CONCEPTRONIC C300GBRS4

Version 1.0

802.11n Wireless Gigabit Broadband Router

User Manual

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About This Manual

This manual provides descriptions of the Conceptronic C300GBRS4 802.11n Wireless Gigabit Broadband Router, its hardware and software features, and how to set up and use the device on your small office or home network.

Before You Start

Please read and make sure you understand all the prerequisites for proper installation of your new Wireless Broadband Router. Have all the necessary information and equipment on hand before starting the installation. A packing list is included at the end of this section.

Installation Overview

The procedure to install the Wireless Broadband Router can be described in general terms in the following steps:

1. Gather information and equipment needed to install the device. Check the contents of the package to be certain that everything listed on the packing list is included. A packing list is included at the end of this section. The information you will need includes the account name or number and the password used to gain access to your service provider’s network, and ultimately to the Internet.
2. Install the hardware, that is, connect the Ethernet cables to the device to establish the necessary network links to your computer and connect the power adapter to power on the Wireless Broadband Router.
3. Check the IP settings on your computer and change them if necessary so the computer can access the web-based software built into the Wireless Broadband Router. Without the correct IP settings your computer will not be able to communicate with the device or access the software used to configure the Wireless Broadband Router. Without compatible IP settings on your computer, you will not be able to use a web browser to access the Internet.
4. Use the web-based management software to configure the device. Many users can install the Wireless Broadband Router with the Setup Wizard. Some users may not need to change any of the device settings that establish and maintain the network connection. Follow the instructions of your service provider to find out what is required for your account.

Requirements for Installation

To install and use the Wireless Broadband Router you need a computer equipped with an Ethernet port (such as an Ethernet NIC) and a web browser.

WLAN Ethernet Adapter

Any computer that uses the Wireless Broadband Router must be able to connect to it through the Wireless Ethernet (WLAN) on the Wireless Broadband Router. This connection is a Wireless Ethernet (WLAN or WiFi) connection and therefore requires that your computer be equipped with a Wireless Ethernet Adapter as well. Many notebook computers are now sold with a Wireless Ethernet Adapter already installed. There is also a Wired Ethernet port that is used to connect the WLAN adapter to your wired network. This port can be used to configure the Wireless Broadband Router. Most fully assembled desktop computers come with an Ethernet NIC adapter as standard equipment. If your computer does not have an Ethernet port, you must install an Ethernet NIC adapter before you can configure the Wireless Broadband Router. If you must install an adapter, follow the installation instructions that come with the Ethernet NIC adapter.

Operating System

The Wireless Broadband Router uses an HTML-based web interface for setup and management. The web configuration manager may be accessed using any operating system capable of running web browser software.

Web Browser

Any common web browser can be used to configure the Wireless Broadband Router using the web configuration management software. The program is designed to work best with more recently released browsers such as Microsoft Internet Explorer® version 6.0, Netscape Navigator® version 6.2.3, or later versions. The web browser must have JavaScript enabled. JavaScript is enabled by default on many browsers. Make sure JavaScript has not been disabled by other software (such as virus protection or web user security packages) that may be running on your computer.

Packing List

Open the shipping carton and carefully remove all items. Make sure that you have the items listed here.

- One Conceptronic C300GBRS4 - 802.11n Wireless Gigabit Broadband Router
- Three Antennas for C300GBRS4
- One CD-ROM containing this User's Guide
- One Straight-through Ethernet cable
- One Power Adapter, 5V, 3A DC
- One Quick Installation Guide
- One Warranty Card

Wireless LAN

A Wireless LAN is a cellular computer network that transmits data using radio signals instead of cables. Wireless LAN technology is commonly used for home, small office and large corporate networks. Wireless LAN devices have a high degree of mobility and flexibility that allow network to be quickly set up or dismantled and allow them to roam freely throughout the network.

The IEEE 802.11n Wireless LAN standard is an improvement on the IEEE 802.11g standard. The 802.11n embedded Wireless LAN access point is fully compatible with legacy IEEE 802.11b and IEEE 802.11g devices.

Some basic understanding of wireless technology and terminology is useful when you are setting up the Wireless Broadband Router or any wireless access point. If you are not familiar with wireless networks please take a few minutes to learn the basics.

For home users who will not incorporate a RADIUS server in their network, the security for the Conceptronic C300GBRS4, used in conjunction with other WPA-compatible 802.11 products, will still be much stronger than ever before. Utilizing the **Pre-Shared Key** mode of WPA, the Wireless Broadband Router will obtain a new security key every time it connects to the 802.11 network. You only need to input your encryption information once in the configuration menu. No longer will you have to manually input a new WEP key frequently to ensure security. With the Wireless Broadband Router, you will automatically receive a new key every time you connect, vastly increasing the safety of your communication.

The Wireless Broadband Router is an ideal solution for quickly creating and extending a wireless local area network (WLAN) in offices or other workplaces, trade shows and special events. The 802.11n standard is backwards compatible with 802.11b and 802.11g devices.

The Wireless Broadband Router has the newest, strongest, most advanced security features available today. When used with other 802.11n WPA (WiFi Protected Access) compatible products in a network with a RADIUS server, the security features include:
WPA: WiFi Protected Access, which authorizes and identifies users, based on a secret key that change automatically at regular intervals. **WPA** uses **TKIP (Temporal Key Integrity Protocol)** to change the temporal key every 10,000 packets (a packet is a kind of message transmitted over a network.) This insures much greater security than the standard WEP security. (By contrast, the previous WEP encryption implementation required the keys to be changed manually.)

Radio Transmission

Wireless LAN devices use electromagnetic waves within a broad, unlicensed range of the radio spectrum to transmit and receive radio signals. When a wireless access point is present, it becomes a base station for the Wireless LAN nodes in its broadcast range. Wireless LAN nodes transmit digital data using FM (frequency modulation) radio signals. Wireless LAN devices generate a carrier wave and modulate this signal using various techniques. In this way, digital data can then be superimposed onto the carrier signal. This radio signal carries data to Wireless LAN devices within range of the transmitting device. The antennae of Wireless LAN devices listen for and receive the signal.

Range

Range should not be a problem in most homes or small offices. If you experience low or no signal strength in some areas, consider positioning the device in a location between the Wireless LAN devices maintaining a roughly equal straight-line distance to all devices that need to access the Wireless Broadband Router through the wireless interface. Adding more 802.11n access points to rooms where the signal is weak can improve signal strength.

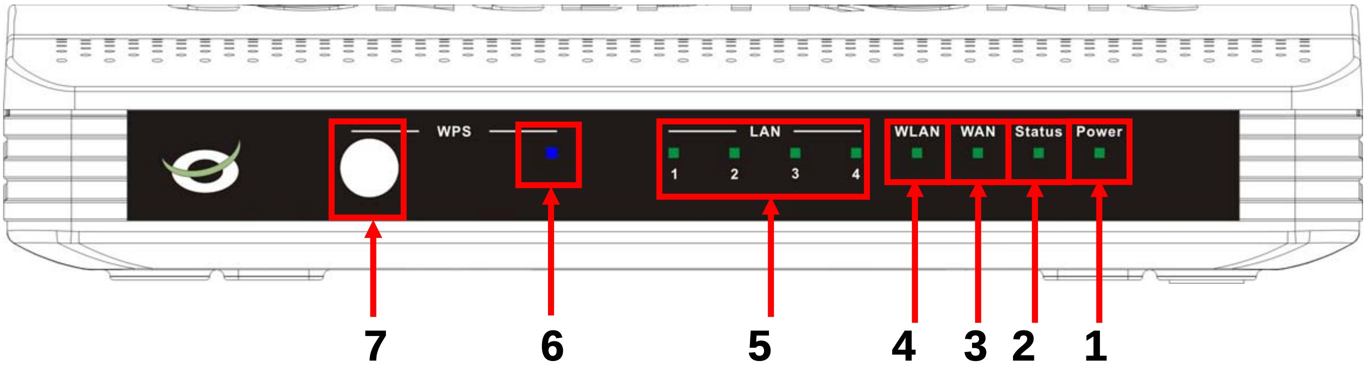
SSID

Wireless networks use an SSID (Service Set Identifier) to allow wireless devices to roam within the range of the network. Wireless devices that wish to communicate with each other must use the same SSID. Several Wireless Broadband Routers or access points can be set up using the same SSID so that wireless stations can move from one location to another without losing connection to the wireless network.

The Wireless Broadband Router operates in Infrastructure mode. It controls network access on the wireless interface in its broadcast area. It will allow access to the wireless network to devices using the correct SSID after a negotiation process takes place. The Conceptronic C300GBRS4 broadcasts its SSID so that any wireless station in range can learn the SSID and ask permission to associate with it. Many wireless adapters are able to survey or scan the wireless environment for access points. An access point in Infrastructure mode allows wireless devices to survey that network and select an access point with which to associate.

Front Panel LED Display

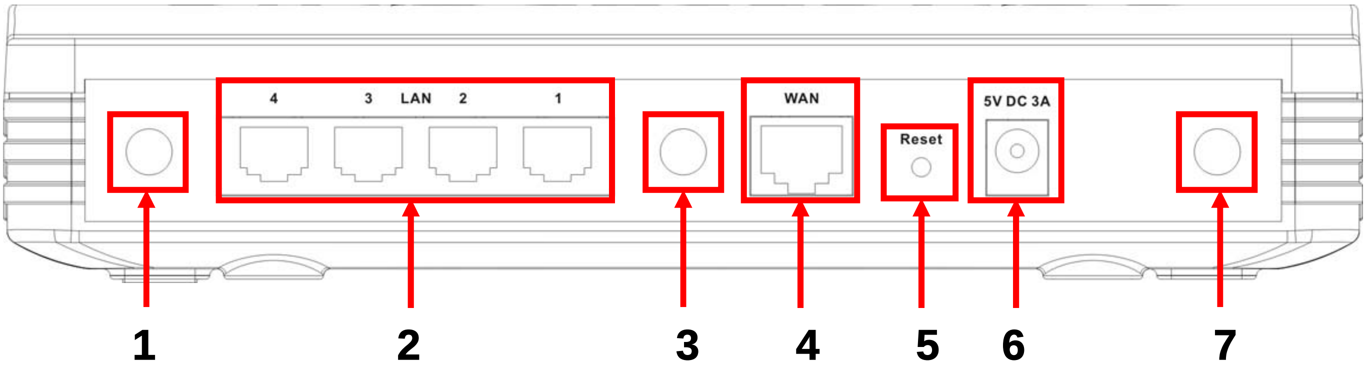
Place the Router in a location where the LED indicators on the front panel can be viewed. The LED indicators on the front panel include the Power, Status, WAN, WLAN and WPS indicators. Each Ethernet LAN port displays an indicator for monitoring link status and activity (Link/Act).



Nr	Description	Status	Status Explanation
1	Power LED	**OFF**	The device is turned off.
		ON	The device is turned on successfully.
2	Status		The device is turned off or there is system failure.
		BLINK	The device is turned on and ready for use.
3	WAN LED	**OFF**	No WAN Connection is created.
		ON - BLINK GREEN	Data is sent or received through the WAN Port.
		ON - STEADY GREEN	A WAN Connection is created.
4	WLAN LED	**OFF**	Wireless interface is disabled.
		ON - BLINK GREEN	Data is sent or received through Wireless interface.
		ON - STEADY GREEN	Wireless interface is enabled.
5	LAN LEDs (1, 2, 3, 4)	**OFF**	No Network Link is created to the LAN Port.
		ON - BLINK GREEN	Data is sent or received with the speed under 1000 Mbps through the LAN Port.
		ON - STEADY GREEN	A 1000 Mbps Network Link is created on the LAN Port.
		ON - BLINK ORANGE	Data is sent or received with the speed under 100 Mbps through the LAN Port.
		ON - STEADY ORANGE	A 100 Mbps Network Link is created on the LAN Port.
6	WPS/Status LED	**ON - BLINK BLUE**	When the WPS Button is pressed, the WPS LED will blink while searching for WPS Clients.
		ON - STEADY BLUE	When the authentication of WPS Client is succeeded, the WPS LED will light blue for 300 seconds.
		ON -RED	If there is any error, the WPS LED will light red.
7	WPS Button	Press the WPS Button to activate the WPS feature. The router will search for WS Clients.	

Rear Panel Cable Connections

Connect the power adapter cord and network cables on the rear panel. The power switch and reset button are also located on the back of the device. Connect the antennas to the antenna posts.



Nr	Description	Explanation
1	Antenna Connection	Reverse-SMA Connector for Wireless Antenna
2	LAN Ports	Connect computer(s) to the Router
3	Antenna Connection	Reverse-SMA Connector for Wireless Antenna
4	WAN port	Connect broadband connection to the Router
5	Reset Button	Reset the router to the Factory Default Settings
6	Power Connection	Connect the Power Adapter included in the package to the Router
7	Antenna Connection	Reverse-SMA Connector for Wireless Antenna

Hardware Installation

Place the Wireless Broadband Router in a location where it can be easily connected to the wired interface (Ethernet link to a broadband modem, for example) as well as function effectively as a Wireless LAN access point. Make sure the Wireless Broadband Router is near a suitable power source.
Connect the bundled power supply to the power connection on the back of the C300GBRS4 and to a free wall power outlet. The Power LED of the C300GBRS4 will turn on.

Wireless LAN Performance and Environment

Many environmental factors can affect the effective wireless function of the Wireless Broadband Router. If this is your first time setting up a wireless network device, read and consider the points listed below.

The Wireless Broadband Router can be placed on a shelf or desktop, ideally you should be able to see the LED indicators on the front if you need to view them for troubleshooting.

The Wireless Broadband Router lets you access your network within range of the device. However, walls, ceilings, or other objects that the wireless signals must pass through can limit signal range. Typical ranges vary depending on the types of materials and background RF noise in your home or business. For maximum range and signal strength, use these basic guidelines:

1. **Keep the number of walls and ceilings to a minimum:**

   The signal emitted from Wireless LAN devices can penetrate through ceilings and walls. However, each wall or ceiling can reduce the range Wireless LAN devices from 1 to 30M. Position your wireless devices so that the number of walls or ceilings obstructing the signal path is minimized.
2. **Consider the direct line between access points and workstations:**

   A wall that is 0.5 meters thick, at a 45-degree angle appears to be almost 1 meter thick. At a 2-degree angle, it is over 14 meters thick. Be careful to position access points and client adapters so the signal can travel straight through (90º angle) a wall or ceiling for better reception.
3. **Building Materials make a difference:**

   Buildings constructed using metal framing or doors can reduce effective range of the device. If possible, position wireless devices so that their signal can pass through drywall or open doorways, avoid positioning them so that their signal must pass through metallic materials. Poured concrete walls are reinforced with steel while cinderblock walls may have little or no structural steel.
4. **Keep the Wireless Broadband Router away (at least 1-2 meters) from electrical devices:**

   Position wireless devices away from electrical devices that generate RF noise such as microwave ovens, monitors, electric motors, etc.
5. **Position antenna for best reception:**

   Adjust the antenna position to see if the signal strength improves. Some adapters or access points allow the user to judge the strength of the signal. Use this method, if available, to test signal strength.

WAN Connection

Use a LAN Cable to connect the C300GBRS4 to your Broadband Gateway (Cable Modem, DSL Modem, Fiber Gateway, etc.)

The WAN LED on the front side of the C300GBRS4 will turn on.

Note: If the WAN LED on the front side does not turn on, make sure that:

- The C300GBRS4 is powered (the Power LED should be on).
- The Broadband Gateway is turned on.
- The LAN cable between both devices is connected correctly.

LAN / Wireless LAN Connection

For LAN Cable Users:

Connect the LAN Cable to 1 of the 4 LAN ports on the back panel of the C300GBRS4 and to the Network Card in your computer.
The LAN LED of the used LAN port will turn on, indicating that the computer is connected.
(Your LAN Connection must be enabled and your computer turned ON).

For Wireless Users:

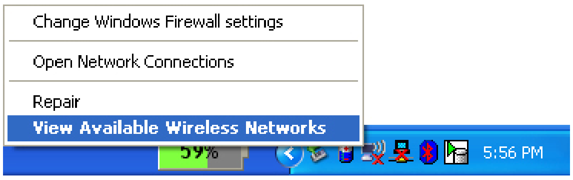
You can connect wireless to the C300GBRS4 in 2 different ways:

- Manually, without encryption.
- Automatically with the WPS feature, with encryption.

