

In this lab, we are going to use techniques to gather information about individuals and organizations using only publicly available tools and data. This simulates the reconnaissance phase of a penetration test or social engineering operation.

- Domain reconnaissance

Let's start by doing some reconnaissance on the website testphp.vulnweb.com., and see the results.

```
(osint@tlosint)-[~]
$ whois codeforall.com
Domain Name: CODEFORALL.COM
Registry Domain ID: 1747673682_DOMAIN_COM-VRSN
Registrar WHOIS Server: whois.registrar.amazon
Registrar URL: http://registrar.amazon.com
Updated Date: 2025-08-21T18:30:57Z
Creation Date: 2012-09-25T18:27:23Z
Registry Expiry Date: 2026-09-25T18:27:23Z
Registrar: Amazon Registrar, Inc.
Registrar IANA ID: 468
Registrar Abuse Contact Email: trustandsafety@support.aws.com
Registrar Abuse Contact Phone: +1.2024422253
Domain Status: clientDeleteProhibited https://icann.org/epp#clientDeletePr
ohibited
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransf
erProhibited
Domain Status: clientUpdateProhibited https://icann.org/epp#clientUpdatePr
ohibited
Name Server: NS-1270.AWSDNS-30.ORG
Name Server: NS-2004.AWSDNS-58.CO.UK
Name Server: NS-396.AWSDNS-49.COM
Name Server: NS-891.AWSDNS-47.NET
DNSSEC: unsigned
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wi
cf/
>>> Last update of whois database: 2026-01-28T12:00:17Z <<<
```

Here we started with the whois tool to find some information about code for all.

```

(osint@tlosint)-[~]
$ nslookup codeforall.com
Server:      10.0.2.3
Address:     10.0.2.3#53

Non-authoritative answer:
Name:   codeforall.com
Address: 199.60.103.152
Name:   codeforall.com
Address: 199.60.103.52

(osint@tlosint)-[~]
$

```

Here we used a tool called nslookup, and we found two IP addresses.

```

(osint@tlosint)-[~]
$ dig codeforall.com

; <<>> DiG 9.19.21-1-Debian <<>> codeforall.com
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 2874
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;codeforall.com.                IN      A

;; ANSWER SECTION:
codeforall.com.                218     IN      A      199.60.103.152
codeforall.com.                218     IN      A      199.60.103.52

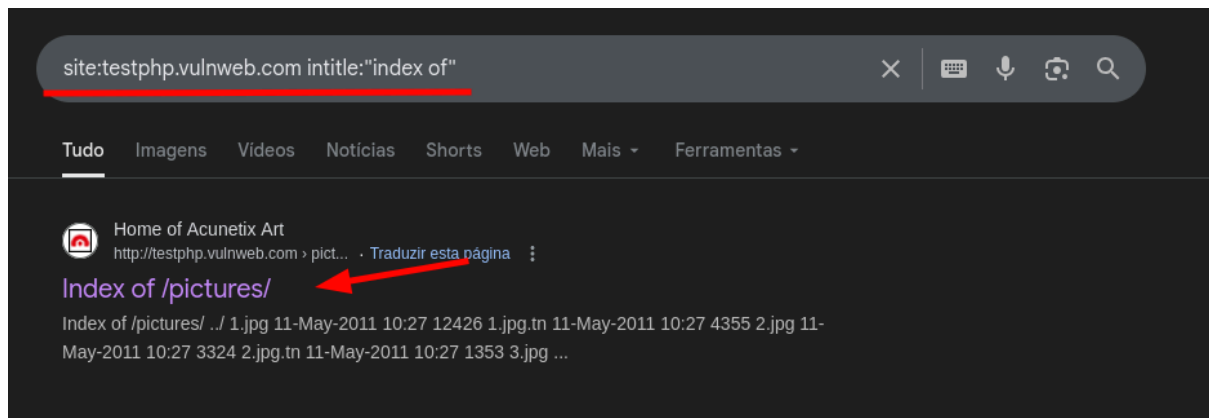
;; Query time: 4 msec
;; SERVER: 10.0.2.3#53(10.0.2.3) (UDP)
;; WHEN: Wed Jan 28 12:05:25 UTC 2026
;; MSG SIZE rcvd: 75

```

Now with the dig tool, we can check some information like nslookup, but with more details.

