Slow Controls DB

I have been in contact with George Salukvadze regarding the Slow Controls DB. We need to produce an application to copy from the CERN-side Oracle DB.

Justin and I have almost obtained all of the access and permissions we need to get this started.   We will need to sort out getting the data from NP04 through to FNAL but this has been done for other applications.

IFBeam DB

Igor informed me that the protoDUNE device is now available and active in the DIP service.

The rate it is sending at is too slow for a true test. I need to follow up on getting a more realistic rate.
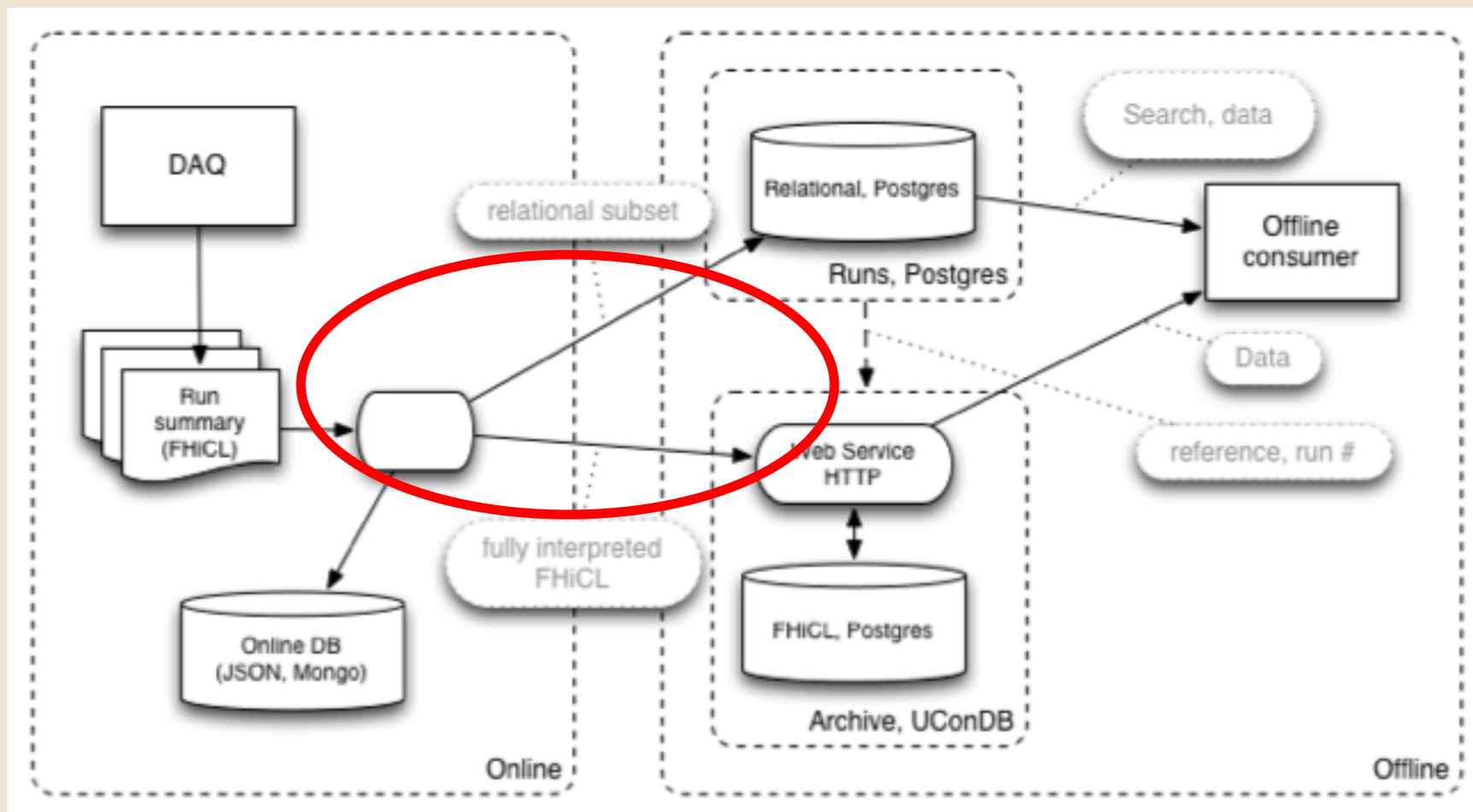
Dual Phase needs

I have communicated with Elisabetta about the DP protoDUNE DB needs.

- Will duplicate what we do for Slow Controls DB (FNAL copy)
- Same case for Runs DBs
- Hardware DB not as critical but would also like to build off of what we are doing for the SP

Run Database DAQ-side application

Igor presented the status of the run config/history DBs

Runs DB continued

- Collection of run configuration
  - Configs collected from fhicls and DAQ directly
  - History is subset of config metadata

Question – do we have the history RDB populated directly from the DAQ or from the ucondb?

Option 1 – RDB populated directly from DAQ application

- DAQ is sole source of data in both DBs
- Relies on two independent paths – potential for sync issues
- Link from DAQ to RDB needs to be worked out
- Changes to RDB tables require modification of DAQ code

Runs DB continued

Option 2 – RDB populated from ucondb

- Ucondb is FNAL-side source of contents of both DBs

- Single data path from CERN

- Requires application to copy from ucondb into RDB

- Minimizes changes to DAQ if RDB tables change (depends on the parameter and how things are designed on CERN-side)

We have not reached a consensus on which approach but perhaps it would help to have a better idea of the Runs DB requirements.

As Jon pointed out in the thread on this topic – available personnel to develop the applications may be an additional limiting factor (currently we have Igor working on the FNAL side, Kurt working with the DAQ group and Justin (my student) starting to get involved.

Run Conditions and History DB Requirements

- ## Buffering of run parameter payload

  - Anything not directly pulled from fhicls needs to be staged to ensure CERN-FNAL link interruption protection

- ## Parameter handling

  - What level of translation of parameters allowed – i.e. do we store fhicls directly or convert to JSON, or something else?

  - What protections are required if additional transfer from ucondb to RDB takes place? Is this any different from the two path approach?

  - Late entry of parameters only in the case of disruptions or table changes?

- ## Timing (latency)

  - Do we wait until run termination until transferring to FNAL?

  - What is the timescale on getting the transfer made? When does DQM need parameters (eg. run type and exit code)