User documentation on EDPB Website Auditing Tool



Version history

|  |  |  |
| --- | --- | --- |
| Version 1.2 | 04 08 2023 | Addition of Installation information |
| Version 1.1 | 10 01 2023 | Addition of the TestSSL addendum |
| Version 1.0 | 09 12 2022 | Publication of the first version |

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The **EDPB website auditing tool** collects evidence, classifies data and generates reports regarding trackers that are being used by websites. It is intended to be used to facilitate website inspections.

On this page you will find information on how to use the EDPB auditing tools. Click on [**How the tool works**](http://localhost:4200/#/helps/how_the_tool_works) to get a first introduction.

At any time, you can come back to this page by clicking on the HELP button on the left sidebar.

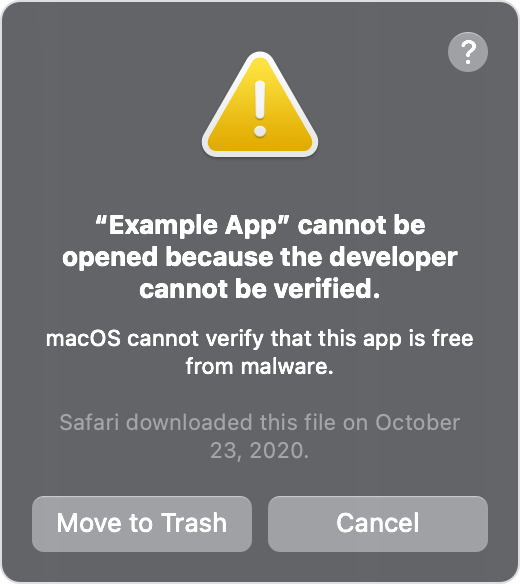
# Installation

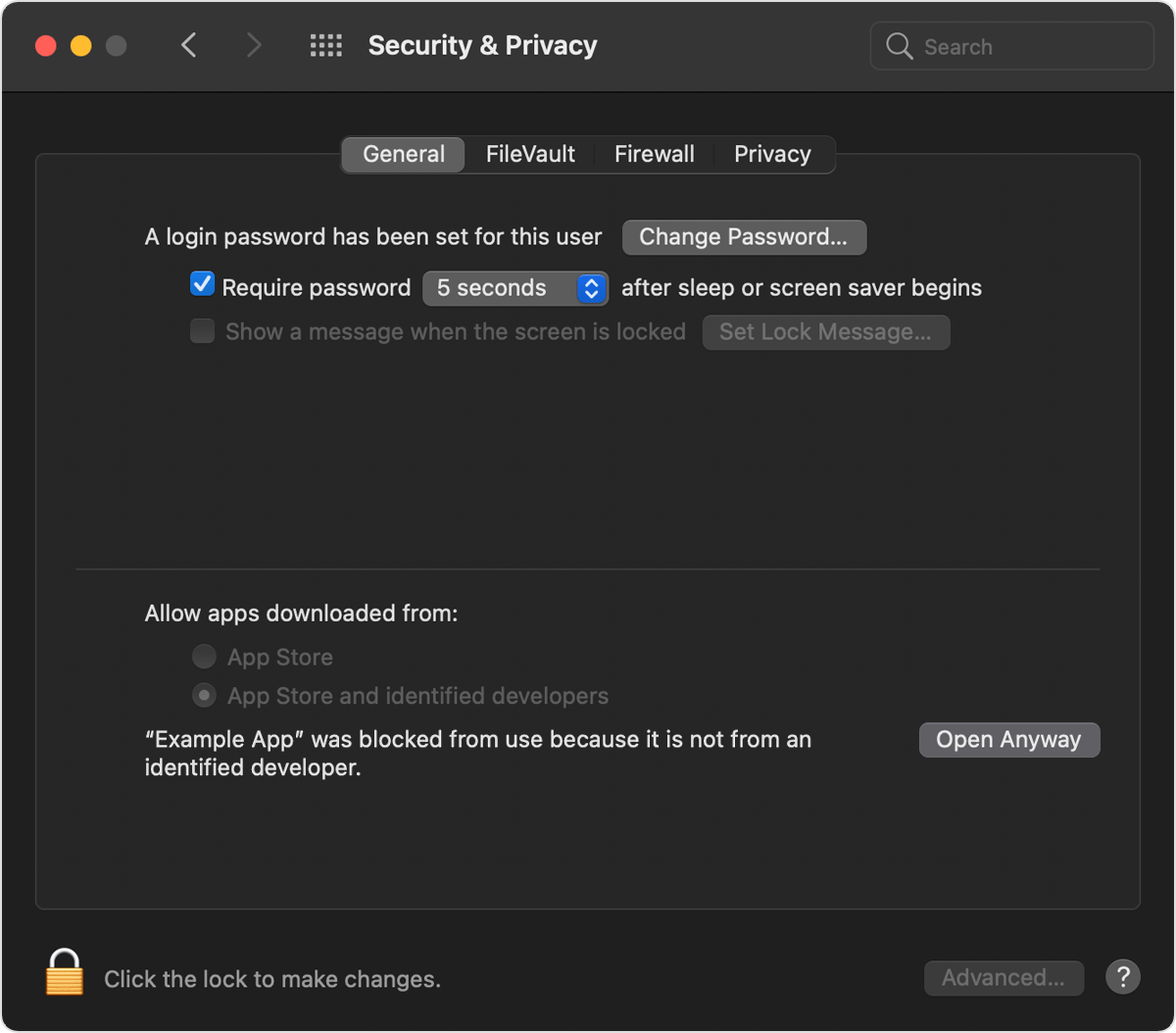
## Partial installation (i.e. without testssl.sh)

