

Ethernet Device Network Settings for LCLS Subnets

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References

- [README](#)
- [How-to Configure an MVME6100 RTEMS Processor](#)
- [EVR Installation](#)
- [Terminal Server and VME CPU Serial Port](#)
- [How-to Release Software](#)
- [How-to Setup DHCP for an IOC](#)
- [Network](#)
- [How-to Connect to an IOC Serial Port](#)
- [How-to Reboot an RTEMS IOC](#)

On the [LCLSDMZ](#) production subnet devices can be on the LCLSDMZ or on a 172 production subnet. All above network devices any subnet must be in the Internet Free Zone (IFZ).

Controls Subnets		
Device	Production Subnet	Development Production
EPICS IOCs	LCLSCA	LCLSDMZ
VME Crates, Power stripsTermial Servers, Switches	LCLSUTIL	
Cameras	LCLSVIDEO	
PLCs,EPSC	LCLSINST	

Development

- [Nodes on LCLSDEV Subnet](#)
 - [IP Addresses on LCLSDEV for development](#)

RTEMS			
Boot Server	Subnet	Dev Directory	Prod Directory
surrey11	LCLSDEV	/nfs/slac/g/lcls/build/rtems/4.7.1	/nfs/slac/g/lcls/build/rtems/4.7

LCLSDEV Subnet	
Server IP Address	134.79.19.29
Secondary Server IP Address	134.79.19.148
Default Gateway	134.79.219.1
Subnet Mask:	255.255.252.0
Domain	slac.stanford.edu
DNS #1	134.79.111.111
DNS #2	134.79.111.112
DNS #3	
NTP #1	134.79.110.75
NTP #2	134.79.110.10
NTP #3	134.79.110.9
My Network IF + media (LAN Speed)	auto
Use Bootp	N

For development iocs send a request to unix-admin to add your ioc to the **lcls-rtems** netgroup so the ioc can access files under [/nfs/slac/g/lcls](#).

File System	Account	uid.gid	Directory
lcls-dev2	laci	8412.2211	/home/epics/ioc/data/<ioc nodename>
RTEMS st.cmd files			
IOC Log	nfsMount("8412.2211.@134.79.219.12","/nfs/slac/g/lcls/dev/epics/ioc/data","/dat")		
SLC-Aware	nfsMount("8412.2211.@134.79.219.12","/nfs/slac/g/lcls/dev/slc","/slc")		

EPICS IOC Startup Files		
Directory:	/nfs/slac/g/lcls/build/epics/ioc/iocBoot/ioc-<area>-<subsystem>	
File	Description	Comment
st.cmd	RTEMS IOC Startup Script	example
st.cmd	Soft IOC Startup Script	example
pre/post startup files	Setup env variables	

Production on LCLSDMZ Subnet

- [Nodes on LCLSDMZ Subnet](#)
 - [IP Addresses on LCLSDMZ for temporary only](#)
 - [How-to Setup DHCP for an IOC](#)

RTEMS		
Boot Host	Subnet	Directory
surrey11	LCLSDMZ	/nfs/slac/g/lcls/build/rtems/rtems/4.7
LCLSDMZ Subnet		
Server IP Address 134.79.19.29		
Secondary Server IP Address	134.79.19.148	
Default Gateway	134.79.151.1	
Subnet Mask	255.255.252.0	
Domain	slac.stanford.edu	
DNS #1	134.79.151.11	
DNS #2	134.79.18.41	
DNS #3	134.79.18.40	
NTP #1	134.79.48.11	
NTP #2	134.79.18.40	
NTP #3	134.79.18.41	
My Network IF + media (LAN Speed)	auto	
Use Bootp	N	

For iocs on the LCLSDMZ subnet send a request to unix-admin to add your ioc to the [lcls-rtems](#) netgroup so the ioc can access files under [/nfs/slac/g/lcls](#).

File System	Account	uid.gid	Directory
surrey11	laci	8412.2211	/nfs/slac/g/lcls/epics/ioc/data/<ioc nodename>
NFS Access for IOCs			
IOC Log	nfsMount("8412.2211.@134.79.127.60","/nfs/slac/g/lcls/epics/ioc/data /<nodename>","/data")		
SLC-Aware	nfsMount("8412.2211.@134.79.127.60","/nfs/slac/g/lcls/slc","/slc")		

EPICS IOC Startup Files		
Directory:	/afs/slac/g/lcls/epics/ioc/iocBoot/ioc-<area>-<subsystem>	
File	Description	Comment
st.cmd	RTEMS IOC Startup Script	example
st.cmd	Soft IOC Startup Script	example
epicsEnvSetDmz	Setup env variables	

Production on LCLSDMZ Subnet

[Nodes on LCLSCA Subnet](#)

Boot Host	Subnet	RTEMS Version
mccfs2	LCLSCA	/usr/local/lcls/rtems/4.7.1
LCLSCA Subnet		
Server IP Address	172.27.8.11	
Default Gateway	172.27.8.1	
Subnet Mask	255.255.252.0	
DNS #1	134.79.151.11	
NTP #1	134.79.151.11	
My Network IF + media (LAN Speed)	auto	
Use Bootp	N	

Note: to use DHCP enter "Y" for instead of "N" for Use Bootp. For further instruction on setting up DHCP click [here](#).

For production iocs on the LCLSCA subnet send email to ((Jingchen Zhou|Jingchen) and request that he add your ioc to the following system files on lcls-prod05. This will give your ioc access to the files on mccfs2, which is mounted as /u1 on lcls-prod05.

/etc/hosts
/etc/dfs/dfsta

Boot Host	NFS Disk	Host	Account (uid)	Group (gid)	uid.gid	IOC Data
mccfs2	mccfs2	lcls-prod05	laci	lcls	8412.2211	/u1/lcls/epics/ioc/data /<nodename>
NFS Mounts						
File Systems	nfsMount("8412.2211@172.27.8.11","/u1/lcls/epics/ioc/data /<nodename>","/data")					
SLC-Aware	nfsMount("8412.2211@172.27.8.11","/u1/lcls/epics/slc","/slc")					

File	Description	Directory
startup.cmd	file your ioc boots. Generated automatically by ioc-release	/usr/local/lcls/epics/iocCommon/<subsystem>/<nodename>
st.cmd	EPICS startup script, called by startup.cmd	/usr/local/epics/iocTop/<subsystem>/<subsystem cvs tag>/iocBoot /<nodename>
pre_st.cmd	Setup for RTEMS IOC's, called by startup.cmd	/usr/local/lcls/epics/iocCommon/All/Prod
post_st.cmd	Diagnostic infor for RTEMS IOC's, called by startup.cmd	/usr/local/lcls/epics/iocCommon/All/Prod

Instrumentation Subnets

- [Nodes on LCLSINST Subnet](#)

LCLSINST Subnet
Default Gateway: 172.27.12.1
DNS #1: 134.79.151.11
Subnet Mask: 255.255.252.0

- [Nodes on LCLSUTIL Subnet](#)

LCLSUTIL Subnet
Default Gateway: 172.27.4.1
DNS #1: 134.79.151.11
Subnet Mask: 255.255.252.0

- [Nodes on LCLSVIDEO Subnet](#)

LCLSVIDEO Subnet
Default Gateway: 172.27.16.1
DNS #1: 134.79.151.11
Subnet Mask: 255.255.252.0