



Web Service Self-Assessment Tools

**Robert Riemann
IT Policy**

**Hands-On Exercise
DPO Day**

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**Don't wait until a future
wave catches you!**

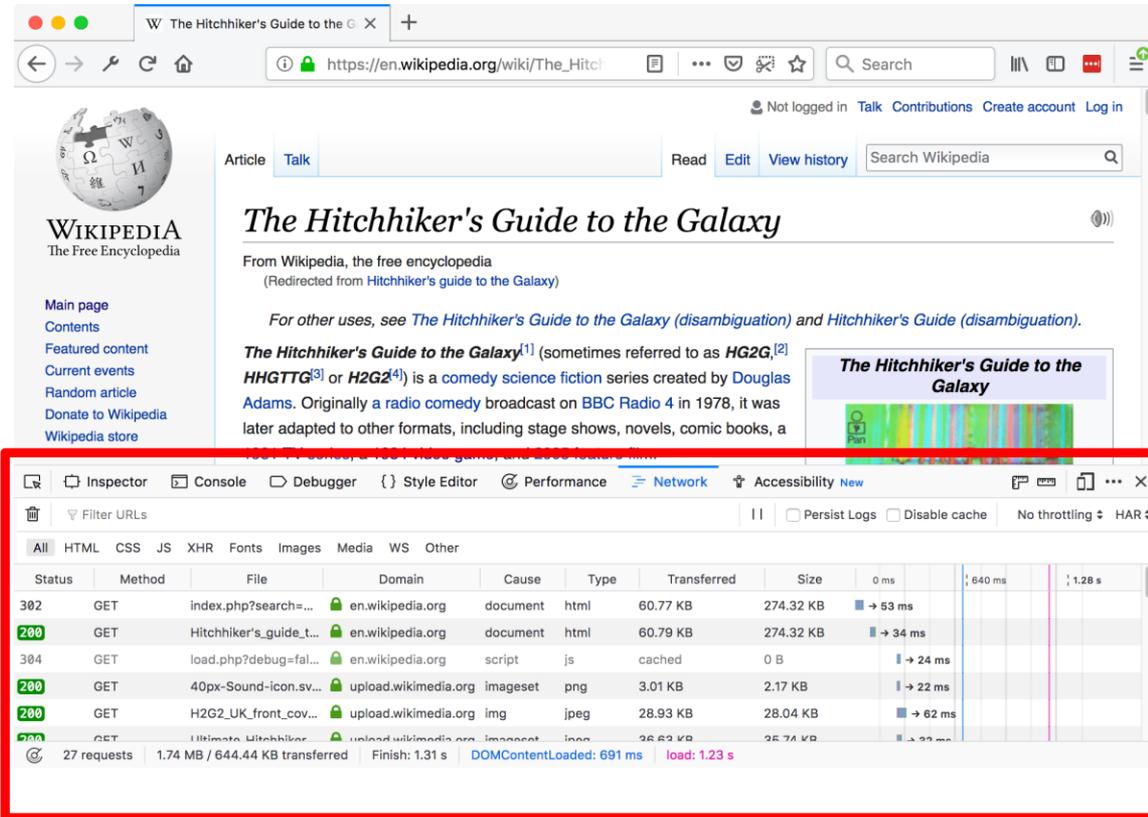


A photograph of two surfers in black wetsuits walking on a wet beach at sunset. They are carrying surfboards. In the background, a long wooden pier extends into the ocean. The sky is a mix of orange, yellow, and blue, and the wet sand reflects the scene.

