

Hello Computers CCIE Security Lab Solution for Lab13

r1config

```
r1#
hostname r1
!
service password-encryption
logging buffered 10000 7
logging 150.50.15.101
logging facility local6
no service tcp-small-server
no service udp-small-server
no service finger
service debug timestamp
no ntp enable
no cdp run
ip http server
ip http access-class 10
access-list 10 permit 150.50.0.0 0.0.255.255
snmp-server community hello ro 71
snmp-server community hellorw rw 72
snmp-server contact Hello Computers
snmp-server location Fremont-Santa Clara
access-list 71 permit 150.50.0.0 0.0.255.255
access-list 72 permit 150.50.111.0 0.0.0.255
scheduler interval 1000
no ip domain-lookup
no ip source-route
!
!acl for icmp rate-limiting
access-list 141 permit icmp any any
access-list 141 deny ip any any
!
!deny Trinoo
access-list 171 deny tcp any any eq 27665
access-list 171 deny udp any any eq 31335
access-list 171 deny udp any any eq 26444
!deny Stacheldraht
access-list 171 deny tcp any any eq 16660
access-list 171 deny tcp any any eq 65000
!deny subseven
access-list 171 deny tcp any any eq 6711
access-list 171 deny tcp any any eq 6712
access-list 171 deny tcp any any eq 6669
access-list 171 deny tcp any any eq 2222
access-list 171 deny tcp any any eq 7000
access-list 171 permit ip any any
!
enable secret hello
!
int e0
no ip directed-broadcast
```

```

no ip proxy-arp
no ip redirects
no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 150.50.15.1 255.255.255.0
ip ospf priority 1
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int s0
encapsulation frame
frame-relay lmi-type ansi
ip address 150.50.12.1 255.255.255.0
ip ospf network point-to-point
frame map ip 150.50.12.2 112 broadcast
no frame inverse
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int lo0
ip add 11.11.11.11 255.255.255.0
!
int lo1
ip add 111.111.111.111 255.255.255.0
!
router ospf 100
network 150.50.15.0 0.0.0.255 area 0
network 11.11.11.0 0.0.0.255 area 0
network 150.50.12.0 0.0.0.255 area 1
area 1 virtual 22.22.22.22 authentication message-digest
area 1 virtual 22.22.22.22 message-digest-key 1 md5 hello
area 0 authentication message-digest
area 1 authentication message-digest
!
router bgp 4799
network 111.111.111.0 mask 255.255.255.0
no auto-summary
no sync
neighbor 22.22.22.22 remote-as 4799
neighbor 22.22.22.22 description r2lo0-ibgp
neighbor 22.22.22.22 update-source loopabck 0
neighbor 22.22.22.22 route-reflector-client
neighbor 22.22.22.22 soft-reconfiguration in
neighbor 22.22.22.22 next-hop-self
neighbor 33.33.33.33 remote-as 4799
neighbor 33.33.33.33 description r3lo0-ibgp
neighbor 33.33.33.33 update-source loopabck 0
neighbor 33.33.33.33 route-reflector-client

```

```
neighbor 33.33.33.33 soft-reconfiguration in
neighbor 33.33.33.33 next-hop-self
neighbor 44.44.44.44 remote-as 4799
neighbor 44.44.44.44 description r4lo0-ibgp
neighbor 44.44.44.44 update-source loopabck 0
neighbor 44.44.44.44 route-reflector-client
neighbor 44.44.44.44 soft-reconfiguration in
neighbor 44.44.44.44 next-hop-self
neighbor 55.55.55.55 remote-as 4799
neighbor 55.55.55.55 description r3lo0-ibgp
neighbor 55.55.55.55 update-source loopabck 0
neighbor 55.55.55.55 route-reflector-client
neighbor 55.55.55.55 soft-reconfiguration in
neighbor 55.55.55.55 next-hop-self
neighbor 150.50.15.111 remote-as 111
neighbor 150.50.15.111 description AS111-bb1
neighbor 150.50.15.111 update-source loopabck 0
neighbor 150.50.15.111 soft-reconfiguration in
neighbor 150.50.15.111 ebgp-multihop 10
neighbor 150.50.15.111 route-map setnh in
!
route-map setnh permit 10
set ip next-hop 150.50.15.111
!
line con 0
no login
line vty 0 4
login
password hello
```

