



## **Cisco ONS 15200 Command Line Interface Manual**

Software Release 1.1  
January 2002

### **Corporate Headquarters**

Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
<http://www.cisco.com>  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

Customer Order Number: DOC-7813769=  
Text Part Number: 78-13769-01

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The following information is for FCC compliance of Class A devices: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to correct the interference at their own expense.

The following information is for FCC compliance of Class B devices: The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with Cisco's installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

Modifying the equipment without Cisco's written authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

You can determine whether your equipment is causing interference by turning it off. If the interference stops, it was probably caused by the Cisco equipment or one of its peripheral devices. If the equipment causes interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the equipment to one side or the other of the television or radio.
- Move the equipment farther away from the television or radio.
- Plug the equipment into an outlet that is on a different circuit from the television or radio. (That is, make certain the equipment and the television or radio are on circuits controlled by different circuit breakers or fuses.)

Modifications to this product not authorized by Cisco Systems, Inc. could void the FCC approval and negate your authority to operate the product.

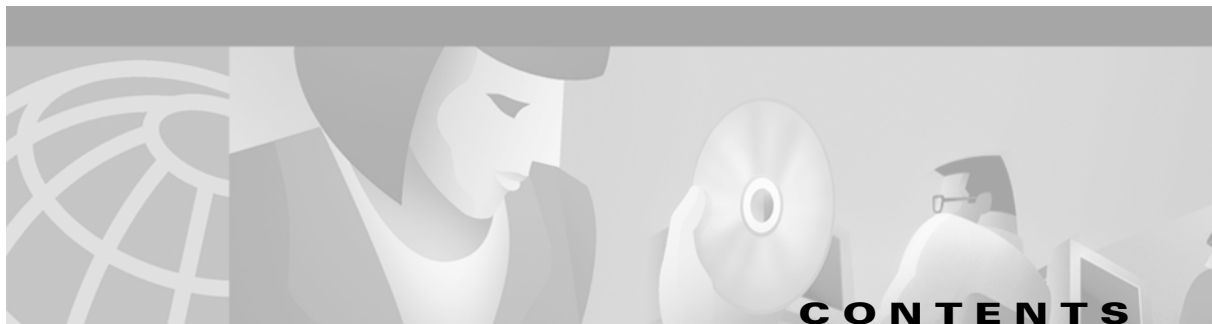
The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

AccessPath, AtmDirector, Browse with Me, CCIP, CCSI, CD-PAC, *CiscoLink*, the Cisco *Powered* Network logo, Cisco Systems Networking Academy, the Cisco Systems Networking Academy logo, Cisco Unity, Fast Step, Follow Me Browsing, FormShare, FrameShare, IGX, Internet Quotient, IP/VC, iQ Breakthrough, iQ Expertise, iQ FastTrack, the iQ Logo, iQ Net Readiness Scorecard, MGX, the Networkers logo, ScriptBuilder, ScriptShare, SMARTnet, TransPath, Voice LAN, Wavelength Router, and WebViewer are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and Discover All That's Possible are service marks of Cisco Systems, Inc.; and Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, the Cisco IOS logo, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherSwitch, FastHub, FastSwitch, GigaStack, IOS, IP/TV, LightStream, MICA, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, RateMUX, Registrar, SlideCast, StrataView Plus, Stratm, SwitchProbe, TeleRouter, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks mentioned in this document or Web site are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0110R)



## Cisco ONS 15200 Command Line Interface Manual 1

### **About this Manual** xvii

- Organization xvii
- Related Documentation xvii
- Obtaining Documentation xvii
  - World Wide Web xviii
  - Optical Networking Product Documentation CD-ROM xviii
  - Ordering Documentation xviii
  - Documentation Feedback xviii
- Obtaining Technical Assistance xix
  - Cisco.com xix
  - Technical Assistance Center xix
    - Procedure: Cisco TAC Website xx
    - Procedure: Cisco TAC Escalation Center xx

---

### **CHAPTER 1**

### **Software Description** 1-1

- 1.1 Features 1-1
- 1.2 User Interface 1-1
  - 1.2.1 Command Line Editing 1-2
  - 1.2.2 Command Syntax 1-2
- 1.0.1 Access Modes 1-2
- 1.0.2 Focus 1-3

---

### **CHAPTER 2**

### **Getting Started** 2-1

- 2.1 Connecting to the ONS 15200 Network 2-1
  - Procedure: Connect to the Network Directly 2-1
  - Procedure: Connect to the Network Indirectly through the LAN 2-1
- 2.2 Configuring the Computer 2-2
  - Procedure: Configure the Subnet Mask 2-2
- 2.3 Logging into the CLI 2-2
  - Procedure: Log Into the CLI 2-3
- 2.4 Exiting the Application 2-3

**CHAPTER 3**

**Command Summary 3-1**

- 3.1 Administrator Commands **3-1**
  - 3.1.1 General Commands **3-1**
  - 3.1.2 Configure System Sub-Commands **3-1**
  - 3.1.3 Create/Configure/Display User **3-2**
  - 3.1.4 FTP Sub-Commands **3-2**
- 3.2 Guest User Commands **3-3**
  - 3.2.1 General Commands **3-3**
  - 3.2.2 Display Clip Sub-Commands **3-3**
- 3.3 Operator Commands **3-3**
  - 3.3.1 General Commands **3-4**
  - 3.3.2 Configure/Display Clip Sub-Commands **3-4**
  - 3.3.3 Configure Management Sub-Commands **3-4**
  - 3.3.4 Configure Network Sub-Commands **3-5**
  - 3.3.5 Configure System Sub-Commands **3-6**
  - 3.3.6 Open Eventlog/Pmlog **3-6**

**CHAPTER 4**

**General Commands 4-1**

- 4.1 Cd **4-1**
  - 4.1.1 Input Parameters **4-2**
  - 4.1.2 Normal Response **4-2**
  - 4.1.3 Error Response **4-2**
  - 4.1.4 Response Parameters **4-2**
- 4.2 Commit **4-2**
  - 4.2.1 Input Parameters **4-3**
  - 4.2.2 Normal Response **4-3**
  - 4.2.3 Error Response **4-4**
  - 4.2.4 Response Parameters **4-4**
- 4.3 Configure Clip **4-4**
  - 4.3.1 Input Parameters **4-5**
  - 4.3.2 Normal Response **4-5**
  - 4.3.3 Error Response **4-5**
  - 4.3.4 Response Parameters **4-5**
- 4.4 Configure Community **4-5**
  - 4.4.1 Input Parameters **4-6**
  - 4.4.2 Normal Response **4-6**
  - 4.4.3 Error Response **4-6**
  - 4.4.4 Response Parameters **4-6**

- 4.5 Configure Management **4-6**
  - 4.5.1 Input Parameters **4-7**
  - 4.5.2 Normal Response **4-7**
  - 4.5.3 Error Response **4-7**
  - 4.5.4 Response Parameters **4-7**
- 4.6 Configure MCU **4-7**
  - 4.6.1 Input Parameters **4-8**
  - 4.6.2 Normal Response **4-9**
  - 4.6.3 Error Response **4-9**
  - 4.6.4 Response Parameters **4-9**
- 4.7 Configure Network **4-9**
  - 4.7.1 Input Parameters **4-10**
  - 4.7.2 Normal Response **4-10**
  - 4.7.3 Error Response **4-10**
  - 4.7.4 Response Parameters **4-10**
- 4.8 Configure Path **4-10**
  - 4.8.1 Input Parameters **4-11**
  - 4.8.2 Normal Response **4-11**
  - 4.8.3 Error Response **4-11**
  - 4.8.4 Response Parameters **4-11**
- 4.9 Configure SCU **4-12**
  - 4.9.1 Input Parameters **4-12**
  - 4.9.2 Normal Response **4-13**
  - 4.9.3 Error Response **4-13**
  - 4.9.4 Response Parameters **4-13**
- 4.10 Configure SNM **4-13**
  - 4.10.1 Input Parameters **4-14**
  - 4.10.2 Normal Response **4-14**
  - 4.10.3 Error Response **4-14**
  - 4.10.4 Response Parameters **4-14**
- 4.11 Configure System **4-15**
  - 4.11.1 Normal Response Format **4-16**
  - 4.11.2 Error Response Format **4-17**
  - 4.11.3 Response Parameters **4-17**
- 4.12 Configure Trap **4-17**
  - 4.12.1 Input Parameters **4-17**
  - 4.12.2 Normal Response **4-18**
  - 4.12.3 Error Response **4-18**
  - 4.12.4 Response Parameters **4-18**

- 4.13 Configure User **4-18**
  - 4.13.1 Input Parameters **4-19**
  - 4.13.2 Normal Response Format **4-19**
  - 4.13.3 Error Response Format **4-19**
  - 4.13.4 Response Parameters **4-19**
- 4.14 Create Community/Trap **4-20**
  - 4.14.1 Input Parameters **4-20**
  - 4.14.2 Normal Response Format **4-21**
  - 4.14.3 Error Response Format **4-21**
  - 4.14.4 Response Parameters **4-21**
- 4.15 Create MCU/SCU **4-21**
  - 4.15.1 Input Parameters **4-22**
  - 4.15.2 Normal Response Format **4-23**
  - 4.15.3 Error Response Format **4-23**
  - 4.15.4 Response Parameters **4-23**
- 4.16 Create Trap **4-23**
- 4.17 Create User **4-23**
  - 4.17.1 Input Parameters **4-24**
  - 4.17.2 Normal Response Format **4-25**
  - 4.17.3 Error Response Format **4-25**
  - 4.17.4 Response Parameters **4-25**
- 4.18 Defrag **4-25**
  - 4.18.1 Input Parameters **4-26**
  - 4.18.2 Normal Response Format **4-26**
  - 4.18.3 Error Response Format **4-26**
  - 4.18.4 Response Parameters **4-26**
- 4.19 Delete **4-26**
  - 4.19.1 Input Parameters **4-27**
  - 4.19.2 Normal Response Format **4-28**
  - 4.19.3 Error Response Format **4-28**
  - 4.19.4 Response Parameters **4-28**
- 4.20 Display **4-29**
  - 4.20.1 Input Parameters **4-29**
  - 4.20.2 Normal Response Format **4-30**
  - 4.20.3 Error Response Format **4-30**
  - 4.20.4 Response Parameters **4-30**
- 4.21 Display User **4-31**
  - 4.21.1 Input Parameters **4-31**
  - 4.21.2 Normal Response Format **4-31**

- 4.21.3 Error Response Format **4-31**
- 4.21.4 Response Parameters **4-31**
- 4.22 DNSconf **4-32**
  - 4.22.1 Input Parameters **4-32**
  - 4.22.2 Normal Response Format **4-33**
  - 4.22.3 Error Response Format **4-33**
  - 4.22.4 Response Parameters **4-33**
- 4.23 Exit **4-33**
  - 4.23.1 Input Parameters **4-33**
  - 4.23.2 Normal Response Format **4-34**
  - 4.23.3 Error Response Format **4-34**
  - 4.23.4 Response Parameters **4-34**
- 4.24 Format **4-34**
  - 4.24.1 Input Parameters **4-34**
  - 4.24.2 Normal Response Format **4-35**
  - 4.24.3 Error Response Format **4-35**
  - 4.24.4 Response Parameters **4-35**
- 4.25 Fschk **4-35**
  - 4.25.1 Input Parameters **4-35**
  - 4.25.2 Normal Response Format **4-36**
  - 4.25.3 Error Response Format **4-36**
  - 4.25.4 Response Parameters **4-36**
- 4.26 FTP **4-36**
  - 4.26.1 Input Parameters **4-36**
  - 4.26.2 Normal Response Format **4-37**
  - 4.26.3 Error Response Format **4-37**
  - 4.26.4 Response Parameters **4-37**
- 4.27 Inhibit/No Inhibit **4-37**
  - 4.27.1 Input Parameters **4-38**
  - 4.27.2 Normal Response Format **4-38**
  - 4.27.3 Error Response Format **4-38**
  - 4.27.4 Response Parameters **4-38**
- 4.28 Insert **4-38**
  - 4.28.1 Input Parameters **4-39**
  - 4.28.2 Normal Response Format **4-39**
  - 4.28.3 Error Response Format **4-39**
  - 4.28.4 Response Parameters **4-39**
- 4.29 Ipconf **4-39**
  - 4.29.1 Input Parameters **4-40**

- 4.29.2 Normal Response Format **4-40**
- 4.29.3 Error Response Format **4-40**
- 4.29.4 Response Parameters **4-40**
- 4.30 Ipfilt **4-41**
  - 4.30.1 Input Parameters **4-42**
  - 4.30.2 Normal Response Format **4-42**
  - 4.30.3 Error Response Format **4-42**
  - 4.30.4 Response Parameters **4-43**
- 4.31 Ldboot **4-43**
  - 4.31.1 Input Parameters **4-43**
  - 4.31.2 Normal Response Format **4-44**
  - 4.31.3 Error Response Format **4-44**
  - 4.31.4 Response Parameters **4-44**
- 4.32 List <dev> **4-44**
  - 4.32.1 Input Format **4-44**
  - 4.32.2 Input Parameters **4-44**
  - 4.32.3 Normal Response Format **4-45**
  - 4.32.4 Error Response Format **4-45**
  - 4.32.5 Response Parameters **4-45**
- 4.33 List Parameter/Value/Recursive **4-45**
  - 4.33.1 Input Parameters **4-46**
  - 4.33.2 Normal Response Format **4-46**
  - 4.33.3 Error Response Format **4-46**
  - 4.33.4 Response Parameters **4-46**
- 4.34 Macaddr **4-47**
  - 4.34.1 Input Parameters **4-47**
  - 4.34.2 Normal Response Format **4-47**
  - 4.34.3 Error Response Format **4-47**
  - 4.34.4 Response Parameters **4-47**
- 4.35 No Inhibit **4-47**
- 4.36 Open Eventlog **4-48**
  - 4.36.1 Normal Response Format **4-48**
  - 4.36.2 Error Response Format **4-48**
  - 4.36.3 Response Parameters **4-48**
- 4.37 Open Pmlog15/Pmlog24 **4-49**
  - 4.37.1 Normal Response Format **4-49**
  - 4.37.2 Error Response Format **4-49**
  - 4.37.3 Response Parameters **4-49**
- 4.38 Page **4-50**



- 4.38.1 Input Parameters **4-50**
- 4.38.2 Normal Response Format **4-50**
- 4.38.3 Error Response Format **4-50**
- 4.38.4 Response Parameters **4-50**
- 4.39 <parameter> **4-51**
  - 4.39.1 Input Parameters **4-51**
  - 4.39.2 Normal Response **4-51**
  - 4.39.3 Error Response **4-52**
  - 4.39.4 Response Parameters **4-52**
- 4.40 Password **4-52**
  - 4.40.1 Normal Response Format **4-53**
  - 4.40.2 Error Response Example **4-53**
  - 4.40.3 Response Parameters **4-53**
- 4.41 Read **4-53**
  - 4.41.1 Input Parameters **4-54**
  - 4.41.2 Normal Response Format **4-54**
  - 4.41.3 Error Response Format **4-54**
  - 4.41.4 Response Parameters **4-54**
- 4.42 Reboot **4-54**
  - 4.42.1 Input Parameters **4-55**
  - 4.42.2 Normal Response Format **4-55**
  - 4.42.3 Error Response Format **4-55**
  - 4.42.4 Response Parameters **4-55**
- 4.43 Remove **4-55**
  - 4.43.1 Input Parameters **4-56**
  - 4.43.2 Normal Response Format **4-56**
  - 4.43.3 Error Response Format **4-56**
  - 4.43.4 Response Parameters **4-56**
- 4.44 Remove CLIP/SNM **4-56**
  - 4.44.1 Input Parameters **4-57**
  - 4.44.2 Normal Response Format **4-57**
  - 4.44.3 Error Response Format **4-57**
  - 4.44.4 Response Parameters **4-57**
- 4.45 Rewind **4-57**
  - 4.45.1 Input Parameters **4-58**
  - 4.45.2 Normal Response Format **4-58**
  - 4.45.3 Error Response Format **4-58**
  - 4.45.4 Response Parameters **4-58**
- 4.46 Show Alarm **4-58**

- 4.46.1 Input Parameters **4-59**
- 4.46.2 Normal Response Format **4-59**
- 4.46.3 Response Parameters **4-59**
- 4.47 Show Discrepancy **4-60**
  - 4.47.1 Input Parameters **4-60**
  - 4.47.2 Normal Response Format **4-60**
  - 4.47.3 Error Response Format **4-61**
  - 4.47.4 Response Parameters **4-61**
- 4.48 Show Inventory **4-61**
  - 4.48.1 Input Parameters **4-61**
  - 4.48.2 Normal Response Format **4-62**
  - 4.48.3 Response Parameters **4-62**
- 4.49 Show Management **4-63**
  - 4.49.1 Input Parameters **4-63**
  - 4.49.2 Normal Response Format **4-63**
  - 4.49.3 Error Response **4-63**
  - 4.49.4 Response Parameters **4-63**
- 4.50 Show Name **4-64**
  - 4.50.1 Input Parameters **4-64**
  - 4.50.2 Normal Response Format **4-64**
  - 4.50.3 Error Response **4-64**
  - 4.50.4 Response Parameters **4-65**
- 4.51 Show Path **4-65**
  - 4.51.1 Input Parameters **4-65**
  - 4.51.2 Normal Response Format **4-66**
  - 4.51.3 Error Response Format **4-66**
  - 4.51.4 Response Parameters **4-66**
- 4.52 Show Power **4-66**
  - 4.52.1 Input Parameters **4-67**
  - 4.52.2 Normal Response Format **4-67**
  - 4.52.3 Error Response Format **4-67**
  - 4.52.4 Response Parameters **4-67**
- 4.53 Show User **4-67**
  - 4.53.1 Input Parameters **4-68**
  - 4.53.2 Normal Response Format **4-68**
  - 4.53.3 Error Response Format **4-68**
  - 4.53.4 Response Parameters **4-68**
- 4.54 Sntp **4-69**
  - 4.54.1 Input Parameters **4-69**

- 4.54.2 Normal Response Format **4-70**
- 4.54.3 Error Response Format **4-70**
- 4.54.4 Response Parameters **4-70**
- 4.55 Source **4-70**
  - 4.55.1 Input Parameters **4-71**
  - 4.55.2 Normal Response Format **4-71**
  - 4.55.3 Error Response Format **4-71**
  - 4.55.4 Response Parameters **4-71**
- 4.56 Suppress/No Suppress **4-71**
  - 4.56.1 Input Parameters **4-72**
  - 4.56.2 Normal Response Format **4-72**
  - 4.56.3 Error Response Format **4-72**
  - 4.56.4 Response Parameters **4-72**
- 4.57 Syslog **4-72**
  - 4.57.1 Input Parameters **4-73**
  - 4.57.2 Normal Response Format **4-73**
  - 4.57.3 Error Response Format **4-73**
  - 4.57.4 Response Parameters **4-73**
- 4.58 Time **4-73**
  - 4.58.1 Input Parameters **4-74**
  - 4.58.2 Normal Response Format **4-74**
  - 4.58.3 Error Response Format **4-74**
  - 4.58.4 Response Parameters **4-74**
- 4.59 Type **4-74**
  - 4.59.1 Input Parameters **4-75**
  - 4.59.2 Normal Response Format **4-75**
  - 4.59.3 Error Response Format **4-75**
  - 4.59.4 Response Parameters **4-75**
- 4.60 Upload **4-75**
  - 4.60.1 Input Parameters **4-76**
  - 4.60.2 Normal Response Format **4-76**
  - 4.60.3 Error Response Format **4-76**
  - 4.60.4 Response Parameters **4-76**
- 4.61 Version **4-76**
  - 4.61.1 Input Parameters **4-77**
  - 4.61.2 Normal Response Format **4-77**
  - 4.61.3 Error Response Format **4-77**
  - 4.61.4 Response Parameters **4-77**
- 4.62 Whoami **4-77**

- 4.62.1 Input Parameters 4-77
- 4.62.2 Normal Response Format 4-78
- 4.62.3 Error Response Format 4-78
- 4.62.4 Response Parameters 4-78

**CHAPTER 5**

**SNMP 5-1**

- 5.1 Overview 5-1
- 5.2 Connecting to the Network 5-1
  - Procedure: Connect a PC Directly to an MCU 5-1
- 5.3 Connecting to a LAN or WAN 5-2
- 5.4 Configuring the Computer 5-2
  - Procedure: Configure the Computer 5-2
- 5.5 Configuring the SNMP Agent 5-3
  - Procedure: Configure the SNMP Using the Command Line Interface 5-3
- 5.6 Running SNMP Commands 5-3
- 5.7 SNMP Components 5-4
- 5.8 SNMP Support 5-5
  - Procedure: Set Up SNMP Community Support 5-5
  - 5.8.1 SNMP Trap Support 5-6
    - Procedure: Set Up SNMP Trap Support 5-6
- 5.9 SNMP MIBs 5-7
- 5.10 SNMP Traps 5-8
- 5.11 SNMP Community Names 5-8

**CHAPTER 6**

**FTP Commands 6-1**

- 6.1 Ascii 6-1
  - 6.1.1 Input Parameters 6-1
  - 6.1.2 Normal Response Format 6-2
  - 6.1.3 Error Response 6-2
- 6.2 Binary 6-2
  - 6.2.1 Input Parameters 6-2
  - 6.2.2 Normal Response Format 6-2
  - 6.2.3 Error Response 6-2
- 6.3 Cd 6-3
  - 6.3.1 Input Parameters 6-3
  - 6.3.2 Normal Response Format 6-3
  - 6.3.3 Error Response 6-3
- 6.4 Close 6-3

6.4.1	Normal Response Format	6-4
6.4.2	Error Response	6-4
6.5	Exit	6-4
6.5.1	Input Parameters	6-4
6.5.2	Normal Response Format	6-4
6.5.3	Error Response	6-4
6.6	Get	6-4
6.6.1	Input Parameters	6-5
6.6.2	Normal Response Format	6-5
6.6.3	Error Response	6-5
6.7	Ls	6-5
6.7.1	Input Parameters	6-6
6.7.2	Normal Response Format	6-6
6.7.3	Error Response	6-6
6.8	Open	6-6
6.8.1	Input Parameters	6-7
6.8.2	Normal Response Format	6-7
6.8.3	Error Response	6-7
6.9	Passive	6-7
6.9.1	Input Parameters	6-8
6.9.2	Normal Response Format	6-8
6.9.3	Error Response	6-8
6.10	Put	6-8
6.10.1	Input Parameters	6-8
6.10.2	Normal Response Format	6-9
6.10.3	Error Response	6-9
6.11	Pwd	6-9
6.11.1	Input Parameters	6-9
6.11.2	Normal Response Format	6-9
6.11.3	Error Response	6-10
6.12	Quit	6-10
6.12.1	Input Parameters	6-10
6.12.2	Normal Response Format	6-10
6.12.3	Error Response	6-10
6.13	Status	6-10
6.13.1	Input Parameters	6-11
6.13.2	Normal Response Format	6-11
6.13.3	Error Response	6-11
6.14	Syst	6-11

