

VDC system hap-reset vdc resource template <i>otv-te- mplate</i> limit-resource VRF min 8 max 16 vdc N7K1id 1 no limit-resource module-type allocate interface ethernet 3/1-8 ha-policy single-sup reload template <i>otv-template</i> Verification: sh vdc internal pss sh int e3/1 capabilities >>>> It will show the port-group.	VPC feature vpc vpc domain 100 role priority 1 system-priority 1 peer-keepalive destination <i>8.8.8.2 source 8.8.8.1 vrf vpc- keepalive</i> dual-active exclude interface- vlan 10 ! interface port-channel100 vpc peer-link Verification: show vpc consistency-par- ameters global	Fabricpath (cont) ! interface Ethernet1/1 switchport mode fabricpath fabricpath isis metric 50 VRRP feature vrrp ! interface Vlan31 no shutdown ip address 10.1.31.2 vrrp 1 priority 254 address 10.1.31.1 no shutdown	HSRP Localisation ! VACL Filter: ip access-list ALL_IPs 10 permit ip any any ! ip access-list HSRP_IP 10 permit udp any 224.0.0.2/32 eq 1985 20 permit udp any 224.0.0.1- 02/32 eq 1985 ! vlan access-map HSRP_Localiz- ation 10 match ip address HSRP_IP action drop vlan access-map HSRP_Localiz- ation 20 match ip address ALL_IPs action forward ! vlan filter HSRP_Localization vlan-list 3001-3002 ! ! OTV MAC route filter: mac-list OTV_HSRP_VMA- C_deny seq 10 deny 0000.0- c07.ac00 ffff.ffff.ff00 mac-list OTV_HSRP_VMA- C_deny seq 20 deny 0000.0- c9f.f000 ffff.ffff.f000 mac-list OTV_HSRP_VMA- C_deny seq 30 permit 0000.0- 000.0000 0000.0000.0000 ! route-map OTV_HSRP_filter permit 10 match mac-list OTV_HSRP_- VMAC_deny ! otv-isis default vpn Overlay0 redistribute filter route-map OTV_HSRP_filter
VLAN vlan dot1Q tag native ! vlan 2 name VLAN2 Verification: sh int switchport	VPC+ vpc domain 200 fabricpath switch-id 200 ! interface port-channel100 switchport mode fabricpath vpc peer-link	HSRP feature hsrp ! interface Vlan41 no shutdown ip address 10.1.41.252/24 hsrp version 2 hsrp 1 ip 10.1.41.254 authentication md5 key-chain <i>mychain</i> timers 1 3 preempt priority 255 ! key chain mychain key 1 key-string CCIEDC Verification: sh hsrp brief sh hsrp group 1*	
SVI (Switch Virtual Interface) feature interface-vlan ! interface vlan 41 no shutdown ip address 10.1.41.252/24	Fabricpath install feature-set fabricpath feature-set fabricpath ! fabricpath switch-id 300 ! fabricpath timers linkup-delay 20 ! fabricpath domain default root-priority 255 maximum-paths 2 ! vlan 34 mode fabricpath		
VRF vrf context vpc-keepalive ! interface Vlan888 vrf member vpc-keepalive ip address 8.8.8.1/30			