r2config

```
r2#
hostname r2
!
service password-encryption
logging buffered 10000 7
logging 150.50.15.101
logging facility local6
no service tcp-small-server
no service udp-small-server
no service finger
service debug timestamp
no ntp enable
no cdp run
ip http server
ip http access-class 10
access-list 10 permit 150.50.0.0 0.0.255.255
snmp-server community hello ro 71
snmp-server community hellorw rw 72
snmp-server contact Hello Computers
snmp-server location Fremont-Santa Clara
access-list 71 permit 150.50.0.0 0.0.255.255
```

```

access-list 72 permit 150.50.111.0 0.0.0.255
scheduler interval 1000
no ip domain-lookup
no ip source-route
!
!acl for icmp rate-limiting
access-list 141 permit icmp any any
access-list 141 deny ip any any
!
!deny Trinoo
access-list 171 deny tcp any any eq 27665
access-list 171 deny udp any any eq 31335
access-list 171 deny udp any any eq 26444
!deny Stacheldraht
access-list 171 deny tcp any any eq 16660
access-list 171 deny tcp any any eq 65000
!deny subseven
access-list 171 deny tcp any any eq 6711
access-list 171 deny tcp any any eq 6712
access-list 171 deny tcp any any eq 6669
access-list 171 deny tcp any any eq 2222
access-list 171 deny tcp any any eq 7000
access-list 171 permit ip any any
!
enable secret hello
!
int e0
no ip directed-broadcast
no ip proxy-arp
no ip redirects
no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 150.50.22.2 255.255.255.0
no shut
!
int s0
encapsulation frame
frame-relay lmi-type ansi
no shut
!
int s0.21 point-to-point
ip add 150.50.12.2 255.255.255.0
frame interface-dlci 121
ip ospf network point-to-point
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int s0.23 point-to-point
ip add 150.50.23.2 255.255.255.0
frame interface-dlci 123

```

```

ip ospf network point-to-point
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int s0.24 point-to-point
ip add 150.50.24.2 255.255.255.0
frame interface-dlci 124
ip ospf network point-to-point
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int tunnel 2
ip address 172.16.22.2 255.255.255.0
tunnel source 150.50.22.2
tunnel destination 150.50.22.112
!
int lo0
ip add 22.22.22.22 255.255.255.0
!
int lo1
ip add 122.122.122.122 255.255.255.0
!
router ospf 100
network 150.50.12.0 0.0.0.255 area 1
network 150.50.24.0 0.0.0.255 area 1
network 22.22.22.0 0.0.0.255 area 1
network 150.50.23.0 0.0.0.255 area 2
area 1 virtual 11.11.11.11 authentication message-digest
area 1 virtual 11.11.11.11 message-digest-key 1 md5 hello
redistribute eigrp 112 subnets
area 1 authentication message-digest
area 2 authentication message-digest
!
router eigrp 112
no auto-summary
network 172.16.22.0 0.0.0.255
network 150.50.22.0 0.0.0.255
redistribute ospf 100 metric 10000 100 255 1 1500
!
router bgp 4799
network 122.122.122.0 mask 255.255.255.0
no auto-summary
no sync
neighbor 11.11.11.11 remote-as 4799
neighbor 11.11.11.11 description r1lo0-ibgp
neighbor 11.11.11.11 soft-reconfiguration in
neighbor 11.11.11.11 update-source loopback 0
line con 0
no login
line vty 0 4
login
password hello

