



<b>BC</b>	Cisco IOS Bridging and IBM Networking Configuration Guide
<b>DNC</b>	Cisco IOS Dial Services Configuration Guide: Network Services
<b>DTC</b>	Cisco IOS Dial Services Configuration Guide: Terminal Services
<b>FC</b>	Cisco IOS Configuration Fundamentals Configuration Guide
<b>IC</b>	Cisco IOS Interface Configuration Guide
<b>MC</b>	Cisco IOS Multiservice Applications Configuration Guide
<b>P1C</b>	Cisco IOS IP and IP Routing Configuration Guide
<b>P2C</b>	Cisco IOS AppleTalk and Novell IPX Configuration Guide
<b>P3C</b>	Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Configuration Guide
<b>QC</b>	Cisco IOS Quality of Service Solutions Configuration Guide
<b>SC</b>	Cisco IOS Security Configuration Guide
<b>WC</b>	Cisco IOS Wide-Area Networking Configuration Guide
<b>XC</b>	Cisco IOS Switching Services Configuration Guide

## Symbols

? command **xxvii**

## A

AAL

configuring **WC-2, WC-20**

description **WC-2**

AAL3/4

enabling **WC-51**

static mapping **WC-52**

AAL3/4-SMDS

(examples) **WC-96**

AAL5

ATM

configuration (example) **WC-87**

AAL5-LLC SNAP

encapsulations **WC-53**

AAL5-MUX

transparent bridging **WC-53**

AAL5-NLPID

transparent bridging **WC-53**

AAL5-SNAP

transparent bridging **WC-5**

abbreviating commands

context-sensitive help **xxvii**

ABR

ATM

configuring (example) **WC-89**

abr rate-factors command **WC-21**

access-class command **WC-265**

access lists

X.29

applying to a line **WC-265**

creating **WC-265**

X.29 (example) **WC-290**

active SVCs and PVCs, displaying **WC-238**

addresses

SMDS **WC-192**

IP **WC-197**

multicast **WC-192**

structure **WC-190**

X.25

IP-to-X.121 mapping **WC-222, WC-226**

modifying **WC-236**

PVC protocol **WC-228**

substitute in local route **WC-241**

- X.121, setting **WC-215**
- X.121 alias, setting **WC-221**
- X.25 interface-based insertion and removal **WC-240**
- Address Resolution Protocol
  - See ARP
- ADSL termination
  - PPP over ATM connection **WC-71, WC-102**
- AESA
  - embedded E.164 address format **WC-73**
- AIP
  - interface types **WC-6**
- alias **WC-221**
- alias X.121 address, enabling **WC-221**
- alt-dial command **WC-176**
- Annex G (X.25 over Frame Relay) **WC-246**
- Annex G (X.25 over Frame Relay) (example) **WC-278**
- AppleTalk
  - multicast address, SMDS address mapping **WC-192**
  - SMDS, configuring **WC-196**
- appletalk address command **WC-82**
- appletalk route-cache command **WC-198**
- ARP
  - ATM
    - configuration (example) **WC-94, WC-95**
    - configuring **WC-43**
    - multicast address, SMDS address mapping **WC-192**
    - overview, WAN **WC-9**
    - SMDS broadcast messages **WC-193**
  - arp command
    - SMDS **WC-193**
  - asymmetrical flow control values, setting **WC-219**
  - asymmetrical windows and packets, X.25 **WC-219**
  - Asymmetric Digital Subscriber Line
    - See ADSL
  - Asynchronous Transfer Mode
    - See ATM
  - ATM
    - AAL
      - configuring **WC-20**
    - AAL3/4
      - enabling **WC-51**
      - encapsulations **WC-51**
      - (example) **WC-96**
      - static mapping **WC-51**
    - AAL5
      - configuration (example) **WC-87**
    - AAL5-SNAP (example) **WC-97**
    - ABR
      - configuring (example) **WC-89**
    - AESA address format **WC-73, WC-74**
    - AIP
      - interface types **WC-3, WC-7**
    - AIP microcode **WC-10**
    - AXIS, PPP over ATM **WC-72**
    - bridging
      - transparent, fast-switched **WC-53**
    - buffer size **WC-50**
    - call setup
      - configuring **WC-28**
    - CES
      - channel-associated signaling **WC-79**
      - clear channel **WC-76**
      - clocking **WC-78**
      - description **WC-75**
      - N x 64 **WC-77**
      - on-hook detection **WC-79**
      - structured, configuring **WC-77**
      - structured services **WC-77**
      - task list **WC-76**
      - unstructured, configuring **WC-76**
      - virtual path shaping **WC-81**
    - channels
      - configuring **WC-49**
    - clock source
      - configuring **WC-80**
    - configuration
      - task list **WC-17**
    - configuring **WC-17**

- description **WC-2**
- E.164 addresses **WC-52**
- E.164 auto conversion **WC-73**
- enabling **WC-18**
- encapsulations
  - configuring **WC-20**
- ESI addresses
  - configuration (example) **WC-91**
  - configuring **WC-30**
- exception-queue length **WC-49**
- feature overview **WC-5**
- ILMI
  - configuration (example) **WC-90**
  - configuring **WC-28**
  - management
    - configuration (example) **WC-94**
    - configuring **WC-40, WC-42, WC-43**
- IMA
  - bandwidths **WC-67**
  - configuring **WC-54 to WC-68**
  - (example), E1 **WC-97**
  - (example), T1 **WC-100**
  - overview **WC-54 to WC-56**
  - troubleshooting **WC-66**
- Inverse ARP
  - configuration (example) **WC-89**
  - configuring **WC-45**
  - PVCs, configuring **WC-23**
- IP and ARP
  - configuration (example) **WC-94, WC-95**
  - configuring **WC-43, WC-44, WC-45**
- IP and Inverse ARP
  - configuring **WC-45**
- IP multicasting
  - configuring **WC-33**
- LIS **WC-45**
- LLC/SNAP
  - configuration (example) **WC-87**
- loopback mode **WC-48**
- message identifiers **WC-52**
- monitoring **WC-85**
- MTU size **WC-48**
- multicasting
  - IP, configuring **WC-33**
- network timing services
  - configuring **WC-80**
  - (example) **WC-109**
- NSAP addresses
  - configuration (example) **WC-92**
  - configuring **WC-29, WC-30**
- OAM
  - cells, flushing **WC-84**
  - configuration (example) **WC-90**
  - loopback cells, configuring **WC-23, WC-35**
  - management, configuring **WC-40, WC-41, WC-42, WC-43**
  - management (example) **WC-94**
- PPP over ATM
  - Cisco proprietary
    - configuring **WC-72**
    - (example) **WC-108**
  - configuring **WC-68 to WC-73**
  - description **WC-68**
  - IETF-compliant LLC encapsulated
    - configuring **WC-71**
    - (example) **WC-106**
  - IETF-compliant MUX encapsulated
    - configuring **WC-70**
    - (example) **WC-102**
  - virtual templates **WC-69**
- protocol addresses
  - configuring **WC-20**
- protocols supported **WC-9**
- pseudobroadcasting **WC-3**
- PVC discovery
  - configuration (example) **WC-89**
- PVCs
  - broadcast packets, configuring **WC-24**

- configuration, bit rates **WC-21**
- configuring **WC-19**
- configuring (example) **WC-87, WC-88**
- discovery, configuring **WC-22**
- PPP over ATM **WC-73**
- traffic parameters, configuring **WC-21**
- VC classes, configuring **WC-24**
- PVC trap support
  - configuring **WC-23**
  - (example) **WC-90**
- rate queues **WC-46, WC-47**
  - (example) **WC-95**
- raw queue size **WC-50**
- SAR **WC-18**
- serial interfaces
  - description **WC-82**
  - enabling **WC-82**
  - PVCs, ATM-DXI **WC-83, WC-84**
- Service Interworking
  - See ATM, FRF.8
- signalling
  - point-to-multipoint, configuring **WC-32**
- SMDS
  - configuring **WC-51**
- SONET PLIM
  - configuring **WC-48**
- SSCOP
  - connection control timer, configuring **WC-37**
  - description **WC-36**
  - keepalive timer, configuring **WC-37**
  - poll timer, configuring **WC-37**
  - receiver windows, configuring **WC-38**
  - transmitter windows, configuring **WC-38**
- SVCs
  - broadcast packets, configuring **WC-36**
  - call setup, configuring **WC-28**
  - configuring **WC-26, WC-31**
  - configuring (example) **WC-90, WC-92**
  - disabling **WC-38**
  - OAM, configuring **WC-43**
  - traffic parameters, configuring **WC-33**
  - traffic shaping, configuring **WC-34**
  - VC classes, configuring **WC-36**
  - timeout intervals, configuring **WC-31**
  - transmit clock **WC-46**
  - transmit clock source **WC-51**
  - troubleshooting **WC-84**
  - UNI version override
    - configuring **WC-31**
  - unstructured CES services **WC-76**
  - VC classes
    - configuration (examples) **WC-93**
  - vci-to-vpi ratio **WC-51**
  - VCS
    - configuring, classes **WC-38, WC-39**
    - configuring, parameters **WC-39**
    - limits, configuring **WC-46**
    - management, configuring **WC-40, WC-41, WC-42, WC-43**
    - virtual circuits **WC-8**
    - virtual path filter **WC-53**
    - virtual path shaping **WC-81**
    - virtual templates, PPP over ATM **WC-69**
- atm aal aal3/4 command **WC-52**
- ATM adaptation layer
  - See AAL
- atm arp-server self command **WC-45**
- atm clock internal command **WC-51**
- atm e164 auto conversion command **WC-74**
- ATM End System Address
  - See AESA
- atm esi-address command **WC-30, WC-32**
- atm exception-queue command **WC-49**
- atm framing command **WC-48**
- atm ilmi-keepalive command **WC-28**
- atm ilmi-pvc-discovery command **WC-22**
- atm max channels command **WC-49**
- atm max-channels command **WC-49**

