

NR500 Series Industrial Cellular VPN Router

Application Note 045

L2TP Server with Window OS

Version: V1.0.0
Date: Feb 2020
Status: Confidential



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1. Introduction

1.1 Overview

This document contains information regarding the configuration and use of L2TP server with Windows OS.

This guide has been written for use by technically competent personnel with a good understanding of the communications technologies used in the product, and of the requirements for their specific application.

1.2 Compatibility

This application note applies to:

Models Shown: NR500 series.

Firmware Version: V1.1.1 (d053368) or newer

Other Compatible Models: None

1.3 Version

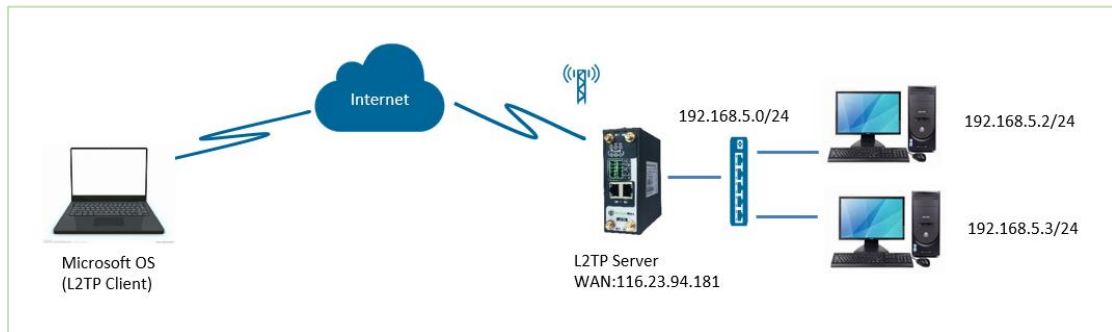
Updates between document versions are cumulative. Therefore, the latest document will include all the content of previous versions.

Release Date	Doc. Version	Firmware Version	Change Description
2020/02/29	V1.0.0	V1.1.1(d053368)	First released

1.4 Corrections

Appreciate for corrections or rectifications to this application note, and if any request for new application notes please email to: support@navigateworx.com

