VTP & VLAN & TRUNK & ACCESS

VTP & VLAN & TRUNK & ACCESS

Server

Switch>en

Switch#conf t

Switch(config)#hostname SW-TokyoServer1

SW-TokyoServer1(config)#vtp mode server

SW-TokyoServer1(config)#vtp domain Tokyo

SW-TokyoServer1(config)#vtp password 1234

SW-TokyoServer1(config)#vlan 10

SW-TokyoServer1(config-vlan)#name vlan10

SW-TokyoServer1(config)#vlan 20

SW-TokyoServer1(config-vlan)#name vlan20

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#vlan 30

SW-TokyoServer1(config-vlan)#name vlan30

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#vlan 100

SW-TokyoServer1(config-vlan)#name vlan100

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#interface range gigabitEthernet 0/1,g1/1,g2/1,g3/1,g4/1,g5/1,g6/1,g7/1

SW-TokyoServer1(config-if-range)#no shut

SW-TokyoServer1(config-if-range)#switchport mode trunk

Switch#conf t

Switch(config)#hostname SW-TokyoServer2

SW-TokyoServer2(config)#vtp mode server

SW-TokyoServer2(config)#vtp domain Tokyo

SW-TokyoServer2(config)#vtp password 1234

SW-TokyoServer2(config)#vlan 10

SW-TokyoServer2(config-vlan)#name vlan10

SW-TokyoServer2(config-vlan)#vlan 20

SW-TokyoServer2(config-vlan)#name vlan20

SW-TokyoServer2(config-vlan)#vlan 30

SW-TokyoServer2(config-vlan)#name vlan30

SW-TokyoServer2(config-vlan)#vlan 100

SW-TokyoServer2(config-vlan)#name vlan100

SW-TokyoServer2(config-vlan)#interface range gigabitEthernet 0/1,g1/1,g2/1,g3/1,g4/1,g5/1,g6/1,g7/1

SW-TokyoServer2(config-if-range)#no shut

SW-TokyoServer2(config-if-range)#switchport mode trunk

SW-TokyoServer2#show vlan

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active

10 vlan10 active

20 vlan20 active

30 vlan30 active

100 vlan100 active

1002 fddi-default active

1003 token-ring-default active

1004 fddinet-default active

1005 trnet-default active

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

1 enet 100001 1500 - - - - - 0 0

10 enet 100010 1500 - - - - - 0 0

20 enet 100020 1500 - - - - - 0 0

30 enet 100030 1500 - - - - - 0 0

100 enet 100100 1500 - - - - - 0 0

1002 fddi 101002 1500 - - - - - 0 0

1003 tr 101003 1500 - - - - - 0 0

1004 fdnet 101004 1500 - - - ieee - 0 0

1005 trnet 101005 1500 - - - ibm - 0 0

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Client

Switch>en

Switch#conf t

Switch(config)#hostname SW-Tokyo10

SW-Tokyo10(config)#vtp mode client

SW-Tokyo10(config)#vtp domain Tokyo

SW-Tokyo10(config)#vtp password 1234

SW-Tokyo10(config)#interface range fastethernet 0/1-4

SW-Tokyo10(config-if-range)#switchport mode access

SW-Tokyo10(config-if-range)#switchport access vlan 10

Switch>en

Switch#conf t

Switch(config)#hostname SW-Tokyo20

SW-Tokyo20(config)#vtp mode client

SW-Tokyo20(config)#vtp domain Tokyo

Domain name already set to Tokyo.

SW-Tokyo20(config)#vtp password 1234

SW-Tokyo20(config)#interface range fastethernet 0/1-4

SW-Tokyo20(config-if-range)#switchport mode access

SW-Tokyo20(config-if-range)#switchport access vlan 20

Switch>en

Switch#conf t

Switch(config)#hostname SW-Tokyo30

SW-Tokyo30(config)#vtp mode client

SW-Tokyo30(config)#vtp domain Tokyo

SW-Tokyo30(config)#vtp password 1234

SW-Tokyo30(config)#interface range fastethernet 0/1-4

SW-Tokyo30(config-if-range)#switchport mode access

SW-Tokyo30(config-if-range)#switchport access vlan 30

Transparent

Switch>en

Switch#conf t

Switch(config)#hostname SW-Tokyo100

SW-Tokyo100(config)#vtp domain Tokyo

SW-Tokyo100(config)#vtp mode transparent

SW-Tokyo100(config)#vtp password 1234

SW-Tokyo100(config)#vlan 100

SW-Tokyo100(config-vlan)#name vlan100

SW-Tokyo100(config-vlan)#interface range gigabitEthernet 0/1,gig1/1,gig2/1,gig3/1

