

Collabora Online & ownCloud

Michael Meeks <michael.meeks@collabora.com>

General Manager at Collabora Productivity

@michael_meeks, mmeeks #libreoffice-dev irc.freenode.net



*"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 WYSIWYG 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'être:

- 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 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



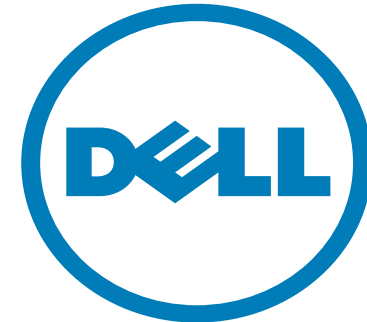
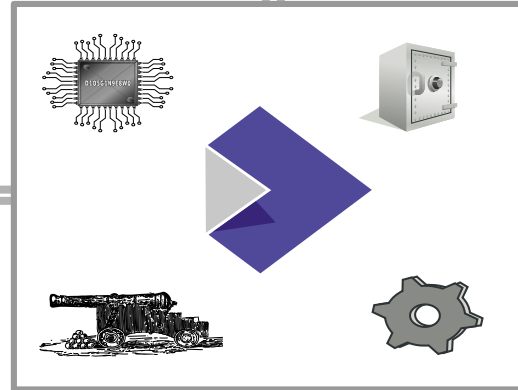
One of the top three Italian banks
20,000 seats deployed in all their
branch offices. Visionary cost
savings.

Partner:
STUDIOSTORTI
SOLUZIONI OPEN SOURCE



Partner:
NOV & CFF

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



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 ...



Microsoft Word Online

Sorry, Word Online can't open this document because it's too big.

Tell us about this problem to help us fix it.
[Give feedback to Microsoft](#)

Session ID: 9b5be095-bcc2-497b-984a-9b5d80...

[Edit in Word](#)

Microsoft Word Online

Sorry, Word Online ran into a problem while opening this document. To view this document, please open it in Microsoft Word.

Session ID: bd60564a-5cbb-4d12-82b3-2496bf8eba30

[Edit in Word](#)

Microsoft Word Online

Sorry, Word Online can't open this document for editing because it has document protection enabled for one or more sections. To edit this document, please open it in Microsoft Word.

Tell us about this problem to help us fix it.
[Give feedback to Microsoft](#)

Session ID: 735838fd-b0c7-4534-8d07-84df8f1158b9

[Edit in Word](#) [Open in Reading View](#)

Accessibility Mode

Edit Document Print Share

W Edit in Word Use the full functionality of Microsoft Word.

W Edit in Browser Make quick changes right here using Word Online.

Couldn't Open the Workbook

Sorry, we can't open your workbook in Excel Online because it exceeds the 5 MB file size limit.

You'll need to open this in Excel.

[Learn more](#)

[Open in Excel](#)

Compatibility Report

We can't show these features in the browser:

- Shapes or other objects
- SmartArt (process, hierarchy, cycle and relationship diagrams)

But you can see all the content in this workbook by opening the file in Excel.

[Learn more](#)

OK

Edit a Copy?

To edit this in your browser, we will create a copy that doesn't include unsupported features.

To edit this workbook with all of its features, click Cancel and open it in Excel.

[Learn more](#)

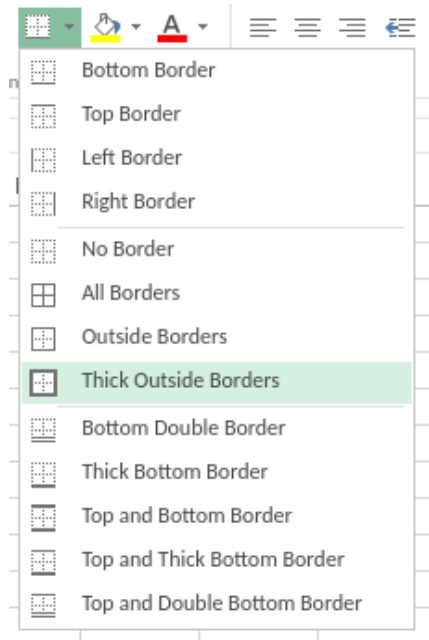
[Edit a Copy](#) [Cancel](#)

collaboraonline.com

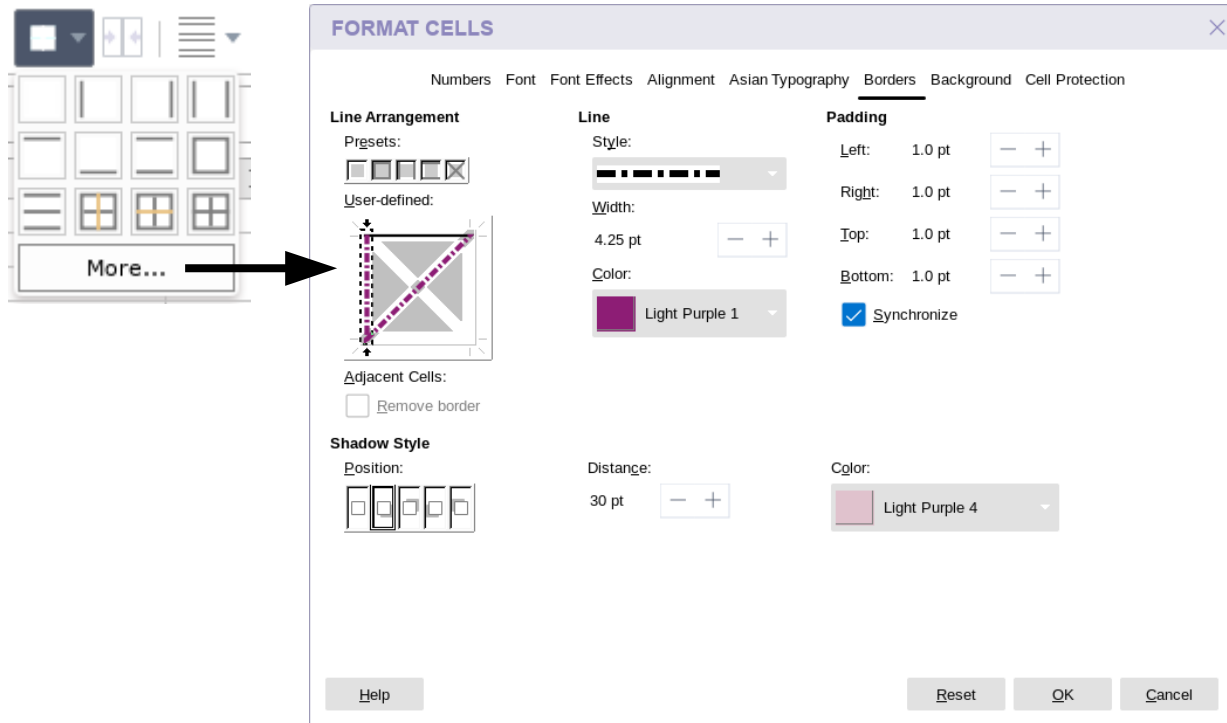


Full Feature → the things the feature matrix hides

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



INWARD (SHIPS AND BOATS OTHER)

Microsoft Word Online



Sorry, Word Online can't open this document for editing because it has document protection enabled for one or more sections. To edit this document, please open it in Microsoft Word.

Tell us about this problem to help us fix it.

[Give feedback to Microsoft](#)

Session ID: 18d4953e-e7ae-45f8-9080-c62b6dc6f9f2

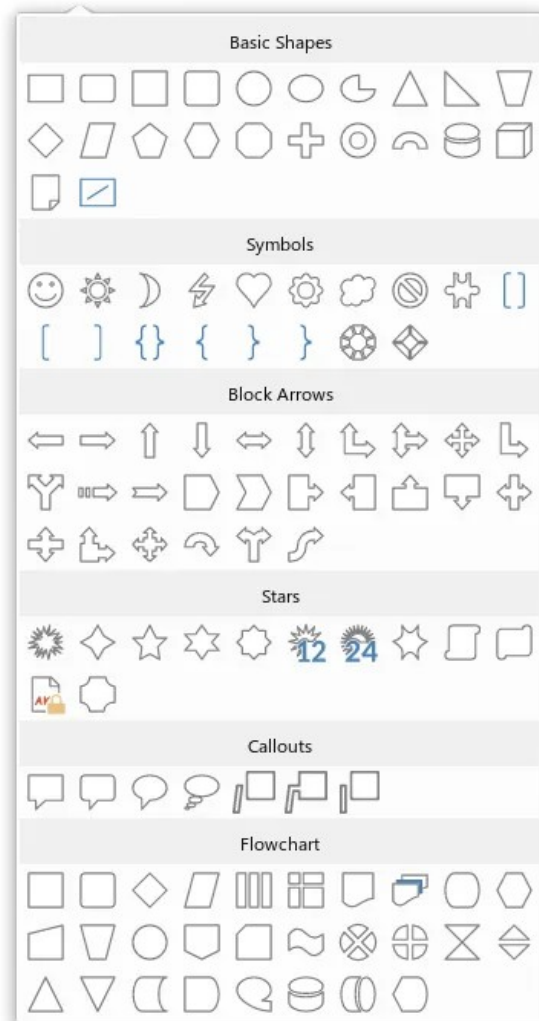
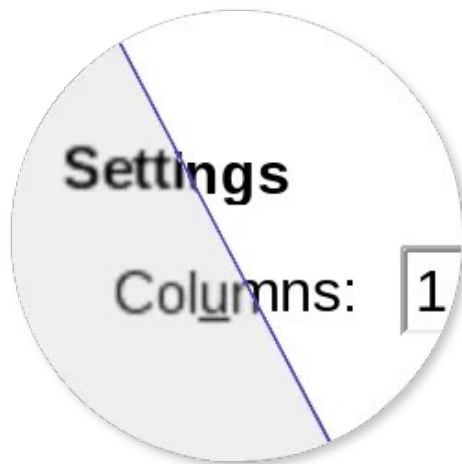
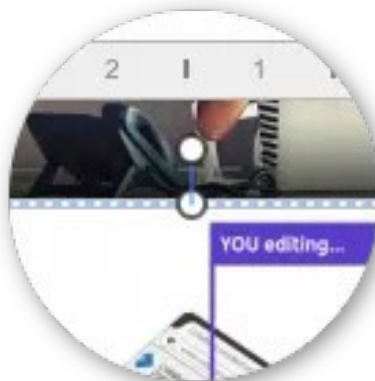
Edit in Word

