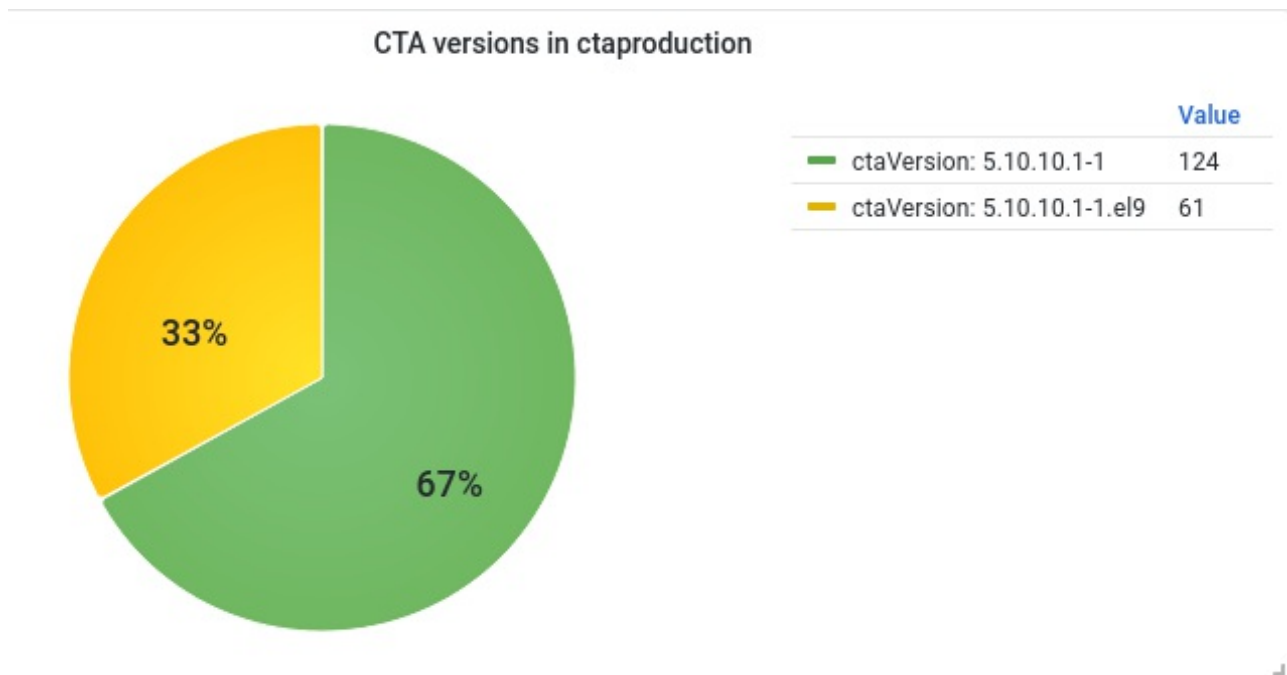


2024-05-22 Community meeting

- CentOS7 to AlmaLinux9 migration plan review
- Main CTA features review
- Community raised topics

CentOS7 to AlmaLinux9 migration plan overview

Ongoing migration at CERN: TODAY

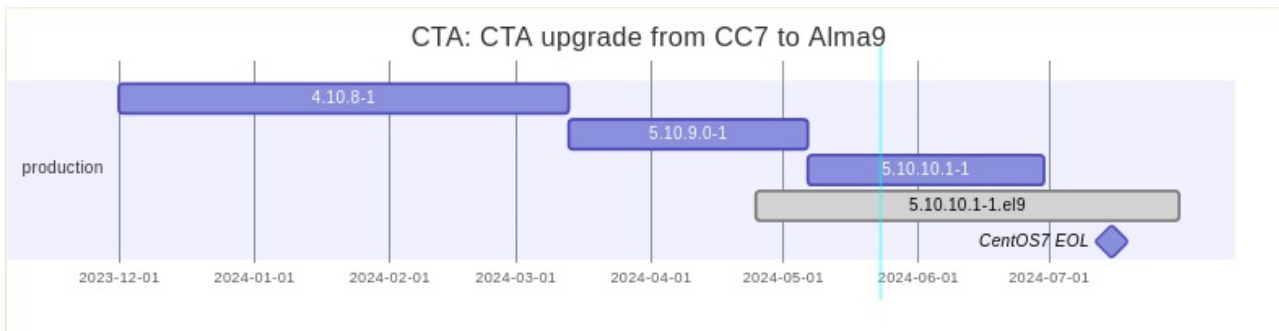


- [cta/CTA#600 \(https://gitlab.cern.ch/cta/CTA/-/issues/600\)](https://gitlab.cern.ch/cta/CTA/-/issues/600) - Setup the Alma9 release pipeline

