Run Configuration DB

Updates

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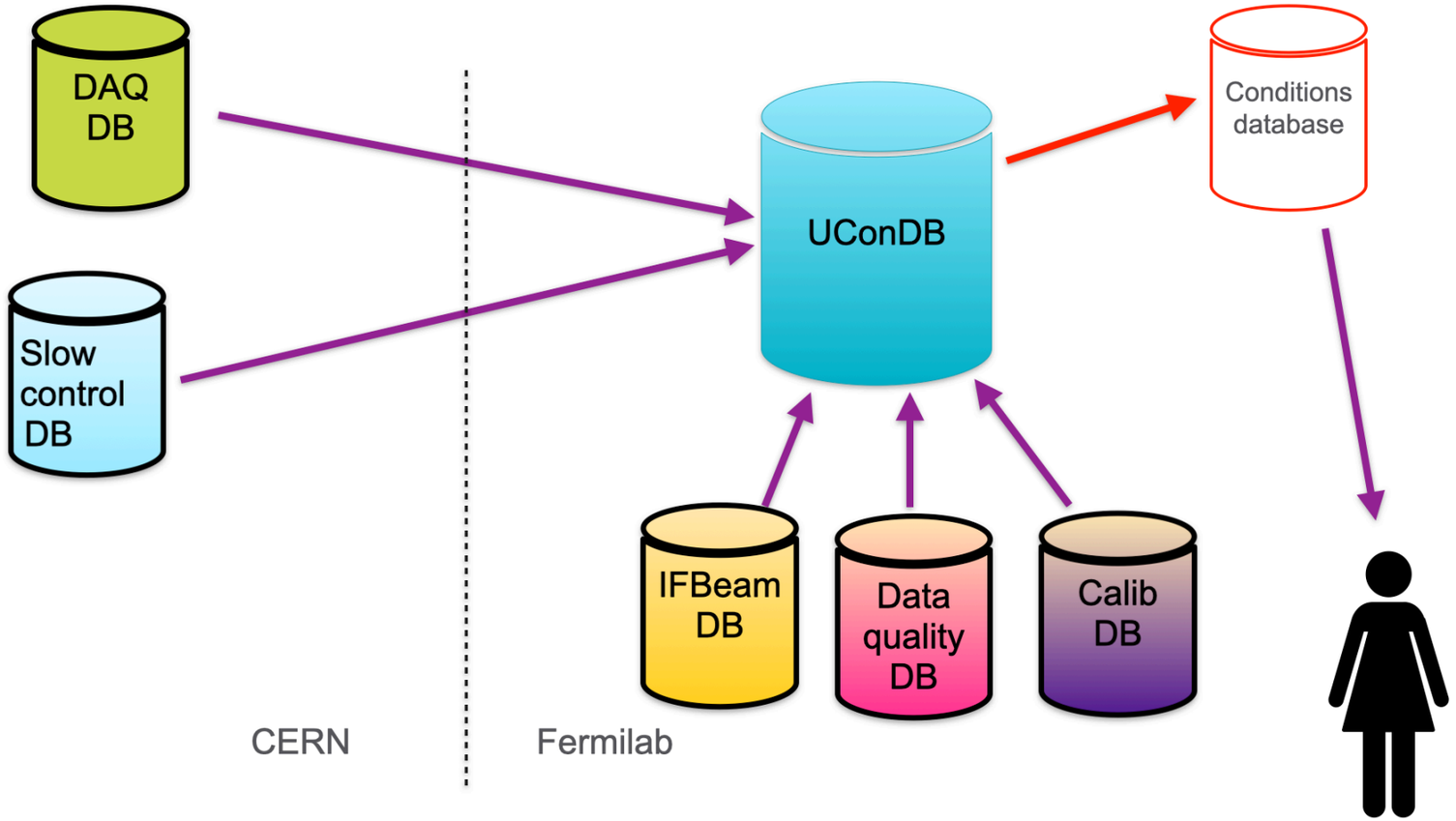

