



Meeting Minutes

<i>date:</i> September 21, 2006	<i>subject:</i> LCLS Controls Software Meeting
<i>from:</i> Doug Murray x2235	
<i>department:</i> LCLS Controls	

<i>Linac Coherent Light Source</i>	•	<i>Stanford Linear Accelerator Center</i>
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Attendees:

Arturo Alarcon	Debbie Rogind	Diane Fairley
Doug Murray	Hamid Shoaee	Kristi Luchini
Mike Stanek	Mike Zelazny	Patrick Krejcik
Sergei Chevtsov	Sheng Peng	Jim Knopf
Stephanie Allison	Stephen Norum	Stephen Schuh
Steve Lewis	Till Straumann (<i>absent</i>)	Mike Browne
Dayle Kotturi	Terri Lahey	Jingchen Zhou

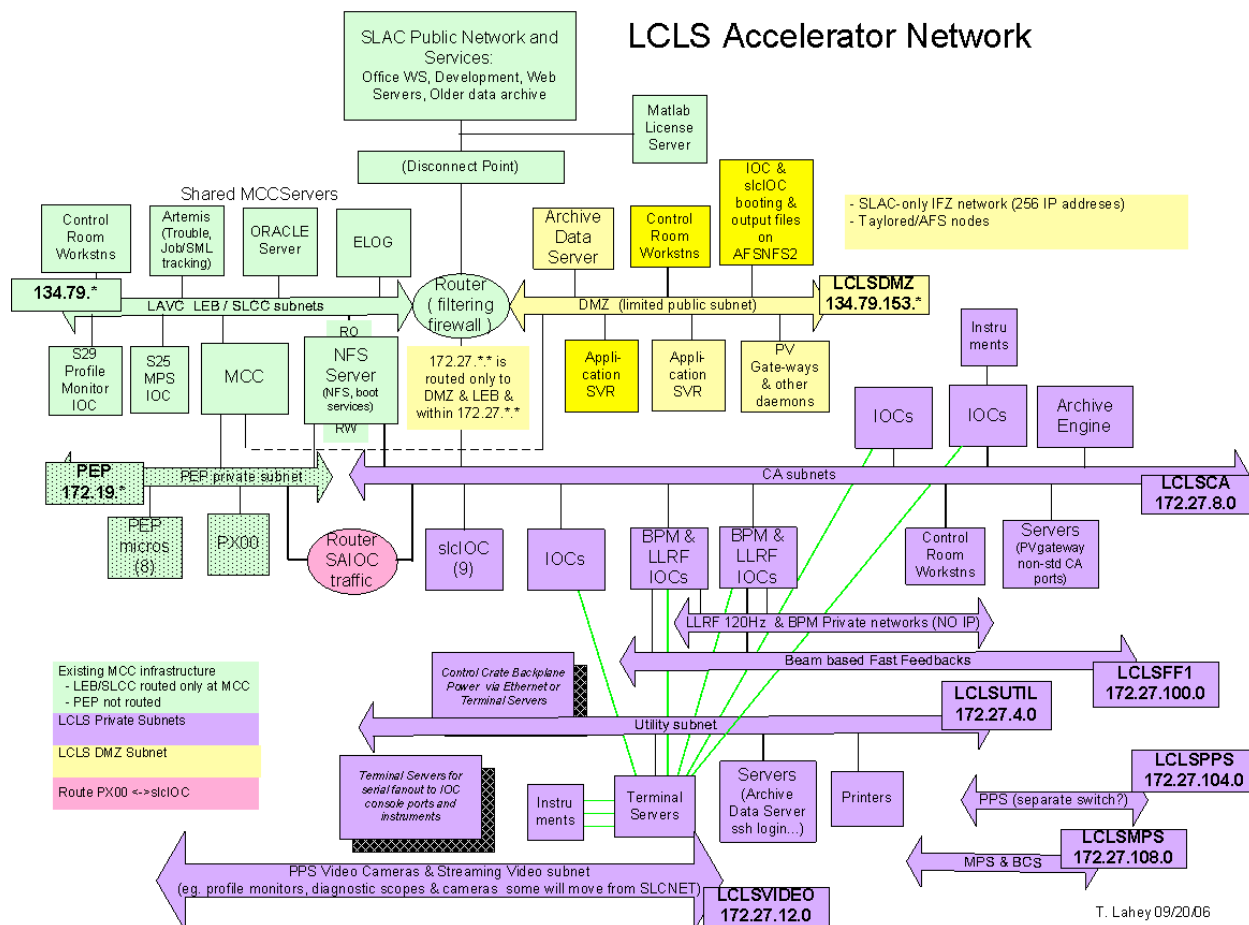
Agenda:

1. EPICS Startup Screen – Invitation to Compete
2. Network and Server Status Update for Operations

Minutes:

1. Hamid started today's meeting with a reference to a previous meeting. He spoke of the need for a main startup screen for our control software.
 1. He announced a competition for the creation of the initial, startup application. The prize would be a [REDACTED] of [REDACTED].
 2. It would be used to launch all LCLS related applications, and could itself be started as a standalone program or from elsewhere including an SCP display.
 3. He showed some examples from SLAC's SCP screens, and from the SNS startup display.
 4. Ideally, the new startup screen would provide access to all geographic regions and to any functional aspect of operation, either in graphic form or just as text.
 5. Any format for the display is acceptable, although EDM is preferable; it could be in JAVA, TCL/TK, C++, COBOL.
 6. For the competition, he said the team would decide the winner.
 7. The work is due by Monday, October 16, and should be able to support safety systems, existing EPICS tools, the Archiver, alarms, high level applications and more.
 8. Hamid also suggested we could discuss the control panel hierarchy and other startup applications at a future meeting.
2. Terri then gave an update to the plans for network and server support, relating to the upcoming commissioning schedule.
 1. She started with a diagram of the planned network topology.

