Numerics

802.11 counters report 14-12
802.11 security trap 10-71
802.11 tags layer 5-44
802.11a policy name 10-52
802.11b/g RRM interval template 10-62, 10-64
802.11b/g RRM threshold template 10-61
802.11b/g voice template 10-57
802.11h template
    configuring 10-63
802.1X association 6-24
802.1X authentication 6-24
802.3 bridging
    configuring 9-12

A

AAA override 10-17
AAA servers 10-16
AAA traps 10-71
access control list templates 10-51
access point authentication and MFP templates 10-46
access point authorization template 10-39
access point inventory report 14-9
access point layer 5-41
access point load
    avoiding 10-54
access point placement 5-21
access point positions
    changing with import or export of file 5-30
access point reports 14-4
    modifying 14-4
    viewing 14-4
access point security statistics
    for mesh 6-35
access point templates
    adding 10-75
access point traps 10-71
access point/radio templates 10-76
access points
    adding 5-20
    adding to maps 5-20–5-21
    configuring 9-18, 10-39
    configuring for hybrid REAP 12-9
    converting to LWAPP C-2
    searching 9-23
    selecting 10-80
accessing the schedule panel 14-3
ACL template 10-41
    configuring 10-41
ACS server
    adding WCS to 15-4
active interferer count per channel 9-26
active interferers 9-25
active interferers count chart 9-26
active sessions
    monitoring 7-5
adaptive scan threshold 10-61
add config groups 8-15
add known rogue 10-65, 10-67
adding a license B-5
adding a migration template 9-17
adding a spectrum expert 9-24
adding access point templates 10-75
adding access points 5-19
adding autonomous access points
    by CSV file 9-15
adding chokepoints 5-31
adding controllers 9-2
adding controllers from config group 8-17
adding guest user account 7-15
adding IOS access points 9-15
    by device information 9-15
adding templates from config group 8-18
adding WCS as TACACS+ server 15-5
adding WCS to a non-Cisco ACS server 15-13

adding WCS to ACS server 15-4
for use with RADIUS 15-9
adding WCS usergroups
into ACS for RADIUS 15-10
into ACS for TACACS+ 15-6
adjusted link metric 6-28
administration menu 2-21
advanced debug 5-30, 5-57
Advanced Options 5-15
definition 5-17
Advanced tab
on WLAN template 10-19
Aironet IE 10-20
alarm 13-1
search filters 13-4
alarm dashboard 2-22, 13-2
alarm emails 13-59
alarm monitor 2-22, 6-3
alarm severity
configuring 13-57
alarm trigger threshold 10-47
all groups window 15-7
alternate parent
for mesh 14-10
analyzing element location accuracy 5-57
anonymous provisioning 10-33
antenna gain 6-19
antenna type 6-19
AP attack details 2-16
AP list by location report 14-4
AP list by SSID 14-4
AP mesh layer info 5-42
AP policies 3-7
AP policies template 10-43
AP profile status report 14-4
AP up time 6-33
applying calibration models 5-54
applying config groups 8-18
applying controller templates 10-74
APs not assigned to maps 2-15
association request failures 6-38
association request success 6-38
association request timeouts 6-38
audience of document xviii
audit reports 14-5
configuring 9-5, 9-22
audit status
viewing 9-5
viewing for access points 9-22
audit trail
enabling for guest user activities 7-11
viewing 7-9
AUDIT_STATUS_DIFFERENCE 13-56
auditing config groups 8-19
auditing H-REAP groups 12-14
authentication order
managing 9-5
authentication priority 9-5
authentication process
Hybrid REAP 12-2
authentication request failures 6-38
authentication request success 6-38
authentication request timeout 6-38
automated upgrade 11-15
automatic backups, scheduling 11-4, 15-2
automatic client exclusion 10-20
autonomous access points
adding by CSV file 9-15
viewing 9-16
autonomous to LWAPP migration support 9-14
auto-synchronizing location appliances 11-10
avoid access point load 10-54
avoid Cisco AP load 10-54
avoid foreign AP interference 10-54
avoid non-802.11 noise 10-54

B

background tasks 11-13
    running 15-2
backhaul interface 6-37
backing up location appliance data 11-12
backing up the WCS database
    on Linux 11-5–11-6
    on Windows 11-5
backup and restore license B-6
bandwidth
    making expedited 10-58
best practices A-1
bridge group name 6-37
bridging link information 6-41
bridging mesh statistics 6-37
bronze 10-18
bronze queue 6-38
buildings
    adding to a campus map 5-3
    adding to WCS database 5-4
busiest APs report 14-4
busiest clients report 14-7