Download the last version of the software appropriate for your operating system.

Take note that, for the moment, the application is unsigned and those might rise security alert.

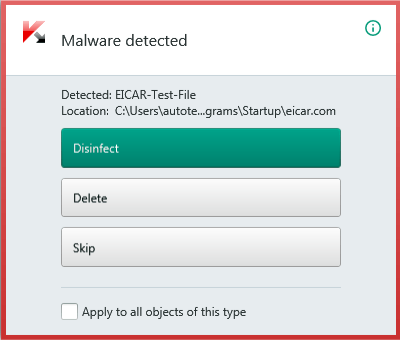
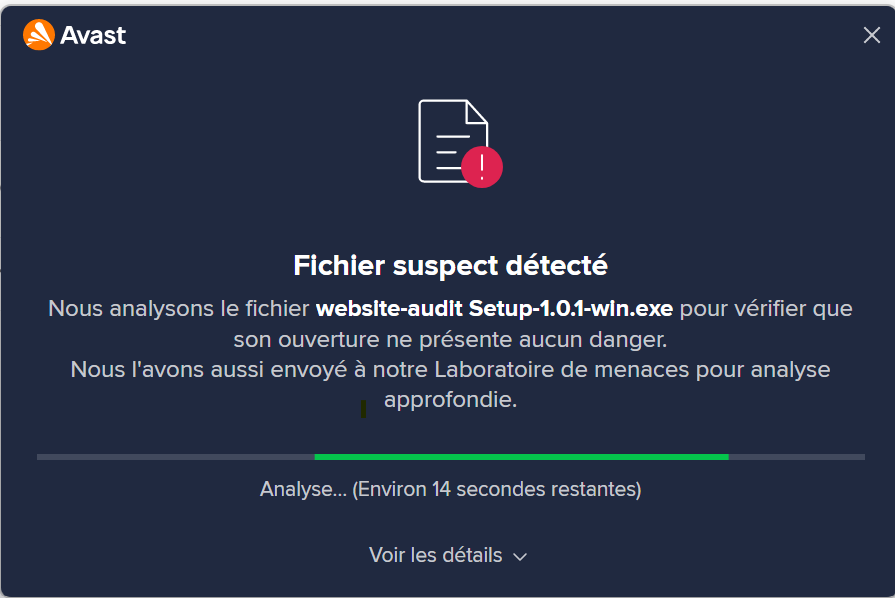
### MAC

* Download website-audit-XXXX-mac.dmg
* Drag/drop the tool in your application folder
* Open the tool from your application folder, you might have a message like:
* The application is not yet signed and should be accepted in the security & privacy section of system preferences: System preferences > Security and Privacy > Open Anyway



### Windows

* Download website-audit Setup-XXX-win.exe
* Double click to install
* The application is not yet signed, your antivirus might raise an alert that you will need to ignore.



### GNU/Linux with snap

* Download website-audit\_XXX\_linux.snap
* in a terminal, install with snap and the option --dangerous:

sudo snap install **--dangerous** ./website-audit\_1.0.1\_linux.snap

Then, you will be able to start the application in the terminal with website-audit

## Full install (ie with testssl.sh)

The software can include an evaluation of the TLS provided by the website. To do so, we use the software testssl.sh[[1]](#footnote-1) which inspects the HTTPS configuration of the web service host and classifies detected vulnerabilities by their level of severity low, medium, high, or critical.

EDPB WTA dynamically calls [testssl.sh](https://testssl.sh/) and integrates the output in the tool. testssl.sh [[2]](#footnote-2) is a free and open source software available under the terms of GPLv2.

### Prerequisite: install Docker

Before installing the EDPB auditing tool, please make sure that Docker is already installed and active on your system. Follow the instructions to install Docker on your system:

* Windows: <https://docs.docker.com/desktop/install/windows-install/>
* Mac: <https://docs.docker.com/desktop/install/mac-install/>
* GNU/Linux: <https://docs.docker.com/desktop/install/linux-install/>

Once installed, open Docker for the first time (from the system tray or the start menu).

