139	4481
Medium	PHP < 5.2.10 Multiple Vulnerabilities	CVE-2009-2687	39480	3575
Medium	PHP < 5.2.9 Multiple Vulnerabilities	CVE-2008-5498	35750	3312
Medium	Apache HTTP Server 403 Error Page UTF-7 Encoded XSS	CVE-2008-2168	17696	2935
Medium	Apache 2.x < 2.2.12 Multiple Vulnerabilities	CVE-2009-0023	40467	2759
Medium	Apache < 2.2.9 Multiple Vulnerabilities (DoS, XSS)	CVE-2007-6420	33477	1699
Medium	Apache < 2.2.8 Multiple Vulnerabilities (XSS, DoS)	CVE-2007-5000	31118	1051
Medium	PHP < 5.2.5 Multiple Vulnerabilities	CVE-2007-3996	28181	945
Medium	Apache < 2.2.6 Multiple Vulnerabilities (DoS, XSS)	CVE-2006-5752	26023	944
Medium	PHP < 5.2.4 Multiple Vulnerabilities	CVE-2007-1413	25971	858
Medium	Apache < 2.0.63 Multiple XSS Vulnerabilities	CVE-2007-5000	31407	444
Medium	OpenSSL < 0.9.6m / 0.9.7d Multiple Remote DoS	CVE-2004-0079	12110	415
Medium	PHP < 5.2.3 Multiple Vulnerabilities	CVE-2007-1900	25368	392
Medium	OpenSSL < 0.9.6j / 0.9.7b Multiple Vulnerabilities	CVE-2003-0078	11267	380

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Top of Medium-risk vulnerabilities discovered (2)

• • •				
Medium	Apache 2.4 < 2.4.3 Multiple Vulnerabilities	CVE-2012-2687	61644	324
Medium	Apache < 1.3.41 Multiple Vulnerabilities (DoS, XSS)	CVE-2007-3847	31408	303
Medium	PHP 5.3 < 5.3.1 Multiple Vulnerabilities	CVE-2009-3557	42862	184
Medium	PHP php_variables.c Multiple Variable Open Bracket Mem	CVE-2004-0958	15436	156
Medium	Apache < 2.0.51 Multiple Vulnerabilities (OF, DoS)	CVE-2004-0747	14748	113
Medium	PHP < 4.3.8 Multiple Vulnerabilities	CVE-2004-0594	13650	96
Medium	Apache < 2.0.50 Multiple Remote DoS	CVE-2004-0493	12293	96
Medium	lighttpd mod_fastcgi HTTP Request Header Remote Overfl	CVE-2007-4727	26057	92
Medium	F5 BIG-IP Cookie Remote Information Disclosure		20089	86
Medium	PHP Mail Function Header Spoofing	CVE-2002-0985	11444	67
Medium	PHP 5.x < 5.1.0 Multiple Vulnerabilities	CVE-2005-3319	17711	57
Medium	PHP socket_iovec_alloc() Function Overflow	CVE-2003-0166	11468	53
Medium	Apache < 1.3.31 / 2.0.49 Socket Connection Blocking Rac	CVE-2004-0174	12280	33
Medium	Apache 2.4 < 2.4.2 'LD_LIBRARY_PATH' Insecure Library L	CVE-2012-0883	58795	32
Medium	PHP < 4.3.3 php_check_safe_mode_include_dir Function Sa	CVE-2003-0863	11807	24
Medium	Apache < 2.0.47 Multiple Vulnerabilities (DoS, Enc)	CVE-2003-0192	11788	23
Medium	PHP 5.4.x < 5.4.1 Multiple Vulnerabilities	CVE-2012-1172	58967	16
Medium	Apache 2.2.18 APR apr_fnmatch DoS	CVE-2011-1928	54646	13
Medium	Oracle GlassFish Server 2.1.1 < 2.1.1.15 / 3.0.1 < 3.0.	CVE-2011-5035	58090	11
Medium	Oracle GlassFish Server 3.0.1 / 3.1.1 < 3.0.1.5 / 3.1.1	CVE-2012-0104	57805	11
Medium	Jetty < 4.2.19 HTTP Server HttpRequest.java Content-Len	CVE-2004-2381	17348	6
Medium	Apache < 2.0.43 Multiple Vulnerabilities (Log Injection	CVE-2002-1156	11408	4
Medium	IceWarp Merak WebMail Server < 9.4.2 Multiple Vulnerabi	CVE-2009-1467	38717	2
Medium	PHP Safe Mode mail Function 5th Parameter Arbitrary Cmd	CVE-2001-1246	10701	2
Medium	Sun NetBeans Java IDE HTTP Server IP Restriction Bypass	CVE-1999-1527	10149	1
Medium	ListManager < 9.3b / 9.2c / 8.95d Multiple Vulnerabilit	CVE-2007-6319	31134	1
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49 rows in set (0.47 sec)

