

# LCLS Directory Tree for Booting an EPICS IOC

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### Scope

This page describes the directory hierarchy found on the production and development systems.

### Development System

The development system is available from the SLAC Unix Network which uses by the AFS and NFS. However, the actual development takes place on lcls-dev2 host. Although other Linux hosts available on the SLAC Unix Network may be used for development builds, only lcls-dev2 is guaranteed to have the same version of Red Hat Enterprise used by the Control System in production.

The AFS directories on the development system are used by for code management, control system builds and testing.

The AFS ACL's are listed in Table 1.1.1 For the SCCS AMD information, such as filesystem map, click [here](#).

SCCS NFS toaster space is used in development to store data files that are either written by host processes or by EPICS IOCs during boot. The development system top-level directories are described in Table 1-1.

The column header "Access" found in the tables below refer to the control system applications access and not users access.

Table 1.1					
Development System - NFS Toaster Space					
Path	*Server: [ AMD	http://www.slac.stanford.edu/comp/unix/unix-monitoring.html ]	NIS Group	Net Group	Access
/home	lcls-dev2	lcls	lcls-rtems	read-write	
/nfs/slac/g/lcls	surrey10	lcls	lcls-rtems	read-write	

Table 1.1.2				
Development System - AFS				
Path	Server	NIS Group	ACL Group	Access
/afs/slac/g/lcls	SLAC Public Unix Network	lcls	g-lcls	read-only
			owner-g-lcls	

### Production System

The production system can be found on opi00gtw03 (from the laci account) and it uses an NFS server, which is maintained by the LCLS Controls System sysadmin group.

In the "/u1" directory, which is mapped to the mccfs0 NFS disk, data files are either written by Host processes or by EPICS IOCs. The production system NFS server is maintained by the Controls Group sysadmin team. The top-level directory for production is described in Table 1-2.

The column header "Access" found in the tables below refer to the control system applications access and not users access.

Table 1.2				
Production System - NFS				
Path	Server: AMD Filesystem	NIS Group	Net Group	Access
/u1/lcls	mccfs0-ca	lcls	lcls-rtems	read-write
/usr/local/lcls	opi00gtw03	lcls		read-only

### Booting an IOC from Development

### Booting an IOC from Production

The directories useful for booting an EPICS IOC from production, on the lclsca subnet are listed below.

Table 2.2		
Top-Level Directories		
Production		
Path	Description	Access
/usr/local/lcls/rtems	RTEMS OS versions	read only
/usr/local/lcls/epics	EPICS versions	read only
/usr/local/lcls/prod	released software	read only
/u1/lcls/epics/ioc/data	EPICS IOC data	read-write
/u1/lcls/slc/<prod, dev>	SLC db primary map for SLC Aware IOCs	read only (???why isn't this in /usr/local/lcls with read only files ???)
/u1/lcls/tools		read-write

Table 2.2.1	
EPICS Top-level Directories	
Path	Description
/usr/local/lcls/prod/epics	
/usr/local/lcls/prod/epics/base	symbolic link to prod version of epics base
/usr/local/lcls/prod/epics/ extensions	symbolic link to prod version of epics extensions
/usr/local/lcls/prod/epics/config	Set EPICS environment variables for iocs and processes

Table 2.2.2		
IOC Application Directories		
Path	Description	Access
/usr/local/lcls/prod/epics/ioc/iocBoot/<nodename>	IOC startup and links	read only
/usr/local/lcls/prod/epics/ioc/Alignment	alignment IOC application	read only
/usr/local/lcls/prod/epics/ioc/BeamCharge	beam charge IOC application	read only
/usr/local/lcls/prod/epics/ioc/BeamChargeCF	beam charge CF IOC application	read only
/usr/local/lcls/prod/epics/ioc/BeamContainment	beam containment system IOC application	read only
/usr/local/lcls/prod/epics/ioc/BunchLength	bunch length IOC application	read only
/usr/local/lcls/prod/epics/ioc/BunchLengthCF	bunch length CF IOC application	read only
/usr/local/lcls/prod/epics/ioc/FeedbackSimulation	feedback simulation IOC application	read only
/usr/local/lcls/prod/epics/ioc/Feedback	feedback IOC application	read only
/usr/local/lcls/prod/epics/ioc/Laser	laser IOC application	read only
/usr/local/lcls/prod/epics/ioc/MachineProtection	mps IOC application	read only
/usr/local/lcls/prod/epics/ioc/Magnet/ magnet IOC application	IOC application	read only
/usr/local/lcls/prod/epics/ioc/MotionControl	motion control IOC application	read only
/usr/local/lcls/prod/epics/ioc/PersonelProtection	pps IOC application	read only
/usr/local/lcls/prod/epics/ioc/ProfileMonitor	profile monitor IOC applicaiton	read only
/usr/local/lcls/prod/epics/ioc/VacuumApp	vacuum IOC application	read only
/u1/local/lcls/epics/ioc/data/<ioc nodename alias>/log	ioc boot log file	read-write
/u1/local/lcls/epics/ioc/data/<ioc nodename alias>/config	read-writeConfiguration data to restore	read-write
/u1/local/lcls/epics/ioc/data/<ioc nodename alias>/restore	ChannelWatcher IOC data to be restored	read-write

Note: the ioc nodename alias is define in the file screeniocs, which is found in the directory /usr/local/lcls/prod/epics/ioc/iocBoot.

