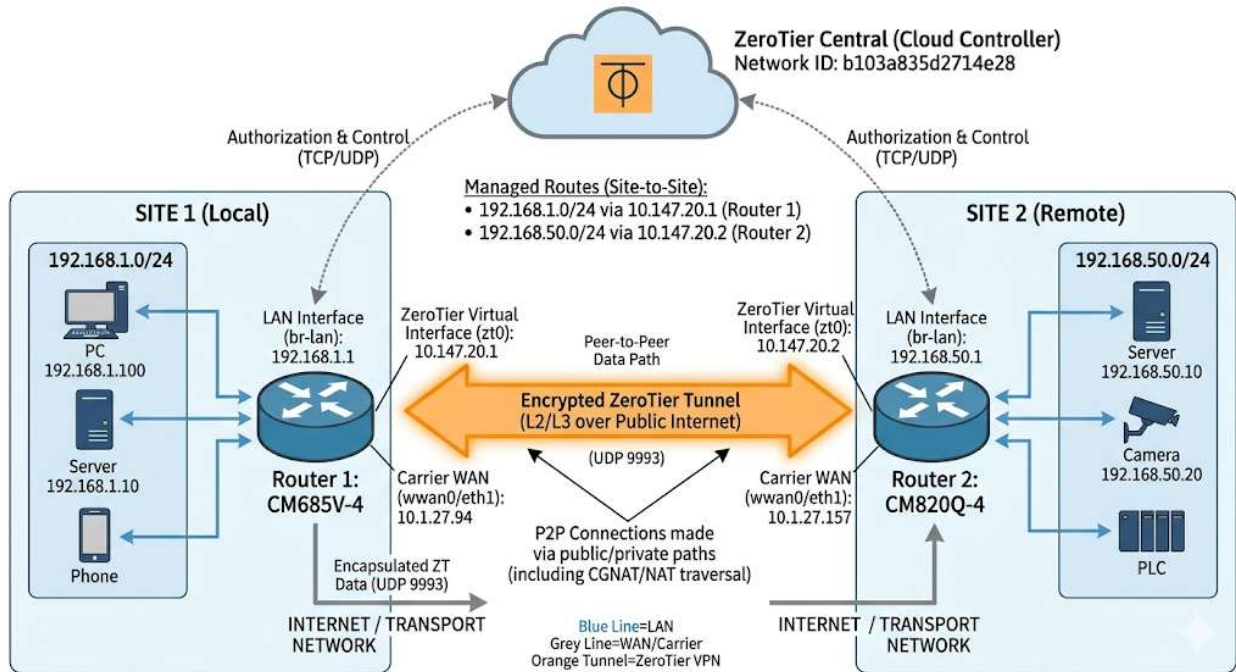
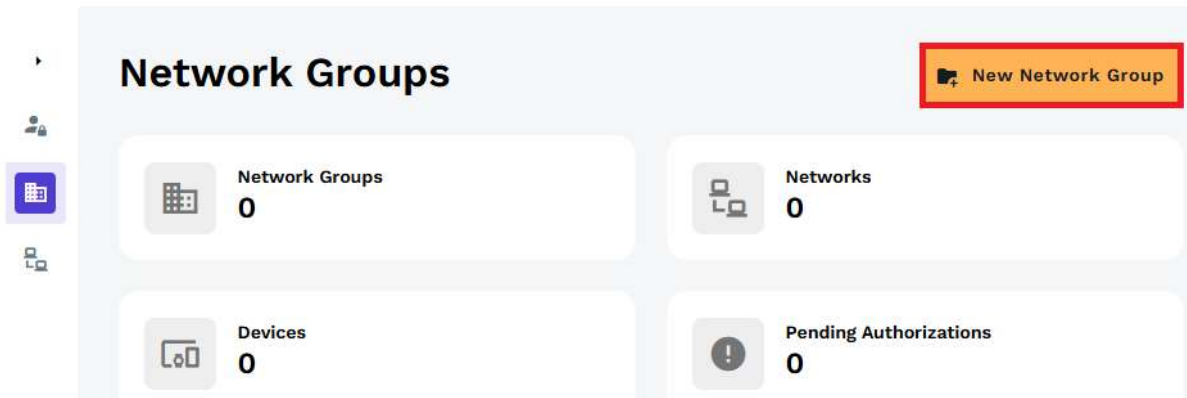


How to setup ZeroTier VPN on the Comset CM685V/CM820Q/CM950W Router

Network Topology



1. Register and log in to your Zerotier VPN account - <https://www.zerotier.com/>.
2. Create a Network Group. See screenshots below.



