

Service Managed Gateway™

Configuring an IDSL Connection



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1 Introduction

1.1 What is IDSL?

ISDN Digital Subscriber Line (IDSL) is a dedicated service that provides DSL technology over existing Integrated Services Digital Network (ISDN) lines. It allows digital data to be transmitted at rates up to 144 Kbps on a regular copper telephone line (twisted pair) from a user to a destination using digital (rather than analog or voice) transmission, bypassing the telephone company's central office equipment that handles analog signals.

2 Configuring an IDSL connection over PPP

2.1 What is PPP?

The Point-to-Point Protocol (PPP) is defined industry standard used widely to allow two devices to communicate across a logical link. PPP is extensively deployed by service providers as a means of connecting customers to Internet Protocol (IP)-based services, such as the Internet.

2.2 Using the Fast Start wizard to configure an IDSL connection

When your Gateway is correctly connected to your PC, type fast.start into the URL line of your browser to display the Start page.

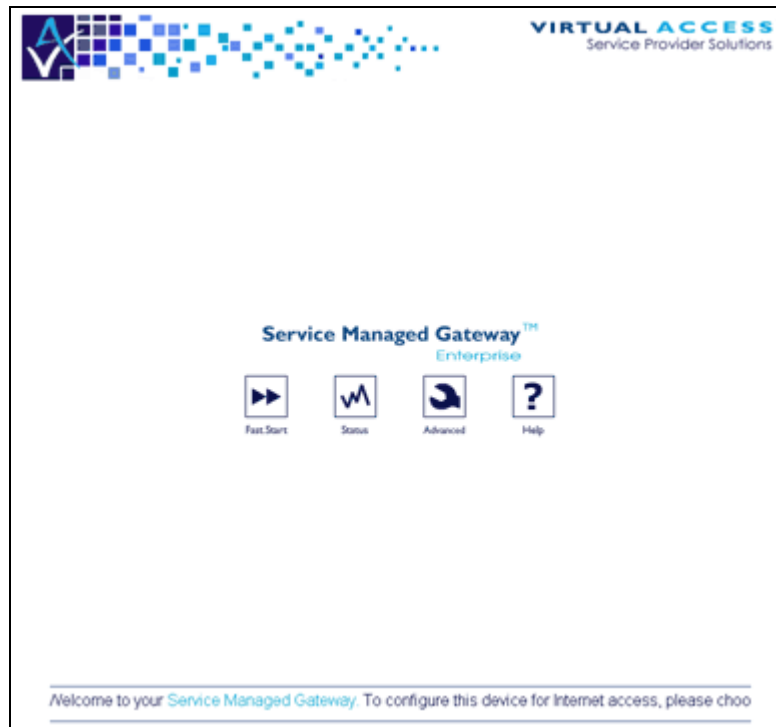


Figure 1: The SMG start page

Access the Fast Start wizard by clicking **Fast Start** on the start page of the embedded web.

The Fast Start Wizard will guide you through a series of forms that you must complete to configure your Service Managed Gateway (SMG).



Figure 2: The welcome page

From the Service type drop-down list, select **Routed IDSL Connection**. Then click **Connection Wizard**.

2.3 Generating an IDSL connection over PPP

Ensure that the Connections page displays the button **Add an IDSL PPP connection**. If it does not, click **PPP Configuration** highlighted in blue on the screen.

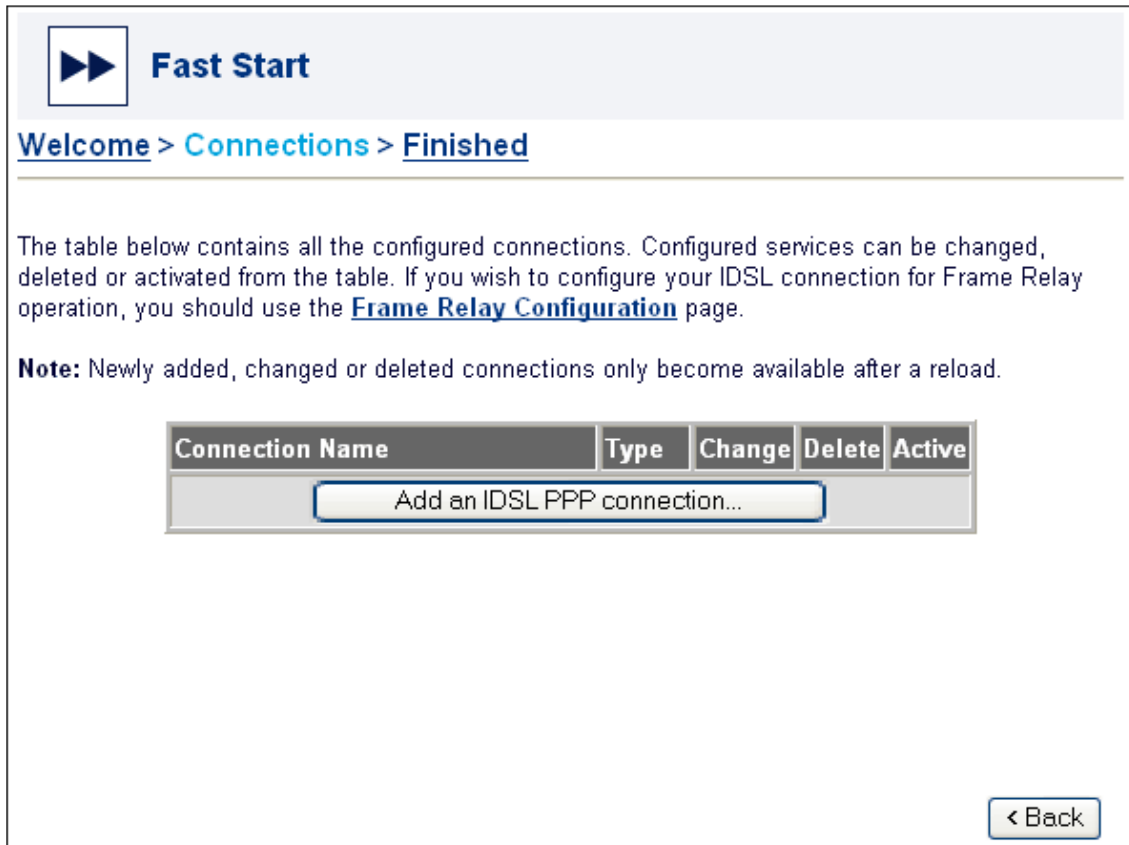


Figure 3: The connections page

You can now generate the connection by clicking **Add an IDSL PPP connection**. The message 'Creating new PPP IDSL connection' appears momentarily, followed by the Access the Internet using IDSL page.

2.4 PPP network configuration

On the Connections page, when you click Add an IDSL PPP connection, or Change if you are modifying an existing connection, you open a page where you can enter details about Internet access.

Access the Internet using IDSL

Please enter the details for your IDSL PPP connection below. Your service provider can supply you with this information. Not all providers require a username and password for IDSL service. In this case, you can simply leave the fields empty.