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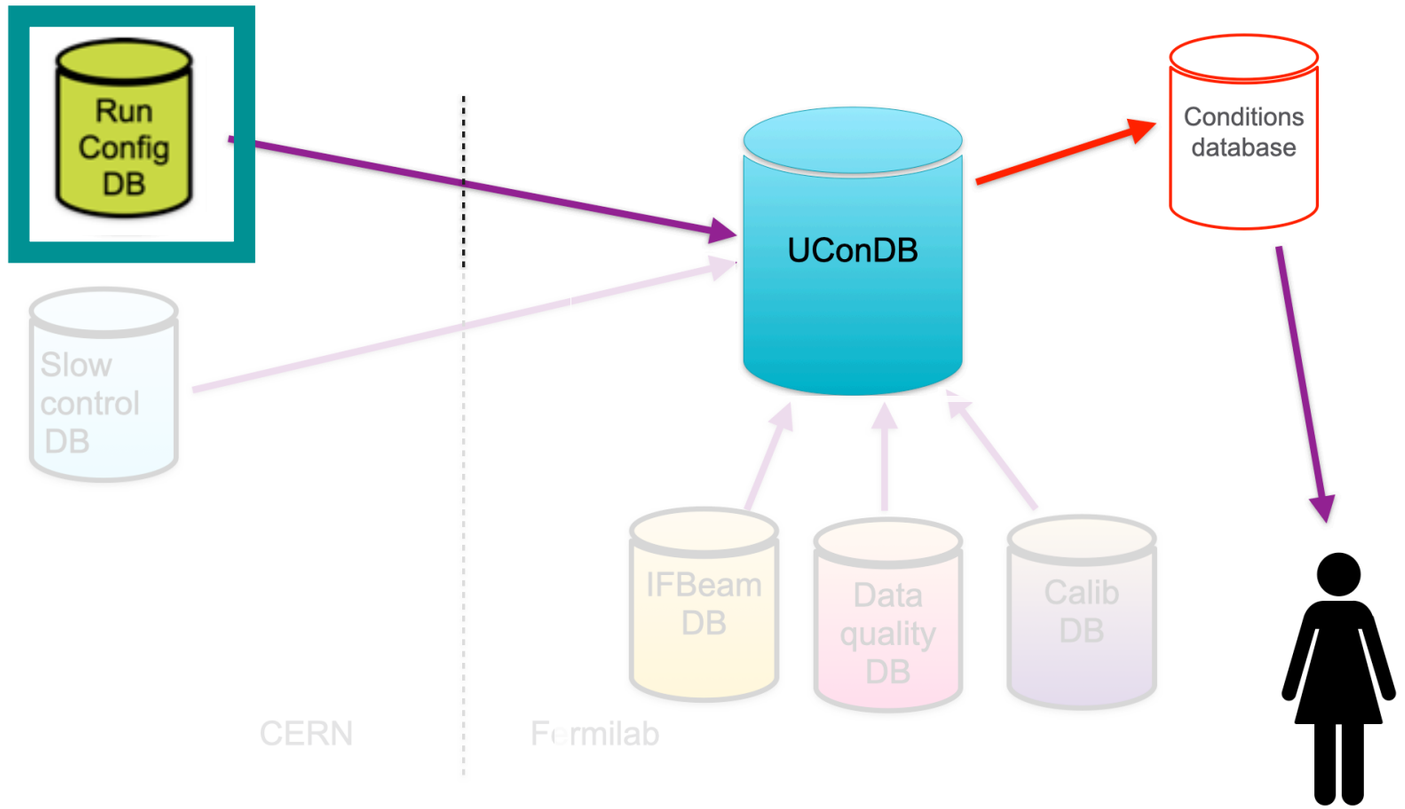
Run Configuration DB

- New method to extract the metadata from the run configuration DB and send it to the UConDB
- Subset of data is then send to another database with a more useful format

Updates

- Transfer data automatically after runs
- Select more data for the ‘conditions DB’



Data transfer after run - updates

ProtoDUNE I

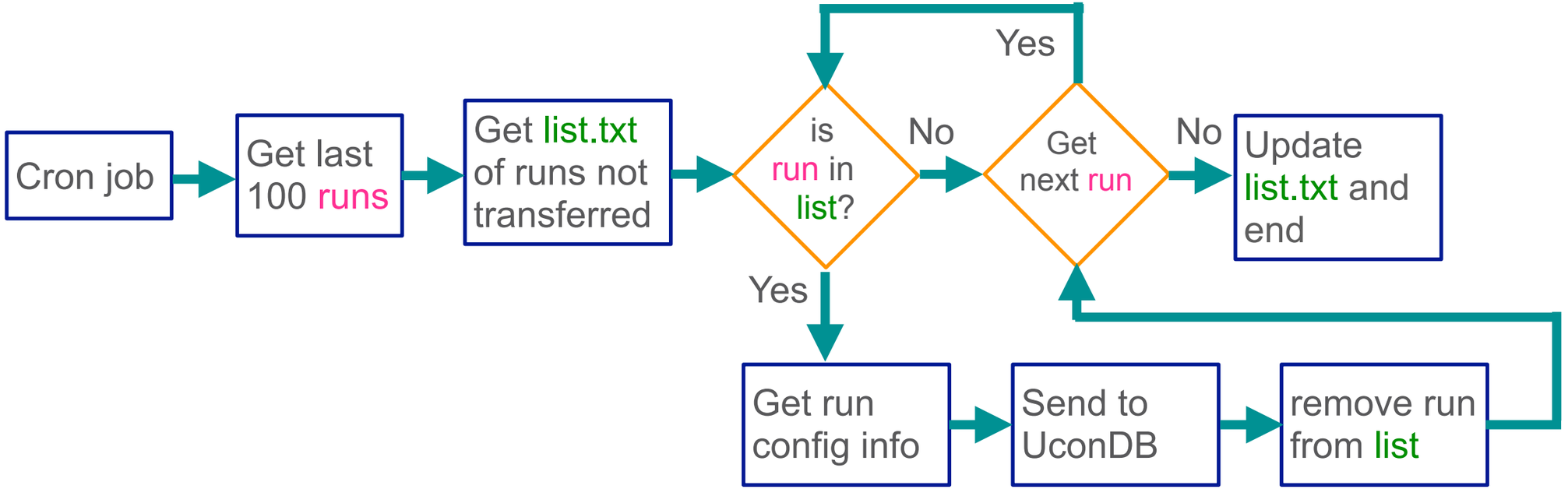
- Cron job that ran every 2 minutes
- Check for end of run:
  - Used the appearance of a stop.txt file on disk
  - Was the stop.txt file created ~ 2 min ago?
  - Look if the run info was transferred

