Unleash the Power of COOL

Seamless Integration, Cutting-Edge

**Features and Empowered** 

**Collaboration** 

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CEO
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### **Collabora Online**

**Powerful Online Collaboration** 



**CW2** What is Collabora Online?

#### **Documents + Spreadsheets + Slides + Drawings**

- Viewing and collaborative editing
- Feature rich

#### **Interoperability with Microsoft formats**

docx, doc, rtf, xlsx, xls, pptx, ppt

#### Import filters and viewing for

PDF, Visio, Publisher and many more

### **Powerful WYSIWYG rendering**

**On-premise integration** 

Architecture - a bet on CPU threads and network getting cheaper over time







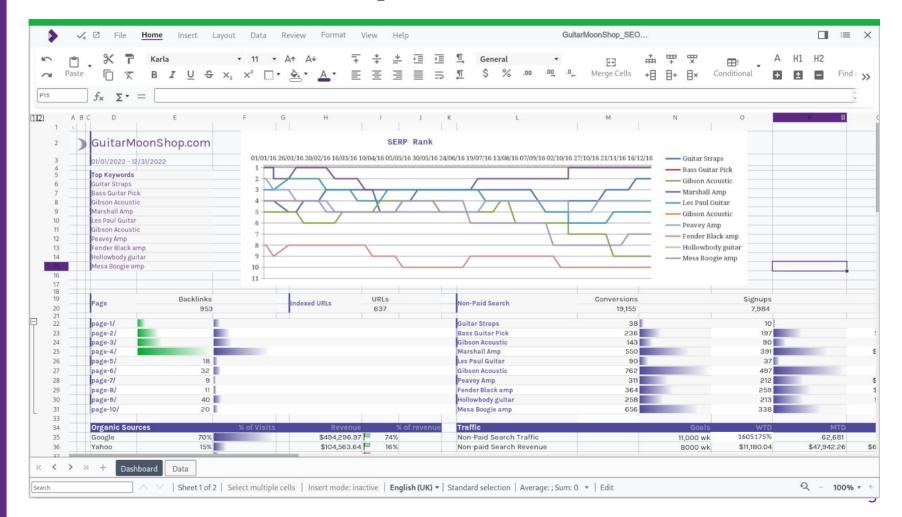
### CW2 Collaborative Writer







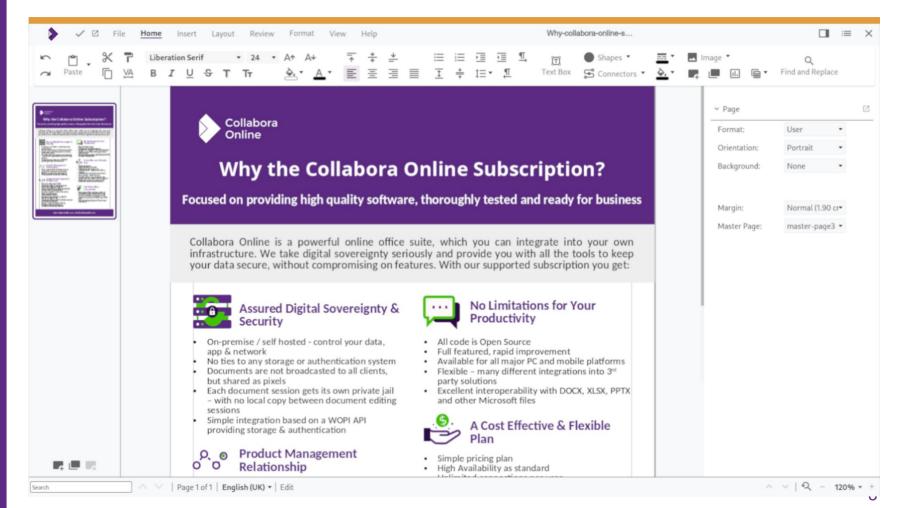
## **Collaborative Spreadsheets**







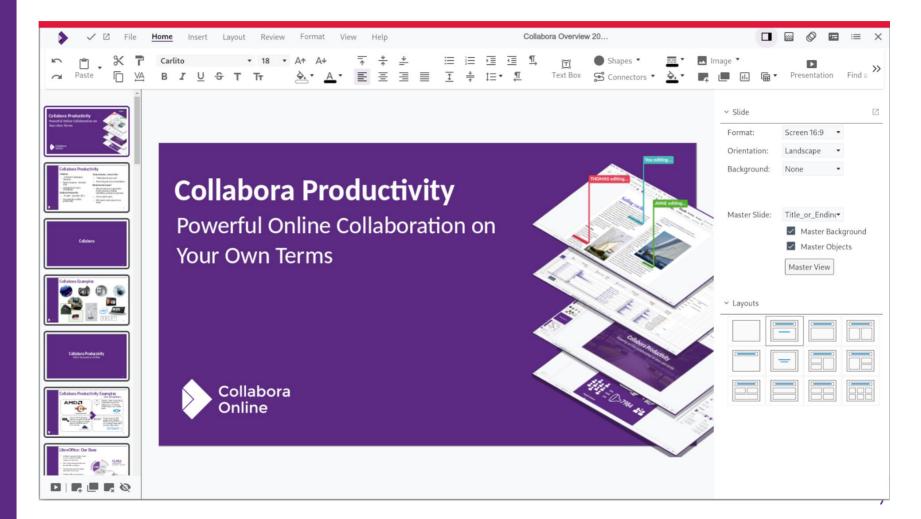
## **Collaborative Drawing**







## **CW2** Collaborative Presentations





CW2 Collabora for Android, iOS &

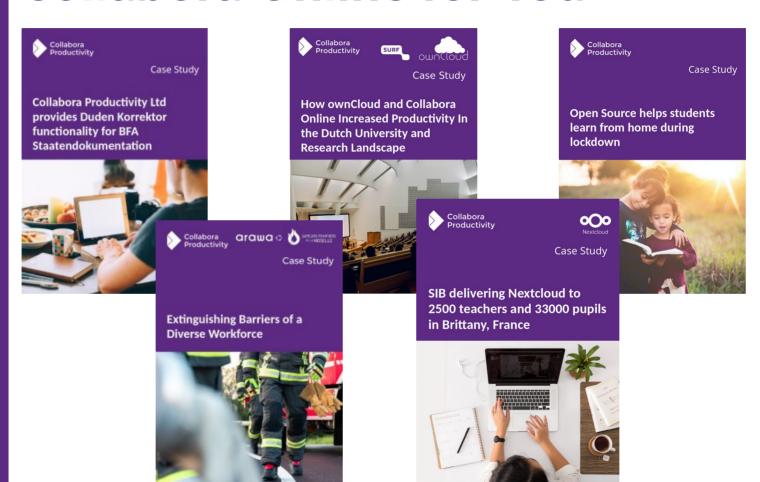
Chromebooks







# Collabora Online for You



**SMBs** 



**Enterprises** 



**Education** 



Hosting



**OEM** 



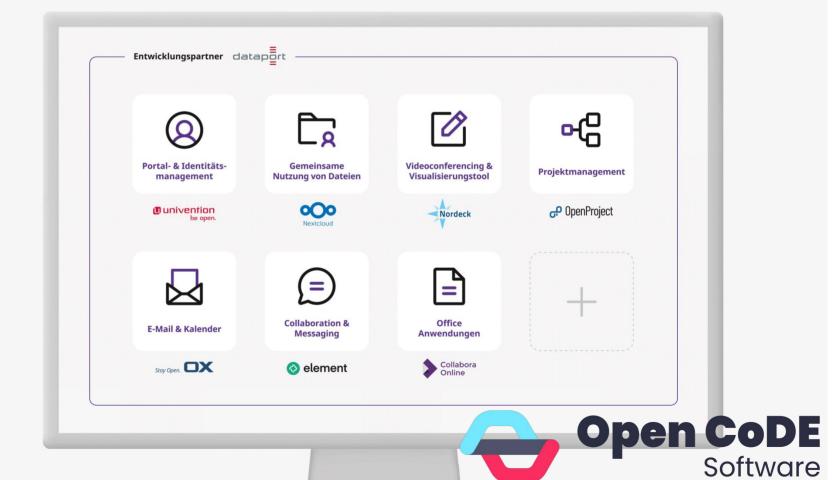




### cw2 openDesk

#### Including IT-Grundschutz work with Dataport

Der Souveräne Arbeitsplatz





### **Collabora Online**

Distinctives