Connection name

Connection username

Connection password

Re-enter connection password

IDSL line speed

Use **Advanced Network Options** if you need to configure any options not listed above.

Figure 4: The access the internet using IDSL page

Field	Description
Connection name	Specify a descriptive name in this field. This name is used to identify the connection for maintenance functions such as connecting, disconnecting, and viewing connection statistics.
Connection username/password	In most cases, your service provider requires that you enter a login name and password to access Internet services. Enter your login name in the Connection username field. Enter your password in the Connection password field. For security, an asterisk (*) appears each time you type a character. To verify that you typed the password correctly, retype it in the Re-enter connection password field.
IDSL line speed	You can choose the speed of your IDSL connection from the drop-down menu in this field. The available speeds are 64Kbps, 128Kbps, and 144Kbps. Alternatively, you can choose Auto. If you do this, the SMG will attempt to auto-detect the speed of the line, which is set by the Digital Subscriber Line Access Multiplexer (DSLAM). Note: the Auto option may not work with all DSLAMs.

Figure 5: The access the internet using IDSL fields and their descriptions

Click **OK** to see the new or modified configuration listed on the Connections page.

Before you configure the connection, you may want to set additional parameters that are not listed above. To do this, click **Advanced Network Options**. This opens the Advanced IDSL Network Options pop-up window.

2.5 Advanced PPP network configuration

Figure 6: The advanced IDSL network options pop-up window

Field	Description
IP address obtained automatically	You can set the IP address to be obtained automatically by choosing 'yes' from the drop-down menu in this field. However, if your IDSL connection has a permanent IP address assigned to it, you may want to enter the details manually. To do so, set this field to no , then click Details to open the IP Addressing pop-up window.

Figure 7: The IP addressing pop-up window

In the Local PPP IP address and PPP IP address mask fields respectively, enter the IP address and subnetwork mask assigned to your connection by your ISP.

In the example above, the IP address assigned to the SMG is 255.255.255.0

Click **OK** to close the IP Addressing pop-up window.

Field	Description
DNS address obtained automatically	The Domain Name System (DNS) is used to associate host names with IP addresses. The DNS server is responsible for tracking these associations. Usually, the DNS address is obtained automatically. However, if it is not, select no from the DNS address obtained automatically drop-down list. Then click Details to display the DNS Addressing pop-up window.

Figure 8: The DNS addressing pop-up window

In the DNS Addressing pop-up window, enter the IP address of the primary DNS server in the Primary DNS IP Address field. If applicable, enter the IP address of the secondary DNS server in the Secondary DNS IP Address field.

Click **OK** to close the DNS Addressing pop-up window.

Field	Description
IP address translation enabled	IP address translation can be used to 'hide' the devices on the local LAN by substituting the IP address of the originating device with the IP address of the Gateway. If you want to disable IP address translation for the leased line connection, select no from the IP address translation enabled drop-down list in the Advanced IDSL Network Options pop-up window.

Click **OK** to close the Advanced IDSL Network Options pop-up window.

Click **OK** to close the Access the Internet using IDSL page.

2.6 Saving your PPP configuration

When you have configured a PPP over IDSL connection, it is listed in the table on the Connections page as shown.

▶▶

Fast Start

[Welcome](#) > [Connections](#) > [Finished](#)

The table below contains all the configured connections. Configured services can be changed, deleted or activated from the table. If you wish to configure your IDSL connection for Frame Relay operation, you should use the [Frame Relay Configuration](#) page.

Note: Newly added, changed or deleted connections only become available after a reload.

Connection Name	Type	Change	Delete	Active
My ISP	IDSL	Change	Delete	⦿
<div style="border: 1px solid #ccc; padding: 5px; display: inline-block; margin: 0 auto;">Add an IDSL PPP connection...</div>				

< Back
Next >

Figure 9: The connections page

Your SMG needs to reload before newly-configured connections become available. To enable the new configuration, click **Next** to open the Finished page, where you can save your configuration.

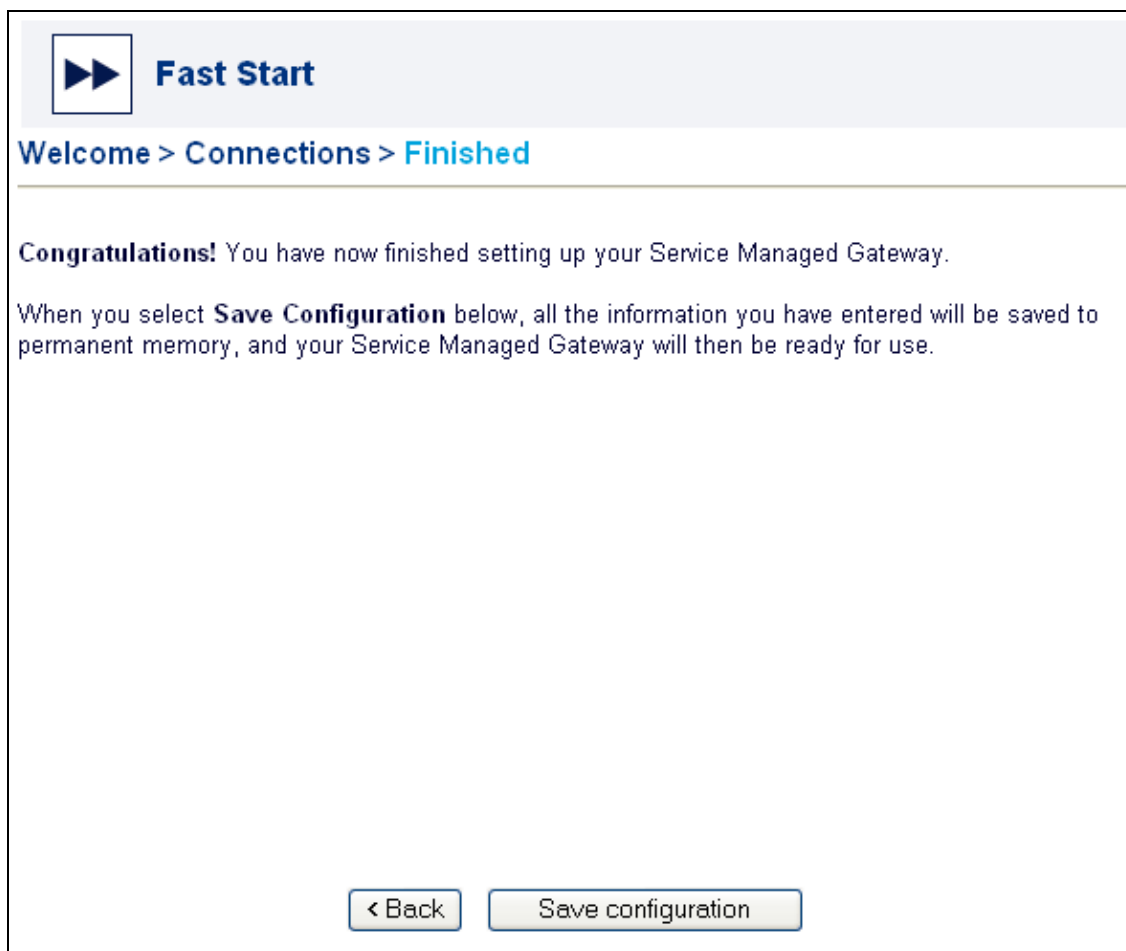


Figure 10: The first finished page, where you save your configuration

Click **Save Configuration** to retain the new configuration in your SMG's permanent memory. The SMG will automatically reload so the new connection can be implemented.