**Test the waters
ahead of time
on your own!**

Browser Developer Toolbar

- easily available: integrated in all modern browsers
- press in browser: `Ctrl+Shift+I`
- displays browser storage (cookies) and all data traffic in real-time



The screenshot shows a web browser displaying the Wikipedia article "The Hitchhiker's Guide to the Galaxy". The browser's developer toolbar is open, and the Network tab is selected, showing a list of network requests. The requests are as follows:

Status	Method	File	Domain	Cause	Type	Transferred	Size	0 ms	640 ms	1,28 s
302	GET	index.php?search=...	en.wikipedia.org	document	html	60.77 KB	274.32 KB	→ 53 ms		
200	GET	Hitchhiker's_guide_t...	en.wikipedia.org	document	html	60.79 KB	274.32 KB	→ 34 ms		
304	GET	load.php?debug=fal...	en.wikipedia.org	script	js	cached	0 B	→ 24 ms		
200	GET	40px-Sound-icon.sv...	upload.wikimedia.org	imageset	png	3.01 KB	2.17 KB	→ 22 ms		
200	GET	H2G2_UK_front_cov...	upload.wikimedia.org	img	jpeg	28.93 KB	28.04 KB	→ 62 ms		
200	GET	Ultimate_Hitchhiker...	upload.wikimedia.org	imageset	jpeg	26.62 KB	26.74 KB	→ 33 ms		

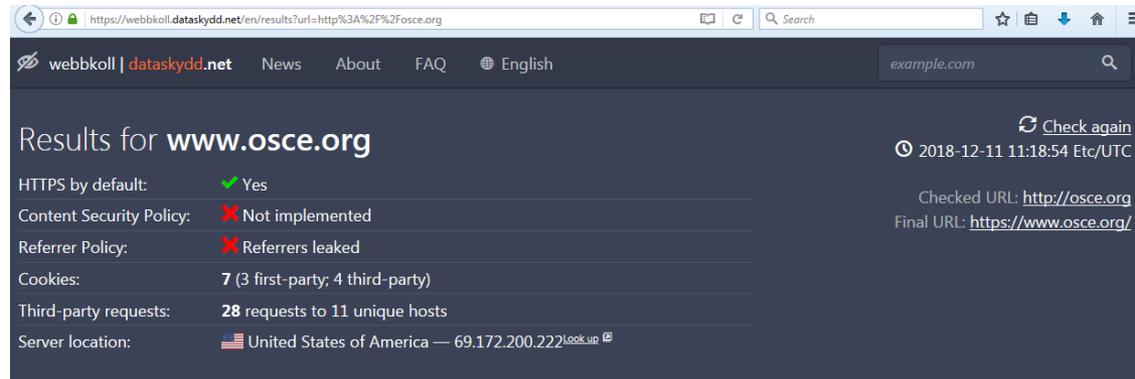
The Network tab summary shows: 27 requests, 1.74 MB / 644.44 KB transferred, Finish: 1.31 s, DOMContentLoaded: 691 ms, load: 1.23 s.

- Firefox: <https://developer.mozilla.org/en-US/docs/Tools>
- Chrome: <https://developers.google.com/web/tools/chrome-devtools/>

Online Service *webbkoll*

<https://webbkoll.dataskydd.net/en>

- service gathers evidence, e.g. cookies, HTTPS
- provides privacy assessment
- assessment is automated and not EUI specific



The screenshot shows a web browser displaying the results of a security scan for the website www.osce.org. The page title is "Results for www.osce.org". The scan results are as follows:

HTTPS by default:	✔ Yes
Content Security Policy:	✘ Not implemented
Referrer Policy:	✘ Referrers leaked
Cookies:	7 (3 first-party; 4 third-party)
Third-party requests:	28 requests to 11 unique hosts
Server location:	United States of America — 69.172.200.222 look up

Additional information shown includes a "Check again" button, a timestamp "2018-12-11 11:18:54 Etc/UTC", and the checked and final URLs: <http://osce.org> and <https://www.osce.org/>.

✔ HTTPS by default

www.osce.org uses HTTPS by default.

Chromium reports the following:

State	Title	Summary	Description
✔	Certificate	valid and trusted	The connection to this site is using a valid, trusted server certificate issued by DigiCert SHA2 Secure Server CA.
✔	Connection	secure connection	The connection to this site is encrypted and authenticated using TLS 1.2. ECDHE RSA with P-256.

