**Bài tập nhóm**

**Core 1**

Core1#sh ip int bri | ex un

Core1#sh cdp n

conf t

int port-channel 1

no switchport

ip add 10.0.0.1 255.255.255.252

no shut

conf t

int ra g0/1-2

no switchport

channel-group 1 mode on

conf t

port-channel load-balance src-dst-ip

en

conf t

int ra g0/1-2

shut

channel-group 1 mode on

no shut

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.0 0.0.0.3

net 10.0.0.4 0.0.0.3

net 10.0.0.12 0.0.0.3

net 10.0.0.20 0.0.0.3

net 10.0.0.28 0.0.0.3

net 10.0.0.36 0.0.0.3

net 10.0.0.40 0.0.0.3

net 10.0.0.56 0.0.0.3

**Core 2**

Core2#sh cdp n

conf t

int port-channel 1

no switchport

ip add 10.0.0.2 255.255.255.252

no shut

conf t

int ra g0/1-2

no switchport

channel-group 1 mode on

conf t

port-channel load-balance src-dst-ip

en

conf t

int ra g0/1-2

shut

channel-group 1 mode on

no shut

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.0 0.0.0.3

net 10.0.0.8 0.0.0.3

net 10.0.0.16 0.0.0.3

net 10.0.0.24 0.0.0.3

net 10.0.0.32 0.0.0.3

net 10.0.0.40 0.0.0.3

net 10.0.0.48 0.0.0.3

net 10.0.0.60 0.0.0.3

**ping 10.0.0.2**

**ping 10.0.0.1**

**D1**

sh ip int bri | ex un

conf t

vlan 3

vlan 5

vlan 9

vlan 14

en

conf t

int vlan 3

ip add 192.168.3.2 255.255.255.0

exit

int vlan 5

ip add 192.168.5.2 255.255.255.0

exit

int vlan 9

ip add 192.168.9.2 255.255.255.0

exit

int vlan 14

ip add 192.168.14.2 255.255.255.0

exit

en

conf t

ip dhcp exclude 192.168.3.1 192.168.3.3

ip dhcp exclude 192.168.5.1 192.168.5.3

ip dhcp exclude 192.168.9.1 192.168.9.3

ip dhcp exclude 192.168.14.1 192.168.14.3

en

conf t

ip dhcp pool VLAN3

net 192.168.3.0 255.255.255.0

default 192.168.3.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN5

net 192.168.5.0 255.255.255.0

default 192.168.5.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN9

net 192.168.9.0 255.255.255.0

default 192.168.9.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN14

net 192.168.14.0 255.255.255.0

default 192.168.14.1

domain 2112998.com

dns 8.8.8.8

ex

en

conf t

int vlan 3

standby 3 ip 192.168.3.1

standby 3 prio 120

standby 3 pre

ex

int vlan 9

standby 9 ip 192.168.9.1

standby 9 prio 120

standby 9 pre

ex

int vlan 5

standby 5 ip 192.168.5.1

ex

int vlan 14

standby 14 ip 192.168.14.1

en

conf t

int g0/1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

int ra fa0/1-3

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

ex

int fa0/5

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

en

conf t

spanning-tree vlan 3,9 root primary

spanning-tree vlan 5,14 root secondary

en

conf t

spann mode rapid

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.4 0.0.0.3

net 10.0.0.8 0.0.0.3

net 192.168.3.0 0.0.0.255

net 192.168.5.0 0.0.0.255

net 192.168.9.0 0.0.0.255

net 192.168.14.0 0.0.0.255

en

conf t

int fa0/3

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

en

conf t

int fa0/13

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

**D2**

conf t

vlan 3

vlan 5

vlan 9

vlan 14

en

conf t

int vlan 3

ip add 192.168.3.3 255.255.255.0

exit

int vlan 5

ip add 192.168.5.3 255.255.255.0

exit

int vlan 9

ip add 192.168.9.3 255.255.255.0

exit

int vlan 14

ip add 192.168.14.3 255.255.255.0

exit

en

conf t

ip dhcp exclude 192.168.3.1 192.168.3.3

ip dhcp exclude 192.168.5.1 192.168.5.3

ip dhcp exclude 192.168.9.1 192.168.9.3

ip dhcp exclude 192.168.14.1 192.168.14.3

en

conf t

ip dhcp pool VLAN3

net 192.168.3.0 255.255.255.0

default 192.168.3.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN5

net 192.168.5.0 255.255.255.0

