Adding a New LCLS Node to the SLAC Network

Adding a New LCLS Node to the Network

Scope
This purpose of this page is to provide information on how to add a number of different types of devices to the network. In links to documents and forms created by SLAC Computer Services (SCCS) related to adding a network node are also provided herein.

Ordering Hardware
Place an order using the SLAC Online Requisition. The easiest method is to clone a previous purchase order. See Table 1.1 for a list of devices and BIS-Requisitions.

Table 1.1
Device
MVME6100
VME Crate - 21 slot
PLC Enet Controller
Terminal Server
VME Crate - 2 slot
VME Crate - 7 slot
Power Strip

Getting and IP Address
Before adding a new node to the SLAC network, you must review the SLAC Policy on Network Devices and Computing Security at SLAC and the policy for Remote Access Services.

Adding a node to the network requires an IP address which is assigned by your system manager based on the type of hardware and usage. You and the system manager then decide a nodename based on some LCLS Naming Conventions. Each network and/or department may have a different convention.

Once you have decided on a nodename, fill out the SLAC Nodename and Address Request Form and specify the appropriate LCLS Subnets and then fax the form, without the authorizing signature, to Terri Lahey at x3515. For all other SLAC networks, get the authorizing signature and fax the form to the SCCS help desk (x4003) (see Computer Networking for guidance). You will receive an email with network information once the nodename becomes available. Allow one or two days for processing.

Please note that all IOC's must have an ip addres on the internet free zone (IFZ). This information must be specified on the IP/Nodename Request Form. All development iocs for lcls should be on the lclsdev subnet, while all production iocs are on the lclsca subnet.

Configuration
Configuring a new node is dependent upon the type of hardware being added to the network. Security issues may be of concern when configuring a node and must be discussed with your system manager. For information on configuring the nvram boot parameters of an rtems cpu, click here.

Currently, there are no LCLS nodes that are configured using BOOTP on the development system.. However, in production BOOTP is available, and in future all EPICS IOC processors will be configured via BOOTP.

For nodes that require manual configuration, please see Table 1.2 below. For Node NVRAM Settings by subnet click here.

Table 1.2		
Device	**Documentation**	**Subnet**
RTEMS Processor	How-to Setup for RTEMS	LCLSCA
Terminal Server		LCLSUTIL
Programmable Logic Controller		LCLSINST
Ethernet PS Controllers		LCLSINST
Power Strip		LCLSUTIL
Scope		LCLSTERM
VME Crates		LCLSUTIL
Video Cameras		LCLSVIDEO

Once your node has been configured, verify that it works. All nodes which ultimately become production nodes must first be tested on a development subnet, such as LCLSDEV. One testing method generally used is to configure the new node using a spare development subnet IP address. Once the test has confirmed that the devices is in working order, the node can be reconfigured using a production subnet settings. Permission from MCC Pperations (ext. 2151) is required prior to adding a new node on a production network.

Documentation
Add new node to the WIKI page Information by Location.

LCLS Naming Conventions