

# CASTOR 2.1.15

What we are getting

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# RAL CASTOR Current Status

- Running CASTOR 2.1.14-15
  - Since spring 2015
  - It works pretty well...
  - ...but we have some grumbly problems
    - Checksum mismatch spam
    - Rebalancing not used
    - Various VO xroot problems (especially CMS)

## 2.1.15 Development

- 2.1.15-0 released by CERN developers Jan 2015
- Now at 2.1.15-20 (Nov 2015)
- Continued 2.1.15 releases expected
- No ETA for 2.1.16

# Features

- Some externally-facing improvements...
  - ...and lots of help internally
  - All CASTOR internal transfers will use xrootd.
- Xrootd 4
- Streamlined tape system – multitude of daemons merged into one tapeserverd
- Similar story on disk management – ‘stagerjob’ process merged into diskmanagerd
- Bugfixes in rebalance code should let us use it...
  - Not tested yet.

# Xroot 4

- CASTOR 2.1.14: xroot 3.3
- CASTOR 2.1.15: xroot 4.2
- Xroot has become a significant pain point for admins and VOs
  - CMS redirection issues, file open times, etc.
- Major version upgrade
  - IPv6 support
  - Improved logging
- Difficult for us to get support when running an obsolete version...
  - Should be easier when we are up to date.

# Datapools and Ceph

- CASTOR 2.1.15 introduces the ‘Datapool’ concept
  - 2.1.14 presents storage as ‘Diskpools’ – collections of filesystems on storage nodes.
  - 2.1.15 retains this, but also allows us to also present a ‘Datapool’ – a chunk of Ceph-managed storage.
  - So instead of worrying about the state of each disk node, we let Ceph think about that and just work on our allocated chunk of storage.

# Datapools and Ceph

- Concept of ‘disk servers’ remains with CASTOR-Ceph integration...
  - ...but they are actually just a gateway leading to the backend Ceph cluster.
- We do not propose to make use of this functionality in the short term.
  - Upgrade will be to a traditional CASTOR implementation, just using 2.1.15.
  - Any Ceph integration will require an RH7-based OS (CERN-CentOS 7 at CERN).

# RAL Development Status

- 2.1.15 installed locally
  - Testing phase
- Target date to start upgrade: late Feb-early March
  - Before Shaun leaves!
- One downtime (~1 day) for all VOs...
- ...followed by ~1 day downtimes for individual VOs
- Aim to finish early April.



# Future Plans

- '2.1.16' to be released in ~1 month
  - Version number implies a major change
  - All that is actually happening is that the CASTOR SRM will be integrated with 2.1.15
  - Plus assorted incremental improvements.
  - Expected DT to be short

Any Questions?