SW-Tokyo100(config-if-range)#switchport mode access

SW-Tokyo100(config-if-range)#switchport access vlan 100

DTP

SW-TokyoServer1(config)#interface range g0/1 ,g1/1 ,g2/1 ,g3/1 ,g4/1 ,g5/1 ,g6/1 ,g7/1

SW-TokyoServer1(config-if-range)#switchport trunk allowed vlan 10,20,30,100

SW-TokyoServer1(config-if-range)#switchport nonegotiate

SW-TokyoServer2(config)#interface range g0/1 ,g1/1 ,g2/1 ,g3/1 ,g4/1 ,g5/1 ,g6/1 ,g7/1

SW-TokyoServer2(config-if-range)#switchport trunk allowed vlan 10,20,30,100

SW-TokyoServer2(config-if-range)#switchport nonegotiate

Switch>en

Switch#conf t

Switch(config)#hostname SW-TokyoServer1

SW-TokyoServer1(config)#vtp mode server

SW-TokyoServer1(config)#vtp domain Tokyo

SW-TokyoServer1(config)#vtp password 1234

SW-TokyoServer1(config)#vlan 10

SW-TokyoServer1(config-vlan)#name vlan10

SW-TokyoServer1(config)#vlan 20

SW-TokyoServer1(config-vlan)#name vlan20

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#vlan 30

SW-TokyoServer1(config-vlan)#name vlan30

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#vlan 100

SW-TokyoServer1(config-vlan)#name vlan100

SW-TokyoServer1(config-vlan)#exit

SW-TokyoServer1(config)#interface range gigabitEthernet 0/1,g1/1,g2/1,g3/1,g4/1,g5/1,g6/1,g7/1

SW-TokyoServer1(config-if-range)#no shut

SW-TokyoServer1(config-if-range)#switchport mode trunk

Switch>

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW-TokyoServer2

SW-TokyoServer2(config)#vtp mode server

Device mode already VTP SERVER.

SW-TokyoServer2(config)#vtp domain Tokyo

Domain name already set to Tokyo.

SW-TokyoServer2(config)#vtp password 1234

Password already set to 1234

SW-TokyoServer2(config)#vlan 10

SW-TokyoServer2(config-vlan)#name vlan10

SW-TokyoServer2(config-vlan)#vlan 20

SW-TokyoServer2(config-vlan)#name vlan20

SW-TokyoServer2(config-vlan)#vlan 30

SW-TokyoServer2(config-vlan)#name vlan30

SW-TokyoServer2(config-vlan)#vlan 100

SW-TokyoServer2(config-vlan)#name vlan100

SW-TokyoServer2(config-vlan)#interface range gigabitEthernet 0/1,g1/1,g2/1,g3/1,g4/1,g5/1,g6/1,g7/1

SW-TokyoServer2(config-if-range)#no shut

SW-TokyoServer2(config-if-range)#switchport mode trunk

SW-TokyoServer2#show vlan

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active

10 vlan10 active

20 vlan20 active

30 vlan30 active

100 vlan100 active

1002 fddi-default active

1003 token-ring-default active

1004 fddinet-default active

1005 trnet-default active

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

1 enet 100001 1500 - - - - - 0 0

10 enet 100010 1500 - - - - - 0 0

20 enet 100020 1500 - - - - - 0 0

30 enet 100030 1500 - - - - - 0 0

100 enet 100100 1500 - - - - - 0 0

1002 fddi 101002 1500 - - - - - 0 0

1003 tr 101003 1500 - - - - - 0 0

1004 fdnet 101004 1500 - - - ieee - 0 0

1005 trnet 101005 1500 - - - ibm - 0 0

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Switch>

Switch>en

Switch#conf t

Switch(config)#hostname SW-Tokyo10

SW-Tokyo10(config)#vtp mode client

SW-Tokyo10(config)#vtp domain Tokyo

SW-Tokyo10(config)#vtp password 1234

SW-Tokyo10(config)#interface range fastethernet 0/1-4

SW-Tokyo10(config-if-range)#switchport mode access

SW-Tokyo10(config-if-range)#switchport access vlan 10

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW-Tokyo20

SW-Tokyo20(config)#vtp mode client

Setting device to VTP CLIENT mode.

SW-Tokyo20(config)#vtp domain Tokyo

Domain name already set to Tokyo.

