Contents

[Introduction](#)
[Prerequisites](#)
[Requirements](#)
[Components Used](#)
[Configure](#)
[Network Diagram](#)
[Configurations](#)
[Verify](#)
[Troubleshoot](#)

Introduction

This document describes how to configure the tracking of static route using IP Service Level Agreement (SLA).

Contributed Gaurav Mahajan, Cisco TAC Engineer.

Prerequisites

Requirements

Cisco recommends that you have knowledge of static routing.

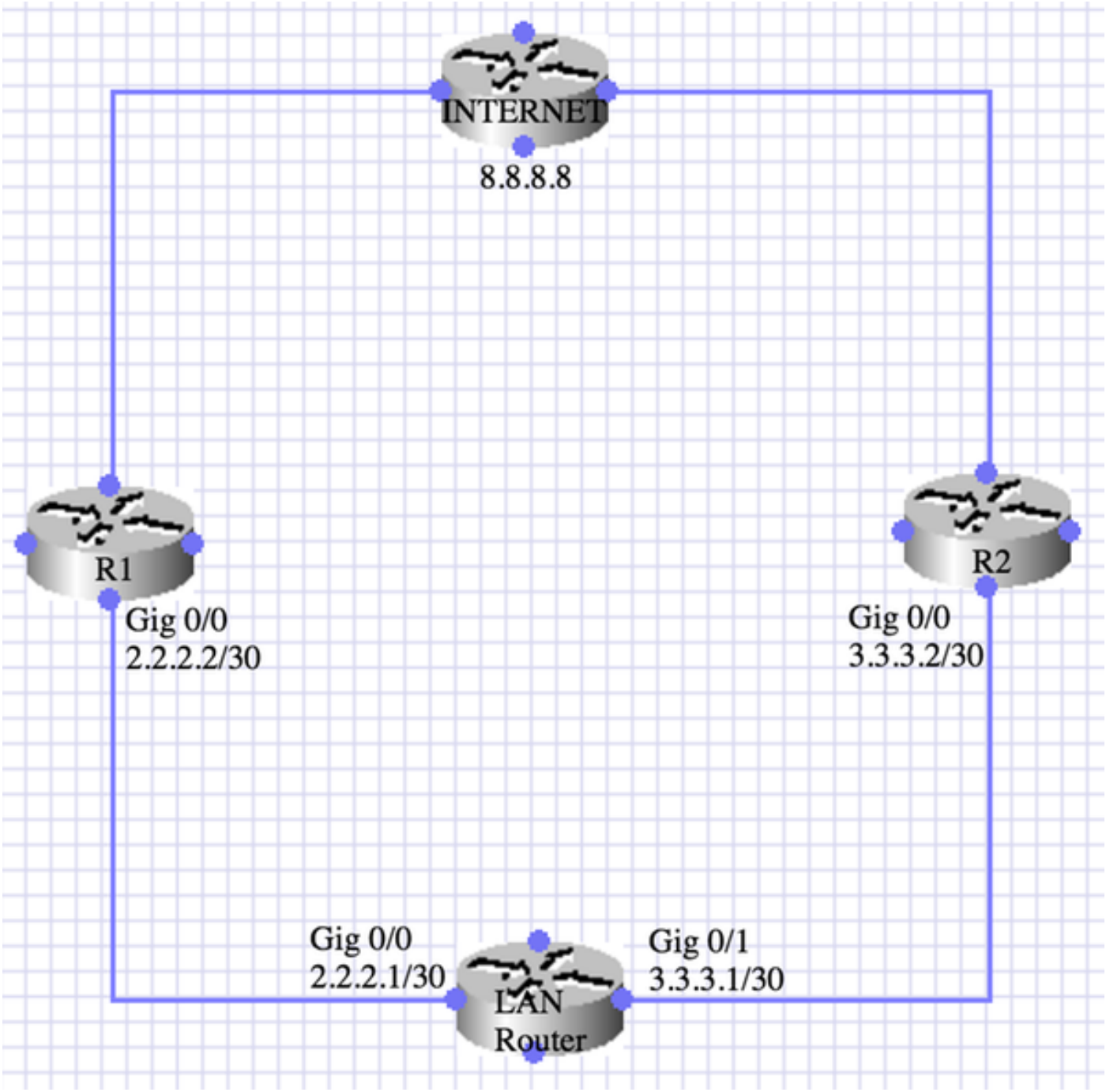
Components Used

The information in this document is based on Cisco IOS® Software Release 15.2(4)M4

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Configure

Network Diagram



Configurations

LAN Router

When track 1 is up traffic to internet goes from Primary Router R1.

```
LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 2.2.2.2 to network 0.0.0.0
```

```
S*    0.0.0.0/0 [1/0] via 2.2.2.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 2.2.2.2 to network 0.0.0.0

S*    0.0.0.0/0 [1/0] via 2.2.2.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 2.2.2.2 to network 0.0.0.0

S*    0.0.0.0/0 [1/0] via 2.2.2.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2
```

Verify

Use this section in order to confirm that your configuration works properly.

Ping and traceroute goes to internet from Primary router

```
LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 2.2.2.2 to network 0.0.0.0

S*    0.0.0.0/0 [1/0] via 2.2.2.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2
```

In case of any Issue in primary link will bring down the track 1.

```
LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 2.2.2.2 to network 0.0.0.0

S*    0.0.0.0/0 [1/0] via 2.2.2.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2
```

When track 1 goes down traffic goes from secondary router R2

```
LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 3.3.3.2 to network 0.0.0.0

S*    0.0.0.0/0 [10/0] via 3.3.3.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 3.3.3.2 to network 0.0.0.0

S*    0.0.0.0/0 [10/0] via 3.3.3.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2LAN#show ip route
Codes: L - local, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is 3.3.3.2 to network 0.0.0.0

S*    0.0.0.0/0 [10/0] via 3.3.3.2
      2.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        2.2.2.0/30 is directly connected, GigabitEthernet0/0
L        2.2.2.1/32 is directly connected, GigabitEthernet0/0
      3.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        3.3.3.0/30 is directly connected, GigabitEthernet0/1
L        3.3.3.1/32 is directly connected, GigabitEthernet0/1
      20.0.0.0/30 is subnetted, 1 subnets
S        20.20.20.0 [1/0] via 2.2.2.2
```

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.