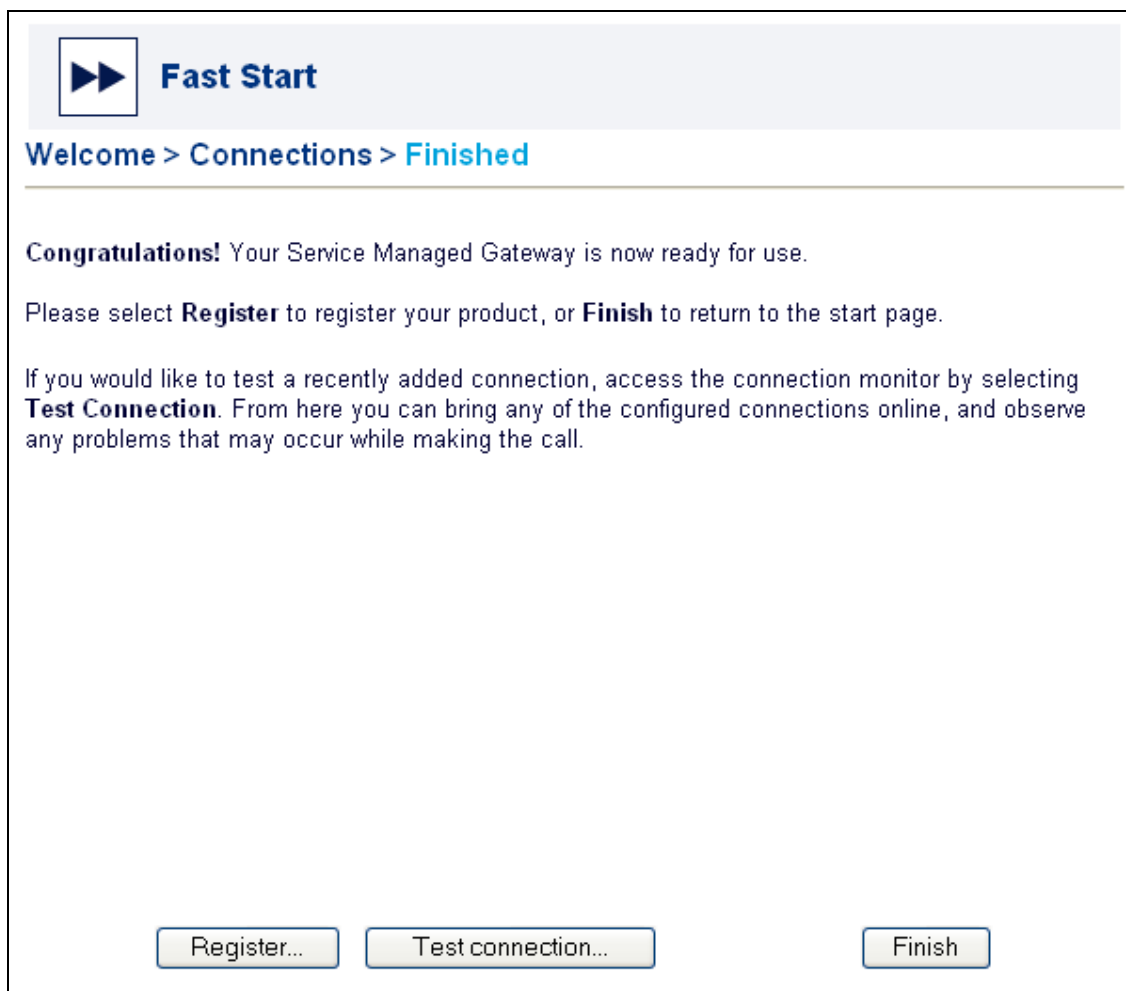


Figure 11: The second finished page, where you register your product and test your connection

You can optionally register your product by clicking **Register**. This presents a form that you can fill in, print and send off to complete your registration.

Before you click **Finish**, you can test your connection to ensure that you have configured it correctly. Click **Test Connection** on the Finished page to access the Connection Monitor.

The screenshot shows the 'Connection Monitor' window. At the top, there are two dropdown menus: '---Connect to---' and '---Disconnect from---'. Below these is a grid of checkboxes for different protocols and parameters. The protocols listed are IPCP, CHAP/PAP, LCP, PPPoE, ATM VC, ISDN, and ADSL. The parameters for IPCP, CHAP/PAP, and LCP are P1 through P8. For ISDN, the parameters are D, B1, and B2. A legend box in the bottom right corner explains the checkbox states: a green checkmark in a box indicates 'Active', a white box indicates 'Inactive', a red 'X' in a box indicates 'Error', and a grey box indicates 'Unconfigured'. At the bottom right of the window is a button labeled 'Ping remote site...'. The current state of the checkboxes is as follows:

Protocol	P1	P2	P3	P4	P5	P6	P7	P8
IPCP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHAP/PAP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LCP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PPPoE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATM VC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ISDN	D: <input checked="" type="checkbox"/>	B1: <input checked="" type="checkbox"/>	B2: <input checked="" type="checkbox"/>					
ADSL	<input type="checkbox"/>							

Figure 12: The Connection Monitor

For more information about the Connection Monitor for your connection type, consult the Advanced menu for your connection in 'Operating Your Service Managed Gateway'.

When you click **Finish**, you return to the Gateway start page. From the start page you can access the Advanced and Status menus to further configure, view and monitor your SMG.

2.7 Modifying an existing IDSL connection over PPP

To modify the configuration of an existing IDSL connection over PPP, on the start page, click **Fast Start**. The Welcome page appears.

Select **Routed IDSL Connection** from the drop-down menu in the Service type field.



Figure 13: The welcome page

Click **Connection Wizard** to open the Connections page. This page lists PPP connections that have already been configured on your SMG.