C

CA certificates 4-5
CAC
    enabling 9-7
CAD files 5-2
calculating access point requirements 5-13
calibration models 5-54
calibration models, applying 5-54
call admission control 10-57
campus map, adding to WCS database 5-2
cascade reboot 8-19
caution, defined xix
CCA sensitivity 10-56
certificate signing request 3-20
changing access point positions 5-30
    by importing or exporting a file 5-30
channels
    monitoring on a floor map 5-47
checking the status of WCS
    on Linux 11-2
    on Windows 11-2
chokepoints 5-31
    adding 5-31
    monitoring 5-39
    removing 5-38
    using to enhance tag location 5-31
Cisco AP load
    avoiding 10-54
Cisco Discovery Protocol 9-21
Cisco UDI 5-16
Cisco Unified Wireless Network Solution 5-57
Cisco WCS base B-2
Cisco WCS location B-2
Cisco Wireless LAN Solution
    overview 1-2
    security solutions 3-2–3-5
clear config 9-22
client alarms
    most recent 2-15
client association report 14-7
client authentication provision 10-33
client count 2-15, 2-19
client count report 14-7
client devices
    connecting to WLANs 12-11
client exclusion 10-20
    automatically 10-20
    policies template 10-44
client MFP 3-7
client properties 6-12
client related traps 10-70
client reports
    creating new 14-8

modifying 14-6, 14-7
viewing 14-6, 14-7
client security component 2-19
client statistics 6-23
client tab
home page 2-15
client traffic 2-16, 2-19
clients
finding 6-20–6-23
manually disabled 2-16
map 6-23
monitoring on a floor map 5-49
parameters 5-49
clients detected by location server 2-19
clients layer 5-43
combined inventory report 14-9
command buttons 2-22
config group
adding controllers 8-17
adding templates 8-18
configuring 8-17
downloading IDS signatures 8-21
downloading sw to controllers 8-20
removing controllers 8-17
removing templates 8-18
config groups
applying 8-18
auditing 8-19
creating 8-15
downloading customized webauth 8-22
rebooting 8-19
configure menu 2-21
configuring an 802.11h template 10-63
configuring 802.3 bridging 9-12
configuring access control lists 10-51
configuring an access point 9-12, 9-18, 10-39
configuring an access point for hybrid REAP 12-9
configuring an ACL template 10-40
configuring alarm severity 13-57
configuring audit reports 9-5
configuring a client exclusion policy template 10-44
configuring config group 8-15
configuring the controller for hybrid REAP 12-6
configuring a CPU ACL template 10-41
configuring an EAP-FAST template 10-32
configuring EDCA parameters
for individual controllers 9-13
through a template 10-59
configuring firewall for WCS 3-6
configuring general templates 10-4
configuring global email parameters 15-22
configuring high density templates 10-55
configuring a high throughput template 10-64
configuring H-REAP AP groups 10-21
configuring Hybrid REAP 12-1
configuring hybrid REAP access point groups 12-12
configuring IDS 3-9
configuring IDS signatures 3-10
configuring intrusion detection systems 3-9
configuring a LDAP server template 10-27
configuring a local EAP general template 10-30
configuring a local EAP profile template 10-31
configuring a manually disabled client template 10-40
configuring a mesh template 10-64, 10-65
configuring multiple country codes 8-13
configuring a network access control template 10-29
configuring a policy name template 10-52
configuring radio templates 10-78
configuring RADIUS servers 15-17
configuring a roaming parameters template 10-59
configuring a rogue policies template 10-42
configuring an RRM interval template 10-62
configuring an RRM threshold template 10-61
configuring SNMPv3 9-13
configuring spectrum experts 9-24
configuring the switch
for hybrid REAP 12-4
configuring TACACS+ servers 15-15

