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?
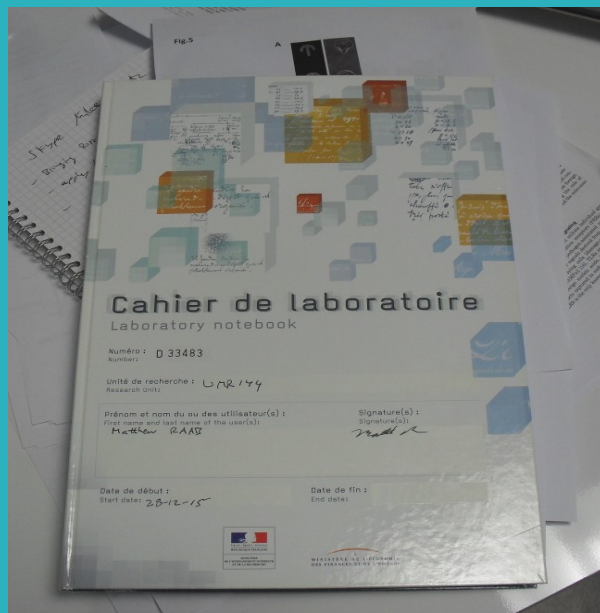
Why use an ELN?

Problem:

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

Why use an ELN?

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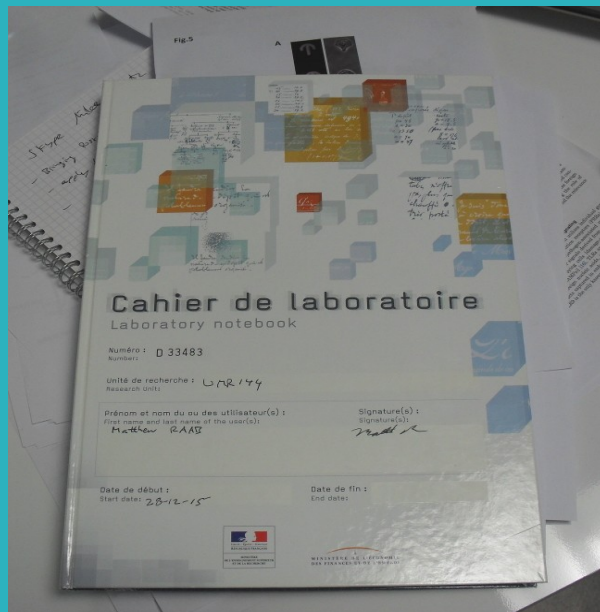
Solution:

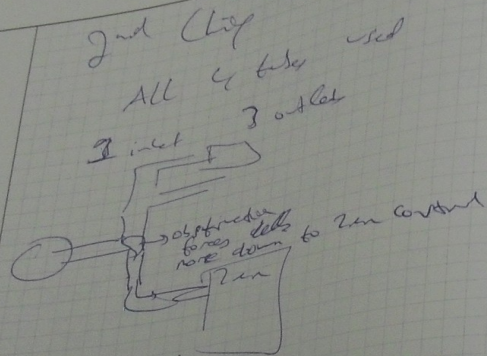# Why use an ELN?

Problem:

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

Solution:

Limitations:

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

Fig.6

A

Left page

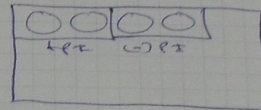2nd Chip
ALL 4 tubes used

3 inlet   3 outlet

obstructed
forces cells
note down to zero control
7 um

Eventually want
to zoom in.

Raised to inside NEXXGEL for heat,
then every few min bring
down to mix via AirBar

Problem!
① cells not getting into
tubes in outlets. I think
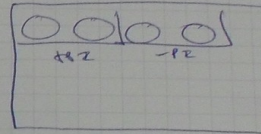they are stuck here
② cells in tube are
dead → from RT?

