Quick Install Guide
Director Xstream™ Data Monitoring Switch

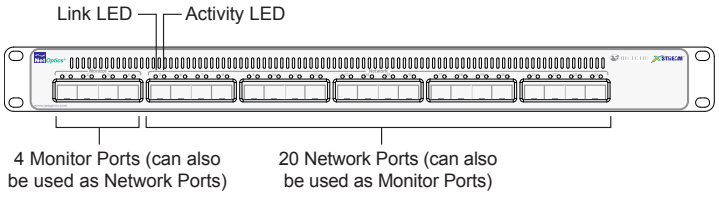
Unpacking and Inspection

Carefully unpack Director Xstream™ and retain materials for later use.

Director Xstream ships with the following:

- (1) Director Xstream device
- (2) Power cords
- (2) Cables, 3 Meter, RJ45, CAT 5e 4-Pair
- (1) DB9-to-RJ45 RS232 adapter for use with CLI
- Screws and washers for mounting the device
- Director Xstream Quick Install Guide (this sheet)
- (1) CD containing the Director Xstream User Guide and CLI Command Reference manual
- Registration instructions
- Service Plan Reference Guide
- Extended Warranty if purchased

Carefully check the packing slip against parts received. If any part is missing or damaged, contact Net Optics Customer Service. (Note: SFP and SFP+ modules are ordered and shipped separately.)

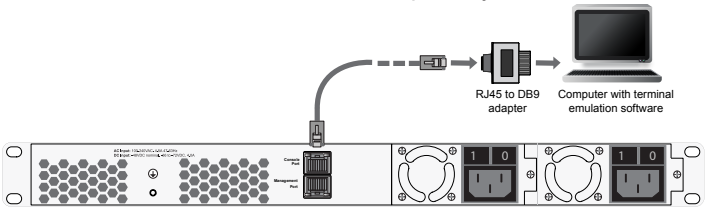


Configuring Director Xstream

All configuration options, status, and statistics are accessible from the CLI. To get started with the Director Xstream, you must set an IP address with the CLI using the local RS232 interface.

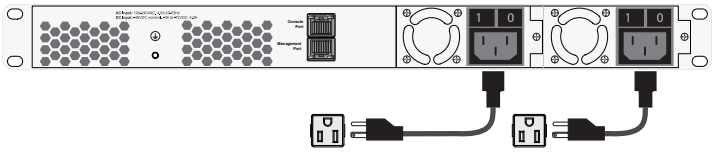
To access the Command Line Interface:

1. Connect a PC with terminal emulation software to Director Xstream using the supplied RS232 RJ45 cable and the RJ45 to DB9 adapter. Alternately, you can use an RJ45 to USB adapter if your terminal



emulation software can run over USB.

2. Launch terminal emulation software such as HyperTerminal or minicom and set the communication parameters to 115200 baud, 8 data bits, no parity, 1 stop bit, no flow control.



3. Connect power to Director Xstream. Make sure that you connect the power supplies to two separate, independent power sources.
4. At the login prompt, type **admin**; and at the password prompt, type **netoptics**.
5. Change the password for the admin account by typing:

   user mod name=admin priv=1 pw=<*new-pw*>
   where <*new-pw*> is the new password
6. Set the Director Xstream IP address by typing:

   sysip set ipaddr=<*ipaddress*> **mask=**<*netmask*> **gw=**<*gateway*>
   sysip commit
   where <*ip address*> is the IP address for Director Xstream, <*netmask*> is the netmask, and <*gateway*> is the IP address of the gateway.
7. For more information on the CLI, type **Help** to display command information, or see the User Guide. The tab key or space bar can be used to autocomplete partially typed commands. Entering ? following a command (and a space) displays the arguments for that command. The up- and down-arrow keys access the CLI command history buffer.