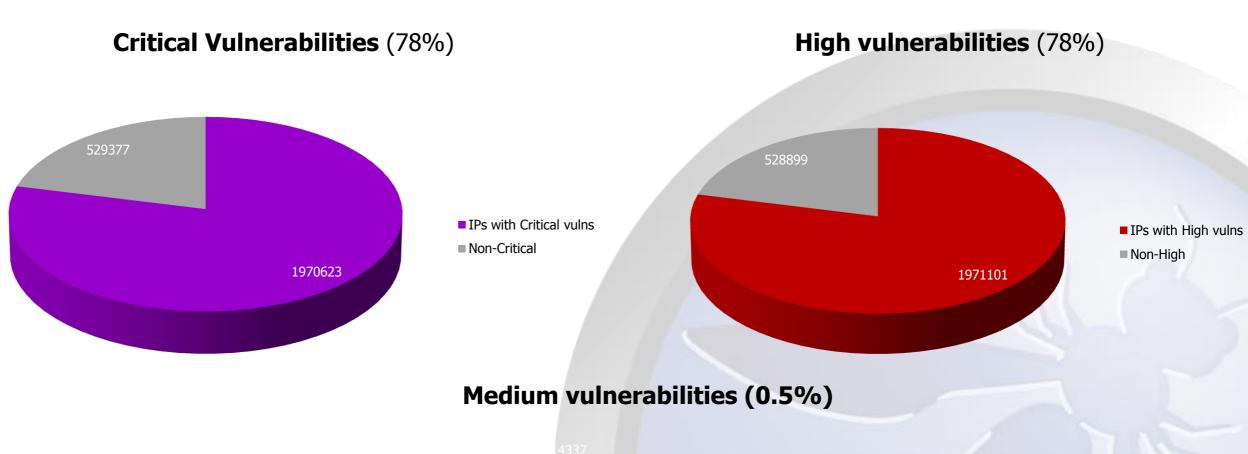


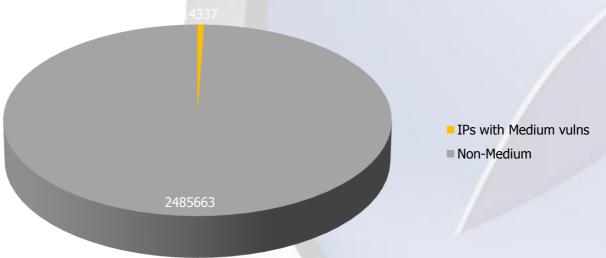
Nessus plugins summary

Total 112 unique plugins triggered on all input data (3.1% of total 3527 plugins)

- 10 Critical risk
- 50 High risk
- 49 Medium risk
- 3 Low risk

Vulnerability summary





Why so many vulnerabilities?

++++		
Severity Plugin Name CVE	PlugID Nr Serve	
Critical PHP 5.3.x < 5.3.15 Multiple Vulnerabilities CVE High PHP < 5.3.12 / 5.4.2 CGI Query String Code Execution CVE High PHP < 5.3.11 Multiple Vulnerabilities CVE High PHP 5.3.x < 5.3.14 Multiple Vulnerabilities CVE	-2012-2688 60085 19596 -2012-1823 58988 19679 -2011-1398 58966 19679 -2012-2143 59529 19590 -2012-2311 59056 19586	57 41 14 46

All these plugins trigger on the following server signature:

Server: nginx/1.0.11

X-Powered-By: PHP/5.3.10

There are 1,905,288 devices with this signature (76% of total web servers).

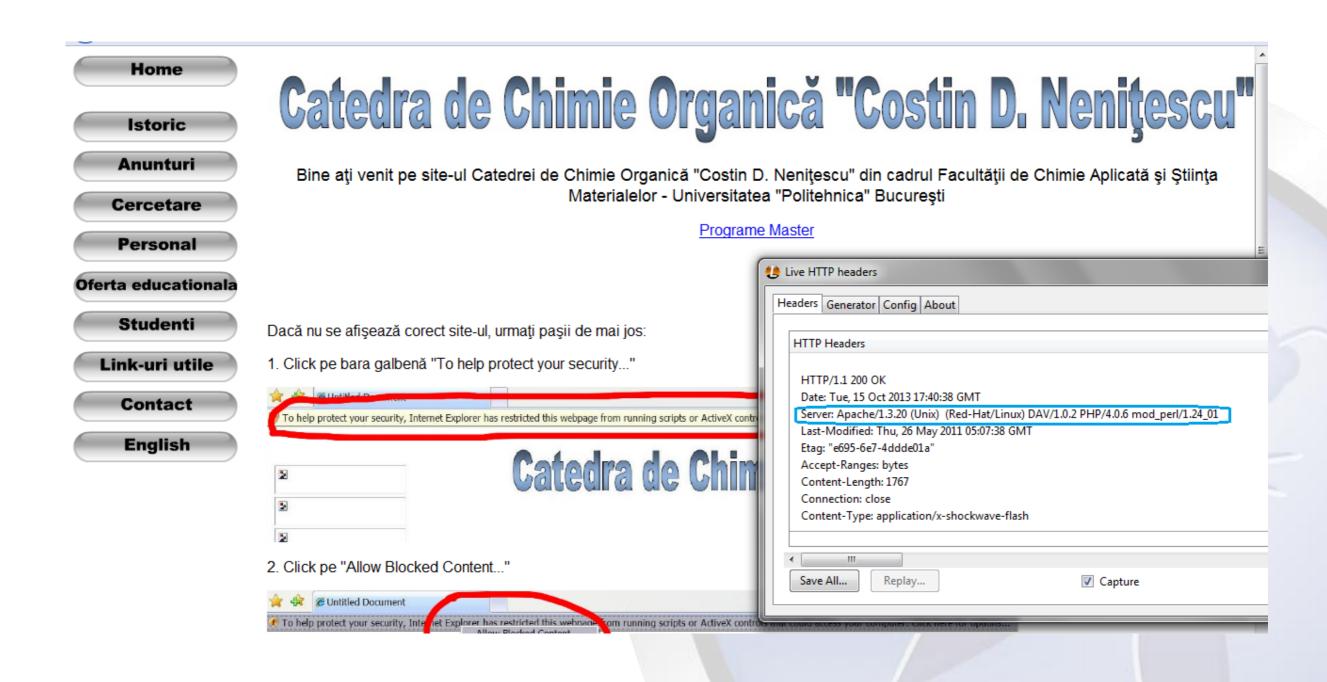
What is the real risk?

