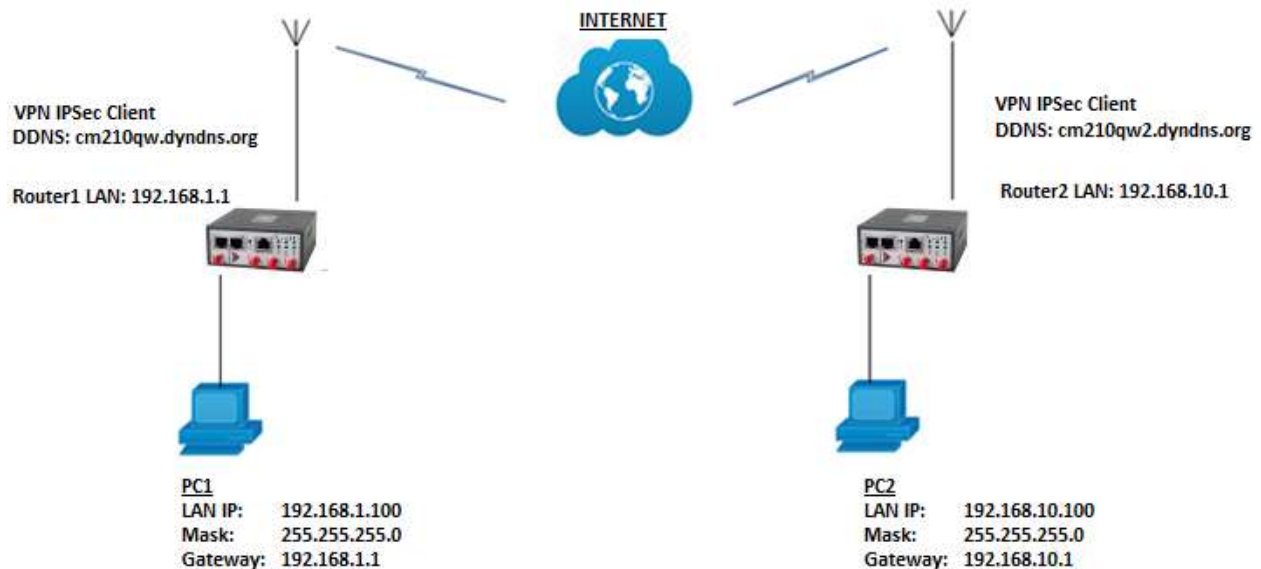


How to configure VPN IPsec on the Comset CM210Q-W

Network Topology:



To configure VPN IPsec on the Comset CM210Q-W router, please configure the router with the correct APN that will provide you with a Public WAN IP address, such as telstra.extranet for a Telstra Data SIM. You need to ask your carrier to activate your SIM card with a Public WAN IP.

1. Router#1

❖ Go to VPN Tunnel -> IPsec1 -> Group Setup. Set as below:

IPsec Mode:	Normal
Local Security Group Subnet/Netmask:	192.168.1.0/24
Local Security Firewalling:	Enabled
Remote Security Gateway:	cm210qw2.dyndns.org
Remote Security Firewalling:	192.168.10.0/24
Remote Security Firewalling:	Enabled



Status
Basic Network
WLAN
Advanced Network
Firewall
VPN Tunnel
GRE
OpenVPN Client
PPTP Server
PPTP Online
VPN Client
IPsec
Administration
Debugging
Logout

IPSEC

IPSEC 1 IPSEC 2

Group Setup Basic Setup Advanced Setup

Enable IPsec

IPsec Extensions Normal

Local Security Gateway Interface 3G Cellular

Local Security Group Subnet/Netmask 192.168.1.0/24 ex. 192.168.1.0/24

Local Security Firewalling

Remote Security Gateway IP/Domain cm210qw2.dyndns.org

Remote Security Group Subnet/Netmask 192.168.10.0/24 ex. 192.168.88.0/24

Remote Security Firewalling

❖ Click on Basic Setup.

Set default Phase1 and Phase2 Groups such as Encryption, Authentication, Lifetime.

Set Pre-shared key for VPN IPsec.

Note: Pre-shared key should be the same on both routers.

IPSEC

IPSEC 1
IPSEC 2

Group Setup
Basic Setup
Advanced Setup

Keying Mode	IKE with Preshared Key ▼
Phase 1 DH Group	Group 2 - modp1024 ▼
Phase 1 Encryption	3DES (168-bit) ▼
Phase 1 Authentication	SHA1 HMAC (96-bit) ▼
Phase 1 SA Life Time	<input type="text" value="28800"/> <i>seconds</i>
Phase 2 DH Group	Group 2 - modp1024 ▼
Phase 2 Encryption	AES-128 (128-bit) ▼
Phase 2 Authentication	SHA1 HMAC (96-bit) ▼
Phase 2 SA Life Time	<input type="text" value="3600"/> <i>seconds</i>
Preshared Key	●●●●●●●●