2. Topology

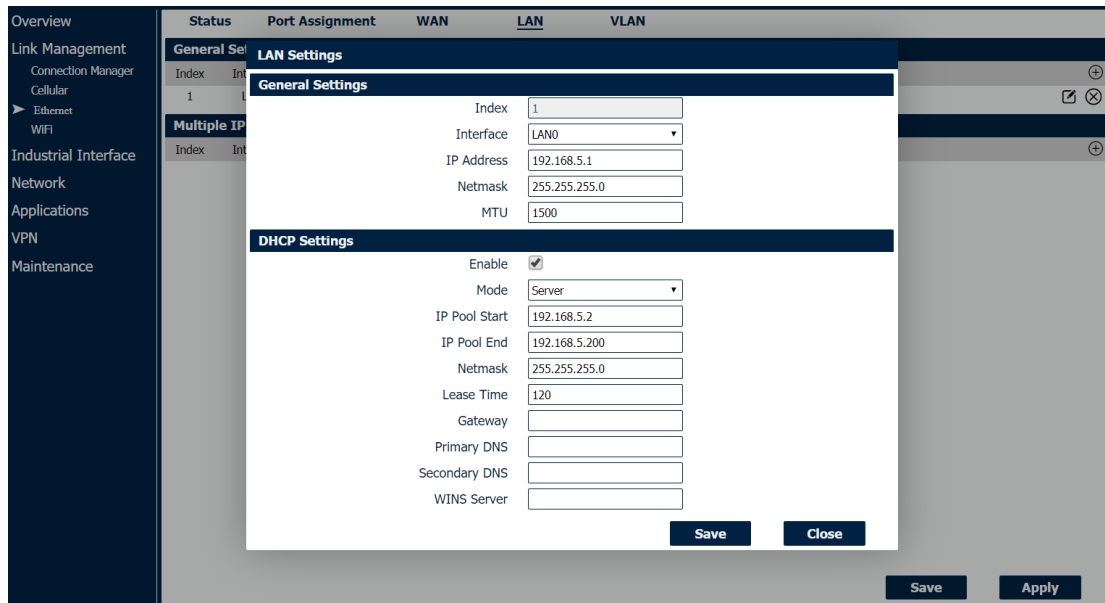


1. NR500 Router run as L2TP server with the public IP address.
2. A PC run with Microsoft Windows OS works as L2TP client.
3. L2TP VPN tunnel is established between NR500 router and the PC, PC can access to the LAN device behind NR500 Router.

3. Configuration

3.1 L2TP Server Configuration

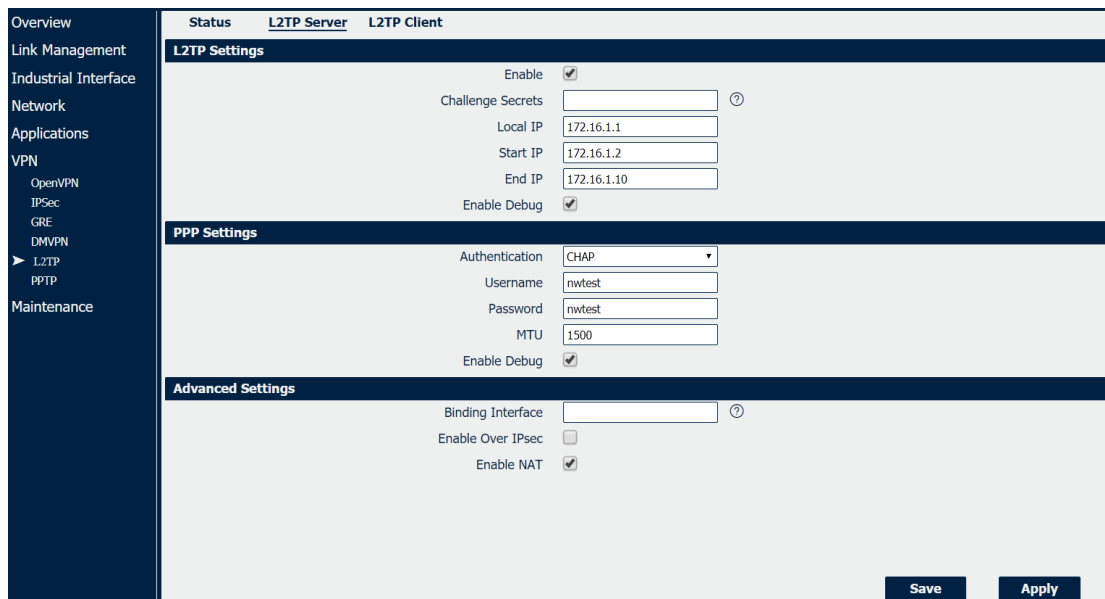
1. Go to **Link Management>Ethernet>LAN**, specify the LAN IP address as 192.168.5.0/24, like below:



The screenshot shows the LAN Settings configuration page. The left sidebar contains a navigation menu with categories like Overview, Link Management, Industrial Interface, Network, Applications, VPN, and Maintenance. The main content area is titled 'LAN Settings' and is divided into 'General Settings' and 'DHCP Settings' sections. The 'General Settings' section includes fields for Index (1), Interface (LAN0), IP Address (192.168.5.1), Netmask (255.255.255.0), and MTU (1500). The 'DHCP Settings' section includes checkboxes for Enable (checked), Mode (Server), IP Pool Start (192.168.5.2), IP Pool End (192.168.5.200), Netmask (255.255.255.0), Lease Time (120), Gateway, Primary DNS, Secondary DNS, and WINS Server. There are 'Save' and 'Close' buttons at the bottom of the configuration area.