atm maxvc command **WC-50**  
 atm mid-per-vc command **WC-53**  
 atm multicast command **WC-52**  
 atm multipoint-interval command **WC-33**  
 atm multipoint-signalling command **WC-33**  
 atm nsap-address command **WC-30, WC-31, WC-32**  
 atm oam flush command **WC-84**  
 ATM on the AIP for Cisco 7500 series  
     (examples) **WC-85**  
 ATM port adapter  
     (example) **WC-110**  
     interface types **WC-3**  
 atm pvp command **WC-81**  
 atm rate-queue command **WC-48**  
 atm rate-queue tolerance svc command **WC-47**  
 atm rawq-size command **WC-50**  
 atm rxbuff command **WC-50**  
 atmsig close atm command **WC-38**  
 atm sig-traffic-shaping strict command **WC-33, WC-35**  
 atm smds-address command **WC-52**  
 atm sonet stm-1 command **WC-48**  
 ATM switch interface shelf  
     See AXIS  
 atm txbuff command **WC-51**  
 atm uni-version command **WC-31**  
 ATM UNI version override  
     configuring **WC-23**  
 atm vc-per-vp command **WC-51**  
 atm vp-filter command **WC-52, WC-53**  
 available bit rate  
     See ABR  
 AXIS  
     PPP over ATM **WC-72**

## B

backup delay command **WC-139**  
 backup enable and disable delay, specifying **WC-139**  
 backup interface for the subinterface,  
     configuring **WC-139**  
 backup interfaces  
     Frame Relay **WC-138**  
 Bc, Frame Relay committed burst size **WC-122**  
 BECN **WC-156**  
 BECN feedback for frame-transmission rate,  
     enabling **WC-122**  
 BFE  
     address  
         conventions (figure) **WC-258**  
         translation table **WC-260**  
     Blacker Emergency Mode **WC-261**  
     Cisco's implementation **WC-14**  
     configuration **WC-257**  
         (example) **WC-286**  
     description **WC-15**  
     encapsulation **WC-260**  
     encryption **WC-259**  
     general statistics, displaying **WC-266**  
     IP address conventions (figure) **WC-258**  
     mapping algorithm **WC-259**  
 bfe command **WC-261**  
 BFE Emergency Mode (example) **WC-286**  
 bidirectional mode  
     Frame Relay end-to-end keepalive **WC-129**  
 Blacker Emergency Mode  
     address translation **WC-260**  
     configuration **WC-257**  
     description **WC-15**  
     entering **WC-261**  
     leaving **WC-261**  
 Blacker Front End  
     See BFE  
 booting  
     from a network server  
         over Frame Relay (example) **WC-157**  
         over X.25 (example) **WC-288**  
     from a network server, X.25 (example) **WC-288**

bridge-group command **WC-54, WC-138**

LAPB **WC-211**

SMDS **WC-196**

bridge protocol command **WC-54**

LAPB **WC-211**

bridging

ATM

transparent **WC-53**

multicast address

SMDS address mapping **WC-192**

SMDS **WC-196**

X.25

configuring **WC-229**

broadcast command **WC-24, WC-36**

broadcast queue

creating **WC-142**

Frame Relay **WC-141**

broadcasts

SMDS

ARP messages **WC-193**

enabling **WC-193**

example **WC-203**

IP networks **WC-197**

pseudobroadcasting **WC-198**

buffer size

ATM **WC-50**

## C

calling address insertion and removal, X.25  
(example) **WC-276**

calling X.121 address

disabling **WC-221**

enabling **WC-221**

call setup

SVCs

configuring **WC-28**

call user data

See CUD

cautions

usage in text **xxiii**

CCO

accessing **xxiii**

definition **xxiii**

CES

ATM

channel-associated signaling **WC-79**

clear channel **WC-76**

clocking **WC-78**

configuring **WC-76**

description **WC-75**

N x 64 **WC-77**

on-hook detection **WC-79**

structured services **WC-77**

task list **WC-76**

unstructured services **WC-76**

virtual path shaping **WC-81**

See also ATM

ces aal1 clock command **WC-77, WC-78**

ces aal1 service command **WC-77, WC-78**

ces circuit cas command **WC-80, WC-81**

ces circuit cdv command **WC-78**

ces circuit command **WC-77, WC-78**

ces circuit on-hook-detection command **WC-80**

ces circuit timeslot command **WC-78**

ces dsx1 clock command **WC-77, WC-78**

ces dsx1 framing command **WC-78**

ces dsx1 lbo command **WC-78**

ces dsx1 linemode command **WC-78**

ces dsx1 signalmode robbedbit command **WC-80**

ces pvc command **WC-77, WC-78, WC-81**

channel-associated signaling (CAS) **WC-79**

channels

ATM

configuring **WC-49**

circuit emulation services

See CES

Cisco Connection Online

- See CCO
- Cisco IOS
  - saving configuration changes **xxx**
- class command **WC-127**
- class-int command **WC-40**
- class-vc command **WC-25, WC-36, WC-40**
- clear frame-relay-inarp command **WC-147**
- clear x25 command **WC-261, WC-266**
- clear xot command **WC-266**
- clock source
  - ATM, configuring **WC-80**
- CMNS
  - address map
    - (example) **WC-279**
  - configuration
    - task list **WC-247**
    - X.25 route **WC-247**
  - enabling **WC-247**
- LLC2
  - connections, displaying **WC-266**
  - support **WC-247**
- local X.25 routing on nonserial media **WC-15, WC-247**
- on leased lines (example) **WC-281**
- over a public data network (example) **WC-279**
- switching over a PDN (example) **WC-279**
- traffic statistics, displaying **WC-266**
- virtual circuits **WC-266**
- X.25 switching (example) **WC-279**
- cmns enable command **WC-247**
- command modes
  - summary (table) **xxvi**
- commands
  - configuration
    - dial-peer voice **WC-175**
  - dial peer
    - port (POTS only) **WC-175**
- command syntax conventions
  - Cisco IOS documentation **xxiii**
- compressions
  - Frame Relay **WC-143**
    - payload **WC-142**
  - LAPB **WC-207**
  - TCP/IP header **WC-143**
  - X.25
    - payload **WC-230**
    - TCP/IP header **WC-229**
- compress predictor command **WC-208**
- condition signaling
  - BECN **WC-156**
  - Router ForeSight **WC-156**
- configuration, saving **xxx**
- configured static routes, displaying **WC-147**
- connection control timer
  - configuring **WC-37**
- Connection-Mode Network Service
  - See CMNS
- constant bit rate (CBR) port
  - channel-associated signaling (CAS) **WC-79**
  - clear channel CES services **WC-76**
  - network timing **WC-80**
  - N x 64 CES services **WC-77**
  - structured CES services **WC-77**
  - unstructured CES services **WC-76**
- controller command **WC-173, WC-178**
- CSU/DSU
  - Frame Relay connections **WC-114**
- CUD
  - default protocol on virtual circuit **WC-222**
  - (example) **WC-271**
  - in X.25 Call Request packet **WC-222**
- CUGs
  - configuring **WC-249**
  - CUG service, subscribing **WC-253**
  - incoming and outgoing access **WC-252, WC-253**
  - local CUG to network CUG, mapping **WC-253**
  - membership selection **WC-252**
  - network subscription **WC-249**
  - no-incoming and no-outgoing access **WC-253**

- point of presence (POP) **WC-251**
  - POPs, configuring **WC-254**
  - POP with access restricted to one CUG  
(example) **WC-285**
  - POP with multiple CUGs and no public access  
(example) **WC-285**
  - POP with multiple CUGs and public access  
(example) **WC-286**
  - POP with no CUG access (example) **WC-285**
  - protection and security **WC-249**
  - service, access, and properties **WC-253**  
(example) **WC-284**
  - X.25 **WC-248**  
(example) **WC-284**
  - custom queueing  
X.25 **WC-248**
- D**
- data communications equipment  
See DCE
  - Data Exchange Interface  
See DXI 3.2
  - datagram transport  
LAPB **WC-14**  
X.25  
configuration task list **WC-223**  
description **WC-14**
  - data link connection identifier  
See Frame Relay, DLCI
  - data packet acknowledgement, enabling **WC-232**
  - data terminal equipment  
See DTE
  - D-bit, X.25 **WC-215, WC-233, WC-234**
  - DCE **WC-119**  
configuration (example) **WC-161**  
configuration (figure) **WC-161**  
DDN X.25 encapsulation **WC-259**  
Frame Relay **WC-11**  
Frame Relay devices **WC-140**  
use in LAPB **WC-206**  
X.25  
encapsulation **WC-212, WC-234**  
rules for initiating calls on **WC-213**  
virtual circuit range on **WC-214**
  - DDN X.25  
address conventions (figure) **WC-258**  
address conversion scheme **WC-258**  
configuration (example) **WC-286**  
enabling on **WC-259**  
encapsulation types **WC-259**  
IP address conventions (figure) **WC-258**  
mapping algorithm **WC-257**  
standard service **WC-15, WC-257, WC-259**  
type of service (TOS) field **WC-259**
  - DE bit  
discard eligibility **WC-146**
  - debug domain command **WC-245**
  - debug x25 events command **WC-245, WC-264**
  - DECnet  
multicast address  
SMDS address mapping **WC-193**  
Phase IV congestion information, transmitting over  
Frame Relay **WC-11**  
routing  
Frame Relay (example) **WC-150**  
SMDS **WC-195**  
SMDS, configuring **WC-195**
  - default form of a command  
using **xxix**
  - Defense Communications Agency (DCA)  
Blacker Interface Control document **WC-259**  
certification **WC-15**
  - Defense Data Network  
See DDN X.25
  - DE group, defining **WC-146**
  - destination  
X.25, selecting **WC-235**



