



Quick Note 11

Configuring a Digi TransPort as a PPTP Server for Windows Clients

Digi Technical Support

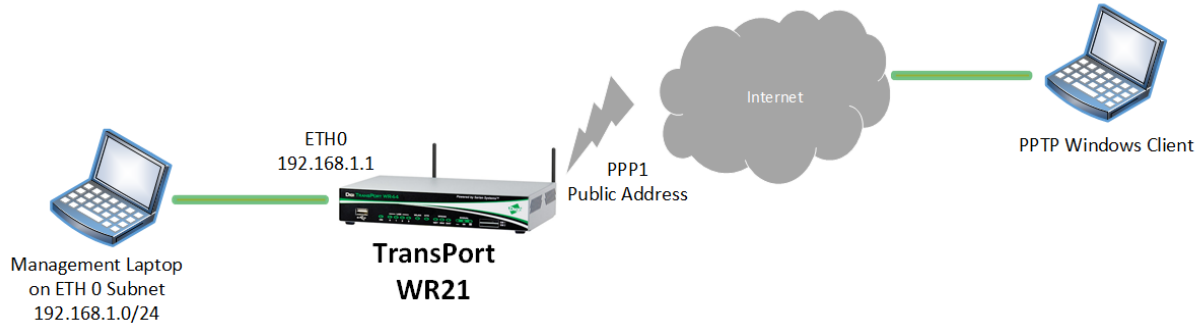
February 2016

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1 INTRODUCTION

1.1 Outline



PPTP is popular, easy to configure and is supported on multiple platforms including mobile phones. In this example, a simple VPN tunnel will be configured to allow access to Windows clients.

The router must be on firmware version 5048 or higher and have a public IP address. It is assumed that the router is already configured with internet access.

In this Quick Note a WR21 will be shown, but this is applicable to every TransPort model.

1.2 Corrections

Requests for corrections or amendments to this Quick Note are welcome and should be addressed to: tech.support@digicom.com

Requests for new Quick Notes can be sent to the same address.

1.3 Version

Version Number	Status
1.0	Published
1.1	Amended due to changes after firmware release 5006
2.0	Updated and rebranded – added vista screen shots
2.1	Updated for new web GUI
3.0	Updated structure, formatting and layout – added Windows 7 steps
3.1	Updated screenshots and instructions for new web interface, rebranding (Feb 2016)

2 CONFIGURING THE TRANSPORT ROUTER

This section assumes the WR21 is using a GSM/UMTS W-WAN module and that PPP 1 will be used as WAN connection. Please note that also other types of WAN connection can be used as long as the TransPort is reachable via a Public IP address.

2.1 Configure the Cellular WAN Interface

[Configuration - Network](#) > [Interfaces](#) > [Mobile](#)

▼ Mobile

Select a SIM to configure from the list below

Settings on this page apply to the selected SIM

SIM: 1 (PPP 1) ▼

IMSI: 310410825281959

▼ Mobile Settings

Select the service plan and connection settings used in connecting to the mobile network.

Mobile Service Provider Settings

Service Plan / APN: Your.APN.goes.here

Use backup APN Retry the main APN after minutes

SIM PIN: (Optional)

Confirm SIM PIN:

Username: (Optional)

Password: (Optional)

Confirm Password:

Mobile Connection Settings

Re-establish connection when no data is received for a period of time

Mobile Network Settings

Enable NAT on this interface
 IP address IP address and Port

Enable IPsec on this interface

Enable the firewall on this interface

▶ Mobile Firmware (OTA) Update

▶ SIM Selection

▶ Advanced

▶ SMS Settings

Apply

Configuring a TransPort as a PPTP server for Windows Clients

Parameter	Setting	Description
SIM	1 (PPP 1)	The following config will apply to SIM 1 & PPP 1
Service Plan / APN	Your APN	Contact your service provider to obtain the APN
SIM PIN	Your PIN code	The SIM PIN (Optional)
Username/Password	APN Username	Contact your service provider to obtain the APN username/password (Optional)

2.2 Configure the PPP Instance

An unused PPP instance needs to be configured as an answering PPP that will use PPTP for its underlying connectivity. The PPP number will vary depending on the product.

Click on "Load answering defaults":

[Configuration - Network](#) > [Interfaces](#) > [Advanced](#) > [PPP 0 - 9](#) > [PPP 5](#)

▼ PPP 5

Description:

This PPP interface will use ▼

Dial out using numbers:

Prefix: to the dial out number

Username:

Password:

Confirm password:

Allow the remote device to assign a local IP address to this router

Try to negotiate to use as the local IP address for this router

Use as the local IP address for this router (i.e. not negotiable)

Use mask for this interface

Configuring a TransPort as a PPTP server for Windows Clients

After loading answering defaults ("Answer config loaded" will be shown), return to the same config page and change the "This PPP interface will use <interface> <interface#>" properties to set the layer 1 interface to PPTP o.

[Configuration - Network](#) > [Interfaces](#) > [Advanced](#) > [PPP 0 - 9](#) > [PPP 5](#)

Answering config loaded

Description:

This PPP interface will use

Leave the other settings at their default values.

2.3 Configure the PPTP Instance

Tick the check boxes for "Enable Server Mode", and then click the 'Apply' button.

