p3s - a few technicalities

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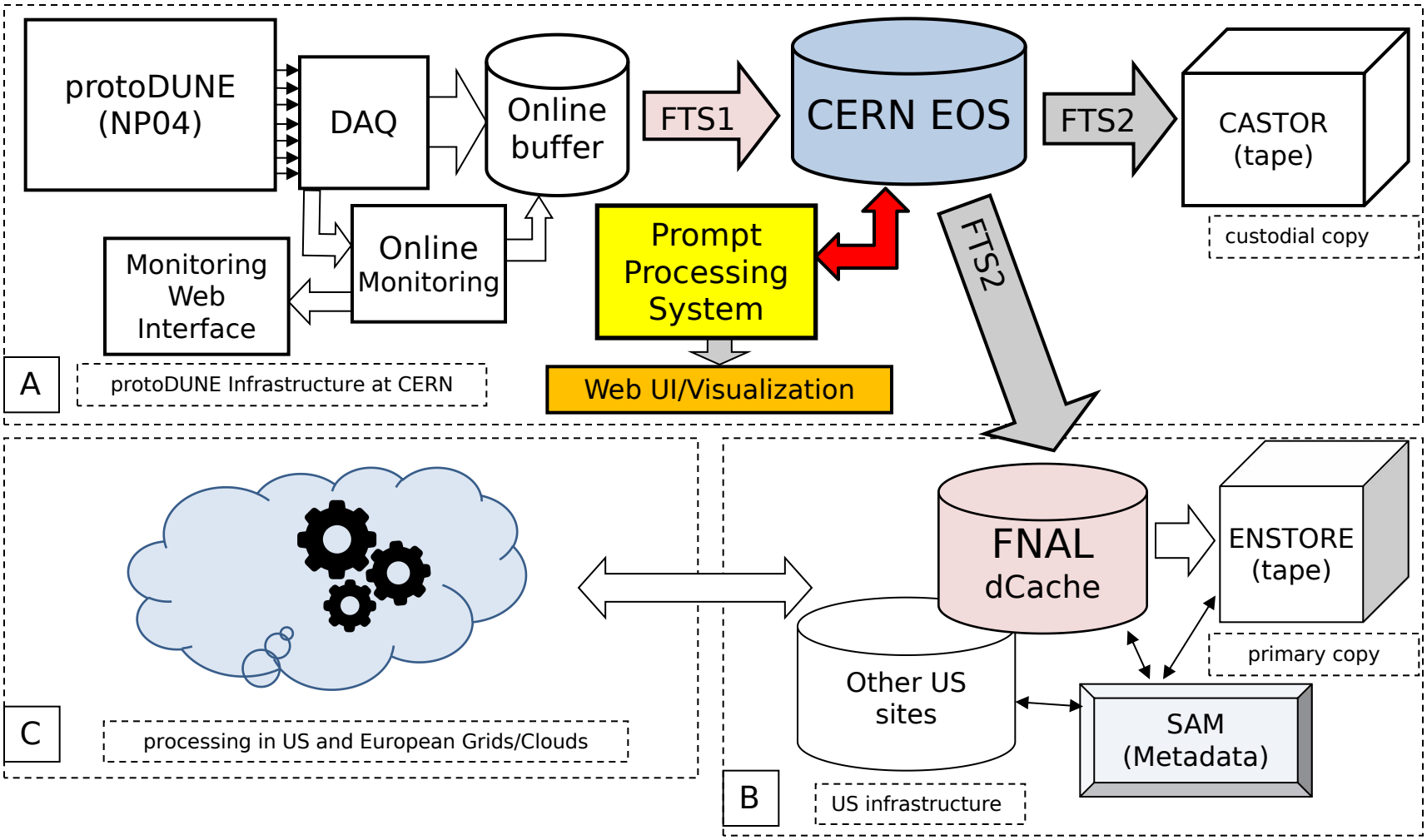
protoDUNE-SP data flow



Documentation

- User-level documentation for p3s
  - See "documents" folder on GitHub: https://github.com/DUNE/p3s
  - Documents exist in both "md" and "pdf" formats
  - For now the most relevant document is "JOB"
  - Links for all that are at https://wiki.dunescience.org/wiki/ProtoDUNE-SP
- Expert-level documentation for server maintenance is in the works, will be placed in the same location

Storage (identity and access to EOS)

- p3s jobs run under the pilot identity np04dqm
- could also run as the developer mxp
- when the pilot executes the job it still retains the pilot identity
- in either case if your job description refers to directories not open to public the job will fail

Storage (data)

- Right now we fully depend on EOS for data
- F-FTS team knows the agreed upon location of our "inbox", that's where the input data will be coming
- re: identity/access to EOS - see previous slide... either you can use your existing account and ensure that
  - primary Unix group is np-comp
  - to submit batch jobs: e-group np04-t0comp-users
  - to read/write EOS you need eos-experiment-cenf-np04-readers and eos-experiment-cenf-np04-writers to read and write respectively
- ...or at least for now use the prod account np04dqm
- "Everything" (including all logs) is currently under
  - /eos/experiment/neutplatform/protodune/np04tier0/p3s/
- Perhaps we need better structure since FUSE has hiccups when there is a large number of files in the same directory
- Condor logs had to be moved from EOS to AFS due to a CERN policy

Storage (logs)

- As mentioned, all logs are currently under
  - /eos/experiment/neutplatform/protodune/np04tier0/p3s/
- Look at UUID in the p3s monitor (p3s-wev.cern.ch) to match an object to its log (pilot, job)
- stdout and stderr are captured in uuid.out and uuid.err respectively, where uuid is the actual (long) identifier - in the directory "joblog"

Storage (software)

- Tried EOS to host software (Dorota), does not perform/breaks
- AFS was scheduled to be decomissioned in late 2018 but this is likely to be pushed back
- AFS has
  - user space up to 10GB in an account
  - work space up to 100GB
- The latter seems the right place to put software built locally since it is suposed to be more robust albeit with more latency
- Condor logs are now also in AFS due to CERN policy (EOS breaks Condor daemons)

Setup and wrappers

- There are (previously) working examples of wrappers (payload scripts) in the repository, under p3s/inputs
- ...see the "larsoft" folder there, and there is also breakdown for a few types of larsoft jobs
- Need updates examples of CVMFS-only setup
- ...perhaps event display won't need local builds
- *Need instructions (from Tom) for local builds as well*