In this section, we are only going to go over the steps to configure and connect the network with Routing Information Protocol (RIP) version 2.

Please read up on how RIP calculates routes and table updates.

**Note:** RIP can take while to converge. **PATIENCE** is a must for completion of the lab assignment.

**Useful references:**
- [https://netref.soe.ucsc.edu/osnl/35](https://netref.soe.ucsc.edu/osnl/35)
- [https://netref.soe.ucsc.edu/osnl/33](https://netref.soe.ucsc.edu/osnl/33)

### Configure IP address on all configured interfaces:

<table>
<thead>
<tr>
<th>PC1</th>
<th>PC2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ifconfig eth0 10.0.0.11/24</td>
<td>ifconfig eth0 10.0.5.12/24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>conf t</td>
<td>conf t</td>
<td>conf t</td>
<td>conf t</td>
</tr>
</tbody>
</table>
int fa0/0
ip add 10.0.0.1
255.255.255.0
no shut
int fa1/0
ip add 10.0.2.1
255.255.255.0
no shut
int fa2/0
ip add 10.0.1.1
255.255.255.0
no shut
end

int fa0/0
ip add 10.0.2.3
255.255.255.0
no shut
int fa2/0
ip add 10.0.1.2
255.255.255.0
no shut
end

int fa0/0
ip add 10.0.3.2
255.255.255.0
no shut
int fa1/0
ip add 10.0.4.3
255.255.255.0
no shut
end

int fa2/0
ip add 10.0.3.4
255.255.255.0
no shut
int fa1/0
ip add 10.0.4.4
255.255.255.0
no shut
int fa0/0
ip add 10.0.5.4
255.255.255.0
no shut
end

Test Connectivity on all immediate neighbors

<table>
<thead>
<tr>
<th>R1</th>
<th>R2</th>
<th>R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>ping 10.0.0.11</td>
<td>ping 10.0.1.1</td>
<td>ping 10.0.4.3</td>
</tr>
<tr>
<td>ping 10.0.2.3</td>
<td>ping 10.0.3.4</td>
<td>ping 10.0.3.2</td>
</tr>
<tr>
<td>ping 10.0.5.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Part 2 Configuration:

<table>
<thead>
<tr>
<th>R1</th>
<th>R2</th>
<th>R3</th>
<th>R4</th>
</tr>
</thead>
<tbody>
<tr>
<td>conf t</td>
<td>conf t</td>
<td>conf t</td>
<td>conf t</td>
</tr>
<tr>
<td>ip routing</td>
<td>ip routing</td>
<td>ip routing</td>
<td>ip routing</td>
</tr>
<tr>
<td>router rip</td>
<td>router rip</td>
<td>router rip</td>
<td>router rip</td>
</tr>
<tr>
<td>version 2</td>
<td>version 2</td>
<td>version 2</td>
<td>version 2</td>
</tr>
<tr>
<td>network 10.0.0.0</td>
<td>network 10.0.0.0</td>
<td>network 10.0.0.0</td>
<td>network 10.0.0.0</td>
</tr>
</tbody>
</table>

PC1

/etc/rc.d/init.d/zebra start
/etc/rc.d/init.d/ripd start
telnet localhost 2602
pw = rootroot
enable
configure terminal

PC2

/etc/rc.d/init.d/zebra start
/etc/rc.d/init.d/ripd start
telnet localhost 2602
pw = rootroot
enable
configure terminal
router rip
version 2
network 10.0.0.0/21
passive-interface eth0
int eth0
no ip rip authentication mode text
end
show ip rip

For those who are wondering what RIP authentication is →