THOMSON

THOMSON TG580

Wireless-n Multi-User ADSL2+ Gateway

Setup and User Guide

THOMSON TG580

Setup and User Guide

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About this Setup and User Guide

Used Symbols

A ***note*** provides additional information about a topic.

A ***caution*** warns you about potential problems or specific precautions that need to be taken.

Terminology

Generally, the THOMSON TG580 will be referred to as Thomson Gateway in this Setup and User Guide.

Typographical Conventions

Following typographical convention is used throughout this manual:

- Sample text indicates a hyperlink to a Web site.

  Example: For more information, visit us at www.thomson.net.
- Sample text indicates an internal cross-reference.

  Example: If you want to know more about guide, see "1 Introduction" on page 7.
- ***Sample text*** indicates an important content-related word.

  Example: To enter the network, you ***must*** authenticate yourself.
- **Sample text** indicates a GUI element (commands on menus and buttons, dialog box elements, file names, paths and folders).

  Example: On the **File** menu, click **Open** to open a file.

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For more information on THOMSON's latest technological innovations, documents and software releases, visit us at www.thomson.net.

About this Setup and User Guide

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1 Installation

Introduction

In a few minutes you will be able to access the Internet using your Thomson Gateway.

This Setup and User Guide will show you how to set up your Thomson Gateway and how to connect your computer(s) to the Internet.

Main features

As soon as you have completed the installation of your Thomson Gateway you will be able to benefit from all the services offered by your Thomson Gateway. This Setup and User Guide will focus on the following features:

- ***Broadband Internet*** connection.
  This chapter describes how to connect your Thomson Gateway to the Internet.
- ***Wired and wireless access*** to your local network devices.
  For more information, see "1.4 Connecting a Computer Using the Ethernet Cable" on page 8 and "3 Wireless Access" on page 17.
- ***Internet Security:***
  For more information, see "5 Internet Security" on page 35.
- ***Useful networking tools*** like UPnP, Dynamic DNS and many more.

Before you can start to use these features, we will first setup your Thomson Gateway.

1.1 Preliminary Steps

DSL service

The DSL service must be up and running on your telephone line.

If both conventional telephone and DSL service are simultaneously available from the same copper pair, you will need a central splitter or distributed filters for decoupling DSL and telephone signals.

Public telephone lines carry voltages that can cause electric shock. Only try to set up splitter/filters that have been designed to be installed by unqualified personnel. For further assistance, contact your Internet Service Provider.

Computer requirements

If you want to connect your computer using:

- The Ethernet cable, make sure that the computer is equipped with an Ethernet Network Interface Card (NIC).
- A wireless connection, you will need a WiFi-certified wireless client adapter for each computer you want to connect wirelessly.

Internet connection details

You may need the following connection details from your Internet Service Provider (ISP):

- Your ISP's method for connecting to the Internet (for example PPPoE)
- The VPI/VCI (for example 8/35)
- Your user name and password to connect to the Internet for PPP connections
- Your IP settings in case of static configurations

You may have received this information when you subscribed at your Internet Service Provider. You may be prompted for this information at a given step in the installation procedure.

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1.2 Installing your Thomson Gateway

Overview

How it works

The Setup and User Guide will first help you to connect your computer to the Thomson Gateway. After this is done, you can configure your Thomson Gateway using your web browser.

Requirements

Javascript must be enabled on your web browser.

Getting started

Proceed with "1.2.1 Manual Installation" on page 6.

1.2.1 Manual Installation

Procedure

Proceed as follows:

1. Connect the cables
2. Configure the Thomson Gateway

Connect the cables

Proceed as follows:

1. Connect the Thomson Gateway to the DSL line.
2. Connect the power supply.
3. Turn on the Thomson Gateway.
4. Connect your computer to the Thomson Gateway as described in "1.3 Adding a New Computer to your Network" on page 7.

Configure the Thomson Gateway

You are now ready to configure your Internet connection and local network.

Proceed as follows:

1. Open your web browser, and browse to http://dsldevice.lan or to the IP address of your Thomson Gateway (by default: 192.168.1.254).
2. The Thomson Gateway GUI appears. Click the **Thomson Gateway** menu item on the left-hand side.
3. The **Thomson Gateway** page appears. In the **Pick a task** list, click **Setup**.
4. The **Easy Setup** wizard appears. This wizard will guide you through the configuration of your Thomson Gateway.
5. Click **Next** and follow the instructions.
6. After running the **Easy Setup** wizard, you are connected to the Internet.

For more information, see " Setting up your Thomson Gateway" on page 45.

1.3 Adding a New Computer to your Network

Overview

If you want to connect your computer to the Thomson Gateway using:

- A Wireless connection, continue with "3 Wireless Access" on page 17.
- An Ethernet cable connection, continue with "1.4 Connecting a Computer Using the Ethernet Cable" on page 8.

1.4 Connecting a Computer Using the Ethernet Cable

Requirements

- Your computer must have a free Ethernet port.
- Your computer must be configured to obtain an IP address automatically. This is the default setting.

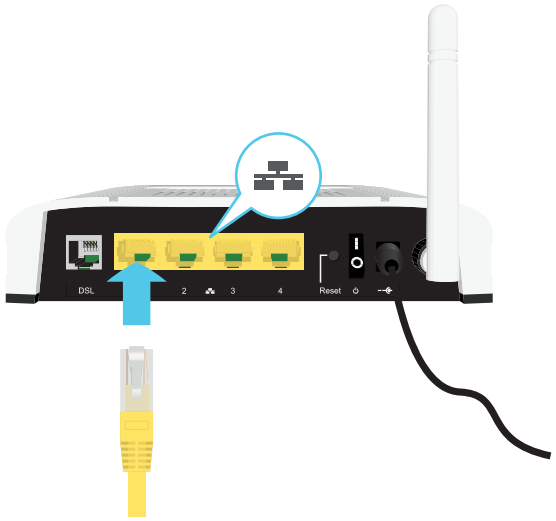
Ethernet cable

In your package, you will find a cable with yellow connectors. This is the Ethernet cable.

Procedure

Proceed as follows:

1 Connect one end of the Ethernet cable to the yellow Ethernet port(s) of your Thomson Gateway:



2 Connect the other end of the Ethernet cable to your computer.

3 Your computer is now connected to your network. No additional configuration is needed.

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2 Thomson Gateway Basics

In this chapter

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2 Thomson Gateway Basics

2.1 Thomson Gateway LED Behaviour

Content

This chapter describes the behaviour of:

- Status LEDs
- WPS Button LED

2.1.1 Status LEDs

Introduction

On the front panel of your Thomson Gateway, you can find a number of status LEDs, indicating the state of the device during normal operation.

Following LEDs are available on your Thomson Gateway:

LED	Name
	Power LED
	Broadband LED
	Internet LED
	Wireless LED
	Ethernet LED
	WPS LED

Power LED

Colour	State	Description
Green	Solid on	Power on, normal operation
Red	Solid on	Power on, self-test failed, indicating device malfunction
Amber	Blinking	Bootloader active (during upgrade)
Off		Power off

Broadband LED

Colour	State	Description
Green	Blinking	Pending DSL line synchronisation or No DSL line
	Solid on	DSL line synchronised

Internet LED

Colour	State	Description
Green	Blinking	Internet activity
	Solid on	Internet connectivity, no activity
Red	Solid on	Internet connection setup failed
Off		No Internet connection

Wireless LED

Colour	State	Description
Green	Blinking	Wireless activity, WPA(2) encryption
	Solid on	No wireless activity, WPA(2) encryption
Amber	Blinking	Wireless activity, WEP encryption
	Solid on	No wireless activity, WEP encryption
Red	Blinking	Wireless activity, no security
	Solid on	No wireless activity, no security
Red/green	Toggling	Wireless client registration phase
Off		WLAN disabled

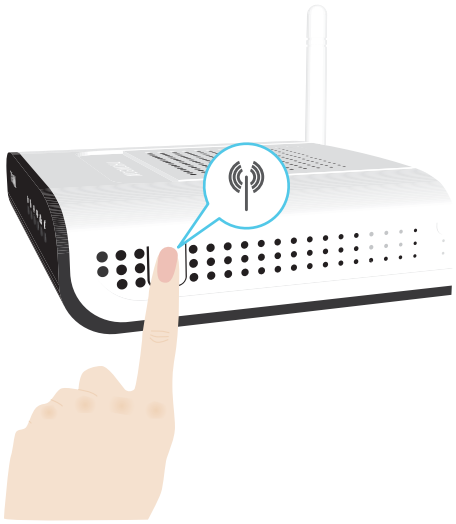
Ethernet LED

Colour	State	Description
Green	Solid on	Ethernet connection, no activity
	Blinking	Ethernet activity
Off		No Ethernet connection

2.1.2 WPS Button LED

Introduction

The WPS button allows you to add new wireless clients to your network.



For more information, see Connecting Your Wireless Client via WPS.

WPS LED

Colour	State	Description
Green	Solid On	Client successfully registered via WPS
Amber	Blinking	WPS registration ongoing
Red	Blinking	Error occurred

2.2 Thomson Gateway GUI

Introduction

The Thomson Gateway Graphical User Interface (GUI) allows you to configure your Thomson Gateway using your web browser.

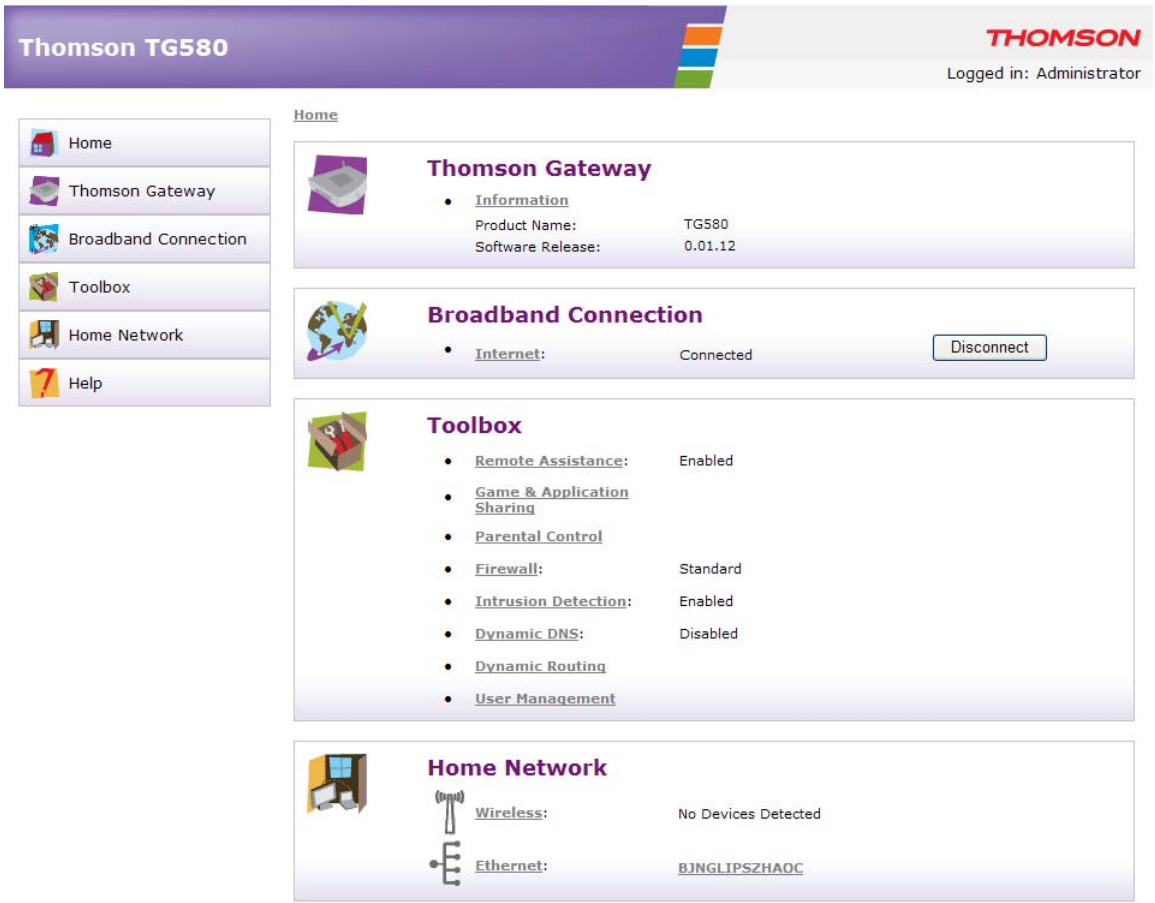
Requirements

Javascript must be enabled on your browser. For more information, consult the help of your Internet browser.

Accessing the Thomson Gateway Web Interface

Proceed as follows:

1. Open your web browser.
2. Browse to http://dsldevice.lan or the IP address of your Thomson Gateway (by default: 192.168.1.254).
3. If you have protected your Thomson Gateway with a user name and password, the Thomson Gateway will prompt you to enter these. Enter your user name and password and click **OK**.
4. The Thomson Gateway GUI appears. For more information, see "6 Thomson Gateway GUI" on page 39.



If your computer runs Windows Vista or Windows XP, you can also access the Thomson Gateway GUI using the Internet Gateway Device icon. For more information, see "4.1 UPnP" on page 26.

2.3 Backing Up/Restoring your Configuration

Introduction

Once you have configured your Thomson Gateway to your needs, it may be a good idea to backup your configuration for later use. This way you can always return to your working configuration in case of problems.

Backing up your configuration

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Thomson Gateway** menu, click **Configuration**.
3. In the **Pick a task** list, click **Save or Restore Configuration**.
4. Under **Backup current configuration**, click **Backup Configuration Now**.
5. The Thomson Gateway prompts you to save your file.
6. Save your file to a location of your choice.

Restoring your configuration

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Thomson Gateway** menu, click **Configuration**.
3. In the **Pick a task** list, click **Save or Restore Configuration**.
4. Under **Restore saved configuration**, click **Browse**.
5. Browse to your backup file and open it.

These files usually use **.bin** as extension.

6. The Thomson Gateway restores your configuration.

3 Wireless Access

Introduction

With the built-in wireless access point you are no longer need a cable connection between your computer and your Internet gateway.

What you need to set up a wireless network

To set up a wireless network, you need the following components:

- A Wireless Access Point
- A Wireless client

Wireless Access Point

You can consider the wireless access point as the heart of your wireless network. The wireless access point:

- Connects different wireless devices with each other.
- Secures the data sent over wireless connection.

The Thomson Gateway comes with an integrated wireless access point. The only thing you need is a wireless client.

Other devices like media players and smartphones may also have a built-in wireless client. Check the documentation of your device for more information.

Wireless client

The wireless client allows you to connect a device, typically a computer, to a wireless access point. Both built-in and external (for example via USB) are available.

Check the documentation of your computer if you are not sure if your computer is equipped with a wireless client.

Configuring your wireless clients

Before you can start surfing the internet with a wireless connection, you must first connect your wireless client to your wireless access point: the Thomson Gateway.

For more information, see "3.1 Connecting Your Wireless Client via WPS" on page 18 and "3.2 Connecting Your Wireless Client without WPS" on page 20.

Secure your wireless connection!

Because you no longer need a physical connection, everyone who is within the range of your Thomson Gateway can access your network. If you do not protect your wireless network, the following could happen:

- People can use your connection to access the Internet.
- Hackers can use your connection to commit computer crimes.

You can easily prevent this by securing your wireless connection. For more information, see "3.3 Securing Your Wireless Connection" on page 21.

3.1 Connecting Your Wireless Client via WPS

WPS

Wi-Fi Protected Setup (WPS) allows you to add new wireless clients to your network in a swift and easy way, without the need to enter all of your wireless settings (SSID, encryption,...).

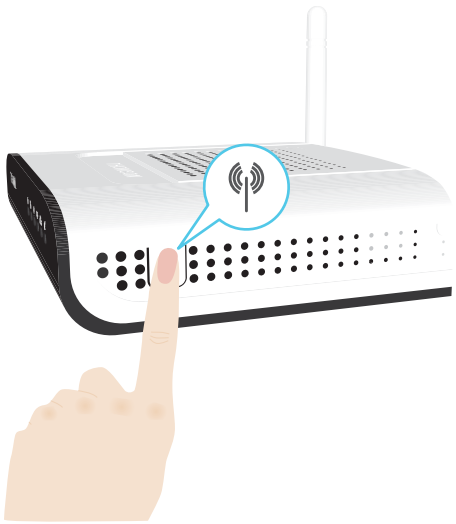
Requirements

- Your wireless client must supports WPS. Check the documentation of your wireless client for this.
- Your Thomson Gateway must use WPA(2)-PSK encryption (default encryption) or no encryption. WPS with WEP encryption is not possible.

Procedure

Proceed as follows:

1 Shortly press the WPS button on the Thomson Gateway:



2 The WPS button LED starts blinking orange. This indicates that the Thomson Gateway is now searching for wireless clients that are in registration mode. You now have two minutes to start WPS on your wireless client.

3 Start WPS on your wireless client.

The WPS button LED is solid green

This indicates that you have successfully registered your wireless client. You are now connected to the Thomson Gateway network.

The WPS button LED is blinking red

This indicates that the Thomson Gateway could not find your wireless client.

Make sure that the WLAN LED is blinking amber when you start WPS on your wireless client. If you still have trouble connecting to the Thomson Gateway, try connecting your wireless client without WPS. For more information, see "3.2 Connecting Your Wireless Client without WPS" on page 20.

Troubleshooting

If you are having trouble connecting your wireless client via WPS, try to configure it manually. For more information, see "3.2 Connecting Your Wireless Client without WPS" on page 20.

3.2 Connecting Your Wireless Client without WPS

Before you start

Before you can connect a computer to your wireless network you need to know which Network Name (SSID) and wireless encryption your Thomson Gateway is using.

What Network Name (SSID) is the Thomson Gateway using?

If you did not change the SSID manually, your Thomson Gateway uses the SSID that is printed on the bottom panel label of your Thomson Gateway.

What wireless security is the Thomson Gateway using?

You have not yet configured your Thomson Gateway

In this case, no encryption is used.

You have already configured your Thomson Gateway

If you have configured the wireless security settings through the Thomson Gateway GUI, the encryption key/passphrase is the one you typed in the the **Encryption Key** textbox.

Forgot your wireless settings?

If you have changed the wireless settings manually and you can't remember your settings, try one of the following:

If one of your computers is already connected to your network:

1. Browse to the Thomson Gateway GUI on a computer that is already connected to your network.
2. On the **Home Network** menu, click **Wireless**.
3. In the upper-right corner, click **Details**.
4. Under:
   - **Configuration**, you can find the network name (SSID).
   - **Security**, you can find the encryption.

If none of your computers is connected to your network, connect a computer using a wired connection and follow the procedure above to find out what your wireless settings are.

Another option is to reset your Thomson Gateway and configure it all over again. For more information, see "7.2 Reset to Factory Defaults" on page 91.

Procedure

Configure your computer with the same wireless settings as your Thomson Gateway. For more information, consult the help of your wireless client.

3.3 Securing Your Wireless Connection

Introduction

By using encryption, communication between the wireless clients and your Thomson Gateway is protected by a passphrase. Only clients which use the correct network name (SSID) and passphrase can connect to your network.

Encryption methods

During the years a number of encryption types have been developed. The list below gives you an overview of the supported encryption types ordered by security level, you will find the highest level of security at the top of the list:

- WPA-PSK Encryption:
  The wireless data is being encrypted with a user-defined key. Wireless clients must be configured with this key before they can connect to the Thomson Gateway.
- WEP Encryption:
  The first encryption type used for wireless connections. Like WPA-PSK it uses a user-defined key, but WEP has been proven to have some security issues. ***We strongly recommend you to use WPA-PSK instead.***

WPA-PSK versions

The Thomson Gateway supports the following WPA-PSK versions:

- **WPA2** (also referred to as WPA2-PSK):
  WPA2 is the most secure version, but not all wireless clients already support it. Before you select this version, make sure all of your wireless clients support it.
- **WPA+WPA2**:
  If not all of your wireless clients support WPA2 or you are not sure if they support WPA2, we recommend you to choose WPA+WPA2. Wireless clients that support WPA2 will use WPA2, the others will use WPA.
- **WPA**:
  If none of your wireless clients support WPA2 choose this option.