- Google Dorking

Now, let's see if we can identify any open directories in testphp.vulnweb.com

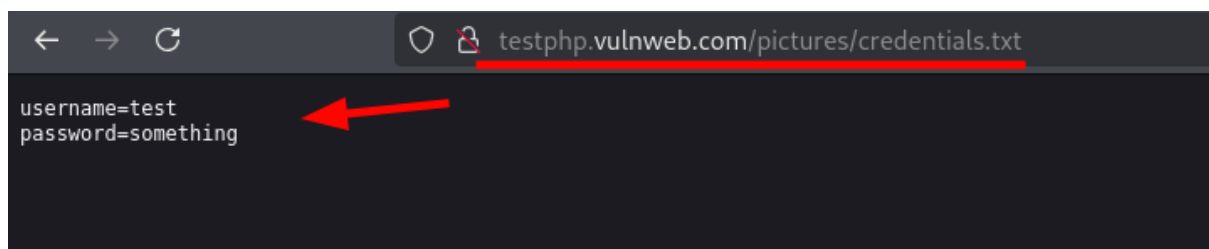


Here we have an example of google dorking, check that we find a link index of, let's check what we have inside.

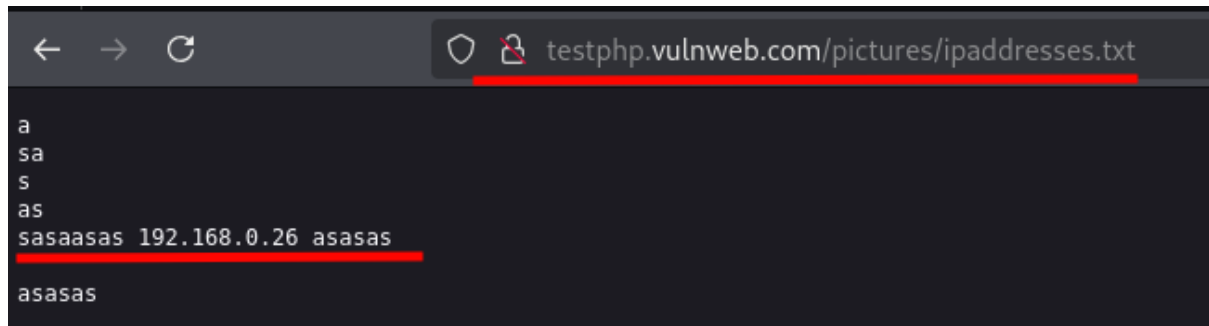
Index of /pictures/

../		
1.jpg	11-May-2011 10:27	12426
1.jpg.tn	11-May-2011 10:27	4355
2.jpg	11-May-2011 10:27	3324
2.jpg.tn	11-May-2011 10:27	1353
3.jpg	11-May-2011 10:27	9692
3.jpg.tn	11-May-2011 10:27	3725
4.jpg	11-May-2011 10:27	13969
4.jpg.tn	11-May-2011 10:27	4615
5.jpg	11-May-2011 10:27	14228
5.jpg.tn	11-May-2011 10:27	4428
6.jpg	11-May-2011 10:27	11465
6.jpg.tn	11-May-2011 10:27	4345
7.jpg	11-May-2011 10:27	19219
7.jpg.tn	11-May-2011 10:27	6458
8.jpg	11-May-2011 10:27	50299
8.jpg.tn	11-May-2011 10:27	4139
WS_FTP.LOG	23-Jan-2009 10:06	771
credentials.txt	23-Jan-2009 10:47	33
ipaddresses.txt	23-Jan-2009 12:59	52
path-disclosure-unix.html	08-Apr-2013 08:42	3936
path-disclosure-win.html	08-Apr-2013 08:41	698
wp-config.bak	03-Dec-2008 14:37	1535

Here we have some directories to check, but we found two directories that caught my attention, credentials.txt and ipaddresses.txt, let's check.