2. Click Save>Apply.

3. Go to **VPN>L2TP>L2TP Server**, enable L2TP server and configuration like below:

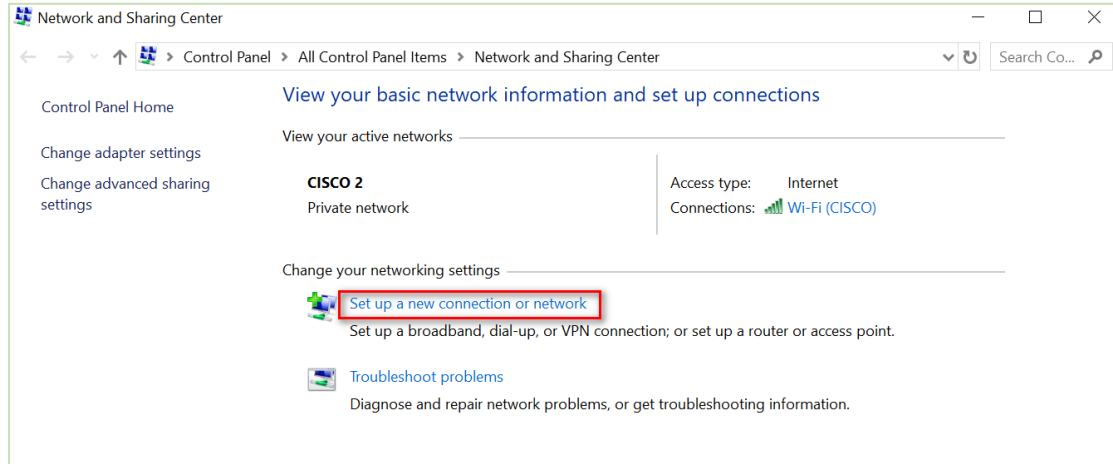


The screenshot shows the L2TP Server configuration page. The left sidebar contains a navigation menu with categories like Overview, Link Management, Industrial Interface, Network, Applications, VPN, and Maintenance. The main content area is titled 'L2TP Settings' and is divided into 'L2TP Settings', 'PPP Settings', and 'Advanced Settings' sections. The 'L2TP Settings' section includes checkboxes for Enable (checked), Challenge Secrets, Local IP (172.16.1.1), Start IP (172.16.1.2), End IP (172.16.1.10), and Enable Debug (checked). The 'PPP Settings' section includes a dropdown for Authentication (CHAP), Username (nwttest), Password (nwttest), MTU (1500), and Enable Debug (checked). The 'Advanced Settings' section includes a dropdown for Binding Interface, Enable Over IPsec (unchecked), and Enable NAT (checked). There are 'Save' and 'Apply' buttons at the bottom of the configuration area.