HTTPS encrypts nearly all information sent between a client and a web service. Properly configured, it guarantees three things:

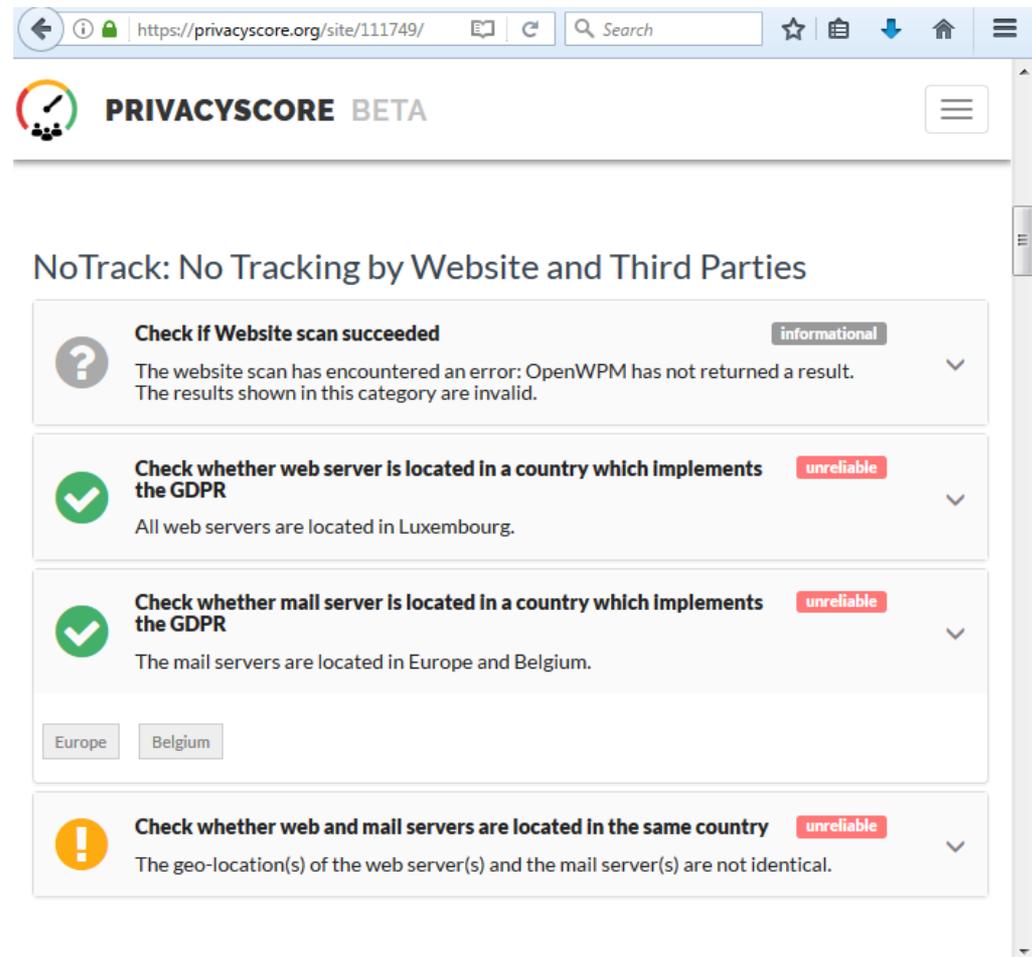
- **Confidentiality.** The visitor's connection is encrypted, obscuring URLs, cookies, and other sensitive metadata.
- **Authenticity.** The visitor is talking to the "real" website, and not to an impersonator or through a "man-in-the-middle".
- **Integrity.** The data sent between the visitor and the website has not been tampered with or modified.

A plain HTTP connection can be easily monitored, modified, and impersonated. Every unencrypted HTTP request reveals information about a user's behavior, and the interception and tracking of unencrypted browsing has become commonplace.