- 6.14.1 Input Parameters **6-11**
- 6.14.2 Normal Response Format **6-12**
- 6.14.3 Error Response **6-12**
- 6.15 User **6-12**
  - 6.15.1 Input Parameters **6-12**
  - 6.15.2 Normal Response Format **6-12**
  - 6.15.3 Error Response **6-12**

**CHAPTER 7**

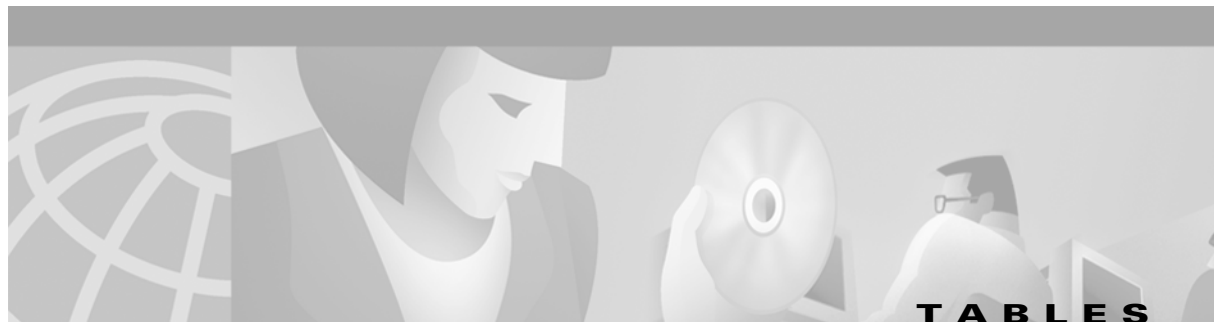
**Common Procedures 7-1**

- 7.1 Creating a New User **7-1**
  - Procedure: Procedure: Create a User **7-1**
- 7.2 Backing Up the Database (Windows) **7-1**
  - Procedure: Procedure: Back Up the Database **7-2**
- 7.3 Exporting the Event/PM Logs to a Spreadsheet Program **7-2**
  - Procedure: Procedure: View the Event/PM Logs through Spreadsheet Software **7-2**
- 7.4 Upgrading the Subnetwork Manager **7-3**
  - Procedure: Procedure: Upgrade the Subnetwork Manager from 1.0.x to 1.0.y **7-3**
  - Procedure: Procedure: Upgrade the SNM from 1.0.x to 1.1 **7-4**

**APPENDIX A**

**Configurable Parameters A-1**

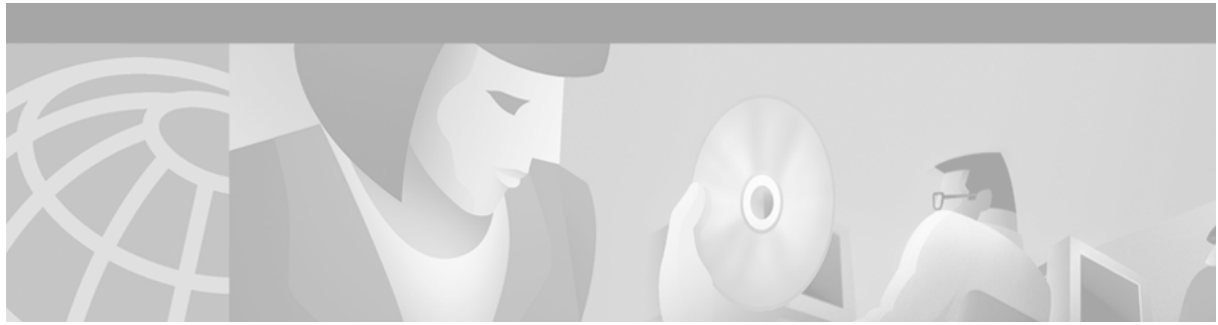
- A.1 CLIP Parameters **A-1**
- A.2 Client Signal Parameters **A-2**
- A.3 DWDM Parameters **A-3**
- A.4 Environmental Parameters **A-5**
- A.5 DCN Parameters **A-6**
- A.6 SNM Parameters **A-6**
- A.7 User Parameters **A-7**



<i>Table 1-1</i>	Command Line Editing Features	<b>1-2</b>
<i>Table 1-2</i>	Command Conventions	<b>1-2</b>
<i>Table 4-1</i>	Committable Object Types	<b>4-3</b>
<i>Table 4-2</i>	Commit Command Input Parameters	<b>4-3</b>
<i>Table 4-3</i>	Configure Clip Command Input Parameters	<b>4-5</b>
<i>Table 4-4</i>	Configure Community Command Input Parameters	<b>4-6</b>
<i>Table 4-5</i>	Configure MCU Command Parameters	<b>4-8</b>
<i>Table 4-6</i>	Configure Path Command Parameters	<b>4-11</b>
<i>Table 4-7</i>	Configure SCU Command Parameters	<b>4-12</b>
<i>Table 4-8</i>	Configure SNM Command Parameters	<b>4-14</b>
<i>Table 4-9</i>	Configure System Commands	<b>4-15</b>
<i>Table 4-10</i>	Configure User Command Response Parameters	<b>4-19</b>
<i>Table 4-11</i>	Create Community/Trap Command Parameters	<b>4-20</b>
<i>Table 4-12</i>	Create MCU/SCU Command Parameters	<b>4-22</b>
<i>Table 4-13</i>	Create MCU/SCU Command Parameters	<b>4-23</b>
<i>Table 4-14</i>	Delete Input Command Parameters	<b>4-27</b>
<i>Table 4-15</i>	Delete Response Command Parameters	<b>4-28</b>
<i>Table 4-16</i>	Display Command Response Command Parameters	<b>4-29</b>
<i>Table 4-17</i>	Display Command Response Command Parameters	<b>4-30</b>
<i>Table 4-18</i>	Display User Command Response Parameters	<b>4-31</b>
<i>Table 4-19</i>	DNSconf Command Input Parameters	<b>4-32</b>
<i>Table 4-20</i>	Insert Command Input Parameters	<b>4-39</b>
<i>Table 4-21</i>	Insert Command Response Parameters	<b>4-39</b>
<i>Table 4-22</i>	Ipconf Command Input Parameters	<b>4-40</b>
<i>Table 4-23</i>	Ipfilt Command Input Parameters	<b>4-42</b>
<i>Table 4-24</i>	Ldboot Command Input Parameters	<b>4-43</b>
<i>Table 4-25</i>	List Parameter/Value/Recursive Command Input Parameters	<b>4-46</b>
<i>Table 4-26</i>	<parameter> Command Input Parameters	<b>4-51</b>
<i>Table 4-27</i>	Read Command Input Parameters	<b>4-54</b>
<i>Table 4-28</i>	Remove Command Input Parameters	<b>4-56</b>
<i>Table 4-29</i>	Remove CLIP/SNM Command Input Parameters	<b>4-57</b>

<i>Table 4-30</i>	Remove CLIP/SNM Command Response Parameters	<b>4-57</b>
<i>Table 4-31</i>	Show Alarm Command Input Parameters	<b>4-59</b>
<i>Table 4-32</i>	Show Alarm Command Response Parameters	<b>4-59</b>
<i>Table 4-33</i>	Show Inventory Command Response Parameters	<b>4-62</b>
<i>Table 4-34</i>	Show Management Command Response Parameters	<b>4-63</b>
<i>Table 4-35</i>	Show Name Command Response Parameters	<b>4-65</b>
<i>Table 4-36</i>	Show Path Command Response Parameters	<b>4-66</b>
<i>Table 4-37</i>	Show Power Command Response Parameters	<b>4-67</b>
<i>Table 4-38</i>	Show User Command Response Parameters	<b>4-68</b>
<i>Table 4-39</i>	Sntp Command Input Parameters	<b>4-69</b>
<i>Table 4-40</i>	Source Command Input Parameters	<b>4-71</b>
<i>Table 4-41</i>	Time Command Input Parameters	<b>4-74</b>
<i>Table 4-42</i>	Type Command Input Parameters	<b>4-75</b>
<i>Table 4-43</i>	Whoami Command Response Parameters	<b>4-78</b>
<i>Table 5-1</i>	SNMP Manager Operations	<b>5-7</b>
<i>Table 5-2</i>	IETF Standard MIBs Implemented in the ONS 15200 SNMP Agent	<b>5-8</b>
<i>Table 5-3</i>	Generic Traps Supported by ONS 15200	<b>5-8</b>
<i>Table A-1</i>	CLIP Module Parameters	<b>A-1</b>
<i>Table A-2</i>	Client Signal Parameters	<b>A-3</b>
<i>Table A-3</i>	DWDM Signal Parameters	<b>A-4</b>
<i>Table A-4</i>	Environmental Parameters	<b>A-6</b>
<i>Table A-5</i>	DCN Parameters	<b>A-6</b>
<i>Table A-6</i>	SNM Parameters	<b>A-7</b>
<i>Table O-7</i>	Configure User Parameters	<b>A-7</b>





## About this Manual

---

This publication provides administrator-level information about the ONS 15200 Command Line Interface (CLI) and describes how to view information about the ONS 15200 network.

## Organization

The *Cisco ONS 15200 Command Line Interface Manual* is organized as follows:

- Chapter 1, “Software Description,” provides an overview of the software features.
- Chapter 2, “Getting Started,” provides information about ONS 15200 CLI connectivity.
- Chapter 3, “Command Summary,” provides administrator-level commands.
- Chapter 4, “General Commands,” describes universal command parameters and provides information about each ONS 15200 Command Line Interface command that can be sent to ONS 15200 modules, including purpose, syntax, input parameters, and response parameters.
- Chapter 5, “SNMP,” describes the commands that allow third-party network managers to access and interface with ONS 15200 systems.
- Chapter 6, “FTP Commands,” describes the ONS 15200 CLI File Transfer Protocol (FTP) commands supported by ONS 15200 system network elements (NEs).
- Chapter 7, “Common Procedures,” provides procedures for some commonly performed tasks including creating a new user, backing up the database, and upgrading the Subnetwork Manager.
- Appendix A, “Configurable Parameters,” lists parameters that you can configure from the CLI.

## Related Documentation

Additional information about ONS 15200 software can be found in the *Cisco ONS 15200 Maintenance Manager Installation and Operations Guide* and in the *Cisco ONS 15200 Web Interface Software Manual*.

## Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

## World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

<http://www.cisco.com>

Translated documentation is available at the following URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15200 documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated as required and therefore may be more current than printed documentation. The CD-ROM package is available as a single package or as an annual subscription.

## Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation, including the *Optical Networking Product* CD-ROM, from the Networking Products MarketPlace:

[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

## Documentation Feedback

If you are reading Cisco product documentation on Cisco.com, you can submit technical comments electronically. Click **Leave Feedback** at the bottom of the Cisco Documentation home page. After you complete the form, print it out and fax it to Cisco at 408 527-0730.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Cisco Systems  
Attn: Document Resource Connection  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

# Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

## Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

## Cisco TAC Website

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

<http://www.cisco.com/register/>

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; these classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer will automatically open a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to the following URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled; for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). In addition, please have available your service agreement number and your product serial number.



## Software Description

---

This chapter provides a general overview of the Cisco ONS 15200 Command Line Interface (CLI).

### 1.1 Features

The following list describes the features of the ONS 15200 CLI:

- Remote system visibility—You can use the ONS 15200 CLI at any computer connected to a Network Control Board (NCB) module in the ONS 15200 network.
- Requires no local software—Because the ONS 15200 CLI runs via a telnet connection, you can establish a command prompt on any device with a telnet client, such as a PC or UNIX workstation.
- User levels—The ONS 15200 CLI offers three user levels: guest user, operator, and administrator. Some commands can only be performed by one user level, while others can be performed by multiple user levels.
- Real-time—The ONS 15200 CLI provides a real-time view of the network. Changes to the system are reported immediately.
- Ethernet connection—The ONS 15200 CLI connects to the ONS 15200 network through an Ethernet connection. The CLI can connect directly to the Network Control Board (NCB) module or indirectly through any computer connected to an ONS 15200 network.

### 1.2 User Interface

The ONS 15200 CLI uses a UNIX-style, character-based user interface that allows you to communicate directly with the NCB module and provides commands that allows users to add, delete, and configure objects, alarms, and parameters.

## 1.2.1 Command Line Editing

The UNIX-style command line interpreter uses features specific to the ONS 15200 Command Line Interface. Table 1-1 lists the command line editing features.

**Table 1-1 Command Line Editing Features**

Command	Result
<Ctrl> a	Go to the beginning of the line.
<Ctrl> e	Go to the end of the line.
<Ctrl> f	Go forward one character.
<Ctrl> b	Go backward one character.
<Ctrl> d	Delete one character at the cursor.
<Ctrl> k	Delete from the cursor to the end of the line.
<Ctrl> n	Scan command history forward.
<Ctrl> p	Scan command history backward.
?	List available commands.

## 1.2.2 Command Syntax

Many commands available in the ONS 15200 Command Line Interface have parameters that allow you to configure specific aspects of a given command. Command parameter syntax follows rules that help the user identify which parameters are optional, which are required, which need to be repeated, and so on. These rules follow:

**Table 1-2 Command Conventions**

Convention	Description
<b>bold text</b>	Command or keyword that you must enter.
<i>italic text</i>	Parameter or argument for which you supply a value.
[x]	Optional keyword or argument that you may enter.
{ x   y   z }	Choice or alternate values (select only one).
[x {y z}]	A required choice within an optional element.
<x>	A required parameter

## 1.0.1 Access Modes

The ONS 15200 Command Line Interface has three operating modes. One mode grants read-and-write access to the parameters; the second mode grants read-only access; and the third grants access to the system commands. The command line prompt indicates the current mode.

- > indicates read-only mode
- # indicates read-and-write mode
- = indicates system command mode

Some commands, such as the **configure** command, automatically enter read-and-write mode. The prompt indicates the current mode, regardless of how the modes were entered or exited. The user's access privileges may prevent the user from entering read-and-write mode.

## 1.0.2 Focus

The network database has a structure similar to a file system. The data is structured hierarchically, with nodes and leaves. A *leaf* is a container for a value, and a *node* groups related leaves (i.e., values) together in a tree structure. When you need to manipulate or monitor many values on a certain level, you must set the current focus to a local top-node rather than the database top-node. Some commands, such as the **create** and **configure** commands, may also change the focus. A new focus also changes the command line prompt.







## Getting Started

---

This chapter describes the procedures for connecting a computer to the ONS 15200 network, configuring a PC to view system information, and logging into the system. An ONS 15200 network consists of the ONS 15252 Multichannel unit (MCU) and ONS 15201 Single-Channel Unit (SCU) that compose the metropolitan dense wavelength division multiplexing (DWDM) network.

### 2.1 Connecting to the ONS 15200 Network

The following procedures describe how to connect a computer running the ONS 15200 Command Line Interface to the ONS 15200 network. Connect to the ONS 15200 system directly through an ONS 15252 MCU or indirectly through customer equipment attached to the network.

#### Procedure: Connect to the Network Directly

Follow these steps to connect directly to the ONS 15252 MCU:

- 
- Step 1** Attach one end of a crossover Ethernet cable to the ETHER port on the Network Control Board module (NCB). The NCB module is located in Slot 17 on the right side of the MCU. The ETHER connection on the NCB module is a standard RJ-45 connector.
  - Step 2** Connect the other end of the crossover Ethernet cable to the Ethernet port on the computer you are connecting to the ONS 15200 network.
- 

#### Procedure: Connect to the Network Indirectly through the LAN

You can also retrieve system information from the ONS 15200 system by making an indirect connection to the ONS 15200. To make an indirect connection, connect the computer to a local area network (LAN) or wide area network (WAN) connected to the ONS 15200. You can configure any computer in the extended network to retrieve information from the ONS 15200 system. See the “Configuring the Computer” section on page 2-2 for more information.

## 2.2 Configuring the Computer

The computer used to connect to the network may need to be configured to use the same subnet mask as the ONS 15200 system, depending on your network configuration. Contact your system administrator for more information on your particular network configuration.

The following procedure describes how to configure the subnet mask on a computer running a Windows 2000 operating system. Procedures for other operating systems are similar. Refer to the technical documentation provided with the operating system for more information.

### Procedure: Configure the Subnet Mask

- 
- Step 1** On the Windows taskbar, click **Start > Settings > Control Panel**. The Control Panel window opens.
  - Step 2** Double-click **Network** in the Control Panel window. The Network window opens.
  - Step 3** Click **Add**. The Select Network Component Type window opens.
  - Step 4** Click **Protocols**. The Select Network Protocol window opens.
  - Step 5** Select the appropriate manufacturer and network protocols.
  - Step 6** Click **Add**. The Network window opens.




---

**Note** If the computer being configured is connected indirectly to the ONS 15200 network through a LAN or WAN, the network protocol must match the protocol of the LAN or WAN to which it is connected.

---

- Step 7** Select the network component just installed from the *The following network components are installed* area of the Network window.
- Step 8** Click **Properties**. The TCP/IP window opens.
- Step 9** Click the **IP Address** tab.
- Step 10** Click **Specify an IP address**.
- Step 11** Type the IP address of the computer in the IP Address box.
- Step 12** Type the subnet mask of the ONS 15200 network in the Subnet Mask box.




---

**Note** The subnet mask for the computer must match the subnet mask assigned to the ONS 15200 network.

---

- Step 13** Click **OK**.
- 

## 2.3 Logging into the CLI

The following steps describe how to start and log into the ONS 15200 Command Line Interface application. The following procedure describes how to start the CLI application on a computer running a Windows 2000 operating system. Procedures for other operating systems are similar. Refer to the technical documentation provided with the operating system for more information.

When you start ONS 15200 CLI, you are prompted for a user name and a password that the system validates before granting access to the QDBS database.

**Note**

If no users are defined in the QDBS database, access is granted by pressing the **Enter** key for both user name and password. This is intended for first time logon only. The first user must create at least one user with administrator privileges. The existence of users automatically disables the “nameless” login. See “Chapter 4, “General Commands,” for more information about creating users.

Multiple simultaneous login attempts with the same user name are not allowed. The system will prompt the user for another user name and password if the logon fails.

A maximum of eight concurrent telnet sessions, eight concurrent ftp sessions, eight concurrent http (web) sessions, one RS-232 session, and one SNMP session are allowed.

## Procedure: Log Into the CLI

- Step 1** Click **Start > Run** on the Windows taskbar. The Run window opens.
- Step 2** In the Open field, type `TELNET` followed by a space and the Internet protocol (IP) address for the NCB module of the 15200 system where you want to log in.
- Step 3** Click **OK**. A Telnet session opens and the command line appears.
- Step 4** At the Login prompt, type your user name and press **Enter**.
- Step 5** At the password prompt, type your password and press **Enter**. The `NCB:>` prompt appears.

**Note**

No characters will appear on the screen when you type your password.

## 2.4 Exiting the Application

To exit the ONS 15200 Command Line Interface application, type **exit** at the command prompt until the Telnet session displays a message indicating that the current session has been terminated.

**Note**

If you close the telnet window without exiting the session, you cannot start another session until the original session times out or an administrator terminates the session.





## Command Summary

---

All Cisco ONS 15200 Command Line Interface (CLI) users have either administrator, operator, or guest user privileges. This chapter lists the CLI commands according to user privilege type. See Chapter 4, “General Commands,” for more detailed information on the commands.

### 3.1 Administrator Commands

The following commands are available to users logged on with administrator privileges.

#### 3.1.1 General Commands

The following commands can be accessed from initial login mode:

- **commit user**
- **configure system|user**
- **create user**
- **delete user**
- **display user**
- **exit**
- **password**
- **show user**
- **source <dev> <filename>**
- **whoami**

#### 3.1.2 Configure System Sub-Commands

The following commands can be accessed from the **configure system** command:

- **defrag <dev>**
- **dnsconf [<hostname> <domain> <server1> [<server2>]]:** Get/Set dns server(s)
- **exit**
- **format <dev>**

- **fschk** *<dev>*
- **ftp**
- **host** *<ipaddr|hostname>*
- **ipconf** [*<ipaddr>* *<mask>* *<gateway>*]
- **ipfilt** **add|list|remove|set|commitr**
- **sntp** **server|timezone|freq|commit|dlst\_on|dlst\_off**
- **ldboot** [*<dev>* *<filename>* *<count>*]
- **list** *<dev>*
- **macaddr**
- **page** [*<len>*]
- **password**
- **reboot**
- **remove** *<dev>* *<filename>*
- **source** *<dev>* *<filename>*
- **syslog**
- **time** [*<yyyy:mm:dd>* *<hh:mm:ss>*]
- **type** *<dev>* *<filename>*
- **version**
- **whoami**

### 3.1.3 Create/Configure/Display User

The following commands are available from the **create user**, **configure user**, and **display user** commands after a user has been created.

- **cd** [*<path>*]
- **commit**
- **exit**
- **list** **parameter|recurse|value**
- **upload** [*<path>*]
- **whoami**

### 3.1.4 FTP Sub-Commands

The following commands are available in File Transfer Protocol (FTP) mode from the **ftp** command:

- **open** *<ipaddr>*
- **close**
- **user** *<name>*
- **cd** *<path>*

- **pwd**
- **ls** *<path>*
- **ascii**
- **binary**
- **syst**
- **get** *<file>*
- **put** *<file>*
- **status**
- **passive**
- **quit**
- **exit**

## 3.2 Guest User Commands

The following commands are available to users logged on with guest user privileges.

### 3.2.1 General Commands

The following commands are read-only for guest users in the initial login mode:

- **display clip|snm**
- **exit**
- **open eventlog|pmlog15|pmlog24**
- **password**
- **show alarm|name|discrepancy|inventory|management|path|power**
- **whoami**

### 3.2.2 Display Clip Sub-Commands

- **cd** [*<path>*]
- **exit**
- **list** **parameter|recursive|value**
- **upload** [*<path>*]
- **whoami**

## 3.3 Operator Commands

The following commands are available to users logged on with operator privileges.