Alma9 constraints

- xrootd4 (and therefore EOS4) no more
 - **only CTA 5 available in Alma9**
- migrate to CTA5 before Alma9

CTA CentOS7 to Alma9 migration path



- Migration performed at common CTA version for CentOS7 and Alma9
 - More CTA releases in the pipeline
- EOSCTA
 - [cta/CTA#686 \(https://gitlab.cern.ch/cta/CTA/-/issue/686\)](https://gitlab.cern.ch/cta/CTA/-/issue/686) - Upgrade eos-5 to eos-5.2.23-1

Simplified *version based* state machine

CTA version	State description
4.10.8-1	Last xrootd 4 version
5.10.9.0-1	Upgrade to xrootd 5 version (xrootd 4 deprecation)
5.10.10.1-1	New drive naming in place last CC7 version, multidrive support, configured with legacy log format written to file
5.10.10.1-1.e19	First Alma 9 version, <i>configured with json log format</i>

CERN migration strategy

- CTA upgrades are possible during CentOS7 to Alma9
 - 5.10.10.1-1 and 5.10.10.1-1.e19 is the same CTA code
 - .e19 is the agreed *alma9* marker that allows to follow deployment progress in production during this transition period

Main CTA features review

Deprecations

Compulsory configuration changes

- `/etc/cta/TPCONFIG` merged in new cta-taped configuration CTA 5.10.10.1-1
 - [cta/CTA#576 \(https://gitlab.cern.ch/cta/CTA/-/issue/576\)](https://gitlab.cern.ch/cta/CTA/-/issue/576) - Read current TPCONFIG configuration from cta-taped.conf
- `syslog legacy` logging support is going away in upcoming CTA 5.10.11.0-1

- [cta/CTA#687 \(https://gitlab.cern.ch/cta/CTA/-/issue/687\)](https://gitlab.cern.ch/cta/CTA/-/issue/687) - Remove SyslogLogger
- Log to file using `cta-taped --log-to-file=<logfile>`

New cta-taped configuration

Driven by multi-drive support.

All tape drives connected on one server **must be in the same CTA physicalLibrary**, allowing the local `cta-rmcd` server to mount tapes for all the drives connected on this server

- 1 `cta-taped` configuration file per tape drive
- 1 `cta-taped@<DRIVENAME>` `systemctl` service per tape drive

Each `cta-taped` configuration file must include the information that was previously in `TPCONFIG` in the following format:

`/etc/cta/cta-taped-IBMLIB4-TS1160-F14C2R1.conf:`

```
# Only 1 driveName entry allowed
taped DriveName IBMLIB4-TS1160-F14C2R1

# CTA logical Library for this tape drive
taped DriveLogicalLibrary IBM460

# System device allowing to read and write on the mounted
# tape in this tape drive
taped DriveDevice /dev/nst0

# Unique library control path for this drive in its
# physical library
taped DriveControlPath smc47
```

Two new fields must also be configured, the instance name and the scheduler backend name. These will be logged along with the drive name in each log line.

```
# String to identify CTA's catalogue instance
general InstanceName production

# String to identify the backend scheduler resources.
# "[ceph|postgres|vfs][User|Repack]".
general SchedulerBackendName cephUser
```

NOTE: Support for these fields in the `cta` frontend logs should arrive in `5.10.11.0-1` (to be confirmed)

Multi-drive cta-taped systemd unit configuration example:

- One `systemd-taped` service as parent per machine
 - One child `cta-taped@<drive_name>` service per drive
-

Parent file (mostly just for convenience)

```
# /etc/systemd/system/cta-taped.service
[Unit]
Description=CERN Tape Archive (CTA) tape server daemon
After=syslog.target network-online.target

[Service]
ExecStart=/bin/true
RemainAfterExit=yes

[Install]
WantedBy=default.target
```

Per-drive service

```
# /etc/systemd/system/cta-taped.service.wants/cta-taped@SPECTRALIB2-LT09-
F05B5S2.service
[Unit]
Description=CERN Tape Archive (CTA) tape drive daemon for drive %i
PartOf=cta-taped.service
After=syslog.target network-online.target cta-taped.service

[Service]
EnvironmentFile=-/etc/sysconfig/cta-taped # Supplies XrdSecPROTOCOL and
XrdSecSSSKT env variables
ExecStart=/usr/bin/cta-taped --log-format=json --log-to-file=/var/log/cta/cta-
taped-%i.log --config=/etc/cta/cta-taped-%i.conf ${CTA_TAPED_OPTIONS}
LimitCORE=infinity
OOMScoreAdjust=-1000
Type=forking
Restart=no

[Install]
WantedBy=cta-taped.service
```

[Community raised topics \(https://cta-community.web.cern.ch\)](https://cta-community.web.cern.ch)