configuring a TACACS+ server template 10-28
configuring a TFTP server template 10-68
configuring a trusted AP policies template 10-43
configuring a user authentication priority template 10-74
configuring a user login policies template 10-37
configuring a video parameter template 10-58
configuring a voice parameter template 10-57
configuring wired guest access 9-26
configuring templates
802.11a policy name 10-51
802.11b/g RRM interval 10-62
802.11b/g RRM threshold 10-58
802.11b/g voice 10-57
access point authentication and MFP 10-43
access point authorization 10-39
access point/radio 10-76
file encryption 10-22
guest users 10-36
known rogue access point 10-63
local management user 10-73
local net users 10-27
MAC filter 10-38
QoS 10-7
RADIUS accounting 10-26
RADIUS authentication 10-24
syslog 10-72
Telnet SSH 10-71
traffic stream metrics QoS 10-8
trap control 10-69
trap receiver 10-68
web authentication 10-47
WLAN 10-9
connecting client devices
to WLANs 12-11
connecting to the Guest WLAN 3-19
content
customizing 2-18
controllers
adding 9-2
adding to WCS database 4-2
configuring for hybrid REAP 12-6
pinging network devices 6-26
searching 9-4
specified 1-2
controller CPU utilization 2-19
controller inventory report 14-9
controller inventory status 2-19
controller memory utilization 2-19
controller templates
applying 10-75
controller utilization report 14-12
conventions of document xix
converting WLSE autonomous to WCS controller C-1
counters report
for 802.11 14-12
country codes
multiple 8-13, 9-3
setting 9-3
coverage areas 2-19
coverage holes 2-15
finding 6-25
monitoring on a floor map 5-48–5-49
monitoring on floormap 5-48
summary report 14-12
CPU access control list template 10-41
creating a lobby ambassador account 7-12
creating a network configuration audit 14-6
creating a network design 5-24
creating a new access point report 14-5
creating a new client report 14-8
creating a new inventory report 14-9
creating a new mesh report 14-6, 14-11
creating a new performance report 14-12
creating a new security report 14-14
creating calibration models 5-42
creating guest user accounts 7-11
CSR 3-20
CSV file 9-15

CSV file format 10-35
custom signature 3-13
customized Web authentication 3-16
    downloading 8-22, 10-48
customizing content on WCS Home page 2-18
customizing tabs on WCS Home page 2-17

D

data management tasks
    performing 15-19
data/coverage 5-16
debug commands A-4
debug strategy A-4
default lobby ambassdor credentials
    editing 7-9
deleting a guest user 3-19
deleting guest user templates 7-17
deleting a license B-6
deleting a report 14-3
deleting WCS user accounts 7-4
designing a network 5-24
detecting a suspicious client 3-9
device certificates 4-4
device information 9-15
DHCP 6-24
DHCP server
    overriding 10-20
diagnostic channel A-2
disable report schedule 14-2
disabling IDS signatures 3-12
DNS ping 6-24
DNS resolution 6-24
document
    audience xviii
    conventions xix
    organization xviii
    purpose xviii
documentation
    obtaining xx
downloading a customized web authentication 3-16, 8-22, 10-48
downloading IDS signatures 3-11
    from your config group 8-21
downloading sw to controllers
    after adding config group 8-20
downloading vendor CA certificates 4-5
downloading vendor device certificates 4-4
downstream delay 10-9
downstream packet loss rate 10-9
drawing polygon areas
    using map editor 5-10
DTIM 10-53

E

EAP-FAST template 10-32
EDCA parameters
    configuring for individual controllers 9-13
    configuring through a template 10-59
edit link 5-5
    home page 2-17
editing guest users 7-16
editing signature parameters 3-14
editing the default lobby ambassador credentials 7-9
email
    configuring parameters 15-21
email notification
    alarms 13-59
enable report schedule 14-2
enabling audit trails
    for guest user activities 7-11
enabling high density 9-8
enabling IDS signatures 3-12
enabling load-based CAC 9-6
enabling Web login 3-15
end user license agreement B-6

entry chokepoint 5-39
establishing logging options 15-18
event history 6-8
event notification 1-5
events 13-1
excluded packets 6-37
exit chokepoint 5-39
expedited bandwidth 10-58
export task list 15-7
exporting a file
to change access point position 5-30
exporting asset information 11-10
exporting WLSE map data 5-51
extracting task list 15-14

F

feature license B-3
file encryption template 10-22
filtering
using to modify maps 6-41
finding clients 6-20
firewall, configuring for WCS 3-6
floor plans
adding to a campus building 5-6–5-8
adding to a standalone building 5-8–5-9
enhancing with map editor 5-9
foreign access point interference
avoiding 10-54
foreign AP interference
avoiding 10-54
frame type 3-13

