Collabora Online & ownCloud

Collabora Productivity

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"Stand at the crossroads and look; ask for the ancient paths, ask where the good way is, and walk in it, and you will find rest for your souls..." - Jeremiah 6:16

What is Collabora Online ?

Documents + Spreadsheets + Slides

- Viewing and Collaborative editing

Excellent interoperability with Microsoft formats

- DOCX, DOC, RTF, XLSX, XLS, PPTX, PPT

Many other Import filters / Viewing for

- PDF, Visio, Publisher …

Powerful WYSIWG rendering

On-premise Integration with ownCloud.

Architecture – a bet on CPU threads & network …

![Collabora Productivity — Free your business. The driving force behind putting #LibreOffice in the #Cloud.]

Collabora

- \>100 staff, Cambridge & Montreal

- Parent company – 14 years old

Collabora Productivity – Office Productivity

- ~30 staff – 6 years old (last week)

- 50% C'bra, 50% me

Shared mission / raison d'etre:

- Make Open Source rock: simple goal of the shareholders

- We re-invest your support into FLOSS software

Leaders in the LibreOffice Community

- ~300 developers/year, ~1000 contributors

- Collabora Online (DE) – 20+ million docker images

collabora online .com

Collabora Parent: eg. Monado / OpenXR – play later …

Monado

- Founders & driving force behind FLOSS VR / XR

  - When the world goes this way

  - Vital to have an open-source run-time, stack, drivers & community.

## Fun & Games for hackers on Linux

- Get involved

  - https://gitlab.freedesktop.org/monado

  - https://monado.freedesktop.org/

Collabora Productivity: examples

AMD RYZEN THREADRIPPER

One of the top three Italian banks **20,000** seats deployed in all their branch offices. Visionary cost savings.

Partner: **STUDIOSTORTI** SOLUZIONI OPEN SOURCE

Partner: **NOY&OFF**

Powerful document classification – eg. "top secret". Digital signatures and classification of paragraphs.

DELL
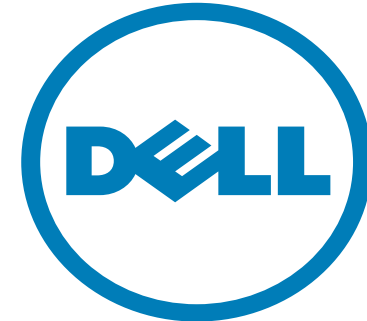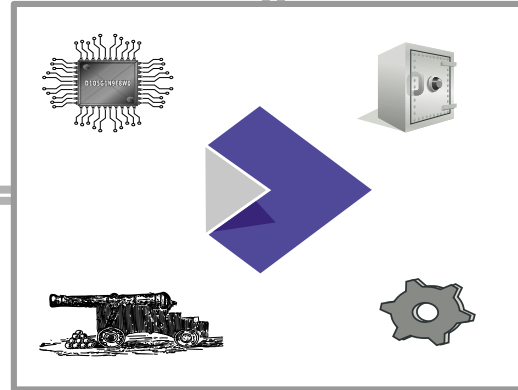
140 partners and growing ...

A seamless ownCloud partnership

ownCloud - a great partnership

- working together with Carlos & Cornelius' team

Product support & Professional Services.

- A *single* support partner with **experts** in Collabora Online
- No blame-game nightmares:

Bank: 5 people & 5 companies in the room.

- It is exactly not like that … with us
- Single point of contact, and relationship.

We provide Service Level Agreement & place to file tickets

The Collabora Online Vision

Full-feature, Open Source,

On-premise / hosted – control your data & apps …

No compromises & flexible

Complements
ownCloud's vision

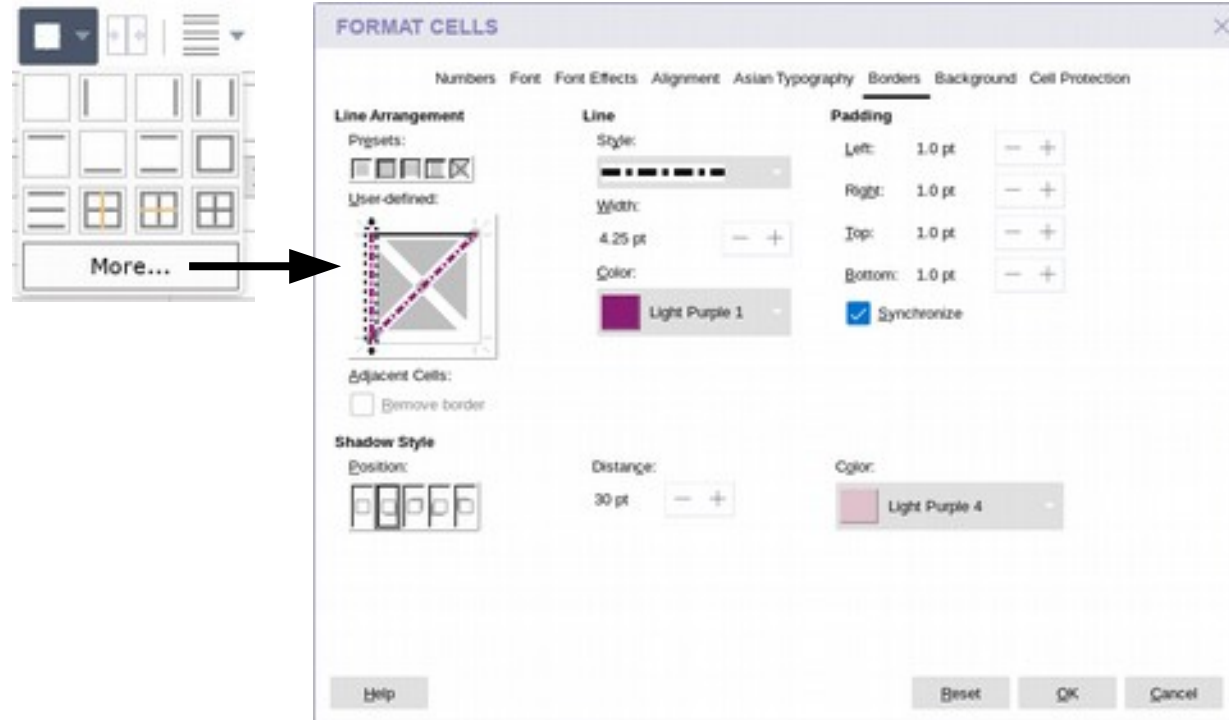# MS Office Online browser a stop-gap …

Full Feature → the things the feature matrix hides

The complete set of pre-canned border functionality in MS Online
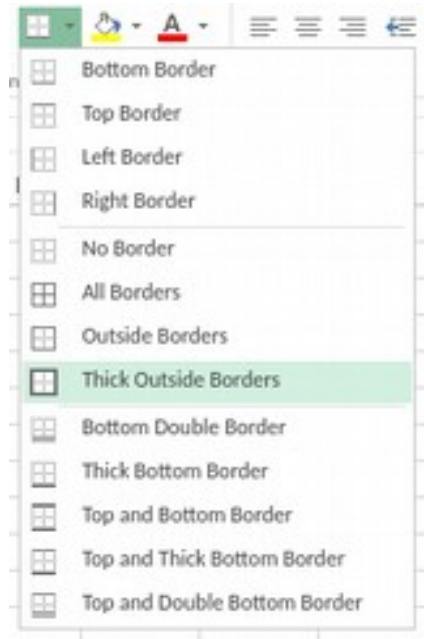
The rich border UI in Collabora Online

Interoperability & Collaboration

We have very powerful document interoperability

- Collabora Office → ~8 million LOC, MS Office ~30 million LOC
- Most mature Office code-base outside of Microsoft

"100% interoperability" - not a credible claim

- I was on the ECMA Technical Committee standardizing MS' XML formats.
- Interoperability – a mix of: import, rendering, feature-set, export
- To edit you **have to** understand the format – no reliable short-cuts.

Expectation here – we can win !

- Doing better than Google Docs, and Microsoft Online
- **Collaboration** is the key driver …
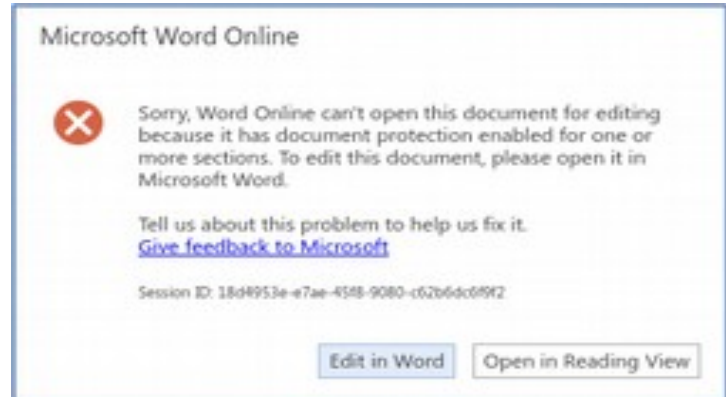
Example: writer Rich Fields support …

Fill out DOC / DOCX forms
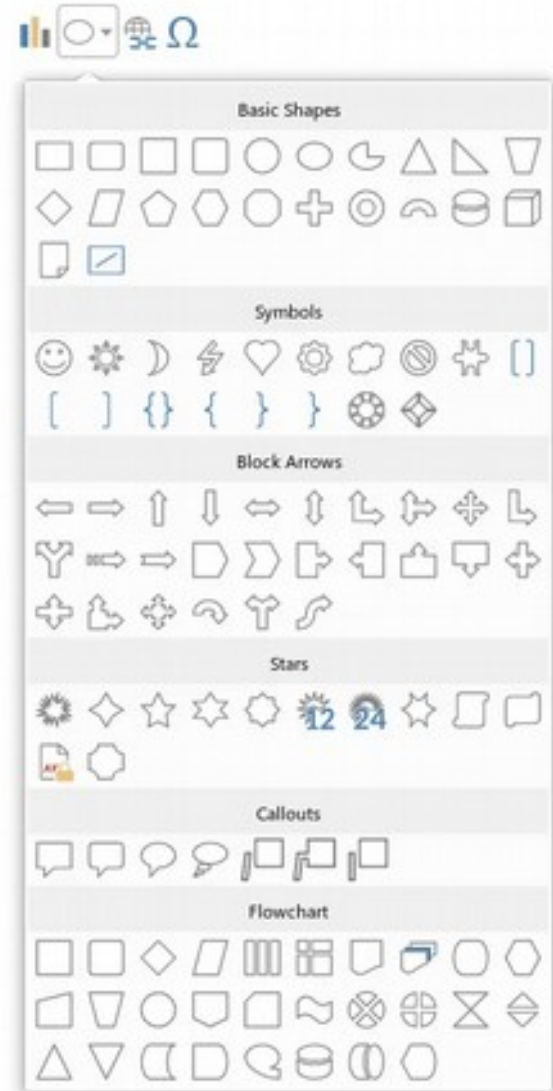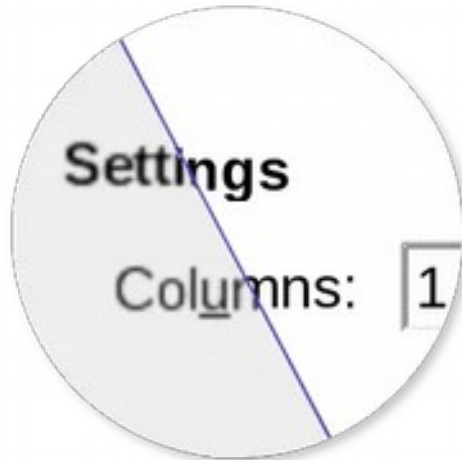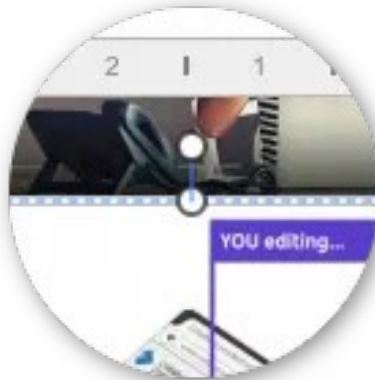
- tab through editable fields; skip protected sections