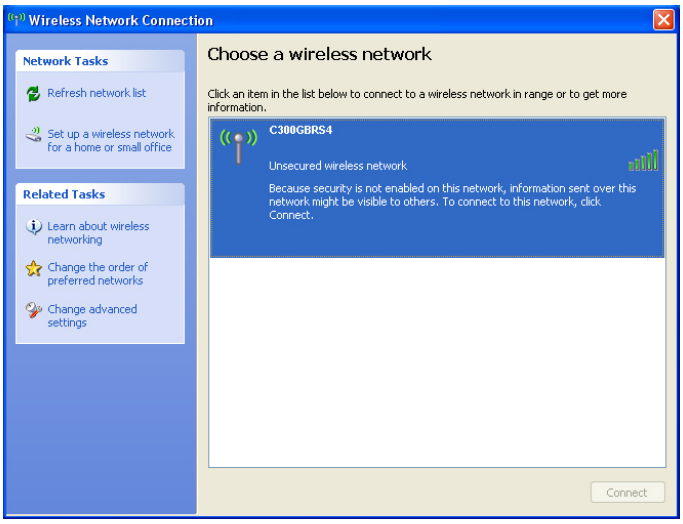
If you have 1 or more clients which do not support WPS, it is advised to manually connect to the C300GBRS4, or secure the wireless connection manually before you connect to the C300GBRS4. You can secure your connection manually with the configuration wizard, explained in the chapter **'Configuring Router Settings'**.

In this chapter you will find the steps how to connect manually to your unsecured network. For more information about the WPS feature and the configuration steps, see the chapter **'Configuring Router Settings'** of this Manual.

A. Right click the Wireless Network Icon in your System tray and select **View Available Wireless Networks**.


Change Windows Firewall settings
Open Network Connections
Repair
View Available Wireless Networks
59%
5:56 PM

B. Select the Network **C300GBRS4** from the list of available wireless networks and click **Connect**.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Connect

Choose a wireless network

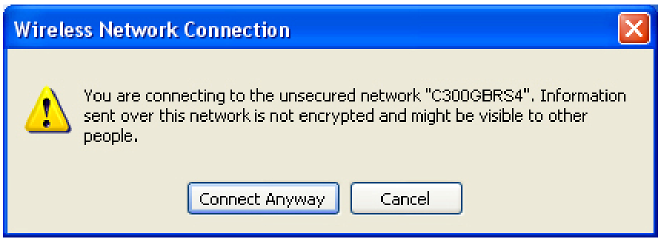
Click an item in the list below to connect to a wireless network in range or to get more information.

C300GBRS4

Unsecured wireless network

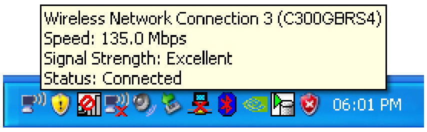
Because security is not enabled on this network, information sent over this network might be visible to others. To connect to this network, click Connect.

C. You will receive a warning about connecting to an unsecured wireless network. Click **Connect anyway** to proceed with the connection.



You are connecting to the unsecured network "C300GBRS4". Information sent over this network is not encrypted and might be visible to other people.

D. When the connection is built, you will see the active wireless icon in the system tray. If you move your mouse over the icon you will receive an information popup (about the speed, signal strength and status of your connection).



Wireless Network Connection 3 (C300GBRS4)
Speed: 135.0 Mbps
Signal Strength: Excellent
Status: Connected

Computer Configuration

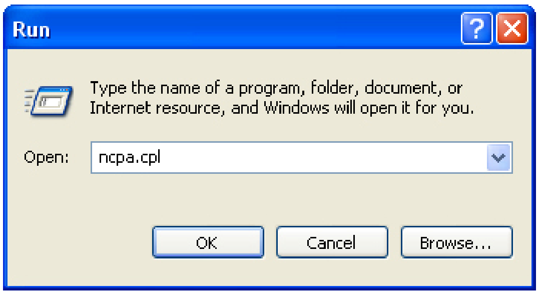
Configure your IP address

The C300GBRS4 is equipped with a build-in DHCP Server. The DHCP Server will automatically assign an IP address to a connected computer if the connected computer is set to **Obtain an IP address automatically**.

To configure your computer for Automatic IP follow the instructions below:

A. Click **Start** → **Run**.

B. Enter the command "*NCPA.CPL*" and click **OK**.

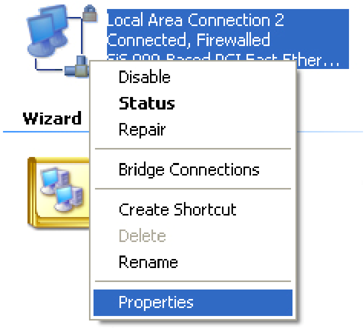


Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: ncpa.cpl

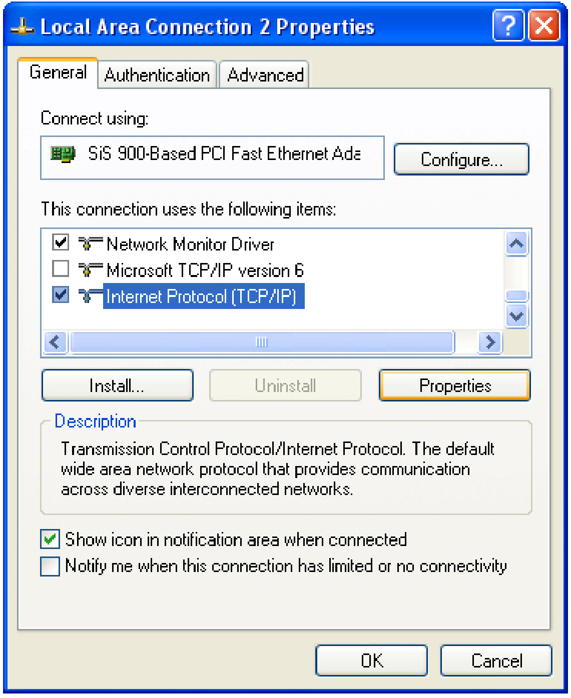
The Network Connections window will appear.

C. Right click your **Local Area Connection** (Wired or Wireless, depending on the connection you use) and select **Properties**.



The Properties window of your Local Area Connection will appear.

D. Select the **Internet Protocol (TCP/IP)** and click **Properties**.



Local Area Connection 2 Properties

General | Authentication | Advanced

Connect using:

SiS 900-Based PCI Fast Ethernet Ada | Configure...

This connection uses the following items:

☑ Network Monitor Driver
☐ Microsoft TCP/IP version 6
☑ Internet Protocol (TCP/IP)

Install... | Uninstall | Properties

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

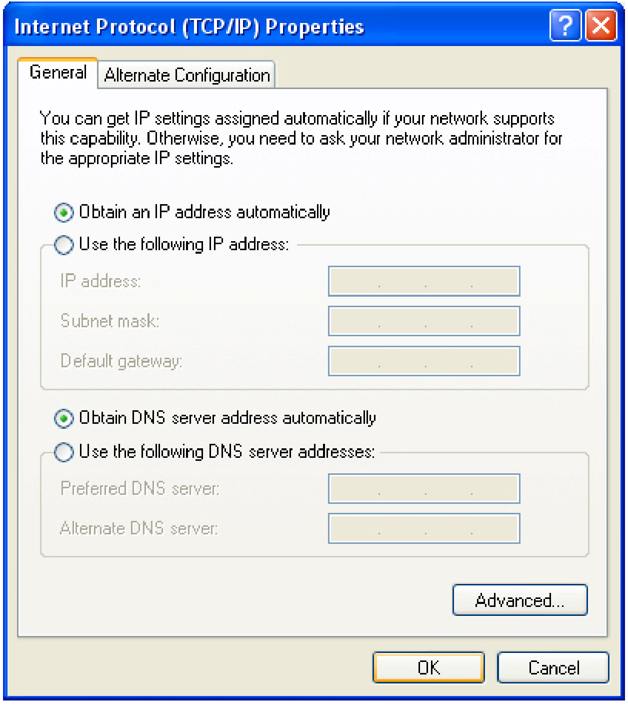
☑ Show icon in notification area when connected
☐ Notify me when this connection has limited or no connectivity

OK | Cancel

The Properties window of the Internet Protocol (TCP/IP) will appear.

E. Set the properties to **Obtain an IP address automatically** and click **OK** to save the settings.

F. Press **OK** in the properties window of the Local Area Connection to save the settings.



Internet Protocol (TCP/IP) Properties

General | Alternate Configuration

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

● Obtain an IP address automatically
○ Use the following IP address:

IP address: . . .
Subnet mask: . . .
Default gateway: . . .

● Obtain DNS server address automatically
○ Use the following DNS server addresses:

Preferred DNS server: . . .
Alternate DNS server: . . .

Advanced...

OK | Cancel

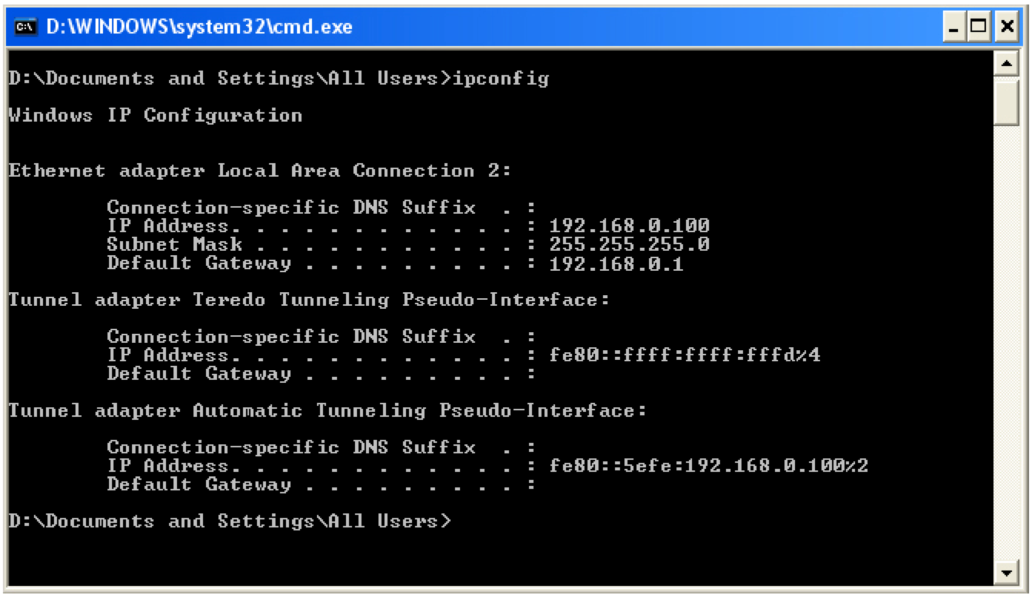
Checking your connection with the C300GBRS4

With the Command prompt of Windows you can verify if you have received a correct IP address on your Local Area Connection:

A. Click **Start** → **Run**.
B. Enter the command "*cmd*" and click **OK**.

The Command Prompt will appear.

C. Enter the command "*ipconfig*" and press **Enter**.



```
D:\Documents and Settings\All Users>ipconfig

Windows IP Configuration


Ethernet adapter Local Area Connection 2:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : 192.168.0.100
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.0.1

Tunnel adapter Teredo Tunneling Pseudo-Interface:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : fe80::ffff:ffff:fffd%4
        Default Gateway . . . . . . . . . :

Tunnel adapter Automatic Tunneling Pseudo-Interface:

        Connection-specific DNS Suffix  . :
        IP Address. . . . . . . . . . . . : fe80::5efe:192.168.0.100%2
        Default Gateway . . . . . . . . . :

D:\Documents and Settings\All Users>
```

You should see the following information

IP Address	**: 192.168.0.xxx** (Where **xxx** can vary between **100** ~ **199**).
Subnet Mask	**: 255.255.255.0**
Default Gateway	**: 192.168.0.1**

If the information shown above matches your configuration you can continue the configuration of the device in Chapter 5.

If the shown information above does not match your configuration (i.e. your IP address is 169.254.xxx.xxx) please check the options below:

1. Power OFF and Power ON the device.
2. Reconnect the LAN Cable to the device and to your computer.
3. Renew the IP address of your computer with the following commands:
   - **"IPCONFIG /RELEASE"** to release the wrong IP address.
   - **"IPCONFIG /RENEW"** to receive a new IP address from the device.

If above steps do not solve the IP address problem, you can reset the device to the factory default settings with the Reset Button on the back of the device.
Press and hold the Reset Button for +/- 15 seconds to load the Factory Default Settings. When the Status LED is active again, repeat step C to renew your IP address.

Configuring Router Settings

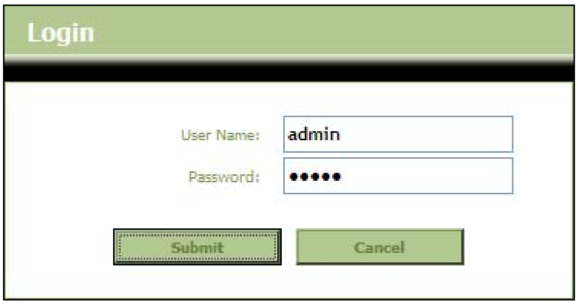
This chapter describes how to configure the Wireless Broadband Router the first time you use it or if you are configuring it after resetting the device to the factory default settings. The following sections describe how to configure the router through the Web based configuration.

The configuration of your C300GBRS4 is web based. You will need a web browser for the configuration of the device.

Note: For configuration of the router it is advised to use a LAN Cable connection to the device instead of a Wireless connection.

A. Start your web browser (like: Internet Explorer, FireFox or Safari).
B. Enter the IP address of the device in the address bar of your web browser (By default: *http://192.168.0.1/*).

The Login page of the C300GBRS4 will be shown.



Login

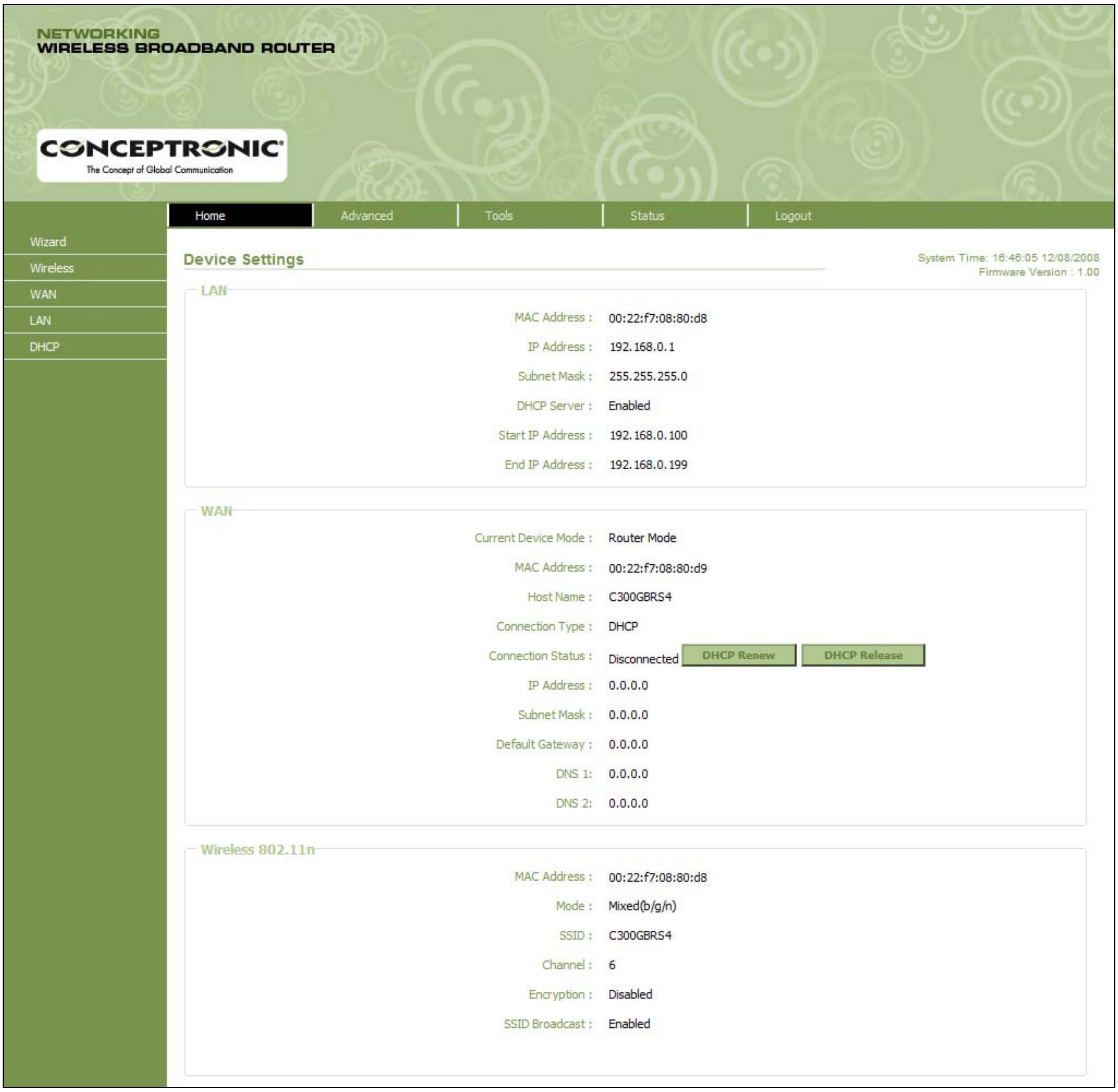
User Name: admin

Password: •••••

C. Enter the Username and Password (Default: '*admin*' & '*admin*') and click **Submit** to enter the configuration pages.