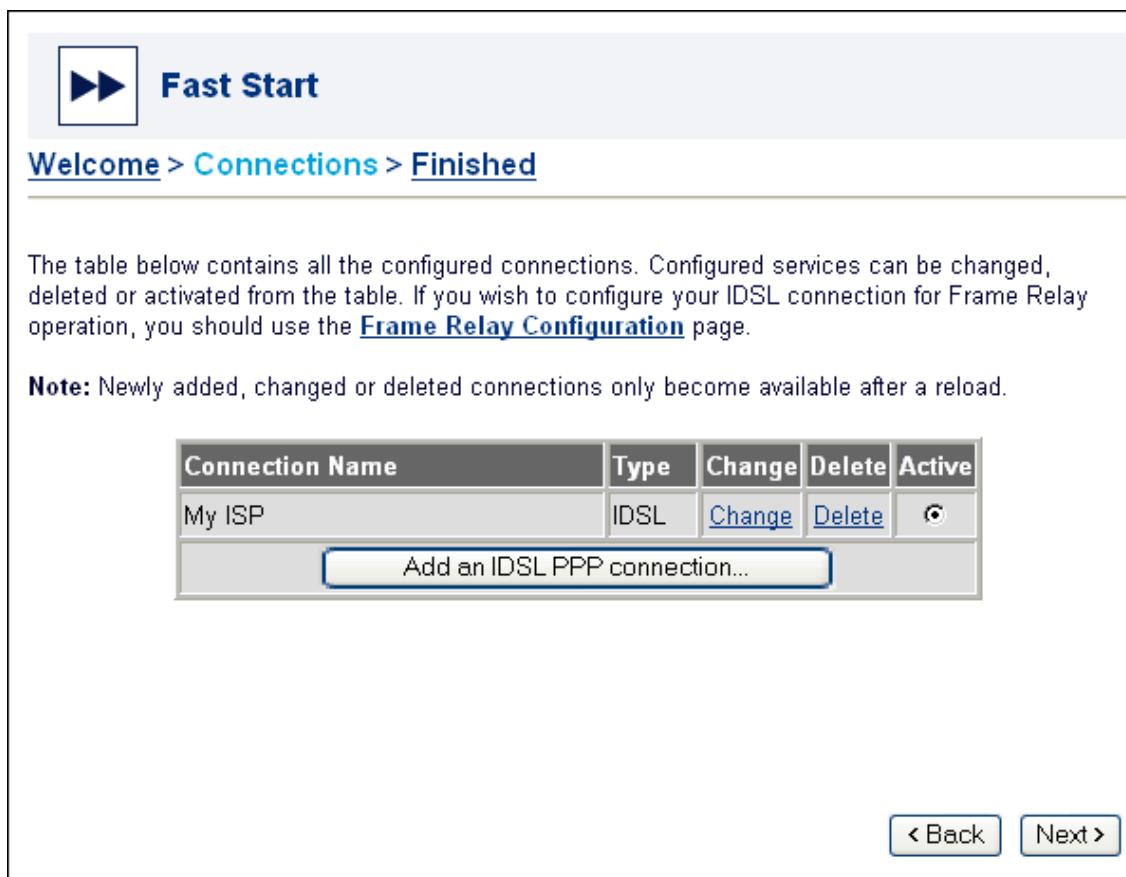


Figure 14: The connections page

Identify the name of the connection that you want to alter. Then click **Change** in the same row.

This presents the current configuration for the connection, which you can change by following the steps outlined in the sections 'PPP Network Configuration', 'Advanced PPP Network Configuration' and 'Saving your PPP Configuration'.

2.8 Removing an IDSL connection over PPP

To delete an existing IDSL connection over PPP, on the start page, click **Fast Start**. The Welcome page appears.

Select **Routed IDSL Connection** from the drop-down menu in the Service type field.

Click **Connection Wizard** to open the Connections page. This page lists PPP connections that have already been configured on the gateway.

Fast Start

[Welcome](#) > [Connections](#) > [Finished](#)

The table below contains all the configured connections. Configured services can be changed, deleted or activated from the table. If you wish to configure your IDSL connection for Frame Relay operation, you should use the [Frame Relay Configuration](#) page.

Note: Newly added, changed or deleted connections only become available after a reload.

Connection Name	Type	Change	Delete	Active
My ISP	IDSL	Change	Delete	<input type="radio"/>

[Add an IDSL PPP connection...](#)

[< Back](#) [Next >](#)

Figure 15: The connections page

Identify the name of the connection that you want to delete. Click **Delete** in the same row, and, when prompted, confirm your intention to remove the connection.

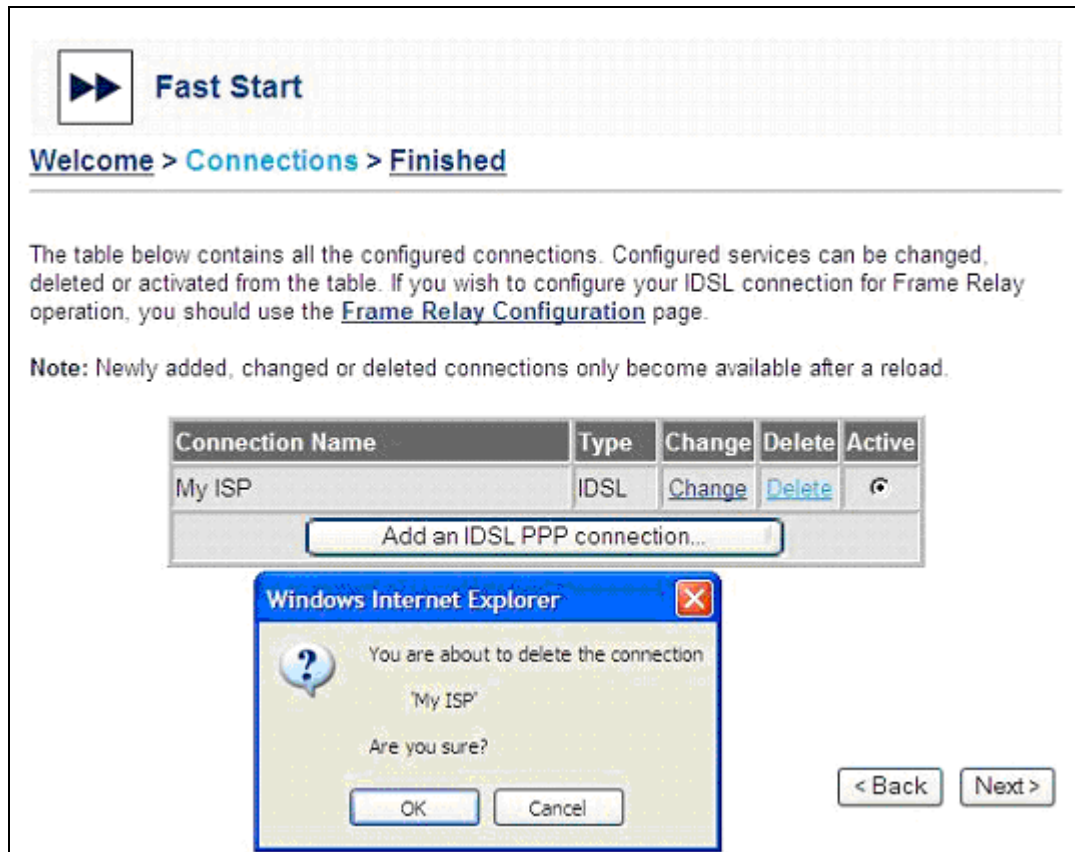


Figure 16: The delete warning pop-up window

3 Configuring an IDSL connection over frame relay

3.1 What is frame relay transmission?

Frame relay is a telecommunications access interface. Each node, or end-point, connects to a frame relay network, avoiding the need for leased-line connections between individual devices. For this reason, Wide Area Networks (WANs) and Local Area Networks (LANs) often use frame relay transmission for sending data.

