Collabora Productivity
Free your business

The driving force behind putting #LibreOffice in the #Cloud.

LibreOffice: online

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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

"There is no Cloud, it's just someone else's computer" unless it's your computer that is …

Controlling your data

- 100% F**L**OSS software implementation

- Sitting on your own hardware, on-premise, or with a hoster you trust

  - You know whom you're sharing the CPU with: cf. RowHammer, Xen vul'ns etc. etc.

  - You know where your data goes.

- Easy to integrate with other systems

- Efficient, Scalable, Powerful

Current Version CODE 2.0

- High fidelity, WYSIWYG rendering
- Document Support:
  - DOC, DOCX, PPT, PPTX, XLS, XLSX + ODF.
  - Import/View Visio, Publisher, + 100 more
- Basic Document Editing as of now
- Collaborative editing with this basic set.
- Better commenting / collaboration is next.
- CODE: suitable for home use …
  - Volunteers – should not be responsible for your free enterprise deployment.

Integrating with lots of FSS

Existing EFSS does:

- Authentication:
    - Active Directory, Kerberos, LDAP, etc. etc. integration
- Storage:
    - replication, backup, database integration, Antivirus, backup.

We do:

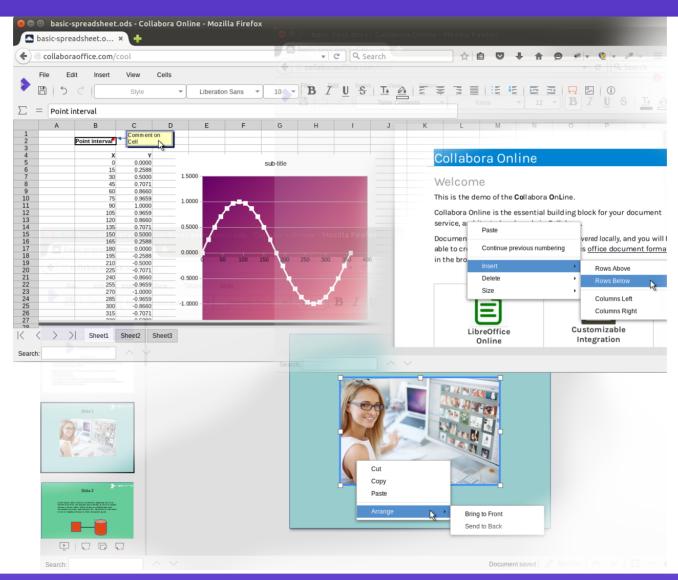- Collaborative editing and rendering of arbitrary file formats

Bonus features

- A reduced feature-set sphere – can win.
    - light editing use-cases to match competition
- Document Formats – relevant only for migration.
    - "in the cloud"
- Server / Certification / Revenue model ...
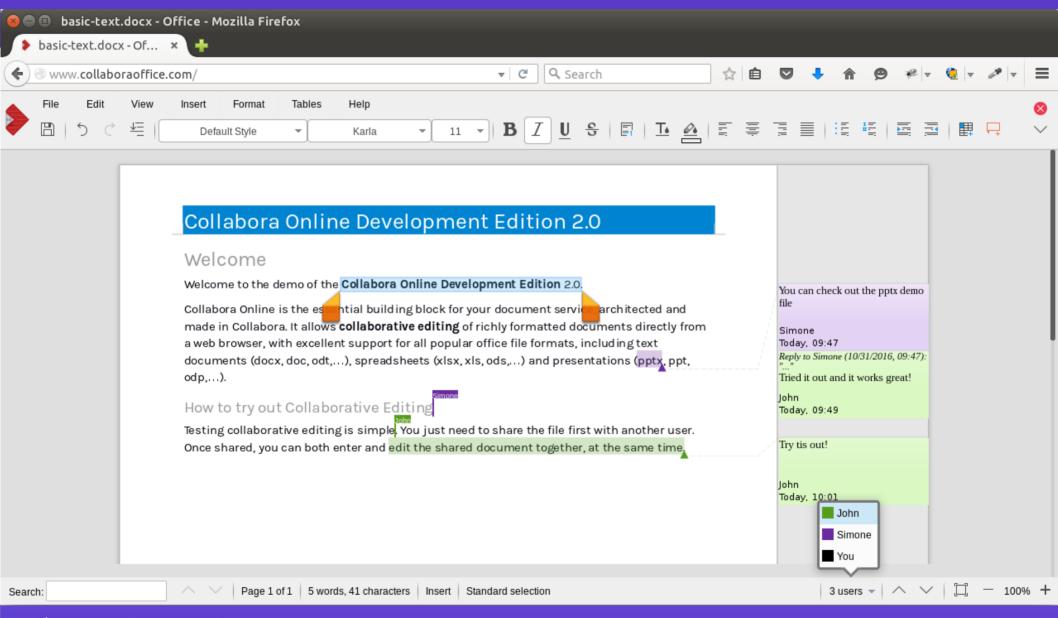
CODE ...