Recent Improvements

Significant Mobile & UX improvements

Blockchain / Vereign Integration

File	Edit	View	Insert	Format	Table	Tools	Help	Last modification

🖨 | ↶ ↷ 🖌 𝐀 | 100 ▼ | Header ▼ | Liberation Serif ▼ | 12 ▼
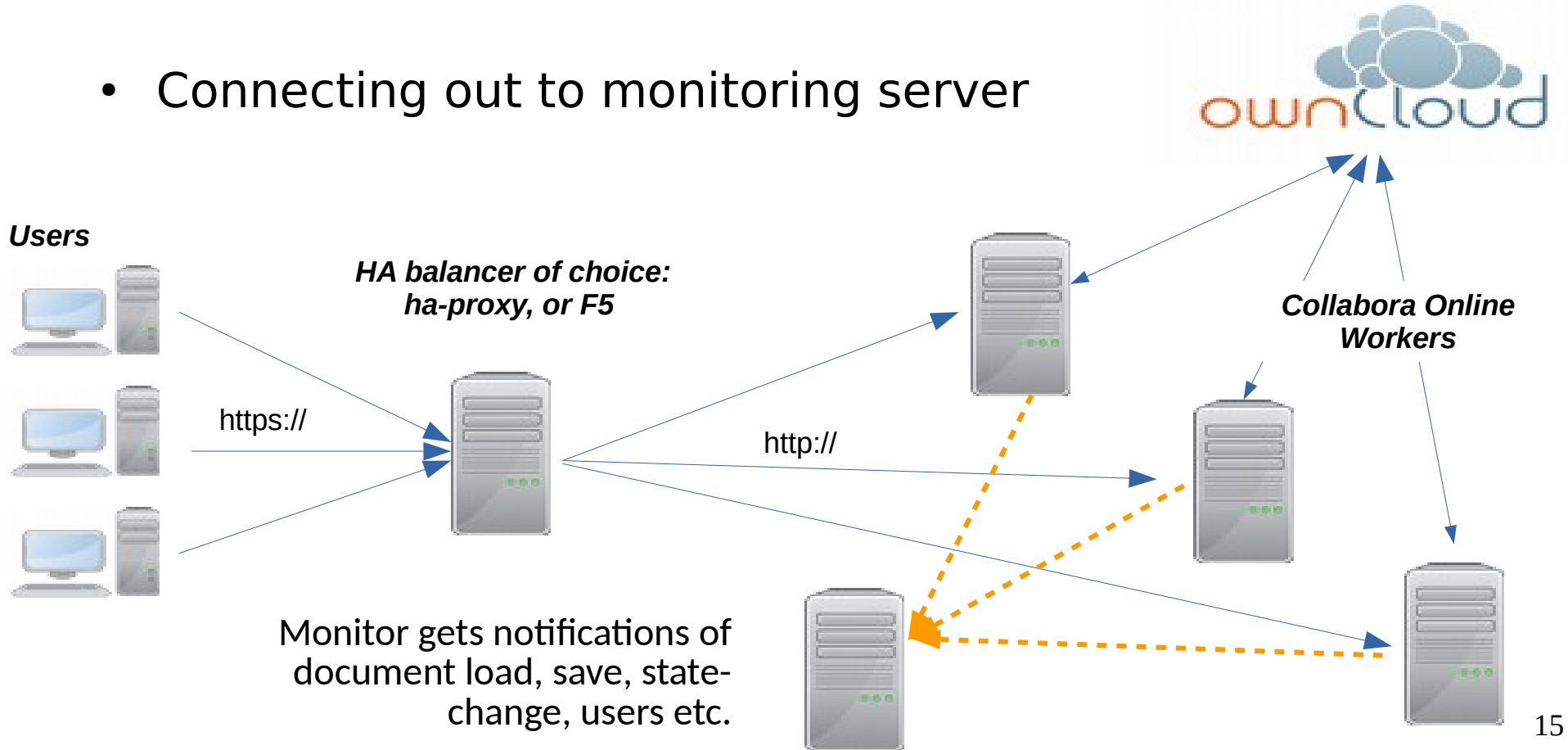
Sign Document | Status: Not Signed Yet! → Login Into Vereign ✕
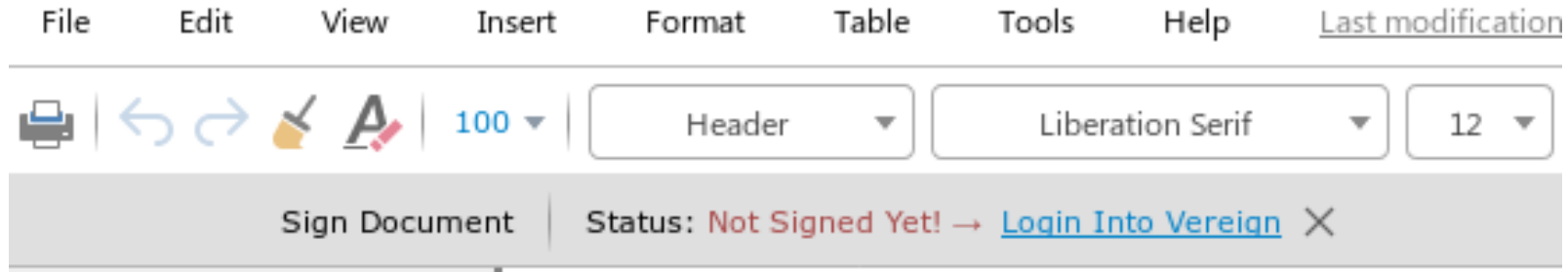
In co-operation with Vereign a Swiss open source company building a blockchain based self-sovereign identity and personal data store.

File	Edit	View	Insert	Format	Table	Tools	Help	Last modifi...

💾 🖨 | ↶ ↷ 🖌 𝐀 | 100 ▼ | Header ▼ | Liberation Serif ▼ | 12

▼ Vereign | Signed and validated | Upload | Identity: TV | Select passport

Monitoring API for remote locking

- Connecting out to monitoring server

Users

**HA balancer of choice:
ha-proxy, or F5**

**Collabora Online
Workers**

https://

http://

Monitor gets notifications of
document load, save, state-
change, users etc.
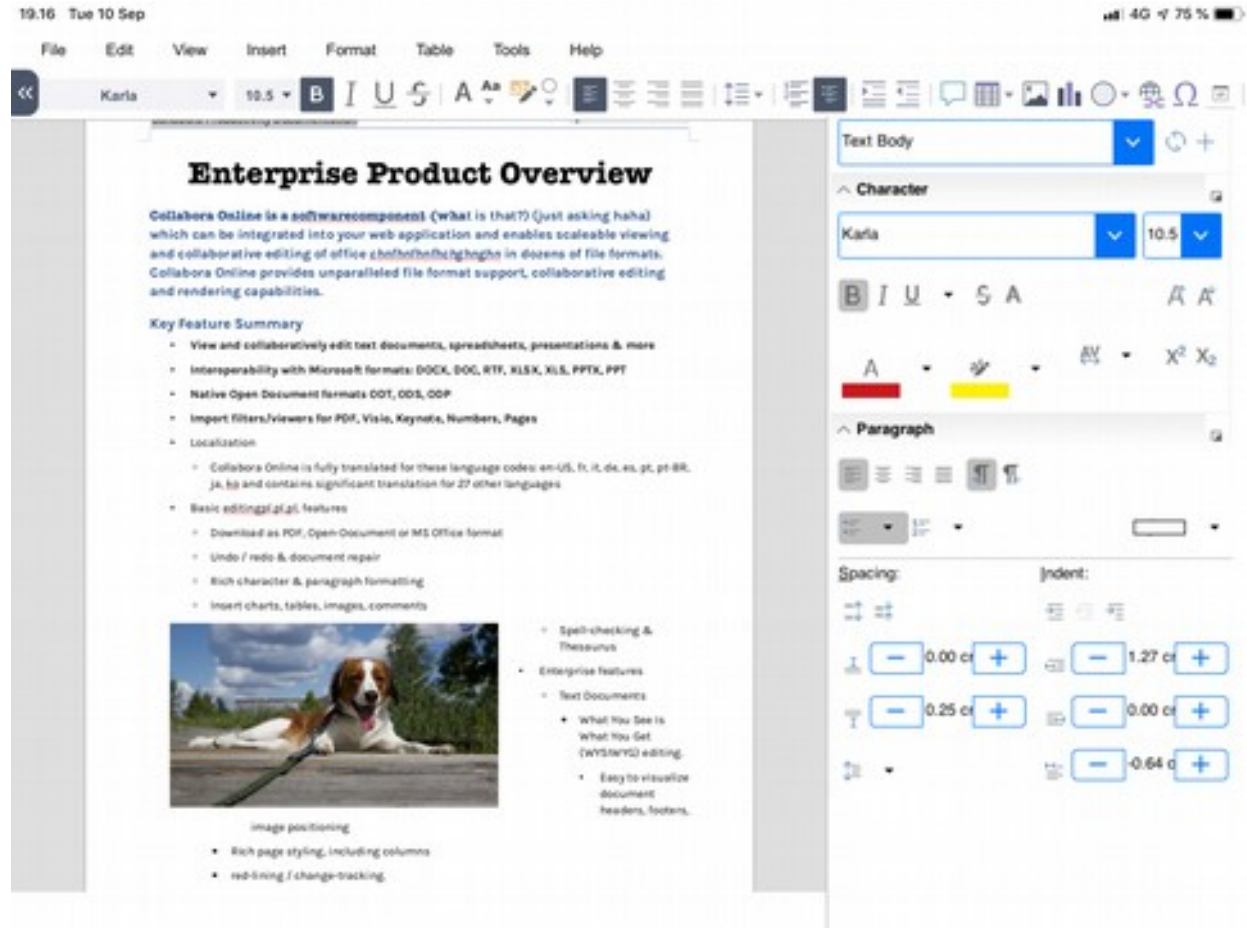
15

