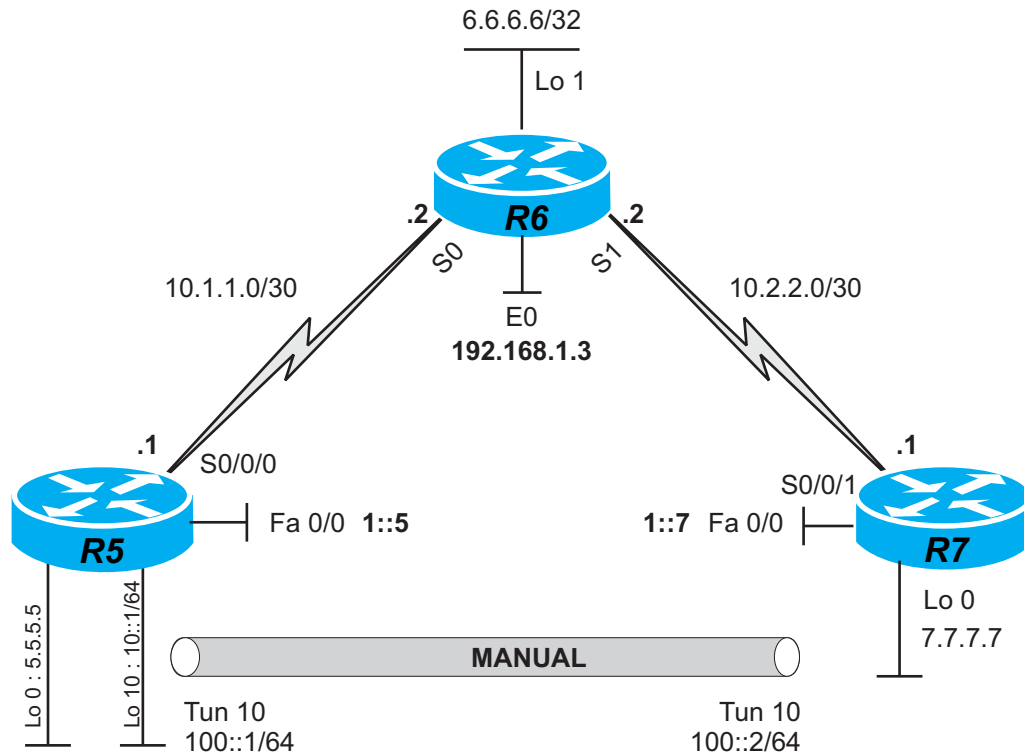


IPv6

Tunnel

Manual Tunnel

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

1. Configuration of MANUAL TUNNEL
2. Understanding the concepts Passenger Protocol and Transport Protocol.

Commands:

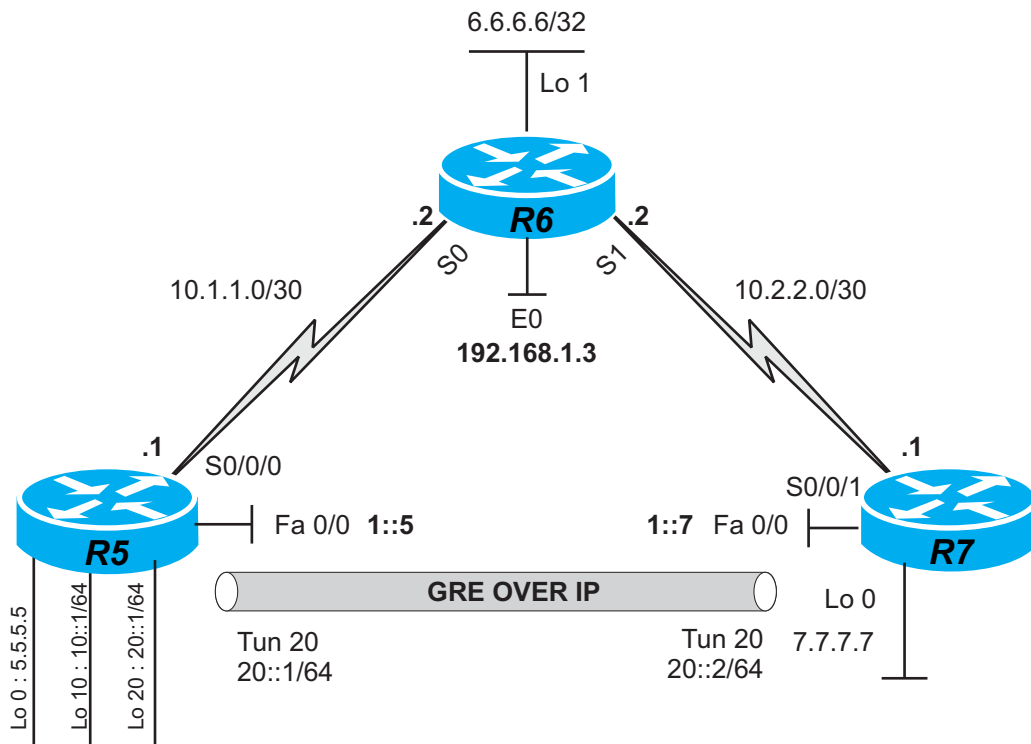
```
# interface tunnel 57
# ipv6 address 2018::/64
# tunnel source
# tunnel destination
# tunnel mode ipv6ip
# show tunnel 57
# debug tunnel
# debug ip packet
# router rip
# ipv6 router rip ipss
# ipv6 rip ipss enable
```

