Send docu



5kdocfeedback@cisco.com

INDEX

	Cisco Fabric Services over IP
Numerics	about 4-4
10 Gigabit-Ethernet	requirements 4-2
peer link ports 2-14	Cisco Nexus 2000 Series Fabric Extender
	installing a new Fabric Extender 2-13
A	replacing in a dual-homed vPC topology 2-12 replacing in a single-homed vPC topology 2-13
Active/Active FEX Topology 4-13	replacing in a vPC topology 2-12
ARP processing with vPC 3-2	Cisco Nexus 5000 Series switch
auto-recovery	reloading 4-26
about 2-8	replacing in a vPC topology 2-11
replacing reload restore 2-8	synchronizing peer switches after a reload 4-27
status 2-9	class-fcoe 5-8
	class of service (COS) 5-12
	and ETS 5-12
В	and PFC 5-12
buffer	CNA
configuration guidelines 4-8	DCB support 5-13
buffer allocation	second generation 5-6
and QoS configuration 5-11	commit
configuring for FCoE COS 5-8	about 4-8
for FCoE 5-8	best practice 4-8
buffering	command 4-8
switch profile configuration 4-8	order dependency for commands 4-8
	process duration 4-8
	unreachable peer 4-26
С	unsuccessful 4-8, 4-9, 4-31
CFSoIP	config-sync mode 4-5
configuring 4-4	supported commands 4-6
CFS protocol 4-4	configuration modes
channel group	selecting 4-33
failure 4-32	configuration rollback 4-9
workaround 4-32	conditional features

tt. t. it. and	
limitation 4-31	D
workaround 4-31	Data Contan Buildaina aVahanaa (DCDV) E 12
configuration synchronization 4-1	Data Center Bridging eXchange (DCBX) 5-13 DCB Ethernet links 5-9
benefits 4-2	DCBX
best practices 4-9	
configuration examples 4-10	negotiation failure 5-14
configuring a dual-homed FEX topology (Active/Active FEX topology) 4-13	dedicated links 5-9, 5-10 benefits 5-10
configuring an existing deployment with an A/A topology 4-17	dedicated VRF 3-7
configuring a vPC topology using configuration synchronization 4-10	default mode on Cisco Nexus 5000 Series switch 5-15
definition 4-33	delay restore 3-4
guidelines 4-2	delay timer 3-4
limitations 4-3	designated router 3-10
configuration rollback 4-3	CFS message 3-11
FCoE 4-3	elected 3-11
feature commands 4-3	priority 3-11
new deployment in a vPC topology and	Domain IDs
straight-through FEX topology 4-21	limitations 5-15
requirements 4-2	DR election
switch vPC topology and straight-through FEX topology (host vPC) 4-19	see designated router 3-11
connecting to a router in a vPC topology 3-3	dual-homed A/A topology
consistency check	configuring 4-14
bypassing when a peer link is lost 2-8	
failure 2-7	E
configuration differences that lead to 2-7	
status 2-7	Enhanced Transmission Selection (ETS) 5-12
successful 2-7	Etherchannel 4-1
consistency checks	Ethernet NIC 5-6
configuring per-VLAN 2-5	ETS
consolidated links 5-9, 5-10	default settings 5-12
benefits 5-10	
consolidated vs dedicated links 5-9	F
control traffic forwarding in a vPC topology 3-6	
COS	Fabric Extender (FEX)
default value and FCoE 5-12	pre-provisioning 4-2
	faster convergence
	in vPC topology 3-9
	FC-MAP 5-2

changing the FC-MAP value 5-2	about 2-3
default value 5-2	
ranges 5-2	 Н
FCoE	"
buffer allocation 5-8	high availability (HA) 5-2
enabling 5-2	
enabling on VLAN 1 5-3	-
host disruptions 5-2	•
interoperability 5-14	IEEE 802.1Q Data Center Bridging (DCB) standard 5-13
no-drop class of service	IEEE 802.1Q Enhance Ethernet Standards 5-12
and QoS configuration example 5-12	IEEE 802.1Q standard 5-12
predefined QoS policies 5-11	import
QoS configuration 5-11	abort 4-9
single-hop topology 5-14	configuration changes during 4-9
FCoE fabric	methods 4-18, 4-24
best practice 5-3	importing switch profile commands
configuring 5-3	about 4-9
FCoE ports	improved convergence 3-4
host-facing 5-3	initiator switch 4-8
FCoE VLAN	interoperability
and STP 5-3, 5-4	and FCoE 5-14, 5-15
configuration in a vPC 5-7	ISSUs
connecting to a VF port 5-3	not supported 3-14
FCoE VLANS	supported 3-15
difference from Ethernet VLANs 5-3	
FEX	
configuring a FEX in an A/A topology 4-14	K
how to provision 4-29	keepalive interface
straight-through topology 4-20	dedicated VRF for a 3-7
FHRP. See also First Hop Redundancy Protocol	keepalive link
Fibre Channel	failure followed by a peer link failure 2-16
HBA 5-6	, 1
First Hop Redundancy Protocol 3-1	
	L
	Layer 3
	and ISSUs 3-14
Gigabit Expansion Module (GEM)	connecting to a router in a vPC topology 3-6
pre-provisioning 4-2	improved convergence with a vPC topology 3-4
graceful consistency check 2-2	

