eLabFTW

The Free and Open Source Electronic Lab Notebook

www.elabftw.net

Summary

- Why use an electronic lab notebook?
- Why use an open source solution?
- Why use eLabFTW?
- Why use Deltablot hosting?

Why use an ELN?

Problem:

Need to store metadata of experiments (what, when, where, who, why, how)

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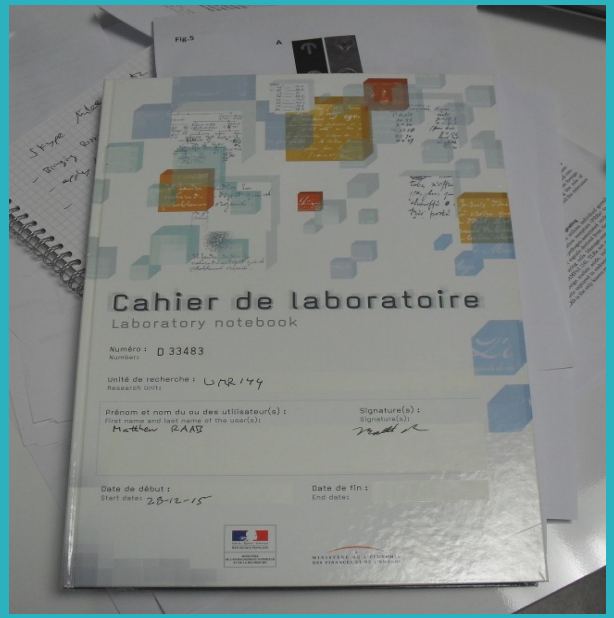
Solution:



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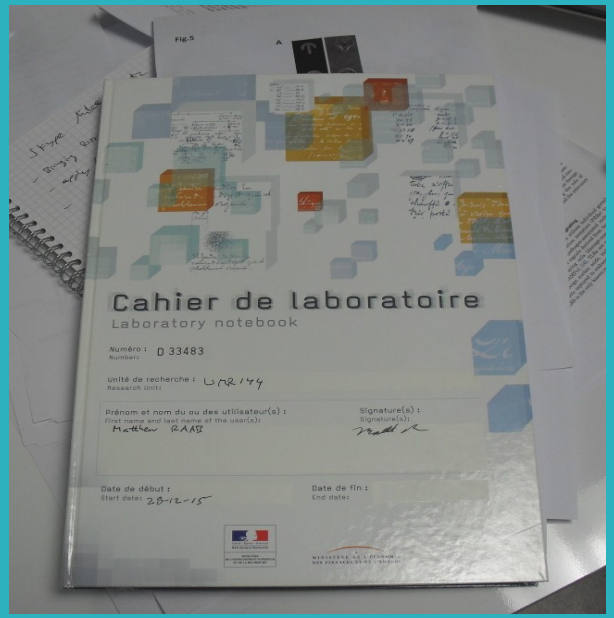


Limitations:

- Can be lost or disappear in a flood/fire
- No backups possible
- Can’t input digital data

Fig.6

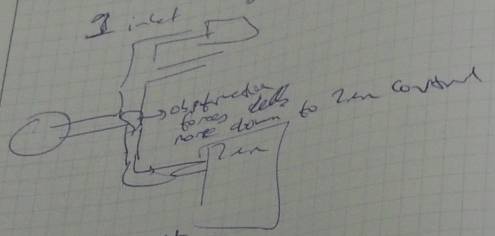
A

2nd Chip

All 4 tubes used

3 outlet

1 inlet



Eventually want to 200nl/hr.

Raised to inside incubator for test, then every few min bring down to mix via stirbar

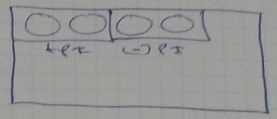
Problem! ① cells not getting into tubes in outlets I think they are stuck here

② cells in 4th are dead from RT?