G

general tab
client properties 6-12
home page 2-14
RF properties 6-14
security 6-15
general templates
configuring 10-4
generate password 10-36
global settings
for standard and custom signatures 3-14
gold 10-18
gold queue 6-38
group setup window on ACS server 15-9
guest user account
adding 7-15
creating 7-11
deleting 3-19
managing 7-14
scheduling 7-18
guest user activities 7-11
guest user credentials 7-16
guest user details
emailing 7-19
print 7-19
guest user templates 10-36
deleting 7-17
guest users
viewing and editing 7-16
Guest WLAN
connecting 3-19
guidelines for using the map editor 5-9

H

heat map
described 5-21
graphic 5-21
heater status 6-33
help menu 2-22
hierarchy
of mesh network 6-40
of Mesh parent to child 6-42

high density
enabling 9-8
requirements 9-9
templates 10-55
high throughput template
configuring 10-64
historical report type 14-1
Home page
customizing content 2-18
customizing tabs 2-17
H-REAP AP groups
configuring 10-21
H-REAP groups
auditing 12-14
Hybrid REAP
configuring 9-1, 12-1
hybrid REAP access point groups 12-12
Hybrid REAP local switching 10-19
hysteresis 10-61

I

IDS 3-9
configuring 3-9
IDS event correlation 13-61
IDS sensors 3-9
IDS signature attacks
viewing 13-60
IDS signature events
viewing 3-15
IDS signatures 3-10
disabling 3-12
downloading 3-11
downloading from config group 8-21
enabling 3-12
uploading 3-10
importing a file
to change access point position 5-30
importing asset information 11-10
importing tasks into ACS 15-4
importing WLSE map data 5-51
indicator of alarms 2-22
information elements
Aironet 10-20
infrastructure MFP 3-7
inspect location readiness 5-18
inspect VoWLAN readiness 5-19
installer
using to upgrade 11-15
installing a license B-4
installing WCS
for WLSE conversion C-2
insufficient memory 6-37
interferers
summary 9-25
inter-subnet roaming 8-4
Intrusion Detection Systems 3-9
invalid association request 6-39
invalid reassociation request 6-39
invalid reauthentication request 6-39
inventory detail status 2-15
inventory reports 14-8
creating 14-9
modifying 14-9
viewing 14-9
inventory status 2-19
IOS access points
adding 9-15
adding by device information 9-15
IP connectivity 6-24

K

KEK
key encryption key 10-24
key wrap 10-24
known rogue access point templates 10-67

L

laptop icon 6-22
Layer 1 security solutions 3-2
Layer 2 10-12
Layer 2 security solutions 3-2
Layer 3 10-15
Layer 3 security solutions 3-2
Layer 3 to Layer 2 mode
  converting Cisco Wireless LAN Solution 3-5
LBS authorization 10-39
LDAP server
  configuring a template for 10-27
LEAP authentication
  requirements 8-8
license
  adding B-5
  backup and restore B-6
  deleting B-6
license agreement B-6
license installation B-4
license management B-5
license types B-2
licenses B-2
licensing
  on WLSE network management C-3
lifetime 7-17
link aggregation 10-5
link aggregation (LAG)
  guidelines 12-4
link metric
  adjusted 6-28
  unadjusted 6-28
link SNR 6-28
link stats
  for mesh 14-10
link test
  running 6-44
link test result 6-46, 6-28
load 5-39
load-based CAC 10-58
  enabling 9-7
lobby ambassador 7-11
  logging activites 7-19
lobby ambassador account
  creating 7-12
  editing 7-13
lobby ambassador defaults
  setting 7-8
local EAP check box 10-17
local EAP general template 10-30
local EAP profile template 10-31
local management user template 10-73, 10-74
local net users template 10-34
local password policy 15-15
local switching
  Hybrid REAP 10-19
location accuracy
  analyzing 5-57
  using testpoints 5-57
location appliance
  importing 11-8
location appliance data
  backing up 11-12
location appliance functionality 4-3
location appliance importing 11-8
location appliances
  adding to WCS database 4-2
  auto-synchronizing 11-11
  relationship with WCS Location 1-5
location inventory status 2-19
location menu 2-21
location readiness
  inspecting 5-18
location server inventory report 14-9
location server utilization 14-12
location tab 6-18
location upgrade B-2

log analysis 6-7
logging 15-4
logging in
to the WCS user interface 7-13, 2-13–2-14
logging options 15-18
logging the lobby ambassador activities 7-19
login.html 3-16
long preambles
enabling for SpectraLink NetLink phones 4-6
LWAPP migration 9-14