Online Service *PrivacyScore*

<https://privacyscore.org>

- inspired by *webbkoll*
- evidence and assessment
- curated lists with [assessment of EU institutions](#)
- assessment is automated and not EUI specific



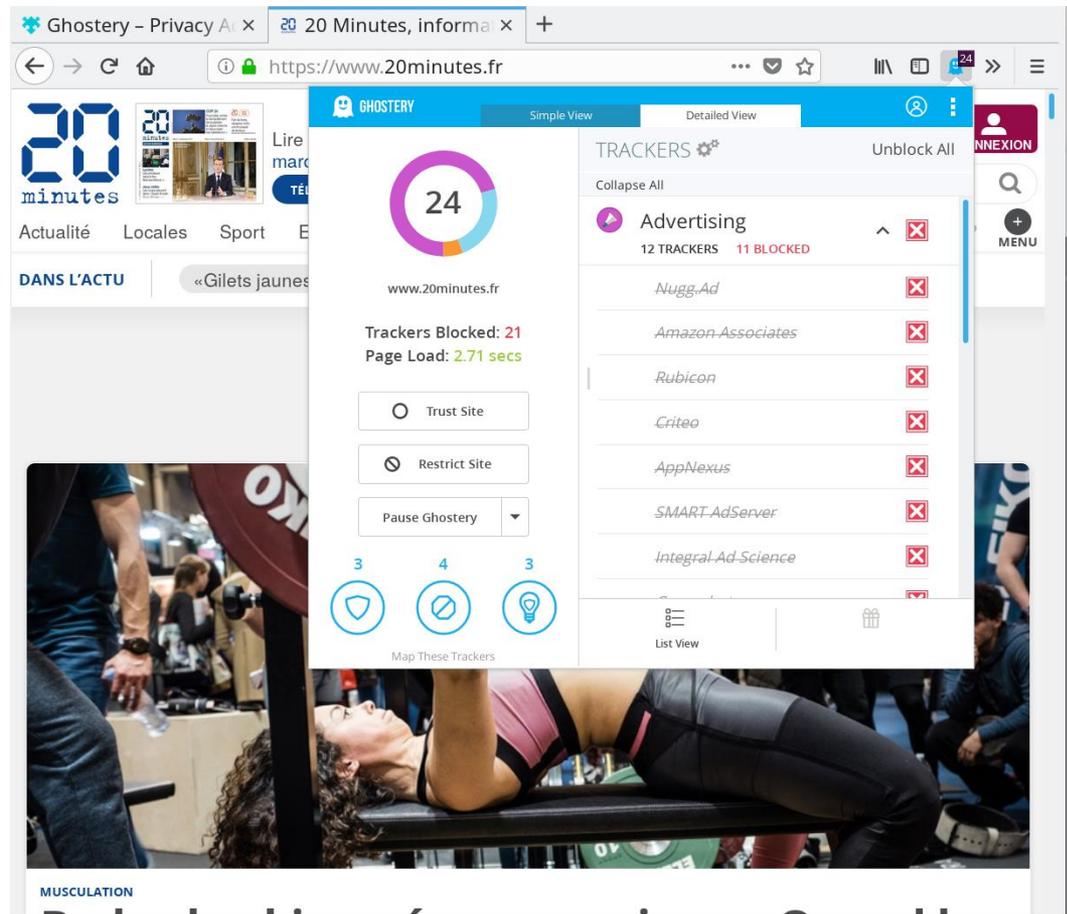
The screenshot shows a web browser window with the URL <https://privacyscore.org/site/111749/>. The page header features the PrivacyScore logo and the text "PRIVACYScore BETA". The main content area displays a "NoTrack: No Tracking by Website and Third Parties" assessment. The assessment consists of four items:

- Check If Website scan succeeded** (informational): The website scan has encountered an error: OpenWPM has not returned a result. The results shown in this category are invalid.
- Check whether web server is located in a country which implements the GDPR** (unreliable): All web servers are located in Luxembourg.
- Check whether mail server is located in a country which implements the GDPR** (unreliable): The mail servers are located in Europe and Belgium. Below this item, there are two buttons: "Europe" and "Belgium".
- Check whether web and mail servers are located in the same country** (unreliable): The geo-location(s) of the web server(s) and the mail server(s) are not identical.