The **Device Settings** overview shows all configured settings for the LAN, WAN and Wireless part of the router.

The Home menu of the configuration contains the following configuration options: **Wizard**, **Wireless**, **WAN**, **LAN** and **DHCP**.



Device Settings

System Time: 16:46:05 12/08/2008
Firmware Version : 1.00

LAN

MAC Address : 00:22:f7:08:80:d8
IP Address : 192.168.0.1
Subnet Mask : 255.255.255.0
DHCP Server : Enabled
Start IP Address : 192.168.0.100
End IP Address : 192.168.0.199

WAN

Current Device Mode : Router Mode
MAC Address : 00:22:f7:08:80:d9
Host Name : C300GBRS4
Connection Type : DHCP
Connection Status : Disconnected
IP Address : 0.0.0.0
Subnet Mask : 0.0.0.0
Default Gateway : 0.0.0.0
DNS 1: 0.0.0.0
DNS 2: 0.0.0.0

Wireless 802.11n

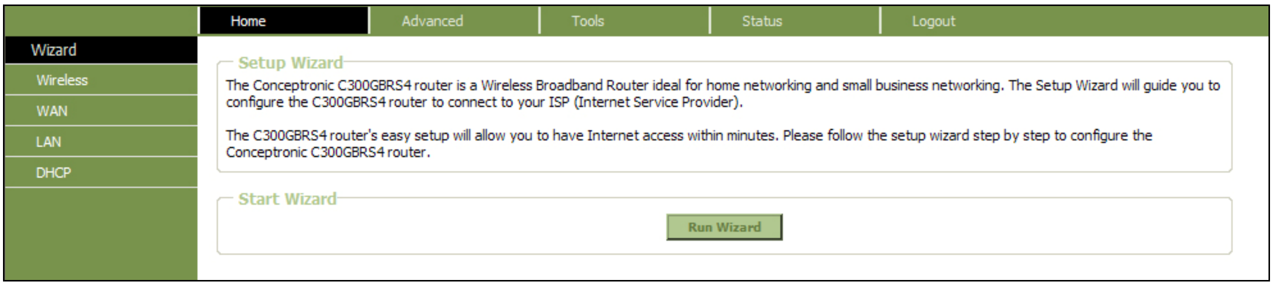
MAC Address : 00:22:f7:08:80:d8
Mode : Mixed(b/g/n)
SSID : C300GBRS4
Channel : 6
Encryption : Disabled
SSID Broadcast : Enabled

Device Settings Overview

HOME - WIZARD

You can setup the C300GBRS4 through the build-in Wizard. This Wizard will help you configuring the basic settings of the C300GBRS4 step by step.

To use the Setup Wizard, click the **Run Wizard** button.



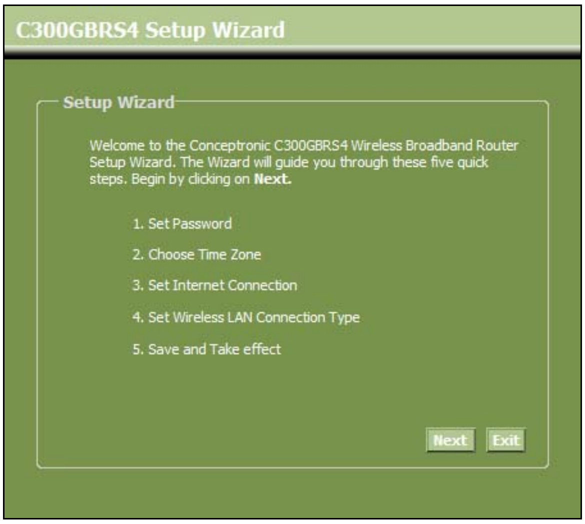
The Conceptronic C300GBRS4 router is a Wireless Broadband Router ideal for home networking and small business networking. The Setup Wizard will guide you to configure the C300GBRS4 router to connect to your ISP (Internet Service Provider).

The C300GBRS4 router's easy setup will allow you to have Internet access within minutes. Please follow the setup wizard step by step to configure the Conceptronic C300GBRS4 router.

Setup Wizard window

Note: Before you begin with the Wizard Configuration, make sure you have all information for the Internet settings available. (For example: Account information, connection type, etc.)

A. The welcome screen lists five steps of the wizard. Click **Next** to continue.

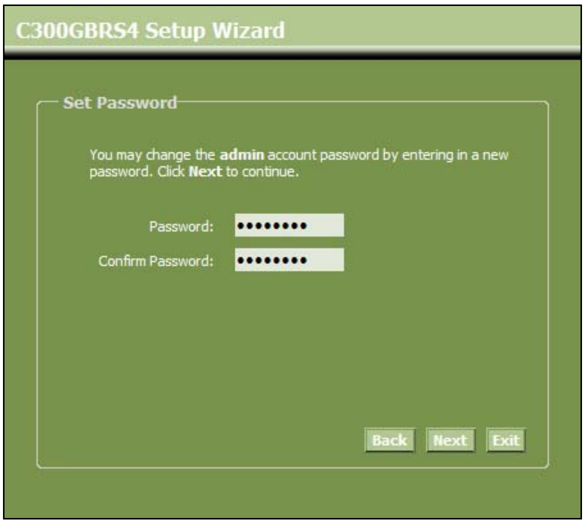


Welcome to the Conceptronic C300GBRS4 Wireless Broadband Router Setup Wizard. The Wizard will guide you through these five quick steps. Begin by clicking on **Next.**

1. Set Password
2. Choose Time Zone
3. Set Internet Connection
4. Set Wireless LAN Connection Type
5. Save and Take effect

B. You are recommended to set an admin password here. Enter the new password and re-enter it for confirmation.

When completed, click **Next**.



You may change the **admin** account password by entering in a new password. Click **Next** to continue.

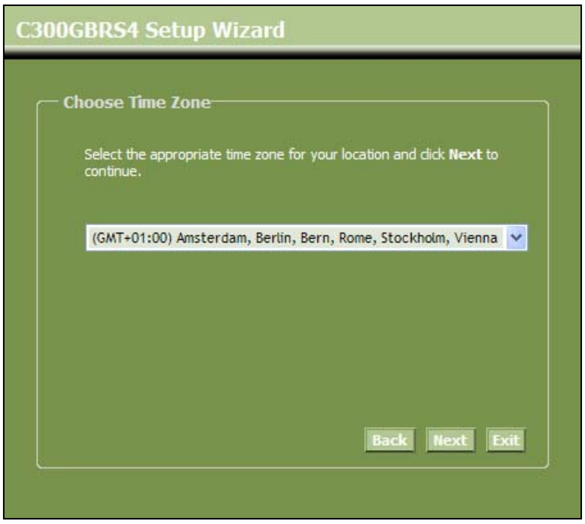
Password: ••••••••

Confirm Password: ••••••••

C. For system management purpose, a correct time setting is critical to have accurate time stamps on the system logs.

Set an appropriate Time Zone in this step.

When completed, click **Next**.



C300GBRS4 Setup Wizard

Choose Time Zone

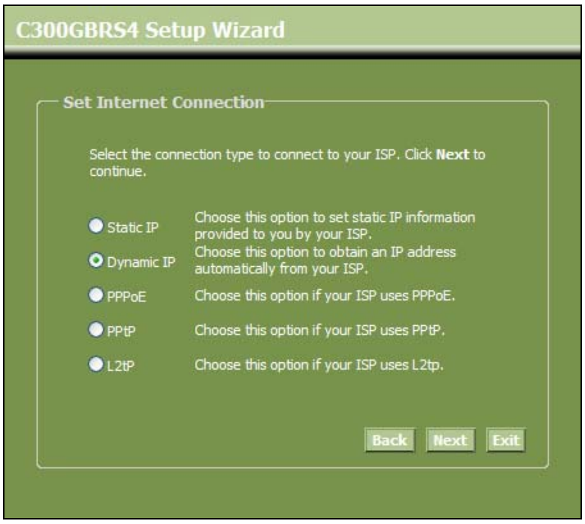
Select the appropriate time zone for your location and click **Next** to continue.

(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

D. Select the Internet Connection method which corresponds with your provider settings.

If you don't know which option you need for your internet connection, please check the documentation of your provider or contact your provider helpdesk.

When completed, click **Next**.



C300GBRS4 Setup Wizard

Set Internet Connection

Select the connection type to connect to your ISP. Click **Next** to continue.

○ Static IP	Choose this option to set static IP information provided to you by your ISP.
● Dynamic IP	Choose this option to obtain an IP address automatically from your ISP.
○ PPPoE	Choose this option if your ISP uses PPPoE.
○ PPtP	Choose this option if your ISP uses PPtP.
○ L2tP	Choose this option if your ISP uses L2tp.

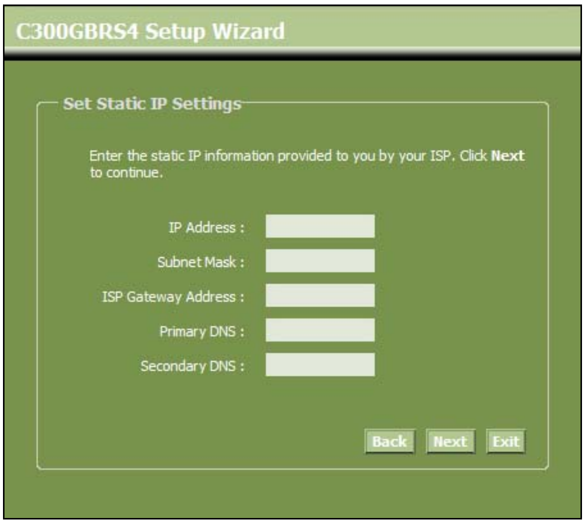
E. When your provider requires a Static IP connection, select the **Static IP** option.

Enter the requested information:

- *IP Address*
- *Subnet Mask*
- *ISP Gateway Address*
- *Primary DNS*
- *Secondary DNS (Optional)*

When completed, click **Next**.

Connection - Static IP



C300GBRS4 Setup Wizard

Set Static IP Settings

Enter the static IP information provided to you by your ISP. Click **Next** to continue.

IP Address :

Subnet Mask :

ISP Gateway Address :

Primary DNS :

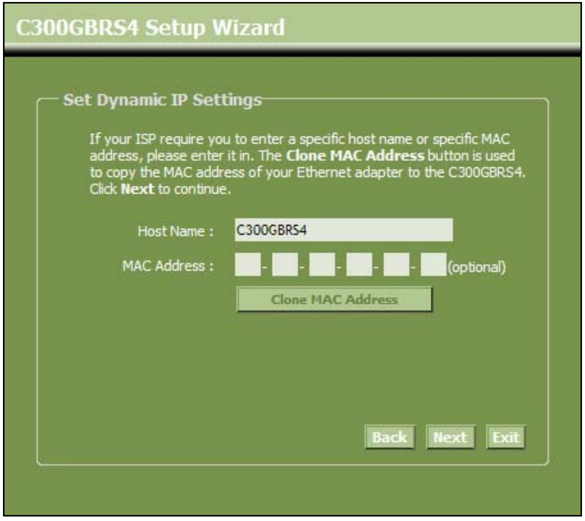
Secondary DNS :

F. When your provider requires a Dynamic IP connection, select the **Dynamic IP** option. Some providers require a specific Hostname for their connections. If your provider requires a specific Hostname, enter the Host Name in the field.

Some providers only allow 1 specific MAC address to connect to the Internet. If your PC Network Card works with the specific required MAC address, click the **Clone MAC Address** button or enter the MAC Address manually.

When completed, click **Next**.

Connection - Dynamic IP



C300GBRS4 Setup Wizard

Set Dynamic IP Settings

If your ISP require you to enter a specific host name or specific MAC address, please enter it in. The **Clone MAC Address** button is used to copy the MAC address of your Ethernet adapter to the C300GBRS4. Click **Next** to continue.

Host Name : C300GBRS4

MAC Address : - - - - - (optional)

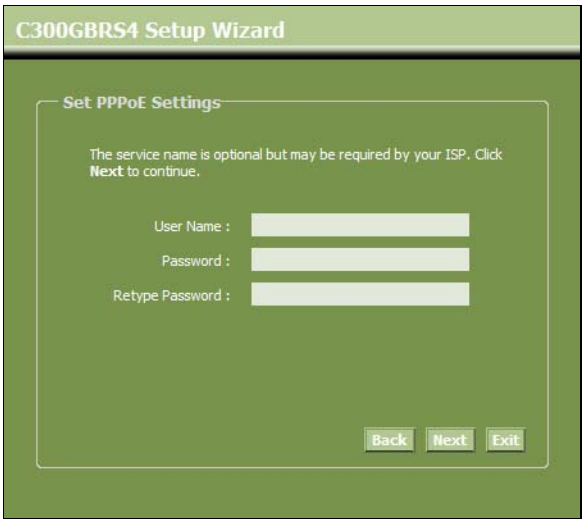
G. When your provider requires a PPPoE connection, select the **PPPoE** option.

Enter the requested information:

- *User Name*
- *Password*
- *Retype Password*

When completed, click **Next**.

Connection - PPPoE



C300GBRS4 Setup Wizard

Set PPPoE Settings

The service name is optional but may be required by your ISP. Click **Next** to continue.

User Name :

Password :

Retype Password :

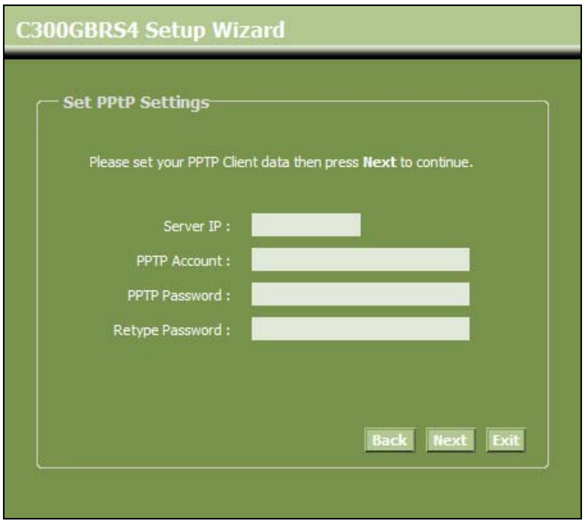
H. When your provider requires a PPTP connection, select the **PPTP** option.

Enter the requested information:

- *Server IP*
- *PPTP Account*
- *PPTP Password*
- *Retype Password*

When completed, click **Next**.

Connection - PPTP



C300GBRS4 Setup Wizard

Set PPtP Settings

Please set your PPTP Client data then press **Next** to continue.

Server IP :

PPTP Account :

PPTP Password :

Retype Password :

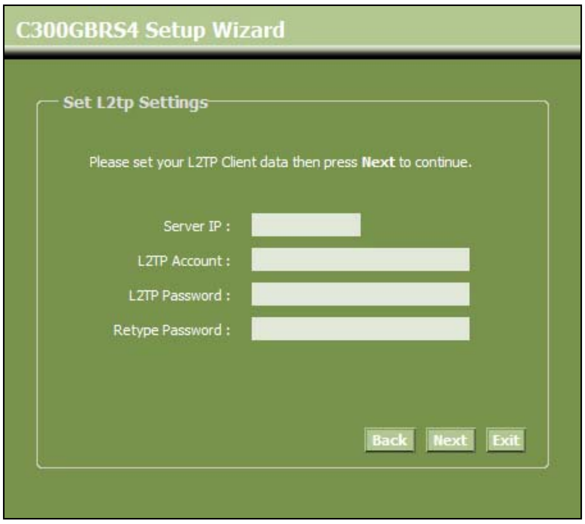
I. When your provider requires a L2TP connection, select the **L2TP** option.