```

r3config

```
-----  
r3#  
hostname r3  
!  
service password-encryption  
logging buffered 10000 7  
logging 150.50.15.101  
logging facility local6  
no service tcp-small-server  
no service udp-small-server  
no service finger  
service debug timestamp  
no ntp enable  
no cdp run  
ip http server  
ip http access-class 10  
access-list 10 permit 150.50.0.0 0.0.255.255  
snmp-server community hello ro 71  
snmp-server community hellorw rw 72  
snmp-server contact Hello Computers  
snmp-server location Fremont-Santa Clara  
access-list 71 permit 150.50.0.0 0.0.255.255  
access-list 72 permit 150.50.111.0 0.0.0.255  
scheduler interval 1000  
no ip domain-lookup  
no ip source-route  
!  
!acl for icmp rate-limiting  
access-list 141 permit icmp any any  
access-list 141 deny ip any any  
!  
!deny Trinoo  
access-list 171 deny tcp any any eq 27665  
access-list 171 deny udp any any eq 31335  
access-list 171 deny udp any any eq 26444  
!deny Stacheldraht  
access-list 171 deny tcp any any eq 16660  
access-list 171 deny tcp any any eq 65000  
!deny subseven  
access-list 171 deny tcp any any eq 6711  
access-list 171 deny tcp any any eq 6712  
access-list 171 deny tcp any any eq 6669  
access-list 171 deny tcp any any eq 2222  
access-list 171 deny tcp any any eq 7000  
access-list 171 permit ip any any  
!  
enable secret hello  
!  
int e0  
no ip directed-broadcast  
no ip proxy-arp  
no ip redirects
```

```

no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 150.50.33.3 255.255.255.0
no shut
!
int s0
encapsulation frame
frame-relay lmi-type ansi
ip address 150.50.23.3 255.255.255.0
ip ospf network point-to-point
frame map ip 150.50.23.2 132 broadcast
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int atm0
ip address 150.50.113.3
atm pvc 1 0 5 qsaal
atm pvc 2 0 16 ilgi
atm pvc 3 4 40 aal5snap
map-group map1
no shut
!
int lo0
ip add 33.33.33.33 255.255.255.0
!
int lo1
ip add 133.133.133.133 255.255.255.0
!
router ospf 100
network 150.50.23.0 0.0.0.255 area 2
network 33.33.33.0 0.0.0.255 area 2
network 150.50.33.0 0.0.0.255 area 2
network 150.50.3.0 0.0.0.255 area 2
area 2 authentication message-digest
!
router bgp 4799
network 133.133.133.0 mask 255.255.255.0
no auto-summary
no sync
neighbor 11.11.11.11 remote-as 4799
neighbor 11.11.11.11 description r1lo0-ibgp
neighbor 11.11.11.11 soft-reconfiguration in
neighbor 11.11.11.11 update-source loopback 0
neighbor 150.50.3.113 remote-as 113
neighbor 150.50.3.113 description bb3atm0-AS113
neighbor 150.50.3.113 soft-reconfiguration in
!
map-list map1
ip 150.50.3.113 atm-vc 3 broadcast

```

```
!  
line con 0  
  no login  
line vty 0 4  
  login  
  password hello  
  
r4config  
-----  
r4#  
hostname r4  
!  
service password-encryption  
logging buffered 10000 7  
logging 150.50.15.101  
logging facility local6  
no service tcp-small-server  
no service udp-small-server  
no service finger  
service debug timestamp  
no ntp enable  
no cdp run  
ip http server  
ip http access-class 10  
access-list 10 permit 150.50.0.0 0.0.255.255  
snmp-server community hello ro 71  
snmp-server community hellorw rw 72  
snmp-server contact Hello Computers  
snmp-server location Fremont-Santa Clara  
access-list 71 permit 150.50.0.0 0.0.255.255  
access-list 72 permit 150.50.111.0 0.0.0.255  
scheduler interval 1000  
no ip domain-lookup  
no ip source-route  
!  
!acl for icmp rate-limiting  
access-list 141 permit icmp any any  
access-list 141 deny ip any any  
!  
!deny Trinoo  
access-list 171 deny tcp any any eq 27665  
access-list 171 deny udp any any eq 31335  
access-list 171 deny udp any any eq 26444  
!deny Stacheldraht  
access-list 171 deny tcp any any eq 16660  
access-list 171 deny tcp any any eq 65000  
!deny subseven  
access-list 171 deny tcp any any eq 6711  
access-list 171 deny tcp any any eq 6712  
access-list 171 deny tcp any any eq 6669  
access-list 171 deny tcp any any eq 2222  
access-list 171 deny tcp any any eq 7000  
access-list 171 permit ip any any
```



```

!
enable secret hello
isdn switch-type basic-ni
username r5 password hello
!
int e0
no ip directed-broadcast
no ip proxy-arp
no ip redirects
no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 172.16.44.4 255.255.255.0
no shut
!
int s0
encapsulation frame
frame-relay lmi-type ansi
ip address 150.50.24.4 255.255.255.0
ip ospf network point-to-point
frame map ip 150.50.24.2 142 broadcast
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int s1
encapsulation frame
frame-relay lmi-type ansi
ip address 150.50.46.4 255.255.255.0
frame route ip 150.50.46.6 146 broadcast
no shut
ip authentication eigrp 46 md5
ip authentication key-chain eigrp 46 keyr4
!
int bri0
ip add 145.45.45.4 255.255.255.240
isdn switch-type basic-ni
dialer-group 1
encapsulation ppp
ppp authentication chap
dialer idle-timeout 60
dialer load-threshold 128 either
ppp multilink
ppp callback accept
dialer callback-secure
dialer map ip 145.45.45.5 class callbackclass name r5 broadcast 8358662
dialer map ip 145.45.45.5 class callbackclass name r5 broadcast 8358664
ip ospf demand-circuit
ip ospf network point-to-point
no shut
ip ospf authentication message-digest

