



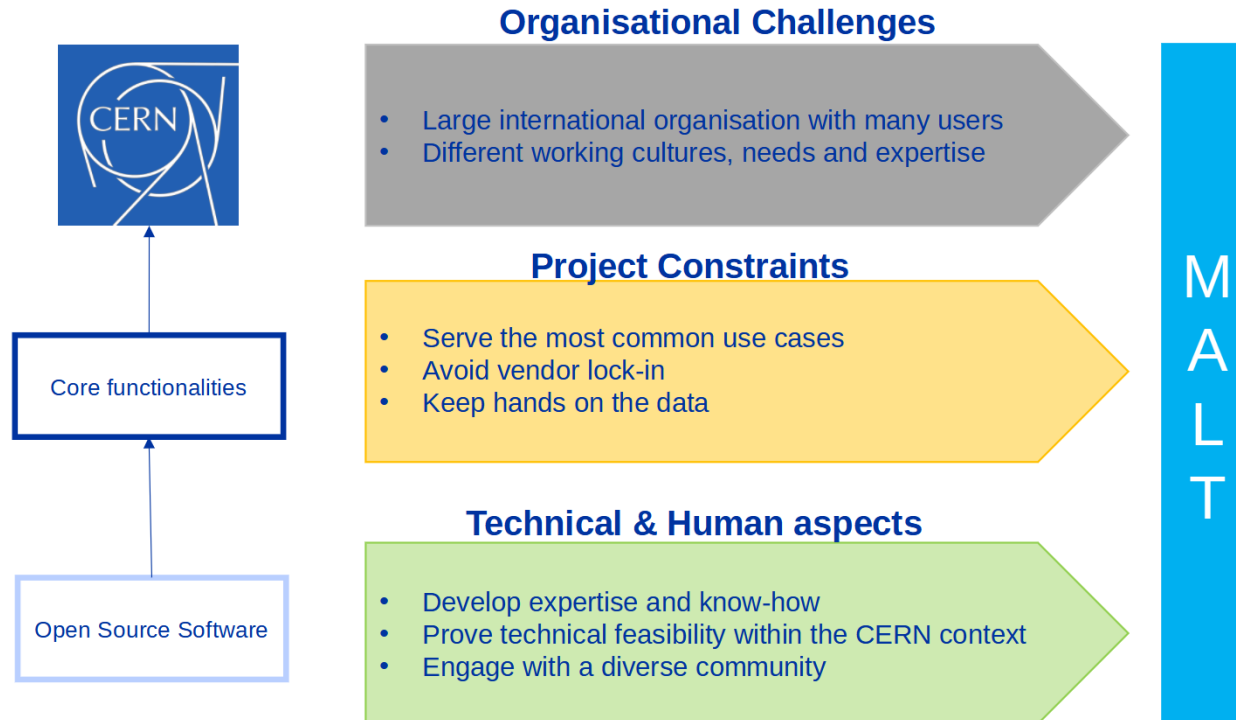
# **OnlyOffice and Collabora Online experience at CERN**