Right page

26 Aug 2016
Testing Cell Death +HP-1
20k cells   cells

[diagram boxes]   37°C 5% CO_2
+P2   -P1

[diagram boxes]   37°C NO CO_2
+P2   -P2

CO_2 Rdg +HP-1 media
indep
[diagram boxes]   25°   NO CO_2
+P2   -P1
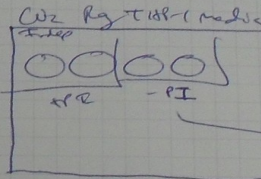
→ Add P2 next day
waited 15 min, then image
dead cells

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

Conclusion → P1 in media (2 ug/mL)
kills cells after a few hours.
Not 1-2 hrs, but 3-5 hours
- CO_2 Indep media improves
things a bit, but RT really bad
so bad for cells

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
- Export in ZIP, PDF, CSV, JSON
- QR codes
- Molecule editor
- Todolist
- Tex rendering
- Very customizable
- Translated in 17 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)
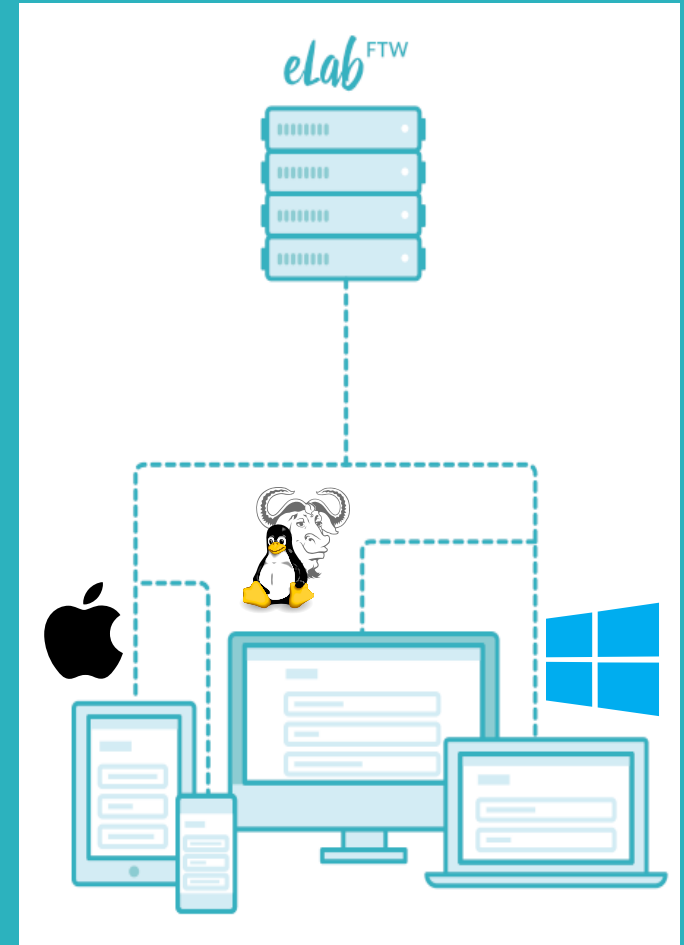
eLabFTW: key features

Trusted timestamping

RFC 3161 timestamping for experimental data.

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

eLabFTW: key features

bloXberg

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

openssf best practices | silver

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

SSL Report: **demo.elabftw.net** (2001:bc8:31d5:100:0:0:0:1)

Assessed on: Tue, 21 May 2019 22:46:39 UTC | HIDDEN | Clear cache

Scan Another »

Summary

Overall Rating

A

Certificate	
Protocol Support	
Key Exchange	
Cipher Strength	

0   20   40   60   80   100
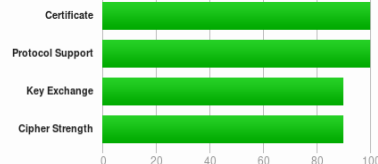
Source: Mozilla's Observatory

Scan Summary

A⁺

Host:	demo.elabftw.net
Scan ID #:	19066810 (unlisted)
Start Time:	May 8, 2021 9:19 PM
Duration:	6 seconds
Score:	115/100
Tests Passed:	11/11