- CODE – grab the latest Docker image and/or Virtual Machine pieces.

  - http://collaboraoffice.com/code

- And an extension for your EFSS ...

  - No core changes required, easy to deploy

- Extensions implement the WOPI protocol

  - Unifies authentication and file-access

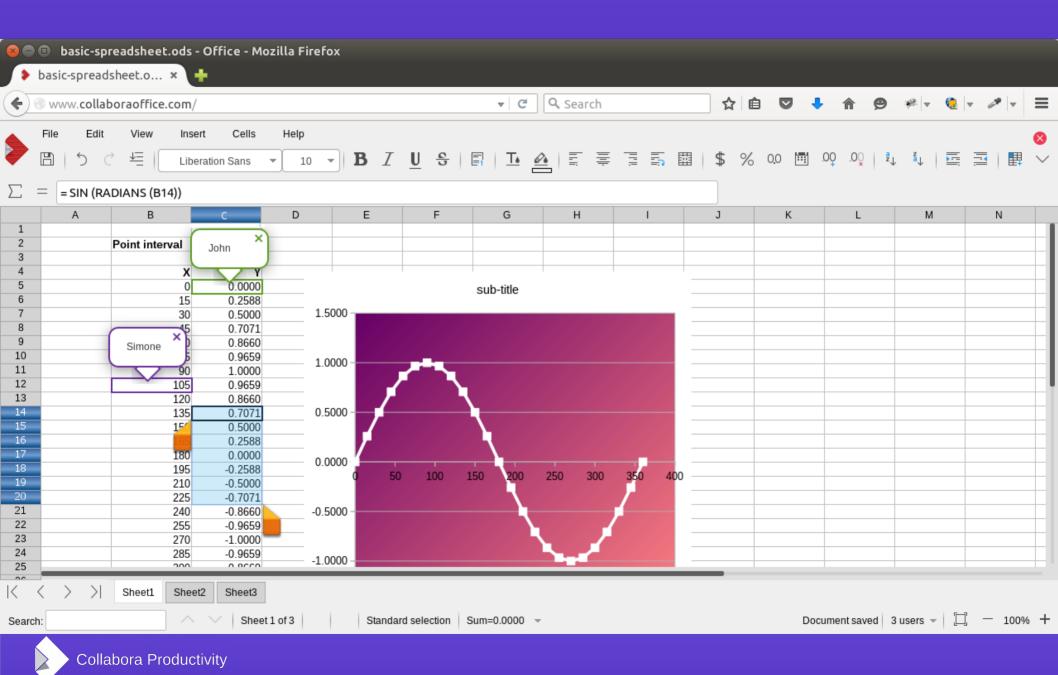 - Re-use awesome authentication and storage options – effortlessly.
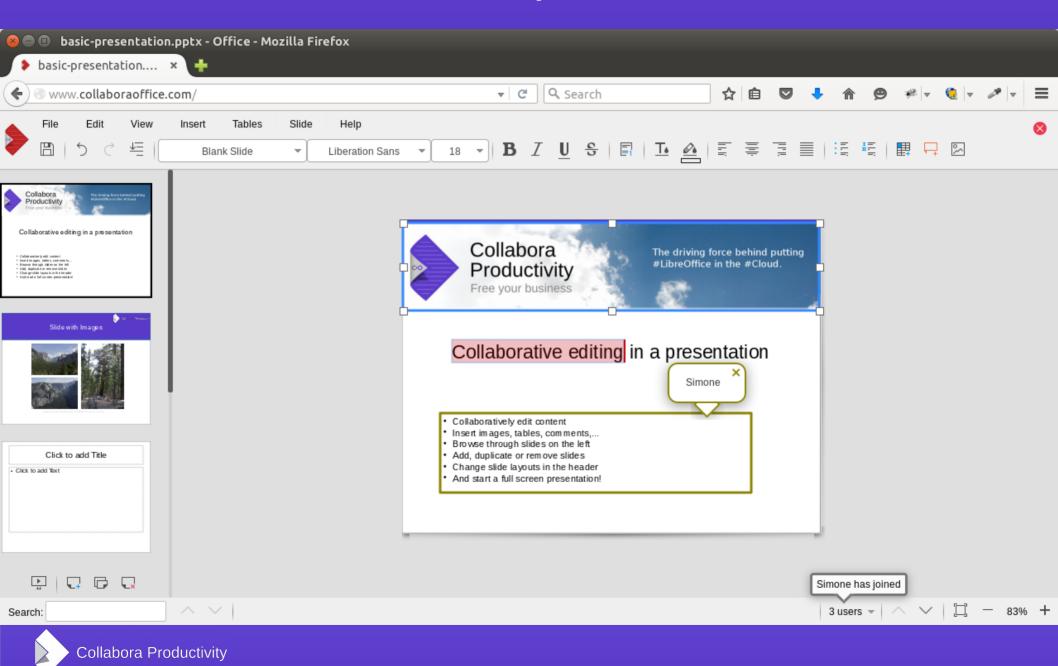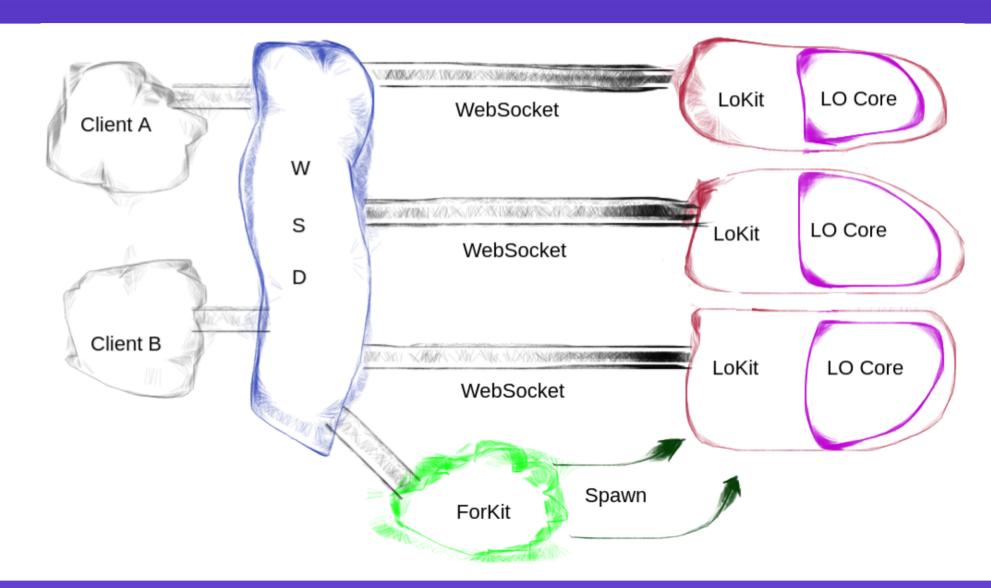
Demo / what it looks like