Jumbo Frame N7K: system jumbomtu 9216 ! int e3/1 mtu 9216 ! N5K-1: policy-map type network-qos jumbo class type network-qos class- fcoe pause no-drop mtu 2158 ! class type network-qos class-- default mtu 9216 ! system qos service-policy type network-qos jumbo	OSPF feature ospf ! router ospf 1 router-id 1.1.1.1 ! interface Ethernet4/1 ip router ospf 1 area 0 ip ospf network point-to-point Verification: sh ip ospf neighbors summary sh ip ospf neighbors	OTV feature otv ! otv site-vlan 80 otv site-identifier 0x1 ! interface Overlay1 otv join-interface Ethernet4/1 otv control-group 239.1.1.1 otv data-group 232.1.1.0/24 otv extend-vlan 90 no shutdown ! interface Ethernet4/1 ip igmp version 3 no shutdown Verification: show ip igmp interface brief show otv show otv vlan show otv adjacency show otv route	ACL ip access-list WAN 10 permit ip any 10.1.40.0/24 20 permit tcp any 10.1.41.0/24 eq 23 30 deny ip any 10.1.41.0/24 40 permit ip any any ! inter eth 4/1 ip access-group WAN in
Netflow feature netflow ! flow exporter nf_collector destination 10.1.1.1 use-vrf management source mgmt 0 version 9 ! flow monitor nf_monitor record netflow-original exporter nf_collector ! interface Vlan1 ip flow monitor nf_monitor input	EIGRP feature eigrp feature bfd ! route-map SVI permit 10 match interface vlan 40 vlan 50 ! router eigrp 1 bfd autonomous-system 1 router-id 1.1.1.1 redistribute direct route-map SVI ! interface Ethernet4/1 ip router eigrp 1 no ip redirects ip summary-address eigrp 1 10.1.40.0/22	Enhanced VPC feature fex ! fex 101 diag boot level bypass ! inter eth 1/1-2 channel-group 101 no shut ! inter po101 switchport switchport mode fex fex associate 101 vpc 101 no shut	NTP Default VDC: clock protocol ntp vdc 3 ! VDC3: ntp server 10.0.0.1 prefer ntp source-interface eth 4/1
Verification: show run netflow show flow exporter show flow monitor show flow interface	PIM feature pim ! ip pim rp-address 20.0.0.1 ! interface Ethernet4/1 ip pim sparse-mode no shutdown Verification: show run pim show pim neighbor	STP ! SPT root primary spanning-tree vlan 1-4094 root primary Verification: sh spanning-tree root sh spanning-tree summary	Syslog logging server 10.0.0.1 logging source-interface lo0
			MST spanning-tree mode mst ! spanning-tree mst configuration name ccie revision 5 instance 1 vlan 41,42 ! spanning-tree mst 1 root primary

FCoE - Storage VDC

```

Default VDC:
!
install feature-set fcoe
!
license fcoe module 3
!
system qos
service-policy type network-qos
default-nq-7e-policy
!
port-channel load-balance src-
dst ip-l4port module 3
!
vdc Storage_VDCid 2type
storage
allocate fcoe-vlan-range 100
!
Storage VDC:
feature-set fcoe
feature npiv
feature lacp
feature lldp
!
vsan database
vsan 100
!
vlan 100
fcoe vsan 100

```

```

Verification:
show vlan fcoe
show policy-map system
show run ipqos

```

vfc

```

interface Ethernet 3/1
switchport
switchport mode trunk
switchport trunk allowed vlan 200
spanning-tree port type edge
trunk
!

```

vfc (cont)

```

interface vfc 4
bind interface Ethernet 3/1
switchport mode F
switchport trunk allowed vsan 2
!
vlan 200
fcoe vsan 2
!
vsan database
vsan 2interface vfc 4

```

```

Verification:
show int bri fcoe
show int vfc 4 trunk vsan

```

vfc-portchannel

```

feature lacp
!
interface port-channel1
switchport
switchport mode trunk
switchport trunk allowed vlan
100
no shutdown
!
interface Ethernet4/1
channel-group 1force mode
active
!
interface vfc-po1
switchport mode F
switchport trunk allowed vsan
100
no shutdown
!
vsan database
vsan 100interface vfc-po 1

```

F san-portchannel

```

feature npiv
feature fport-channel-trunk
!
interface port-channel 100
channel mode active
switchport mode f
switchport mode trunk on
switchport trunk allowed vsan
100
switchport rate-mode shared
!
interface fc1/9-12
channel-group 100force
no shutdown