destination address and Frame Relay map class for QoS,  
specifying **WC-123**

destination-pattern command **WC-175**

dial backup

Frame Relay DLCIs **WC-138**

dial-peer voice command **WC-175**

discard eligibility

Frame Relay packets **WC-146**

DLCI

defining **WC-137**

destination address, mapping **WC-116, WC-137**

destination bridge, defining **WC-116**

for ISO CLNS frames, defining **WC-116**

for the subinterface, specifying **WC-139**

map bridge, defining **WC-137, WC-138**

multicast mechanism **WC-11**

on the subinterface, associating **WC-138**

static address mapping **WC-116, WC-137**

status mechanism **WC-11**

X.25 profiles **WC-246**

DNS-based routing, X.25 **WC-242**

(example) **WC-278**

documentation conventions

Cisco IOS **xxii**

DTE

DDN X.25 encapsulation **WC-259**

Frame Relay **WC-11**

devices **WC-140**

rules for initiating calls on X.25 **WC-213**

use in LAPB **WC-206**

virtual circuit range on X.25 **WC-214**

X.25 encapsulation **WC-212, WC-234**

DXI 3.2 **WC-14, WC-197**

dxi map command **WC-84**

dxi pvc command **WC-83**

dynamic addressing

SMDS **WC-194**

dynamic rate queues

(example) **WC-95**

## E

E.164

telephone numbering specification **WC-73**

E.164 addresses, SMDS

configuring **WC-52**

E.164 auto conversion

ATM **WC-73**

E164\_AESA

address format **WC-74**

E164\_ZDSP

address format **WC-74**

ELMI, enabling **WC-126**

encapsulation aal5 command **WC-20, WC-31, WC-174, WC-178**

encapsulation atm-dxi command **WC-83**

encapsulation frame-relay command **WC-115, WC-121, WC-133, WC-138, WC-139, WC-173, WC-180, WC-246**

encapsulation idle time, enabling **WC-231**

encapsulation lapb command **WC-207, WC-208**

encapsulation lapb dce command **WC-207**

encapsulation lapb dce multi command **WC-207**

encapsulation lapb multi command **WC-207, WC-208, WC-211**

encapsulation ppp command **WC-69**

encapsulations

AIP

AAL3/4, enabling **WC-51**

AAL3/4, static mapping **WC-51**

AAL5-LLC SNAP **WC-53**

AAL5-MUX **WC-53**

AAL5-NLPID **WC-53**

ATM

configuring **WC-20**

BFE **WC-260**

configuring **WC-133**

DDN X.25 **WC-259**

default serial **WC-212**

LAPB **WC-207**

multiprotocol **WC-208**

- SMDS **WC-191**
  - X.25 **WC-212**
    - X.25 over Frame Relay (Annex G) **WC-246**
  - encapsulation smds command **WC-191, WC-196, WC-198**
  - encapsulation x25 bfe command **WC-260**
  - encapsulation x25 command **WC-213, WC-239**
  - encapsulation x25 dce ddn command **WC-259**
  - encapsulation x25 ddn command **WC-259**
  - end station identifier
    - See ESI
  - end-to-end
    - keepalive, Frame Relay **WC-128**
  - Enhanced Local Management Interface
  - error event
    - Frame Relay end-to-end keepalive **WC-129**
  - ESI
    - addresses
      - configuration (example) **WC-91**
      - configuring **WC-30**
  - event window
    - Frame Relay end-to-end keepalive **WC-129**
  - exception-queue length
    - ATM **WC-49**
- F**
- fast-switched transparent bridging
    - SMDS **WC-196**
  - fast switching
    - AppleTalk
      - SMDS **WC-198**
    - IP
      - SMDS **WC-198**
    - IPX
      - SMDS **WC-198**
    - SMDS **WC-196, WC-198**
  - flow control
    - X.25, setting **WC-217**
    - XOT values **WC-240**
  - flow control parameter behavior
    - disabled setting **WC-219**
  - flow control parameter negotiation **WC-216**
    - setting **WC-217**
  - forward-digits commands **WC-175**
  - Forward Explicit Congestion Notification
    - See Frame Relay, FECN
  - forwarding calls, X.25 (example) **WC-276**
  - Frame Relay
    - address mapping **WC-115, WC-116**
    - alternate dial-out string, configuring **WC-176**
    - AppleTalk (example) **WC-149**
    - ATM encapsulation, enabling **WC-173, WC-178**
    - ATM PVC encapsulation, enabling **WC-174, WC-178**
    - backup interfaces **WC-138**
    - Bc **WC-122**
    - booting from network server (example) **WC-157**
    - bridging **WC-10**
    - broadcast queue **WC-141**
      - priority condition **WC-141**
      - transmission rates **WC-141**
    - broadcasts **WC-116, WC-137**
    - Cisco's implementation **WC-10**
    - condition signaling **WC-156**
    - configuration
      - (examples) **WC-148**
      - task list **WC-115**
    - congestion information **WC-11**
    - connections **WC-147**
      - monitoring and maintaining **WC-147**
    - controller, setting **WC-173**
    - CRC4 format, enabling **WC-178**
    - customizing task list **WC-128**
    - custom queue-list, specifying **WC-122, WC-127**
    - DCE, description **WC-11**
    - DCE devices **WC-140**
      - configuration (example) **WC-161**
      - configuration (figure) **WC-161**
      - configuring **WC-140**

- DCE switch **WC-140**
- DE bit **WC-146**
- DE list, defining **WC-146**
- device, configuring **WC-140**
- dial backup **WC-138**
- dial peer destination-patterns, configuring **WC-175**
- dial peer ports (POTS only), enabling **WC-175**
- dial peer preferences, configuring **WC-175**
- dial peer session targets, configuring **WC-176**
- digit-forwarding, configuring **WC-175**
- discard eligibility (DE) bit **WC-146**
- DLCI
  - configuring **WC-173, WC-246**
  - multicast mechanism **WC-11**
  - static address mapping **WC-116, WC-136, WC-137**
  - status mechanism **WC-11**
- DLCI priority levels **WC-147**
  - prerequisites **WC-146**
- DLCIs and the LMI, displaying **WC-147**
- DLCI to an ATM PVC, mapping **WC-173**
- DTE devices **WC-140**
- DTE switch **WC-11**
- encapsulation
  - enabling **WC-180**
- encapsulation types **WC-115**
  - IETF (example) **WC-148**
- end-to-end keepalive **WC-128**
- Enhanced Local Management Interface **WC-126**
  - (examples) **WC-156**
  - overview **WC-126**
- ESF format, enabling **WC-178**
- FECN
  - bit promotion **WC-11**
- FRF.5
  - See Frame Relay-ATM Interworking
- FRF.5 Network Interworking, concepts **WC-172**
- FRF.8
  - See Frame Relay-ATM Interworking
- hardware **WC-114**
- idle timeout interval, setting **WC-122**
- IETF encapsulation
  - (examples) **WC-148**
- Inverse ARP **WC-11, WC-116**
  - subinterfaces **WC-136**
- IP tunnel **WC-11**
- IP unnumbered
  - (example) **WC-151**
- IPX
  - (examples) **WC-151**
- keepalives **WC-119**
  - end-to-end **WC-128**
- keepalive timer, enabling **WC-180**
- LAPF **WC-123**
- LMI
  - autosense **WC-117**
  - enabling **WC-180**
  - DCE polling verification timer **WC-119**
  - DTE error threshold **WC-119**
  - DTE full status polling interval **WC-119**
  - DTE monitored events counter **WC-119**
  - explicit configurations **WC-118**
  - keepalives **WC-119**
  - NNI error threshold **WC-119**
  - NNI monitored events counter **WC-119**
  - NNI polling verification timer **WC-119**
  - polling intervals **WC-119**
  - specifications **WC-10**
- MIB extensions
  - WC-114**
- multicast mechanism **WC-11**
- multipoint subinterfaces
  - DLCI associations **WC-136**
  - DLCIs **WC-136**
  - dynamic address resolution **WC-136**
  - dynamic address resolution (example) **WC-151**
- network clock base rate, configuring **WC-179**
- NNI
  - interfaces **WC-140**