ProtoDUNE Now

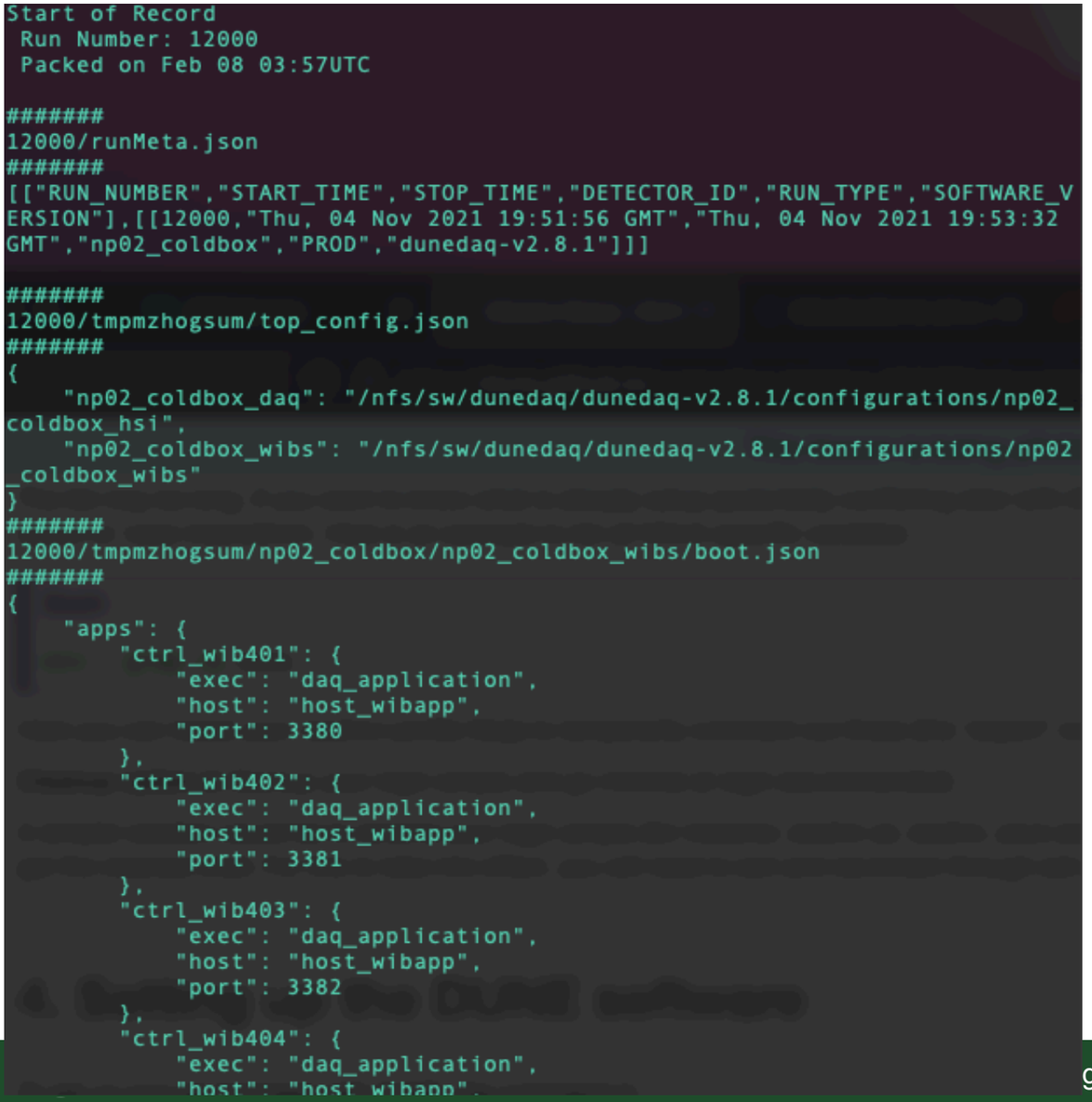
- Cron job that will run every ~2 min
- Storing of run registry info is now handled by web service instead of files on disk
- Check for end of run:
  - Extract metadata of last ~100 runs using run registry service
  - Check which runs have been transferred