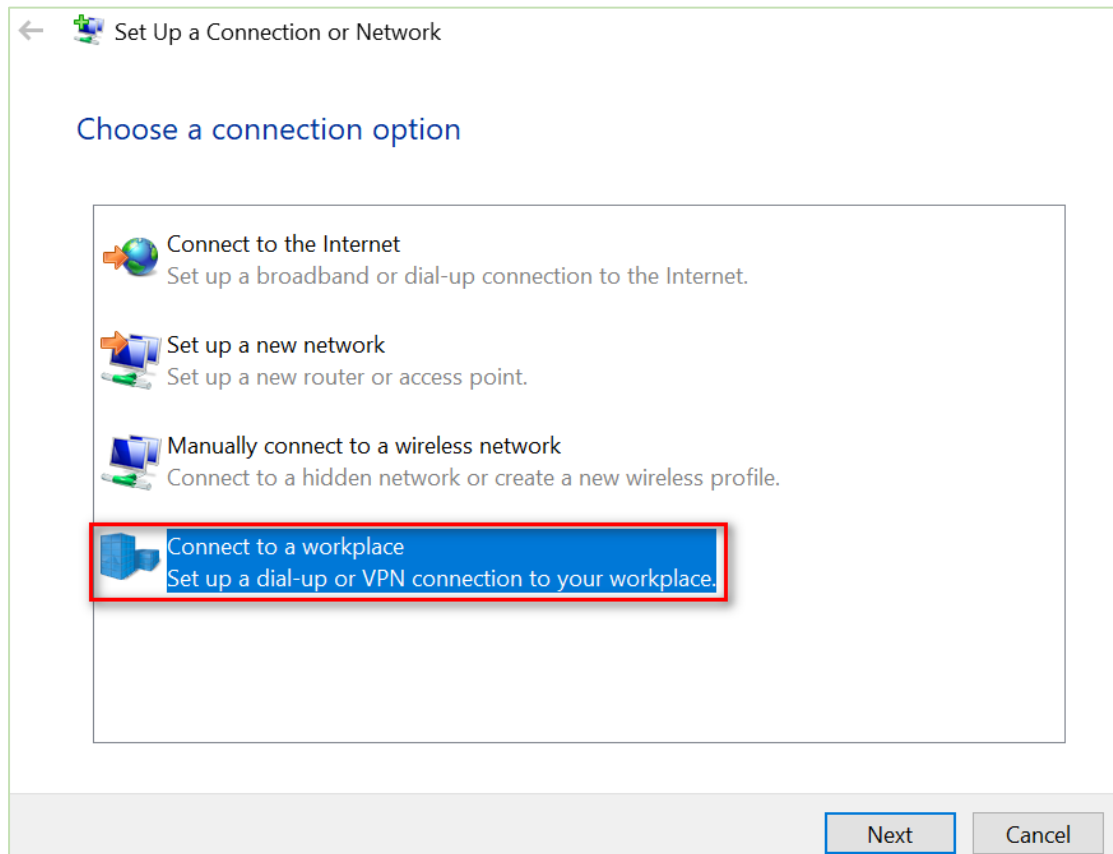
4. Click Save>Apply.

3.2 L2TP Client Configuration

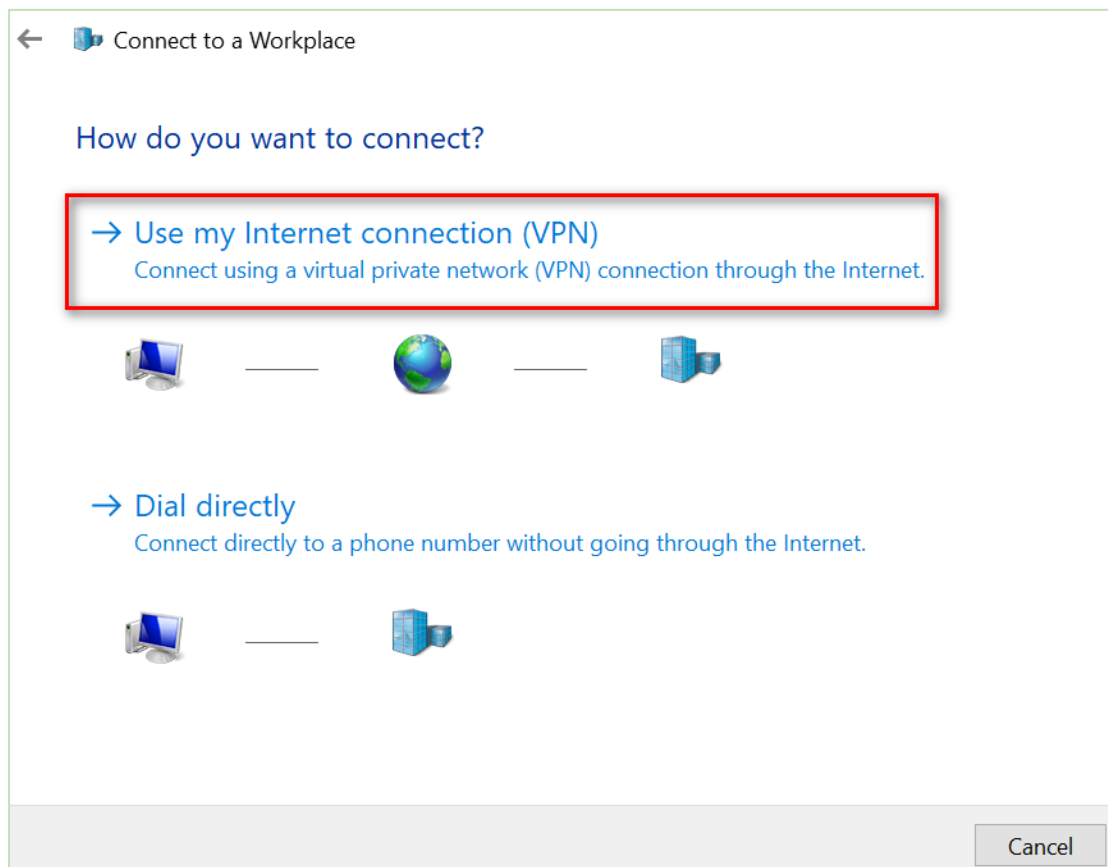
1. Open the PC and go to Network and Sharing Center, click "Set up a new connection or network":