Make sure that Docker is active and in your path, by using the following line in your terminal:

docker run --rm -ti drwetter/testssl.sh:3.0 https://example.com/

The output should look like this (example on Windows):

Une image contenant texte

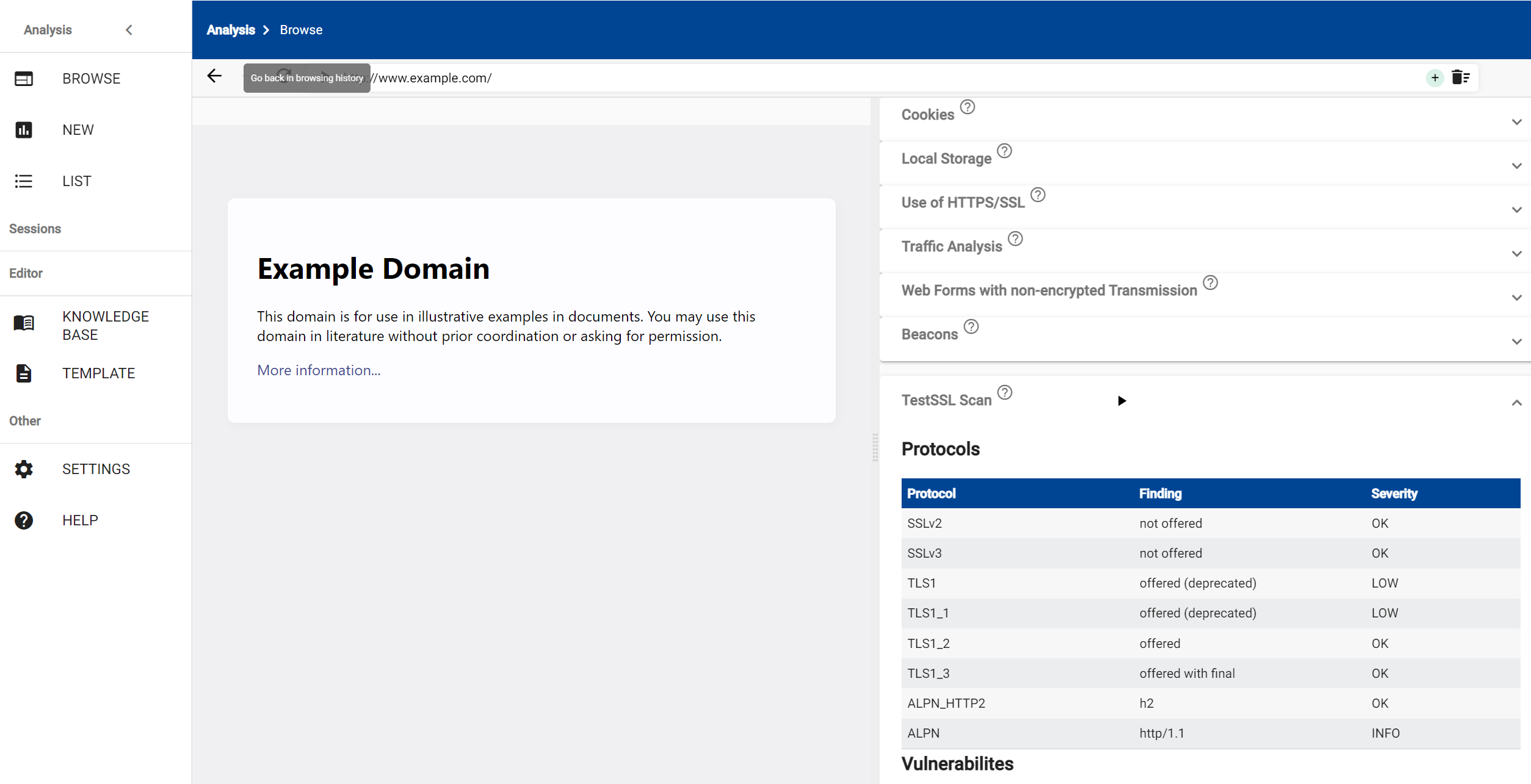
Description générée automatiquement

### Installation of EDPB WAT

Once Docker is installed, follow the instructions in the section 1.1 to install the version 1.0.1 (or more recent) of the EDPB auditing tool.

### Verification of testssl.sh

testssl.sh should now be directly available inside the “TestSSL Scan” card in the browse section of the tool:



# How the tool works

The EDPB website auditing tool introduces a user-friendly layer to the Chromium browser in order to help assess at a glance whether or not a website collects or stores information in a browser in a compliant way (*i.e.*by informing and gathering user consent when this is required).

All evidence data can be stored in the tool through an *analysis* that gathers different *scenarios*, representing an interaction (*e.g.* consent, refusal, etc.) with the given website.

The assessment is facilitated with automated tools, while the decision on compliance / non-compliance is made by the case officer.

*Knowledge base*can help identify known trackers.

