

XRoads Networks

Edge Network Appliance Platform Notes

PPTP Configuration

Edge Configuration Series PPTP Client Overview

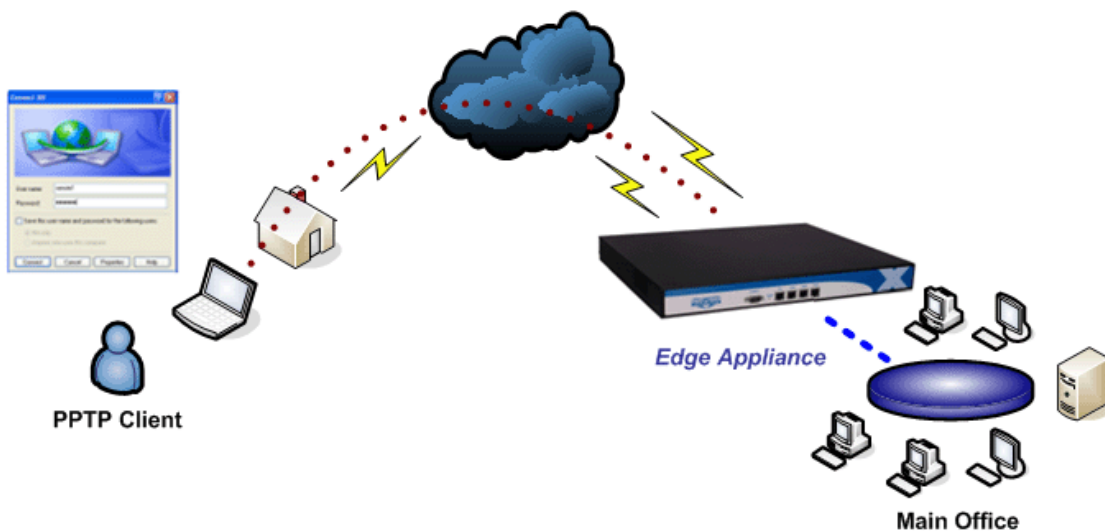
XRoads Networks has developed a full featured PPTP Client for easy remote access from Microsoft platforms. This client allows any Windows PC (NT, 2000, XP) to connect to an EdgeXOS appliance through a secure PPTP tunnel. Configuration of the PPTP is performed under the Firewall tab of the web interface.



PPTP Client Overview (Network Diagram)

The typical method for setting up a PPTP client tunnel is between an Edge appliance acting as a hub and a remote client using a Microsoft OS. The hub may have either a static or dynamic IP address; the client may also have a dynamic address as it initiates the PPTP connection.

NOTE: The PPTP client can only connect via WAN1 unless there is an outage or WAN1 is not in use, then the PPTP client can connect on the next available WAN link.



The next sections detail the setup and configuration of a PPTP client and how to setup PPTP failover.

Setting Up The PPTP Client (Example Configuration)

This section provides a step-by-step overview of how to setup the PPTP client on a Windows platform.

Setting Up The PPTP Client

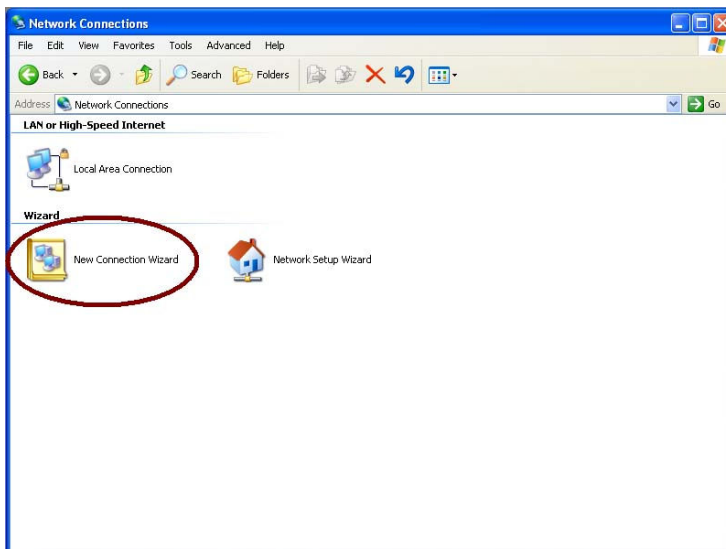
The first step is to create a VPN connection on the Windows PC. This can be done via Microsoft's built-in "New Connection Wizard".

Before getting started, here is a list of the information required:

- What will be the name of the connection?
- What is the WAN IP addresses of the Edge appliance?
- What LAN IP will be used by each PPTP client?
- What is the username / password for the PPTP connection?

Starting the Wizard

- 1) Click the Start button on the taskbar.
- 2) Click on the Control Panel menu item.
- 3) Double-click the Network Connections option, then double-click on the New Connection Wizard icon.