Open in Reading View

PART A: ARRIVAL	
Name of ship	The Honorable Ship Goodwin
Date of arrival	Time of arrival
Name of person in charge	
IMO number	

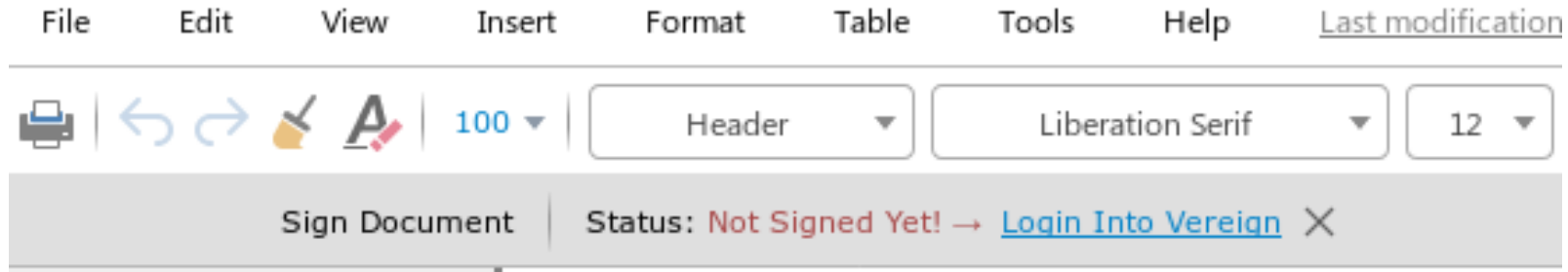
Recent Improvements

Significant Mobile & UX improvements

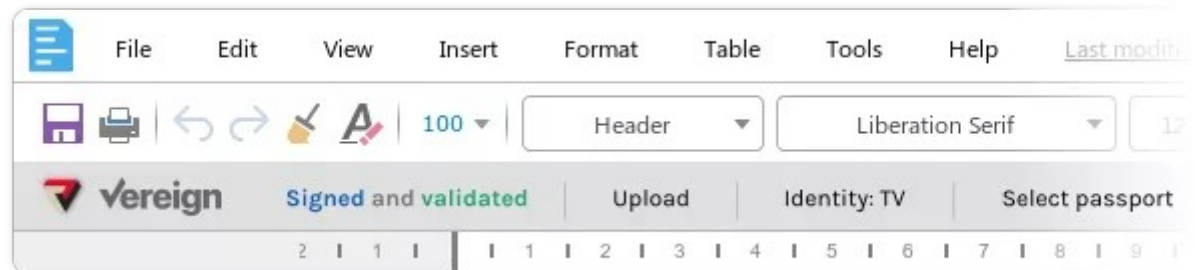




Blockchain / Vereign Integration

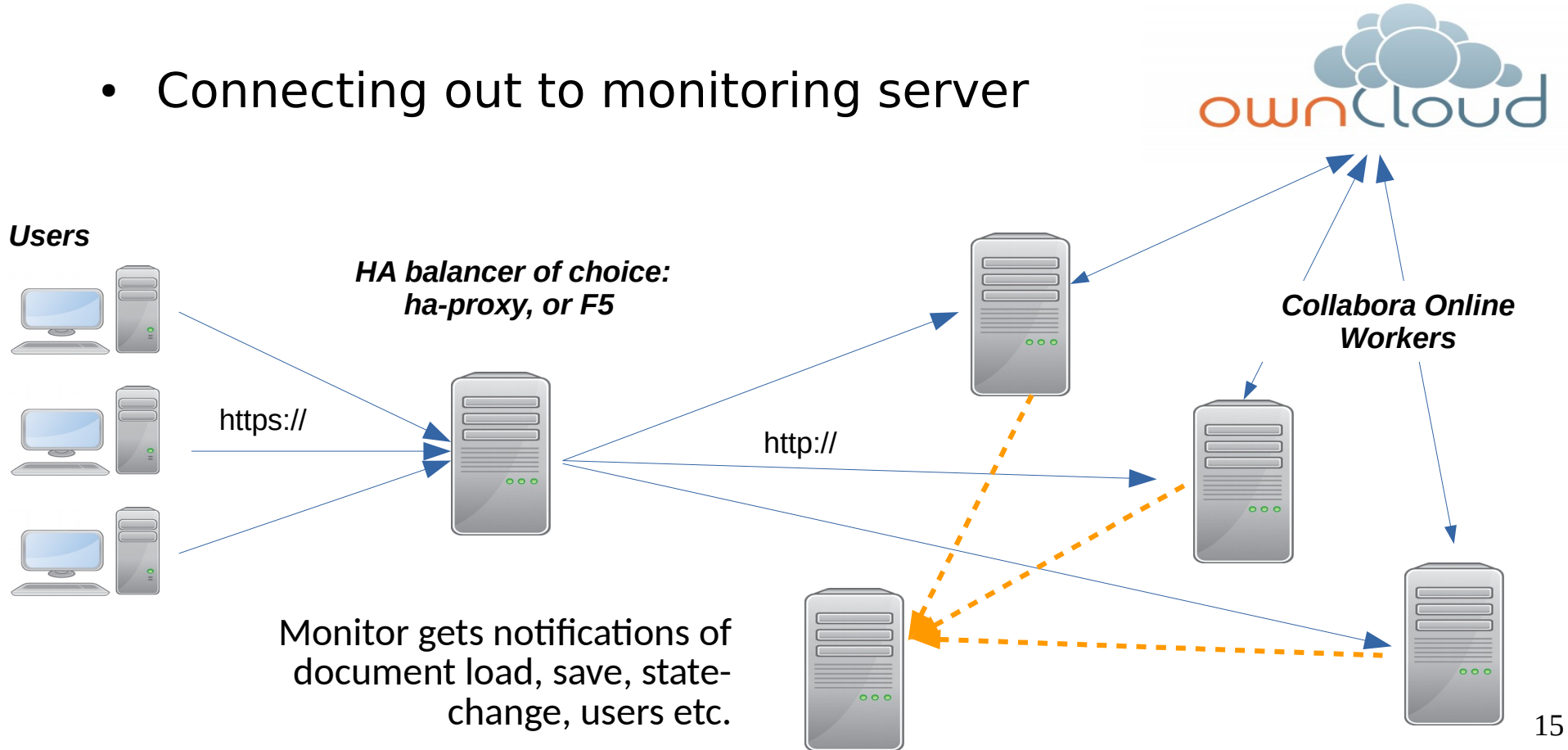


In co-operation with Vereign a Swiss open source company building a blockchain based self-sovereign identity and personal data store.



