DSG NPS Status

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Priorities as of 09/13/2022

Just wanted to check in on a few things. Documentation on how to run the software needs to be added to the wiki page here:
https://wiki.jlab.org/cuawiki/index.php/NPS_Controls

The 'go_XX' helper links will be updated to point at the preferred software later. For now, I/we need "low-level" instructions on how to run the Phoebus software on cdaql3.

Here's the list from

- Priority 1: Please focus on getting your HV (CAEN) and LV (MPOD) software up and running on cdaql3. (We have workarounds, but running the final, production software is a priority.)
  - nps-hv1
  - nps-hv2

  Both crates have power and are on the network. There are *no* HV cables plugged into the back and signs are posted to prevent that from happening. So, you are free to point your software at those crates and turn HV on/off at will to test/debug.

  - nps-lv1

  That crate is also online. I have been controlling it through a USB cable, which is not great. It will be great to have the production software for that MPOD crate up and running so we can control the crate from cdaql3

- Priority 2: User-friendly control software for the LED pulser system.

- Priority 3: Thermal readout software
  * NOTE: The French team will be coming onsite to complete the thermocouple connections at the end of September. We would like the readout software ready and running by that point.

HV and LV controls

LED controls

Thermal readback (Keysight unit)

Status as of 10/14/22

o Phoebus HV GUI isn't quite ready to go.
- The Instructions here aren't enough to run the GUI
  https://wiki.jlab.org/cuawiki/index.php/NPS_Controls#Phoebus_HV_controls
- I presume that works from the cdsg account, but that is not the account that we will use.
- Can you add instructions on how to install a copy of that software in a different account (provide a tarball, etc.)

- Mary Ann is writing instructions
  - Peter and Pablo will proof instructions
  - Aaron will add instructions to wiki page
- Only cdsg account was given; what account will be used?
  - Once accounts are accessible, startup instructions will be provided
- Brian will make the tarball
  - Need access to other accounts

Status as of 10/14/22

o Chiller controls: Please add documentation to the wiki on how to configure and run the relevant software https://wiki.jlab.org/cuawiki/index.php/NPS_Controls#Chiller

- Configuration, run, and control instructions will be provided once chiller controls are installed
  - Independent VI chiller controls work
  - Peter and Pablo will proof instructions
  - Program will be moved to the NPS cRIO

Status as of 10/14/22

o Thermal Readbacks: Please add documentation to the wiki on how to configure and run the relevant software
https://wiki.jlab.org/cuawiki/index.php/NPS_Controls#Thermal_Readbacks_.28Keysight.29

- Aaron will add documentation
  - Peter will proof the documentation
- Aaron is revising LabVIEW program to reflect new channel connections for the Keysight readback
- Aaron will test the humidity sensors
- Marc will fabricate power distribution box
- Pablo will test EPICS controls Phoebus screens

Status as of 10/14/22

o Can you provide an ETA on the LV controls software?
- I had understood there was a GUI for the same Weiner MPOD system running in Hall A associated with the GEMs. Can that be adapated?

- Expected date of completion: ~3 weeks
- Brian has the codes from the halls
  - Hall A code (EPICS) only uses HV modules; yes, code can be adapted
- Tyler will set up the EPICS PV table
  - HV modules have different parameters
  - Need to know what to monitor for the low voltage
  - Need to know what account
- Mary Ann will generate Phoebus screen

Status as of 10/14/22

o Can you provide a status update on the LED controls
- Do you have a testbed established using the boards and drivers you in your possession?
- Have you been able to take to the boards with the low level code Bryan Moffit, William Gu, et al have provided?

- Work in progress
  - Estimated time of completion unknown
- Brian has a testbed for LED controls
- Missing software drivers between the VME LED drivers and the Phoebus screen (most complex part)
- Mary Ann will develop Phoebus screen

Summary

- DSG needs at least 3 weeks (without time contingency) to address the items mentioned in the previous slides

- Unknown amount of time required for developing missing software drivers between the VME LED drivers and the Phoebus screen (most complex part)