Roteamento Estático - Atividades

segunda-feira, 7 de novembro de 2022 15:01

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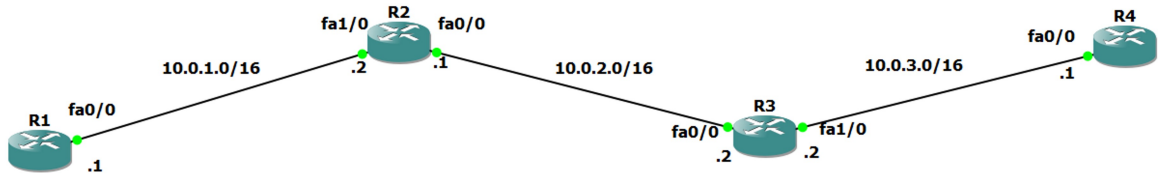
Atividade 1



Configurações

#R1

R1(config)#int fa0/0
R1(config-if)#ip add 10.0.1.1 255.255.255.0
R1(config-if)#no shut
R1(config-if)#exit
R1(config)#
*Nov 7 14:26:53.971: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov 7 14:26:54.971: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

R1(config-if)#ip route 10.0.2.0 255.255.255.0 10.0.1.2
R1(config)#ip route 10.0.3.0 255.255.255.0 10.0.1.2

R1#ping 10.0.3.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.3.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 132/142/184 ms
R1#ping 10.0.2.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 88/102/132 ms
R1#show ip int br

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	10.0.1.1	YES	manual	up	up

#R2

R2(config-if)#int fa1/0
R2(config-if)#ip add 10.0.1.2 255.255.255.0
R2(config-if)#no shut
R2(config-if)#exit
R2(config)#int fa0/0
R2(config-if)#ip add 10.0.2.1 255.255.255.0
R2(config-if)#no shut
R2(config-if)#exit
R2(config)#
*Nov 7 14:29:50.875: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov 7 14:29:51.875: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
R2(config)#ip route 10.0.3.0 255.255.255.0 10.0.2.2
R2(config)#exit
R2#
*Nov 7 14:58:17.475: %SYS-5-CONFIG_I: Configured from console by console

```
R2#ping 10.0.2.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 20/31/44 ms
R2#ping 10.0.3.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.3.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 60/71/96 ms
R2#show ip int br
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        10.0.2.1        YES manual up                    up
FastEthernet1/0        10.0.1.2        YES manual up                    up
FastEthernet1/1        unassigned      YES unset  administratively down down
R2#
```

