Handling failed requests

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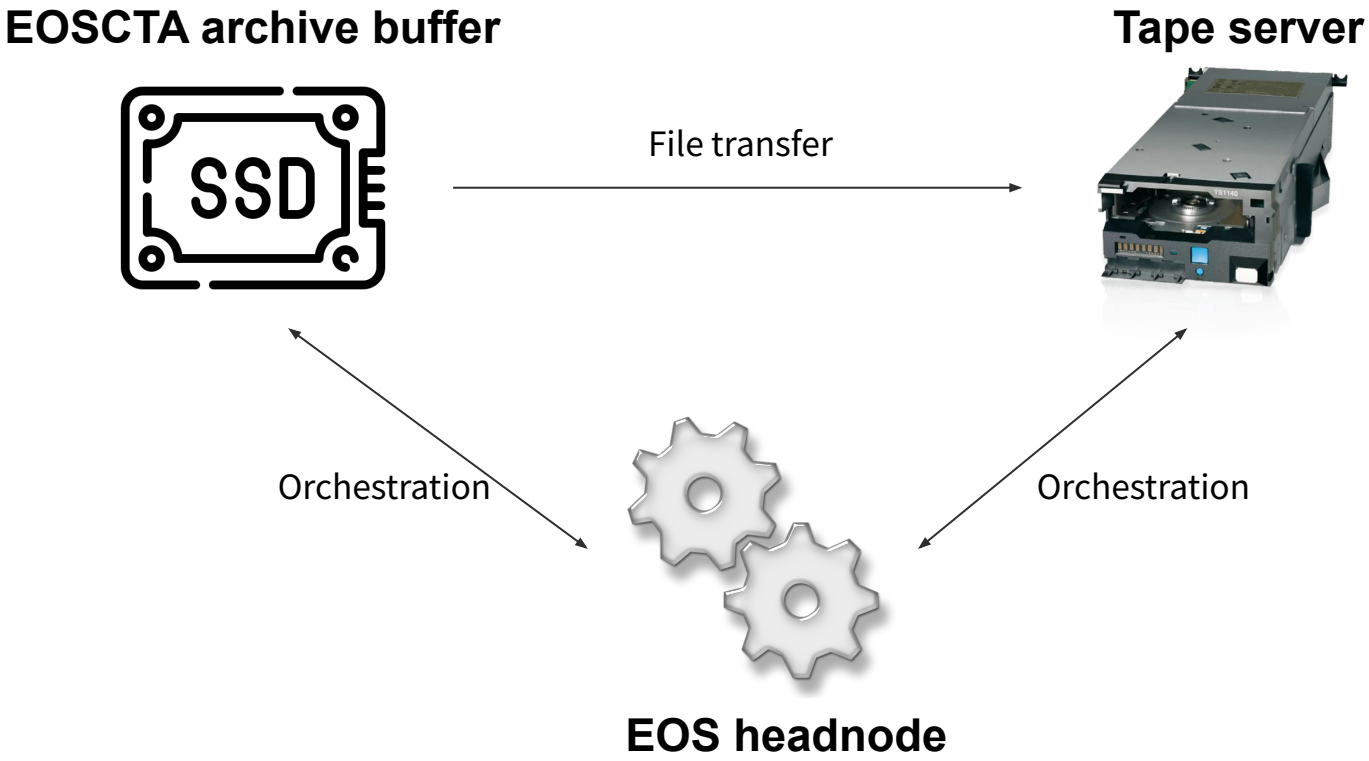
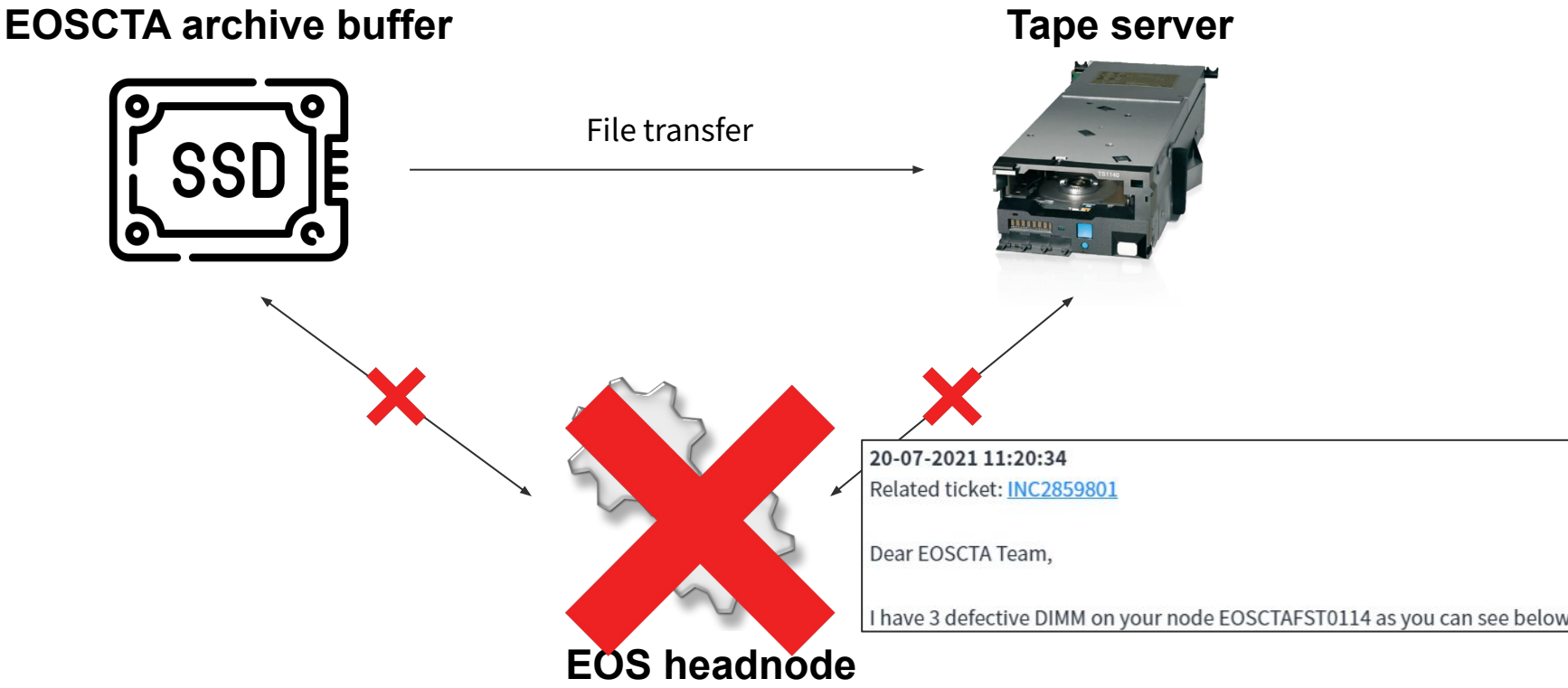
What are failed requests?