[Configuration - Network](#) > [Virtual Private Networking \(VPN\)](#) > [PPTP](#) > [PPTP 0](#)

▼ PPTP 0

Description:

Remote Host:

Use Interface:

Enable Server Mode

Enable Client mode

Enable Socket mode

Encrypt control data using SSL version

Enable PPTP debug

2.4 Configuring the VPN User

Configure the VPN login credentials for the VPN user. Configure a username and password. Set the (router management) Access Level to None.

[Configuration - Security](#) > [Users](#) > [User 0 - 9](#) > [User 2](#)

▼ User 2

Username:	<input type="text" value="VPN-User0"/>
Password:	<input type="password" value="••••••••"/>
Confirm Password:	<input type="password" value="••••••••"/>
Access Level:	<input type="text" value="None"/> ▼

► Advanced

Apply

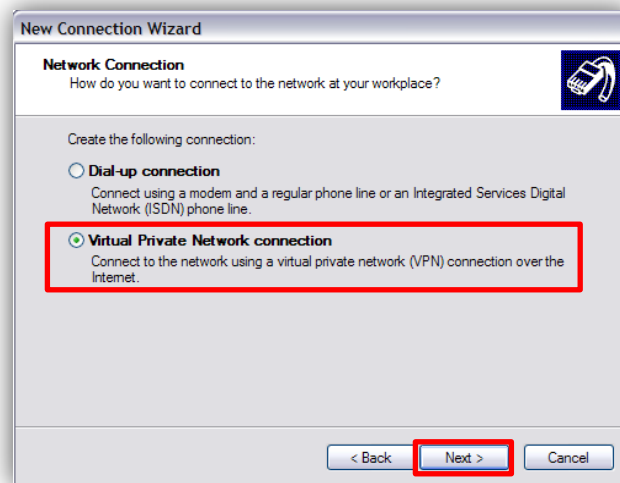
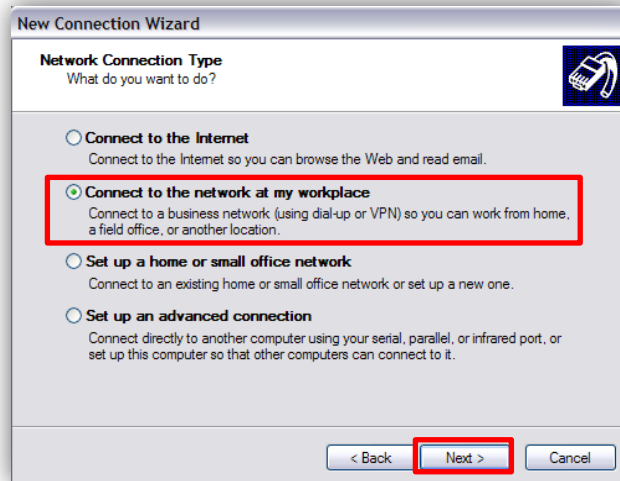
If more PPTP tunnels are required, repeat all of above sections using another unused PPP instance, PPTP instance and user configuration.

3 CONFIGURING THE WINDOWS CLIENT

This section will describe a step by step process to configure the windows client to connect to the PPTP VPN server using different Windows versions (XP, Vista and 7).

3.1 Using Windows XP

Create a new network connection and specify the following options:



Configuring a TransPort as a PPTP server for Windows Clients

New Connection Wizard

Connection Name
Specify a name for this connection to your workplace.

Type a name for this connection in the following box.

Company Name

For example, you could type the name of your workplace or the name of a server you will connect to.

< Back **Next >** Cancel

New Connection Wizard

Public Network
Windows can make sure the public network is connected first.

Windows can automatically dial the initial connection to the Internet or other public network, before establishing the virtual connection.

Do not dial the initial connection.

Automatically dial this initial connection:

< Back **Next >** Cancel

Configuring a TransPort as a PPTP server for Windows Clients

New Connection Wizard

VPN Server Selection
What is the name or address of the VPN server?

Type the host name or Internet Protocol (IP) address of the computer to which you are connecting.

Host name or IP address (for example, microsoft.com or 157.54.0.1):

10.1.51.2 <- Change this to the public IP address of the router.

< Back Next > Cancel

New Connection Wizard

Completing the New Connection Wizard

You have successfully completed the steps needed to create the following connection:

VPN to Office

- Share with all users of this computer

The connection will be saved in the Network Connections folder.

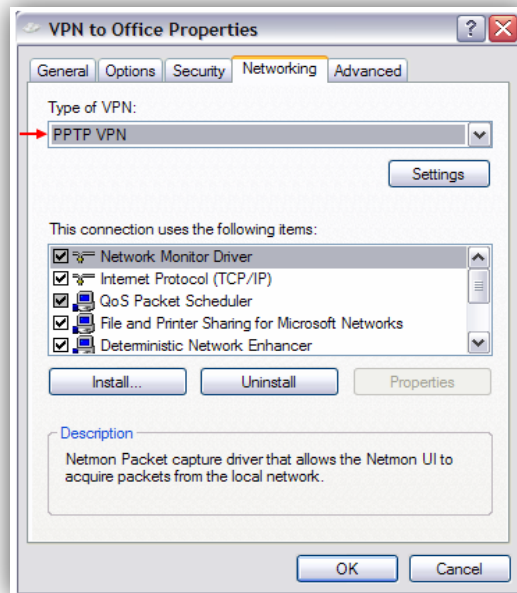
Add a shortcut to this connection to my desktop

To create the connection and close this wizard, click Finish.