### 3.3.1 General Commands

- **commit management**
- **configure clip|management|network|snm|system**
- **display clip|snm**
- **exit**
- **open eventlog|pmlog15|pmlog24**
- **clear eventlog|pmlog15|pmlog24**
- **password**
- **show alarm|name|discrepancy|inventory|management|path|power|user**
- **source <dev> <filename>**
- **whoami**

### 3.3.2 Configure/Display Clip Sub-Commands

The following commands can be accessed from the **configure clip** and **display clip** commands:

- **cd [<path>]**
- **commit**
- **exit**
- **list parameter|recursive|value**
- **no suppress|inhibit**
- **suppress <path>**
- **inhibit <path>**
- **upload [<path>]**
- **whoami**

### 3.3.3 Configure Management Sub-Commands

The following commands can be accessed from the **configure management** command:

- **cd [<path>]**
- **create community|trap**
- **commit trap|community**
- **configure community|trap**
- **delete community|trap**
- **display community|trap**
- **exit**
- **list parameter|recursive|value**
- **whoami**



The following commands can be accessed from the **create community**, **configure community**, and **display community** commands:

- **cd** [*<path>*]
- **exit**
- **list parameter|recursive|value**
- **whoami**

The following commands can be accessed from the **create trap**, **configure trap**, and **display trap** commands:

- **cd** [*<path>*]
- **exit**
- **list parameter|recursive|value**
- **whoami**

### 3.3.4 Configure Network Sub-Commands

The following commands can be accessed from the **configure network** command:

- **exit**
- **create mcu|scu**
- **commit clip|mcu|network|path|scu|snm**
- **configure clip|mcu|path|scu|snm**
- **delete mcu|scu**
- **display clip|mcu|network|path|scu|snm**
- **show inventory**
- **list clip|mcu|path|scu|snm**

The following commands can be accessed from the **configure mcu** and **configure scu** commands (after entering Network Configuration mode):

- **commit**
- **exit**
- **insert** *<element name>*
- **list parameter|recursive|value**
- **remove** *<element name>*
- **whoami**

### 3.3.5 Configure System Sub-Commands

The following commands can be accessed from the **configure system** command:

- **defrag** *<dev>*
- **exit**
- **fschk** *<dev>*
- **host** *<ipaddr|hostname>*
- **ldboot** [*<dev>* *<filename>* *<count>*]
- **list** *<dev>*
- **macaddr**
- **page** [*<len>*]
- **password**
- **reboot**
- **source** *<dev>* *<filename>*
- **syslog**
- **time** [*<yyyy:mm:dd>* *<hh:mm:ss>*]
- **version**
- **whoami**

### 3.3.6 Open Eventlog/Pmlog

The following commands can be accessed from the **open eventlog**, **open pmlog15**, and **open pmlog24** commands:

- **exit**
- **list** *parameter|recursive|value*
- **read** [*<user>*|-*<source>*]
- **rewind**
- **starttime** [[*<yyyy:mm:dd>*] *<hh:mm:ss>*]
- **endtime** [[*<yyyy:mm:dd>*] *<hh:mm:ss>*]
- **username** *<name>*[*<name>*].
- **source** *<name>*[*<name>*].
- **whoami**



## General Commands

---

This chapter provides detailed descriptions of the ONS 15200 Command Line Interface (CLI) general commands available through a telnet session that are supported by ONS 15200 system network elements (NEs).

Commands are sent asynchronously during active sessions. To issue ONS 15200 CLI commands, you must be connected to a Network Control Board (NCB) module in an ONS 15252 and have adequate permission.

### 4.1 Cd

<b>Command</b>	Cd
<b>Syntax</b>	<b>cd</b> <b>cd &lt;path&gt;</b> <b>cd ..</b>
<b>Privilege Level</b>	operator, guest

You can use the **cd** (change directory) command to change the current focus of the CLI. The following cd commands are available:

- The **cd <path>** command allows you to view a sub-node of the current node.
- The **cd** command shows the current path.
- The **cd ..** command shows the path above the current one.

You must be in one of the following modes to execute this command:

- System Configuration
- CLIP Configuration
- SNM Configuration
- Display
- Management Configuration
- Community Creation/Configuration/Display
- Trap Creation/Configuration/Display

## 4.1.1 Input Parameters

“<path>” is a “.” or <space> separated list of tree nodes relative to the current path. Two “.” characters are used to go up one level relative to the current location.

## 4.1.2 Normal Response

### Example 4-1 Cd Command Response

```
clip_301:#cd
[clip_301] dwdm.arxpower
clip_301:#
-----
clip_301:#cd ..
[clip_301] dwdm
clip_301:#
-----
clip_301:#cd brxpower
[clip_301] dwdm.brxpower
clip_301:#
```

## 4.1.3 Error Response

```
-- Path not found --
```

## 4.1.4 Response Parameters

None.

## 4.2 Commit

<b>Command</b>	Commit
<b>Syntax</b>	<b>commit</b> <object type> [<name>]
<b>Privilege Level</b>	All <b>commit</b> commands except <b>commit user</b> must be performed by a user with operator privileges. <b>Commit user</b> must be performed by a user with administrator privileges.

The **commit** command stores the current properties of an object in non-volatile memory in the system. A committed object is automatically restored after the NCB is rebooted. Operators can commit SNMP (management) properties from the initial logon level. Other entities can be committed from the following levels:

- Network Configuration
- Management Configuration
- Clip Configuration
- Snm Configuration

**Note**

If you omit the `<name>` parameter, all objects of the specified type are committed.

If you execute the **commit** command followed by the “?” character, a list of objects that can be committed at that level appears.

Table 4-1 shows committable objects types and the corresponding level at which they can be committed.

**Table 4-1 Committable Object Types**

Object Type	Level
community	configure management
clip	configure clip
management	initial login (NCB:> prompt)
mcu	configure network
network	configure network
path	configure network
scu	configure network
snm	configure network
sntp	configure system; administrators only
trap	configure management
user	initial login (NCB:> prompt); administrators only

## 4.2.1 Input Parameters

**Table 4-2 Commit Command Input Parameters**

Parameter	Description
<code>&lt;name&gt;</code>	The name of the individual object.
<code>&lt;object type&gt;</code>	Object types include user, clip, and management.

## 4.2.2 Normal Response

A normal response to the commit command is a blank command line.

**Example 4-2 Commit User Response**

```
NCB:>commit user myuser
NCB:>
```

## 4.2.3 Error Response

```
-- Unknown 'object type' 'object name' --
```

## 4.2.4 Response Parameters

None.

## 4.3 Configure Clip

<b>Command</b>	Configure Clip
<b>Syntax</b>	<b>configure clip</b> <object name>
<b>Privilege Level</b>	operator
<b>Related commands</b>	<b>configure network</b>

The **configure clip** command modifies the parameters of a CLIP module, which connects the client signal to the DWDM system. Most parameters are set when the CLIP is manufactured, and are therefore read-only. See Appendix A, “Configurable Parameters,” for information about configurable CLIP parameters.

**Note**

You must be in Network Configuration mode or initial login mode to execute this command.

This command enables the following set of commands:

- **cd** [<path>]
- **commit**
- **exit**
- **list parameter|recursive|value**
- **acknowledge** <path>
- **no suppress|inhibit**
- **suppress** <path>
- **inhibit** <path>
- **upload** [<path>]
- **whoami**

See the individual descriptions of these commands for more information.

## 4.3.1 Input Parameters

**Table 4-3** Configure Clip Command Input Parameters

Parameter	Description
<i>&lt;object name&gt;</i>	The name of the CLIP you want to configure.

## 4.3.2 Normal Response

```
Network:#configure clip <object name>
<Object name>:#
```

**Example 4-3** Commit Command Response

```
Network:#configure clip clip_340
Configure 'clip_340'
clip_340:#
```

## 4.3.3 Error Response

```
-- Path not found --
```

## 4.3.4 Response Parameters

This parameter is identical to the input parameter.

## 4.4 Configure Community

<b>Command</b>	Configure Community
<b>Syntax</b>	<b>configure community</b> <i>&lt;community name&gt;</i>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>configure management, show management</b>

The **configure community** command modifies the properties of an SNMP community. An SNMP community enables an SNMP manager to access the SNMP interface of an SNM by referring to a valid community name.

This command sets the focus of the CLI to the community you want to configure and enables the following subset of commands:

- **cd** [*<path>*]
- **exit**
- **list parameter|recursive|value**
- **whoami**

See the individual descriptions of these commands for more information.

**Note**

You must be in Management Configuration mode to execute this command.

## 4.4.1 Input Parameters

**Table 4-4** Configure Community Command Input Parameters

Parameter	Description
<code>&lt;community name&gt;</code>	The name of the community you want to configure.

## 4.4.2 Normal Response

```
Mgmt:#configure community <community name>
Configure '<community name>'
<community name>:#
```

**Example 4-4** Configure Community Command Response

```
Mgmt:#configure community stockholm
Configure 'stockholm'
stockholm:#1 v
stockholm:
name
stockholm:#name sweden
stockholm:#1 v
stockholm:
name                sweden
stockholm:#
```

## 4.4.3 Error Response

```
-- Path not found --
```

## 4.4.4 Response Parameters

This parameter is identical to the input parameter.

# 4.5 Configure Management

<b>Command</b>	Configure Management
<b>Syntax</b>	<code>configure management</code>
<b>Privilege Level</b>	operator



The **configure management** command allows you to access commands that you can use to configure the properties of the SNMP management interface. This command changes the focus to the element to configure and enables the following new set of commands:

- **cd** [*<path>*]
- **create community|trap**
- **commit community|trap**
- **configure community|trap**
- **create community|trap**
- **delete community|trap**
- **display community|trap**
- **exit**
- **list parameter|recursive|value**
- **whoami**

See the individual descriptions of these commands for syntax and details.

## 4.5.1 Input Parameters

None.

## 4.5.2 Normal Response

```
NCB:#configure management
Configure management
Mgmt:#
```

## 4.5.3 Error Response

```
-- Path not found --
```

## 4.5.4 Response Parameters

None.

## 4.6 Configure MCU

<b>Command</b>	Configure MCU
<b>Syntax</b>	<b>configure mcu</b> <i>&lt;object name&gt;</i>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>configure network</b>

The **configure mcu** command modifies the properties of a multichannel unit (MCU) logical representation. The MCU has a number of slots that may contain CLIP or SNM objects. You can use the **configure mcu** command to set up the expected properties of the MCU.

The **configure mcu** command changes the CLI focus to the element to configure and enables the following new set of commands:

- **commit**
- **exit**
- **insert** *<element name>*
- **list parameter|recursive|value**
- **remove** *<element name>*
- **whoami**

See the individual descriptions of these commands for syntax and details. Refer to the *Cisco ONS 15200 Installation, Setup, and Test Manual* for the procedure for configuring an MCU using the **configure mcu** command.

**Note**


---

You must be in Network Configuration mode to execute this command.

---

## 4.6.1 Input Parameters

**Table 4-5** Configure MCU Command Parameters

Parameter	Description
<i>&lt;object name&gt;</i>	The name of the object you want to configure.

## 4.6.2 Normal Response

```
Mgmt:#configure mcu <object name>
Configure '<object name>'
<object name>:#
```

### Example 4-5 Configure MCU Command Response

```
Network:#configure mcu osmo
Configure 'osmo'
osmo:#1 v
mcu_3_6:
status                critical
neid                  6
name                  osmo
rack                  3
alarmlocation         1,2,3,4,5
slot1                  osmo_12475
slot2                  clip_12477
slot3                  clip_20529
slot4                  clip_20522
slot5                  clip_20497
slot6
slot7
slot8
slot9
slot10
slot11
slot12
slot13
slot14
slot15
slot16
slot17                  snm_osmo
osmo:#
```

## 4.6.3 Error Response

```
-- Path not found --
```

## 4.6.4 Response Parameters

None.

## 4.7 Configure Network

<b>Command</b>	Configure Network
<b>Syntax</b>	<b>configure network</b>
<b>Privilege Level</b>	operator

The **configure network** command allows you to access commands that you can use to configure the network. In network configuration mode, you can perform tasks such as creating, configuring, displaying, and deleting different network objects.

The **configure network** command enables the following subset of commands:

- **exit**
- **create mcu|scu**
- **commit clip|mcu|network|path|scu|snm**
- **configure clip|mcu|path|scu|snm**
- **delete mcu|scu**
- **display mcu|scu|clip|path**
- **show inventory**
- **list clip|mcu|path|scu|snm**
- **whoami**

See the individual descriptions of these commands for syntax and details.

## 4.7.1 Input Parameters

None.

## 4.7.2 Normal Response

```
NCB:#configure network
Network:#
```

## 4.7.3 Error Response

```
-- Path not found --
```

## 4.7.4 Response Parameters

None.

# 4.8 Configure Path

<b>Command</b>	Configure Path
<b>Syntax</b>	<b>configure path</b> <name>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>configure network</b>

The **configure path** command allows you to modify the properties of a path. The **configure path** command changes the CLI focus to the configurable element and enables the following subset of commands:

- **cd** [*<path>*]
- **commit**
- **exit**
- **list parameter|recursive|value**
- **upload** [*<path>*]
- **whoami**

See the individual descriptions of these commands for syntax and details. .

**Note**

You must be in Network Configuration mode to execute this command.

## 4.8.1 Input Parameters

**Table 4-6** Configure Path Command Parameters

Parameter	Description
<i>&lt;name&gt;</i>	The name of the path you want to configure.

## 4.8.2 Normal Response

```
Mgmt:#configure path <name>
Configure '<name>'
<name>: #
```

**Example 4-6** Configure Path Command Response

```
Network:#configure path path_18658_20535
Configure 'path_18658_20535'
path_18658_20535: #1 v
path_18658_20535:
status          minor
datarate        STM-16/OC-48
unit1           clip_18658
unit2           clip_20535
path_18658_20535: #
```

## 4.8.3 Error Response

```
-- Path not found --
```

## 4.8.4 Response Parameters

None.

## 4.9 Configure SCU

<b>Command</b>	Configure SCU
<b>Syntax</b>	<b>configure scu</b> <object name>
<b>Privilege Level</b>	operator

The **configure scu** command allows you to modify the properties of a Single-Channel unit (SCU). The SCU has one slot that can contain a CLIP module.

The **configure scu** command changes the CLI focus to the configurable element and enables the following subset of commands:

- **commit**
- **exit**
- **insert** <element name>
- **list parameter|recursive|value**
- **remove** <element name>
- **whoami**

See the individual descriptions of these commands for syntax and details. Refer to the *Cisco ONS 15200 Installation, Setup, and Test Manual* to configure an SCU using the **configure scu** command.



### Note

You must be in Network Configuration mode to execute this command.

### 4.9.1 Input Parameters

**Table 4-7** Configure SCU Command Parameters

Parameter	Description
<object name>	The name of the object you want to configure.

## 4.9.2 Normal Response

```
Mgmt:#configure scu <object name>
Configure '<object name>'
<object name>:#
```

### Example 4-7 Configure SCU Command Response

```
Network:#configure scu hagersten
Configure 'hagersten'
hagersten:#1 v
scu_3005:
status          normal
neid            34
slot            clip_309
hagersten:#
```

## 4.9.3 Error Response

```
-- Path not found --
```

## 4.9.4 Response Parameters

None.

## 4.10 Configure SNM

<b>Command</b>	Configure SNM
<b>Syntax</b>	<b>configure snm</b> <object name>
<b>Privilege Level</b>	operator

The **configure snm** command allows you to modify the properties of a Sub-Network Manager (SNM). An SNM manages all elements in its database, such as MCUs and SCUs. From the **configure snm** command you can differentiate two NCBs on a Control Access Network (CAN) bus by configuring the SNM's unitid parameter as `snm_1` or `snm_2`.

The **configure snm** command changes the CLI focus to the configurable element and enables the following subset of commands:

- **cd** [<path>]
- **commit**
- **exit**
- **list parameter|recursive|value**
- **upload** [<path>]
- **whoami**

See the individual descriptions of these commands for syntax and details. Refer to the *Cisco ONS 15200 Installation, Setup, and Test Manual* to configure an SNM using the **configure snm** command.

**Note**

You must be in Network Configuration mode or initial login mode to execute this command.

## 4.10.1 Input Parameters

**Table 4-8** Configure SNM Command Parameters

Parameter	Description
<code>&lt;object name&gt;</code>	The name of the SNM you want to configure.

## 4.10.2 Normal Response

```
Network:#conf snm snm_xxx
Configure 'snm_xxx'
snm_xxx:#
```

**Example 4-8** Configure SNM Command Response

```
Network:#conf snm snm_12316
Configure 'snm_12316'
snm_12316:#list value
snm_12316:
dcnaddress          0xf80
unitid              snm_1
label               NCB-RPX-REV-3A
position            <uninitialised>
neid                12316
inventory           <node>
network             <node>
snm_12316:#
```

## 4.10.3 Error Response

```
-- Path not found --
```

## 4.10.4 Response Parameters

None.



## 4.11 Configure System

<b>Command</b>	Configure System
<b>Syntax</b>	<b>configure system</b>
<b>Privilege Level</b>	administrator, operator

The **configure system** command accesses the system configuration mode. In system configuration mode, you can perform tasks such as defragmenting the file system, setting page lengths, executing command files, and other similar system functions. Table 4-9 lists and describes the commands available under the **configure system** command.

**Table 4-9 Configure System Commands**

Command	Description	User Levels
<b>defrag</b> <dev>	Defrag the file system	administrator, operator
<b>dnsconf</b> [<hostname> <domain> <server1> [<server2>]]	Get/set DNS server(s)	administrator
<b>exit</b>	Exit the system mode	administrator, operator
<b>format</b> <dev>	Format the file system	administrator
<b>fschk</b> <dev>	Check the file system	administrator, operator
<b>ftp</b>	Enter FTP session	administrator
<b>host</b> <ipaddr> <hostname>	IP address to name, name to IP address	administrator, operator
<b>ipconf</b> [<ipaddr><mask><gateway>]	Get/set the IP address	administrator
<b>ipfilt</b> add list remove set commit	Update the IP filter	administrator
<b>sntp</b> server timezone freq commit dlst_on dlst_off	Update SNTP server	administrator
<b>ldboot</b> [<dev> <filename> <count>]	View/load/unload boot	administrator, operator
<b>list</b> <dev>	List files	administrator, operator
<b>macaddr</b>	Retrieve the system MAC address	administrator, operator
<b>page</b> [<len>]	Get/set page length	administrator, operator
<b>password</b>	Set new password	administrator, operator
<b>reboot</b>	Reboot the system	administrator, operator
<b>remove</b> <dev> <filename>	Remove files	administrator
<b>source</b> <dev> <filename>	Execute a command file	administrator, operator
<b>syslog</b>	Display the system log	administrator, operator
<b>time</b> [<yyyy:mm:dd> <hh:mm:ss>]	Get/set system time	administrator, operator
<b>type</b> <dev><filename>	Types (prints) the file on the display	administrator
<b>version</b>	Display the software and hardware version	administrator, operator
<b>whoami</b>	List the current user	administrator, operator

See the individual descriptions of these commands for syntax and details.

## 4.11.1 Normal Response Format

```
NCB:>configure system
NCB:=
```

### Example 4-9 Configure System Response (Operator)

```
NCB:>configure system
NCB:=?
defrag <dev>
exit
format <dev>
fschk <dev>
ipconf [<ipaddr><mask><gateway>]
ipfilt add|list|remove|set|commit|
ldboot [<dev> <filename> <count>]
list <dev>
macaddr
page [<len>]
password
reboot
remove <dev><filename>
source <filename>
syslog
time [<yyyy:mm:dd><hh:mm:ss>]
version
whoami
NCB:=
```

### Example 4-10 Configure System Response (Administrator)

```
NCB:>configure system
NCB:=?
defrag <dev> : Defrag file system
dnsconf [<hostname> <domain> <server1> [<server2>]]: Get/Set dns server(s)
exit : Exit system mode
format <dev> : Format file system
fschk <dev> : Check file system
ftp : Enter FTP session
host <ipaddr|hostname> : IP addr to name, name to ip addr
ipconf [<ipaddr> <mask> <gateway>]: Get/Set ip address
ipfilt add|list|remove|set|commit: Update ip filter
sntp server|timezone|freq|commit|dlst_on|dlst_off: Update SNTP server
ldboot [<dev> <filename> <count>]: View/Load/Unload boot
list <dev> : List files
macaddr : System MAC address
page [<len>] : Set page length
password : Set new password
reboot : System reboot
remove <dev> <filename> : Remove files
source <dev> <filename> : Execute a command file
syslog : Display system log
time [<yyyy:mm:dd> <hh:mm:ss>]: Get/Set system time
type <dev> <filename> : Print file
version : Display sw and hw version
whoami : Current user
NCB:=
```

## 4.11.2 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Insufficient size --
```

## 4.11.3 Response Parameters

None.

## 4.12 Configure Trap

<b>Command</b>	Configure Trap
<b>Syntax</b>	<b>configure trap</b> <trap name>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>configure management, show management</b>

The **configure trap** command modifies the properties of an SNMP trap. An SNMP trap enables an SNMP manager to access the SNMP interface of an SNM by referring to a valid community name.

This command sets the CLI focus to the trap you want to configure and enables the following subset of commands:

- **cd** [<path>]
- **exit**
- **list parameter|recursive|value**
- **whoami**

See the individual descriptions of these commands for more information.



### Note

You must be in Management Configuration mode to execute this command.

### 4.12.1 Input Parameters

“<trap name>” represents the name of the trap you want to configure.

## 4.12.2 Normal Response

```
Mgmt:#configure trap <trap name>
Configure '<trap name>'
<trap name>:#
```

### Example 4-11 Configure Trap Command Response

```
Mgmt:#con trap lassep
Configure 'lassep'
lassep:#
lassep:#1 v
lassep:
ipaddress
community
lassep:#
```

## 4.12.3 Error Response

```
-- Path not found --
```

## 4.12.4 Response Parameters

“<trap name>” represents the name of the trap you want to configure.

## 4.13 Configure User

<b>Command</b>	Configure User
<b>Syntax</b>	<b>configure user</b> <user name>
<b>Privilege Level</b>	administrator

The **configure user** command modifies the properties of a user.

This command sets the CLI focus to the user you want to configure and enables the following subset of commands:

- **cd** [<path>]
- **commit**
- **exit**
- **list parameter|recursive|value**
- **upload** [<path>]
- **whoami**

See the individual descriptions of these commands for more information. See Appendix A, “Configurable Parameters,” for information on configurable user parameters.

## 4.13.1 Input Parameters

“<user name>” represents the name of the user you want to configure.

## 4.13.2 Normal Response Format

```
NCB:>configure '<user name>'
Configure '<user name>'
<user name>:#
```

### Example 4-12 Configure User Command Response

```
NCB:>configure user testguest
Configure 'testguest'
testguest:#?
cd [<path>]           : Change current path
commit                : Commit current object
exit                  : Exit configuration mode
list parameter|recursive|value
upload [<path>]      : Synchronise object
whoami                : Current user
dummy1:#1 v
dummy1:
password             ***
privileges           guest
state                offline
timeout              30
logintime            00:00
dummy1:#
```

## 4.13.3 Error Response Format

```
-- Not enough access --
-- Wrong number of arguments [configure user <user name>] --
-- Missing argument --
-- Unexpected reply code <error code> --
```

## 4.13.4 Response Parameters

**Table 4-10 Configure User Command Response Parameters**

Parameter	Description
<user name>	The name of the user to be configured.
<error code>	Number assigned to the error code. This number should be reported to Cisco personnel.

## 4.14 Create Community/Trap

<b>Command</b>	Create Community Create Trap
<b>Syntax</b>	<b>create community</b> <community name> <b>create trap</b> <trap name>
<b>Privilege Level</b>	administrator
<b>Related command(s)</b>	<b>configure management</b>

The **create community** and **create trap** commands add a new SNMP community or trap. The new community or trap assumes default values for all parameters. See the “Configure Community” section on page 4-5 and the “Configure Trap” section on page 4-17 for more information about communities and traps.

These commands enables the following subset of commands:

- **cd** [<path>]
- **exit**
- **list parameter|recursive|value**
- **whoami**

See the individual descriptions of these commands for more information.



### Note

You must be in Management Configuration mode or initial login mode to execute this command.

### 4.14.1 Input Parameters

**Table 4-11 Create Community/Trap Command Parameters**

Parameter	Description
<community name>	The name of the community you want to create.
<trap name>	The name of the trap you want to create.

## 4.14.2 Normal Response Format

```
NCB:>create community <community name>
Created '<community name>'
<community name>:#
-----
NCB:>create trap <trap name>
Created '<trap name>'
<trap name>:#
```

### Example 4-13 Create Community/Trap Command Response

```
NCB:>create community stockholm
Created 'stockholm'
stockholm:#
-----
NCB:>create trap trap12
Created 'trap12'
trap12:#
```

## 4.14.3 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Insufficient size --
```

## 4.14.4 Response Parameters

None.