#R3

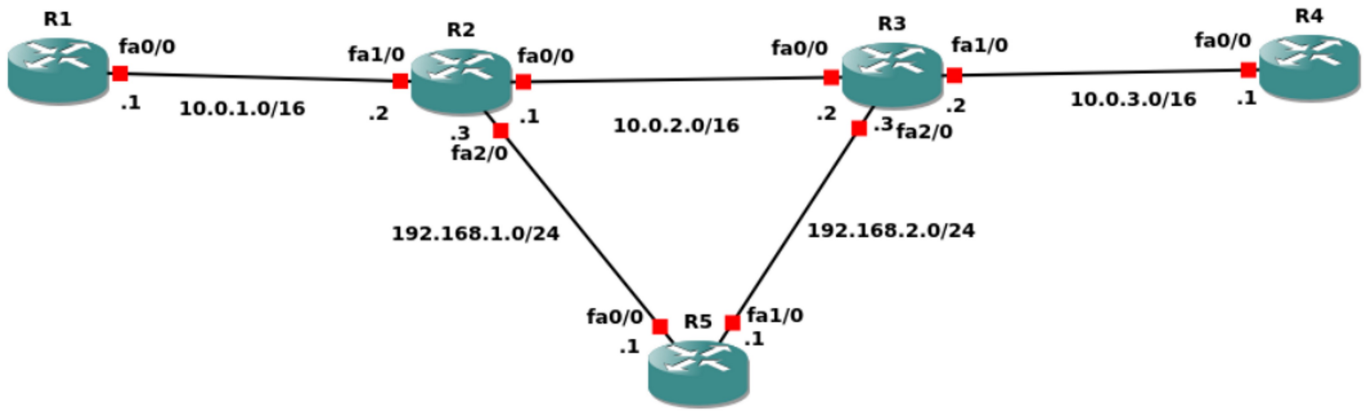
```
R3(config)#int fa0/0
R3(config-if)#ip add 10.0.2.2 255.255.255.0
R3(config-if)#no shut
R3(config-if)#exit
R3(config)#
*Nov  7 14:27:26.431: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 14:27:27.431: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R3(config)#int fa1/0
R3(config-if)#ip add 10.0.3.2 255.255.255.0
R3(config-if)#no shut
R3(config-if)#exit
R3(config)#
*Nov  7 14:28:21.931: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
*Nov  7 14:28:22.931: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up
R3(config)#ip route 10.0.1.0 255.255.255.0 10.0.2.1
R3(config)#exit
R3#
*Nov  7 14:54:59.387: %SYS-5-CONFIG_I: Configured from console by console
R3#ping 10.0.1.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 28/63/108 ms
R3#ping 10.0.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/49/88 ms
R3#show ip int br
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        10.0.2.2        YES manual up                    up
FastEthernet1/0        10.0.3.2        YES manual up                    up
FastEthernet1/1        unassigned      YES unset  administratively down down
```

#R4

```
R4#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#int fa0/0
R4(config-if)#ip add 10.0.3.1 255.255.255.0
R4(config-if)#no shut
R4(config-if)#exit
```

```
R4(config)#
*Nov  7 14:28:30.219: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 14:28:31.219: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R4(config)#ip route 10.0.2.0 255.255.255.0 10.0.3.2
R4(config)#ip route 10.0.1.0 255.255.255.0 10.0.3.2
R4(config)#exit
R4#ping
*Nov  7 14:54:33.983: %SYS-5-CONFIG_I: Configured from console by console
R4#ping 10.0.2.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 64/91/156 ms
R4#ping 10.0.2.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/76/92 ms
R4#ping 10.0.1.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 96/117/132 ms
R4#ping 10.0.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 32/80/112 ms
R4#show up int br
        ^
% Invalid input detected at '^' marker.

R4#show ip int br
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        10.0.3.1        YES manual up                    up
FastEthernet1/0        unassigned      YES unset  administratively down down
FastEthernet1/1        unassigned      YES unset  administratively down down
```

Atividade 2



Configurações

#R1

```
R1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int fa0/0
R1(config-if)#ip add 10.0.1.1 255.255.255.0
R1(config-if)#no shut
R1(config-if)#exit
```

```
R1(config)#
*Nov  7 15:20:12.851: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 15:20:13.851: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R1(config)#exit
R1#ping
*Nov  7 15:29:33.667: %SYS-5-CONFIG_I: Configured from console by console
R1#ping 10.0.1.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.2, timeout is 2 seconds:
!!!!!
R1(config)#ip route 10.0.2.0 255.255.255.0 10.0.1.2
R1(config)#ip route 10.0.3.0 255.255.255.0 10.0.1.2
R1(config)#exit

R1#ping 10.0.3.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.3.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 132/144/184 ms
R1#show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/24 is subnetted, 3 subnets
S       10.0.2.0 [1/0] via 10.0.1.2
S       10.0.3.0 [1/0] via 10.0.1.2
C       10.0.1.0 is directly connected, FastEthernet0/0
R1#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

#R2

