

Numerics	passtnrough 13-55	
rediffer 103	TFO only 13-55	
10 Gigabit Ethernet interfaces	TFO with DRE (Adaptive Cache) 13-55	
modifying 6-7	TFO with DRE (Bidirectional Cache) 13-55	
	TFO with DRE (Unidirectional Cache) 13-55	
A	TFO with LZ compression 13-55	
A	types 13-55	
AAA accounting	activating devices 16-35	
configuring 7-34	adaptive buffering, TFO 13-66	
AAA-based management systems 2-26, 7-2	adding	
acceleration	charts 17-13	
about 1-7, 13-1	administrative login authentication and authorization	
features 1-7	default 7-4	
TCP adaptive buffering settings 13-66	for WAEs 7-2	
TCP settings 13-64	local database description 7-6	
accelerators	overview of 7-1	
enabling 13-3	RADIUS overview 7-12	
accelerator threshold 13-58	TACACS+ overview 7-14	
accounts	Windows domain overview 7-16	
creating 8-4	administrative login authentication failover 7-27	
creation process 8-2	alarm overload detection, enabling 10-23	
deleting 8-6	alarm panel	
local CLI 8-2	system dashboard window 17-3	
roles-based 8-2	alarms	
types 8-1	device reporting 17-4	
viewing 8-8	alerts 17-5	
ACL	application acceleration	
interception 5-28	about 1-7, 13-1	
See also IP ACL	enabling 13-3	
action	application classifiers	
full optimization (adaptive cache) 13-55	creating 13-53	
full optimization (bidirectional cache) 13-55	match condition 13-57	
full optimization (unidirectional cache) 13-55	restoring 13-61	

application definition	enabling WAAS service insertion on interfaces 6-17
creating 13-52	registration process 10-28
application list, viewing 13-59 application policy	reimporting a certificate to the Central Manager 10-34
creating 13-53	assigning
creation process 13-51	devices to a preposition directive 12-16
position 13-62	devices to device groups 3-5
preparation tasks 13-51	devices to more than one device group 3-7
restoring defaults 13-61	audit trail logs
applications	viewing 7-35, 17-62
monitoring 13-61, 17-2	authentication
AppNav	default feature values 7-4
adding and removing devices 4-43	authentication databases, types of 7-2
AppNav Cluster 4-2	authentication servers
AppNav Controller 4-1	configuring 7-12, 7-14
AppNav Controller Group 4-2	authorization
appnav-controller interception 5-57	default feature values 7-4
AppNav Controller Interface Modules 4-3	autodiscover 1-20
class maps 4-5	autoregistration
cluster settings 4-35	DHCP server requirements 2-8
cluster settings for WAAS node 4-42	
cluster wizard 4-15	<u></u> В
configuring 4-1, 4-11	В
configuring class maps 4-22	backing up
configuring policy rules 4-28	configuration files 11-6
connection statistics 4-51	WAAS Central Manager 16-10
connection tracing 4-51	WAE devices 16-12
controller settings 4-37	backup and restore
deployment models 4-3	cms database 16-10
interface wizard 4-20	
monitoring cluster 4-47	banners
policies 4-5	configuring 7-10
policy 4-4	BIC TCP 1-6
service context 4-2	BMC
WAAS Node 4-2	enabling IPMI over LAN 10-26
WAAS Node Group 4-2	enabling IPMI SoL 10-27
WAAS node group settings 4-41	firmware update 10-25
WAAS node settings 4-40	bootflags 16-22
WAAS node settings 4-40 AppNav-XE	bootflags 16-22 bridge group

assigning physical interface 6-20	coherency
creating 6-19	age-based validation 12-4
bridge virtual interface	compression, about 1-6
creating 6-20	conditions
browser support 2-10	modifying or deleting from IP ACLs 9-6
	configuring WAAS CM for single sign-on 7-33
C	congestion windows, about 6-24
	connections
CDP	viewing TCP connections 17-40
configuring 6-27	Connections Statistics report 17-40
cdp enable command 5-41	connection statistics, AppNav 4-51
cdp run command 5-40	connection tracing 4-51
Central Manager. See WAAS Central Manager	controlled shutdown 16-36
certificate	copy disk ftp command 16-10
reimporting 10-34	core WAE, about 1-9
charts	corrupted system images
adding 17-13	recovering from 16-19
customizing 17-10	CPU load threshold 13-59
descriptions 17-14	creating
settings 17-14	accounts 8-4
	application classifier 13-53
Cisco.com	application definition 13-52
obtaining software files from 16-3	application policy 13-53
Cisco Discovery Protocol. See CDP	local user 8-4
Cisco Prime Network Single Sign-on configuration 7-32	match condition 13-57
classifier, creating 13-53	new software file 16-3
classifier report, viewing 13-60	preposition directive 12-11
clear statistics all command 7-26	preposition schedule 12-17
clear statistics authentication command 7-26	current software version
clear statistics windows-domain command 7-26	determining 16-3
CLI user	
creating 8-4	D
clock	U
setting 10-5	dashboard
clustering in inline mode 5-53	customizing 17-10
cms database	device 17-8
backup and restore procedure 16-10	system 17-1
cms database backup command 16-10	database backup 16-10
cms database restore command 16-11	data coherency, about 12-3