The screenshot shows the Zerotier 'Network Groups' dashboard. At the top right, there is a red-bordered button labeled 'New Network Group'. Below this, there are four summary cards: 'Network Groups' with a count of 0, 'Networks' with a count of 0, 'Devices' with a count of 0, and 'Pending Authorizations' with a count of 0. A sidebar on the left contains navigation icons for home, users, network groups, and devices.

Create a Network Group

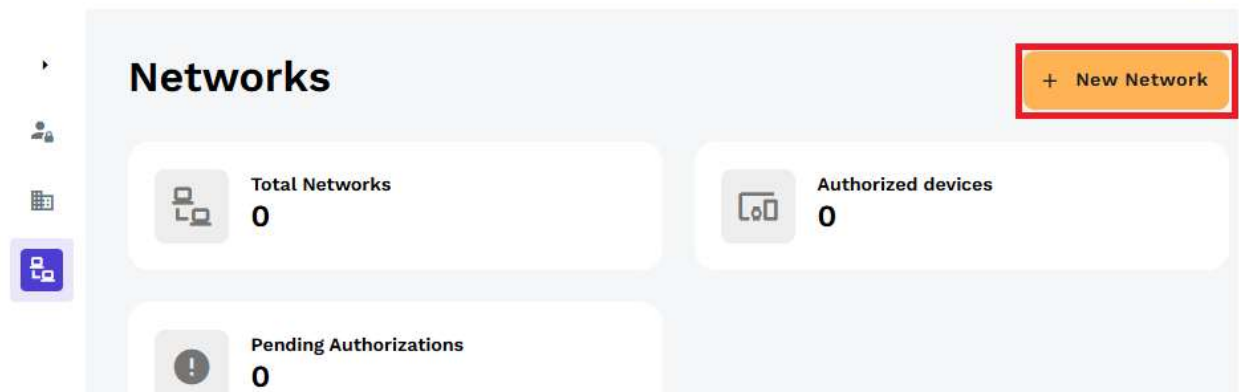
Name your network group

Network Group Name

Network Group Description (Optional)
Describe your network group

The description is helpful when you have a lot of network groups

3. Create a Network. This will generate a Network ID that will be assigned to all Zerotier VPN routers.



The screenshot shows the Zerotier 'Networks' dashboard. At the top right, there is a red-bordered button labeled '+ New Network'. Below this, there are three summary cards: 'Total Networks' with a count of 0, 'Authorized devices' with a count of 0, and 'Pending Authorizations' with a count of 0. A sidebar on the left contains navigation icons for home, users, network groups, and networks.