Collabora Office Mobile - Q4

Native iOS version for tablets - with Adfinis

Co-Developed with Adfinis
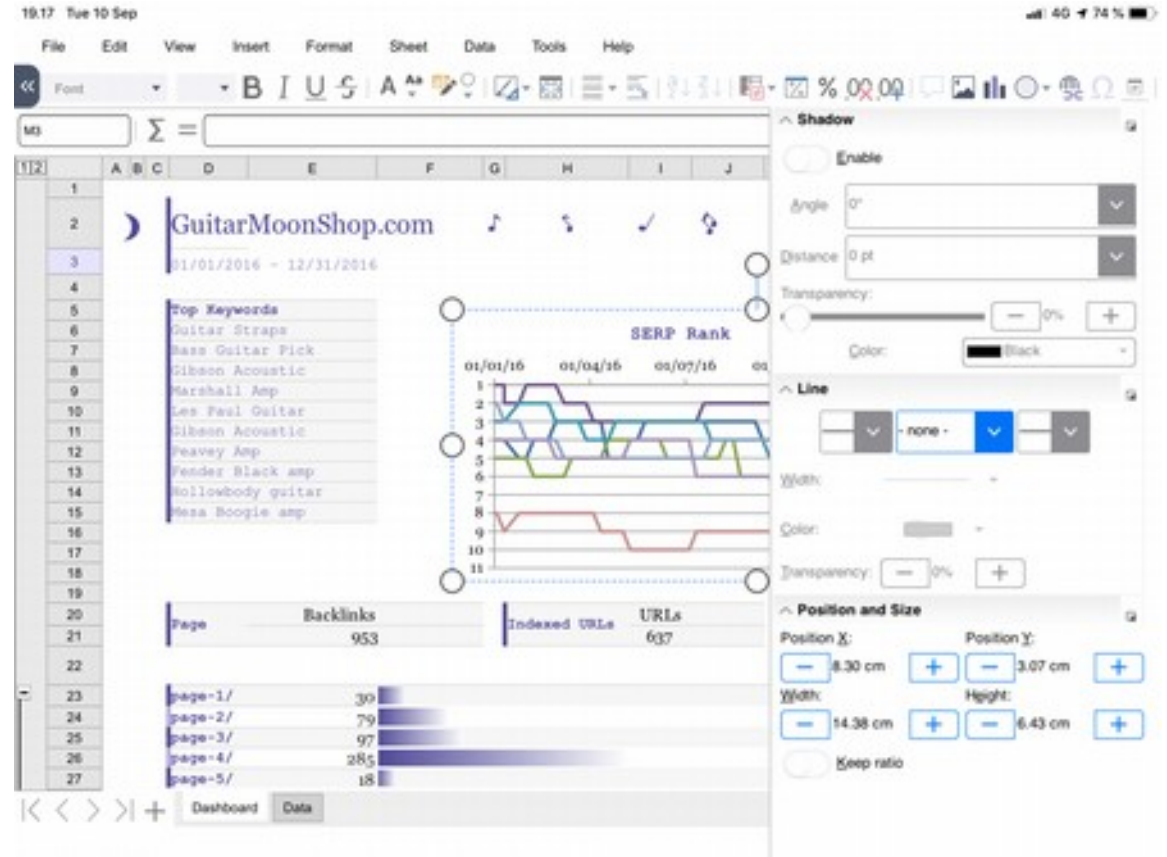
- A great Collabora partner !

Beta in TestFlight
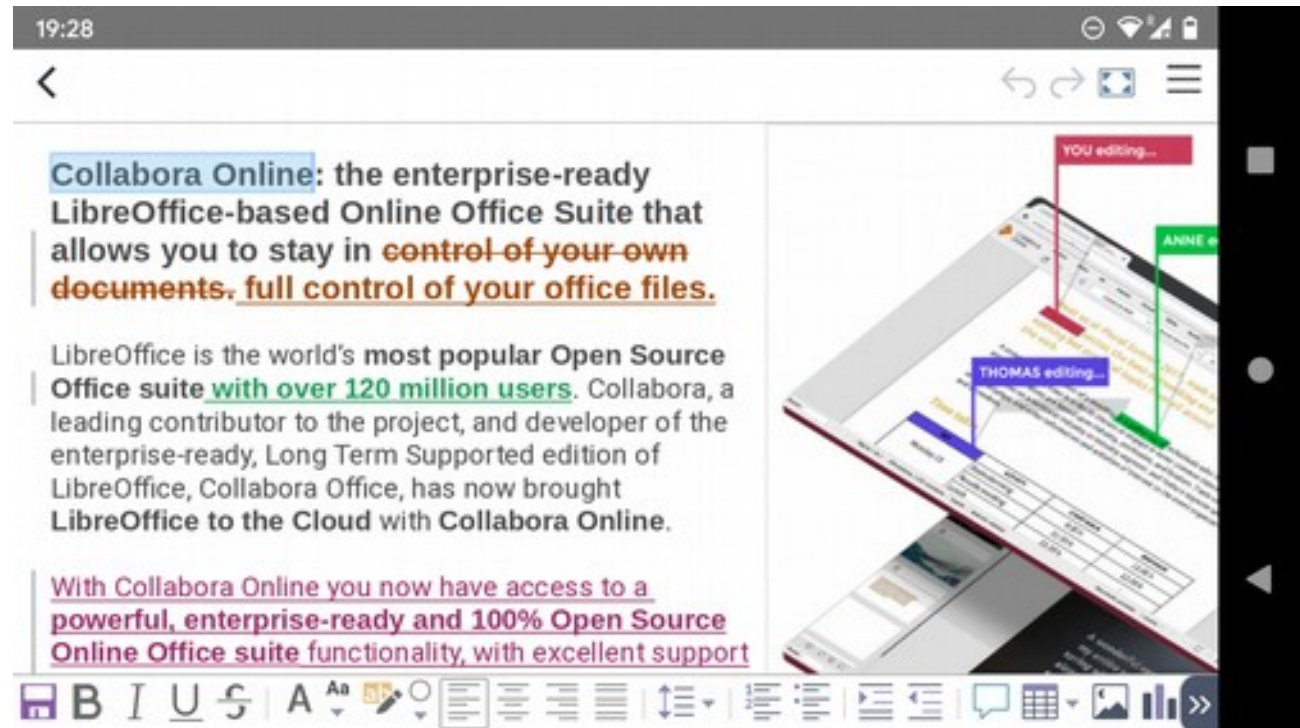
Native iOS version for tablets ... with Adfinis

Co-Developed with Adfinis

- A great Collabora partner

Quite a story:

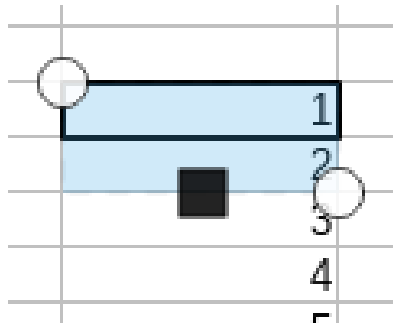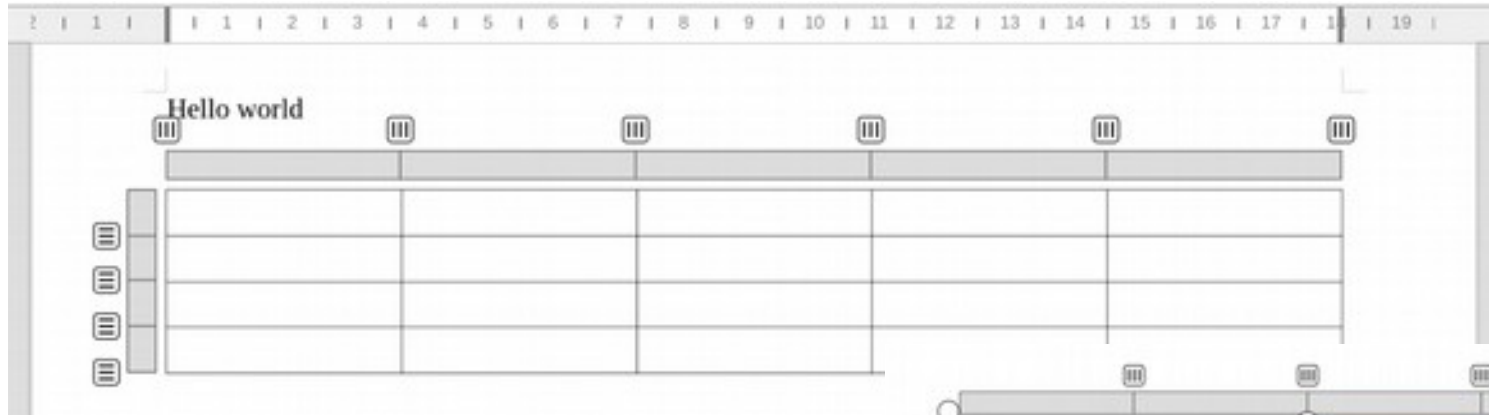Buy Collabora Online, get a free iPad version thrown in free !

