



INDEX

Symbols

- * (asterisk)
 - host time stamps **10-30**
 - +153646 **10-38**
 - +840266 **10-36**

A

- active zone sets
 - considerations **3-4**
 - enabling distribution **3-15**

B

- BB_credits
 - FICON port swapping **10-37**
- broadcast
 - routing **6-12**
- Brocade
 - native interop mode **11-14**

C

- CIM
 - configuring **11-1**
 - description **11-1**
 - displaying information **11-3**
- CIM servers
 - displaying information **11-3, 11-5**
- code pages
 - FICON text string formatting **10-20**
- Common Information Model. See CIM

- company IDs
- FC ID allocations **11-11**
- configuration
 - saving automatically for FICON **10-22**
- configuration files
- FICON **10-33**
- Control Unit Port. See CUP in-band management
- CUP in-band management
 - blocking restriction **10-25**
 - description **10-42**
 - displaying information **10-43**
 - placing CUPs in zones **10-43**

D

- dead time intervals
 - configuring for FSPF **6-8**
 - description **6-7**
- default VSANs
 - description **2-9**
- default zones
 - configuring access permissions **3-11**
 - configuring QoS priorities **3-20**
 - description **3-10**
 - interoperability **11-14**
 - policies **3-10**
- destination IDs
 - in-order delivery **6-13**
 - path selection **2-11**
- device alias database
 - committing changes **5-6**
 - disabling distribution **5-7**
 - discarding changes **5-6**

Send documentation comments to mdsfeedback-doc@cisco.com

- distribution to fabric [5-5](#)
 - enabling distribution [5-7](#)
 - merging [5-9](#)
 - overriding fabric lock [5-7](#)
 - device aliases
 - clearing statistics [5-9](#)
 - comparison with zones (table) [5-4](#)
 - creating [5-5](#)
 - default settings [5-12](#)
 - description [5-1](#)
 - displaying information [5-9 to 5-11](#)
 - features [5-3](#)
 - modifying the database [5-4](#)
 - requirements [5-3](#)
 - device allegiance
 - FICON [10-22](#)
 - domain IDs
 - configuring fcalias members [3-11](#)
 - interoperability [11-14](#)
 - DPVM
 - default settings [4-14](#)
 - description [4-1](#)
 - displaying configurations [4-10](#)
 - enabling [4-2](#)
 - requirements [4-2](#)
 - sample configuration [4-11 to 4-14](#)
 - DPVM databases
 - autolearned entries [4-4](#)
 - clearing [4-5](#)
 - comparing differences [4-9](#)
 - configuring CFS distribution [4-5 to ??](#)
 - copying [4-9](#)
 - description [4-3](#)
 - displaying [4-11](#)
 - enabling autolearning [4-5](#)
 - merging guidelines [4-8](#)
 - drop latency time
 - configuring for FSPF in-order delivery [6-16](#)
 - displaying information [6-17](#)
 - Dynamic Port VSAN Membership. See DPVM
-
- E**
 - EBCDIC
 - FICON string format [10-20](#)
 - enhanced zones
 - advantages over basic zones [3-32](#)
 - broadcast frames [3-37](#)
 - changing from basic zones [3-32](#)
 - configuring default full database distribution [3-38](#)
 - configuring default switch-wide zone policies [3-38](#)
 - creating attribute groups [3-34](#)
 - default settings [3-43](#)
 - description [3-31](#)
 - displaying information [3-39 to 3-41](#)
 - enabling [3-33](#)
 - merging databases [3-35](#)
 - modifying database [3-34](#)
 - E ports
 - FSPF topologies [6-2](#)
 - recovering from link isolations [3-15](#)
 - exchange IDs
 - in-order delivery [6-13](#)
 - path selection [2-11](#)
 - Extended Binary-Coded Decimal Interchange Code. See EBCDIC [10-20](#)
-
- F**
 - Fabric-Device Management Interface. See FDMI
 - fabric login. See FLOGI
 - fabric pWWNs
 - zone membership [3-2](#)
 - Fabric Shortest Path First. See FSPF
 - fabric WWNs. See fWWNs
 - fault tolerant fabrics
 - example (figure) [6-2](#)
 - fcalias