```

```

ip ospf message-digest key 1 md5 hello
!
int lo0
ip add 44.44.44.44 255.255.255.0
!
int lo1
ip add 144.144.144.144 255.255.255.0
!
key chain keyr4
key 1
  key-string hello
!
router ospf 100
network 150.50.24.0 0.0.0.255 area 1
network 150.50.44.0 0.0.0.255 area 1
network 44.44.44.0 0.0.0.255 area 1
network 145.45.45.0 0.0.0.15 area 1
redistribute eigrp 46 subnets
area 1 authentication message-digest
!
router eigrp 46
no auto-summary
network 150.50.46.0 0.0.0.255
redistribute ospf 100 metric 10000 100 255 1 1500
passive bri0
!
router bgp 4799
network 144.144.144.0 mask 255.255.255.0
no auto-summary
no sync
neighbor 11.11.11.11 remote-as 4799
neighbor 11.11.11.11 description r1lo0-ibgp
neighbor 11.11.11.11 soft-reconfiguration in
neighbor 11.11.11.11 update-source loopback 0
neighbor 150.50.46.6 remote-as 6767
neighbor 150.50.46.6 description r6s0-AS6767
neighbor 150.50.46.6 soft-reconfiguration in
!
dialer-list 1 protocol ip permit
!
map-class dialer callbackclass
dialer callback-server username
!
line con 0
no login
line vty 0 4
login
password hello

r5config
-----
r5#
hostname r5

```

```
!  
service password-encryption  
logging buffered 10000 7  
logging 150.50.15.101  
logging facility local6  
no service tcp-small-server  
no service udp-small-server  
no service finger  
service debug timestamp  
no ntp enable  
no cdp run  
ip http server  
ip http access-class 10  
access-list 10 permit 150.50.0.0 0.0.255.255  
snmp-server community hello ro 71  
snmp-server community hellorw rw 72  
snmp-server contact Hello Computers  
snmp-server location Fremont-Santa Clara  
access-list 71 permit 150.50.0.0 0.0.255.255  
access-list 72 permit 150.50.111.0 0.0.0.255  
scheduler interval 1000  
no ip domain-lookup  
no ip source-route  
!  
!acl for icmp rate-limiting  
access-list 141 permit icmp any any  
access-list 141 deny ip any any  
!  
!deny Trinoo  
access-list 171 deny tcp any any eq 27665  
access-list 171 deny udp any any eq 31335  
access-list 171 deny udp any any eq 26444  
!deny Stacheldraht  
access-list 171 deny tcp any any eq 16660  
access-list 171 deny tcp any any eq 65000  
!deny subseven  
access-list 171 deny tcp any any eq 6711  
access-list 171 deny tcp any any eq 6712  
access-list 171 deny tcp any any eq 6669  
access-list 171 deny tcp any any eq 2222  
access-list 171 deny tcp any any eq 7000  
access-list 171 permit ip any any  
!  
enable secret hello  
isdn switch-type basic-ni  
username r4 password hello  
!  
int e0  
no ip directed-broadcast  
no ip proxy-arp  
no ip redirects  
no ip icmp mask-reply  
no ip icmp unreachable
```

```

no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 150.50.15.5 255.255.255.0
ip ospf priority 1
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int s0
encapsulation hdlc
ip address 150.50.57.5 255.255.255.0
no shut
ip rip authentication mode md5
ip rip authentication key-chain keyr5
!
int bri0
ip add 145.45.45.5 255.255.255.240
isdn switch-type basic-ni
dialer-group 1
encapsulation ppp
ppp authentication chap
dialer idle-timeout 60
dialer load-threshold 128 either
ppp multilink
ppp callback request
dialer map ip 145.45.45.4 name r4 broadcast 8358661
dialer map ip 145.45.45.4 name r4 broadcast 8358663
ip ospf demand-circuit
ip ospf network point-to-point
no shut
ip ospf authentication message-digest
ip ospf message-digest key 1 md5 hello
!
int lo0
ip add 55.55.55.55 255.255.255.0
!
int lo1
ip add 155.155.155.155 255.255.255.0
!
key chain keyr5
key 1
  key-string hello
!
router ospf 100
network 150.50.15.0 0.0.0.255 area 0
network 55.55.55.0 0.0.0.255 area 0
network 145.45.45.0 0.0.0.15 area 1
redistribute rip subnets
area 0 authentication message-digest
area 1 authentication message-digest
!
router rip