If you want to configure WPA2 on the built-in wireless utility of Windows XP Service Pack 2 (SP2), you first have to:

- Upgrade your Windows XP to Service Pack 3.

- or -

- Install the following update: http://support.microsoft.com/kb/917021.

Which encryption method should I use?

We strongly recommend you to use ***WPA+WPA2***.

Although the Thomson Gateway allows you to use WEP or no security, it is not recommended to use these settings. Only use WEP if you have wireless clients that don't support a higher encryption level.

Configuring the wireless encryption

Proceed as follows:

1. Open the Thomson Gateway GUI.
2. On the left menu, click **Home Network**.

3 Under **Wireless**, click your access point.

Your access point will be listed in the following format: "WLAN:<Network Name> (<Actual Speed>)". For example, **WLAN: Thomson83C7C7 (54Mbps)**.

4 The **Wireless Access Point** page appears.

5 In the **Location bar**, click **Configure**.

6 Under **Security**, you can change the **Encryption**. If you want to use:

- WPA-PSK Encryption, continue with "3.3.1 Configuring WPA-PSK Encryption" on page 23.
- WEP Encryption, continue with "3.3.2 Configuring WEP Encryption" on page 24.

3.3.1 Configuring WPA-PSK Encryption

Procedure

Continuing from " Configuring the wireless encryption" on page 21:

1. Select **Use WPA-PSK Encryption**.
2. In the **WPA-PSK Encryption Key** box, type a pass phrase (also known as Pre-shared key) of your choice. The pass phrase must consist of 8 to 63 alphanumeric characters or 8 to 64 hexadecimal characters (characters from 0 to 9 and from A to F).
3. In the **WPA-PSK Version** list, click the WPA-version of your choice. Following options are available:
   - **WPA2:**
     WPA2 is the most secure version, but not all wireless clients already support it. Before you select this version, make sure all of your wireless clients support it.
   - **WPA+WPA2**:
     If not all of your wireless clients support WPA2 or you are not sure if they support WPA2, we recommend you to choose WPA+WPA2. Wireless clients that support WPA2 will use WPA2, the others will use WPA.
   - **WPA**:
     If none of your wireless clients support WPA2 choose this option.

   If you want to configure WPA2 on the built-in wireless utility of Windows XP Service Pack 2 (SP2), you first have to:

   - Upgrade your Windows XP to Service Pack 3.

   - or -

   Install the following update: http://support.microsoft.com/kb/917021.
4. Click **Apply**.
5. Configure your wireless client(s) with the same settings.

3.3.2 Configuring WEP Encryption

Warning

Although the Thomson Gateway allows you to use WEP or no security, it is not recommended to use these settings. Only use WEP if you have wireless clients that don't support a higher encryption level.

Procedure

Continuing from " Configuring the wireless encryption" on page 21:

1. Select **Use WEP Encryption**
2. In the **WEP Key Length** list, click the desired key length (a higher key length offers higher security).
3. In the **Encryption key** box, type a Network key of your choice. If you are using:
   - A 64-bit key:
     Type 10 hexadecimal characters (characters from 0 to 9 and from A to F) or 5 alphanumeric characters.
   - A 128-bit key:
     Type 26 hexadecimal characters (characters from 0 to 9 and from A to F) or 13 alphanumeric characters.
4. Click **Apply**.
5. Configure your wireless client(s) with the same settings.

4 Thomson Gateway Tools

In this chapter

In this chapter we will take a closer look at following features:

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UPnP	26
Assigning a service (HTTP, FTP,...) to a computer	32
Dynamic DNS	34

Feature availability

Depending on the configuration offered by your Internet Service Provider (ISP), some features may not be available on your Thomson Gateway. For more information, contact your ISP.

4.1 UPnP

Introduction

UPnP is designed to automate the installation and configuration of a (small) network as much as possible. This means that UPnP-capable devices can join and leave a network without any effort of a network administrator.

Supported Operating Systems

Following operating systems support UPnP:

- Windows Vista
- Windows XP

If your computer is running Windows XP, you first have to install the UPnP component. For more information, see "4.1.4 Installing UPnP on Windows XP" on page 30.

UPnP and the Thomson Gateway

With UPnP you can:

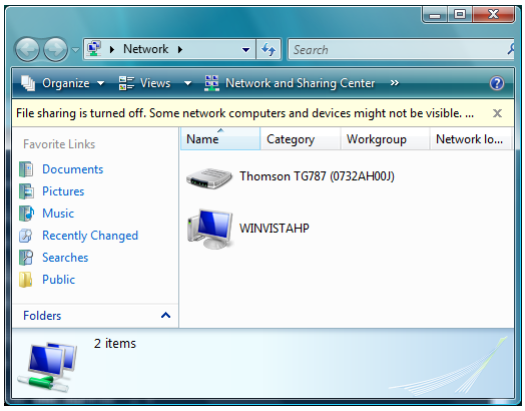
- Access the Thomson Gateway GUI without opening your web browser. For more information, see Accessing Your Thomson Gateway with UPnP.
- Connect/disconnect without having to open the Thomson Gateway GUI.
  For more information, see Managing your Internet connection with UPnP.
- Automatic port configuration for UPnP-enabled games and applications. You do not have to create port to run services on a computer. If the application is UPnP-enabled, UPnP will create these entries automatically. For more information, see Assigning a service (HTTP, FTP,...) to a computer.

4.1.1 Accessing Your Thomson Gateway with UPnP

Windows Vista

If your computer runs Windows Vista:

1. On the Windows **Start** menu, click **Network**.
2. The **Network** window appears:

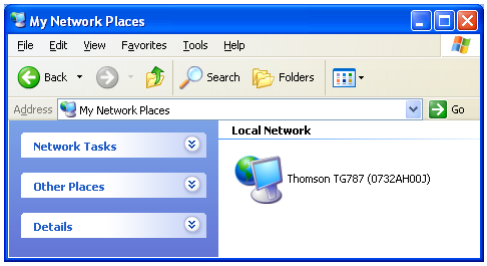


3. Right-click your Thomson Gateway (displayed as THOMSON TGXXX) and click **View device web page**.
4. The Thomson Gateway GUI appears.

Windows XP

If your computer runs Windows XP:

1. Go to **My Network Places**.
2. The **My Network Places** window appears:



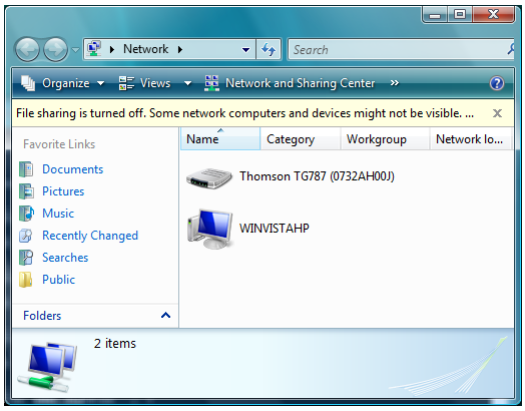
3. Double-click your Thomson Gateway (displayed as THOMSON TGXXX).
4. The Thomson Gateway GUI appears.

4.1.2 Managing your Internet connection with UPnP

Windows Vista

If your computer runs Windows Vista:

1. On the Windows **Start** menu, click **Network**.
2. The **Network** window appears:

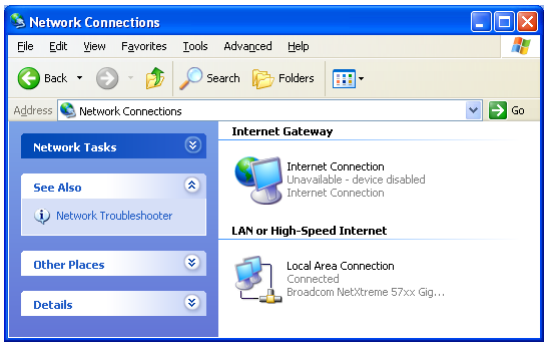


3. Right-click your Thomson Gateway (displayed as THOMSON TGXXX).
4. If you are currently:
   - Connected to the Internet, click **Disable** to disconnect from the Internet.
   - Not connected to the Internet, click **Enable** to connect to the Internet.

Windows XP

If your computer runs Windows XP:

1. On the Windows **Start** menu, click **(Settings >) Control Panel**.
2. The **Control Panel** window appears.
   Click **(Network and Internet Connections) > Internet Connections**.
3. The **Network Connections** window appears;



4. If you right-click the **Internet Connection** icon, you can connect/disconnect your connection to the Internet.

4.1.3 Configuring UPnP on the Thomson Gateway

Introduction

On the Thomson Gateway GUI you can:

- Enable/Disable UPnP

Enable/Disable UPnP

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Game & Application Sharing**.
3. Under **Universal Plug and Play**:
   - Select the **Use UPnP** check box, to enable UPnP.
   - Clear the **Use UPnP** check box, to disable UPnP.
4. Click **Apply**.

4.1.4 Installing UPnP on Windows XP

Adding UPnP

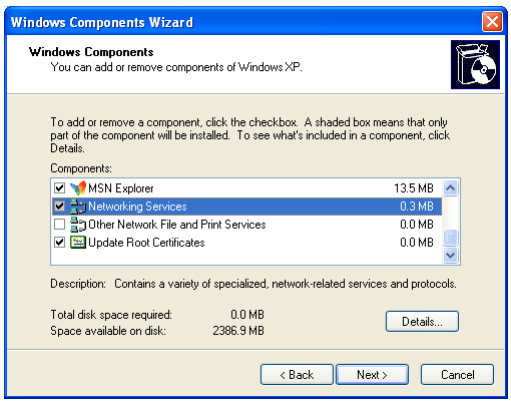
If you are running Microsoft Windows XP, it is recommended to add the UPnP component to your system.

Proceed as follows:

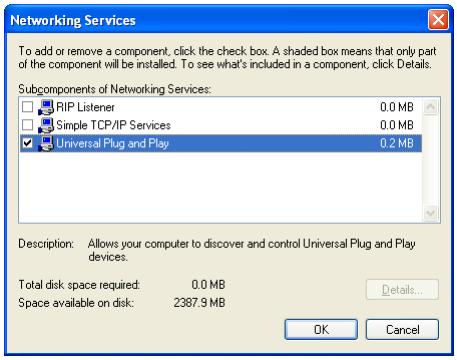
1. In the **Start** menu, click **(Settings >) Control Panel**.
2. The **Control Panel** window appears.

   Click **Add or Remove Programs**.
3. The **Add or Remove Programs** window appears.

   Click **Add/Remove Windows Components**.
4. The **Windows Components Wizard** appears:



   In the **Components** list, select **Networking Services** and click **Details**
5. The **Networking Services** window appears:



   Select **Universal Plug and Play** or **UPnP User Interface** and click **OK**.
6. Click **Next** to start the installation and follow the instructions in the **Windows Components Wizard**.

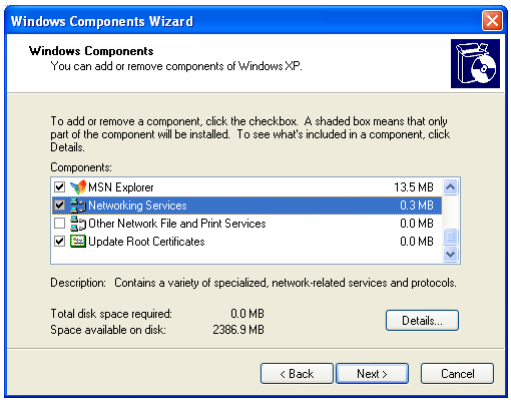
   You may need your Windows installation CD during the installation.
7. At the end of the procedure the Wizard informs you that the installation was successful. Click **Finish** to quit.

Adding IGD Discovery and Control

Your Windows XP system is able to discover and control Internet Gateway Devices (IGD) like the Thomson Gateway on your local network. Therefore, it is recommended to add the IGD Discovery and Control client to your system.

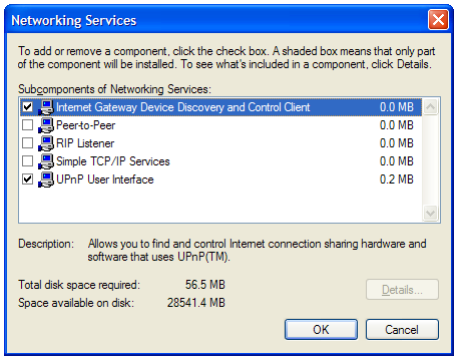
Proceed as follows:

1. On the Windows taskbar, click **Start**.
2. Select **(Settings >) Control Panel** > **Add or Remove Programs**.
3. In the **Add or Remove Programs** window, click **Add/Remove Windows Components**.
4. The **Windows Components Wizard** appears:



Select **Networking Services** in the **Components** list and click **Details**.

5. The **Networking Services** window appears:



Select **Internet Gateway Device Discovery and Control Client** and click **OK**.

6. Click **Next** to start the installation and follow the instructions in the **Windows Components Wizard**.

You may need your Windows installation CD during the installation.

7. At the end of the procedure, the Wizard informs you that the installation was successful. Click **Finish** to quit.

4.2 Assigning a service (HTTP, FTP,...) to a computer

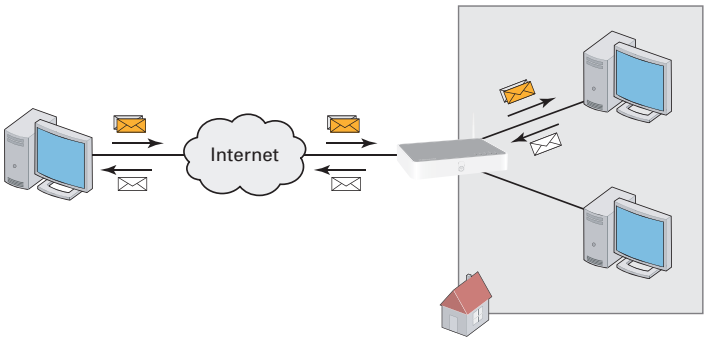
Introduction

The Thomson Gateway allows you to use one internet connection for multiple computers. This means that all your computers share one public IP address, as if only one computer is connected to the outside world.

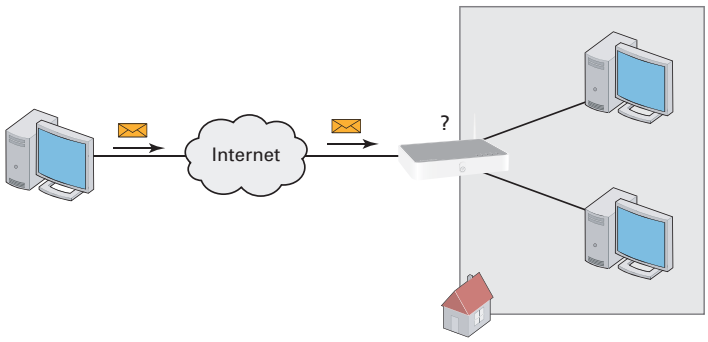
Problem

When the Thomson Gateway receives an incoming message, the Thomson Gateway has to decide to which computer he will have to send this message.

If the incoming message is a response to an outgoing message originating from one of your computers, the Thomson Gateway sends the incoming message to this computer.



If your are running a server or an application that acts as a server (for example a HTTP server, internet game), the initial message will come from the internet and the Thomson Gateway has to decide to which computer he should forward the incoming message.



In the latter case, the Thomson Gateway cannot decide all along the service related to the message is not assigned to one computer.

Solution

To avoid this problem you can:

- Enable UPnP.
- Assign a game or application to a local networking device.

UPnP

UPnP is a technology that enables seamless operation of a wide range of games and messaging applications. Your computer will use UPnP to communicate to the Thomson Gateway which services are running on the computer.

For example, when you start a UPnP-enabled application on your computer, it will automatically creat the necessary port mappings to this computer.

For more information on UPnP, see "4.1 UPnP" on page 26.

Assign a game or application to a local networking device

If you assign a game or application to a local networking device, you will basically tell the Thomson Gateway that if it receives requests for a specific game or application, it has to forward these messages to a specific computer.

Proceed as follows to do so:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Game & Application Sharing**.
3. In the **Pick a task** list, click **Assign a game or application to a local network device**.
4. In the **Game or application** list, click the service you want to run on the computer. For example, **HTTP Server (World Wide Web)**.

   If the service is not available in the list, click **Create a new game or application** in the **Pick a task** list. For more information, click **Help** on the Thomson Gateway GUI.
5. In the **Device** list, select the computer to which you want to assign the service. Your computer will be listed with its computer name.

   The computer must be connected to the network and up and running.

   It may be advised to assign "**Always use the same address**" or to configure the computer with a static IP!
6. All incoming request for the selected service will now be directed to the selected device. The Thomson Gateway automatically configures the firewall to allow this service.

4.3 Dynamic DNS

Introduction

The dynamic DNS service allows you to assign a fixed DNS host name (for example john.dyndns.org) to a broadband connection even if this connection is using a dynamically assigned IP address. As soon as the device gets a new IP address, the dynamic DNS server updates its entry to the new IP address.

What you need

Before you can configure dynamic DNS, you first have to create an account at a dynamic DNS service provider. For example:

- www.dyndns.org
- www.no-ip.com
- www.dtdns.com

Procedure

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Dynamic DNS**.
3. On the **Location bar**, click **Configure**.
4. Select the **Enabled** check box.
5. Type the user name and password of your Dynamic DNS service account in the corresponding fields.
6. In the **Service** list, click the name of your Dynamic DNS service provider.
7. In the **Host** box, type the host name that you got from the Dynamic DNS service provider (for example mywebpage.dyndns.org).
8. Click **Apply**.

5 Internet Security

Overview

The Thomson Gateway offers you various options to secure your network:

Topic	Page
Firewall	36
Parental Control	37

5.1 Firewall

Changing the security level

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Firewall**.
3. The **Firewall** page appears. In the upper-right corner, click **Configure**.
4. A list with security settings with a brief description is displayed.
5. Select the security level of your choice and click **Apply**.

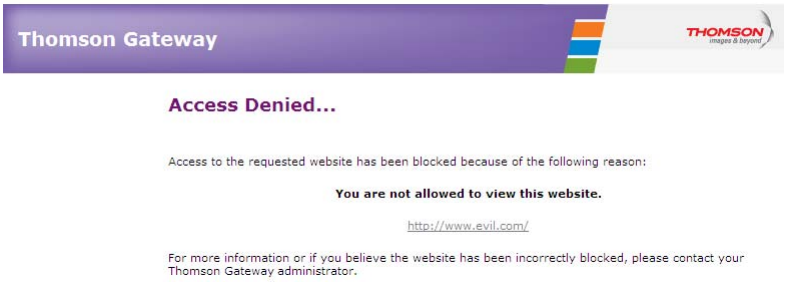
5.2 Parental Control

Introduction

The Thomson Gateway allows you to deny access to specific web sites.

Access Denied page

When a user tries to access a page that is being blocked, the following page is displayed:



Address-based filtering

With address-based filtering (or URL-filtering) you can ***block web sites based on their address*** (for example www.porn.com).

