**Unleash the Power of COOL** 

Seamless Integration, Cutting-Edge Features and Empowered Collaboration

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#### **Collabora Online**

Powerful Online Collaboration



#### 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**







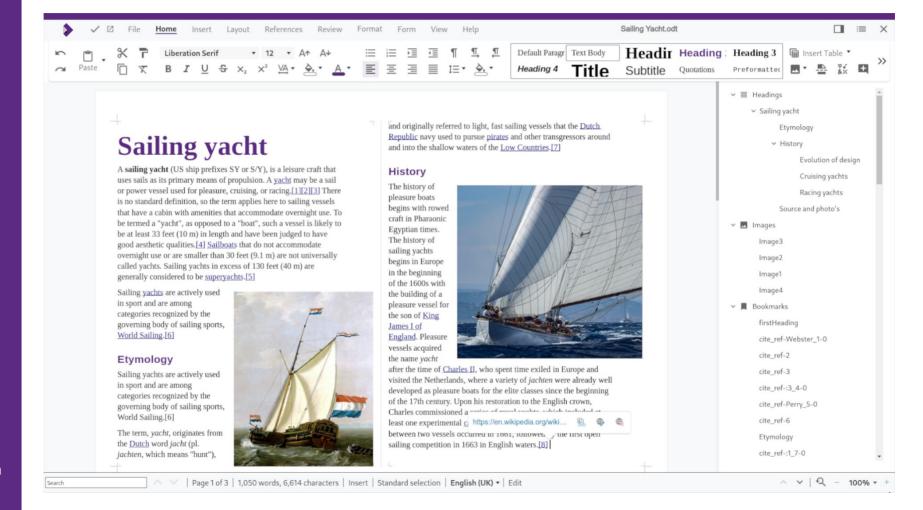