## **Friendly Open Source Project**



#### **Real Open Source**

- 100% Open Source code
- Built with LibreOffice technology
- Built with Free Software technology stacks: primarily C++
- Runs best on Linux

#### **Open Development**

- Anyone can contribute & participate
- Follow commits and tickets
- Public community calls forum has details

#### **Focus**

- A non-renewable resource
- Office Productivity & Documents
- Excited about migrating your documents
- Grateful to our partners for solving other problems





## **Friendly Open Source Project**



#### **Responsive Support**

- Standing behind our customers
- ISO 9001, and ISO 27001 certified

#### Sensible licensing

As many servers & connections
 & containers & VMs as you need

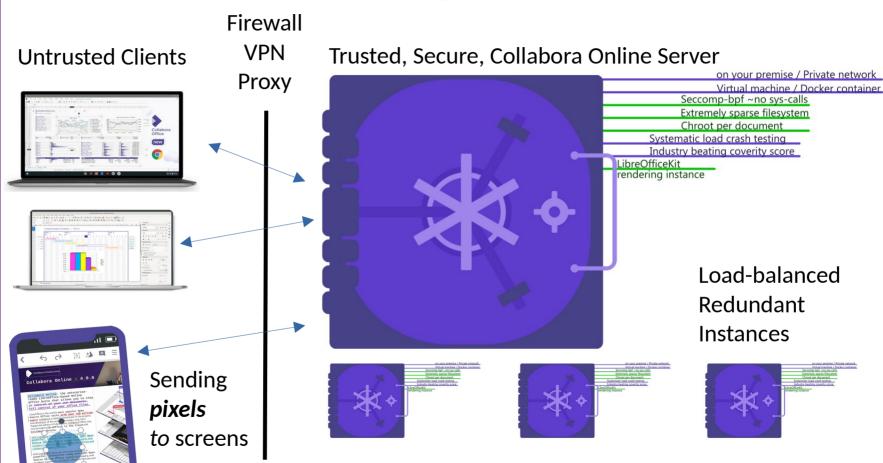
#### "Office for the free world"

- Friendly Developers
  - 50% EU, 75% NATO, global org +
     LibreOffice technology community
- Friendly Investors
  - 50/50 ~Canada/UK
- Engineers that can travel to you
- Clean hands





## **Document Security**

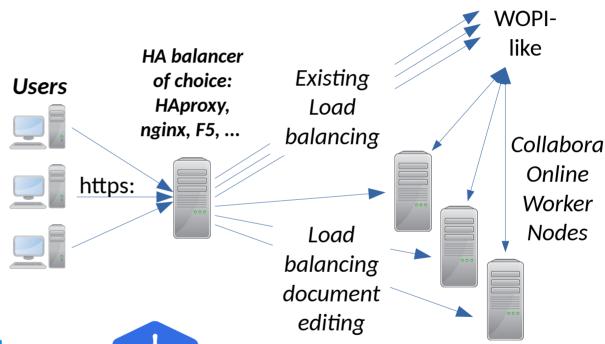




## Highly Available & Simply Scalable

### eg. grab our helm-chart

- Incremental /
   available
   upgrade-ability
- No extra services
- Management (eg. Kubernetes)











**EFSS** 

### **COOL Controller**

Even easier deployment & scaling



### **Scaling Collabora Online with Kubernetes**

- Improved scaling and load distribution
- Cost efficient server usage
- Perfect for large deployments