```

```
version 2
no auto-summary
network 150.50.57.0
passive bri0
redistribute ospf 100
default-metric 2
!
router bgp 4799
network 155.155.155.0 mask 255.255.255.0
no auto-summary
no sync
neighbor 11.11.11.11 remote-as 4799
neighbor 11.11.11.11 description r1lo0-ibgp
neighbor 11.11.11.11 soft-reconfiguration in
neighbor 11.11.11.11 update-source loopback 0
neighbor 150.50.57.7 remote-as 6767
neighbor 150.50.57.7 description r7s0-AS6767
neighbor 150.50.57.7 soft-reconfiguration in
!
dialer-list 1 protocol ip permit
!
line con 0
no login
line vty 0 4
login
password hello
```

r6config

```
-----
r6#
hostname r6
!
service password-encryption
logging buffered 10000 7
logging 150.50.15.101
logging facility local6
no service tcp-small-server
no service udp-small-server
no service finger
service debug timestamp
no ntp enable
no cdp run
ip http server
ip http access-class 10
access-list 10 permit 150.50.0.0 0.0.255.255
snmp-server community hello ro 71
snmp-server community hellorw rw 72
snmp-server contact Hello Computers
snmp-server location Fremont-Santa Clara
access-list 71 permit 150.50.0.0 0.0.255.255
access-list 72 permit 150.50.111.0 0.0.0.255
scheduler interval 1000
no ip domain-lookup
```

```

no ip source-route
!
!acl for icmp rate-limiting
access-list 141 permit icmp any any
access-list 141 deny ip any any
!
!deny Trinoo
access-list 171 deny tcp any any eq 27665
access-list 171 deny udp any any eq 31335
access-list 171 deny udp any any eq 26444
!deny Stacheldraht
access-list 171 deny tcp any any eq 16660
access-list 171 deny tcp any any eq 65000
!deny subseven
access-list 171 deny tcp any any eq 6711
access-list 171 deny tcp any any eq 6712
access-list 171 deny tcp any any eq 6669
access-list 171 deny tcp any any eq 2222
access-list 171 deny tcp any any eq 7000
access-list 171 permit ip any any
!
enable secret hello
!
int e0
no ip directed-broadcast
no ip proxy-arp
no ip redirects
no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 192.168.66.6 255.255.255.0
no shut
!
int s0
encapsulation frame
frame-relay lmi-type ansi
ip address 150.50.46.6 255.255.255.0
no shut
ip authentication mode eigrp 46 md5
ip authentication key-chain keyr6
!
int lo0
ip add 66.66.66.66 255.255.255.0
!
int lo1
ip add 167.167.167.166 255.255.255.0
!
key chain keyr6
key 1
key-string hello
!

```

```

router eigrp 46
no auto-summary
network 150.50.46.0 0.0.0.255
network 66.66.66.0 0.0.0.255
network 192.168.66.0 0.0.0.255
!
router bgp 6767
network 167.167.167.0 mask 255.255.255.0
no auto-summary
neighbor 150.50.46.4 remote-as 4799
neighbor 150.50.46.4 description r4s1-AS4799
neighbor 150.50.46.4 soft-reconfiguration in
!
ip domain-name hellocomputers.com
ip host caserver 150.50.15.100
!
crypto key generate rsa
!
crypto ca identity caserver
enrollment mode ra
enrollment url http://caserver/certsrv/mscep/mscep.dll
!
crypto ca authenticate caserver
crypto ca enroll caserver
!
crypto isakmp policy 10
authentication rsa-sig
hash md5
crypto isakmp policy 20
authentication pre-share
hash md5
!
crypto isakmp key r6pix2key address 150.50.22.12
crypto isakmp key r6r7key address 150.50.57.7
!
crypto ipsec transform-set tset esp-des esp-md5-hmac
!
crypto map supermap 10 ipsec-isakmp
set peer 150.50.15.11
set transform-set tset
match address 168
crypto map supermap 20 ipsec-isakmp
set peer 150.50.22.12
set transform-set tset
match address 169
crypto map supermap 30 ipsec-isakmp
set peer 150.50.57.7
set transform-set tset
match address 167
!
access-list 168 permit ip 192.168.66.0 0.0.0.255 host 150.50.15.111
access-list 169 permit ip 192.168.66.0 0.0.0.255 host 150.50.22.112
access-list 167 permit ip 192.168.66.0 0.0.0.255 10.10.77.0 0.0.0.255