Enter the requested information:

- *Server IP*
- *L2TP Account*
- *L2TP Password*
- *Retype Password*

When completed, click **Next**.

Connection - L2TP



C300GBRS4 Setup Wizard

Set L2tp Settings

Please set your L2TP Client data then press **Next** to continue.

Server IP :

L2TP Account :

L2TP Password :

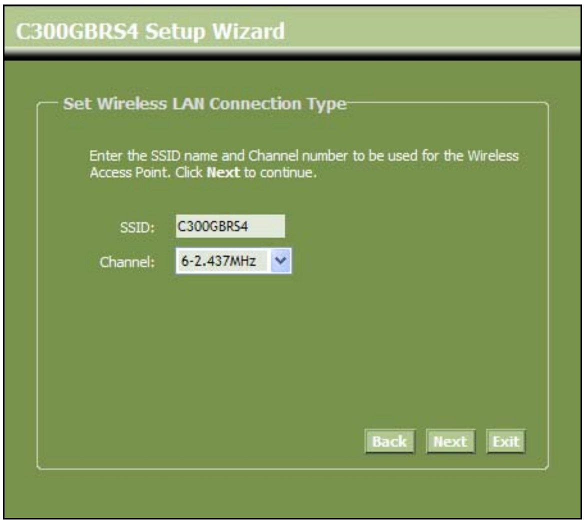
Retype Password :

When the WAN configuration is complete, the Wizard will continue with the Wireless configuration:

J. You can change the SSID of the router. The SSID is the name which will be broadcasted through the Wireless part.

You can change the channel between channel 1 and 13. If you experience slow connections or break-downs, there can be another access point in your area which can interfere with your wireless channel. In that case, you can try another channel.

When completed, click **Next**.



C300GBRS4 Setup Wizard

Set Wireless LAN Connection Type

Enter the SSID name and Channel number to be used for the Wireless Access Point. Click **Next** to continue.

SSID: C300GBRS4

Channel: 6-2.437MHz

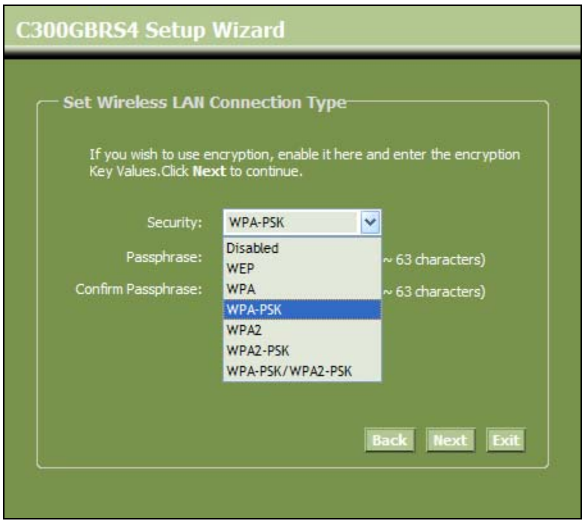
You can secure your Wireless Connection with encryption. By default, the Wireless Connection is not secured. To prevent unauthorized access to your network, set a security level through the Setup Wizard.

If you want to use the WPS feature of the C300GBRS4, you can skip the wireless configuration and continue the Setup Wizard without encryption. To setup your WPS security, please proceed to the section 'HOME – WIRELESS' of this chapter.

Note: All security options of the Setup Wizard are explained, but it is advised to secure your network with **"WPA-PSK/WPA2-PSK"** security if your Clients do not support WPS. This is the highest WPA2 security level, with backwards compatibility to WPA only clients.

Note: Remember or write down the entered wireless security information. You will need it when you want to configure a Wireless Client to connect to the C300GBRS4!

K. Select a security level for your Wireless Network.
When a security level is chosen, the Wizard will show fields for the required information.



C300GBRS4 Setup Wizard

Set Wireless LAN Connection Type

If you wish to use encryption, enable it here and enter the encryption Key Values.Click **Next** to continue.

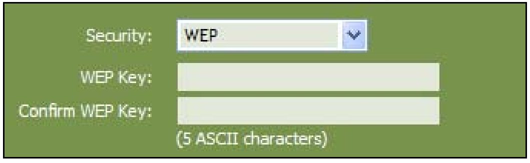
Security: WPA-PSK

Passphrase: ~ 63 characters)

Confirm Passphrase: ~ 63 characters)

L. If you want to secure your network with WEP encryption, select **WEP** from the drop-down list. Enter the WEP key in ASCII format (input: A-Z, 0-9).
<u>Note:</u> Through the Wizard you can only configure WEP 64Bits.

Security – WEP Encryption



Security: WEP

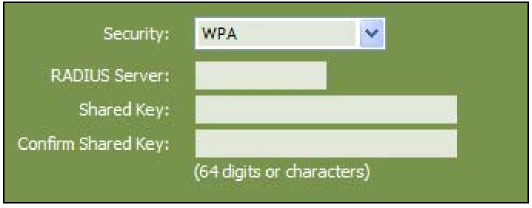
WEP Key:

Confirm WEP Key:

(5 ASCII characters)

M. If you want so secure your network with WPA or WPA2 (with Radius Server), select **WPA** or **WPA2** from the drop-down list.
Enter the IP Address of the Radius Server, the Shared Key and confirm the Shared Key in the second field.

Security – WPA / WPA2 Encryption



Security: WPA

RADIUS Server:

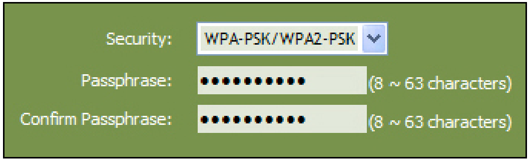
Shared Key:

Confirm Shared Key:

(64 digits or characters)

N. If you want to secure your network with WPA-PSK or WPA2-PSK, select **WPA-PSK**, **WPA2-PSK** or **WPA-PSK/WPA2-PSK** from the drop-down list.
Enter the Passphrase for your encryption and confirm the Passphrase in the second field.

Security – WPA-PSK / WPA2-PSK



Security: WPA-PSK/WPA2-PSK

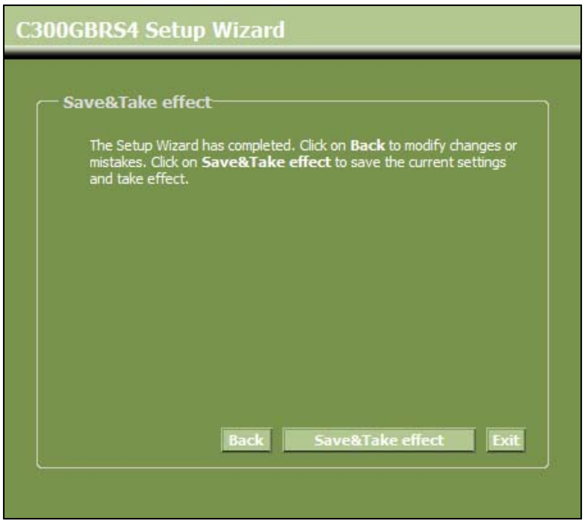
Passphrase: •••••••••• (8 ~ 63 characters)

Confirm Passphrase: •••••••••• (8 ~ 63 characters)

O. When all Wireless settings are made, click **Next** to continue.

P. The Setup Wizard is now complete. If you want to apply your settings, click **Save & Take Effect**.
If you want to change any setting, click **Back** to return to the previous screen.

If you want to close the Setup Wizard without any changes, click **Exit**.



The Setup Wizard has completed. Click on **Back** to modify changes or mistakes. Click on **Save&Take effect** to save the current settings and take effect.

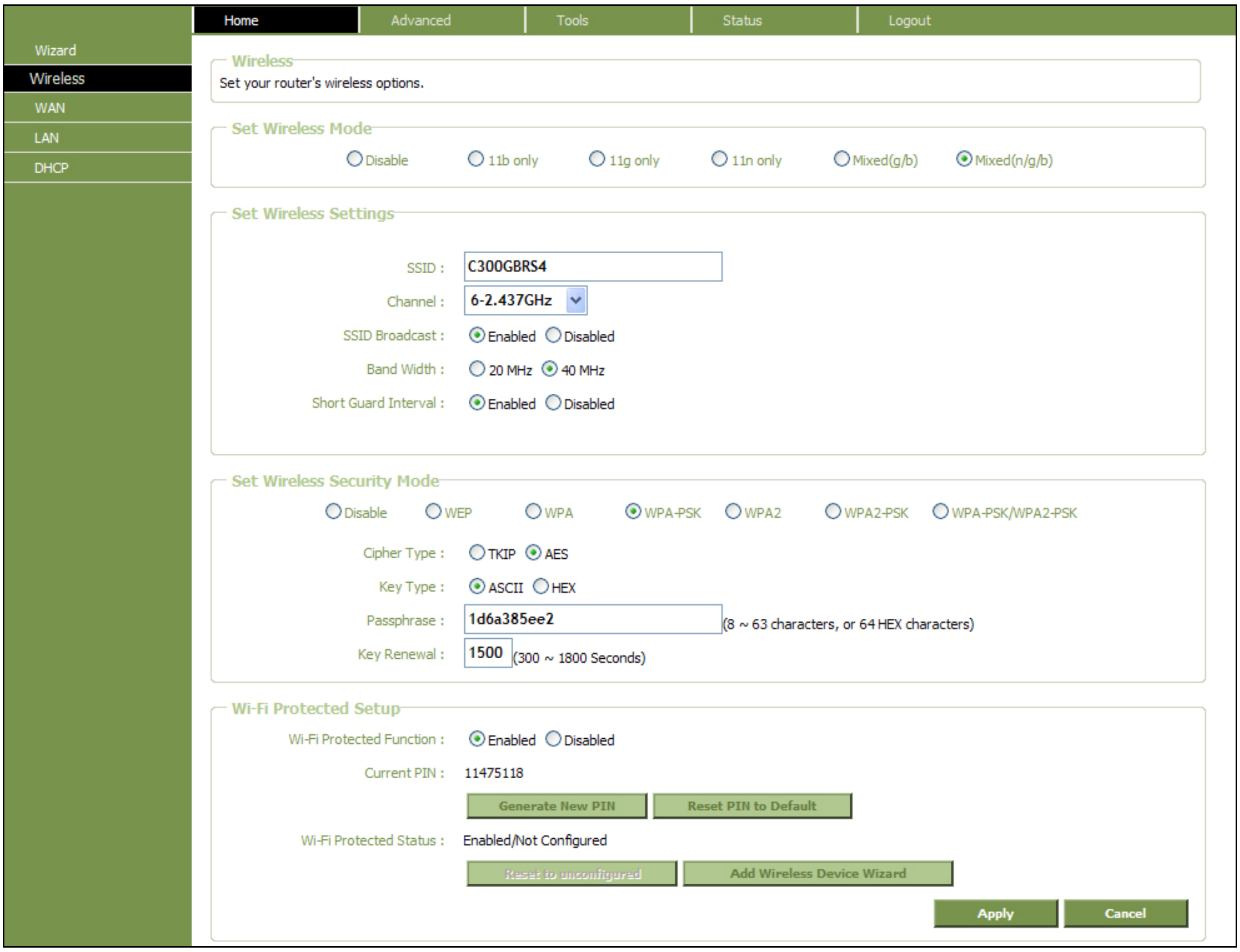
When you select **Save & Take Effect**, the router will apply the configured settings. Please wait for the message **Save Complete**.

Q. The configuration is now complete. Click **Close** to exit the Setup Wizard.

You will return to the **Device Settings** overview which will show you the configured settings for your WAN and Wireless connection.

HOME - WIRELESS

To configure the Router's basic configuration settings without running the Setup Wizard, you can access the windows used to configure Wireless, WAN, LAN, and DHCP settings directly from the Setup directory. To access the Wireless Settings window, click the Wireless button on the left side of the first window that appears when you successfully access the web manager.



Wireless

Set your router's wireless options.

Set Wireless Mode

○ Disable ○ 11b only ○ 11g only ○ 11n only ○ Mixed(g/b) ● Mixed(n/g/b)

Set Wireless Settings

SSID : C300GBRS4

Channel : 6-2.437GHz

SSID Broadcast : ● Enabled ○ Disabled

Band Width : ○ 20 MHz ● 40 MHz

Short Guard Interval : ● Enabled ○ Disabled

Set Wireless Security Mode

○ Disable ○ WEP ○ WPA ● WPA-PSK ○ WPA2 ○ WPA2-PSK ○ WPA-PSK/WPA2-PSK

Cipher Type : ○ TKIP ● AES

Key Type : ● ASCII ○ HEX

Passphrase : 1d6a385ee2 (8 ~ 63 characters, or 64 HEX characters)

Key Renewal : 1500 (300 ~ 1800 Seconds)

Wi-Fi Protected Setup

Wi-Fi Protected Function : ● Enabled ○ Disabled

Current PIN : 11475118

Wi-Fi Protected Status : Enabled/Not Configured

Wireless Settings window

Click one of the radio buttons in the Set Wireless Mode section to allow the router to operate in the wireless environment.

The **SSID** identifies members of the Service Set. Accept the default name or change it to something else. If the default SSID is changed, all other devices on the wireless network must use the same SSID.

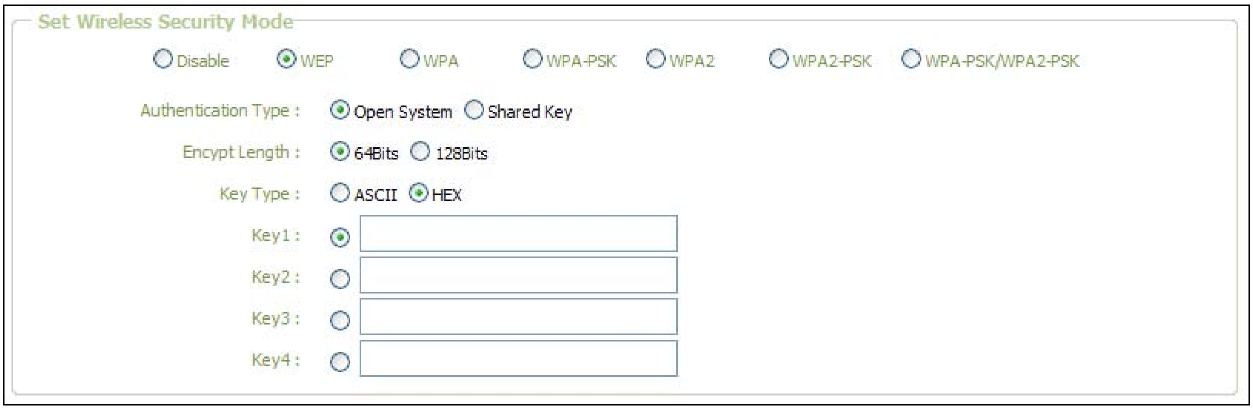
Enable **SSID Broadcast** if you want users to be able to join your wireless network based on the SSID information broadcast by the Router. If this is disabled, each new user will have to be manually configured.

What channels are available for use by the access point depends on the local regulatory environment. Remember that all devices communicating with the device must use the same channel (and use the same SSID). Use the drop-down menu to select the **Channel** used for your 802.11n wireless LAN. Click **Apply**.

WEP Encryption

WEP (Wireless Encryption Protocol) encryption can be enabled for security and privacy. WEP encrypts the data portion of each frame transmitted from the wireless adapter using one of the predefined keys. The router offers 64- or 128-bit encryption with four keys available.

To bring up the Wireless Settings window for WEP, click the **WEP** radio button in the **Set Wireless Security Mode** section.