The CLI can now be accessed remotely by SSH over the Director Xstream Management port. The default SSH username is **director**, the password is **netoptics** and the port is 22. Connect the Management port with a CAT5 cable to a switch or hub to access the CLI over the network. After you log in, use the **passwd** command to change the SSH password. *Be sure to change the SSH and CLI passwords to maintain system security.*

Mounting Director Xstream

Director Xstream is designed to mount in a 19-inch rack, occupying 1U of height. Slide the chassis into the rack and fasten it in place at the front panel ears using the supplied screws and washers. Make sure that the rack is properly grounded.

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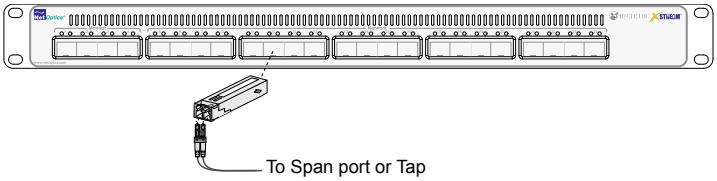
Connecting to the Network

Note: SFP+ and SFP modules may be shipped separately. An appropriate cable is shipped with each module.

To connect Director Xstream to a Span port or external Tap on your network:

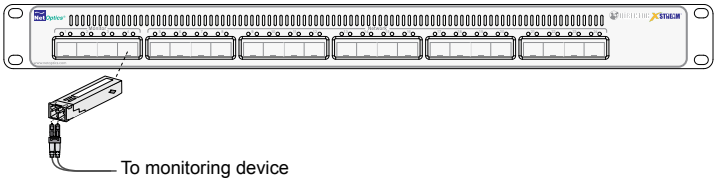
1. Remove the temporary plug from any SFP+ slot and insert the SFP+ or SFP module until it clicks into place.
2. Plug the cable supplied with the module into the port.
3. Plug the other end of the cable into a Span port on a network switch. Alternately, it can be connected to an external Tap or Port Aggregator Tap.



Connecting to Monitoring Devices

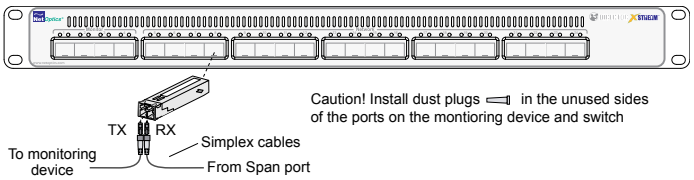
To connect Director Xstream to a monitoring device:

1. Remove the temporary plug from any SFP+ slot and insert the SFP+ or SFP module until it clicks into place.
2. Plug the cable supplied with the module into the port.
3. Plug the other end of the cable into the monitoring device.



Doubling Your Ports

By using simplex (single fiber) cables, fiber ports can be used as Span network inputs and monitor outputs simultaneously, making up to 24 network and 24 monitor ports available for use. This can be done because the TX and RX sides of the ports are completely independent.



To use TX and RX independently, the links must be configured with autonegotiation off and link must be present on the RX side for the TX side to transmit. Also, be sure to insert dust plugs in the unused sockets of ports on your devices to keep the fiber ends clean and prevent laser safety hazards.

Enabling the Ports

Enable all of the ports by typing the CLI command **port set ports=all admin=enable speed=10000**. Then configure the speed of 1G ports typing **port set ports=**<*n1,n2,n3...*> **speed=1000**, where *n1,n2,n3...* lists all of the ports that have 1G SFP modules installed.

Note: 10/100/1000 SFP transceivers and 10 Mbps and 100 Mbps links are not currently supported.

Checking the Installation

After you have connected Director Xstream, verify that it is functioning correctly by checking the link LEDs for each of the connected ports. The link LEDs should be illuminated to indicate that the links are connected and traffic is present.