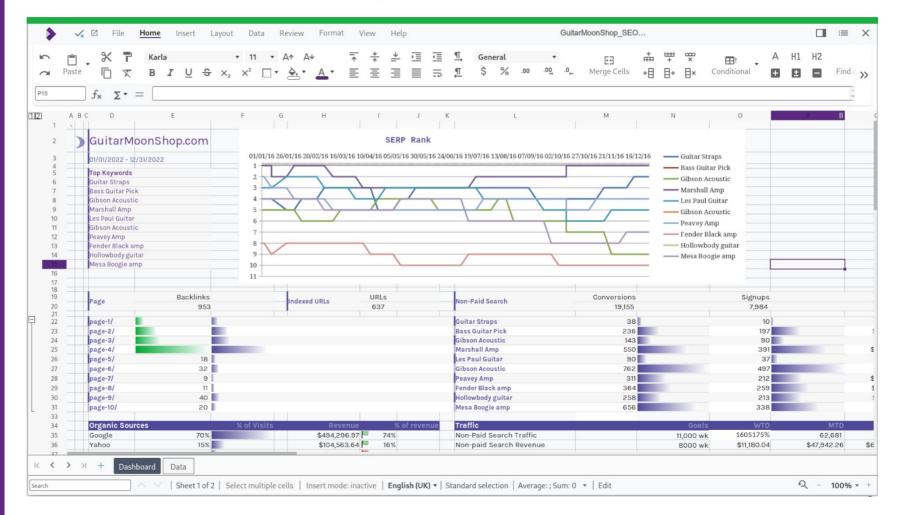
#### **Collaborative Writer**







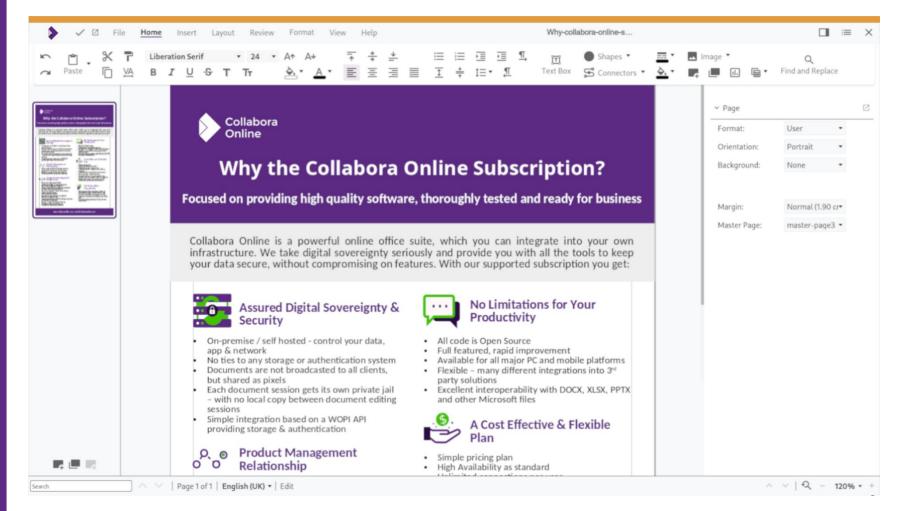
## **Collaborative Spreadsheets**







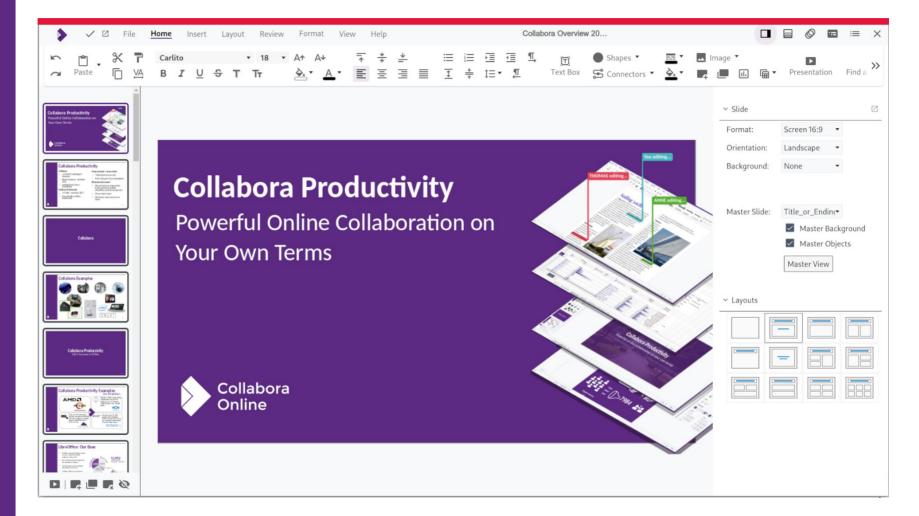
## **Collaborative Drawing**







#### **Collaborative Presentations**







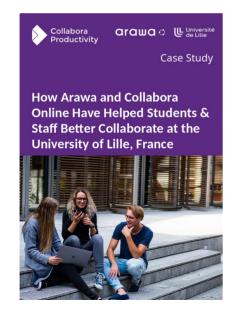
Collabora for Android, iOS & Chromebooks