Online based Android app – in progress

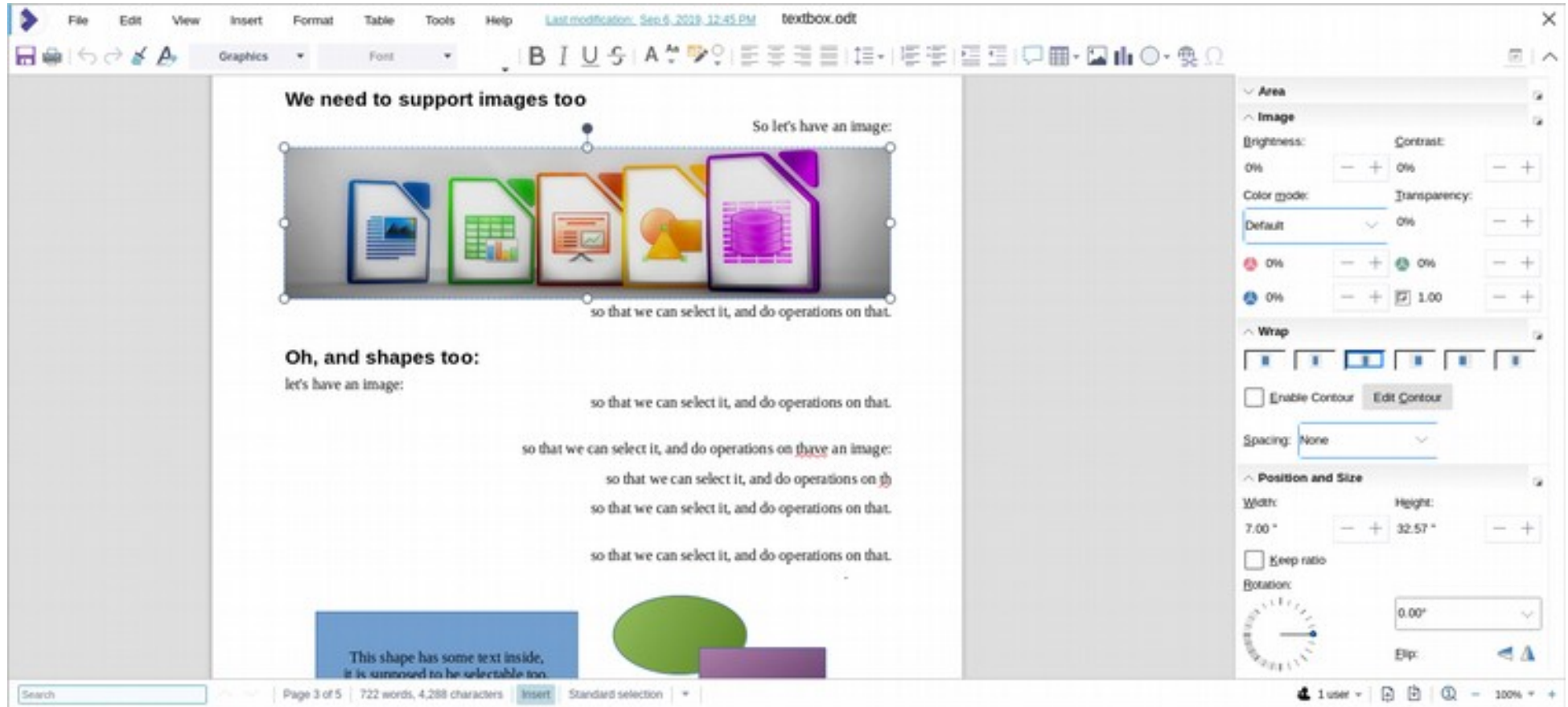# Implemented for Collabora Online 4.2 *(due Q4)*

Many mobile wins: eg. touch resizing handles
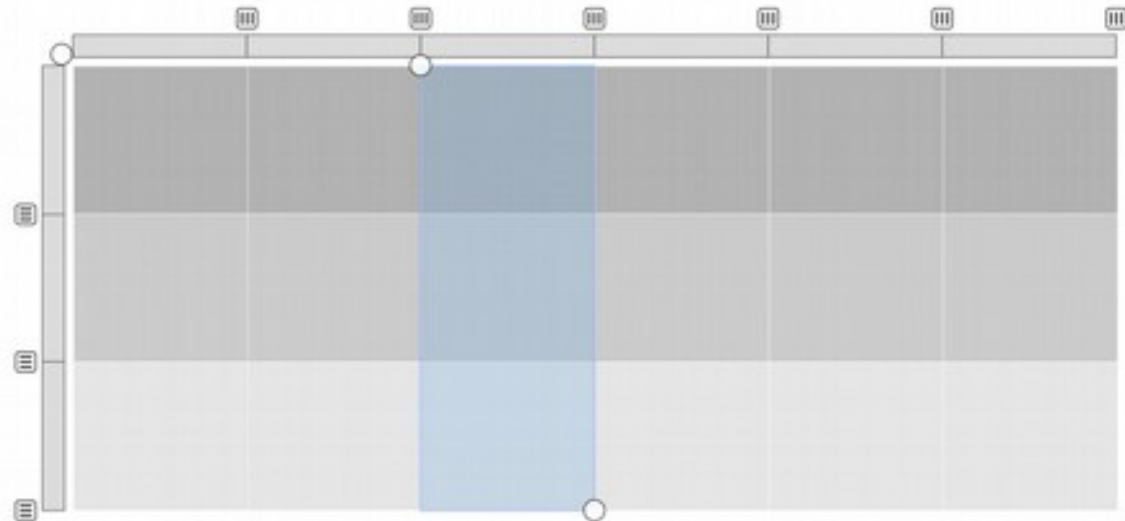
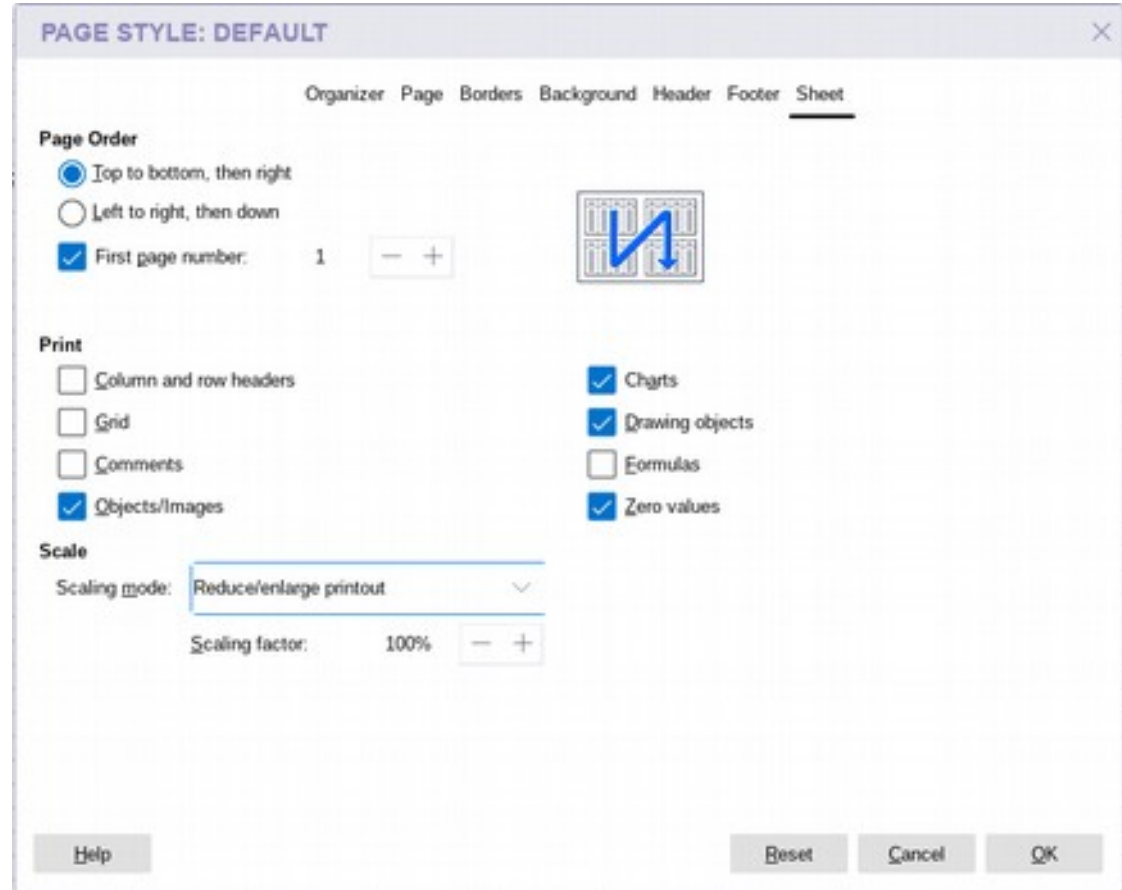# Sidebar in Writer, Calc and Impress

collabora online.com

Online / Widget theming implementation ...

Custom look & feel

- Custom SVG branding of individual widgets

- Building on native widget framework.

The pieces you can't see

Integration improvements

- Masses of new extensible API to embed Online into applications

Performance

- Loading time, dialog rendering time
- Improved PDF rendering
- Unipoll – code simplification.
- Profiling infrastructure

UX / infra changes

- Many new dialogs converted to async
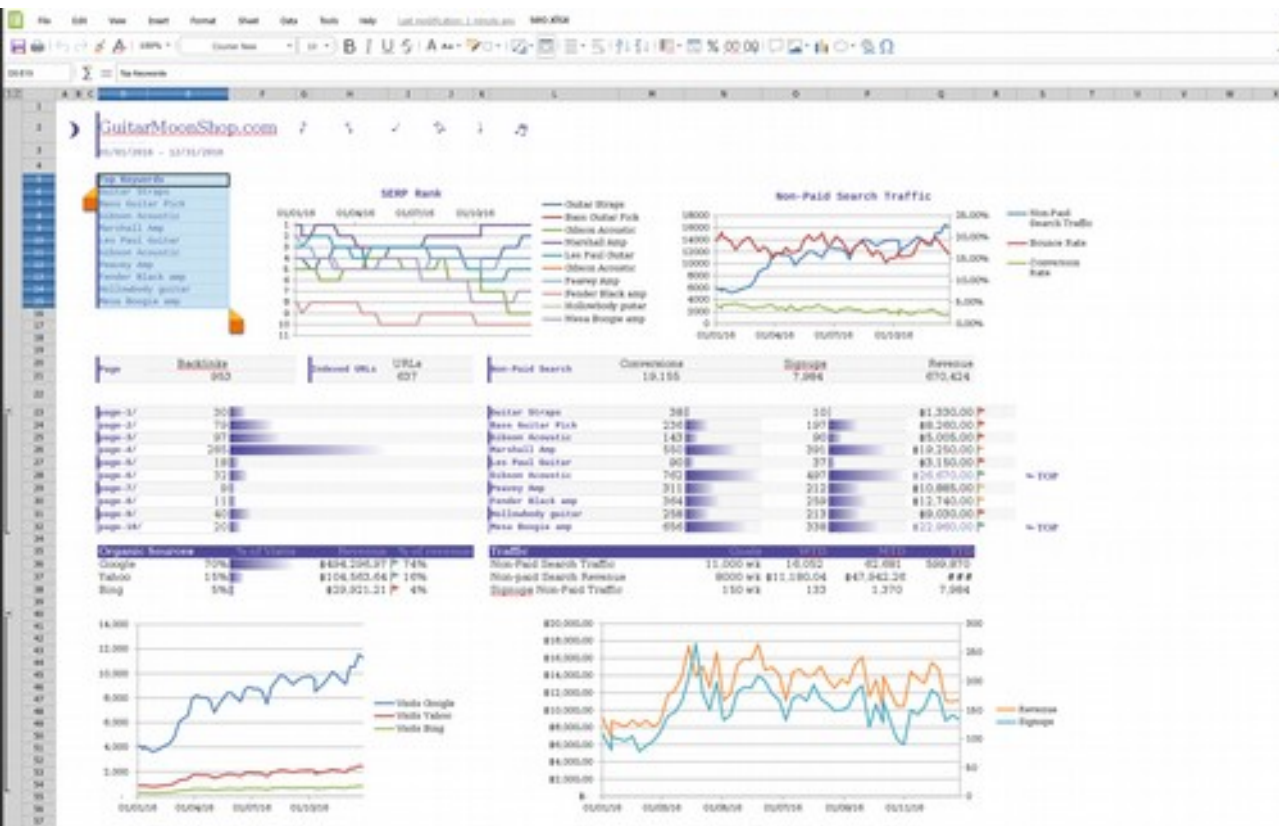- Multi-window focus re-work.