TUNNEL

CASE STUDY-2

GRE Tunnel

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

1. Configuration of GRE TUNNEL
2. Understanding the concepts Passenger Protocol and Transport Protocol.

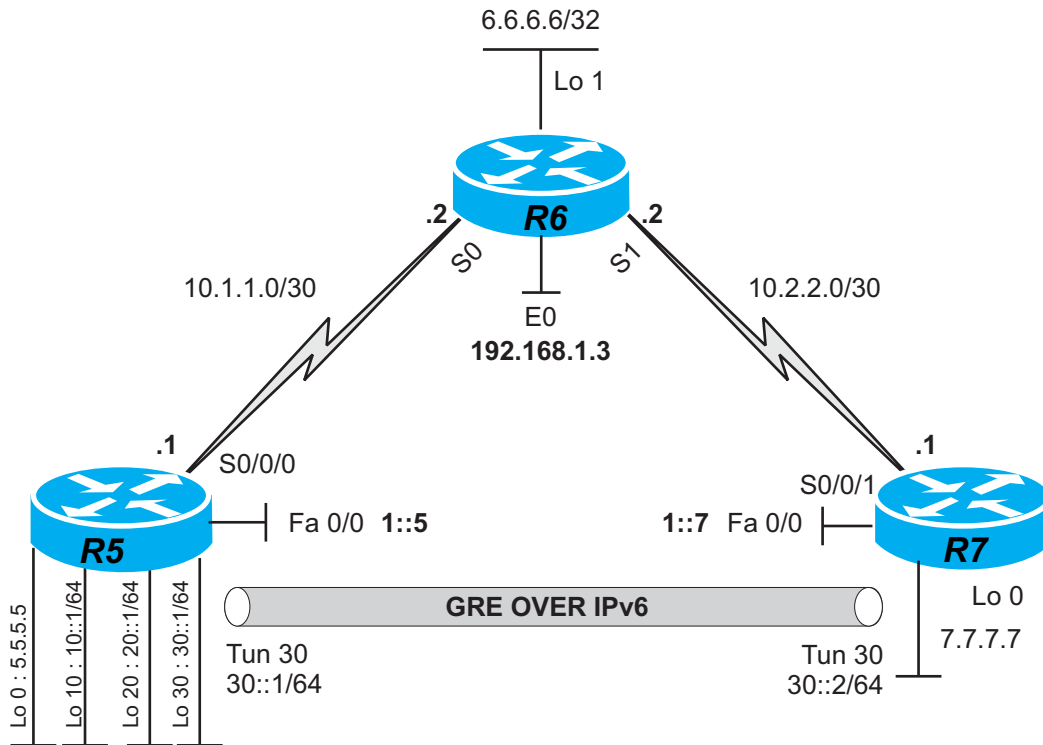
Commands:

```
# interface tunnel 75
# tunnel source
# tunnel mode ipv6ip
# debug tunnel
# router rip
# ipv6 ospf 1 area 0

# ipv6 address 75::1/64
# tunnel destination
# show tunnel 75
# debug ip packet
# IPV6 router ospf 1
```