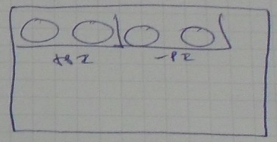
26 Aug 2016

Testing Cell Death THP-1 cells

30K cells

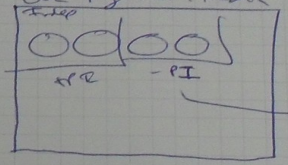


37°C 5% CO_2



37°C No CO_2

CO_2 Rg THP-1 media



25° No CO_2

Add PI next day waited 15 min, then imaged dead cells

Imaged every 1-2 hrs, then left all 3 in incubator O/N. Imaged again next day.

Conclusion: PI in media (2ug/mL) kills cells after a few hours. Not 1-2 hrs, but 3-5 hours

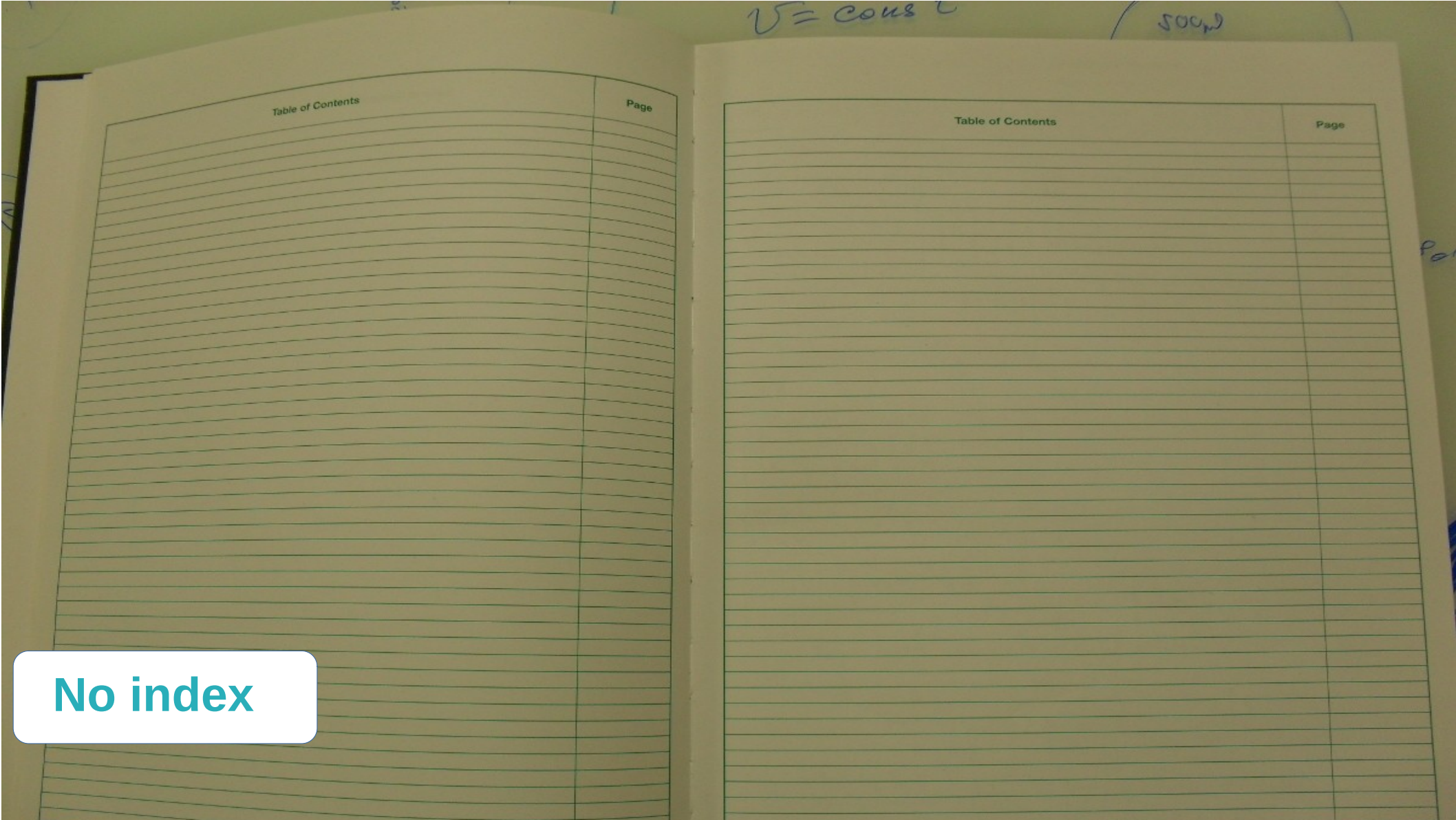
- CO_2 Fridge media improves things a bit, but RT really bad for cells