```
R2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#int fa0/0
R2(config-if)#ip add 10.0.2.1 255.255.255.0
R2(config-if)#no shut
R2(config-if)#exit
R2(config)#
*Nov  7 15:20:30.735: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 15:20:31.735: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R2(config)#int fa1/0
R2(config-if)#ip add 10.0.1.2 255.255.255.0
R2(config-if)#no shut
R2(config-if)#exit
R2(config)#i
*Nov  7 15:20:54.739: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
*Nov  7 15:20:55.739: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up
R2(config)#int fa1/1
R2(config-if)#ip add 192.168.1.3 255.255.255.0
R2(config-if)#no shut
R2(config-if)#exit
R2(config)#
*Nov  7 15:21:44.735: %LINK-3-UPDOWN: Interface FastEthernet1/1, changed state to up
*Nov  7 15:21:45.735: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/1,
changed state to up
R2(config)#ping 192.168.1.1
```

```
          ^
% Invalid input detected at '^' marker.

R2(config)#exit
R2#p
*Nov  7 15:28:55.959: %SYS-5-CONFIG_I: Configured from console by console
R2#ping 192.168.1.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 92/92/96 ms
R2#ping 10.0.1.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.1.1, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 88/132/200 ms
R2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip route 10.0.3.0 255.255.255.0 10.0.2.2
R2(config)#exit
R2#show
*Nov  7 15:58:32.979: %SYS-5-CONFIG_I: Configured from console by console
R2#show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/24 is subnetted, 3 subnets
C       10.0.2.0 is directly connected, FastEthernet0/0
S       10.0.3.0 [1/0] via 10.0.2.2
C       10.0.1.0 is directly connected, FastEthernet1/0
C    192.168.1.0/24 is directly connected, FastEthernet1/1
R2#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

#R3

```
R3#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#int fa0/0
R3(config-if)#ip add 10.0.2.2 255.255.255.0
R3(config-if)#no shut
R3(config-if)#exit
R3(config)#
*Nov  7 15:22:03.379: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 15:22:04.379: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R3(config)#int fa1/0
R3(config-if)#ip add 10.0.3.2 255.255.255.0
R3(config-if)#no shut
R3(config-if)#exit
R3(config)#i
*Nov  7 15:22:28.875: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
*Nov  7 15:22:29.875: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up
R3(config)#int fa1/1
R3(config-if)#ip add 192.168.2.3 255.255.255.0
R3(config-if)#no shut
R3(config-if)#exit
R3(config)#
*Nov  7 15:23:30.643: %LINK-3-UPDOWN: Interface FastEthernet1/1, changed state to up
```

```
*Nov  7 15:23:31.643: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/1,
changed state to up
R3(config)#exit
R3#p
*Nov  7 15:27:04.859: %SYS-5-CONFIG_I: Configured from console by console
R3#ping 10.0.2.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.1, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 76/87/92 ms
R3#ping 10.0.3.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.3.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 84/89/96 ms
R3#ping 192.168.2.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 88/91/100 ms
R3#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#ip route .2
               ^
% Invalid input detected at '^' marker.

R3(config)#ip route 10.0.1.0 255.255.255 192.168.2.3
                                ^
% Invalid input detected at '^' marker.

R3(config)#ip route 10.0.1.0 255.255.255.0 192.168.2.3
%Invalid next hop address (it's this router)
R3(config)#ip route 10.0.1.0 255.255.255.0 192.168.2.3
%Invalid next hop address (it's this router)
R3(config)#exit
R3#ping
*Nov  7 15:45:54.911: %SYS-5-CONFIG_I: Configured from console by console
R3#ping 192.168.2.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 88/91/96 ms
R3#ping 192.168.2.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 4/4/8 ms
R3#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#ip route 10.0.1.0 255.255.255.0 192.168.2.3
%Invalid next hop address (it's this router)
R3(config)#ip route 192.168.1.0 255.255.255.0 192.168.2.3
%Invalid next hop address (it's this router)
R3(config)#ip route 192.168.1.0 255.255.255.0 192.168.2.1
R3(config)#ip route 10.0.1.0 255.255.255.0 192.168.2.1
R3(config)#exit
R3#show i
*Nov  7 15:58:01.323: %SYS-5-CONFIG_I: Configured from console by console
R3#show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route
```

```
Gateway of last resort is not set

    10.0.0.0/24 is subnetted, 3 subnets
C       10.0.2.0 is directly connected, FastEthernet0/0
C       10.0.3.0 is directly connected, FastEthernet1/0
S       10.0.1.0 [1/0] via 192.168.2.1
S    192.168.1.0/24 [1/0] via 192.168.2.1
C    192.168.2.0/24 is directly connected, FastEthernet1/1
R3#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
```