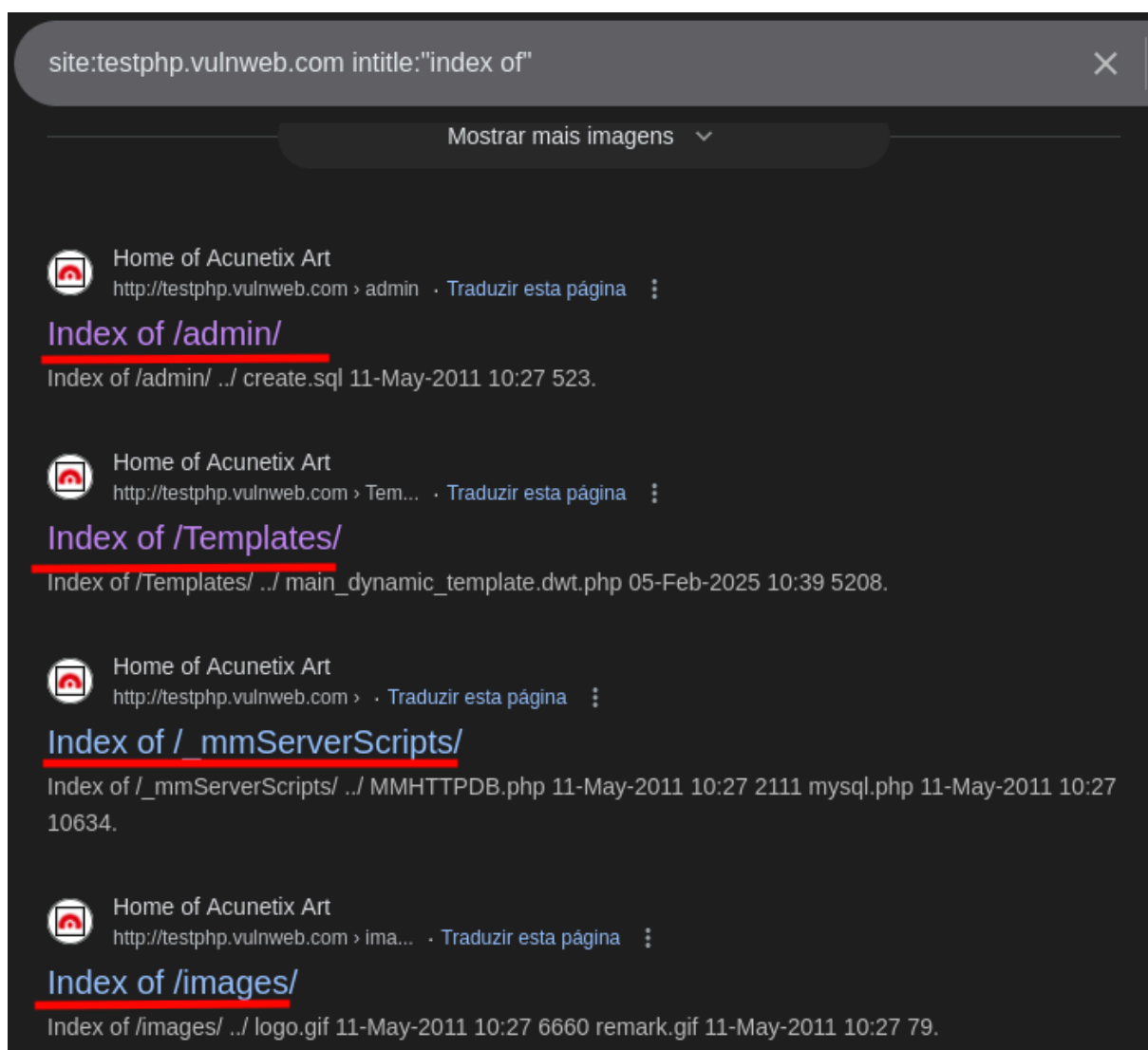


Here we can check that inside of the directory credentials.txt, we have a username and password, it can be important in the future.



```
a
sa
s
as
sasaasas 192.168.0.26 asasas
asasas
```

Here inside of the ipaddresses directory, we found an ip address, let's keep it.