```

```
!  
line con 0  
  no login  
line vty 0 4  
  login  
  password hello  
  
r7config  
-----  
r7#  
hostname r7  
!  
service password-encryption  
logging buffered 10000 7  
logging 150.50.15.101  
logging facility local6  
no service tcp-small-server  
no service udp-small-server  
no service finger  
service debug timestamp  
no ntp enable  
no cdp run  
ip http server  
ip http access-class 10  
access-list 10 permit 150.50.0.0 0.0.255.255  
snmp-server community hello ro 71  
snmp-server community hellorw rw 72  
snmp-server contact Hello Computers  
snmp-server location Fremont-Santa Clara  
access-list 71 permit 150.50.0.0 0.0.255.255  
access-list 72 permit 150.50.111.0 0.0.0.255  
scheduler interval 1000  
no ip domain-lookup  
no ip source-route  
!  
!acl for icmp rate-limiting  
access-list 141 permit icmp any any  
access-list 141 deny ip any any  
!  
!deny Trinoo  
access-list 171 deny tcp any any eq 27665  
access-list 171 deny udp any any eq 31335  
access-list 171 deny udp any any eq 26444  
!deny Stacheldraht  
access-list 171 deny tcp any any eq 16660  
access-list 171 deny tcp any any eq 65000  
!deny subseven  
access-list 171 deny tcp any any eq 6711  
access-list 171 deny tcp any any eq 6712  
access-list 171 deny tcp any any eq 6669  
access-list 171 deny tcp any any eq 2222  
access-list 171 deny tcp any any eq 7000  
access-list 171 permit ip any any
```



```

!
enable secret hello
!
int e0
no ip directed-broadcast
no ip proxy-arp
no ip redirects
no ip icmp mask-reply
no ip icmp unreachable
no ip route-cache
rate-limit output access-group 141 1000000 512000 786000 conform-action transmit exceed-action drop
ip access-group 171 out
ip add 10.10.77.7 255.255.255.0
no shut
!
int s0
encapsulation hdlc
clock rate 64000
ip address 150.50.57.7 255.255.255.0
no shut
ip rip authentication mode md5
ip rip authentication key-chain keyr7
!
int lo0
ip add 77.77.77.77 255.255.255.0
!
int lo1
ip add 167.167.167.167 255.255.255.0
!
key chain keyr7
key 1
  key-string hello
!
router rip
version 2
network 150.50.57.0
network 77.77.77.0
network 10.10.77.0
no auto-summary
!
router bgp 6767
network 167.167.167.0 mask 255.255.255.0
no auto-summary
neighbor 150.50.57.5 remote-as 4799
neighbor 150.50.57.5 description r5s0-AS4799
neighbor 150.50.57.5 soft-reconfiguration in
!
ip domain-name hellocomputers.com
ip host caserver 150.50.15.100
!
crypto key generate rsa
!
crypto ca identity caserver