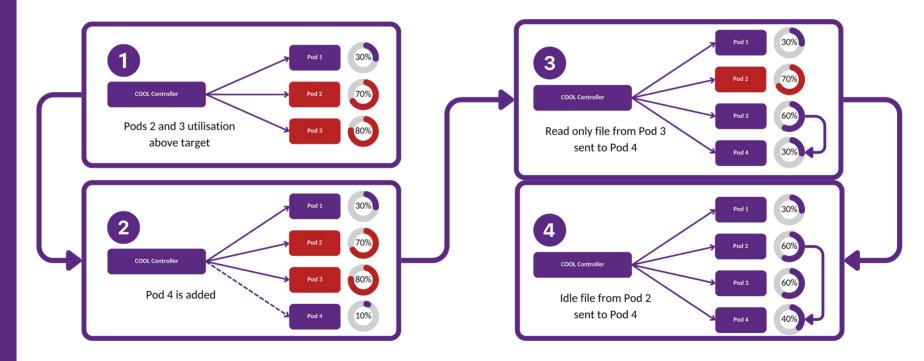






### **Scaling Collabora Online with Kubernetes**

Load scaling example – target pod utilisation <70%</li>

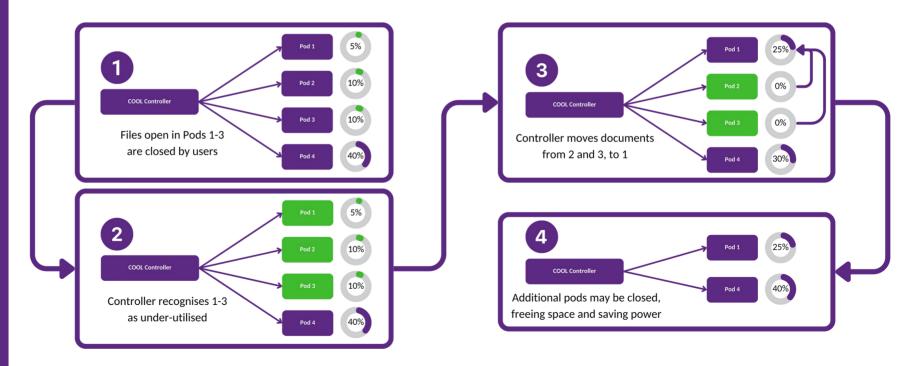






### **Scaling Collabora Online with Kubernetes**

Load scaling example – pod under-utilisation





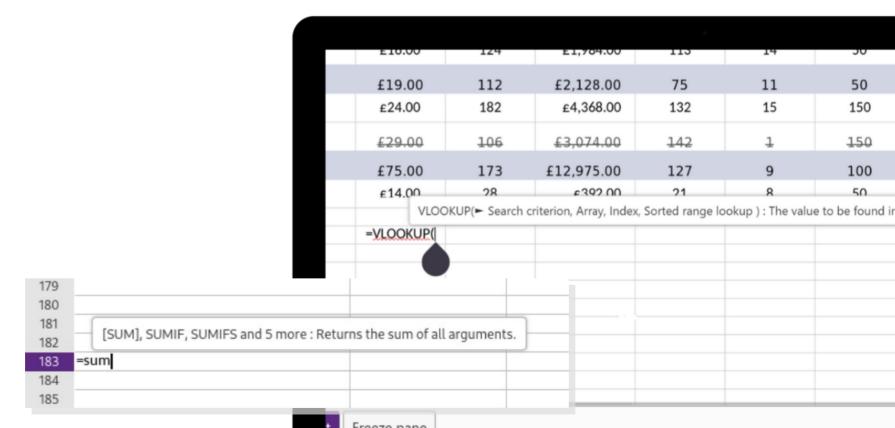
### Latest Features in 24.04

Lots of work over the past year – let us free your documents!



## **Contextual Tooltips**

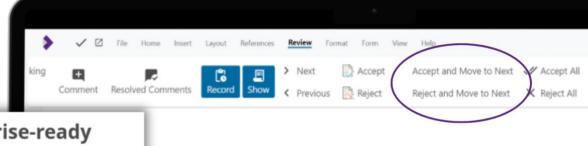
Start to type a formula and a list of available formulas appear







## **Better Tracked Change Processing**



Collabora Online: the enterprise-ready

Deleted: Alan - 04/27/2017 17:11:07 e Office Suite that
allows you to stay in control of your own
documents. full control of your office files.

## **SSS**Sailing yacht

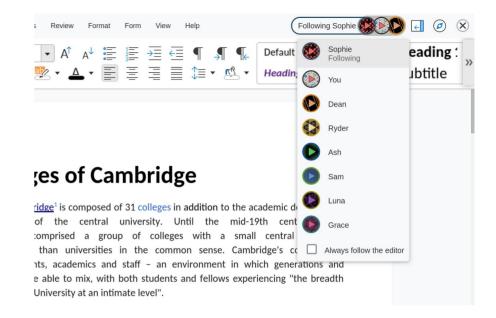
AA sailing yacht (US ship prefixes SY or S/Y), is a leisure craft that uses sails as its primary means of propulsion. A <u>yacht</u> may be a sail or power vessel used for pleasure, cruising, or racing.[1][2][3] There is no standard definition, so the term applies here to sailing