Step A – Network Connection Wizard

Once started the New Connection Wizard will show the following screen.



Click the "Next" button to display the following screen.



Select the "Connect to the network at my workplace" to create the new PPTP connection.

Click the "Next" button to display the following screen.



Select the "Virtual Private Network connection" to create the new PPTP connection.

Click the "Next" button to display the following screen.



Now enter the connection name that you defined for this user.

Click the "Next" button to display the following screen.

Enter the IP address of the remote Edge appliance (a URL may also be used as long as it can be properly resolved). NOTE: Ping to test URL.

Click the "Next" button to display the following screen.



The screenshot shows a Windows dialog box titled "New Connection Wizard" with a blue header bar. The main area has a light beige background. At the top left, it says "VPN Server Selection" followed by the question "What is the name or address of the VPN server?". To the right is a small icon of a computer mouse. Below this, there is a text box with the placeholder "xxx.xxx.xxx.xxx". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

Click the "Next" button to display the following screen.



The screenshot shows the "Completing the New Connection Wizard" screen of the "New Connection Wizard" dialog box. It features a dark blue background on the left with a globe icon. The main area is white and contains the following text: "You have successfully completed the steps needed to create the following connection:", followed by a section titled "Remote1" with a bullet point "Share with all users of this computer". Below that, it says "The connection will be saved in the Network Connections folder." and a checkbox "Add a shortcut to this connection to my desktop" which is currently unchecked. At the bottom, it says "To create the connection and close this wizard, click Finish." and there are three buttons: "< Back", "Finish", and "Cancel".

That completes the first stage of the configuration.

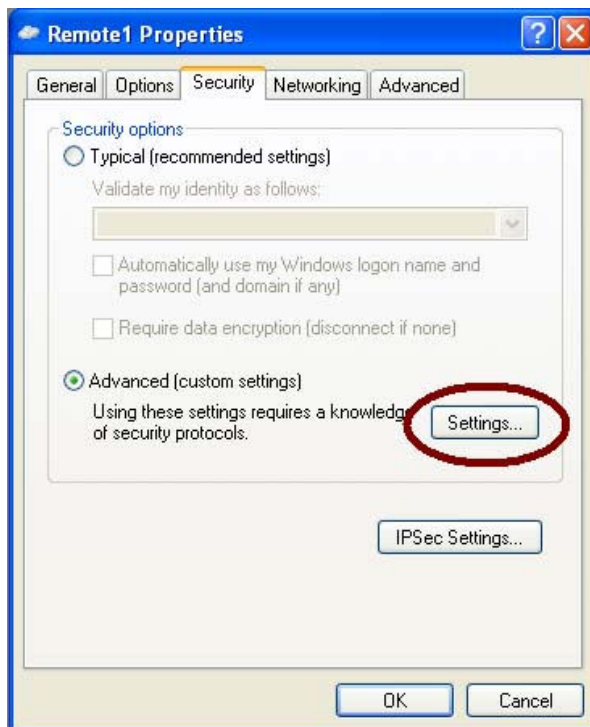
Click the "Finish" button to return to the Control Panel->Network Connections screen.

Step B – PPTP Properties

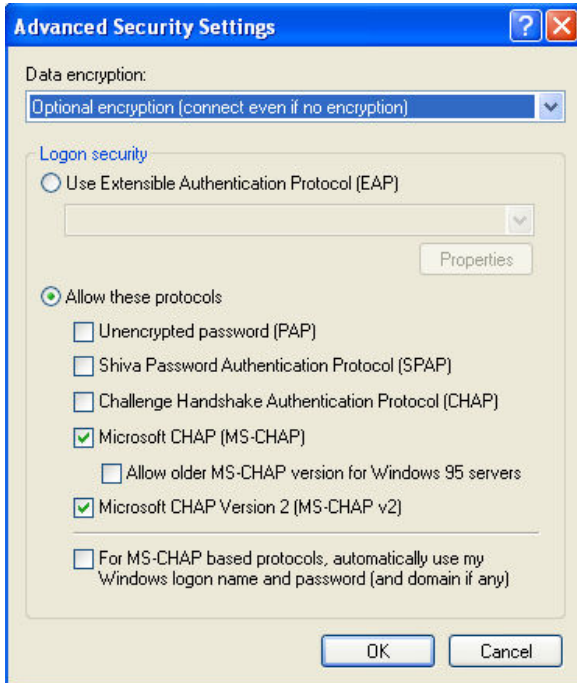
Now that the PPTP tunnel has been created, several minor modifications need to be made to get everything to work correctly with the Edge appliance.



Step 1) Click the Properties button and click the "Advanced (custom settings) radio button, then click the "Settings" button as seen below.



Step 2) Select "Optional encryption" from the dropdown menu, then click the "Allow these protocols radio button and make sure that ONLY the "Microsoft CHAP Version 2" is selected to ensure the highest authentication possible.