module failure 3-5	N-Port Virtualizer (NPV) 5-15
recommendation for connections between a router and	NPV
switch 3-6	device benefits 5-15
source and Rendezvouz Point (RP) 3-10	NPIV requirement 5-15
vPC consistency check 3-8	NPV mode
link aggregation control protocol (LACP) 5-5	changing to switch mode 5-15
load balance 5-2	requirement 5-15
M	P
merge checks 4-8	peer-gateway command 3-4
mgmt0 interface 4-4	peer keepalive
lost connectivity 4-31	configuring 4-11
MST 5-4	peer link
multicast	failure followed by a peer keepalive link failure 2-16
data forwarding 3-11	peer links
forwarding algorithm 3-11	bandwidth 2-14
forwarding process 3-13	failure 2-14
forwarding rules 3-12	peer switch
routing table size 3-9	failure 2-16
unsupported topology in vPC configurations 3-9	running configuration in a vPC topology 4-11
multicast routing table	running configuration of FEX in A/A topology 4-14
example of switch output 3-10	PFC
multicast traffic	class-of-service 5-12
not routed 3-12	default settings 5-12
mutual exclusion check	lossless transport and dedicated bandwidth 5-12
about 4-7	PIM router 3-9
command exceptions 4-7	policies
failure 4-7	synchronizing 4-22
	port channel members
N	peer switch requirements 4-23
	port-profiles 4-9
native	prebuilt source tree
fabric services 5-15	faster convergence 3-9
network disruptions 5-2	pre-defined
no-drop classes of service 5-12	FCoE policies 5-11
no-drop service	pre-provisioning 4-9
thresholds 5-8	FEX in dual-homed topology 4-17
N-Port ID Virtualization (NPIV) 5-15	offline interfaces 4-16, 4-23

Priority Flow Control (PFC) 5-12	commands
PVST 5-4	not supported 4-6
PVST+ 5-4	supported 4-6
	commit
Q	requirements 4-7
u	copying commands to 4-9
QoS	creating 4-5
FCoE configuration 5-11	limit 4-6
	naming 4-6
	synchronization
R	configuration changes made during 4-8
reload delay period 2-8	
reload restore 2-8	T
bypassing the vPC consistency check 2-15	•
Rendezvous Point (RP) 3-10	terminology 4-33
Role Based Access Control (RBAC)	traffic flow
switch profile requirements 4-6	tracing in a vPC topology 2-17
routing table size 3-9	Type 1
	interface-level inconsistency 2-4, 2-5
S	Type 2
	parameter mismatch 2-2
single-hop	
FCoE topology 5-14	U
Spanning Tree Protocol 5-3	•
STP	Unified Port Controller (UPC) ASIC 5-10
mode mismatch example 2-4	first generation 5-10
Type 1 consistency checks 2-5	second generation 5-10
straight-through topology	VLAN configuration limit 5-11
diagram 4-20	unified ports 5-11
switch mode	configuration requirements 5-11
and FCoE 5-15	in expansion modules 5-11
and native fabric services 5-15	unsupported multicast topology 3-9
changing to NPV mode 5-15	User-Based Access Controls
switch profile	about 4-6
configuration modes 4-33	
definition 4-33	V
switch profiles 4-1	•
about 4-5	Verification Checks 4-7

```
multicast interaction
Virtual Port Channeling (vPC)
                                                              VRF
    and FCoE 5-5
VLAN
                                                                   services that are recognized 3-8
    consistency checks 2-5
    scalability 5-11
    VLAN to VSAN mapping 5-3
vPC
    Active/Active topology 4-3
    and straight-through FEX topologies 4-19
    and straight-through FEX topology
        existing deployments 4-24
    configurations 4-3
    configuring 4-3, 4-11
    connecting a host 5-5
    consistency check 4-1
    consistency checks 2-1
    identifying inconsistent configurations 2-6
    member port failure 2-13
    peer-config-check-bypass best practice 4-11
    peer keepalive link failure 2-15
    peer-link failure 4-28
    straight-through topology
        running configuration example 4-21
    topology 4-1
    topology diagram 4-3
    traffic flow 2-17
        diagram 2-17
    unsupported multicast topology 3-9
vPC and peer-gateway 3-3
vPC failure scenarios 2-13
vPC operations
    about 2-1
vPC peer link failure 3-5
vPC topologies
    configuration changes 2-9
    running different versions of Cisco NX-OS 4-7
vPC topology
    and straight-through FEX topology new
    deployment 4-21
```