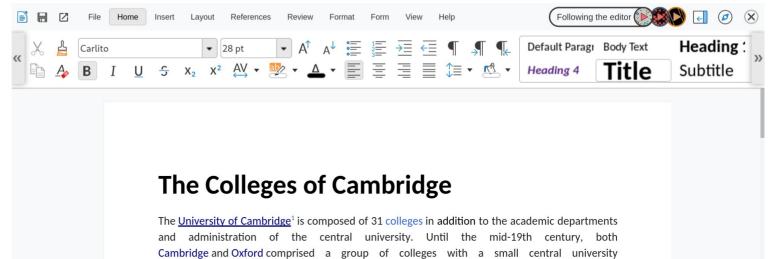




### **Follow Users**

- New interface for clarity
- Unfollow with just a click

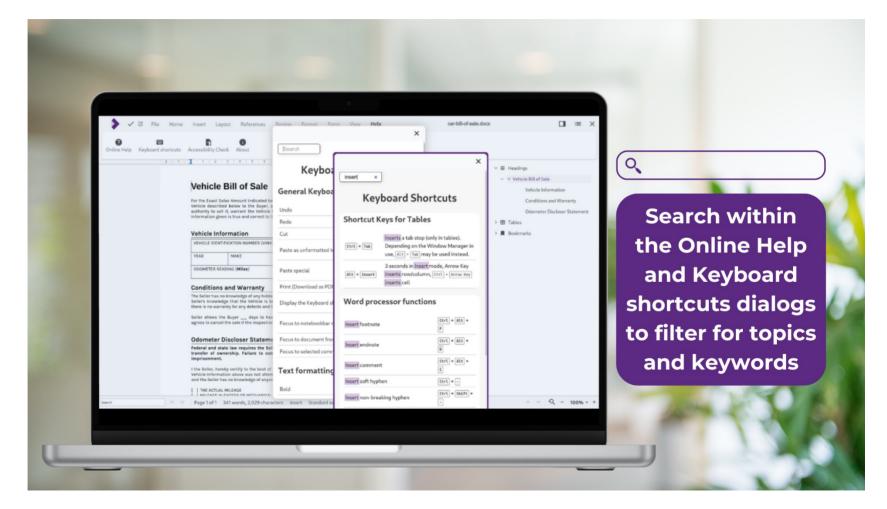








## Search for Help



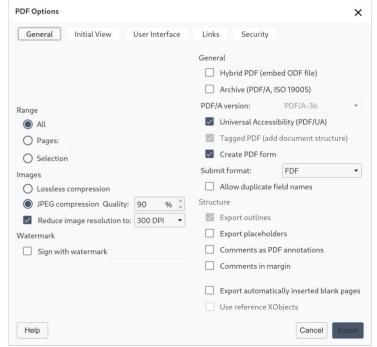




## **PDF Improvements**

- Generating accessible PDFs with PDF/UA export
- Exporting to PDF v.1.7 by default
- Tagged PDFs produced by default
  - Include hidden accessibility markups to improve the reading experience with screen readers and other assistive technologies
- Hybrid PDFs now storing original ODF documents
  - For sharing documents with others as a pdf, while retaining the functionality of being able to modify the original file









## **Continued Accessibility Wins**

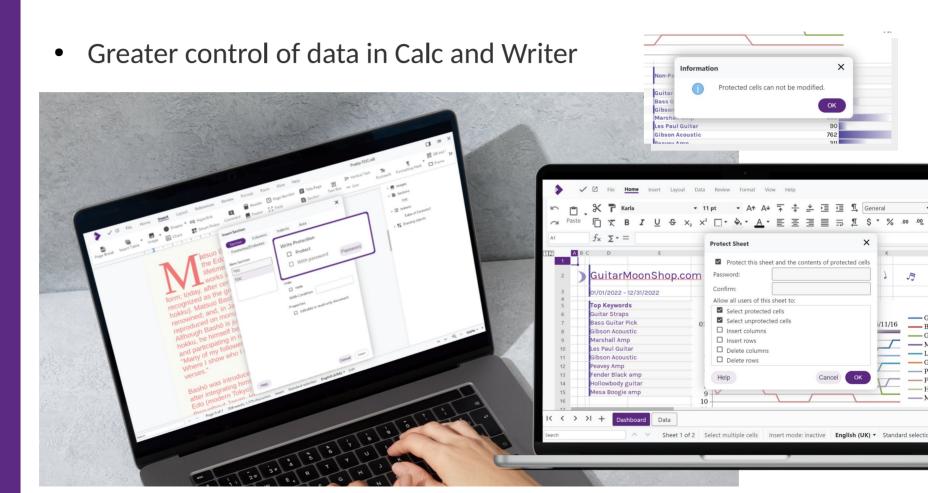
- Screen reading & keyboard usability wins
- Processing lots of Audit results
  - Actively fixing and polishing large numbers of improvements
- Target full WCAG 2.0 AA conformance







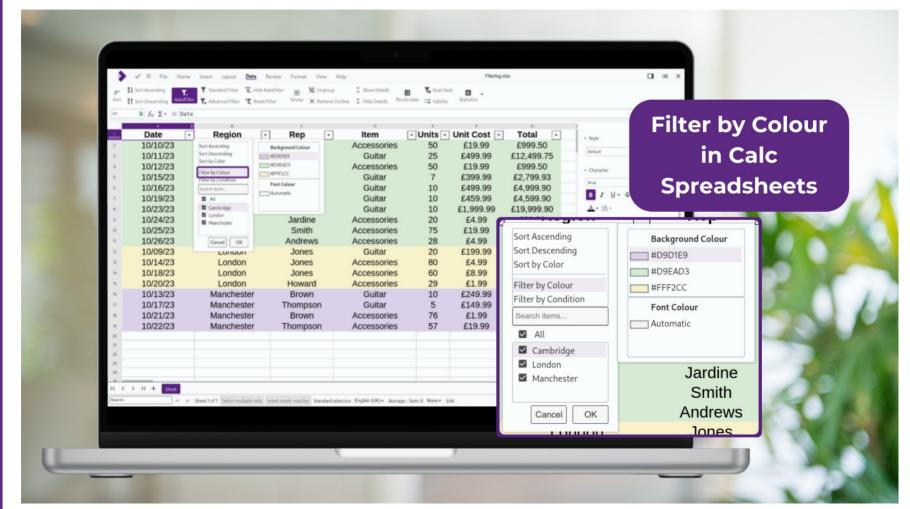
## Cell Protection and Section Editing







## **New Filter Options**







## **Improved Read-Only Mode**

- Previously, read-only access was not interactive
- Now we offer more granular control for documents and spreadsheets
  - Allow users to select document text
  - Improved accessibility
- Plus you can now follow hyperlinks in read-only documents







## Present in Window

New option to present slides in a new window







## Quarantine

- Rescue documents from corner-cases
- Imagine someone changing permissions on the document you are editing...
- Suspends the state-less-ness we know and love somewhat
  - Off by default







### **Auto-Save**

- Auto-saving can now be carried out in the background
- Fewer interruptions to editing
- 700ms before the animation, 7ms to fork...