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Parental Control**.
3. On the **Location bar**, click **Configure**.
4. Make sure that the **Use Address Based Filter** check box is selected.
5. In the **Action for Unknown Sites**, select:
   - **Allow** as the default rule if you want to allow access to ***all*** web sites and manually specify which web sites may not be accessed.
   - **Block** as the default rule if you want to deny access to ***all*** web sites and manually specify a number of web sites that may be accessed.
6. Click **Apply**.
7. If you want to make exceptions for specific web sites, add the necessary rules in the address-based filter. For more information, see "5.2.1 Adding Rules For The Address Based Filter" .

5.2.1 Adding Rules For The Address Based Filter

Options

With the address based filter you can:

- Deny access to a specific Web site
- Allow access to a specific Web site

Deny access to a specific Web site

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Web Site Filtering**.
3. Make sure the **Use Address Based Filter** check box is selected.
4. Type the URL of the Web site you want to block (for example “mail.provider.com”) in the **Web Site** box.
5. In the **Action** list, click **Block**.
6. Click **Add**.

Allow access to a specific Web site

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Toolbox** menu, click **Web Site Filtering**.
3. Make sure the **Use Address Based Filter** check box is selected.
4. Type the URL of the Web site you want to allow (for example “netbanking.bank.com”) in the **Web Site** box.
5. Click **Allow** in the **Action** list.
6. Click **Add**.

6 Thomson Gateway GUI

Introduction

The Thomson Gateway comes with an integrated configuration web interface, commonly referred to as the Graphical User Interface (GUI).

It allows you to configure your Thomson Gateway simply by using a web browser from any local computer connected to the Thomson Gateway.

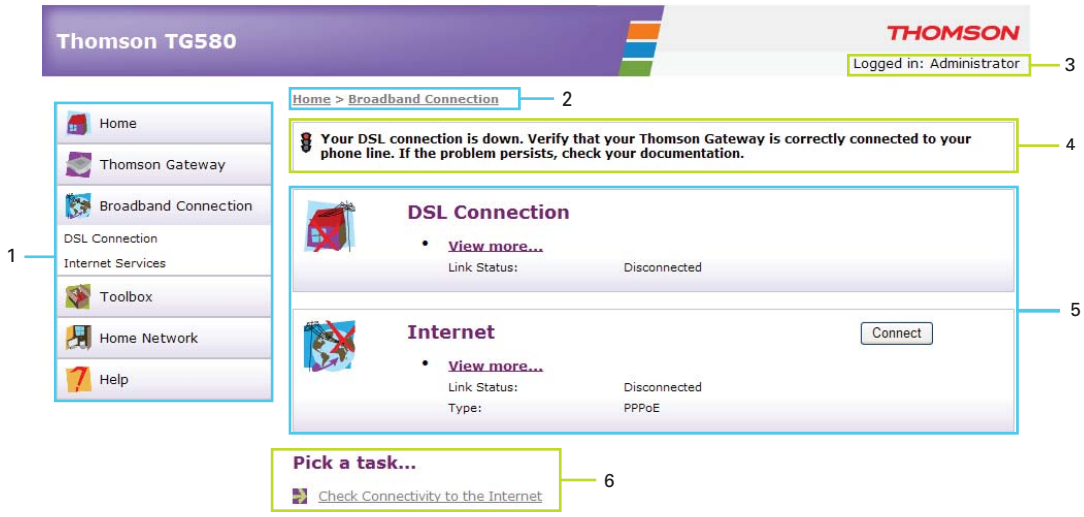
Requirements

Before you can access the Thomson Gateway web pages:

- Javascript must be enabled on your web browser. For more information, consult the help of your Internet browser.
- Your computer must be configured to obtain an IP address automatically. This is the default setting.

Components

You can find the following components on the Thomson Gateway GUI:



Label	Description
1	Menu
2	Location bar
3	Login section
4	Notification Area
5	Content pane
6	Tasks

Menu

The menu consists of the following menu items:

- **Home**:
  Allows you to go back to the home page.
- **Thomson Gateway**:
  Provides basic information on the Thomson Gateway.
- **Broadband Connection**:
  Allows you to view/configure your broadband connections.
- **Toolbox**:
  Allows you to assign games or applications to a device and secure your Internet connection.
- **Home Network**:
  Allows you to manage your local network.
- **Help**:
  Allows you to view context-related help information.

Location bar

The location bar allows you to:

- View your current position in the Thomson Gateway GUI.
- Depending on the page you are on, view the following buttons:
  - **Overview** to view a summary of the current status or configuration.
  - **Details** to view more detailed information on the current status or configuration.
  - **Configure** to change the current settings.

Login section

In this section, you can see the current user name.

Notification Area

The notification area is used to display:

- Error messages, indicated by a red traffic light.
- Warnings, indicated by an orange traffic light.
- Information, indicated by a green traffic light.

If none of these events occurs, the notification area will not be shown.

Content pane

The content pane displays the information and configurable items of the selected topic.

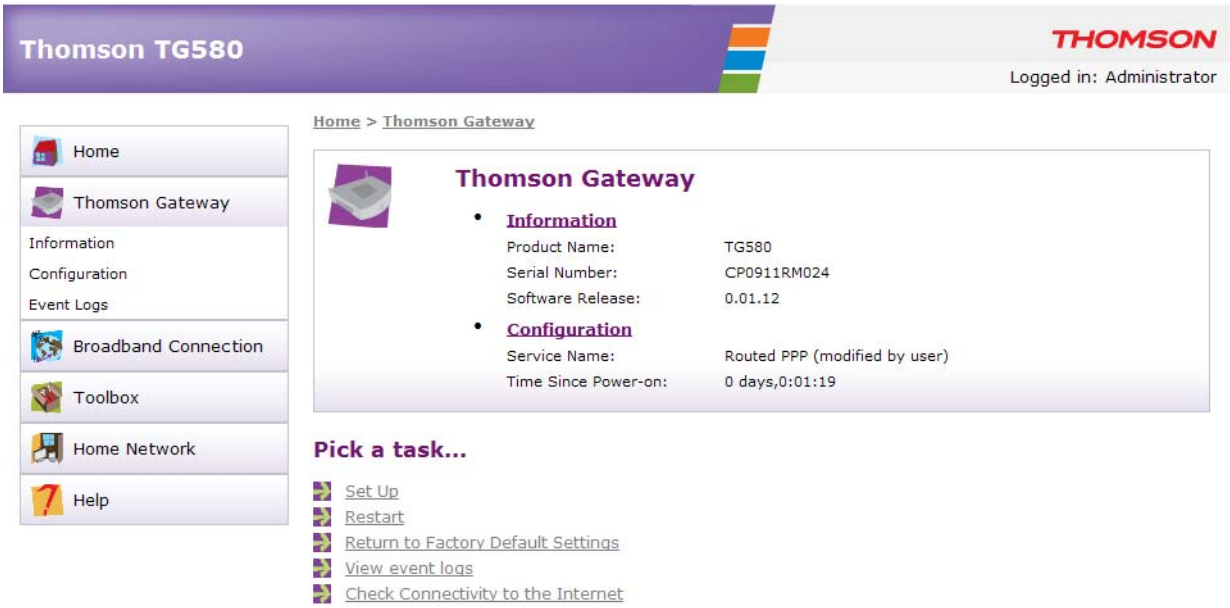
Tasks

To allow a quick configuration of your Thomson Gateway, some pages may offer you a number of related tasks in the **Pick a task** list. These tasks will guide you to the page where you can perform the selected task.

6.1 Thomson Gateway

The Thomson Gateway page

The **Thomson Gateway** page gives you an overview of some basic product information and configuration parameters of your Thomson Gateway.



The Thomson Gateway menu

In the **Thomson Gateway** menu, you can find the following items:

Click...	To...
Information	View some system information on your Thomson Gateway.
Configuration	View some configuration information on your Thomson Gateway.
Event Logs	View the last events recorded on your Thomson Gateway.

Tasks

On the **Thomson Gateway** page you can carry out following tasks:

- Setting up your Thomson Gateway.
- Restarting your Thomson Gateway.
- Returning to Factory Default Settings.
- Viewing Event Logs.
- Checking connectivity to the Internet.

6.1.1 Information

Introduction

On the **System Information** page, you can find some important system information of your Thomson Gateway. You may need this when contacting your help desk.

This page lists the Thomson Gateway's:

- **Product Name**
- **Software Release**
- **Boot Loader Version**
- **ADSL Modem Code Version**
- **HW Version**
- **Serial Number**

Restarting your Thomson Gateway

Proceed as follows:

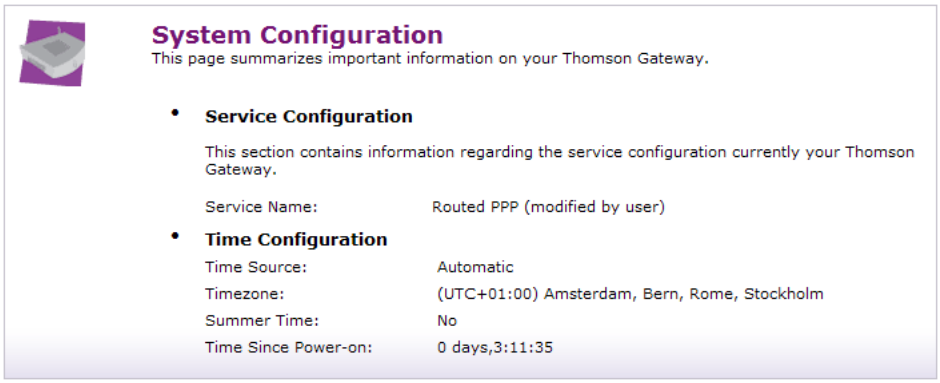
1. In the **Pick a task** list, click **Restart**.
2. The Thomson Gateway prompts you to confirm your choice, click **Yes, Restart my Thomson Gateway**.

3. The Thomson Gateway restarts and returns to the **Home** page.

6.1.2 Configuration

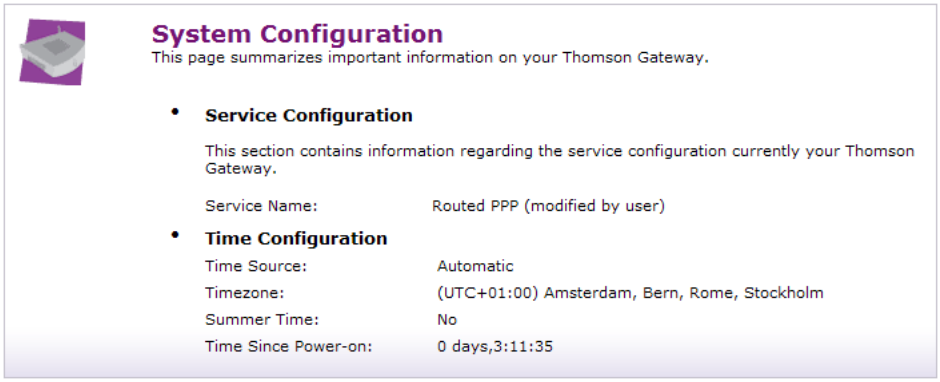
Overview

The **System Configuration Overview** page displays basic configuration information.



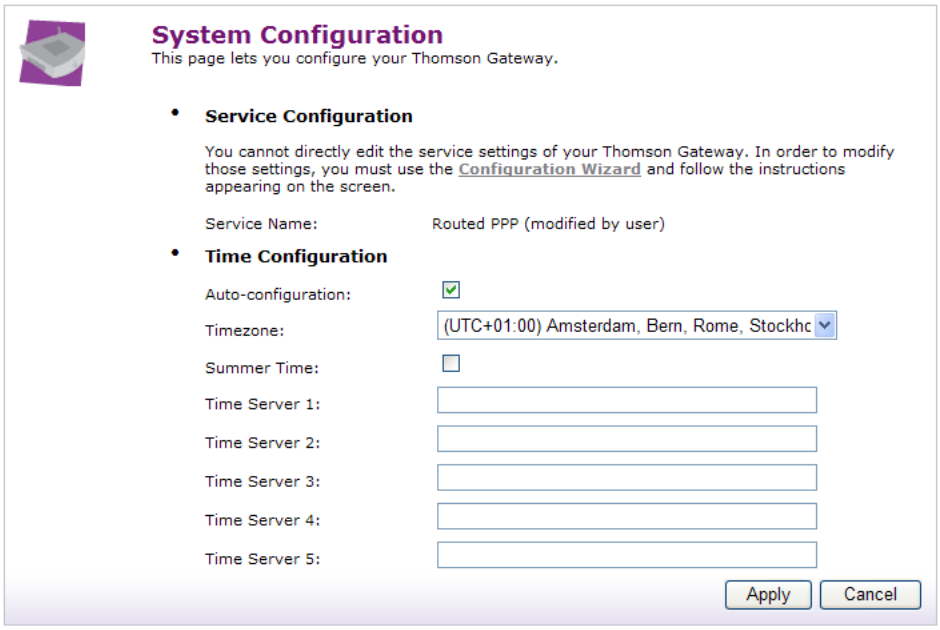
Details

The **System Configuration Details** page displays all of the available configuration information.



Configure

The **System Configuration Configure** page allows you to change your current configuration.

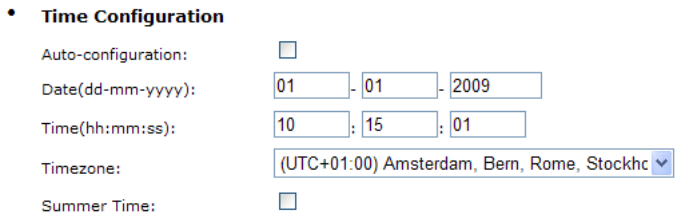


This page consists of the following sections:

- **Service Configuration**:

  Click **Configuration Wizard** to edit the service settings of your Thomson Gateway. The Easy Setup wizard will be launched. For more information, see " Setting up your Thomson Gateway" on page 45

- **Time Configuration**:
  - Select **Auto-configuration** if you want the Thomson Gateway to use a dedicated Network Time Protocol (NTP) Server to synchronize its clock to. The following settings can be configured:
    - **Timezone**:
      Choose your geographical timezone.
    - **Summer Time**:
      Enable/disable time adjustment in regions where daylight saving is applicable.
    - **Time Server 1..5**:
      Dedicated time server(s) for the Thomson Gateway to synchronize with.
  - Clear **Auto-configuration** to configure the Thomson Gateway time settings manually.



The following settings can be configured:

- **Date (dd-mm-yyyy)**:
  Current date
- **Time (hh:mm:ss)**:
  Current time
- **Timezone**:
  Geographical timezone

- **Summer Time:**
  Enable/disable time adjustment in regions where applicable

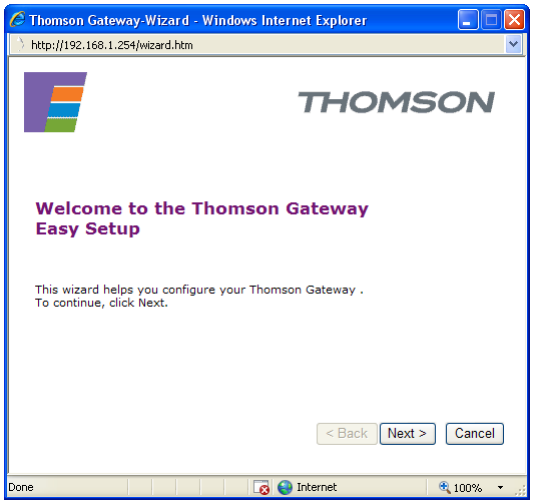
Click **Apply** to apply and save your settings.

Setting up your Thomson Gateway

The Easy Setup wizard helps you to configure your Thomson Gateway Internet connection.

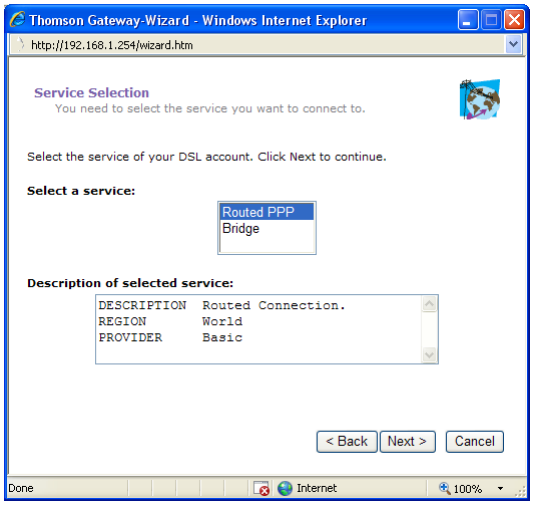
Proceed as follows:

1 In the **Pick a task** list, click **Set up**. The embedded Easy Setup wizard appears:



2 Click **Next**.

3 The following window invites you to select the appropriate service for your Internet connection:

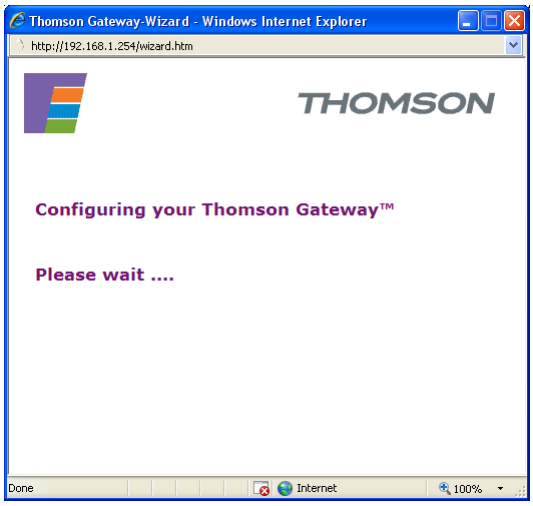


In the **Select a service** list, select the service specifiied by your Serivce Provider and click **Next** to continue.

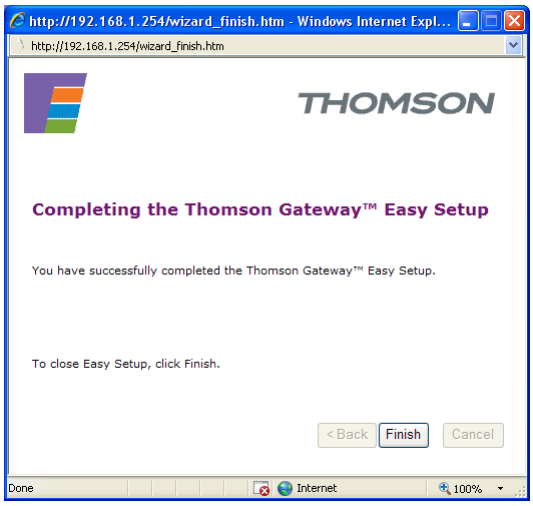
4 Subsequent screens will guide you through the configuration setup of your Thomson Gateway. Follow the instructions and enter the required information whenever needed. The requested information will depend on the selected Service profile and should be provided by your Service Provider.

Click **Next** whenever requested.

5 Easy Setup will update the Thomson Gateway configuration according to the service profile.



6 As soon as the **Easy Setup** wizard completed the update of the Thomson Gateway configuration, the following window appears:



Click **Finish** to close the **Easy Setup** wizard.

Returning to Factory Default Settings

The **Reset to Factory Defaults** page allows you to return to the initial configuration of your Thomson Gateway.

All changes you have made to the configuration will be deleted. If you want to save your current configuration, see "2.3 Backing Up/Restoring your Configuration" on page 16.

If you reset your Thomson Gateway to factory default settings, all wireless and broadband connections may be disconnected permanently after reboot (other settings) or briefly interrupted during the reboot.