Create Network

Creating a network in network group **Comset-test**

Select a Network Group

Network Group
Comset-test

Name your Network

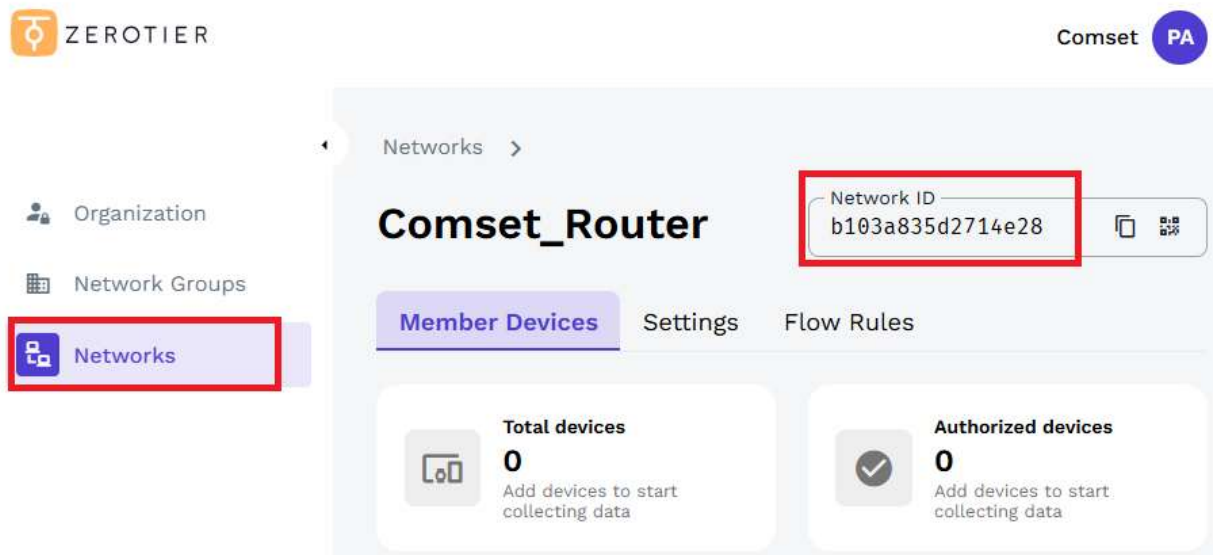
Network Name
Comset_Router

Network Description (Optional)
Describe your network

The description is helpful when you have a lot of networks

Cancel Create Network

4. Click Network page and check Network ID. See below.



The screenshot shows the Zerotier web interface. On the left, a sidebar contains navigation options: Organization, Network Groups, and Networks (highlighted with a red box). The main content area displays the details for a network named 'Comset_Router'. The 'Network ID' is shown as 'b103a835d2714e28' and is highlighted with a red box. Below the network name, there are tabs for 'Member Devices', 'Settings', and 'Flow Rules'. Two summary cards are visible: 'Total devices' with a count of 0 and 'Authorized devices' with a count of 0. Both cards include the text 'Add devices to start collecting data'.

5, Go to CM685V web GUI page on Zerotier settings and copy/paste Network ID to request authorization to join VPN Private Network. See below.

ZeroTier

ZeroTier Settings

- Enable
- ZeroTier Network ID: b103a835d2714e28
- Port: 9993
- Auto NAT Clients
- Zerotier access control:
 - lan access zerotier
 - wan access zerotier
 - remote access wan
 - remote access lan

6, Go to your Zerotier account and “authorize” new device. See below

Networks >

Comset_Router Network ID: 154a350c86b744f9

Member Devices Settings Flow Rules

Device Pending Authorization
A device is waiting for approval. Authorize or Reject here or in the table below (actions) Authorize Reject

Total devices: 1 Authorized devices: 0

Member Devices

Search devices... Show 0 Rejected Devices

| Device ID | Name | Status | ZT IP | Public IP | ZT Version | Last Active | Actions |
|------------|------|----------------|-------|--------------------|--------------------|-------------------|---------|
| bd3bf32fdc | | Not Authorized | | 1.145.224.186/1639 | unknown Unknown | a few seconds ago | ⋮ |

Click on the three dotted line at the right-side corner of the device to “authorize” the new device. See screenshot below.

Member Devices Settings Flow Rules

Total devices 1 Authorized devices 1

Member Devices

Search devices... Show 0 Rejected Devices

| Device ID | Name | Status | ZT IP | Public IP | ZT Version | Last Active |
|------------|------|------------|------------|--------------------|--------------------|-------------------|
| bd3bf32fdc | | Authorized | 10.1.27.94 | 1.145.224.186/1639 | unknown Unknown | a few seconds ago |

Click on the Three dotted line to click Authorize to allow permission.

