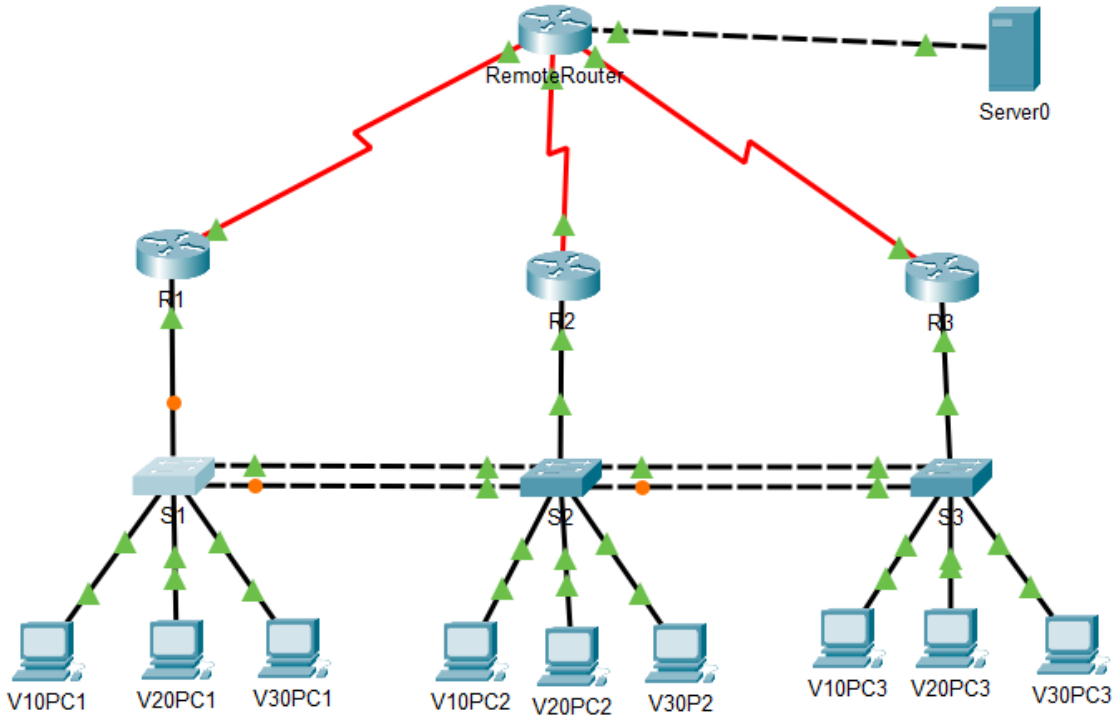
Rendszerüzemeltetés
Load balance and high quality beállítása



R1:

```
R1>enable
R1#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#interface serial0/0/0
R1(config-if)#ip address 40.0.0.1 255.0.0.0
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#interface gigabiteth 0/0
R1(config-if)#no ip address
R1(config-if)#no shutdown
R1(config-if)#exit
R1(config)#interface gigabitEth 0/0.10
R1(config-subif)#encapsulation dot1Q 10
R1(config-subif)#ip address 10.0.0.1 255.0.0.0
R1(config-subif)#exit
R1(config)#interface gigabitEth 0/0.20
R1(config-subif)#encapsulation dot1Q 20
R1(config-subif)#ip address 20.0.0.1 255.0.0.0
R1(config-subif)#exit
R1(config)#interface gigabitEth 0/0.30
R1(config-subif)#encapsulation dot1Q 30
R1(config-subif)#ip address 30.0.0.1 255.0.0.0
R1(config-subif)#exit
R1(config)#router rip
R1(config-router)#network 10.0.0.0
R1(config-router)#network 20.0.0.0
R1(config-router)#network 30.0.0.0
R1(config-router)#network 40.0.0.0
R1(config-router)#exit
R1(config)#
```

