

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... Trace-Labs...
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

Trace Labs ... Trace-Labs... v4.0.tar.gz TJ-OSINT...
(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

The screenshot shows a Google search results page. The search bar at the top contains the query "site:testphp.vulnweb.com intitle:'index of'". Below the search bar, there are navigation links for "Tudo", "Imagens", "Videos", "Notícias", "Shorts", "Web", "Mais", and "Ferramentas". The main content area displays a search result from "Home of Acunetix Art" (http://testphp.vulnweb.com/pictures/). The result title is "Index of /pictures/" (highlighted with a red arrow). Below the title, there is some descriptive text and a list of files. The entire screenshot has a dark theme.

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

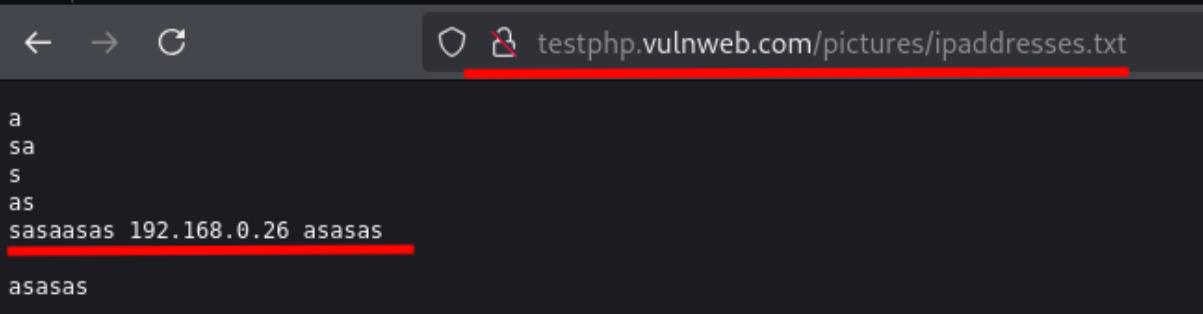
Index of /pictures/

.. /		
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.

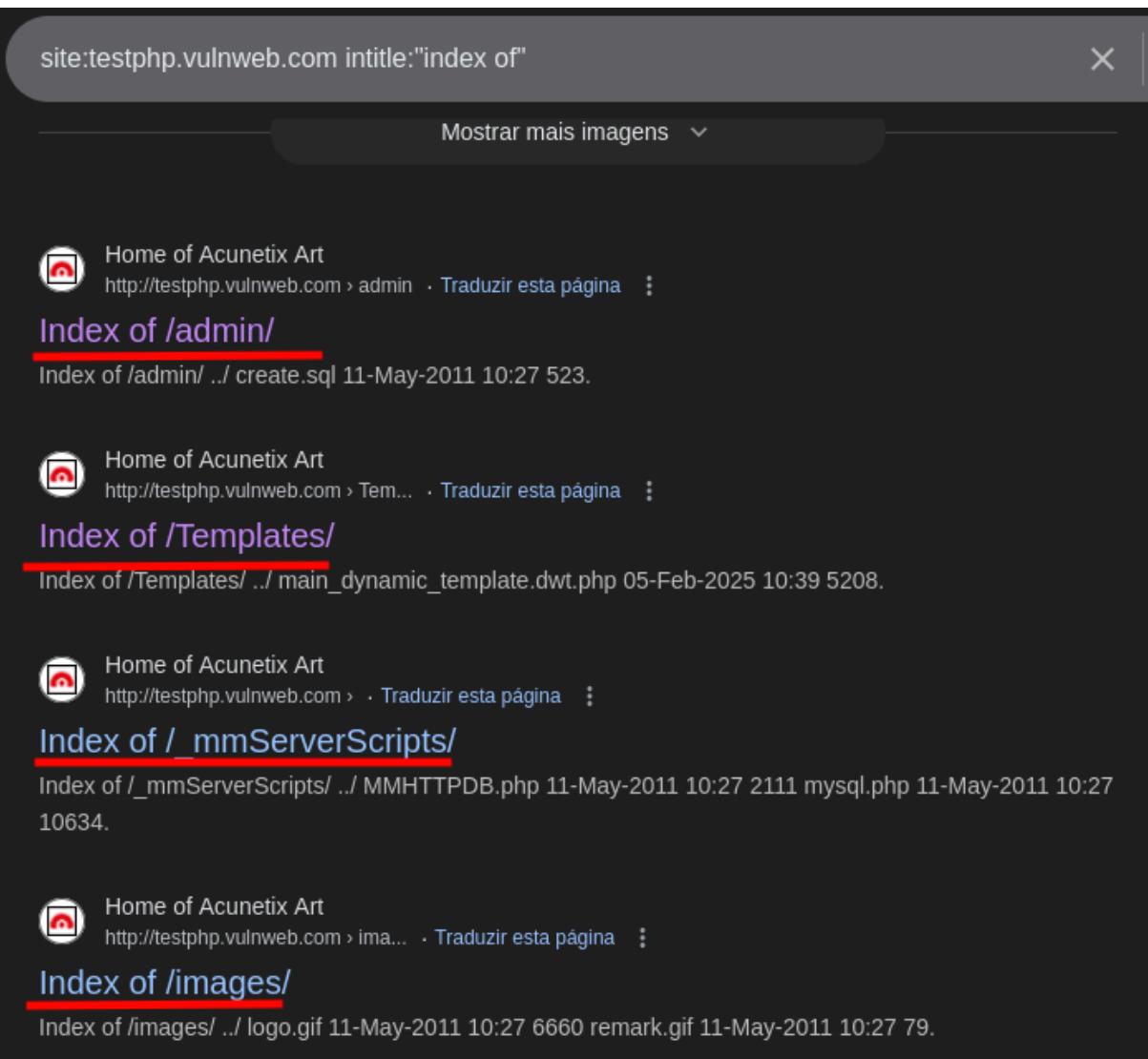
The screenshot shows a browser window. The address bar contains the URL "testphp.vulnweb.com/pictures/credentials.txt". Below the address bar, the page content is displayed. At the top left of the content area, there are URL parameters: "username=test" and "password=something". A red arrow points to the "password=something" parameter.