M

MAC filter template 10-38
MAC filtering 10-15
MAC frequency 3-13
MAC information 3-13
MACK
message authenticator code keys 10-24
Maintain Image Aspect Ratio 5-50
maintaining WCS 11-1–11-19
malformed neighbor packets 6-37
management frame protection 3-7, 10-46
management queue 6-38
managing guest user accounts 7-14
managing licenses B-5
managing multiple WCSs 1-7
managing user authentication order 9-5
manually disabled client
template for 10-40
manually disabled clients 2-16
manufacturer information 6-19
map
adding chokepoints 5-31
removing chokepoints 5-38
map editor
general notes 5-9
guidelines for using 5-9
using to draw polygon areas 5-10
map editor, enhancing floor plans 5-9
map view
updating 6-42
maps
creating 5-2–5-21
monitoring 5-39, 5-39–5-50
searching 5-5
using to monitor link stats 6-26
using to monitor mesh AP neighbors 6-31
menu bar 2-21
mesh access point neighbors
monitoring 6-31
mesh access points
monitoring 6-29
mesh alarms
most recent 2-17
mesh alternate parent 14-10
mesh health 6-33
monitoring 6-33
mesh link statistics 6-26
monitoring 6-26
mesh link stats 14-10
mesh neighbors 6-32
mesh networks
monitoring using maps 6-26
mesh network hierarchy 6-40
mesh node hops 14-10
mesh packet error statistics 14-10
mesh packet statistics 14-10
mesh parent-child hierarchical view 5-42
mesh reports 14-10
creating 14-6, 14-11
modifying 14-11
viewing 14-11
mesh security statistics
for an AP 6-33
mesh statistics
for an access point 6-35
mesh stranded APs 14-10

mesh tab
home page 2-17
mesh template
configuring 10-65
mesh tree
viewing 6-40
mesh worst node hops 14-10
mesh worst SNR links 14-10
message integrity check information element 10-46
metrics
in QoS 10-8
MFP 3-7
for clients 3-7
MFP alarms
viewing 13-58
MFP client protection 10-21
MFP events
viewing 13-58
MFP signature generation 10-21
MFP templates 10-46
MIC IE 10-46
minimum RSSI 10-60
mirror mode 9-21
mobility 8-2
mobility anchors 8-10
mobility groups
configuring 8-7
prerequisites 12-4
modifying a migration template 9-17
modifying access point reports 14-4
modifying audit reports 14-6
modifying client reports 14-6, 14-7
modifying inventory reports 14-9
modifying map displays 6-41
using filters 6-41
modifying mesh reports 14-11
modifying performance reports 14-12
modifying security reports 14-14
monitor menu 2-21
monitoring active sessions 7-5
monitoring channels
on a floor map 5-47
monitoring chokepoints 5-39
monitoring clients
on a floormap 5-49
monitoring coverage holes
on a floormap 5-48
monitoring maps 5-39
monitoring mesh access point neighbors 6-31
using maps 6-31
monitoring mesh health 6-28, 6-33
monitoring mesh link statistics
using maps 6-26
monitoring mesh networks
using maps 6-26
monitoring outdoor areas 5-42, 5-50
monitoring predicted coverage 5-40
monitoring spectrum experts 9-25
monitoring transmit power levels 5-42
on a floormap 5-47
most recent AP alarms 2-19
most recent client alarms 2-15
most recent mesh alarms 2-17
most recent rogue adhocs 3-3
most recent security alarms 2-16
multiple country codes
configuring 8-13
setting 9-3

N

N+1 redundancy 8-5
Navigator 1-7
network access control
configuring template 10-29
network design 5-24
network protection 3-9
Network Summary page 2-13

new rogue AP count report 14-13
new rogue APs report 14-13
new search 5-5
node hop count
    worst 2-17
node hops 6-37
    for mesh 14-10
noise
    avoid non-802.11 10-54
non-802.11 noise
    avoiding 10-54
non-Cisco ACS server
    for use with RADIUS 15-13
note, defined xix
NTP server template 10-3

O

optimizing the controller for high density 9-9
organization of document xviii
organizationally unique identifier 6-19
outdoor areas
    adding to a campus map 5-4–5-5
    monitoring 5-50
overview
    Cisco Wireless LAN Solution 1-2
    WCS 1-3