And we have more options to check if we want with the filter “index of”.

```
(osint@tlosint)-[~]  
$ whois OSINTtechniques.com  
Domain Name: OSINTTECHNIQUES.COM  
Registry Domain ID: 2193028538_DOMAIN_COM-VRSN  
Registrar WHOIS Server: whois.register.com  
Registrar URL: http://www.register.com  
Updated Date: 2024-11-20T18:58:06Z  
Creation Date: 2017-11-28T01:15:52Z  
Registry Expiry Date: 2026-11-28T01:15:52Z  
Registrar: Register.com - Network Solutions, LLC  
Registrar IANA ID: 9  
Registrar Abuse Contact Email: domain.operations@web.com  
Registrar Abuse Contact Phone: +1.8777228662  
Domain Status: clientTransferProhibited https://icann.org/epp#clientTransf  
erProhibited  
Name Server: DNS1.REGISTER.COM  
Name Server: DNS2.REGISTER.COM  
DNSSEC: unsigned  
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wi  
cf/  
>>> Last update of whois database: 2026-01-28T15:41:29Z <<<
```

Now, with whois, let's try to find some geolocation related to the OSINTtechniques.

```
Domain Name: osinttechniques.com  
Registry Domain ID: 2193028538_DOMAIN_COM-VRSN  
Registrar WHOIS Server: whois.register.com  
Registrar URL: http://www.register.com  
Updated Date: 2024-11-20T18:58:08Z  
Creation Date: 2017-11-28T01:15:52Z  
Registrar Registration Expiration Date: 2026-11-28T01:15:52Z  
Registrar: Register.com, Inc.  
Registrar IANA ID: 9  
Reseller:  
Domain Status: clientTransferProhibited http://icann.org/epp#clientTransferPr  
ohibited  
Registry Registrant ID:  
Registrant Name: PERFECT PRIVACY, LLC  
Registrant Organization:  
Registrant Street: 5335 Gate Parkway  
Registrant City: Jacksonville  
Registrant State/Province: FL  
Registrant Postal Code: 32256  
Registrant Country: US  
Registrant Phone: +1.9027492701  
Registrant Phone Ext.:  
Registrant Fax:  
Registrant Fax Ext.:  
Registrant Email: 5l96sakh18g9i9vfvson50dv4i@domaindiscreet.com  
Registry Tech ID:  
Tech Name: PERFECT PRIVACY, LLC
```

Here we found some important information, like, Domain name, city, state and country.

The screenshot shows the IPinfo website interface. At the top, the IP address 199.34.228.66 is entered in the search bar, with a red arrow pointing to it. The navigation menu includes links for Products, Data, Why IPinfo?, Pricing, Resources, Docs, Login, and Sign up. On the left sidebar, the 'Geolocation' tab is selected. The main content area displays the following information:

IP Geolocation	
City	Oakland
State	California
Country	United States
Postal	94612
Local time	09:43 AM, Wednesday, January 28, 2026
Timezone	America/Los_Angeles
Coordinates	37.8085 N, 122.2668 W

