How to Configure a PPTP WAN Connection with an External DSL Modem

https://campus.barracuda.com/doc/73719021/

The firewall can dial in using PPTP with an external DSL modem. The xDSL connection can be configured to be in Active or Standby Mode. In Standby Mode, the activation and subsequent monitoring of the link must be triggered externally.

Before You Begin

- Connect the external xDSL modem supplied by your ISP to a port on the Barracuda CloudGen Firewall.
- Verify that you have all the necessary configuration information provided to you by your ISP.

Step 1. Create an xDSL Connection

Enable xDSL and create a new xDSL connection.

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. In the left menu, select **xDSL/DHCP/ISDN**.
3. In the **Configuration Mode** menu, select **Switch to Advanced**.
4. Click **Lock**.
5. **Enable xDSL**.
6. In the **xDSL Links** table, click **+** to add an entry.
7. Enter a name for the link (no special characters) and click **OK**. The **xDSL Links** window opens.
8. Enable **Synchronous PPP** if supported by your ISP and applicable to your network environment.
9. Select **PPTP** as the **Connection Type**.
10. Enter the **Static Local** and **Gateway IP** address if your ISP does not assign it automatically.

Step 2. Configure Connection Details

Enter the PPTP configuration settings you received from your ISP.

1. Enter the **Modem IP** address or the IP address of the PPTP server in the **PPTP Connection Details** section.
2. Select the applicable option from the **Local IP Selection** list:
   - **Static** – The local address is used. Select, if your provider expects you to use a static IP

address.
    - Enter the **Local IP** address that is used to establish a connection with the specified modem IP address. You must use a local IP address that is already configured. This address is used for local GRE protocol registration with the local firewall.
  - **DHCP** – Your provider first assigns a local net via DHCP through which the DSL modem is then reached. The path to the modem is selected according to current routing.
  - **Dynamic** – The device selects the address that is provided by routing to reach the PPTP server. This address is then reported to the firewall engine for GRE registration.
    - In the **Required DHCP Link** field, enter the name of the DHCP section that this xDSL link relies upon for providing a routing path to the specified modem IP address.
3. Add the IP address of the gateway in the **Gateway to Modem IP** field if the xDSL modem or PPTP server is not directly attached to the gateway. A gateway route will automatically be created for PPTP. This setting and the **Required DHCP Link** setting are mutually exclusive.

Step 3. Configure Authentication

1. In the **Authentication** section, select the **Authentication Method** for the connection.
2. In the **User Access ID** field, enter the principal account name (PPP username) assigned by your provider.
3. Enter the **User Access Sub-ID** if provided. The # and @ symbols are generated automatically. The complete user ID is formatted as follows:
   `[user_id]#[access_sub_id]@[provider_name]`, E.g.,
   `000xxxxxxxx520069204717#0001@t-online.de`
4. Enter the PPP **Access Password** assigned by your ISP.
5. If you want to use your ISPs DNS server, select **Use ProviderDNS**.
6. If you are using dynamic DNS, select **Use Dynamic DNS**.
    1. Click **Set**. The **Dynamic DNS Params** window opens.
    2. Select a dynamic DNS **Service Type**. For information about available DynDNS service types, see http://www.dyndns.com/services/.
    3. Enter the **Dyn DNS Name** that was registered at dyndns.org.
    4. Enter the **User Access ID** and **Password** for accessing the server as defined during registration at dyndns.org.
7. Click **OK**.

Step 4. Configure Routing Settings

Configure the routes and routing tables for the xDSL link. For PPP multilink bundles, the routing settings of the primary link are adopted for the bundled link.

1. In the **Routing** section, enable **Create Default Route**. This automatically introduces a default

route for the xDSL link.
2. If you are using dynamic routing protocols, enable **Advertise Route**. For more information, see OSPF/RIP/BGP.
3. Enter the **Route Metric**. If multiple routes to the same destination are available, the CloudGen Firewall selects the route with the lowest route metric. If this route becomes unavailable, the route with the second lowest route metric is automatically selected. Default: `50`

Step 5. Configure Connection Monitoring

Configure log settings and define target IP addresses that will be regularly pinged to monitor the availability of the connection. Each target IP address is pinged every 20 seconds (2 ICMP packets each). If there is no response, the link is re-established.