*Template* can be used to personalise reports for a given scenario.

Through the left side navigation bar, you can access to all these functionalities:

|  |
| --- |
| **Analysis** |
| BROWSE | Take a quick overview of the personal data stored or transferred in or by the browser. The results will not be stored in the tool. |
| NEW | Initiate a new website analysis for collecting evidence. Evidence is stored in the tool for later assessment of their compliance with legal requirements. |
| LIST | List of analysis stored in the tool with their assessment. |
| **Sessions** |  |
| ANALYSIS > SCENARIO | Current session attached to an analysis and a scenario in this analysis. Evidence can be attached to the referenced analysis and scenario until this session is closed. **Once closed, no evidence can be attached anymore to this analysis and scenario**. |
| **Editor** |  |
| KNOWLEDGE BASE | The knowledge base lists known trackers and their corresponding purposes. This information can be accessed dynamically whilst browsing or assessing the compliance of a website.The knowledge base can be edited with new information gathered by the case officer. It serves only as a tool to facilitate the analysis by the case officer. |
| TEMPLATE | Templates are used for generating reports tailored to specific needs. |
| **Other** |  |
| SETTINGS | Customize the information displayed while browsing or assessing compliance of a given scenario. |
| HELP | Reference to the documentation of this tool. |

As a first introduction, about how to conduct an analysis, we recommend that you take a look at the section **Provide new analysis**.

# Provide new analysis

An *analysis* gathers information that has been stored in a browser when browsing websites through a set of *scenarios*.

It can be initiated from the NEW section or from the “+” button in the toolbar of the BROWSE section.

Both of these icons reveal the following form:

|  |
| --- |
| **Website information** |
| \*Name of the website or responsible entity | This name is only informative and helps to re-identiying this analysis from the list. |
| \*URL of the website | This is the starting point of the analysis. Note that an analysis is not bound to one URL and other URLs can be included whilst browsing. |
| **First or new scenario** |  |
| \*Select a source for this scenario | These are the sources from which evidence of data collection can be extracted for conducting its legal assessment:   * *Internal Browser*: Use the Chromium browser integrated to this tool and also accessible through BROWSE section. * *HTTP Archive format (HAR)*: Use a JSON-formatted file format that stores communications generated by a browser when browsing websites. This file can be generated through the inspector from all general public browsers. * *Website Evidence Collector (WEC)*: Use reports generated by the [**Website Evidence Collector (WEC)**](https://edps.europa.eu/edps-inspection-software_en) developed by the European Data Protection Supervisor (EDPS) for conducting a legal assessment with this tool.   The **use of the internal browser is the recommended way to conduct an analysis**s**ince it can produce an in-depth analysis of trackers on a website,** including tracking functions or requests that actually store information in the browser. |
| \*Set a tag for this scenario | Associate a name to the scenario you plan to assess on the website (*e.g.* before consent, after consent, manage options, etc.) for its later identification and assessment. |
| Start | Once all the information is correctly entered, the start button appears to initiate the association of information to the given scenario in the analysis. |

If the internal browser source is selected, a new session ANALYSIS > SCENARIO appears in **Sessions** on the left navigation bar. Until this session is closed, the newly created scenario is associated with all the information collected through this session.

# The Internal Browser

The internal browser of the EDPB website auditing tool uses Chrome Version 106.0.5249.103.

It appears whenever you associate a new scenario to an analysis, or when clicking on the BROWSE or on an existing session in the left navigation bar.

The browser interface is composed of the following three main components:

* the *toolbar* on the upper part of the browser interface allows for managing both scenarios, browser and data collected through the browser,
* the *information displayed (render)* on the left side of the browser show the visible part of the website as individuals see it,
* the *logger* on the right side of the browser shows the hidden part of the website ie. all communication and storage performed by the given website with this browser.

The internal browser can be associated (or not) to a session. If associated, all data collected is automatically stored in the tool and can be assessed on-the-fly through the analysis interface.

## The toolbar

The toolbar helps to manage both browsing sessions and information collected by the browser:

|  |  |
| --- | --- |
|  | Navigation buttons that allow respectively to navigate backward and forward in the browsing history or reloading the current page. |
|  | Pause or resume information displayed in real time through the logger panel. **If paused, information is still collected by this tool but is no longer refreshed until resuming.** |
|  | If not selected, this input shows the current Uniform Resource Locator (URL) of the webpage displayed in the renderer panel. If selected, this input allows fetching a new URL to be displayed. The http:// protocol is automatically added to malformed URLs. Unreachable URLs are dismissed. |
| Analysis > Scenario  + | Session management buttons that respectively allow viewing which scenario and analysis this session is currently associated with (if any). A click on the current running session will display the assessment view on the associated scenario. As such, information already collected in the logger can be tagged as compliant/not compliant whilst keeping the current running session alive and accessible through **Sessions** on the left side navigation bar. |
|  | Data collection management buttons that respectively allow taking a snapshot of website displayed in the browser, to erase all information from both the renderer and the logger, and to stop and save data collected for the current scenario. |
|  | Hide/show the logger panel. |

## The logger panel

The logger panel displays in real time all communication and information storage that occurs in the browser during the navigation.