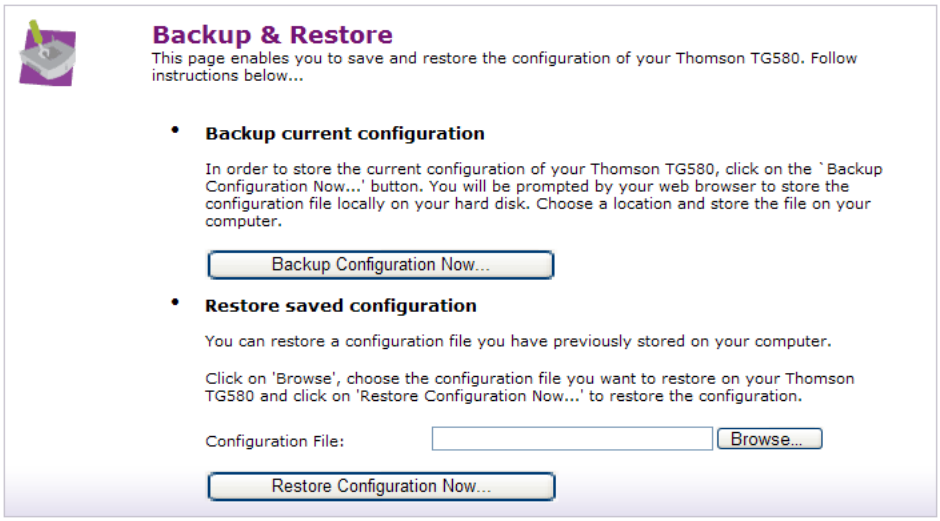
Proceed as follows:

1. In the **Pick a task** list, click **Return to Factory Default Settings**.
2. The following page appears:

3. Click **Yes, reset my Thomson Gateway**.

Saving or Restoring Configuration

The **Backup & Restore** page allows you to:

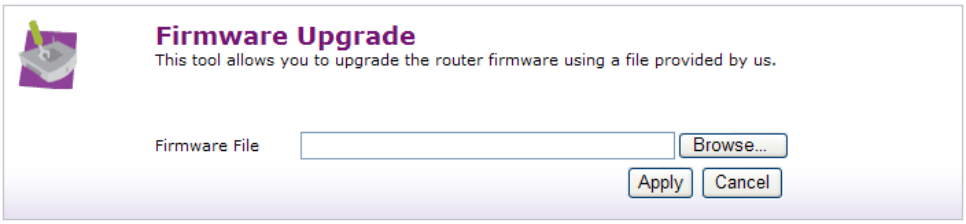


- Save your current configuration.
- Restore a previously saved configuration.

For more information, see "2.3 Backing Up/Restoring your Configuration" on page 16.

Firmware upgarde

This **Firmware Upgrade** page allows you to upgrade the Thomson Gateway with a firmware which is located on your computer.



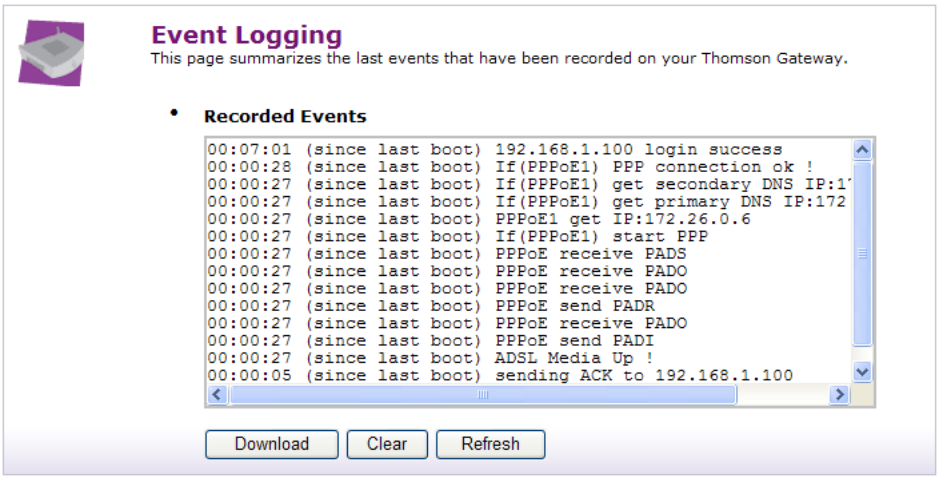
Proceed as follows:

1. In the **Pick a task** list, click **Firmware Upgrade**.
2. Click **Browse**. Browse to the firmware on your local computer and open it.
3. Click **Apply**. The Thomson Gateway upgrades your firmware.

6.1.3 Event Logs

Introduction

The **Event Logging** page summarises the last events recorded on your Thomson Gateway.



The first entry is the most recent recorded event.

Recorded Events

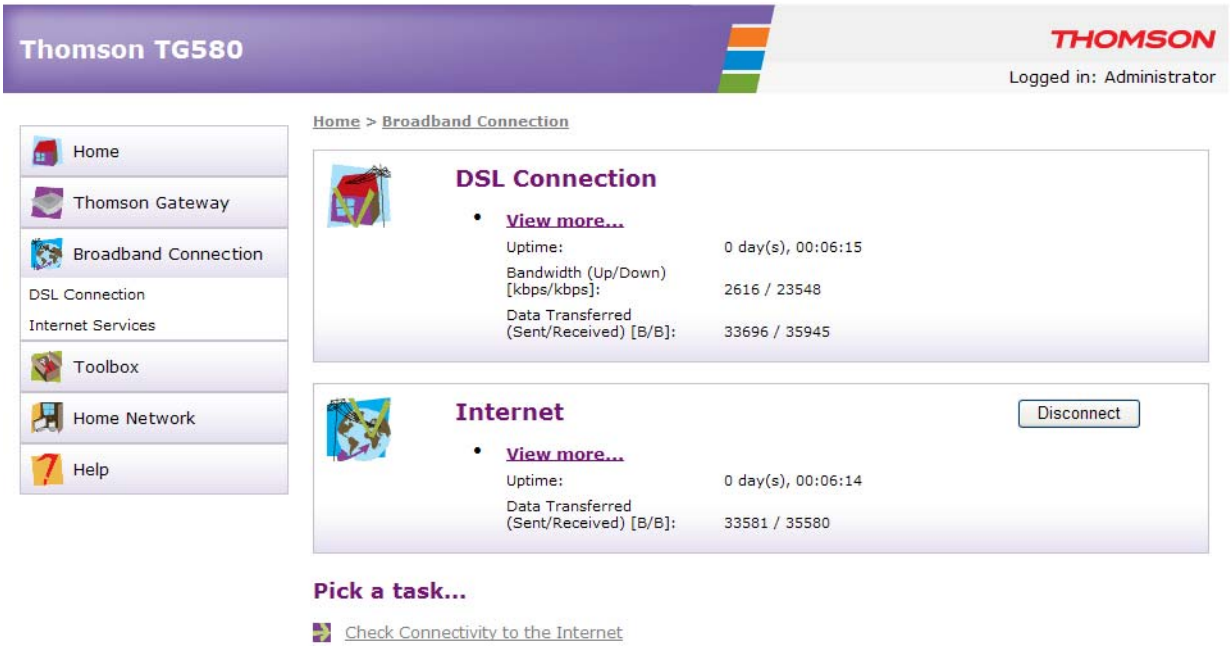
The **Recorded Events** table gives you an overview of the last event logs that have been recorded since the Thomson Gateway was turned on. You can perform the following actions:

- Click **Download** to save the event logs to a location of your choice.
- Click **Clear** to clear the event logs.
- Click **Refresh** to refresh the **Event Logging** page.

6.2 Broadband Connection

The Broadband Connection page

The **Broadband Connection** page gives you a short status overview of the broadband connections and the Internet service(s) configured on your Thomson Gateway.



Click:

- **View more** to see more information on the corresponding broadband connection.
- **Connect/Disconnect** to establish/terminate a dial-up connection.

The Broadband Connection menu

In the **Broadband Connection** menu, you can find the following items:

Click...	To...
Broadband Connection	View all information on the DSL connection configured on your Thomson Gateway.
Internet Services	View basic information on the Internet service(s) configured on your Thomson Gateway.

Tasks

On the **Broadband Connection** page you can carry out following tasks:

- Checking connectivity to the Internet

6.2.1 Broadband Connection

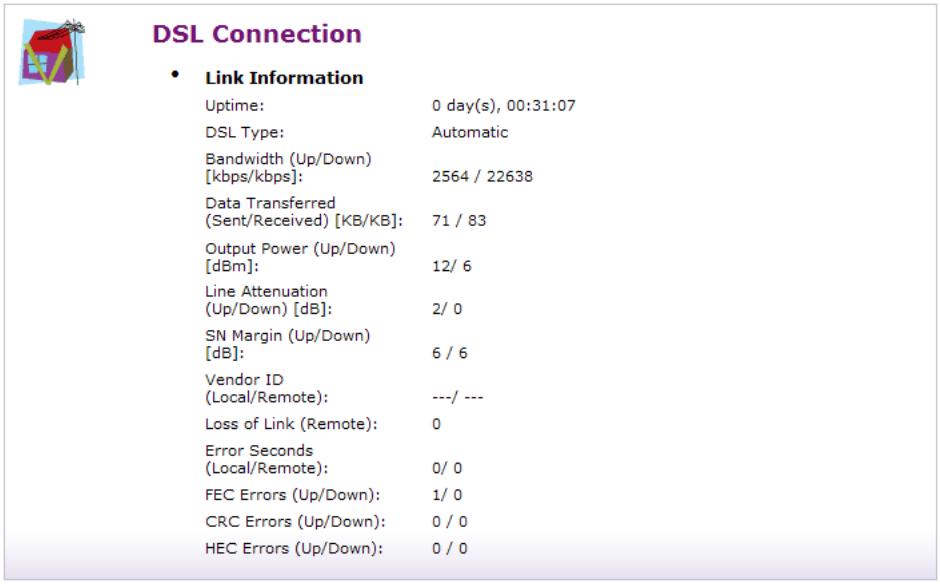
Overview

The **DSL Connection Overview** page displays basic DSL **Link Information**:

- **Uptime:**
  Time since the DSL link is up for this session.
- **DSL Type:**
  Type (modulation) of DSL line.
- **Bandwidth (Up/Down):**
  Available up- and downstream bandwidth in kilobits per second (kbps).
- **Data Transferred (Sent/Received):**
  Total amount of data sent and received during this session in kilobyte (kB).

Details

The **DSL Connection Details** page displays all DSL **Link Information**:



Besides the same information as on the **Overview** page, the following information is also displayed:

- **Output Power (Up/Down)** in dBm
  The Output Power in dBm (up and downstream direction).
- **Line Attenuation (Up/Down)** in dB
  The Line Attenuation in dB (up and downstream direction).
- **SN Margin (Up/Down)**
  The Signal to Noise (SN) margin in dB (up and downstream direction).

- **Vendor ID (Local/Remote)**
  The Vendor ID of the equipment at the local (i.e. the Thomson Gateway) and remote (Central Office) side.
- **Loss of Link (Local/Remote)**
  The number of times "Loss of link" is occurred. This is an indication of how many times the link to the CO is lost on the physical layer. This is displayed for both the local and remote side.
- **Error Seconds (Local/Remote)**
  The time in seconds (accumulated) of error indications occured on the line. This is displayed for both the local and remote side.
- **FEC Errors (Up/Down)**
  The amount of Forward Error Correction (FEC) errors (up and downstream direction).
- **CRC Errors (Up/Down)**
  The amount of Cyclic Redundancy Check (CRC) errors (up and downstream direction).
- **HEC Errors (Up/Down)**
  The amount of Header Error Correction (HEC) errors (up and downstream direction).

6.2.2 Internet Services

Introduction

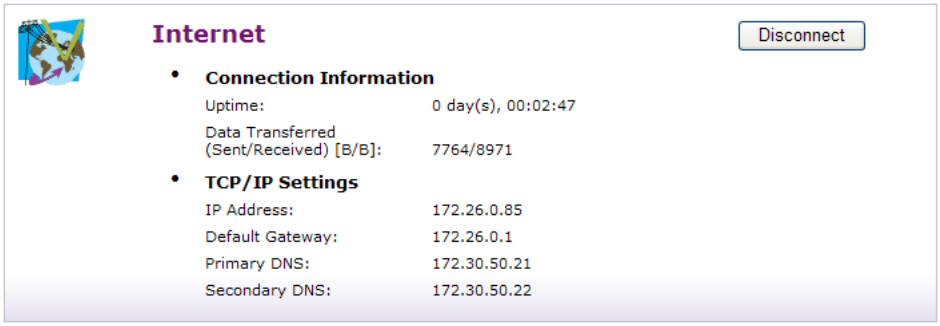
The **Internet Services** page displays the following basic information on the Internet service(s) configured on your Thomson Gateway:

- **Uptime**
- **Data Transferred**

Click **View more** on the corresponding service to view the Internet service settings of this Internet service.

Overview

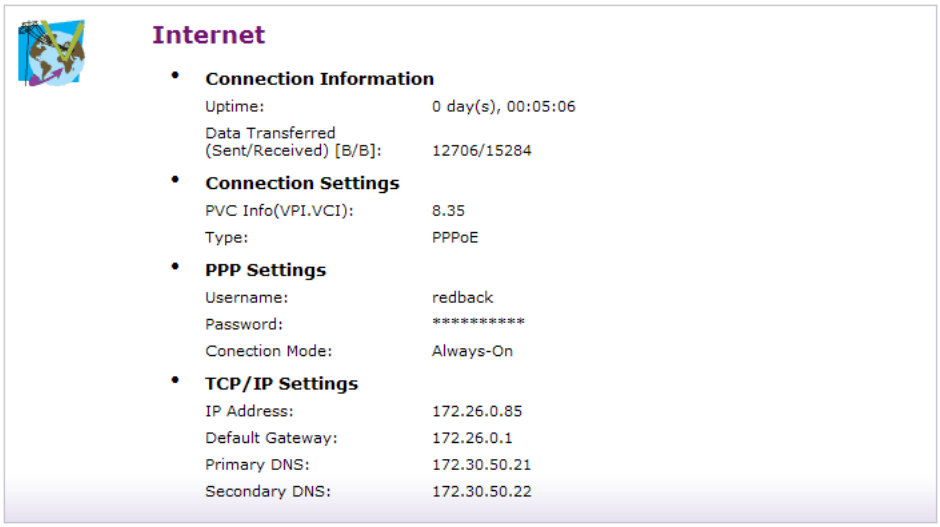
The **Internet Service Settings Overview** page displays the following basic information:



- **Connection Information**:
  - **Uptime**:
    Displays the time since the Internet service is up for this session.
  - **Data Transferred**:
    Displays the total amount of data sent and received during this session in kilobyte (kB).
- **TCP/IP Settings**:
  - **IP Address**:
    Displays the IP address of this Internet connection.
  - **Default Gateway**:
    Displays the IP address of the remote peer of this Internet connection.
  - **Primary DNS** and **Secondary DNS**:
    Displays the IP address of the primary and secondary DNS of this Internet connection.

Details

The **Internet Service Settings Details** page displays all information of this Internet service:



In addition to the information shown on the **Overview** page, the following fields are added:

- **Connection Settings**:
  - **PVC Info (VPI.VCI)**
  - **Type**, either be "**Bridge**", "**PPPoE**", "**PPPoA**" and etc.
- **PPP Settings** (only applicable for PPP connections):
  - **Username** and **Password**:
    Displays the username and password of your Internet account.
  - **Connection Mode**:
    Displays the PPP connection model, either be "**Always-On**", "**On-Demand**" or "**Manual**".

Connecting or disconnecting

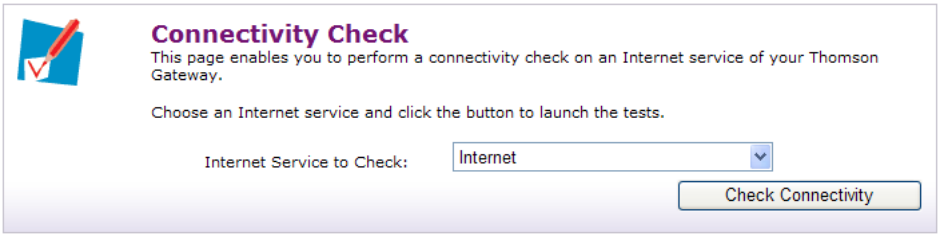
If you configured a dial-up connection, you can establish/terminate the connection by clicking the **Connect**/**Disconnect** button.

Checking connectivity to the Internet

On the **Connectivity Check** page, you can check if your Internet connection is working correctly.

Proceed as follows:

1 In the **Pick a task** list, click **Check connectivity to the Internet.**

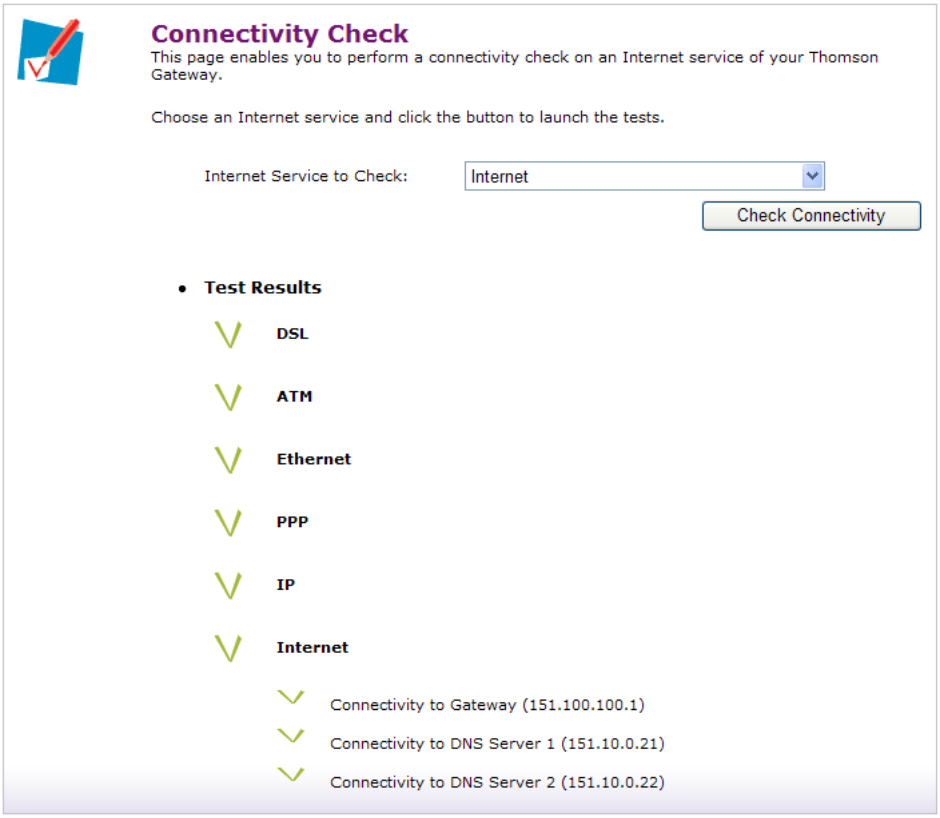


2 In the **Internet Service to Check** list, click the Internet service that you want to check (default setting = Internet).