Security Report Summary

A⁺

Site:	https://demo.elabftw.net/login.php
IP Address:	2001:bc8:31d5:100::1
Report Time:	21 May 2019 22:43:47 UTC
Headers:	✔ Strict-Transport-Security ✔ X-Frame-Options ✔ X-XSS-Protection ✔ X-Content-Type-Options ✔ Content-Security-Policy ✔ Referrer-Policy ✔ Feature-Policy

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

Scan Summary

F	Host:	my.labguru.com
	Scan ID #:	10882470
	Start Time:	May 22, 2019 12:04 PM
	Duration:	1 seconds
	Score:	20/100
	Tests Passed:	6/11

Scan Summary

D	Host:	www.docollab.com
	Scan ID #:	10882496
	Start Time:	May 22, 2019 12:11 PM
	Duration:	2 seconds
	Score:	35/100
	Tests Passed:	6/11

Scan Summary

F	Host:	www.eclabnote.com
	Scan ID #:	10882493
	Start Time:	May 22, 2019 12:11 PM
	Duration:	2 seconds
	Score:	0/100
	Tests Passed:	5/11

Scan Summary

B	Host:	my.scinote.net
	Scan ID #:	10882483
	Start Time:	May 22, 2019 12:08 PM
	Duration:	6 seconds
	Score:	75/100
	Tests Passed:	10/11

Scan Summary

C-	Host:	eln.chemotion.net
	Scan ID #:	10882556
	Start Time:	May 22, 2019 12:19 PM
	Duration:	3 seconds
	Score:	45/100
	Tests Passed:	9/11

Scan Summary

F	Host:	exemplareln.com
	Scan ID #:	10882503
	Start Time:	May 22, 2019 12:12 PM
	Duration:	3 seconds
	Score:	15/100
	Tests Passed:	5/11

Scan Summary

F	Host:	labcollector.com
	Scan ID #:	10882563
	Start Time:	May 22, 2019 12:21 PM
	Duration:	19 seconds
	Score:	0/100
	Tests Passed:	3/11

Scan Summary

C-	Host:	openwetware.org
	Scan ID #:	10882490
	Start Time:	May 22, 2019 12:10 PM
	Duration:	2 seconds
	Score:	45/100
	Tests Passed:	8/11

Scan Summary

F	Host:	osf.io
	Scan ID #:	10882485
	Start Time:	May 22, 2019 12:09 PM
	Duration:	2 seconds
	Score:	10/100
	Tests Passed:	7/11

Scan Summary

B+	Host:	www.labii.app
	Scan ID #:	10882569
	Start Time:	May 22, 2019 12:22 PM
	Duration:	3 seconds
	Score:	80/100
	Tests Passed:	10/11

Scan Summary

D	Host:	www.benchling.com
	Scan ID #:	10882521
	Start Time:	May 22, 2019 12:16 PM
	Duration:	2 seconds
	Score:	35/100
	Tests Passed:	6/11

Scan Summary

C	Host:	app.labstep.com
	Scan ID #:	10882589
	Start Time:	May 22, 2019 12:26 PM
	Duration:	4 seconds
	Score:	50/100
	Tests Passed:	10/11

Scan Summary

F	Host:	www.scilligence.com
	Scan ID #:	10882597
	Start Time:	May 22, 2019 12:28 PM
	Duration:	1 seconds
	Score:	0/100
	Tests Passed:	5/11

Scan Summary

F	Host:	www.labware.com
	Scan ID #:	10882601
	Start Time:	May 22, 2019 12:29 PM
	Duration:	6 seconds
	Score:	0/100
	Tests Passed:	3/11

Scan Summary

D-	Host:	pillar.science
	Scan ID #:	10882612
	Start Time:	May 22, 2019 12:30 PM
	Duration:	1 seconds
	Score:	25/100
	Tests Passed:	9/11

eLabFTW: supported software

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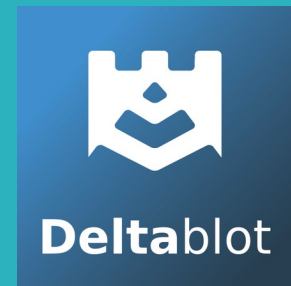PRO support available from Deltablot
Hosting available from Deltablot

→ 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