Security & Anonymization

- GDPR / Anonymized logging
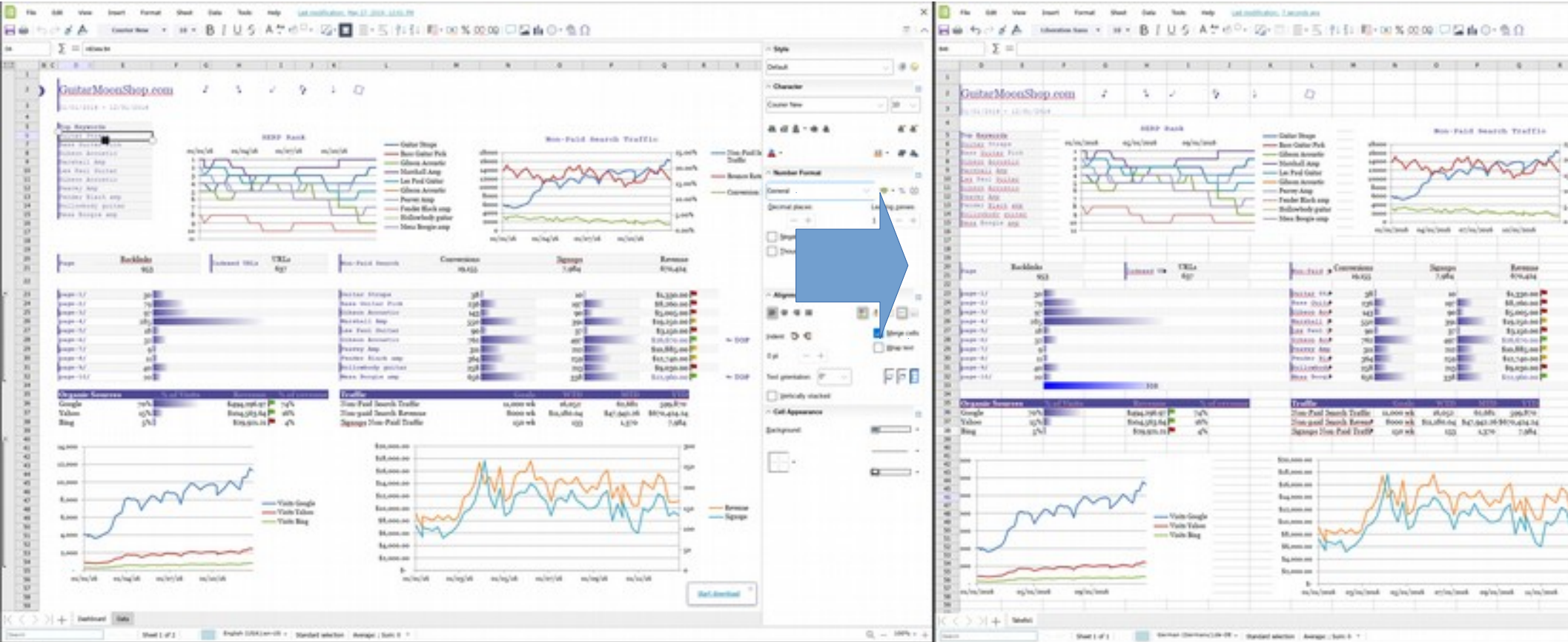- 3rd party penetration testing

And much much more …
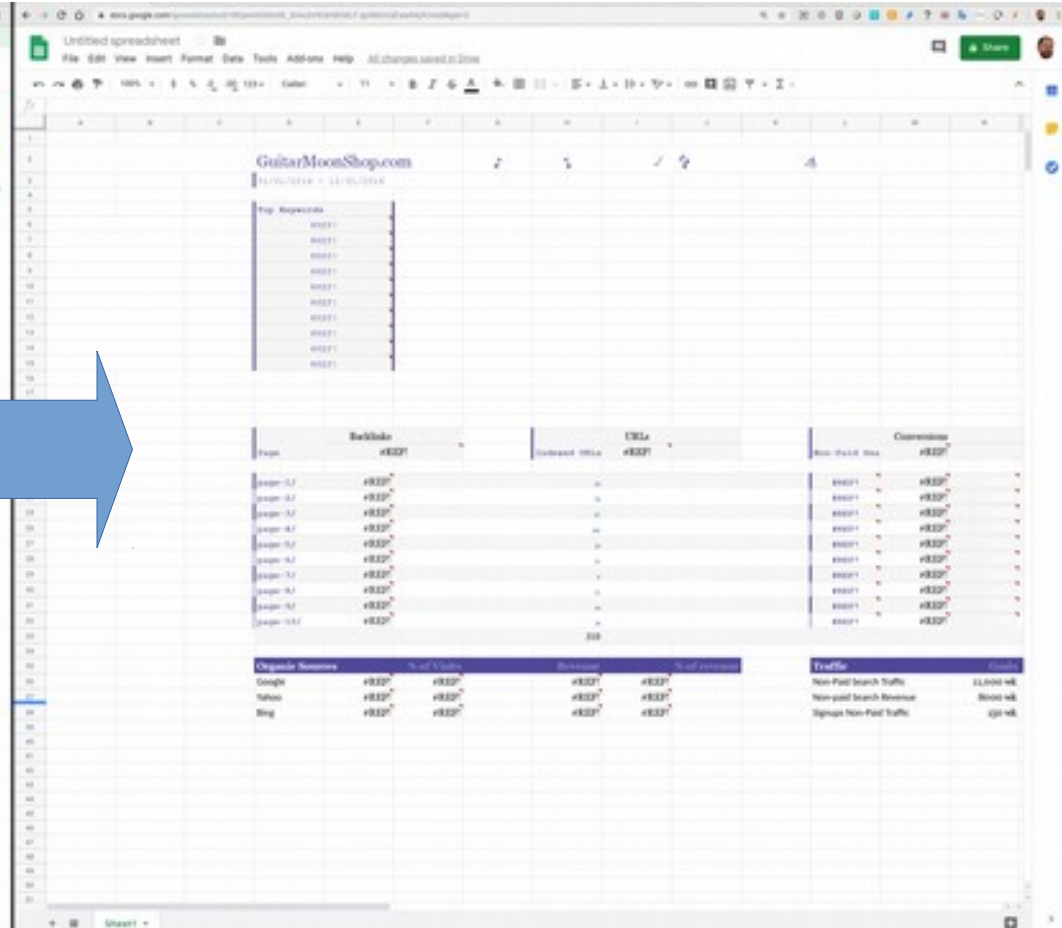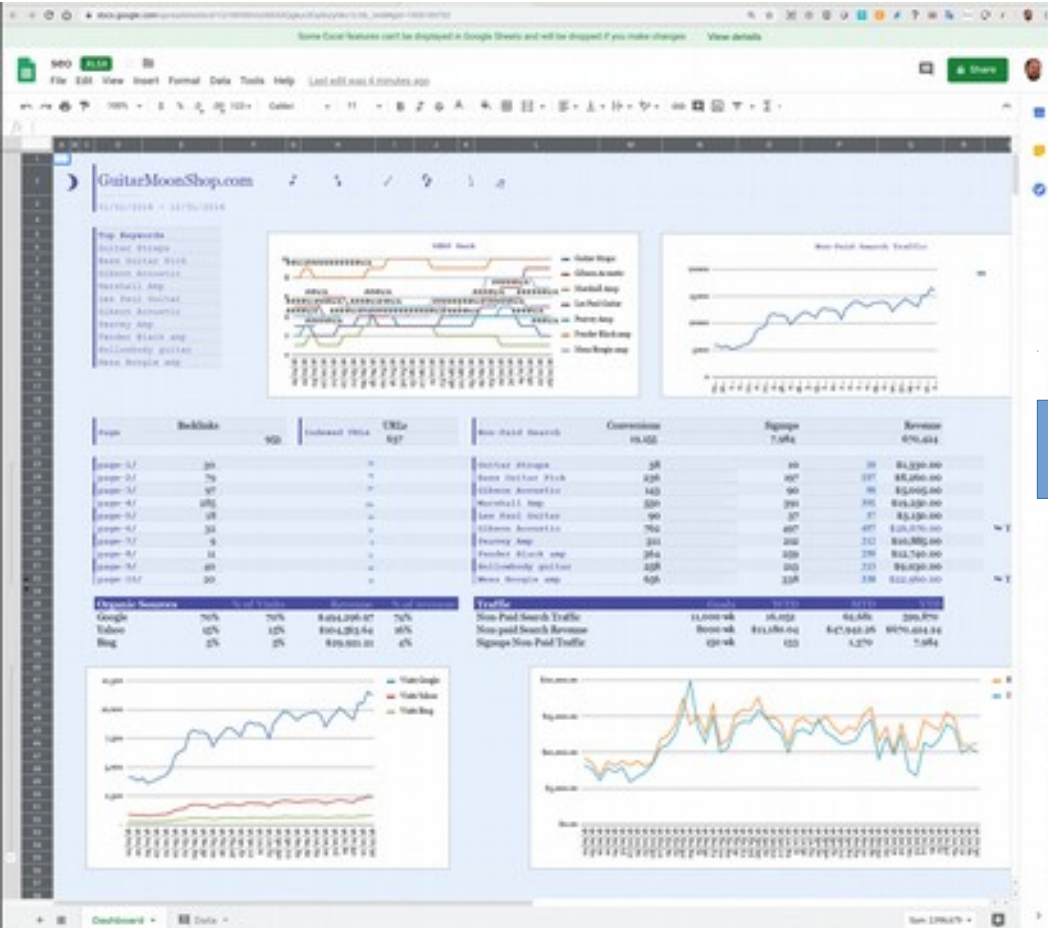
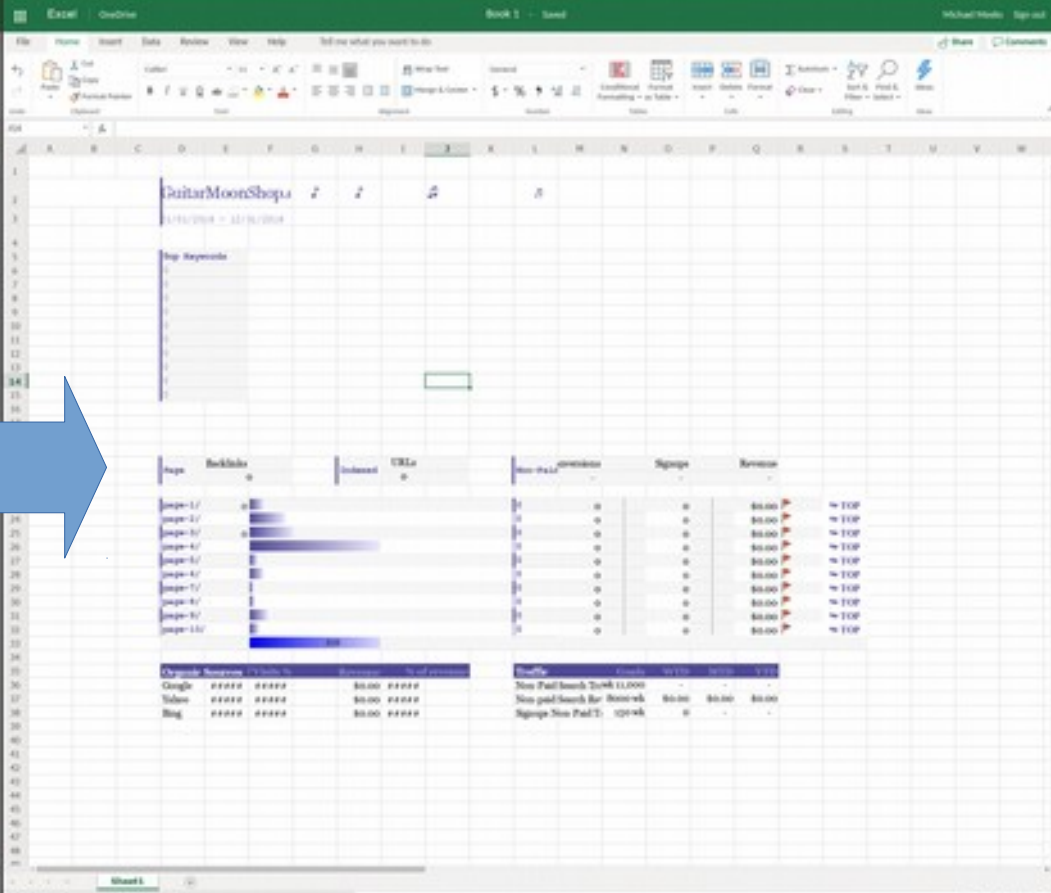# Online – old-style copy/paste: text → CSV import dlg.
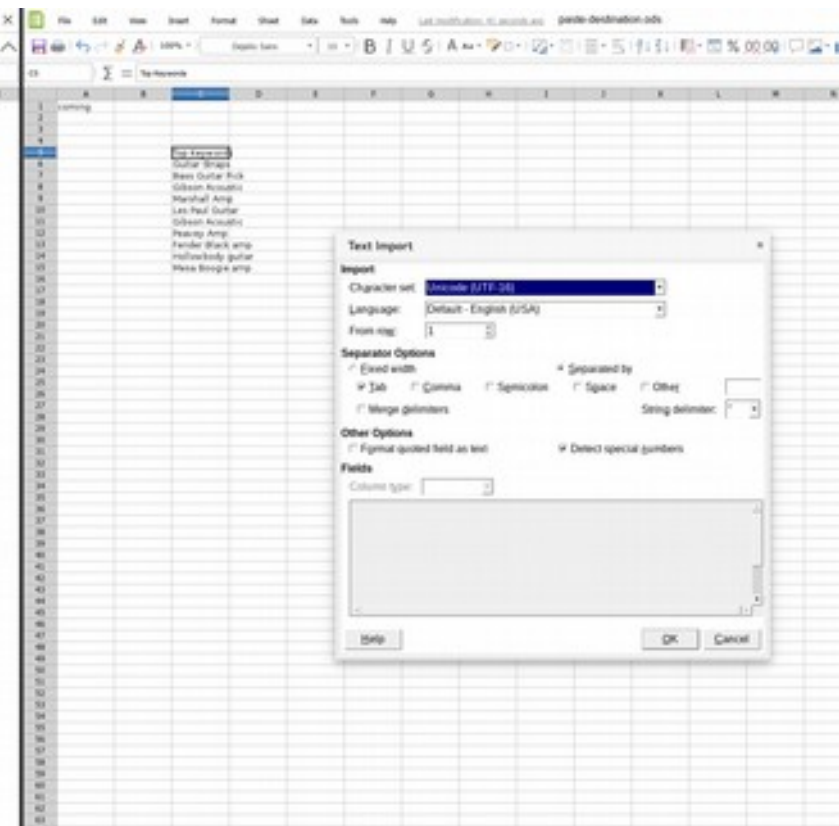
Afterwards (plus manual chart copy)