Hard to read

Signature de l'utilisateur :
user's signature:

Témoin (prénom, nom) :

Signature de l'utilisateur :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No search

eLabFTW solves all these issues

With eLabFTW:

- You can input digital data
- You can search easily
- No readability issues
- You can have backups
- You can legally timestamp results
- You can access it from anywhere in the world
- ...

An ELN brings other issues

Things to consider:

- Where is the data stored?
- What is the privacy policy of the service?
- What happens on the (very) long term?
- Is it interoperable?

Where is the data stored?

On Premise installation:

- The data is stored on your network, on your servers

SaaS service:

- For European customers, the data is hosted in Paris, France, by Scaleway or 3DS Outscale for the SecNumCloud offer (both are french companies).
- For North Americans customers, the data is hosted in New-York, San Francisco or Toronto, by DigitalOcean, LLC (USA company), depending on your location.
- For customers in Asia, the data is hosted in Japan, Korea, India or Singapore, by Vultr, LLC (USA company), depending on your location.
- For Australians customers, the data is hosted in Melbourne, by Vultr, LLC (USA company).
- For South Americans customers, the data is hosted in Chile, Brasil or Mexico, by Vultr, LLC (USA company), depending on your location.

What about privacy?

Be careful about “*free*” ELN services

“If something is free, 'you' are the product”
Read the privacy policy of services you consider using!

Real world example from a commercial ELN:

> tracking email invitations you send; and otherwise supporting your use of the Site. We may use your personal data for target advertising toward you based on things such as region, gender, position, interests, goals, habits, etc. and in order to meet legal obligations.

Would you like your unpublished results to be used in some obscure machine learning process and shared with third parties?

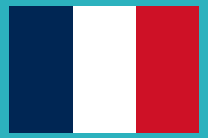
What happens in the (very) long term?

Problem with long term sustainability of proprietary solutions.

→ Only an open source solution can be trusted in the (very) long term!

eLabFTW is 100% Open Source!

eLabFTW



- Developed since 2012
- Vibrant users community
- Has all features you might expect and then some
- Modern codebase and interface
- Secure, audited software
- Popular all over the world
- Plebiscited by users
- Available in many languages
- Supported by big institutions (CNRS, IRD, ...)
- Made in France