- See also Frame Relay, LMI
- OAM PVC management, enabling **WC-178**
- packet discard eligibility **WC-146**
- payload compression **WC-142**
- peers, defining **WC-175**
- point-to-point links (example) **WC-152**
- point-to-point tunnel (example) **WC-165**
- PPP
  - DCE configuration
    - (example) **WC-159**
  - DTE configuration
    - (example) **WC-158**
  - frame format **WC-131**
  - PVC mapping, defining **WC-132**
  - restrictions **WC-130**
  - sessions **WC-130**
- priority queue-list, specifying **WC-122, WC-127**
- protocol addresses
  - mapping DLCIs **WC-116**
- PVCs
  - configuring **WC-174, WC-178**
  - enabling **WC-180**
- PVC switching
  - enabling **WC-179**
  - (examples) **WC-163**
- route, configuring **WC-173**
- routing protocols **WC-10, WC-116**
- software capabilities **WC-10**
- standards **WC-10**
- static address mapping
  - (examples) **WC-149**
- static mapping
  - routing protocols **WC-137**
- static routes
  - PVC switching **WC-140**
- status mechanism **WC-11**
- subinterfaces **WC-12**
  - addressing **WC-134**
  - configuration tasks **WC-132**
  - (examples) **WC-150 to WC-152**
  - overview **WC-133**
  - partially meshed networks **WC-133**
  - point-to-point addressing **WC-135**
  - split horizon **WC-133**
  - static address mapping **WC-137**
  - transparent bridging **WC-137**
- SVCs
  - configuration (examples) **WC-153**
  - configuration task list **WC-120**
  - group addresses **WC-122**
  - interfaces **WC-121**
  - map class **WC-121**
  - overview **WC-119**
  - platforms **WC-120**
  - static address mapping **WC-123**
  - subinterfaces **WC-121**
- SVCs and PVCs **WC-11**
- SVC support, enabling **WC-121**
- switching **WC-11**
  - enabling **WC-139**
  - examples **WC-159 to WC-166**
  - hybrid PVC (figure) **WC-163**
  - over IP tunnel (figure) **WC-165**
- switch type, enabling **WC-180**
- TCP/IP header compression **WC-143 to WC-145**
  - disabling **WC-145**
  - (examples) **WC-167 to WC-169**
- throughput **WC-141**
- traffic rate for map class, defining **WC-127**
- traffic shaping **WC-11**
  - access lists **WC-127**
  - customizing **WC-128**
  - DLCIs **WC-127**
  - (example) **WC-154**
  - PVCs and SVCs **WC-124**
  - queuing **WC-127**
- traffic shaping and per-virtual circuit queuing,
  - enabling **WC-125**

- traffic statistics, displaying **WC-147**
- transparent bridging **WC-137**
  - (example) **WC-152**
- UBR+ values, assigning **WC-174**
- UBR values, assigning **WC-174**
- VBR-NBR values, assigning **WC-174**
- VBR-RT values, assigning **WC-174**
- Frame Relay-ATM Interworking
  - FRF.5 Network Interworking **WC-171**
    - configuration **WC-173**
    - configuration examples **WC-182**
    - configuration for voice traffic **WC-175**
  - FRF.8 Service Interworking **WC-176**
    - concepts **WC-176**
    - configuration **WC-178**
    - configuration example **WC-186**
- Frame Relay-ATM interworking interface,
  - creating **WC-173**
- frame-relay bc command **WC-122**
- frame-relay becn-response-enable command **WC-122**
- frame-relay be command **WC-122**
- frame-relay be out command **WC-122**
- frame-relay broadcast-queue command **WC-142**
- Frame Relay burst size, setting **WC-122**
- frame-relay class command **WC-126**
- Frame Relay compressions
  - VIP **WC-142**
- Frame Relay congestion backward-notification
  - mechanism, specifying **WC-127**
- frame-relay custom-queue-list command **WC-122**
- frame-relay de-group command **WC-146**
- frame-relay de-list command **WC-146**
- Frame Relay encapsulation
  - activating **WC-246**
  - configuring **WC-138, WC-139, WC-145**
  - enabling **WC-115, WC-121, WC-126, WC-173**
  - specifying **WC-143**
- Frame Relay end-to-end keepalive
  - bidirectional mode **WC-129**
  - configuration tasks **WC-129**
  - error event **WC-129**
  - errors events, checking **WC-130**
  - event window **WC-129**
  - mode, configuring **WC-129**
  - passive-reply mode **WC-129**
  - receive side **WC-128**
  - reply mode **WC-129**
  - request **WC-129**
  - request mode **WC-129**
  - send side **WC-128**
  - showing **WC-130**
  - state, modifying **WC-130**
  - success events **WC-129**
  - timer **WC-129**
  - timer, modifying **WC-130**
- frame-relay idle-timer command **WC-122**
- Frame Relay inbound committed information rate,
  - specifying **WC-122**
- frame-relay interface-dlci command **WC-134, WC-135, WC-136, WC-138, WC-173, WC-246**
  - backup interface
    - subinterfaces **WC-139**
- frame-relay interface-dlci ppp command **WC-132**
- frame-relay intf-type command **WC-140, WC-180**
- Frame Relay Inverse ARP
  - disabling **WC-141**
  - enabling **WC-141**
- frame-relay inverse-arp command **WC-141**
- frame-relay ip tcp header-compression command **WC-145**
- frame-relay lmi-n391dte command **WC-119**
- frame-relay lmi-n392dce command **WC-119**
- frame-relay lmi-n392dte command **WC-119**
- frame-relay lmi-n393dce command **WC-119**
- frame-relay lmi-n393dte command **WC-119**
- frame-relay lmi-t393dce command **WC-119**
- frame-relay lmi-type command **WC-118, WC-180**
- frame-relay map bridge command **WC-116, WC-137, WC-138**
- frame-relay map clns command **WC-116, WC-137**

frame-relay map command **WC-116, WC-137, WC-143**

frame-relay map ip cisco tcp header-compression command **WC-144**

frame-relay map ip no compress command **WC-145**

frame-relay map payload-compress command **WC-142**

frame-relay map payload-compress frf9 stac command **WC-143**

Frame Relay maps

- class, specifying **WC-122, WC-127**
- clearing **WC-147**
- entries, displaying **WC-147**
- group, assigning **WC-121**

frame-relay mincir command **WC-122**

Frame Relay minimum incoming CIR, setting **WC-122**

Frame Relay minimum outgoing CIR, setting **WC-122**

Frame Relay outbound committed information rate, specifying **WC-122**

Frame Relay over X.25 (Annex G) **WC-246**

- (example) **WC-278**

frame-relay payload-compress command **WC-142**

frame-relay priority-dlci-group command **WC-147**

frame-relay priority-group command **WC-122**

frame-relay pvc command **WC-180**

frame-relay qos-autosense command **WC-126**

frame-relay route command **WC-140, WC-173**

frame-relay svc command **WC-121**

frame-relay switching command **WC-140, WC-179**

Frame Relay to ATM Interworking **WC-171**

frame-relay traffic-shaping command **WC-125**

framing crc4 command **WC-178**

framing esf command **WC-178**

fr-atm connect dlci command **WC-173**

FRF.5 **WC-171**

- See Frame Relay-ATM Interworking

FRF.8 **WC-171**

- See Frame Relay-ATM Interworking

FRF.9 Compression

- (example) **WC-166**

FRF.9 compression, enabling **WC-143**

FRMR frames at the LAPF Frame Reject procedure, not sending **WC-123**

## G

global configuration mode

- summary **xxvi**

## H

HDLC

- encapsulation
- default for serial interfaces **WC-212**

header compression

- X.25 TCP/IP header **WC-229**

heartbeat

- DXI 3.2 on SMDS **WC-14, WC-197**

help command **xxvii**

High-Speed Serial Interface

- See HSSI

hold queue

- X.25 packet **WC-233**

HSSI

- on an ATM serial interface **WC-83**

## I

idle-timeout command **WC-32**

IETF **WC-105**

- Frame Relay encapsulation **WC-115, WC-148**
- See Frame Relay, standards

ignore destination time, configuring **WC-231**

ILMI

- ATM
- configuration (example) **WC-90**
- configuring **WC-28**
- management
- configuration (example) **WC-94**
- configuring **WC-42, WC-43**

ilmi manage command **WC-41**

## IMA

- bandwidths **WC-67**
- configuring **WC-54 to WC-68**
- (example), E1 **WC-97**
- (example), T1 **WC-100**
- overview **WC-54 to WC-56**
- troubleshooting **WC-66**
- ima active-links-minimum command **WC-62**
- ima clock-mode command **WC-62**
- ima differential-delay-maximum command **WC-62**
- ima-group command **WC-58**
- ima test command **WC-62**
- inarp command **WC-23**
- incoming and outgoing access, CUGs **WC-253**
- input interface-based insertion, enabling **WC-241**
- input packet size, setting **WC-218**
- input window size, setting **WC-218**
- interface atm command **WC-18, WC-26, WC-178**
- interface cbr command **WC-77, WC-78, WC-80**
- interface command **WC-143**
  - LAPB **WC-207**
- interface configuration mode
  - summary **xxvi**
- interface fr-atm command **WC-173**
- interface IP address, specifying **WC-121**
- interface point-to-point command **WC-138**
- interfaces
  - specifying **WC-138**
    - X.25 address alias **WC-221**
- interface serial command **WC-82**
  - backup interfaces **WC-139**
  - Frame Relay subinterfaces **WC-133**
  - LAPB **WC-211**
  - subinterfaces **WC-121, WC-138**
  - SVCs **WC-121**
  - X.25 subinterfaces **WC-224**
- interface serial multipoint command **WC-197**
- interface virtual-template command **WC-69**
- Interim Local Management Interface

See ILMI

International Telecommunication Union Standardization Sector (ITU-T) X.25 recommendation **WC-14**