GRE OVER IPV6 Tunnel

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

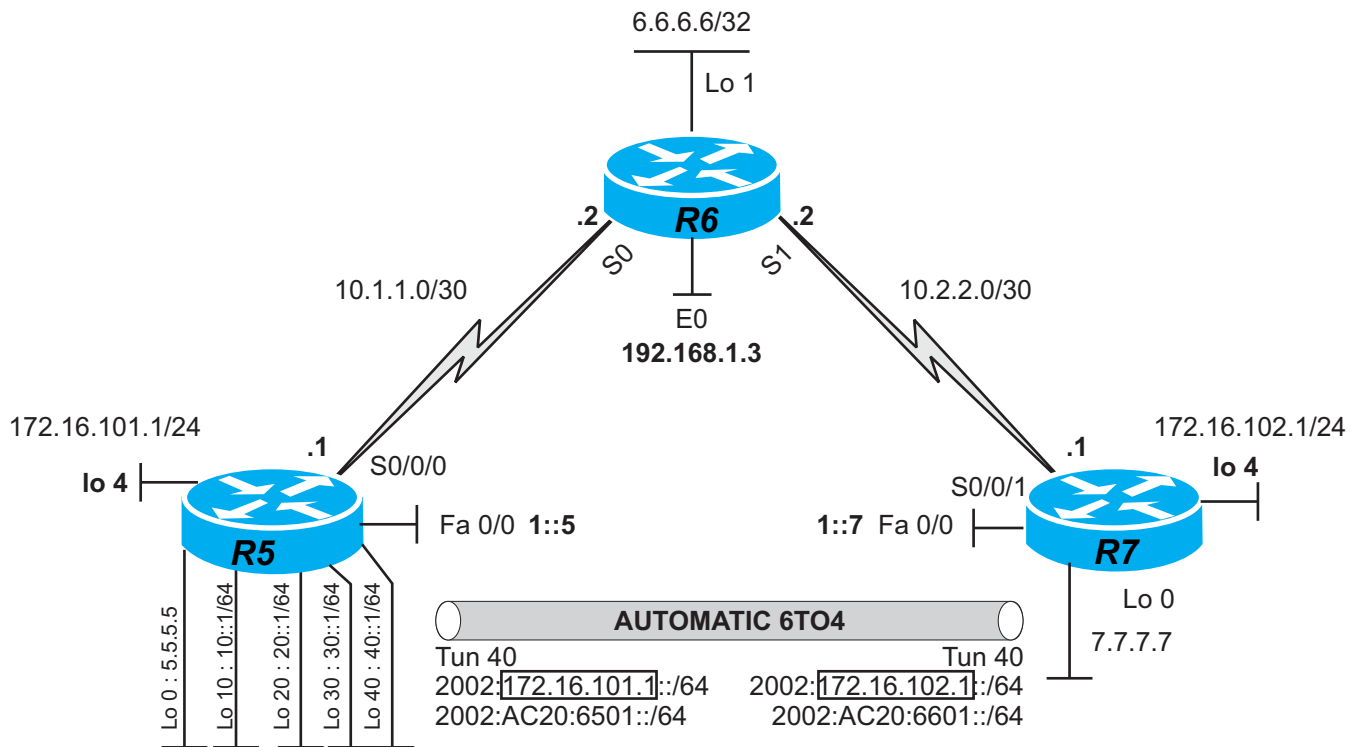
1. Configuration of GRE TUNNEL OVER IPV6
2. Understanding the concepts Passenger Protocol and Transport Protocol.