eLabFTW: key features

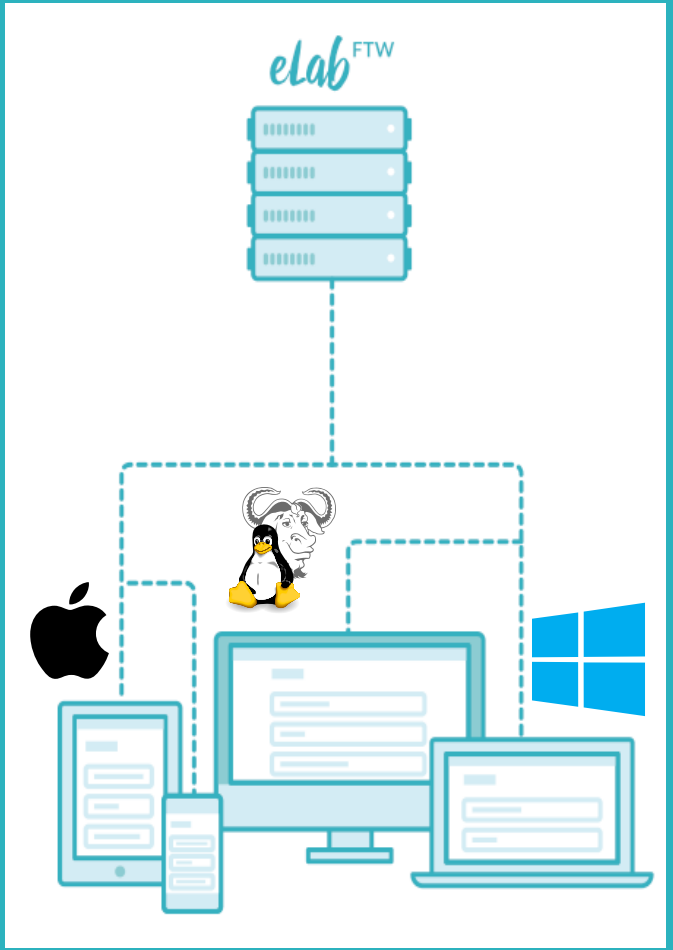
- Trusted timestamping (RFC 3161)
- Blockchain timestamping
- API access
- SAML/LDAP authentication
- Templates for experiments
- Database for products/protocols (LIMS)
- Export in ZIP, PDF, CSV, JSON, ELN
- QR codes
- Molecule editor
- Todolist
- Tex rendering
- Very customizable
- Translated in 20+ languages

eLabFTW: key features

Web application: works across all operating systems

No client to install

Responsive design: works with all screen sizes
(no apps required)



eLabFTW: key features

Trusted timestamping

RFC 3161 timestamping for experimental data.

Compatible with European Regulation eIDAS 910/eu/2014 and qualified timestamping authorities.

eLabFTW: key features

Blockchain timestamping

Leverage the blockchain technology to timestamp and certify research data.

Address: ResearchCertificate | 0x3fb704dfDB72Fc06860D9F09124C30919488f13C

Decoded

Method Id	0xddf252ad
Call	Transfer(address indexed from, address indexed to, uint256 indexed tokenId)

Name	Type	Indexed?	Data
from	address	true	0x0000000000000000000000000000000000000000
to	address	true	0xc4d84f32cd6fd05e2e292c171f5209a678525002
tokenId	uint256	true	15640

Topics

[0] 0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef

[1] 0x0000000000000000000000000000000000000000000000000000000000000000

[2] 0x000000000000000000000000c4d84f32cd6fd05e2e292c171f5209a678525002

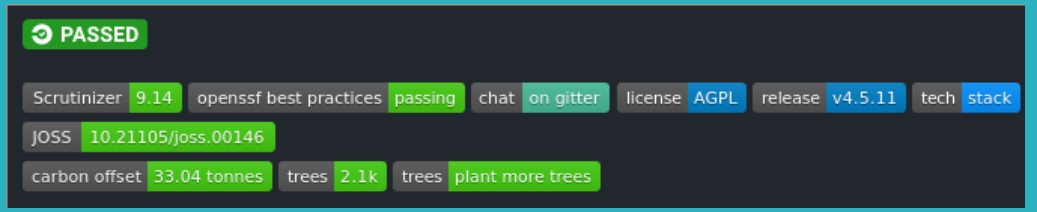
[3] 0x0000000000000000000000000000000000000000000000000000000000003d18

