



CERN
Tape Archive

3rd CTA Workshop (CTA 2024) Welcome and Introduction

Dr. Michael Davis for the CTA Team

CERN, IT Department
Storage and Data Management Group
Tape Archive and Backup Section

Welcome to the 3rd Annual CTA Workshop!



- Now part of TechWeekStorage24!
- Thanks to all contributors for a varied programme
 - Plenary on the outlook for tape storage
 - Site reports
 - Technical presentations
 - Discussion
 - ...including BoF session on inter-site backup
 - Hands-on sessions
 - CTA Roadmap

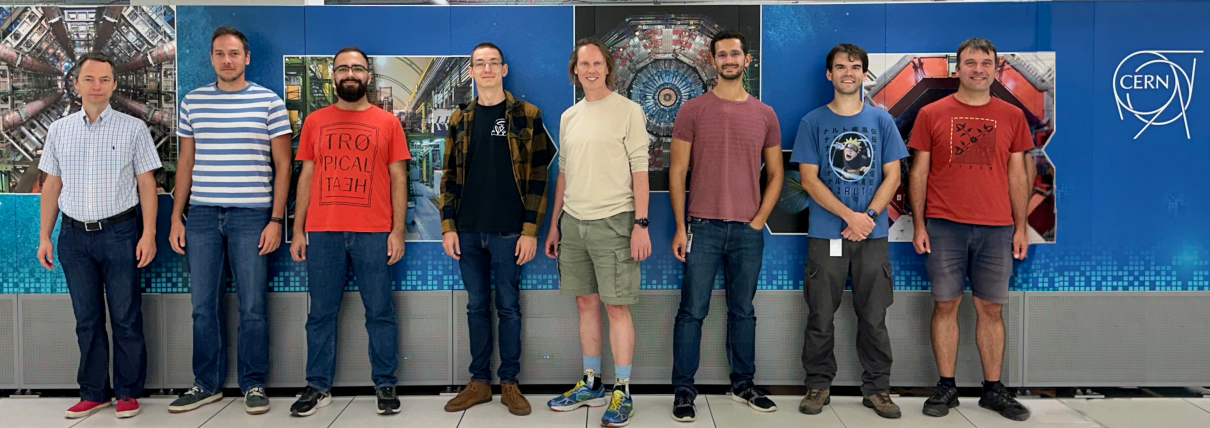
Practical Information



- All plenary sessions and technical talks are here in the IT Amphitheatre
- Morning coffee breaks in the IT Amphitheatre Coffee Area
Lunch in Restaurant 2
- Hands-on sessions in the Data Centre Meeting Room
513/1-064
- Workshop dinner: Meet 19.00 at Luigia Academy Restaurant
[Walking directions on the website](#)



Who's Who on the CTA Team



Vlado

Jaro

Pablo

Richard

Michael

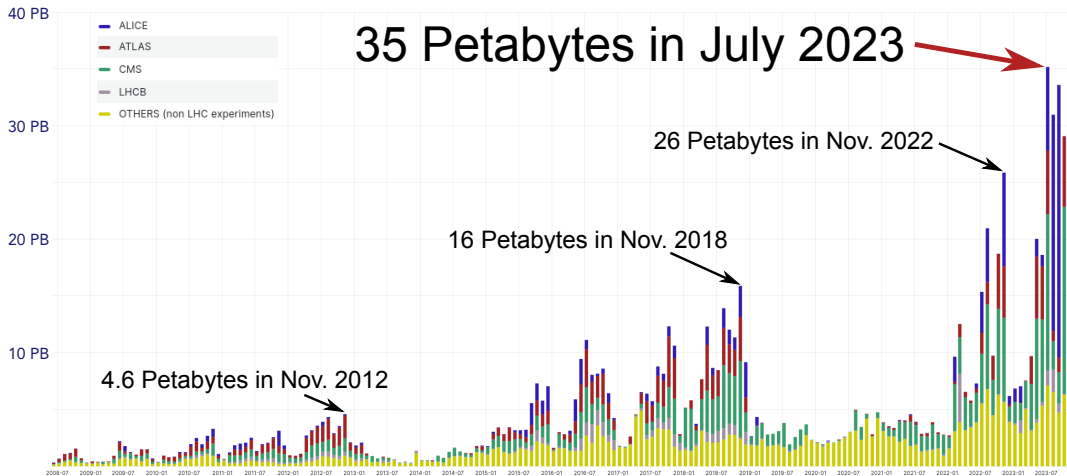
Joao

Jorge

Julien

New monthly data archival record

Data archived to CERN tape storage per month (since 2008)



