

# Collabora Online & Nextcloud

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**Collabora  
Productivity**

*"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 Nextcloud.

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 Productivity: examples



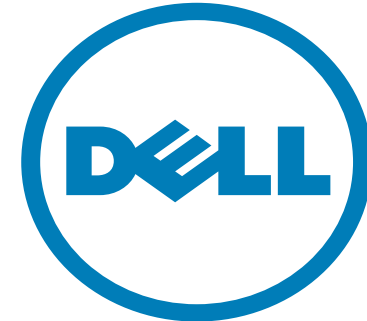
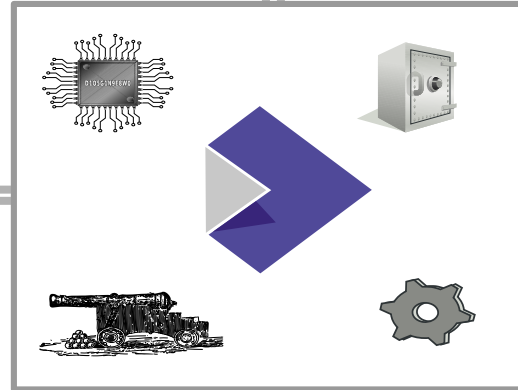
One of the top three Italian banks  
**20,000** seats deployed in all their  
branch offices. Visionary cost  
savings.

Partner:  
**STUDIOSTORTI**  
SOLUZIONI OPEN SOURCE



Partner:  
**COFF**

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



***140 partners and growing ...***



# A seamless Nextcloud partnership

## Nextcloud - an awesome partner

- working together seamlessly and regularly

## 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

Collabora Productivity | Partner Portal

WELCOME PARTNER

Upcoming events

Your Subscriptions

Product	Version	Status	Contact	Phone
Collabora Online	4.0.0	Active	John Doe	1234567890
Collabora Online	4.0.0	Active	John Doe	1234567890

Collaborating Offices

Office	Address	Phone	Email
Collabora Office - London	1234567890	1234567890	1234567890
Collabora Office - London	1234567890	1234567890	1234567890



# The Collabora Online Vision

Full-feature, Open Source,

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

No compromises & flexible

Complements

Nextcloud's vision



# MS Office Online browser a stop-gap ...



**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: T3d838fd-9dc7-4534-8d07-84e9f1158b9

**Edit in Word** Open in Reading View

Accessibility Mode

**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-bcc7-487a-8b4a-9b5d8b...

**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: b460564a-5cbb-4d12-82bd-2496f8bba10

**Edit in Word**

**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**

**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**

**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.

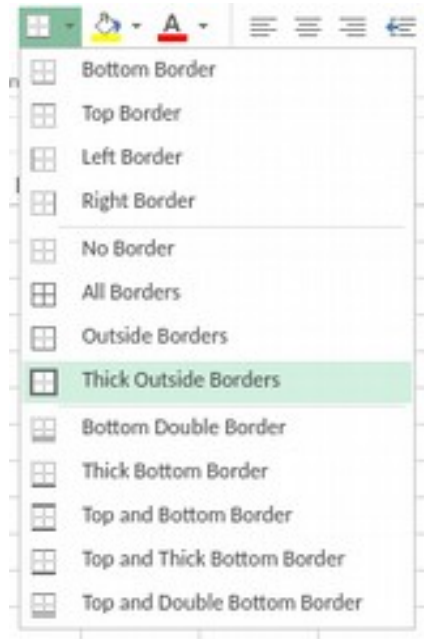
[Learn more](#)

**OK**

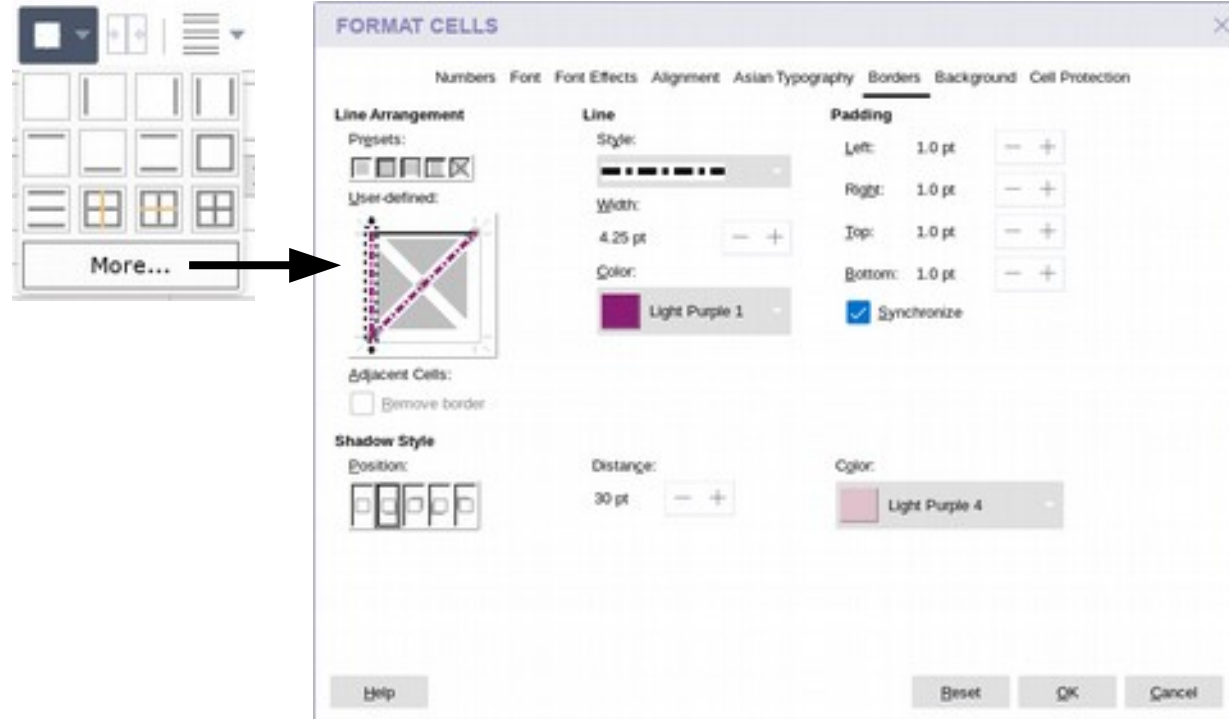


# Full Feature → the things the feature matrix hides

*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 ...

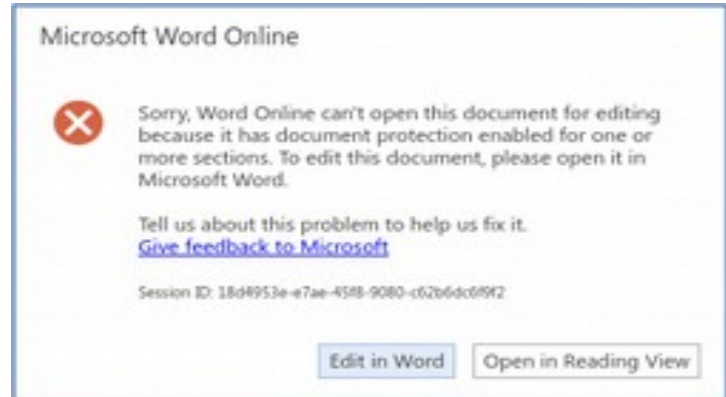
Fill out DOC / DOCX forms

- tab through editable fields; skip protected sections



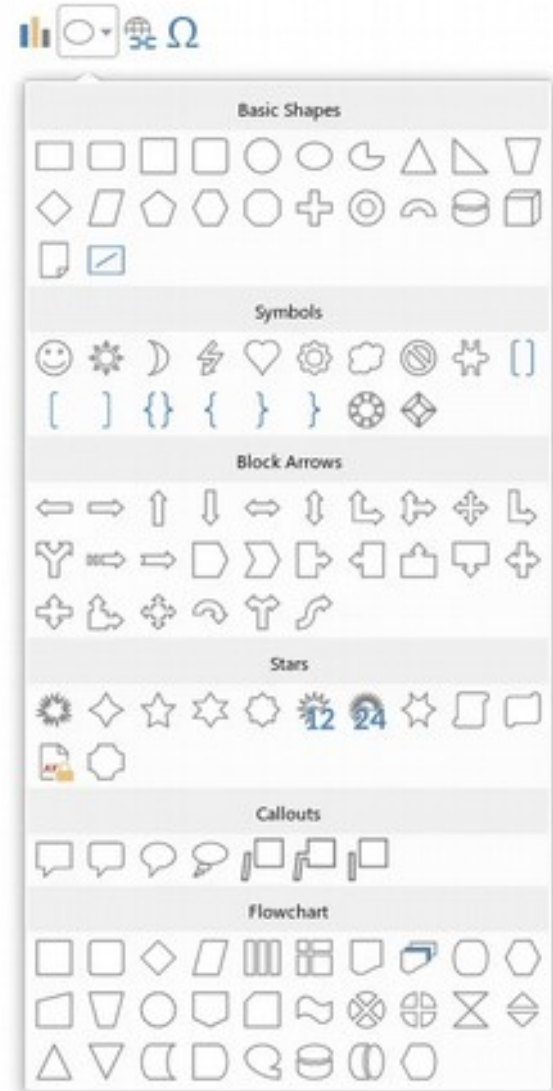
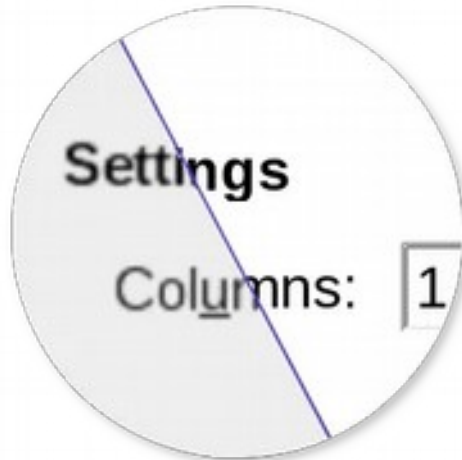
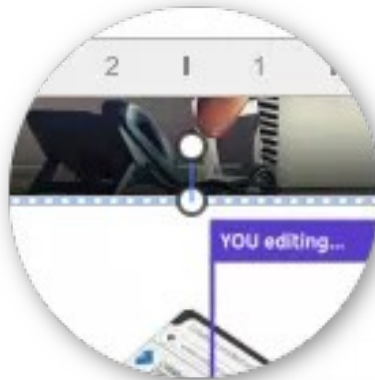
### INWARD (SHIPS AND BOATS OTHER THAN ...)