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.



site:testphp.vulnweb.com intitle:"index of"

Mostrar mais imagens

[Home of Acunetix Art](#)
<http://testphp.vulnweb.com/admin> · Traduzir esta página

Index of /admin/

[Index of /admin/ .. / create.sql](#) 11-May-2011 10:27 523.

[Home of Acunetix Art](#)
<http://testphp.vulnweb.com/Tem...> · Traduzir esta página

Index of /Templates/

[Index of /Templates/ .. / main_dynamic_template.dwt.php](#) 05-Feb-2025 10:39 5208.

[Home of Acunetix Art](#)
<http://testphp.vulnweb.com/> · Traduzir esta página

Index of /_mmServerScripts/

[Index of /_mmServerScripts/ .. / MMHTTPDB.php](#) 11-May-2011 10:27 2111 [mysql.php](#) 11-May-2011 10:27 10634.

[Home of Acunetix Art](#)
<http://testphp.vulnweb.com/ima...> · Traduzir esta página

Index of /images/

[Index of /images/ .. / logo.gif](#) 11-May-2011 10:27 6660 [remark.gif](#) 11-May-2011 10:27 79.

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#clientTransferProhibited
Name Server: DNS1.REGISTER.COM
Name Server: DNS2.REGISTER.COM
DNSSEC: unsigned
URL of the ICANN Whois Inaccuracy Complaint Form: https://www.icann.org/wicf/
>>> 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#clientTransferProhibited
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: 5l96sakh18g9i9vfson50dv4i@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, there is a search bar with the IP address "199.34.228.66" and a red arrow pointing to it. Below the search bar is a navigation menu with links to "Products", "Data", "Why IPinfo?", "Pricing", "Resources", "Docs", "Login", and "Sign up".

The main content area has a sidebar on the left with links to "Summary", "Geolocation" (which is highlighted with a blue background and a red arrow), "Privacy", "ASN", "Company", "Abuse", and "Hosted domains".

The main content area displays "IP Geolocation" information:

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

On the right side, there is a map of the San Francisco Bay Area with a callout showing the coordinates "37.8085 N, 122.2668 W". A green button at the top right says "Sign up for free >".

Below the geolocation section, there is a "IP Geolocation data" section with a brief description and a link to "IP Geolocation API & Database >". It also mentions that the tool is useful for "Web Personalization, and Financial Technology".

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 securityheaders.com website. The header features a logo with a star and the text "Security Headers by snyk". On the right, there are links to "Home", "About", and "API".