3.2 Using the fast start wizard

When your gateway is correctly connected to your PC, type fast.start into the URL line of your browser to display the Start page.

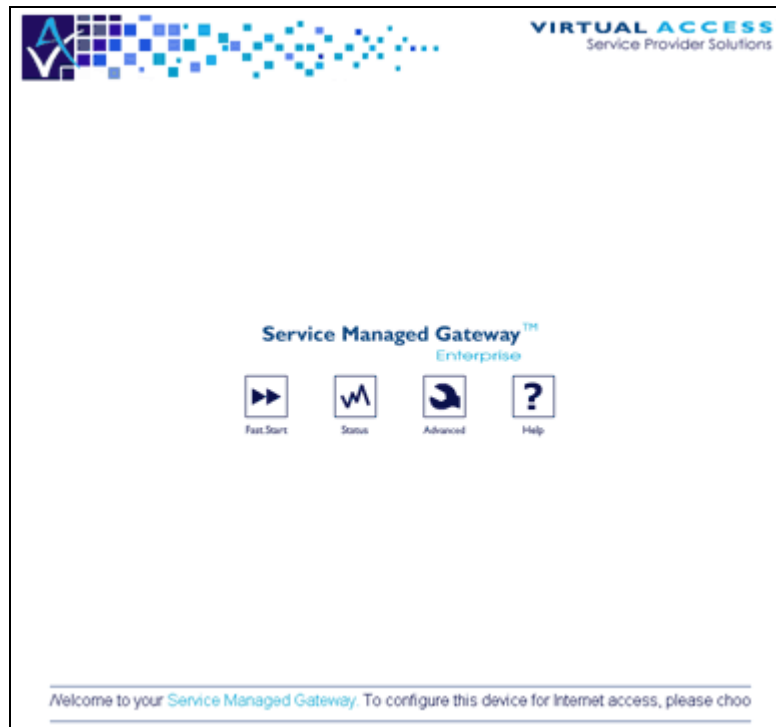


Figure 17: The SMG start page

To access the Fast Start Wizard, click **Fast.Start** on the start page of the embedded web.

The Fast Start wizard will guide you through a series of forms that you must complete to configure your Gateway.

From the Service type drop-down list, select **Routed IDSL Connection**. A dialog box appears.

Click **Connection Wizard**.

3.3 Generating a frame relay connection

Ensure that the Connections page displays the button **Add an IDSL Frame Relay PVC** as shown below. If it does not, click **Frame Relay Configuration**, highlighted in blue on screen.

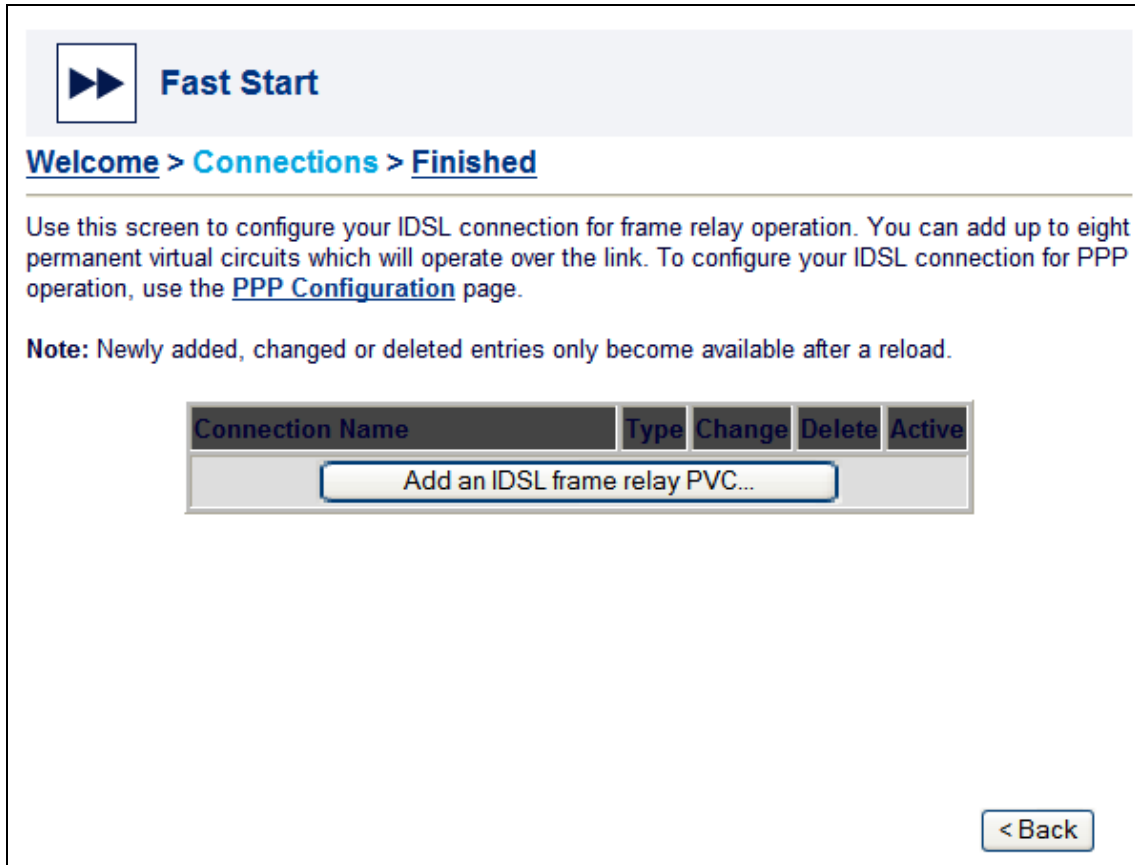


Figure 18: The connections page showing the frame relay button

To generate the connection, click **Add an IDSL frame relay PVC**. The message 'Creating new IDSL Frame Relay connection' appears momentarily, followed by the Fast Start page entitled Access a remote network using frame relay over IDSL.

3.4 Frame relay network configuration

On the welcome page, when you click Add an IDSL Frame Relay PVC, or Change if you are modifying an existing connection, you open a page where you can enter details concerning remote network connection over IDSL.

Access a remote network using frame relay over IDSL

Please enter the details for this permanent virtual circuit over your IDSL frame relay connection. Your service provider can supply you with this information.

Connection name (e.g. My ISP)

Data Link Connection Identifier

Assign an IP address to this link?