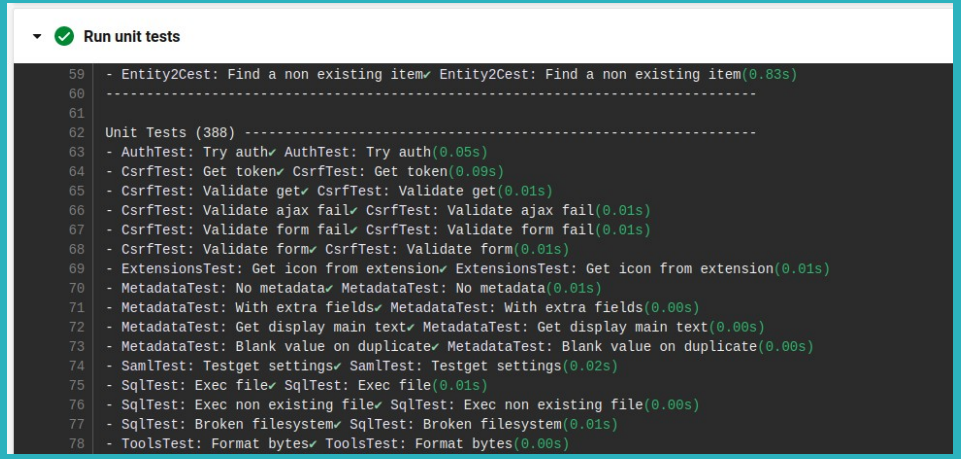
Data: 0x

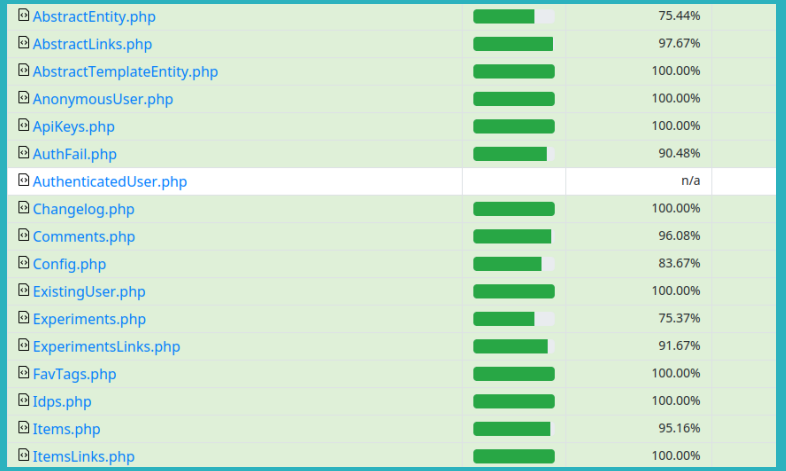
Log Index: 0

eLabFTW: quality software

- Test suite (unit, end-to-end, static analysis)
- Respects code standards
- Best practices followed
- Modern tooling used







eLabFTW: quality software

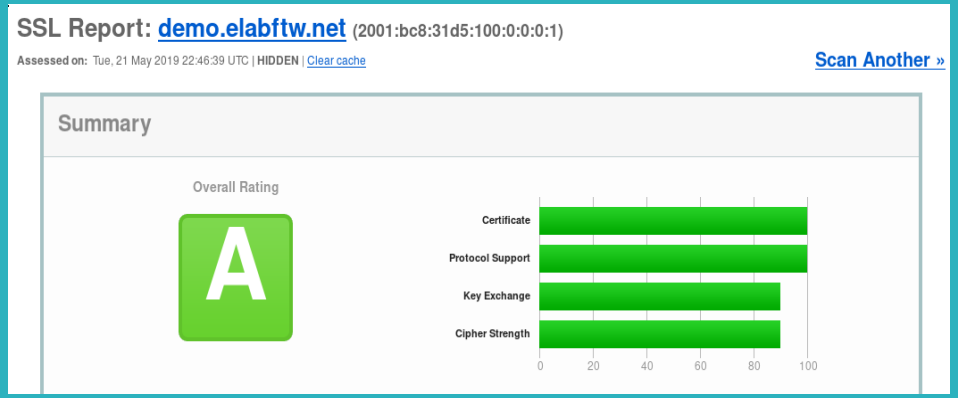
This project reached the Silver level for OpenSSF Best Practices
https://bestpractices.coreinfrastructure.org/en/projects/2766?criteria_level=1