Monitoring API for remote locking

- Connecting out to monitoring server



Collabora Office Mobile - Q4

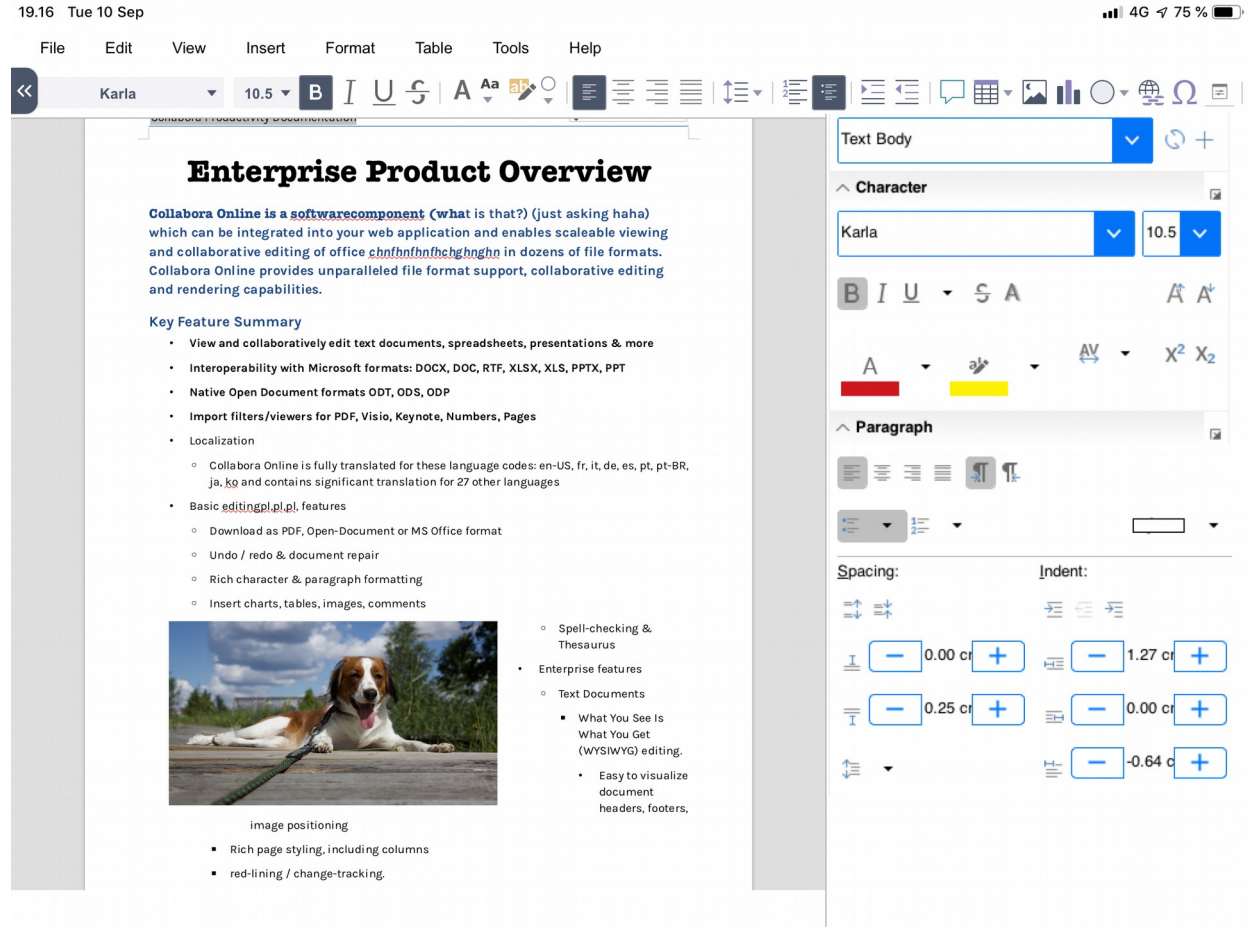


Native iOS version for tablets - with Adfinis

Co-Developed with Adfinis

- A great Collabora partner !

Beta in TestFlight





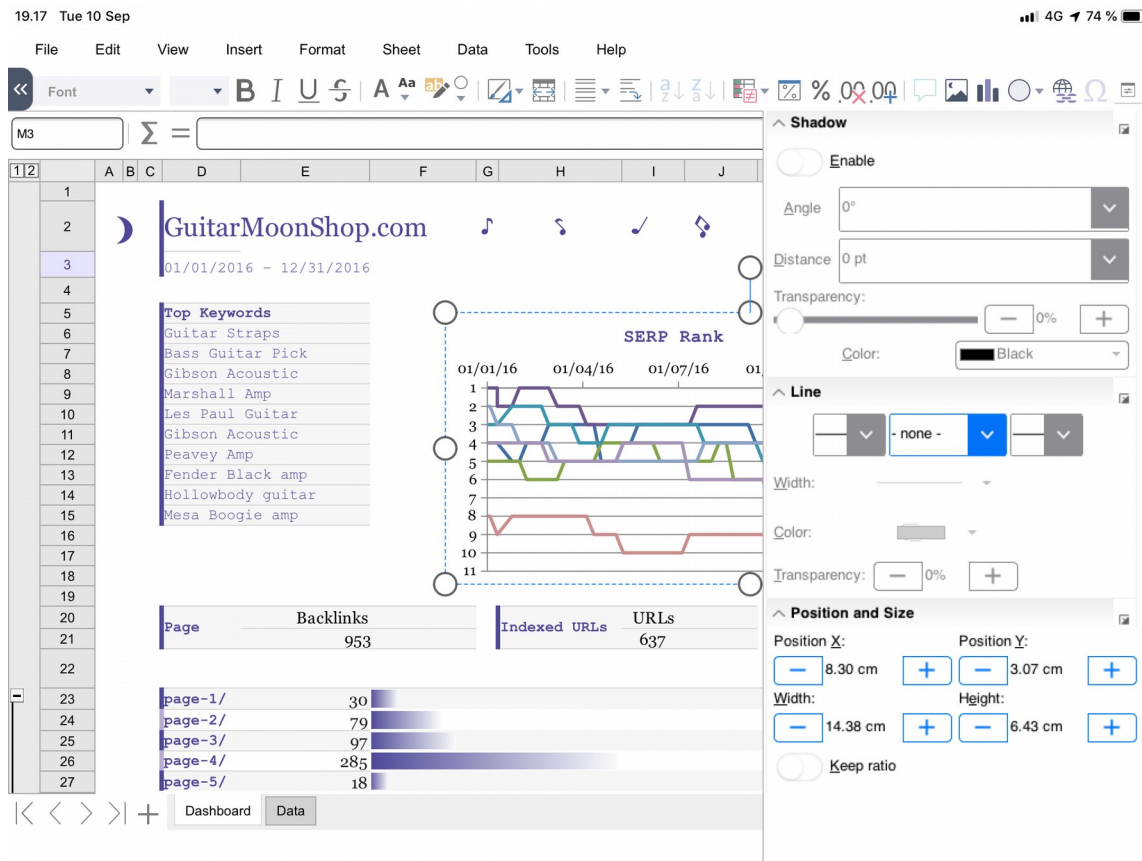
Native iOS version for tablets ... with Adfinis

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

19:24

< ↩ ↪ 🔍 ☰

Collabora Online: the enterprise-ready LibreOffice-based Online Office Suite that allows you to stay in **control-of-your-own documents, full control of your office files.**

LibreOffice is the world's most popular Open Source Office suite **with over 120 million users**. Collabora, a leading contributor to the project, and developer of the enterprise-ready, Long Term Supported edition of LibreOffice, Collabora Office, has now brought LibreOffice to the Cloud with Collabora Online.

With Collabora Online you now have access to a powerful, enterprise-ready and 100% Open Source Online Office suite functionality, with excellent support for all popular office file formats and collaborative editing features.

With Collabora Online you now have access to a powerful, enterprise-ready and 100% Open Source Online Office suite functionality, with excellent support for all popular office file formats and collaborative editing features.

Collabora Online comes with Long Term Support, and can be integrated in any web-based solution, such as File Share and Sync solutions, Document Management Systems, Groupware or custom build software.

All Long Term Support releases are supported for 3 years, with a perpetual license, annual subscription to security maintenance and updates, an SLA, and Level 3 (code fix) support (other levels are provided by our partners). And there are more benefits:

Benefits

- Stable – QA'd and tested
- Long Term Support – 3 years from release
- Signed security updates
- SLA – Guaranteed response times
- Roadmap – Product management interaction and input into roadmap

Collabora Ltd 2005-2018. All rights reserved. www.collaboraoffice.com | hello@collaboraoffice.com
All other trademarks are the property of their respective owners.

CO

📁 B I U ↺ A Aa 🎨 🔍 ☰

19:28

< ↩ ↪ 🔍 ☰

Collabora Online: the enterprise-ready LibreOffice-based Online Office Suite that allows you to stay in **control-of-your-own documents, full control of your office files.**

LibreOffice is the world's most popular Open Source Office suite **with over 120 million users**. Collabora, a leading contributor to the project, and developer of the enterprise-ready, Long Term Supported edition of LibreOffice, Collabora Office, has now brought LibreOffice to the Cloud with Collabora Online.

With Collabora Online you now have access to a powerful, enterprise-ready and 100% Open Source Online Office suite functionality, with excellent support

YOU editing...
THOMAS editing...
ANNE e...

Time tab

Activity	THOMAS	ANNE
Meeting	12:00	12:00
Meeting	12:00	12:00
Meeting	12:00	12:00

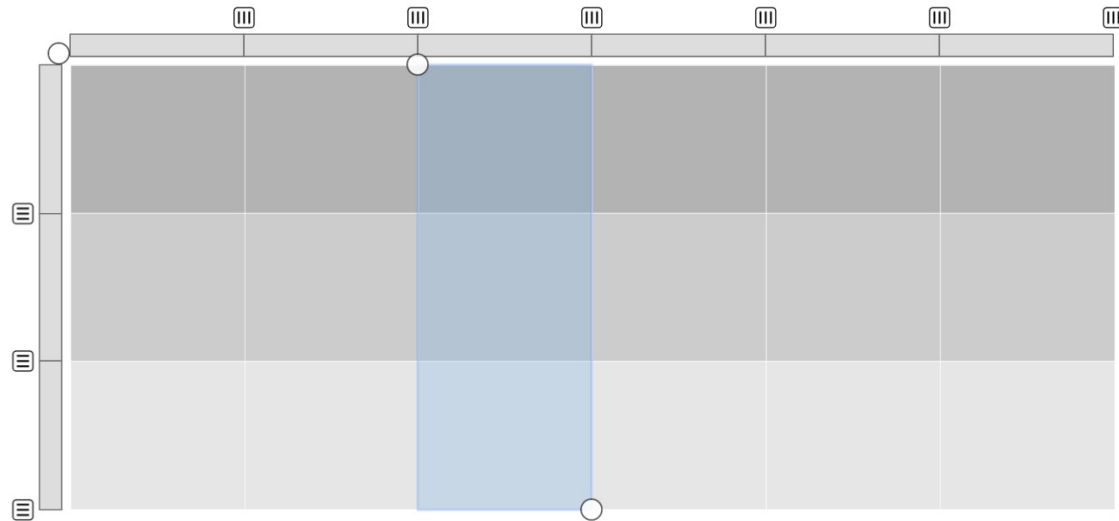
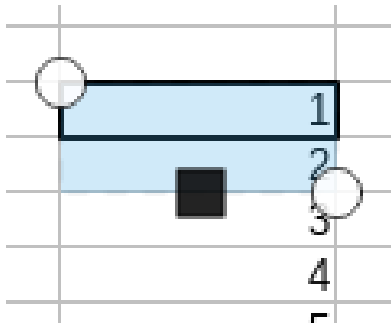
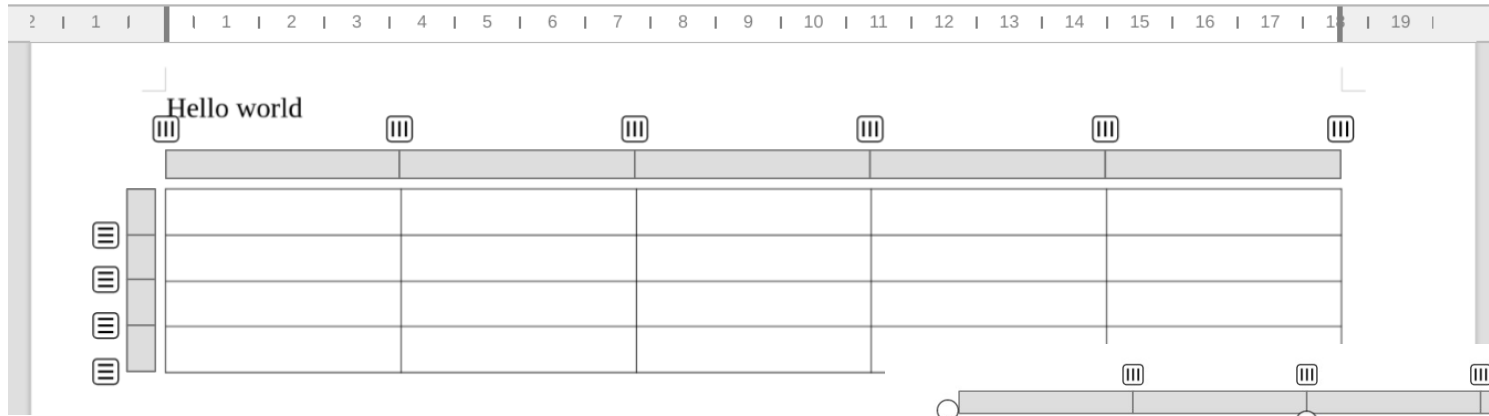
CO

