Workbook 2 ISIS Troubleshooting

A diagram of a computer network

AI-generated content may be incorrect.

## Task1

We have ISIS configured across all 7 routers however the level 1 routers have not learned any routes outside of their area, CE2 is unable to ping CE4 and we need to ensure that all ISIS routes are learned on all routers.

## Troubleshooting commands

The below commands should be enough to get to the stem of the problem, you are free to run the commands on the other routers if desired.

CE1#show clns neighbors   
CE1#show ip route isis  
CE1#show isis database  
  
RP/0/0/CPU0:PE1#show isis neighbors  
RP/0/0/CPU0:PE1#show route isis  
RP/0/0/CPU0:PE1# show isis database

CE4#show clns neighbors   
CE4#show ip route isis  
CE4#show isis database

## Questions

1. Why are level 2 routes not being shared to level 1 routers?  
2. If the default ISIS level configuration settings was used would we have overcome this?  
3. On what devices do we need to make changes to complete Task 1?  
4. What changes do we need to make without changing the interface level assignment?

## Task 1 Solutions

PE1  
route-policy isis  
 Pass  
end-policy  
!  
router isis 1  
net 49.0003.0000.0011.00  
address-family ipv4 unicast  
propagate level 2 into level 1 route-policy isis

PE4  
route-policy isis  
 Pass  
end-policy  
!  
router isis 1  
net 49.0002.0000.0044.00  
address-family ipv4 unicast  
propagate level 2 into level 1 route-policy isis

## Task 2

Apply authentication between routers CE1 and CE2 and ensure that no other ISIS adjacencies are affected

## Questions

What types of packets can be authenticated?  
What are the authentication methods used?  
What type of authentication effects all adjacencies and can this be a possible problem?

## Task 2 Configuration Solution

CE2#  
key chain ISIS-KEY  
key 1  
key-string abc123  
!  
interface GigabitEthernet2  
isis authentication mode md5  
isis authentication key-chain ISIS-KEY

CE1#  
key chain ISIS-KEY  
key 1  
key-string abc123  
!  
interface GigabitEthernet2  
isis authentication mode md5  
isis authentication key-chain ISIS-KEY