- Normal operations workflow is described in https://indico.cern.ch/event/1227241/contributions/5348164/
- Requests end up in QueueFailed after
  - 2 in-mount retries for archive jobs
  - 3 in-mount retries × 2 mounts for retrieve jobs
  - no retries for repack
- Remain in the archive buffer
- May indicate a problem in the system (hardware issue, critical bug)
- Can be listed by `cta-admin fr ls`

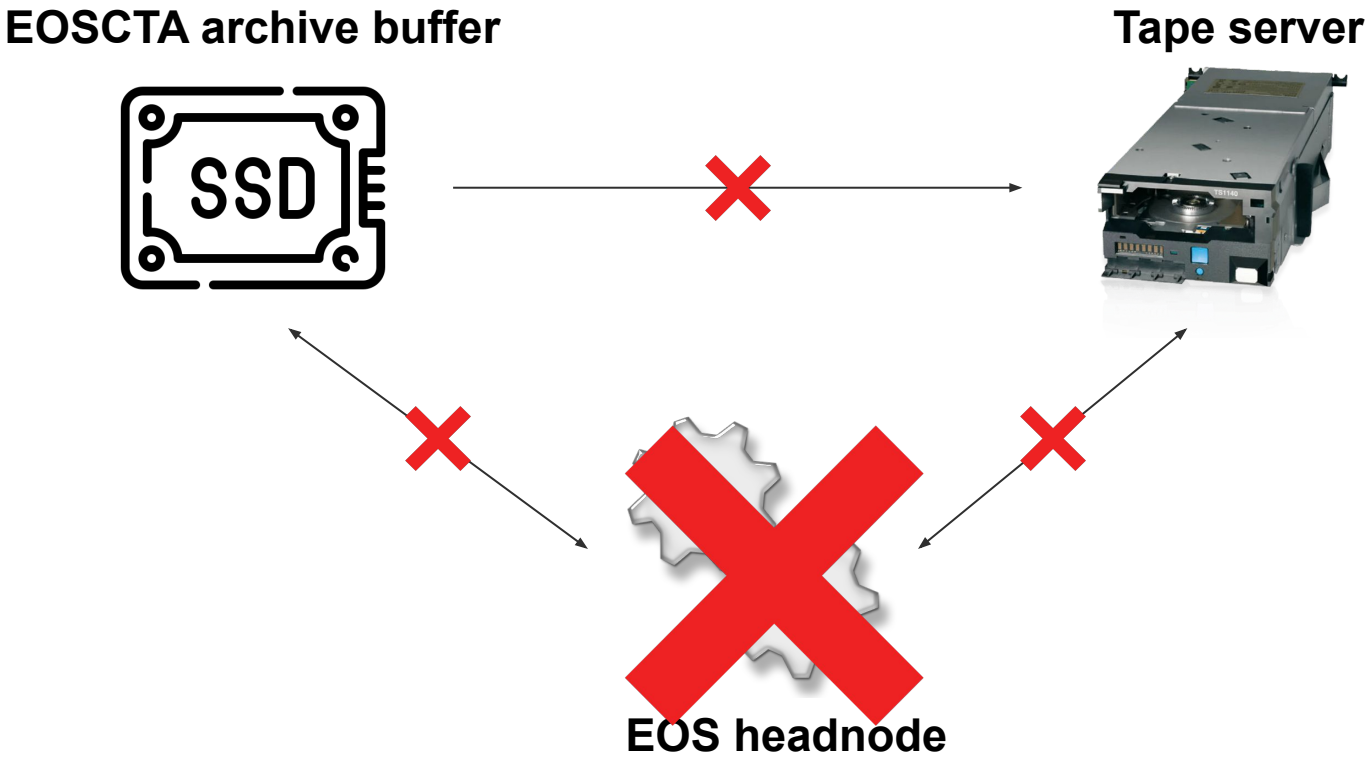
CTA incident 17-18 July 2021 on EOSCTAPUBLIC