Basics	17/17
Change Control	1/1
Reporting	3/3
Quality	19/19
Security	13/13
Analysis	2/2

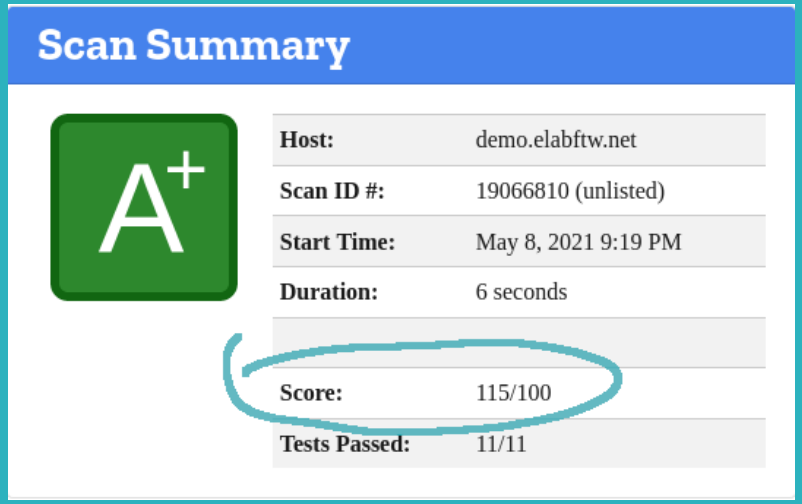
eLabFTW: secure software

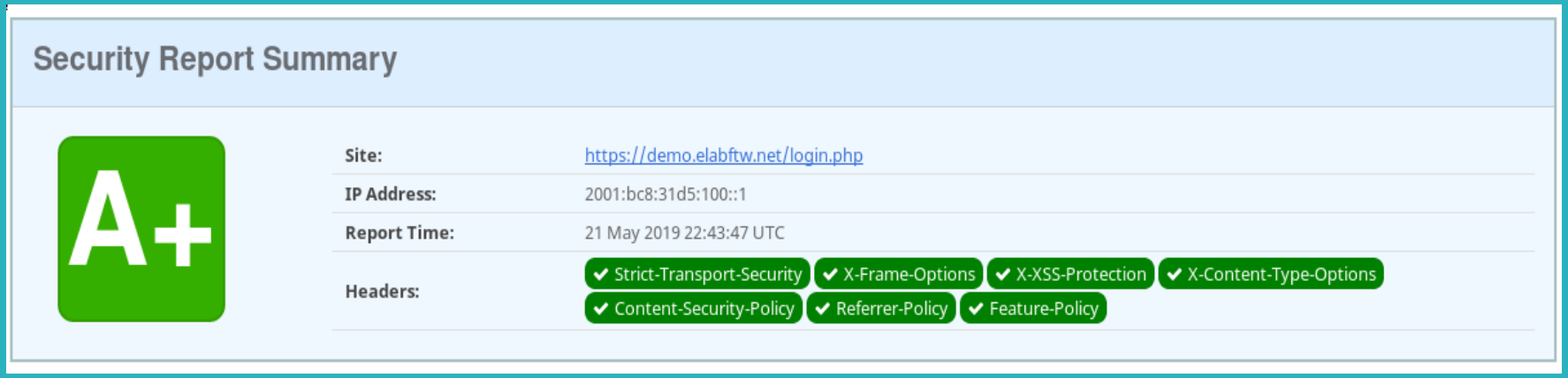
- Tight and secure configuration at different levels
- Vulnerability scans
- Signed releases
- Perfect score on Mozilla’s Observatory
- Externally audited code