Send documentation comments to mdsfeedback-doc@cisco.com

- cloning **3-18**
- configuring for zones **3-11**
- creating **3-11**
- renaming **3-18**
- FC ID allocation
 - FICON implementation **10-14**
- FC IDs
 - allocating **11-11**
 - allocating default company ID lists **11-11**
 - allocating for FICON **10-14**
 - allocation for HBAs **11-11**
 - configuring fcalias members **3-11**
- FCIP
 - FICON support **10-4**
 - reserving ports for FICON **10-13**
- FCIP interfaces
 - binding to FICON port numbers **10-25**
- FCP
 - intermixing protocols **10-5**
- fctimers
 - displaying configured values **11-9**
 - distribution **11-7**
- FDMI
 - description **8-6**
 - displaying database information **8-6**
- Fibre Channel
 - time out values **11-5 to 11-9**
- Fibre Channel interfaces
 - displaying VSAN membership **2-8**
- Fibre Channel Protocol. See FCP
- Fibre Connection. See FICON
- FICON
 - advantages on MDS switches **10-3 to 10-7**
 - automatic configuration save **10-23**
 - basic configuration **10-16**
 - cascading **10-7**
 - clearing device allegiance **10-22**
 - configuration files **10-32**
 - configuring<\$11-22 **10-15**
 - configuring ports **10-24 to 10-32**
 - CUP in-band management **10-42**
 - default settings **10-51**
 - description **10-1 to 10-7**
 - displaying information **10-44 to 10-51**
 - FC4 protocols **10-2**
 - FC ID allocations **10-14**
 - FCIP support **10-4**
 - host timestamp control **10-21**
 - implemented ports **10-11**
 - installed ports **10-11**
 - manually enabling **10-19**
 - MDS-supported features **10-5**
 - PortChannel support **10-4**
 - port numbering **10-7 to 10-14**
 - port swapping **10-36 to 10-38**
 - prohibited ports **10-48**
 - RLIRs **10-27 to 10-28**
 - saving configuration changes **10-22**
 - tape acceleration **10-38 to ??, 10-40 to ??, 10-42 to ??**
 - text string formatting codes **10-20**
 - unimplemented port **10-11**
 - VSAN offline state **10-42**
 - FICON configuration files
 - applying to running configuration **10-33**
 - copying **10-36**
 - description **10-33**
 - displaying **10-34**
 - displaying information **10-46**
 - editing **10-34**
 - FICON port numbers
 - assigning to slots **10-12**
 - default numbering scheme **10-8**
 - displaying assignments **10-12**
 - FCIP interfaces **10-13**
 - implemented addresses **10-11**
 - installed ports **10-11**
 - logical interfaces **10-13**
 - numbering guidelines **10-12**