## 4.15 Create MCU/SCU

<b>Command</b>	Create MCU Create SCU
<b>Syntax</b>	<b>create mcu</b> <neid><rack> <b>create scu</b> <neid>
<b>Privilege Level</b>	operator
<b>Related command(s)</b>	configure network, list mcu, list scu

The **create mcu** and **create scu** commands add a new MCU or SCU. The new MCU or SCU assumes default values for all parameters. See the “Configure MCU” section on page 4-7 and the “Configure Path” section on page 4-10 for more information about MCU and SCU parameters.

These command enables the following subset of commands:

- **cd** [<path>]
- **exit**
- **insert** <element name>

- **list** *parameter|recursive|value*
- **remove** *<element name>*
- **whoami**

See the individual descriptions of these commands for more information. Refer to the *Cisco ONS 15200 Installation, Setup, and Test Manual* to create an MCU or SCU using the **create mcu** and **create scu** commands.

**Note**


---

You must be in Network Configuration mode to execute these commands.

---

## 4.15.1 Input Parameters

*Table 4-12 Create MCU/SCU Command Parameters*

Parameter	Description
<i>&lt;neid&gt;</i>	The network element ID.
<i>&lt;rack&gt;</i>	The backplane jumper settings of the MCU.



## 4.15.2 Normal Response Format

```
NCB:>create mcu <neid><rack>
Created 'mcu_<rack>_<neid>'
mcu_<rack>_<neid>:#
-----
NCB:>create scu <neid>
Created 'scu_<neid>'
scu_<neid>:#
```

### Example 4-14 Create MCU/SCU Command Response

```
NCB:>create mcu 100 2
Created 'mcu_2_100'
mcu_2_100:#
-----
NCB:>create scu 123
Created 'scu_123'
scu_123:#
```

## 4.15.3 Error Response Format

```
-- Path not found --
-- Insufficient size --
-- Missing argument --
```

## 4.15.4 Response Parameters

Table 4-13 Create MCU/SCU Command Parameters

Parameter	Description
<neid>	The network element ID.
<rack>	The backplane jumper settings of the MCU.

## 4.16 Create Trap

See the “Create Community/Trap” section on page 4-20 for information on the **create trap** command.

## 4.17 Create User

Command	Create User
Syntax	<b>create user</b> <user name>
Privilege Level	administrator
Related command(s)	commit, password, configure user

The **create user** command adds a new system user. Each user has a set of parameters. See Appendix A, “Configurable Parameters” for a description of the user parameters.

After you create a user, specify the password and privilege level of that user. For example, to set the password, from the `<user name>` prompt, type **password** `<firstpassword>`, where `<firstpassword>` is the password you want to set for that user. The user should change his or her password at the first login.

See the “Creating a New User” section on page 7-1 to create and set parameters for a new user. See the “Configure User” section on page 4-18 for more information.

This command enables the following subset of commands:

- **cd** [`<path>`]
- **commit**
- **exit**
- **list parameter|recursive|value**
- **upload** [`<path>`]
- **whoami**

See the individual descriptions of these commands for more information.

## 4.17.1 Input Parameters

“`<user name>`” represents the name designated by the administrator for the new user. The user name can be set to any string that contains a minimum of 6 characters and a maximum of 30 characters. Valid characters are *a* through *z*, *0* through *9*, *A* through *Z*, and the `_` (underscore) character.

**Note**

---

The user name cannot begin with a numeral.

---

## 4.17.2 Normal Response Format

```
NCB:>create user <user name>
Created '<user name>'
<user name>:#
```

### Example 4-15 Create User Command Response

```
NCB:>create user barkero
barkero:#1 v
barkero:
password          ****
privileges        guest
state             offline
timeout30
barkero:#password ciscopass
barkero:#privileges operator
barkero:#1 v
barkero:
password          ****
privileges        operator
state             offline
timeout           30
logintime         -
barkero:#
```

## 4.17.3 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Insufficient size --
-- Wrong number of arguments [create user <name>] --
-- Missing argument --
-- Could not create 'name' --
-- User name 'name' too short; minimum 6 characters --
-- User name 'name' too long; maximum 30 characters --
-- Item named 'name' already exists --
-- Name 'name' does not follow naming convention --
-- Unexpected reply code <error code> --
```

## 4.17.4 Response Parameters

See

## 4.18 Defrag

<b>Command</b>	Defrag
<b>Syntax</b>	<b>defrag</b> <device>
<b>Privilege Level</b>	administrator, operator
<b>Related command(s)</b>	<b>commit, password</b>

The **defrag** command removes files from the file system on the NCB module. When you delete a file, it is marked for deletion but it is not removed until you run the **defrag** command or reboot the NCB.

**Note**

You must be in System Configuration mode to execute this command.

This command can take up to 30 seconds to complete.

## 4.18.1 Input Parameters

“<device>” is the equipment you want to defragment. Currently only Device 0 is supported.

## 4.18.2 Normal Response Format

```
NCB:=defrag 0
Defragmentation in progress...
NCB:=
```

## 4.18.3 Error Response Format

None.

## 4.18.4 Response Parameters

None.

## 4.19 Delete

<b>Command</b>	Delete
<b>Syntax</b>	<b>delete community</b> <community name> <b>delete mcu</b> <mcu name> <b>delete scu</b> <scu name> <b>delete trap</b> <trap name> <b>delete user</b> <user name>
<b>Privilege Level</b>	administrator ( <b>delete user</b> only); operator for all others

The **delete** command is used to remove the following objects from the system database:

- communities
- MCUs
- SCUs
- traps
- users

**Note**

You must be in Management Configuration mode to perform the **delete community** and **delete trap** commands. You must be in Network Configuration mode to perform the **delete mcu** and **delete scu** commands.

## 4.19.1 Input Parameters

**Table 4-14 Delete Input Command Parameters**

Parameter	Description
<i>&lt;community name&gt;</i>	The name of the community you want to delete.
<i>&lt;mcu name&gt;</i>	The name of the MCU you want to delete.
<i>&lt;scu name&gt;</i>	The name of the SCU you want to delete.
<i>&lt;trap name&gt;</i>	The name of the trap you want to delete.
<i>&lt;user name&gt;</i>	The name of the user you want to delete.

## 4.19.2 Normal Response Format

```
Mgmt:>delete community <community name>
Deleted '<community name>'
Mgmt:>
-----
Mgmt:>delete trap <trap name>
Deleted '<trap name>'
Mgmt:>
-----
NCB:>delete user <user name>
Deleted '<user name>'
NCB:>
```

### Example 4-16 Delete Command Response

```
Mgmt:>delete community stkcommunity
Deleted 'community2'
Mgmt:#
-----
Mgmt:>delete trap rcdntrap
Deleted 'rcdntrap'
Mgmt:#
-----
NCB:>delete user barkero
Deleted 'barkero'
NCB:>
```

## 4.19.3 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Wrong number of arguments [delete community <name>] --
-- Wrong number of arguments [delete trap <name>] --
-- Wrong number of arguments [delete user <name>] --
-- Missing argument --
-- Unexpected reply code <error code> --
```

## 4.19.4 Response Parameters

**Table 4-15 Delete Response Command Parameters**

Parameter	Description
<user name>	The name of the user to be deleted.
<error code>	Number assigned to the error code. This number should be reported to Cisco personnel.

## 4.20 Display

<b>Command</b>	Display
<b>Syntax</b>	<b>display</b> <object type> <name>
<b>Privilege Level</b>	guest user, operator
<b>Related Command(s)</b>	<b>configure clip, configure SNM</b>

The **display** command is similar to the **configure** command, but instead of granting read-write privileges, it grants read-only access to the parameters of the selected object, such as a CLIP module or SNM. The command automatically sets the CLI focus to the object. Use the **exit** command to exit this mode.

See the “Configure Clip” section on page 4-4 and the “Configure SNM” section on page 4-13 for more information.


**Note**

To display user properties using the **display user** command, you must be logged in as an administrator. See the “Display User” section on page 4-31 for more information.

### 4.20.1 Input Parameters

**Table 4-16 Display Command Response Command Parameters**

Parameter	Description
<object type>	The type of object to display, such as clip, snm, community, trap, and user.
<name>	The name assigned to the object that you want to display.

## 4.20.2 Normal Response Format

```
NCB:>display <object type><name>
Display '<name>'
<name>:
```

### Example 4-17 Display Command Response

```
NCB:>display clip clip_341
Display 'clip_341'
clip_341:>list value
clip_341:
dcnaddress          0x1944
uploaded            yes
neid                20537
name                clip_20537
status              critical
primary             none
secondary           this
mm                  none
unittype            clip
unitappl            6
serno                CEM05430279
position             rack(1)_slot(4)
container           <node>
itu                 47
protection           yes
datarate             STM-16/OC-48
pm                  off
inuse                yes
client              <node>
dwdm                 <node>
board                <node>
inventory            <node>
dcn                  <node>
misc                 <node>
clip_20537:>
```

## 4.20.3 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Insufficient size --
-- Wrong number of arguments [%s %s <name>] --
-- Missing argument --
-- Unexpected reply code (<error code>) --
```

## 4.20.4 Response Parameters

**Table 4-17 Display Command Response Command Parameters**

Parameter	Description
<object name>	The name assigned to the selected element
<error code>	Number assigned to the error code. This number should be reported to Cisco personnel.



## 4.21 Display User

<b>Command</b>	Display User
<b>Syntax</b>	<b>display user</b> <user name>
<b>Privilege Level</b>	administrator

The **display user** command lists user properties.

### 4.21.1 Input Parameters

“<user name>” is the name of the user that you want to display.

### 4.21.2 Normal Response Format

```
NCB:>display user <user name>
Display '<user name>'
<user name>:>
```

#### Example 4-18 Display User Response

```
NCB:>display user sdsguest
Display 'sdsguest'
sdsguest:>
```

### 4.21.3 Error Response Format

```
-- Not enough access --
-- Insufficient size --
-- Wrong number of arguments [display user <name>] --
-- Missing argument --
-- Unexpected reply code <error code> --
```

### 4.21.4 Response Parameters

**Table 4-18 Display User Command Response Parameters**

Parameter	Description
<user name>	The name of the user
<error code>	Number assigned to the error code. This number should be reported to Cisco personnel.

## 4.22 DNSconf

<b>Command</b>	DNSconf
<b>Syntax</b>	<b>dnsconf</b> [<hostname> <domain> <dns server X> [<dns server Y>]]
<b>Privilege Level</b>	administrator

The **dnsconf** command configures the NCB module's Domain Name System (DNS) client, which provides access to a DNS server database. After the DNS client is configured, you can use domain names instead of IP addresses.


**Note**

You must be in System Configuration mode to perform this command.

### 4.22.1 Input Parameters

*Table 4-19 DNSconf Command Input Parameters*

Parameter	Description
<hostname>	The host name assigned to the NCB module.
<domain>	The default domain used by the NCB module.
<dns server 1>	The IP address of the domain name server.
<dns server 2>	The IP address of the second domain name server (optional).

## 4.22.2 Normal Response Format

### Example 4-19 DNSconf Command Response

```
NCB:=dnsconf ncb .cisco.com 144.254.74.7 144.254.71.184
DNS configured, please reboot
NCB:=
-----
NCB:=dnsconf
Hostname:      ncb
Domain:        .cisco.com
Server1:       144.254.74.7
Server2:       144.254.71.184
NCB:=
```

## 4.22.3 Error Response Format

```
-- Not enough access --
-- Path not found --
-- Wrong number of arguments [delete community <name>] --
-- Wrong number of arguments [delete trap <name>] --
-- Wrong number of arguments [delete user <name>] --
-- Missing argument --
-- Unexpected reply code <error code> --
```

## 4.22.4 Response Parameters

None.

## 4.23 Exit

<b>Command</b>	Exit
<b>Syntax</b>	<b>exit</b>
<b>Privilege Level</b>	administrator, operator, guest user

The **exit** command closes the current ONS 15200 Command Line Interface mode and opens the level above. When you issue this command at the `NCB:>` prompt, the telnet session is terminated.

### 4.23.1 Input Parameters

None.

## 4.23.2 Normal Response Format

### Example 4-20 Exit Command Response

```
barkero:>exit
NCB:>
-----
NCB:=exit
NCB:>
```

## 4.23.3 Error Response Format

None.

## 4.23.4 Response Parameters

None.

## 4.24 Format

<b>Command</b>	Format
<b>Syntax</b>	<b>format</b> <device>
<b>Privilege Level</b>	administrator

The **format** command reformats the specified device and erases all files on that device.



### Note

You must be in System Configuration mode to execute this command.

## 4.24.1 Input Parameters

“<device>” is the equipment you want to format. Currently only Device 0 is supported.

## 4.24.2 Normal Response Format

### Example 4-21 Format Command Response

```
NCB:=format 0
Formatting in progress...
NCB:=
```

## 4.24.3 Error Response Format

```
-- Error, no such device --
-- Wrong number of arguments [format <dev>] --
```

## 4.24.4 Response Parameters

“<dev>” is the device you wanted to format.

## 4.25 Fschk

<b>Command</b>	Fschk
<b>Syntax</b>	<b>fschk</b> <device>
<b>Privilege Level</b>	administrator, operator

The **fschk** command displays information, contents, and the status of the specified device of the file system.



### Note

You must be in System Configuration mode to execute this command.

### 4.25.1 Input Parameters

“<device>” is the number of the file system device you want to check. Currently only Device 0 is supported.

## 4.25.2 Normal Response Format

### Example 4-22 Fschk Command Response

```
NCB:=fschk 0
Number of files:          5
Number of deleted files: 0
1147467 bytes used
949681 bytes left
NCB:=
```

## 4.25.3 Error Response Format

```
-- Error, no such device --
-- Missing argument [fschk <dev>] --
```

## 4.25.4 Response Parameters

None.

## 4.26 FTP

<b>Command</b>	FTP
<b>Syntax</b>	<b>ftp</b>
<b>Privilege Level</b>	administrator
<b>Related Command(s)</b>	<b>configure system</b>

The **ftp** command initiates the File Transfer Protocol (FTP) client mode. See Chapter 6, “FTP Commands” for more information about FTP.



### Note

You must be in System Configuration mode to execute this command.

### 4.26.1 Input Parameters

None.

## 4.26.2 Normal Response Format

### Example 4-23 Ftp Command Response

```

NCB:=ftp
ftp:>?
open <ipaddr> : Open a FTP connection
close         : Close current FTP connection
user <name>   : Send user name
cd <path>     : Change working directory
pwd           : Print current working directory
ls <path>     : List file(s)
ascii        : Set ASCII transfer type
binary       : Set binary transfer type
syst        : Get server system
get <file>   : Retrieve a file from server
put <file>   : Send a file to the server
passive     : Toggle passive mode (on/off)
status      : Show the current status of the FTP connection
quit        : Terminate FTP session
exit        : Exit FTP mode
ftp:>

```

## 4.26.3 Error Response Format

None.

## 4.26.4 Response Parameters

None.

## 4.27 Inhibit/No Inhibit

<b>Command</b>	Inhibit/No Inhibit)
<b>Syntax</b>	<b>inhibit</b> [<path>] <b>no inhibit</b> [<path>]
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	suppress, no suppress

The **inhibit** command disables an alarm point on a CLIP module so that the CLIP alarm point will not detect alarms on any Subnetwork Managers (SNMs) in the network. The **no inhibit** command reverses the **inhibit** command and allows the alarm point to detect alarms. An inhibited alarm point will report the status “inhibited.” A suppressed alarm cannot be inhibited unless you issue a **no suppress** command.



### Note

You must be in CLIP Configuration mode to perform these commands.

## 4.27.1 Input Parameters

“<path>” is a “..” or <space> separated list of tree nodes relative to the current path.

## 4.27.2 Normal Response Format

### Example 4-24 Inhibit Command Response

```
NCB:=dwdm arxpower status
highwarning
NCB:=inhibit dwdm arxpower
NCB:=dwdm arxpower status
inhibited
NCB:=no inhibit dwdm arxpower
NCB:=dwdm arxpower status
highwarning
NCB:=
```

## 4.27.3 Error Response Format

```
-- Not an inhibitable alarm point --
-- Unable to inhibit/un-inhibit--
```

## 4.27.4 Response Parameters

None.

## 4.28 Insert

<b>Command</b>	Insert
<b>Syntax</b>	<b>insert</b> <clip name> <snm name>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>remove</b>

The **insert** command inserts an object, such as a CLIP or an SNM, in a container, such as an MCU or SCU. This command is used to associate an object with its container. Refer to the *Cisco ONS 15200 Module Handbook* for the procedure used to replace a unit using the **insert** command.



## 4.28.1 Input Parameters

**Table 4-20 Insert Command Input Parameters**

Parameter	Description
<clip name>	The name assigned to the CLIP module you want to insert.
<snm name>	The name assigned to the SNM you want to insert.

## 4.28.2 Normal Response Format

**Example 4-25 Insert Command Response**

```
mcu_1_45:#insert clip_309
mcu_1_45:#
-----
mcu_1_45:#insert snm_234
mcu_1_45:#
```

## 4.28.3 Error Response Format

```
-- Unable to determine position in container --
-- Slot '<slot>' is already occupied --
-- Slot is already occupied --
-- Wrong number of arguments [insert <name>] --
-- Unexpected reply code ('<error code>') --
```

## 4.28.4 Response Parameters

**Table 4-21 Insert Command Response Parameters**

Parameter	Description
<rack id>	The backplane jumper. Possible values are 1 through 4.
<slot>	The position within the MCU.
<error code>	An internal error code. Report this code to Cisco personnel.

## 4.29 Ipconf

<b>Command</b>	Ipconf
<b>Syntax</b>	<b>ipconf</b> [<ip address> <subnet mask> <default gateway>]
<b>Privilege Level</b>	administrator
<b>Related Command(s)</b>	<b>configure system</b>

The **ipconf** command sets or modifies the IP properties of the Subnetwork Manager (SNM). This command assigns an IP address, a subnet mask, and a default gateway to the NCB module. You can communicate with the module via the RS-232 port using the **ipconf** command.

**Note**

You must be in System Configuration mode to execute this command.

## 4.29.1 Input Parameters

**Table 4-22** *ipconf* Command Input Parameters

Parameter	Description
<ip address>	The IP address of the Sub-Network Manager (SNM)
<subnet mask>	The subnetwork mask address of the SNM
<default gateway>	The default gateway address of the SNM

## 4.29.2 Normal Response Format

**Example 4-26** *ipconf* Command Response

```
NCB:=ipconf
IP address:      10.52.18.225
Subnet mask:    255.255.255.0
Default gateway: 10.52.18.1
NCB:=
-----
NCB:=ipconf 192.10.23.45 255.255.255.0 192.10.23.1
IP address set, please reboot...
NCB:=
```

## 4.29.3 Error Response Format