IDSL line speed

Use **Advanced** if you need to configure any options not listed above.

Figure 19: The access a remote network using frame relay over IDSL page

Field	Description
Connection name	Specify a descriptive name for your connection in this field. This name is used to identify the connection for maintenance functions such as connecting, disconnecting, and viewing connection statistics.
Data Link Connection Identifier	Enter the Data Link Connection Identifier (DLCI) number assigned to the virtual circuit in this field. Your service provider should give you this information.
Assign an IP address to this link?	In some applications it may be necessary to assign a local and remote IP address to the connection. If you require IP addressing, set Assign an IP address to this link to yes then click Details to display the Frame Relay IP Addressing pop-up window shown in figure 18.

Figure 20: The frame relay addressing pop-up window

Field	Description
Local IP address	Enter the IP address assigned to the gateway's end of the connection in this field.
Remote IP address	Enter the IP address assigned to the remote end of the connection in this field.
IP address mask	Enter the IP subnetwork mask in this field.
IP address translation enabled	IP address translation can be used to 'hide' the devices on the local LAN by substituting the IP address of the originating device with the IP address of the router. To enable IP address translation, select yes from the drop-down menu associated with this field. Set IP address translation enabled to no if you want to disable the IP address translation for the connection.

Click **OK** to accept the changes, close the Frame Relay IP Addressing pop-up window, and return to the Access a remote network using frame relay over IDSL page.

Field	Description
IDSL speed	You can determine the speed of your IDSL frame relay connection using this field. Choose 64Kbps, 128Kbps, or 144Kbps as appropriate. Alternatively, you can set this field to Auto . If you do this, the SMG will attempt to auto-detect the speed of the line set by the DSLAM. Note: the Auto function may not work with all DSLAMs.

Click **OK** to see the new or modified configuration listed on the Connections page.

If you need to configure additional network parameters, refer to section 3.6 'Advanced frame relay network configuration'.

3.5 Advanced frame relay network configuration

If you need to configure a remote DNS server or if your provider uses Copper Mountain Protocol to manage connections, in the Access a remote network using frame relay over IDSL window, click **Advanced Options**.

Advanced Options

Please refer to the User Guide for details of these parameters.

If any client PCs are using your Service Managed Gateway as their DNS server (which is the default) you need to configure the address of a remote DNS server that can respond to requests.

If your clients contact a DNS server directly, or you already have a PPP connection configured for DNS operation, you can leave this address set to 0.0.0.0.

IP address of remote DNS server . . .

For Frame Relay services, if your provider uses Copper Mountain Control Protocol for connection management, select CopperCompatible CMCP mode below.

CopperCompatible CMCP mode

Figure 21: The advanced options page

Enter the details of the remote DNS server in the fields provided.

If necessary, check the checkbox beside CopperCompatible CMCP mode.

Click **OK** to close the Advanced Options window.

Click **OK** to see the new configuration listed on the Connections page.

3.6 Saving your frame relay configuration

When you click **OK** on the Access a remote network using frame relay over IDSL page, you see the new or altered connection listed on the Connections page.

▶▶

Fast Start

[Welcome](#) > [Connections](#) > [Finished](#)

The table below contains all the frame relay permanent virtual circuits currently available to activate for your IDSL connection. Configured connections can be changed, deleted or activated from the table. To configure your IDSL connection for PPP operation, use the [PPP Configuration](#) page.

Note: Newly added, changed or deleted entries only become available after a reload.

Connection Name	Type	Change	Delete	Active
My Connection	IDSL	Change	Delete	⊙

Add an IDSL frame relay PVC...

< Back
Next >

Figure 22: The connections page showing the new connection

Note: your SMG needs to reload before newly-configured connections become available.

Click **Next** to open the Finished page, where you can save your configuration and reload your SMG.

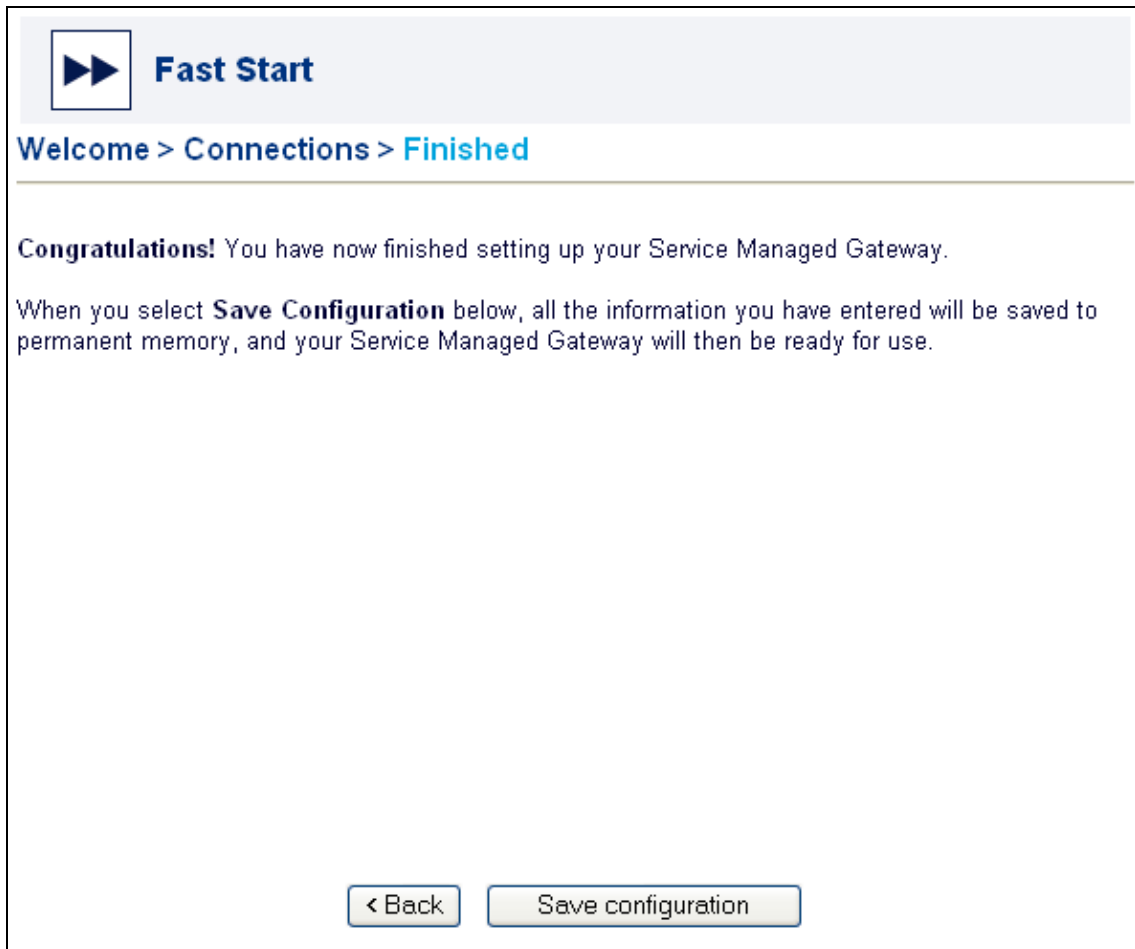


Figure 23: The first finished page, where you save your configuration

Click **Save Configuration** to retain the new configuration in your SMG's permanent memory. The SMG will automatically reload so the new connection can be implemented.