Send documentation comments to mdsfeedback-doc@cisco.com

- PortChannel interfaces **10-13**
 - port swapping **10-10**
 - reserved numbering scheme **10-11**
 - unimplemented addresses **10-11**
 - uninstalled ports **10-11**
- FICON ports
 - assigning address names **10-27**
 - binding to FCIP interfaces **10-25**
 - binding to PortChannels **10-24**
 - blocking **10-25**
 - configuring prohibiting default state **10-26**
 - displaying address information **10-45**
 - displaying administrative states **10-48**
 - prohibiting **10-26**
 - swapping configurations **10-37**
- FICON port swapping
 - guidelines **10-37**
- FICON tape acceleration
 - configuration considerations **10-40**
 - configuring **10-40**
 - description **10-38, 10-40, 10-42**
- FICON tape read acceleration
 - configuring **10-41**
- FLOGI
 - description **8-1**
 - displaying details **8-1**
- flow statistics
 - clearing **6-18**
 - counting **6-18**
 - description **6-17**
 - displaying **6-18**
- FL ports
 - DPVM support **4-4**
- F ports
 - DPVM support **4-4**
- FSCN
 - displaying databases **9-3**
- FSPF
 - clearing counters **6-9**
 - clearing VSAN counters **6-6**
 - computing link cost **6-7**
 - configuring globally **6-4 to 6-6**
 - configuring Hello time intervals **6-7**
 - configuring link cost **6-6**
 - configuring on a VSAN **6-5**
 - configuring on interfaces **6-6 to 6-9**
 - dead time intervals **6-7**
 - default settings **6-21**
 - description **6-2**
 - disabling **6-6**
 - disabling on interfaces **6-9**
 - disabling routing protocols **6-6**
 - displaying database information **6-20**
 - displaying global information **6-19**
 - displaying information **? to 6-21**
 - enabling **6-6**
 - fail-over with PortChannels **6-3**
 - fault tolerant fabrics **6-2**
 - flow statistics **6-17 to 6-19**
 - in-order delivery **6-13 to 6-17**
 - interoperability **11-15**
 - link state record defaults **6-4**
 - multicast root switches **6-12**
 - reconvergence times **6-2**
 - redundant links **6-3**
 - resetting configuration **6-5**
 - resetting to defaults **6-5**
 - retransmitting intervals **6-8**
 - routing services **6-1**
 - topology examples **6-2 to 6-4**
 - FSPF multicast roots
 - configuring switches **6-12**
 - FSPF routes
 - configuring **6-10**
 - description **6-10**
 - FSPF routing
 - multicast **6-12**
 - full zone sets

Send documentation comments to mdsfeedback-doc@cisco.com

- considerations [3-4](#)
 - enabling distribution [3-15](#)
 - fWWNs
 - configuring fcalias members [3-11](#)
 - Fx ports
 - VSAN membership [2-4](#)
-
- H**
 - hard zoning
 - description [3-14](#)
 - HBAs
 - device aliases [5-1](#)
 - FC ID allocations [11-11](#)
 - Hello time intervals
 - configuring for FSPF [6-7](#)
 - description [6-7](#)
 - host control
 - FICON [10-20](#)
-
- I**
 - IBM PPRC
 - FICON support [10-4](#)
 - in-band management
 - CUP [10-42](#)
 - in-order delivery
 - configuring drop latency time [6-16](#)
 - displaying status [6-15](#)
 - enabling for VSANs [6-15](#)
 - enabling globally [6-15](#)
 - guidelines [6-14](#)
 - reordering network frames [6-13](#)
 - reordering PortChannel frames [6-14](#)
 - interfaces
 - assigning to VSANs [2-7](#)
 - configuring fcalias members [3-11](#)
 - VSAN membership [2-7](#)

- interoperability
 - configuring interop mode 1 [11-16](#)
 - description [11-13](#)
 - VSANs [2-11](#)
 - interop modes
 - configuring mode 1 [11-16](#)
 - default settings [11-20](#)
 - description [11-13](#)
 - IOD. See in-order delivery
 - IPv4 addresses
 - configuring fcalias members [3-11](#)
 - IPv6 addresses
 - configuring fcalias members [3-2, 3-11](#)
 - isolated VSANs
 - description [2-9](#)
 - displaying membership [2-9](#)
-

- L**
- link costs
 - configuring for FSPF [6-7](#)
 - description [6-6](#)
- Link Incident Records. See LIRs
- LIRs
 - description [10-27](#)
- load balancing
 - attributes [2-11](#)
 - attributes for VSANs [2-5](#)
 - configuring [2-11](#)
 - description [2-11](#)
 - guarantees [2-11](#)
- logical unit numbers. See LUNs
- LUNs
 - displaying automatically discovered SCSI targets [9-4](#)
 - displaying customized discovered SCSI targets [9-4](#)
 - displaying discovered SCSI targets [9-3](#)
- LUN zoning
 - configuring [3-23](#)
 - description [3-22](#)