LCLS Accelerator Network



T. Lahey 09/20/06

- It was pointed out that the DMZ would be a "SLAC-only" subnet; it would only be visible to other SLAC sites, and would only be able to directly reach other SLAC sites. It will not be directly on the Internet. This is similar to our lcls-dev server. Most machines on this subnet will be Tailored with AFS access, and has a maximum of 256 nodes. It will include Control Room workstations (operator stations), at least 2 application servers, running Red Hat Linux, Enterprise Edition 4.
- MATLab will work on the Application servers or workstations.
- Terri mentioned that Logbooks would be defined (Elog), and the Artemis trouble reporting system will be available.
- Kristi asked about the location of the Oracle server. Jingchen said it would be in the MCC subnet within the computer room. It is used for ELog, and will be loaded locally, it does not need AFS access.
- Hamid asked if IRMIS support would be there as well. Terri said it would be on an SSCS server.
- Stephanie asked if physicists with LINUX laptops would access our IOCs from outside via the gateway. The answer was Yes, but would Channel Access be used from the DMZ to MCC? Aida will also be used. A proxy for SLC IOCs needs to be opened to allow access to PX00. Also a laptop on the Utility subnet is to use the PV gateway.
- Terri mentioned there were now 14 SLC aware IOCs on the list, with more coming.

9. Sheng asked if other Network Accessible Devices such as PLCs, motion controllers or oscilloscopes would reside on the Utility subnet. Terri said it wasn't clear, and it could be discussed offline.
10. Kristi asked what criteria would be used to determine nodes on the Utility subnet. Can a router be configured to allow direct access from a Utility subnet node from a Channel Access node? Terri suggested we discuss the issue offline.
11. It was pointed out that an isolated switch would be used for non-IP dedicated communication with LLRF and BPM equipment.
12. Steve asked how one would access the terminal servers to gain access to an IOC console. Terri mentioned there was a line missing from the diagram.
13. Dayle asked if thought had been given to the CA_ADDR_LIST environment variable in the designs. Terri said Yes.
14. Kristi asked if non-Channel Access devices could be categorized separately. Sheng suggested it could be a separate VLAN from the CA one. Terri suggested we discuss the details offline, but it should not be a problem.
15. Stephanie asked about writing files from the DMZ subnet? Terri suggested we discuss this offline. Stephanie said she was thinking specifically about the AFS tokens expiring after several hours.
16. A question arose regarding access to web-based interfaces to VME crates, PLCs, power reboot units, terminal servers and other network devices. Terri suggested we could discuss this offline.
17. Terri pointed out that Nancy Spencer must be given details for PVs running in SLC aware IOCs.
18. There was a question to confirm that the LINUX servers will be 32 bit versions working on 64 bit machines. Jingchen said that was the case, and would be until we were ready to change.
19. Terri mentioned that we should all be aware that physicists want to use Windows based PCs. Hamid confirmed that the group was aware, and mentioned they will have LINUX machines too.
20. Steve asked about using different port numbers for development and testing, from those in the operations environment. This is being done for many of the subsystems.
21. Stephanie pointed out that a command server would be needed for LINUX. It was mentioned that the command server was currently only compiled to run on Solaris.
22. Doug asked where EDM would typically execute. Jingchen said on a control room workstation, although it could run on an application server as well.
23. Terri then described a migration plan from AFS to standalone operation, at a future date.
 1. She mentioned that eventually none of the machines would be Taylored.
 2. Kristi asked about CMLog. Terri said it is being worked on.
 3. Stephanie said that IOCs would need DNS and NTP. Terri said they would be available, and currently exist on MCC.
 4. Kristi pointed out that Configuration files for applications would need to be moved from AFS also.
 5. Patrick asked how backups would be done. Terri said there was no need since most of the data is copied from originals that are backed up.
 6. Stephanie asked about acquired data, and Jingchen suggested a backup scheme would be implemented for that. Terri said we could discuss the details offline.
 7. Kristi mentioned that some Linux machines will need access to serial ports, which Taylor currently disables. A recent fix from SCCS is documented on the Wiki.
24. Sheng suggested that read-only access to Cisco switch settings would be very useful. Terri said that was a possibility and we could discuss it offline.
25. Doug suggested we allocate a pool of IP addresses for quick deployment of test or calibration devices, since the current form with signature seems too time consuming. Terri said that wasn't their policy.

26. Terri mentioned that SunRay screens were working now, and encouraged people to log into them.
27. Doug asked about the status of the Linux workstation, and Jim said they have been working, but are not currently available..
28. Diane asked if there would be room for laptops, since the physicists would like to run MATLAB programs. Terri said that wireless access would be available. Hamid said that Linux laptops would have space available inside and near the control room.
29. Hamid also mentioned that control engineers would need to be available during day shift. Mike asked about the details of the work, and if other duties could be performed. Hamid said the details would be forthcoming, but engineers would indeed be able to do their regular work when not engaged in commissioning work.
30. Kristi asked if history buffers would be used, or the archiver? Hamid said that was yet to be determined.
31. Terri mentioned that a separate MATLAB application server might be required.