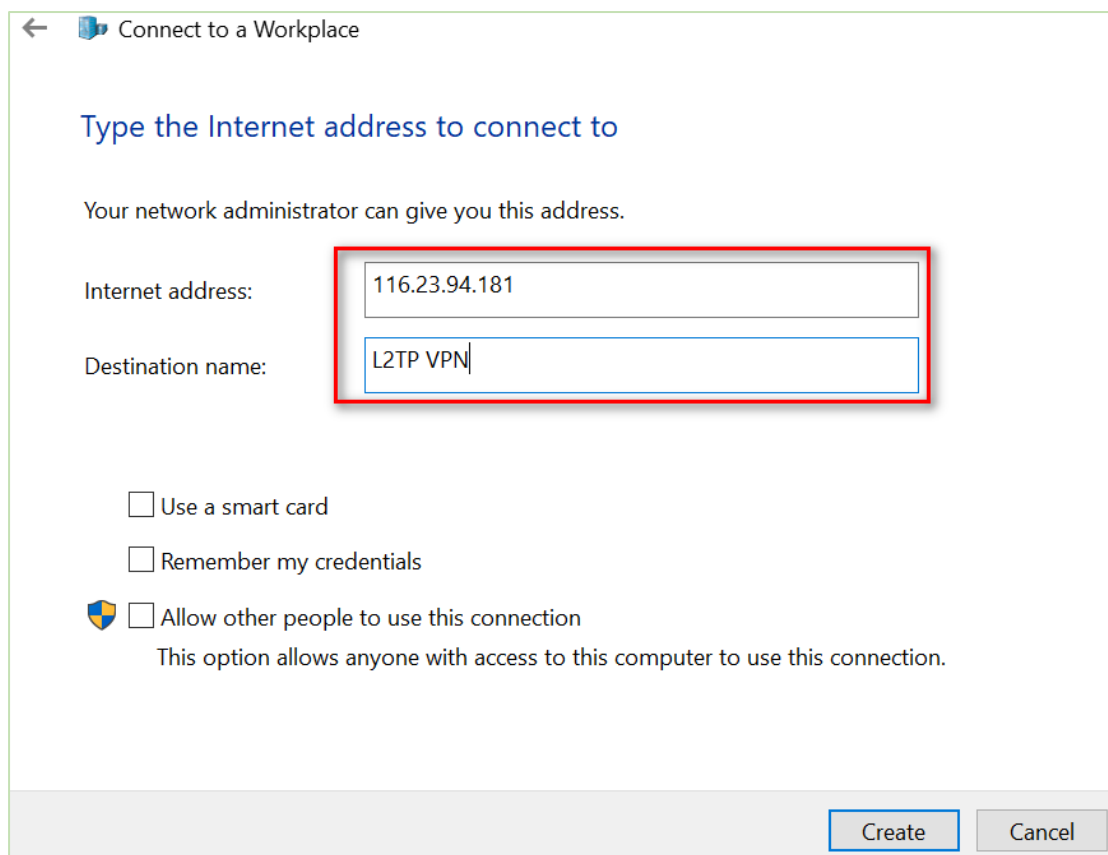
2. Choose "Connect to a workplace" and click "Next":