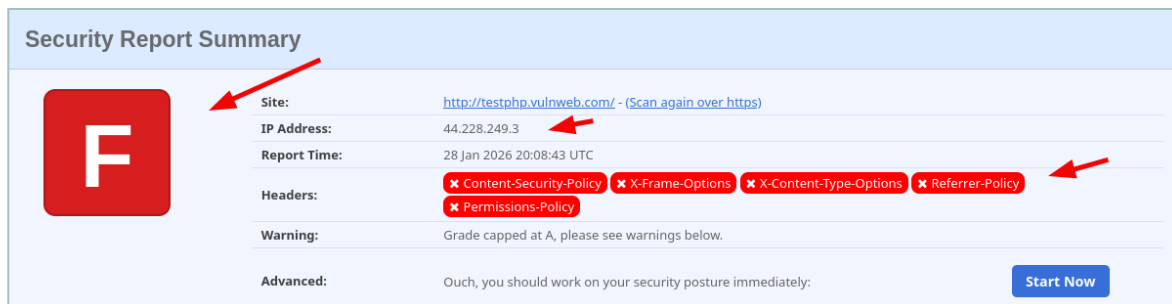
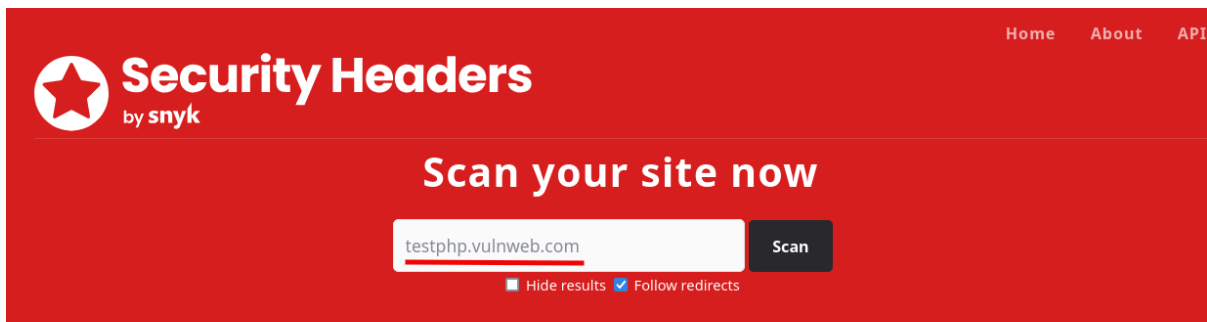
To the right of the table is a map of the San Francisco Bay Area with a red arrow pointing to the location of Oakland. Below the table, there is a section titled 'IP Geolocation data' with a brief description and a link to the 'IP Geolocation API & Database'.

If we put the IP address that we found in some site of ip location, we can check more details.

- Security Headers Check

The screenshot shows the Security Headers website by Snyk. The header includes the logo and navigation links for Home, About, and API. The main heading is 'Scan your site now'. Below this is a search bar with the placeholder text 'enter address here' and a 'Scan' button. At the bottom of the search bar, there are checkboxes for 'Hide results' and 'Follow redirects'.

Now, we are going to use a web tool called securityheaders.com , it is an online tool that analyzes a website and shows which security headers it is using and which ones are missing.



Here we can check some important information, like, we scanned the testphp.vulnweb.com, in the headers part, we can check that there are five security headers that are missing on this site, and we can check the rating on this site, which is terrible.

Missing Headers	
Content-Security-Policy	Content Security Policy is an effective measure to protect your site from XSS attacks. By whitelisting sources of approved content, you can prevent the browser from loading malicious assets.
X-Frame-Options	X-Frame-Options tells the browser whether you want to allow your site to be framed or not. By preventing a browser from framing your site you can defend against attacks like clickjacking. Recommended value "X-Frame-Options: SAMEORIGIN".
X-Content-Type-Options	X-Content-Type-Options stops a browser from trying to MIME-sniff the content type and forces it to stick with the declared content-type. The only valid value for this header is "X-Content-Type-Options: nosniff".
Referrer-Policy	Referrer Policy is a new header that allows a site to control how much information the browser includes with navigations away from a document and should be set by all sites.
Permissions-Policy	Permissions Policy is a new header that allows a site to control which features and APIs can be used in the browser.

Now, let's talk a little about this five security headers,

1) Content-Security-Policy (CSP), Controls where the website can load content (scripts, images, iframes, etc.) without the CSP the site may be vulnerable to XSS(cross-site scripting), very high importance.

2) X-Frame-Options, It indicates whether the website can be loaded within an iframe. Without this, the site may suffer

Clickjacking (The user thinks they are clicking on one thing, but it's something else) high importance.

