S1E10 - A Tangled Web

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Connecting

Connect to the lab server:

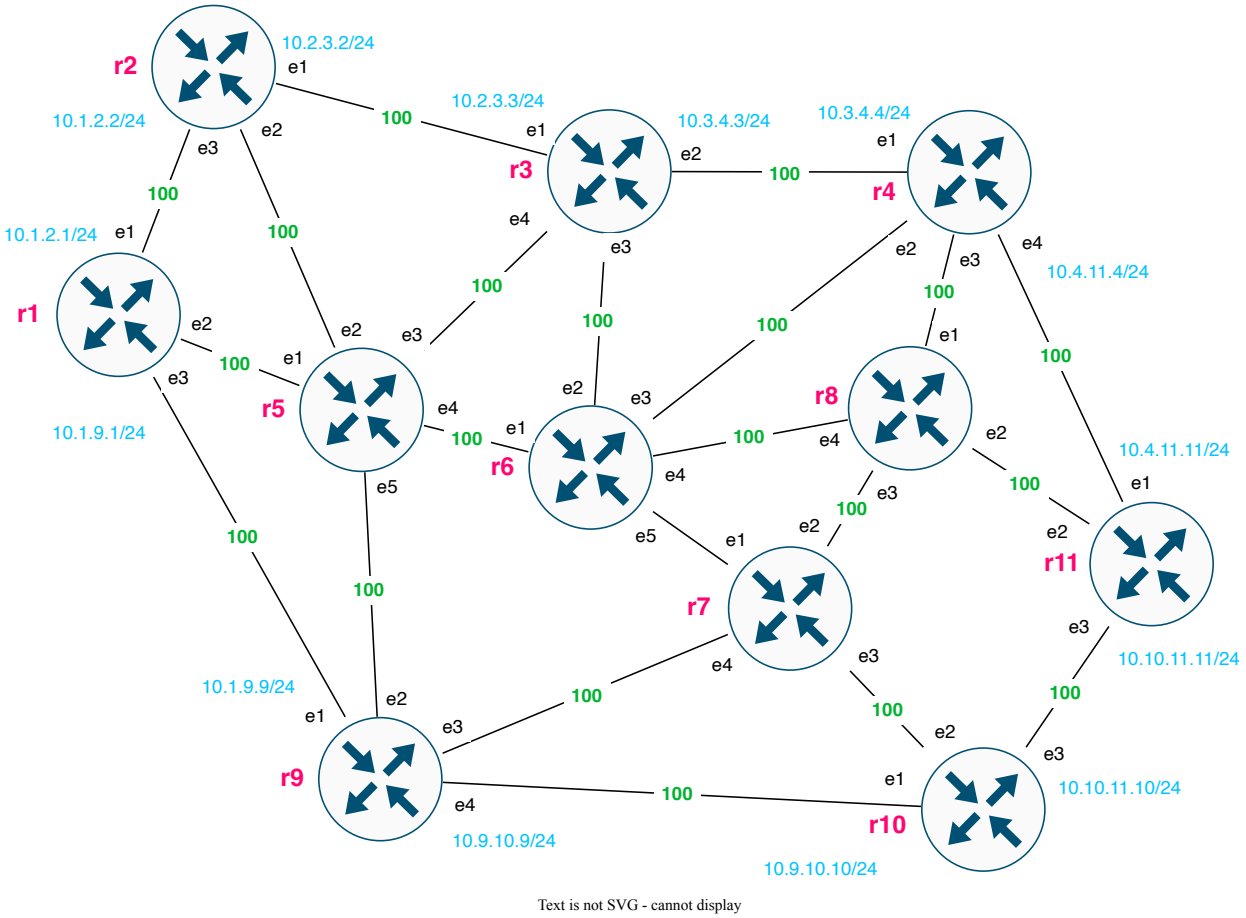
```
local$ ssh-keygen -R netlab.nanocat.net
local$ ssh lab@netlab.nanocat.net
Password: (see discord)
```

Connect to your router:

```
lab@netlab$ list-routers                            <- list all lab routers
lab@netlab$ list-pcs                                <- list all lab PCs
lab@netlab$ docker exec -it clab-clintro-r7 Cli     <- connect to your router
```

Topology

Topology: a-tangled-web



Text is not SVG - cannot display

Goal

- Configure all routers
- Enable dynamic routing with RIP
- All routers can reach all other routers

Steps (Bird's-Eye View)

- Enable IP routing
- Configure your loopback interface
- Configure your ethernet interfaces
- Set up RIP

IP Routing

- Aristas are Layer 2 Switches by default
- Routing must be explicitly enabled
- ```
  !
  ip routing
  !
  ```

Loopback interface

- Take your router number (eg r7)
- That number, repeated four times /32, is your loopback interface
- ```
  !
  interface loopback1
     ip address 7.7.7.7/32
  !
  ```

Ethernet interface addressing concept

- Take your router number (eg r7)
- Take your neighbour's router number (eg r9)
- Your interface address is 10.7.9.7/24
  - 10, dot
  - lower router number, dot
  - higher router number, dot
  - your router number /24
- EG link from r2:eth1 -> r5:eth5
  - r2 side: 10.2.5.1/24
  - r5 side: 10.2.5.5/24

Ethernet interfaces

```
!
interface ethernet2
   no switchport                          <- routed port
```

```
   description --- link to r8:eth10 ---     <- discover from diagram
                                              or using : show lldp neighbor
   ip address 10.4.8.4/24
!
```

Set up RIP

```
!
router rip
   no shutdown
   network 10.0.0.0/8
!
```

Experiment!

```
show ip route
traceroute 6.6.6.6
ping 10.10.10.10
```

Bonus: convert to OSPF

- If we make it this far:
- ```
  !
  no router rip
  router ospf 100
     network 10.0.0.0/8 area 0
     redistribute connected
  !
  ```

michel - R3 roumen - R5 chris - R6 nick - R7 kim - R8 hans - R10 ryan - R11
  ```