Commands:

# interface tunnel 100	# ipv6 address 100::1/64
# tunnel source	# tunnel destination
# tunnel mode ipv6ip	# show tunnel 100
# debug tunnel	# debug ip packet
# router bgp	# neighbor
# address family ipv6	# neighbor activate

Automatic 6to4 Tunnel

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

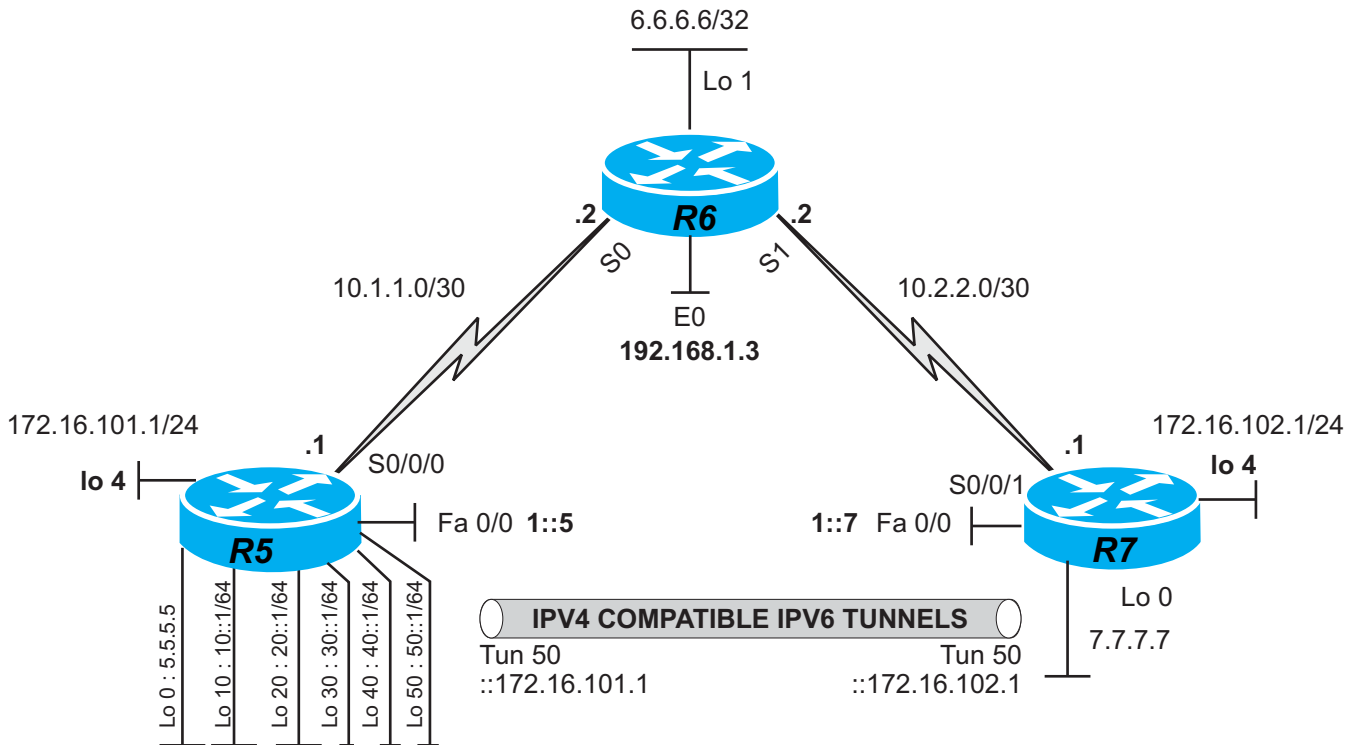
1. Configuration of 6to4
2. Understanding the concepts ipv4 embedded address
3. 2002::/16 prefix value
4. Hexadecimal conversion and embedded ipv4 address
5. tunnel end point as gateway
6. Ipv6 Default Route

Commands:

```
# interface tunnel 200
# tunnel source
# tunnel mode ipv6ip 6to4
# debug tunnel
# router bgp
# address family ipv6
# ipv6 route 2002:AC10:6501::/16 tunnel 40
# show tunnel 40
# debug ip packet
# neighbor
# neighbor activate
```