Writer

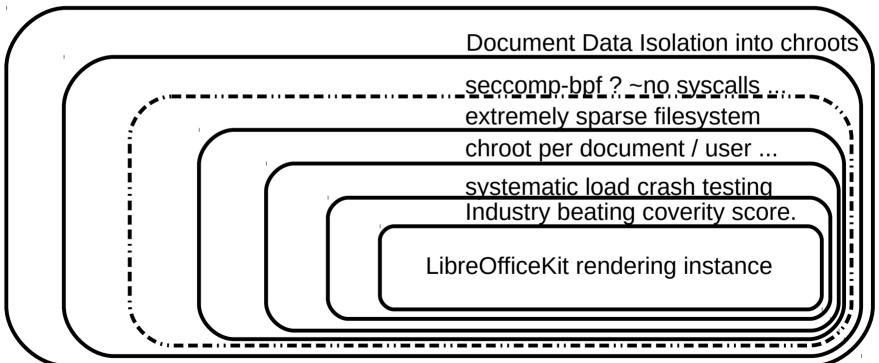# Calc

Collabora Productivity

Impress

Architecture

Client A

Client B

W
S
D

WebSocket

WebSocket

WebSocket

LoKit — LO Core

LoKit — LO Core

LoKit — LO Core

ForKit

Spawn

The Security Onion

A Layered approach to protecting your infrastructure ...

Virtual Machine / Docker Container

Document Data Isolation into chroots

seccomp-bpf ? ~no syscalls ...

extremely sparse filesystem

chroot per document / user ...

systematic load crash testing

Industry beating coverity score.

LibreOfficeKit rendering instance

Storage & Auth:
WOPI – REST-ness:

- WOPI: a well documented open protocol (https://wopi.readthelatestdocs.org/en/latest/

- To download the file:

  - GET https://<WOPI host URL>/<...>/wopi*/files/<id>/contents?access_token=<token>

- Upload back:

  - POST https://<WOPI host URL>/<...>/wopi*/files/<id>/contents?access_token=<token>

- Check file info (file name, size, user name, version)

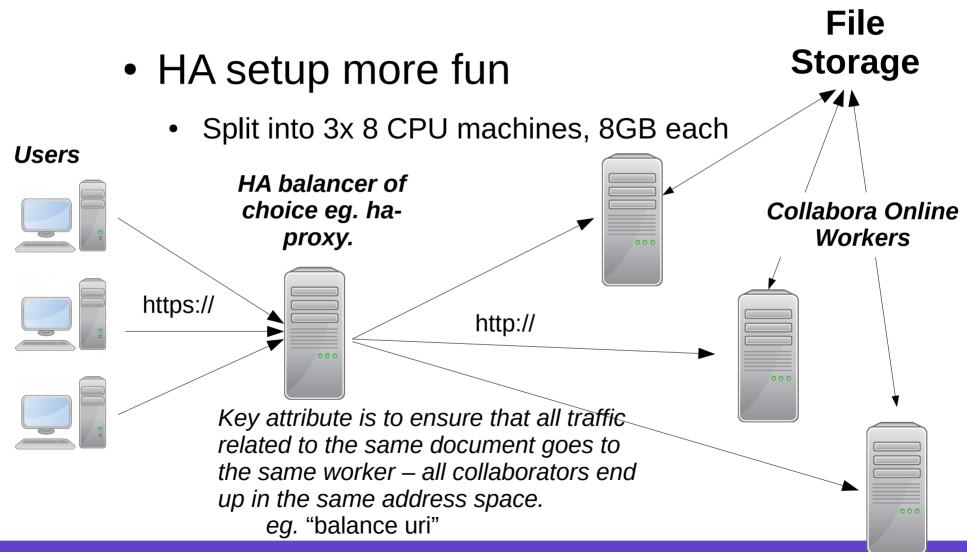 - https://<WOPI host URL>/<...>/wopi*/files/<id>?access_token=<token>

LibreOffice Online: supported everywhere:

Partners – *will distribute Collabora Online integrated with their products*

And more ...

HA / setup …

File Storage

- ## HA setup more fun

  - ### Split into 3x 8 CPU machines, 8GB each

Users

HA balancer of choice eg. ha-proxy.