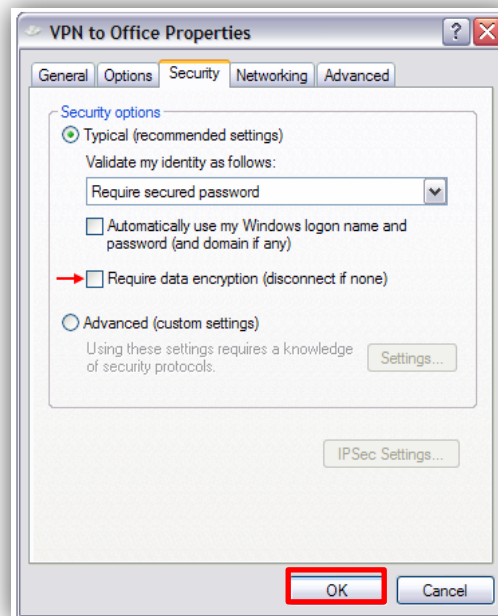
< Back Finish Cancel

Configuring a TransPort as a PPTP server for Windows Clients

View the properties of the newly created VPN connection and click on the Networking tab. Change the Type of VPN to PPTP VPN.



Click on the Security tab, remove the tick from "Require data encryption (disconnect if none)", and then click OK.



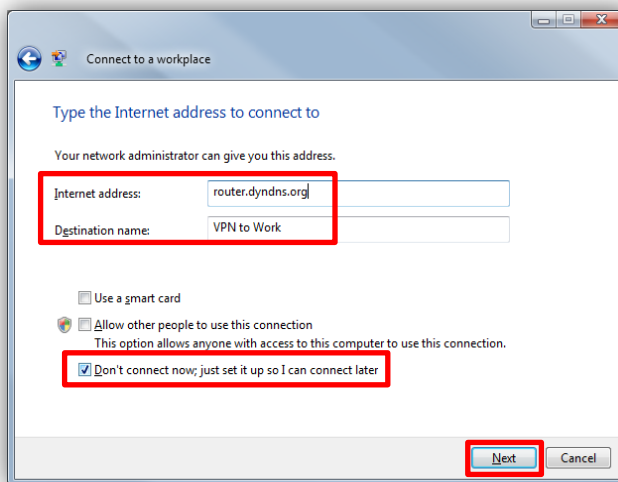
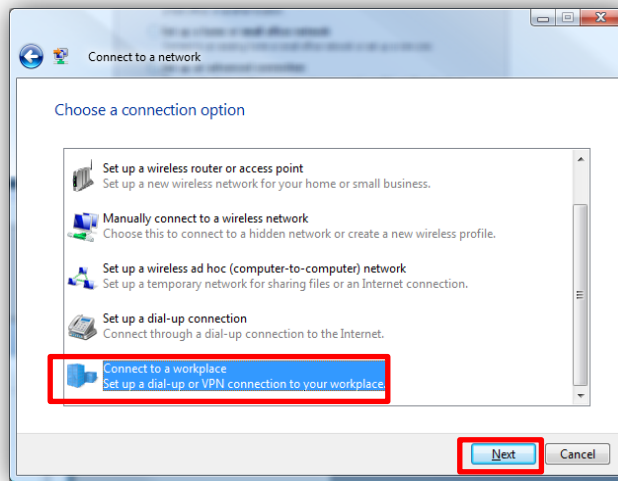
Configuring a TransPort as a PPTP server for Windows Clients

Type in the username and password configured on the TransPort earlier, and then click Connect.

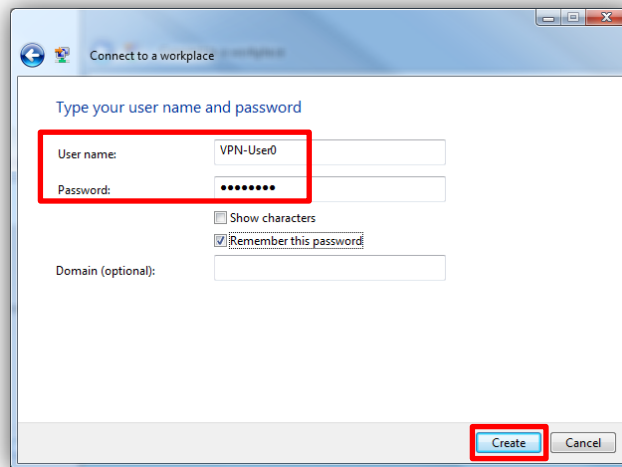


3.2 Using Windows Vista

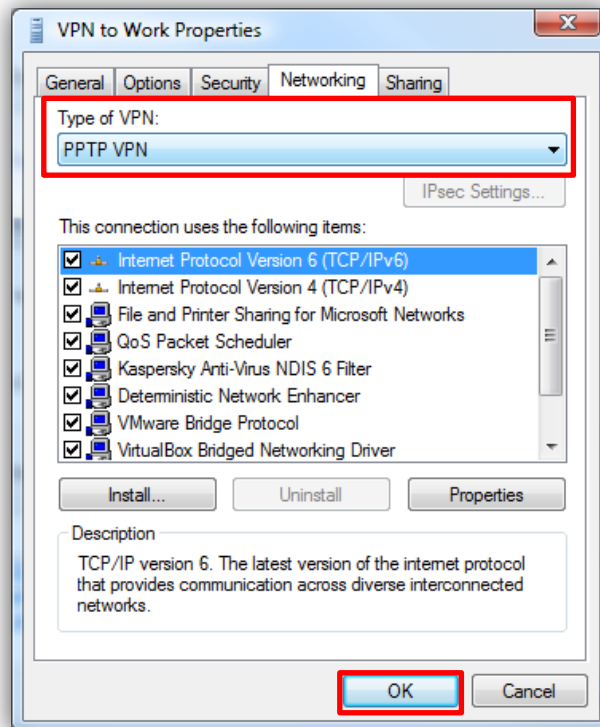
Create a new network connection and specify the following options.