3 Click **Check Connectivity**. The following items are checked if applicable:

- **DSL line**
- **ATM interface**
- **Ethernet interface**
- **PPP connectivity**

4 The Thomson Gateway lists the test results.

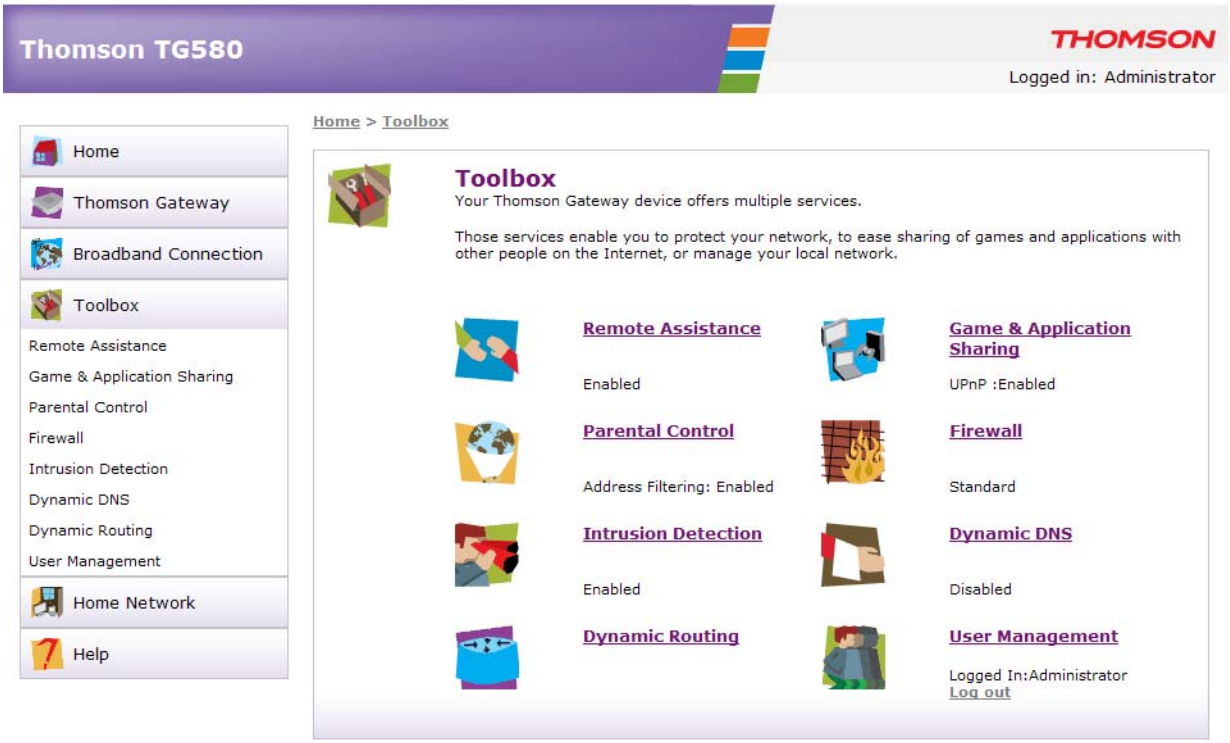


If a test is successful, you will get a green check mark. If a test fails you will get a red cross.

6.3 Toolbox

The Toolbox page

The **Toolbox** page gives you an overview of the available services and their current status. To go to the corresponding Web page of a service, click the applicable service.



The Toolbox Menu

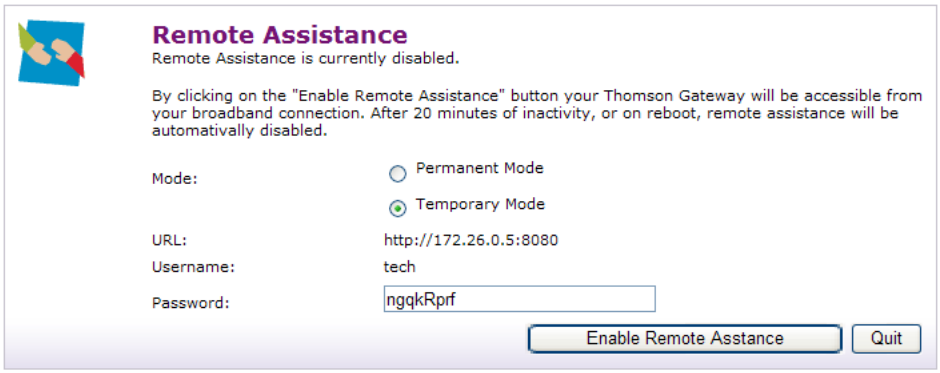
In the **Toolbox** menu, you can find the following items:

Click...	To...
Remote Access/Assistance	Make your Thomson Gateway accessible for remote support (temporary or permenant).
Game & Application Sharing	Share services and games that you run in your private network towards the Internet.
Parental Control	Block/allow access to specific Web sites.
Firewall	Configure the Thomson Gateway Stateful Inspection Firewall.
Intrusion Detection	View the intrusions you are protected against.
Dynamic DNS	Assign a dynamic DNS host name to your broadband connection(s).
Dynamic Routing	Allow the automation of static routing maintenance.
User Management	Manage the users configured on your Thomson Gateway.

6.3.1 Remote Access/Assistance

Introduction

The **Remote Access/Assistance** page allows you to make your Thomson Gateway accessible for remote support. Remote assistance implies one remote assistance session while remote access can be used for multiple remote assistance sessions.



Before you can enable remote assistance, you must be connected to the Internet.

Enabling Remote Access/Assistance

Proceed as follows:

1 Complete and check the following parameters:

- **Mode**:
  - **Permanent Mode (Remote Access)**
    The remote session ends when the remote user ends the session or after restarting your Thomson Gateway.
  - **Temporary Mode (Remote Assistance)**
    The remote session will be automatically disabled, after 20 minutes of inactivity or on reboot.
- **URL**

  A remote user can access your Thomson Gateway via the specified URL.
- **User name** and **Password**

  This user name and password are needed to access your Thomson Gateway remotely. If desired, you can change the automatically generated password in the **Password** text box.

2 Click **Enable Remote Access/Assistance** to pass your parameters to your technical support, in order for them to be able to access your Thomson Gateway.

Once a remote authenticated session started, no other remote sessions can be started on the Thomson Gateway.

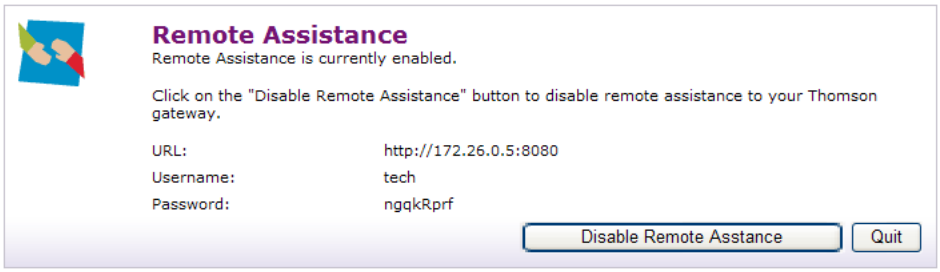
It is now possible for a remote user to access your Thomson Gateway via the specified URL using the provided user name and password.

You can replace the IP address in this URL by the dynamic DNS host name if you enabled and configured dynamic DNS (+ link). For more information, see "6.3.6 Dynamic DNS" on page 70.

Example: https://*141.11.249.150*:51003 can be replaced by https://*dummy.dyndns.org*:51003

Disabling Remote Access/Assistance

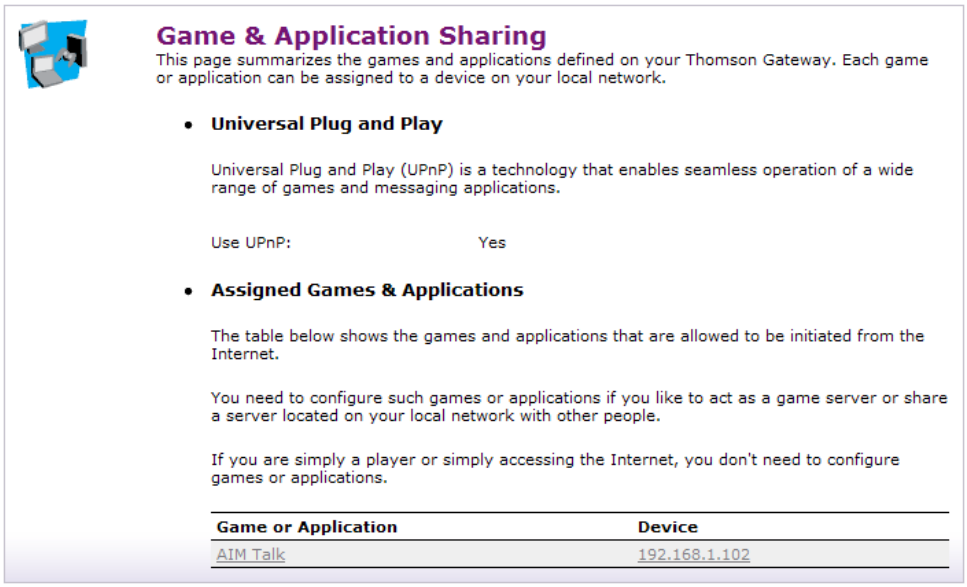
To disable remote access/assistance, click **Disable Remote Access/Assistance**.



6.3.2 Game & Application Sharing

Overview

The **Game & Application Sharing Overview** page consists of the following sections:



- **Universal Plug and Play**:

  Displays Universal Plug and Play settings of your Thomson Gateway.

- **Assigned Games & Applications**:

  Displays an overview of all assigned Games & Applications. These are applications or games installed on a specific local host on your network, for which the Thomson Gateway should accept inbound initiated connections coming from the Internet.

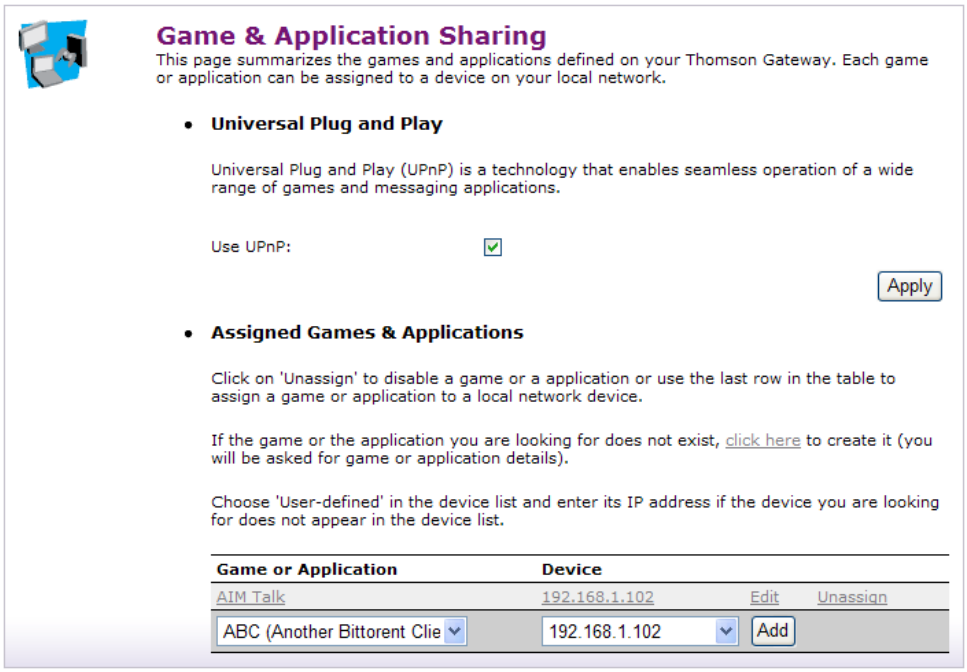
  For each game or application that has been assigned to a host, you can:

  - Click on its name to see its **Game or Application Definition**. For more information, see " Game or application definition" on page 63.
  - Click on the name of the assigned device to see more information about it. For more information, see "6.4.1 Devices" on page 77.

Each game or application is only allowed to be assigned to one computer. The host should be on default port.

Configure

The **Game & Application Sharing Configure** page consists of the following components:



- **Universal Plug and Play:**

  This section allows you to enable/disable UPnP on your Thomson Gateway.

  UPnP provides NAT-Traversal: UPnP aware applications on a computer will automatically create Hyper-NAT entries on the Thomson Gateway for incoming traffic on the protocol ports this type of traffic needs. As a consequence these applications are able to traverse the Thomson Gateway without the need for extra and manual configuration.

  To enable/disable UPnP, proceed as follows:

  1. Select/clear the **Use UPnP** check box.
  2. Click **Apply**.

  UPnP is an architecture for transparent peer-to-peer connectivity of computers, intelligent appliances, and (wireless) devices. It enables seamless operation of a wide range of games and messaging applications.

- **Assigned Games & Applications:**

  This section allows you to:

  - Assign a game or application to a specific network device.

    Proceed as follows:

    1. In the **Game or Application** list, click the game or application that you want to assign.
    2. In the **Device** list, click the device that you want to assign the game or application to.
    3. Click **Add**.

  - Edit an existed assignment.

    Proceed as follows:

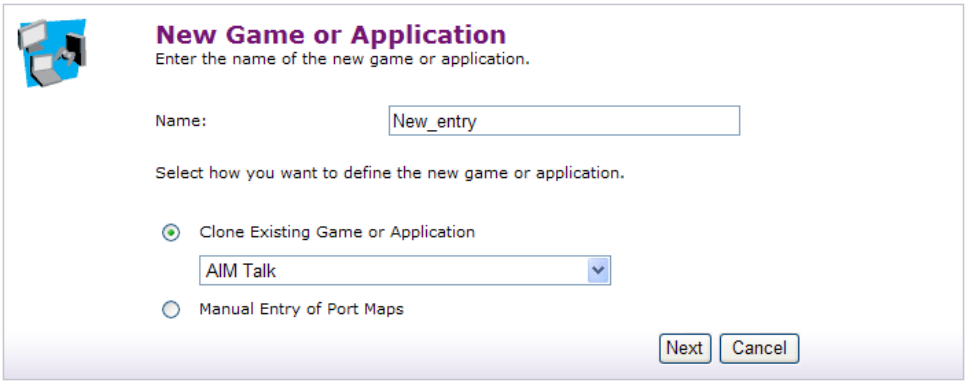
    1. Click **Edit** next to the game or application that you want to edit.
    2. In the **Device** list, click the device that you want to assign the game or application to.
    3. Click **Apply**.

  - Delete the assignment of the game or application to a local host, click **Unassign** next to the game or application you want to unassign.

Creating a new game or application

Proceed as follows:

1. In the **Pick a task** list, click **Create a new game or application**.
2. The **New Game or Applications** page appears:



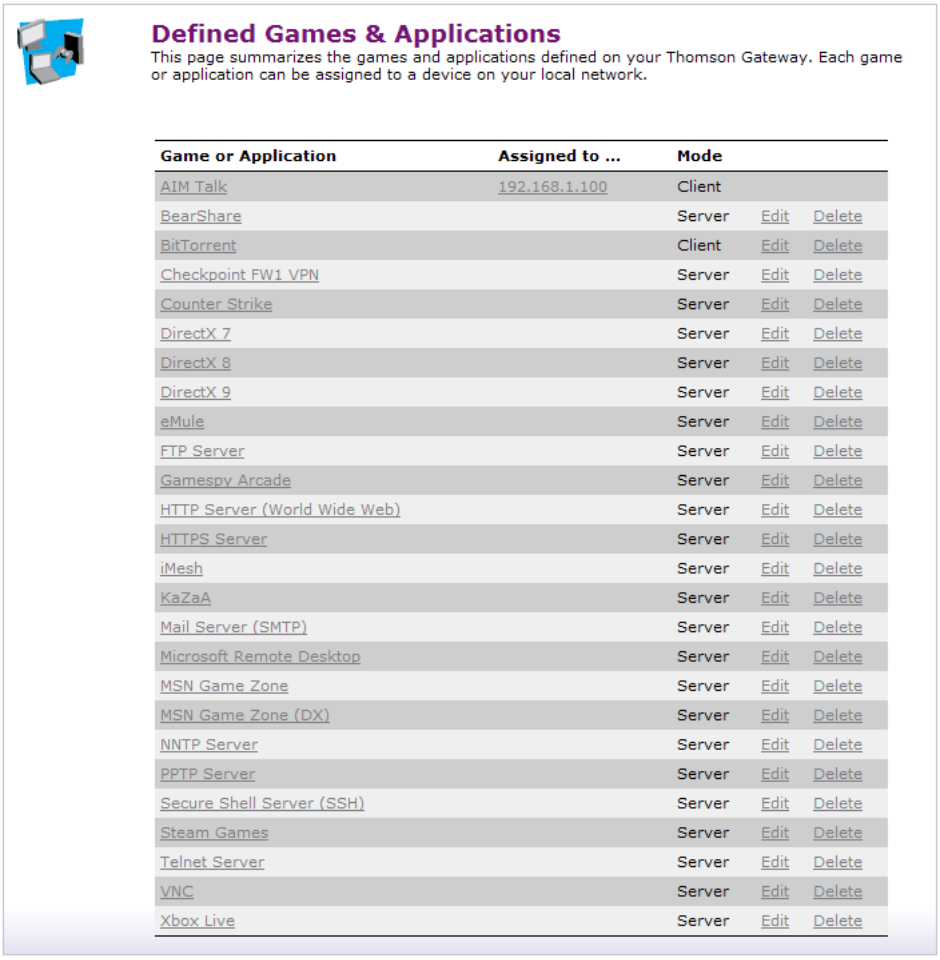
3. In the **Name** box, type the name of the game or application.
4. Click:
   - **Clone Existing Game or Application**, if you want to start from the port mappings of an existing game or application.
   - **Manual Entry of Port Maps**, if you want to configure the port mapping for this game or application manually.
5. Click **Next**.
6. The Thomson Gateway creates the game or application sharing entry and guides you to the **Game or Application Definition Configure** page to configure the port mappings for this game or application. For more information, see " Game or application definition" on page 63.
7. Enter each necessary port mapping in the **Game or Application Definition** section.
8. Click **Add**.

Defined games & applications

Proceed as follows:

1 In the **Pick a task** list, click **Modify a game or application**.

2 The **Defined Games & Applications** page appears:



Defined Games & Applications

This page summarizes the games and applications defined on your Thomson Gateway. Each game or application can be assigned to a device on your local network.

Game or Application	Assigned to ...	Mode		
AIM Talk	192.168.1.100	Client		
BearShare		Server	Edit	Delete
BitTorrent		Client	Edit	Delete
Checkpoint FW1 VPN		Server	Edit	Delete
Counter Strike		Server	Edit	Delete
DirectX 7		Server	Edit	Delete
DirectX 8		Server	Edit	Delete
DirectX 9		Server	Edit	Delete
eMule		Server	Edit	Delete
FTP Server		Server	Edit	Delete
Gamespy Arcade		Server	Edit	Delete
HTTP Server (World Wide Web)		Server	Edit	Delete
HTTPS Server		Server	Edit	Delete
iMesh		Server	Edit	Delete
KaZaA		Server	Edit	Delete
Mail Server (SMTP)		Server	Edit	Delete
Microsoft Remote Desktop		Server	Edit	Delete
MSN Game Zone		Server	Edit	Delete
MSN Game Zone (DX)		Server	Edit	Delete
NNTP Server		Server	Edit	Delete
PPTP Server		Server	Edit	Delete
Secure Shell Server (SSH)		Server	Edit	Delete
Steam Games		Server	Edit	Delete
Telnet Server		Server	Edit	Delete
VNC		Server	Edit	Delete
Xbox Live		Server	Edit	Delete

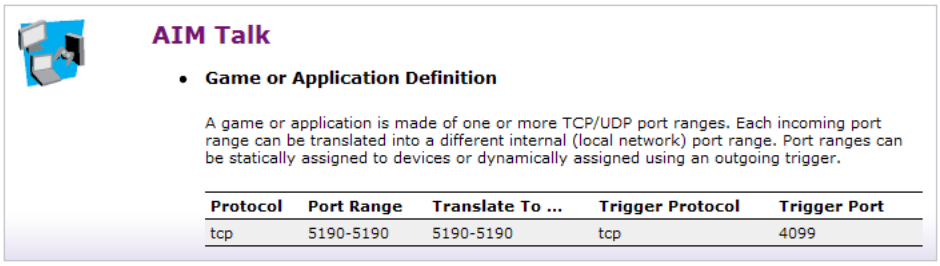
This page gives you an overview of the games and applications defined on your Thomson Gateway. Each game or application can be assigned to a device on your local network.