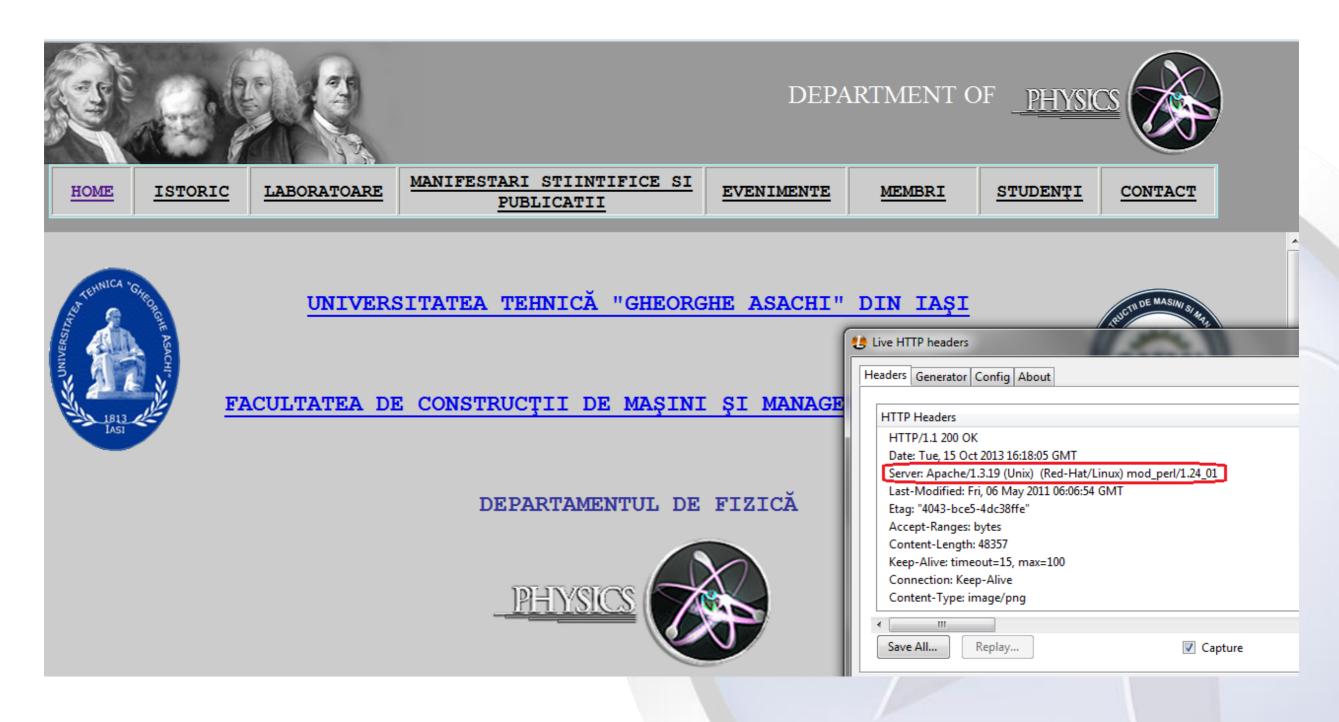
- Most of these vulnerabilities are not directly exploitable:
 - Locally exploitable
 - Specific configurations must be in place
 - But NOT impossible
- However, there are some high risk and easily exploitable vulnerabilities (Metasploit, public exploits):

Severity	Plugin Name	CVE	PlugID N	r Servers
High		CVE-2002-0392 CVE-2006-3747 CVE-2012-2311	11030 31654 59056	62 721 1958619