data concurrency, about 12-5	activating 16-35
data migration 2-27	adding to device groups 3-5
data redundancy elimination, about 1-6	adding to multiple device groups 3-7
debug command 17-65	impact of assigning to multiple groups 3-9
default status, restoring 16-12	overriding device group settings 3-8
deleting	restarting 16-35
accounts 8-6	topology 17-40
device groups 3-6	viewing group assignments 3-6
locations 3-11	viewing information for 17-6, 17-36, 17-40
roles 8-13	Devices window 17-6
software files 16-9	DHCP
user groups 8-20	configuring interfaces for 6-14
device	for autoregistration 2-8
alarms 17-4	interface-level 2-9
autodiscovery 1-20	DHCP server
clock setting 10-5	requirements for autoregistration 2-8
rebooting 16-35	diagnostic tests 17-64
Device Dashboard window 17-8	
device groups	Disabling NetFlow v9 17-51
about 3-1	disabling WCCP flow redirection 5-17
adding and removing devices 3-5	disk-based software, missing
configuring 3-4	recovering from 16-22
creating 3-3	disk encryption 16-31
creation process 3-2	disk handling
deleting 3-6	configuring error-handling methods 16-32
enabling overlap 3-7	configuring extended object cache 16-33
force group settings 3-7	disks
list 3-6	monitoring 17-43
overriding settings 3-7	Disks report 17-43
setting configuration precedence 3-8	DNS, configuring 6-27
Device Home window. See Device Dashboard window	domains
device locations	about 8-14
about 3-10	adding entities 8-15
creating 3-10	assigning to user accounts 8-15
deleting 3-11	assigning to user groups 8-19
device logs, viewing 17-63	creating 8-14
device registration information	deleting 8-16
recovering 16-23	modifying and deleting 8-16
devices	viewing 8-17

downgrading 16-3	about 6-24
DRE, about 1-6	extended object cache 16-33
DRE settings	
configuring 13-7	F
DSCP 13-56	r
global default 13-61	failover, for administrative login authentication 7-27
dynamic shares	fast offline detection
	about 10-23
creating for SMB accelerator 12-19	configuring 10-22
	file locking, about 12-5
E	File Server Rename utility 11-13
_	file servers
edge WAE, about 1-9	supported 12-7
egress methods	file services 12-8
configuring 5-30	about 1-8
email server settings for reports 10-24	features 1-9
enable command 7-15	preparing for 12-7
enabling	SMB configuration process 12-19
optimization and accelerators 13-3	firewall, configuring for 6-29
protocol chaining 13-49	flash memory
SNMP 18-14	corrupted 16-19
SNMP agent 18-13	flow monitoring
traffic statistic collection 13-52	configuring 17-48
	force group settings 3-7
WCCP flow redirection 5-17	full optimization (adaptive cache) action 13-55
encryption	full optimization (bidirectional cache) action 13-55
disk 16-31	full optimization (unidirectional cache) action 13-55
enabling secure store 10-10	
entities	<u></u>
adding to domains 8-15	G
EPM accelerator	generic GRE egress method 5-30
enabling 13-3	generic routing encapsulation. See GRE encapsulation
errors	Gigabit Ethernet interfaces
disk drives 16-32	modifying 6-7
EtherChannel	GRE encapsulation 5-14, 5-16
configuring 6-10	GRE packet forwarding 5-16
Exec timeout	GRE tunnel, configuring on router 5-32
configuring 7-10	groups. See user groups
explicit congestion notification	