Fewer interruptions with 24.04



## Interoperability



## **Smart Justify**

- Maximised interoperability with Microsoft Word
- Image shows a composite
   of pages typeset by Writer
   (black) and Microsoft
   Word (red) before and
   after the update.
  - The line breaks
     ultimately resulted in
     a two-page document
     for Writer, where
     Word rendered as
     one.

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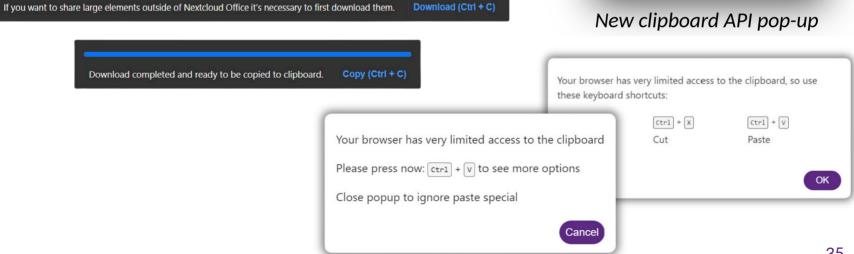


\*Many thanks to László Németh, the European Commission's Next Generation Internet programme and NLnet

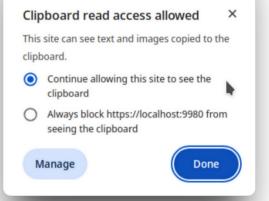


## **Simplifying Copy and Paste**

- Toolbar buttons work as expected
- Fasier for the end user
- No download required









## HTML Copy/paste with Google Sheets

- Reverse-engineered and documented Google Sheets extensions
  - Preserves formulae vs values and styling
  - Ensuring that data copied from Calc includes

markers such as <google-sheets-html-origin/>

to fully work with Google Sheets

Online copy/paste as well as from

**Google Sheets** 







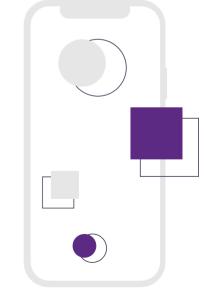
### **Improved Graphics Support**

- Previously SVGs would default to the fallback PNG
  - OOXML should now render the SVG image correctly
- Three interoperability issues related to Windows EMF and EMF+ files

have also been resolved

 Smoother experience when working with SVGs, EMF and EMF+ files







### CW2 STYLEREF

Create dynamic headers or footers that automatically update based on changes in the document.

Document Cross-references Functions DocInformation Variables

Selection

Value

Filter Selection

STYLEREF Example

STYLEREF Example

**Fields** 

Set Reference

Bookmarks Styles

Insert Reference

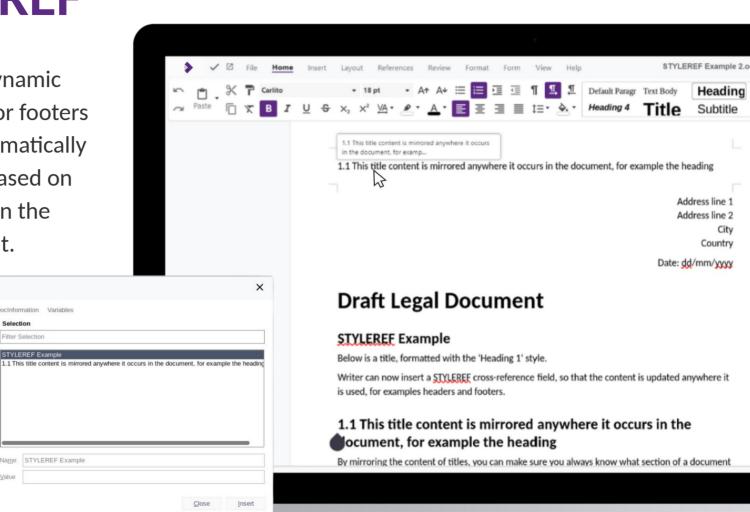
Numbered Paragraphs

Page number (unstyled)

"Above"/"Below" Page number (styled)

Number (no context)

Number (full context





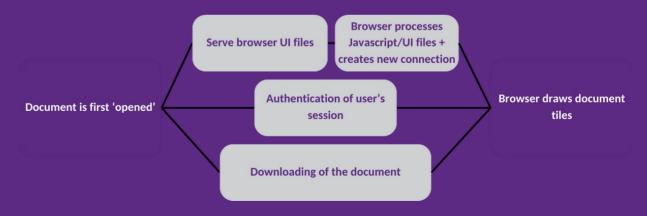
### Performance

### 2x Faster Document Loading



Carrying out processes in parallel to halve load times

Previously in series



Up to 2x faster in parallel

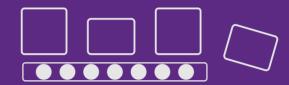
### Up to ~18x Faster Tile Compression

- This speed-boost stacks two improvements
  - 4.5x performance from run length encoding
  - 4x performance improvement from improved threading
- Combined for ~18x speed boost for tiles



### Improved Threading in Calc

- We tested time for loading, recalculation, and saving
- 650,000 test spreadsheets
- Time reduced from 3 days, to
   36 hours
  - ~2x speedup







### **Long Running Demo Profiles: A Week**

#### What does it mean?

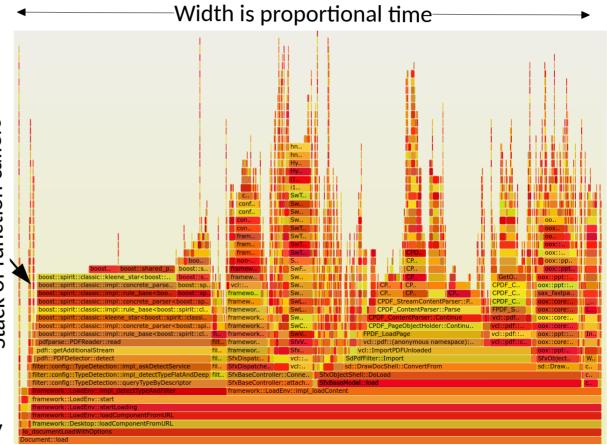
17% of a week of profiling:

Detecting: "is it a Hybrid PDF"?