CTA incident 17-18 July 2021 on EOSCTAPUBLIC



CTA incident 17-18 July 2021 on EOSCTAPUBLIC



How to recover?

- **Ask user** to re-transfer
- **Reinject**: send CLOSEW event to CTA to trigger archiving of a disk file
  - enabled by EOS WorkFlow Engine
  - more details on EOS+CTA workflows: https://indico.cern.ch/event/985953/contributions/4238328/
- Or **ignore** (e.g. repack failed requests)

Reasons for reinjection

① Reduce the number of transfers made by user

② Free up archive buffer space on shared instances

③ Quickly recover from the incidents

Scripts to handle failed requests

classify.sh

reinject.sh

1. Dump requests to a json file
2. Filter out files that:
   - were deleted by user
   - were overwritten by user
   - have wrong fileID (but same path and not on tape)
   - successfully written to tape
   - have valid request still ongoing
   - request the second copy
   - have no archiveID - <u>to be reinjected!</u>

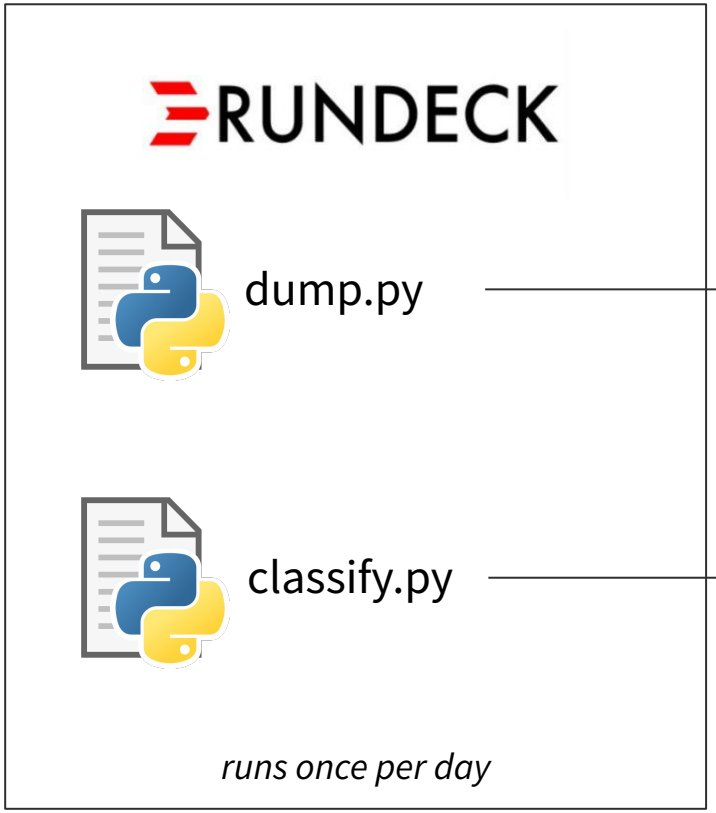
Scripts to handle failed requests

classify.sh

reinject.sh

1. Sanity checks
2. Delete ‘`sys.cta.archive.objectstore.id`’ extended attribute
3. Send CLOSEW event

Automated classification



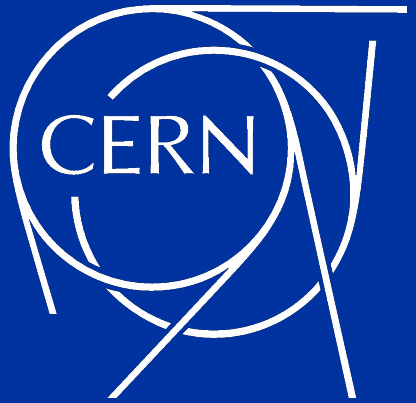
Dump failed requests to a file and upload it to the CTA project space in EOS

Filter out files for reinjection + upload the list to CTA project space in EOS

- TODO: upload directly to the monitoring DB

Next steps

- Integrate the classification scripts with the monitoring system
- Make them publicly available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