

Troubleshooting and Simulation hints *by Bob Cunningham*

Troubleshoot subnet problems

Ensure that no host address is assigned to a network or broadcast address

Check for overlapping VLSM subnets

Create and troubleshoot RIP networks

Use show run config to check the configuration of RIP v1

Use router rip to configure RIP

Add a network to RIP v1

Change to RIP version 2

Evaluate a RIP network for a consistent and workable subnet scheme

Evaluate a RIP network for RIP not running or networks not routing

Use the show ip route command to identify routes for RIP, OSPF and directly connected.

Create and troubleshoot OSPF networks

Use show running configuration to identify OSPF areas

Ensure that OSPF routers are in the same area.

Ignore the OSPF PID as has no effect on inter router communication

Serial and Ethernet Connections

Use show controllers to identify which side of a serial cable is DTE or DCE

Apply clocking to the DCE side

Use show interface to check the ip address and subnet mask on an interface

Set an ip address and subnet mask on an interface

Bounce an interface



Create and apply access control lists

Know the access-list, ip access-group and access-class commands

Create both standard and extended access control lists

Create an access list to block ping, telnet and FTP (remember FTP uses ports 20 & 21)

Apply extended access lists as close to the source as possible

Apply standard ACLs as close to the destination as possible

Create static and dynamic NAT

Steps to create a static NAT

Define an inside interface and an outside interface

Define a pool of global addresses to be allocated

Establish a static translation relationship with the static local-ip and global-ip

Steps to create a dynamic NAT

Define an inside interface and an outside interface

Define a pool of global addresses to be allocated

Define a standard IP ACL identifying local addresses to be translated

Establish a dynamic source translation relationship with the ACL and address pool

Configure a 2950

Configure the IP Management address (vlan 1) & the default gateway

Configure the VTP domain on a 2950

Configure the switch in Server, client and transparent modes

Miscellaneous

Practice working with the simulation interface found at:

http://www.cisco.com/warp/public/10/wwtraining/certprog/training/cert_exam_tutorial.html

The last step in a troubleshooting is always to do a copy run start

Set a secret password

Set a hostname

You can only directly log in to a switch or router that has a dotted line

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“Practice is the best of all instructors” Publilius Syrus (Roman Philosopher)