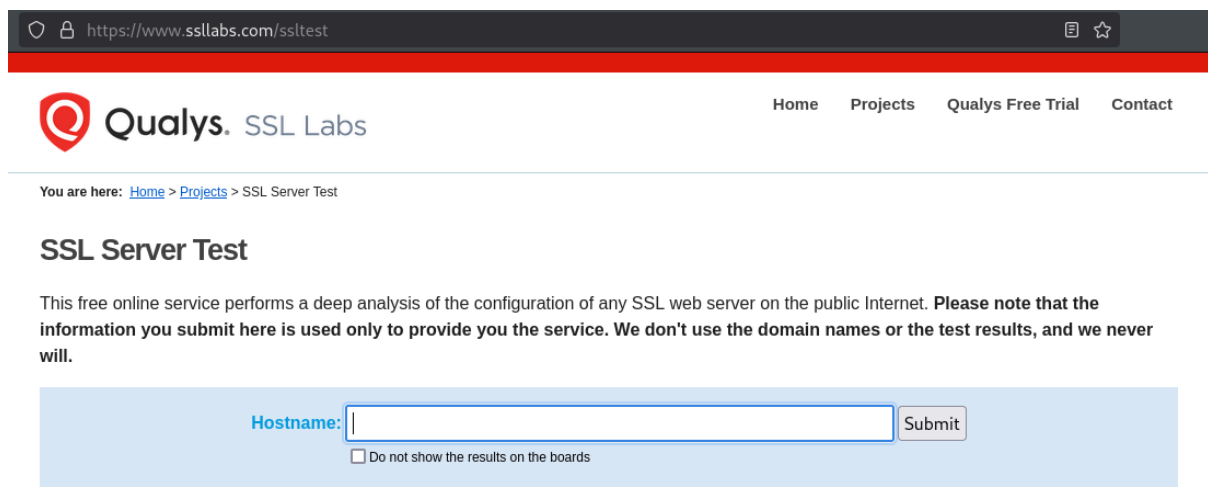
3) X-Content-Type-Options, It prevents the browser from "guessing" the file type, Without this, the following may occur executing files as scripts when they shouldn't, medium importance.

4) Referrer-Policy, Controls what source information is sent when the user clicks on links; without this Internal URLs can leak, Sensitive parameters may be exposed, medium importance.

5) Permissions-Policy, Controls access to browser resources, camera, microphone, location, Without it Scripts may request unnecessary permissions, medium importance.

The main recommendation is to correctly implement HTTP security headers, as they significantly reduce the risk of common web attacks.