eLabFTW: secure software

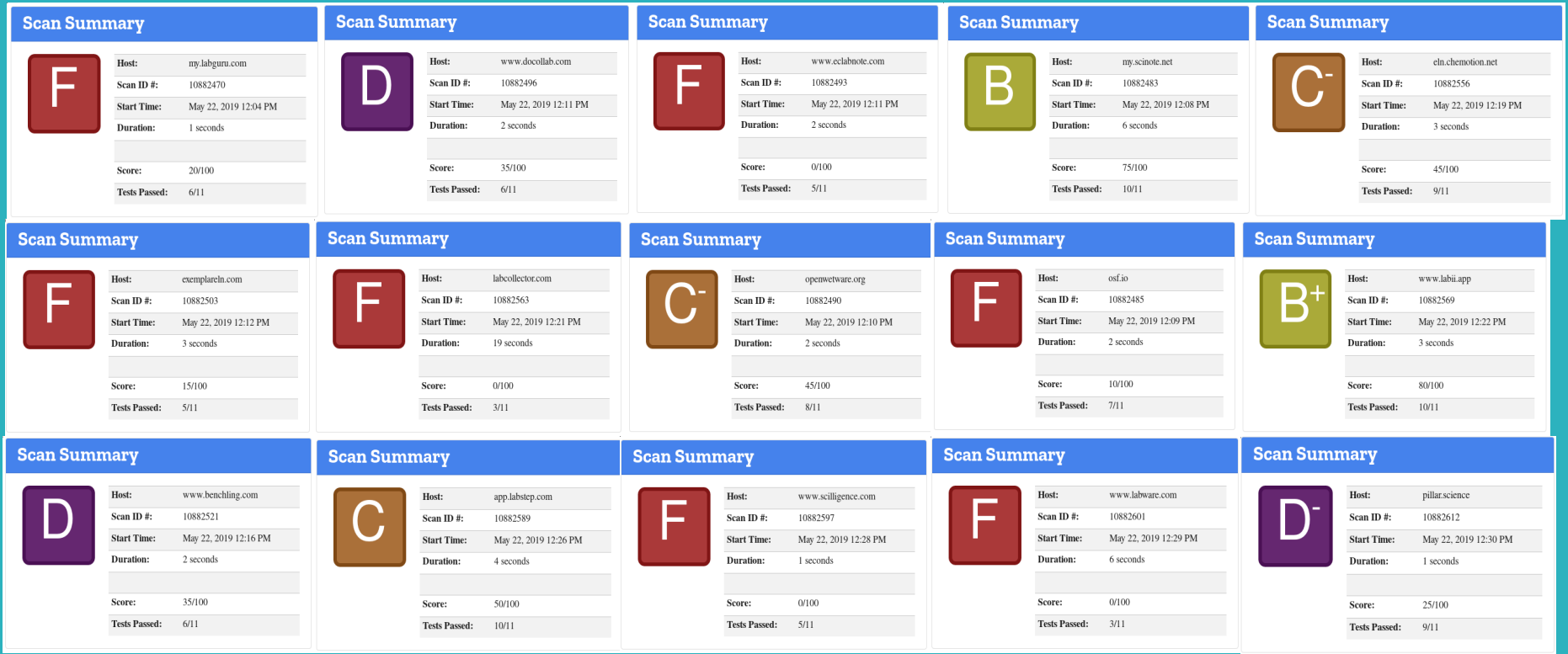


Source: Mozilla's Observatory





eLabFTW: secure software
... not like others...



eLabFTW: supported software

Free support on GitHub
PRO support available from Deltablot
Hosting available from Deltablot

→ Best of both worlds: supported open source

https://www.deltablot.com

contact@deltablot.email

eLabFTW: get hosted!

Hosting a web service can be tricky if you don’t have the right knowledge.

HSTS, SSH, TLS, CSP, Docker, Nginx, Backups, updates, protecting against threat actors, staying online...

Don’t worry about all of that, and use Deltablot’s hosting!

See Deltablot hosting solution

Get in touch:
contact@deltablot.email

eLabFTW: links

Main website:	https://www.elabftw.net
Documentation:	https://doc.elabftw.net
Live demo:	https://demo.elabftw.net
Source code:	https://github.com/elabftw/elabftw
Commercial website:	https://www.deltablot.com/elabftw