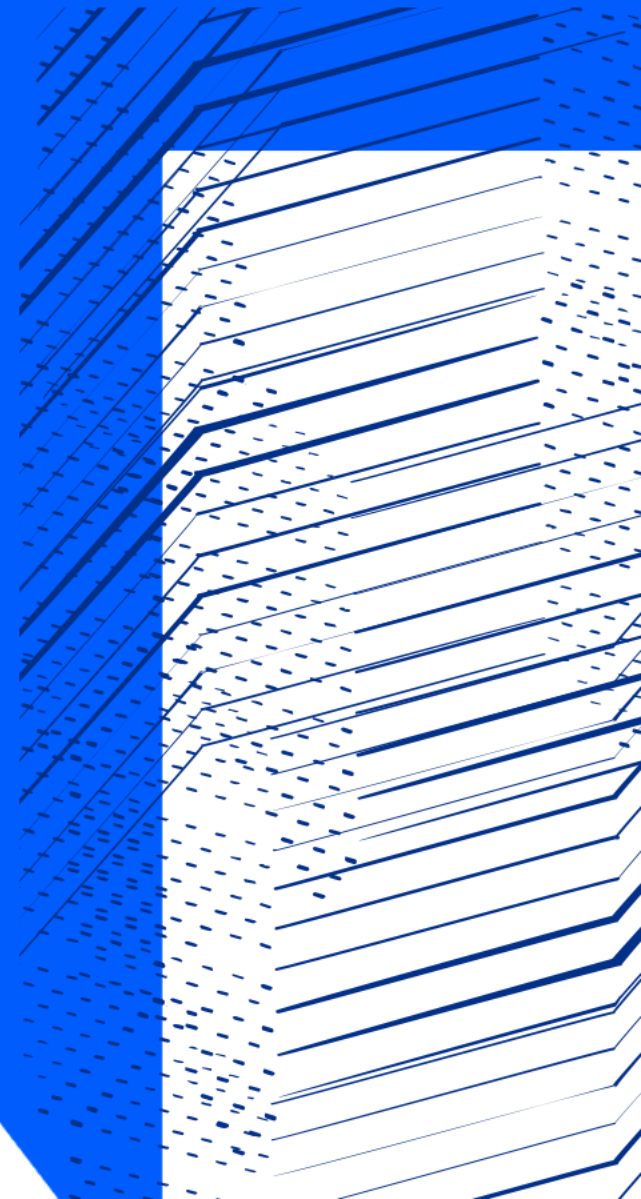




Science and
Technology
Facilities Council

RAL Deployment and Testing Status

George Patargias
9th December, 2020



Outline

- **Introduction (timeline)**
- **Set up of Kubernetes EOS-CTA Test Instance**
- **Set up of standard EOS instance**
- **Tier-1 Namespace clean-up**

Timeline

- **Castor has been the storage solution for tape-backed data at RAL until now**
- **Meeting with CTA team at CERN – October, 2019**
 - **Provided an overview of EOS-CTA components and architecture**
 - **Introduction to concepts around migration from Castor to CTA**
- **Two team members attended EOS workshop – February, 2020**
- **Hardware delivered in March, 2020**
- **CTA repo and migration procedures available – July, 2020**

EOS-CTA Instance

- Advice from CERN to run the containerised EOS-CTA test instance
- Set up a Kubernetes EOS-CTA instance on a standalone VM
- Using PostgreSQL for the external back-end database (CTA catalogue) and *mhVTL* as the virtual tape library
- Pre-requisite for understanding EOS-CTA and for the Castor to CTA migration
- Objective: to translate Kubernetes setup to how the physical systems will be setup

EOS Instance

- **With Tom Byrne, work in progress to set up a “standard” EOS instance**
- **Started by creating a small Docker EOS instance**
 - ✓ Understand what services are running on which nodes
 - ✓ First contact with EOS client commands
- **Currently setting up the EOS management (MGM) and storage (FST) nodes in config management system (Aquilon)**
- **We have a working cluster of an EOS MGM node and an EOS FST storage node to test out basic EOS admin tasks**

Tier-1 Namespace Clean-up

- Remove/clean-up parts of the namespace – old disk-only directories no longer required
- Creates smaller DB schemas to migrate to CTA
- Iterative procedure of directory & file search and deletion in collaboration with experiment liaisons
- Deleted entries per VO:

ATLAS: 20,133,182

CMS: 973,006

LHCb: 8,543,377

Total: 29,649,565

**36% of the namespace
size before deletion!**

Short-term Plans (Q1, 2021)

- **Complete cabling up the hardware/network switches**
- **Start installing the various nodes (OS will be Scientific Linux 7): EOS servers, CTA Ceph nodes, CTA tape servers and CTA Database nodes**
- **Start work testing the Castor to CTA migration procedure**
- **Upgrade Castor to 2.1.19 (pre-requisite for live migration) – will be carried out by Castor team lead and DBA team.**

THANK YOU!