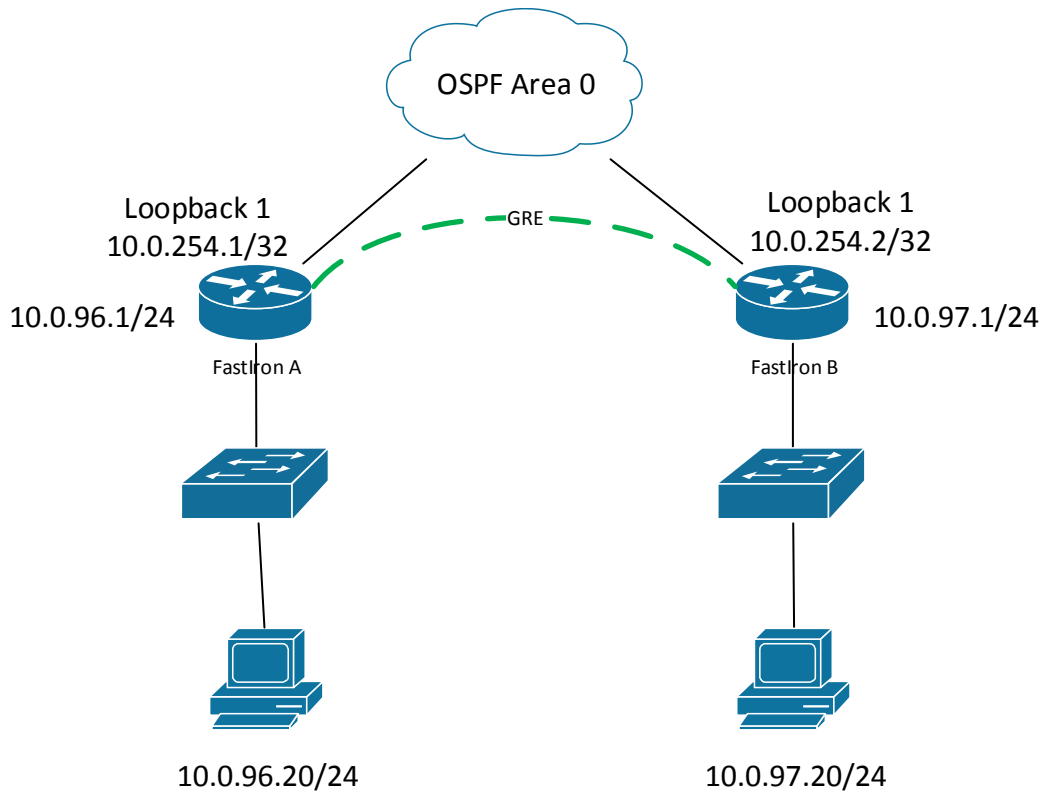


# Brocade FastIron GRE Tunnel



Generic Routing Encapsulation is described in RFC 2784. Generally, GRE provides a way to encapsulate arbitrary packets (payload packet) inside of a transport protocol, and transmit them from one tunnel endpoint to another. The payload is encapsulated in a GRE packet. The resulting GRE packet is then encapsulated in a delivery protocol, then forwarded to the tunnel destination. At the tunnel destination, the packet is decapsulated to reveal the payload. The payload is then forwarded to its final destination.

This feature is supported on FCX, ICX 6610, ICX 6450, ICX 6650, ICX 7250, ICX 7450, ICX 7750, and FSX devices only.

RE tunnels support includes the following:

- IPv4 over GRE tunnels. IPv6 over GRE tunnels is not supported.
- Static and dynamic unicast routing over GRE tunnels
- Multicast routing over GRE tunnels
- Hardware forwarding of IP data traffic across a GRE tunnel.
- Path MTU Discovery (PMTUD)

## Configuring point-to-point GRE tunnel for FastIron A

```
config t
!
vlan 96 name GRE-SITEA by port
untagged ethe 1/1/26
router-interface ve 96
spanning-tree 802-1w
exit
!
interface loopback 1
ip address 10.0.254.1/32
ip ospf area 0
exit
!
interface ve 96
ip address 10.0.96.1/24
exit
!
interface tunnel 1
tunnel mode gre ip
tunnel source 10.254.0.1
tunnel destination 10.254.0.2
ip address 10.10.3.1 255.255.255.0
ip mtu 1400
exit
!
ip route 10.0.97.0/24 tunnel 1
```

\*\*\* WAN communications not covered in this document \*\*\*

## Configuring point-to-point GRE tunnel for FastIron B

```
config t
!
!
vlan 97 name GRE-SITEB by port
untagged ethe 1/1/26
router-interface ve 96
spanning-tree 802-1w
exit
!
interface loopback 1
ip ospf area 0
ip address 10.0.254.2/32
exit
!
interface ve 97
ip address 10.0.97.1/24
exit
!
interface tunnel 1
tunnel mode gre ip
tunnel source 10.254.0.2
tunnel destination 10.254.0.1
ip address 10.10.3.2 255.255.255.0
ip mtu 1400
exit
!
ip route 10.0.96.0/24 tunnel 1
```

\*\*\* WAN communications not covered in this document \*\*\*

## Verification of GRE Tunnel

### FastIron A:

```
SSH@Lab-6610#show ip interface tunnel 1
Interface Tunnel 1
  port enabled
  port state: UP
  ip address: 10.10.3.1      subnet mask: 255.255.255.0
  Port belongs to VRF: default-vrf
  encapsulation: GRE, mtu: 1400, metric: 1
  directed-broadcast-forwarding: disabled
  ICMP redirect: disabled
  proxy-arp: disabled
  ip arp-age: 10 minutes
  No Helper Addresses are configured.
  No inbound ip access-list is set
  No outgoing ip access-list is set
```

```
SSH@Lab-6610#show interface tunnel 1
Tunnel1 is up, line protocol is up
  Hardware is Tunnel
  Tunnel source 10.254.0.1
  Tunnel destination is 10.254.0.2
  Tunnel mode gre ip
  No port name
  Internet address is 10.10.3.1/24, MTU 1400 bytes, encapsulation GRE
  Keepalive is not Enabled
  Path MTU Discovery: Enabled, MTU is 1400 bytes, age-timer: 10 minutes
```

### FastIron B:

```
SSH@Lab-7450#sh ip interface tunnel 1
Interface Tunnel 1
  port enabled
  port state: UP
  ip address: 10.10.3.2      subnet mask: 255.255.255.0
  Port belongs to VRF: default-vrf
  encapsulation: GRE, mtu: 1400, metric: 1
  directed-broadcast-forwarding: disabled
  ICMP redirect: disabled
  proxy-arp: disabled
  ip arp-age: 10 minutes
  No Helper Addresses are configured.
  No inbound ip access-list is set
  No outgoing ip access-list is set
```

```
SSH@Lab-7450#show interface tunnel 1
Tunnel1 is up, line protocol is up
  Hardware is Tunnel
  Tunnel source 10.254.0.2
  Tunnel destination is 10.254.0.1
  Tunnel mode gre ip
  No port name
  Internet address is 10.10.3.2/24, MTU 1400 bytes, encapsulation GRE
  Keepalive is not Enabled
  Path MTU Discovery: Enabled, MTU is 1400 bytes, age-timer: 10 minutes
```