

Planning Workshop Preparation

DAQ CT, 22.05.06

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Thea



Science and
Technology
Facilities Council

Agenda (semi-final)

DAQ Planning Workshop

Week of: **May 13**

Set the starting date in cell C2. Rows 3 and 4 will automatically

	5/13 MONDAY	5/14 TUESDAY	5/15 WEDNESDAY	5/16 THURSDAY	5/17 FRIDAY
7:00 AM		NP04	NP02 Other	Server PRR	
7:30 AM		NP02 Scene Setting and OKS Review Summary	NP02 Other	Server PRR	
8:00 AM		v5/OKS	Critical Path	Server PRR	
8:30 AM		v5/OKS	Critical Path	Server PRR	
9:00 AM		v5/OKS	Critical Path		
9:30 AM		v5/OKS	Critical Path		

- Apologies for the early start



Indico & Zoom

Indico pages

- ▶ May 14: <https://indico.fnal.gov/event/64574/>
- ▶ May 15: <https://indico.fnal.gov/event/64575/>
- ▶ May 16: <https://indico.fnal.gov/event/64576/>
 - Very tempted to collapse them into a single event if there is time

Zoom

- ▶ Booked a physical room at CERN for people on site
- ▶ Zoom links here:
 - <https://indico.cern.ch/event/1413044/>
- ▶ Will be added to the FNAL indico page(s)



Inputs for discussions

WBS NUMBER	TASK TITLE	WHO?	PCT OF TASK COMPLETE	January				February				March				April				May			June
				8	15	22	29	5	12	19	26	4	11	18	25	1	8	15	22	29	6	13	20
1	Build and code generation tools																						
2	Schema design																						
3	Run control integration																						
4	Schema development for DAQ Modules																						
4.1	Introduce OKS schema concept to DAQ module developers	Gordon	100%																				
4.2	Prepare schema for readout	Gordon/Giovanna/Rolanda	95%																				
4.3	Prepare schema for timing	Diana/Gordon?	20%																				
4.3.1	Prepate schema for HSI	Eric?	20%																				
4.4	Prepare schema for dataflow apps	Giovanna/Eric	100%																				
4.5	Prepare schema for trigger apps	Arthur/Giovanna	95%																				
4.6	update CmakeLists.txt and activate dal generation	John	100%																				
4.7	prepare schema for detector modules	Giovanna/Eric?	0%																				
4.5.1	Ready for dunedaq-v5.0.0		0%																				
5	Introduce DAL into appfwk & DAQ Modules																						
5.1	Prepare instruction to switch DAQ code	Gordon, Eric	100%																				
5.2	Basic configuration generation tools	Gordon	100%																				
5.3	Switch appfwk / lomanager to using DAL	Eric/Gordon	100%																				
5.4	Switch all core DAQ modules to using DAL	Eric/Giovanna/Artur	100%																				
5.5	Manual integration and system tests	??	0%																				
5.5.1	Ready to merge into nightly		0%																				
6	Validation																						
6.1	Establishment of automated integration and system tests	Eric, Kurt?	5%																				
6.2	Tests with real data input	Giovanna	80%																				
6.3	Better configuration generation tools	Eric/Gordon	0%																				
6.4	Basic validation of db for users	Alessandro/?	10%																				
6.5	Configuration area for EHN1	Giovanna/Wes	0%																				
6.5.1	Ready for dunedaq-v5.0.0		0%																				
7	Getting ready for production																						
7.1	CTB schema and code conversion	Marco	5%																				
7.2	detector modules code conversion		0%																				
	wibmod	Roland																					
	sspmodules	Ron																					
	daphnmodules	Marco																					
	crtmodudules	?																					
7.2.1	Complete operational monitoring info for trigger	Artur																					
7.3	Timing session using OKS	Diana	0%																				
7.4	Completion of configuration area for EHN1/NP02	Wes?	0%																				
7.5	Switch to DRUNC	Pierre/Gordon	80%																				
7.6	System testing with pinning	?	0%																				
7.7	Virtual functions support	Alessandro/Gordon																					
7.8	Refined readout schema for dpdk	Alessandro																					
7.9	Release testing																						
7.6.1	Ready for dunedaq-v5.1.0		0%																				