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



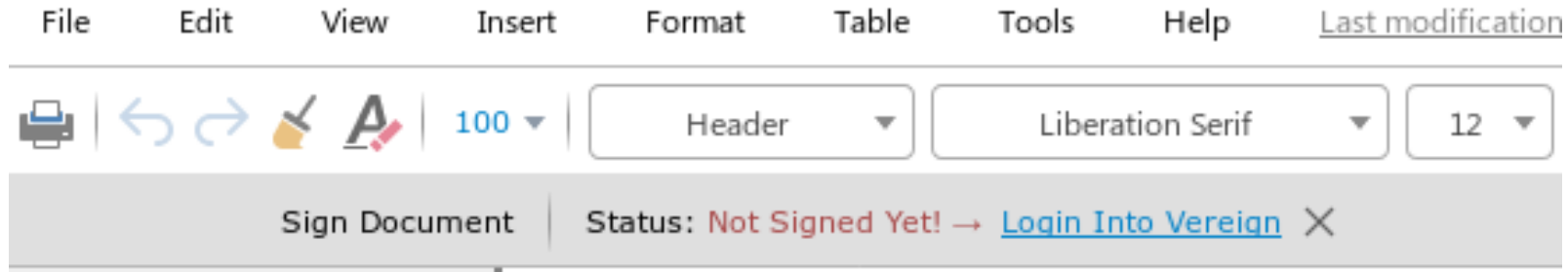
# Recent Improvements

# 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.

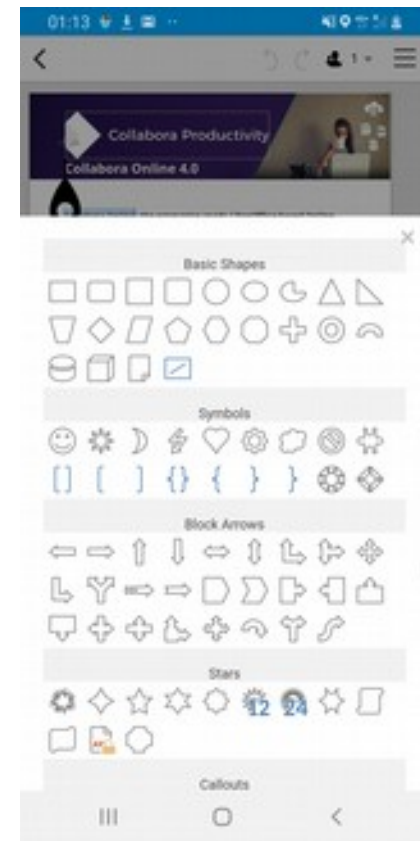
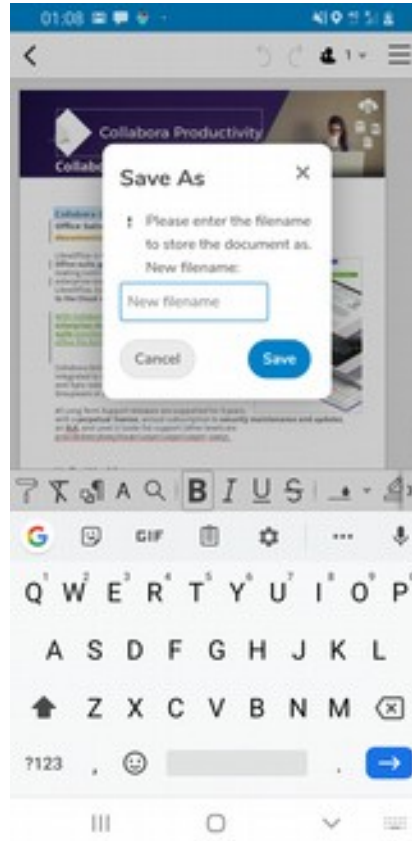
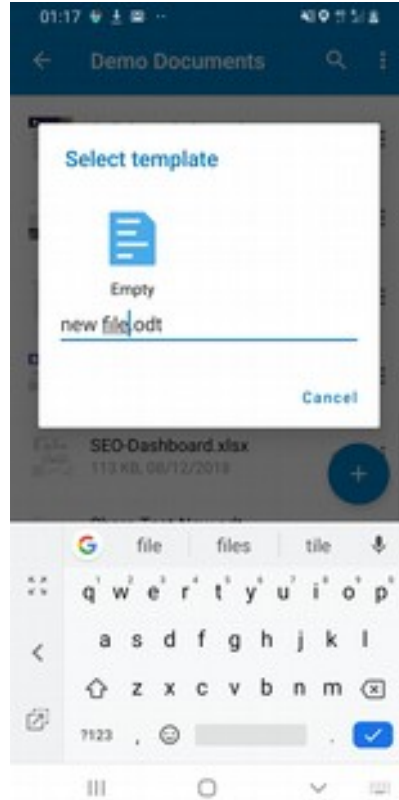
**Thanks to** *Tomaž Vajngerl*



# Nextcloud Mobile App



# Better integration in your hands



# Collabora Office Mobile - Q4



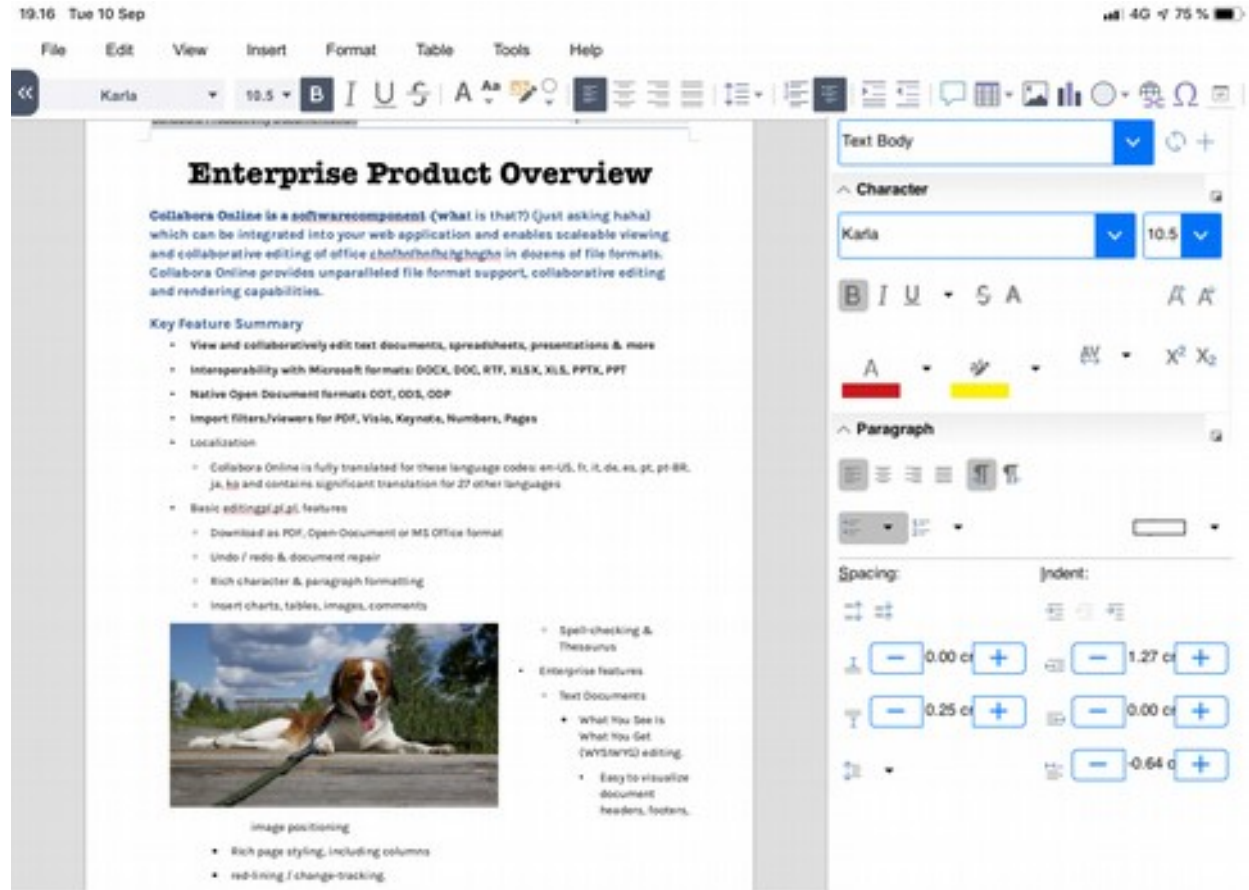


# Native iOS version for tablets - with Adfinis

## Co-Developed with Adfinis

- A great Collabora & Nextcloud partner !