Unbelievably
wasteful
Scan last 4k block S

'+17%

'AdditionalStreams







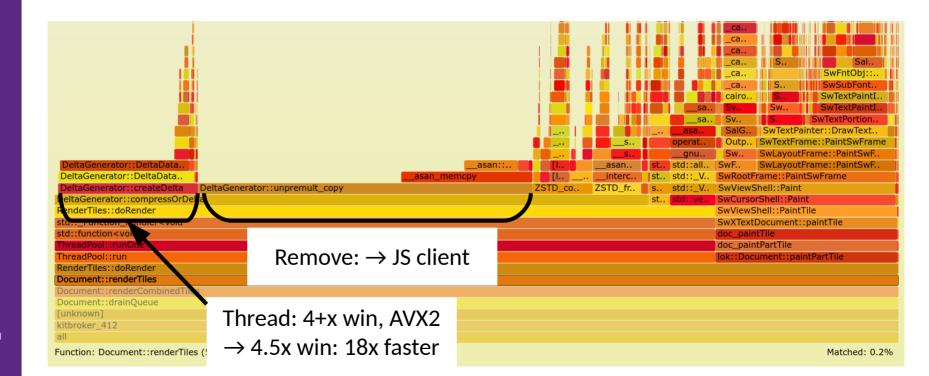
### Rendering Tiles 40% of Your Profile?

#### Lots of unnecessary re-rendering

Pruning the simple cases out

#### Silliness in various places

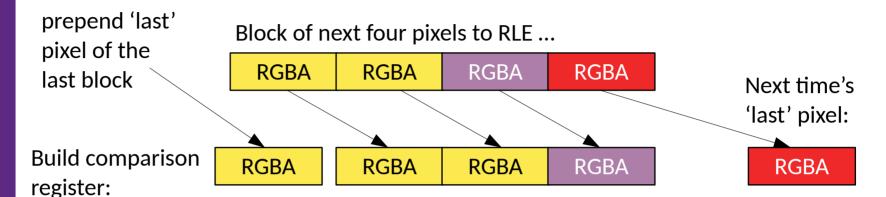
Now much improved





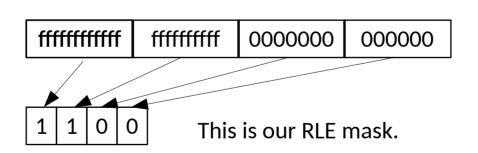
#### CW2

### The Magic of AVX2 - Branch Free RLE



Compare: cmpeq\_epi32

Magic: floating point sign mask: movemask\_ps



NB. really 8 pixels at a time, not four and more 0's and f's needed ...

How many pixels to copy? popcount(RLE mask)
Which ones? RLE Mask → LUT + AVX2 gather
permutevar8x32\_epi32 ... is your friend





### Performance – Faster & Simpler

#### A faster, slicker experience

- Memory trimming on idle: cleans caches & frees up memory
- Swap out compressed image data as well as uncompressed
- Faster load of large spreadsheets
- Significantly reduced re-rendering (even more pending)
- Continual style re-thumbnailing redux
   caching of generated JSON

- Improved tile pre-loading (with more caching work queued)
- Clamp over-sizing of threads
- Accelerated transparent text rendering
- Avoid background whole document renders
- Compress RLE'd tiles on the wire
- Scan /proc/<pid>/smaps\_rollup





### **Performance Tuning**

 Much faster for many operations – for example – multiple users to join a shared Writer document and scroll through a long, heavy Writer document.

120

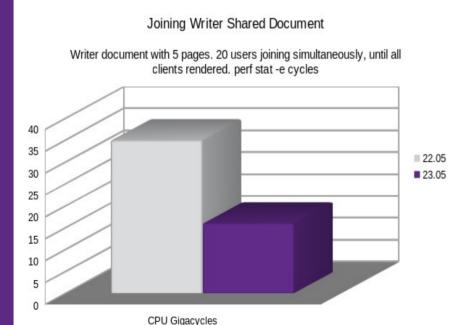
100

80

60

40

20



# 115 tables. Wheel scrolled from start to end. perf stat -e cycles 22.05 23.05

Writer Scrolling

Writer document with 157 pages, 164 shapes, 32 comments, 13 images,

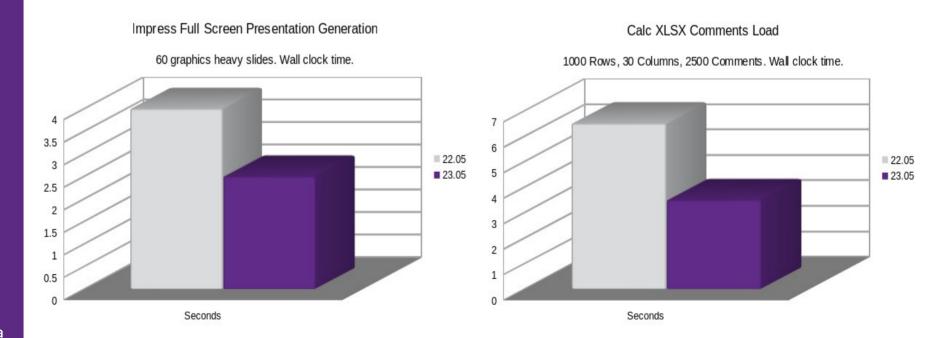
CPU Gigacycles





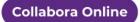
### **Performance Tuning**

 Reduced time to load graphic heavy Impress slide decks, and comment heavy Calc spreadsheets.