Just the basics ? Gdocs / Chrome comparison

or: Office.com / Excel copy / paste ...

Interop: the best all-round implementation and constantly improving …

A random new feature: eg. bottom to top / left to right layout …

- hundreds more, all across the board in the core

Collabora Online is a powerful LibreOffice-based online office that supports all major document, spreadsheet and presentation file formats, which you can integrate in your own infrastructure. Key features are collaborative editing and excellent office file format support.

Collabora Office is the enterprise office suite of LibreOffice, the world's most widely used Open Source office suite. We provide installation and administration utilities together with long term maintenance and contracted support to deliver successful deployments with expertise.

Create & Modify writer page watermarks

Distinctives

Don't let your document data out of your <u>site</u> [sic]
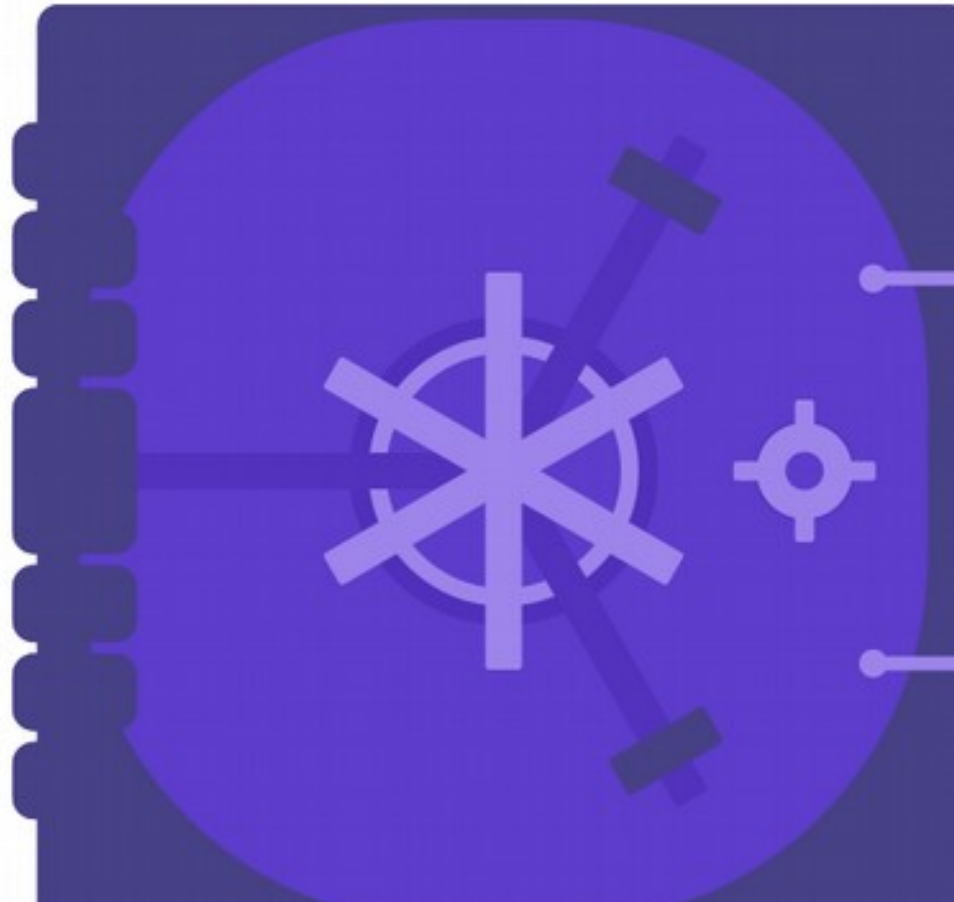
on your premise / Private network
Virtual machine / Docker container
Seccomp-bpf ~no sys-calls
Extremely sparse filesystem
Chroot per document
Systematic load crash testing
Industry beating coverity score
LibreOfficeKit
rendering instance

We send pixels to clients.

Keystrokes come in, and go out as changed pixels.

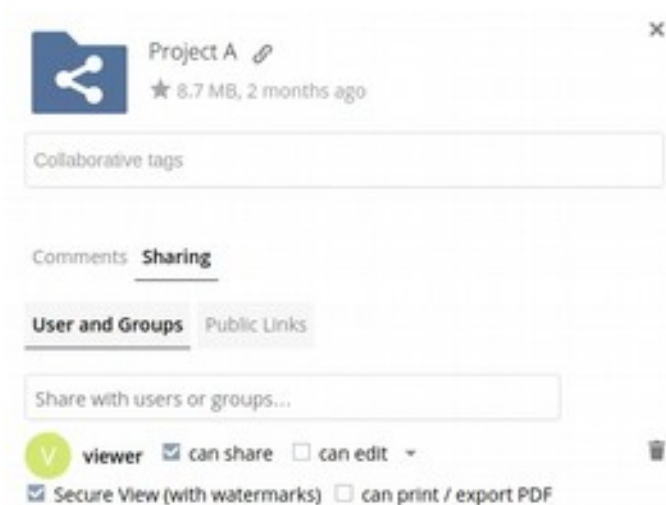Document data stays where it belongs – in your data centre.