Set Wireless Security Mode

○ Disable ● WEP ○ WPA ○ WPA-PSK ○ WPA2 ○ WPA2-PSK ○ WPA-PSK/WPA2-PSK

Authentication Type : ● Open System ○ Shared Key

Encypt Length : ● 64Bits ○ 128Bits

Key Type : ○ ASCII ● HEX

Key1 : ●

Key2 : ○

Key3 : ○

Key4 : ○

Wireless Settings window for WEP

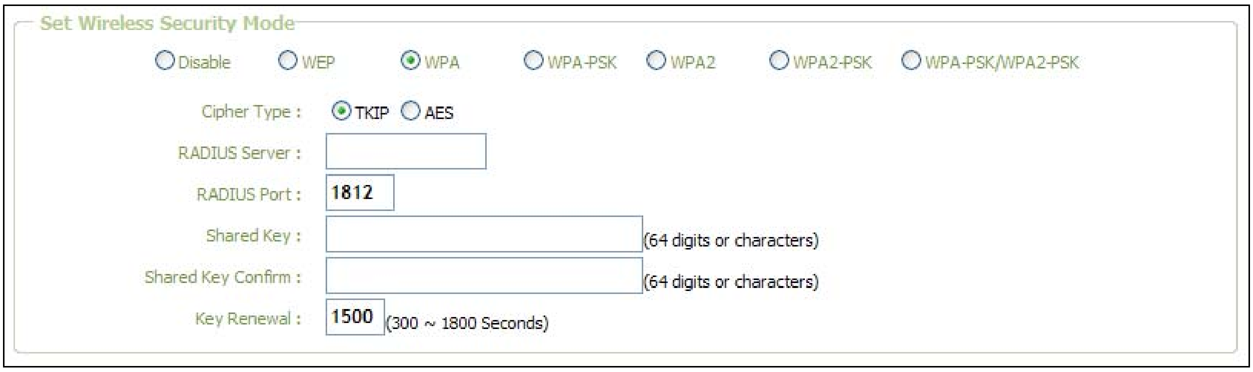
1. Select an **Authentication** type, *Open System* or *Shared Key*.
2. Select the desired level of **WEP Encryption**, *64Bits* or *128Bits*.
3. Select the desired key input format, *ASCII* or *HEX* (hexadecimal).
4. Select a key by clicking a radio button on the left and then enter the proper-length key.
5. Click **Apply**.

Note: If encryption of any kind, at any level is applied to the Wireless network, all devices on the network must comply with all security measures.

WPA Encryption

Wi-Fi Protected Access was designed to provide improved data encryption, perceived as weak in WEP, and to provide user authentication, largely nonexistent in WEP. There are two versions, WPA and WPA2; both are supported by the Access Point. WPA includes the option of using a Pre-Shared Key similar to WEP, or a RADIUS server can be used for verification. In addition, WPA2-Auto is offered for user convenience.

WPA/WPA2 Encryption with Radius Server



Set Wireless Security Mode

○ Disable ○ WEP ● WPA ○ WPA-PSK ○ WPA2 ○ WPA2-PSK ○ WPA-PSK/WPA2-PSK

Cipher Type : ● TKIP ○ AES

RADIUS Server :

RADIUS Port : 1812

Shared Key : (64 digits or characters)

Shared Key Confirm : (64 digits or characters)

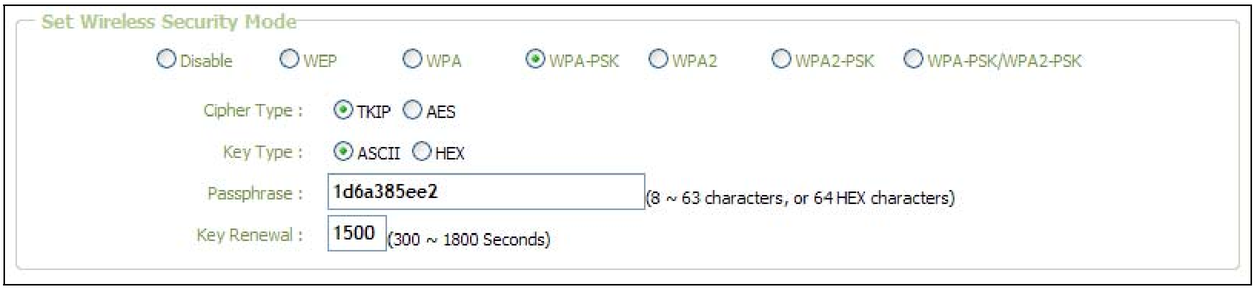
Key Renewal : 1500 (300 ~ 1800 Seconds)

Wireless Settings window for WPA and WPA2

1. Select the type of WPA encryption for your Radius Server, **WPA** or **WPA2**.
2. Select the desired **Cipher Type**, *TKIP*, or *AES*.
3. Enter the **RADIUS Server** IP address and the **RADIUS Port** for your Radius Server.
4. Enter the **Shared Key** (between 1 and 64 characters) which is needed for the Radius server.
5. Re-enter the Shared Key in the second field.
6. Enter a time in **Key Renewal** (300 ~ 1800 seconds).
7. Click **Apply**.

Note: The values needed for RADIUS authentication can be obtained from your Internet Service Provider (ISP).

WPA/WPA2-PSK With Passphrase Encryption



Set Wireless Security Mode

○ Disable ○ WEP ○ WPA ● WPA-PSK ○ WPA2 ○ WPA2-PSK ○ WPA-PSK/WPA2-PSK

Cipher Type : ● TKIP ○ AES

Key Type : ● ASCII ○ HEX

Passphrase : 1d6a385ee2 (8 ~ 63 characters, or 64 HEX characters)

Key Renewal : 1500 (300 ~ 1800 Seconds)

Wireless Settings window for WPA-PSK, WPA2-PSK and WPA-PSK/WPA2-PSK

1. Select the type of WPA encryption for use with your Passphrase, **WPA-PSK**, **WPA2-PSK** or **WPA-PSK/WPA2-PSK**.

Note: If you select **WPA-PSK/WPA2-PSK**, the router will work with the highest WPA2-PSK encryption. If clients try to connect which do not support WPA2-PSK, the router will automatically authorize the client on WPA-PSK Level.

2. Select the desired **Cipher Type**, *TKIP* or *AES*.
3. Select the **Key Type**, *ASCII* or *HEX* (Hexadecimal).
4. Enter the **Passphrase** you want to use for your WPA-PSK encryption (8 ~ 63 characters ASCII, or 64 characters HEX).
5. Enter a time in **Key Renewal** (300 ~ 1800 seconds).
6. Click **Apply**.

WPS Security

The Conceptronic C300GBRS4 supports WPS (Wi-Fi Protected Setup). WPS is a standard for easy and secure establishment of a wireless network. With WPS you can setup and protect your wireless network in just a few easy steps.

Note: To use WPS with the C300GBRS4, you need to have Wireless Clients which supports WPS. If you have 1 or more Wireless Clients without WPS support, it is advised to secure your network manually using the Setup Wizard.

Note: For more (technical) information about WPS, you can visit the following website: *http://en.wikipedia.org/wiki/Wi-Fi_Protected_Setup*

The C300GBRS4 supports 2 ways to activate and establish a WPS connection:

- Push Button technology
- Pin Code technology

WPS – Push Button technology

The WPS Push Button technology requires a (virtual) button on your Wireless Client to establish a connection between the C300GBRS4 and your Wireless Client.
Some Wireless Clients work with a real button to activate the WPS Push Button technology; some Wireless Clients use a software-based virtual button.

Follow the steps below to activate and establish a WPS connection with the Push Button technology:

A. Press the WPS Button at the front of the C300GBRS4 until the WPS LED blinks.
B. Press the WPS Button at your Wireless Client. This can be a hardware button or a virtual button in the software of your Wireless Client.

The C300GBRS4 will activate WPA security over your wireless network and accepts the wireless connection of your Wireless Client.

Note: The C300GBRS4 will keep the WPS authentication active for 120 seconds. During this process, the WPS LED will blink. If there is no connection in these 120 seconds, the LED will turn off and the WPS authentication process is stopped.
If the WPS feature is not used earlier, the wireless network will still be unencrypted.

If the authentication of the Wireless Client is succeeded, the WPS LED will burn steady blue for 5 minutes. After these 5 minutes, the LED will turn off.

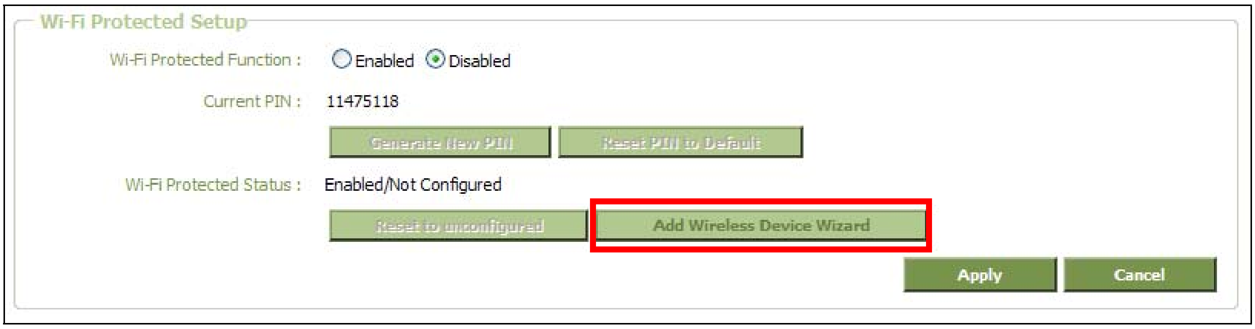
Your Wireless Client is now connected to the C300GBRS4 and your network is secured with WPA Encryption.
You can add more Wireless WPS Clients without loosing the connection to previous Wireless WPS Clients.
If you want to add more Wireless WPS clients, repeat step A & B.

Note: The WPA Key generated by the C300GBRS4 is random.

WPS - Pin Code technology

At the bottom of the Wireless Configuration page, you can find the **"Wi-Fi Protected Setup"** section.

A. Click the **Add Wireless Device Wizard** button on the screen.



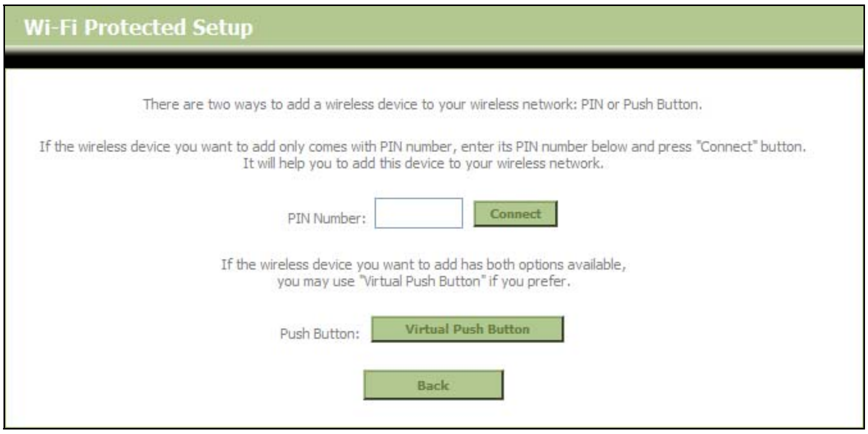
Wi-Fi Protected Setup

Wi-Fi Protected Function : ○ Enabled ● Disabled

Current PIN : 11475118

Wi-Fi Protected Status : Enabled/Not Configured

The WPS Wizard will be shown on your screen:



Wi-Fi Protected Setup

There are two ways to add a wireless device to your wireless network: PIN or Push Button.

If the wireless device you want to add only comes with PIN number, enter its PIN number below and press "Connect" button. It will help you to add this device to your wireless network.

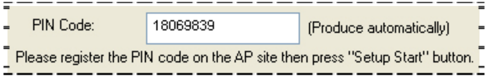
PIN Number:

If the wireless device you want to add has both options available, you may use "Virtual Push Button" if you prefer.

Push Button:

In this Wizard, you can activate the Pin Code feature. To start with the Pin Code authentication, you need the Pin Code generated by your Wireless Client.

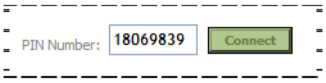
B. Select the WPS Pin Code feature in the software of your Wireless Client. The Wireless Client will generate a Pin Code and shows it on your screen.



PIN Code: 18069839 (Produce automatically)

Please register the PIN code on the AP site then press "Setup Start" button.

[Wireless Client Software]

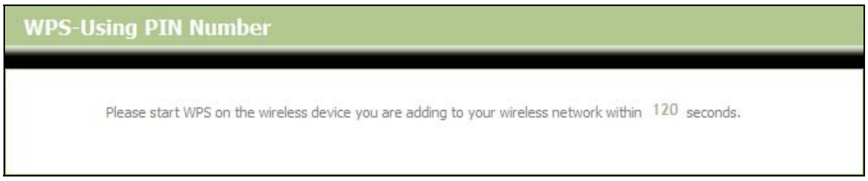


PIN Number: 18069839

[C300GBRS4 WPS Wizard]

C. Enter the Pin Code given by your Wireless Client in the WPS Wizard of the C300GBRS4 and click **Connect**.

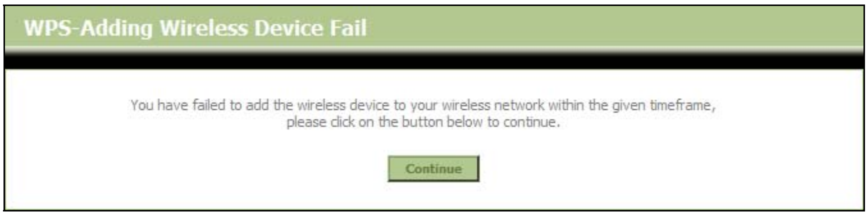
The C300GBRS4 will activate WPA security on your wireless network and accepts the wireless connection of your Wireless Client with the entered Pin Code.



WPS-Using PIN Number

Please start WPS on the wireless device you are adding to your wireless network within 120 seconds.

The C300GBRS4 will keep the WPS authentication active for 120 seconds. During this process, the WPS LED will blink. If there is no connection in these 120 seconds, the LED will turn off and the WPS authentication process is stopped.



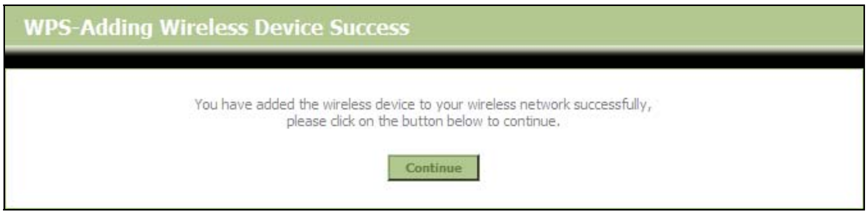
WPS-Adding Wireless Device Fail

You have failed to add the wireless device to your wireless network within the given timeframe, please click on the button below to continue.

Click **Continue** to return to the WPS Wizard screen.

Note: If the WPS feature is not used earlier, the wireless network will still be unencrypted.

If the authentication of the Wireless Client is succeeded, the Wizard will show **"WPS - Adding Wireless Device Success"**. The WPS LED will burn steady blue for 5 minutes. After these 5 minutes, the LED will turn off.



WPS-Adding Wireless Device Success

You have added the wireless device to your wireless network successfully, please click on the button below to continue.

Click **Continue** to return to the Wireless Configuration page.

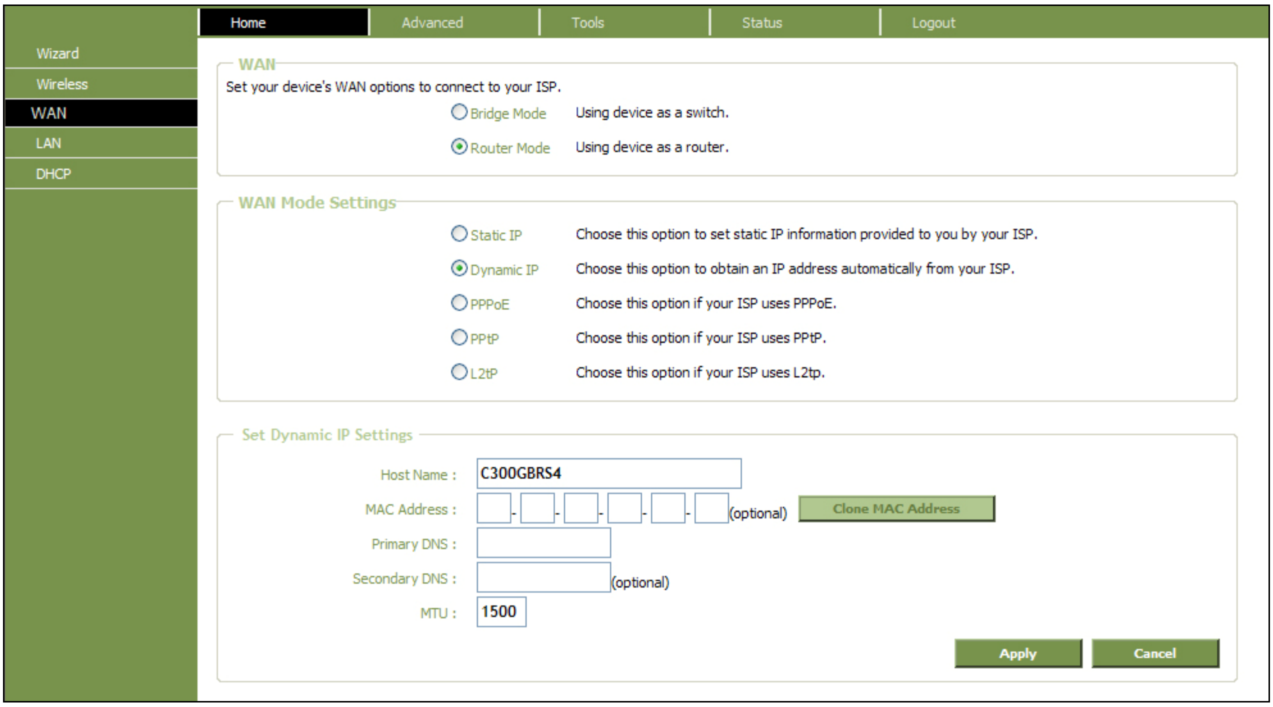
Your Wireless Client is now connected to the C300GBRS4 and your network is secured with WPA Encryption.
If you want to add more Wireless Clients with the WPS feature, repeat step A to C.