default 192.168.5.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN9

net 192.168.9.0 255.255.255.0

default 192.168.9.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN14

net 192.168.14.0 255.255.255.0

default 192.168.14.1

domain 2112998.com

dns 8.8.8.8

ex

en

conf t

int vlan 5

standby 5 ip 192.168.5.1

standby 5 prio 120

standby 5 pre

ex

int vlan 14

standby 14 ip 192.168.14.1

standby 14 prio 120

standby 14 pre

ex

int vlan 3

standby 3 ip 192.168.3.1

int vlan 9

standby 9 ip 192.168.9.1

en

conf t

int g0/1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

int ra fa0/1-2

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

ex

int ra fa0/4-5

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

en

conf t

spanning-tree vlan 5,14 root primary

spanning-tree vlan 3,9 root secondary

en

conf t

spann mode rapid

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.12 0.0.0.3

net 10.0.0.16 0.0.0.3

net 192.168.3.0 0.0.0.255

net 192.168.5.0 0.0.0.255

net 192.168.9.0 0.0.0.255

net 192.168.14.0 0.0.0.255

en

conf t

int fa0/4

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

en

conf t

int fa0/12

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

**sh vlan**

**D3**

en

Conf t

vlan 34

vlan 37

vlan 42

vlan 46

en

conf t

int vlan 34

ip add 192.168.34.2 255.255.255.0

exit

int vlan 37

ip add 192.168.37.2 255.255.255.0

exit

int vlan 42

ip add 192.168.42.2 255.255.255.0

exit

int vlan 46

ip add 192.168.46.2 255.255.255.0

exit

en

conf t

ip dhcp exclude 192.168.34.1 192.168.34.3

ip dhcp exclude 192.168.37.1 192.168.37.3

ip dhcp exclude 192.168.42.1 192.168.42.3

ip dhcp exclude 192.168.46.1 192.168.46.3

en

conf t

ip dhcp pool VLAN34

net 192.168.34.0 255.255.255.0

default 192.168.34.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN37

net 192.168.37.0 255.255.255.0

default 192.168.37.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN42

net 192.168.42.0 255.255.255.0

default 192.168.42.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN46

net 192.168.46.0 255.255.255.0

default 192.168.46.1

domain 2112998.com

dns 8.8.8.8

ex

en

conf t

int vlan 34

standby 34 ip 192.168. 34.1

standby 34 prio 120

standby 34 pre

ex

int vlan 42

standby 42 ip 192.168. 42.1

standby 42 prio 120

standby 42 pre

ex

int vlan 37

standby 37 ip 192.168.37.1

int vlan 46

standby 46 ip 192.168.46.1

ex

en

conf t

int g0/1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

int ra fa0/1-4

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

**en**

**sh stan b**

en

conf t

spanning-tree vlan 34,42 root primary

spanning-tree vlan 37,46 root secondary

en

conf t

spann mode rapid

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.20 0.0.0.3

net 10.0.0.24 0.0.0.3

net 192.168.34.0 0.0.0.255

net 192.168.37.0 0.0.0.255

net 192.168.42.0 0.0.0.255

net 192.168.46.0 0.0.0.255

**sh cdp n**

en

conf t

int fa0/5

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

int fa0/11

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

**D4**

en

Conf t

vlan 34

vlan 37

vlan 42

vlan 46

en

conf t

int vlan 34

ip add 192.168.34.3 255.255.255.0

exit

int vlan 37

ip add 192.168.37.3 255.255.255.0

exit

int vlan 42

ip add 192.168.42.3 255.255.255.0

exit

int vlan 46

ip add 192.168.46.3 255.255.255.0

exit

en

conf t

ip dhcp exclude 192.168.34.1 192.168.34.3

ip dhcp exclude 192.168.37.1 192.168.37.3

ip dhcp exclude 192.168.42.1 192.168.42.3

ip dhcp exclude 192.168.46.1 192.168.46.3

en

conf t

ip dhcp pool VLAN34

net 192.168.34.0 255.255.255.0