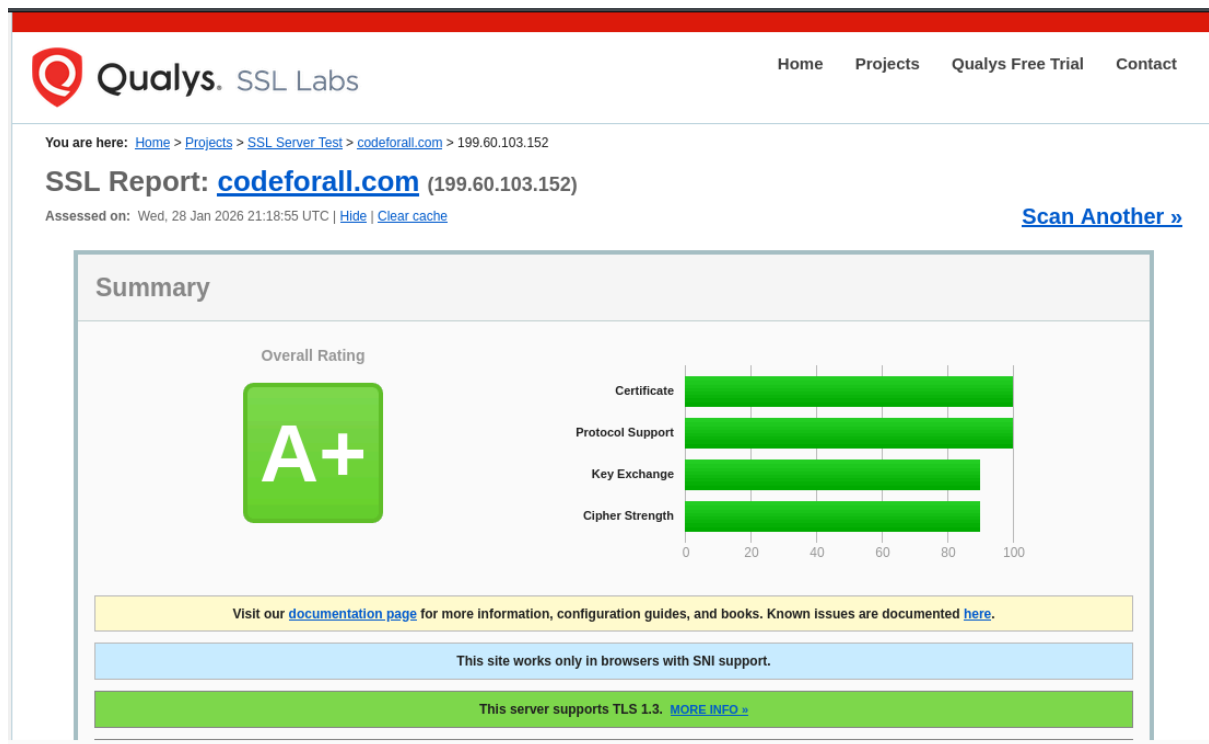
- SSL/TLS Analysis



The screenshot shows the SSL Labs SSL Server Test tool interface. At the top, the browser address bar displays <https://www.ssllabs.com/ssltest>. The page header includes the Qualys SSL Labs logo and navigation links: Home, Projects, Qualys Free Trial, and Contact. Below the header, a breadcrumb trail reads: You are here: [Home](#) > [Projects](#) > SSL Server Test. The main heading is "SSL Server Test". A descriptive paragraph states: "This free online service performs a deep analysis of the configuration of any SSL web server on the public Internet. **Please note that the information you submit here is used only to provide you the service. We don't use the domain names or the test results, and we never will.**" Below this, there is a light blue form area containing a "Hostname:" label, a text input field, and a "Submit" button. At the bottom of the form, there is a checkbox labeled "Do not show the results on the boards".


Now, we are going to use a new tool,
<https://ssllabs.com/ssltest>, The SSL Labs SSL Test tool is used

to analyze a website's HTTPS security configuration. It evaluates the digital certificate, the encryption protocols used, the strength of the ciphers, and the presence of known vulnerabilities. Based on these criteria, the tool assigns a score indicating the level of security of the communication between the user and the server.



Here we put a domain in the url field, which was supposed to be another site, the testphp.vulnweb.com, but it is out of system, let's check the code for all domains however.

In this image we can check that code for all has the greatest rating score. It's very safe. We can check the supported TLS version is 1.3.

 Cipher Suites		
# TLS 1.3 (server has no preference) [-]		
TLS_AES_128_GCM_SHA256 (0x1301)	ECDH x25519 (eq. 3072 bits RSA) FS	128
TLS_AES_256_GCM_SHA384 (0x1302)	ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_CHACHA20_POLY1305_SHA256 (0x1303)	ECDH x25519 (eq. 3072 bits RSA) FS	256
# TLS 1.2 (suites in server-preferred order) [-]		
TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b)	ECDH x25519 (eq. 3072 bits RSA) FS	128
TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca9)	ECDH x25519 (eq. 3072 bits RSA) FS	256 ^P
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA (0xc009)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	128
TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c)	ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	256
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256 (0xc023)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	128
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384 (0xc024)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	256
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)	ECDH x25519 (eq. 3072 bits RSA) FS	128
TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xc030)	ECDH x25519 (eq. 3072 bits RSA) FS	256 ^P
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	128
TLS_RSA_WITH_AES_128_GCM_SHA256 (0x9c)	WEAK	128
TLS_RSA_WITH_AES_128_CBC_SHA (0x2f)	WEAK	128
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030)	ECDH x25519 (eq. 3072 bits RSA) FS	256
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014)	ECDH x25519 (eq. 3072 bits RSA) FS WEAK	256
TLS_RSA_WITH_AES_256_GCM_SHA384 (0x9d)	WEAK	256

Here we can check some weak and misconfigurations.

In my opinion, the tool that i liked it the most was Sherlock, i think it is very useful, we got a lot of information that can be used to a reconnaissance, OSINT only uses information that the company itself allows to be released; OSINT never hacks, so we must train our employees to prevent this from happening, remove sensitive information from the web, reduce infrastructure exposure, among other things.