HOME - WAN

To access this window click the **WAN** button in the left menu of the web manager.

You can configure the C300GBRS4 as Router, or as Switch/Access point.

- When you select the **Router Mode** option, you can configure a connection for your provider which is described further in this manual.
- When you select the **Bridge Mode** function, the C300GBRS4 will disable all router functions and will work as a 5 ports switch with access point. This can be useful if you want to use the C300BSRS4 just as a switch and access point, instead of all the router functions.



WAN

Set your device's WAN options to connect to your ISP.

○ Bridge Mode Using device as a switch.

● Router Mode Using device as a router.

WAN Mode Settings

○ Static IP Choose this option to set static IP information provided to you by your ISP.

● Dynamic IP Choose this option to obtain an IP address automatically from your ISP.

○ PPPoE Choose this option if your ISP uses PPPoE.

○ PPtP Choose this option if your ISP uses PPtP.

○ L2tP Choose this option if your ISP uses L2tp.

Set Dynamic IP Settings

Host Name : C300GBRS4

MAC Address : __-__-__-__-__-__ (optional)

Primary DNS :

Secondary DNS : (optional)

MTU : 1500

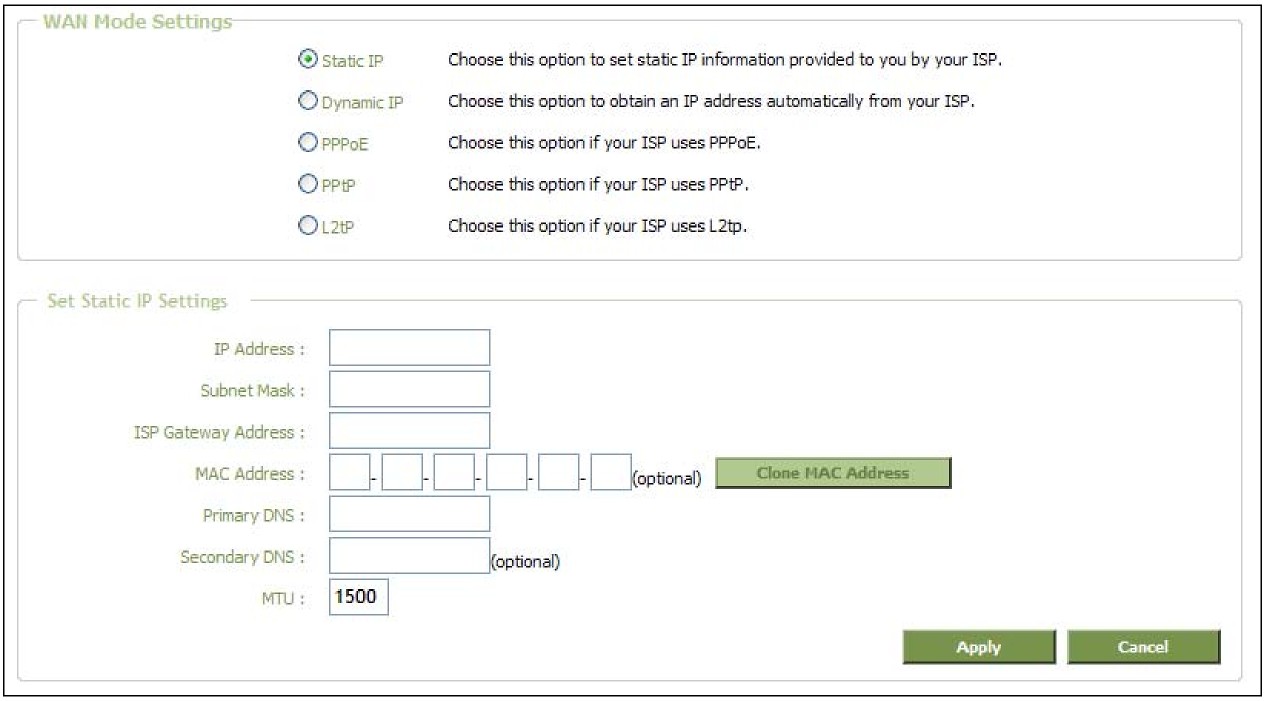
WAN – Bridge or Router Mode

Note: If you select the **"Bridge"** option, the DHCP Server also will be disabled. You cannot access the configuration pages of the C300GBRS4 anymore on **192.168.0.1**, but you need to check the DHCP Server in your network which IP Address is assigned to the C300GBRS4.

Static IP Address

When the Router is configured to use Static IP Address assignment for the WAN connection, you must manually assign a global IP Address, Subnet Mask and Gateway IP Address used for the WAN connection. Follow the instruction below to configure the Router to use Static IP Address assignment for the WAN connection.

To configure a Static IP Address connection, perform the steps listed below. Some of the settings do not need to be changed the first time the device is set up, but can be changed later if you choose. See the table below for a description of all the settings available in this window.



WAN Mode Settings

● Static IP Choose this option to set static IP information provided to you by your ISP.

○ Dynamic IP Choose this option to obtain an IP address automatically from your ISP.

○ PPPoE Choose this option if your ISP uses PPPoE.

○ PPtP Choose this option if your ISP uses PPtP.

○ L2tP Choose this option if your ISP uses L2tp.

Set Static IP Settings

IP Address :

Subnet Mask :

ISP Gateway Address :

MAC Address : - - - - - (optional)

Primary DNS :

Secondary DNS : (optional)

MTU : 1500

WAN Settings window for Static IP Address

To configure a Static IP type connection for the WAN, follow these steps:

1. Click the **Static IP** radio button in the WAN Mode Settings section.
2. Enter an **IP Address**, **Subnet Mask**, **ISP Gateway Address**, **Primary DNS** address, and (if available) **Secondary DNS** address as instructed by your ISP. These are the global IP settings for the WAN interface. This is the “visible” IP address of your account. Your ISP should have provided these IP settings to you.
3. Some ISPs record the unique MAC address of your computer’s Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer’s Ethernet adapter, press the **Clone MAC Address** button or enter the MAC Address manually.
4. Leave the **MTU** value at the default setting (default = 1500) unless you have specific reasons to change this (see table below).
5. When you are satisfied that all the WAN settings are configured correctly, click the **Apply** button.

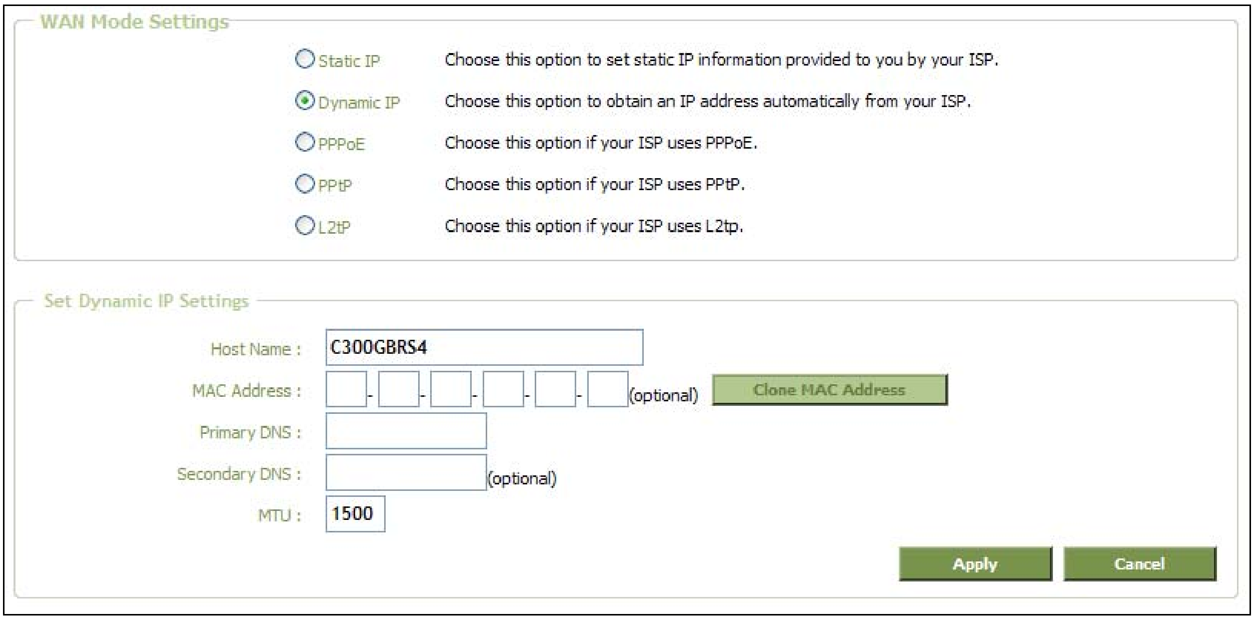
6. The new settings must be saved and the Router must be restarted for the settings to go into effect. To save and reboot the Router, click the **Tools** button in the top menu and select the **System** button in the left menu. In the System Management window, click the **Save** button under Save Device Settings to Your Local Hard Drive and then click the **Reboot** button to reboot the C300GBRS4.
7. The Router will save the new settings and restart. Upon restarting the Router will automatically establish the WAN connection.

Additional settings for Static IP Address connections:

Static IP Parameters	Description
IP Address	This is the permanent global IP address for your account. This is the address that is visible outside your private network. Get this from your ISP.
Subnet Mask	This is the Subnet mask for the WAN interface. Get this from your ISP.
ISP Gateway Address	This is the IP address of your ISP's Gateway router. It provides the connection to the Router for IP routed traffic that is outside your ISP's network. That is, this will be the primary connection from the Router to most of the Internet. Get this IP address from your ISP.
MAC Address	To use the Clone MAC Address feature, simply click the **Clone MAC Address** button.
Primary DNS	This is the IP address of the first choice for Domain Name Service (DNS) used to match the named URL web address used by most browsers with the actual global IP address used for a web server. Usually this will be a server owned by the ISP. Get this IP address from your ISP.
Secondary DNS	This is the second choice for a DNS server. Get this IP address from your ISP.
MTU	The Maximum Transmission Unit size may be changed if you want to optimize efficiency for uploading data through the WAN interface. The default setting (1500 bytes) should be suitable for most users. Some user may want to adjust the setting to optimize performance for wireless traffic or when low latency is desired (such as with Internet gaming). It is highly recommended that the user research how adjusting the MTU may affect network traffic for better or worse.

Dynamic IP Address

A Dynamic IP Address connection configures the Router to automatically obtain its global IP address from a DHCP server on the ISP's network. The service provider assigns a global IP address from a pool of addresses available to the service provider. Typically the IP address assigned has a long lease time, so it will likely be the same address each time the Router requests an IP address.
To configure a Dynamic IP Address connection, perform the steps listed below. Some of the settings do not need to be changed the first time the device is set up, but can be changed later if you choose. See the table below for a description of all the settings available in this window.



WAN Mode Settings

○ Static IP — Choose this option to set static IP information provided to you by your ISP.
● Dynamic IP — Choose this option to obtain an IP address automatically from your ISP.
○ PPPoE — Choose this option if your ISP uses PPPoE.
○ PPtP — Choose this option if your ISP uses PPtP.
○ L2tP — Choose this option if your ISP uses L2tp.

Set Dynamic IP Settings

Host Name : C300GBRS4
MAC Address : __-__-__-__-__-__ (optional)
Primary DNS :
Secondary DNS : (optional)
MTU : 1500

WAN Settings window for Dynamic IP Address

To configure a Dynamic IP Address connection for the WAN, follow these steps:

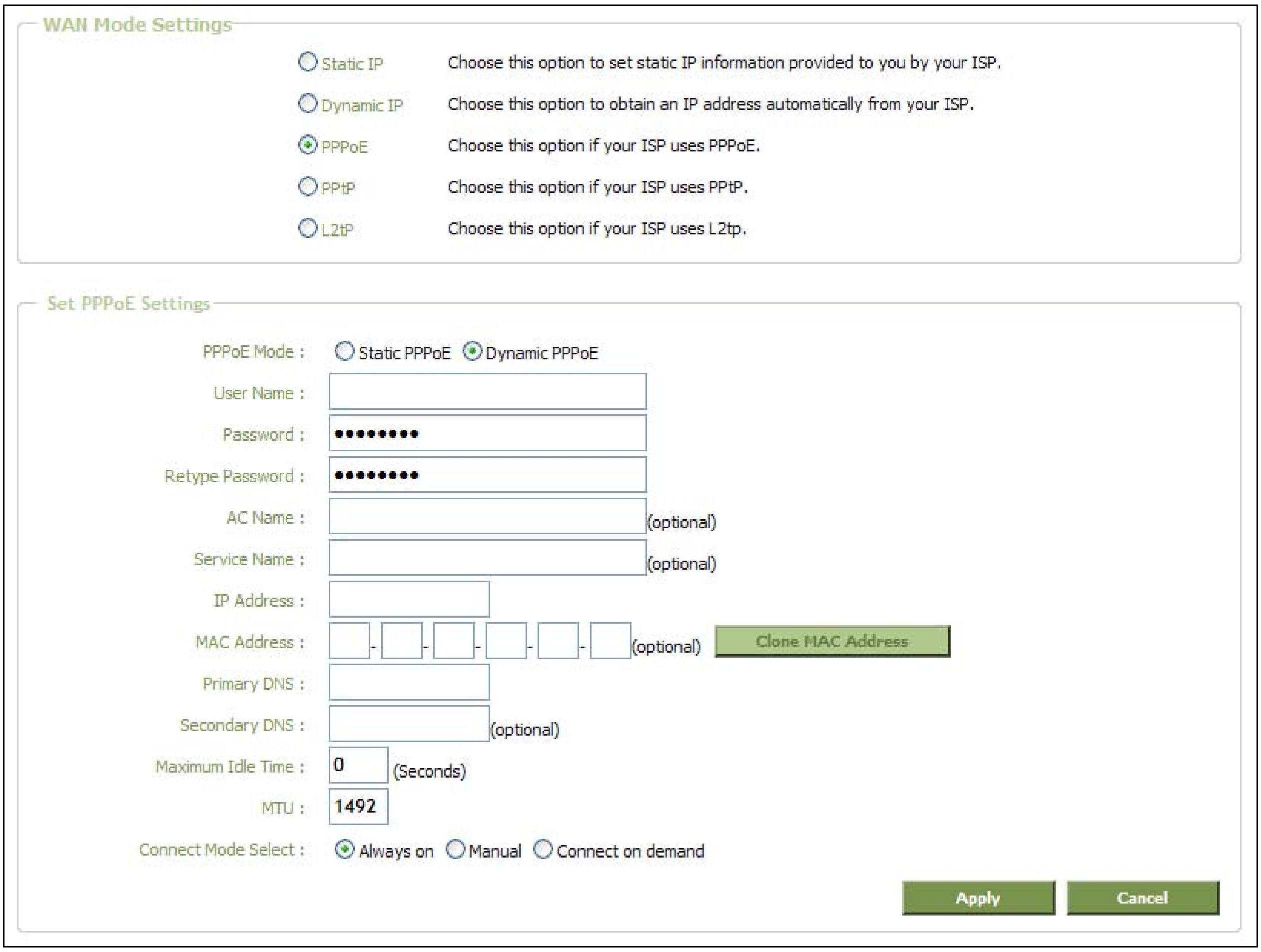
1. Click the **Dynamic IP** radio button in the WAN Mode Settings section.
2. Some ISPs record the unique MAC address of your computer's Ethernet adapter when you first access their network. This can prevent the Router (which has a different MAC address) from being allowed access to the ISPs network (and the Internet). To clone the MAC address of your computer's Ethernet adapter, press the **Clone MAC Address** button or enter the MAC Address manually.
3. Enter the **Primary DNS** address. This information should be available from your ISP.
4. Enter the **Secondary DNS** address (if available from your ISP).
5. Leave the **MTU** value at the default setting (default = 1500) unless you have specific reasons to change this (see table below).
6. When you are satisfied that all the WAN settings are configured correctly, click the **Apply** button.
7. The new settings must be saved and the Router must be restarted for the settings to go into effect. To save and reboot the Router, click the **Tools** button in the top menu and select the **System** button in the left menu. In the System Management window, click the **Save** button under Save Device Settings to Your Local Hard Drive and then click the **Reboot** button to reboot the C300GBRS4.
8. The Router will save the new settings and restart. Upon restarting the Router will automatically establish the WAN connection.