This information is categorized into a set of expandable *cards* that contain a list of information related to the given analysis.

The header of these tables in each card is clickable in order to sort identical information for a given category. On some analyses, lines of the table can be individually selected to get more details on the selected information.

## Analysis Cards

Each card is a representation of an analysis that has been performed on the current website. Headers of these cards contain the identification of the analysis performed, a question mark that gives more information on this analysis, and an arrow to expand or collapse the contained information. Question marks can be hidden through the setting section of the left navigation bar.

The following table gives information of each analysis performed:

|  |  |
| --- | --- |
| Screenshot | List all screenshots that have been recorded from the renderer since the beginning of the session. The title of each screenshot can be modified through the edit button to help its later identification. |
| Cookies | List all the cookies that have been stored since the beginning of the session. Each cookie is represented as a single line in the table classified by domain, name and potential purpose from knowledge bases (if any). A click on a line displays detailed information about the cookie. |
| Local Storage | List all pairs of key/value that have been stored in each frame contained in the displayed webpage. Each key in the local storage is represented as a single line in the table, associated with the url of the frame that requested the storage, the key value, and the potential purpose from knowledge bases (if any). A click on a line displays detailed information about the local storage access. |
| Use of HTTPS/SSL | Check whether the current webpage makes use of a secure communication (SSL). It also checks if an unencrypted access (HTTP) redirects to a secure access (HTTPS) and gives the corresponding location. |
| Traffic Analysis | List all domains that have been requested by the renderer to display the current webpage. |
| Web Forms with non-encrypted Transmission | Check whether the rendered page contains a form where data is transmitted through an unsecured communication (HTTP). Each form is represented as a single line in the table, associated with its identification in the source code and the action performed when submitting. |
| Beacons | List all known tracking pixels (Web Beacons) contained in the rendered page according to [**EasyPrivacy**](https://easylist.to/#easyprivacy) and [**Fanboy's Annoyance**](https://easylist.to/#fanboy-s-annoyance-list) list. **This list is only informational, it may be incomplete or includes false positives due to inaccurate or outdated signatures.** |
| TestSSL scanplay\_arrow | If configured in the settings section, the command-line tool testssl.sh can be performed on the current URL by clicking on the play button. This tool checks supports of TLS/SSL ciphers, protocols as well as recent cryptographic flaws on the current URL server. Note that this test takes several minutes to be performed. |

## The details panel

Detailed information stored or transmitted during the current sessions through cookies, local storage and web beacons are accessible through a window that appears at the bottom when a line is selected in tables.

This detailed information is divided in three categories:

|  |  |
| --- | --- |
| Details | List complete information about a given cookie, key in the local storage or a web beacon. |
| Logs | Show the call stack tree or the request that results in the deposit of the given cookie, the entry of the key in the local storage or that initiates the request from the web beacon. |
| Knowledge | If the current entry has been found in at least one knowledge base, this tab lists all matching entries in the knowledge base according to its category.  If it is a cookie, these entries are categorized as follows:   * *Exact match*: at least one entry corresponds to the name and the domain of the cookie, * *Match name*: at least one entry corresponds to the name of the cookie with a wildcard domain (*\**), * *Match domain*: at least one entry corresponds to the domain of this cookie.   If it is a key in the local storage, at least one entry matches the key or the script responsible for this entry. |
| Close details | Click on this button located on the top of the logger panel to close the current detail window. |

# Making a decision of compliance / non compliance

In order to assist in the assessment of website compliance, analysis, scenarios and cards can be marked as Compliant, Not Compliant, or To Be Defined.

This assessment interface can be reached at any time, by clicking on the toolbar button Analysis > Scenario through the internal browser during a session, or after the collection of evidence through the format\_list\_bulletedList in the left sidebar navigation.

This list gives an overview of all analysis stored in the website auditing tool and their current assessment.

Each entry takes the following form:

|  |  |
| --- | --- |
| analysis Compliant  Not compliant  To be defined | The entity associated with this analysis and its current assessment. |
|  | Actions buttons on the current analysis in order to respectively view and assess this entry, to generate a report of this analysis and to delete the entry. |
| Scenario 1  Scenario 2  Scenario 3 | The scenarios that have been recorded for the given analysis. The color corresponds to their respective current assessment if any (**complaint**, **not complaint** or **to be defined**). |
| link www.(...).com date\_range 10/01/2022 | Other metadata associated to this analysis, which is the link that has been indicated at the creation of the analysis and the date of this creation. |

The right panel allows filtering these analyses according to their identification or their current assessment.