R2:

```
R2>enable
R2#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#int ser0/0/0
R2(config-if)#ip address 50.0.0.1 255.0.0.0
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#int gigabit 0/0
R2(config-if)#no ip address
R2(config-if)#exit
R2(config)#int gigabit 0/0.10
R2(config-subif)#encaps dot1Q 10
R2(config-subif)#ip address 10.0.0.2 255.0.0.0
R2(config-subif)#exit
R2(config)#int gigabit 0/0.20
R2(config-subif)#encaps dot1Q 20
R2(config-subif)#ip address 20.0.0.2 255.0.0.0
R2(config-subif)#exit
R2(config)#int gigabit 0/0.30
R2(config-subif)#encaps dot1Q 30
R2(config-subif)#ip address 30.0.0.2 255.0.0.0
R2(config-subif)#exit
R2(config)#router rip
R2(config-router)#network 10.0.0.0
R2(config-router)#network 20.0.0.0
R2(config-router)#network 30.0.0.0
R2(config-router)#network 50.0.0.0
R2(config-router)#exit
R2(config)#
```

R3:

```
R3>ENABLE
R3#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#int ser0/0/0
R3(config-if)#ip address 60.0.0.1 255.0.0.0
R3(config-if)#no shutdown
R3(config-if)#exit
R3(config)#int gigabit 0/0
R3(config-if)#no ip address
R3(config-if)#no shutdown
R3(config-if)#exit
R3(config)#int gigabit 0/0.10
R3(config-subif)#encaps dot1Q 10
R3(config-subif)#ip address 10.0.0.3 255.0.0.0
R3(config-subif)#exit
R3(config)#int gigabit 0/0.20
R3(config-subif)#ip address 20.0.0.3 255.0.0.0
R3(config-subif)#exit
R3(config)#int gigabit 0/0.30
R3(config-subif)#exit
R3(config)#int gigabit 0/0.20
R3(config-subif)#encaps dot1Q 20
R3(config-subif)#exit
R3(config)#int gigabit 0/0.30
R3(config-subif)#encaps dot1Q 30
R3(config-subif)#ip address 30.0.0.3 255.0.0.0
R3(config-subif)#exit
R3(config)#router rip
R3(config-router)#network 10.0.0.0
R3(config-router)#network 20.0.0.0
R3(config-router)#network 30.0.0.0
R3(config-router)#network 60.0.0.0
R3(config-router)#exit
R3(config)#
```

RemoteRouter

```
Router>enable
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int ser0/0/0
Router(config-if)#ip address 40.0.0.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#int ser0/0/1
Router(config-if)#ip address 50.0.0.2 255.0.0.0
Router(config-if)#exit
Router(config)#int ser0/1/0
Router(config-if)#ip address 60.0.0.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#int ser0/0/1
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#int gigabit0/0
Router(config-if)#ip address 70.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 70.0.0.0
Router(config-router)#network 60.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#exit
Router(config)#
```

S1:

```
S1>enable
S1#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#vlan 10
S1(config-vlan)#exit
S1(config)#vlan 20
S1(config-vlan)#exit
S1(config)#vlan 30
S1(config-vlan)#exit
S1(config)#int fasteth 0/1
S1(config-if)#switchport access vlan 10
S1(config-if)#exit
S1(config)#int fasteth 0/2
S1(config-if)#switchport access vlan 20
S1(config-if)#exit
S1(config)#int fasteth 0/3
S1(config-if)#switchport access vlan 30
S1(config-if)#exit
S1(config)#int gigabiteth 0/1
S1(config-if)#switchport mode trunk
S1(config-if)#exit
S1(config)#int fasteth 0/24
S1(config-if)#switchport mode trunk
S1(config-if)#exit
S1(config)#int fasteth 0/23
S1(config-if)#switchport mode trunk
S1(config-if)#exit
S1(config)#
```

S2:

```
S2>ENABLE
S2#CONF TERM
Enter configuration commands, one per line.  End with CNTL/Z.
S2(config)#vlan 10
S2(config-vlan)#exit
S2(config)#vlan 20
S2(config-vlan)#exit
S2(config)#vlan 30
S2(config-vlan)#exit
S2(config)#int fasteth 0/1
S2(config-if)#switchport access vlan 10
S2(config-if)#exit
S2(config)#int fasteth 0/2
S2(config-if)#switchport access vlan 20
S2(config-if)#exit
S2(config)#int fasteth 0/3
S2(config-if)#switchport access vlan 30
S2(config-if)#exit
S2(config)#int giga 0/1
S2(config-if)#switchport mode trunk
S2(config-if)#exit
S2(config)#int fast 0/24
S2(config-if)#switchport mode trunk
S2(config-if)#exit
S2(config)#int fast 0/23
S2(config-if)#switchport mode trunk
S2(config-if)#exit
S2(config)#int fast 0/22
S2(config-if)#switchport mode trunk
S2(config-if)#exit
S2(config)#int fast 0/21
S2(config-if)#switchport mode trunk
S2(config-if)#exit
S2(config)#
```