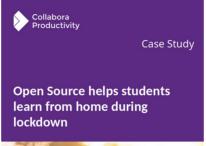






#### **Collabora Online for Education**













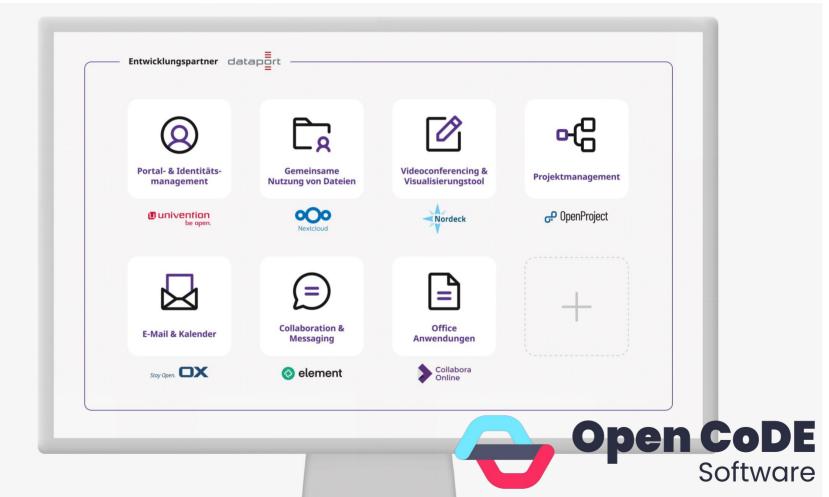




### open **Desk**

#### 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 Business**



#### **Responsive Support**

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

#### Sensible licensing

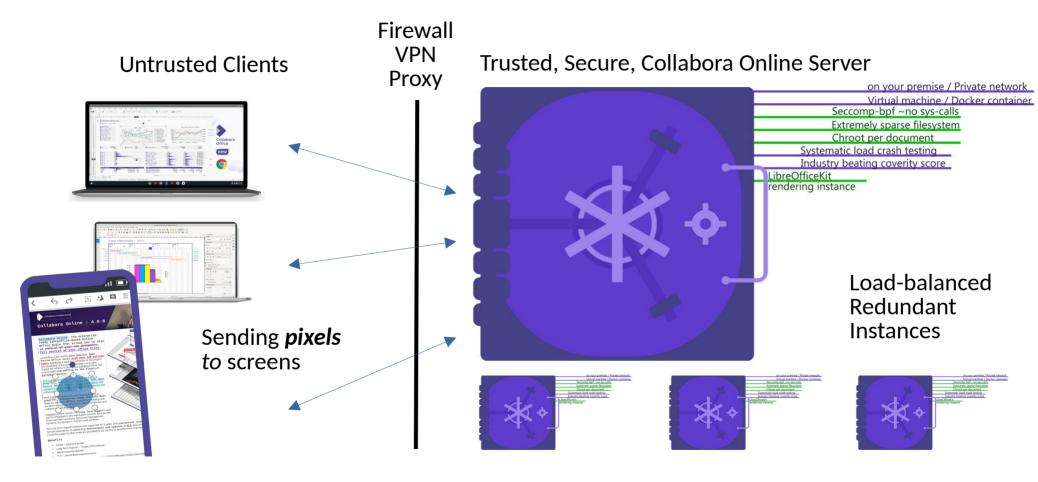
As many servers & connections
 & containers & VMs as you need

#### "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

#### **EFSS** WOPIeg. grab our helm-chart like Incremental / **HA** balancer Existing of choice: **Users** available Load HAproxy, balancing upgrade-ability nginx, F5, ... Collabora Online No extra services https: Worker Management Nodes Load (eg. Kubernetes) balancing document editing



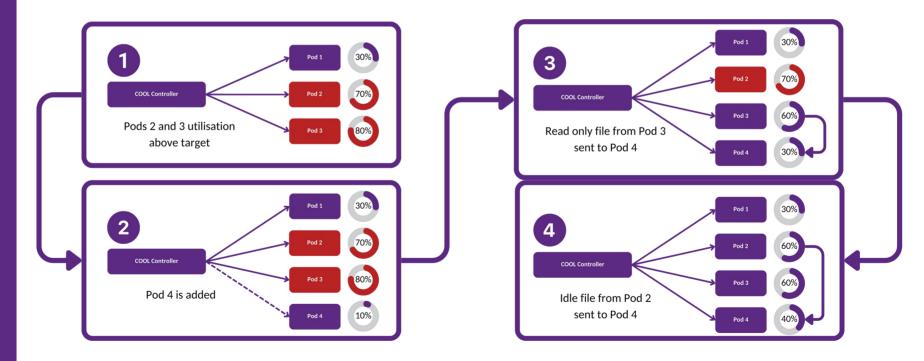
#### **COOL Controller:**

Even easier deployment & scaling



## **Scaling Collabora Online with Kubernetes**

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

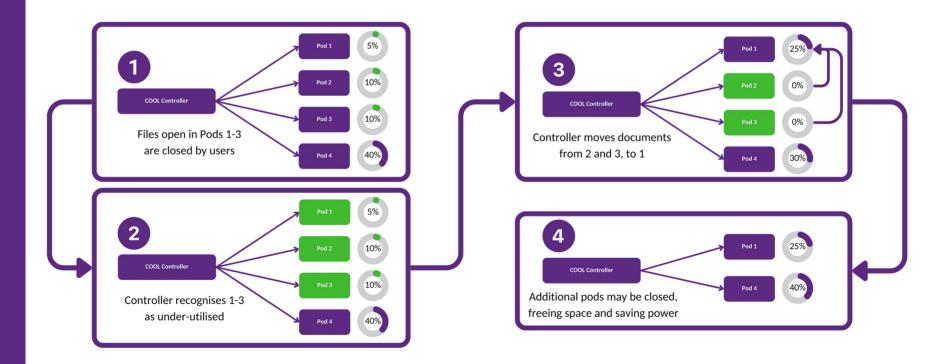






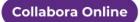
#### **Scaling Collabora Online with Kubernetes**