📁 B I U ↺ A Aa 🎨 🔍 ☰

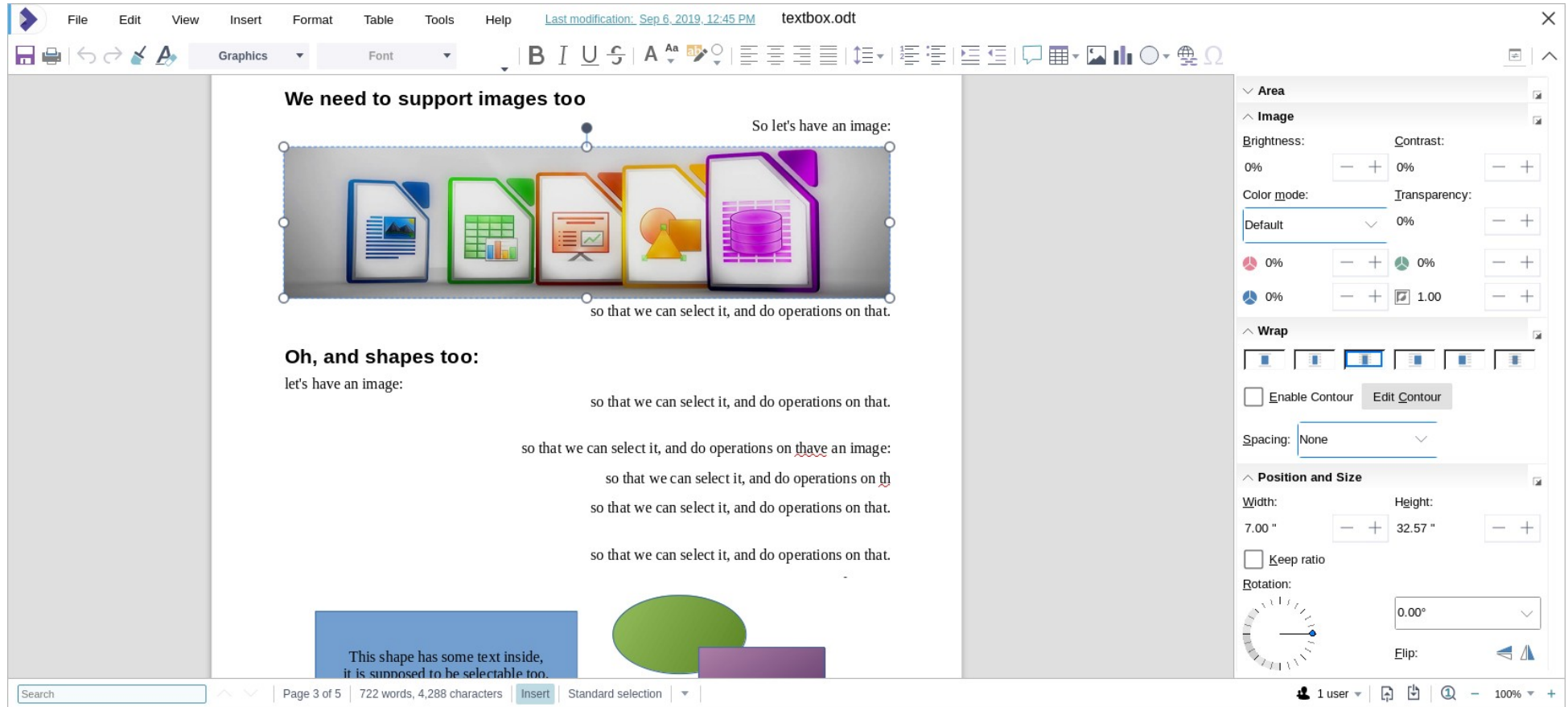
Implemented for
Collabora Online 4.2
(due Q4)



Many mobile wins: eg. touch resizing handles



Sidebar in Writer, Calc and Impress

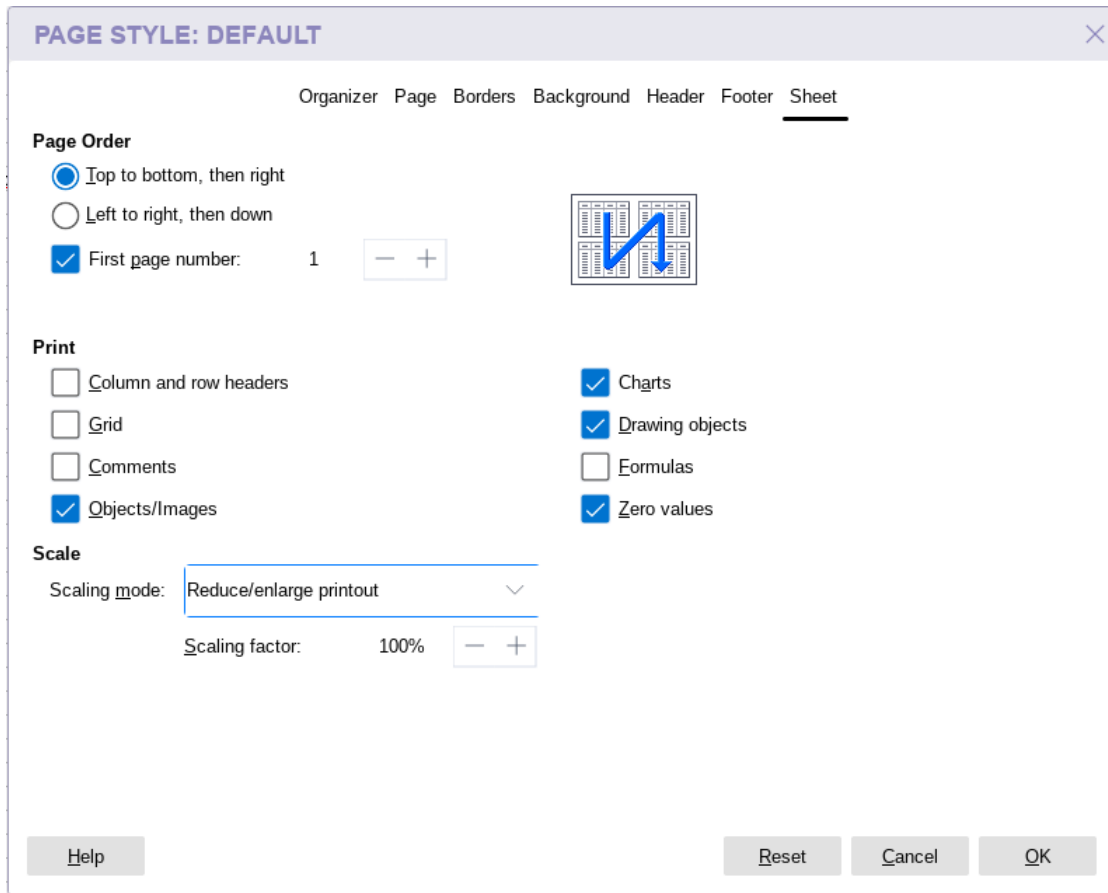




Online / Widget theming implementation ...