## Beta in TestFlight



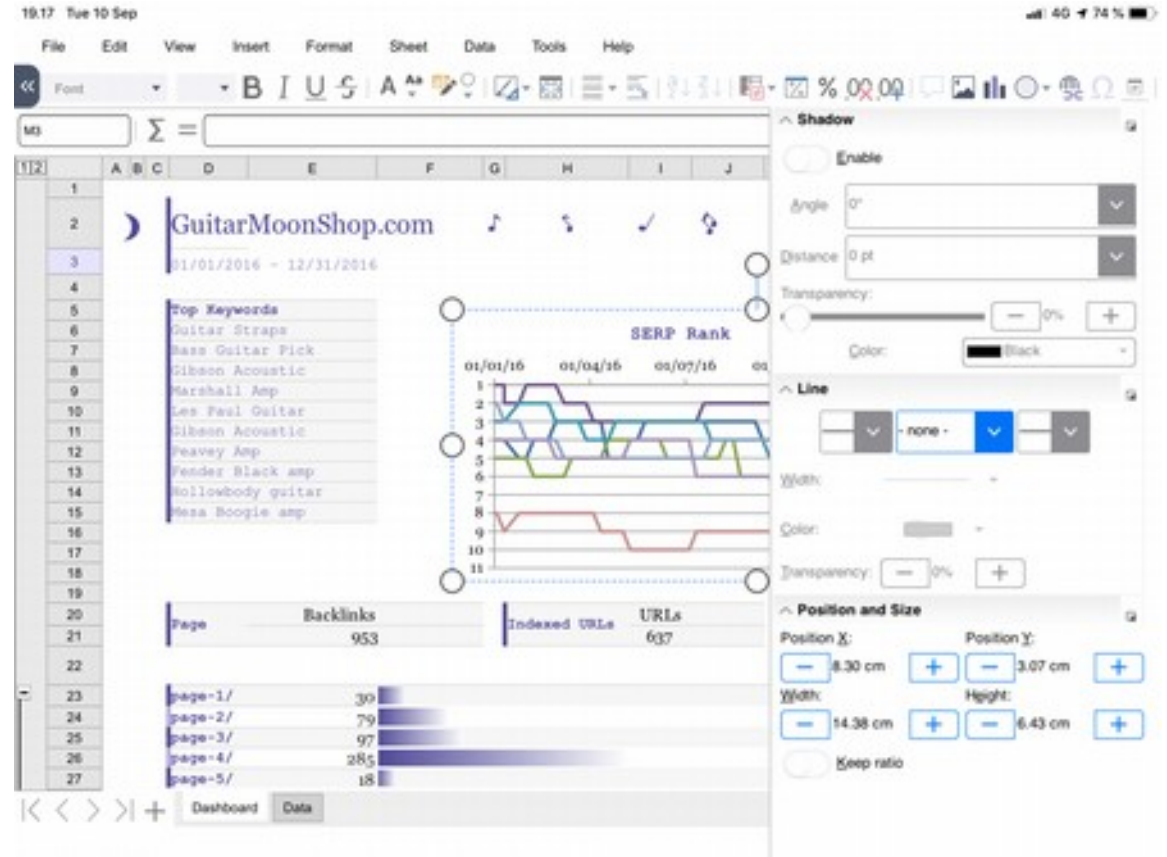
# Native iOS version for tablets ... with Adfinis

## Co-Developed with Adfinis

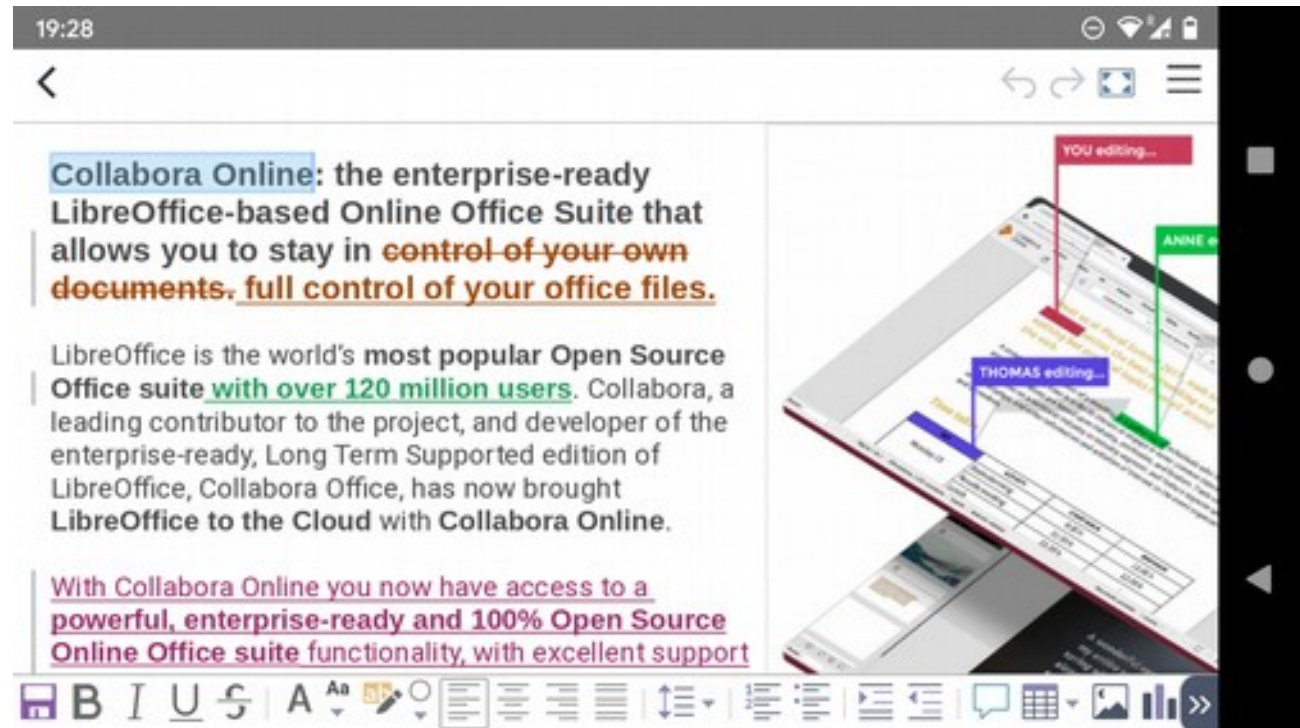
- A great Collabora & Nextcloud partner

## Quite a story:

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



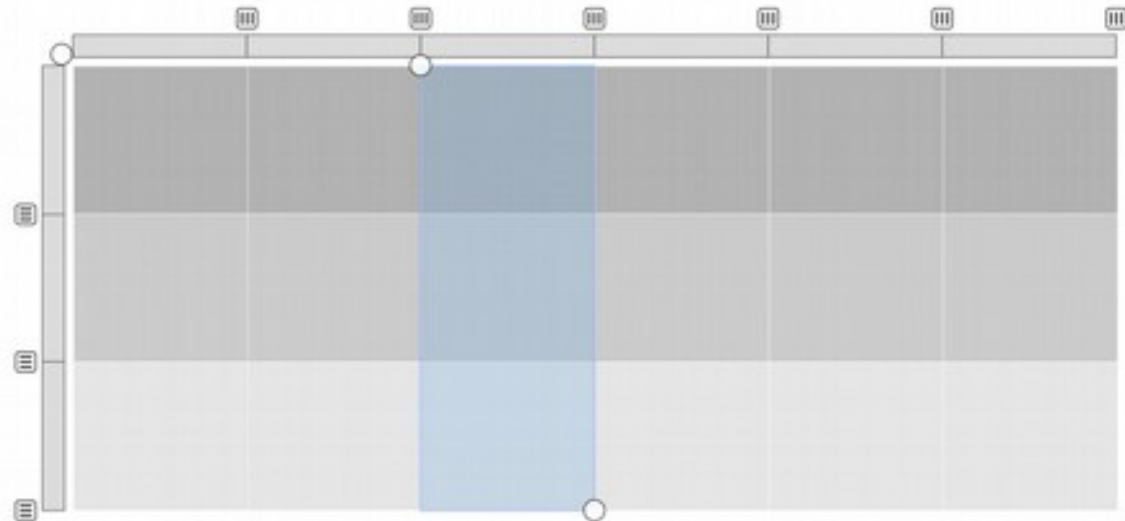
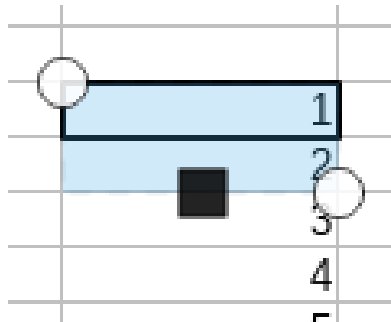
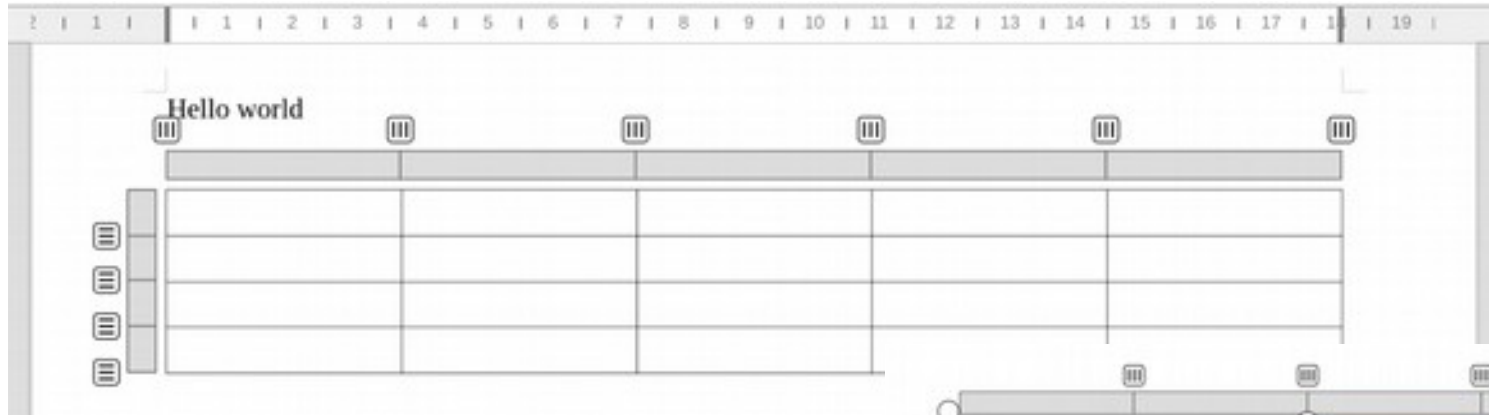
# Online based Android app – in progress