Send documentation comments to mdsfeedback-doc@cisco.com

M

- MAC addresses
 - configuring secondary [11-11](#)
- mainframes
 - FICON parameters [10-21](#)
 - VSAN clock [10-21](#)
- McData
 - native interop mode [11-14](#)
- multicast root switches
 - configuring [6-12](#)
 - description [6-12](#)

N

- name servers
 - displaying database entries [8-4](#)
 - interoperability [11-15](#)
 - LUN information [9-1](#)
 - proxy feature [8-3](#)
 - registering proxies [8-3](#)
 - rejecting duplicate pWWNs [8-4](#)

- NL ports
 - hard zoning [3-14](#)
 - zone enforcement [3-14](#)

node world wide names. See nWWNs

- N ports
 - hard zoning [3-14](#)
 - zone enforcement [3-14](#)
 - zone membership [3-2](#)
 - See also Nx ports

nWWNs

DPVM [4-1](#)

P

- PLOGI
 - name server [8-4](#)
- port addresses

FICON [10-10](#)

PortChannels

binding to FICON port numbers [10-24](#)

configuring Fibre Channel routes [6-11](#)

FICON support [10-4](#)

in-order guarantee [6-14](#)

interoperability [11-15](#)

link changes [6-14](#)

link failures [6-3](#)

reserving ports for FICON [10-13](#)

port numbers. See FICON port numbers

ports

VSAN membership [2-7](#)

port swapping. See FICON port swapping

port world wide names. See pWWNs

prohibited ports

FICON [10-48](#)

proxies

registering for name servers [8-3](#)

pWWNs

configuring fcalias members [3-11](#)

DPVM [4-1](#)

rejecting duplicates [8-4](#)

zone membership [3-2](#)

R

read-only zones

configuration guidelines [3-24](#)

configuring [3-24](#)

default settings [3-43](#)

description [3-24](#)

redundancy

VSANs [2-4](#)

redundant physical links

example (figure) [6-3](#)

Registered Link Incident Reports. See RLIRs

Registered State Change Notifications. See RSCNs

retransmitting intervals

Send documentation comments to mdsfeedback-doc@cisco.com

- configuring for FSPF **6-8**
 - description **6-8**
 - RLIRs
 - clearing information **10-32**
 - conditional receive **10-30**
 - description **10-27, 10-28**
 - displaying information **10-28 to 10-32**
 - specifying preferred host **10-28**
 - route costs
 - computing **6-6**
 - routing
 - multicast **6-12**
 - See also broadcast routing
 - See also IP routing
 - routing protocols
 - disabling **6-6**
 - RSCNs
 - clearing statistics **8-10**
 - default settings **8-15**
 - description **8-8**
 - displaying information **8-8**
 - multiple port IDs **8-9**
 - suppressing domain format SW-RSCNs **8-10**
 - RSCN timers
 - configuration distribution using CFS **8-12 to 8-15**
 - configuring **8-11**
 - displaying configuration **8-12**
 - runtime checks
 - static routes **6-10**
-
- S**
 - scalability
 - VSANs **2-4**
 - SCSI LUNs
 - customized discovery **9-2**
 - discovering targets **9-1**
 - displaying information **9-2**
 - starting discoveries **9-2**
- secondary MAC addresses
 - configuring **11-11**
 - small computer system interface. See SCSI
 - SNMP
 - FICON control **10-22**
 - soft zoning
 - description **3-14**
 - See also zoning
 - source IDs
 - in-order delivery **6-13**
 - path selection **2-11**
 - SPF
 - computational hold times **6-4**
 - static routes
 - runtime checks **6-10**
 - storage devices
 - access control **3-1**
-
- T**
 - tape acceleration
 - FICON **10-38 to 10-40, ?? to 10-42**
 - TE ports
 - FSPF topologies **6-2**
 - interoperability **11-15**
 - recovering from link isolations **3-15**
 - time out values. See TOVs
 - timestamps
 - FICON host control **10-21**
 - TOVs
 - configuring across all VSANs **11-6**
 - configuring for a VSAN **11-6**
 - default settings **11-20**
 - interoperability **11-14**
 - ranges **11-5**
 - traffic isolation
 - VSANs **2-4**
 - trunking
 - interoperability **11-14**