Creating a Filter

To view traffic on monitor ports, you must define one or more filters. For example, create a filter that

- Aggregates traffic received on network ports 5 to 11 and 24
- Regenerates it to monitor ports 1 and 2
- Forwards only traffic going to Layer 4 Port 80
- But drops any traffic originating from 10.1.1.1

To create the filter, type:

Net Optics> filter add in_ports=5-11,24 ip_src=10.1.1.1 action=drop

Net Optics> filter add in_ports=5-11,24 l4_dst_port=80 action=redir redir_ports=1-2

Net Optics> commit

Notes:

- The ports are number 1 through 24 going left to right across the chassis.
- Any port can be an in_port or a redir_port, or both at the same time (split the cable into a transmit fiber and a receive fiber, and use them separately).
- The drop filter must come first so the matching traffic is dropped before the redirect filter.
- **commit** *must be executed to activate previously defined filter actions.*
- *To clear all the filters, type* **filter discard** *followed by a* **commit**.

For more information, see the Director Xstream User Guide (PUBDIRXU.PDF) and CLI Command Reference PUBDIRXC.PDF) on the CD that was included with the device.

If you have questions, the Net Optics technical support team is available from 8:00 to 17:00 Pacific Time, Monday through Friday at (408) 737-7777 and through e-mail at ts-support@netoptics.com**. Information can also be found at www.netoptics.com.**

DIRECTOR XSTREAM™

Director Xstream™ Pre-Loaded Filters QuickStart

Using Pre-loaded Filters

Director Xstream is pre-loaded with some pre-defined filters to help you get started. Follow these instructions and you will have data moving through your new Director Sxtream in no time!

To view the pre-loaded filters:

1. Enter **list** in the CLI. A list of configuration files containing the pre-predefined filters is displayed. The filter functions are described at the bottom of this sheet.
2. Enter **show** <*filename*> to view the contents of a configuration file, substituting the name of the desired configuration file for <*filename*>.

To load and activate a pre-loaded filter:

1. Enter **load** <*filename*>. The pre-loaded filter is loaded and made pending.
2. Enter filter list. The pending filters are displayed.
3. Enter commit. The pending filters are made active.

To view the active filter configuration:

- Enter **show running** in the CLI. The filters that are actively running in Director are displayed.

Pre-loaded Filter Functions

Filename	Function
one2one	Maps four network ports straight through to monitor ports: Port 5 → Port 1 Port 7 → Port 3 Port 6 → Port 2 Port 8 → Port 4
two2one	Aggregates four adjacent pairs of network ports, maps each pair to a monitor port: Ports 5-6 → Port 1 Ports 9-10 → Port 3 Ports 7-8 → Port 2 Ports 11-12 → Port 4
five2one	Aggregates sets of five adjacent network ports, maps each set to a monitor port: Ports 5-9 → Port 1 Ports 15-19 → Port 3 Ports 10-14 → Port 2 Ports 20-24 → Port 4
all2one	Aggregates all network ports, maps them to the first monitor port: Ports 5-24 → Port 1
one2all	Regenerates the first network port to all of the monitor ports: Port 5 → Ports 1-4
all2all	Aggregates all of the network ports, regenerates the aggregated traffic to all of the monitor ports: Ports 5-24 → Port 1-4
protocols	Aggregates 16 right-most ports, distributes traffic to 8 left-most ports sorted by protocol: Port 1 → FTP Port 5 → TFTP Port 2 → Telnet Port 6 → DHCP Port 3 → UDP Port 7 → HTTP Port 4 → TCP Port 8 → SIP and H.323/VoIP
load_bal_2	Aggregates all of the network ports, load balances the aggregated traffic to the first 2 monitor ports
load_bal_3	Aggregates all of the network ports, load balances the aggregated traffic to the first 3 monitor ports
load_bal_4	Aggregates all of the network ports, load balances the aggregated traffic to the first 4 monitor ports
load_bal_5	Aggregates right-most 19 ports, load balances the aggregated traffic to the remaining 5 ports
load_bal_8	Aggregates right-most 16 ports, load balances the aggregated traffic to remaining 8 ports