SW-Tokyo20(config)#vtp password 1234

Setting device VLAN database password to 1234

SW-Tokyo20(config)#interface range fastethernet 0/1-4

SW-Tokyo20(config-if-range)#switchport mode access

SW-Tokyo20(config-if-range)#switchport access vlan 20

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW-Tokyo30

SW-Tokyo30(config)#vtp mode client

Setting device to VTP CLIENT mode.

SW-Tokyo30(config)#vtp domain Tokyo

Domain name already set to Tokyo.

SW-Tokyo30(config)#vtp password 1234

Setting device VLAN database password to 1234

SW-Tokyo30(config)#interface range fastethernet 0/1-4

SW-Tokyo30(config-if-range)#switchport mode access

SW-Tokyo30(config-if-range)#switchport access vlan 30

SW-Tokyo30(config-if-range)#

Switch>en

Switch#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Switch(config)#hostname SW-Tokyo100

SW-Tokyo100(config)#vtp domain Tokyo

Domain name already set to Tokyo.

SW-Tokyo100(config)#vtp mode transparent

Setting device to VTP TRANSPARENT mode.

SW-Tokyo100(config)#vtp password 1234

Setting device VLAN database password to 1234

SW-Tokyo100(config)#vlan 100

SW-Tokyo100(config-vlan)#name vlan100

SW-Tokyo100(config-vlan)#interface range gigabitEthernet 0/1,gig1/1,gig2/1,gig3/1

SW-Tokyo100(config-if-range)#switchport mode access

SW-Tokyo100(config-if-range)#switchport access vlan 100

Router on a stick

Router on a stick

Router>en

Router#conf t

Router(config)#hostname Router-Tokyo1

Router-Tokyo1(config)#interface gigabitEthernet 0/0.10

Router-Tokyo1(config-subif)#encapsulation dot1q 10

Router-Tokyo1(config-subif)#ip address 172.28.1.252 255.255.254.0

Router-Tokyo1(config)#interface giga0/0.20

Router-Tokyo1(config-subif)#encapsulation dot1q 20

Router-Tokyo1(config-subif)#ip address 172.28.3.252 255.255.254.0

Router-Tokyo1(config-subif)#exit

Router-Tokyo1(config)#interface giga0/0.30

Router-Tokyo1(config-subif)#encapsulation dot1q 30

Router-Tokyo1(config-subif)#ip address 172.28.5.252 255.255.254.0

Router-Tokyo1(config-subif)#exit

Router-Tokyo1(config)#interface giga0/0.100

Router-Tokyo1(config-subif)#encapsulation dot1q 100

Router-Tokyo1(config-subif)#ip address 172.28.7.252 255.255.254.0

Router-Tokyo1(config-subif)#exit

Router-Tokyo1(config)#interface gig0/0

Router-Tokyo1(config-if)#no shut

Router>en

Router#conf t

Router(config)#hostname Router-Tokyo2

Router-Tokyo2(config)#interface giga0/0.10

Router-Tokyo2(config-subif)#encapsulation dot1q 10

Router-Tokyo2(config-subif)#ip address 172.28.1.253 255.255.254.0

Router-Tokyo2(config-subif)#interface giga0/0.20

Router-Tokyo2(config-subif)#encapsulation dot1q 20

Router-Tokyo2(config-subif)#ip address 172.28.3.253 255.255.254.0

Router-Tokyo2(config-subif)#interface giga0/0.30

Router-Tokyo2(config-subif)#encapsulation dot1q 30

Router-Tokyo2(config-subif)#ip address 172.28.5.253 255.255.254.0

Router-Tokyo2(config-subif)#interface giga0/0.100

Router-Tokyo2(config-subif)#encapsulation dot1q 100

Router-Tokyo2(config-subif)#ip address 172.28.7.253 255.255.254.0

Router-Tokyo2(config-subif)#exit

Router-Tokyo2(config)#interface gig0/0

Router-Tokyo2(config-if)#no shut

EtherChannel

EtherChannel

Stp

Stp

### **מה זה BPDU Guard**

BPDU Guard הוא מנגנון הגנה ב־**סוויצ'ים** שמטרתו למנוע מצב שבו מישהו מחבר **סוויץ' נוסף או ראוטר** בצורה לא מבוקרת לרשת שלך.

* כל סוויץ' שמשתתף ב־Spanning Tree שולח הודעות שנקראות **BPDU** (Bridge Protocol Data Unit).
* ההודעות האלה משמשות את הסוויצ'ים כדי לבחור מי יהיה ה־**Root Bridge** ולמנוע לופים (loops) ברשת.

אם מישהו יחבר סוויץ' חיצוני (למשל מתחת לשולחן או במקרה), הוא גם ישלח BPDUs, ויכול **לשנות את מבנה ה־Spanning Tree** שלך ולגרום ללופים או לנפילות ברשת.