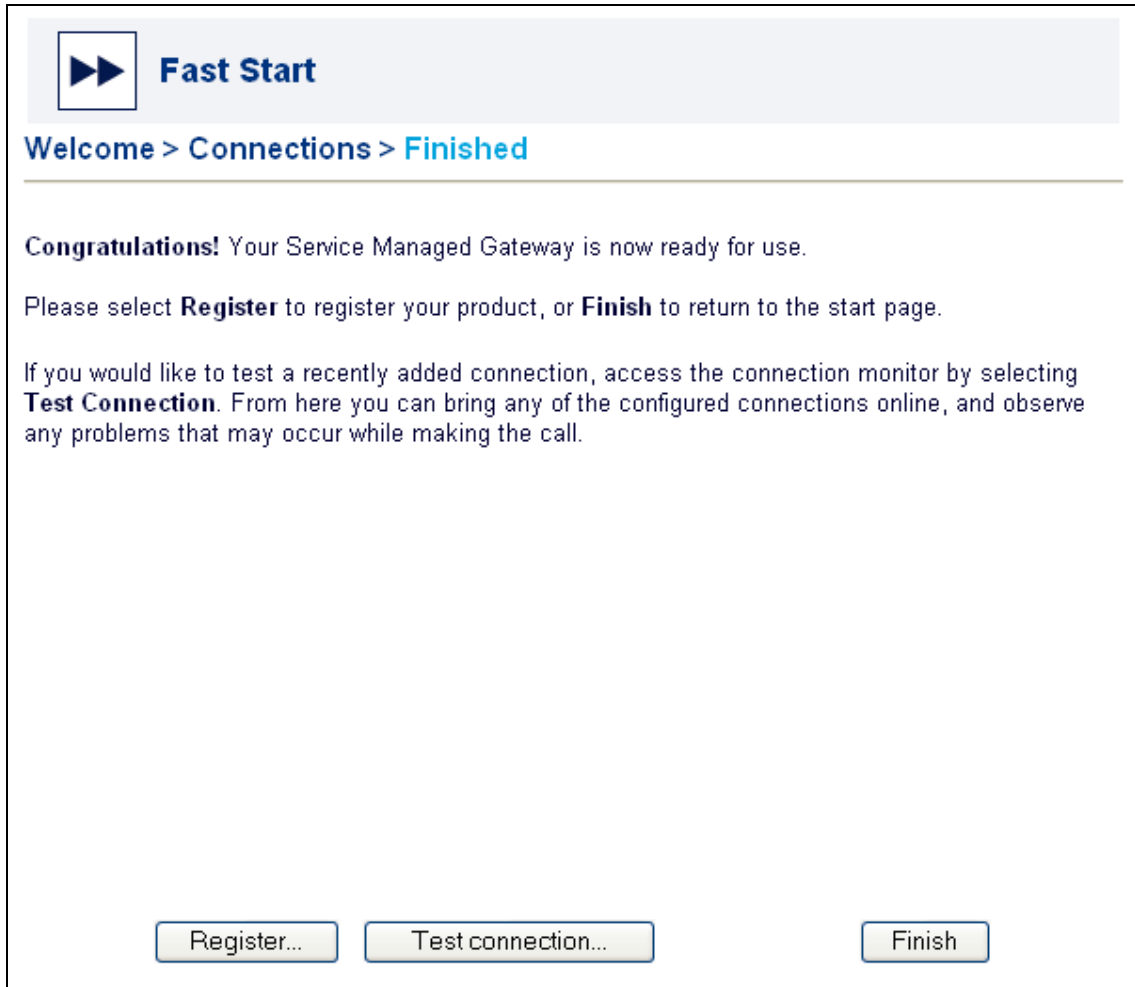


Figure 24: The second finished page, where you register your product and test your connection

You can optionally register your product by clicking **Register**. This presents a form that you can fill in, print and send off to complete your registration.

Before you click Finish, you can test your connection to ensure that you have configured it correctly. Click **Test Connection** on the Finished page to access the Connection Monitor.

Note: Connection Monitor interfaces vary according to connection type. An IDSL Frame Relay Connection Monitor is shown in figure 23.

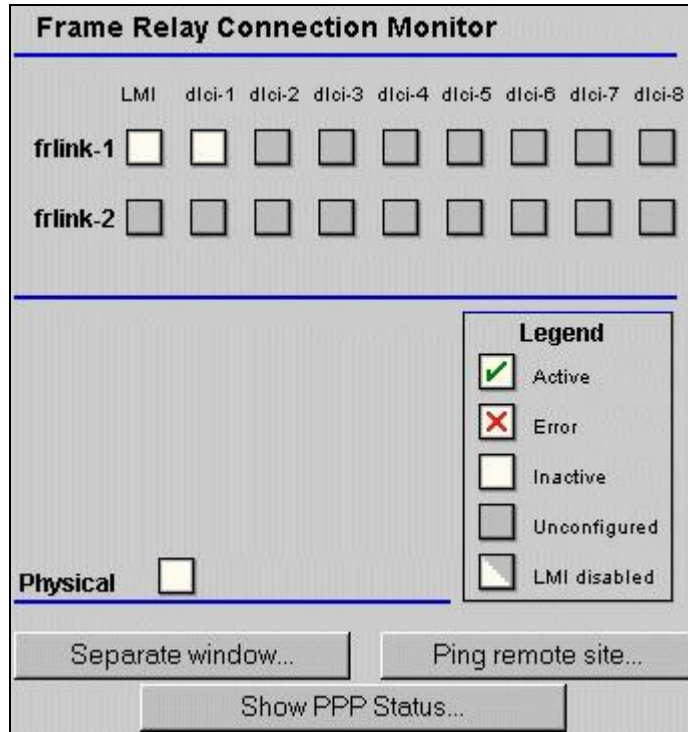


Figure 25: The connection monitor

For more information about the Connection Monitor for your connection type, consult the Advanced menu for your connection in 'Operating Your Service Managed Gateway'.

Click **Finish** to return to the Start page. From the start page you can access the Advanced and Status menus to further configure, view and monitor your SMG.

3.7 Modifying an existing frame relay connection over IDSL

To modify the configuration of an existing frame relay connection over IDSL, on the start page, click **Fast Start**. The Welcome page appears.

Select **Routed IDSL Connection** from the drop-down menu in the Service type field.



Figure 26: The welcome page

Click **Connection Wizard** to open the Connections page. This page lists frame relay connections that have already been configured on your SMG.