1. In the **Connection Monitoring** section, select the **Monitoring** method:
   - **LCP** – If pings are not answered, the CloudGen Firewall uses LCP to probe the dial-in daemon directly.
   - **ICMP** – The Reachable IPs are periodically pinged - if there is no response, the gateways are probed.
   - **StrictLCP** – No ICMP probing occurs.
2. Add at least one target IP address to the **Reachable IPs** table. The target IP addresses must be accessible only via the xDSL connection.
3. Select the **Unreachable Action** to be taken if the connection cannot be established. The following options are available:
   - **Restart** – Restarts the xDSL connection.
   - **Increase-Metric** – Increases the metric for the xDSL connection, so that a backup connection (which now has the lowest metric) is chosen until the healthcheck targets are reachable again.
4. Click **OK**.
5. Click **Send Changes** and **Activate**.

Step 6. Activate Network Changes

You must activate the network changes to bring up the xDSL connection.

1. Go to **CONTROL > Box**.
2. In the left menu, expand the **Network** section and click **Activate new network configuration**.
3. Select **Failsafe**.

Your xDSL connection is now active and the IP address assigned by your ISP is visible on the **CONTROL > Network** page. All status icons next to the ppp1 interface are green, indicating an

active connection. If the xDSL connection is your primary Internet connection, the default route pointing to the ppp1 interface is also created. If more than one default route is present, the connection with the lowest route metric is used.

Operating an xDSL Link in Standby Mode

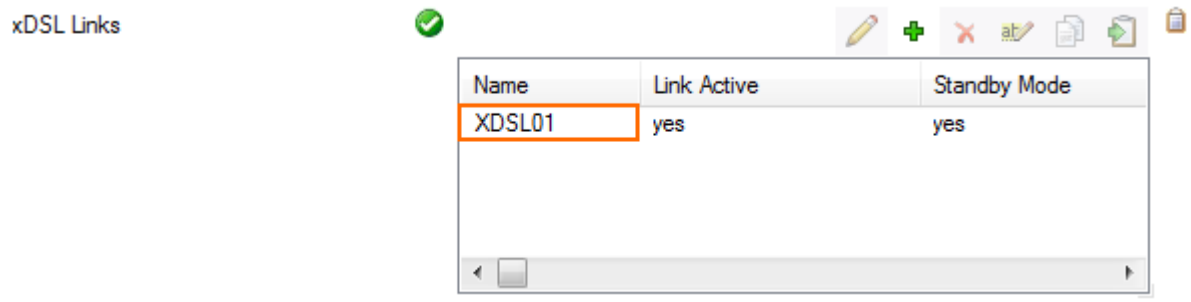
If required, e.g., for maintenance purposes, you can enable **Standby Mode** in the link configuration. In Standby Mode, the activation and subsequent monitoring of the link must be triggered externally. Standby Mode also lets you combine HA setups for HA xDSL connections. In Standby Mode:

1. The involved routes are set to pending state, and it is not checked whether they are established.
2. The configuration is completely run through, but the connection is not yet established.

Connecting is handled from the Command-Line Interface via a server-side script that is used for starting and stopping the connection with corresponding command lines:

- Start all xDSL connections – `/etc/phion/bin/openxdsl start &`
- Stop all xDSL connections – `/etc/phion/bin/openxdsl stop &`
- Start an explicit xDSL connection – `/etc/phion/bin/openxdsl start  &`
- Stop an explicit xDSL connections – `/etc/phion/bin/openxdsl stop  &`

is the name of the configuration entry in the **xDSL Links** list:



Figures

1. xDSL_01.png

© Barracuda Networks Inc., 2024 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.