Configuring a TransPort as a PPTP server for Windows Clients

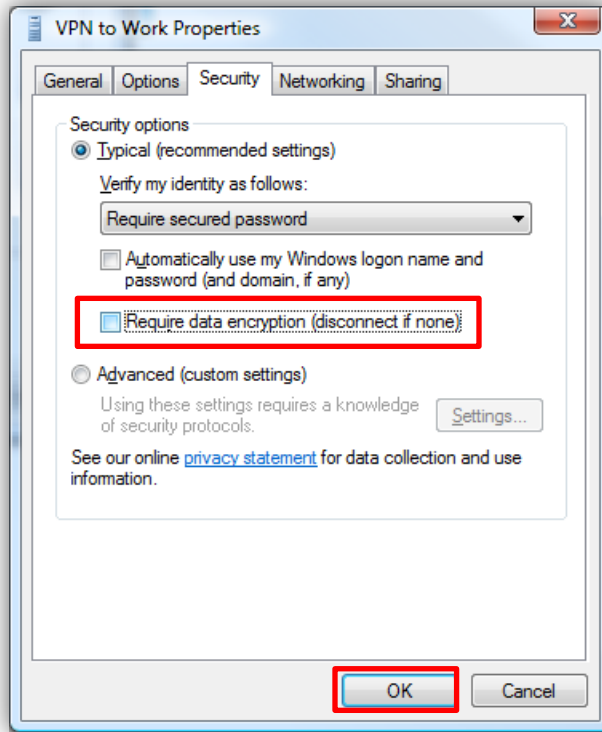


View the Properties of the newly created VPN connection and click on the Networking tab. Change the Type of VPN to 'PPTP VPN'.



Configuring a TransPort as a PPTP server for Windows Clients

Click on the Security tab, remove the tick from "Require data encryption (disconnect if none)", and then click OK.

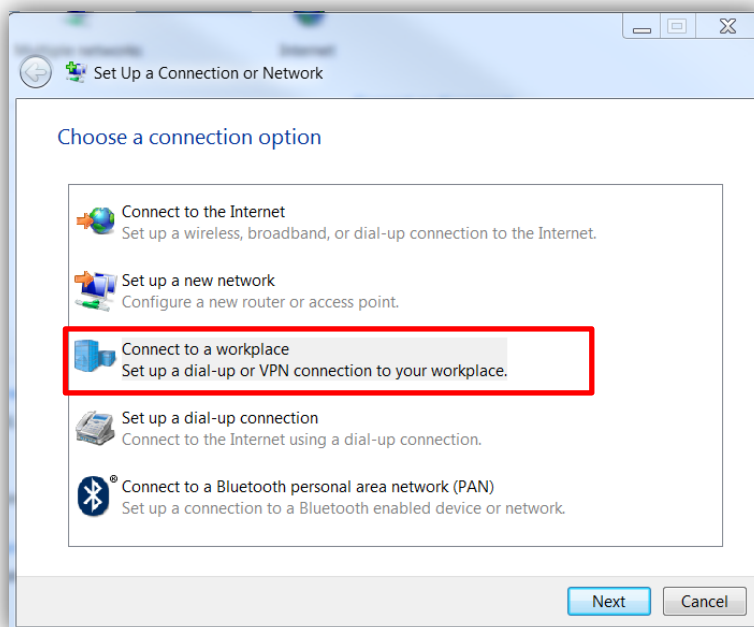
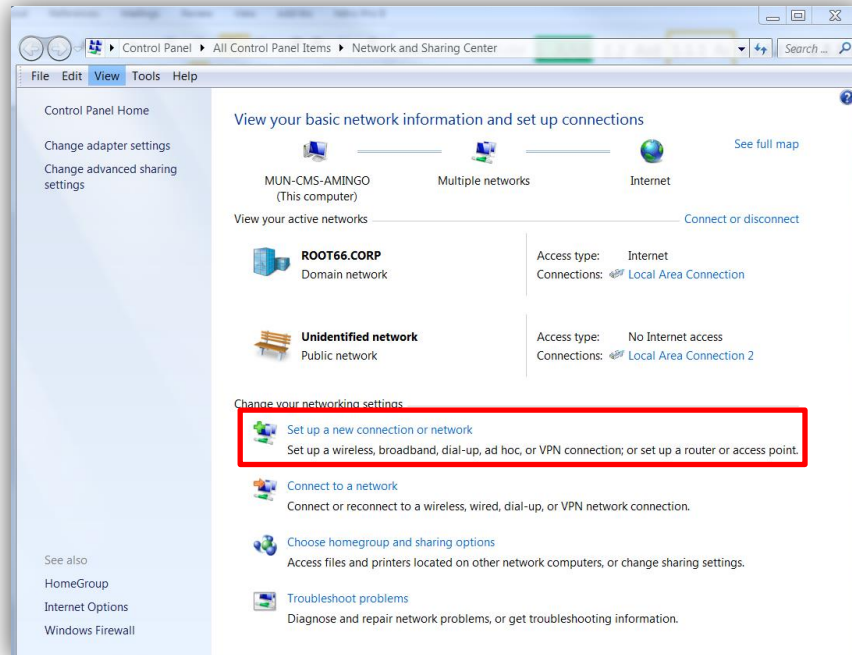


Type in the username and password configured on the TransPort earlier, and then click Connect.