Н	configuring virtual 6-14
	enabling AppNav-XE service insertion 6-17
hardware clock 10-5	manually configuring for DHCP 6-14
hardware devices supported 2-10	WAAS Express optimization 6-16
high bandwidth WAN link 2-7	IP access control lists. See IP ACL
HTTP accelerator	IP ACL
configuring 13-8	adding conditions to 9-3
enabling 13-3	applying to interface 9-6
HTTPS settings 13-8	associating with application 9-6
	conditions, modifying or deleting 9-6
I	configuration constraints 9-2
-	creating new 9-3
ICA accelerator	deleting 9-7
configuring 13-29	on routers 2-25
configuring ICA over SSL 13-31	on WAEs 2-25
increased buffering 1-5	overview 9-1
inline mode 5-43	IP addresses
configuring IP address 5-52	multiple, configuring on single interface 6-6
interface settings 5-47	static 2-9
serial clustering 5-53	IPMI over LAN
VLAN configuration 5-53	about 10-25
VLAN ID check 5-46	enabling 10-26
inline network adapter card 5-43	enabling SoL 10-27
installing system software 16-12	IP routes
intelligent message prediction 1-7	configuring 6-26
interception	ip wccp command 5-10
appnav-controller 5-57	ip wccp redirect-list command 5-10
inline 5-43	ip web-cache redirect command 5-10
policy-based routing 5-33	
Wickle	K
WCCP 5-11	
interception ACL 5-28	kernel debugger
interface	enabling 17-63
assigning to bridge group 6-20	
interface-level DHCP	L
description 2-9	
interface module inline mode 5-43	Layer 2 redirection 5-16
interfaces	LDAP server signing
configuring 6-1	

configuring on a Microsoft server 7-24	configuring 13-11
configuring on a WAE 7-25	enabling 13-3
disabling on a WAE 7-26	match condition, creating 13-57
overview of 7-24	maximum segment size 13-65
licenses 10-3	message logs
line console carrier detection	viewing 17-62
configuring 7-11	message of the day settings
load balancing 1-23, 5-12, 6-13	configuring 7-10
local CLI accounts, about 8-2	Message Signing Server Database 12-19
local user, creating 8-4	MIBs
locations	supported 18-4
about 3-10	MIB traps
creating 3-10	configuring using the WAE Device Manager 11-8
deleting 3-11	migration, data 2-27
location tree	missing disk-based software
viewing 3-11	recovering from 16-22
logging	monitoring
configuring system logging 17-56	applications 13-61, 17-2
message priority levels 17-58	chart descriptions 17-14
transaction log format B-1	chart settings 17-14
transaction logging 17-59	creating custom reports 17-44
viewing audit trail log 17-62	disk information 17-43
viewing device logs 17-63	flows with NetQoS 17-48
viewing system messages 17-62	predefined reports 17-35
llogin access	resource utilization 17-42
controlling 7-7	system status 17-5
login authentication	using the WAE Device Manager 11-17
about 2-25, 7-1	with SNMP 18-1
logs	multiple IP addresses
severity levels in the WAE Device Manager 11-22	configuring on single interfaces 6-6
viewing in the WAE Device Manager 11-21	
lost administrator passwords	R1
recovering 16-21	N
LZ compression, about 1-6	NAS appliances 1-21
	NAT address 10-2
	NAT configuration 10-2
M	NetBIOS 10-2
management IP address 10-2	NetFlow v9 17-50
MAPI accelerator	NetQoS monitoring 17-48

network	configuring 6-10
viewing information for 17-1	load balancing 6-13
Network Time Protocol. See NTP	ports
network traffic analyzer tool 17-65	139 2-6
NFS accelerator	bypassing 2-7
enabling 13-3	445 2-6
notification settings	position, application policy 13-62
for alerts 11-9	power failure 16-19
for reports 10-24	preposition
NTP, configuring 10-5	about 12-5
	checking status of 12-18
	creating directive 12-11
0	scheduling 12-17
obtaining software files 16-3	viewing in the WAE Device Manager 11-14
operation prediction and batching 1-7	print accelerator 1-9
optimization	print services
configuring on WAAS Express interfaces 6-16	about 1-9
enabling global features 13-3	priority levels 17-58
<u>Р</u>	
Ρ	N.
packet forwarding method 5-14	RADIUS
Layer 2 redirection 5-16	authentication overview 7-12
Layer 3 GRE 5-16	configuring server 7-12
packet return 5-15	database 7-2
passthrough action 13-55	default configuration 7-4
passwords	RAID 1-23
changing account 8-6, 8-7	RCP services, enabling 10-4
recovering administrator 16-21	rebooting devices 16-35
PBR, about 1-22	receive buffer size 13-65
policy-based routing	recovering
about 1-22	device registration information 16-23
configuration of interception 5-33	from missing disk-based software 16-22
overview of 2-20	
Overview of 2-20	lost administrator passwords 16-21
verifying next-hop availability 5-40	lost administrator passwords 16-21 system software 16-19
	_
verifying next-hop availability 5-40	system software 16-19
verifying next-hop availability 5-40 policy report, viewing 13-60	system software 16-19 redirection methods 5-1