כאן נכנס BPDU Guard:  
 ברגע שסוויץ’ מקבל BPDU על פורט שמוגדר עם BPDU Guard –  
 הפורט **נכבה מיד (err-disabled)** כדי להגן על הרשת.

### **⚙️ איפה מפעילים את זה**

את **BPDU Guard** מפעילים **רק על פורטים שמתחברים לעמדות קצה (endpoints)** – כלומר, לא פורטים שמתחברים לסוויצ'ים אחרים.

#### **✅ דוגמאות שבהן כן מפעילים:**

* פורטים שמחוברים למחשבים
* מדפסות
* טלפונים IP
* מצלמות רשת
* כל מכשיר קצה שאינו סוויץ'

#### **🚫 דוגמאות שבהן לא מפעילים:**

* פורטים שמחברים **סוויצ'ים זה לזה (trunk ports)**
* פורטים שמובילים לנתבים, פיירוולים, או Access Points
* כל פורט שמעביר BPDUs כחלק תקין מהתפקוד שלו

SW-Tokyo10(config)#interface range fastEthernet 0/1-4

SW-Tokyo10(config-if-range)#spanning-tree portfast

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/2 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/3 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/4 but will only

have effect when the interface is in a non-trunking mode.

SW-Tokyo10(config-if-range)#spanning-tree bpduguard enable

SW-Tokyo20(config)#interface range fastEthernet 0/1-4

SW-Tokyo20(config-if-range)#spanning-tree portfast

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/2 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/3 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/4 but will only

have effect when the interface is in a non-trunking mode.

SW-Tokyo20(config-if-range)#spanning-tree bpduguard enable

SW-Tokyo30(config)#interface range fastEthernet 0/1-4

SW-Tokyo30(config-if-range)#spanning-tree portfast

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/2 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/3 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on FastEthernet0/4 but will only

have effect when the interface is in a non-trunking mode.

SW-Tokyo30(config-if-range)#spanning-tree bpduguard enable

SW-Tokyo100>en

SW-Tokyo100#conf t

Enter configuration commands, one per line. End with CNTL/Z.

SW-Tokyo100(config)#interface range gig0/1,gig1/1,gig2/1,gig3/1

SW-Tokyo100(config-if-range)#spanning-tree portfast

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on GigabitEthernet0/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on GigabitEthernet1/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on GigabitEthernet2/1 but will only

have effect when the interface is in a non-trunking mode.

%Warning: portfast should only be enabled on ports connected to a single

host. Connecting hubs, concentrators, switches, bridges, etc... to this

interface when portfast is enabled, can cause temporary bridging loops.

Use with CAUTION

%Portfast has been configured on GigabitEthernet3/1 but will only

have effect when the interface is in a non-trunking mode.

SW-Tokyo100(config-if-range)#spanning-tree bpduguard enable

STP-Spanning Tree Protocol

SW-TokyoServer1# conf t

SW-TokyoServer1(config)#spanning-tree vlan 10 root primary

SW-TokyoServer1(config)#spanning-tree vlan 20 root primary

SW-TokyoServer1(config)#spanning-tree vlan 30 root secondary

SW-TokyoServer1(config)#spanning-tree vlan 100 root secondary

SW-TokyoServer2#conf t

SW-TokyoServer2(config)#spanning-tree vlan 10 root secondary

SW-TokyoServer2(config)#spanning-tree vlan 20 root secondary

SW-TokyoServer2(config)#spanning-tree vlan 30 root primary

SW-TokyoServer2(config)#spanning-tree vlan 100 root primary

Port security

Port security

Restrict

(הגבלה): המתג לא יאפשר להתקן לא מאושר לגשת לרשת, ובנוסף

ייצור יומן אירועים ויתריע למנהל הרשת על ניסיונות הגישה הלא מורשית.

Shutdown

(כיבוי): כאשר המתג מזהה התקן לא מאושר, הוא יכבה את הפורט

באופן מידי וימנע כל גישה אליו. ניתן להפעיל את הפורט מחדש באמצעות פקודה

ידנית.