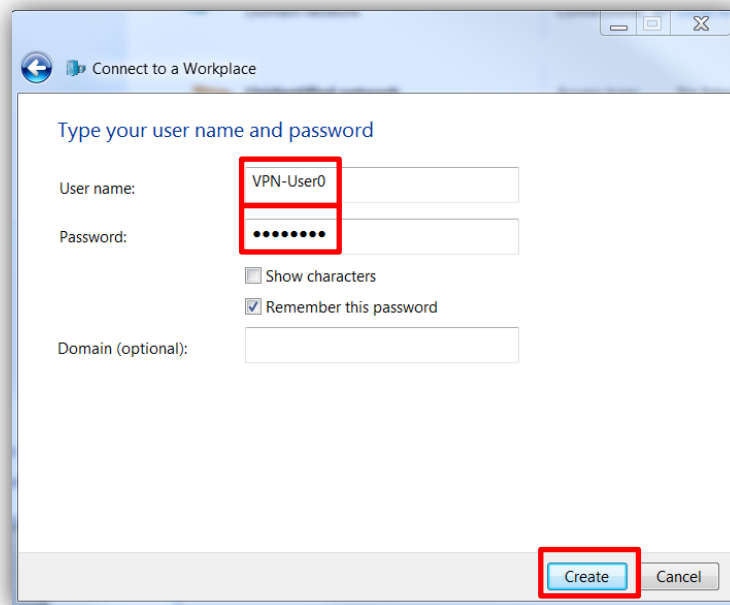
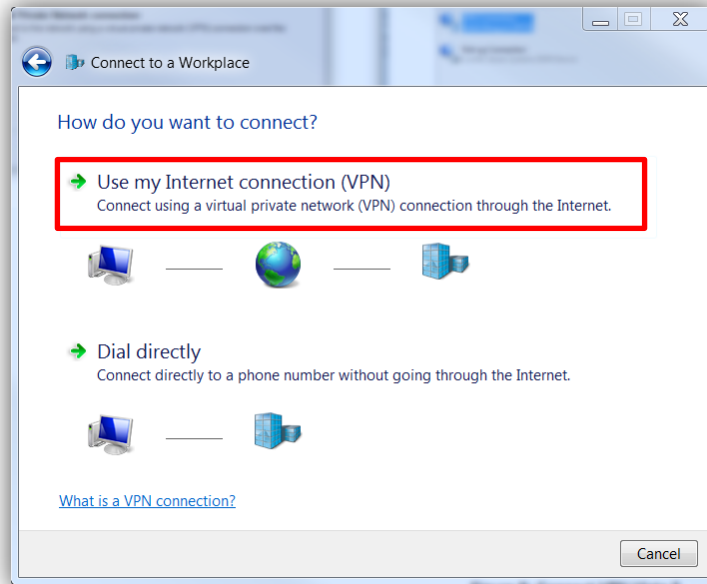


3.3 Using Windows 7

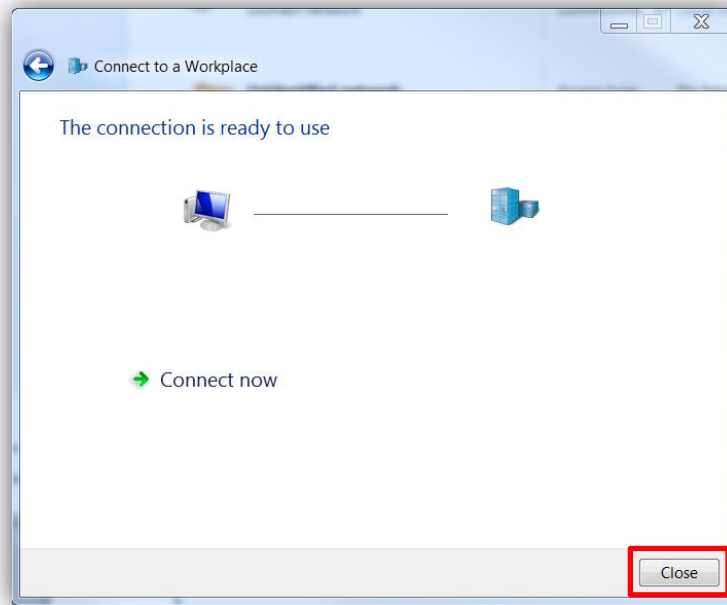
Go to Control Panel\All Control Panel Items\Network and Sharing Center and create a new network connection following the screenshots:



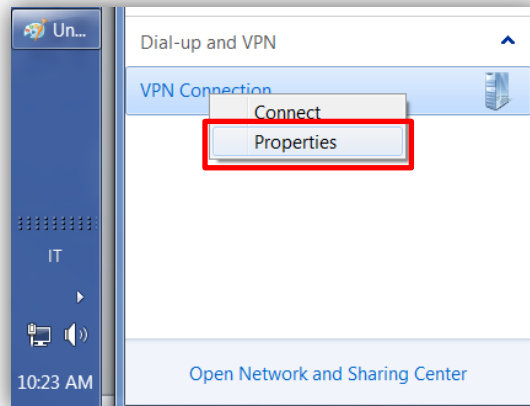
Configuring a TransPort as a PPTP server for Windows Clients