IPV4 Compatible IPV6 tunnels

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

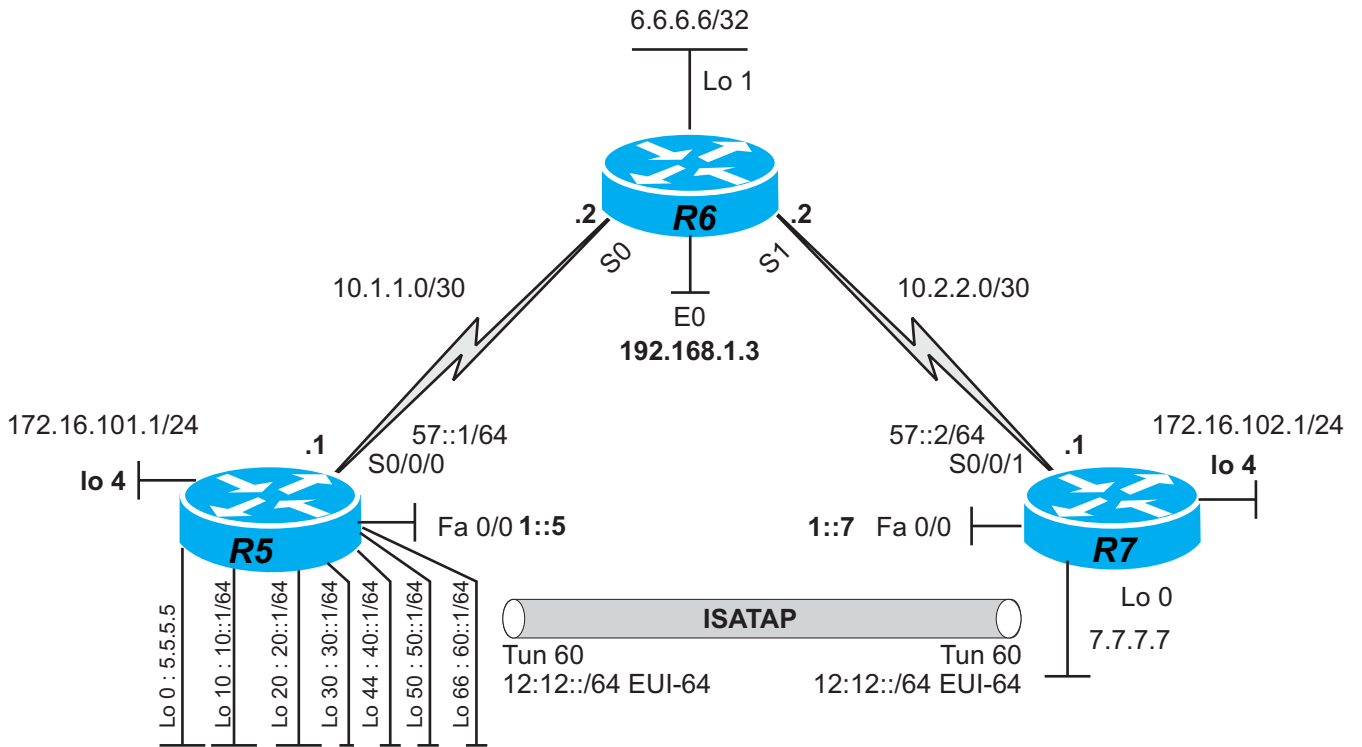
1. Configuration of 6to4
2. Understanding the concepts ipv4 embedded address
3. 2002::/16 prefix value
4. Hexadecimal conversion and embedded ipv4 address
5. tunnel end point as gateway
6. Ipv6 Default Route

Commands:

```
# interface tunnel 50
# tunnel source
# tunnel mode ipv6ip auto-tunnel # show tunnel 50
# debug tunnel # debug ip packet
# router bgp # neighbor
# neighbor activate
# ipv6 Static route
```

ISATAP Tunnel

Topology Diagram:



Objectives:

This Lab topology would make the student understanding the following concepts.

1. Configuration of ISATAP
2. Understanding the concepts 64bit EUI-64 Format
3. Prefix value and Host ID EUI-64
- 4: 32 Bit 5EFE and 32 Bit Ipv4 embedded address
5. tunnel end point as Link-local Address
6. Limited to Static route and BGP

Commands:

```
# interface tunnel 60
# tunnel source 5.5.5.5
# tunnel mode ipv6ip ISATAP
# debug tunnel
# ipv6 route 60::/64 link-local
# show tunnel 50
# debug ip packet
```