Additional settings for Dynamic IP Address connections:

Dynamic IP Parameters	Description
Host Name	This is the name that point to the dynamic IP. You may leave the field as it is unless it is required by your ISP.
MAC Address	This is not always necessary, but may be required for some ISPs. To clone the MAC address of your computer's Ethernet adapter, simply click the **Clone MAC Address** button. This will copy the information to a file used by the Router to present to the ISP's server used for DHCP. Some ISPs record the unique MAC address of your computer's Ethernet adapter when you first access their network. If you want to replace the cloned MAC address with the factory default setting later on, type in all zeros in the fields and click the **Clone MAC Address** button.
Primary DNS	Enter the Primary DNS Address. This information should be provided to you by your ISP.
Secondary DNS	The Secondary DNS Address is optional. See your ISP for further information.
MTU	The Maximum Transmission Unit size may be changed if you want to optimize efficiency for uploading data through the WAN interface. The default setting (1500 bytes) should be suitable for most users. Some user may want to adjust the setting to optimize performance for wireless traffic or when low latency is desired (such as with Internet gaming). It is highly recommended that the user research how adjusting the MTU may affect network traffic for better or worse.

PPPoE

Follow the instructions below to configure the Router to use a PPPoE for the Internet connection. Make sure you have all the necessary information before you configure the WAN connection.



WAN Mode Settings

○ Static IP — Choose this option to set static IP information provided to you by your ISP.
○ Dynamic IP — Choose this option to obtain an IP address automatically from your ISP.
● PPPoE — Choose this option if your ISP uses PPPoE.
○ PPtP — Choose this option if your ISP uses PPtP.
○ L2tP — Choose this option if your ISP uses L2tp.

Set PPPoE Settings

PPPoE Mode :	○ Static PPPoE ● Dynamic PPPoE
User Name :	
Password :	••••••••
Retype Password :	••••••••
AC Name :	(optional)
Service Name :	(optional)
IP Address :	
MAC Address :	- - - - - (optional)
Primary DNS :	
Secondary DNS :	(optional)
Maximum Idle Time :	0 (Seconds)
MTU :	1492
Connect Mode Select :	● Always on ○ Manual ○ Connect on demand

WAN Settings window for PPPoE

To set up a PPPoE connection:

1. Click the **PPPoE** radio button in the WAN Mode Settings section to see the Set PPPoE Settings section.
2. Select the **PPPoE Mode**, *Static PPPoE* or *Dynamic PPPoE*.
3. Type the User Name and Password used for your ADSL account. A typical User Name will be in the form user1234@isp.co.uk. The Password may be assigned to you by your ISP or you may have selected it when you set up the account with your ISP.
4. Typically the globally IP settings (i.e. IP address for the WAN interface) for a PPPoE connection will use Dynamic IP assignment from the ISP. Some accounts may be assigned a specific global IP address.
5. Leave the MTU value at the default setting (default = 1492) unless you have specific reasons to change this (see table below).
6. Choose the desired **Connect Mode Select** setting. Select from: *Always on*, *Manual*, or *Connect on demand*. Most users will want to choose the default connection setting, *Always on*.
7. When you are satisfied that all the WAN settings are configured correctly, click the **Apply** button.

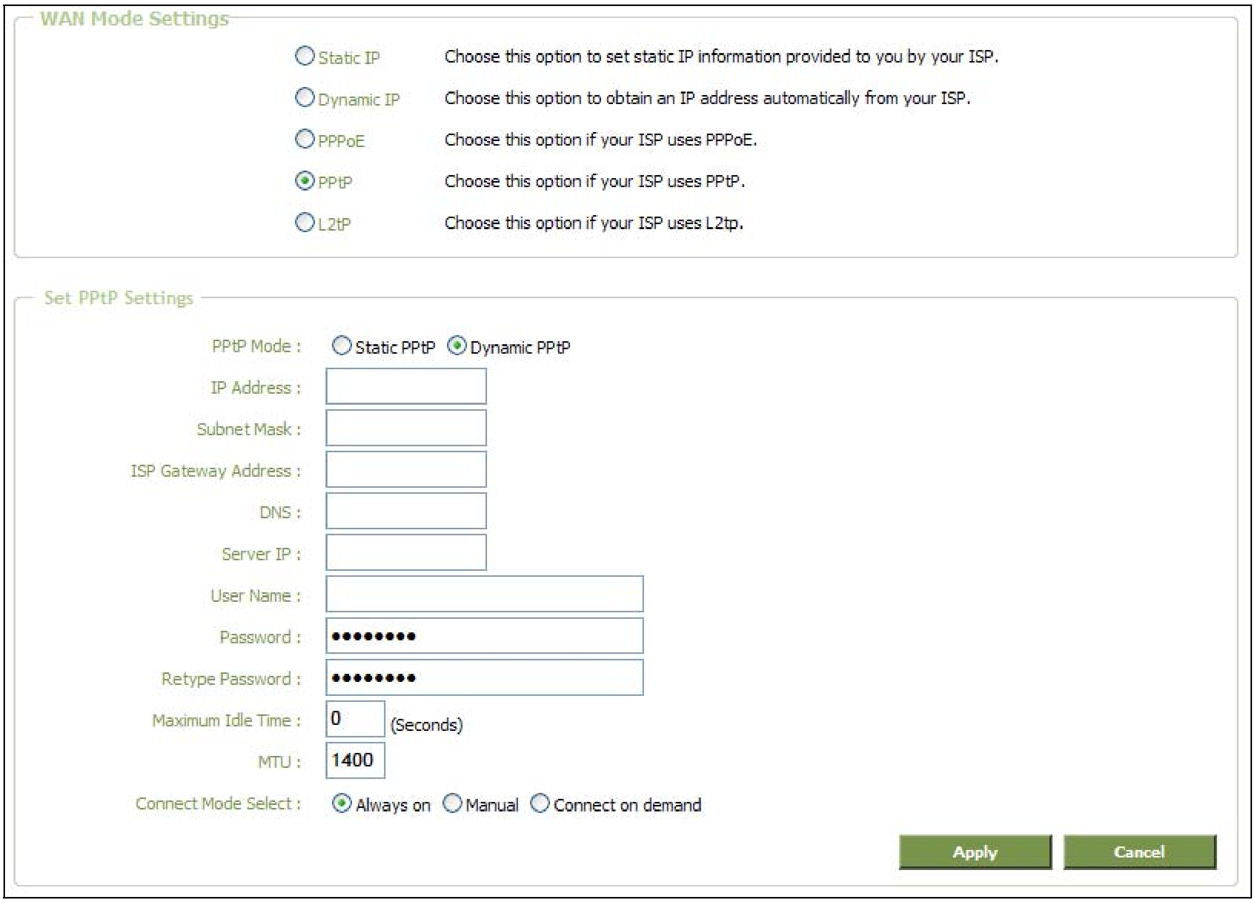
8. The new settings must be saved and the Router must be restarted for the settings to go into effect. To save and reboot the Router, click the **Tools** button in the top menu and select the **System** button in the left menu. In the System Management window, click the **Save** button under Save Device Settings to Your Local Hard Drive and then click the **Reboot** button to reboot the C300GBRS4.
9. The Router will save the new settings and restart. Upon restarting the Router will automatically establish the WAN connection.

Additional settings for PPPoE connections:

PPPoE Parameters	Description
User Name	For PPP connections, a **User Name** and **Password** are used to identify and verify your account to the ISP. Enter the User Name for your ADSL service account. User names and passwords are case-sensitive, so enter this information exactly as given to you by your ISP.
Password	Together with the **User Name**, this is used to verify your account to the ISP. Enter the Password exactly as given to you by your ISP.
Retype Password	Retype the password entered in the Password field.
IP Address	If you have selected the Static PPPoE option, type in the global IP address used for your WAN interface. Your ISP should provide this IP address to you.
MAC Address	To use the Clone MAC Address feature, simply click the **Clone MAC Address** button.
Primary DNS	Enter the Primary DNS Address. This information should be provided to you by your ISP.
Secondary DNS	The Secondary DNS Address is optional. See your ISP for further information.
Maximum Idle Time	A value of 0 means that the PPP connection will remain connected. If your network account is billed according to the amount of time the Router is actually connected to the Internet, enter an appropriate Idle Time value (in minutes). This will disconnect the Router after the WAN connection has been idle for the amount of time specified.
MTU	The Maximum Transmission Unit size may be changed if you want to optimize efficiency for uploading data through the WAN interface. The default setting (1492 bytes) should be suitable for most users. Some user may want to adjust the setting to optimize performance for wireless traffic or when low latency is desired (such as with Internet gaming). It is highly recommended that the user research how adjusting the MTU may affect network traffic for better or worse.
Connect Mode Select	Select the desired option: *Always on*, *Manual*, or *Connect on demand*. Most users will want to choose the default connection setting, *Always on*.

PPTP

The Point to Point Tunneling Protocol (PPTP) is used to transfer information securely between VPNs (Virtual Private Routers). Encryption methods are employed in the transfer of information between you and your ISP using a key encryption. This option is specific for European users whose ISPs support the PPTP protocol for the uplink connection. To connect to your ISP's server using this protocol, the information in this window must be provided to you by your ISP and then properly implemented.



WAN Mode Settings

- ○ Static IP — Choose this option to set static IP information provided to you by your ISP.
- ○ Dynamic IP — Choose this option to obtain an IP address automatically from your ISP.
- ○ PPPoE — Choose this option if your ISP uses PPPoE.
- ● PPtP — Choose this option if your ISP uses PPtP.
- ○ L2tP — Choose this option if your ISP uses L2tp.

Set PPtP Settings

PPtP Mode :	○ Static PPtP ● Dynamic PPtP
IP Address :	
Subnet Mask :	
ISP Gateway Address :	
DNS :	
Server IP :	
User Name :	
Password :	••••••••
Retype Password :	••••••••
Maximum Idle Time :	0 (Seconds)
MTU :	1400
Connect Mode Select :	● Always on ○ Manual ○ Connect on demand

WAN Settings window for Others (PPTP)

PPTP Parameters	Description
IP Address	Enter the IP address for your Router based on the information provided to you by your ISP.
Subnet Mask	Enter the Subnet Mask for your Router based on the information provided to you by your ISP.
ISP Gateway Address	Enter the Gateway IP address based on the information provided to you by your ISP.
DNS	Enter the Domain Name Server IP address.
Server IP	Enter the IP address of the ISP server with which your router will be conveying encrypted information. This field is based on information provided to you by your ISP.
User Name	Enter the name of the PPTP account as provided to you by your ISP.
Password	Enter the PPTP password as provided to you by your ISP.
Retype Password	Retype the password entered in the Password field.

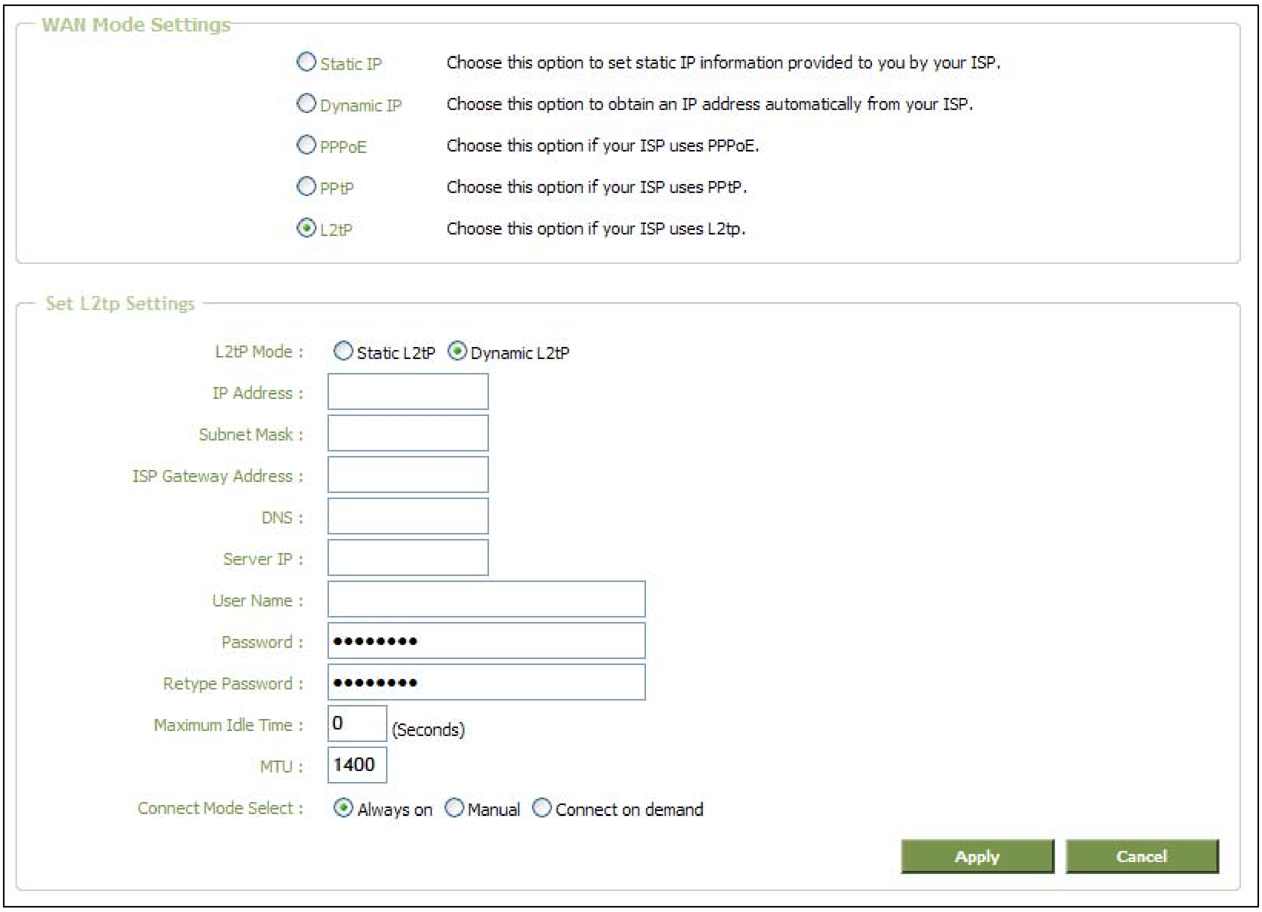
Maximum Idle Time A value of 0 means that the PPP connection will remain connected. If your network account is billed according to the amount of time the Router is actually connected to the Internet, enter an appropriate Idle Time value (in minutes). This will disconnect the Router after the WAN connection has been idle for the amount of time specified.

MTU The Maximum Transmission Unit size may be changed if you want to optimize efficiency for uploading data through the WAN interface. The default setting (1400 bytes) should be suitable for most users. Some user may want to adjust the setting to optimize performance for wireless traffic or when low latency is desired (such as with Internet gaming). It is highly recommended that the user research how adjusting the MTU may affect network traffic for better or worse.

Connect Mode Select Select the desired option: *Always on*, *Manual*, or *Connect on demand*. Most users will want to choose the default connection setting, *Always on*.