Maria Alandes Pradillo, Diogo Castro, Mario Rey Regúlez, Piotr Jan Seweryn

March 2021

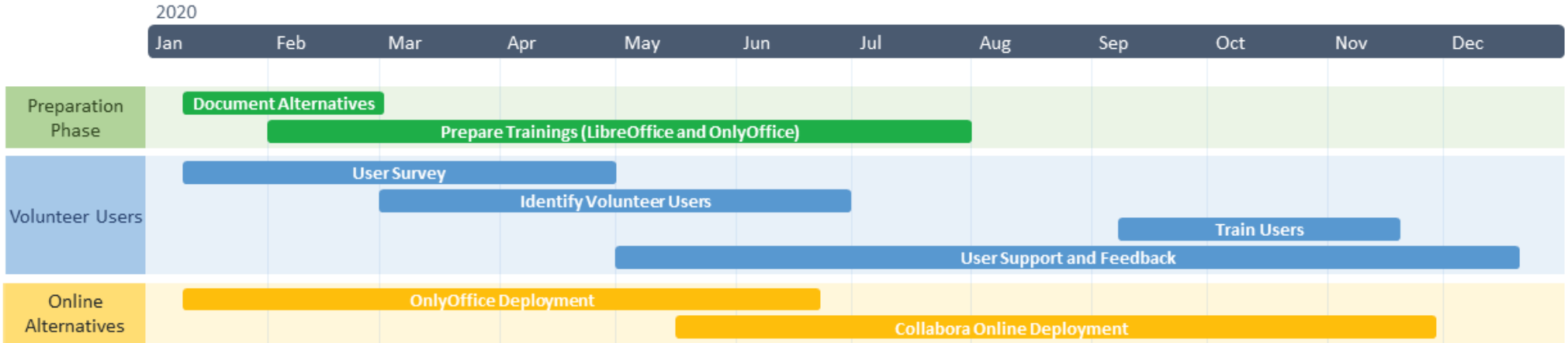
# Background

# The MALT Project



More details in: <https://malt.web.cern.ch>

# MALT Productivity Tools in 2020

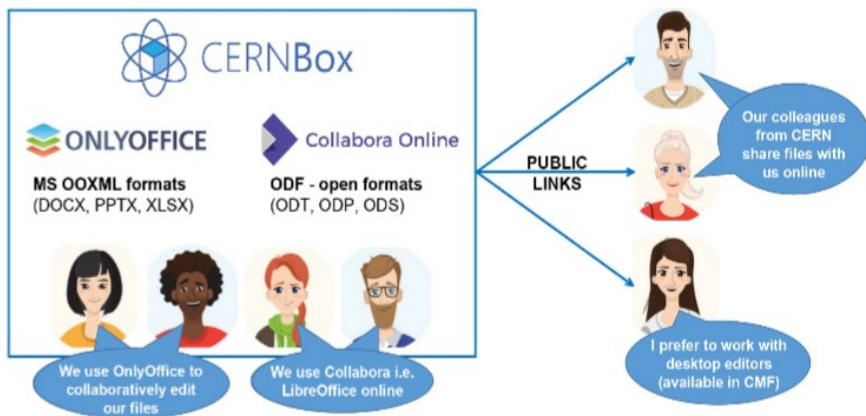
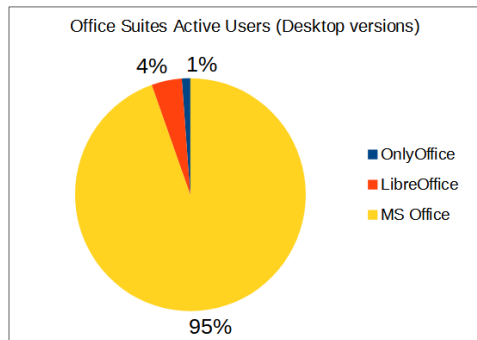


# CERN Office Users

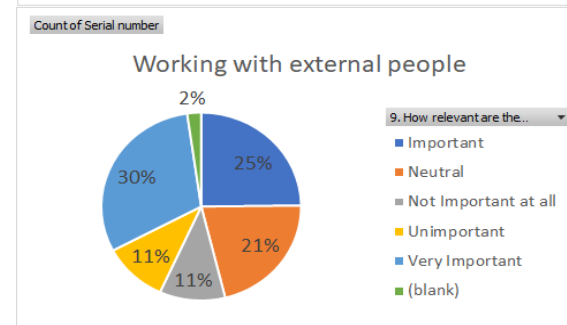
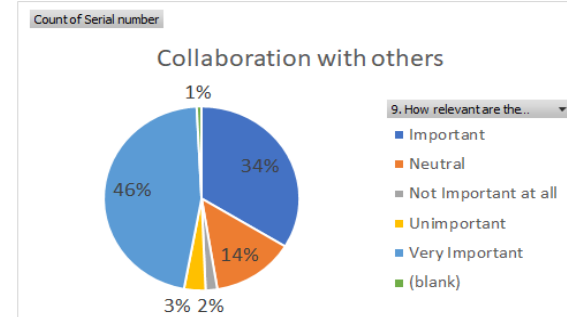
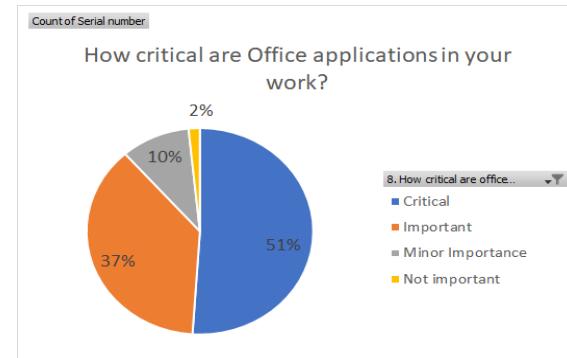
- MS Office installed by default in all Windows PCs since ~2000
- LibreOffice and OnlyOffice included for new PCs in 2020
- Office Online has been default in CERNBox from 2017 to 2020