Data transfer after run - how it works

- Working with Kurt Biery to define last parameters
  - How many runs to get
  - Runs not necessarily finish in order
  - Working with list of runs not transferred to have a small list
- Running in my home area but will transfer to cron folder



Conditions data - from blob to json



```
Start of Record
 Run Number: 12000
 Packed on Feb 08 03:57UTC

#######
12000/runMeta.json
#######
[["RUN_NUMBER","START_TIME","STOP_TIME","DETECTOR_ID","RUN_TYPE","SOFTWARE_V
ERSION"],[[12000,"Thu, 04 Nov 2021 19:51:56 GMT","Thu, 04 Nov 2021 19:53:32
GMT","np02_coldbox","PROD","dunedaq-v2.8.1"]]]

#######
12000/tmpmzhogsum/top_config.json
#######
{
    "np02_coldbox_daq": "/nfs/sw/dunedaq/dunedaq-v2.8.1/configurations/np02_
coldbox_hsi",
    "np02_coldbox_wibs": "/nfs/sw/dunedaq/dunedaq-v2.8.1/configurations/np02
_coldbox_wibs"
}
#######
12000/tmpmzhogsum/np02_coldbox/np02_coldbox_wibs/boot.json
#######
{
    "apps": {
        "ctrl_wib401": {
            "exec": "daq_application",
            "host": "host_wibapp",
            "port": 3380
        },
        "ctrl_wib402": {
            "exec": "daq_application",
            "host": "host_wibapp",
            "port": 3381
        },
        "ctrl_wib403": {
            "exec": "daq_application",
            "host": "host_wibapp",
            "port": 3382
        },
        "ctrl_wib404": {
            "exec": "daq_application",
            "host": "host_wibapp",
```

The blobs in the UconDB contain:

- Info from a lot of files
- Info is stored differently depending on the file
- Not user friendly

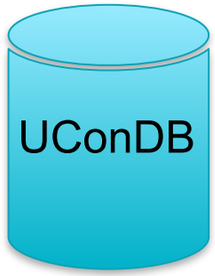
Subset for Conditions DB

Conditions data

- Just a few parameters
- Stored in json format
- User friendly

Conditions data - storage

The Run Configuration blobs are store in the UconDB



The conditions data from the run configuration can be stored in:

- Another folder of the UconDB
- A new Fermilab DB
- At cvmfs to improve cache capability

I will start with adding another folder to the UconDB with run 11880 onwards

Folders:	Objects:	Version:
sp_protodune	configuration All	blob-run# blob-run# ….
….		
protodune	configuration Conditions	blob-run# blob-run# …

Conditions data - more parameters

David Adams pointed out some parameters that are needed as conditions data, and that can/will be found in the run configuration blobs:

1. Run number
2. APAs: will eventually be available, once the APAs are in the cryostat.
3. Gain
4. Shaping
5. Leakage
6. hvfrac, Slow control setting
7. Pulser Amplitud
8. Pulser source, not yet available but just one has been used

I will add the parameters that come from the run config DB, but I don't think we should add info from a spread sheet that is filled by hand

LBNC feedback

Why do we need two databases?

- UconDB
- Conditions DB

We need to convey that the database group will just support one common database and interface, but not ad hoc solutions

Summary and outlook

- New cron job was created to automatically transfer the run config blobs to the ucondb
  - Final parameters are being set to make suer that outliers work properly
  - Will deploy in .cron folder
- New parameters were suggested to include in the run configuration subset of data
  - I know where to get the information and how to interpret it
  - I will work on including these parameters
  - Create another cron job for this transfer
- LBNC presentation successfully done

Thank you

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Backup slides

Run Config blobs sent to UConDB

The new Run Config - UConDB blobs contain:

- Run number and record of creation
- Metadata information
- Name of config files with path:
  - Front end electronics configuration files (wibs files)
  - DAQ run configuration files (DAQ files)

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Conditions data - more parameters

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The correct interpretation of each parameter can be found in:

/nfs/home/alyankel/gen_coldbox_configs/gen_coldbox_configs.py