```

```
enrollment mode ra
enrollment url http://caserver/certsrv/mscep/mscep.dll
!
crypto ca authenticate caserver
crypto ca enroll caserver
!
crypto isakmp policy 10
authentication rsa-sig
hash md5
crypto isakmp policy 20
authentication pre-share
hash md5
!
crypto isakmp key r7pix1key address 150.50.15.11
crypto isakmp key r6r7key address 150.50.46.6
!
crypto ipsec transform-set tset esp-des esp-md5-hmac
!
crypto map supermap 10 ipsec-isakmp
set peer 150.50.15.11
set transform-set tset
match address 178
crypto map supermap 20 ipsec-isakmp
set peer 150.50.22.12
set transform-set tset
match address 179
crypto map supermap 30 ipsec-isakmp
set peer 150.50.46.6
set transform-set tset
match address 176
!
access-list 179 permit ip 10.10.77.0 0.0.0.255 host 150.50.22.112
access-list 178 permit ip 10.10.77.0 0.0.0.255 host 150.50.15.111
access-list 176 permit ip 10.10.77.0 0.0.0.255 192.168.66.0 0.0.0.255
!
line con 0
no login
!
line vty 0 4
login
password hello
!
!
catconfig
-----
cat(enable)

set vtp domain hello
set vtp mode transparent
!
set port name 3/1 r1e0
set port name 3/2 r2e0
set port name 3/3 r3e0
```

```
set port name 3/4 r4e0
set port name 3/5 r5e0
set port name 3/6 r6e0
set port name 3/7 r7e0
set port name 3/8 bb1e0
set port name 3/9 bb2e0
set port name 3/10 bb3e0
set port name 3/11 pix1e0
set port name 3/12 pix1e1
set port name 3/13 pix1e2
set port name 3/14 pix2e0
set port name 3/15 pix2e1
set port name 3/16 solaris1
set port name 3/17 solaris2
set port name 3/18 tacacs-ca
set port name 3/19 tftp
!
set vlan 2 3/2,3/14,3/17
set vlan 3 3/3
set vlan 4 3/4
set vlan 6 3/6
set vlan 7 3/7
set vlan 11 3/13
set vlan 15 3/1,3/5,3/11,3/16
set vlan 111 3/8,3/12,3/18-19
set vlan 112 3/9,3/15
set vlan 113 3/10
!
set port speed 3/1 auto
set port duplex 3/1 auto
set port speed 3/2 auto
set port duplex 3/2 auto
set port speed 3/3 auto
set port duplex 3/4 auto
set port speed 3/5 auto
set port duplex 3/6 auto
set port speed 3/7 auto
set port duplex 3/7 auto
set port speed 3/8 auto
set port duplex 3/8 auto
set port speed 3/9 auto
set port duplex 3/9 auto
set port speed 3/10 auto
set port duplex 3/10 auto
set port speed 3/11 auto
set port duplex 3/11 auto
set port speed 3/12 auto
set port duplex 3/12 auto
set port speed 3/13 auto
set port duplex 3/13 auto
set port speed 3/14 auto
set port duplex 3/14 auto
set port speed 3/15 auto
```

```

set port duplex 3/15 auto
set port speed 3/16 auto
set port duplex 3/16 auto
set port speed 3/17 auto
set port duplex 3/17 auto
set port speed 3/18 auto
set port duplex 3/18 auto
!
set vlan 111 name backbone1
set vlan 112 name backbone2
set vlan 113 name backbone3
set vlan 15 name pix1outsidevlan
set vlan 7 name r7e0vlan
set vlan 6 name r6e0vlan
set vlan 4 name r4e0vlan
set vlan 22 name pix2outsidevlan
set vlan 11 name pix1dmzvlan
!
set interface sc0 150.50.111.90 255.255.255.0
set interface sc0 111
set ip route default 150.50.111.11 primary
!
set ip permit enable
set ip permit 150.50.0.0 255.255.0.0
!

pix1config
-----
pix1(config)#
!
hostname pix1
interface e0 auto
interface e1 auto
interface e2 auto
!
nameif e0 outside sec0
nameif e1 inside sec100
nameif e2 dmz sec50
!
ip address outside 150.50.15.11 255.255.255.0
ip address inside 150.50.111.11 255.255.255.0
ip address dmz 10.10.11.11 255.255.255.0
!
nat (inside) 0 access-list nonat
access-list nonat permit ip 150.50.111.0 255.255.255.0 10.10.11.0 255.255.255.0
!
nat (inside) 1 0 0
global (outside) 1 150.50.15.150-150.50.15.160 255.255.255.0
global (outside) 1 150.50.111.50
!
rip outside passive version 2
rip outside default version 2
!