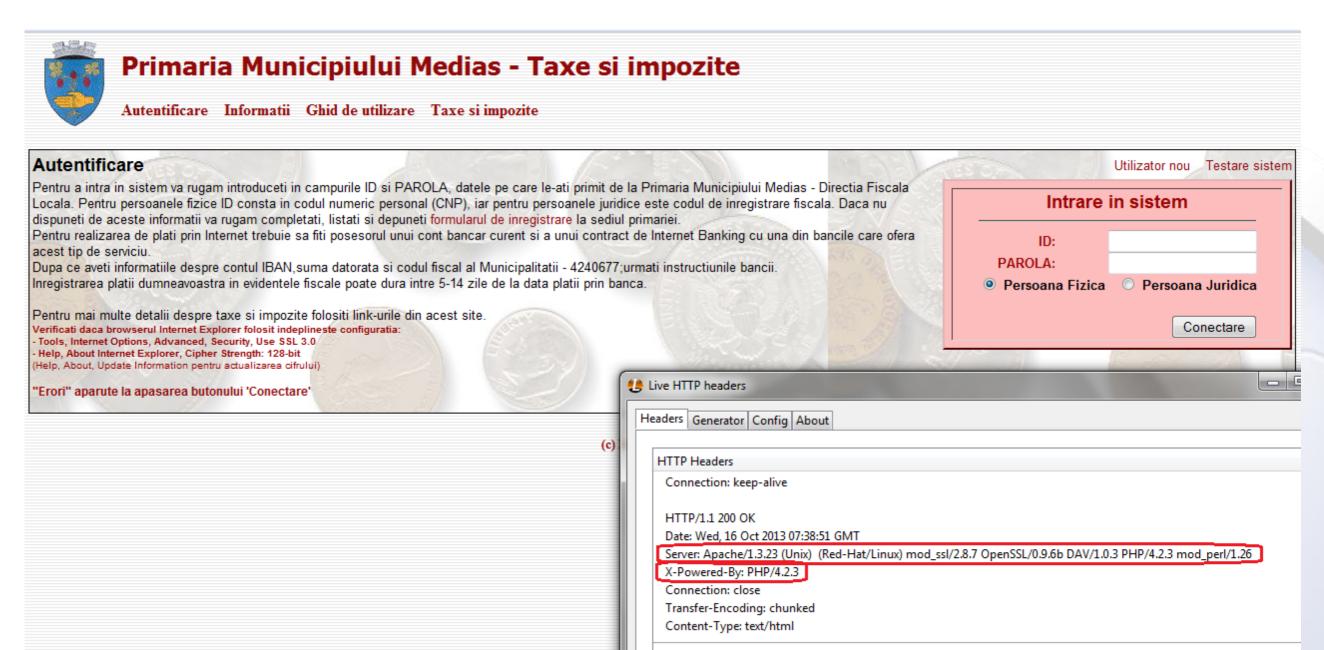


- University websites
- Public institutions websites
- Old company websites
- Surveillance systems
- Special systems