Internet Engineering Task Force

See IETF

internet protocol

See IP

Inverse Address Resolution Protocol

See Inverse ARP

See also Frame Relay, Inverse ARP

Inverse ARP

ATM

configuration (example) **WC-89**

configuring **WC-45**

PVCs, configuring **WC-23**

Frame Relay **WC-11, WC-141**

dynamic address mapping **WC-116**

subinterfaces **WC-136**

Inverse Multiplexing over ATM

See IMA

IP

ATM

configuration (example) **WC-94, WC-95**

configuring **WC-43, WC-44, WC-45**

Frame Relay switching

over IP tunnel **WC-11**

header compression

Frame Relay **WC-143**

multicast address, SMDS address mapping **WC-193**

multicasting

configuring **WC-33**

overview, WAN **WC-9**

SMDS

configuring **WC-195**

subnetworks **WC-196, WC-197**

split horizon

X.25 default **WC-224**

unnumbered

Frame Relay (example) **WC-151**

- IP address and subnet mask, assigning **WC-174**
  - ip address command **WC-18, WC-121, WC-174, WC-211**
    - SMDS **WC-197**
  - IP map for encapsulation and TCP/IP header compression, configuring **WC-144**
  - ip route-cache command **WC-70, WC-198**
  - ip unnumbered ethernet command **WC-69**
  - IPX
    - Frame Relay
      - (examples) **WC-150, WC-151**
    - multicast address, SMDS address mapping **WC-193**
    - SMDS
      - configuring **WC-195**
      - dynamic address mapping (example) **WC-200**
  - ipx network command **WC-82**
  - ipx route-cache command **WC-198**
  - ISDN
    - X.25 over D channel **WC-15**
  - ISO CLNS
    - configuring
      - SMDS **WC-195**
    - multicast address, SMDS address mapping **WC-193**
    - transmitting congestion information over Frame Relay **WC-11**
  - ITU-T X.25 Recommendation **WC-14**
- K**
- keepalive command **WC-119, WC-180**
  - keepalives
    - Frame Relay **WC-119**
    - Frame Relay end-to-end **WC-128**
  - keepalive timers
    - configuring **WC-37**
- L**
- LAPB
    - compression **WC-207**
    - configuration
      - (example) **WC-267**
      - task list **WC-206**
    - custom queuing **WC-210**
    - datagram transport **WC-14, WC-207**
    - encapsulation **WC-207**
    - frame error detection **WC-206, WC-208**
    - general statistics, displaying **WC-266**
    - modulo, function **WC-209**
    - multiprotocol (example) **WC-268**
    - N1 parameter **WC-209**
    - over leased serial line **WC-206, WC-210**
    - parameters (table) **WC-209**
    - PLP restarts **WC-222**
    - priority queuing **WC-210**
    - retransmission criteria **WC-206, WC-208**
    - timers, link failure (T4) and hardware outage **WC-210**
    - transparent bridging (example) **WC-268**
    - window parameter, k **WC-209**
  - lapb interface-outage command **WC-209**
  - lapb k command **WC-209**
  - lapb modulo command **WC-209**
  - lapb n1 command **WC-209**
  - lapb n2 command **WC-209**
  - lapb t1 command **WC-209**
  - lapb t4 command **WC-209**
  - LAPF, displaying **WC-147**
  - LAPF link idle timer value T203, setting **WC-123**
  - LAPF maximum retransmission count N200, setting **WC-123**
  - LAPF retransmission timer value T200, setting **WC-123**
  - LAPF window size k, setting **WC-123**
  - leased serial line
    - LAPB on **WC-206**
  - linecode b8zs command **WC-178**
  - linecode hdb3 command **WC-178**
  - Link Access Procedure, Balanced
    - See LAPB
  - LIS
    - AIP **WC-45**



- LLC/SNAP
    - ATM
      - configuration (example) **WC-87**
  - LMI
    - autosense **WC-117**
    - DCE
      - polling verification timer **WC-119**
    - DTE
      - error threshold **WC-119**
      - full status polling interval **WC-119**
      - monitored events counter **WC-119**
    - Frame Relay **WC-117**
    - keepalives **WC-119**
    - NNI
      - error threshold **WC-119**
      - monitored events counter **WC-119**
      - polling verification timer **WC-119**
    - specifications **WC-10**
  - LMI keepalive interval, setting **WC-119**
  - LMI statistics, displaying **WC-147**
  - LMI type, setting **WC-118**
  - LMI type to NVRAM, writing **WC-118**
  - load balancing, X.25 (example) **WC-274**
  - local acknowledgment
    - X.25 (example) **WC-283**
  - Local Management Interface
    - See LMI
    - See also Frame Relay, LMI
  - logical IP subnetwork
    - See LIS
  - loopback command **WC-49**
  - loopback diagnostic command **WC-48**
  - loopback mode
    - ATM **WC-48**
- M**
- map class for the VC, specifying **WC-129**
  - map-class frame-relay command **WC-122**
  - map group and destination addresses for the SVC,
    - specifying **WC-122**
  - map-group command **WC-121**
  - map group to the subinterface, assigning **WC-121**
  - map-list command
    - addresses
      - E.164, X.121 **WC-122**
  - mapping
    - SMDS static routes **WC-192**
  - mapping addresses
    - DLCIs **WC-116**
    - static **WC-136**
  - maximum length of LAPF I frame N201, setting **WC-123**
  - maximum transmission unit size
    - See MTU size
  - M-bit
    - X.25 more data bit **WC-218**
  - message identifiers
    - ATM **WC-52**
  - MIB
    - extensions **WC-114**
    - X.25 LAPB, SNMP extension **WC-15**
    - X25 Packet Layer, SNMP extension **WC-15**
  - microcode
    - on the AIP **WC-10**
  - mid command **WC-53**
  - mnemonic resolution, X.25 **WC-244**
  - mode atm command **WC-173, WC-178**
  - modes
    - See command modes
  - more data bit
    - X.25 **WC-218**
  - mtu command **WC-48**
  - MTU size
    - ATM **WC-48**
  - multiple logical IP subnetwork (LIS)
    - configuration (example) **WC-201, WC-202**
    - over SMDS **WC-14**
    - SMDS **WC-196**

multiple parallel DLCIs, enabling **WC-147**  
 multipoint subinterface with a DLCI, associating **WC-136**  
 multiprotocol SMDS  
   configuration (example) **WC-199**  
 multiprotocol X.25 **WC-225**

## N

netbooting  
   See booting from a network server  
 network-clock base-rate command **WC-179**  
 network-clock-select command **WC-80**  
 network service access point  
   See NSAPs  
 network timing services  
   configuring **WC-80**  
   example **WC-109**  
 Network-to-Network Interface  
   See NNI  
 no form of a command  
   using **xxix**  
 no frame-relay ip tcp header-compression  
   command **WC-145**  
 no-incoming and no-outgoing access **WC-253**  
 no keepalive command **WC-173**  
 no shutdown command **WC-18**  
 notes  
   usage in text **xxiii**  
 NPM  
   interface types **WC-4**  
 NSAPs  
   addresses  
     configuration (example) **WC-92**  
     configuring **WC-29, WC-30**  
     ESI and selector fields, configuring **WC-30**  
 N x 64 CES services **WC-77**

## O

OAM  
   ATM  
     configuration (example) **WC-90**  
   loopback cells  
     ATM, configuring **WC-23, WC-35**  
   management  
     configuration (example) **WC-94**  
     configuring **WC-40, WC-41, WC-42, WC-43**  
   overview **WC-5**  
 oam-pvc command **WC-24, WC-26, WC-178**  
 oam-pvc manage command **WC-42**  
 oam retry command **WC-24, WC-35, WC-42, WC-43**  
 oam-svc command **WC-35, WC-43**  
 on-hook detection **WC-79**  
 online documentation  
   See CCO  
 Operations, Administration, and Maintenance  
   See OAM  
 OSPF  
   broadcasts on X.25 **WC-228**  
 output packet size, setting **WC-218**  
 output window size, setting **WC-218**

## P

Packet-Level Protocol (PLP) restarts **WC-222**  
 packet-level restarts, disabling **WC-222**  
 packets  
   compressed TCP/IP header **WC-229**  
   X.25 sequence numbering **WC-214**  
 packet-switched nodes  
   DDN X.25 **WC-15, WC-257**  
 PAD  
   access on X.25 **WC-228**  
 passive-reply mode  
   Frame Relay end-to-end keepalive **WC-129**  
 payload compression on a multipoint interface,  
   enabling **WC-142**

payload compression on a point-to-point interface,  
enabling **WC-142**

## PDN

CMNS (example) **WC-279**

datagram transport (figure) **WC-222**

X.25 **WC-14**

X.25, configuring **WC-214**

permanent virtual circuit

See PVC

physical layer interface module

See PLIM

ping

X.25 over multiple serial lines (example) **WC-287**

## PLIM

description, on the AIP **WC-7**

SONET

ATM **WC-48**

point-to-multipoint signalling

ATM

configuring **WC-32**

point-to-point or multipoint subinterface,  
creating **WC-133**

Point-to-Point Protocol

See PPP

point-to-point subinterface with a DLCI,  
associating **WC-135**

poll timer

configuring **WC-37**

## POP

with access restricted to one CUG (example) **WC-285**

with multiple CUGs and no public access  
(example) **WC-285**

with multiple CUGs and public access  
(example) **WC-286**

with no CUG access (example) **WC-285**

X.25 CUGs **WC-251**

X.25 CUGs network subscription **WC-249**

port command **WC-175**

## PPP

Frame Relay

DCE configuration

(example) **WC-159**

DTE configuration

(example) **WC-158**

frame format **WC-131**

PVC mapping, defining **WC-132**

restrictions **WC-130**

ppp authentication chap command **WC-69**

PPP over ATM

Cisco proprietary

configuring **WC-72**

(example) **WC-108**

configuring **WC-68 to WC-73**

description **WC-68**

IETF-compliant LLC encapsulated

configuring **WC-71**

(example) **WC-106**

IETF-compliant MUX encapsulated

configuring **WC-70**

(example) **WC-102**

virtual templates **WC-69**

PPP over Frame Relay **WC-130**

predictor compression **WC-207**

preference command **WC-175**

preferential CUGs **WC-251, WC-252**

prefix command **WC-175**

priority queueing

X.25 **WC-248**

privileged EXEC mode

summary **xxvi**

profiles

X.25 **WC-246**

prompts

system **xxvi**

protocol addresses

ATM

configuring **WC-20**

protocol command **WC-20, WC-31, WC-33, WC-34**

pseudobroadcasting **WC-3**

SMDS **WC-14, WC-198**  
 (example) **WC-203**

public data network  
 See PDN

pvc command **WC-19, WC-26, WC-71, WC-72, WC-174, WC-178**

PVCs

ATM

- broadcast packets, configuring **WC-24**
- configuring **WC-19**
- configuring (example) **WC-87, WC-88**
- PPP over ATM **WC-73**
- PVC discovery (example) **WC-89**
- traffic parameters, configuring **WC-21**
- VC classes, configuring **WC-24**

discovery

- ATM, configuring **WC-22**
- configuration (example) **WC-89**

Inverse ARP

- configuring **WC-23**

X.25

- establishing (example) **WC-273**
- locally switched, configuring **WC-237**
- remote tunneling (example) **WC-273**
- switching on same router (example) **WC-270**