Load scaling example – pod under-utilisation





# Latest Features in 23.05 since last CS3



## **Accessibility Features**



#### **Dark Mode**

**Initial Screen Reading Support** 

**Keyboard Navigation** 

**Accessibility Checker** 

PDF/UA

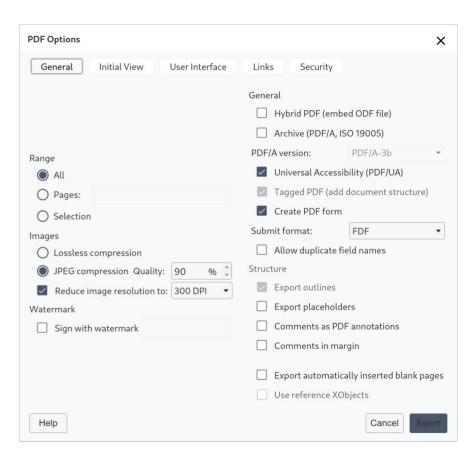
Find out more: col.la/accessibility



## Accessibility

# Generating accessible PDFs with PDF/UA export

 Tagged PDF, PDF forms, Universal Accessibility for PDFs, and many more options when exporting available in last year.



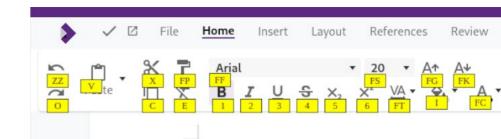




## Accessibility

#### **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 IDENTIFICATION NUMBER (VIN#)					
YEAR	MAKE				
ODOMETER READIN	G (Miles)				

#### **Conditions and Warranty**

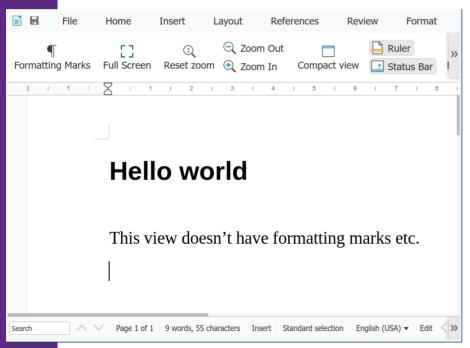
The Seller has no knowledge of any hidden de Seller's knowledge that the Vehicle is being so