If you want to:

- View the definition of a game or application, click on its name. For more information, see ” Game or application definition”.
- View information about a device assigned to a game or application, click on its name. For more information, see ”6.4.1 Devices” on page 77.
- Change the name or port mappings of a game or application, click the **Edit** link of the game or application.
  The Thomson Gateway guides you to the **Game or Application Definition Configure** page to configure the name and/or port mappings for this game or application. For more information, see ” Game or application definition” on page 63.
- Remove a game or application from your Thomson Gateway, click the **Delete** link of the game or application.

Game or application definition

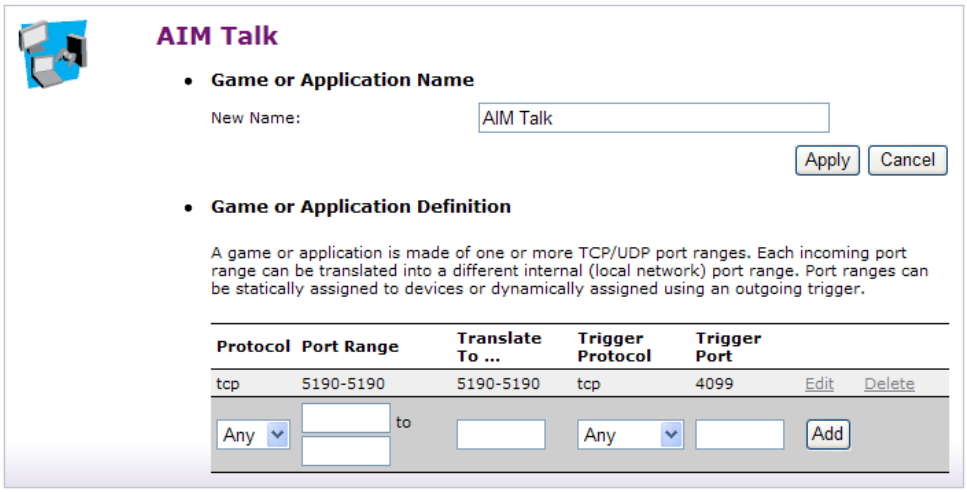
On the **Game or Application Definition Overview** page, you can find an overview of the port mappings used to allow this game or application to be initiated from the Internet.



A game or application definition consists of one or more TCP/UDP port ranges. Each incoming port range can be translated into a different internal (local network) port range. Port ranges can be statically assigned to devices or dynamically assigned using an outgoing trigger.

Consult the user guide or support pages of your game or application to know which ports are being used by this application.

The **Game or Application Definition Configure** page allows you to:



Under **Game or Application Name**:

- Change the name of the game or application, proceed as follows:
  1. Fill in the **New Name** field.
  2. Click **Apply**.

Under **Game or Application Definition**:

- Add a port mapping, proceed as follows:
  1. In the **Protocol** list, click the protocol the game or application uses. **Any** is the default value meaning both UDP and TCP are used.
  2. In the **Port Range** box, type the port range the game or application uses.

     The start port is mandatory. You can leave the end port blank when necessary. This results in a port range equal to one port being the the start port number.
  3. In the **Translate To** box, type the start port of the range to which the Thomson Gateway has to translate the ports specified under **Port Range**. If you leave this box empty the same range is used as for the **Port Range**.

4 If you want to make a dynamic translation rule (optional) you must specify a **Trigger Protocol** and **Trigger Port**.

As soon as the Thomson Gateway receives outgoing traffic on this trigger port, it will activate this translation rule. The mapping will be added dynamically in an internal table of the device and will exist only for the lifetime of this connection.

5 Click **Add**.

- Edit a port mapping, proceed as follows:
  1 Click **Edit** on the port mapping you want to edit.
  2 Make the necessary changes.
  3 Click **Apply**/**Add**.
- Remove a port mapping:

  Click **Delete** on the port mapping you want to remove.

It is not possible to edit/delete the game or application that has been assigned to a computer.

Always make sure that the assigned IP address is unique in the network.

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6.3.3 Parental Control

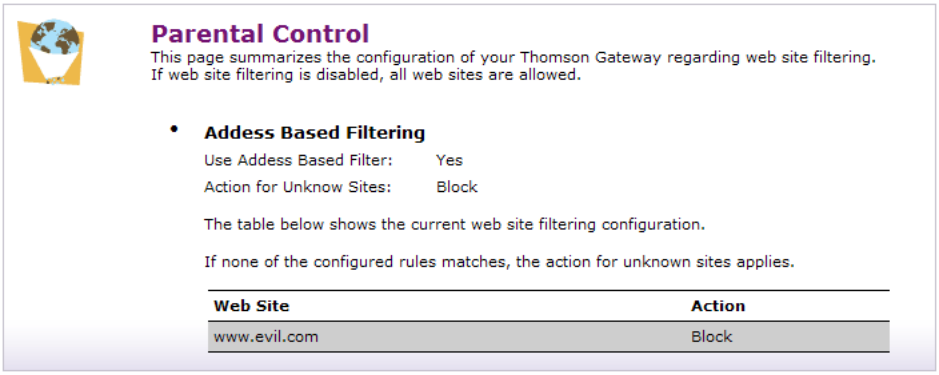
Introduction

Parental Control can be done:

- Based on the Web site's address (URL), also known as address-based filtering.

Overview

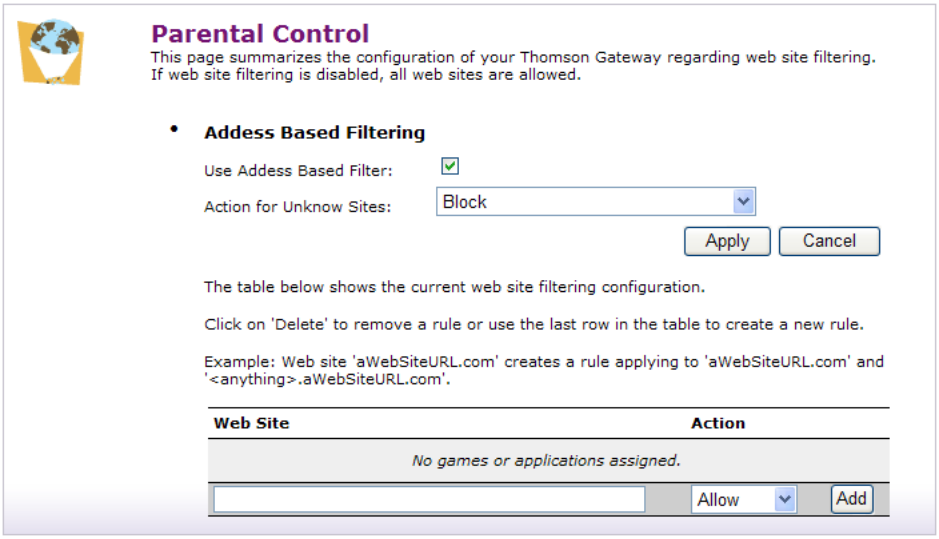
The **Overview** page displays the current parental control settings.



- The status of **Address Based Filter**, being enabled (**Yes**) or disabled (**No**).
- What action has to be carried out for unknown sites in case address based filtering is enabled: Those sites are either **Allowed** or **Blocked**.
- An overview of all of the address based filtering rules in case address based filtering is enabled. The table informs whether a specific web site is **Allowed** or **Blocked** .

Configure

On the **Configure** page, you can restrict access to specific pages based on their URL.



You are allowed to:

- Enable/disable Address Based Filtering, proceed as follows:

1. Select/clear the **Use Address Based Filter** check box.
2. Click **Apply**.

If your administrator account is configured as default user, make sure you configure a password for this account or change the default user. Otherwise any user on your local network can browse to your Thomson Gateway to disable your filtering rules.

For more information, see also "6.3.8 User Management" on page 73 and " Adding a new user" on page 75.

- Add Address Based Filtering rules:

  Before you can perform the following actions, make sure that Address Based Filtering is enabled.

  - Block all Web sites and allow some Web sites, proceed as follows:
    1. In the **Action for unknown sites** list, select **Block**.
    2. Click **Apply**.
    3. In the **Web Site** text box type the URL of the Web site you want to allow.
    4. In the **Action** list, select **Allow**.
    5. Click **Add**.
    6. Repeat steps 3 to 5 for every URL you want to allow.
  - Allow all Web sites and block some Web sites, proceed as follows:
    1. In the **Action for unknown sites** list, select **Allow**.
    2. Click **Apply**.
    3. In the **Web Site** text box type the URL of the Web site you want to block.
    4. In the **Action** list, select **Block**.
    5. Click **Add**.
    6. Repeat steps 3 to 5 for every URL you want to block.
- Edit or delete Address Based Filtering rules:

  To delete or edit a address based filtering rule, click respectively **Edit** or **Delete** after the rule you want to edit or delete.

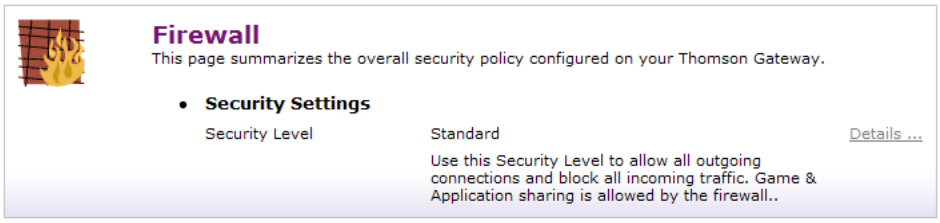
6.3.4 Firewall

Introduction

The firewall allows you to secure traffic from, through and to the Thomson Gateway. There are different security levels, depending on the degree of security you need.

Overview

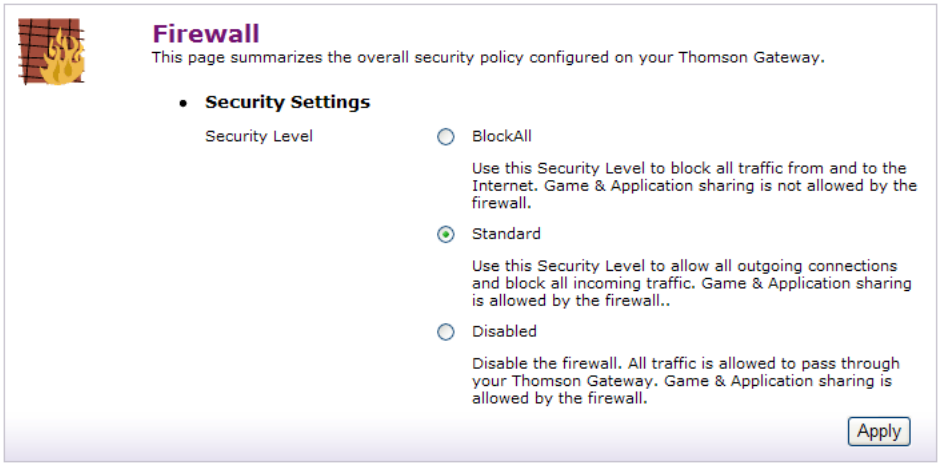
The **Overview** page summarizes the overall security policy configured on your Thomson Gateway.



To view the details of the active security level, click **Details...** . For more information, see " Security level settings" on page 68.

Configure

On the **Configure** page, you can select one of the predefined security levels of the Thomson Gateway.



- To activate a firewall security level, proceed as follows:
  1. In the **Security Level** list, select a security level.
  2. Click **Apply**.

Security Levels

Following describes all of the predefined security levels:

- **BlockAll**:
  All traffic from and to the Internet is blocked. Game and Application Sharing is not allowed by the firewall.

  Although BlockAll should block all connections, some mandatory types of traffic such as DNS will still be relayed between LAN and WAN by the Thomson Gateway.

- **Standard**:
  All outgoing connections are allowed. All incoming connections are blocked, except for inbound connections assigned to a local host via Game and Application Sharing.
- **Disabled**: (This is the default firewall level)
  All in- and outgoing traffic is allowed to pass through your Thomson Gateway, including Game and Application Sharing.

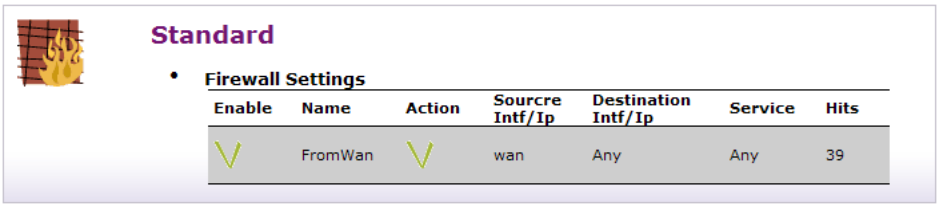
The firewall levels only have impact on traffic passing through your Thomson Gateway. This means that the handling of traffic directly appointed from and to Thomson Gateway is independent of the selected firewall level. The Thomson Gateway itself is always protected, even if you disable the firewall.

Protocol checks will be performed on all accepted connections, irrespective of the chosen level.

It is not possible to deactivate the firewall completely via the GUI.

Security level settings

The **Security Level Settings** page displays the overview of the different firewall rules of the active security level.



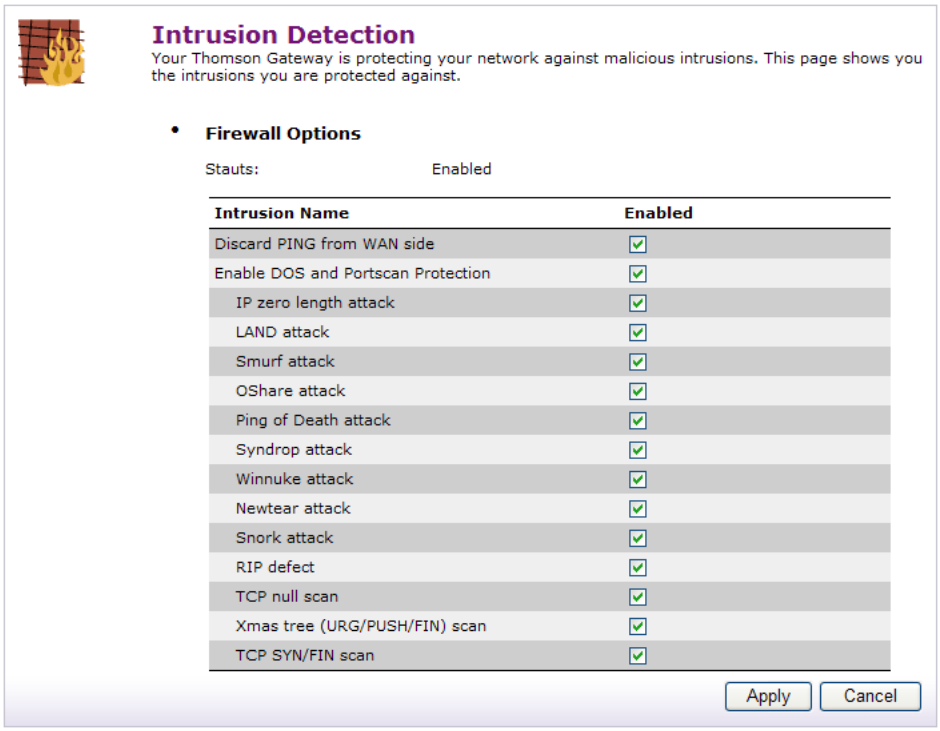
Under **Firewall Settings**, you can find following details:

- The status of the firewall rule: either **enabled** or **disabled**.
- The **Name** of the rule.
- The **Action** that is applied on the traffic when the rule is valid.
  Traffic blocked is indicated with a red cross, while traffic allowed with a green check mark.
- The **Source** and **Destination interface** or **IP address** (range) to which the rule applies.
- The protocol or Thomson Gateway **Service** (Any/ftp/dns...) for which the rule applies.
- The number of **Hits** (number of times that the rule was applied to traffic).

6.3.5 Intrusion Detection

Introduction

Your Thomson Gateway protects your network against malicious intrusions. The **Intrusion Detection** page shows you the intrusions you are protected against.



Enabling Intrusion Detection

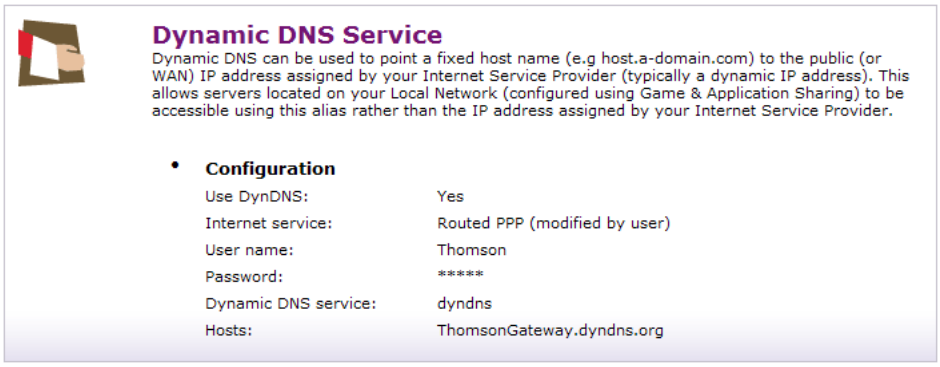
Proceed as follows:

1. Under **Firewall Options**, select the check box(es) of the **Intrusion Name**(s) you want to block.
2. Click **Apply**.

6.3.6 Dynamic DNS

Overview

The **Dynamic DNS Service Overview** page displays the configuration of dynamic DNS.

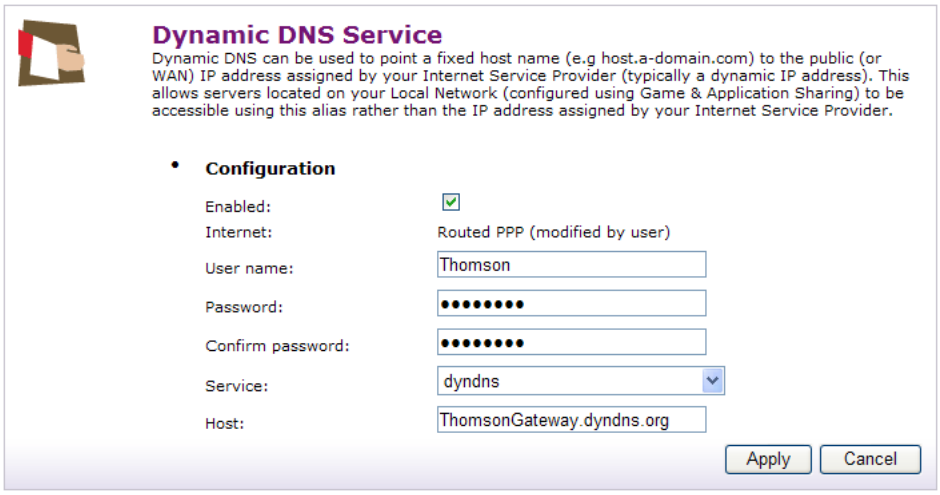


Under **Configuration**, the following items are displayed:

- **Use DynDNS**:
  Informs whether the service is enabled (**Yes**) or not (**No**).
- **Internet Service**:
  Informs the Interface on which the dynamic DNS service is enabled.
- **User name**:
  The user name you are registered with at the dynamic DNS service provider.
- **Password**:
  The password you are registered with at the dynamic DNS service provider.
- **Dynamic DNS service**:
  The dynamic DNS service that is active.
- **Host(s)**:
  The hostname(s) which will be redirected to you current IP address (and informs their update status).

Configure

On the **Dynamic DNS Service Configure** page, you can assign a dynamic DNS host name to an Internet connection.



Before you start configuring the dynamic DNS service, you have to create an account at a dynamic DNS service provider of your choice, for example:

- www.dyndns.com
- www.no-ip.com
- www.dtdns.com
- A dynamic DNS service provided by your ISP.