```
-- Error, could not read IP address parameters --
-- Error, invalid IP address --
-- Error, invalid subnet mask --
-- Error, invalid default gateway --
```

## 4.29.4 Response Parameters

None.

## 4.30 Ipfilt

<b>Command</b>	Ipfilt
<b>Syntax</b>	<b>ipfilt add</b> <ipaddress> <b>ipfilt commit</b> <b>ipfilt list</b> <b>ipfilt remove</b> <entryno> <b>ipfilt set</b> <mask> <code>
<b>Privilege Level</b>	administrator
<b>Related Command(s)</b>	<b>configure system</b>

The **ipfilt** command determines which IP addresses have access to the NCB. By default the system will allow IP packages from any host to enter the system, but open access can be insecure. The system has the ability to accept only hosts or host IP addresses that match a specified mask, as well as individual addresses. There are five subcommands related to the ipfilt command:

- The **ipfilt add** command adds individual acceptable IP addresses.
- The **ipfilt set** command adds or modifies an IP address mask (only one mask is allowed). IP addresses that match the mask are either accepted or rejected depending on the <code> address.
- The **ipfilt list** command displays the current filter list. All entries, apart from the filter, are assigned an entry number.
- The **ipfilt remove** command removes selected IP addresses from the filter list. All entries in the list are assigned an entry number that must be specified when the **ipfilt remove** command is issued.
- The **ipfilt commit** command stores the current settings into non-volatile memory.

The filtering mechanism will not allow the presence of filters (masks) that prevent the current user from accessing the system, unless access is explicitly granted by a separate IP address entry. This safeguard prevents the user from creating a filter that blocks his or her username.



### Note

You must be in System Configuration mode to execute this command.

## 4.30.1 Input Parameters

**Table 4-23** *Ipfilt Command Input Parameters*

Parameter	Description
<ipaddress>	The Internet protocol (IP) address of the device trying to access the NCB
<entryno>	More than one individual IP address is permitted at any time. They are stored in a list. Each entry in the list has an entry number, which can be used when the entry is removed.
<mask>	The mask address of the SNM. This is a 32-bit number. If a 0 is in the mask, the corresponding bit in the <ipaddress> must match the same bit in <code>. This parameter can be entered as a hexadecimal number.
<code>	This is a 32-bit number. All bits in this parameter, where the corresponding bit in the <mask> is 0, must match the bit in the <ipaddress>. This parameter can be entered as a hexadecimal number.

## 4.30.2 Normal Response Format

**Example 4-27** *Ipfilt Command Responses*

```

NCB:=ipfilt list
IP filter mask: 4294967295
IP filter code: 0
0: 10.52.18.225
1: 144.254.121.137
NCB:=
-----
NCB:=ipfilt remove 0
NCB:=
-----
NCB:=ipfilt set 4294967295 0xA3412DA
NCB:=
-----
NCB:=ipfilt commit
NCB:=

```

## 4.30.3 Error Response Format

### ipfilt set

```
-- Error, new filter will not accept your IP address --
-- Wrong number of arguments [ipfilt set <mask> <code>] --
```

### ipfilt add

```
-- Wrong number of arguments [ipfilt add <ipaddr>] --
```

**ipfilt remove**

```
-- Wrong number of arguments [ipfilt remove <ipaddr entryno>] --
-- Error, new filter will not accept your IP address --
-- Error, IP address number out of range --
```

## 4.30.4 Response Parameters

None.

## 4.31 Ldboot

<b>Command</b>	Ldboot
<b>Syntax</b>	<b>ldboot</b> [<drive> <filename> <tries>]
<b>Privilege Level</b>	administrator, operator
<b>Related Command(s)</b>	<b>configure system</b>

The **ldboot** command specifies which application program to start when the system is booting. After setting up the NCB module, the boot software searches for an application to run. The application is specified by the **ldboot** command followed by a drive number and a maximum number of tries. Currently, only drive 0 is supported. The maximum number of tries prevents a malfunctioning application from blocking the system. When the number of tries has been exceeded, the system enters boot mode again and you can replace the malfunctioning database (qdfs.cfg) and binary (snm.out) files.

**Note**

The recommended number of tries is 10. If both LEDs on the Communication Interface Module (CIM) are blinking, the maximum number of boot attempts has been reached.

Running the **ldboot** command without arguments will display the current boot record settings. Running the **ldboot** command with arguments will update the boot record settings.

**Note**

You must be in System Configuration mode to execute this command.

### 4.31.1 Input Parameters

**Table 4-24 Ldboot Command Input Parameters**

Parameter	Description
<drive>	The drive where the file resides. Currently only drive 0 is supported.
<filename>	The name of the application
<tries>	Number of permitted reboot attempts. Setting <tries> to -1 disables the attempt mechanism, granting an unlimited number of boot attempts. The recommended number of tries is 10.

## 4.31.2 Normal Response Format

### Example 4-28 Ldboot Command Response

```
NCB:=ldboot
Boot image: /0/snm.out [2]
NCB:=
-----
NCB:=ldboot 0 snm.out 2
NCB:=
```

## 4.31.3 Error Response Format

```
-- Wrong number of arguments [ldboot [<drive> <filename> <tries>]] --
-- Error, no such device --
```

## 4.31.4 Response Parameters

None.

## 4.32 List <dev>

<b>Command</b>	List
<b>Syntax</b>	<b>list</b> <dev>
<b>Privilege Level</b>	administrator, operator
<b>Related Command(s)</b>	<b>configure system</b>

The **list** command displays a list of the files in the onboard file system. The NCB module has an onboard file system that contains the application and configuration files. Currently, only device 0 is available.



### Note

You must be in System Configuration mode to execute this command.

## 4.32.1 Input Format

**list** <dev>

## 4.32.2 Input Parameters

“<dev>” represents the drive number. Currently only Drive 0 is supported.

## 4.32.3 Normal Response Format

### Example 4-29 List Command Response

```
NCB:=list 0
Thu Sep  4 19:47:14 1980      2582 network.cfg
Thu Sep  4 17:58:25 1980      41  sys_inet.sys
Fri Mar  3 20:12:49 1972     39213 qdbs.cfg
Thu Sep  4 19:30:54 1980    1104832 snm.out
Tue Feb 20 18:58:42 2001      599  users.cfg
NCB:=
```

## 4.32.4 Error Response Format

```
-- Error, no such device --
-- Wrong number of arguments [list <dev>] --
```

## 4.32.5 Response Parameters

None.

## 4.33 List Parameter/Value/Recursive

<b>Command</b>	List Parameter, List Value, List Recursive
<b>Syntax</b>	<b>list parameter</b> [ <i>&lt;path&gt;</i>  ..] <b>list value</b> [ <i>&lt;path&gt;</i>  ..] <b>list recursive</b> [ <i>&lt;path&gt;</i>  ..]
<b>Privilege Level</b>	administrator, operator, guest
<b>Related Command(s)</b>	<b>configure system</b>

The **list** command has three variations. The **list parameter** command lists all parameters at the current focus while the **list value** command also displays their current values. The value '*<node>*' means that the parameter is a node (very similar to a directory in a file system), and not a value. The **list recursive** command works like list value but will recursively scan through the sub-nodes found. It is possible to specify a relative path to display other parameters than those at the current focus.

## 4.33.1 Input Parameters

**Table 4-25 List Parameter/Value/Recursive Command Input Parameters**

Parameter	Description
<path>	This is a "." or <space> separated list of tree nodes relative to the current path.
..	Two "." characters are used to specify "go up one level" relative to the current location.

## 4.33.2 Normal Response Format

**Example 4-30 List Parameter/Value/Recursive Command Response**

```
clip_301:#list parameter
status
value
hat
hwt
lwt
lat
unit
pmvalue

clip_301:#
-----
clip_301:#list value
status      normal
value       -18.8 dbm
hat         -5.3 dbm
hwt         -12.6 dbm
lwt         -21.0 dbm
lat         -27.5 dbm
unit        dbm
pmvalue     - -20.1 -18.7 -17.8

clip_301:#
```

## 4.33.3 Error Response Format

```
-- Path not found --
```

Some additional error responses indicate an error in the parameter value:

```
-- <out of range> --
-- <could not convert> --
-- <general failure> --
```

## 4.33.4 Response Parameters

None.



## 4.34 Macaddr

<b>Command</b>	Macaddr
<b>Syntax</b>	<b>macaddr</b>
<b>Privilege Level</b>	administrator, operator
<b>Related Command(s)</b>	<b>configure system</b>

The **macaddr** command displays the MAC address (i.e., the Ethernet address) of the NCB module. The MAC address is set when the module is manufactured and cannot be changed.



**Note**

You must be in System Configuration mode to execute this command.

### 4.34.1 Input Parameters

None.

### 4.34.2 Normal Response Format

#### *Example 4-31 Macaddr Command Response*

```
NCB:=macaddr
MAC address: 00-01-64-ff-c7-03
NCB:=
```

### 4.34.3 Error Response Format

```
-- Error, invalid MAC address --
```

### 4.34.4 Response Parameters

None.

## 4.35 No Inhibit

See the “Inhibit/No Inhibit” section on page 4-37 for information on the **no inhibit** command.

## 4.36 Open Eventlog

<b>Command</b>	Open Eventlog
<b>Syntax</b>	<b>open eventlog</b>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>pmlog15, pmlog24</b>

The **open eventlog** command is used to open the eventlog so that you can view its contents. This command creates a filter with parameters that the user can alter to filter out events of interest in the logs. The filter parameters include eventid, event source, starttime, and endtime. The events are stored on a file in Volume #1, which can be retrieved using FTP. This command enables the following set of commands that can be used to view the contents of the event log buffer:

- **exit**
- **list parameter|value|recursive**
- **read** [*<user>*][*- <source>*]
- **rewind**
- **starttime**
- **endtime**
- **username** *<name>*[*,<name>*].
- **source** *<name>*[*,<name>*].
- **rewind**
- **whoami**

See the individual commands for more information.

### 4.36.1 Normal Response Format

```
NCB:>open eventlog
EventLog:#
```

### 4.36.2 Error Response Format

None.

### 4.36.3 Response Parameters

None.

## 4.37 Open Pmlog15/Pmlog24

<b>Command</b>	Open Pmlog
<b>Syntax</b>	<b>open pmlog15</b> <b>open pmlog24</b>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>pmlog, syslog</b>

The **open pmlog15** and **open pmlog24** commands are used to open the performance monitoring log so that you can view its contents. These commands create a filter with parameters that the user can alter to filter out events of interest in the logs. The filter parameters include eventid, event source, starttime, and endtime. This command enables the following set of commands that can be used to view the contents of the pm log buffer:

- **exit**
- **list parameter|value|recursive**
- **read** [*<user>*][*- <source>*]
- **rewind**
- **starttime**
- **endtime**
- **username** *<name>*[*,<name>*].
- **source** *<name>*[*,<name>*].
- **rewind**
- **whoami**

See the individual commands for more information.

### 4.37.1 Normal Response Format

```
NCB:>open pmlog15
PmLog15:#
```

### 4.37.2 Error Response Format

None.

### 4.37.3 Response Parameters

None.

## 4.38 Page

<b>Command</b>	Page
<b>Syntax</b>	<b>page</b> <len>
<b>Privilege Level</b>	administrator, operator

The **page** command sets the maximum number of rows displayed before the user is prompted. Some command replies are extensive in length. In such cases, a limited number of rows are displayed on the screen before the user is prompted. At the prompt the user can press the **Enter** key to obtain one more row, or the **spacebar** to obtain one more page. The length of a page is specified by the page command.



### Note

You must be in System Configuration mode to execute this command.

### 4.38.1 Input Parameters

“<len>” represents the number of rows (length) displayed before the user is prompted.

### 4.38.2 Normal Response Format

```
NCB:=page
-- Current page length is xx rows --
NCB:=
-----
NCB:=page <len>
-- New page length is <len> rows --
NCB:=
```

#### *Example 4-32 Page Command Response*

```
NCB:=page
-- Current page length is 24 rows --
NCB:=
-----
NCB:=page 26
-- New page length is 26 rows --
NCB:=
```

### 4.38.3 Error Response Format

None.

### 4.38.4 Response Parameters

None.

## 4.39 <parameter>

<b>Command</b>	<parameter>
<b>Syntax</b>	[<path>]* <parameter> [<new value>]
<b>Privilege Level</b>	guest, operator

The objects in the SNM database have tree structures that consist of nodes and leaves, where the leaves contain the parameter values. The nodes and leaves may have different access rights. Some leaves may be possible to modify while other may contain read-only values. The values and structure of the objects can be viewed by the list command described above or by simply typing the relative path (the <parameter> command). Typing the path of a leaf followed by a ‘?’ character prints the list of possible value to write. Printing a valid value will write the value to the leaf, and omitting it will read the current value.

### 4.39.1 Input Parameters

**Table 4-26** <parameter> Command Input Parameters

Parameter	Description
<path>	This is a “.” or <space> separated list of tree nodes relative to the current path.
<parameter>	The name of the leaf
<new value>	The new value that you want to assign to the selected parameter.

### 4.39.2 Normal Response

The value of the read parameter.

**Example 4-33** <parameter> Command Response

```

myuser:#privileges operator
myuser:#
-----
clip_302:#dwdm.arxpower.hat
-30.1 dbm
clip_302:#dwdm.-arxpower.-hat -29.0
clip_302:#dwdm.-arxpower.-hat
-29.0 dbm
-----
clip_311:#datarate
stm_4
clip_311:#datarate? [STM_1 OC_3 STM_4 OC_12 STM_16 OC_48 gbit_eth]
clip_311:#datarate stm_16
clip_311:#datarate
stm_16
-----
myuser:#privileges
operator
myuser:#

```

### 4.39.3 Error Response

```

-- Not enough access --
-- Path not found --

```

### 4.39.4 Response Parameters

None.

## 4.40 Password

<b>Command</b>	Password
<b>Syntax</b>	<b>password</b>
<b>Privilege Level</b>	administrator, operator

You can use the **password** command to change the password of the currently logged-in user. The command will prompt you for the new password and then will ask for a confirmation of the new password. If the two passwords are identical, the new password is automatically committed. The password can be set to any string that contains at least 6 characters and up to 30 characters. Valid characters are a through z, 0 through 9, A through Z, and the “\_” (underscore) character.

**Note**

You must be in System Configuration mode to execute this command.

## 4.40.1 Normal Response Format

```
NCB:>password
Type new password: *****
Confirm new password: *****
NCB:>
```

## 4.40.2 Error Response Example

```
-- Confirmation failed, password not changed --
-- Password too short, minimum length is 6 characters --
-- Aborted, password not changed --
```

## 4.40.3 Response Parameters

“\*\*\*\*\*” represent the characters of the new password.

## 4.41 Read

<b>Command</b>	Read
<b>Syntax</b>	<b>read</b> <user> <b>read</b> <user> <source> <b>read</b> - <source>
<b>Privilege Level</b>	operator
<b>Related command(s)</b>	<b>open eventlog, open pmlog15, open pmlog24, rewind</b>

The **read** command lists the events in the event log or performance log. You can specify certain events that you want to view using the following commands:

- **Read** <user> displays all of the events associated with a particular user.
- **Read** <user> <source> displays all of the events associated with a particular user and the events that user caused with a particular source (card or object).



### Note

You must be in the event log or one of the performance logs to execute this command. See the “Open Eventlog” section on page 4-48 and the “Open Pmlog15/Pmlog24” section on page 4-49 for information on accessing these logs.

## 4.41.1 Input Parameters

**Table 4-27 Read Command Input Parameters**

Parameter	Description
<user>	The user whose events you want the log to display.
<source>	The object or card whose events you want the log to display.

## 4.41.2 Normal Response Format

**Example 4-34 Read Command Example**

```
EventLog:#source clitester
EventLog:#read
2001-06-07 12:35:42 I 0x40020002 snmptester clitester User logged out.
2001-06-07 12:35:20 I 0x40020001 snmptester clitester User logged in.
2001-06-07 12:35:20 I 0x40020002 snmptester clitester User logged out.
2001-06-07 12:35:18 I 0x40020001 snmptester clitester User logged in.
-----
EventLog:#read - mcu_1_1
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'normal'.
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'warning'.
2001-06-07 12:09:41 I 0x40020010 system mcu_1_1 Set status = 'normal'.
```

## 4.41.3 Error Response Format

None.

## 4.41.4 Response Parameters

None.

## 4.42 Reboot

<b>Command</b>	Reboot
<b>Syntax</b>	reboot
<b>Privilege Level</b>	administrator, operator

The **reboot** command restarts the NCB. The current Telnet or RS-232 connection is lost and must be re-established after the system restarts.



**Note**

You must be in System Configuration mode to execute this command.



**Note**


---

The restart takes approximately one minute. It is not traffic affecting.

---

## 4.42.1 Input Parameters

None.

## 4.42.2 Normal Response Format

None.

## 4.42.3 Error Response Format

None.

## 4.42.4 Response Parameters

None.

## 4.43 Remove

<b>Command</b>	Remove
<b>Syntax</b>	<b>remove</b> <drive> <file>
<b>Privilege Level</b>	administrator

The **remove** command deletes files from the NCB module file system. This command does not actually delete the file; it marks it for deletion.

**Note**


---

You must issue the **defrag** command or reboot the system to actually delete the file.

---

**Note**


---

You must be in System Configuration mode to execute this command.

---

## 4.43.1 Input Parameters

*Table 4-28 Remove Command Input Parameters*

Parameter	Description
<drive>	The drive on which the file resides. Currently only drive 0 is supported.
<file>	The name of the file to delete

## 4.43.2 Normal Response Format

*Example 4-35 Remove Command Example*

```
NCB:=remove 0 file.txt
NCB:=
```

## 4.43.3 Error Response Format

```
-- Wrong number of arguments [remove <drive> <file>] --
-- Error, no such file --
-- Error, no such device --
```

## 4.43.4 Response Parameters

None.

## 4.44 Remove CLIP/SNM

<b>Command</b>	Remove CLIP/SNM
<b>Syntax</b>	<b>remove</b> <clip name> <b>remove</b> <snm name>
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	<b>insert, configure network</b>

This command removes and uninstalls a unit, such as a CLIP module or SNM (within an NCB module), from a container such as an MCU or SCU. This command also removes all information regarding containers stored on the CLIP module or SNM and prevents alarms from being reported when you physically remove a CLIP or NCB module.



**Note**

You must be in Network Configuration mode or MCU Configuration mode (also under Network Configuration) to execute this command.

## 4.44.1 Input Parameters

*Table 4-29 Remove CLIP/SNM Command Input Parameters*

Parameter	Description
<code>&lt;clip name&gt;</code>	The name assigned to the CLIP module you want to insert.
<code>&lt;snm name&gt;</code>	The name assigned to the SNM you want to insert.

## 4.44.2 Normal Response Format

*Example 4-36 Remove CLIP/SNM Command Example*

```
mcu_1_45:#remove clip_309
mcu_1_45:#
-----
mcu_1_45:#remove snm_234
mcu_1_45:#
```

## 4.44.3 Error Response Format

```
-- Element not found in MCU --
-- Element not found in SCU --
-- Wrong number of arguments [remove <name>] --
```

## 4.44.4 Response Parameters

*Table 4-30 Remove CLIP/SNM Command Response Parameters*

Parameter	Description
<code>&lt;rack id&gt;</code>	The backplane strap. Possible values are 1 through 4.
<code>&lt;slot&gt;</code>	The position within the MCU.
<code>&lt;error code&gt;</code>	An internal error code. Report this code to Cisco personnel.

## 4.45 Rewind

<b>Command</b>	Rewind
<b>Syntax</b>	<b>rewind</b>
<b>Privilege Level</b>	operator
<b>Related command(s)</b>	<b>open eventlog, open pmlog, read</b>

The **rewind** command restores the view to the most recent event in the event log or performance log. This command is useful when viewing a long list of events.

**Note**

You must be in the event log or performance log to execute this command. See the “Open Eventlog” section on page 4-48 and the “Open Pmlog15/Pmlog24” section on page 4-49 for information on accessing these logs.

## 4.45.1 Input Parameters

None.

## 4.45.2 Normal Response Format

### *Example 4-37 Rewind Command Response*

```
EventLog:#read - mcu_1_1
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'normal'.
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'warning'.
2001-06-07 12:09:41 I 0x40020010 system mcu_1_1 Set status = 'normal'.
EventLog:#rewind
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'normal'.
2001-06-07 12:17:11 I 0x40020010 system mcu_1_1 Set status = 'warning'.
2001-06-07 12:09:41 I 0x40020010 system mcu_1_1 Set status = 'normal'.
EventLog:#
```

## 4.45.3 Error Response Format

None.

## 4.45.4 Response Parameters

None.

## 4.46 Show Alarm

<b>Command</b>	Show Alarm
<b>Syntax</b>	<b>show alarm</b> [ <i>alarm</i> ] <i>warning</i> [ <i>summary</i> ]
<b>Privilege Level</b>	guest user, operator

The **show alarm** command scans all hub nodes and collector nodes controlled by the NCB and reports all raised alarms. You can choose to report all alarms, all warnings, or a summary of all containers with alarm conditions raised.

## 4.46.1 Input Parameters

**Table 4-31 Show Alarm Command Input Parameters**

Parameter	Description
<i>alarm</i>	Show only alarms with the “alarm” status
<i>warning</i>	Show only alarms with the “warning” status
<i>summary</i>	Lists only containers with units reporting alarms or warnings

## 4.46.2 Normal Response Format

**Example 4-38 Show Alarm Command Response**

```
NCB:>show alarm
-----+-----+-----+-----
name           | slot | alarm point           | status
-----+-----+-----+-----
Network Config | -    | network.cfg           | no_file
-----+-----+-----+-----
mcu mcu_1_4    | 3    | client rxpower        | la (-33.6 dbm)
mcu mcu_1_4    | 3    | dwdm brxpower         | la (-33.7 dbm)
mcu mcu_1_4    | 3    | dcn qppb              | alarm
-----+-----+-----+-----
mcu mcu_1_1    | 4    | dwdm brxpower         | la (-32.0 dbm)
mcu mcu_1_1    | 4    | dwdm peltiercurrent   | la (62.5 pc)
```

## 4.46.3 Response Parameters

**Table 4-32 Show Alarm Command Response Parameters**

Parameter	Description
name	The unit type and name of the node or configuration file where the source of the alarm resides
slot	If applicable, the slot in the node where the source of the error resides

**Table 4-32 Show Alarm Command Response Parameters (continued)**

Parameter	Description
alarm point	Alarm identifier
status	Current alarm status. Possible values include: <ul style="list-style-type: none"> <li>alarm—The specified location is in alarm.</li> <li>ha (high alarm)—The CLIP module recorded an event that exceeded the higher alarm threshold for the alarm point parameter.</li> <li>hw (high warning)—The CLIP module recorded an event that exceeded the higher warning threshold for the alarm point parameter.</li> <li>la (low alarm)—The CLIP module recorded an event that exceeded the lower alarm threshold for the alarm point parameter.</li> <li>lw (low warning)—The CLIP module recorded an event that exceeded the lower warning threshold for the alarm point parameter.</li> <li>mismatch—There are discrepancies between the actual network configuration and the network configuration file.</li> <li>no_file—No network configuration file was found.</li> </ul>

## 4.47 Show Discrepancy

<b>Command</b>	Show Discrepancy
<b>Syntax</b>	<b>show discrepancy</b>
<b>Privilege Level</b>	guest user, operator

The **show discrepancy** command displays discrepancies between the intended system configuration, found in the network.cfg file, and the actual configuration.



### Note

This command can take several minutes to execute.

### 4.47.1 Input Parameters

None.

### 4.47.2 Normal Response Format

The normal response format is a text list containing the discrepancies.

**Example 4-39 Show Discrepancy Command Response**