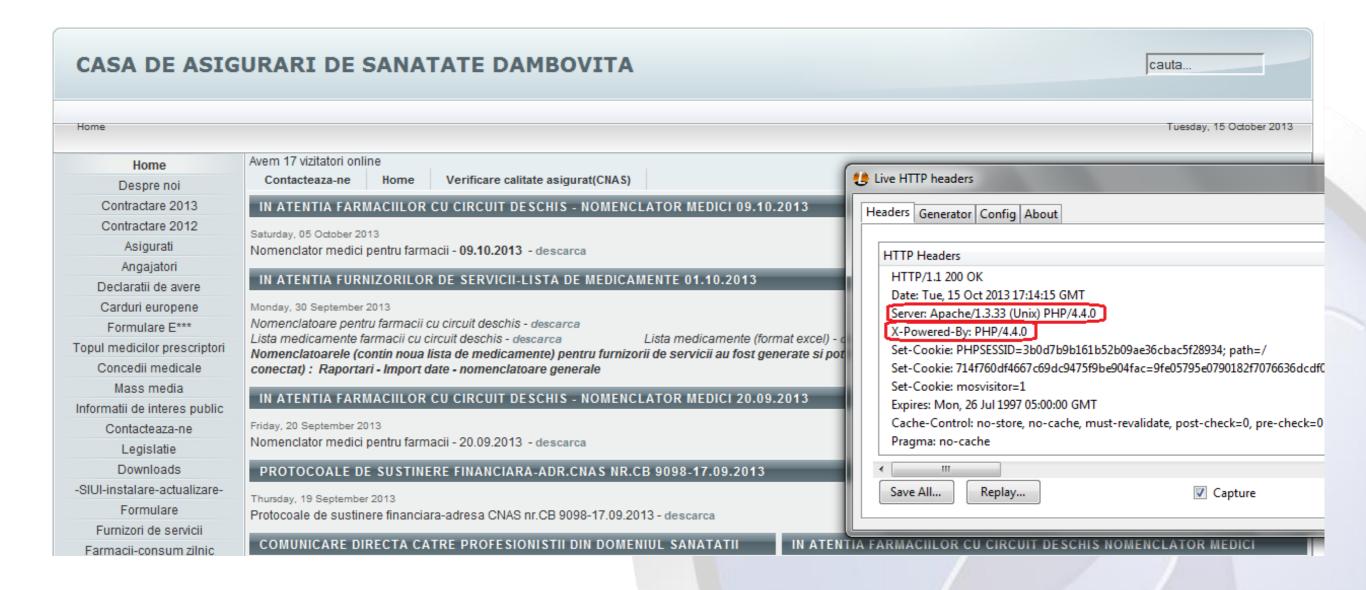




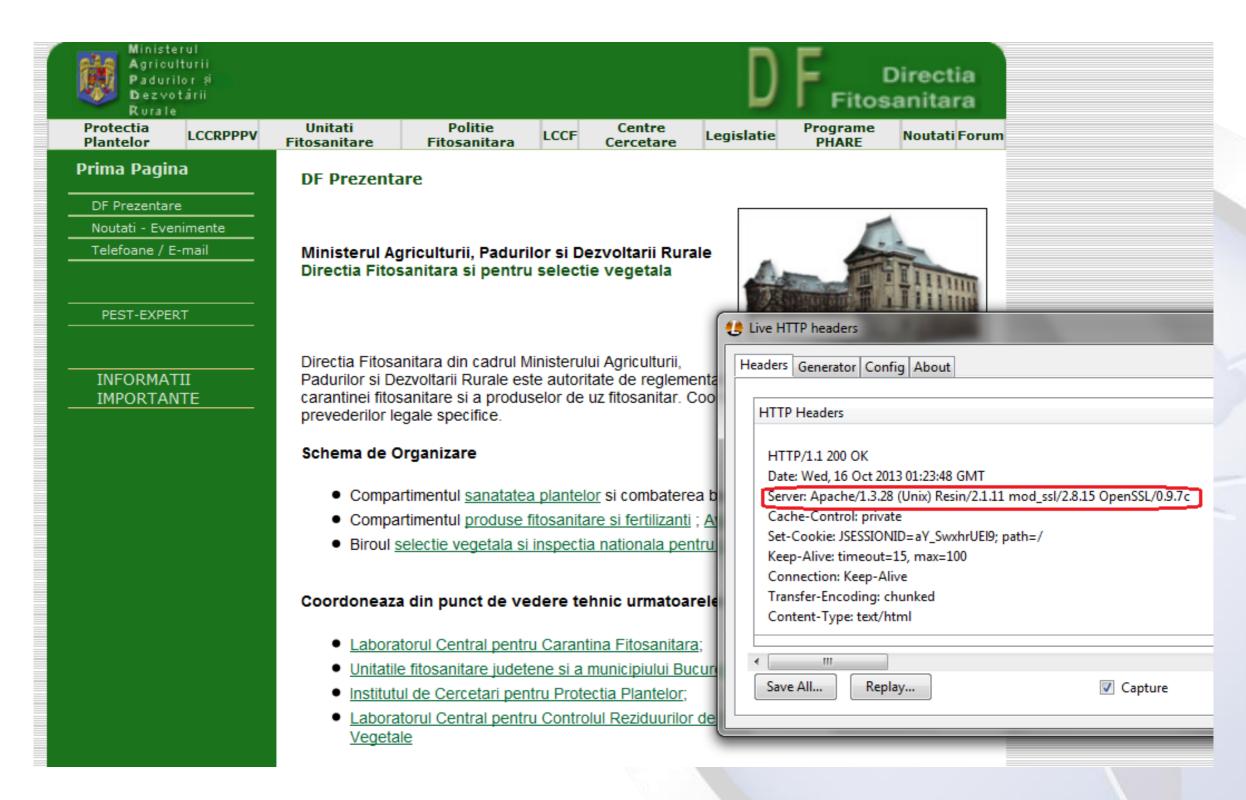




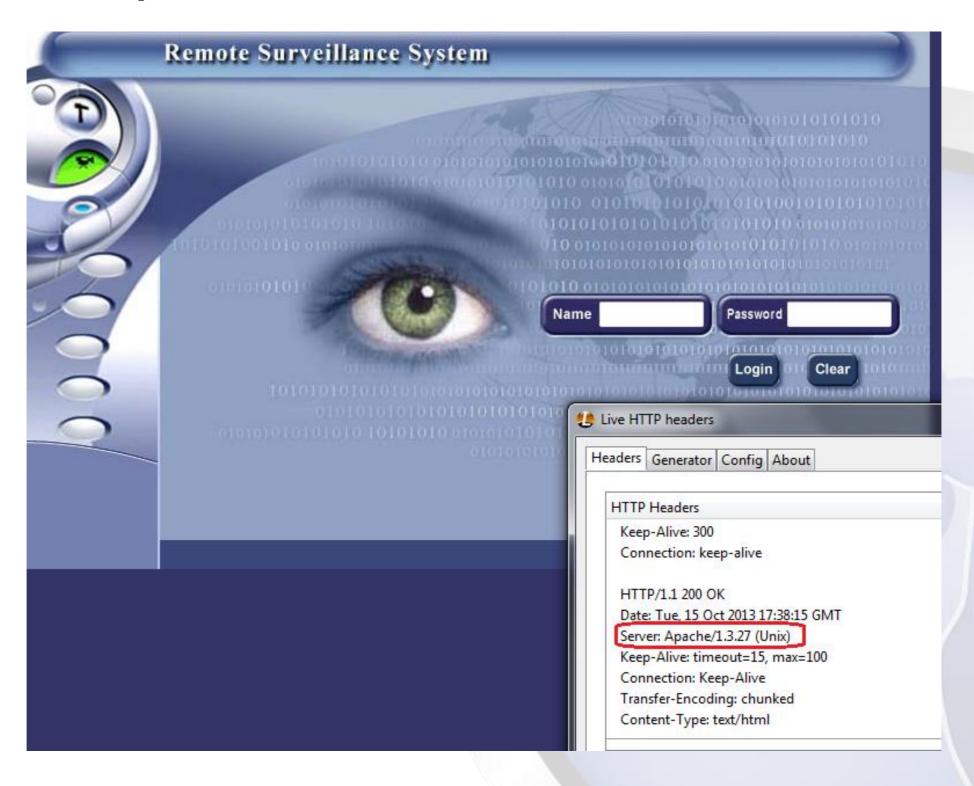






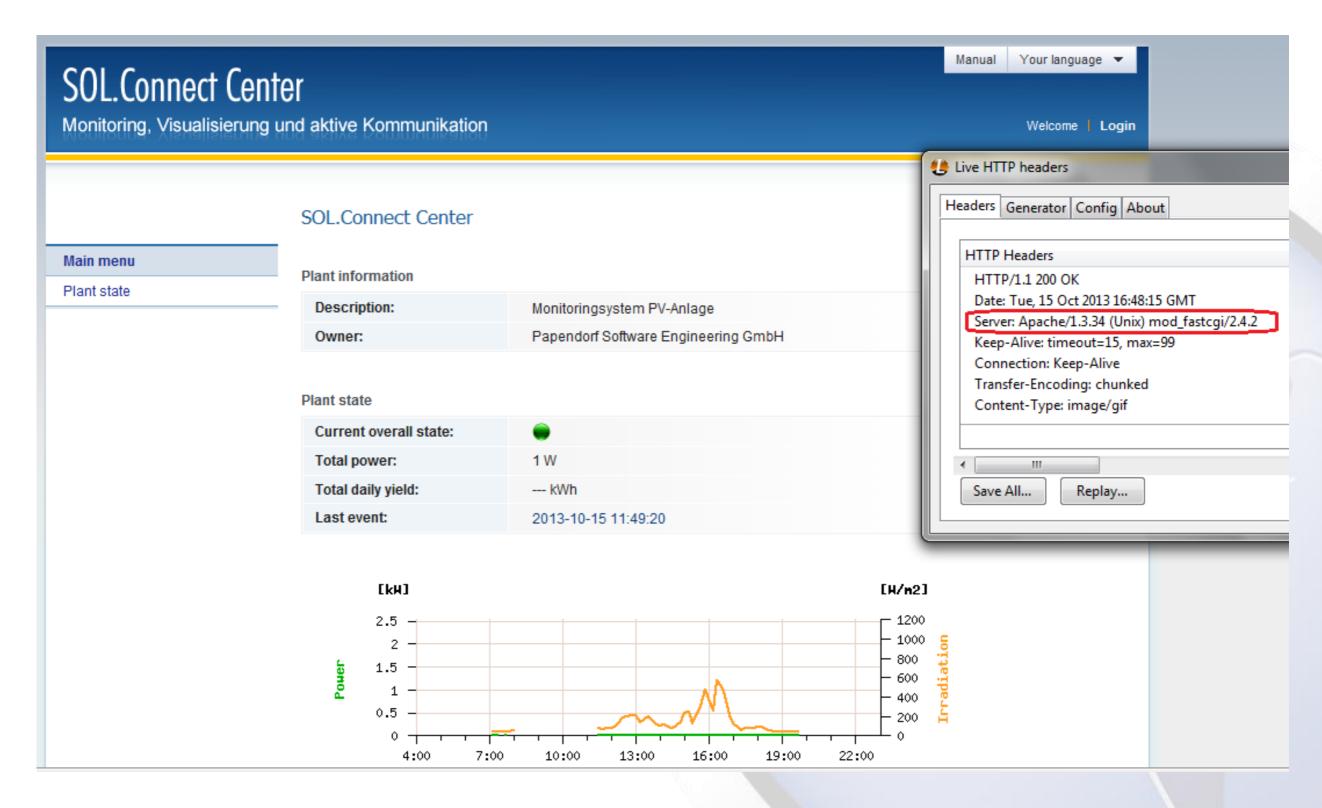














OWASP Top 10 - 2013

"The Ten Most Critical Web Applications Security Risks"

#	Top 10 Name	Included	What exactly?
A1	Injection	X	
A2	Broken Authentication and Session Management	X	
A3	Cross-Site Scripting (XSS)	X	
A4	Insecure Direct Object References	X	
A5	Security Misconfiguration	✓	 Outdated server type and CGI version (already done with Nessus) SQL and PHP error messages Directory listing Default passwords Admin pages publicly accessible
A6	Sensitive Data Exposure		 Admin pages with no SSL WWW-Authentication Plain text passwords Email addresses Private IP disclosure Source code disclosure
A7	Missing Function Level Access Control	X	
A8	Cross-Site Request Forgery	X	
A9	Using Components with Known Vulnerabilities	-	May be done
A10	Unvalidated Redirects and Forwards	X	

SQL and PHP error messages (1) [Total: 171 websites]

HTTP/1.1 200 OK

Date: Wed, 25 Jul 2012 12:06:04 GMT

Server: Apache

Set-Cookie: PHPSESSID=8hn66359c00qad7vqe6gs87f52; path=/

Expires: Thu, 19 Nov 1981 08:52:00 GMT

Content-Length: 864
Connection: close
Content-Type: text/html

-> EROARE <-

Eroare MySQL! Conexiunea 'Resource id #9', la query-ul:

Nu am putut selecta baza de date a magazinului

.....

A aparut urmatoarea eroare:

Error 1044: Access denied for user 'dev'@'%' to database 'netrisk_asigura2'

Pagina: http://beta.asigurari360.ro/

Data: 25.07.2012 15:06:04

ID magazin: 1
ID utilizator: NULL
ID client: NULL
IP: 182.150.134.62,

LAN: NULL, URL: /,

Useragent: NULL,
Actiune: NULL,
Subactiune: NULL,
Referrer: NULL
GET: NULL