```

E san-portchannel

```

N5K:
feature fcoe
!
vsan database
vsan 200
vsan 200loadbalancing src-dst-
id
! SID/DID
port-channel load-balance
ethernet source-dest-ip
!
fcdomain domain 0x1 static
vsan 200
fcdomain restart vsan 200
!
interface san-port-channel 22
channel mode active
switchport mode E
switchport trunk mode on
switchport trunk allowed vsan
add 200

```

E san-portchannel (cont)

```

switchport rate-mode dedicated

```

FCIP with FCSP

```

feature fcip
feature fcsp
!
fcsp dhchap password CCIEDC
fcsp dhchap devicename
NeighborSwitchWWNpassword
CCIEDC
!
int Gi1/1
ip address 10.3.1.1 255.255.2-
55.252
switchport mtu 2300
no shutdown
!
fcip profile 1
ip address 10.3.1.1
!
vsan database
vsan 100
!
interface port-channel 1
channel mode active
fcsp on
switchport mode e
switchport trunk allowed vsan
add 100
!
interface fcip1
use-profile 1
peer-info ipaddr 10.3.1.2
channel-group 1 force
no shutdown

```

```

show wwn switch
show fcsp dhchap database
show fcsp interface port-channel
1

```

FCIP via Firewall	NPV	FCoE Host	N1KV - QoS (cont)
MDS-1: feature fcip int gi1/1 ip addr 10.3.1.1 255.255.2-55.252 switchport mtu 2300 no shut ! fcip profile 10 ip add 10.3.1.1 port 3005 ! int fcip 10 use-profile 10 peer-info ipadd 10.3.1.2 passive-mode switchport mode e switchport trunk allowed vsan 100 no shut ! MDS-2: int gi1/1 ip add 10.3.1.2 255.255.255.252 switchport mtu 2300 no shut ! fcip profile 10 ip add 10.3.1.2 ! int fcip 10 use-profile 10 peer-info ipadd 10.3.1.1 port 3005 switchport mode e switchport trunk allowed vsan 100 no shut Verification: show fcip profile show fcip summary	feature fcoe feature npv ! slot 2 port 1-16 type fc poweroff module 2 no poweroff module 2 ! npv auto-load-balance disruptive FC Zone Creating zone: zoneset name zs_vsan_100 vsan 100 zone name zone_vsan_100 member pwwn 20:00:00:25:b5:-00:00:01 member pwwn 50:00:00:00:00:-00:00:01 ! zoneset activate name zs_vsa-n_100 vsan 100 ! No zone (useful for troubleshooting but not for production): zone default-zone permit vsan 100 ! Basic mode - manual full zone database distribution: zoneset distribute vsan 100 ! Enhanced mode - Automatic full zone database distribution: zone mode enhanced ! show zone status vsan 100 Shortcuts sh cli history config-mode unformatted cli alias name v2 switchto vdc N7K-2	int eth1/20 switchport switchport mode trunk switchport trunk allowed vlan 1,100 spanning-tree port type edge trunk no shut int vfc 20 bind interface eth1/20 switchport mode F switchport trunk allowed vsan 100 no shut N1KV - manual subgroup port-profile type ethernet system-uplink channel-group auto mode on sub-group manual ! interface e3/1 sub-group-id 0 To find the interface number: module vem 3 execute vemcmd show port N1KV - iSCSI Multipath port-profile type vethernet iscsi capability iscsi-multipath system vlan 30 ! port-profile type ethernet system-uplink system vlan 1,30,40* N1KV - QoS policy-map type qos silver class class-default set cos 2 !	port-profile type vethernet iscsi service-policy type qos input silver ! system jumbomtu 9000 ! port-profile type ethernet system-uplink mtu 9000 N1KV - Setup ! Maximum number of ports in a non-uplink port-profile port-profile default max-ports 8 ! dv Port ID persists for the life of veth port-profile default port-binding static N1KV - relative subgroup ! Subgroup ID should start from 0 and increase by 1 for each additional uplink port-profile type ethernet system-uplink channel-group auto mode on mac-pinning relative