## Evaluation

Selecting the button through an analysis, a scenario or a card allows navigating in the given element and gets detailed information.

Each of these elements can be tagged to help conduct the global assessment of the website as follows:

|  |  |
| --- | --- |
| Compliant  Not compliant  To be defined | Mark an analysis as compliant, not compliant and to be evaluated according to legal requirements. |
| Close  Write a comment | Open and close a text editor to write some comment about the given evaluation. |
| done | Single lines of these cards:   * **Cookies**, * **Local Storage**, * **Web beacons** and * **TestSSL**   can also be marked as compliant, not compliant or to be defined in order to assist evaluation. |
| *Evaluation on Nov 25, 2022* | The date of the last evaluation. |

The first card of the analysis or the scenario gives an overview of each scenario or each card with their current evaluation. It also allows a global evaluation for the current analysis or scenario according to these elements.

Each single line in the table of these cards (**Cookies**, **Local Storage** and **Web beacons**) can be selected to get more detailed information on the right panel **More details**. On cookie and local storage lines, the knowledge tab gives easy access to list matching entries from the corresponding knowledge base or to add this entry in a knowledge base. Click on [**Knowledge base**](http://localhost:4200/#/helps/knowledge_base) to get more information on its management.

At any time, a new scenario can be attached to the analysis by clicking + on the left **Scenario** panel.

Once the evaluation of the analysis, you can generate reports that include collected data, evaluations and comments in a communicable format. Click on [**Create reports**](http://localhost:4200/#/helps/create_reports)to get guidances.

# Knowledge Base

Information stored in browsers from a website can have multiple purposes, either for the proper functioning of the website or for subsidiary purposes such as tracking user browsing for delivering targeted advertisements. As such, some may require consent before their use by the website, or third parties, to be compliant with legal requirements, whereas others could be exempted.

Many of these trackers are stored through external SDK developed by third-party companies, as they share common properties between websites, such as the domain, the key name or scripts.

Knowledge bases can help identify these trackers, as well as the case consolidating knowledge over time during case-by-case analysis.

Identification of known trackers occurs while browsing by selecting a cookie or a local storage's key line from the corresponding cards through the logger panel of the internal browser.

This same information is also accessible in **More details** while assessing the legal compliance of an analysis. The expansion panel **Add this item to a knowledge base** also permits adding yet unknown trackers for their later assessment.

Finally, the full content of knowledge is accessible through  KNOWLEDGE BASE in the **Editor** category on the left side navigation bar.

## Editing a knowledge base

Each knowledge base is identified by a name and an author. It is composed of a set of entries which can target either cookies or key in local storage.

The following table details the purpose of each element in the KNOWLEDGE BASE section:

|  |  |
| --- | --- |
| New database | By default, the website auditing tool contains no knowledge base. Users can either create a new one, select a name and the appropriate category (*Cookie* or *Local Storage*). |
| Import | They can also import existing databases in json format that have been already created by others through the website auditing tool. |
| Export all | Finally, they can export all databases contained in this tool through a json-format file, for sharing or archiving purposes. |

Database entries can also be individually managed through the set of buttons , which respectively allow viewing, downloading, duplicating or removing the selected entry.

## Cookie entries

The  button on a cookie knowledge base gives a comprehensive of all entries contained in it, categorized by their domain, name and category.

A click on a cookie knowledge entry gives more detail information on this entry:

|  |
| --- |
| COOKIE |
| Category | The identified purpose of the cookie. Possible entries are: *Targeted advertising*, *Non-Targeted advertising*, *Technical*, *Analytics (exempted)*, *Analytics (non exempted)*, *Social media*, *Social media*, *Content customisation* or *? (Unknown)*. |
| Domain | The URL domain from which cookies have been stored. Its syntax includes wildcards (\*). Thus, if a cookie is deposited from third party domains URL, such as "server1.adcompany.com" and "server2.adcompany.com", the expected entry is "\*.adcompany.com". If a cookie is necessarily deposited from the visited website URL (*first party*) and the domain is not relevant information, then the expected entry is "\*". |
| Name | The identification key used by the cookie. Use of wildcards (\*) is also accepted. As such, if a cookie is named "RTB\_1234" and "RTB\_5678", the expected input is "RTB\_\*". If a domain is necessarily associated with a purpose and the name of the cookie is not relevant, then the expected entry is "\*". |
| Source | The origin or the source of the identification. |
| Data controler | The identified data controller for the identified data processing. Use “? if it is unknown. |
| Privacy policy | The URL of the privacy policy if it exists. |
| Reference type | If there are cases (*e.g.* existing sanctions) that refer to this cookie. |
| Comment | Comments can be used to add contextual information on the cookie. |

Each entry of the displayed form can be edited with a click. Finally, new entries can be added with  New cookie entry.

## Local storage entries

Local storage entries operate in a similar manner than cookies. However this deposit can only occur through scripts.