P

packet error rate
    worse 2-17
packet error rate link color 6-42
packet error statistics
    for mesh 14-10
packet jitter 10-8
packet latency 10-8
packet loss 10-8
packet loss rate 10-9
packet statistics
    for mesh 14-10
packets received 6-39
packets transmitted 6-39
parent changes 6-37
parent TSF 6-25
password rules
    turning on or off 15-15
PEAP 10-32
peer-to-peer blocking 10-20
performance reports 14-12
    creating 14-12
    modifying 14-12
    viewing 14-12
performing data management tasks 15-19
pico cell mode 10-53
pinging network devices from a controller 6-26
placement of access points 5-21
planning mode 5-14
    to calculate access point requirements 5-13
platinum 10-18
platinum queue 6-38
PLR 10-9
policy manager solutions 3-3
policy name template
    configuring 10-52
polygon areas
    drawing with map editor 5-10
poor neighbor SNR 6-37
predicted coverage, monitoring 5-40
predictive tool
    distance based 5-18
prerequisites 2-2
present map 6-22
print guest user details 7-19
protection type 10-46
purpose of document xviii

Q

QoS 10-18
QoS templates 10-7
queue 14-10
    silver, gold, platinum, bronze, management 6-38
quiet time 3-13

R

radio inventory status 2-19
radio measurements
    receiving 6-24
radio receiver sensitivity 6-19
radio resource management 10-54
radio templates
    configuring 10-78
radio utilization report 14-12
RADIUS accounting template 10-26
RADIUS authentication template 10-24
RADIUS servers
    configuring 15-17
reachability status 9-24
reassociation request failures 6-39
reassociation request success 6-39
reassociation request timeouts 6-39
reauthentication request failures 6-39
reauthentication request success 6-39
reauthentication request timeout 6-39
rebooting config groups 8-19
receiving radio measurements 6-24
recent alarms 2-19
recent coverage holes 2-15, 2-19
recent map 6-22
recent rogue adhoc alarm 2-16
recent rogue AP alarms 2-16
recovering the WCS password 11-20
refresh browser 5-39
refresh from network 5-39
refresh heatmap 5-39
related publications xix
removing chokepoints 5-38
removing controllers from config group 8-17
removing templates from config group 8-18
report
    802.11 counters 14-12
    access point inventory 14-9
    busiest APs 14-4
    busiest clients 14-7
    client association 14-7
    client count 14-7
    combined inventory 14-9
    controller inventory 14-9
    controller utilization 14-12
    coverage hole summary 14-12
    deleting 14-3
    location server inventory 14-9
    location server utilization 14-12
    mesh alternate parent 14-10
    mesh worst node hops 14-10
    radio utilization 14-12
    security summary 14-13
    traffic stream metrics 14-7
    traffics stream metrics 14-4
    Tx power level and channel 14-12
    unique client 14-7
    voice statistics 14-12
reporting tag location 5-31
reports 14-4
    access point type 14-4
    disable schedule 14-2
    enable schedule 14-2
    mesh link stats 14-10
    mesh node hops 14-10
    mesh packet error statistics 14-10
    mesh packet statistics 14-10
    mesh worst SNR links 14-10
    running 14-1

reset AP now 9-22
restoring WCS database on Linux 11-7
restrict by protocol 6-21
retrieving UDI 6-46
RF calibration model, creating 4-7
RF calibration tool 1-7
RF prediction heat map 5-21
RF profile traps 10-71
RF properties 6-14
RF update traps 10-71
roaming 8-2
roaming parameters template
    configuring 10-60
roaming time 10-8, 10-9
rogue access point templates 10-67
rogue access points
    acknowledging 6-5
    alarm monitor 6-3
    detecting and locating 6-3–6-4
    monitoring 6-2–6-5
    solutions for 3-3
rogue adhoc alarm 2-16
rogue adhoc detail summary 2-19
rogue adhocs
    most recent 3-3
rogue adhocs event report 14-13
rogue AP alarms 2-16
rogue AP detail summary 2-19
rogue APs event report 14-13
rogue APs layer 5-45
rogue APs report 14-13
rogue clients layer 5-46
rogue detector 9-20
rogue management 3-3
rogue policies
    template for 10-42
rogues detected by APs 14-13
routing state 6-37
RRM 10-54
RRM interval template
    configuring 10-62, 10-64
RRM intervals 10-63, 10-64
RRM threshold template
    configuring 10-61
running 6-44
running a link test 6-43
running background tasks 15-2
running report 14-1
RX neighbor requests 6-37
RX neighbor responses 6-37
Rx sensitivity 10-56