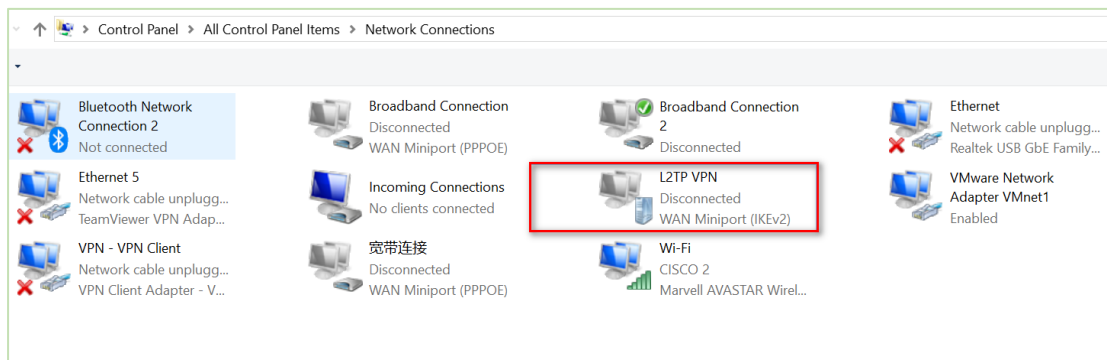
3. Click "Use my Internet connection (VPN)".



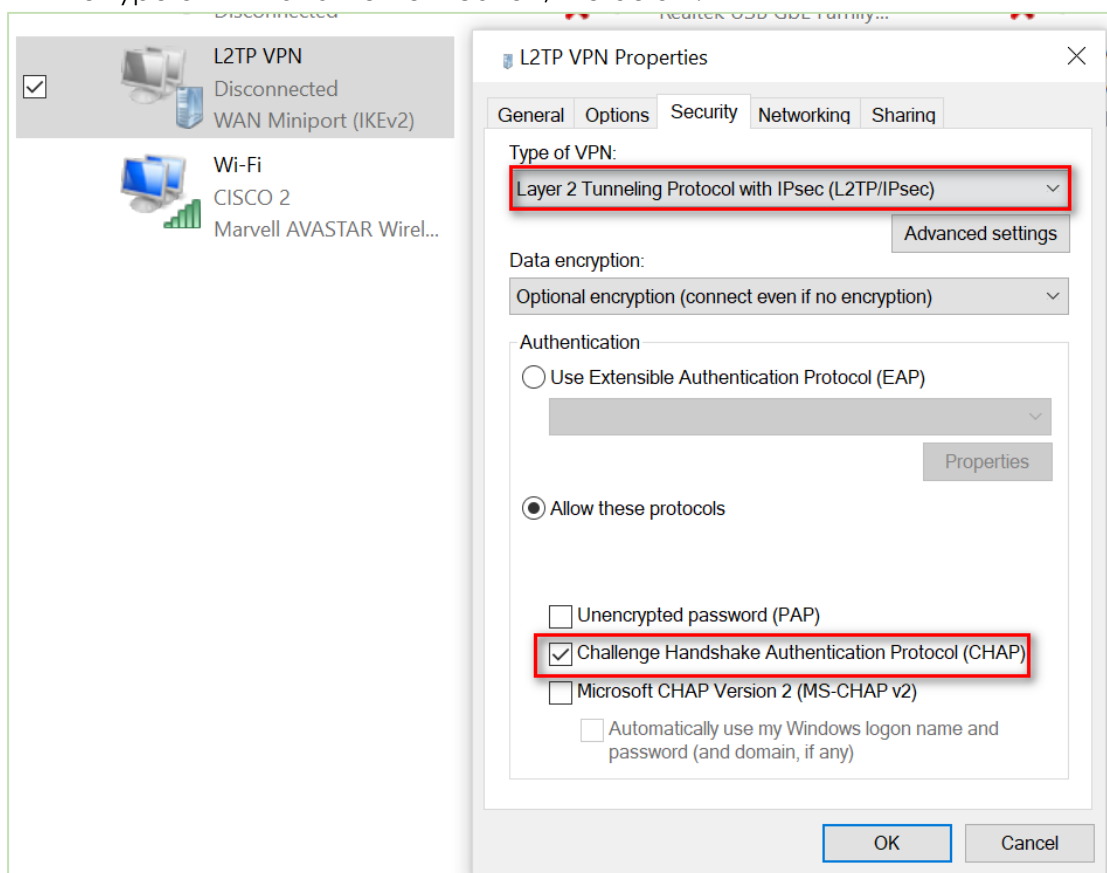
4. Enter the L2TP Server IP address and Destination name, click "Create".