Fast Start

[Welcome](#) > [Connections](#) > [Finished](#)

The table below contains all the frame relay permanent virtual circuits currently available to activate for your IDSL connection. Configured connections can be changed, deleted or activated from the table. To configure your IDSL connection for PPP operation, use the [PPP Configuration](#) page.

Note: Newly added, changed or deleted entries only become available after a reload.

Connection Name	Type	Change	Delete	Active
My Connection	IDSL	Change	Delete	

[Add an IDSL frame relay PVC...](#)

[< Back](#) [Next >](#)

Figure 27: The connections page

Identify the name of the connection that you want to alter. Then click **Change** in the same row.

This presents the current configuration for the connection, which you can change by following the steps outlined in the sections 'Frame relay network configuration', 'Advanced PPP network configuration' and 'Saving your frame relay configuration'.

3.8 Removing a frame relay connection over IDSL

To delete an existing frame relay connection over IDSL, on the start page, click **Fast Start**. The Welcome page appears.

Select **Routed IDSL Connection** from the drop-down menu in the Service type field.

Click **Connection Wizard** to open the Connections page. This page lists frame relay connections that have already been configured on the SMG.

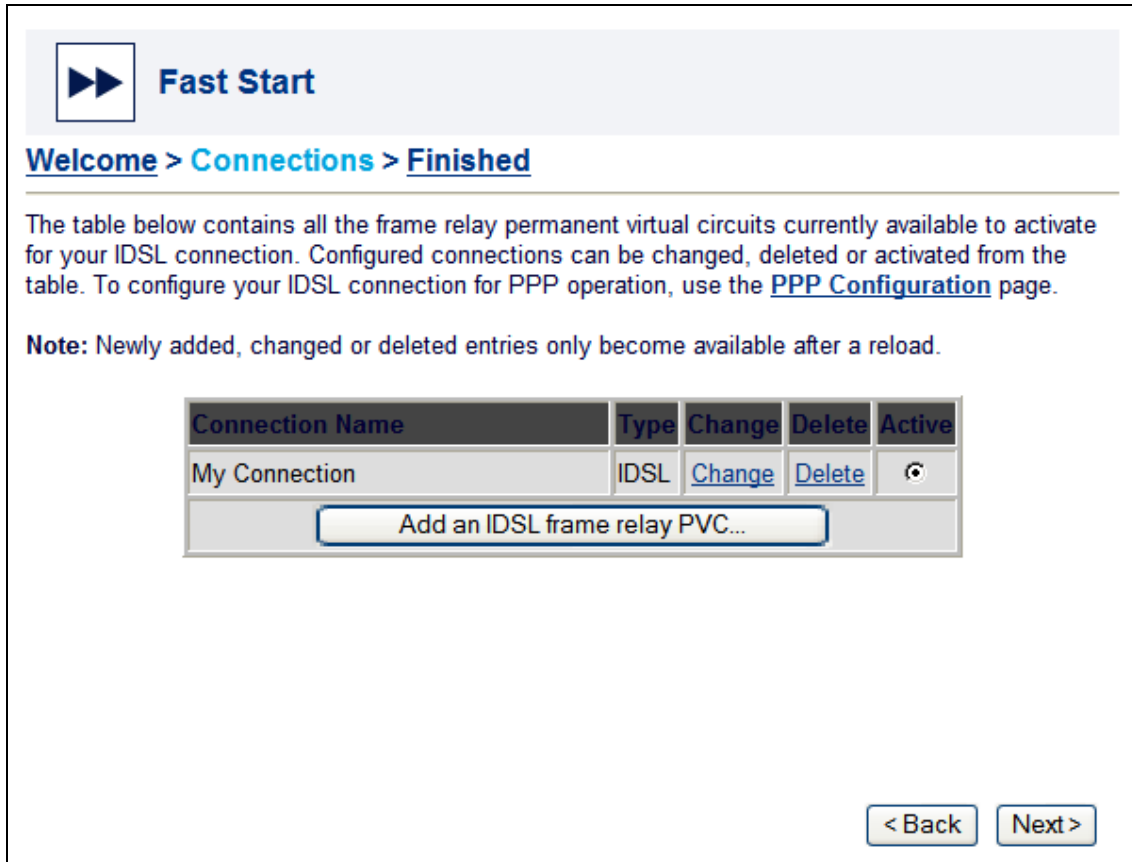


Figure 28: The connections page showing existing frame relay connections

Identify the name of the connection that you want to delete. Click **Delete** in the same row, and, when prompted, confirm your intention to remove the connection.

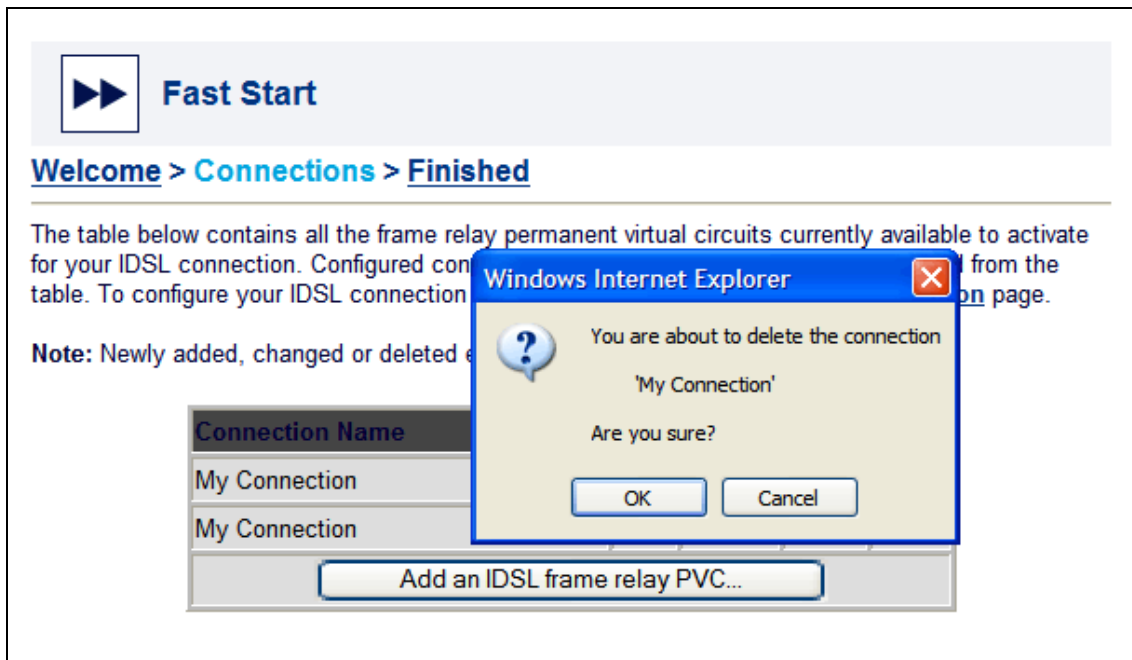


Figure 29: The delete warning pop-up box