Outline

- Description and Architecture
- User Community and Service Numbers
- New features and ongoing work
- Overview and Summary
Description and Architecture
What is CERNBox?

CERNBox provides a cloud synchronisation service

- Available for all CERN users (1TB/user)
- Synchronise files (data at CERN) and offline data access
- Easy way to share with other users
- All major platforms supported
- Based on ownCloud integrated with EOS
What is EOS?

- CERNBox storage backend
- Disk Storage for all LHC and physics data
- Deployment across two computer centres
CERNBox Architecture

native clients  fuse clients  samba gateway

sync and mobile clients

nginx https lb webdav

namespace

data  data  data

web frontend

oc_shares
User Community and Service Numbers
CERNBox Service Numbers

<table>
<thead>
<tr>
<th></th>
<th>Jan 2016</th>
<th>Jan 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Users</strong></td>
<td>4074</td>
<td>8411</td>
</tr>
<tr>
<td><strong># files</strong></td>
<td>55 Million</td>
<td>176 Million</td>
</tr>
<tr>
<td><strong># dirs</strong></td>
<td>7.2 Million</td>
<td>19 Million</td>
</tr>
<tr>
<td><strong>Used Raw Space</strong></td>
<td>208 TB</td>
<td>806 TB</td>
</tr>
<tr>
<td><strong>Deployed Raw Space</strong></td>
<td>1.3 PB</td>
<td>3.2 PB</td>
</tr>
</tbody>
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Engineers

Physicists

Services & Administration

Number of files and directories

CERNBox users

Registered users

Weekly increase
38th INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS
AUGUST 3 - 10, 2016
CHICAGO
CERNBox daily clients
CERNBox daily clients

- weekly and daily cycles
- August
- baseline of desktops - always connected
- laptops + mobiles
- CERN end of the year closure

PUT, GET

- PUTs
- GETs
CERNBox HTTP Operations

Graph showing HTTP operations from 1/9 to 1/24, with different HTTP methods represented by lines of varying colors.
New features
and ongoing work
Single Sign On

- SSO enabled to align with the other CERN web services
- Desktop Sync Client continue using standard auth
Gallery View

- Working on the enable the Gallery View
- Integration between the Gallery App and EOS
Filesystem Access (FUSE)
Filesystem Access (SAMBA)
Python Notebook Integration (SWAN)
Office Online Integration (WOPI)

- Web Application Open Platform Interface (WOPI) protocol
- Native Office in the browser
Overview and Summary
Summary

- EOS/CERNBox innovative platform for scientific computing
  - scalable architecture

- Full integration with the entire LHC storage (100+ PB)

- Bring data closer to our users
  - New ways to interact with the data

- CERNBox as an extension of the Desktop
  - ongoing integration with multiple services