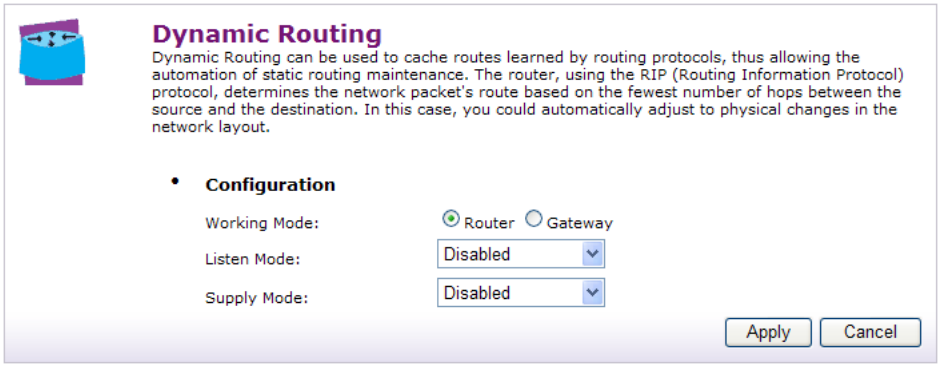
To configure the dynamic DNS service, proceed as follows:

1. Select the **Enabled** check box.
2. Type the **Username** and **Password** of your dynamic DNS service account.
3. In the **Service** list, click your dynamic DNS service provider.
4. In the **Host** text box, type the host name you want to assign to this interface (for example Thomson Gateway.dyndns.org), as registered at the dynamic DNS service provider.
5. Click **Apply**.

6.3.7 Dynamic Routing

Introduction

Dynamic Routing can be used to cache routes learned by routing protocols, thus allowing the automation of static routing maintenance. The Thomson Gateway, using the RIP (Routing Information Protocol) protocol, determines the network packet's route based on the fewest number of hops between the source and the destination. In this case, you can allow the Thomson Gateway to automatically adjust its ranking to physical changes in the network layout.



Enabling Dynamic Routing

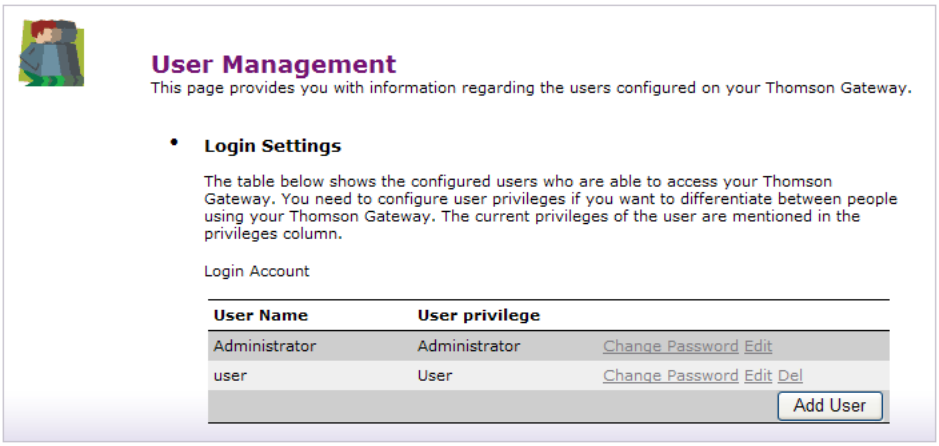
Proceed as follows:

1. Choose the following parameters:
   - **Working Mode**:
     Choose the function mode of the Thomson Gateway: working as either a **Router** or a **Gateway**.
   - **Listen Mode**:
     Enable this mode to allow RIP server to receive routing information and updating the routing information. You can choose among the three types of Routing Information Protocol: **RIP1**, **RIP2** or **Both(RIP1+RIP2)**.
   - **Supply Mode**:
     Enable this mode to allow RIP server to send routing information and updating the routing information. You can choose among the three types of Routing Information Protocol: **RIP1**, **RIP2** or **Both(RIP1+RIP2)**.
2. Click **Apply**.

6.3.8 User Management

Introduction

The **User Management** page gives you an overview of the currently configured users and their privileges.



On this page, you can:

- Change password:
  Click **Change Password** to change the password of the selected user account. For more information, see ” Changing the password”.
- Edit a user.
  Click **Edit** to change a user account. For more information, see ” Editing a user”.
- Add a user.
  Click **Add User** to create a new user account. For more information, see ” Adding a new user”.
- Delete a user.
  Click **Delete** to remove a user.

User Types

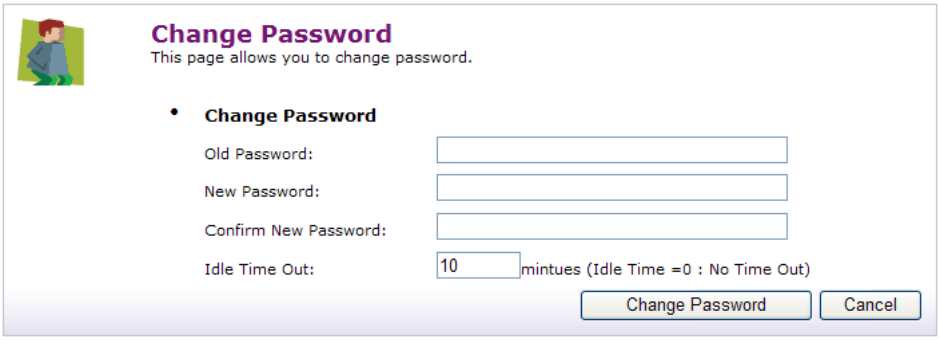
The table below shows the different types of users and their privileges:

User Type	Privileges
Administrator	This user can perform any service via any access channel from LAN or Local origin only.
Poweruser	This user has read access to the GUI (Service/overview pages) via HTTP or HTTPS access channel from LAN origin only.
User	This user has read access to the limited GUI (Overview pages/part of the services in Toolbox) via HTTP or HTTPS access channel from LAN origin only.

Changing the password

Proceed as follows:

1 Click **Change Password** after the user you want to edit on the **User management** page, the **Change Password** page appears:



2 Fill in the **Old Password** box with the current password of the user account your are currently logged on with.

By default no password is defined. In this case, leave the **Old Password** box blank.

3 Fill in the **New Password** and **Confirm New Password** boxes with the desired new password for the user account your are currently logged on with.

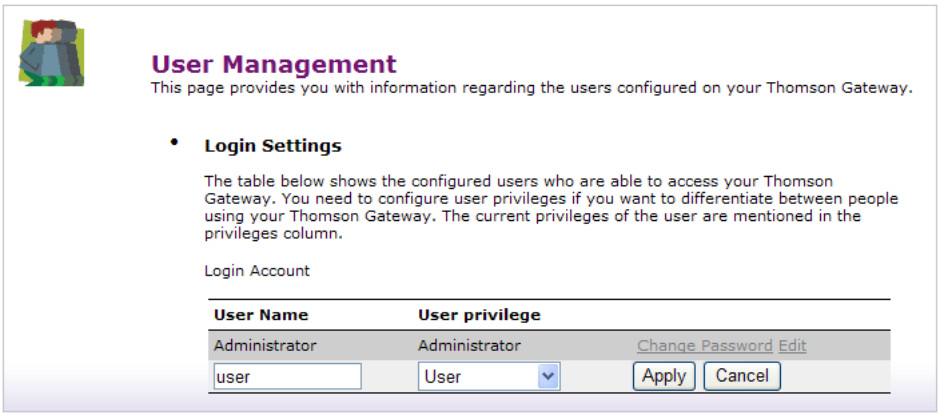
You can configure an account with a blank password by leaving the **New Password** and **Confirm New Password** boxes blank.

4 Click **Change Password** to confirm.

Editing a user

Proceed as follows:

1 Click **Edit** after the user you want to edit on the **User management** page, the following page appears:



2 Edit the user name in the **User Name** textbox.

3 Select the administration right from the **User privilege** dropdown list.

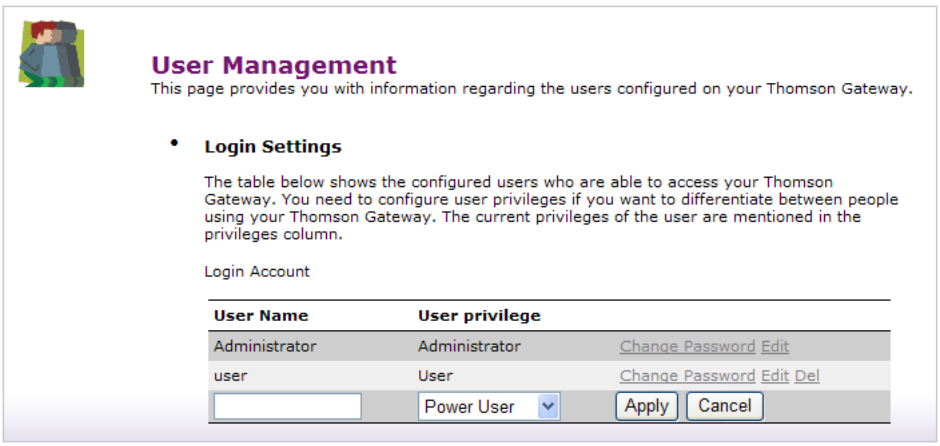
4 Click **Apply**.

Adding a new user

Proceed as follows:

You can only add users with less than or equal administration rights as yourself.

1 On the **User Management** page, click Add User, the following page appears:



2 In the **Login Account** table**,** you can configure:

- The **Name** of the new user.
- The **User Privileges** of the new user.

3 Click **Apply** to confirm.

Switching to another user

Proceed as follows:

1 In the **Pick a task** list, click **Switch to another user.**

A pop-up window appears:

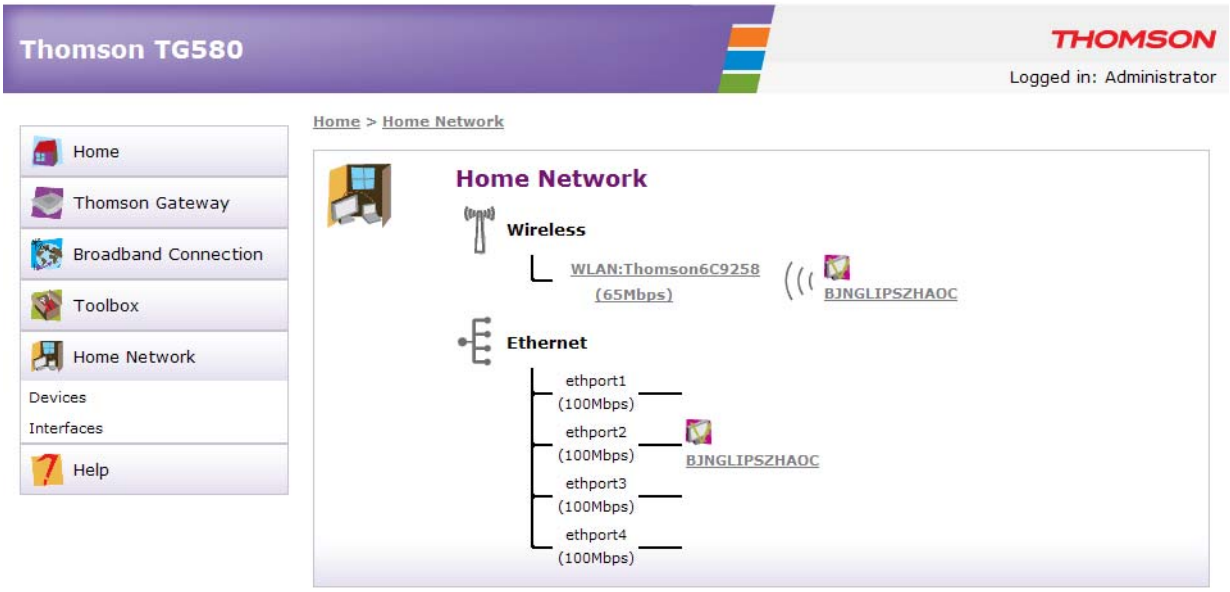
2 Fill in the user name of the user account you want to switch to and its corresponding password.

3 Click **OK**.

6.4 Home Network

The Home Network page

The **Home Network** page summarises your Thomson Gateway network configuration (all interfaces and detected devices).



You can find an overview of the following interfaces:

- Wireless (only in case of a WLAN)
- Ethernet

The detected devices and interfaces are indicated with a corresponding icon.

The Home Network menu

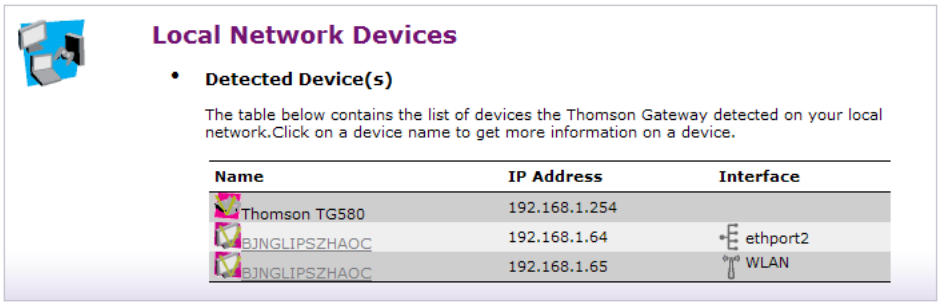
In the **Home Network** menu, you can find the following items:

Click...	To...
Devices	View/configure the devices detected on your local network.
Interfaces	View/configure the interfaces that are available on your Thomson Gateway.

6.4.1 Devices

Overview

The **Local Network Devices Overview** page summarises all devices that are connected to the Thomson Gateway network.



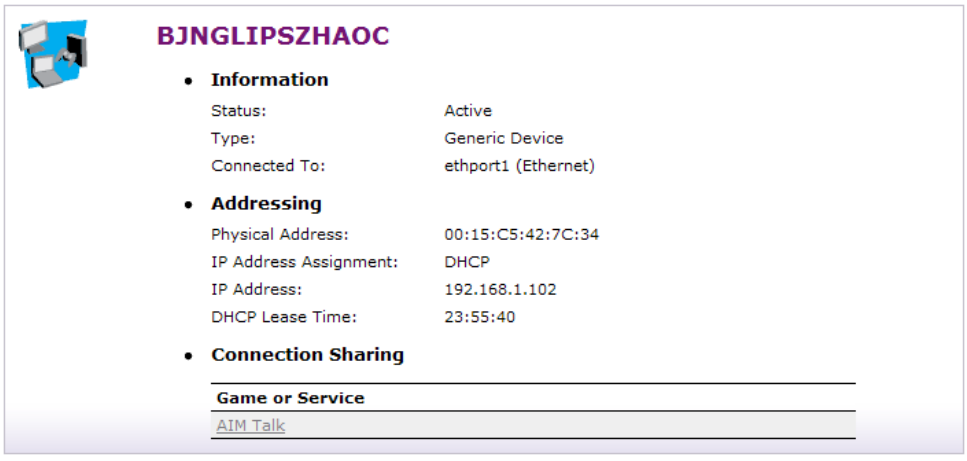
Click on a device name to get more information on a specific device.

The first detected device in the list is the Thomson Gateway itself.

Previously connected devices that are currently not connected are displayed with a blue background.

Device settings

The **Device Settings** page displays the following parameters:



- Under **Information:**
  - **Status:**
    Displays whether the device is currently connected to the Thomson Gateway network or not.
  - **Type:**
    Displays the device type (default: generic device).
  - **Connected To:**
    Displays the interface to which the device is currently connected.
- Under **Addressing:**

- **Physical Address**:
  Displays the MAC address of the device.
- **IP Address Assignment**:
  Displays whether the device is using a static or dynamic IP address.
- **IP Address**:
  Displays the IP address of the device.
- **DHCP Lease Time** (if applicable):
  Displays the time for which the client can use this IP address.

- Under **Connection Sharing**:

  You can view the games or services that are currently assigned to this device. Click the name of the game or service to view the used port mappings (For more information, see " Game or application definition" on page 63).

Assigning the public IP address of a connection to a device

You can assign the public IP address of your Internet Connection(s) to a specific device on your local network. You might want to do this if:

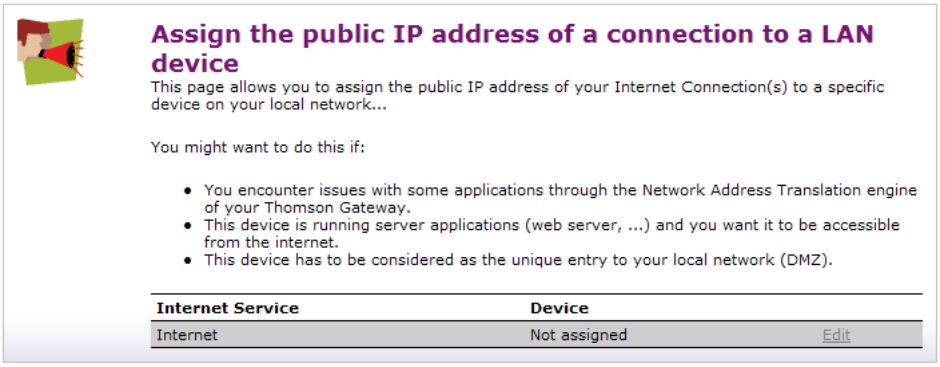
- You encounter issues with some applications through the Network Address Translation engine of your Thomson Gateway.
- This device is running server applications (Web server, ...) and you want it to be accessible from the Internet.

  You can also achieve this by creating a port mapping for the specified server, as described in "6.3.2 Game & Application Sharing" on page 59.
- This device has to be considered as the unique access point to your local network (DMZ).

Be aware that the device to which you assign the public IP address will lose all security offered by the Thomson Gateway.

Proceed as follows:

1. In the **Pick a task** list, click **Assign the public IP address of a connection to a device**.



2. Click the **Edit** link of your Internet connection.
3. In the **Device** list, select the device you want to assign the public address to and click **Apply**.
4. Release and renew the IP address of the device.

6.4.2 Interfaces

Introduction

The **Interfaces** page gives you an overview of the interfaces available on your Thomson Gateway.

- Viewing and configuring **LAN interface**

  If you want to know more about the network settings of the LAN interface, click on **LocalNetwork**. For more information, see " Interface Settings" on page 79.

- Viewing and configuring **Wireless Access Point**

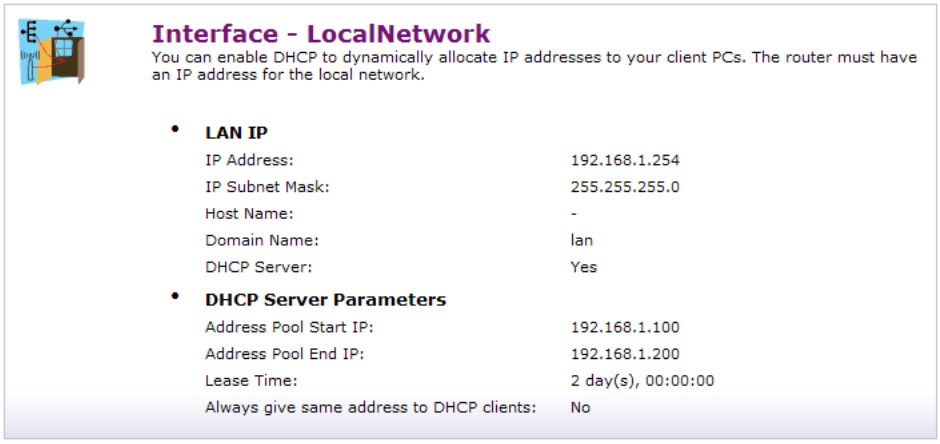
  To view and configure your wireless access point under **LocalNetwork**, click your wireless access point.