Browser-Plugin *Ghostery*

<https://www.ghostery.com/>

- plug-in to block and report on tracking and advertising of web services
- for all browsers
- easy to use

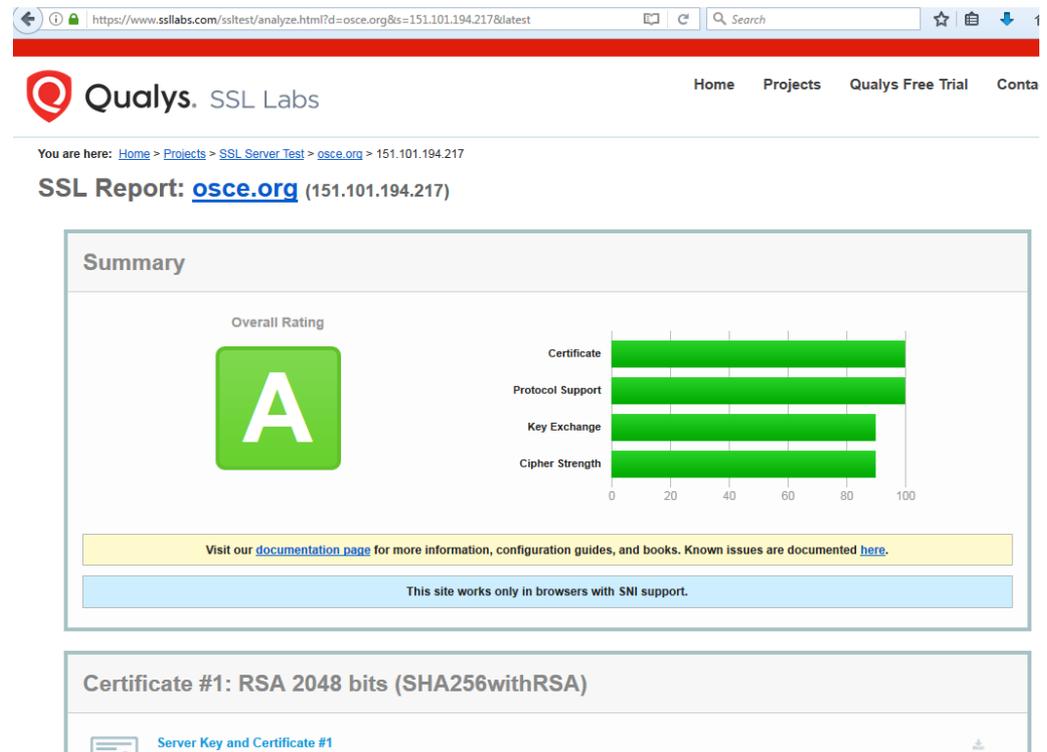


The screenshot shows the Ghostery browser extension interface overlaid on a webpage. The extension is active, displaying a circular progress indicator with the number 24, indicating the number of trackers blocked. Below this, it shows 'Trackers Blocked: 21' and 'Page Load: 2.71 secs'. The interface includes options to 'Trust Site', 'Restrict Site', or 'Pause Ghostery'. A list of blocked trackers is visible, including 'Advertising' (12 trackers, 11 blocked), 'NuggAd', 'Amazon Associates', 'Rubicon', 'Criteo', 'AppNexus', 'SMART-AdServer', and 'Integral-Ad-Science'. The background shows a webpage from '20 minutes' with a photo of a woman lying on a bench in a gym setting.

Online Service Qualys SSL Labs

<https://www.ssllabs.com/ssltest/>

- online service to assess HTTPS configuration
- tests for known vulnerabilities
- easy to use
- traffic light feedback



Alternative open source software: <https://testssl.sh/>