

NetworkPagePreamble

LCLS Network Node Naming Conventions

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Network node names are meant to be consistent with the overall device [LCLS Naming Conventions](#). However, the node names are separated by a dash, "-" whereas the fields of a node name is separated by a colon, ":". In addition, node names are in lower case, whereas PV names are all uppercase, due to SLC Controls System restrictions on VMS. In LCLS-II the uppercase restriction has been lifted for the attribute field of the PV name. A limitation of 24-characters is also current inforced due to a restriction on the VMS EPICS Channel Access Server. This too is a restriction lifted for LCLS-II.

The network node name conforms to the following format: <Device Type><Area><Position> <Subnet>

The *DeviceType* Field for network devices is 2-4 characters in length and can be found in the Table 1.0. The *Area* Field is 4-character field, with numbers and letters and can be found in Table 1.1. Network devices, with the exception of IOCs tend to use the access building location rather than the sector, as some access buildings may server multiple sectors, such as B005. The *Position* Field contains a 2-character *Subsystem Prefix*, followed by a 2-digit *Index* from 01 to 99. The *Subsystem Prefix* designates a subsystem of the control system as follows in Table 1.2. The *Subnet* Field is currently only used for a secondary NIC on the processors. Currently this is only used for fast feedback subnet, in which "-fnet" is used.

Examples of a device name would look as follows:

| Device Type | Nodename | Comment |
|--------------------|--------------------|------------------------------|
| Access Switch | ACSW-IN20-NW01 | |
| Terminal Server | TS-IN20-NW01 | |
| Scope | SCOP-IN20-NW01 | LCLS Injector Scope |
| Scope | SCOP-SYS0-NW01 | LCLS Roaming Scope |
| Magnet IOC | IOC-IN20-MG01 | Magnet injector ioc |
| Magnet IOC 2nd NIC | IOC-IN20-MG01-FNET | Magnet injector ioc feedback |

To obtain an ip address for an LCLS device click [here](#) for SCCS IP/Node Name Request form. Fill out this form according the the naming conventions described herein and email this information to [Charlie Granieri](#).

The Device Type Field

Table 1.0

| Device Type | Description | Manufacturer | Model |
|-------------|--------------------|--------------|----------|
| ACSW | AC Switch | | |
| CHAS | Chassis | | |
| GPIB | GPIB/LAN Gateway | | |
| DDM | Digital Multimeter | Keithley | 2701 |
| RTR | Router | Cisco | |
| SWH | Ethernet Switch | CISCO | |
| SCOP | Scope | Tektronix | DPO4054B |

| | | | |
|------|----------------------------------|---------------------|---------------------------|
| TS | Terminal Server | DIGI | DIGI-TS16 |
| UPS | Uninterruptible Power Supply | APS | |
| WKUP | Walk-up ethernet connection | | |
| EIOC | Embedded IOC | NetBurner,Arcturus | Coldfire 5282, MicroC5282 |
| IOC | IOC | Motorola | MVME6100, MVME3100 |
| SIOC | Soft IOC | Linux Host | |
| VIOC | Virtual IOC (Process) | | |
| CPU | Central Processing Unit | COMx,etc | |
| PLC | Programmable Logic Controller | Allen-Bradley,Pils | |
| PNA | Phase Noise Analyzer | Holzworth | HA7062C |
| PSC | Ethernet Power Supply Controller | SLAC (Dave MacNair) | EPSC |
| CAMR | Camera for Beam Line Optics | Pulnix | |
| CRAT | Intelligent VME Crates | Wiener/Dawn | |
| MET | Metrology | | |
| INST | Instrument | | |

The Area Field

The *Area* field is 4 characters in length. There are currently 24 areas in the LCLS Accelerator. Going from the Drive Laser to the Experimental areas they include:

Table 1.1

| Area | Physical Location |
|------|---|
| ACR0 | Accelerator Control Room (B052) |
| AS01 | Accelerator Structure Test System(ASTA) |
| LI00 | LINAC Sector 0 |
| LR20 | Laser Room (Upstairs, near sector 20) |
| LA20 | FACET Laser Room (Upstairs, near Sector 20) |
| IN20 | Injector |
| LI20 | LINAC Sector 20 |
| LI21 | LINAC Sector 21 |
| LI22 | LINAC Sector 22 |
| LI23 | LINAC Sector 23 |
| LI24 | LINAC Sector 24 |
| LI25 | LINAC Sector 25 |

| | |
|-------------|--|
| LI26 | LINAC Sector 26 |
| LI27 | LINAC Sector 27 |
| LI28 | LINAC Sector 28 |
| LI29 | LINAC Sector 29 |
| LI30 | LINAC Sector 30 |
| MCC0 | Main Control Center (B005) OBSOLETE. Replaced by ACR0 |
| B005 | Access Building 5 |
| B052 | Access Building 52 |
| B136 | Access Building 136 |
| B911 | Access Building 911 |
| B912 | Access Building 912 |
| B913 | Access Building 913 |
| B921 | Access Building 921 |
| BSY0 | Beam Switchyard |
| BSYS | Beam Switch Yard South |
| BSYN | Beam Switch Yard North |
| BSYA | Beam Switch Yart A-Line |
| ESA0 | End Station A and Beam Dump East |
| BSYB | Beam Switchyard B-Line |
| LTU0 | LINAC-to Undulator Switchyard |
| LTU1 | LINAC-to-Undulator Line 1 |
| UND1 | Undulator on Line 1 |
| DMP1 | Beam Dump on Line 1 |
| FEE1 | Front End Enclosure on Line 1 |
| NEH1 | Near Experimental Hall on Line 1 |
| XRT1 | X-Ray Tunnel on Line 1 |
| FEH1 | Far Experimental Hall on Line 1 |
| SYS0 | LCLS System |
| SYS1 | FACET System |
| SYS2 | LCLS-II System |
| SYS3 | LCLS-III System |
| SYS4 | NLCTA System |
| SYS5 | SPEAR System |
| SYS6 | X-Band Test Area System |
| | |

| | |
|------|------------------------|
| SYS7 | ASTA System |
| SYSW | Global System West |
| SYSE | Global System East |
| GBL0 | Global to all Machines |
| AS01 | ASTA |
| XT01 | X-Band Test Area |

The Position Field - Subsystem Prefix

Table 1.2

| Subsystem Prefix | Subsystem |
|------------------|---|
| LS | Laser Steering |
| PM | Profile Monitor |
| SP | Spectrometer |
| IM | Current Monitor |
| BL | Bunch Length Monitor |
| BP | Beam Position Monitor |
| MC | Motion Control |
| CL | Collimator |
| AM | Alignment Mirror |
| AL | Alarm Handler |
| LG | Data Logger |
| MG | Magnet |
| EV | Event |
| RF | Low-Level RF (LLRF) |
| KY | Klystron |
| MP | Machine Protection System (MPS) |
| NW | Network Device, terminal servers, switches routers, scopes, UPS, etc. |
| PP | Personnel Protection System (PPS) |
| BC | Beam Containment System (BCS) |
| TM | Temperature Monitor |
| TR | Toroid |
| VA | Vacuum |

| | |
|----|---------------------|
| WS | Wire Scanner |
| FB | Beam-based Feedback |