  The wireless Access Point has the following format: "WLAN: " + Network Name (or SSID)", for example "WLAN: Thomson1ABC23".

  For more information, see " Wireless Access Point Settings" on page 81.

Interface Settings

The **Interface settings Overview** page gives you an overview of the current settings of the interface:



Under **Lan IP**:

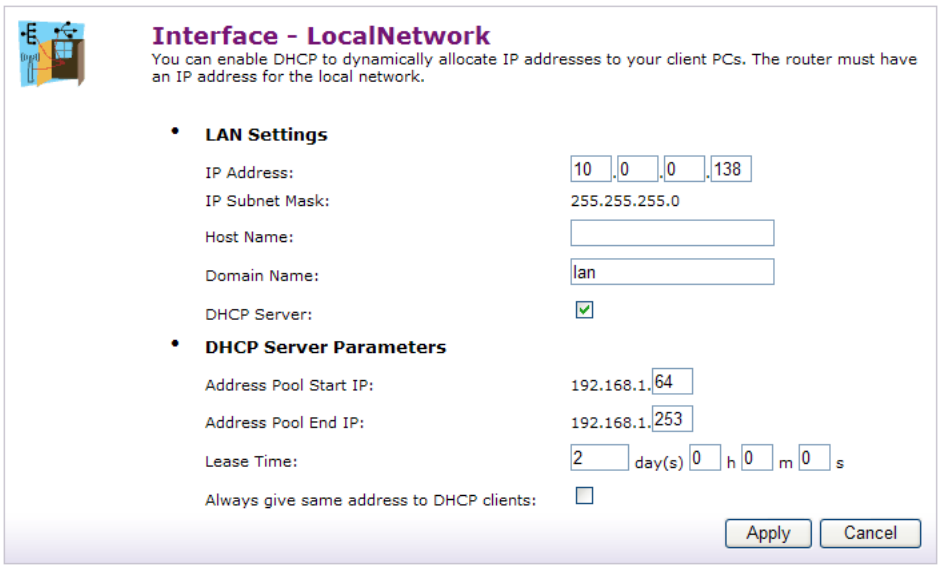
- **IP Address:**
  Displays the IP addresses configured on the interface.
- **IP Subnet Mask:**
  Displays the subnet mask of the DHCP server's address pool.

- **Host Name**:
  Displays the host name for the local network.
- **Domain Name**:
  Displays the domain name you specified.
- **DHCP Server**:
  Indicates the DHCP server is enabled (**Yes**) or disabled (**No**).

Under **DHCP Server Parameters**:

- **Address Pool Start IP**:
  The start IP address of the DHCP server's address pool.
- **Address Pool End IP**:
  The end IP address of the DHCP server's address pool.
- **Lease Time**:
  The time for which the DHCP client is allowed to use the assigned IP address.
- **Always give same address to DHCP clients**:
  If you enabled this, the lease time will be automatically set to **Infinite**.

The **Interface settings Configure** page allows you to:

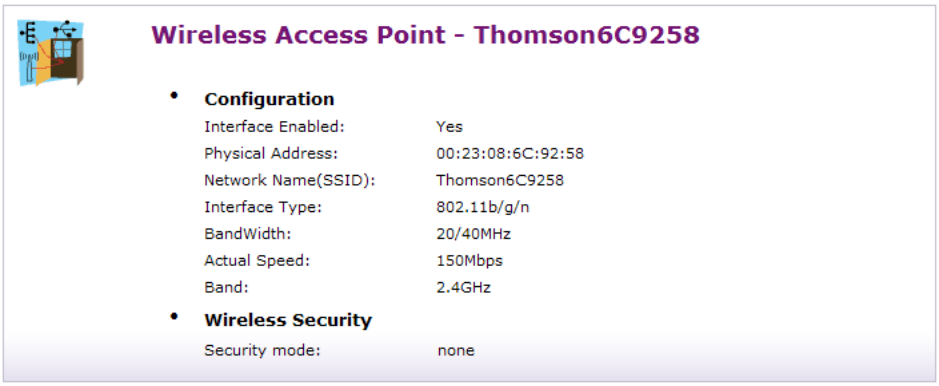


- Under **LAN IP** :
  - Type the **IP Address** of your choice (for example 10.0.0.138) in the text box.
  - Specify the **Host Name** and **Domain Name** in the text box.
  - Select/clear the **DHCP Server** check box to enable/disable DHCP Server on the interface.
- Under **DHCP Server Parameters**:
  - Type the **Address Pool Start/End IP** of your choice in the text boxes.
  - Specify a **Lease Time** in the text boxes.
  - Select the **Always give same address to DHCP clients** check box if you want to make sure that a DHCP client always gets the same DHCP lease IP address..

Click **Apply** to save these settings.

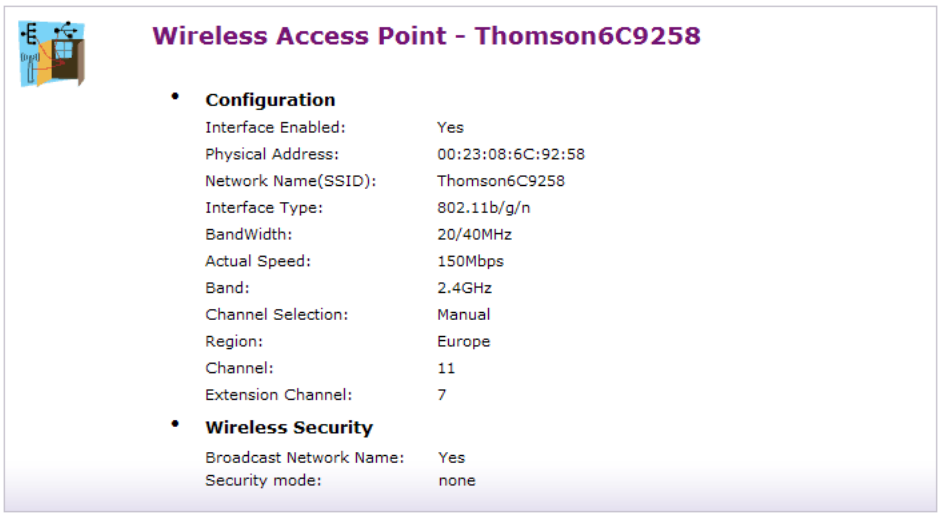
Wireless Access Point Settings

The **Wireless Access Point Overview** page displays basic configuration information.



- Under **Configuration:**
  - **Interface Enabled:**
    Indicates whether the wireless interface is enabled (**Yes**) or disabled (**No**).
  - **Physical Address**:
    Displays the MAC address of your Thomson Gateway's wireless access point interface.
  - **Network Name (SSID)**:
    Displays the Network Name or the SSID of your wireless network.
  - **Interface Type**:
    Displays one of the following interface types (supported interface types depend on Thomson Gateway variant):
    - 802.11b/g
    - 802.11b/g/n
  - **BandWidth**:
    The maximum available bandwidth in both up- and downstream direction.
  - **Actual Speed**:
    Displays the current maximum transmission speed.
  - **Band**
    Displays the band in which your Wireless Access Point operates.
- Under **Security:**
  - **Security Mode**:
    Displays the encryption method used by your wireless network.

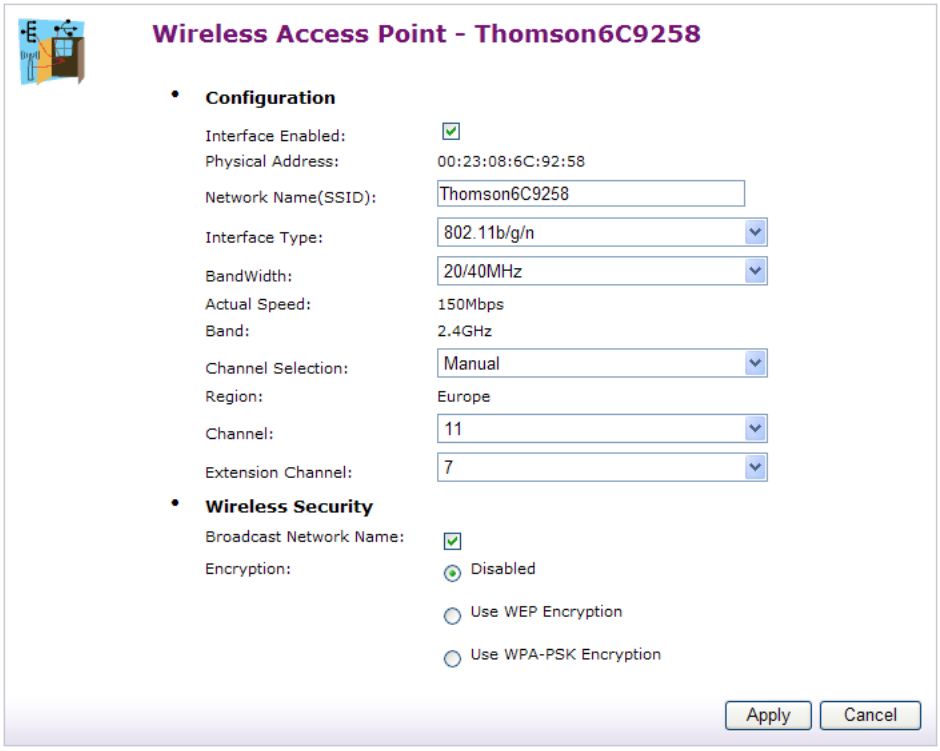
The **Wireless Access Point Details** page displays all of the available configuration information.



Besides the same information as on the **Overview** page, the following fields are available:

- Under **Configuration:**
  - **Channel Selection**:
    Displays whether you select a fixed channel yourself (**Manual**)or the Thomson Gateway selects a channel for you (**Auto**).
  - **Region**:
    Displays your regulatory region.
  - **Channel**:
    Displays the channel that is currently used by the Access Point (AP).
  - **Extension Channel**:
    Displays the secondary channel that is used to send and receive data.
- Under **Wireless Security**:
  - **Broadcast Network Name**:
    Indicates whether your Network Name is broadcasted or not.

On the **Wireless Access Point Configure** page, you can change the configuration details displayed on the **Details** page.



Under **Configuration**:

- **Interface Enabled:**
  To enable the wireless access point, select the check box.
- **Physical Address**:
  The physical address or MAC address of the wireless access point (your Thomson Gateway) is static and can not be configured.
- **Network Name (SSID)**:
  The network name or SSID of your wireless LAN is by default the SSID of your Thomson Gateway as mentioned on a label. You can change the name of the SSID by typing a new name in the text box.
- **Interface Type**:
  The interface type is the specific wireless standard that must be applied in your wireless LAN. This can either be (supported interface types depend on Thomson Gateway variant):
  - 802.11b/g
    Only stations that are configured in 802.11b or 802.11g mode can associate.
  - 802.11b/g/n
    All stations that are configured in 802.11b or in 802.11g or in 802.11n mode can associate.
- **BandWidth**:
  The maximum available bandwidth in both up- and downstream direction.
- **Actual Speed**:
  Displays the current maximum transmission speed and is not configurable.
- **Band**:
  Displays the band in which your Wireless Access Point operates and is not configurable.
- **Channel Selection**:
  The channel selection allows you to set the channel selection to **Automatic** (the Thomson Gateway selects the channel) or you can set is to **Manual**. When set to **Manual,** you can select the channel yourself.

- **Region**:
  Displays your regulatory region and is not configurable.

  You may only use the Thomson Gateway in the regulatory region mentioned.

- **Channel**:
  Displays the channel that is currently used by the Access Point.
  When the **Channel Selection** is set to **Automatic** this parameter is not configurable.
  When the **Channel Selection** is set to **Manual,** you can select the channel.
- **Extension Channel**:
  Displays the secondary channel that is used to send and receive data.

Under **Security**:

- **Broadcast Network Name**:
  By default the Thomson Gateway broadcasts its network name, allowing you to easily recognize your wireless network in the list of available networks. Once you have configured your wireless clients, you can disable this feature by clearing this check box.
- **Encryption**:
  Allows you to select an encryption method for your wireless network. The following encryption methods are supported by the Thomson Gateway:
  - **Disabled:**
    No encryption level is used.

    It is not recommended to use no encryption level for your wireless network!
  - **WEP Encryption:**
    To enable WEP encryption, proceed as follows:
    1. Select **Use WEP Encryption**
    2. In the **WEP Key Length** list, click the desired data security level (either **64 bit** or **128 bit**).
    3. In the **WEP Encryption key** box, type a Network key of your choice. In case of:

       64 bit:
       The 40-bit Network key must consist of 5 alphanumeric characters or 10 hexadecimal digits.

       128 bit:
       The 104-bit Network key consists of 13 alphanumeric characters or 26 hexadecimal digits.
    4. Click **Apply** to immediately apply your changes.
    5. Configure your wireless client(s) with the same settings.

    If your wireless client(s) support(s) WPA-PSK we recommend you to use WPA-PSK, because WEP encryption has been proven to have some security issues.
  - **WPA-PSK Encryption:**
    To enable WPA-PSK encryption, proceed as follows:
    1. Select **Use WPA-PSK Encryption**.
    2. In the **WPA-PSK Encryption Key** box, type a pass phrase (also known as Pre-shared key) of your choice. The pass phrase must consist of 8 to 63 ASCII characters or 64 hexadecimal digits.

3 In the **WPA-PSK Version** list, click the desired WPA-PSK version.

WPA2:
WPA2 is the most secure version, but not all wireless clients already support it. Before you select this version, make sure all of your wireless clients support it.

WPA+WPA2:
If not all of your wireless clients support WPA2 or you are not sure if they support WPA2, we recommend you to choose WPA+WPA2. Wireless clients that support WPA2 will use WPA2, the others will use WPA.

WPA:
If none of your wireless clients support WPA2 choose this option.

4 Click **Apply** to immediately apply your changes.

5 Configure your wireless client(s) with the same settings.

The default WEP key and the default WPA-PSK key are printed on the Thomson Gateway bottom label.

Before configuring the Thomson Gateway encryption, make sure you know which encryption methods are supported by your wireless client.

6 Thomson Gateway GUI

7 Troubleshooting

Introduction

This chapter suggests solutions for problems you may encounter while installing or configuring your Thomson Gateway.

If the suggestions do not resolve the problem, look at the support pages on http://www.thomson.net or contact your service provider.

Topics

This chapter describes the following topics:

Topic	Page
General Thomson Gateway Troubleshooting	88
Reset to Factory Defaults	91

7 Troubleshooting

7.1 General Thomson Gateway Troubleshooting

None of the lights light up (Thomson Gateway does not work)

Make sure that:

- The Thomson Gateway is plugged into a power socket outlet.
- You are using the correct power supply for your Thomson Gateway device.

The power requirements for your Thomson Gateway are clearly indicated on the identification label on the bottom of the Thomson Gateway. Only use the power adaptor supplied with your Thomson Gateway.

- The Thomson Gateway is turned on via the push button or rocker switch on the back panel.

The Broadband LED does not light up

Make sure that:

- The DSL cable is correctly connected. For more information, see "1.2 Installing your Thomson Gateway".
- The DSL service is enabled on your telephone line. For more information, contact your Internet Service Provider.

The Internet LED does not light up

Make sure that your user name and password are correct.

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Broadband** menu, click **Internet Services**.
3. Under **Internet**, click **View More**.
4. Check your user name and password.
5. If your password was not correct, re-enter your password.
6. Click **Connect**.

Thomson Gateway unreachable

If your Thomson Gateway cannot be reached due to misconfiguration, you might consider a hardware reset to factory defaults as described in "7.2 Reset to Factory Defaults" on page 91.

Poor Thomson Gateway performance

Make sure that the Thomson Gateway is installed and configured as instructed in "1 Installation" on page 3 or as instructed by the Service Provider.

7.1.1 Wired Connection Troubleshooting

Ethernet LED does not light up

Make sure that:

- The Ethernet cable is securely connected to the Ethernet port on your Thomson Gateway and your computer.
- You are using the correct cable type for your Ethernet equipment, that is at least UTP CAT5 with RJ-45 connectors.

7.1.2 Wireless Connection Troubleshooting

No Wireless Connectivity

Make sure that:

- Both the wireless client adapter and the Thomson Gateway are allowed to connect through wireless channels as defined for local regulatory domain.
- The wireless client is configured for the correct wireless settings (SSID, security settings).
- Check the signal strength, indicated by the wireless client manager. If the signal is low, try repositioning the Thomson Gateway or directing the Thomson Gateway's antenna(s) for optimal performance.
- Make sure that the wireless client adapter is enabled (message like "radio on").

Poor Wireless Connectivity or Range

Try the following:

- Change the wireless channel.
- Make sure both the wireless client adapter and the Thomson Gateway are allowed to connect through wireless channels as defined for local regulatory domain.
- Check the location of the Thomson Gateway in the building.
- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to place the Thomson Gateway or to direct the Thomson Gateway's antenna(s) for optimal performance.
- Use WPA(2)-PSK as encryption.
  For more information, see "3.3 Securing Your Wireless Connection" on page 21.

Change the wireless channel

Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the left menu, click **Home Network**.
3. Under **Wireless**, click your access point.

Your access point will be listed in the following format: "WLAN:<Network Name> (<Actual Speed>)". For example, **WLAN: Thomson83C7C7 (54Mbps)**.

4. The **Wireless Access Point** page appears.
5. In the **Location bar**, click **Configure**.
6. Under **Configuration**, select the channel of your choice in the **Channel Selection** list.
7. Click **Apply**.

Can not connect via WPS

If you are having trouble connecting your wireless client via WPS, try to configure it manually. For more information, see "3.2 Connecting Your Wireless Client without WPS" on page 20.

7.2 Reset to Factory Defaults

Resetting your Thomson Gateway

If at some point you can no longer connect to the Thomson Gateway or you want to make a fresh install, it may be useful to perform a reset to factory defaults.

Warning

A reset to factory default settings deletes all configuration changes you made. Therefore, after the reset, a reconfiguration of your Thomson Gateway may be needed.

Also your WLAN clients may have to be re-associated, as described in “3 Wireless Access“ on page 17.

Methods

You can choose between:

- Software Reset
- Hardware Reset

Software Reset

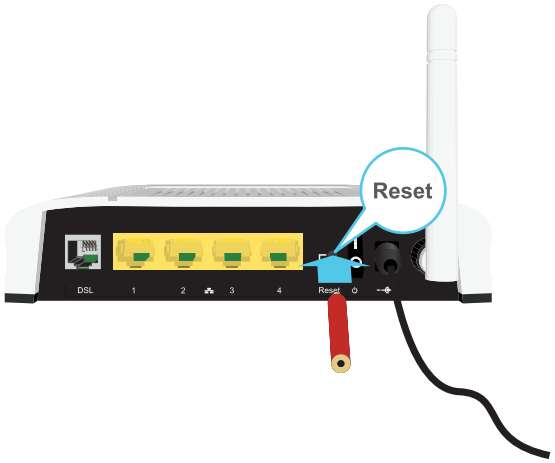
Proceed as follows:

1. Browse to the Thomson Gateway GUI.
2. On the **Thomson Gateway** menu, click **Configuration**.
3. In the **Pick a task** list, click **Reset my Thomson Gateway to default settings**.
4. The Thomson Gateway restores the initial configuration and restarts.
5. The Thomson Gateway returns to the Thomson Gateway home page (unless the IP address of your computer is not in the same subnet as the default IP address of the Thomson Gateway, being 192.168.1.254).

Hardware Reset

Proceed as follows:

1. Make sure the Thomson Gateway is turned on.
2. Use a pen or an unfolded paper clip to push the recessed **Reset** button. Push it until the **Power** LED lights red - this will take about 7 seconds.



3. Release the **Reset** button.
4. The Thomson Gateway restarts.

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www.thomson-broadband.com

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