A click on a key of a local storage gives more detail information on this entry:

|  |
| --- |
| LOCAL STORAGE |
| Category | The identified purpose of the cookie. Possible entries are: *Targeted advertising*, *Non-Targeted advertising*, *Technical*, *Analytics (exempted)*, *Analytics (non exempted)*, *Social media*, *Social media*, *Content customisation* or *? (Unknown)*. |
| Key | The key value of this entry. Use of wildcards (\*) is also accepted. If a cookie is named "RTB\_1234" and "RTB\_5678", the expected input is "RTB\_\*". |
| Script | The URL of the script which is used to manage this selected key. The call stack log at the origin of the deposit of the given key will be analyzed to find the matching script. |
| Source | The origin or the source of the identification. |
| Data controler | The identified data controller for the identified data processing. Use “? if it is unknown. |
| Privacy policy | The URL of the privacy policy if it exists. |
| Reference type | If there are cases (*e.g.* existing sanctions) that refers to this entry. |
| Comment | Comments can be used to add contextual information on the cookie. |

Each entry of the displayed form can also be edited with a click on the information. New entries can be added with  New local storage entry.

## Knowledge base usage

Each cookie or entry in local storage which is stored during a browsing session is automatically scanned for finding matching entries in the knowledge base.

Identified purposes of matching entries are available in the *Category* row in tables of Cookie and Local storage cards, as well as in the following tab from detail panel when selecting a line in tables.

If the current entry has been found in at least one knowledge base, this tab lists all matching entries in the knowledge base according to its category.

If it is a cookie, these entries are categorized as follows:

* *Exact match*: at least one entry corresponds to the name and the domain of the cookie,
* *Match name*: at least one entry corresponds to the name of the cookie with a wildcard domain (*\**),
* *Match domain*: at least one entry corresponds to the domain of this cookie.

If it is a key in the local storage, at least one entry match the key or the script responsible for this entry.

You can refer to [**Provide new analysis**](http://localhost:4200/#/helps/new_analysis) for making use of that information in order to assess compliance / non-compliance of websites according to legal requirements.

# Create reports

Reports are formatted documents according to a given *template* of information contained in an *analysis*, a *scenario* or a given *card*.

The interface edit reports is accessible on each line of the table **Summary of the evaluations**in a given analysis or a given scenario.

## Report interface

The report interface is composed of the following three main components:

*Edit/export toolbar*

*Information filtering toolbar*

*Preview of the report*

* the *Edit/export toolbar* on the upper part of the interface allows editing the report and selecting a format for its exports (*json*, *XLSX*, *PDF* or *DOCX*),
* the *Information filtering toolbar* allows selecting information to be reported, according to its identification or its evaluation,
* the *Preview* frame gives an overview of the information contained in the final reports. Its also provides a simple editor to add or remove information in the report. Note that the final rendering may differ depending on the selected exporting format.

### Edit/export toolbar

The Edit/export toolbar for editing information of the reports and for exporting in a given format:

|  |  |
| --- | --- |
| Edit | Open a simple editor in the preview frame for adding or removing information in the generated report. Note that modified information will only be visible when exporting to pdf or docx. Selecting new filters from *Information filtering toolbar* erase all current modifications. |
| Save as JSON | Export raw information of a given *analysis*, *scenario* or *card* using the JavaScript Object Notation (JSON) format. |
| Save as XLSX | Export raw information of a given *analysis*, *scenario* or *card* in spreadsheets using Office Open XML (XLXS) format. |
| Save as PDF | Export formatted information of a given *analysis*, *scenario* or *card* in Portable Document Format (PDF). |
| Save as Docx | Export formatted information of a given *analysis*, *scenario* or *card* in an editable Office Open XML (DOCX). |

Formatted information corresponds to generating HTML representation of a report based on a template in a PUG format. New templates can be imported in the TEMPLATE section of the left side navigation bar and selected in *Information filtering toolbar*.

### Information filtering toolbar

The information filtering toolbar allows selecting analysis, scenarios and cards depending on their identification or their respective assessment according to options or a template:

|  |  |
| --- | --- |
| Select a template | Use a PUG template has been imported from the descriptionTEMPLATE section of the left side navigation bar. |
| Select tags to report | When reporting a complete analysis, it allows selecting a set of scenarios or all scenarios to be included in the report. |
| Select cards to report | When reporting an analysis or a scenario, it allows selecting a set of cards or all cards to be included in the report. |
| Select evaluations to report | When reporting an analysis, a scenario or a card, it allows selecting evaluations or comments to be included in the report. Note that this option also applies to lines in cookies, local storage, beacons and TestSSL. |

Template and filtering options are mutually inclusive. As such, templates can be complete information on analysis, scenarios and cards that could be later selected through the filtering options.

## Editing New Templates

Yet, the only supported syntax for template is [**PUG**](https://github.com/pugjs/pug). The generated reports from a template corresponds to the data object object contained in the json of an analysis, a scenario or a card to the corresponding *locals* in the pug syntax.