Implemented for  
Collabora Online 4.2  
*(due Q4)*

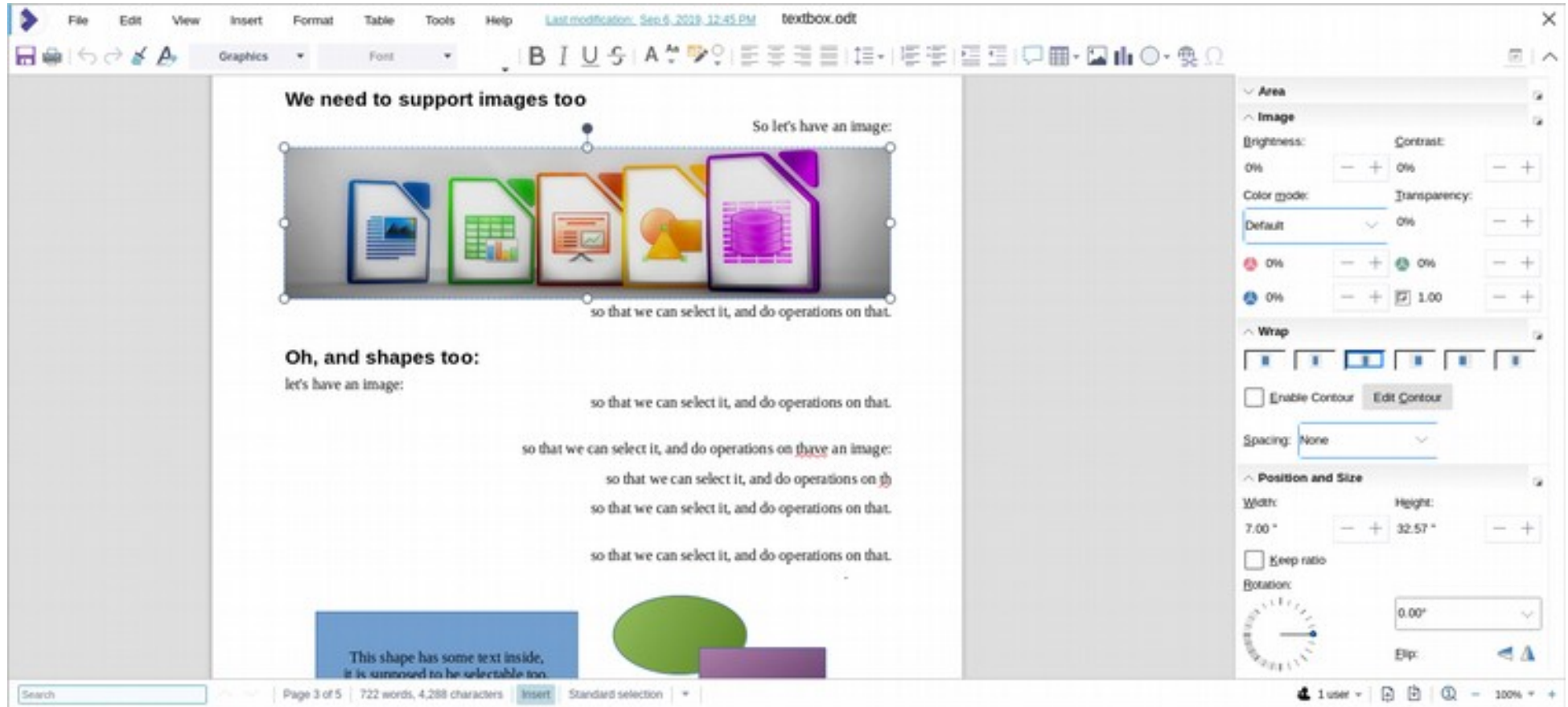


# Many mobile wins: eg. touch resizing handles





# Sidebar in Writer, Calc and Impress

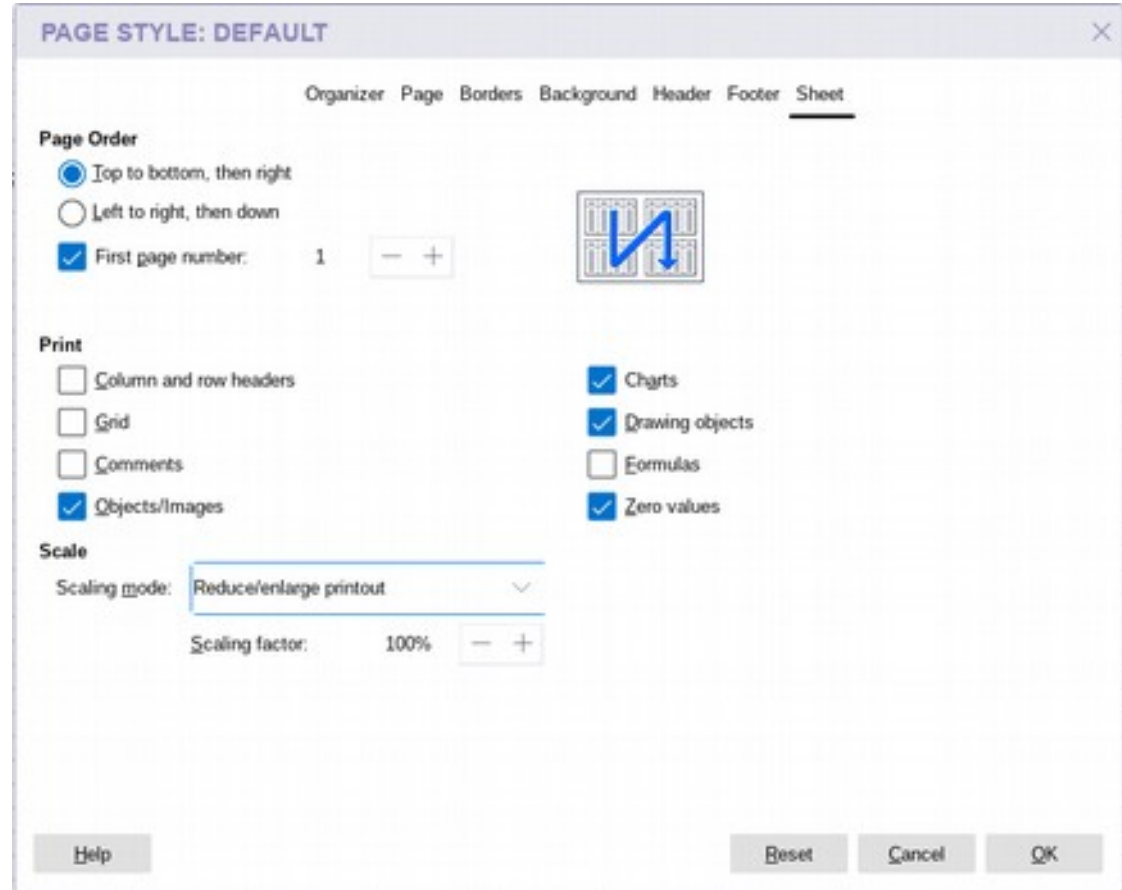




# Online / Widget theming implementation ...

## Custom look & feel

- Custom SVG branding of individual widgets
- Building on native widget framework.
- ~easy to re-use for other platforms (volunteer?)