Main areas of work

- **Operations for NP04 (+NP02)**
 - ▶ Remaining “missing features” for NP04
 - ▶ Remaining integration work in prep of NP02
- **Transition to OKS-based configuration (v5.x)**
- **PRR preparation**
 - ▶ timing, readout network and daq servers
- **Other critical path developments planned for ‘24**



Operations and Integration

- **NP04**
 - ▶ Confirm the list of missing features
 - ▶ Identify who is going to work on them, on what time frames
- **NP02**
 - ▶ Confirm what missing for detector integration (assuming v4 as baseline)
 - ▶ Confirm what is required for transitioning to v5 (see OKS slide)
 - ▶ Identify who is going to work on them, on what time frames
- **Reference person: Wes**



Transition to OKS

- Detailed understanding of work required to deploy OKS-based system as DAQ-default still missing
- Key question that need answering before the workshop
 - ▶ Are the subsystems configuration representation sufficient?
 - ▶ Are the interfaces to the Run Control sufficient?
 - ▶ Are the interfaces to Conditions / Historical databases sufficient? (is there a plan..?)
 - ▶ Are the integration tests ready to support the transition?
 - ▶ Is the configuration management/generation ready for detector operations?



Transition to OKS

- Questions/people table
 - ▶ Are the configuration representation sufficient (to operate NP02)?
 - **Readout - Roland/Alessandro, Trigger - Artur/Josh, Dataflow - Kurt/Eric, Timing - Stoyan/Diana (?)**
 - ▶ Are the interfaces to the Run Control sufficient?
 - **CCM - Pierre/Alex**
 - ▶ Are the interfaces to Conditions / Historical databases sufficient? (is there a plan for..?)
 - **CCM (?) - Alex/Pierre/?**
 - ▶ Are the integration tests/regression tests ready to support the transition?
 - **Release Coordination - Kurt**
 - ▶ Is the configuration management/generation ready for detector operations?
 - **Run Coordination - Wes**
- Reference person: Giovanna



PRRs

- Detailed understanding of work required to prepare the PRRs still missing
- 2 main aspects
 - ▶ Clarifying the procurement process details across the consortium
 - ▶ Technical specifications preparation ← Focus of the workshop
- Inputs to the planning workshop
 - ▶ Timing : preliminary list of documents, hardware testing status and work plan leading up to the review
 - **Stoyan, David**
 - ▶ Readout Network : preliminary list of documents, testing status and plan leading up to the review
 - **Adam + Roland/Alessandro**
 - ▶ Servers (see next slide)



DAQ Servers PRR

- Inputs to the Planning Workshop
 - ▶ preliminary list of documents, testing status and plan leading up to the review
- Baseline goal for the PRR: review of procurement of all DAQ servers: readout, general infrastructure, dataflow/storage, ccm, dqm, trigger and data filter
- What is going to run on each class of servers? and how do we estimate its footprint to inform technical specifications? What measurements are required?
 - ▶ Understanding of readout server requirements fairly advanced: focus on performance measurement work
 - ▶ Missing crucial input for other server groups: **general infrastructure, dataflow/storage, ccm, dqm, trigger and data filter**
 - What do we need to do and how do we get there?
- Reference person: Roland



Other critical path items

- **K8S rollout at EHN1 : report on status and close out**
 - ▶ Alex/Pierre/Tiago
- **Opmon upgrade**
 - ▶ Alex/Pierre/Marco
- **Network requirements document**
 - ▶ Adam/Roland: Missing inputs to FNAL networking and what measurements are required
- **Application framework review implementation**
 - ▶ Eric : Workplan update - **probably requires a dedicated session**
- **Timing SW/FW completion**
 - ▶ Stoyan/David: Activities not covered by Timing PRR prep (e.g. timing as service?)
- **DAQ deployment model**
 - ▶ Already covered by general infrastructure servers specs for server PRR.
- **Reference person: Alessandro**

Summary

- **Preparing the Planning Workshop requires a significant effort from all of us**
 - ▶ Can we devote the required effort in the next couple of weeks?
- **What can we fruitfully discuss in the workshop?**
 - ▶ And what will we have to postpone?
- **What are our priorities?**