WAEs in the WAE Device Manager 11-6	roles-based accounts
reinstalling system software 16-12	about 8-2, 8-3
remote login	router
controlling access 7-7	configuring WCCP transparent redirection on 5-6
reports	
configuring email server settings 10-24	<u> </u>
Connections Statistics 17-40	S
creating custom 17-44	SACK, about 1-5
customizing 17-10	scheduling
editing 17-46	preposition 12-17
managing 17-44	reports 17-46
predefined 17-35	secure shell
resource utilization 17-42	configuring 7-7
scheduling 17-46	host keys 7-8
Topology 17-40	secure store
viewing custom 17-46	changing key and password 10-15
request redirection methods 5-1	configuring 10-10
rescue system image 16-19	disabling 10-17
resource utilization report 17-42	enabling on Central Manager 10-12
restarting devices 16-35	enabling on standby Central Manager 10-13
restoring	enabling on WAE 10-13
application classifiers 13-61	security
application policies 13-61	disk encryption 16-31
configuration files 11-7	enabling secure store 10-10
WAAS Central Manager 16-10	selective acknowledgement 1-5
WAE devices 16-12	send buffer size 13-65
WAE to default condition 16-12	send TCP keepalive 13-64
retransmit time multiplier	serial clustering in inline mode 5-53
about 6-24	service context, AppNav 4-2
roles	service password
about 8-9	configuring 5-10
assigning to user accounts 8-12	set ip next-hop verify-availability command 5-41
assigning to user groups 8-18	shadow copy for shared folders 12-6
creating and managing 8-10	show cdp neighbors command 5-40
deleting 8-13	show command utility
modifying and deleting 8-13	for troubleshooting 17-66
read-only access to services 8-10	show version command 16-21
viewing 8-13	shutting down WCCP 5-27
viewing settings 8-13	Simple Network Management Protocol. See SNMP

site and network planning 2-4	standby Central Manager
SMB accelerator	switching to primary 16-29
configuring 12-19	standby groups
SNMP 1-24	of interfaces 6-3
asset tag setting 18-25	standby interfaces
community settings 18-20	assigning physical interfaces 6-6
configuration process 18-13	configuring 6-3
configuring using the WAE Device Manager 11-8	priimary interface 6-6
contact settings 18-25	starting WAE components 11-5
defining custom traps 18-17	static IP addresses 2-9
enabling 18-14	static IP routes
enabling SNMP agent 18-13	configuring 6-26
enabling traps 18-15	statistics, collecting 13-52
group settings 18-22	stopping WAE components 11-5
host settings 18-19	system configuration settings 10-17
manager	system dashboard
creating 18-3	viewing system-wide information 17-1
monitoring with 18-1	system event logging
preparation 18-14	configuring 17-56
security models and security levels 18-4	message priority levels 17-58
supported MIBs 18-4	viewing log 17-62
trap source settings 18-25	system image
user settings 18-23	recovering 16-19
versions supported 18-3	system message log
view settings 18-21	using 17-56
software	viewing 17-62
recovering 16-19	system software
software clock 10-5	recovering 16-19
software files	system status
obtaining from Cisco.com 16-3	monitoring 17-5
software licenses 10-3	
software recovery 16-12	
software upgrades 16-3	•
for multiple devices 16-7	TACACS+
process 16-1	authentication and authorization, overview of 7-14
software version	database 7-2
determining 16-3	default configuration 7-4
SSL	enable password attribute 7-15
configuring 13-31	TACACS+ server