S3:

```
S3>ENABLE
S3#
S3#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
S3(config)#vlan 10
S3(config-vlan)#exit
S3(config)#vlan 20
S3(config-vlan)#exit
S3(config)#vlan 30
S3(config-vlan)#exit
S3(config)#int fast 0/1
S3(config-if)#switchport access vlan 10
S3(config-if)#exit
S3(config)#int fast 0/2
S3(config-if)#switchport access vlan 20
S3(config-if)#exit
S3(config)#int fast 0/3
S3(config-if)#switchport access vlan 30
S3(config-if)#exit
S3(config)#int giga0/1
S3(config-if)#switchport mode trunk
S3(config-if)#exit
S3(config)#int fast0/22
S3(config-if)#switchport mode trunk
S3(config-if)#exit
S3(config)#int fast0/21
S3(config-if)#switchport mode trunk
S3(config-if)#exit
S3(config)#
```

R1:

```
R1>enable
R1#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int giga0/0.10
R1(config-subif)#standby 10 ip 10.0.0.10
R1(config-subif)#standby 10 priority 120
R1(config-subif)#standby 10 p
%HSRP-6-STATECHANGE: GigabitEthernet0/0.10 Grp 10 state Speak -> Standby

%HSRP-6-STATECHANGE: GigabitEthernet0/0.10 Grp 10 state Standb
R1(config-subif)#standby 10 preempt
R1(config-subif)#exit
R1(config)#int giga0/0.20
R1(config-subif)#standby 20 ip 20.0.0.10
R1(config-subif)#standby 10 priority 110
R1(config-subif)#exit
R1(config)#int giga0/0.30
R1(config-subif)#standby 10 priority 110
%HSRP-6-STATECHANGE: GigabitEthernet0/0.20 Grp 20 state Speak -> Standby

%HSRP-6-STATECHANGE: GigabitEthernet0/0.20 Grp 20 s
R1(config-subif)#standby 30 ip 30.0.0.10
R1(config-subif)#exit
R1(config)#
```

R2:

```
R2>ENA
R2#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#int giga0/0.10
R2(config-subif)#standby 10 ip 10.0.0.10
R2(config-subif)#exit
R2(config)#int giga0/0.20
R2(config-subif)#standby 20 ip 20.0.0.10
R2(config-subif)#standb
%HSRP-6-STATECHANGE: GigabitEthernet0/0.10 Grp 10 state Speak -> Standby

% Incomplete command.
R2(config-subif)#standby 20 prio 120
R2(config-subif)#stan
%HSRP-6-STATECHANGE: GigabitEthernet0/0.20 Grp 20 state Speak -> Standby
% Incomplete command.
R2(config-subif)#standby 20 preempt
R2(config-subif)#
 %HSRP-6-STATECHANGE: GigabitEthernet0/0.20 Grp 20 state Standby -> Active

R2(config-subif)#exit
R2(config)#int giga0/0.30
R2(config-subif)#standby 30 ip 30.0.0.10
R2(config-subif)#standby 30 prio 110
R2(config-subif)#exit
R2(config)#
%HSRP-6-STATECHANGE: GigabitEthernet0/0.30 Grp 30 state Speak -> Standby
```