7. Check Network page to confirm new device is “Authorized”.

| Device ID | Name | Status | ZT IP | Public IP | ZT Version | Last Active |
|------------|------------------|------------|------------|--------------------|-------------------|--------------|
| bd3bf32fdc | CM685V-4 (local) | Authorized | 10.1.27.94 | 1.145.224.186/1639 | v1.8.6 Unknown | a minute ago |

8. Save and copy assigned Zerotier IP address on new device.

9. Do the same procedure on the second remote router. Copy and paste the same Network ID on CM820Q(Remote) Zerotier settings and authorize new device.

10. Check Network page to view authorized Zerotier VPN devices.

Member Devices

Search devices... Show 0 Rejected Devices

| Device ID | Name | Status | ZT IP | Public IP | ZT Version | Last Active |
|------------|-------------------|------------|-------------|--------------------|--------------------|-------------------|
| bd3bf32fdc | CM685V-4 (local) | Authorized | 10.1.27.94 | 1.145.224.186/1639 | unknown Unknown | a minute ago |
| ec17dab14e | CM820Q-4 (remote) | Authorized | 10.1.27.157 | 1.136.107.77/49611 | unknown Unknown | a few seconds ago |

11. You should now be able to access both CM685V and CM820Q router web GUI page via its assigned Zerotier IP address.

12. To access devices behind the CM685V/CM820Q via Local IP address, you need to add routes via its assigned Zerotier IP address.

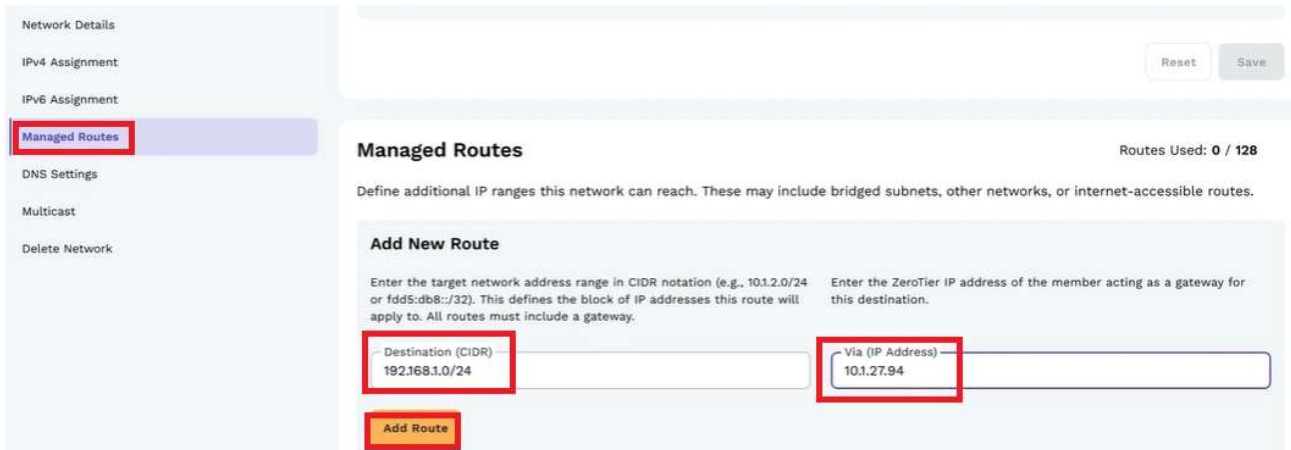
Go to Network page -> Settings -> Manage Routes.

For CM685V(local)

IP local subnet: 192.168.1.0/24

Zerotier IP address: 10.1.27.94

Add new route as shown below.



Network Details
IPv4 Assignment
IPv6 Assignment
Managed Routes
DNS Settings
Multicast
Delete Network

Reset Save

Managed Routes

Routes Used: 0 / 128

Define additional IP ranges this network can reach. These may include bridged subnets, other networks, or internet-accessible routes.

Add New Route

Enter the target network address range in CIDR notation (e.g., 10.1.2.0/24 or fdd5:db8::/32). This defines the block of IP addresses this route will apply to. All routes must include a gateway.

Enter the ZeroTier IP address of the member acting as a gateway for this destination.

