**Configuring Direct, Static, Default routes**

**For router A (Arnor) configuring:**

Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.40.1 255.255.252.0

=> int s1/0 =>ip address 10.13.46.34 255.255.255.252

=> int s0/0 =>ip address 10.13.46.58 255.255.255.252

Static route:

en => conf t => ip route 10.13.46.36 255.255.255.252 s1/0

ip route 10.13.44.0 255.255.255.0 s1/0

ip route 10.13.32.0 255.255.252.0 s1/0

ip route 10.13.46.40 255.255.255.252 s1/0

ip route 10.13.45.0 255.255.255.0 s1/0

ip route 10.13.46.52 255.255.255.252 s1/0

ip route 10.13.46.0 255.255.255.224 s1/0

ip route 10.13.46.44 255.255.255.252 s1/0

ip route 10.13.46.44 255.255.255.252 s0/0

ip route 10.13.0.0 255.255.224.0 s0/0

ip route 10.13.0.0 255.255.224.0 s1/0

ip route 10.13.46.48 255.255.255.252 s0/0

ip route 10.13.46.48 255.255.255.252 s1/0

ip route 10.13.36.0 255.255.252.0 s0/0

ip route 10.13.36.0 255.255.252.0 s1/0

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/0

**For router R (Rohan) configuring:**

Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.46.1 255.255.255.224

=>int s1/0 =>ip address 10.13.46.54 255.255.255.252

=>int s0/0 =>ip address 10.13.46.57 255.255.255.252

Static route:

En => conf t => ip route 10.13.0.0 255.255.0.0 s0/0

=>ip route 10.13.0.0 255.255.0.0 s1/0

=>ip route 10.13.32.0 255.255.252.0 s0/0

=>ip route 10.13.32.0 255.255.252.0 s1/0

=>ip route 10.13.36.0 255.255.252.0 s0/0

=>ip route 10.13.36.0 255.255.252.0 s1/0

=>ip route 10.13.40.0 255.255.252.0 s0/0

=>ip route 10.13.40.0 255.255.252.0 s1/0

=>ip route 10.13.44.0 255.255.255.0 s1/0

=>ip route 10.13.45.0 255.255.255.0 s0/0

=>ip route 10.13.45.0 255.255.255.0 s1/0

=>ip route 10.13.46.32 255.255.255.252 s1/0

=>ip route 10.13.46.36 255.255.255.252 s0/0

=>ip route 10.13.46.36 255.255.255.252 s1/0

=>ip route 10.13.46.40 255.255.255.252 s0/0

=>ip route 10.13.46.40 255.255.255.252 s1/0

=>ip route 10.13.46.44 255.255.255.252 s0/0

=>ip route 10.13.46.44 255.255.255.252 s1/0

=>ip route 10.13.46.48 255.255.255.252 s0/0

=>ip route 10.13.46.48 255.255.255.252 s1/0

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/0

**For router G (Gordor) configuring:**

Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.45.1 255.255.255.0

=> int s1/0 => ip address 10.13.46.42 255.255.255.252

Static route:

enable => conf t => ip route 10.13.0.0 255.255.0.0 s1/0

* ip route 10.13.46.36 255.255.255.252 s1/0
* ip route 10.13.32.0 255.255.252.0 s1/0
* ip route 10.13.44.0 255.255.255.0 s1/0
* ip route 10.13.46.32 255.255.255.252 s1/0
* ip route 10.13.46.52 255.255.255.252 s1/0
* ip route 10.13.46.0 255.255.255.224 s1/0
* ip route 10.13.46.44 255.255.255.252 s1/0
* ip route 10.13.40.0 255.255.255.0 s1/0
* ip route 10.13.46.48 255.255.255.252 s1/0
* ip route 10.13.36.0 255.255.252.0 s1/0

**For router M (Mordor) configuring:**

Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.0.1 255.255.224.0

=>int s1/0 => ip address 10.13.46.46 255.255.255.252

Static route:

enable => conf t => ip route 10.13.44.0 255.255.255.0 s1/0

* ip route 10.13.46.40 255.255.255.252 s1/0
* ip route 10.13.45.0 255.255.255.0 s1/0
* ip route 10.13.46.52 255.255.255.252 s1/0
* ip route 10.13.46.56 255.255.255.252 s1/0
* ip route 10.13.46.0 255.255.255.224 s1/0
* ip route 10.13.46.32 255.255.255.252 s1/0
* ip route 10.13.40.0 255.255.252.0 s1/0
* ip route 10.13.46.36 255.255.255.252 s1/0
* ip route 10.13.32.0 255.255.252.0 s1/0
* ip route 10.13.46.48 255.255.255.252 s1/0
* ip route 10.13.36.0 255.255.252.0 s1/0

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/0

**For router E (Eriador) configuring:**

Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.36.1 255.255.252.0

=> int s1/0 => ip address 10.13.46.50 255.255.255.252

=> int s0/0 => ip address 10.13.46.61 255.255.255.252

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/0

**For router C (Cardolan) configuring:**

=> Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.32.1 255.255.252.0

=>int s1/1 => ip address 10.13.46.38 255.255.255.252

=> int s0/0 => ip address 10.13.46.62 255.255.255.252

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/1

**For router S (Shire) configuring:**

=> Directly connected network:

enable => conf t => int f0/0 => ip address 10.13.44.1 255.255.255.0

=> int s1/0 => ip address 10.13.46.33 255.255.255.252

=> int s1/1 => ip address 10.13.46.37 255.255.255.252

=> int s1/2 => ip address 10.13.46.41 255.255.255.252

=> int s1/3 => ip address 10.13.46.53 255.255.255.252

=> int s1/4 => ip address 10.13.46.49 255.255.255.252

=> int s1/5 => ip address 10.13.46.45 255.255.255.252

Static route:

enable => conf t => ip route 10.13.40.0 255.255.252.0 s1/0

* ip route 10.13.32.0 255.255.252.0 s1/1
* ip route 10.13.45.0 255.255.255.0 s1/2
* ip route 10.13.46.0 255.255.255.224 s1/3
* ip route 10.13.46.56 255.255.255.224 s1/3
* ip route 10.13.36.0 255.255.252.0 s1/4
* ip route 10.13.0.0 255.255.224.0 s1/5

Default route:

enable => conf t => ip route 0.0.0.0 0.0.0.0 s1/2

**Configuring Floating routes**

**Router A:**

Enable => conf t => ip route 10.13.46.0 255.255.255.224 s0/0 10

=>ip route 10.13.46.36 255.255.255.252 s0/0 10

**Router R:**

Enable => conf t => ip route 10.13.44.0 255.255.255.0 s0/0 10

=>ip route 10.13.40.0 255.255.252.0 s0/0 10

**Configuring RIPv2**

**RIPv2 on E:**

en => conf t => ip route 0.0.0.0 0.0.0.0 s1/0 => router rip => version 2 => no auto-summary

=>network 10.13.46.48 => network 10.13.46.60 => passive-interface f0/0 => default-information originate

=> end => copy run start

**RIPv2 on C:**

en => conf t => ip route 0.0.0.0 0.0.0.0 s1/1 => router rip => version 2 => no auto-summary

=>network 10.13.46.36 => network 10.13.46.60 => passive-interface f0/0 => default-information originate

=> end => copy run start