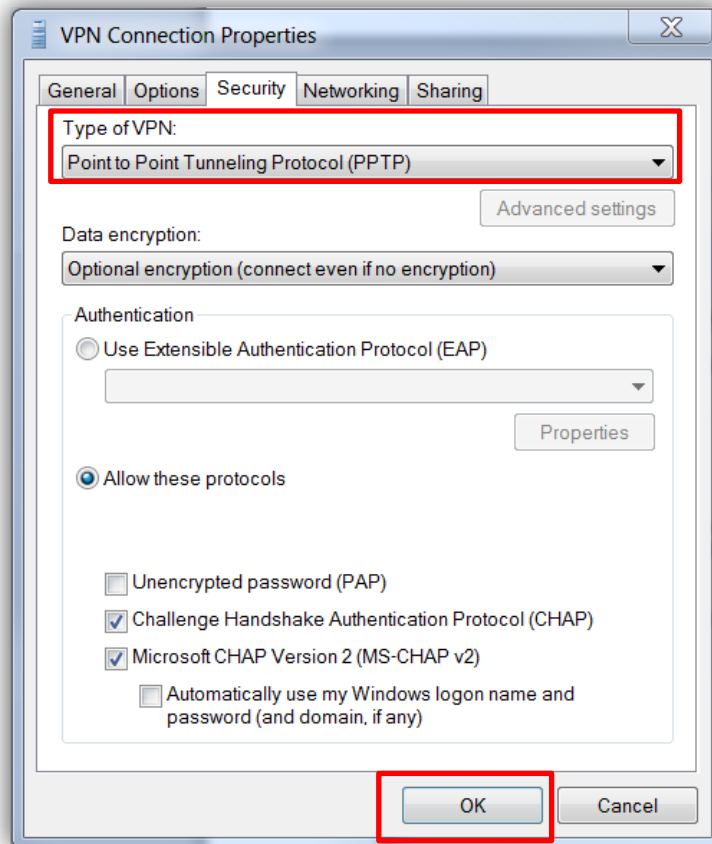
Configuring a TransPort as a PPTP server for Windows Clients



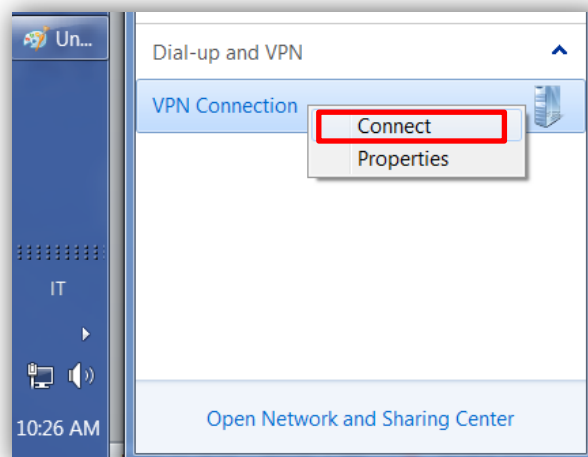
View the Properties of the newly created VPN connection, click on the Security tab, and then configure the following settings:



Configuring a TransPort as a PPTP server for Windows Clients

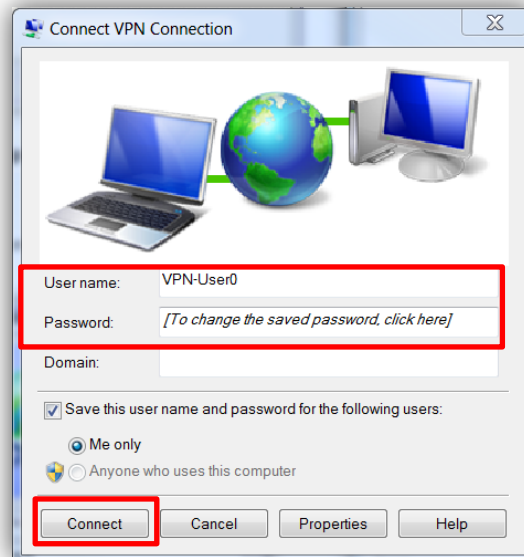


After closing the VPN Properties, right click the VPN connection and select 'Connect':