#R4

```
R4#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#int fa0/0
R4(config-if)#ip add 10.0.3.1 255.255.255.0
R4(config-if)#no shut
R4(config-if)#exit
R4(config)#
*Nov  7 15:22:47.943: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 15:22:48.943: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R4(config)#exit
R4#ping
*Nov  7 15:25:27.391: %SYS-5-CONFIG_I: Configured from console by console
R4#ping 10.0.3.2

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.3.2, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 52/83/100 ms
R4#confiig t
      ^
% Invalid input detected at '^' marker.

R4#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R4(config)#ip route 192.168.2.0 255.255.255.0 10.0.3.2
R4(config)#ip route 192.168.1.0 255.255.255.0 10.0.3.2
R4(config)#ip route 10.0.1.0 255.255.255.0 10.0.3.2
R4(config)#exit
R4#show ip
*Nov  7 15:56:38.923: %SYS-5-CONFIG_I: Configured from console by console
R4#show ip ROUTE
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

    10.0.0.0/24 is subnetted, 2 subnets
C       10.0.3.0 is directly connected, FastEthernet0/0
S       10.0.1.0 [1/0] via 10.0.3.2
S    192.168.1.0/24 [1/0] via 10.0.3.2
S    192.168.2.0/24 [1/0] via 10.0.3.2
R4#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R4#
```

#R5

```
R5#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R5(config)#int fa0/0
R5(config-if)#ip add 192.168.1.1 255.255.255.0
R5(config-if)#no shut
R5(config-if)#exit
R5(config)#co
*Nov  7 15:23:19.187: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up
*Nov  7 15:23:20.187: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
R5(config)#int fa1/0
R5(config-if)#ip add 192.168.2.1 255.255.255.0
R5(config-if)#no shut
R5(config-if)#exit
R5(config)#
*Nov  7 15:24:02.539: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
*Nov  7 15:24:03.539: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0,
changed state to up
R5(config)#ping 192.168.2.3
         ^
% Invalid input detected at '^' marker.

R5(config)#exit
R5#config t
*Nov  7 15:24:29.803: %SYS-5-CONFIG_I: Configured from console by console
R5#ping 192.168.2.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.3, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 56/82/92 ms
R5#ping 192.168.2.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.2.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 88/91/100 ms
R5#ping 192.168.1.3

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.3, timeout is 2 seconds:
.!!!!
Success rate is 80 percent (4/5), round-trip min/avg/max = 88/111/140 ms
R5#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R5(config)#ip route 10.0.1.0 255.255.255.0 192.168.1.3
R5(config)#exit
R5#show ip
*Nov  7 15:57:53.579: %SYS-5-CONFIG_I: Configured from console by console
R5#show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/24 is subnetted, 1 subnets
S       10.0.1.0 [1/0] via 192.168.1.3
C    192.168.1.0/24 is directly connected, FastEthernet0/0
C    192.168.2.0/24 is directly connected, FastEthernet1/0
R5#copy run start
Destination filename [startup-config]? r5
%Error copying nvram:r5 (Invalid argument)
R5#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

```
R5#save runing start
   ^
% Invalid input detected at '^' marker.

R5#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
R5#
```

ATIVIDADE 3

O que acontece se o roteador R5 for desligado?

O roteador 1 não ira conseguir comunicar com o roteador 4 pois a rota de volta deverá passar pelo roteador 5.