PVC statistics, displaying **WC-147**

PVC Status Tables **WC-25**

PVC traffic, configuring **WC-238**

PVC trap support

- configuring **WC-23**
- (example) **WC-90**

## Q

Q.2931 protocol **WC-28**

QoS

- traffic shaping **WC-126**

Quality of Service

- See QoS

question command **xxvii**

queueing

- effect of X.25 flow control **WC-248**
- X.25 **WC-248**

## R

RAND compressor **WC-207**

rate queues

- AIP
- dynamic (example) **WC-95**
- ATM **WC-46, WC-47**

raw queue size

- AIP **WC-50**
- ATM **WC-50**

Real-time Transport Protocol

- See RTP

receive side

- Frame Relay end-to-end keepalive **WC-128**

regular expressions

- X.25 pattern matching (example) **WC-270**

remote failure detection, X.25 **WC-261**

remote peer

- SMDS (example) **WC-200**

reply mode

- Frame Relay end-to-end keepalive **WC-129**

request

- Frame Relay end-to-end keepalive **WC-129**

request mode

- Frame Relay end-to-end keepalive **WC-129**

RFC 877

- IP encapsulation **WC-222, WC-226**

RFC 1144

- TCP/IP header compression **WC-229**

RFC 1209

- multiple logical IP subnetworks **WC-196**

RFC 1294/1490 **WC-156**

RFC 1356

- IETF standard encapsulation **WC-212, WC-225, WC-229**

RFC 1483

bridge frame formats **WC-53**  
 multiprotocol encapsulation **WC-4, WC-82**  
 RFC 1490  
 multiprotocol encapsulation **WC-83**  
 RFC 1577  
 classical IP and ARP over ATM **WC-9**  
 IP and ARP over ATM **WC-43**  
 RFC 1695  
 managed objects for ATM **WC-10**  
 RFC 1889 **WC-145**  
 ROM monitor mode  
 summary **xxvi**  
 Router ForeSight **WC-156**  
 routing  
 X.25 **WC-235**  
 RTP  
 description **WC-145**  
 See also RTP header compression

## S

SAR  
 AIP **WC-18**  
 SAR operation **WC-77, WC-78**  
 satellite link  
 LAPB as a transport **WC-206**  
 saving configuration changes **xxx**  
 SDSU  
 SMDS CSU/DSU **WC-13**  
 segmentation and reassembly  
 See SAR  
 selector fields  
 ESI addresses  
 configuring **WC-30**  
 send side  
 Frame Relay end-to-end keepalive **WC-128**  
 serial interfaces  
 ATM  
 description **WC-82**  
 enabling **WC-82**  
 (example) **WC-110**  
 HSSI **WC-83**  
 PVCs, ATM-DXI **WC-83, WC-84**  
 HDLC encapsulation, default **WC-212**  
 serial line  
 LAPB over leased **WC-206**  
 Service-Specific Connection-Oriented Protocol  
 See SSCOP  
 service tcp-keepalives-in command **WC-237**  
 service tcp-keepalives-out command **WC-237**  
 session target command **WC-176**  
 show arp command **WC-85, WC-198**  
 show atm class-links command **WC-85**  
 show atm interface atm command **WC-85**  
 show atm map command **WC-85**  
 show atm pvc command **WC-85**  
 show atm svc command **WC-85**  
 show atm traffic command **WC-85**  
 show atm vc command **WC-85**  
 show cmns command **WC-266**  
 show controllers atm command **WC-85**  
 show dxi map command **WC-84**  
 show dxi pvc command **WC-84**  
 show frame-relay lmi command **WC-147**  
 show frame-relay map command **WC-147**  
 show frame-relay pvc command **WC-147**  
 show frame-relay route command **WC-147**  
 show frame-relay traffic command **WC-147**  
 show hosts command **WC-245**  
 show ima interface atm command **WC-85**  
 show interfaces atm command **WC-84, WC-85**  
 show interfaces serial command **WC-147, WC-264, WC-266**  
 show ip route command **WC-264**  
 show llc2 command **WC-266**  
 show network-clocks command **WC-85**  
 show process cpu command **WC-207**  
 show smds addresses command **WC-198**  
 show smds map command **WC-199**

- show smds traffic command **WC-199**
- show sscop command **WC-85**
- show x25 interface command **WC-266**
- show x25 map command **WC-266**
- show x25 remote-red command **WC-266**
- show x25 route command **WC-245, WC-266**
- show x25 services command **WC-266**
- show x25 vc command **WC-238, WC-266**
- show x25 xot command **WC-266**
- shutdown command **WC-18, WC-70**
- signalling
  - ATM
    - point-to-multipoint, configuring **WC-32**
- SIG-TS-001/1991 standard **WC-197**
- SMDS
  - address
    - mapping **WC-191**
    - resolution (ARP) **WC-193**
    - specification **WC-191**
- AIP
  - E.164 addresses **WC-52**
- AppleTalk
  - address mapping **WC-192**
  - configuring **WC-196**
  - extended network (example) **WC-201**
  - fast switching **WC-198**
  - nonextended network (example) **WC-201**
- ARP
  - address mapping **WC-192**
  - configuring **WC-195**
- ATM
  - configuring **WC-51**
- bridging **WC-196**
  - address mapping **WC-192**
- broadcast ARP messages **WC-193**
- Cisco's implementation **WC-189**
- configuration (examples) **WC-199**
- configure protocols **WC-194**
- customizing **WC-194**
- DECnet
  - address mapping **WC-193**
  - configuring **WC-195**
- DXI 3.2 with heartbeat **WC-14, WC-197**
- dynamic routing table **WC-13, WC-194**
- enabling, task overview **WC-191**
- encapsulation **WC-191**
- fast switching
  - configuring **WC-198**
  - transparent bridging **WC-196**
- hardware requirements **WC-189**
- IP
  - address mapping **WC-193**
  - configuring **WC-195**
  - fast switching **WC-198**
  - pseudobroadcasting **WC-198**
- IP split horizon **WC-13**
- IPX
  - address mapping **WC-193**
  - configuring **WC-195**
  - dynamic address mapping **WC-194**
  - dynamic address mapping (example) **WC-200**
  - fast switching **WC-198**
- ISO CLNS
  - address mapping **WC-193**
  - configuring **WC-195**
- monitoring activity **WC-199**
- monitoring connection **WC-198**
- multicast address map **WC-192**
- multiple logical IP subnetwork
  - (example) **WC-201**
- LIS **WC-14, WC-196**
- multiprotocol configuration (example) **WC-199**
- network connection **WC-13**
- protocols supported **WC-13**
- pseudobroadcasting **WC-14, WC-198**
  - (example) **WC-203**
- remote peer configuration (example) **WC-200**
- required protocol multicasts (table) **WC-195**

- SDSU equipment **WC-13**
- standards, defining **WC-13**
- static map entries **WC-192**
- static routing table **WC-13**
- subinterfaces, multiple logical IP subnetworks (LIS) **WC-197**
- task list **WC-190**
- transparent bridging **WC-13**
- VINES
  - address mapping **WC-192**
  - configuring **WC-196**
- XNS
  - address mapping **WC-193**
  - configuring **WC-195**
- smds address command **WC-191, WC-197**
- smds dxi command **WC-197**
- smds enable-arp command **WC-193, WC-194, WC-197**
- smds glean command **WC-194**
- smds multicast arp command **WC-194**
- smds multicast bridge command **WC-196**
- smds multicast command **WC-192, WC-197**
- smds static-map command **WC-192**
- smds static-map ip command **WC-198**
- SNMP
  - network management
    - MIB **WC-114**
- snmp-server enable traps command **WC-26**
- software compression
  - LAPB **WC-207**
- SONET
  - PLIM
    - ATM **WC-48**
- split horizon
  - effect on SMDS **WC-13**
  - subinterfaces **WC-133**
  - X.25 **WC-224**
- SSCOP
  - connection control timer
    - configuring **WC-37**
  - description **WC-36**
  - keepalive timer
    - configuring **WC-37**
  - poll timer
    - configuring **WC-37**
  - receiver windows
    - configuring **WC-38**
  - transmitter windows
    - configuring **WC-38**
- sscop cc-timer command **WC-37**
- sscop keepalive-timer command **WC-37**
- sscop max-cc command **WC-37**
- sscop poll-timer command **WC-37**
- sscop receive-window command **WC-38**
- sscop send-window command **WC-38**
- Stacker compressor **WC-207**
- static route for PVC switching, specifying **WC-140**
- static routes
  - Frame Relay **WC-140**
  - SMDS **WC-192, WC-194**
- structured CES
  - ATM **WC-77**
- structured CES services **WC-77**
  - channel-associated signaling (CAS) **WC-79**
- subaddress
  - X.25 **WC-220**
- subinterface configuration mode
  - summary **xxvi**
- subinterface IP address, specifying **WC-121**
- subinterfaces
  - configuration (examples) **WC-150 to WC-152**
  - configured for SVC, specifying **WC-121**
  - configuring **WC-139**
  - Frame Relay, addressing **WC-134**
  - multipoint dynamic addresses **WC-136**
  - point-to-point **WC-134, WC-135**
  - SMDS multipoint **WC-197**
  - specifying **WC-138**
  - with a bridge group, associating **WC-138**