# The pieces you can't see

## Integration improvements

- Masses of new extensible API to embed Online into your application

## 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.

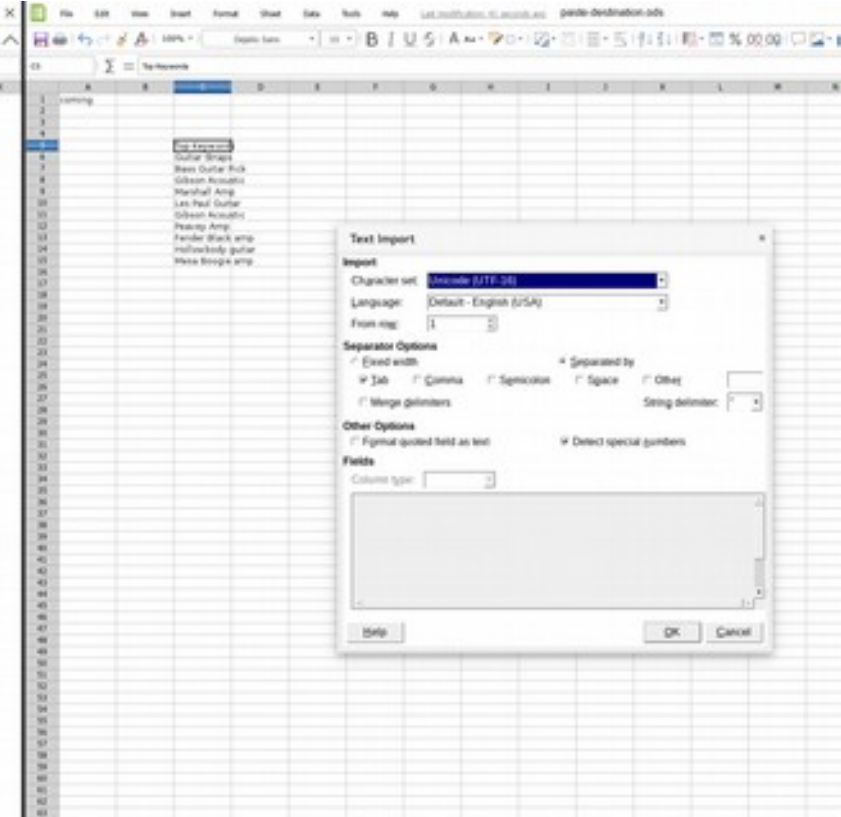
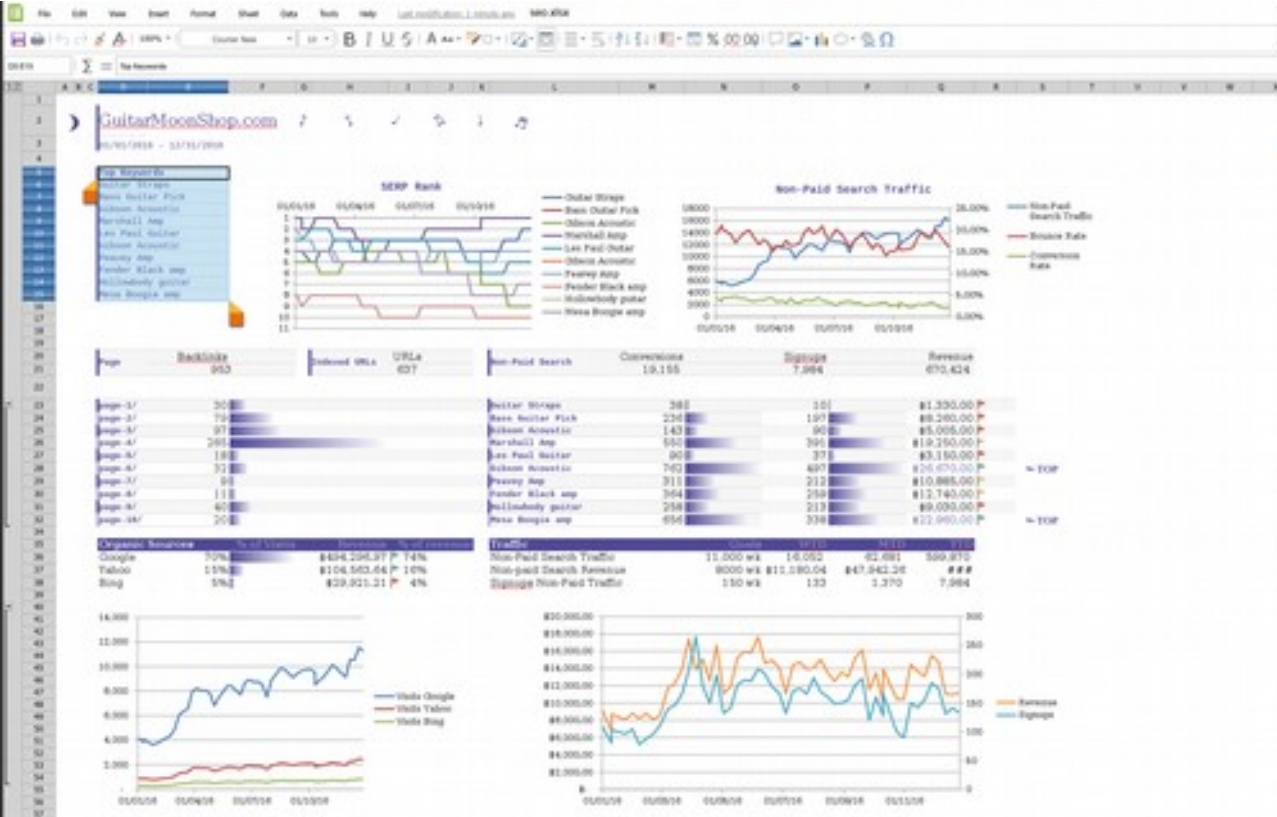
## Security & Anonymization

- Anonymized logging
- 3<sup>rd</sup> party penetration testing

**And much much more ...**

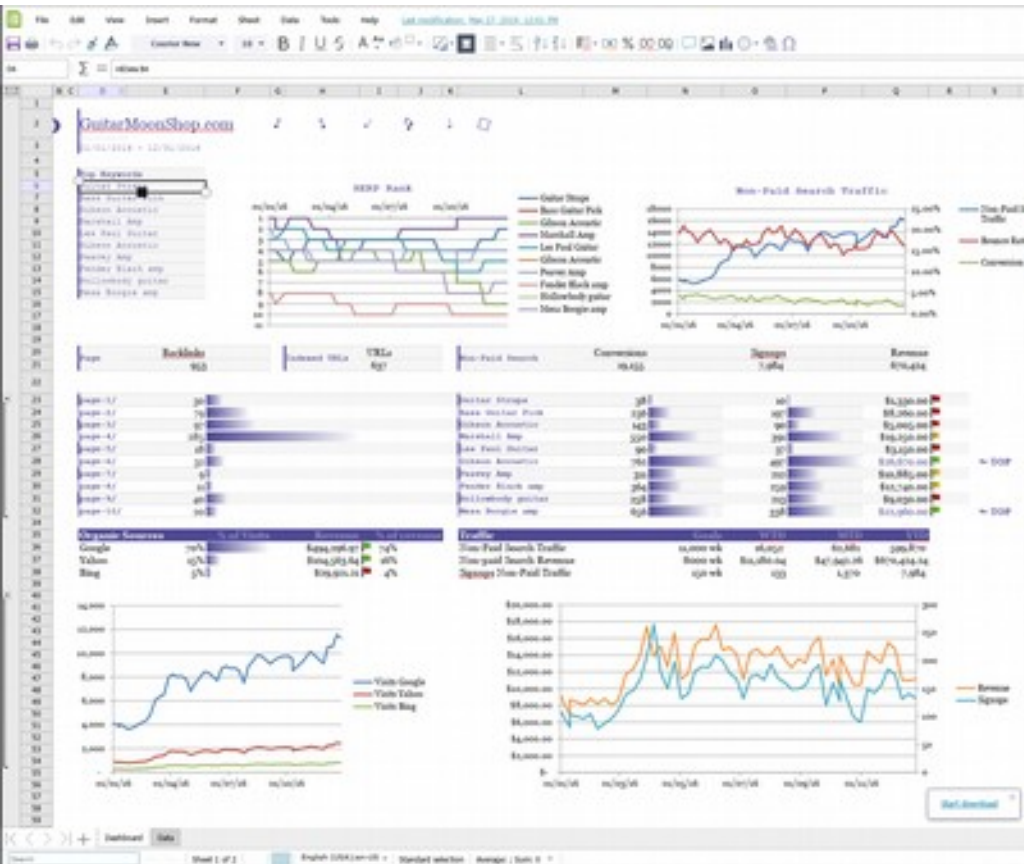


# Online – old-style copy/paste: text → CSV import dlg.



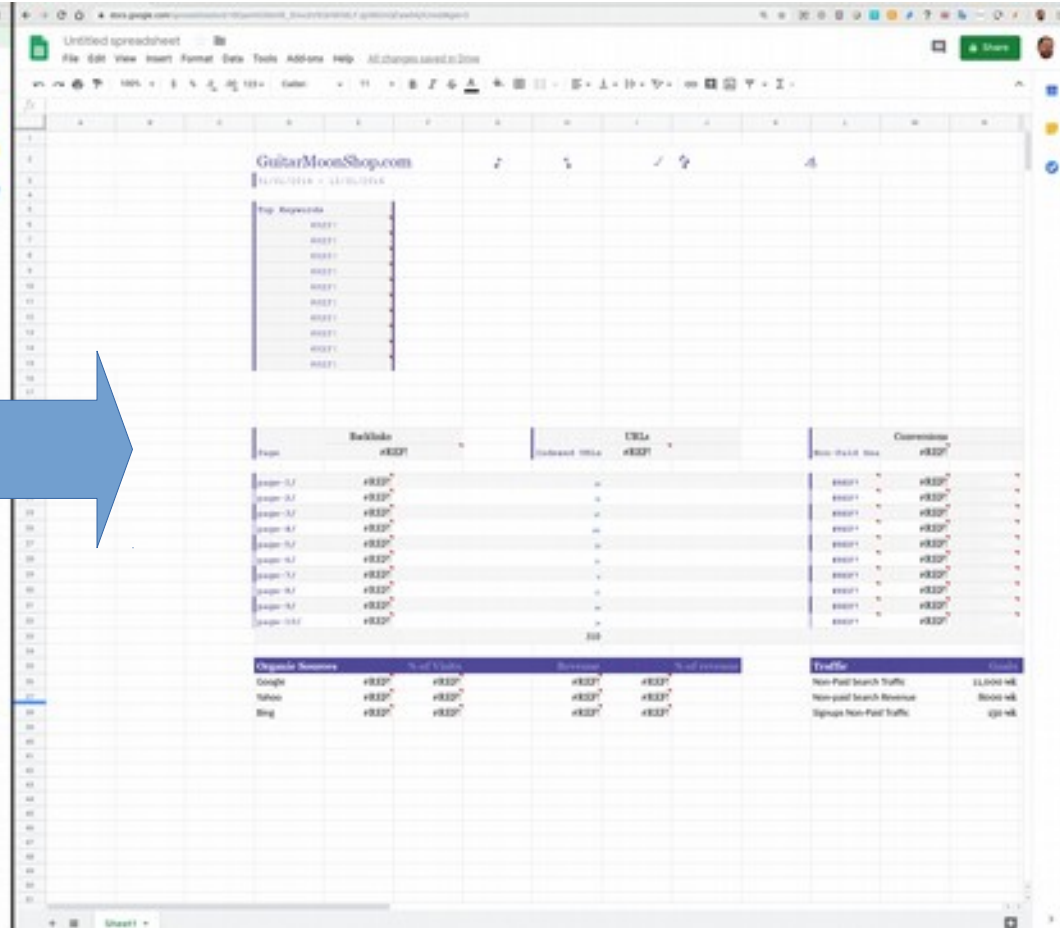
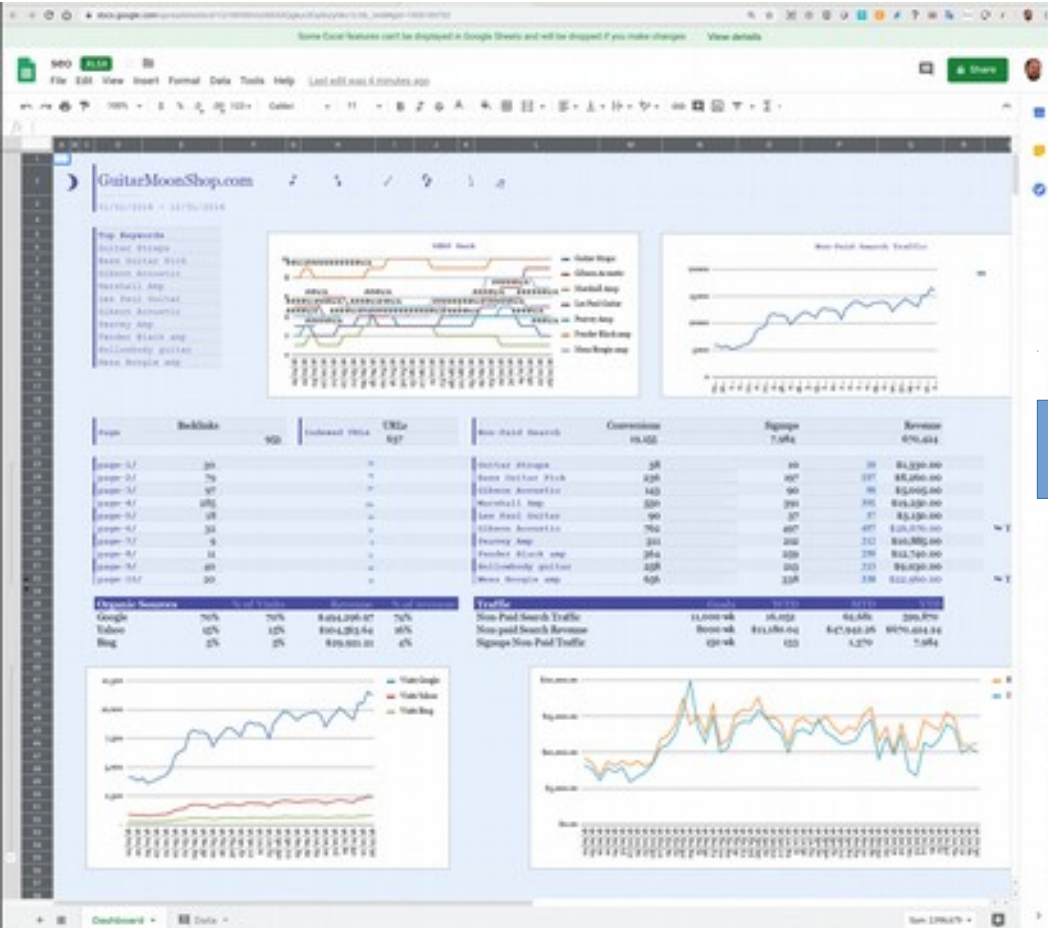