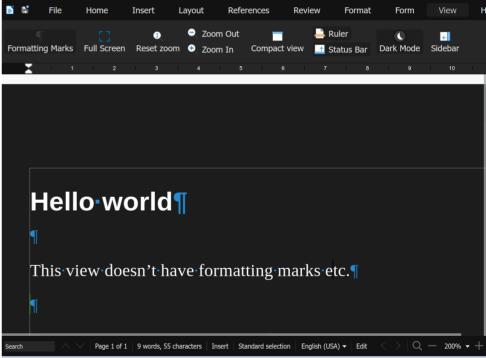




## **Accessibility - Dark mode**

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





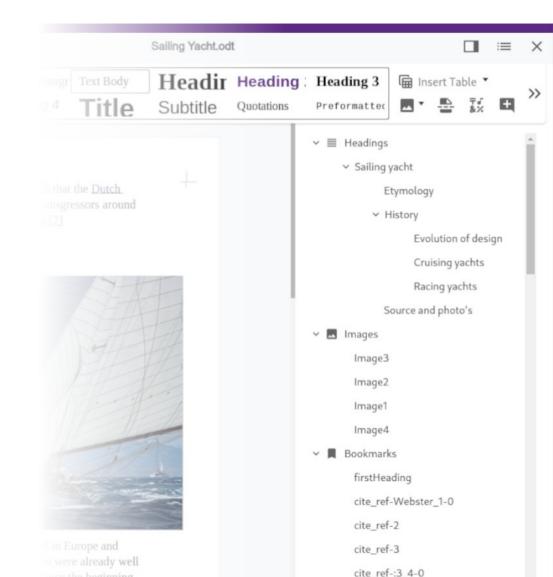




## Accessibility

#### **Page Navigation**

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





# Recent Features

Interoperability Examples



# **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.

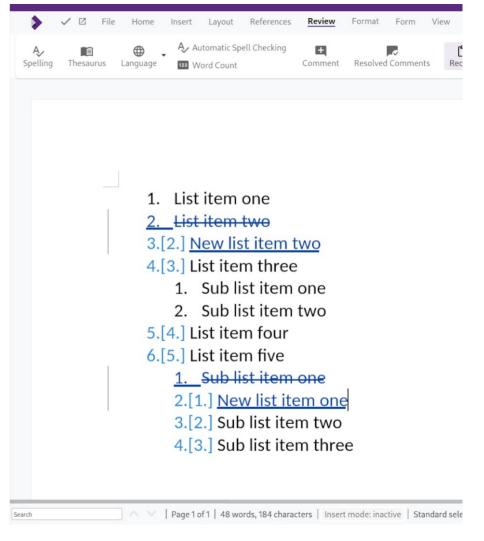




## **Usability**

#### **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.

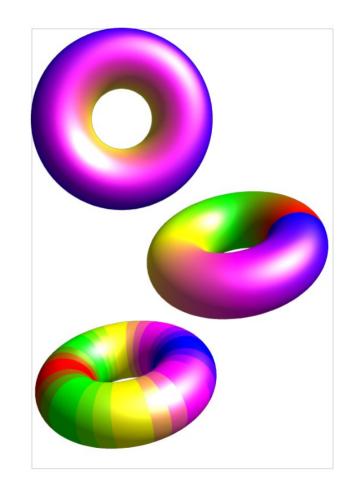






# Multi-stop gradients – improved rendering

 The renderer has been enhanced and can now handle even more complex gradients. You can now turn up the visual appeal of your document by incorporating multi-stop gradients into shapes, borders, and other elements.

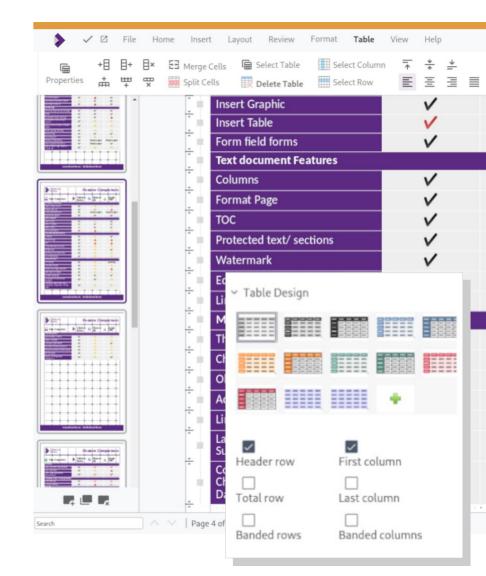






#### Table style design

 You can now modify table styles and create new ones in Impress and Draw. Modified styles are saved into documents, and can be shared via templates. You can access this function by rightclicking on a design in the Table Design Sidebar panel.







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

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			ccc		10		10
	bbx				3	9	12
			ccc		3		3
			ссх			9	9
	bxx					9	9
			ссх			9	9
aax					15	11	26
	bbb				10	4	14
			ccc		8	4	12
			ссх		2		2
	bbx				5		5
			ccc		5		5
	bxx					7	7
			ссх			7	7
axx					12	12	24
	bbb					5	
			ссх			5	
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Total Result					40	41	81

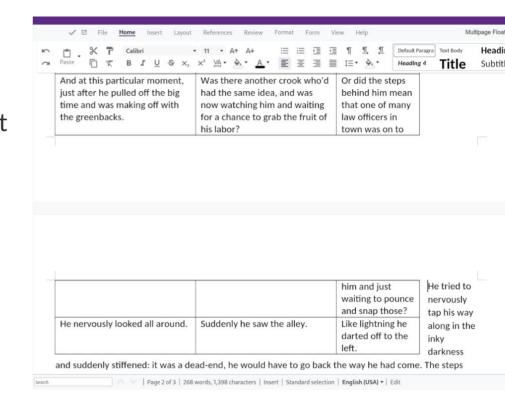
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ссх				9	9 9
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ссх				9	9
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⊟bbb			10	4	14
ссс			8	4	12
ссх			2		2
⊟bbx			5		2 5 5 7
ссс			5		5
⊟bxx				7	
ссх				7	7
⊟ахх			12	12	24
⊟bbb				5	5
ссх				5	5
⊟bbx			9	7	16
ссх			9	7	16
⊟bxx			3		3
ссс			3		3
Total Result			40	41	81





#### Multi-page floating tables

- Significantly improves
   interoperability with tables that
   have been accidentally floated
   by users, and that span
   multiple pages.
- Lots of mis-designed
   Government forms where tables are used for rendering borders are improved, and rendered better.



