



Hands-on Workshop on Network Technologies



Hands-on session 2: IPv6 Static Routing Configuration Lab 7 - IPv6 Lab Series



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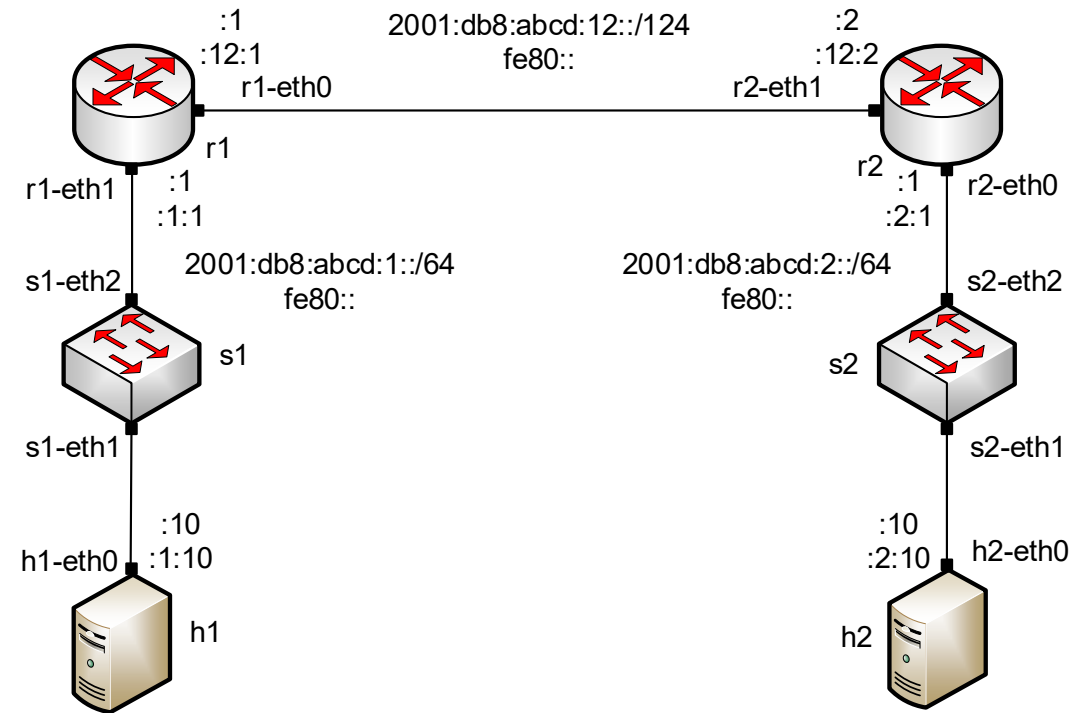
<https://research.cec.sc.edu/cyberinfra/>

Tuesday, Jul 21, 2025
Online

Lab 7: IPv6 Static Routing Configuration

Lab Topology

- The topology consists of:
 - Two hosts in different networks, connected to their respective routers
- Configure static routes so that the hosts can reach each other



IPv6 Static Configuration

Enable static routing daemon

```
"Host: r1"
root@frr-pc:/etc/routers/r1# staticd
root@frr-pc:/etc/routers/r1#
```

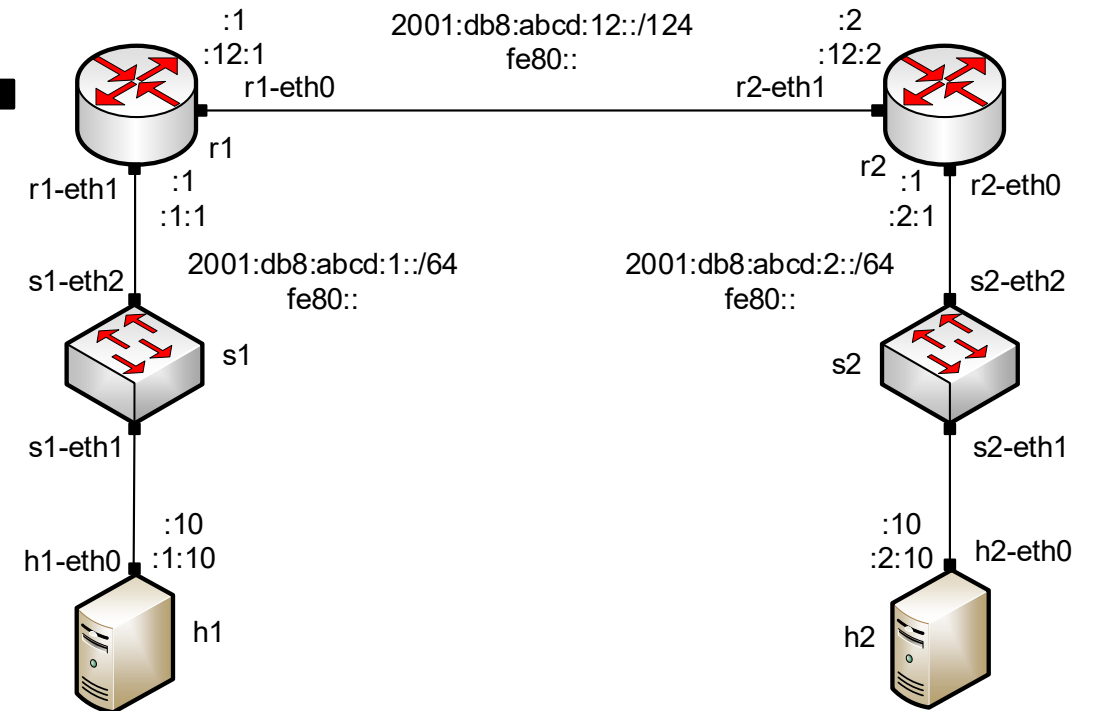
Add static route to network 2001:db8:abcd:2::/64

```
"Host: r1"
frr-pc(config)# ipv6 route 2001:db8:abcd:2::/64 2001:db8:abcd:12::2
frr-pc(config)#
```

Observe routing table

```
"Host: r1"
frr-pc(config)# do show ipv6 route
Codes: K - kernel route, C - connected, S - static, R - RIPng,
       O - OSPFv3, I - IS-IS, B - BGP, N - NHRP, T - Table,
       v - VNC, V - VNC-Direct, A - Babel, D - SHARP, F - PBR,
       f - OpenFabric,
       > - selected route, * - FIB route, q - queued route, r - rejected route

C>* 2001:db8:abcd:1::/64 is directly connected, r1-eth1, 00:05:07
S>* 2001:db8:abcd:2::/64 [1/0] via 2001:db8:abcd:12::2, r1-eth0, 00:00:21
C>* 2001:db8:abcd:12::/124 is directly connected, r1-eth0, 00:05:07
C * fe80::/64 is directly connected, r1-eth1, 00:05:07
C>* fe80::/64 is directly connected, r1-eth0, 00:05:07
frr-pc(config)#
```



Accessing the Platform

We will use the NETLAB virtual platform:

- **URL:** <https://netlab.cec.sc.edu/>
- **Username:** <email address used for the registration>
- **Temporary Password:** nsf-2026