Collabora Online Workers

https://

http://

Key attribute is to ensure that all traffic related to the same document goes to the same worker – all collaborators end up in the same address space.
eg. "balance uri"
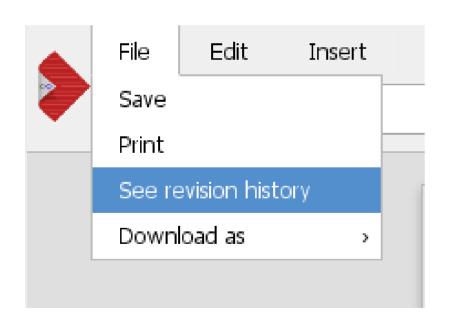
Sample / Hardware Sizing

- Guidelines:
  - 10 users / CPU thread
  - 100Mb RAM / user
  - 100kbit/s / user
- Capacity factor $\rightarrow$ not a hoster …
- Worked example: **my laptop**
  - 1Gbit $\rightarrow$ 10,000 users
  - 16Gb $\rightarrow$ 160 users
  - **8 threads $\rightarrow$ 80 users.**

More details:

Revision Control:

View and restore previous versions:

File   Edit   Insert

Save

Print

See revision history

Download as   ›

Revision History
AshTest.odt

⬇ Latest revision

⬇ September 1, 2016 10:27 PM ↺

⬇ September 1, 2016 10:22 PM ↺

⬇ September 1, 2016 10:19 PM ↺

Editing / Undo collisions etc.

Repair Document: conventional undo/redo simply solves editing conflicts.

Repair Document

Type	Index	Comment	View ID	Timestamp
Undo	0	Insert Image	2	2016-09-01T21:52:18,628396048
Undo	1	Insert table: 'Table1'	2	2016-09-01T21:52:11,777609331
Undo	2	Typing: 'Enter'	2	2016-09-01T21:52:05,103527646
Undo	3	Delete paragraph	2	2016-09-01T21:52:04,737246817
Undo	4	New Paragraph	2	2016-09-01T21:52:04,240850664
Undo	5	Delete '/'	2	2016-09-01T21:52:04,010198873
Undo	6	Replace: "-> '/'	2	2016-09-01T21:52:03,047257372

Jump to state

Debugging Tiled Rendering:

LibreOffice 5.3 due Feb 2017.

Collabora Productivity

https://collaboraoffice.com
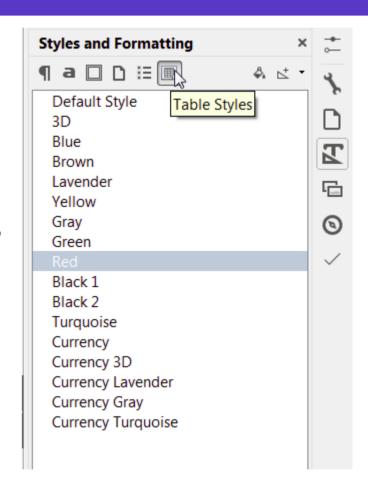
LibreOffice 5.3
a random selection

- Firebird 3.0 (Wastack, Lionel, Stephan B (RedHat))
  - Now using archive format, but not 2.5 compatible
  - Hopefully deprecating HSQLDB permanetly.
- Chart: improved line formula bits (Laurent BP)
- UI
  - Notebookbar (Samuel (CIB), Jay, Kendy (Collabora), Heiko)
  - Keyboard shortcuts visible in context menus (Maxim Monistarsky)

LibreOffice 5.3
a random selection

- ## Writer

  - ### Table styles fun: UNO, ODF file-formats, partial UI thanks to (Jakub Trzebiatowski, GSoC 2016; Miklos Vajna, Collabora; Jan Holešovský, Collabora; Yousuf Philips)

- ## Existing PDF document signing

  - ### Improved SHA512 crypto etc. Miklos Vajna, Tor Lillqvist (Collabora)

Conclusions

- Thanks for your support !

- LibreOffice / Collabora Online Demo

  - https://www.collaboraoffice.com

- Collabora Online Development Edition (CODE)

  - Tech details, test: https://www.collaboraoffice.com/code/

- Participate in the project

  - Code http://cgit.freedesktop.org/libreoffice/online/

  - Integration https://github.com/owncloud/richdocuments

  - API https://www.collaboraoffice.com/collabora-online-editor-api-reference/

- Thanks to the awesome LibreOffice Community !

  - Without you, it couldn't be done & it wouldn't be fun.

  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