

Configuration Documents

IP Configuration for Mikrotik Router:

1. Assign IP Addresses to Interfaces:

```
/ip address
add address=<HQ_LAN_IP>/24 interface=<LAN_Interface>
add address=<HQ_WAN_IP>/30 interface=<WAN_Interface>
```

2. Set Up DHCP Client on WAN Interface (if needed):

```
/ip dhcp-client
add interface=<WAN_Interface> disabled=no
```

3. Configure DNS Settings:

```
/ip dns
set servers=<Primary_DNS_IP>,<Secondary_DNS_IP>
```

4. Configure NAT for Internet Access:

```
/ip firewall nat
add chain=srcnat out-interface=<WAN_Interface> action=masquerade
```

Set up GRE Tunnel on the Headquarters Router:

1. Configure the GRE Tunnel Interface:

```
/interface gre
add name=gre-tunnell remote-address=<Branch_Office_IP> local-address=<HQ_IP>
```

2. Assign IP Addresses to GRE Tunnel:

```
/ip address
add address=<HQ_GRE_IP>/30 interface=gre-tunnell
```

3. Configure Routing for the GRE Tunnel:

```
/ip route
add dst-address=<Branch_Office_Subnet> gateway=<Branch_GRE_IP>
```

Set up GRE Tunnel on the Branch Office Router:

1. Configure the GRE Tunnel Interface:

```
/interface gre
add name=gre-tunnell remote-address=<HQ_IP> local-address=<Branch_Office_IP>
```

2. Assign IP Addresses to GRE Tunnel:

```
/ip address  
add address=<Branch_GRE_IP>/30 interface=gre-tunnel1
```

3. Configure Routing for the GRE Tunnel:

```
/ip route  
add dst-address=<HQ_Subnet> gateway=<HQ_GRE_IP>
```

Ensure Proper Routing on Both Routers:

1. Add Routes on Headquarters Router:

```
/ip route  
add dst-address=<Branch_Office_Subnet> gateway=gre-tunnel1
```

2. Add Routes on Branch Office Router:

```
/ip route  
add dst-address=<HQ_Subnet> gateway=gre-tunnel1
```

Testing and Verification:

1. Verify GRE Tunnel Status:

```
/interface print
```

2. Test Connectivity:

```
/ping <Branch_GRE_IP>  
/ping <HQ_GRE_IP>
```

Optional Security Configuration:

1. Set Up IPsec for GRE Tunnel:

```
/ip ipsec peer  
add address=<Branch_Office_IP> exchange-mode=main secret=<YourSecret>  
  
/ip ipsec policy  
add src-address=<HQ_Subnet> dst-address=<Branch_Office_Subnet> sa-  
src-address=<HQ_IP>
```