Send documentation comments to mdsfeedback-doc@cisco.com

trunking ports

 associated with VSANs **2-7**

V

VSAN IDs

 description **2-5**

 range **2-4**

 VSAN membership **2-4**

VSANs

 advantages **2-3**

 broadcast addresses **6-12**

 clocks **10-21**

 comparison with zones (table) **2-4**

 configuring **2-6 to 2-7**

 configuring FSPF **6-4**

 default settings **2-12**

 default VSANs **2-9**

 deleting **2-9**

 description **2-1 to 2-4**

 displaying configuration **2-11**

 displaying membership **2-8**

 displaying usage **2-12**

 fabric optimization for FICON **10-3**

 FC IDs **2-1**

 features **2-1**

 FICON-enabled **2-11, 10-42**

 flow statistics **6-17**

 FSPF **6-5**

 FSPF connectivity **6-2**

 interop mode **11-14**

 isolated **2-9**

 load balancing **2-11**

 load balancing attributes **2-5**

 multiple zones **3-4**

 names **2-5**

 name server **8-3**

 operational states **2-9**

 port membership **2-7**

states **2-5**

timer configuration **11-6**

TOVs **11-6**

traffic isolation **2-3**

trunking ports **2-7**

W

world wide names. See WWNs

WWNs

 configuring **11-9**

 displaying information **11-10**

 link initialization **11-10**

 secondary MAC addresses **11-11**

X

XRC

 FICON support **10-4**

Z

zone attribute groups

 cloning **3-18**

zone databases

 release locks **3-34**

zones

 access control **3-8**

 adding to zone sets **3-12**

 analyzing **3-42**

 assigning LUNs to storage subsystems **3-24**

 backing up (procedure) **3-17**

 changing from enhanced zones **3-33**

 cloning **3-18**

 compacting for downgrading **3-41**

 comparison with device aliases (table) **5-4**

 comparison with VSANs (table) **2-4**

 configuring **3-6 to 3-7**

Send documentation comments to mdsfeedback-doc@cisco.com

configuring aliases **3-11**
 configuring broadcasting **3-21**
 configuring fcaliases **3-11**
 CUPs **10-43**
 default policies **3-2**
 default settings **3-43**
 displaying information **3-25 to 3-31**
 enforcing restrictions **3-14**
 exporting databases **3-15**
 features **3-1, 3-3**
 importing databases **3-15**
 LUN-based **3-22**
 membership using pWWNs **2-4**
 renaming **3-18**
 restoring (procedure) **3-17**
 See also default zones
 See also enhanced zones
 See also hard zoning; soft zoning
 See also LUN zoning
 See also read-only zones
 See also zoning; zone sets
 zone server databases
 clearing **3-18**
 zone sets
 activating **3-10**
 adding member zones **3-12**
 analyzing **3-42**
 cloning **3-18**
 configuring **3-8 to 3-10**
 considerations **3-4**
 copying **3-16**
 creating **3-8, 3-12**
 default settings **3-43**
 displaying information **3-25 to 3-31**
 distributing configuration **3-14**
 enabling distribution **3-14**
 exporting **3-16**
 exporting databases **3-15**
 features **3-1**
 importing **3-16**
 importing databases **3-15**
 one-time distribution **3-15**
 recovering from link isolations **3-15**
 renaming **3-18**
 See also active zone sets
 See also active zone sets; full zone sets
 See also zones; zoning
 zone traffic priorities
 configuring **3-19**
 description **3-19**
 zoning
 configuring broadcasting **3-21**
 description **3-1**
 example **3-2**
 implementation **3-3**
 See also LUN zoning
 See also zones; zone sets

Send documentation comments to mdsfeedback-doc@cisco.com