```
NCB:>show discrepancy
clip.clip_301.dcnaddress: Integer is '64', should be '40'.
clip.clip_301.state: Enum is 'online', should be 'offline'.
```

## 4.47.3 Error Response Format

```
-- No configuration file found --
```

## 4.47.4 Response Parameters

None.

# 4.48 Show Inventory

<b>Command</b>	Show Inventory
<b>Syntax</b>	<b>show inventory</b>
<b>Privilege Level</b>	guest user, operator

The **show inventory** command presents a list of all network equipment in the system. It also displays inventory-related information about the equipment.

## 4.48.1 Input Parameters

None.

## 4.48.2 Normal Response Format

### Example 4-40 Show Inventory Command Response

```

NCB:>show inventory
-----+-----+-----+-----+-----+-----
type | name                               | slot | itu | serial no | mgr
-----+-----+-----+-----+-----+-----
mcu  | mcu_4_15                           |      |     |           |
ncb  | snm_12316                           | 17   |     | CEM05070007 |
-----+-----+-----+-----+-----+-----
mcu  | mcu_1_1                             |      |     |           |
clip | clip_301                             | 1    | 0   | CEM03010000 | p
clip | clip_302                             | 2    | 0   | CEM03020000 | p
clip | clip_303                             | 3    | 0   | CEM03030000 | s
clip | clip_304                             | 4    |     | CEM03040000 |
ncb  | snm_456                             | 17   |     | CEM04560000 |
-----+-----+-----+-----+-----+-----
mcu  | mcu_1_2                             |      |     |           |
clip | clip_101                             | 1    |     | CEM01010000 |
clip | clip_102                             | 2    |     | CEM01020000 |
-----+-----+-----+-----+-----+-----
clip | clip_103                             |      |     | CEM01030000 |
-----+-----+-----+-----+-----+-----
NCB:>

```

## 4.48.3 Response Parameters

Table 4-33 Show Inventory Command Response Parameters

Parameter	Description
type	Unit type. Unit types are: <ul style="list-style-type: none"> <li>mcu—Multi-channel unit</li> <li>scu—Single channel unit</li> <li>clip—Client Layer Interface Port (CLIP) module not associated with an MCU or SCU</li> <li>path—Logical connection between two CLIP modules</li> <li>ncb—Network Control Board (NCB) unit</li> </ul>
name	Name of the unit
slot	Physical location of the unit in the subrack
itu	International Telecommunications Union (ITU) channel number (i.e. wavelength)
serial no	Serial number (assigned during manufacturing)
mgr	SNM that manages that CLIP module. The following options are available: <ul style="list-style-type: none"> <li>p—the SNM you are logged into is the primary manager of this CLIP module.</li> <li>s—the SNM you are logged into is the secondary manager of this CLIP module.</li> <li>A blank field means that the SNM you are logged into is neither the primary nor the secondary manager of this CLIP module.</li> </ul>



## 4.49 Show Management

<b>Command</b>	Show Management
<b>Syntax</b>	<b>show management</b>
<b>Privilege Level</b>	guest user, operator

The show management command displays the current properties of the Simple Network Management Protocol (SNMP) interface.

### 4.49.1 Input Parameters

None.

### 4.49.2 Normal Response Format

#### *Example 4-41 Show Management Command Response*

```
NCB:>show management
----- SNMP Properties -----
Description: ONS 15200
Contact:     <name>
Location:   <address>
SNMP agent:  SNMP Research SNMP Agent Resident Module Version 15.2.1.10
```

### 4.49.3 Error Response

None.

### 4.49.4 Response Parameters

*Table 4-34 Show Management Command Response Parameters*

Parameter	Description
name	Name of contact person
address	Address or other contact information

## 4.50 Show Name

<b>Command</b>	Show Name
<b>Syntax</b>	<b>show name</b>
<b>Privilege Level</b>	guest user, operator

The **show name** command displays the assigned names for every element in the system.

### 4.50.1 Input Parameters

None.

### 4.50.2 Normal Response Format

#### *Example 4-42 Show Name Command Response*

```
NCB:>show name
-----+-----+-----
type   | identity                | name
-----+-----+-----
mcu    | mcu_1_1                 | heimdall
-----+-----+-----
scu    | scu_2_215               | tor
scu    | scu_2_341               | loke
-----+-----+-----
clip   | clip_340                | clip_340
clip   | clip_208                | clip_208
clip   | clip_215                | clip_215
clip   | clip_341                | clip_341
-----+-----+-----
snm    | snm_12327               | snm_12327
-----+-----+-----
path   | path_208_215            | path_208_215
path   | path_340_341            | path_340_341
-----+-----+-----
```

### 4.50.3 Error Response

None.

## 4.50.4 Response Parameters

*Table 4-35 Show Name Command Response Parameters*

Parameter	Description
type	Unit type. Unit types are: <ul style="list-style-type: none"> <li>• mcu—Multi-channel unit</li> <li>• scu—Single channel unit</li> <li>• clip—Client Layer Interface Port (CLIP) module not associated with an MCU or SCU</li> <li>• snm—Subnetwork Manager</li> <li>• path—Logical connection between two CLIP modules</li> </ul>
identity	Original name of the element
name	Pseudonym assigned to the named element

## 4.51 Show Path

<b>Command</b>	Show Path
<b>Syntax</b>	<b>show path</b>
<b>Privilege Level</b>	guest user, operator

The show path command lists all logical connections in the network. A *path* is formed by two network elements communicating over a particular wavelength.

### 4.51.1 Input Parameters

None.

## 4.51.2 Normal Response Format

### Example 4-43 Show Path Command Response

```
NCB:>show path
-----+-----+-----+-----+-----
name      | status      | itu | element 1 | element 2
-----+-----+-----+-----+-----
path_361_360 | major      | 33 | clip_361  | clip_360
path_363_362 | normal     | 53 | clip_363  | clip_362
path_365_364 | normal     | 55 | clip_365  | clip_364
path_171_178 | warning    | 23 | clip_171  | clip_178
path_305_405 | normal     | 27 | clip_305  | clip_405
-----+-----+-----+-----+-----
```

## 4.51.3 Error Response Format

None.

## 4.51.4 Response Parameters

**Table 4-36 Show Path Command Response Parameters**

Parameter	Description
name	Name of the path or logical connection
status	The status of the unit. Possible values are: Normal: Unit is functioning normally Warning: Operation is functioning close to alarm thresholds Critical: A critical alarm has occurred Major: A major alarm has occurred
itu	International Telecommunications Union (ITU) channel number (i.e. wavelength)
clip 1	The CLIP at the end of the first path
clip 2	The CLIP at the end of the second path

## 4.52 Show Power

<b>Command</b>	Show Power
<b>Syntax</b>	<b>show power</b>
<b>Privilege Level</b>	guest user, operator

The **show power** command reads all optical power levels at the network element receivers and displays the current status of the read value.

## 4.52.1 Input Parameters

None.

## 4.52.2 Normal Response Format

### Example 4-44 Show Power Command Response

```
NCB:>show power
-----+-----+-----+-----+-----+-----+
name           | slot | itu | dwdm A, B           | client
-----+-----+-----+-----+-----+-----+
mcu mcu_1_4    | 1    | 23 | -5.0 hw | -11.0 | -34.4
mcu mcu_1_4    | 3    | 33 | -12.0 | -17.0 lw | -33.6 la
mcu mcu_1_4    | 5    | 53 | -11.3 | -12.3 | -33.8 la
mcu mcu_1_4    | 7    | 55 | -10.2 | -11.2 | -33.4
```

## 4.52.3 Error Response Format

None.

## 4.52.4 Response Parameters

Table 4-37 Show Power Command Response Parameters

Parameter	Description
name	Name of the unit
itu	International Telecommunications Union (ITU) channel number (i.e. wavelength)
slot	The position within the rack; '-' means not applicable
dwdm A, B	The optical input power on receivers A and B, respectively
client	The optical input power on the client-side receiver and any threshold warnings or alarms caused by that power level. See the "Show Alarm" section on page 4-58 for more information on warnings and alarms.

## 4.53 Show User

<b>Command</b>	Show User
<b>Syntax</b>	<b>show user</b> [<name>]
<b>Privilege Level</b>	administrator, operator

The **show user** command lists all users in the network. Information about privilege level and logon status (i.e. online, offline, suspended, or disabled) also appears. If only a specific user is of interest, that user's name can be specified as a parameter.

See Appendix A, “Configurable Parameters” for more information on user parameters.

## 4.53.1 Input Parameters

None.

## 4.53.2 Normal Response Format

### Example 4-45 Show User Command Response

```
NCB:>show user
-----+-----+-----
name           | privileges   | state
-----+-----+-----
tokarlss       | administrator | online
KalleKula      | guest        | offline
kaller         | guest        | suspended
snmptester     | operator     | disabled
-----+-----+-----
```

## 4.53.3 Error Response Format

None.

## 4.53.4 Response Parameters

**Table 4-38 Show User Command Response Parameters**

Parameter	Description
name	The logon name of the user
privileges	The privilege level of the user (administrator, operator, guest).
state	Condition of a selected user. Possible states are: Online—The user is currently logged on. Offline—The user is not currently logged on. Disabled—The user is not allowed to log on. Suspended—Attempts to login exceeded the maximum allowable number of attempts (5).

## 4.54 Sntp

<b>Command</b>	Sntp
<b>Syntax</b>	<b>sntp server</b> [<ipaddr> <dnsname> none] <b>sntp timezone</b> [<zone>] <b>sntp dlst_on</b> [<day:mon hour:min>] <b>sntp dlst_off</b> [<day:mon hour:min>] <b>sntp freq</b> [<freq>] <b>sntp commit</b>
<b>Privilege Level</b>	administrator

The **sntp** command uses Simple Network Timing Protocol (SNTP) to synchronize the clocks of all of the 15201/15252 NEs in the network in real time. The following **sntp** commands are available:

- The **sntp server** command allows you to select the sntp server that you want to use as the clock source.
- The **sntp timezone** command sets the time zone in hours from Greenwich Mean Time (GMT) between -12:00 to 13:00.
- The **sntp freq** command sets the number of minutes between synchronizations. The minimum is 1 minute and the maximum is 60 minutes.
- The **sntp commit** command saves the changes to memory.
- The **sntp dlst\_on** [<day:mon hour:min>] command sets the clock to automatically be updated to Daylight Saving Time (add one hour to the time) at the specified date and time.
- The **sntp dlst\_off** [<day:mon hour:min>] command sets the clock to fall back from Daylight Saving Time (subtract one hour from the time) at the specified date and time.

You can view the current sntp setting of each of the commands by typing the command without the argument following it.



**Note**

You must be in System Configuration mode to execute this command.

### 4.54.1 Input Parameters

**Table 4-39 Sntp Command Input Parameters**

Parameter	Description
<zone>	The time zone in hours (and minutes) from GMT. This value can be an integer or in the form of hours and minutes (hh:mm).
<ipaddr>	The IP address of the node that you want use as the synchronization source for the network.
<day:mon hour:min>	The date and time that the Daylight Savings Time mode is turned on or off.

**Table 4-39 Sntp Command Input Parameters**

Parameter	Description
<code>&lt;freq&gt;</code>	The minutes (from 1 - 60) between synchronizations of the clock.
<code>&lt;dnsname&gt;</code>	The name of the server you want to use as the synchronization source for the network.

## 4.54.2 Normal Response Format

**Example 4-46 Sntp Command Response**

```
NCB:=sntp server
10.52.18.21
NCB:=sntp timezone
GMT+1 DayLight Saving Time is not active
NCB:=sntp freq
1 min
NCB:=sntp freq 5

NCB:=sntp dlst_on 13:03 02:00

NCB:=sntp dlst_off 28:10 03:00

NCB:=sntp dlst_on
Daylight saving time date ON [13 Mar 2:00]
NCB:=sntp dlst_off
Daylight saving time date OFF [28 Oct 3:00]
NCB:=
```

## 4.54.3 Error Response Format

```
-- Error, not a valid address --
-- Error, update frequency should be between 1 and 720 --
-- Error, time zone should be between -12:00 and +12:00 --
```

## 4.54.4 Response Parameters

None.

## 4.55 Source

<b>Command</b>	Source
<b>Syntax</b>	<code>source &lt;dev&gt; &lt;file name&gt;</code>
<b>Privilege Level</b>	administrator, operator



The **source** command changes the input stream and enables the CLI to read commands from a file specified by the <file name> parameter. When the CLI reads an end-of-file (EOF) character, it automatically switches back to the original input stream.

**Note**

You must be in System Configuration mode to execute this command.

## 4.55.1 Input Parameters

**Table 4-40 Source Command Input Parameters**

Parameter	Description
<device>	Represents the drive number. Currently only Device 0 is supported.
<file name>	Represents the name of the file used as the new input stream

## 4.55.2 Normal Response Format

The individual printouts from the commands in the specified file.

**Example 4-47 Source Command Response**

```
NCB::=source 0 myfile.cmd
NCB::=
```

## 4.55.3 Error Response Format

```
-- Error, no such file --
-- Wrong number of arguments [source <file>] --
```

## 4.55.4 Response Parameters

None.

## 4.56 Suppress/No Suppress

<b>Command</b>	Suppress/No Suppress
<b>Syntax</b>	<b>suppress</b> [<path>] <b>no suppress</b> [<path>]
<b>Privilege Level</b>	operator
<b>Related Command(s)</b>	suppress, no suppress

The **suppress** command suppresses an alarm so that changes in alarm status are not reported to the management interface that ordered the suppression (SNM or Maintenance Manager), but are still reported to the other interfaces present in the system. The **no suppress** command reverses the suppress command and allows changes in alarm status to be reported. An suppressed alarm point will report the status “suppressed.” All users logged into that SNM will be unable to receive alarms from the suppressed alarm point until the **no suppress** command is issued.

**Note**


---

You must be in CLIP Configuration mode to perform these commands.

---

## 4.56.1 Input Parameters

“<path>” is a “..” or <space> separated list of tree nodes relative to the current path.

## 4.56.2 Normal Response Format

### *Example 4-48 Suppress/No Suppress Command Response*

```
NCB:=dwdm arxpower status
highwarning
NCB:=suppress dwdm arxpower
NCB:=dwdm arxpower status
suppressed
NCB:=no suppress dwdm arxpower
NCB:=dwdm arxpower status
highwarning
NCB:=
```

## 4.56.3 Error Response Format

```
-- Not an suppressible alarm point --
-- Unable to suppress/unsuppress--
```

## 4.56.4 Response Parameters

None.

## 4.57 Syslog

<b>Command</b>	Syslog
<b>Syntax</b>	syslog
<b>Privilege Level</b>	administrator, operator
<b>Related Command(s)</b>	configure system

The **syslog** command shows the internal low-level system log. The internal low-level system log contains low-level system events and errors that are specific to the cards. The syslog can be used to troubleshoot conditions that may cause the application to fail or boards to reboot.

**Note**


---

You must be in System Configuration mode to execute this command.

---

## 4.57.1 Input Parameters

None.

## 4.57.2 Normal Response Format

### *Example 4-49 Syslog Command Response*

```
NCB:=syslog
Thu Jul 22 17:58:24 2000  Booted NMS 1.0(0.4)
Sat Feb  3 01:02:02 2001  New time: 2001:02:03 01:02:02
Tue Feb 20 15:45:00 2001  New time: 2001:02:20 15:45:00
NCB:=
```

## 4.57.3 Error Response Format

None.

## 4.57.4 Response Parameters

None.

## 4.58 Time

<b>Command</b>	Time
<b>Syntax</b>	<b>time</b> [<yyyy:mm:dd> <hh:mm:ss>]
<b>Privilege Level</b>	administrator, operator

The **time** command is used to read and set the current system time. When the **time** command is issued without parameters, the current time is presented. Both the date and time must be specified in order to set the current time.

**Note**


---

You must be in System Configuration mode to execute this command.

---

## 4.58.1 Input Parameters

**Table 4-41 Time Command Input Parameters**

Parameter	Description
<yyyy:mm:dd>	The year, month, and date to which the system will be set. The year must be in 4-digit format, and the month and date must be in 2-digit format.
<hh:mm:ss>	The hour, minute, and second to which the system will be set.

## 4.58.2 Normal Response Format

If you specify the time parameter, the normal response is a blank command line. If no parameters are specified, the response is the current system time, in <yy:mm:dd><hh:mm:ss> format.

**Example 4-50 Time Command Response**

```
NCB:=time
Thu Feb 22 13:59:01 2001
NCB:=
-----
NCB:=time 2001:02:22 13:44:00
NCB:=
```

## 4.58.3 Error Response Format

```
-- Syntax error --
-- Wrong number of arguments [time or time <yyyy:mm:dd> <hh:mm:ss>] --
```

## 4.58.4 Response Parameters

None.

## 4.59 Type

<b>Command</b>	Type
<b>Syntax</b>	<b>type</b> <dev> <filename>
<b>Privilege Level</b>	administrator

The **type** command displays the content of the specified text file.



**Note**

You must be in System Configuration mode to execute this command.

## 4.59.1 Input Parameters

*Table 4-42 Type Command Input Parameters*

Parameter	Description
<dev>	Represents the drive number. Currently only Device 0 is supported.
<filename>	The name of the file for which you want to display its contents.

## 4.59.2 Normal Response Format

The individual printouts from the commands in the specified file.

*Example 4-51 Type Command Response*

```
NCB:=type 0 sntp.cfg
1 10.52.18.21
2 1
3 10
4 13:03, 05:00
5 28:10,03:00

NCB:=
```

## 4.59.3 Error Response Format

```
-- Error, no such file --
```

## 4.59.4 Response Parameters

None.

## 4.60 Upload

<b>Command</b>	Upload
<b>Syntax</b>	<b>upload</b> [<path>]
<b>Privilege Level</b>	operator, guest
<b>Related Command(s)</b>	<b>suppress, no suppress</b>

The **upload** command synchronizes the database with an external device. When an object is created in the database, its parameters assume default values. Database objects, which reflect physical objects, may need to be synchronized in case the reading is unsuccessful. The **upload** command provides a way to resynchronize an object without knowing its parameters or structure. An optional path may be specified to partially re-synchronize an object. The upload process may take some time.

**Note**


---

You must be in CLIP or SNM Configuration mode to perform this command.

---

## 4.60.1 Input Parameters

“<path>” is a “..” or <space> separated list of tree nodes relative to the current path.

## 4.60.2 Normal Response Format

### *Example 4-52 Upload Command Response*

```
NCB:= upload dwdm
NCB:=
```

## 4.60.3 Error Response Format

```
-- Not an suppressible alarm point --
-- Unable to suppress/unsuppress--
```

## 4.60.4 Response Parameters

None.

## 4.61 Version

<b>Command</b>	Version
<b>Syntax</b>	<b>version</b>
<b>Privilege Level</b>	administrator, operator

The **version** command displays the following:

- NCB part number
- NCB revision number
- NCB serial number
- SNM name
- SNM version number

**Note**


---

You must be in System Configuration mode to execute this command.

---

## 4.61.1 Input Parameters

None.

## 4.61.2 Normal Response Format

```
NCB:=version
NCB Part No: xxx-xxxxx-xx
NCB Revision No: xx
NCB Serial No: xxxxxxxxxxxx
SNM Part No: xxxxxxxx
SNM Version No: x.x(x.x)
NCB:=
```

### *Example 4-53 Version Command Response*

```
NCB:=version
NCB Part No: 800-09474-01
NCB Revision No: 01
NCB Serial No: QEY05100217
SNM Part No: 36A0012
SNM Version No: 1.1(0.7)
NCB:=
```

## 4.61.3 Error Response Format

None.

## 4.61.4 Response Parameters

None.

## 4.62 Whoami

<b>Command</b>	Whoami
<b>Syntax</b>	whoami
<b>Privilege Level</b>	administrator, guest user, operator

The **whoami** command displays the current user and user privilege (administrator, operator, guest user).

## 4.62.1 Input Parameters

None.

## 4.62.2 Normal Response Format

```
NCB:>whoami
<user name>          <user access level>
```

### *Example 4-54 Whoami Command Response*