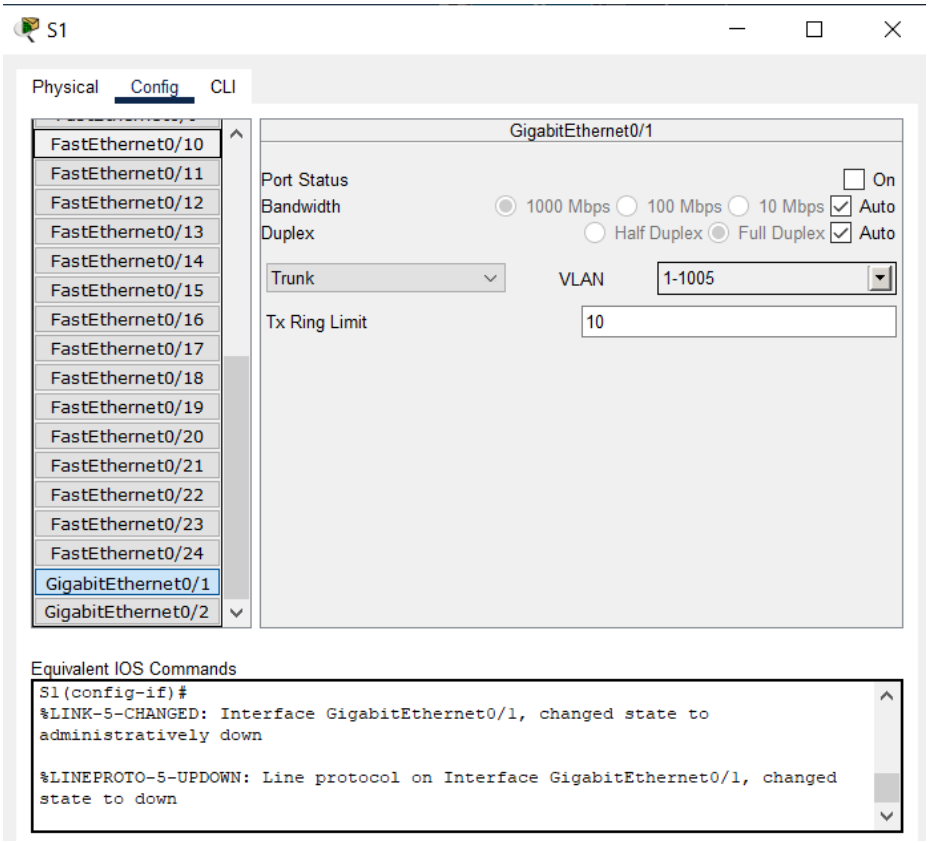
R3:

```
R3>ENABLE
R3#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#int giga0/0.10
R3(config-subif)#standby 10 ip 10.0.0.10
R3(config-subif)#standby 10 prio 110
R3(config-subif)#exit
R3(config)#int giga0/0.20
R3(config-subif)#standby 20 ip 20.0.0.10
R3(config-subif)#exit
R3(config)#int giga0/0.30
R3(config-subif)#standby 30 ip 30.0.0.10
R3(config-subif)#standby 30 prio 120
R3(config-subif)#standby 30 preempt
R3(config-subif)#
 %HSRP-6-STATECHANGE: GigabitEthernet0/0.30 Grp 30 state Standby -> Active
e
% Ambiguous command: "e"
R3(config-subif)#exit
R3(config)#
```

Ping-el ellenőrizzük, hogy létrejött-e a serverrel a kapcsolat

```
C:\>PING 70.0.0.100

Pinging 70.0.0.100 with 32 bytes of data:

Reply from 70.0.0.100: bytes=32 time=1ms TTL=126
Reply from 70.0.0.100: bytes=32 time=1ms TTL=126
Reply from 70.0.0.100: bytes=32 time=14ms TTL=126
Reply from 70.0.0.100: bytes=32 time=14ms TTL=126

Ping statistics for 70.0.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 14ms, Average = 7ms

C:\>tracert 70.0.0.100

Tracing route to 70.0.0.100 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      10.0.0.1
  2    1 ms      1 ms      1 ms      60.0.0.2
  3    5 ms      1 ms      0 ms      70.0.0.100

Trace complete.
```

S1 lekapcsolása:



S1 lekapcsolása után is másik útvonalon elérhető a server:

```
C:\>PING 70.0.0.100

Pinging 70.0.0.100 with 32 bytes of data:

Reply from 70.0.0.100: bytes=32 time=1ms TTL=126
Reply from 70.0.0.100: bytes=32 time=1ms TTL=126
Reply from 70.0.0.100: bytes=32 time=1ms TTL=126
Reply from 70.0.0.100: bytes=32 time=1ms TTL=126

Ping statistics for 70.0.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>tracert 70.0.0.100

Tracing route to 70.0.0.100 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      10.0.0.3
  2    1 ms      1 ms      1 ms      50.0.0.2
  3    1 ms      1 ms      0 ms      70.0.0.100

Trace complete.

C:\>
```