S

saved searches 5-5
scan threshold 10-61
schedule panel
    accessing 14-3
scheduling guest user account 7-18
search clients 6-21
search filters for alarms 13-4
searching controllers 9-4
searching maps 5-5
security alarms
    most recent 2-16
security mesh statistics 6-38
security reports 14-13
    creating 14-14
    modifying 14-14
    viewing 14-14
security solutions 3-2–3-5
security statistics
    for mesh 6-35
security summary report 14-13
security tab
    home page 2-16
selecting access points 10-80

sensors
viewing IDS types 3-9
sequence parameter 10-52
serial number 6-19
servers
synchronizing WCS and location servers 11-9
service options 5-16
setting lobby ambassodor defaults 7-8
setting multiple country codes 9-3
shunned clients 3-9
sidebar area 2-22
signature attacks summary 2-16
silver 10-18
silver queue 6-38
skull-and-crossbones indicator 6-4
sniffer 10-76
sniffer mode 9-20
SNMP authentication 10-70
SNMPv3
configuring 9-13
SNR definition 6-42
SNR down 6-28
SNR link
worst 2-17
SNR UP 6-28
software
downloading config groups to controllers 8-20
updating 4-4
SpectraLink NetLink phones, enabling long preambles 4-6
spectrum expert
adding 9-24
configuring 9-24
details 9-26
monitoring 9-25
summary 9-25
standard signature 3-13
starting WCS
on Linux 2-12
on Windows 2-11
statistics tab 6-16
status report
AP profile 14-4
status, checking 11-2
stopping WCS
on Linux 11-3
on Windows 11-3
supported Cisco WLSE management stations C-2
switch
configuring for hybrid REAP 12-4
symmetric mobility tunneling 10-5
symmetric tunneling 8-5
synchronize servers 11-9
syslog templates 10-72
system requirements 2-2

T

TACACS+ server
configuring 15-15
configuring a template for 10-28
tag location reporting 5-31
target 6-25
target TSF 6-25
tasks
importing into ACS 15-4
Telnet SSH templates 10-71
temperature 6-33
template for configuring network user credentials 10-34
templates
using 10-1
test analysis 6-24
testpoints 5-57
TFTP server 3-10
TFTP server template
configuring 10-68
top APs by client count 2-15
total APs not assigned to maps 2-15
total interferer count 9-26

traffic indicator message 10-53
traffic stream metrics 10-58
traffic stream metrics QoS status 10-8
traffic stream metrics QoS template 10-8
traffic stream metrics report 14-4, 14-7
  graphical 14-4
transition time 10-61
transmit power level 10-54
transmit power level values 5-48
transmit power levels
  monitoring on a floor map 5-47
trap
  802.11 security 10-71
trap control templates 10-69
trap receiver template 10-68
traps
  AAA 10-71
  access point 10-71
  client related 10-70
  RF profile 10-71
  RF update 10-71
  unsupported 13-57
  WPS 10-71
traps added in 2.1 13-29
traps added in 2.2 13-32
traps added in 3.0 13-35
traps added in 3.1 13-37
traps added in 3.2 13-40
traps added in 4.0 13-41
traps added in 4.0.96.0 13-45
traps added in 4.1 13-47, 13-54
traps added in 4.2 13-54
trend report type 14-1
troubleshooting A-1
troubleshooting voice RF coverage 5-19
trusted AP policies
  template for 10-43
trusted AP policies template 10-43
tunneling 8-5
turning password rules on or off 15-15
Tx channel report 14-12
TX neighbor requests 6-37
TX neighbor responses 6-37
Tx power level report 14-12

U

UDI
  retrieving on controllers and access points 6-46
unadjusted link metric 6-28
uninstalling WCS
  on Linux 11-14
  on Windows 11-14
unique client report 14-7
unique device identifier 6-46
unknown association requests 6-39
unknown reassociation request 6-40
unknown reauthentication request 6-40
update map view 6-42
updating system software 4-4
upgrading the network 11-19
upgrading to Linux 4
  during WLSE conversion C-3
upgrading WCS
  on Linux 11-19
  on Windows 11-19
uploading IDS signatures 3-10
upstream delay 10-9
upstream packet loss rate 10-9
user accounts
  for guest 7-11
user authentication order
  managing 9-5
user authentication priority template
  configuring 10-74
user credential retrieval priority 10-34
user details
  emailing 7-19