Step 3) Now click OK to return back to the login screen.



Configuring the Edge Appliance (Example Configuration)

Now that the client has been configured, it is time to create the PPTP tunnel on the EdgeXOS appliance. The following steps outline that process.

PPTP Setup

Access the web GUI interface for the Edge appliance and select the Firewall tab. Then select the 'PPTP Client Termination' selection from the drop-down menu.

The screenshot shows the 'Edge Security' configuration page. The 'PPTP Client Termination' dropdown menu is selected. Below it, the 'PPTP Address Range' is set to '192.168.160.' followed by two empty input boxes for the start and end addresses. An 'Update' button is located below the address range. A note states: 'NOTE: PPTP connections can only be made to the primary active connection.' At the bottom, there is a 'Reset Server' button and a link that says 'Manage User via Shaping->User/Device Management'.

Next, enter the range of addresses that the PPTP server will use from the LAN network and 'Update' your settings.

The 'Reset Server' button is useful if you need to reset the PPTP server and any current PPTP sessions attached to the EdgeXOS appliance.

Tunnel Creation

Access the web GUI interface for the Edge appliance and select the Shaping tab. Then select the 'User/Device Management' selection from the drop-down menu. Then click the "Add User/Device" button and use the steps below to create a new client tunnel.

The screenshot shows the 'User/Device Management' configuration page. The 'Edge Routing' dropdown is set to 'User/Device Management'. The 'Contact Information' section includes a text input for the name 'Jsmith' with a note: '(Name for this user/device, i.e. webserver or jsmith)'. Below this is a note: 'NOTE: This name is used to identify the user/device within the network reporting.' There are three more text inputs for internal identification number, description, and department/type. The 'Authentication' section has two password input fields with labels: '(Enter authentication password for this user)' and '(Confirm authentication password for this user)'. The 'System Identification' section has an IP address input field with a note: 'NOTE: The IP address is used to identify the user/device within the network reporting.' Below that is a MAC address input field with a note: '(Enter the MAC address for DHCP binding - Example: 00:09:FB:03:CF:02)'. There is a checkbox for 'Provide DHCP address allocation for this user.' The 'Bandwidth Enforcement' section has a dropdown menu set to '--- No Shaping ---' with a note: '(Policy-Based Shaping group assigned to this user/device)'. The 'Remote PPTP Access' section, highlighted with a red border, contains three input fields: a text input for the login name 'Jsmith' with a note: '(Enter the PPTP login name to allow remote access for this user, optional)', a password input field with a note: '(Enter the PPTP password for this user)', and a re-enter password input field with a note: '(Re-enter the PPTP password)'.

Step 1) Enter the user name (should contain no spaces or non-numeric characters).

Step 2) Enter the connection name that was assigned during the client setup.

Step 3) Enter and re-enter the users password.

Step 4) Click the "Add / Update" button to create the PPTP login information.

WARNING: Make sure to create a firewall rule to allow the PPTP addresses to access the LAN network. The default is to block this access.

Firewall Settings

When creating PPTP clients, it is critical that you create two firewall rules to allow PPTP connections to work. The first rule allows PPTP connections to the EdgeXOS appliance. The second rule allows PPTP connections to communicate with the LAN network.

By default, PPTP clients can only communicate with the Edge appliance and each other. By creating the firewall rule, as defined below, PPTP clients can access the rest of the LAN.

NOTE: This is a security feature designed to prevent unauthorized access to the LAN network from PPTP clients.

This example shows a LAN network, 192.168.160.0 with a subnet mask of 255.255.255.0 setup to provide PPTP client connectivity.

The rule allows the PPTP LAN addresses to communicate with the rest of the LAN network. If you are having any problems, make sure that the rule is configured similar to that which is defined below:

L7 Firewall Rules

WebFarm <- Select A Firewall Group OR Create A New One -> PPTP

PPTP

. . . (Source Address OR Select LAN - ANY)

LAN (Source Network / Mask)

OR

--- Select Source --- (Select a pre-defined source)

. . . (Destination Address OR Select LAN - ANY)

LAN (Destination Network / Default All LAN Addresses)

OR

--- Select Destination --- (Select a pre-defined destination)

ANY----->ANY (Specify A Service)

OR

New Service (Define A New Service)

ACCEPT

These rules allows the PPTP client to connect to the EdgeXOS appliance and the PPTP LAN addresses to communicate with the rest of the LAN network. If you are having any problems, make sure that the rule is configured similar to that which is defined below:

Select	Group	Inbound	Src Net	Dst Net	Service	Action	Log	Comments
<input type="radio"/>	PPTP	LAN	LAN	LAN	ANY ANY	ACCEPT	Off	
<input type="radio"/>	PPTP	PPTP	ANY	ANY	ANY ANY	ACCEPT	Off	