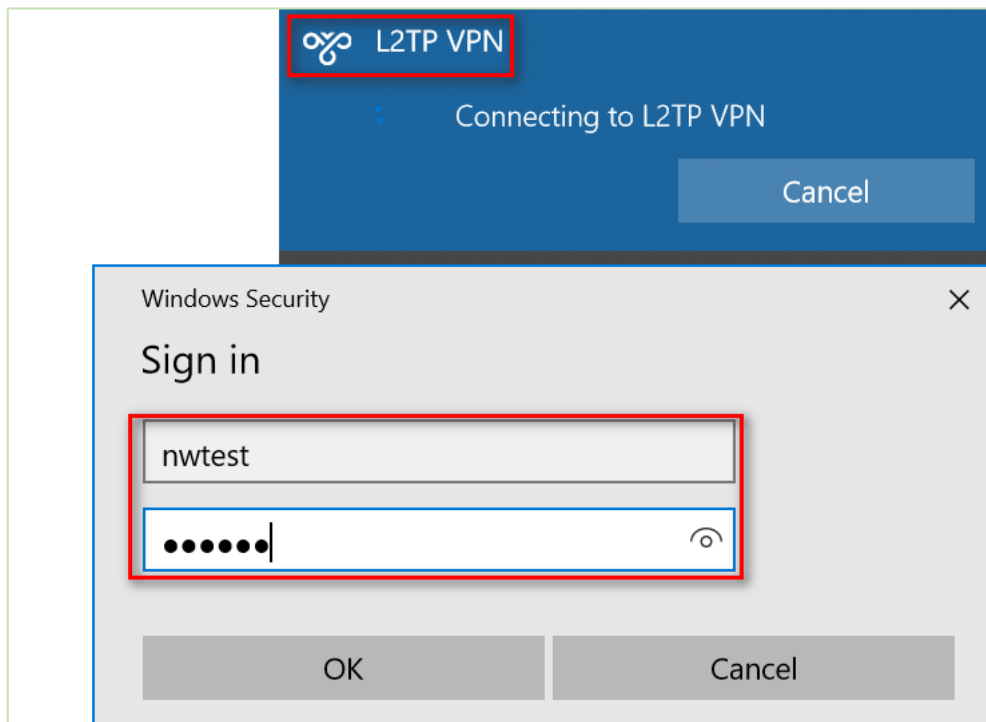
5. After that, we had created L2TP connection, like below:



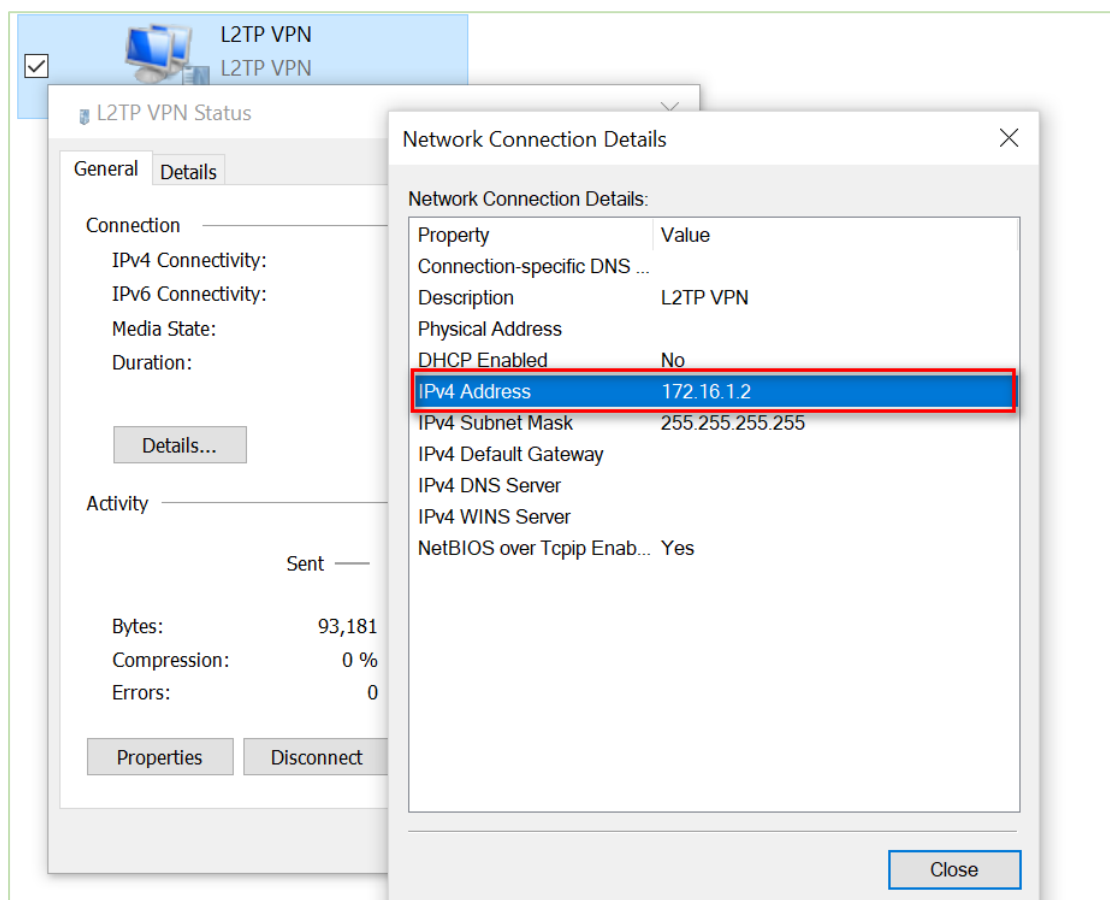
6. Right Click "L2TP VPN", and choose "Properties", go to "Security" and specify the Type of VPN and Authentication, like below:



7. After finishing all above settings, click to connect "L2TP VPN", and sign in with the Username and Password, Click "OK", like below:



8. L2TP Client had connected to L2TP Server successfully. Right Click the "L2TP VPN", choose "Status", go to "Details", then we can see that the L2TP Server had assigned the IP address to the L2TP Client.



4. Testing

1. Ping from L2TP Client to L2TP Server and successfully.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.17134.556]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping 192.168.5.1

Pinging 192.168.5.1 with 32 bytes of data:
Reply from 192.168.5.1: bytes=32 time=13ms TTL=64
Reply from 192.168.5.1: bytes=32 time=1ms TTL=64
Reply from 192.168.5.1: bytes=32 time=1ms TTL=64
Reply from 192.168.5.1: bytes=32 time=4ms TTL=64

Ping statistics for 192.168.5.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 4ms

C:\Users\Administrator>
```