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

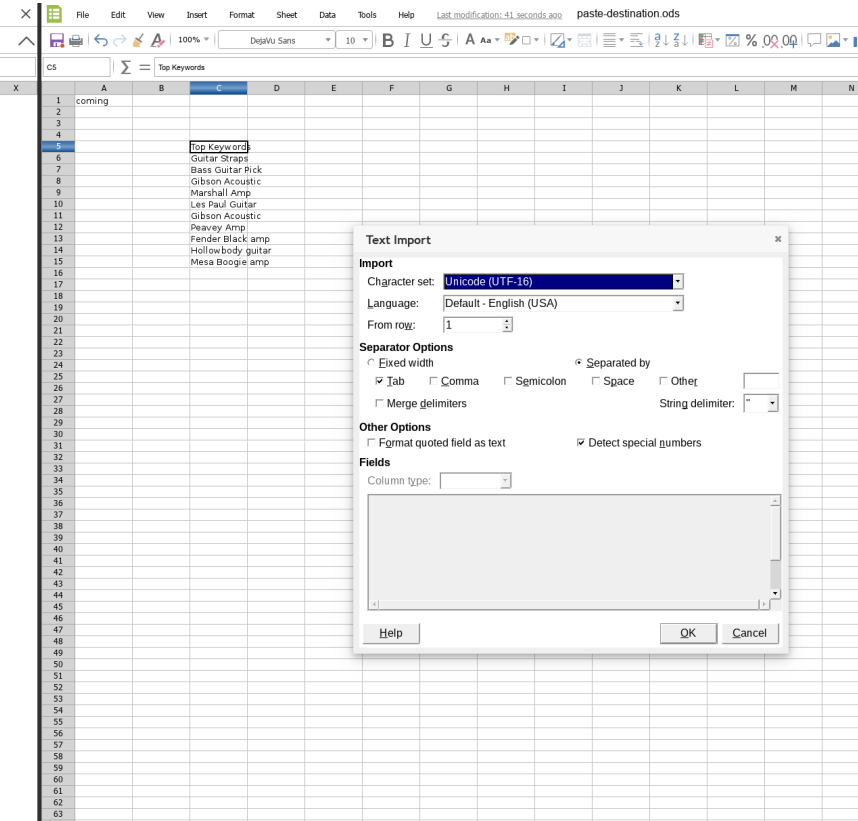
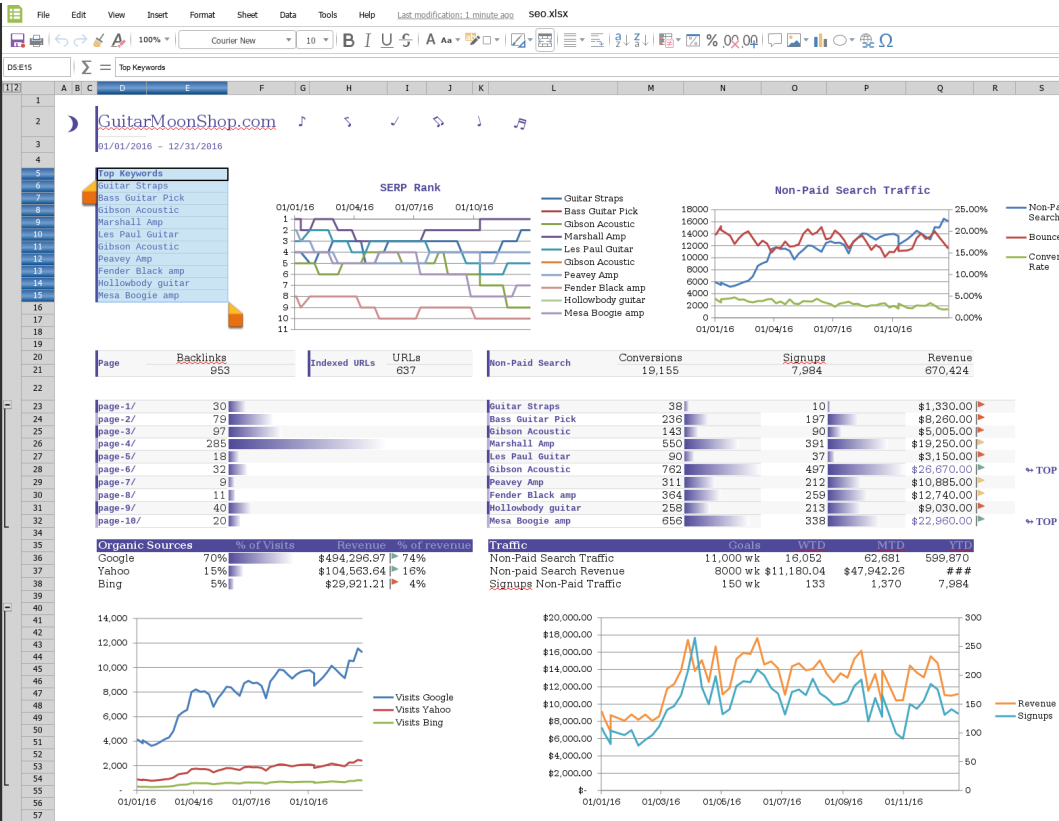
- Many new dialogs converted to async
- Multi-window focus re-work.

Security & Anonymization

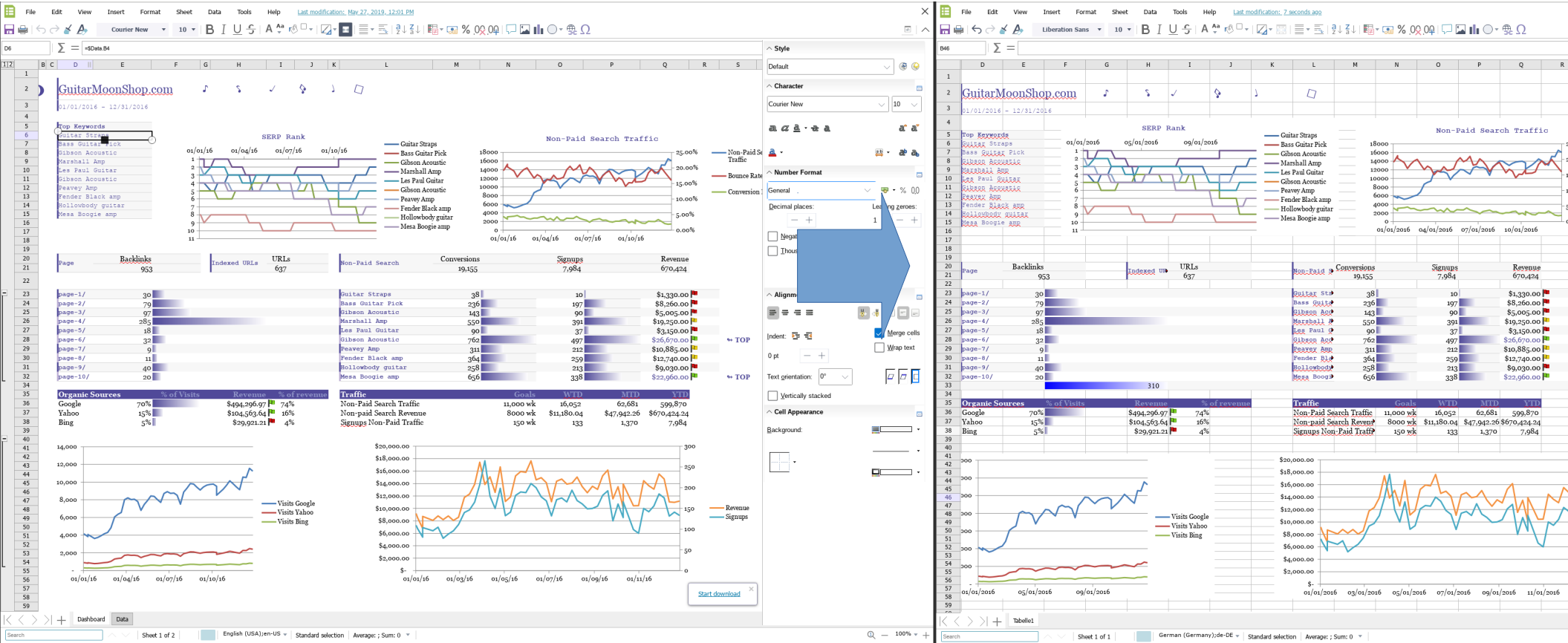
- GDPR / Anonymized logging
- 3rd party penetration testing

And much much more ...