You can refer to the *Language Reference* section of its [**official website**](https://pugjs.org/api/getting-started.html) to get complete information in its syntax.

The descriptionTEMPLATE provides a set of action to import, edit or duplicate existing templates:

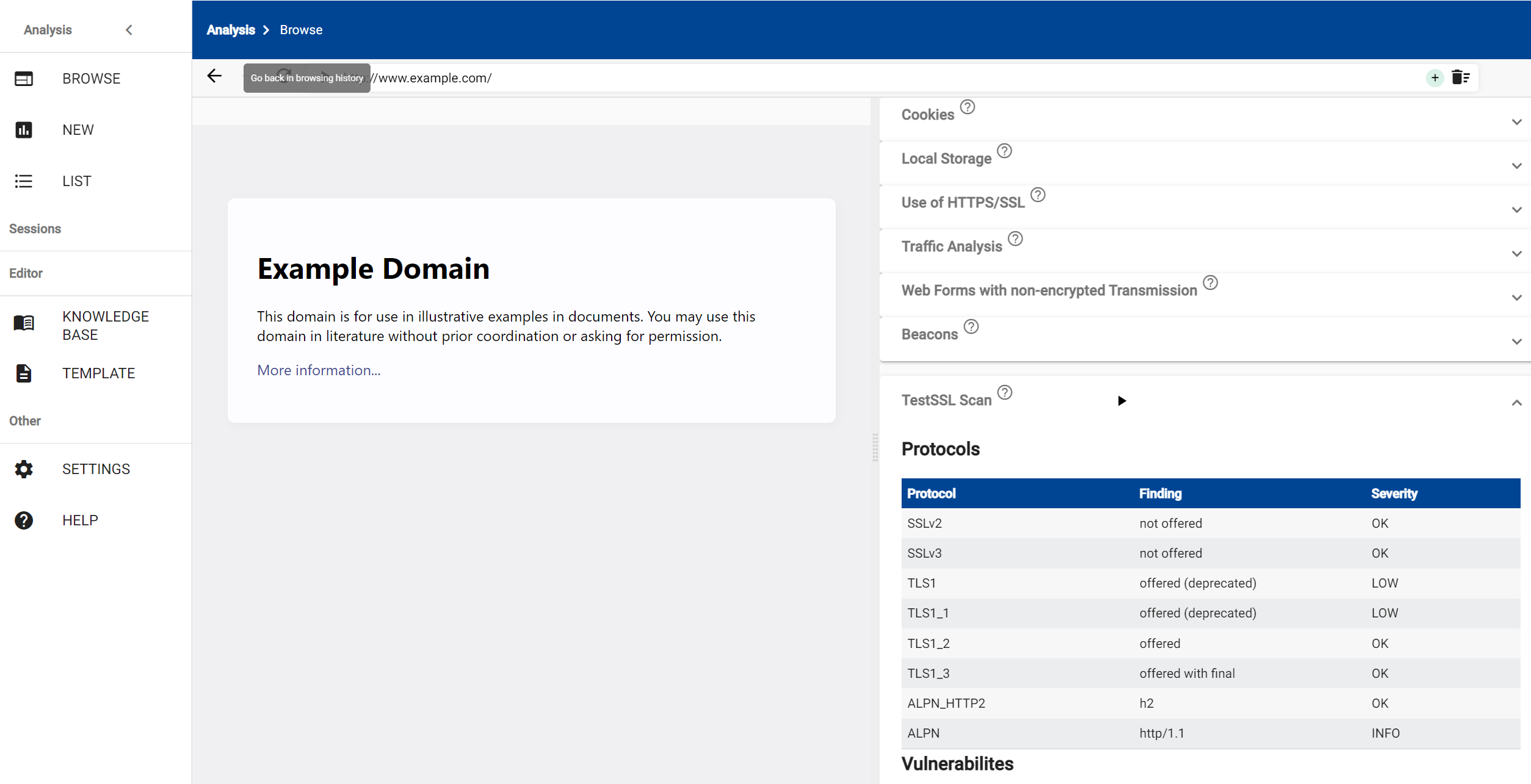
|  |  |
| --- | --- |
| New template | Import a template in PUG syntax with a name and an author for its later use in reports. |
|  | Respectively download and delete imported templates |

As a first introduction for generating new templates, we recommend downloading an analysis, a scenario or tag from the *Edit/export toolbar* in JSON raw format for finding matching entries.

Many online Online Pug Testing Tool allows copy/pasting PUG template and JSON information to render the final HTML. *Default template* can also be exported as a reference.

# testssl.sh

testssl.sh scans are directly available inside the TestSSL Scan card in the browse section.



1. <https://testssl.sh/> [↑](#footnote-ref-1)
2. Source and development are on GitHub at <https://github.com/drwetter/testssl.sh> . [↑](#footnote-ref-2)