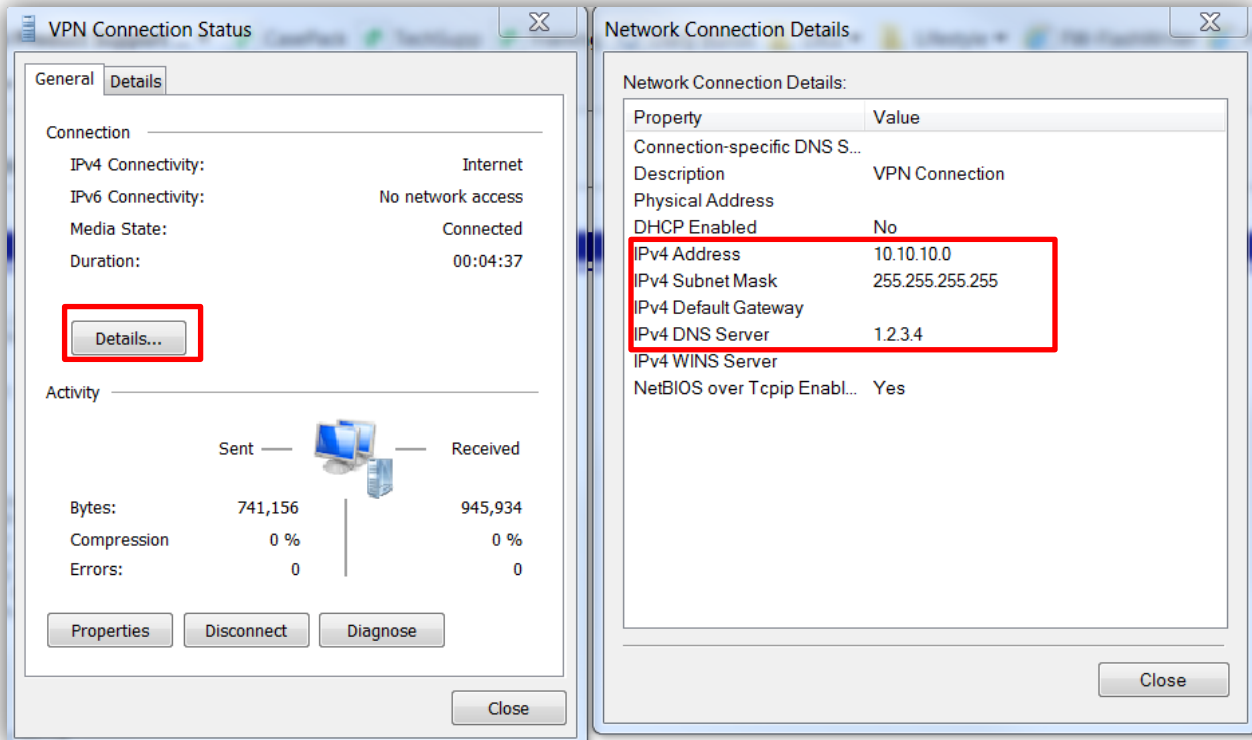
Configuring a TransPort as a PPTP server for Windows Clients

Type in the username and password configured on the TransPort earlier, and then click 'Connect':



4 CHECK THE VPN CONNECTION

The VPN Connection can be checked on the Windows Client by looking at the VPN connection Status Details:



As shown, the VPN client is connected to the server and has received the IP configuration that has been configured in PPP 5 on the TransPort.

Configuring a TransPort as a PPTP server for Windows Clients

The PPPTP and PPP5 events in the TransPort Event Log show that the VPN is UP:

Management - Event Log

```
08:27:53, 16 Jul 2015, Telnet session closed
08:27:11, 16 Jul 2015, Login from Remote IP: 59.182.88.52
08:27:11, 16 Jul 2015, GP socket connected: 37.84.194.233:23 -> 59.182.88.52:57041
08:27:08, 16 Jul 2015, PPP 5 up
08:27:07, 16 Jul 2015, PPP 5 Start IPCP
08:27:07, 16 Jul 2015, PPP Login OK by VPN-User0 lvl 4
08:27:07, 16 Jul 2015, PPP 5 Start AUTHENTICATE
08:27:07, 16 Jul 2015, PPP 5 Start LCP
08:27:07, 16 Jul 2015, PPP 5 Start
08:27:07, 16 Jul 2015, PPTP Call 0 up
08:27:07, 16 Jul 2015, PPTP Tunnel 0 up
08:27:07, 16 Jul 2015, GP socket connected: 37.84.194.233:1723 -> 217.151.242.13:26023
```

This can also be checked here:

[Management - Network Status](#) > [Interfaces](#) > [Advanced](#) > [PPP](#) > [PPP 0 - 9](#) > [PPP 5](#)

▼ PPP 5

Uptime: 0 Hrs 6 Mins 3 Seconds

Option	Local	Remote
MRU:	1500	1400
ACCM:	0x0	0xffffffff
VJ Compression:	OFF	OFF

Link Active With Entity: PPTP 0

IP Address: 1.2.3.4

5 CONFIGURATION AND FIRMWARE/HARDWARE

5.1 WR21 Configuration File

This is the config.dao file used for the purpose of this Quick Note:

```
eth 0 IPaddr "192.168.1.1"
addp 0 enable ON
pptp 0 listen ON
lapb 0 ans OFF
lapb 0 tinact 120
lapb 1 tinact 120
lapb 3 dtemode 0
lapb 4 dtemode 0
lapb 5 dtemode 0
lapb 6 dtemode 0
ip 0 cidr ON
def_route 0 ll_ent "ppp"
def_route 0 ll_add 1
dhcp 0 IPmin "192.168.1.100"
dhcp 0 respdelms 500
dhcp 0 mask "255.255.255.0"
dhcp 0 gateway "192.168.1.1"
dhcp 0 DNS "192.168.1.1"
sntp 0 server "time.etherios.com"
dyndns 0 epassword "PTNzVEQdFA=="
ppp 0 timeout 300
ppp 1 name "W-WAN (HSPA 3G)"
ppp 1 phonenum "*98*1#"
ppp 1 IPaddr "0.0.0.0"
ppp 1 timeout 0
ppp 1 use_modem 1
ppp 1 aodion 1
ppp 1 autoassert 1
ppp 1 r_chap OFF
ppp 3 defpak 16
ppp 4 defpak 16
ppp 5 r_addr ON
ppp 5 IPaddr "1.2.3.4"
ppp 5 mask "255.255.255.255"
ppp 5 DNSport 53
ppp 5 IPmin "10.10.10.0"
ppp 5 IPrange 5
ppp 5 ans ON
ppp 5 timeout 60
ppp 5 ndis ON
ppp 5 metric 1
ppp 5 netip "0.0.0.0"
ppp 5 ip2count 3
ppp 5 ripauth 1
ppp 5 inrip ON
ppp 5 maxneg 80
ppp 5 l_accm "0x00000000"
```