- X.25
    - configuring **WC-223**
    - deleting and reestablishing **WC-224**
    - (example) **WC-272**
    - multipoint **WC-223**
    - point-to-point **WC-223**
  - subinterface with a bridge group, associating **WC-138**
  - success events
    - Frame Relay end-to-end keepalive **WC-129**
  - svc nsap command **WC-31, WC-33, WC-34**
  - SVCs
    - ATM
      - broadcast packets, configuring **WC-36**
      - call setup, configuring **WC-28**
      - configuring **WC-26, WC-31**
      - configuring (example) **WC-90, WC-92**
      - disabling **WC-38**
      - traffic parameters, configuring **WC-33**
      - traffic shaping, configuring **WC-34**
      - VC classes, configuring **WC-36**
    - Frame Relay
      - configuring **WC-119**
      - under a specified map list, displaying **WC-147**
    - X.25
      - switching between PVCs and SVCs **WC-238**
    - See also Frame Relay, SVCs
  - Switched Multimegabit Data Service
    - See SMDS
  - switched virtual circuit
    - See SVCs
  - switching
    - X.25 local **WC-15**
  - Synchronous Optical Network
    - See SONET
- T**
- Tab key
    - command completion **xxvii**
  - TCP
    - connections
      - X.25 **WC-237**
  - TCP/IP
    - header compression
      - configuring **WC-145**
      - disabling inherited (example) **WC-168**
    - Frame Relay (examples) **WC-167 to WC-168**
    - overview **WC-143 to WC-145**
    - keepalives **WC-237**
    - X.25
      - header compression **WC-229**
      - IP datagrams over **WC-234**
  - timeout intervals
    - ATM
      - configuring **WC-31**
  - timers
    - Frame Relay end-to-end keepalive **WC-129**
    - Frame Relay keepalive **WC-119**
  - LAPB
    - hardware outage **WC-210**
    - link failure (T4) **WC-210**
  - X.25 Level 3 **WC-220**
  - traffic parameters
    - ATM
      - PVC **WC-21**
      - SVCs **WC-33**
  - traffic shaping
    - adaptive **WC-127**
    - ATM
      - SVC **WC-34**
    - condition signaling **WC-156**
    - QOS **WC-126**
    - VCs **WC-125**
    - See also ForeSight
  - transmit clock source
    - ATM **WC-51**
  - transparent bridging
    - configuring



- multiprotocol LAPB **WC-211**
  - (example) **WC-268**
- Frame Relay **WC-10**
  - (example) **WC-152**
- SMDS **WC-13, WC-196**
- troubleshooting
  - ATM **WC-84**
- Tymnet
  - X.25 PAD switch (example) **WC-271**

## U

- ubr+ command **WC-21, WC-34, WC-174**
- ubr command **WC-21, WC-34, WC-174**
- UNI
  - ATM version override
    - configuring **WC-31**
- unnumbered IP
  - Frame Relay (example) **WC-151**
- unstructured CES
  - ATM **WC-76**
- unstructured CES services **WC-76**
- user EXEC mode
  - summary **xxvi**
- user-network interface
  - See UNI

## V

- vbr-nrt command **WC-21, WC-34, WC-174**
- vbr-rt command **WC-174**
- vc-class atm command **WC-39**
- VC classes
  - ATM
    - configuration (examples) **WC-93**
  - PVCs
    - configuring **WC-24**
  - SVCs
    - configuring **WC-36**

- vci-to-vpi ratio
  - ATM **WC-51**
- VC packet hold queue size, defining **WC-233**
- VCs
  - ATM
    - classes, configuring **WC-38, WC-39**
    - management, configuring **WC-40, WC-41, WC-42, WC-43**
    - parameters, configuring **WC-39**
- VINES
  - Inverse ARP support **WC-11**
  - multicast address, SMDS address mapping **WC-192**
  - SMDS
    - configuring **WC-196**
- VIP
  - Frame Relay compression **WC-142**
- virtual circuit classes
  - See VC classes
- virtual circuits
  - on the AIP **WC-8**
  - See also SVCs
  - X.25
    - multiprotocol **WC-225**
    - protocol identification **WC-225**
    - ranges **WC-213**
  - See also PVC; X.25
  - See also Frame Relay SVCs
- virtual path filter
  - ATM **WC-53**
- virtual path shaping
  - ATM **WC-81**
- virtual templates
  - PPP over ATM **WC-69**
- Voice over Frame Relay dial peer, defining **WC-175**

## W

- WANs
  - overview

- ATM **WC-2**
  - chapter description **WC-1**
  - IP and ARP **WC-9**
  - organization **WC-1**
  - wide-area networking
    - See WANs
- X**
- X.121 addresses
    - aliases **WC-221**
    - interface-based insertion and removal **WC-240**
    - setting **WC-215**
    - understanding **WC-220**
  - X.121-to-IP addressing correlation **WC-243**
  - X.25
    - access lists (example) **WC-290**
    - addresses
      - BFE conventions **WC-258**
      - datagram
        - mapping **WC-226**
        - transport **WC-222**
      - destination hosts addresses, mapping **WC-227**
      - interface, setting on **WC-215**
      - pattern matching (example) **WC-270**
      - replacing **WC-221**
      - substitute in local route **WC-241**
      - suppressing **WC-221**
    - X.121
      - address mapping **WC-226**
    - alias X.121 address **WC-221**
    - assigned routes, displaying **WC-266**
    - asymmetrical windows and packets **WC-219**
    - BFE
      - address conventions **WC-258**
      - configuring **WC-257**
    - BFE Emergency Mode (example) **WC-286**
    - Blacker Emergency Mode
      - address translation **WC-260**
      - booting from a network server (example) **WC-288**
      - bridging **WC-229**
      - bridging frames, enabling **WC-229**
      - bridging on **WC-14**
      - bundling X.25 and LAPB commands **WC-246**
      - calling address insertion and removal **WC-240**
        - (example) **WC-276**
      - Call Request packet **WC-222**
      - Cisco's implementation **WC-14**
      - closed user groups (CUGs) **WC-248**
      - CMNS
        - configuring routes **WC-247**
        - interface **WC-266**
        - routing **WC-247**
      - CMNS on leased lines (example) **WC-281**
      - CMNS switching (example) **WC-279**
      - CMNS switching over a PDN (example) **WC-279**
      - compressed packet header **WC-229**
      - compression, payload **WC-230**
      - configuration
        - (example) **WC-268**
        - task list **WC-211**
    - CUG numbers, mapping **WC-255**
    - CUGs
      - configuring **WC-249**
        - (example) **WC-284**
      - incoming and outgoing access **WC-252, WC-253**
      - membership selection **WC-252**
      - network subscription **WC-249**
      - no-incoming and no-outgoing access **WC-253**
      - POP with access restricted to one CUG
        - (example) **WC-285**
      - POP with multiple CUGs and no public access
        - (example) **WC-285**
      - POP with multiple CUGs and public access
        - (example) **WC-286**
      - POP with no CUG access (example) **WC-285**
      - protection and security **WC-249**
      - service, access, and properties **WC-253**
        - (example) **WC-284**

- CUG service, subscribing **WC-253**
- custom queuing **WC-248**
- datagram transport
  - configuration task list **WC-223**
  - description **WC-14**
  - (figure) **WC-222**
- D-bit **WC-215, WC-233, WC-234**
- DCE encapsulation **WC-212, WC-234**
- DDN
  - address conventions (figure) **WC-258**
  - configuration **WC-257**
  - configuration (example) **WC-286**
  - encapsulation types **WC-259**
  - mapping algorithm **WC-257**
  - standard service **WC-259**
  - type of service (TOS) field **WC-259**
- destination time, ignore **WC-231**
- DNS-based routing **WC-242**
  - (example) **WC-278**
- DTE encapsulation **WC-212, WC-234**
- dynamic mapping of IP and X.121 addresses **WC-226**
- encapsulation of X.25 over Frame Relay (Annex G) **WC-246**
- facilities supported **WC-234**
- flow control
  - effect on queueing **WC-248**
  - parameter negotiation **WC-216**
  - setting **WC-217**
  - values **WC-240**
- forwarding calls (example) **WC-276**
- general statistics, displaying **WC-266**
- hunt groups, configuring **WC-239**
- hunt groups to routing tables, adding **WC-239**
- incoming calls to a map, restricting **WC-234**
- IP datagrams over **WC-234**
- IP route statements **WC-242**
- IP split horizon, default **WC-224**
- ITU-T and ISO specifications **WC-14**
- LAPB **WC-209, WC-210**
- load balancing (example) **WC-274**
- local acknowledgment (example) **WC-283**
- local CUG to network CUG, mapping **WC-253**
- locally switched PVC **WC-237**
- map usage, restricting **WC-234**
- M-bit **WC-218**
- mnemonic resolution **WC-244**
- modulo (extended packet sequence) **WC-234**
- network user ID (Cisco) **WC-233**
- number of SVCs, specifying **WC-231**
- OSPF, broadcasts **WC-228**
- outgoing calls from a map, restricting **WC-234**
- over ISDN **WC-15**
- over TCP/IP (XOT) **WC-234, WC-240, WC-241**
- packet
  - acknowledgment policy **WC-232**
  - hold queue **WC-233**
  - numbering modulo, setting **WC-214**
- packet-layer protocol (PLP) **WC-14**
- packet size **WC-216, WC-218**
  - setting **WC-217**
- PAD
  - access, configuring **WC-228**
  - connections **WC-15, WC-221**
- payload compression **WC-230**
- ping over (example) **WC-287**
- PLP restarts **WC-222**
- POPs on CUGs, configuring **WC-254**
- precedence handling **WC-259**
- preferential CUGs **WC-251, WC-252**
- priority queuing **WC-248**
- profile script (example) **WC-290**
- protocol encapsulation options **WC-225**
- protocol identification **WC-225**
- protocols supported, routing **WC-14**
- public data network (PDN) **WC-14**
- PVC
  - exchange IP traffic (example) **WC-272**
  - IP traffic exchange (figure) **WC-272**