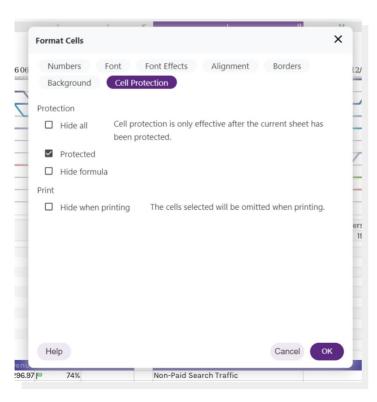


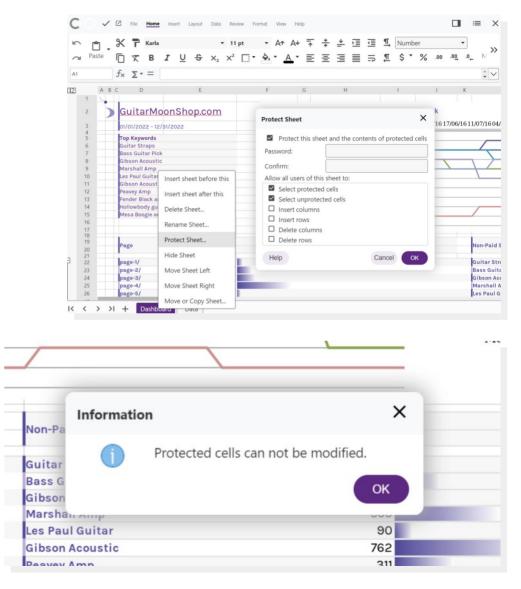
# Recent Features Usability Examples



## **Usability**

Cell protection in Calc
 Spreadsheets









## **Usability**

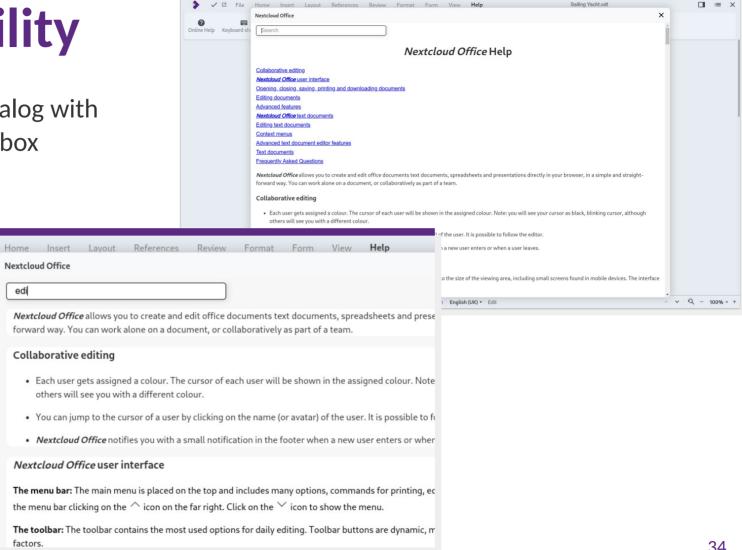
Help dialog with search box

Online Help Keyboard sh

**Nextcloud Office** 

edi

factors.







## **Usability - Tooltips**

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

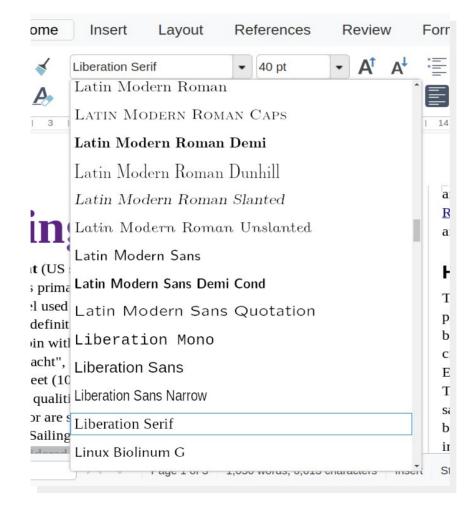
documents: full control of your office files.

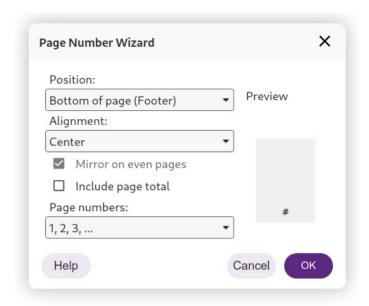


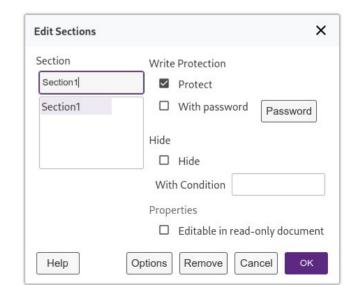




## **Usability - Dialogs**











## **Usability**

- Hide/show slides in Impress
- Present in new screen









### Usability: easy QR-code generation



QR and Barcode	×
Options	
URL/Text:	collaboraoffice.com
Error correction:	O Low
	○ Medium
	○ Quartile
	High
Margin:	1 🗘
Type:	QR Code ▼
Help	Cancel