- The introduction of alternative office suites is very recent
- Users have gained a lot of experience with MS Office for many years



## Replies from CERN User Survey on the use of Office Applications



# Challenges when working with CERN users

CERN  
users

Heterogeneous

Busy

MS Office  
Expertise

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No news,  
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This has worked for us

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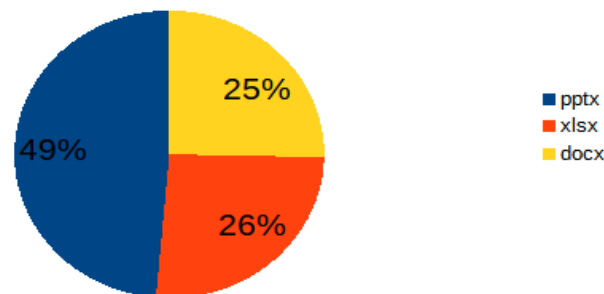
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**Do not underestimate the amount of time needed in user support and communication**

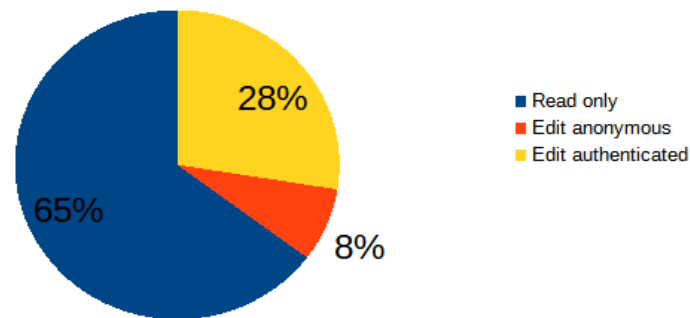
# Online Office Suites Usage

- **OnlyOffice**: up to ~**2K** daily sessions, peaked **75** simultaneous users
- **Collabora Online**: up to **100** daily sessions
- Reflecting the Office file types distribution in CERNBox
  - **3.6M** Office documents
  - 51% MS Legacy, **44% OOXML**, **5% ODF**