```
NCB:>whoami
my user              operator
```

## 4.62.3 Error Response Format

None.

## 4.62.4 Response Parameters

*Table 4-43 Whoami Command Response Parameters*

Parameter	Description
user name	The logon name of the current user
user access level	The privilege level of the current user (administrator, operator, guest)





## SNMP

---

Simple Network Management Protocol (SNMP) is an application-layer Internet Protocol (IP) that allows network devices to exchange management information. SNMP enables network administrators to manage network performance, find and solve network problems, and plan for network growth. The Cisco ONS 15200 SNMP is a common platform that allows third-party network managers to access and interface with ONS 15200 systems.

The ONS 15200 SNMP uses the Command Line Interface to configure SNMP. The Command Line Interface must be running in order to execute SNMP commands.

### 5.1 Overview

SNMP defines a client/server relationship. The client program (called the network manager) makes virtual connections to a server program (called the SNMP agent) on a remote network device. The SNMP agent sends information to the network manager regarding the status of the device. The database, controlled by the SNMP agent, is referred to as the SNMP Management Information Base (MIB) and is a standard set of statistical and control values. Using private MIBs, SNMP extends the standard values with values specific to a particular agent. Directives issued by the network manager client to an SNMP agent consist of the identifiers of SNMP variables (referred to as MIB object identifiers or MIB variables), along with instructions to obtain or change the value for the identifier.

ONS 15200 SNMP uses two types of SNMP messages: Get and Trap. A Get request returns the value of a named object, and a Trap message is generated asynchronously by network devices that can notify a network manager of a problem apart from any polling of the device. Each of these message types fulfills a particular requirement of network managers.

### 5.2 Connecting to the Network

This section explains how to connect a computer running the ONS 15200 SNMP to the ONS 15200 network. Connect to the ONS 15200 network directly through an ONS 15252 MCU or indirectly through third-party customer equipment attached to the network.

#### **Procedure: Connect a PC Directly to an MCU**

The following procedure describes how to connect directly to the ONS 15252 Multichannel Unit (MCU).

- 
- Step 1** Attach one end of a crossover Ethernet cable to the ETHER port on the Network Control Board module (NCB). The NCB module is located in Slot 17 on the right side of the MCU. The **ETHER** connection on the NCB module is a standard RJ-45 connector.
- Step 2** Connect the other end of the crossover Ethernet cable to the Ethernet port on the computer being connected to the ONS 15200 network.
- 

## 5.3 Connecting to a LAN or WAN

You can also retrieve system information from the ONS 15200 system by making an indirect connection to the ONS 15200. To make an indirect connection, connect the computer to a local area network (LAN) or wide area network (WAN) connected to the ONS 15200. Any computer in the extended network can be configured to retrieve system information from the ONS 15200 system.

## 5.4 Configuring the Computer

The computer used to connect to the network must be configured to use the same subnet mask as the ONS 15200 system. The following procedure describes how to configure the subnet mask on a computer operating with a Windows 95 platform. Procedures for other operating systems are similar. Refer to the technical documentation provided with the operating system for more information.

### Procedure: Configure the Computer

- 
- Step 1** From the Windows task bar, click **Start > Settings > Control Panel**. The Control Panel window opens.
- Step 2** Double-click **Network** in the Control Panel window. The Network window opens.
- Step 3** Click **Add**. The Select Network Component Type window opens.
- Step 4** Click **Protocols**. The Select Network Protocol window opens.
- Step 5** Choose the appropriate manufacturer and network protocols.
- Step 6** Click **Add**. The Network window opens.




---

**Note** If the computer you are configuring is connected indirectly to the ONS 15200 network through a LAN or WAN, the network protocol must match the protocol of the LAN or WAN to which it is connected.

---




---

**Note** If you are connecting the computer directly to the ONS 15201, select **Microsoft** (the manufacturer) and **TCP/IP** (the network protocol) in the Network window.

---

- Step 7** Select the network component just installed from the *The following network components are installed* area of the Network window.
- Step 8** Click **Properties**. The TCP/IP window opens.
- Step 9** Click the **IP Address** tab.

- Step 10** Click **Specify an IP address**.
- Step 11** Type the IP address of the computer in the IP Address field.
- Step 12** Type the subnet mask of the ONS 15200 network in the Subnet Mask field.



**Note** The subnet mask for the computer must match the subnet mask assigned to the ONS 15200 network.

- Step 13** Click **OK**.

## 5.5 Configuring the SNMP Agent

Use the Command Line Interface to configure the SNMP agent.

### Procedure: Configure the SNMP Using the Command Line Interface

The following steps describe how to run the ONS 15200 SNMP application:

- Step 1** Click **Start > Run** on the Windows taskbar. The Run window opens.
- Step 2** Type `TELNET` in the Run box. If you know the IP address for the NCB module, type a space and then the IP address in the Run box.
- Step 3** Click **OK**. A Telnet session appears.
- Step 4** Click **Connect > Remote System** on the menu bar. The Connect window opens.



**Note** If you typed an IP address in the Run box, the connection is already established. You have completed this procedure.

- Step 5** Type the IP address of the NCB module in the Host Name box.
- Step 6** Select `telnet` from the Port list.
- Step 7** Select `VT100` from the TermType list.
- Step 8** Click **Connect**. The command line appears.

## 5.6 Running SNMP Commands

The SNMP Agent starts automatically when the NCB module boots. Once the SNMP agent is configured, it is ready to serve requests from an SNMP manager. See the “Set Up SNMP Community Support” procedure on page 5-5 and the “SNMP Trap Support” section on page 5-6.

To start the ONS 15200 SNMP, enter a user name and a password when prompted. User names and passwords must be validated before access to the database is granted.

If no users are defined in the database, press the **Enter** key twice to bypass the user name and password. This is intended for first time log on only. The first user must create at least one user with administrator privileges. The existence of users automatically disables the anonymous log on.

Multiple simultaneous log on attempts with the same user name are not allowed. The system will prompt you for another user name and password if the log on fails. See the “Logging into the CLI” procedure on page 2-2 for more information on how to log into the CLI.

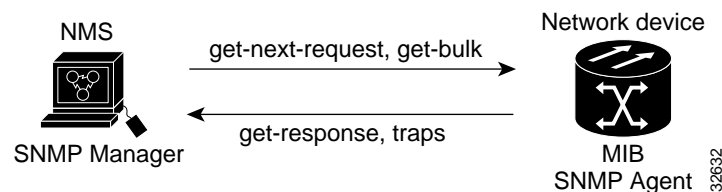
The Command Line Interface is now ready for SNMP configuration, which is described in the “Set Up SNMP Community Support” section on page 5-5 and the “SNMP Trap Support” section on page 5-6.

## 5.7 SNMP Components

An SNMP-managed network consists of three primary components: managed devices, agents, and management systems. A managed device is a network node that contains an SNMP agent and resides on a managed network. Managed devices collect and store management information and use SNMP to make this information available to management systems that use SNMP. Managed devices include routers, access servers, switches, bridges, hubs, computer hosts, and printers.

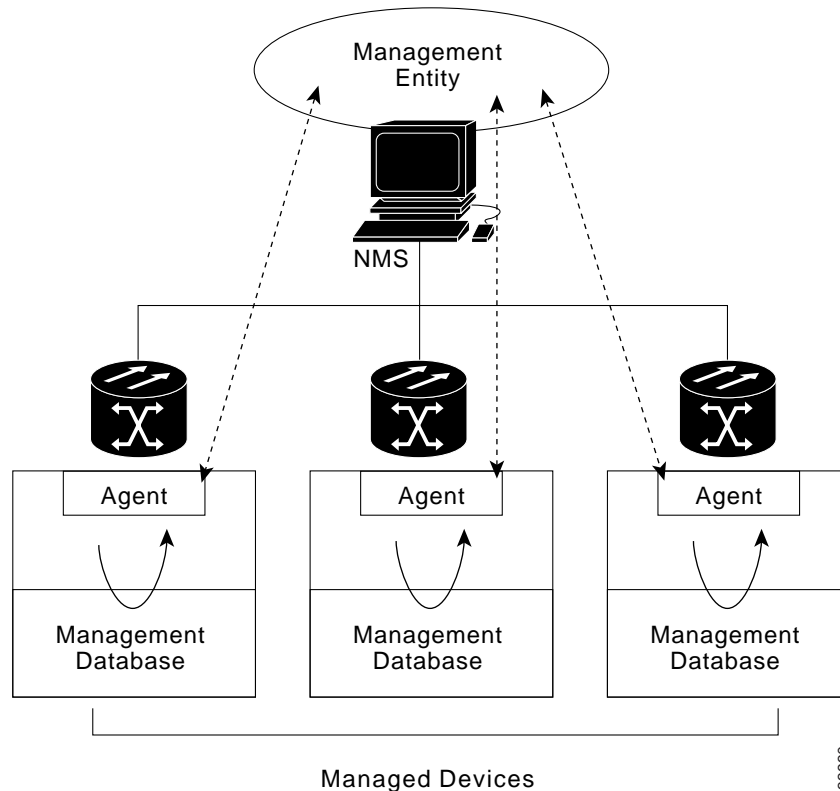
An agent is a software module that resides on a managed device. An agent has local knowledge of management information and translates that information into a form compatible with SNMP. The SNMP agent gathers data from the management information base (MIB), which is the repository for information about device parameters and network data. The agent can also send traps, or notification of certain events, to the manager. Figure 5-1 illustrates these SNMP operations.

**Figure 5-1** SNMP Operations



A management system executes applications that monitor and control managed devices. Management systems provide the bulk of the processing and memory resources required for network management. One or more management systems must exist on any managed network. Figure 5-2 illustrates the relationship between the three key SNMP components.

Figure 5-2 SNMP Components



## 5.8 SNMP Support

The Cisco ONS 15200 supports SNMP Version 1 (SNMPv1) and SNMP Version 2c (SNMPv2c) traps and gets. SNMPv1 and SNMPv2 share many features, but SNMPv2c offers additional protocol operations. The SNMP MIBs in the ONS 15200 define alarms, traps, and status. Through SNMP, network management system (NMS) applications can query a management agent using a supported MIB.

### Procedure: Set Up SNMP Community Support

- 
- Step 1** Enter the management mode by using the **configure management** at the Command Line Interface prompt.
  - Step 2** Type `cd snmp` at the prompt to go to the SNMP node.
  - Step 3** Use the **create community** command to create an SNMP Community Entry.
  - Step 4** Type `name <my community>` at the prompt to enter the community name. For a description of SNMP community names, see the “SNMP Community Names” section on page 5-8.
  - Step 5** Type `Exit`.
  - Step 6** Use the **commit community** command to save the configuration to nonvolatile memory.  
Example 5-1 shows sample SNMP community input.

**Example 5-1 Set Up SNMP Community Support**

```

NCB:>configure management
Configure management
Mgmt:#create community mycommunity
Created 'mycommunity'
mycommunity:#name mycommunity
mycommunity:#exit
Mgmt:#commit community mycommunity
Mgmt:#exit
NCB:>

```

## 5.8.1 SNMP Trap Support

When trap receiver or community entries are added, deleted, or edited, the changes take place immediately. You do not need to restart the SNMP software.

### Procedure: Set Up SNMP Trap Support

- Step 1** From the Command Line Interface, enter management mode using the **configure management** command.
- Step 2** Type `cd snmp` at the command prompt to go to the SNMP node.
- Step 3** Use the **create trap** command to create an SNMP trap destination entry.
- Step 4** Type `ipaddress <ipaddress>`.
- Step 5** Type `community mycommunity` at the prompt.
- Step 6** Type `Exit`.
- Step 7** Use the **commit trap** command to save the configuration to nonvolatile memory.  
Use the **Show Management** command to view SNMP information for each node.



**Note** The UDP port for SNMP is 162.

Example 5-2 shows sample SNMP trap input.

**Example 5-2 Set Up SNMP Trap Support**

```

NCB:>configure management
Mgmt:#create trap mytrap
Created 'mytrap'
mytrap:#ipaddress 10.52.18.220
mytrap:#community mycommunity
mytrap:#list value
mytrap:
ipaddress          10.52.18.220
community          mycommunity
mytrap:#exit
Mgmt:#commit trap mytrap
Mgmt:#exit
NCB:>

```

## 5.9 SNMP MIBs

A Management Information Base (MIB) is a hierarchically-organized collection of information. MIBs are accessed using a network management protocol such as SNMP. MIBs consist of managed objects and are identified by object identifiers.

The ONS 15200 SNMP manager uses information in the MIB to perform the operations described in Table 5-1.

**Table 5-1** *SNMP Manager Operations*

Operation	Description
get-request	Retrieve a value from a specific variable
get-next-request	Retrieve the value following the named variable; this operation is often used to retrieve variables from within a table <sup>1</sup>
get-response	The reply to a get-request, get-next-request, get-bulk-request, or set-request sent by an NMS
get-bulk-request	Similar to the get-next-request, but fill the get-response with up to the max-repetition number of get-next interactions
trap	An unsolicited message sent by an SNMP agent to an SNMP manager indicating that an event has occurred

<sup>1</sup>With this operation, an SNMP manager does not need to know the exact variable name. A sequential search is performed to find the needed variable from within the MIB.

A managed object (sometimes called an MIB object) is one of any number of specific characteristics of a managed device. Managed objects consist of one or more object instances that are, essentially, variables.

The ONS 15200 MIBs ship on the accompanying software CD. These MIBs need to be compiled in the following order. If the order is not followed, one or more MIB files may not compile:

- QEY-SMI.my
- QEY-TC.my
- CLIP.my
- NCB.my

If you are unable to compile the ONS 15200 MIBs, call the Cisco Technical Assistance Center (TAC) at 1-877-323-7368. Table 5-2 shows the Internet Engineering Task Force (IETF) standard MIBs and their associated module names.

**Table 5-2 IETF Standard MIBs Implemented in the ONS 15200 SNMP Agent**

RFC#	Module Name	Title/Comments
1213 +1907	RFC1213-MIB, SNMPV2-MIB	MIB-II from RFC1213 with enhancement from RFC1907 for v2
2037	ENTITY-MIB	Entity MIB using SMI v2
2233	IF-MIB	Interface evolution (enhances MIB-II)

## 5.10 SNMP Traps

The ONS 15200 can send traps and also receive SNMP requests from a number of SNMP managers. The ONS 15200 generates all alarms and events as SNMP traps.

Traps generated by the ONS 15200 contain an object ID that uniquely identifies the alarm. An entity identifier uniquely identifies which entity generated the alarm. Traps give the severity of the alarm (critical, major, minor, etc.) and a date/time stamp that shows the date and time the alarm occurred. Traps also contain a trap notification number, which is a sequential number that starts at one for the first generated trap and increases by one for each subsequent trap. The ONS 15200 also generates a trap for each alarm when the alarm condition clears.

The generic traps are listed in Table 5-3.

**Table 5-3 Generic Traps Supported by ONS 15200**

Trap	From RFC#	IETF Standard Objects in Varbind List	Description
ColdStart	RFC1213-MIB	None	Agent up - cold start
WarmStart	RFC1213-MIB	None	Agent up - warm start
AuthenticationFailure	RFC1213-MIB	None	Community string did not match

## 5.11 SNMP Community Names

Community names can be provisioned for all SNMP requests (see the “SNMP Trap Support” section on page 5-6). In effect, any SNMP request using a community name that matches a community name on the list of provisioned SNMP trap destinations is considered valid. Otherwise, the request is considered invalid and is dropped.

If an SNMP request contains an invalid community name, the request is silently dropped and the MIB variable, `snmpInBadCommunityNames`, is incremented. All SNMP requests containing a validated community name are granted access to all MIB variables managed by the agent.





## FTP Commands

---

This chapter provides detailed descriptions of the Cisco ONS 15200 Command Line Interface File Transfer Protocol (FTP) commands supported by ONS 15200 network elements (NEs). The FTP client command group is the user interface to the ARPANET standard FTP. These commands allow a user to transfer files from and to a remote network site. The Network Control Board (NCB) of the ONS 15200 can work both as an FTP server (when you start a new ftp session) and as an FTP client (when you start an FTP client session, using the **ftp** command, after opening a telnet session).

To use FTP, log in as an administrative user to either the telnet or FTP session.



**Note**

---

Normal and error responses may vary between different implementations/interpretations of FTP, so responses listed in this document may not match responses you receive.

---

### 6.1 Ascii

<b>Command</b>	Ascii
<b>Syntax</b>	<b>ascii</b>
<b>Privilege Level</b>	administrator

The **ascii** command sets the file transfer mode for the FTP connection to network ASCII (default) mode. Use the network ASCII mode when transferring text files that contain only printable characters, such as the qdbs.cfg file, to the FTP server (using the **put** command) or from the FTP server (using the **get** command). The FTP connection remains in network ASCII transfer mode until it is changed by the **binary** command. See the individual descriptions of these commands in this chapter for more information.

#### 6.1.1 Input Parameters

None.

## 6.1.2 Normal Response Format

### Example 6-1 Ascii Command Response

```
ftp:>ascii
200 Type set to A.

ftp:>
```

## 6.1.3 Error Response

```
No connection to server
Control connect to server lost
```

# 6.2 Binary

<b>Command</b>	Binary
<b>Syntax</b>	<b>binary</b>
<b>Privilege Level</b>	administrator

The **binary** command sets the file transfer mode to binary mode. Use binary mode when transferring binary image files, such as snm.out, to the FTP server (using the **put** command) or from the FTP server (using the **get** command). The FTP connection remains in binary transfer mode until it is changed by the **ascii** command. See the individual descriptions of these commands for more information.

## 6.2.1 Input Parameters

None.

## 6.2.2 Normal Response Format

### Example 6-2 Binary Command Response

```
ftp:>binary
200 Type set to I.

ftp:>
```

## 6.2.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.3 Cd

<b>Command</b>	Cd
<b>Syntax</b>	<code>cd &lt;path&gt;</code>
<b>Privilege Level</b>	administrator

The `cd` command changes the working directory on the FTP server.

### 6.3.1 Input Parameters

“<path>” is the directory path toward which you are navigating.

### 6.3.2 Normal Response Format

```
ftp:>cd <path>
250 CWD command successful.
```

```
ftp:>
```

#### *Example 6-3 Cd Command Response*

```
ftp:>cd snmp
250 CWD command successful.
```

```
ftp:>
```

### 6.3.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.4 Close

<b>Command</b>	Close
<b>Syntax</b>	<code>close</code>
<b>Privilege Level</b>	administrator

The `close` and `quit` commands end an FTP session. The `close` command closes the connection to the FTP server without logging you out, which allows you to log onto another ftp server. The `quit` command logs you out of the FTP server before closing the connection to the server and terminating the FTP session.

## 6.4.1 Normal Response Format

```
ftp:>close
```

```
NCB:>
```

## 6.4.2 Error Response

None.

## 6.5 Exit

<b>Command</b>	Exit
<b>Syntax</b>	<b>exit</b>
<b>Privilege Level</b>	administrator

The **exit** command terminates the FTP session and returns you to the previous command mode. Before the command mode changes, you are logged out and the connection to the FTP server is closed (similar to the **quit** command).

### 6.5.1 Input Parameters

None.

### 6.5.2 Normal Response Format

```
ftp:>exit
221
```

```
NCB:=
```

### 6.5.3 Error Response

```
Control connect to server lost
```

## 6.6 Get

<b>Command</b>	Get
<b>Syntax</b>	<b>get</b> <file>
<b>Privilege Level</b>	administrator

The **get** command transfers a file from the FTP server to the NCB module (if you are opened the FTP session from a telnet session). Because the current transfer mode is used, before a file is transferred you must set the correct transfer mode. Set the transfer mode to network ASCII mode (using the **ascii** command) if a text file, such as `qdfs.cfg`, will be transferred or set the transfer mode to binary (using the **binary** command) if a binary file, such as `snm.out`, will be transferred.

**Note**

To permit FTP data connections, some firewalls require passive mode. If the file transfer fails, enable the FTP client's passive mode using the **passive** command and try the file transfer again.

## 6.6.1 Input Parameters

“*<file>*” is the path to the file on the FTP server that you want to transfer.

## 6.6.2 Normal Response Format

```
ftp:>get <file>
200 PORT command successful.
150 Opening ASCII mode data connection for <file> (x bytes).
226 Transfer complete.
```

```
ftp:>
```

### Example 6-4 Get Command Response

```
ftp:>get /snmp/readme.txt
200 PORT command successful.
150 Opening ASCII mode data connection for /tomkarls/readme.txt(1413 bytes).
226 Transfer complete.
```

```
ftp:>
```

## 6.6.3 Error Response

```
No connection to server
Control connect to server lost
Could not setup data connection
Could not open data connection
Could not write to file
Data connect to server lost
Unimplemented TYPE
```

## 6.7 Ls

<b>Command</b>	Ls
<b>Syntax</b>	ls <directory path>
<b>Privilege Level</b>	administrator

The **ls** command lists the files in a directory on the FTP server when the NCB is the FTP client. Before executing the **ls** command, the transfer mode must be set to network ASCII mode using the **ascii** command. If you enter the **ls** command without specifying a path, the files in the current working directory on the FTP server are listed. **Dir** is the corresponding command used when the NCB is the FTP server.

**Note**

To permit FTP data connections, some firewalls require passive mode. If the directory list does not display, enable the FTP client's passive mode using the **passive** command and try the **ls** command again.

## 6.7.1 Input Parameters

"<directory path>" is the path to the directory for which you want to see a list of files.

## 6.7.2 Normal Response Format

### Example 6-5 Ls Command Response

```
ftp:>ls /snmp
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls.
12-15-00 05:37PM                262219 snmpTools_0_1_0_16.exe
12-19-00 03:26PM                232323 snmptools_0_1_0_17.zip
01-08-01 11:26AM                274432 snmpTools_0_1_0_18.exe
04-05-01 12:16PM                266396 snmpTools_1_0_2_3.exe
04-05-01 12:11PM                236162 snmpTools_1_0_2_3.zip
226 Transfer complete.

ftp:>
```

## 6.7.3 Error Response

```
No connection to server
Control connect to server lost
Could not setup data connection
Could not open data connection
```

## 6.8 Open

<b>Command</b>	Open
<b>Syntax</b>	<b>open</b> <ip address   server name>
<b>Privilege Level</b>	administrator

The **open** command establishes a connection and logs you into an FTP server. First the connection is made, and then the FTP server enters an interactive mode and asks for a user name and password. After the server successfully authenticates your user name and password, you can transfer files from/to the

FTP server. If the authentication fails, the connection to the FTP server remains open and you can use the **user** command to make a new login attempt. The connection to the FTP server remains open until you issue a **close**, **exit**, or **quit** command, or the FTP server shuts down.

If the NCB module's DNS client has been configured, you can use a server name rather than an IP address to identify the FTP server that you need to open. See Chapter 4, "General Commands," for information on the **dnsconf** command.

## 6.8.1 Input Parameters

"<ip address|server name>" is the IP address or the name of the FTP server where you want to establish a connection.

## 6.8.2 Normal Response Format

### Example 6-6 Open Command Response

```
ftp:>open 10.52.18.44
220 hag-qs101 Microsoft FTP Service (Version 4.0).
User: anonymous
331 Anonymous access allowed, send identity (e-mail name) as password.
Password:*****
230-----
230--
230-- Welcome to Control System download area
230--
230-----
230 Anonymous user logged in.

ftp:>
```

## 6.8.3 Error Response

```
Could not connect to server [10.52.18.204]
Unresolvable IP address [ncb02.cisco.com]
```

## 6.9 Passive

<b>Command</b>	Passive
<b>Syntax</b>	<b>passive</b>
<b>Privilege Level</b>	administrator

The **passive** command toggles the FTP client's passive mode on and off. The default setting is off. Turning the passive mode on causes the FTP client to initiate a separate data connection for directory listings (**ls** command) and file transfers (**put** or **get** command). Passive mode is required for connections through some firewalls.

## 6.9.1 Input Parameters

None.

## 6.9.2 Normal Response Format

```
ftp:>passive
Passive mode on

ftp:>
-----
ftp:>passive
Passive mode off

ftp:>
```

## 6.9.3 Error Response

None.

# 6.10 Put

<b>Command</b>	Put
<b>Syntax</b>	<b>put</b> <file>
<b>Privilege Level</b>	administrator

The **put** command transfers a file from the NCB module to the FTP server. Because the current transfer mode is used, before transferring a file set the correct transfer mode. Set the transfer mode to network ASCII mode (using the **ascii** command) if a text file, such as qdbs.cfg, will be transferred or set the transfer mode to binary (using the **binary** command) if a binary file, such as snm.out, will be transferred.

The file is copied to the current working directory on the FTP server. Use the **pwd** command can be used to display the path to the current working directory and use the **cd** command to change the working directory.



### Note

To permit FTP data connections, some firewalls require passive mode. If the file transfer fails, enable the FTP client's passive mode using the **passive** command and try the file transfer again.

## 6.10.1 Input Parameters

“<file>” represents the file on the NCB module that you want to transfer onto the FTP server.



## 6.10.2 Normal Response Format

### Example 6-7 Put Command Response