SW-Tokyo10>en

SW-Tokyo10#conf t

SW-Tokyo10(config)#interface range fastEthernet 0/1-4

SW-Tokyo10(config-if-range)#switchport mode access

SW-Tokyo10(config-if-range)#switchport port-security mac-address sticky

SW-Tokyo10(config-if-range)#switchport port-security maximum 1

SW-Tokyo10(config-if-range)#switchport port-security violation restrict

SW-Tokyo20>en

SW-Tokyo20#conf t

SW-Tokyo20(config)#interface range fastEthernet 0/1-4

SW-Tokyo20(config-if-range)#switchport mode access

SW-Tokyo20(config-if-range)#switchport port-security mac-address sticky

SW-Tokyo20(config-if-range)#switchport port-security maximum 1

SW-Tokyo20(config-if-range)#switchport port-security violation restrict

SW-Tokyo30>en

SW-Tokyo30#conf t

SW-Tokyo30(config)#interface range fastEthernet 0/1-4

SW-Tokyo30(config-if-range)#switchport mode access

SW-Tokyo30(config-if-range)#switchport port-security mac-address sticky

SW-Tokyo30(config-if-range)#switchport port-security maximum 1

SW-Tokyo30(config-if-range)#switchport port-security violation restrict

SW-Tokyo100>en

SW-Tokyo100#conf t

SW-Tokyo100(config)#interface range gig0/1, gig1/1, gig2/1, gig3/1

SW-Tokyo100(config-if-range)#switchport mode access

SW-Tokyo100(config-if-range)#switchport port-security mac-address sticky

SW-Tokyo100(config-if-range)#switchport port-security maximum 1

SW-Tokyo100(config-if-range)#switchport port-security violation shutdown

Hsrp

Hsrp

EIGRP

EIGRP

ראוטר פנימי:

Router-Tokyo1>en

Router-Tokyo1#conf t

Router-Tokyo1(config)#interface gig1/0

Router-Tokyo1(config-if)#no shut

Router-Tokyo1(config-if)#ip address 10.10.10.1 255.255.255.252

Router-Tokyo1(config)#router eigrp 100

Router-Tokyo1(config-router)#network 172.28.0.0 0.0.1.255

Router-Tokyo1(config-router)#network 172.28.2.0 0.0.1.255

Router-Tokyo1(config-router)#network 172.28.4.0 0.0.1.255

Router-Tokyo1(config-router)#network 172.28.6.0 0.0.1.255

Router-Tokyo1(config-router)#network 10.10.10.0 0.0.0.3

Router-Tokyo1(config-router)#no auto-summary

Router-Tokyo2>en

Router-Tokyo2#conf t

Router-Tokyo2(config)#interface gigabitEthernet 1/0

Router-Tokyo2(config-if)#no shut

Router-Tokyo2(config-if)#ip address 10.10.10.5 255.255.255.252

Router-Tokyo2(config-if)#router eigrp 100

Router-Tokyo2(config-router)#network 172.28.0.0 0.0.1.255

Router-Tokyo2(config-router)#network 172.28.2.0 0.0.1.255

Router-Tokyo2(config-router)#network 172.28.4.0 0.0.1.255

Router-Tokyo2(config-router)#network 172.28.6.0 0.0.1.255

Router-Tokyo2(config-router)#network 10.10.10.0 0.0.0.3

Router-Tokyo2(config-router)#no auto-summary

לסדר שמות למדינות

לתת להם שם של המדינה ומספר  
לשים לב לכל הכתובות

ראוטר חיצוני:  
  
RouterJapanEX2>en

RouterJapanEX2#conf t

RouterJapanEX2(config)#interface giga 0/0

RouterJapanEX2(config-if)#no shut

RouterJapanEX2(config-if)#ip address 10.10.10.6 255.255.255.252

RouterJapanEX2(config)#router eigrp 100

RouterJapanEX2(config-router)#network 10.10.10.4 0.0.0.3

RouterJapanEX2(config-router)#no auto-summary

RouterJapanEX1#conf t

RouterJapanEX1(config)#interface gig 0/0

RouterJapanEX1(config-if)#ip address 10.10.10.2 255.255.255.252

RouterJapanEX1(config-if)#no shut

RouterJapanEX1(config-if)#ex

RouterJapanEX1(config)#router eigrp 100

RouterJapanEX1(config-router)#network 10.10.10.0 0.0.0.3

RouterJapanEX1(config-router)#no auto

RouterJapanEX1(config-router)#no auto-summary

Access List

R-Holon2(config)#ip access-list extended vlan90

R-Holon2(config-ext-nacl)#deny ip 172.19.36.0 0.0.1.255 172.19.34.0 0.0.1.255

R-Holon2(config-ext-nacl)#deny ip 172.19.36.0 0.0.1.255 172.19.32.0 0.0.1.255

R-Holon2(config-ext-nacl)#permit ip any any

R-Holon2(config-ext-nacl)#ex

R-Holon2(config)#interface gigabitEthernet 0/0.90

R-Holon2(config-subif)#ip access-group vlan90 in