POST: NULL
Timp SQL: 0,
Timp total: 0.015,
ID categorie: NULL

ID producator: NULL ID produs: NULL

\$ whois 182.150.134.62

% [whois.apnic.net]

% Whois data copyright terms http://www.apnic.net/db/dbcopyright.html

% Information related to '182.144.0.0 - 182.151.255.255'

inetnum: 182.144.0.0 - 182.151.255.255

netname: CHINANET-SC

descr: CHINANET Sichuan province network

descr: Data Communication Division

descr: China Telecom

country: CN

SQL and PHP error messages (2) [Total: 171 websites]

HTTP/1.1 200 OK

Date: Wed, 25 Jul 2012 19:48:27 GMT Server: Apache/2.0.55 (Ubuntu) PHP/5.1.2

X-Powered-By: PHP/5.1.2 Content-Length: 403 Connection: close

Content-Type: text/html; charset=UTF-8

Warning: pg_pconnect() [function.pg-pconnect]: Unable to connect to PostgreSQL server: could not

connect to server: No route to host

Is the server running on host "192.168.1.130" and accepting

TCP/IP connections on port 5432? in /home/vftp/comenzi.ruris.ro/dbconnection.php on line 41

can not connect to PostgreSQL server

HTTP/1.0 200 OK

Date: Wed, 25 Jul 2012 13:08:13 GMT

Server: LiteSpeed Connection: close

X-Powered-By: PHP/5.2.17

Set-Cookie: cba19ac07617cbccdb85f183c0d1adf1=a137cb6b8ebb579dd4174347f4f93b76; path=/

P3P: CP="NOI ADM DEV PSAi COM NAV OUR OTRo STP IND DEM"

Content-Type: text/html

jtablesession::Store Failed

Jable 'rilievi_tt.jos_session' doesn't exist jtablesession::Store Failed

Jable 'rilievi_tt.jos_session' doesn't exist jtablesession::Store Failed

Jable 'rilievi_tt.jos_session' doesn't exist jtablesession:

SQL=INSERT INTO `jos_session` (`session_id`,`time`,`username`,`gid`,`guest`,`client_id`) VALUES (

'a137cb6b8ebb579dd4174347f4f93b76','1343221693',",'0','1','0')