default 192.168.34.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN37

net 192.168.37.0 255.255.255.0

default 192.168.37.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN42

net 192.168.42.0 255.255.255.0

default 192.168.42.1

domain 2112998.com

dns 8.8.8.8

ex

ip dhcp pool VLAN46

net 192.168.46.0 255.255.255.0

default 192.168.46.1

domain 2112998.com

dns 8.8.8.8

ex

en

conf t

int vlan 37

standby 37 ip 192.168. 37.1

standby 37 prio 120

standby 37 pre

ex

int vlan 46

standby 46 ip 192.168. 46.1

standby 46 prio 120

standby 46 pre

ex

int vlan 34

standby 34 ip 192.168.34.1

int vlan 42

standby 42 ip 192.168.42.1

ex

en

conf t

int g0/1

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

en

conf t

int ra fa0/1-4

switchport trunk encapsulation dot1q

switchport mode trunk

switchport nonegotiate

**en**

**sh stan b**

en

conf t

spanning-tree vlan 37,46 root primary

spanning-tree vlan 34,42 root secondary

en

conf t

spann mode rapid

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.28 0.0.0.3

net 10.0.0.32 0.0.0.3

net 192.168.34.0 0.0.0.255

net 192.168.37.0 0.0.0.255

net 192.168.42.0 0.0.0.255

net 192.168.46.0 0.0.0.255

en

conf t

int fa0/6

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

int fa0/10

ip summary-address eigrp 1 192.168.0.0 255.255.240.0

ex

**A1**

En

Conf t

Vlan 3

Vlan 5

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 3

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 3 host

ex

int fa0/5

switchport mode access

switchport access vlan 5

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 5 host

**A2**

En

Conf t

Vlan 3

Vlan 5

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 3

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 3 host

ex

int fa0/5

switchport mode access

switchport access vlan 5

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 5 host

**A3**

En

Conf t

Vlan 9

Vlan 14

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 9

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 9 host

ex

int fa0/5

switchport mode access

switchport access vlan 14

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 14 host

**A4**

En

Conf t

Vlan 9

Vlan 14

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 9

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 9 host

ex

int fa0/5

switchport mode access

switchport access vlan 14

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 14 host

**A5**

En

Conf t

Vlan 34

Vlan 37

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 34

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 34 host

ex

int fa0/5

switchport mode access

switchport access vlan 37

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 37 host

**A6**

En

Conf t

Vlan 34

Vlan 37

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

int fa0/6

switchport mode access

switchport access vlan 34

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 34 host

ex

int fa0/5

switchport mode access

switchport access vlan 37

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 37 host

**A7**

En

Conf t

Vlan 42

Vlan 46

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

en

conf t

int fa0/6

switchport mode access

switchport access vlan 42

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 42 host

ex

int fa0/3

switchport mode access

switchport access vlan 46

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 46 host

**A8**

En

Conf t

Vlan 42

Vlan 46

En

Conf t

int ra fa0/1-2

switchport mode trunk

switchport nonegotiate

ex

en

conf t

spann mode rapid