Configuring a TransPort as a PPTP server for Windows Clients

```
ppp 5 r_accm "0xffffffff"
ppp 5 l_mru 1500
ppp 5 r_mru 1500
ppp 5 l_acfc ON
ppp 5 l_pap ON
ppp 5 l_chap ON
ppp 5 l_comp ON
ppp 5 l_pfc ON
ppp 5 r_callb 1
ppp 5 l_md5 1
ppp 5 r_md5 ON
ppp 5 r_ms1 ON
ppp 5 r_ms2 ON
ppp 5 lcn 1027
ppp 5 defpak 128
ppp 5 baklcn 1027
ppp 5 radiuscfg 1
web 0 prelogin_info ON
web 0 showgswiz ON
modemcc 0 info_asy_add 3
modemcc 0 init_str "+CGQREQ=1"
modemcc 0 init_str1 "+CGQMIN=1"
modemcc 0 apn "internet.t-d1.de"
modemcc 0 link_retries 10
modemcc 0 stat_retries 30
modemcc 0 sms_interval 1
modemcc 0 sms_access 1
modemcc 0 sms_concat 0
modemcc 0 init_str_2 "+CGQREQ=1"
modemcc 0 init_str1_2 "+CGQMIN=1"
modemcc 0 apn_2 "Your.APN.goes.here"
modemcc 0 link_retries_2 10
modemcc 0 stat_retries_2 30
modemcc 0 sms_access_2 1
modemcc 0 sms_concat_2 0
ana 0 l1on ON
ana 0 lapdon 0
ana 0 asyon 1
ana 0 logsize 45
cmd 0 unitid "ss%s>"
cmd 0 cmdnua "99"
cmd 0 hostname "digi.router"
cmd 0 asyled_mode 2
cmd 0 tremto 1200
cmd 0 rcihttp ON
user 0 access 0
user 1 name "username"
user 1 epassword "KD51SVJDVVg="
user 1 access 0
user 2 name "VPN-User0"
user 2 epassword "PDZxU0FFQFU="
user 2 access 4
user 3 access 0
user 4 access 0
```

Configuring a TransPort as a PPTP server for Windows Clients

```
user 5 access 0
user 6 access 0
user 7 access 0
user 8 access 0
user 9 access 0
local 0 transaccess 2
sslsvr 0 certfile "cert01.pem"
sslsvr 0 keyfile "privrsa.pem"
ssh 0 hostkey1 "privSSH.pem"
ssh 0 nb_listen 5
ssh 0 v1 OFF
templog 0 mo_autooff ON
cloud 0 ssl ON

Power Up Profile: 0
```

5.2 Hardware and Firmware

```
Digi TransPort WR21-UX2B-DE1-XX Ser#:237416
Software Build Ver5.2.11.4. Jun 5 2015 04:39:32 WW
ARM Bios Ver 7.42u v43 454MHz B987-M995-F80-08140,0 MAC:00042d039f68
Async Driver Revision: 1.19 Int clk
Ethernet Port Isolate Driver Revision: 1.11
Firewall Revision: 1.0
EventEdit Revision: 1.0
Timer Module Revision: 1.1
(B)USBHOST Revision: 1.0
L2TP Revision: 1.10
PPTP Revision: 1.00
TACPLUS Revision: 1.00
MODBUS Revision: 0.00
RealPort Revision: 0.00
MultiTX Revision: 1.00
LAPB Revision: 1.12
X25 Layer Revision: 1.19
MACRO Revision: 1.0
PAD Revision: 1.4
X25 Switch Revision: 1.7
V120 Revision: 1.16
TPAD Interface Revision: 1.12
GPS Revision: 1.0
TELITUPD Revision: 1.0
SCRIBATSK Revision: 1.0
BASTSK Revision: 1.0
PYTHON Revision: 1.0
CLOUDSMS Revision: 1.0
TCP (HASH mode) Revision: 1.14
TCP Utils Revision: 1.13
PPP Revision: 5.2
WEB Revision: 1.5
SMTP Revision: 1.1
FTP Client Revision: 1.5
FTP Revision: 1.4
IKE Revision: 1.0
PollANS Revision: 1.2
PPPOE Revision: 1.0
BRIDGE Revision: 1.1
MODEM CC (Ericsson 3G) Revision: 5.2
FLASH Write Revision: 1.2
Command Interpreter Revision: 1.38
SSLCLI Revision: 1.0
OSPF Revision: 1.0
BGP Revision: 1.0
QOS Revision: 1.0
PWRCTRL Revision: 1.0
RADIUS Client Revision: 1.0
SSH Server Revision: 1.0
SCP Revision: 1.0
SSH Client Revision: 1.0
CERT Revision: 1.0
```

Configuring a TransPort as a PPTP server for Windows Clients

```
LowPrio      Revision: 1.0  
Tunnel      Revision: 1.2  
OVPN        Revision: 1.2  
TEMPLOG     Revision: 1.0  
QDL         Revision: 1.0  
OK
```