Fatal error: Allowed memory size of 134217728 bytes exhausted (tried to allocate 72 bytes) in

/home/rilievi/public_html/libraries/joomla/error/exception.php on line 117

Directory listing [Total: 131 websites]

HTTP/1.1 200 OK

</body></html>

Date: Wed, 25 Jul 2012 09:59:08 GMT Server: Apache/2.2.22 (Unix) PHP/5.3.14 Vary: Accept-Encoding Content-Length: 1131 Connection: close Content-Type: text/html;charset=ISO-8859-1 <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN"> <html> <head> <title>Index of /</title> </head> <body> <h1>Index of /</h1> arhsite.tgz autoclubs/ backupcraiova.sgl backups/ beta/ captiv.tgz craiovanet/ face.htacces fun/ host/ lang-ro.php netsat/ oldba/ servxx/ sms/ video/ work/ workauto/



Default credentials for admin interfaces

HTTP/1.1 401 Unauthorized

AServer: GoAhead-Webs

Date: Wed Jan 12 17:32:16 2000

WWW-Authenticate: Basic realm="Default: admin/1234"

Pragma: no-cache

Cache-Control: no-cache Content-Type: text/html

```
<html>
    <head>
        <title>Document Error: Unauthorized</title>
    </head>
    <body>
        <h2>Access Error: Unauthorized</h2>
        </body>
    </html>
```

[Total: 53424 servers (WWW-Auth)]

realm="Default: admin/1234" - 1292 devices
realm="Default: admin/admin - 21
realm="Default: admin/airlive - 2
realm="Default password:1234 - 4
realm="Default USER:admin - 1
realm="Wireless AP (username: admin) - 5
realm="Wireless Router (username: admin) - 50
realm="DVR Remote System (Default Login: root / 0000) - 1
+ default passwords based on device type/version

Private IP disclosure [Total: 2684 websites]

```
HTTP/1.1 200 OK
Content-Length: 332
Content-Type: text/html
Content-Location: http://172.16.0.113/index.html
Last-Modified: Mon, 25 Jun 2012 19:32:38 GMT
Server: Microsoft-IIS/6.0
Date: Wed, 25 Jul 2012 18:42:42 GMT
Connection: close
<?xml version=3D"1.0" encoding=3D"UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<a href="http://www.w3.org/1999/xhtml">
        <head>
                <title></title>
                <meta http-equiv=3D"refresh" content="0;url=Snippets_of_Thoughts/Blog/Blog.html" />
        </head>
        <body>
        </body>
</html>
```

Ream strings suggesting the usage of the systems (WWW-Authentication):

realm="Access permis doar pentru utilizatorii ANM" realm="Access permis doar pentru utilizatorii faro" realm="Access permis doar pentru utilizatorii Meteo Romania" realm="Access permis doar pentru utilizatorii Radar" realm="Access permis pentru utilizatorii Administratiei Nationale de Meteorologie" realm="Administrare retea infraserver" realm="Birou Contabilitate" realm="BlueNote Nagios Access" realm="Cacti monitoring server" realm="Innerlook CRM Platform" realm="Innerlook Recruiting Platform" realm="IntelEmbeddedWeb@Express460T" realm="Intelligent Switch" realm="IntermediaTV Botosani" realm="Lotus Notes Traveler (HQLNA1/RADIOCOM)" realm="Lotus Notes Traveler (Traveler/EMON)" realm="Lotus Notes Traveler (Traveler/FRISOMAT)"

Top 20 realm strings (WWW-Authentication):

	1 11
SmartAX	28636
EchoLife Home Gateway	2763
level_15_access	1570
Home Gateway	1426
Default: admin/1234	1292
Allied Telesis AT-AR415S	1290
ADSL Modem	1042
DI-524	1014
Wireless Access Point	654
WL520gc	647
level_15 or view_access	542
RT-G32	534
RT-N10	471
RT-N10+	471
Wireless Broadband Router	342
dreambox	319
RT-N10E	316
streaming_server	281
streaming_server 11N Broadband Router	281 271
	level_15_access Home Gateway Default: admin/1234 Allied Telesis AT-AR415S ADSL Modem DI-524 Wireless Access Point WL520gc level_15 or view_access RT-G32 RT-N10 RT-N10+ Wireless Broadband Router dreambox

IP cameras connected to the internet: **756** (based on realm string)

1	Internet Camera	226
2	Network Camera	126
3	Welcome to IPCam!	88
4	IPCam	72
5	Wireless IP Camera	38
6	Day/Night IP Camera	32
7	IP Camera	29
8	Camera Server	17
9	Ipcam manager	13
10	Planet IP Camera	12
11	PLANET IP Camera	12
12	MegapixelIPCamera	11
13	Wireless Day/Night IP Camera	9
14	IP Camera Manager	7
15	Wireless Pan/Tilt Surveillance Camera	7
16	IP_Camera	6
17	Network Camera with Pan/Tilt	6
18	Wireless Network Camera	6
19	MPEG4 Internet Camera	2
20	VS Network Camera	2

See the video of this talk:

"Do you know who's watching you?:
An in-depth examination of IP
cameras attack surface"

Francisco Falcon and Nahuel Riva Hack.lu 2013

Interesting web servers...