❖ Click on Advanced Set-up and set IPsec Custom Options 1

IPsec Custom Options 1: rightid=%any

IPSEC

IPSEC 1
IPSEC 2

Group Setup
Basic Setup
Advanced Setup

Aggressive Mode	<input type="checkbox"/>
Compress(IP Payload Compression)	<input type="checkbox"/>
Dead Peer Detection(DPD)	<input type="checkbox"/>
ICMP Check	<input type="checkbox"/>
IPSec Custom Options 1	<input type="text" value="rightid=%any"/>
IPSec Custom Options 2	<input type="text"/>

2. Router#2

❖ Go to VPN Tunnel -> IPsec -> Group Setup

IPsec Mode:

Normal

Local Security Group Subnet/Netmask:

192.168.10.0/24

Local Security Firewalling:

Enabled

Remote Security Gateway:

cm210qw.dyndns.org

Remote Security Firewalling:

192.168.1.0/24

Remote Security Firewalling:

Enabled

IPSEC

IPSEC 1 | IPSEC 2

Group Setup | Basic Setup | Advanced Setup

Enable IPsec

IPsec Extensions: Normal

Local Security Gateway Interface: 3G Cellular

Local Security Group Subnet/Netmask: 192.168.10.0/24 ex. 192.168.1.0/24

Local Security Firewalling

Remote Security Gateway IP/Domain: cm210qw.dyndns.org

Remote Security Group Subnet/Netmask: 192.168.1.0/24 ex. 192.168.88.0/24

Remote Security Firewalling

❖ Click on Basic Setup.

Set default Phase1 and Phase2 Groups such as Encryption, Authentication, Lifetime.

Set Pre-shared key for VPN IPsec.

Note: Pre-shared key should be the same on both routers.

IPSEC

IPSEC 1 IPSEC 2

Group Setup **Basic Setup** Advanced Setup

Keying Mode IKE with Preshared Key ▾

Phase 1 DH Group Group 2 - modp1024 ▾

Phase 1 Encryption 3DES (168-bit) ▾

Phase 1 Authentication SHA1 HMAC (96-bit) ▾

Phase 1 SA Life Time 28800 seconds

Phase 2 DH Group Group 2 - modp1024 ▾

Phase 2 Encryption AES-128 (128-bit) ▾

Phase 2 Authentication SHA1 HMAC (96-bit) ▾

Phase 2 SA Life Time 3600 seconds

Preshared Key ●●●●●●●●

❖ Click on Advanced Setup and set IPSec Custom Options 1

IPSec Custom Options 1: rightid=%any

IPSEC

IPSEC 1 IPSEC 2

Group Setup Basic Setup **Advanced Setup**

Aggressive Mode

Compress(IP Payload Compression)

Dead Peer Detection(DPD)

ICMP Check

IPSec Custom Options 1 rightid=%any

IPSec Custom Options 2

3. Checking VPN IPsec Status and Testing VPN Tunnel.

- ❖ Go to Status -> Overview -> VPN Status:

VPN Status	
IPSec 1	Connected
Phase 1 Status	37 minutes
Phase 1 IKE	3DES_CBC/HMAC_MDS_96/PRF_HMAC_MDS/MODP_1024
Phase 2 Status	TUNNEL
Phase 2 ESP	3DES_CBC/HMAC_MDS_96
IPSec Recv.	840 Bytes
IPSec Send.	1680 Bytes

- ❖ Check Ping connection from PC1 (192.168.1.100) behind the Router1 to PC2 (192.168.10.100) behind the Router2.

```
C:\Users\Tony>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::9c70:98fe:2b67:b3c8%15
    IPv4 Address. . . . . : 192.168.1.100
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
```

```
C:\Users\Tony>ping 192.168.10.100

Pinging 192.168.10.100 with 32 bytes of data:
Reply from 192.168.10.100: bytes=32 time=70ms TTL=126
Reply from 192.168.10.100: bytes=32 time=63ms TTL=126
Reply from 192.168.10.100: bytes=32 time=73ms TTL=126
Reply from 192.168.10.100: bytes=32 time=92ms TTL=126

Ping statistics for 192.168.10.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 63ms, Maximum = 92ms, Average = 74ms
```

- ❖ Check Ping connection from PC2 (192.168.10.100) behind the Router2 to PC1 (192.168.1.100) behind the Router1.

Ethernet adapter Local Area Connection:

```
Connection-specific DNS Suffix . :  
Link-local IPv6 Address . . . . . : fe80::9571:4168:f214:45c9%15  
IPv4 Address. . . . . : 192.168.10.100  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 192.168.10.1
```

```
C:\Users\A>ping 192.168.1.100
```

```
Pinging 192.168.1.100 with 32 bytes of data:  
Reply from 192.168.1.100: bytes=32 time=185ms TTL=126  
Reply from 192.168.1.100: bytes=32 time=158ms TTL=126  
Reply from 192.168.1.100: bytes=32 time=99ms TTL=126  
Reply from 192.168.1.100: bytes=32 time=371ms TTL=126  
  
Ping statistics for 192.168.1.100:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 99ms, Maximum = 371ms, Average = 203ms
```