Secure View: ownCloud 10.3

New Advanced Sharing Permissions API

Watermarked Editing

☑ Enable Secure View
Set default share permissions for all users (available for shares without edit permission)
☐ can print/export
☑ Secure View (with watermarks)

Set watermark text for Secure View. To include the user email address dynamically, use the {viewer-email} variable. Click outside the text field to save.

Strictly confidential. Only for {viewer-email}

Granular permissions
- Edit, Print, Share, Download
- Watermarked PDFs if can print.

Thanks to: *Vincent Petry, Piotr Mrowczynski, Patrick Jahns, Phil Davis, Mert Tumer*
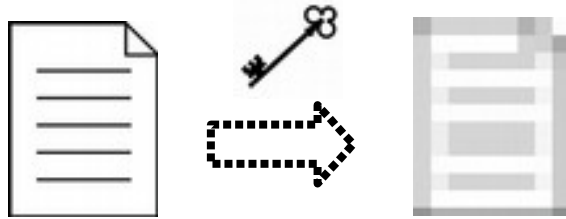
Microsoft's Digital Rights Management

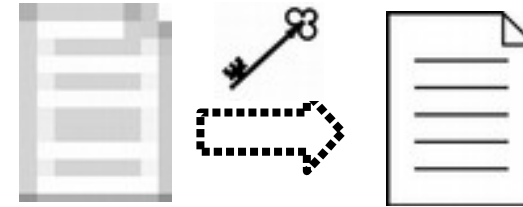How can we show people a document, and control their access: ?

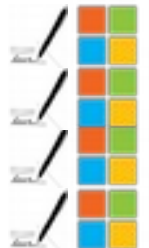- eg. disable copy/paste, print, save-as, control views etc.

Step 4: check **system** and **app** is fully **signed**, and policy is ok & Decrypt document.

Step 1: encrypt the document

Step 3: mail it

MS sign / revoke from bottom up

Step 2: send the key to Azure

Office

| Windows OS |
| Bootloader |
| BIOS |

How not to do it: (but oddly popular)

Send the whole document data to everyone with 'view' access
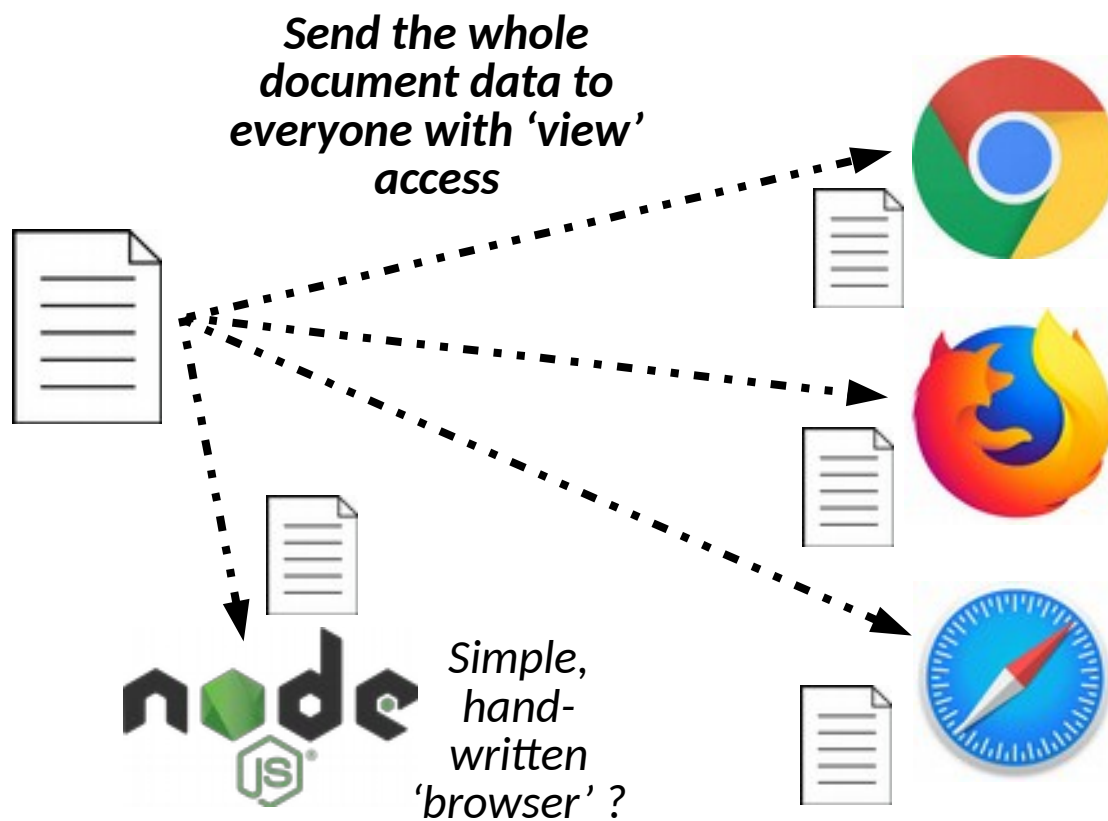
Render whole document data using HTML5 in **Javascript,** press F12 to debug **policy enforcement**

Simple, hand-written 'browser' ?
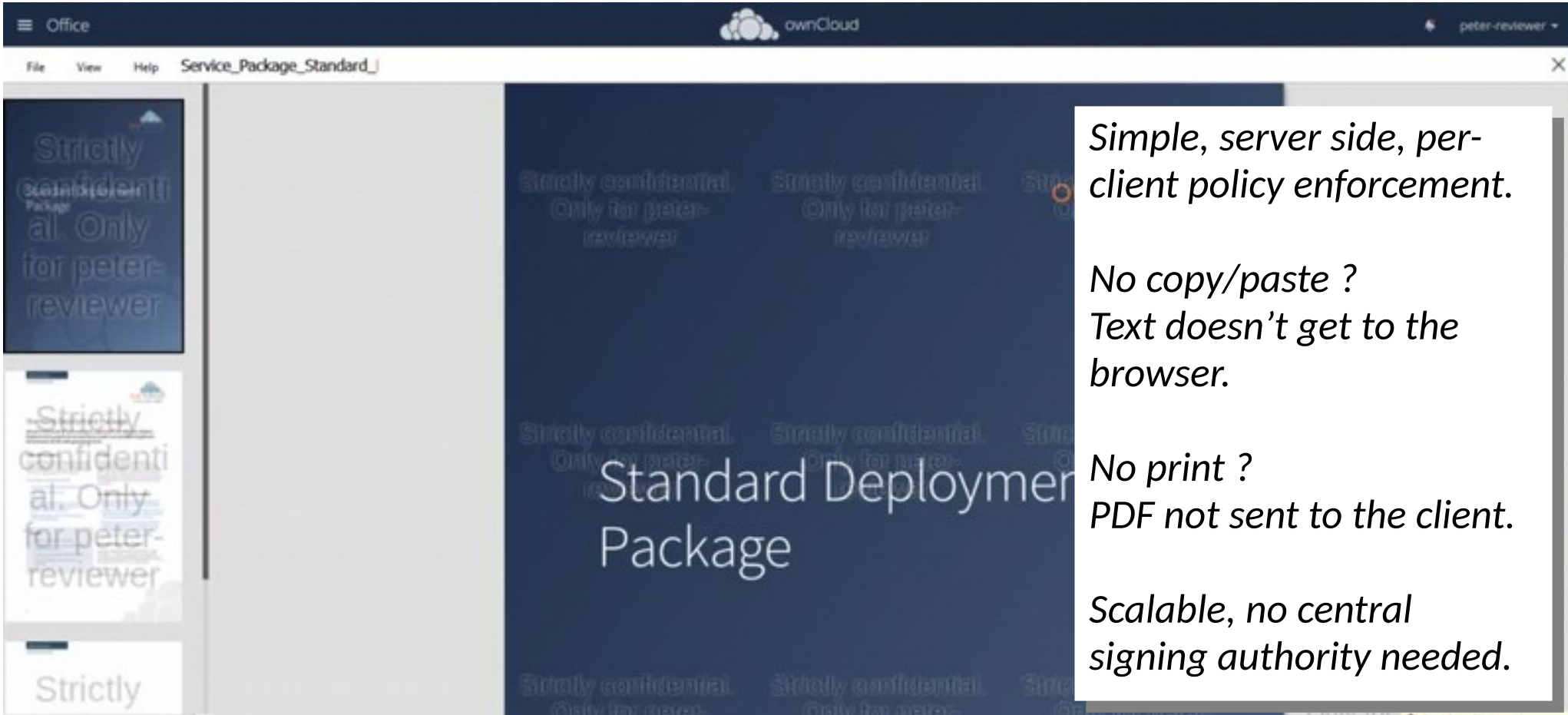
Apply watermark on top.
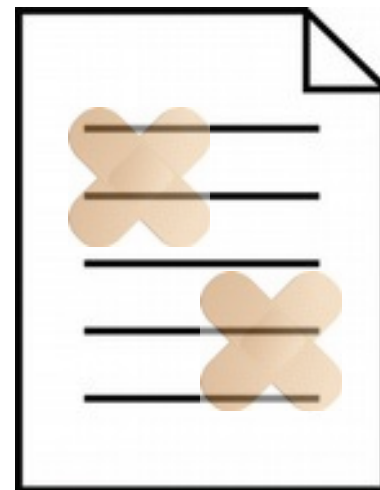
A better design: send pixels with watermarks → client

Simple, server side, per-client policy enforcement.

No copy/paste ?
Text doesn't get to the browser.

No print ?
PDF not sent to the client.
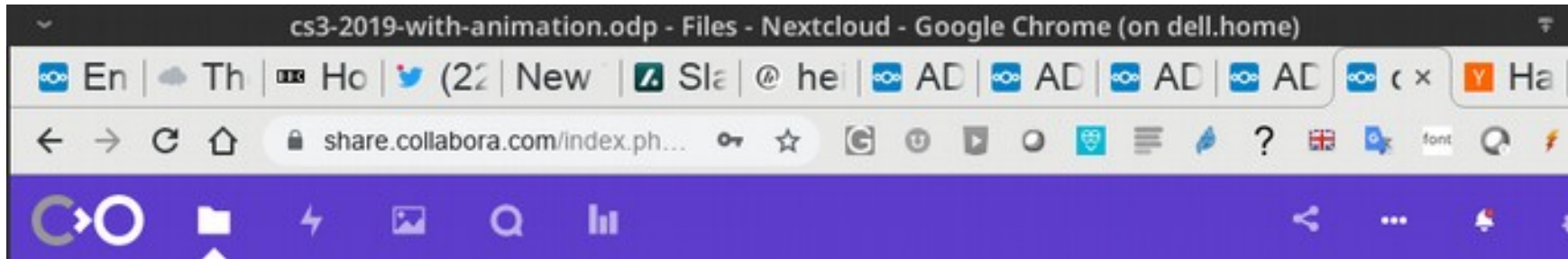
Scalable, no central signing authority needed.