# Recent Features Performance



#### Long running demo profiles: a week:

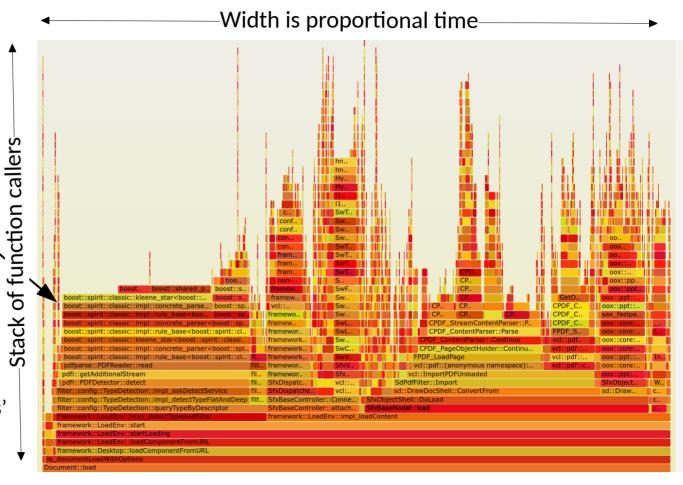
What does it mean?

·17%+ of a week of profiling:

Detecting: "is it Hybrid PDF"?

 Unbelievably wasteful

 Scan last 4k block 'AdditionalStreams' +17%





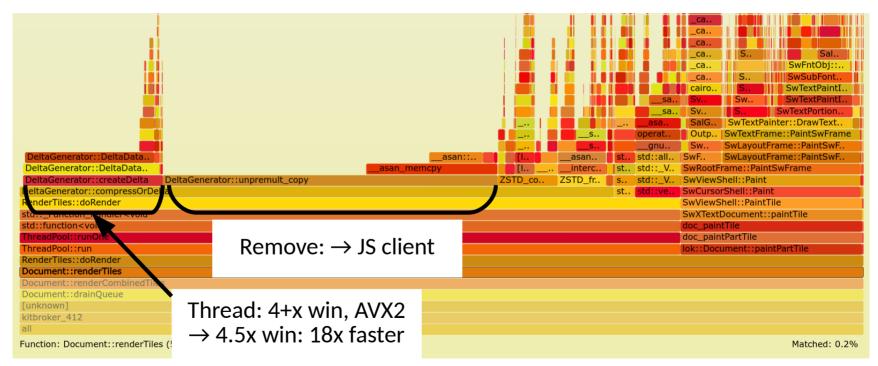
### Rendering tiles 40% of your profile?

#### Lots of unnecessary re-rendering

Pruning the simple cases out

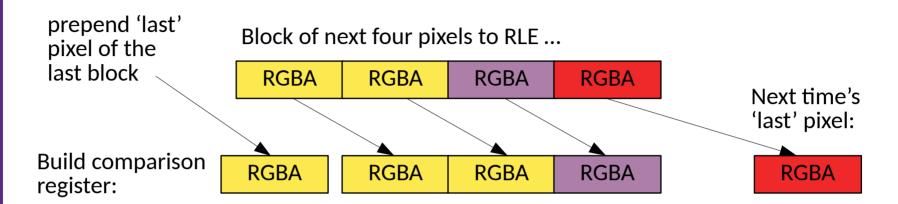
#### Silliness in various places

Now much improved.



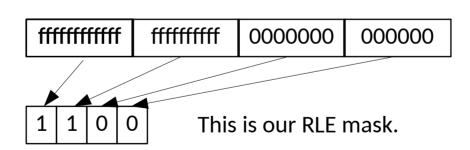


#### The magic of AVX2 - branch free RLE



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

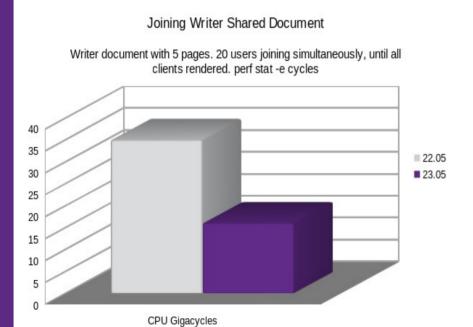
- Improved tile pre-loading (with more caching work queued)
- Clamp over-sizing of threads
- Accelerated transparent text rendering
- Avoid background whole document renders
- Compress RLE'd tiles on the wire
- Scan /proc/<pid>/smaps\_rollup

