

Routing Commands

Featuring RIP
On Linux, OS X, Windows Server
CISCO IOS

Why RIP?

- The Lemming Idea - Everyone Does it.
- We Have It
- Easier to Monitor and Explain

ROUTED

- On most Unix systems
- Modern version will do RIPv1 and v2, as well as Internet Router Discovery Protocol
- Will do Poison Reverse and Split Horizon
- Will update the route tables also
- Configurable via command line options or configuration files

ROUTED on OSX

- Started by the OS for multiple interfaces
- Run manually with root permissions
- The options we care about are -d and -t

RIP on Windows

- Use the GUI
- Start->Settings->Control Panel->Administrative Tools, select Routing and Remote Access properties
- There will be a RIP item on the left hand side, and the hand side pane should show the student interface

LINUX

- Uses the QUAGGA package. QUAGGA is being developed to be the ultimate routing handler
- It's modular design can handle RIP, BGP, OSPF, and static routes, with other protocols in development
- ZEBRA handles routing tables, and communicates with specialized routing daemons
- RIPD is the daemon that handles RIP
- Configurable from command line, config files, vty
- More information at www.quagga.net
- AS-number 196614

RUNNING QUAGGA

- First, start zebra to handle route changes as:
`/usr/lib/quagga/zebra -d -f /etc/quagga/zebra.conf`
- Next, start the RIP daemon as:
`/usr/lib/quagga/ripd -f /etc/quagga/ripd.conf`
- Remember to use `sudo` on both commands.

CISCO and RIP

- RIP is off by default.
- To enable RIP, Enter RIP config mode and configure RIP with the commands
router rip
network 132.235.201.xxx
network 132.235.201.yyy
passive-interface 0/5
- And exit RIP mode.

MORE RIP CONFIG

- Now that the router does RIP, you must tell it where to send the packets.
- For each interface, enter interface configuration mode and type
 `ip rip send version 2`
- Exit configuration mode, then verify your work with:
 `show ip protocol`

AND THE WORLD

- Default route information distribution is off by default, so Buell should tell everyone about it: On Buell only:
 router rip
 default-information originate
 redistribute static
 exit
- And Everyone is Happy

ABOUT THE LAB

- Your goal is:
 - To observe dynamic route changes,
document the changes,
and explain them.
- So do NOT enter default routes
- This will be a VERY shared environment.
- Check for the latest lab writeup.