Microsoft-HTTPAPI/1.0	26
Microsoft-HTTPAPI/2.0	2483
Microsoft-IIS/5.0	108
Microsoft-IIS/5.1	794
Microsoft-IIS/6.0	2101
Microsoft-IIS/7.0	1115
Microsoft-IIS/7.5	14113
Microsoft-IIS/8.0	113
Microsoft-WinCE/4.20	7
Microsoft-WinCE/5.0	35
Microsoft-WinCE/6.00	2

Apache rulz (by the numbers)
Lighttpd
Nginx
RomPager

Low hanging fruit (examples)

GLOBAL COMMUNICATIONS SERVICES ROMANIA

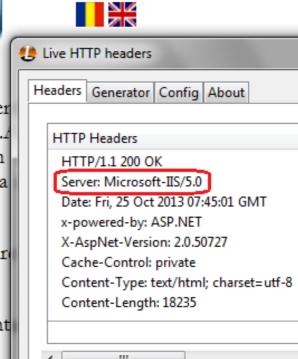


Acasa Produse Servicii Suport Contact

Global Communications Services Romania S.A. este Service Provider Thuraya per Ca Service Provider Thuraya în România, Global Communications Services Romania S.Z comercializează servicii și produse pentru comunicații mobile de satelit Thuraya în Printre acestea se pot enumera terminale utilizator si carduri SIM precum și facturarea efectuate de abonați sau aspecte privind suportul tehnic pentru clienții săi.

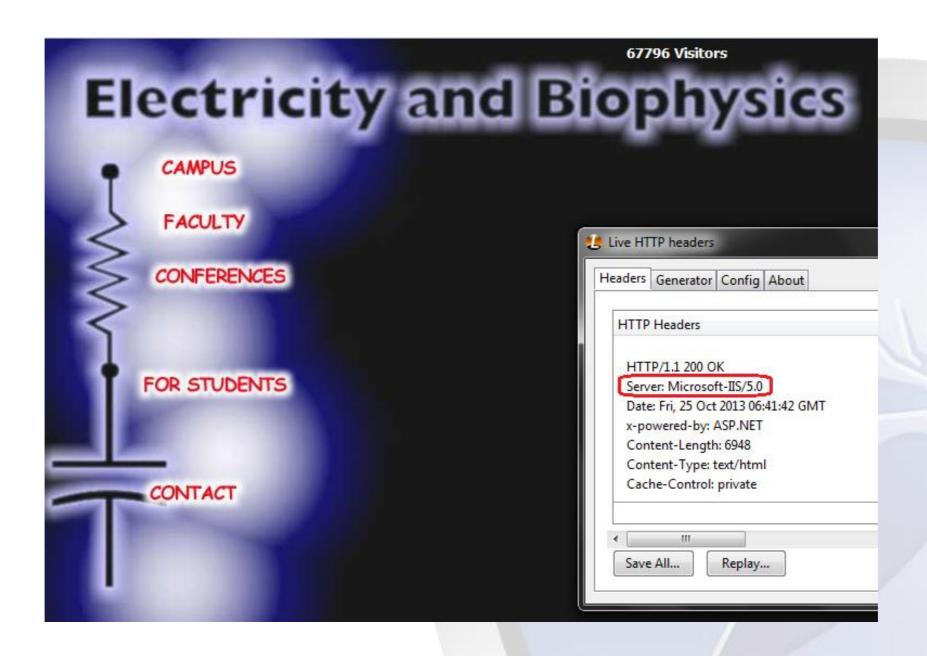
Global Communications Services Romania S.A., are sediul central în București și are comunicații, electronică, informatică și protecția prin criptare a datelor.

Înființată în 1999, este o companie privată românească, binecunoscută ca reprezent agent și distribuitor exclusiv pentru mai multe companii internaționale cum ar fi:

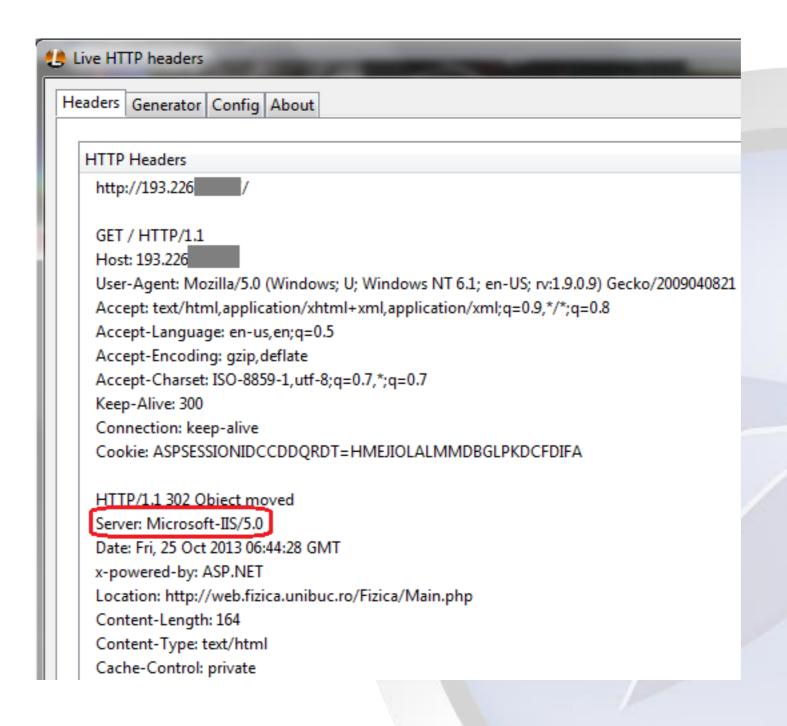




Low hanging fruit (examples)



Low hanging fruit (examples)







- Increase the security awareness level to all people (technical and non-technical)
 - Upgrade software periodically
- □ Create and implement a national security program to <u>periodically</u> evaluate the security of IT systems belonging to public institutions and academia.
- Perform vulnerability assessment AND penetration testing periodically in the private sector.

Further work

- Do the same vulnerability scan for other common ports (all data is available):

 - 1
 - 2
 - 3
 - 5

 - ...







Thank You!

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