```
ftp:>put rs232d.out
200 PORT command successful.
150 Opening BINARY mode data connection for rs232d.out.
226 Transfer complete.

ftp:>
```

## 6.10.3 Error Response

```
No connection to server
Control connect to server lost
Could not setup data connection
Could not open data connection
Could not read from file
Data connect to server lost
Unimplemented TYPE
No such file
```

## 6.11 Pwd

<b>Command</b>	Pwd
<b>Syntax</b>	pwd
<b>Privilege Level</b>	administrator

The **pwd** command prints the path of the current working directory on the FTP server.

### 6.11.1 Input Parameters

None.

### 6.11.2 Normal Response Format

#### Example 6-8 Pwd Command Response

```
ftp:>pwd
257 "/snmp" is current directory.

ftp:>
```

## 6.11.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.12 Quit

<b>Command</b>	Quit
<b>Syntax</b>	<b>quit</b>
<b>Privilege Level</b>	administrator

The **quit** command closes an open connection to the FTP server. See the “Close” section on page 6-3 for information on the differences between the **quit** and **close** commands.

### 6.12.1 Input Parameters

None.

### 6.12.2 Normal Response Format

```
ftp:>quit
221
ftp:>
```

### 6.12.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.13 Status

<b>Command</b>	Status
<b>Syntax</b>	<b>status</b>
<b>Privilege Level</b>	administrator

The **status** command shows the current status of the FTP connection. This command gives information about the following:

- Address of the FTP server to which a connection has been established (if one exists)
- File transfer type—The default value for this parameter is **ascii**. You can change the parameter value with the **ascii** or **binary** command.

- File transfer format, structure, and mode—The default values for these parameters are non-print, file, and stream, respectively. The FTP client supports the default settings for these parameters.
- Passive mode—The default value for this parameter is “off.” You can change the value to “on” with the **passive** command.

## 6.13.1 Input Parameters

None.

## 6.13.2 Normal Response Format

### *Example 6-9 Status Command Response*

```
ftp:>status
Connected to [10.52.18.44]
Type: binary
Format:non-print
Structure: file
Mode: stream
Passive mode: off

ftp:>
```

## 6.13.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.14 Syst

<b>Command</b>	Syst
<b>Syntax</b>	syst
<b>Privilege Level</b>	administrator

The **syst** command shows the type of operating system running on the FTP server.

## 6.14.1 Input Parameters

None.

## 6.14.2 Normal Response Format

### Example 6-10 Syst Command Response

```
ftp:>sys
215 Windows_NT version 4.0

ftp:>
```

## 6.14.3 Error Response

```
No connection to server
Control connect to server lost
```

## 6.15 User

<b>Command</b>	User
<b>Syntax</b>	<b>user</b> <user name>
<b>Privilege Level</b>	administrator

The **user** command sends a user name and password to an FTP server.

### 6.15.1 Input Parameters

“<user name>” is the name of the user whose user name and password you want to save to an FTP server.

### 6.15.2 Normal Response Format

#### Example 6-11 User Command Response

```
ftp:>user anonymous
331 Anonymous access allowed, send identity (e-mail name) as password.
Password:*****
230-----
230--
230-- Welcome to Control System download area
230--
230-----
230 Anonymous user logged in.

ftp:>
```

### 6.15.3 Error Response

```
No connection to server
Control connect to server lost
```







## Common Procedures

---

This chapter provides procedures for some commonly performed Cisco ONS 15200 tasks, including creating a new user, backing up the database, and upgrading the Subnetwork Manager.

### 7.1 Creating a New User

To add a user to the database, perform the following steps. See the “Create User” section on page 4-23 for more information about the **create user** command. See the “Password” section on page 4-52 for more information on password restrictions.

#### Procedure: Create a User

- 
- Step 1** Log in as an administrator to the NCB where you want to add a user.
  - Step 2** At the NCB:> prompt, type `create user <username>`, where *username* is the name of the user you are creating. Press **Enter**. The user is created and you are now at the user name directory.
  - Step 3** Type `password <userpass>`, where *userpass* is the password you want to assign that user. Press **Enter**.
  - Step 4** Type `privileges administrator`, `privileges guest` or `privileges operator`, depending on the user privilege level you want to assign that user. Press **Enter**.
  - Step 5** To list the parameter values for that user, type `l v` and press **Enter**.
  - Step 6** To save the user name to the NCB, type `commit user username` and press **Enter**. The user name will automatically be restored after the system restarts.
- 

### 7.2 Backing Up the Database (Windows)

Before you can back up the database, you must know the IP address of the system and make sure your PC is properly configured to communicate with the 15200 system. Contact your system administrator for more information about your network configuration.

If you want the database files to be saved in a particular folder, make sure the destination folder is created on your PC's C:\ drive.

## Procedure: Back Up the Database

Perform the following steps to back up the 15200 database:

- 
- Step 1** To open a command prompt window, select **Start > Programs** and select **Command Prompt** (it may be under **Accessories**).
  - Step 2** At the C:\ prompt, type `cd <foldername>`, where *foldername* is the destination folder where you want to save the database files. Press **Enter**.
  - Step 3** To ftp the 15200, type `ftp <ipaddress>`, where *ipaddress* is the IP address of the 15200 system whose database you want to back up. Press **Enter**.
  - Step 4** At the ftp prompt, log in as a user with administrator privileges.
  - Step 5** To list all of the database files, type `dir` and press **Enter**.
  - Step 6** Type `get <filename>`, where *filename* is the name of the first file that appears in the list, and press **Enter**.
  - Step 7** Repeat Step 6 for all of the files listed after the `dir` command.
  - Step 8** In your C:\ directory, find the destination folder and verify that all of the files you extracted are there.
  - Step 9** Close the ftp window.
- 

## 7.3 Exporting the Event/PM Logs to a Spreadsheet Program

Using the CLI, you can view performance monitoring (PM) and event logs for a particular CLIP module using after saving them to a spreadsheet program such as Microsoft Excel. See Chapter 4, “General Commands” for information on the event and PM logs.

### Procedure: View the Event/PM Logs through Spreadsheet Software

Perform the following steps to view the event or either performance monitoring log through spreadsheet software.

- 
- Step 1** Start a telnet session and log in as an operator user.
  - Step 2** Type `open` followed by `pmlog15`, `pmlog24`, or `eventlog`. Press **Enter**.
  - Step 3** At the log’s prompt, type `read` and press **Enter** to make sure there are events recorded in the log you want to export.
  - Step 4** Start an FTP session and log in as an administrative user.
  - Step 5** To change the directory to the drive that contains the log files, type `cd /1` and press **Enter**.
  - Step 6** To see a list of all files in that directory, type `dir` and press **Enter**.
  - Step 7** To change the PC’s directory to the folder where you want to store the log file, type `lcd` followed by folder name.
  - Step 8** To place a copy of the log into the folder on your local PC drive, type `get` followed by `pmlog15`, `pmlog24`, or `eventlog` and press **Enter**.



- Step 9** Open the spreadsheet program where you want to view the log and import the file.
- 

## 7.4 Upgrading the Subnetwork Manager

Before you upgrade the Subnetwork Manager (SNM), perform the database back up procedure (see the “Backing Up the Database (Windows)” section on page 7-1) and obtain the location of the SNM upgrade files on your PC. You must also be connected to the 15200 over an Ethernet cross-over or straight cable, depending on how you are connected to the network.

### Procedure: Upgrade the Subnetwork Manager from 1.0.x to 1.0.y

Perform the following steps to upgrade the SNM from a previous 1.0.x software version to a subsequent 1.0.y version:

- 
- Step 1** To telnet the 15200, type `telnet <ipaddress>`, where *ipaddress* is the IP address of the 15200 system where you want to log in. Press **Enter**.
- Step 2** Log in as a user with administrator privileges.
- Step 3** At the NCB:> prompt, type `configure system` and press **Enter**.
- Step 4** At the NCB:= prompt, type `remove 0 qdbs.cfg` and press **Enter**.
- Step 5** Type `remove 0 snm.out`, where *snm.out* is the name of the boot file, and press **Enter**.
- Step 6** Type `defrag 0` and press **Enter**. (This process may take up to a minute.)
- Step 7** Type `ldboot 0 snm.out 10` and press **Enter**.
- Step 8** Close the telnet session.
- Step 9** To copy the SNM upgrade files from your local drive, open a command prompt window by selecting **Start > Programs** and select **Command Prompt** (it may be under **Accessories**).
- Step 10** At the C:\ prompt, type `cd <foldername>`, where *foldername* is the folder where the new *snm.out* and *qdbs.cfg* files reside. Press **Enter**.
- Step 11** To ftp the 15200, type `ftp <ipaddress>`, where *ipaddress* is the IP address of the 15200 system where you want to copy the SNM upgrade. Press **Enter**.
- Step 12** At the ftp prompt, log in as a user with administrator privileges.
- Step 13** Type `ascii` and press **Enter**.
- Step 14** Type `put qdbs.cfg` and press **Enter**.
- Step 15** Type `bin` and press **Enter**.
- Step 16** Type `put snm.out` and press **Enter**.
- Step 17** Close the ftp window.
- Step 18** To telnet the 15200, type `telnet<ipaddress>`, where *ipaddress* is the IP address of the 15200 system where you want to log in. Press **Enter**.
- Step 19** Log in as a user with administrator or operator privileges.
- Step 20** At the NCB:> prompt, type `configure system` and press **Enter**.

**Step 21** At the NCB:= prompt, type `reboot` and press **Enter**. The system will reboot with the upgraded SNM.

---

## Procedure: Upgrade the SNM from 1.0.x to 1.1

Perform the following steps to upgrade the SNM from a 1.0 software version to 1.1. You must first upload a slightly modified version of SNM 1.0.5. This version has an extra command, **commit upgrade**, that performs an inventory of all CLIP modules, SNMs, and the sub-network, and produces a command file, `upgrade.cfg`, that is stored on the NCB.

---

- Step 1** Open a command prompt window and log into the CLI as an operator.
- Step 2** Open a command prompt window. To ftp the 15200 system you want to upgrade, type `ftp <ipaddress>`, where *ipaddress* is the IP address of the NCB that contains the SNM to be upgraded. Press **Enter**.
- Step 3** Log in as an administrator.
- Step 4** To change to the directory where the folder that contains the SNM Upgrade version files resides, type `cd` followed by the path to that folder.
- Step 5** To list all files in SNM Upgrade folder, type `dir`. Make sure that the `snm.out` and `qdfs.cfg` files are present.
- Step 6** To delete the `snm.out` file, type `delete snm.out` and press Enter.
- Step 7** Repeat Step 6 for the `qdfs.cfg` file.
- Step 8** Return to the telnet session window and type `configure system..` Press **Enter**.
- Step 9** Type `list 0` and press **Enter**. Confirm that the `snm.out` and `qdfs.cfg` files are marked for deletion.
- Step 10** To delete the `snm.out` and `qdfs.cfg` files type `defrag 0` and press **Enter**.
- Step 11** Return to the ftp session window and type `put snm.out` to copy the `snm.out` file to the SNM on the NCB.
- Step 12** Repeat Step 11 for the `qdfs.cfg` file.
- Step 13** To exit the ftp session, type `bye` and press **Enter**.
- Step 14** Return to the telnet session window, type `reboot`, and press **Enter**. The NCB will reboot. (This may take a 30-45 seconds.)
- Step 15** Press **Enter**. You will see the following message: `Connection to host lost.`
- Step 16** Start a new telnet session and log in as an operator.
- Step 17** Type `show inventory` and make sure all of the CLIPs in the system appear in the inventory.
- Step 18** To create the `upgrade.cfg` file, type `commit upgrade` and press **Enter**.
- Step 19** Type `configure system` and press **Enter**.
- Step 20** To make sure the `upgrade.cfg` file was created, type `list 0` and press **Enter**. You should see the `upgrade.cfg` file in the list of files.
- Step 21** Type `exit` twice to exit the telnet session.
- Step 22** Repeat Steps 2 through 17 using the location of the 1.1 software version files.
- Step 23** Open a telnet session and log in to the CLI as an operator.
- Step 24** To set the unitid for this SNM to `snm1`, type `configure snm snm_XXX` and press **Enter**. Type `unitid snm_1`.

- Step 25** Type `show inventory` and press **Enter**. Observe the name of the NCB/SNM you are connected to and make sure all of the hardware in your system appears in the inventory. If all of the CLIPs do not appear, wait a few seconds and try the `show inventory` command again.
- Step 26** To commit the change to the database, type `commit`.
- Step 27** To change to the System Configuration mode, type `configure system` and press **Enter**.
- Step 28** Execute the `upgrade.cfg` file by typing `source 0 upgrade.cfg` and press **Enter**. You will see commands scroll down the window as the script is executed.
- The system will automatically create necessary objects and make configurations to reflect the system inventory. The `upgrade.cfg` command file is a script that performs the following actions:
- Sets the current NCB/SNM as primary manager on all CLIP objects it observes.
  - Creates unique container needs for all SCU/MCUs.
  - Creates names for all MCUs and SCUs; if the MCU/SCU has an alias, it will be used as a name. Otherwise the name will be the old default name (like `mcu_4_1`) with the prefix "old" added (e.g. `oldmcu_4_1`).
  - Creates all SCU and MCU objects based on the container id and rack id (for MCUs).
  - Inserts all objects (SNM and CLIP) into the containers.
  - Commits the container to save data to the CLIPs.
  - Sets the container name.
  - If a CLIP was previously assigned an alias, the alias becomes the CLIP name. The script commits the CLIPs so that the names are stored on the CLIP itself.
  - The new network configuration is committed to the `network.cfg` file.
- Step 29** After the commands executed by the script are complete, type `list 0` and press **Enter** to verify that the files are marked for deletion.
- Step 30** Type `defrag 0` to remove the marked files.
-





## Configurable Parameters

This chapter contains descriptions of parameters in the ONS 15200 system. The following parameter types are described:

- CLIP module
- Client signal
- Environmental
- DCN

You can manipulate these parameters using the Command Line Interface (CLI). After entering the particular mode (sometimes a configuration mode), enter the parameter name at the command prompt to see the parameter and its current value. Type a “?” character to list valid values for that parameter. You must save any changes to these parameters using the **commit** command; this command ensures that the settings will not be lost between system reboots.

Refer to the *Cisco ONS 15200 Product Description* for information regarding acceptable parameter ranges and specifications.


### A.1 CLIP Parameters

Table A-1 lists the CLIP module parameters that you can manipulate using the CLI. View these parameters by using the **configure clip** command.

**Table A-1 CLIP Module Parameters**

Parameter	Description
primary	This parameter determines the primary manager of the CLIP module. To make a Subnetwork Manager (SNM) the primary manager, you must first log into the SNM and set the primary variable to “this.” You can also set the parameter to “none,” in which case the currently assigned manager is de-registered. If an SNM is not specified as primary or secondary, the parameter may show the network element ID, or neid, of the SNM assigned as primary manager. The primary and secondary parameters are mutually exclusive, i.e. setting the secondary parameter to “this” when the primary parameter is already set to “this” will automatically set the primary parameter to “none.” Setting an SNM to “primary” when another SNM is already set to “primary” will remove the first SNM as “primary.”
secondary	This parameter determines the secondary manager of the CLIP module. See the description of the primary parameter for more information.

**Table A-1 CLIP Module Parameters (continued)**

name	This parameter displays the name of the CLIP. When the CLIP is detected in the network, you can write to this parameter to set the name of the CLIP. This parameter is a string of up to 30 characters. To clear this parameter, use a "-" (hyphen character).
datarate	<p>This parameter displays the speed of the optical channel. The following data rates are available:</p> <ul style="list-style-type: none"> <li>• STM-1</li> <li>• OC-3</li> <li>• STM-4</li> <li>• OC-12</li> <li>• STM-16</li> <li>• OC-48</li> <li>• gbit_eth (gigabit ethernet)</li> </ul> <p>CLIPs with 2R capability have another option, pass_through, which means that no retiming of the signal is performed.</p>
pm	<p>This parameter controls the performance data reported by a CLIP. When set to "on" the unit reports performance data to the NCB. When set to "off" the CLIP does not report performance data.</p> <p> <b>Caution</b> You can only turn on performance monitoring for a maximum of ten CLIP modules.</p>

## A.2 Client Signal Parameters

Table A-2 describes parameters related to the client signal.

**Table A-2 Client Signal Parameters**

Parameter	Description
client rx power	<p>The client signal receiver reports the current status of the receiver. You can manipulate the values of the following alarm thresholds:</p> <ul style="list-style-type: none"> <li>• hat (high alarm threshold)</li> <li>• hwt (high warning threshold)</li> <li>• lwt (low warning threshold)</li> <li>• lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>
client laserbias	<p>The client transponder reports the current laserbias status. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>• hat (high alarm threshold)</li> <li>• hwt (high warning threshold)</li> <li>• lwt (low warning threshold)</li> <li>• lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>

## A.3 DWDM Parameters

Table A-3 describes parameters related to the dense wave division multiplexing (DWDM) transponder. These can be accessed from...

Table A-3 DWDM Signal Parameters

Parameter	Description
fdi	Forward defect indication (FDI) switching may be enabled or disabled by writing enable or disable to this parameter.
switchmode	<p>This parameter is used to control which of the two DWDM receivers is used. Allowed values are:</p> <ul style="list-style-type: none"> <li>forced_a—Always use Receiver A.</li> <li>forced_b—Always use Receiver B.</li> <li>cond_a—Use Receiver A if it has a valid input signal, otherwise use Receiver B.</li> <li>cond_b—Use Receiver B if it has a valid input signal, otherwise use Receiver A.</li> <li>automatic—Use either Receiver A or Receiver B as long as it has a valid input signal.</li> </ul>
dwdm arxpower	<p>The DWDM Receiver A reports the current status in this parameter. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>hat (high alarm threshold)</li> <li>hwt (high warning threshold)</li> <li>lwt (low warning threshold)</li> <li>lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>
dwdm brxpower	<p>The DWDM Receiver B reports the current status in this parameter. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>hat (high alarm threshold)</li> <li>hwt (high warning threshold)</li> <li>lwt (low warning threshold)</li> <li>lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>
dwdm peltiercurrent	<p>The DWDM transponder cooler/heater reports the current peltier current status in this parameter. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>hat (high alarm threshold)</li> <li>hwt (high warning threshold)</li> <li>lwt (low warning threshold)</li> <li>lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>



**Table A-3 DWDM Signal Parameters (continued)**

dwdm laserbias	<p>The DWDM transponder reports the current laserbias status in this parameter. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>• hat (high alarm threshold)</li> <li>• hwt (high warning threshold)</li> <li>• lwt (low warning threshold)</li> <li>• lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>
dwdm lasertemp	<p>The DWDM transponder reports the current laser temperature status in this parameter. You can manipulate the following four alarm thresholds:</p> <ul style="list-style-type: none"> <li>• hat (high alarm threshold)</li> <li>• hwt (high warning threshold)</li> <li>• lwt (low warning threshold)</li> <li>• lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>

## A.4 Environmental Parameters

Table A-3 describes parameters related to the environment.

**Table A-4 Environmental Parameters**

Parameter	Description
power	The power parameter reports the presence of dual power supplies. Possible values are: <ul style="list-style-type: none"> <li>• normal</li> <li>• power_1_fail</li> <li>• power_2_fail</li> <li>• suppressed</li> <li>• inhibited</li> </ul>
temp	The environment temperature sensor reports current board temperature status. You can manipulate the following four alarm thresholds: <ul style="list-style-type: none"> <li>• hat (high alarm threshold)</li> <li>• hwt (high warning threshold)</li> <li>• lwt (low warning threshold)</li> <li>• lat (low alarm threshold)</li> </ul> <p>You can prevent these threshold crossing indications from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the <b>suppress</b> and <b>inhibit</b> commands.</p>

## A.5 DCN Parameters

Table A-5 shows parameters reported by the Data Control Network (DCN). You can prevent these alarms from being reported or detected by suppressing or inhibiting the alarm point. See Chapter 4, “General Commands” for information on the **suppress** and **inhibit** commands.

**Table A-5 DCN Parameters**

Parameter	Description
qpp	Alarm from the only in-band control signal when only one DWDM receiver is available
qppa	Alarm status of the primary in-band control signal
qppb	Alarm status of the secondary in-band control signal
can	Alarm status of the CAN bus connected to the device

## A.6 SNM Parameters

Below is a list of SNM parameters, which can be manipulated by using the **configure snm** command.

**Table A-6** SNM Parameters

Parameter	Description
unitid	This parameter is used to differentiate two SNMs on a single CAN bus. It can be set to either snm_1 or snm_2. Before this parameter has been set the SNM will not scan the network for elements. The SNM must be rebooted before a change in this parameter takes effect.
name	Displays the name of the SNM. As soon as the SNM is detected in the network, you can write to this parameter to set the name of the SNM. This parameter is a string of up to 30 characters. Writing a minus character, "-", to this parameter clears it.

## A.7 User Parameters

Below is a list of user parameters, which can be manipulated by using the **configure user** command.

**Table 0-7** Configure User Parameters

Parameter	Description
Password	The password can be set to any string that contains at least 6 characters and up to 30 characters. Valid characters are a through z, 0 through 9, A through Z, and the "_" (underscore) character. See the "Password" section on page 4-52 for more information on setting the user password.
Privileges	Access level of a selected user. Available privileges are: <ul style="list-style-type: none"> <li>Administrator—able to create, delete, and change user properties</li> <li>Operator—able to operate the network</li> <li>Guest—able to view the network</li> </ul>
State	Condition of a selected user. Possible states are: <ul style="list-style-type: none"> <li>Online—The user is currently logged on.</li> <li>Offline—The user is not currently logged on.</li> <li>Disabled—The user is not allowed to log on.</li> <li>Suspended—Attempts to login exceeded the maximum allowable number of attempts (5).</li> </ul>
Timeout	Numerical value in minutes that indicates the length of time a user can be inactive before the user is logged off automatically by the system.