File format use in OO-CERNBox - February 2021

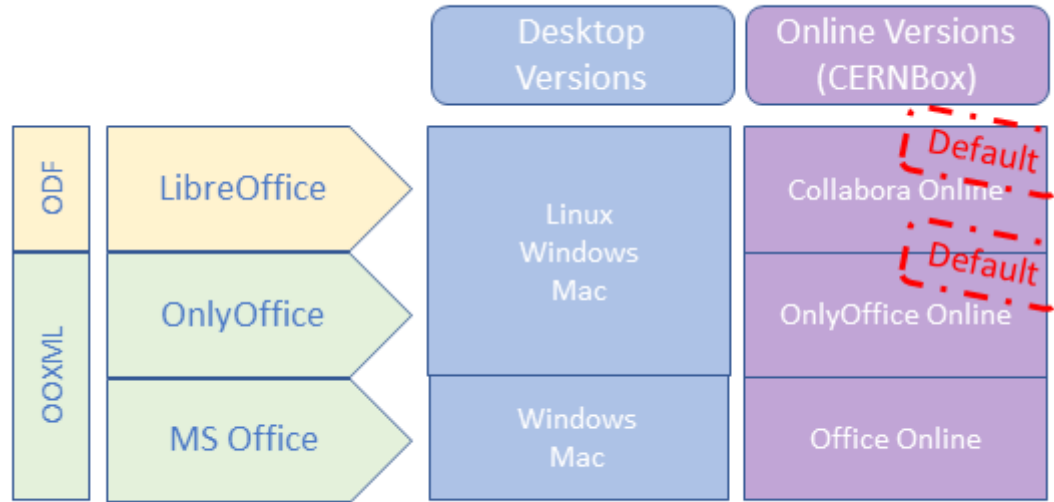


Read vs Edit access in OO-CERNBox - February 2021



# CERNBox Integration

# Office Suites available



# CERNBox integration

- **WOPI server**

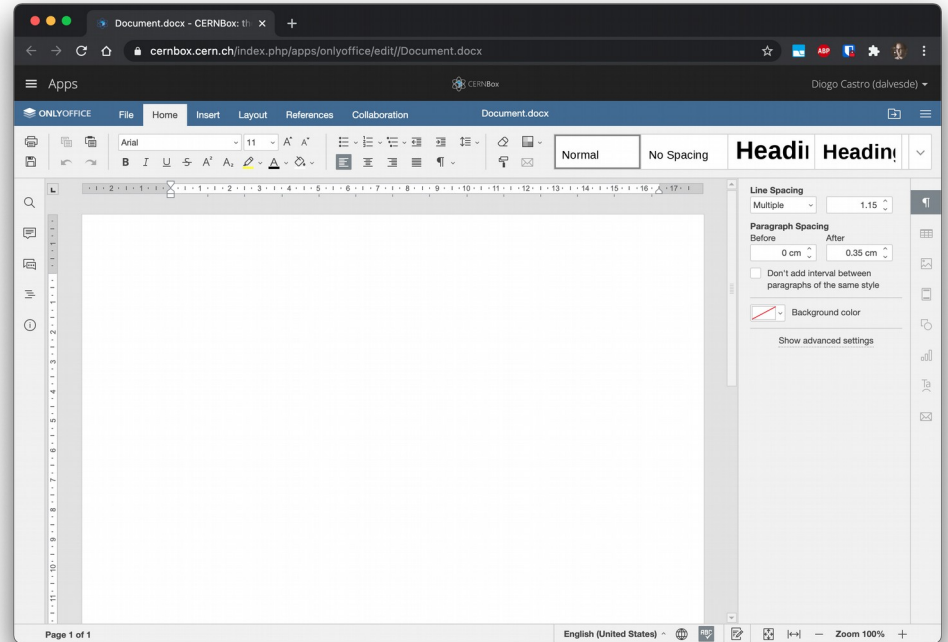
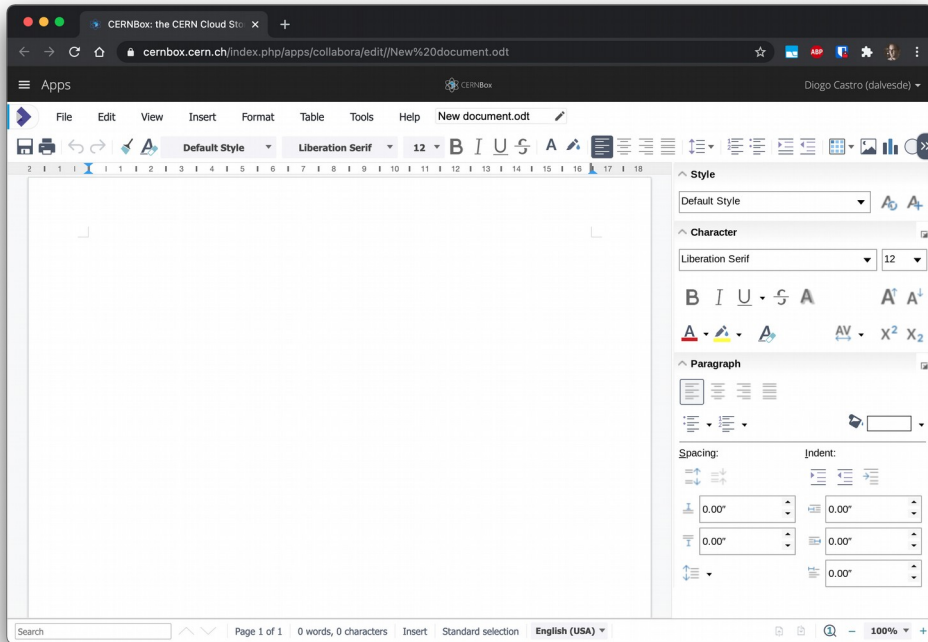
- Developed at CERN, FOSS, CS3 APIs compatible
- Supports Collabora and MS Office
- Interoperable locking across all Office applications, both web and Desktop (when on mounted storage)