### Other Updates in the Last Year



### **Accessibility Features**



#### **Dark Mode**

**Initial Screen Reading Support** 

**Keyboard Navigation** 

**Accessibility Checker** 

PDF/UA

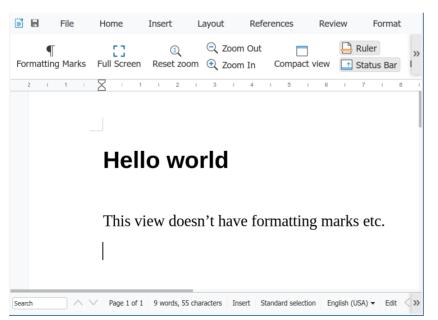
Find out more: col.la/accessibility

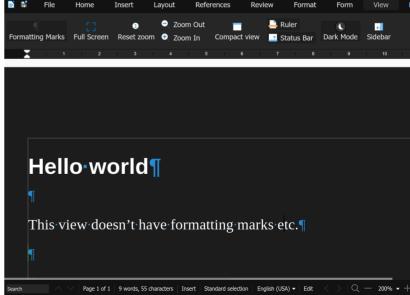


### Accessibility

#### **Dark Mode**

Also added various UI properties per-view: eg. non-printing characters,
 spell-underlines etc.









### Accessibility

#### **Keyboard Accelerators**

- Expansion for languages
  - Keyboard shortcuts have been expanded to allow all users to be able to use their own language's keyboard shortcuts when editing a file collaboratively.
  - Holding down the 'Alt' key will also highlight options for learnability.



#### Vehicl

For the Exact Sales Amount indicated below, Vehicle described below to the Buyer, acknow authority to sell it, warrant the Vehicle to be fro information given is true and correct to the best

#### Vehicle Information

VEHICLE IDENTIFICA	TION NUMBER (VIN#)
YEAR	MAKE
ODOMETER READIN	G (Miles)

#### **Conditions and Warranty**

The Seller has no knowledge of any hidden de Seller's knowledge that the Vehicle is being so

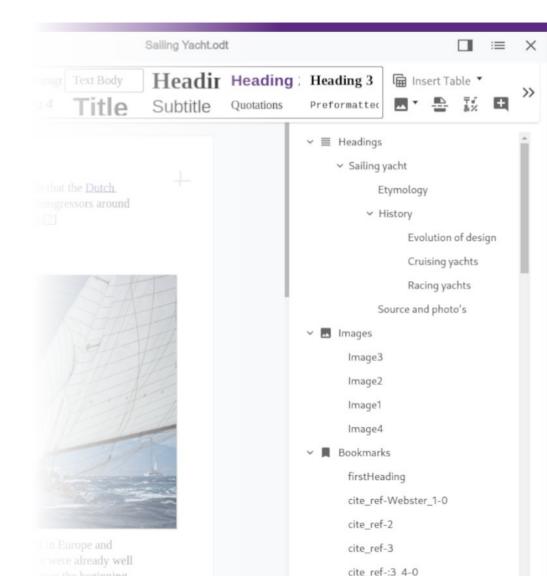




### Accessibility

#### **Page Navigation**

 Navigator functionality is viewable in the sidebar, allowing you to jump to each section by simply clicking the headings.







### Interoperability

### Document themes – controlling branding

 Document themes can be configured and applied to a whole document to easily change and re-purpose the appearance, giving it a consistent style and branding.

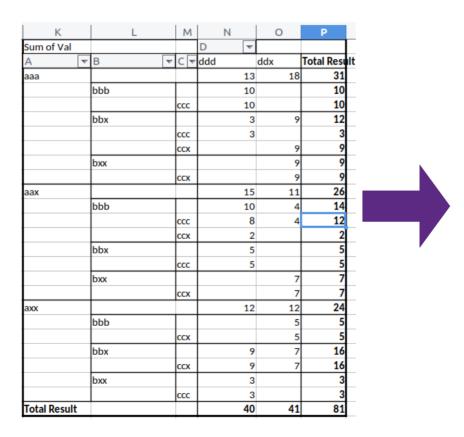






### **CW2** Interoperability

#### **Compact Pivot Tables for Calc Spreadsheets**



K		L		М	N
Sum of Val	D		₩		
Row Label: ▼	ddd			ddx	Total Result
⊟aaa			13	18	31
⊟bbb			10		10
ссс			10		10
⊟bbx			3	9	12
ссс			3		3
ссх				9	9
⊟bxx				9	9
ссх				9	9
⊟aax			15	11	26
⊟bbb			10	4	14
ссс			8	4	12
ссх			2		2
⊟bbx			5		5 5 7
ссс			5		5
⊟bxx				7	7
ссх				7	7
⊟ахх			12	12	24
⊟bbb				5	5
ссх				5	5
⊟bbx			9	7	16
ссх			9	7	16
⊟bxx			3		3
ссс			3		3
Total Result			40	41	81

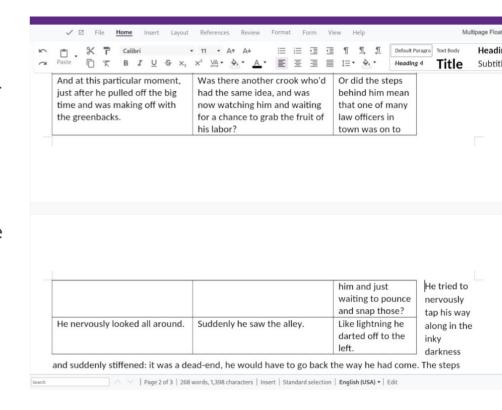




### Interoperability

#### Multi-page floating tables

- Allows your tables to span content over multiple pages inside floating frames
- Significantly improves interoperability
  with tables that have been accidentally
  floated by users, and that span multiple
  pages.
- Preserving layouts across platforms
  - Lots of mis-designed Government forms – where tables are used for rendering borders are improved, and rendered better.