printing 7-19
user groups 7-3
user interface 2-20
user login policies
configuring a template 10-37
user preferences 15-23
using chokepoints 5-30
to enhance tag location reporting 5-30
using filtering 6-41
using maps
to monitor mesh AP neighbors 6-31
to monitor mesh link statistics 6-26
using maps to monitor mesh networks 6-26
using planning mode 5-10
using templates 10-1
802.11a policy name 10-52
802.11b/g RRM interval 10-62, 10-64
802.11b/g RRM threshold 10-61
802.11b/g voice 10-57
access point authentication & MFP 10-46
access point authorization 10-39
access point/radio 10-76
ACL 10-41
file encryption 10-22
guest users 10-36
known rogue access point 10-67
local management user 10-73, 10-74
local net users 10-34
MAC filter 10-38
NTP server 10-3
QoS 10-7
RADIUS accounting 10-26
RADIUS authentication 10-24
syslog 10-72
Telnet SSH 10-71
traffic stream metrics QoS 10-8
trap control 10-69
trap receiver 10-68
web authentication 10-47
WLAN 10-9
using testpoints
to analyze element location accuracy 5-57
using the installer to upgrade 11-15
utilization report
for controllers 14-12

V

V5 Client Statistics Report 14-7
vendor CA certificates
downloading 4-5
vendor device certificates
downloading 4-4
video parameter template
configuring 10-58
video parameter templates
configuring 10-58
view audit reports 9-5
View Filters icon 5-41, 5-47, 5-48, 5-49
view in grid 2-19
viewing access point reports 14-4
viewing audit reports 14-6
viewing audit status 9-5
for access points 9-22
viewing autonomous access points 9-16
viewing client reports 14-7
viewing clients
identified as WGBs 6-43
viewing guest users 7-16
viewing IDS signature attacks 13-60
viewing IDS signature events 3-15
viewing inventory reports 14-9
viewing mesh reports 14-11
viewing mesh tree 6-35
viewing MFP events 13-58
viewing performance reports 14-12
viewing security reports 14-14
viewing shunned clients 3-9

viewing the audit trail 7-9
voice parameter template
configuring 10-57
voice RF coverage
troubleshooting 5-19
voice statistics report 14-12
voice traffic 5-16
VoWLAN readiness
inspecting 5-19

W

WCS
checking status
on Linux 11-2
on Windows 11-2
installing 2-4
maintaining 11-1–11-19
overview 1-3
servers supported 1-3
starting
on Linux 2-12
on Windows 2-11
stopping
on Linux 11-3
on Windows 11-3
uninstalling
on Linux 11-14
on Windows 11-14
upgrading
on Linux 11-19
on Windows 11-19
versions 1-4–1-6
WCS Base, described 1-4, 1-6
WCS controller deployment
from WLSE autonomous C-1
WCS database
adding chokepoints 5-31
adding controllers 4-2
adding location appliances 4-2
backing up
on Linux 11-5–11-6
on Windows 11-5
removing chokepoints 5-38
restoring
on Linux 11-7
on Windows 11-6
scheduling automatic backups 11-4, 15-2
WCS home 2-13
WCS Home page
customizing content 2-18
customizing tabs 2-17
WCS licenses B-2
WCS Location
described 1-5–1-6
relationship with Cisco location appliances 1-5
WCS Navigator 1-7
WCS on WLSE
licensing C-6
WCS password
recovering 11-20
WCS user accounts
adding 7-2
changing passwords 7-4
deleting 7-4
WCS user interface 7-14
described 1-3, 1-7
logging into 2-13–2-14
web auth security A-3
web authentication template 10-47
web authentication types 3-16
web login
enabling 3-15
WGB 9-16
WGBs
viewing those clients 6-43
wired guest access
configuring 9-26

Wireless Control System (WCS)
See WCS
wireless LAN event correlation 13-61
WLAN templates 10-9
WLANs
web auth security A-3
WLSE autonomous deployment conversion C-1
WLSE management stations C-2
WLSE map data
exporting 5-51
importing 5-51
WLSE upgrade B-2
WLSE upgrade license C-6
WMM policy 10-18
work group bridge mode 9-16
worst node hop count 2-17
worst node hops
for mesh 14-10
worst packet error rate 2-17
worst SNR links 2-17
for mesh 14-10
WPS traps 10-71