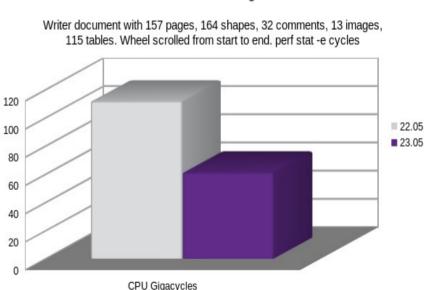




### **Performance Tuning**

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





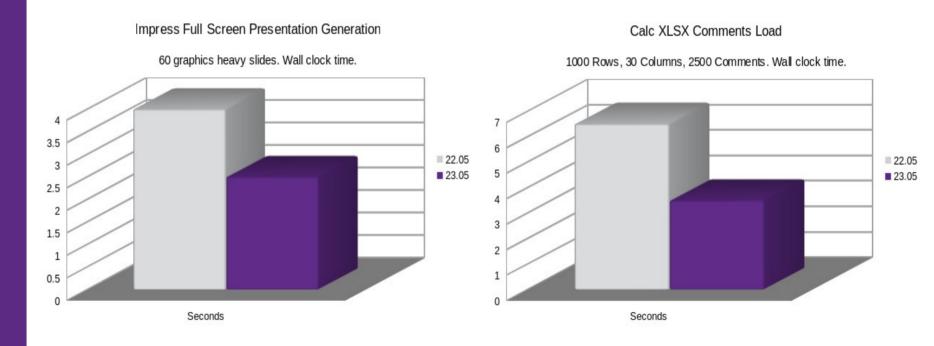
Writer Scrolling





### **Performance Tuning**

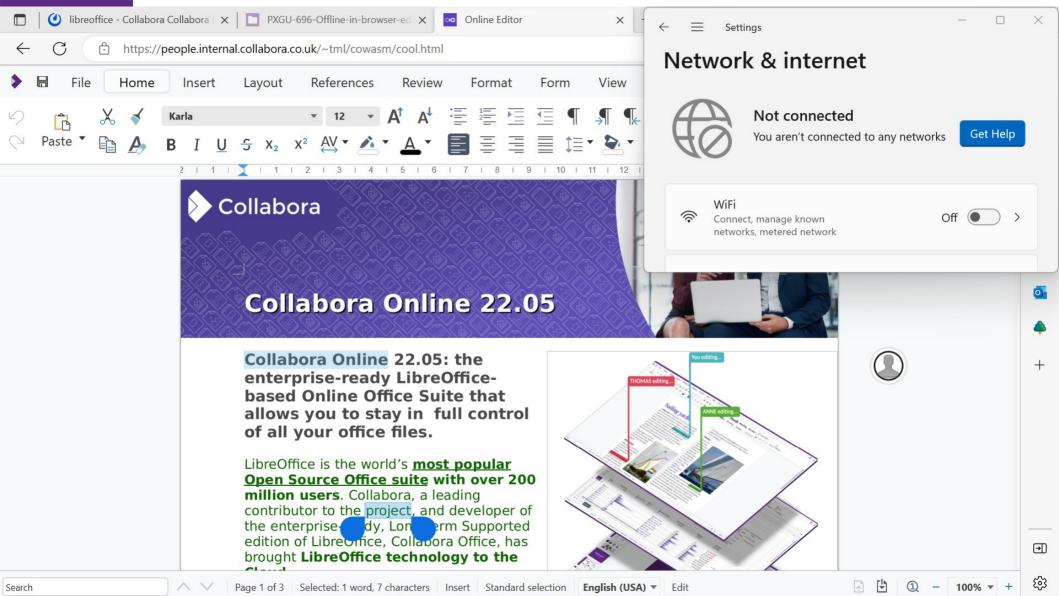
• Reduced time to load graphic heavy Impress slide decks, and comment heavy Calc spreadsheets.





## Playground: WASM Prototype:

(not a product)



#### **Sneak Peeks:**

Collabora Online 24.04



#### A few flavours of CODE 24.04 ...

- Re-written read only mode:
  - accessibility, selection / cursors
- Performance improvements
  - Interleaving WOPI requests with JS setup / start.
  - Background auto-save
  - JS code-size reduction & reduced dependencies.
- A year of interoperability improvements
- Continued Accessibility, UX
- And more...





#### Interop eg. Smart Justification

#### Much improved page layout matching: thanks to László Németh & NLnet

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we are **NOT FOR SALE** 









































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APRIL, 2024
8TH - TEAM BUILDING
9TH & 10TH - COOL DAYS

CAMBRIDGE, UK





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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