```

```

route outside 0 0 150.50.15.1
!
!static and conduit for router bb1 to allow BGP connection from r1
static (inside,outside) 150.50.15.111 150.50.111.111
conduit permit tcp host 150.50.15.111 gt 11000 host 150.50.15.1
!
!static and conduit for aaa/ca server
static (inside,outside) 150.50.15.100 150.50.111.100
conduit permit ip host 150.50.15.100 0 0
!
!static and conduit for tftp server
static (inside,outside) 150.50.15.101 150.50.111.101
conduit permit tcp host 150.50.15.101 eq tftp 0 0
!
sysopt connection permit-ipsec
!
name 150.50.15.100 caserver
domain-name hellocomputers.com
ca generate rsa key 512
ca identity caserver caserver:certsrv/mscep/mscep.dll
ca configure caserver ra 1 20
ca authenticate caserver
ca enroll caserver hello
ca save all
!
isakmp enable outside
isakmp identity address
isakmp policy 10 authentication rsa-sig
isakmp policy 10 hash md5
!
isakmp policy 20 authentication pre-share
isakmp policy 20 hash md5
!
isakmp key pix1pix2key address 150.50.22.12
isakmp key r7pix1key address 150.50.57.7
!
access-list bb1tobb2 permit ip 150.50.111.111 255.255.255.255 150.50.22.112 255.255.255.255
access-list bb1tovlan7 permit ip host 150.50.111.111 10.10.77.0 0.0.0.255
access-list bb1tovlan6 permit ip host 150.50.111.111 192.168.66.0 0.0.0.255
!
crypto ipsec transform-set tset esp-des esp-md5-hmac
!
crypto map supermap 10 ipsec-isakmp
crypto map supermap 10 set peer 150.50.46.6
crypto map supermap 10 set transform-set tset
crypto map supermap 10 match address bb1tovlan6
!
crypto map supermap 20 ipsec-isakmp
crypto map supermap 20 set peer 150.50.22.12
crypto map supermap 20 set transform-set tset
crypto map supermap 20 match address bb1tobb2
!
crypto map supermap 30 ipsec-isakmp

```

```

crypto map supermap 30 set peer 150.50.57.7
crypto map supermap 30 set transform-set tset
crypto map supermap 30 match address bb1tovlan7
!
crypto map supermap interface outside
!
!
pix2config
-----
pix2(config)#
!
hostname pix2
!
interface e0 auto
interface e1 auto
!
nameif e0 outside sec0
nameif e1 inside sec100
!
ip address outside 150.50.22.12 255.255.255.0
ip address inside 10.10.112.12 255.255.255.0
!
nat (inside) 1 10.10.112.0 255.255.255.0
global (outside) 1 150.50.22.150-150.50.22.160 255.255.255.0
global (outside) 1 150.50.22.50
!
rip outside passive version 2
rip outside default version 2
!
route outside 0 0 150.50.22.2
route inside 112.112.112.0 255.255.255.0 10.10.112.112
!
!static and conduit to allow ping to bb2 loopback0 from r2
static (inside,outside) 150.50.22.113 112.112.112.112
conduit permit icmp host 150.50.22.113 host 150.50.22.2
!
!static and conduit to allow gre traffic to bb2 from r2
static (inside,outside) 150.50.22.112 10.10.112.112
conduit permit gre host 150.50.22.112 host 150.50.22.2
!
sysopt connection permit-ipsec
!
name 150.50.15.100 caserver
domain-name hellocomputers.com
ca generate rsa key 512
ca identity caserver caserver:certsrv/mscep/mscep.dll
ca configure caserver ra 1 20
ca authenticate caserver
ca enroll caserver hello
ca save all
!
isakmp enable outside
isakmp identity address

```

```
isakmp policy 10 authentication rsa-sig
isakmp policy 10 hash md5
!
isakmp policy 20 authentication pre-share
isakmp policy 20 hash md5
!
isakmp key pix1pix2key address 150.50.15.11
isakmp key r6pix2key address 150.50.46.6
!
access-list bb2tobb1 permit ip host 10.10.112.112 host 150.50.15.111
access-list bb2tovlan7 permit ip host 10.10.112.112 10.10.77.0 0.0.0.255
access-list bb2tovlan6 permit ip host 10.10.112.112 192.168.66.0 0.0.0.255
!
crypto ipsec transform-set tset esp-des esp-md5-hmac
!
crypto map supermap 10 ipsec-isakmp
crypto map supermap 10 set peer 150.50.57.7
crypto map supermap 10 set transform-set tset
crypto map supermap 10 match address bb2tovlan7
!
crypto map supermap 20 ipsec-isakmp
crypto map supermap 20 set peer 150.50.15.11
crypto map supermap 20 set transform-set tset
crypto map supermap 20 match address bb2tobb1
!
crypto map supermap 30 ipsec-isakmp
crypto map supermap 30 set peer 150.50.46.6
crypto map supermap 30 set transform-set tset
crypto map supermap 30 match address bb2tovlan6
!
crypto map supermap interface outside
!
!
```