- **OnlyOffice backend**

- Rewritten by CERN
- Interoperable locking with WOPI



# CERNBox integration



# Where to improve?

- **Global locking**

- Bring locks to any application, offered by Sync&Share platforms
- Make applications aware they are not alone

- **Integration with Desktop apps**

- **OpenCloudMesh integration**

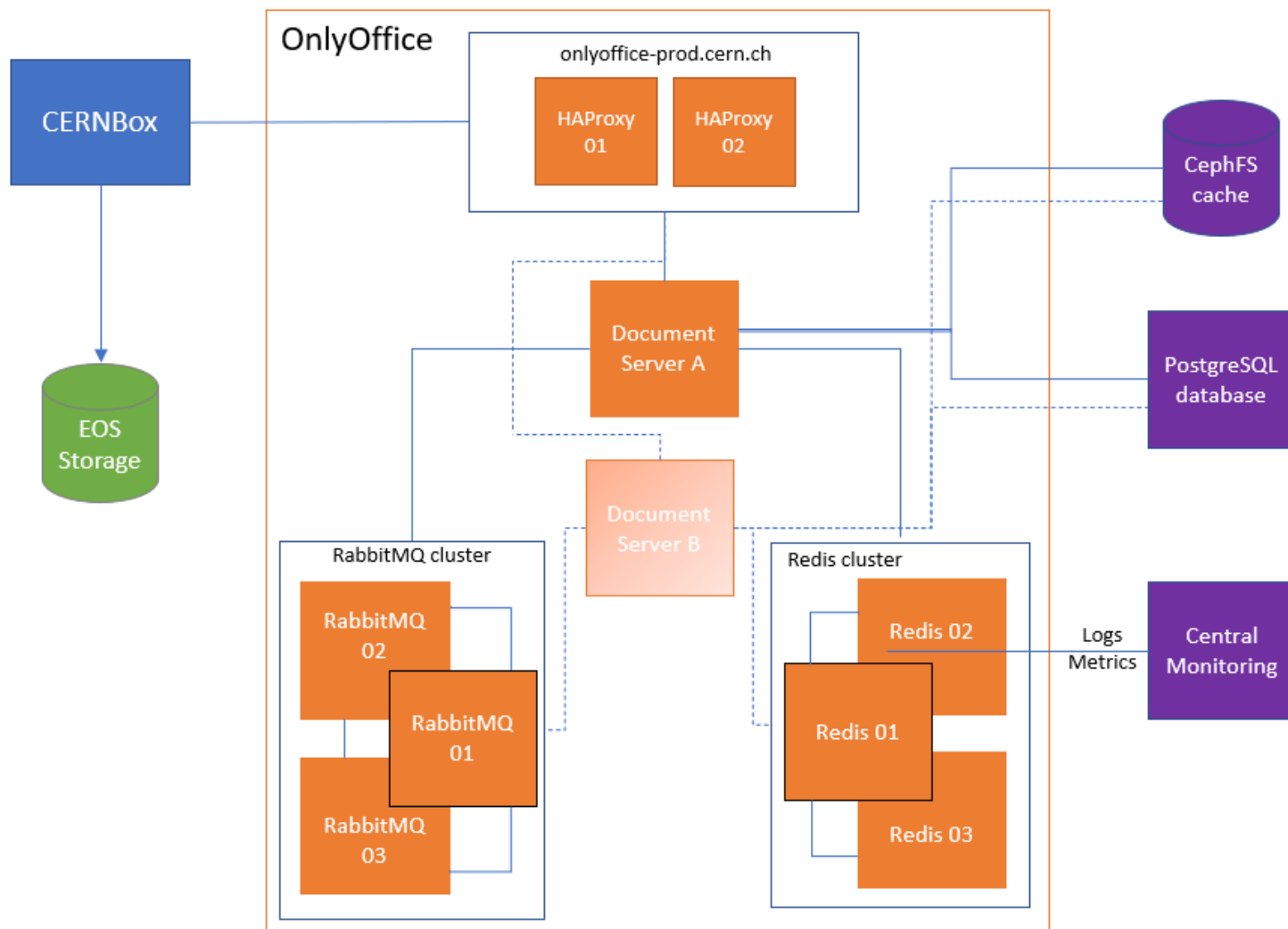
- Cross site collaboration
- Ongoing work on CS3MESH4EOSC EU project

# CS3MESH4EOSC

- **EU-funded project (coordinated by CERN)**
  - 6M EUR, 12 partners, 2020-2022
  - <https://sciencemesh.io/>
- **Federation of existing CS3 sites**
  - 30+ sites (e.g. CERNBox, DesyBox, Universities, ...)
  - 300K+ users
- **Goal: Global collaborative environment for research**
  - Share documents, files, projects, data, ...
  - Connected Application Hubs, Data Science environments, ...