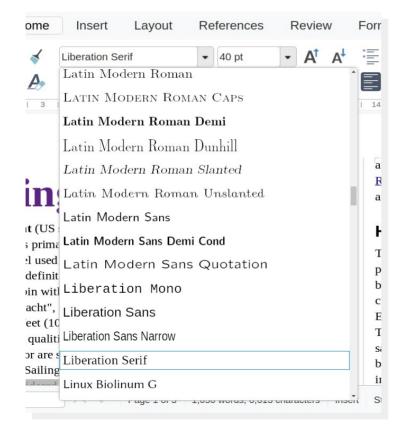


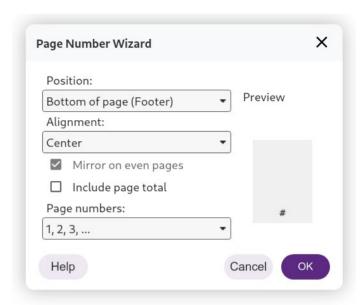




### CW2 Usability

#### **Updated**, simplified dialogs





Section	Write Protection
Section1	<b>☑</b> Protect
Section1	☐ With password Password
	Hide
	☐ Hide
	With Condition
	Properties
	☐ Editable in read-only documen

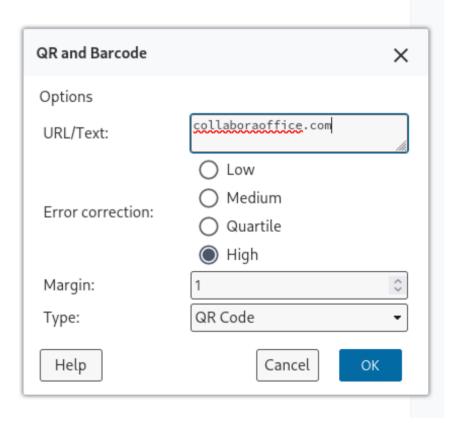




### CW2 Usability

#### **Easy QR Code Generation**





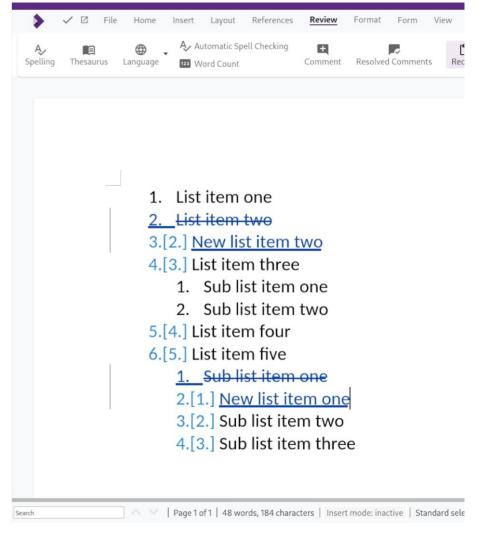




### **Usability**

#### **Change tracking in numbered lists**

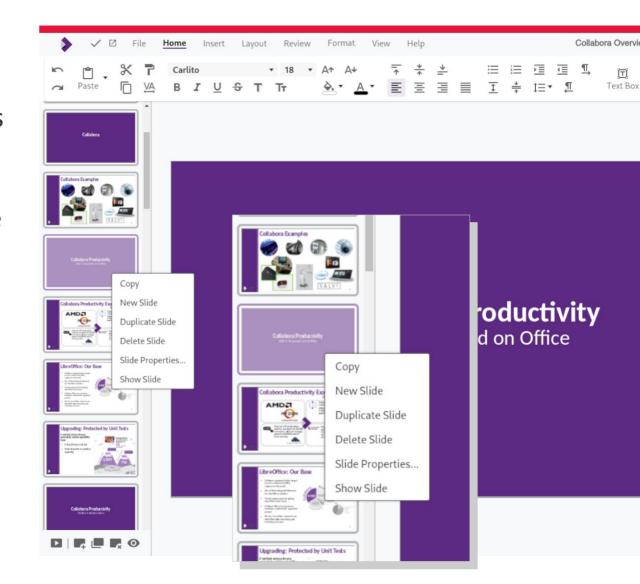
 When making changes within numbered lists, the numbering has now been fixed to show actual and original numbers within the document.





### **Usability**

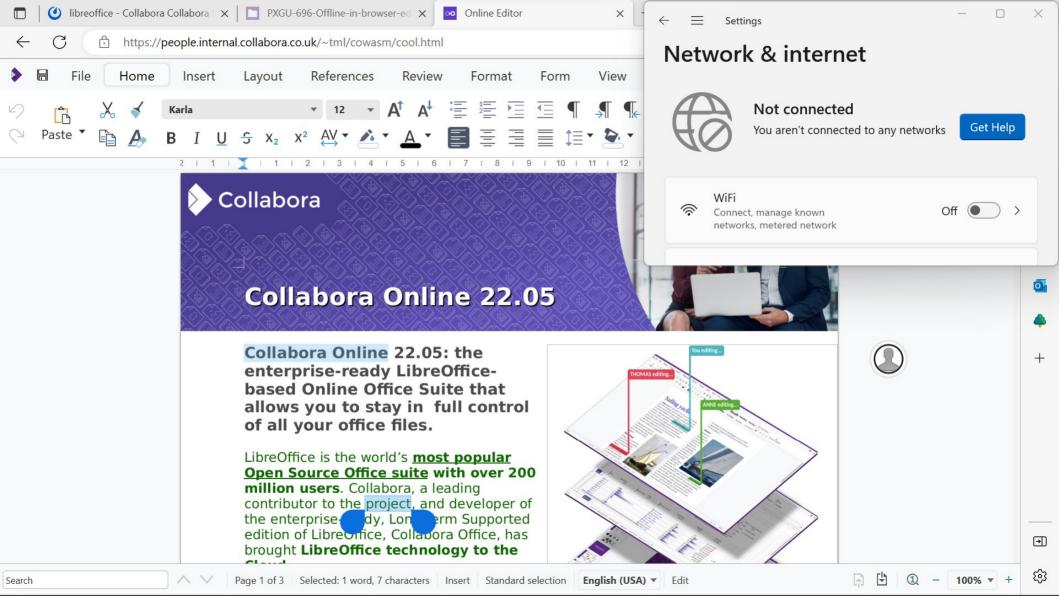
- Hide/Show slides in Impress
  - Easily choose which slides are visible





### Playground: WASM Prototype:

(not a product)



# With thanks to our Partners, Customers & Community!

#### CW2

### Some of Our Clients and Partners

we are NOT **FOR SALE** 



























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## CW2



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

### Thank you!









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