Simple, per-user pricing

Run as many servers / VMs as you need

Dynamically scale your workloads with Kubernetes

Beware of the Window + Tabpocalypse:

Simplicity & Scalability

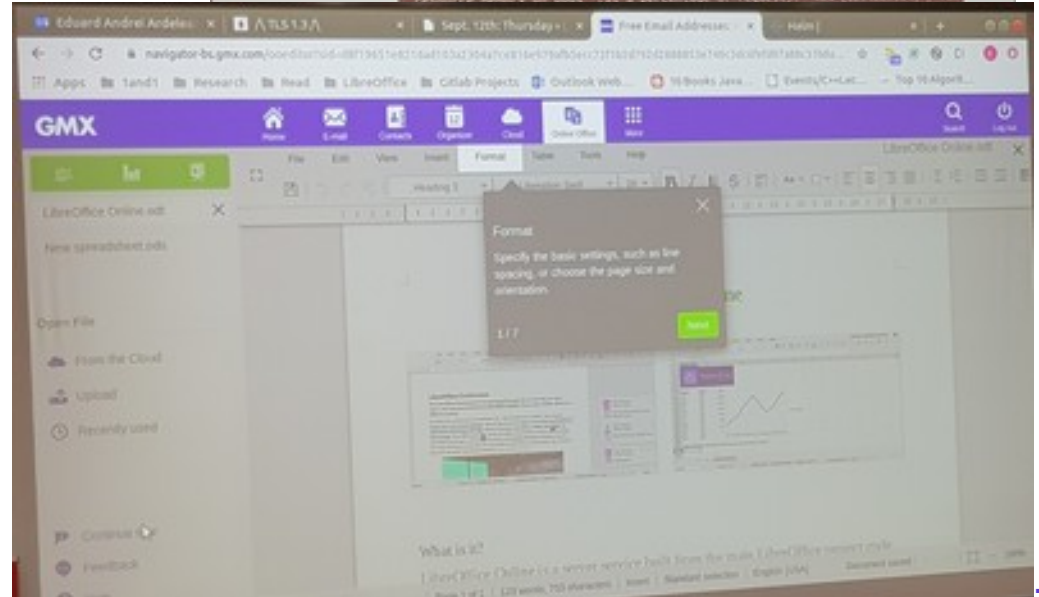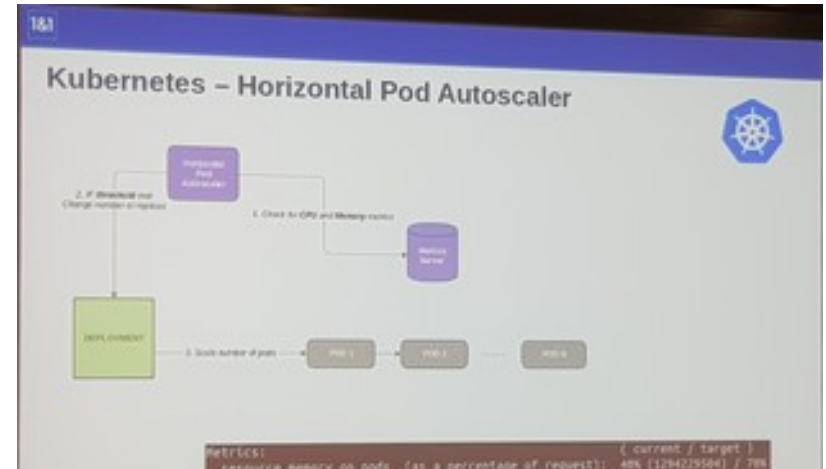**Large deployments / HA pieces**

- Scales with the network.

Simple architecture:

- No new HA Database

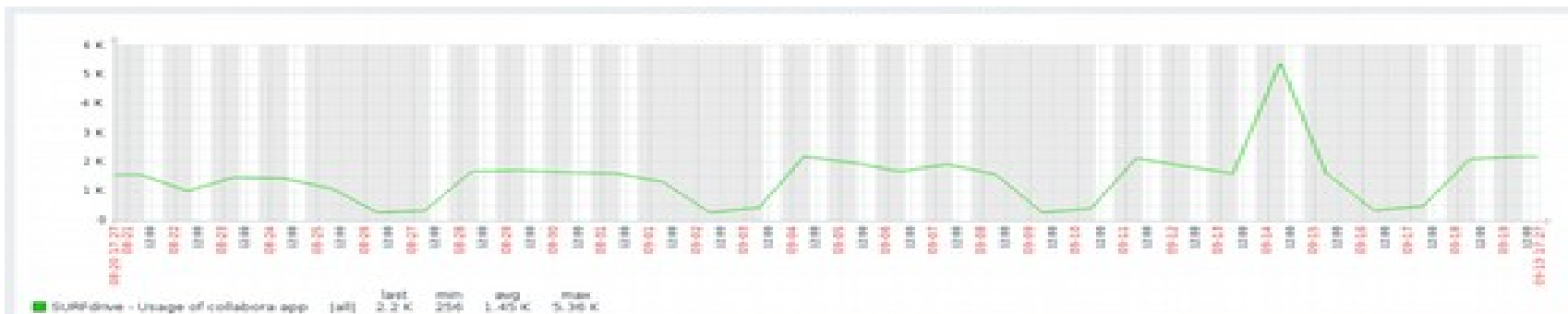- No new message-bus

- No shared data storage

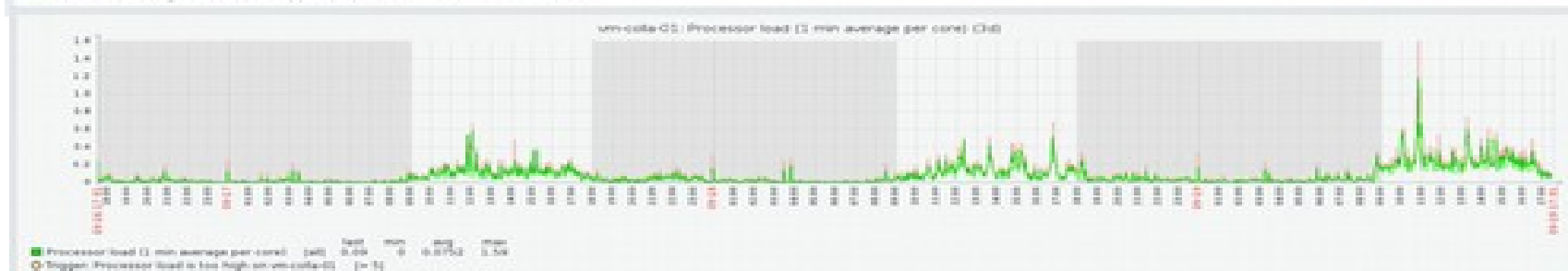**eg. 1&1 / GMX**

- ~millions of users with access

Real world: 45k+ users – Collabora Online

Usage

CPU

Free
RAM:
13.5Gb
→
11Gb

ownClou

Collabora Productivity

Do the work on battery, or in the data-center ?

Time to load & render blank files - Galaxy S4

- ■ Collabora
- ■ Native JS
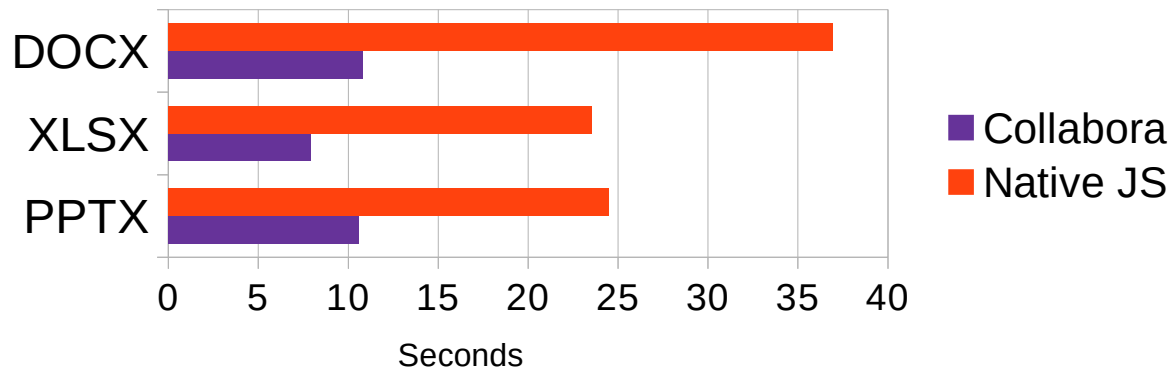
First cut pre-optimized numbers

With data: larger spreadsheets
10x faster → 1000X faster.

Threaded, GPU accelerated
spreadsheet core

Before (above) to after (left) –
re-ordering & optimizing *"Hello World"* DOCX load -
~3.5s from start.
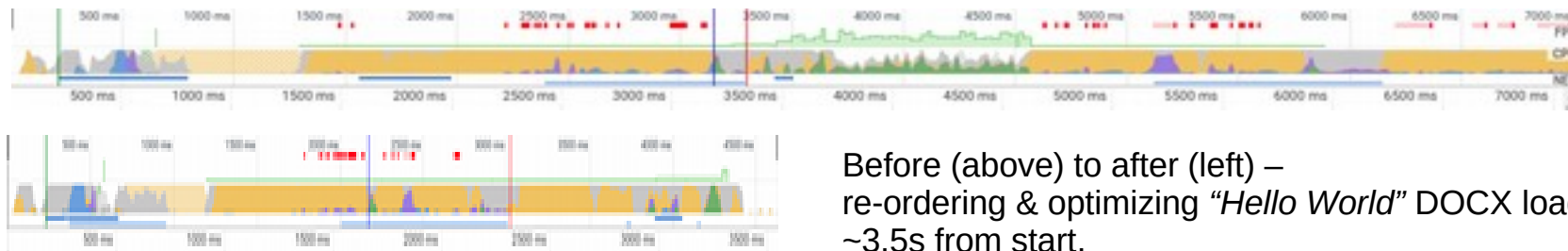
Open First + Community

Deep pool of volunteers & companies

- Berlin based Stiftung, 100% open code

Conclusions

Collabora Productivity

- Our mission applied

- Rich partnership with ownCloud

- Georgeous, interoperable Document collaboration

- Seamless support with SLA

- Rapid improvement

- Scalable & easy to deploy

- Backed by large, diverse community & Berlin based Stiftung.

- **We are hiring:** Javascript, Marketing, Sales

Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27