# OnlyOffice



# Technical overview

- **OpenStack and Puppet**
  - Take care of everything
- **CephFS storage**
  - 1 TB of a shared network file system
- **Monitoring:**
  - Simple bash script for usage statistics
  - Integration with Central Monitoring: Kibana and Grafana dashboards



# Issues along the way

- **Software bugs**

- Lots of time and people involved, including OnlyOffice support
- Difficult to reproduce by vendor, and to trace logs back
- Some data loss, although recoverable

- **Conversion is suboptimal**

- File formats, fonts, displaced content

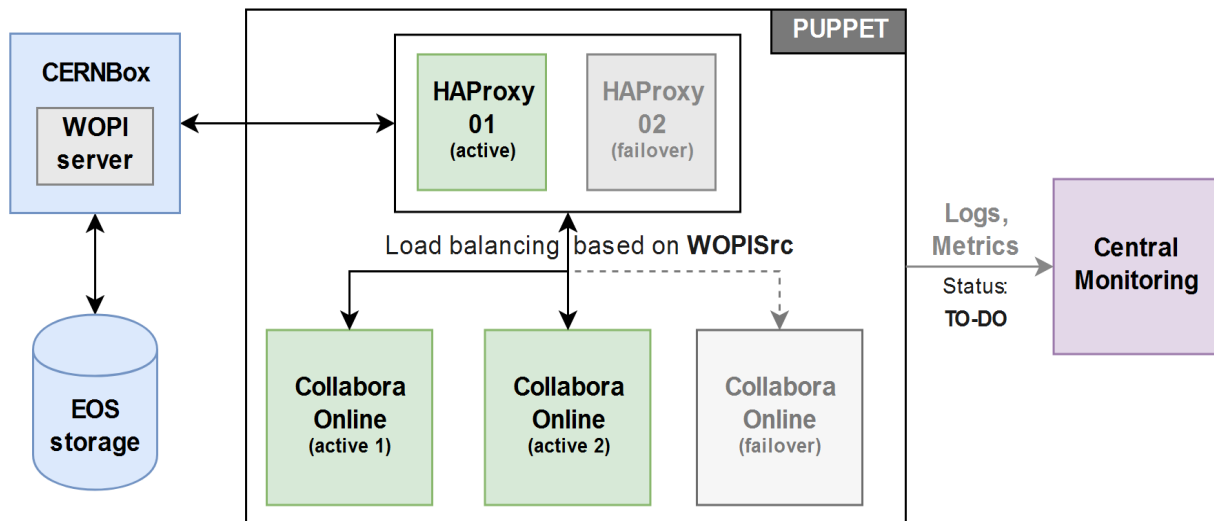
- **Sensitive to CephFS degradations**

- Workaround with non-shared volumes

# Collabora Online



# Deployment



- **Puppet as a configuration management tool over OpenStack VMs:**
  - 2 HAProxy + 3 Collabora Online servers in production
  - High availability setup
- **Load balancing based on WOPIsrc parameter**
- **Monitoring:**
  - Simple bash script for usage statistics
  - Next step: integration with Central Monitoring (Kibana, Grafana)

# Issues along the way

- **Deployment**

- Started with a single container, then a single server to reach HA setup
- No issues - very good documentation
- Place for some Puppet configuration improvements

- **Applications' features**

- Several issues and bugs reported to the vendor's support
- Requires time and effort (testing, reporting, following up)
- Missing features and performance
- Collaborative editing

# Summary

- **Gain more experience running these applications in production**
  - Encourage more users to adopt these applications and learn from their use cases
  - Test scalability
- **Following up on issues with vendors' support**
  - Very good response from both OnlyOffice and Collabora so far!

**Thanks for listening!**  
**Time for your questions**



[home.cern](https://home.cern)