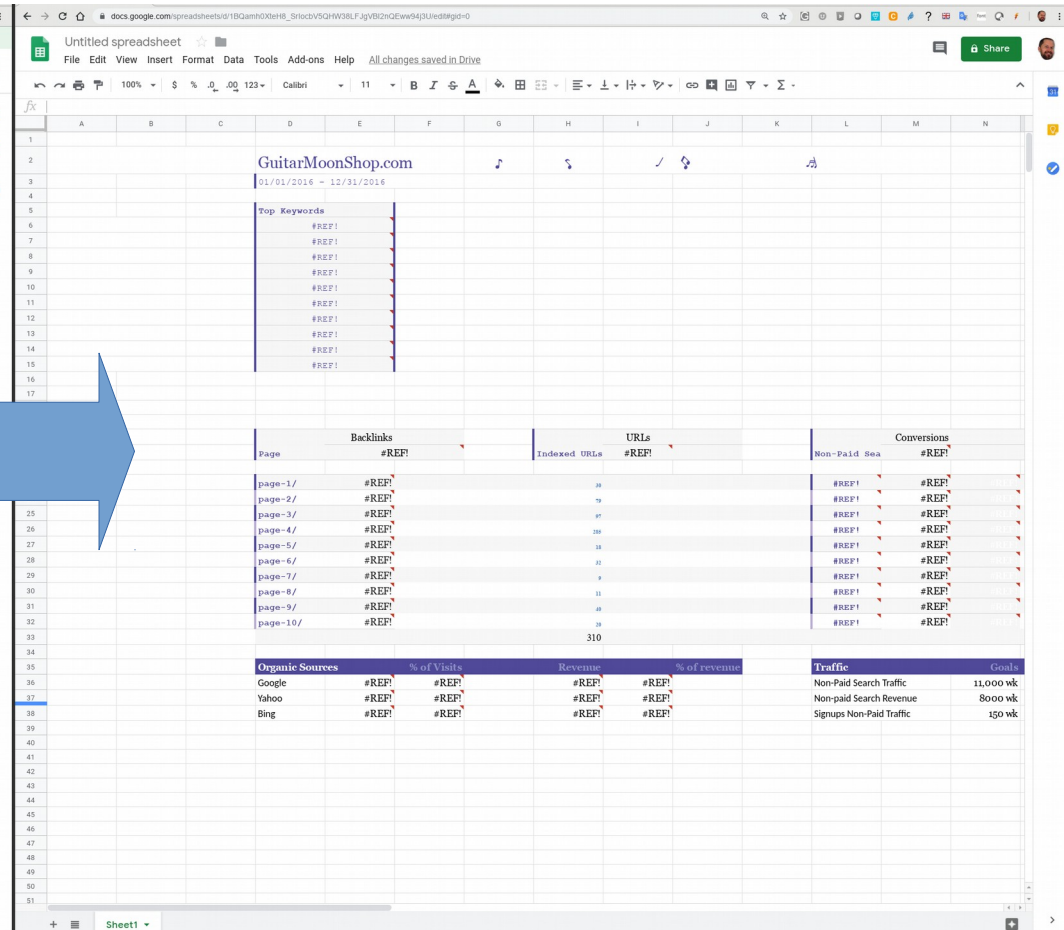
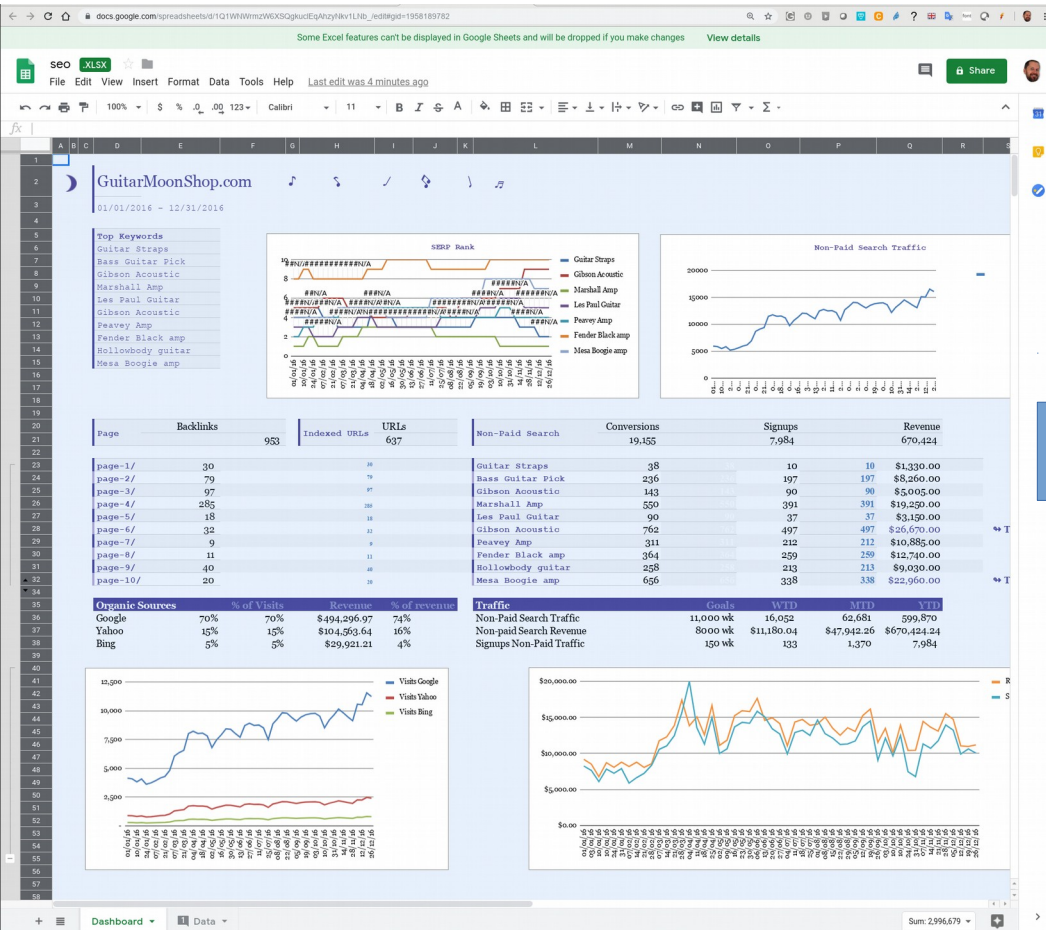
Online – old-style copy/paste: text → CSV import dlg.

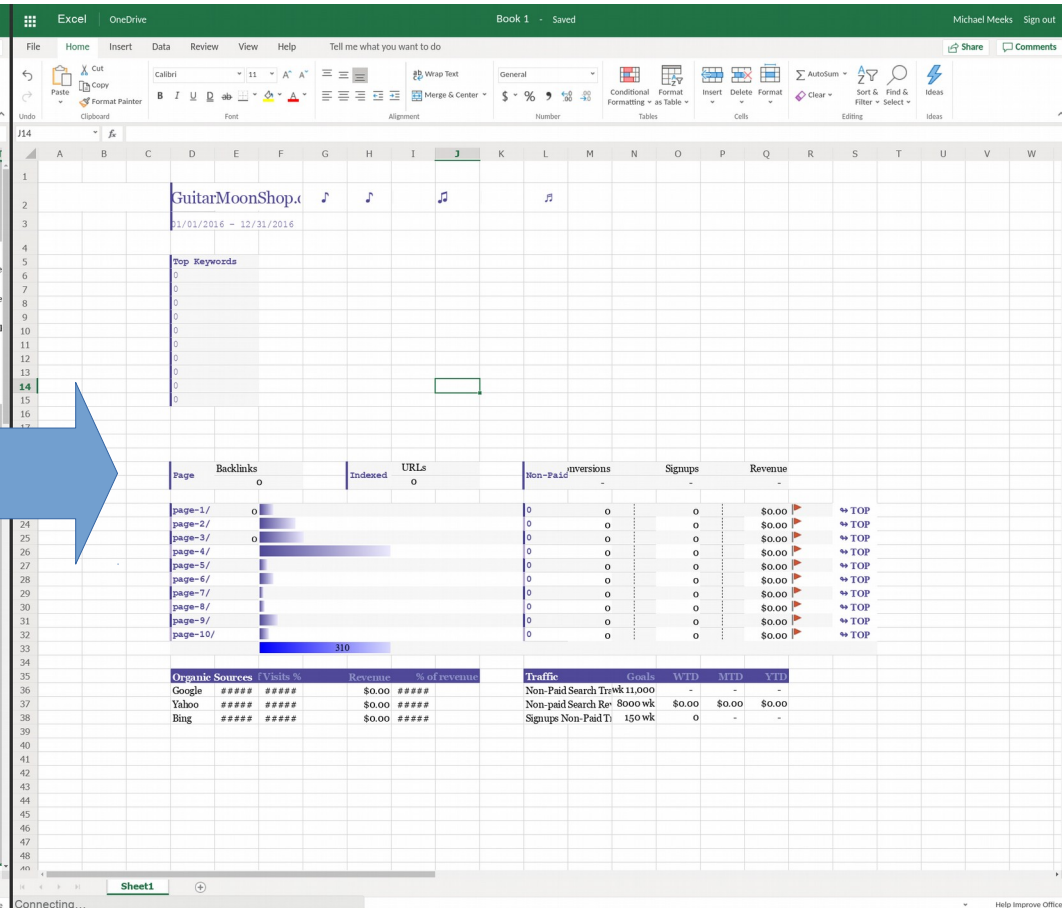
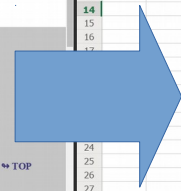


Afterwards (plus manual chart copy)



Just the basics ? Gdocs / Chrome comparison





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

The screenshot displays the Collabora Online web interface for editing a document. The top navigation bar includes 'Office', 'ownCloud', and a user profile 'michael'. The menu bar contains 'File', 'Edit', 'View', 'Insert', 'Format', 'Table', 'Tools', and 'Help'. The status bar at the top right shows 'Last modification: May 27, 2019, 12:01 PM' and 'Collabora Online.docx'. The document content area shows a heading 'Rich Editing' and a paragraph 'Sharing dialogs with your familiar PC Office Productivity Suite'. A large, light gray watermark 'Writer Page Watermark' is visible diagonally across the page. A 'WATERMARK' dialog box is open in the foreground, allowing for the creation or modification of the watermark. The dialog box has the following settings:

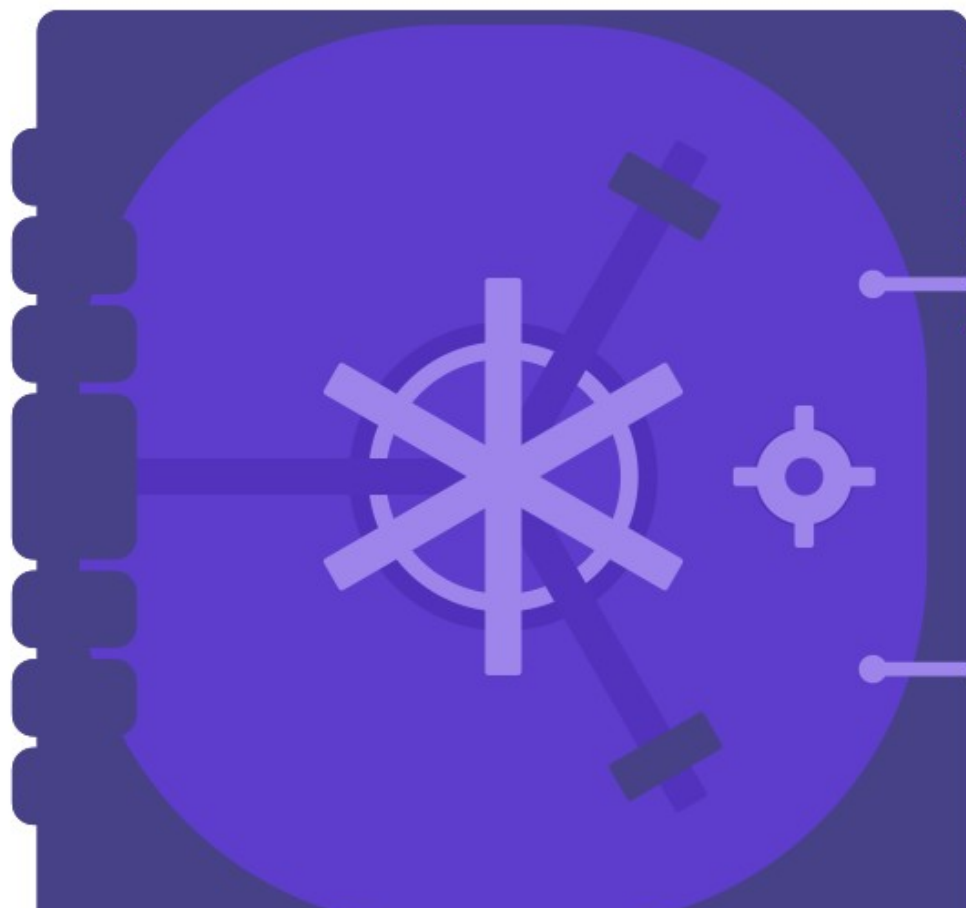
- Text: Writer Page Watermark
- Font: Liberation Sans
- Angle: 45°
- Transparency: 50%
- Color: #C0C0C0

The dialog box includes 'Help', 'OK', and 'Cancel' buttons. The bottom status bar shows 'Page 3 of 3', '281 words, 1,915 characters', 'Standard selection', 'English (USA);en-US', '2 users', and a zoom level of '70%'.

Distinctives



Don't let your document data out of your site [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.

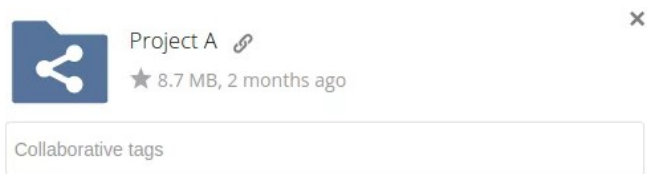
Keystrokes come in, and go out as changed pixels.

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



Secure View: ownCloud 10.3



New Advanced Sharing Permissions API



Comments **Sharing**

User and Groups Public Links

Share with users or groups...

 **viewer** ☒ can share ☐ can edit 
☒ Secure View (with watermarks) ☐ can print / export PDF

Granular permissions

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



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}

Thanks to: Vincent Petry, Piotr Mrowczynski,
Patrick Jahns, Phil Davis, Mert Tumer

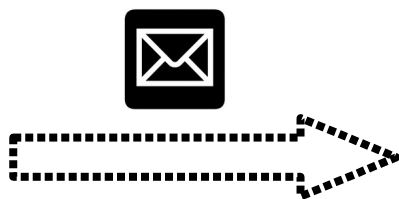
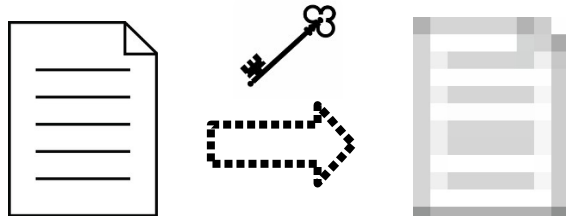


Microsoft's Digital Rights Management

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

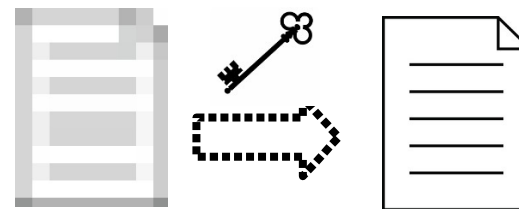
- eg. disable copy/paste, print, save-as, control views etc.

Step 1: encrypt the document

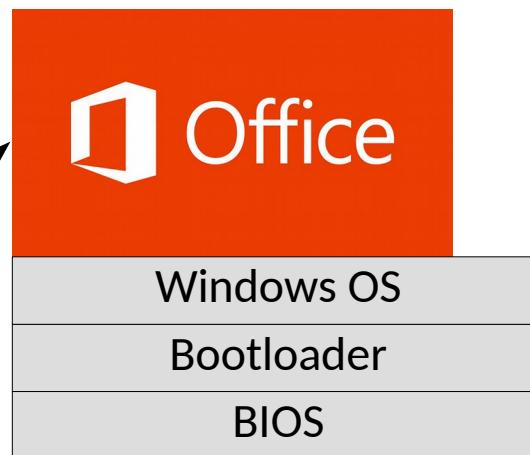


Step 3: mail it

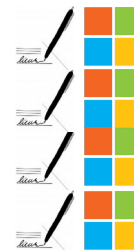
Step 2: send the key to Azure



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

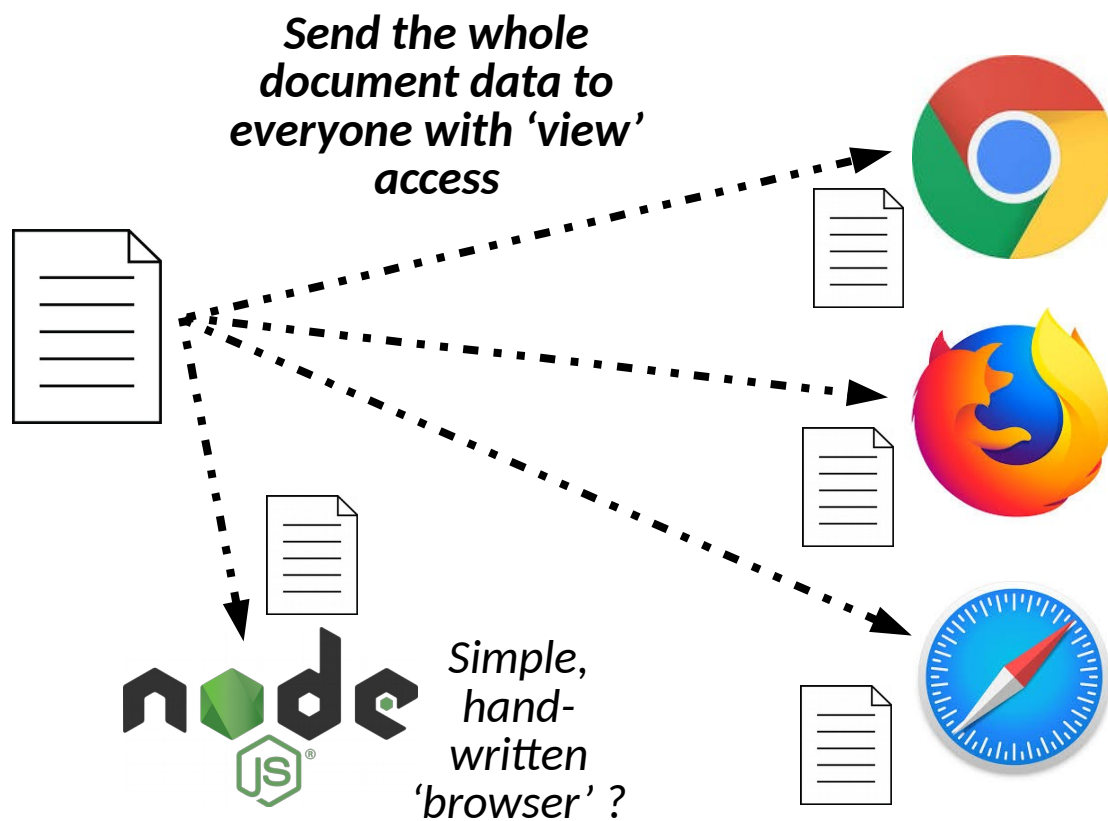


MS sign / revoke from bottom up





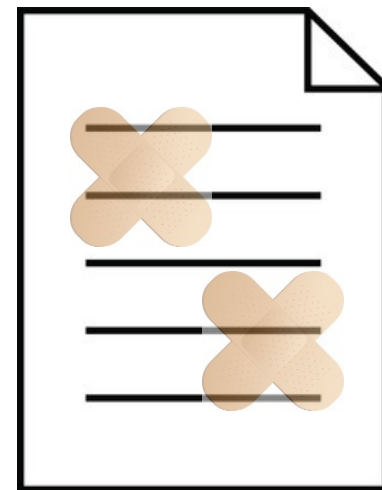
How not to do it: (but oddly popular)



*Render whole document data using HTML5 in Javascript, press F12 to debug **policy enforcement***



Apply watermark on top.





A better design: send pixels with watermarks → client

Office ownCloud peter-reviewer

File View Help Service_Package_Standard_1

Strictly confidential. Only for peter-reviewer

Standard Deployment Package

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.