# Afterwards (plus explicit chart copy)



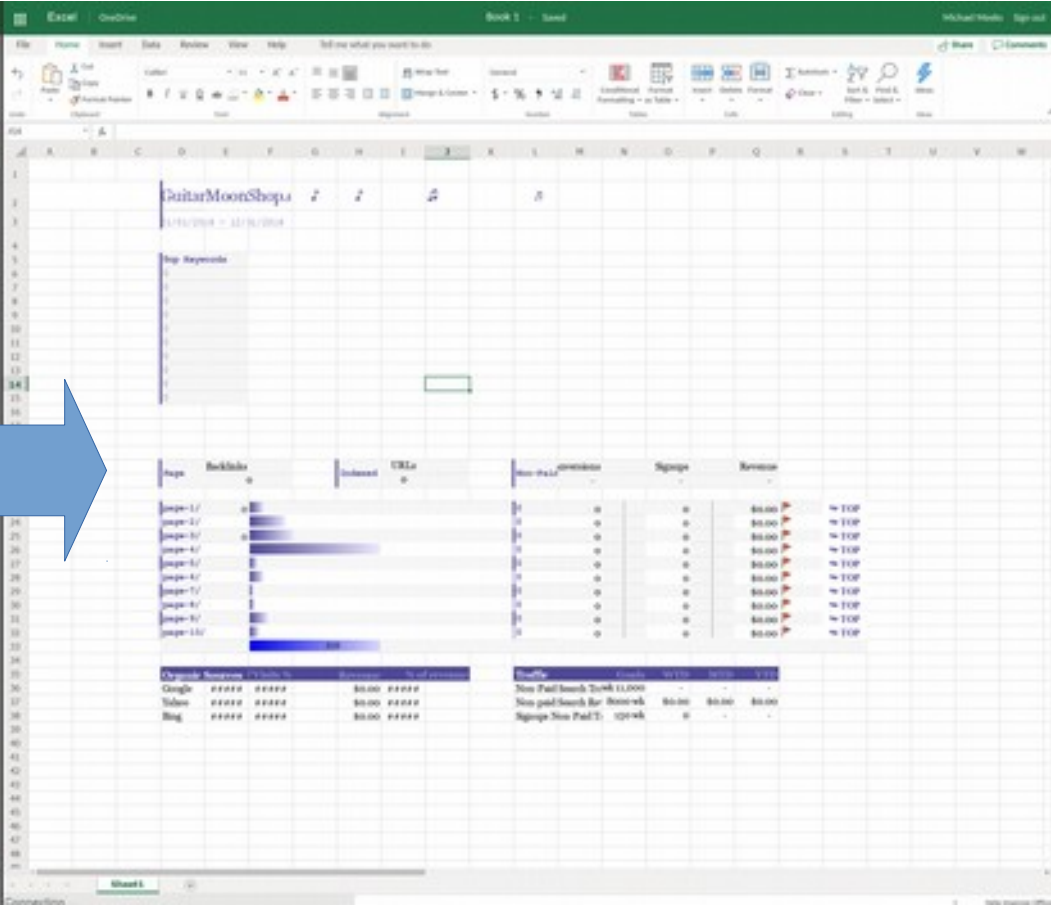
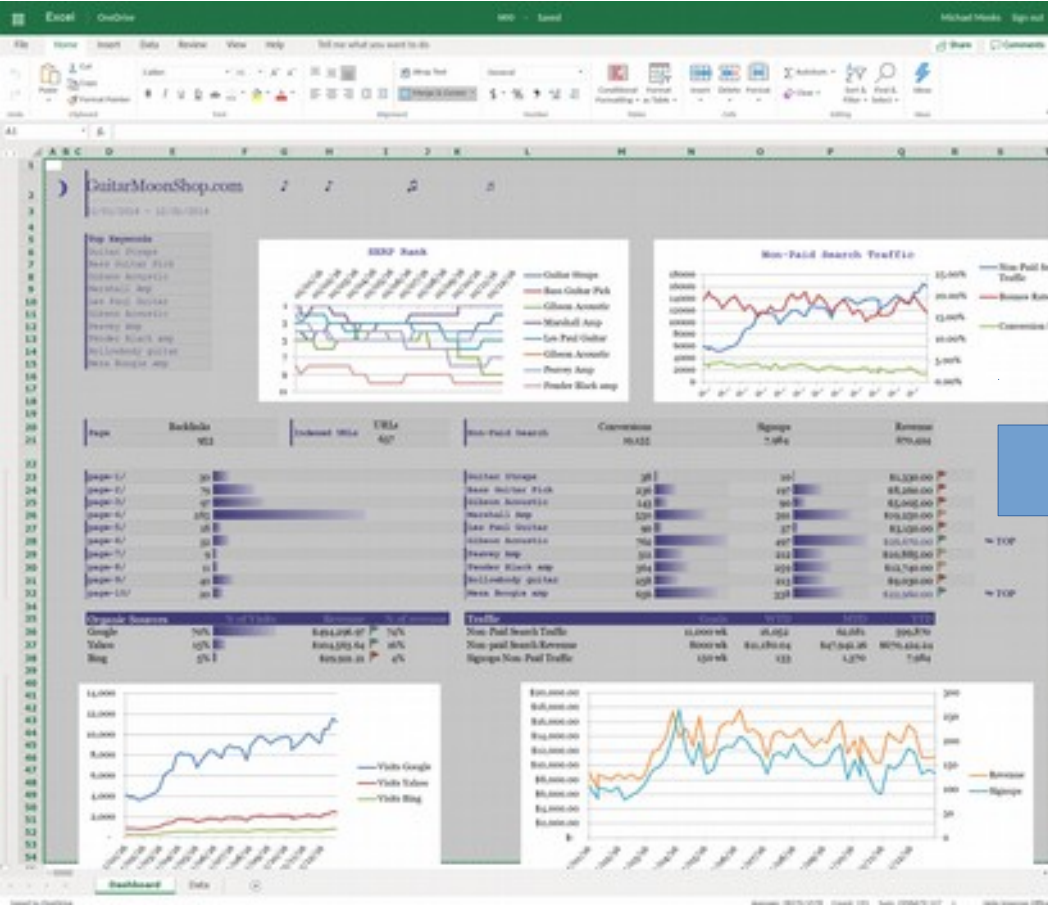


# Just the basics ? Gdocs / Chrome comparison





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



# Interop: the best all-round implementation and constantly improving ...



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

**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.

**Integration with Nextcloud  
wins – in last year**



# Lots of lovely new things ...

## RichDocuments goodness

- Federation & Global Scale [!]
- Secure View + Watermarking UI
- Template selector
- Integrated preview support
- File Renaming support
- Improved UI: Avatars outside
- Version integration with NC sidebar
- Insert image from Nextcloud
- Improved admin / options
- Performance improvements

## Mobile / iOS & Android – direct editing

- Embedding Collabora *Online*
- Native print & Save As support
- Rich copy/paste integration
- Hide fullscreen, improved idle

## Thanks to

- Julius Härtl, Roeland Jago Douma, Marino Faggiana, Tobias Kaminsky



## Easy sharing – close at hand ...

The screenshot displays the Collabora Online web interface within a Google Chrome browser. The browser's address bar shows the URL `share.collabora.com/index.php/apps/files/?dir=/ADemo&fileid=...`. The interface features a purple header bar with navigation icons and a menu. Below this is a toolbar with options like File, Edit, View, Insert, Format, Table, Tools, and Help. The main editing area shows a document titled "Collabora Online.docx" with a rich text editor toolbar and a document preview. The preview includes a section titled "Collabora Online v 4.0" and a paragraph describing the software as an enterprise-ready LibreOffice-based Online Office Suite. A sidebar on the right contains a sharing panel for "Collabora Online.docx", showing its size (627 KB) and age (6 months ago). The sharing panel includes a search bar and a list of sharing options: "Share link", "Add to a project", and "Connect items to a project to make them easier to find". A light blue circle highlights the sharing options in the sidebar.