- remote tunneling (example) **WC-273**
- switching (example) **WC-270, WC-273**
- QLLC over **WC-15**
- received keepalives, enabling **WC-237**
- remote failure detection **WC-261**
- remote switching **WC-15**
- restricted fast select facility **WC-233**
- route table **WC-235**
- routing
  - configuration task list **WC-235**
  - enabling **WC-235**
  - (example) **WC-271**
  - local switching **WC-15, WC-234**
  - one or multiple protocols **WC-227**
  - protocols supported **WC-227**
  - remote switching **WC-15, WC-234**
  - static table **WC-234**
  - (example) **WC-271**
  - supported protocols **WC-14**
  - via OSI NSAP **WC-15**
  - XOT alternate routes **WC-242**
- routing table
  - positional parameters **WC-270**
- security, POPs **WC-248**
- selecting destination of route **WC-235**
- sent keepalives, enabling **WC-237**
- services, displaying **WC-266**
- source and destination addresses, modifying **WC-236**
- specifications **WC-14**
- subaddress **WC-220, WC-221**
- subinterfaces
  - configuration **WC-223**
  - (example) **WC-272**
- switching, local or remote **WC-15**
- switching between PVCs and SVCs **WC-238**
- (example) **WC-275**
- TCP/IP networks **WC-242**
- TCP keepalives **WC-237**
- terminating VC connection **WC-237**
- timers **WC-220**
- tunneling **WC-15, WC-234, WC-235**
- unrestricted fast select facility **WC-233**
- user facilities
  - accept reverse charging **WC-232**
  - closed user group (CUG) **WC-232**
  - configuration task list **WC-229**
  - flow control parameter negotiation **WC-232**
  - list of **WC-232**
  - network user ID (Cisco) **WC-233**
  - Recognized Operating Agency (ROA) **WC-233**
  - reverse charging **WC-232**
  - throughput class negotiation **WC-233**
  - transit delay **WC-233**
- VCs on serial interface, displaying **WC-266**
- virtual circuits
  - clearing **WC-266**
  - displaying **WC-266**
  - establishing **WC-222**
  - idle time, setting **WC-231**
  - multiprotocol **WC-225**
  - options available **WC-225**
  - protocol
    - encapsulation **WC-225**
    - identification **WC-225**
    - (table) **WC-225**
- ranges
  - (example) **WC-269**
  - keywords (table) **WC-214**
  - setting **WC-213**
- routing protocols **WC-227**
- window size **WC-216, WC-218**
- setting **WC-217**
- X.121
  - addresses **WC-220**
  - displaying **WC-266**
  - mapping **WC-242, WC-266**
  - aliases **WC-221**
  - setting **WC-215**

- X.25 over Frame Relay (Annex G) **WC-246**
- X.25 profiles **WC-246**
- X.28 mnemonics **WC-243**
- X.29
  - access lists (example) **WC-290**
  - profile script (example) **WC-290**
- XOT **WC-242**
  - PVC
    - (figure) **WC-273**
    - virtual circuits, displaying **WC-266**
  - XOT routing in DNS, configuring **WC-245**
  - See also LAPB
- X.25 destination address, modifying **WC-241**
- X.25 encapsulation **WC-288**
  - enabling **WC-239**
- X.25 local acknowledgment
  - asymmetrical windows and packets **WC-219**
  - enabling **WC-216, WC-219**
  - flow control parameter negotiation **WC-216**
  - packet size **WC-216**
  - window size **WC-216**
- X.25 over Frame Relay (Annex G) **WC-246**
  - (example) **WC-278**
- X.25 over multiple serial lines
  - ping command (example) **WC-287**
- X.25 profiles
  - creating **WC-246**
  - DLCI **WC-246**
- X.25 profile to the DLCI, assigning **WC-246**
- X.25 remote failure detection and backup
  - interface **WC-289**
- X.25 remote failure detection with IP static
  - routes **WC-289**
- X.25 route
  - assigning **WC-246**
  - configuring **WC-236**
- X.25 routing, enabling **WC-239, WC-240, WC-246**
- X.25 source address, modifying **WC-241**
- X.29
  - access lists
    - applying to a line **WC-265**
    - creating **WC-265**
  - access lists (example) **WC-290**
  - profile script (example) **WC-290**
  - x25 accept-reverse command **WC-232**
  - x25 address command **WC-215**
  - x25 alias command **WC-221**
  - x25 bfe-decision command **WC-261**
  - x25 bfe-emergency command **WC-261**
  - x25 default command **WC-222**
  - x25 facility cug command **WC-232**
  - x25 facility packetsize command **WC-232**
  - x25 facility reverse command **WC-232**
  - x25 facility roa command **WC-233**
  - x25 facility throughput command **WC-233**
  - x25 facility transit-delay command **WC-233**
  - x25 facility window size command **WC-232**
  - x25 hic command **WC-214**
  - x25 hoc command **WC-214**
  - x25 hold-queue command **WC-233**
  - x25 hold-vc-timer command **WC-231**
  - x25 htc command **WC-214**
  - x25 hunt-group command **WC-239**
  - x25 idle command **WC-231**
  - x25 ip-precedence command **WC-259**
  - x25 ips command **WC-218**
  - x25 lic command **WC-214**
  - x25 linkrestart command **WC-222**
  - x25 loc command **WC-214**
  - x25 ltc command **WC-214**
  - x25 map accept-reverse command **WC-232**
  - x25 map bridge command **WC-229**
  - x25 map command **WC-224, WC-227, WC-231**
  - x25 map compress command **WC-230**
  - x25 map compressedtcp command **WC-229**
  - x25 map cug command **WC-232**
  - x25 map idle command **WC-231**
  - x25 map no-incoming command **WC-234**

- x25 map no-outcoming command **WC-234**
- x25 map nudata command **WC-233**
- x25 map nuid command **WC-233**
- x25 map nvc command **WC-231**
- x25 map packetsize command **WC-232**
- x25 map pad command **WC-228**
- x25 map reverse command **WC-232**
- x25 map roa command **WC-233**
- x25 map throughput command **WC-233**
- x25 map transit-delay command **WC-233**
- x25 map window size command **WC-232**
- x25 modulo command **WC-214**
- x25 nvc command **WC-231**
- x25 ops command **WC-218**
- x25 pad-access command **WC-228**
- x25 profile command **WC-246**
- x25-profile command **WC-246**
- x25 pvc command **WC-224, WC-228, WC-238**
- x25 pvc interface command **WC-237**
- x25 remote-red command **WC-260**
- x25 retry command **WC-261**
- x25 route command **WC-236, WC-239, WC-241, WC-242, WC-245, WC-246, WC-247**
- x25 route command wildcard **WC-243**
- x25 routing acknowledge local command **WC-216, WC-219**
- x25 routing command **WC-235, WC-239, WC-246**
- x25 routing tcp-use-if-defs command **WC-240**
- x25 subscribe cug-service command **WC-253, WC-255**
- x25 subscribe flow-control command **WC-217, WC-219**
- x25 subscribe local-cug command **WC-253, WC-255**
- x25 subscribe packet size command **WC-217**
- x25 subscribe window size command **WC-217**
- x25 suppress-called-address command **WC-221**
- x25 suppress-calling-address command **WC-221**
- x25 x25 command **WC-220**
- x25 t10 command **WC-220**
- x25 t11 command **WC-220**
- x25 t12 command **WC-220**
- x25 t13 command **WC-220**
- x25 t20 command **WC-220**
- x25 t21 command **WC-220**
- x25 t22 command **WC-220**
- x25 t23 command **WC-220**
- x25 use-source-address command **WC-221**
- x25 win command **WC-218**
- x25 wout command **WC-218**
- x29 access-list command **WC-265**
- x29 profile command **WC-266**
- XNS
  - multicast address, SMDS address mapping **WC-193**
  - SMDS, configuring **WC-195**
- XOT
  - destination **WC-237**
  - keepalive options **WC-237**
  - X.25 connections (example) **WC-273**
  - See also X.25, over TCP/IP (XOT)
- XOT flow control values, modifying **WC-240**
- XOT PVC, resetting **WC-266**
- XOT SVC, clearing **WC-266**

## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>