en

conf t

int fa0/6

switchport mode access

switchport access vlan 42

spanning-tree portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 42 host

ex

int fa0/3

switchport mode access

switchport access vlan 46

spanning-tree Portfast

spanning-tree bpduguard enable

switchport nonegotiate

storm-control broadcast level 40

switchport port-security

switchport port-security mac-address sticky

switchport port-security maximum 2

switchport port-security violation restrict

description to VLAN 46 host

ipconfig /renew

**DC1**

En

Conf t

Vlan 250

Name DC

En

Conf t

Int fa0/5

No switchport

Ip add 10.0.0.69 255.255.255.252

No shut

En

Conf t

Int fa0/1

Switchport trunk encapsulation dot1q

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

Exit

Int fa0/13

Switchport trunk encapsulation dot1q

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

En

Conf t

Ip Routing

Int vlan 250

Ip add 192.168.250.2 255.255.255.0

No shut

En

Conf t

Int vlan 250

Standby 1 ip 192.168.250.1

Standby 1 prio 120

Standby 1 pre

Int vlan 250

Standby 250 ip 192.168.250.254

Standby 250 prio 120

Standby 250 pre

en

conf t

spanning-tree mode rapid-pvst

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.36 0.0.0.3

net 10.0.0.48 0.0.0.3

net 10.0.0.68 0.0.0.3

net 192.168.250.0 0.0.0.255

**DC2**

En

Conf t

Vlan 250

Name DC

En

Conf t

Int fa0/5

No switchport

Ip add 10.0.0.70 255.255.255.252

No shut

En

Conf t

Int fa0/10

Switchport trunk encapsulation dot1q

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

Exit

Int fa0/12

Switchport trunk encapsulation dot1q

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

En

Conf t

Ip Routing

Int vlan 250

Ip add 192.168.250.3 255.255.255.0

No shut

En

Conf t

Int vlan 250

Standby 1 ip 192.168.250.1

Standby 1 prio 120

Standby 1 pre

Ex

Int vlan 250

Standby 250 ip 192.168.250.254

Standby 250 prio 120

Standby 250 pre

en

conf t

spanning-tree mode rapid-pvst

en

conf t

ip routing

do sh ip rou con

router eigrp 1

no auto-summary

net 10.0.0.40 0.0.0.3

net 10.0.0.44 0.0.0.3

net 10.0.0.68 0.0.0.3

net 192.168.250.0 0.0.0.255

**Sh stan b**

**Data\_switch\_1**

En

Conf t

Vlan 250

Name DC

En

Conf t

Int fa0/1

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

Exit

Int fa0/10

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

En

Conf t

Int ra fa0/2-7

Switchport mode access

Switchport access vlan 250

spanning-tree portfast

spanning-tree bpduguard enable

storm-control broadcast level 40

en

conf t

spanning-tree mode rapid-pvst

**Data\_switch\_2**

En

Conf t

Vlan 250

Name DC

En

Conf t

Int ra fa0/12-13

Switchport mode trunk

Switchport trunk allowed vlan 250

Switchport nonegotiate

Exit

en

conf t

int ra fa0/1-6

Switchport mode access

Switchport access vlan 250

spanning-tree bpduguard enable

storm-control broadcast level 40

en

conf t

spanning-tree mode rapid-pvst

**Edge**

En

Conf t

Int g0/1/0

Description connection to ISP

No cdp enable

Ip add 200.0.0.1 255.255.255.252

No shut

En

Conf t

Ip route 0.0.0.0 0.0.0.0 gig 0/1/0

En

Conf t

Do sh ip rou con

Router eigrp 1

No auto-summary

Net 10.0.0.56 0.0.0.3

Net 10.0.0.60 0.0.0.3

En

Conf t

Router eigrp 1

Redistribute static

En

Conf t

Ip access-list standard NAT

Permit any

En

Conf t

Ip nat inside source list NAT interface g0/1/0 overload

En

Conf t

Int g0/0

Ip nat in

Ex

Int g0/1

Ip nat in

Ex

Int g0/1/0

Ip nat out

**ISP**

En

Conf t

Int g0/0/0

Ip add 200.0.0.2 255.255.255.252

No shut

Int loopback 1

Ip add 8.8.8.8 255.255.255.255