configuring 7-14	track command 5-42
taskbar icons 1-16	traffic statistics collection, enabling 13-52
TCP	traffic statistics report 17-2
congestion windows 6-24	chart descriptions 17-14
explicit congestion notification 6-24	transaction logging 17-59
parameter settings 6-22	configuring 17-59
retransmit timer 6-24	log format B-1
slow start 6-25	transparent redirection, configuring on a router 5-6
viewing connections 17-40	traps
tcpdump command 17-65	defining SNMP 18-17
TCP initial window size, about 1-5	enabling 18-15
TCP promiscuous mode service	triggers
overview of 2-24	defining SNMP 18-17
Telnet services	troubleshooting
enabling 7-9	CLI commands 17-65
Ten Gigabit Ethernet interfaces	using show command utility 17-66
modifying 6-7	with Central Manager diagnostic tests 17-64
test command for troubleshooting 17-65	with TCPdump 17-65
tethereal command 17-65	with Tethereal 17-65
TFO	with WAAS TCP Traceroute 17-66
about 1-4	Troubleshooting Devices window 17-5
TFO adaptive buffering 13-66	
TFO and LZ compression action 13-55	U
TFO features 1-4	U
BIC TCP 1-6	Unicode support 2-10
compression 1-6	upgrading
increased buffering 1-5	device groups 16-7
selective acknowledgement 1-5	process 16-1
TCP initial window size maximization 1-5	WAAS Central Manager device 16-5
Windows scaling 1-5	user accounts
TFO only action 13-55	adding domain entities 8-15
TFO with DRE (Adaptive Cache) action 13-55	assigning to domains 8-15
TFO with DRE (Bidirectional Cache) action 13-55	audit trail logs
TFO with DRE (Unidirectional Cache) action 13-55	viewing 7-35, 17-62
time zones	changing passwords 8-6, 8-7
location abbreviations 10-7	creating 8-4
parameter settings for 10-5	creation process 8-2
Topology report 17-40	deleting 8-6
traceroute 17-66	deleting domains 8-16

domains 6-14	
managing 8-7	vWAAS
modifying and deleting 8-6	virtual interface configuration 6-14
roles	
assigning to 8-12	
creating 8-10	W
modifying and deleting 8-13	VV
viewing 8-13	WAAS
viewing 8-8	benefits 1-20
viewing domains 8-17	interfaces 1-10
user authentication. See login authentication	WAAS Central Manager
user groups	backing up 16-10
about 8-17	restoring 16-10
assigning roles to 8-18	upgrading 16-5
assigning to domains 8-19	WAAS Central Manager GUI
creating 8-18	about 1-10
deleting 8-20	accessing 1-11
viewing 8-20	components 1-12
UTC offsets 10-8	taskbar icons 1-16
See also GMT offsets	WAAS CLI, about 1-19
	WAAS Express
V	configuring a device certificate 10-32
V	configuring an NTP server 10-34
version of software 16-3	configuring a user 10-30
video accelerator	configuring optimization on interfaces 6-16
configuring 13-23	enabling HTTP secure server 10-33
enabling 13-3	importing Central Manager certificate 10-31
viewing	installing a license 10-33
application list 13-59	registering with the Central Manager 10-34
classifier report 13-60	registration process 10-28
logs in the WAE device manager 11-21	reimporting a certificate to the Central
policy report 13-60	Manager 10-34
role settings 8-13	WAAS interfaces
	CLI 1-19
virtual interfaces	WAAS Central Manager GUI 1-10
modifying 6-14	WAE Device Manager GUI 1-18
	WAAS networks
VLAN ID check 5-46	and IOP interoperability 2-11
VLAN support 5-45	network planning for 2-1

traffic redirection methods 2-18
WAAS services, about 1-4
WAAS TCP Traceroute 17-66
WAE Device Manager
about 1-18, 11-1
Configuration option 11-8
Control option for the WAE 11-4
logging out 11-3
Notifier tab 11-9
quick tour 11-2
Utilities option 11-11
workflow 11-3
WAE devices
backing up 16-12
controlled shutdown 16-36
modifying configuration properties 10-1
restoring 16-12
supported 2-10
WAE packet return 5-15
WAFS Cache Cleanup utility 11-12
WAVE devices supported 2-10
WCCP
about 1-22, 5-3, 5-11
Cisco Express Forwarding (CEF) 5-15
configuring interception on SCs 5-22
configuring interception on WAEs 5-17
flow redirection, enabling and disabling 5-17
GRE packet return 5-30
ports used 2-6
shutting down 5-27
WCCP-based routing
advanced configuration for a router 5-6
advantages and disadvantages 2-20
configuration guidelines 5-4
web application filter
configuring 10-20
web browser support 2-10
Windows Authentication
configuring in the Central Manager 7-16

Windows domain server settings 7-17
Windows name services 6-28
Windows print accelerator, about 1-9
Windows scaling, about 1-5

Index