Destination (CIDR): 192.168.1.0/24

Via (IP Address): 10.1.27.94

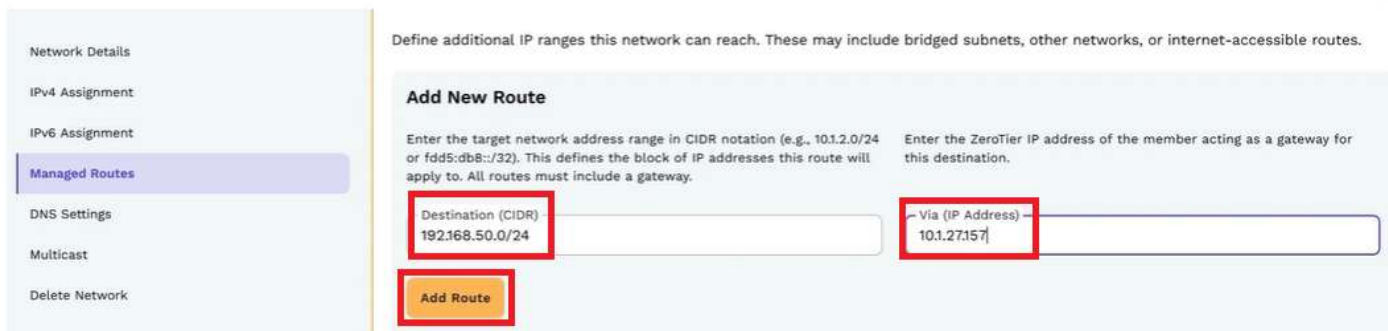
Add Route

For CM820Q(Remote)

IP Local subnet 192.168.50.0/24

Zerotier IP address: 10.1.27.157

Add new route as shown below.



Network Details
IPv4 Assignment
IPv6 Assignment
Managed Routes
DNS Settings
Multicast
Delete Network

Define additional IP ranges this network can reach. These may include bridged subnets, other networks, or internet-accessible routes.

Add New Route

Enter the target network address range in CIDR notation (e.g., 10.1.2.0/24 or fdd5:db8::/32). This defines the block of IP addresses this route will apply to. All routes must include a gateway.

Enter the ZeroTier IP address of the member acting as a gateway for this destination.

Destination (CIDR): 192.168.50.0/24

Via (IP Address): 10.1.27.157

Add Route

Save newly added route. As shown below.

Define additional IP ranges this network can reach. These may include bridged subnets, other networks, or internet-accessible routes.

Add New Route

Enter the target network address range in CIDR notation (e.g., 10.1.2.0/24 or fdd5:db8::/32). This defines the block of IP addresses this route will apply to. All routes must include a gateway.

Enter the ZeroTier IP address of the member acting as a gateway for this destination.

Destination (CIDR)

Via (IP Address)

Active Routes

| Destination (CIDR) | Via (IP Address) | Scope | Action |
|--------------------|------------------|---------|----------------------------------|
| 192.168.1.0/24 | 10.1.27.94 | Private | <input type="button" value="🗑"/> |
| 192.168.50.0/24 | 10.1.27.157 | Private | <input type="button" value="🗑"/> |

11. After adding routes on both CM685V and CM820Q via assigned Zerotier IP address, you should now be able to access any network device behind the routers using its local IP address.

12. Below is a sample screenshot of successful command “Ping Test” from Laptop connected to CM685V-4(Local) to the remote laptop (IP address:192.168.50.151) connected to CM820Q(Remote).

```
Command Prompt
Microsoft Windows [Version 10.0.26200.8246]
(c) Microsoft Corporation. All rights reserved.

C:\Users\tsall>ping 192.168.50.151

Pinging 192.168.50.151 with 32 bytes of data:
Reply from 192.168.50.151: bytes=32 time=313ms TTL=126
Reply from 192.168.50.151: bytes=32 time=306ms TTL=126
Reply from 192.168.50.151: bytes=32 time=293ms TTL=126
Reply from 192.168.50.151: bytes=32 time=326ms TTL=126

Ping statistics for 192.168.50.151:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 293ms, Maximum = 326ms, Average = 309ms

C:\Users\tsall>
```