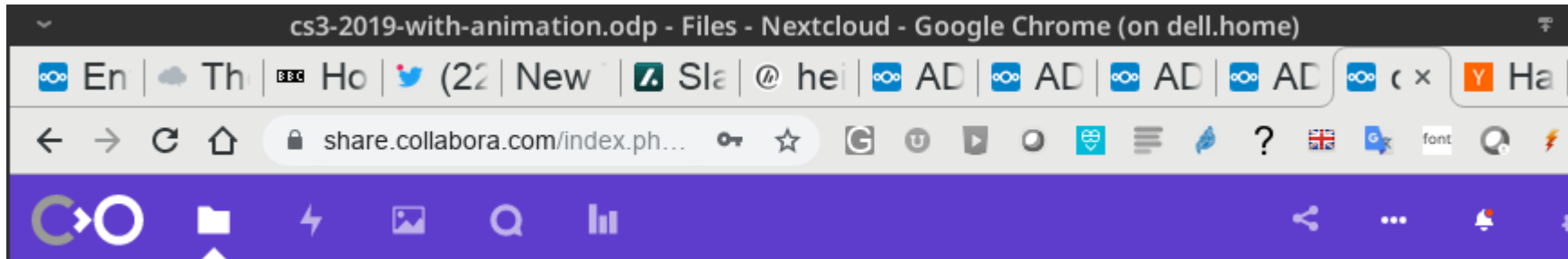


Simple, per-user pricing

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

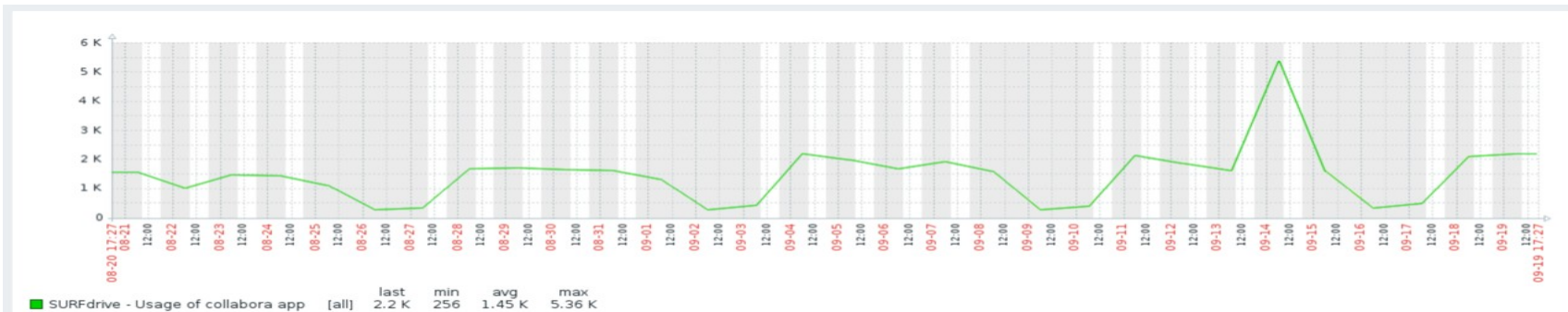
- ~millions of users with access

The image shows a presentation slide titled "Kubernetes - Horizontal Pod Autoscaler" with a diagram illustrating the autoscaling process. The diagram shows a "Horizontal Pod Autoscaler" box connected to a "Metrics Server" box. The process flow is: 1. Check for CPU and Memory metrics (from Metrics Server), 2. If threshold not Change number of replicas, 3. Scale number of pods (from DEPLOYMENT box) to "POD 1", "POD 2", ..., "POD N". Below the diagram, a "Metrics" table shows "resource memory on pods (as a percentage of request)" with values (current / target): 40% (1294229504) / 70%.

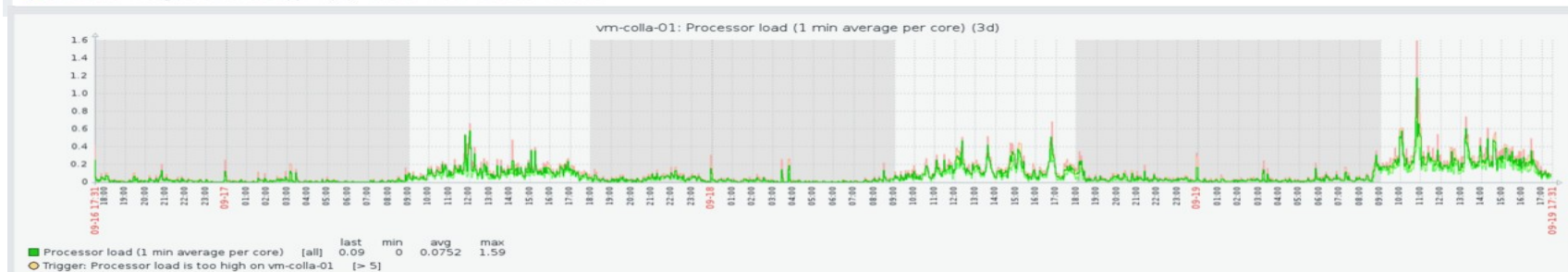
Below the slide is a screenshot of a web browser window showing the GMX web interface. The browser tabs include "Eduard Andrei Ardelean", "TLS 1.3", "Sept. 12th: Thursday", "Free Email Addresses", and "Helm". The GMX interface shows a navigation bar with "Home", "E-mail", "Contacts", "Organizer", "Cloud", "Online Office", and "More". The main content area displays "LibreOffice Online.odt" and "New spreadsheet.odt". A "Format" dialog box is open, showing "Specify the basic settings, such as line spacing, or choose the page size and orientation." with a "Next" button. The bottom of the browser window shows a footer with "What is it?", "LibreOffice Online is a server service built from the main LibreOffice project code", and "Page 1 of 1 | 123 words, 753 characters | Insert | Standard selection | English (USA) | Document saved | 100%".

Real world: 45k+ users – Collabora Online

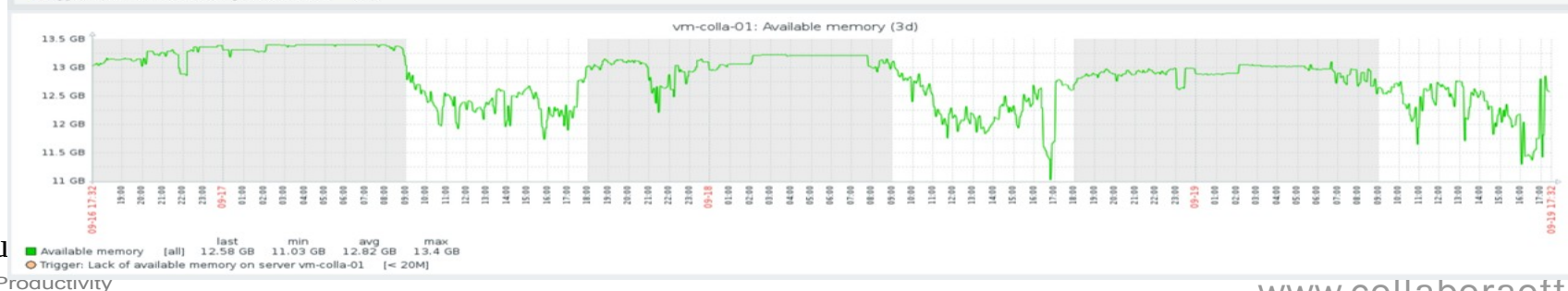
Usage



CPU



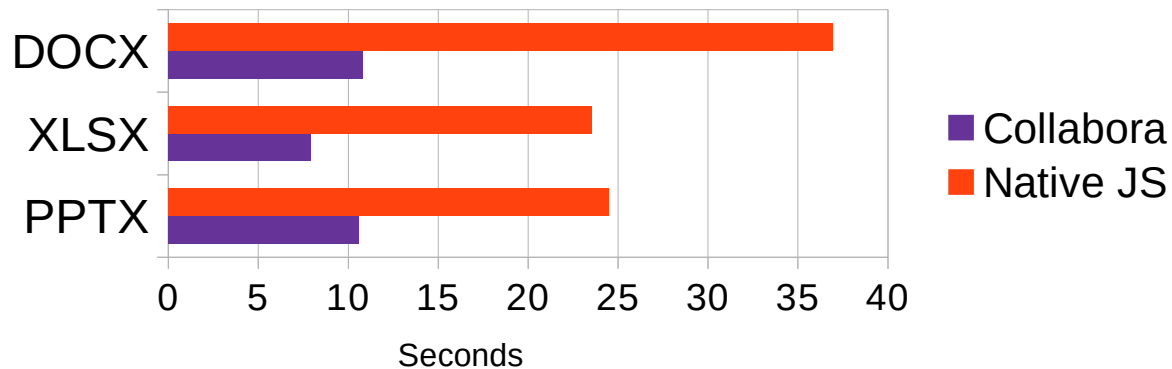
Free
RAM:
13.5Gb
→
11Gb





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

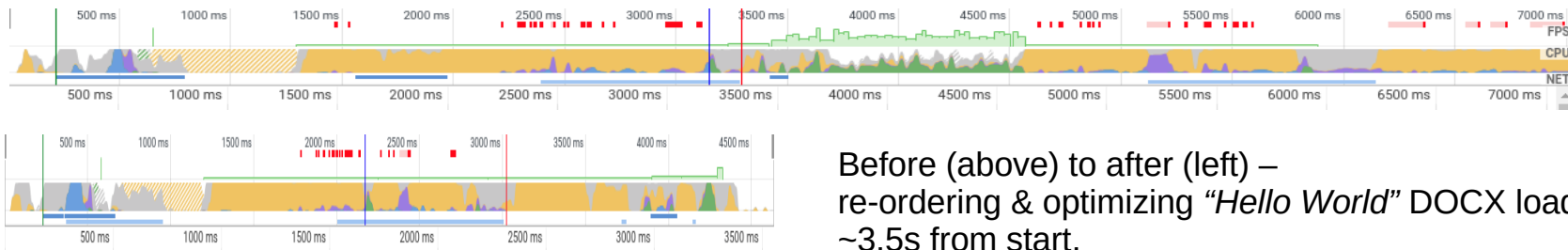
Time to load & render blank files - Galaxy S4



First cut pre-optimized numbers

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

Threaded, GPU accelerated
spreadsheet core





Open First + Community

Deep pool of volunteers & companies

- Berlin based Stiftung, 100% open code





Conclusions

- Our mission applied
- Rich partnership with ownCloud
- Gorgeous, 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