The main area has a large button with the text "Scan your site now". Below it is a search bar with the placeholder "enter address here" and a "Scan" button. There is also a checkbox labeled "Hide results" and a dropdown menu labeled "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.

Security Headers by snyk

Scan your site now

testphp.vulnweb.com

Scan

Hide results Follow redirects

Security Report Summary

	Site: http://testphp.vulnweb.com/ - (Scan again over https)
	IP Address: 44.228.249.3
	Report Time: 28 Jan 2026 20:08:43 UTC
	Headers: ✖ Content-Security-Policy ✖ X-Frame-Options ✖ X-Content-Type-Options ✖ Referrer-Policy ✖ Permissions-Policy
	Warning: Grade capped at A, please see warnings below.
Advanced:	Ouch, you should work on your security posture immediately. Start Now

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

Header	Description
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.

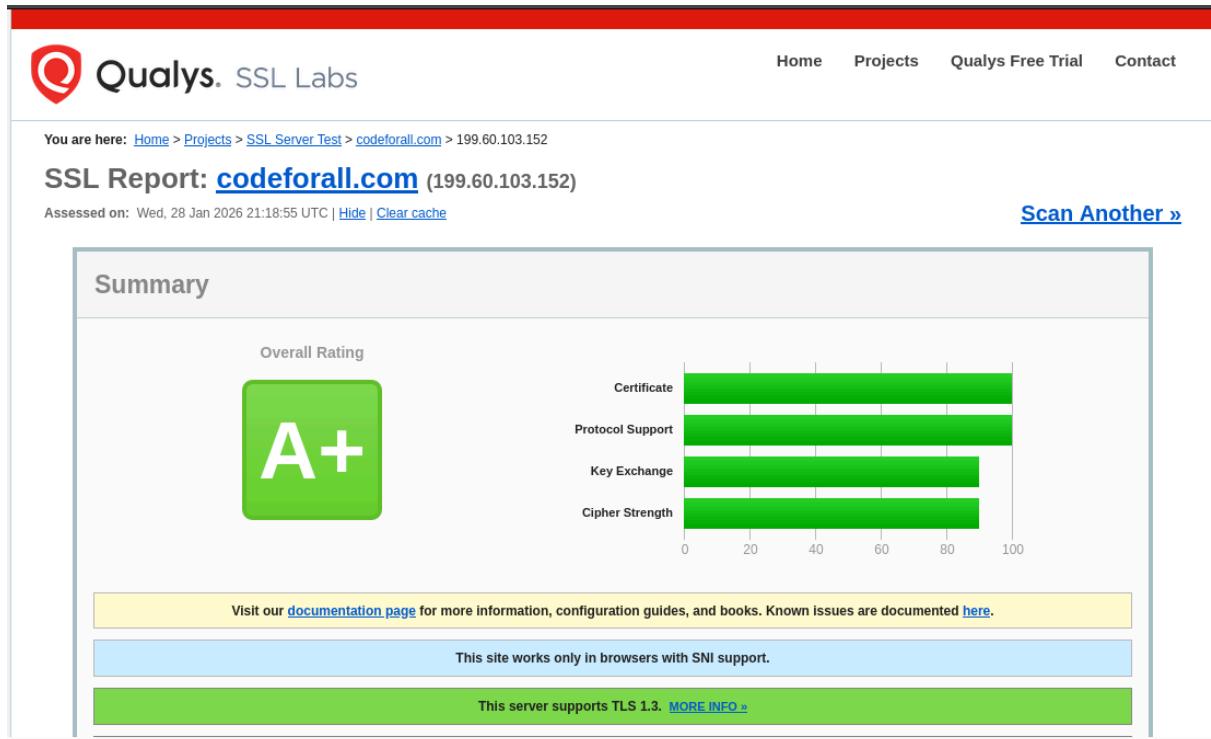
The main recommendation is to correctly implement HTTP security headers, as they significantly reduce the risk of common web attacks.

- SSL/TLS Analysis

The screenshot shows a web browser window with the URL <https://www.ssllabs.com/ssltest>. The page header includes the Qualys logo and navigation links for Home, Projects, Qualys Free Trial, and Contact. Below the header, a breadcrumb trail indicates the user is at Home > Projects > SSL Server Test. The main content area is titled "SSL Server Test" and contains a note about the service's purpose: "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." At the bottom of this section is a form field labeled "Hostname:" with a placeholder input box and a "Submit" button. There is also 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 (0xccaa) 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 (0xccaa8) 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.