Collabora Online.docx - Files - Nextcloud - Google Chrome (on dell.home)

Collabora Online.c x +

share.collabora.com/index.php/apps/files/?dir=/ADemo&fileid=...

Collabora Online.docx

File Edit View Insert Format Table Tools Help

100% Default Style Montserrat 22 B I U S A Aa

Collabora Productivity

**Collabora Online v 4.0**

**Collabora Online 4.0: 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.

YOU editing... ASSIST editing... FORMATTING editing...

Collabora Online.docx

★ 627 KB, 6 months ago Tags

C... Acti... Comm... Shar... Versi...

Name, federated cloud ID or email address →

- Share link
- Add to a project
- Connect items to a project to make them easier to find

Search: Page 1 of 2 281 words, 1,915 characters Standard selection English (USA)





# Collabora Online for thumbnailing

Files - Nextcloud - Google Chrome (on dell.home)

share.collabora.com/index.php/apps/files/?dir=/ADemo&fileid=68859

All files

Recent

Favorites

Shares

- Shared with others
- Shared with you
- Shared by link
- Deleted shares

Tags

Deleted files

3.6 GB used

Settings

ADemo

<input type="checkbox"/>	CharTest.odt	11 KB	3 months ago
<input type="checkbox"/>	Collabora Online.docx	627 KB	6 months ago
<input type="checkbox"/>	Collabora Online.odt	653 KB	3 months ago
<input type="checkbox"/>	collabora-online.docx	411 KB	7 months ago
<input type="checkbox"/>	cs3-2019-with-animation.odp	8.5 MB	4 months ago
<input type="checkbox"/>	demo-embedded-content-showcase.docx	36 KB	9 months ago
<input type="checkbox"/>	demo-timeline.xlsx	11 KB	3 months ago
<input type="checkbox"/>	designer-cv.odt	1.1 MB	6 months ago
<input type="checkbox"/>	designer-cv-lool.odt	1.1 MB	9 months ago
<input type="checkbox"/>	embedding.odt	15 KB	a year ago

41 files 25.6 MB

Collabora Online.docx

627 KB, 6 months ago

Tags

Chat Activity Comments **Sharing** Versions

Name, federated cloud ID or email address...

Share link

Add to a project  
Connect items to  
easier to find

- ☒ Allow editing
- ☒ Hide download
- ☐ Password protect
- ☐ Set expiration date
- ☐ Note to recipient



# Directly insert images easily

Collabora Online.docx - Files - Nextcloud - Google Chrome (on dell.home)

Collabora Online.c x +

share.collabora.com/index.php/apps/files/?dir=/ADemo&fileid=...

File Edit View Insert

100%

Insert from Nextcloud

Photos

ajpeg 948 KB

a.png 11 KB

a... sident.png 392 KB

captive.jpeg 29 KB

Ch... south.jpg 2.4 MB

gre...atch.jpeg 652 KB

Paris.jpg 223 KB

San ... isco.jpg 211 KB

Choose

Collabora Online.docx

627 KB, 6 months ago

Tags

Acti... Comm... Shar... Versi...

Share link

Add to a project

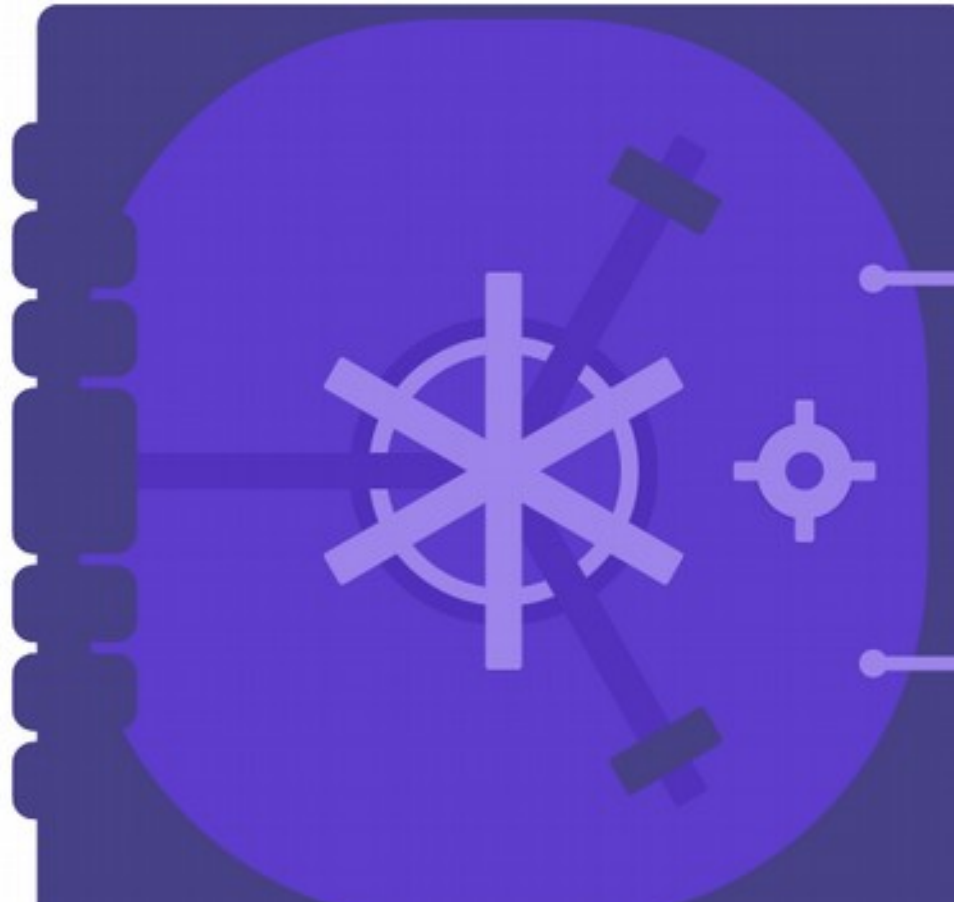
Connect items to a project to make them easier to find

Search: Page 1 of 2 281 words, 1,915 characters Standard selection English (USA)

# 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

Document data is held in your server room.

Not sent to every single device to be controlled by the browser + JS + local debugger.

C'bra sends pixels to clients.



# Secure View: [No] Download + watermarks

The image shows the Nextcloud interface with the 'Secure view settings' panel open. The settings include:

- Secure view settings**
  - Secure view enables you to secure documents by embedding a watermark
  - ☒ Enable watermarking
  - Watermark text: Confidential: Accessed by {userId} at {date} →
  - Supported placeholders: {userId}, {date}
  - ☒ Show watermark on tagged files
  - confidential (restricted)
  - ☒ Show watermark for users of groups
  - externals
  - ☐ Show watermark for all shares
  - ☐ Show watermark for read only shares
- Link shares**
  - ☐ Show watermark for all link shares
  - ☒ Show watermark for download hidden shares
  - ☐ Show watermark for read only link shares
  - ☒ Show watermark on link shares with specific system tags
  - confidential (restricted)

The background shows a document preview of 'embedded-content-showcase.docx' with a watermark: 'Confidential: Accessed by [userId] at 2019-09-10 11:30:57'. The document content includes 'Collabora Office', 'Embedded editable chart', and 'Collabora Productivity'. Below the document preview, there is a preview of a PDF document titled 'Nextcloud Server Administration Manual Release 13' with a watermark: 'Confidential: Accessed by [userId] at 2019-09-10 11:30:57'. The PDF content includes 'Nextcloud Server Administration Manual Release 13' and 'The Nextcloud developers'.

