

# ControlSystemStartupIssues

## Meeting Notes

These notes were taken by Greg White, and then typed into this page by Doug Murray. Jingchen made a modification. They were taken during a meeting on Thursday, January 18 2007. The meeting was attended by Greg White, Jingchen Zhou, Kristi Luchini, Doug Murray and for a brief time by Ron Chestnut and Hamid Shoaee. It was agreed that the setup for production environment is a high priority, comparing to relelase and etc.

## Production Environment

### What is needed for running an IOC?

#### on LCLSCA network

1. Need NFS server - MCCFS0
  2. Bootp must be available
  3. /usr/local/lcls - the location of all files that are needed for IOC boot
  4. /u1/lcls - the location of data (save/restore, log and etc. ) for all IOCs on LCLSCA network
- Action item: (Jingchen) add all of the IOC names to the NMS node name list. This gives write access to the NFS server for the IOCs.
  - (Kristi) is going to send the list of IOC names to Jingchen.
  - Resolution: The "process" of releasing software for IOC software (and possibly GUI applications) will be by a clear document wich describes where to put each kind of file, what to do, and how to move files there. It will specifically not be an automated release mechanism.
  - Action Item: (Jingchen) Set up startup files for linux machines under init.d. (1) cmlog (2) channelwatcher.
  - IOCs on different subnets (DMZ, LCLSCA) shall be able to log on the cmlog server running on lcls-prod01, since there is a route from LCLSCA to DMZ.

#### on DMZ network

1. NFS - IOCs
2. servers
3. consoles
4. AFS - /afs/slac/g/lcls - IOC boot area
5. bootp. So that IOCs can be booted.
6. Startup scripts for IOCs
7. Runtime files. (the basic IOC setup) on AFS. Also RTEMS.
  - a. databases. On AFS. Also RTEMS.
  - b. sequences. On AFS. Also RTEMS.
  - c. object files. On AFS. Also RTEMS.
  - d. binaries. On AFS. Also RTEMS.
  - e. save/restore area. NFS only.
  - f. logger data
8. Laci account, UID/GID.
  - decision on bash. Resolution is that laci account uses bash.
9. data: /nfs/slac/g/lcls/
10. Soft IOCs (process running on a host). "A server, serving EPICS PVs".

## Applications and Daemons

- D=start on boot or procmanager or UWD
- I=interactively started and used. Either Paul or LCLS home or unshbe

User Applications of most level apps, for instance Chanel Access clients.

I	EDM
D	Alarm Handler (standalone)
I	Alarm Hander Viewer
I	SCP
I	striptool
D	Archiver Daemon, Engine and Data Server
I	Archive Viewer
D	cmdSrv

I	cmdSrv use in SCP
I	cmlog client (viewer) browsers
D	cmlog server, fwdBro; cmlogClientD
D	channel watcher
I	Matlab applications
D	elog - mcc/lcls elog server (JLab)
I	elog viewer mcc/lcls - web browser
D	elog - physics DESY elog server
I	elog viewer physics DESY - web browser
I	lclshome (EDM screen) and all screen underneath
D	aida
I	firefox
I	artemis - use web browser
	NOTE: sea monkey and opera may not work
D	gateway (channel access gateway)
D	oracle (mccora, slacprod)
D	ioclogandfwdserver
D	slcca (the channel access server running on the alpha) Needs to be changed to allow PV PUTs
I	iocConsole
D	screen server (required by iocConsole)
D	virtual X server
I	procmanager (later)

- Resolution: there will be a directory in which the interactive program start scripts resides, will be in <somewhere>/bin. [somewhere is a common place on AFS or NFS](#) therefore every user plus operations accounts such as ops on kiosks in MCC use the same script.
- Bash will be used as the shell for the scripts starting interactive applications
- Each of these will source a small common environment (e.g. ENVSMINI.sh) ENVSMINI sets up the minimum interactive environment (that is, there shall be a separate ENVMINI for daemon applications)
- Best practice: to start a daemon on DMZ you type /etc/init.d/something restart from laci account.
- Resolution: start via a bash script calling a common setup
  1. start from lclshome (EDM) screen
  2. start from desktop icon
  3. start from command line
- Action item: (Jingchen) produce list for each daemon, a specification of the executable.
  1. location of the executable
  2. location of config files
  3. location of log files
  4. location of data files
  5. location of startup files
- Do the above for DMZ, LCLSCA, LCLSDEV
- 1. Action item: (Jingchen and Doug) create interactive run script for each interactive application. Therefore, create complete runtime environment for each application.
- 2. Action item: (Jingchen and Doug) create runtime common environment for interactive applications.
- 3. Action item: (Jingchen) Create list of versions of apps. Version of program itself. Version of EPICS on which it depends. This may be combined with list of daemons in a previous item.
- 4. Action item: (Kristi) Write cheat sheet for developers and operations. Probably 2 separate documents.
- 5. Action item: Update Wiki with details of each program. Later.