CTA Service : Highlights 2023/24

- Nominal performance/efficiency as designed
 - Archival at 10 GB/s per LHC experiment consistently reached
 - Archival at 20 GB/s achieved within the limits of hardware resources
 - Archival of 35 PB in July exceeds anticipated data ingest rate
- See The CERN Tape Archive Run-3 production experience, CHEP 2023

Forthcoming, accepted for publication in conference proceedings

CTA Operations : Highlights

- CTA Operator Tools News
- Improved monitoring and alerting
The CTA Tape Alerting System
- CTA operations best practices
- Hands-on sessions (513/1–024)
Understanding and debugging common CTA problems
Restoring deleted tape files in EOSCTA

CTA Software : Highlights

- Migration to Alma Linux 9

Experiences migrating CTA to Alma Linux 9

- Simplified tape server configuration,
better support for two tape drives per tape server

A new simple and flexible configuration of tape drives
and the CTA tape daemon

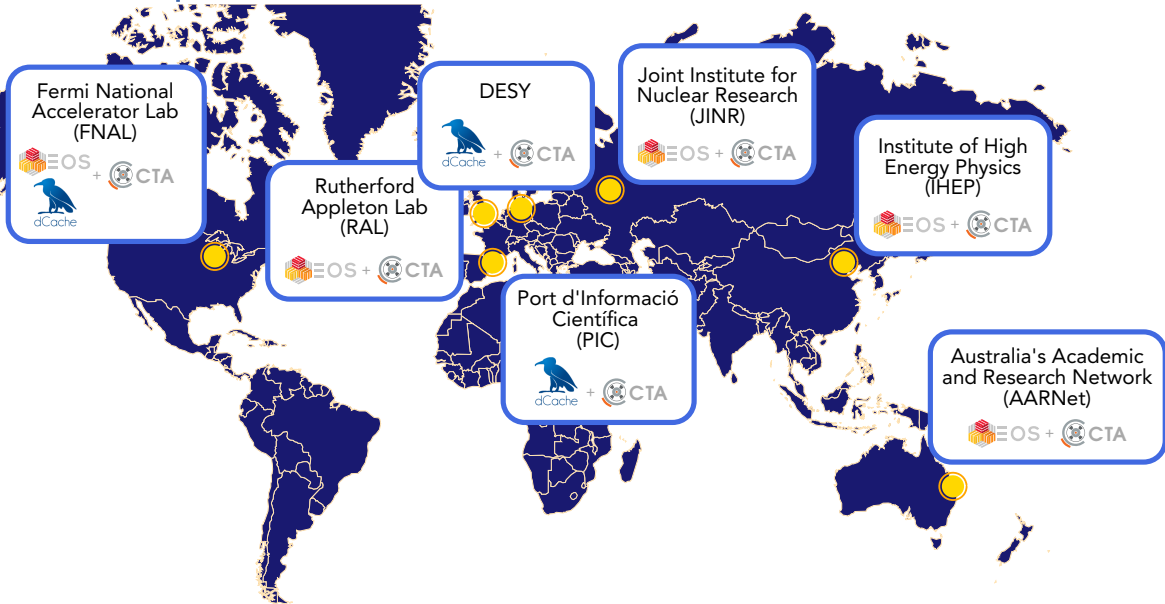
- More robust management of CTA disk buffer

From `stagerm` to `evict` : disk buffer management in CTA

CTA Software : Repack

- Repacking individual tapes works OK, but repack can interfere with normal archival/retrieval operations
- **New Repacking** state in the Tape State Machine
New CTA tape lifecycle (CTA Workshop 2023)
- **Repack Automation**
ATRESYS—Automated Tape REpacking System, a tool for managing CTA repacks and tape lifecycle (CTA Workshop 2023)
- **Separate Repack scheduling** from physics archival
Improving CTA performance by separating scheduler backends

Site Reports (today and tomorrow)



CTA Outlook and Roadmap

- Birds of a Feather session
 - Backing up data between WLCG sites
- Hints for scheduling and data colocation
 - Archive metadata
- CTA Outlook and Roadmap



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