Watermarked Editing

Watermarked PDFs (if allowed)

collaboraonline.com

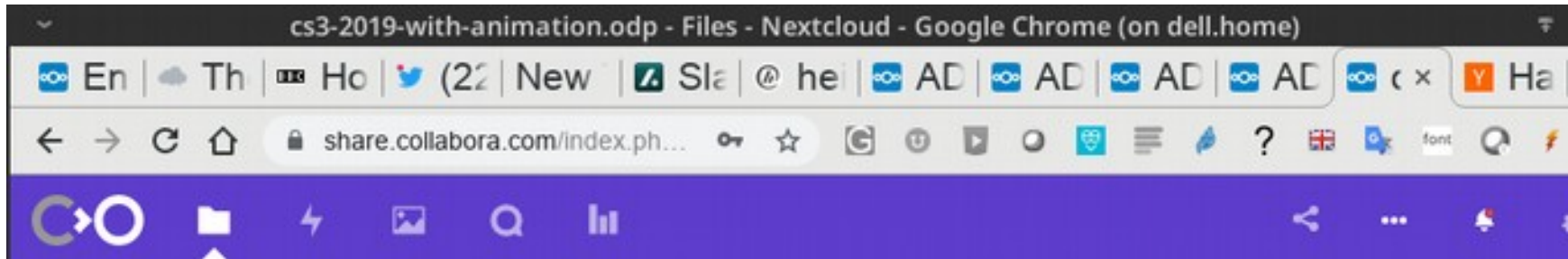


# Simple, per-user pricing

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

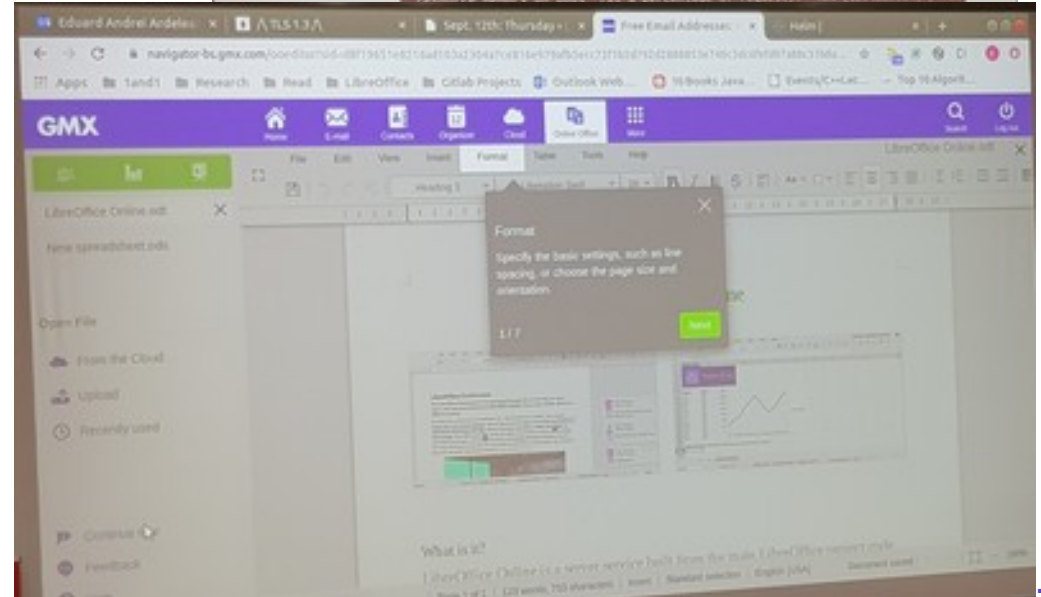
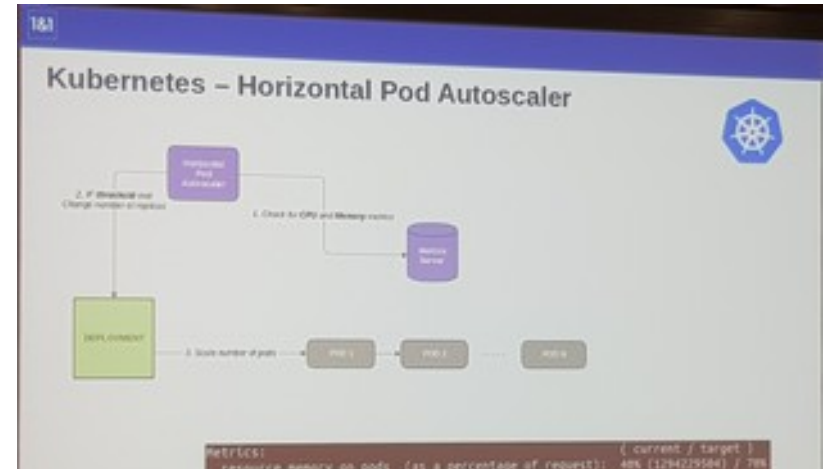
- Scales with the network.

## Simple architecture:

- No new HA Database
- No new message-bus
- No shared data storage

## eg. 1&1 / GMX

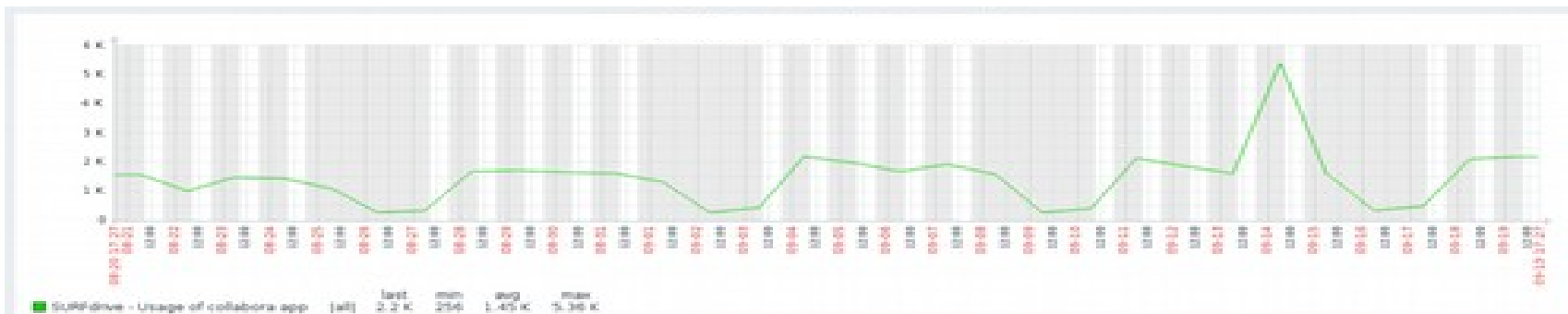
- ~millions of users with access



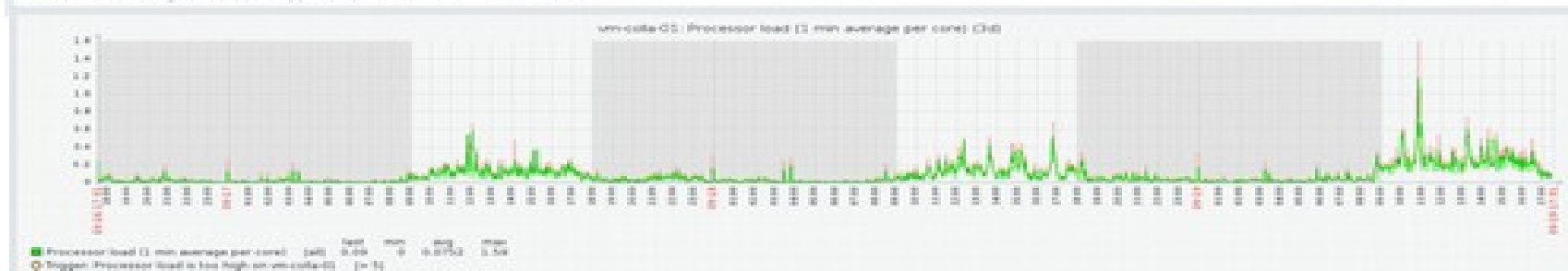


# Real world: 40k users – Collabora Online

Usage



CPU



Free  
RAM:  
13.5Gb  
→  
11Gb

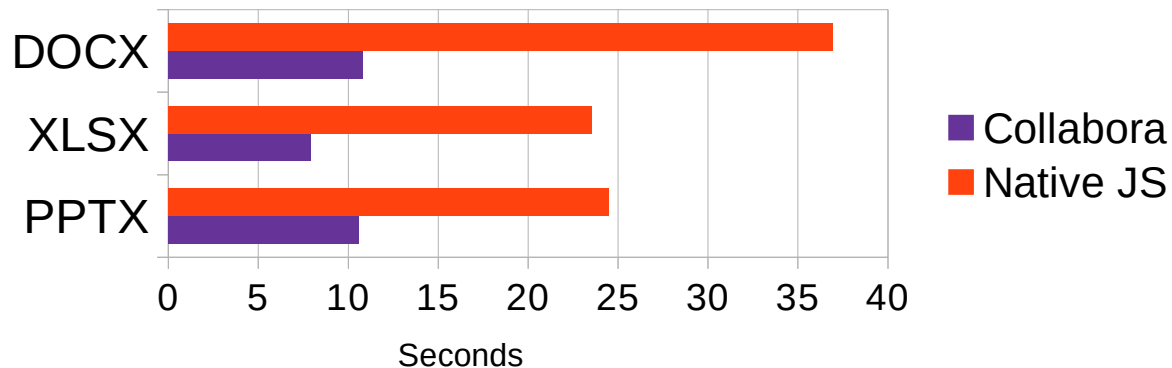






# Do the work on battery, or in the data-center ?

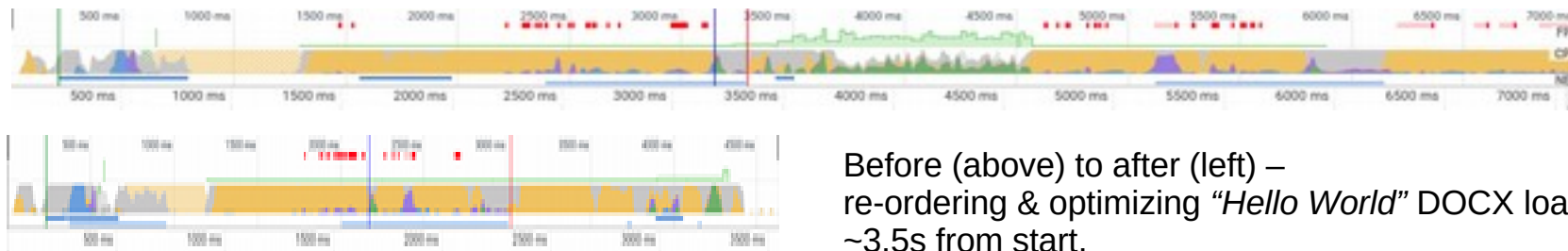
Time to load & render blank files - Galaxy S4



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.

Federal Ministry  
of Economics and  
Technology





Collabora Productivity

# Conclusions

- Our mission applied
- Rich partnership with Nextcloud
- Gorgeous, interoperable Document collaboration
- Seamless support with SLA
- Rapid improvement
- Long term support
- Scalable & easy to deploy
- Backed by large, diverse community & Berlin based Stiftung.
- Product Management today