L2TP

Some ISPs may require the user to uplink using the Layer 2 Tunneling Protocol (L2TP) method. L2TP is a VPN protocol that will ensure a direct connection to the server using an authentication process that guarantees the data originated from the claimed sender and was not damaged or altered in transit. Once connected to the VPN tunnel, it seems to the user that the client computer is directly connected to the internal network. To set up your L2TP connection, enter the following data that was provided to you by your ISP.



WAN Mode Settings

○ Static IP — Choose this option to set static IP information provided to you by your ISP.
○ Dynamic IP — Choose this option to obtain an IP address automatically from your ISP.
○ PPPoE — Choose this option if your ISP uses PPPoE.
○ PPtP — Choose this option if your ISP uses PPtP.
● L2tP — Choose this option if your ISP uses L2tp.

Set L2tp Settings

L2tP Mode : ○ Static L2tP ● Dynamic L2tP
IP Address :
Subnet Mask :
ISP Gateway Address :
DNS :
Server IP :
User Name :
Password : ••••••••
Retype Password : ••••••••
Maximum Idle Time : 0 (Seconds)
MTU : 1400
Connect Mode Select : ● Always on ○ Manual ○ Connect on demand

WAN Settings window for Others (L2TP)

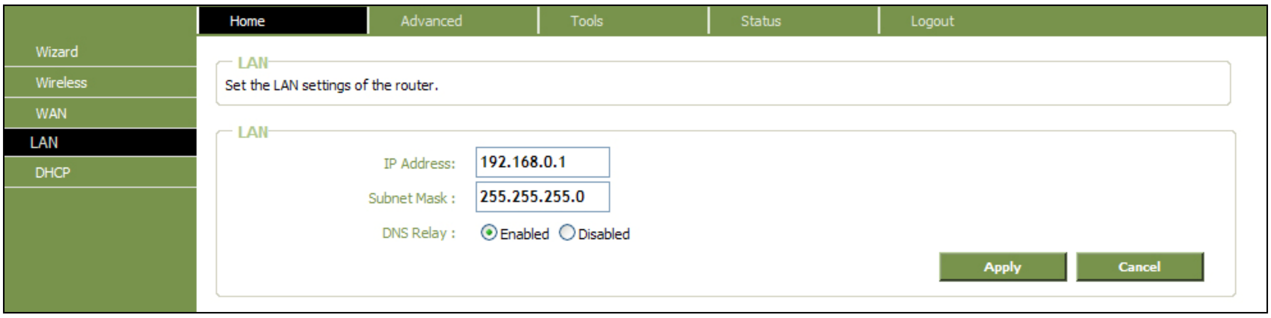
L2TP Parameters	Description
IP Address	Enter the IP address for your Router based on the information provided to you by your ISP.
Subnet Mask	Enter the Subnet Mask for your Router based on the information provided to you by your ISP.
ISP Gateway Address	Enter the Gateway IP address based on the information provided to you by your ISP.
DNS	Enter the Domain Name Server IP address.
Server IP	Enter the IP address of the ISP server with which your router will be conveying encrypted information. This field is based on information provided to you by your ISP.
User Name	Enter the name of the L2TP account as provided to you by your ISP.
Password	Enter the L2PT password as provided to you by your ISP.
Retype Password	Retype the password entered in the Password field.
Maximum Idle Time	A value of 0 means that the PPP connection will remain connected. If your network account is billed according to the amount of time the Router is actually connected to the Internet, enter an appropriate Idle Time value (in minutes). This will disconnect the Router after the WAN connection has been idle for the amount of time specified.

MTU The Maximum Transmission Unit size may be changed if you want to optimize efficiency for uploading data through the WAN interface. The default setting (1400 bytes) should be suitable for most users. Some user may want to adjust the setting to optimize performance for wireless traffic or when low latency is desired (such as with Internet gaming). It is highly recommended that the user research how adjusting the MTU may affect network traffic for better or worse.

Connect Mode Select Select the desired option: *Always on*, *Manual*, or *Connect on demand*. Most users will want to choose the default connection setting, *Always on*.

HOME - LAN

You can configure the LAN IP address to suit your preference. Many users will find it convenient to use the default settings together with DHCP service to manage the IP settings for their private network. The IP address of the Router is the base address used for DHCP. In order to use the Router for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the Router. The IP addresses available in the DHCP IP address pool will change automatically if you change the IP address of the Router. See the next section for information on DHCP setup.



LAN

Set the LAN settings of the router.

LAN

IP Address: 192.168.0.1

Subnet Mask : 255.255.255.0

DNS Relay : ● Enabled ○ Disabled

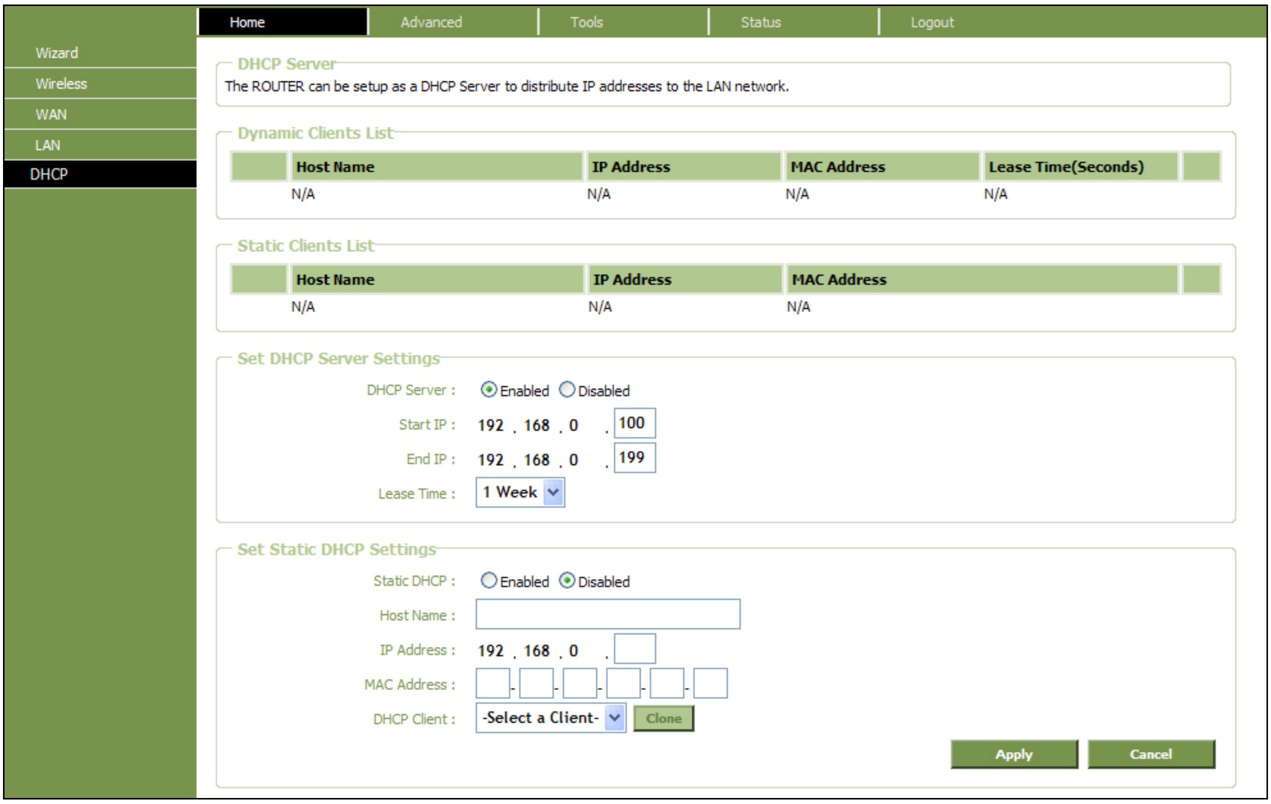
LAN Settings window

To change the LAN **IP Address** or **Subnet Mask**, type in the desired values and click the **Apply** button. Your web browser should automatically be redirected to the new IP address. You will asked to login again to the Router's web manager.

In addition, the Router can be configured to relay DNS from your ISP or another available service to workstations on your LAN. When DNS Relay is Enabled, the Router will accept DNS requests from hosts on the LAN and forward them to the ISP (or alternative) DNS servers. Alternatively, you may also disable the DNS relay and configure hosts on your LAN to use DNS servers directly. Most users, who are using the Router for DHCP service on the LAN and are using DNS servers on the ISP's network, will leave DNS relay enabled.

HOME - DHCP

The DHCP server is enabled by default for the Router's Ethernet LAN interface. DHCP service will supply IP settings to workstations configured to automatically obtain IP settings that are connected to the Router though the Ethernet port. When the Router is used for DHCP it becomes the default gateway for DHCP client connected to it. Keep in mind that if you change the IP address of the Router the range of IP addresses in the pool used for DHCP on the LAN will also be changed. The IP address pool can be up to 253 IP addresses.



DHCP Server

The ROUTER can be setup as a DHCP Server to distribute IP addresses to the LAN network.

Dynamic Clients List

	Host Name	IP Address	MAC Address	Lease Time(Seconds)	
	N/A	N/A	N/A	N/A	

Static Clients List

	Host Name	IP Address	MAC Address	
	N/A	N/A	N/A	

Set DHCP Server Settings

DHCP Server : ● Enabled ○ Disabled
Start IP : 192 . 168 . 0 . 100
End IP : 192 . 168 . 0 . 199
Lease Time : 1 Week

Set Static DHCP Settings

Static DHCP : ○ Enabled ● Disabled
Host Name :
IP Address : 192 . 168 . 0 .
MAC Address : - - - - -
DHCP Client : -Select a Client- Clone

DHCP window

To display this window, click the **DHCP** button in left menu. Any active DHCP Clients appear at the top of the window in the DHCP Clients List. The IP address and MAC address for active DHCP clients are displayed in the list.

The two options for DHCP service are as follows:

- You may use the Router as a DHCP server for your LAN.
- You can disable DHCP service and manually configure IP settings for workstations.

Follow the instructions below according to which of the above DHCP options you want to use. When you have configured the DHCP Settings as you want them, click the **Apply** button to commit the new settings.

Use the Router for DHCP

To use the built-in DHCP server, click the **Enabled** radio button under the **DHCP Server** option if it is not already selected. The IP Address Pool settings can be adjusted. The **Start IP** address is the lowest available IP address. If you change the IP address of the Router this will change automatically to be 1 more that the IP address of the Router.

The **End IP** address is the highest IP address number in the pool. Select the desired **Lease Time** from the drop-down list. This is the amount of time that a workstation is allowed to reserve an IP address in the pool if the workstation is disconnected from the network or powered off.

Disable the DHCP Server

To disable DHCP, click the **Disabled** radio button under the **DHCP Server** option and then click the **Apply** button. Choosing this option requires that workstations on the local network must be configured manually or use another DHCP server to obtain IP settings.

If you configure IP settings manually, make sure to use IP addresses in the subnet of the Router. You will need to use the Router's IP address as the Default Gateway for the workstation in order to provide Internet access.

Create Static DHCP Server rules

You can also create static DHCP Server rules to assign the same IP address every time to the same network client. To create a static DHCP Server rule, click **Enabled** under **Static DHCP**, and enter the **Host Name** and the **IP Address** you want to use for the network client. Enter the MAC Address of the network client in the **MAC Address** field, or select it from the **DHCP Client** drop-down list if it is connected and click the **Clone** button. Click **Apply** to save the static DHCP rule.

Note: If you want to use the Wake-on-LAN feature of the router, make sure you have defined the network clients you want to wake in the Static DHCP Server rules.

Advanced

The Advanced menu contains main windows for Virtual Server, Special Applications, Firewall Rules, DMZ, IP Filters, MAC Filters, URL Blocking, Domain Blocking, Wireless Performance, and Dynamic DNS.

ADVANCED – VIRTUAL SERVER

Use this window to set up forwarding rules applied to inbound (WAN-to-LAN) traffic. The Virtual Server function allows remote users to access services on your LAN such as FTP for file transfers or SMTP and POP3 for e-mail. The Wireless Broadband Router will accept remote requests for these services at your Global IP Address, using the specified TCP or UDP protocol and port number, and then redirect these requests to the server on your LAN with the LAN IP address you specify. Remember that the specified Private IP Address must be within the useable range of the subnet occupied by the Router.

UDP/TCP port redirection is used to direct inbound traffic to the specified servers or workstations on your private network. Port redirection can also be used to direct potentially hazardous packets to a proxy server outside your firewall. For example, you can configure the Router to direct HTTP packets to a designated HTTP server in the DMZ. You can define a set of instructions for a specific incoming port or for a range of incoming ports. Each set of instructions or rule is indexed and can be modified or deleted later as needed.

Below you will find a list of some common used ports and their corresponding application:

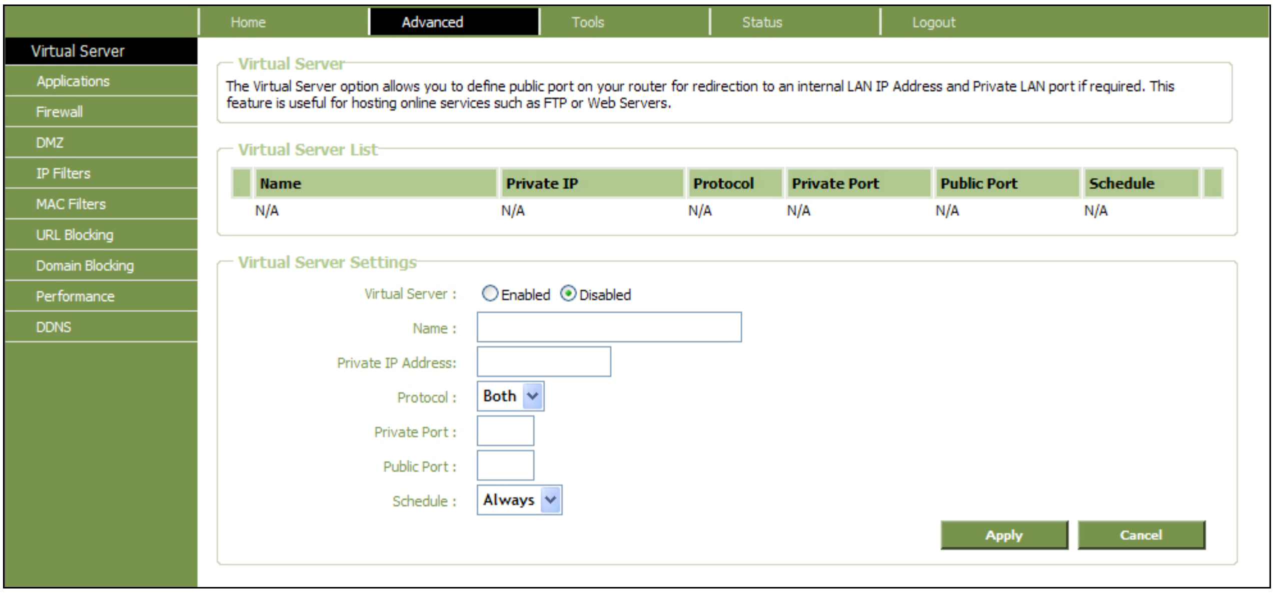
Port	Application	Port	Application
20	FTP Data (FTP Server)	**80**	HTTP (Web Server)
21	FTP (FTP Server)	**110**	POP3 (Mail Server – Incoming)
22	SSH (Secure Shell)	**2000**	Remotely Anywhere
23	Telnet	**5800**	VNC
25	SMTP (Mail Server – Outgoing)	**5900**	VNC

For more ports and their corresponding applications, see:
http://portforward.com/cports.htm

Note: When you are using an application which supports UPnP Port Mapping, the router can be automatically configured by the application when needed. In that case, you don’t need to setup your port mappings manually.

Note: When using Virtual Server rules, it is advised to configure the computer(s) with a Fixed IP Address instead of a Dynamic IP Address.

Note: In the next picture you will see an example of a Virtual Server configuration.



Virtual Server

The Virtual Server option allows you to define public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Virtual Server List

Name	Private IP	Protocol	Private Port	Public Port	Schedule
N/A	N/A	N/A	N/A	N/A	N/A

Virtual Server Settings

Virtual Server : ○ Enabled ● Disabled
Name :
Private IP Address:
Protocol : Both
Private Port :
Public Port :
Schedule : Always

Virtual Server window

1. Click the **Enabled** radio button under Virtual Server.
2. Enter a name for your Virtual Server Rule in the **Name** field.
3. Enter the IP Address of your computer/server which needs the Virtual Server rule.
4. Select the Protocol for your Virtual Server rule: *TCP*, *UDP* or *Both*.

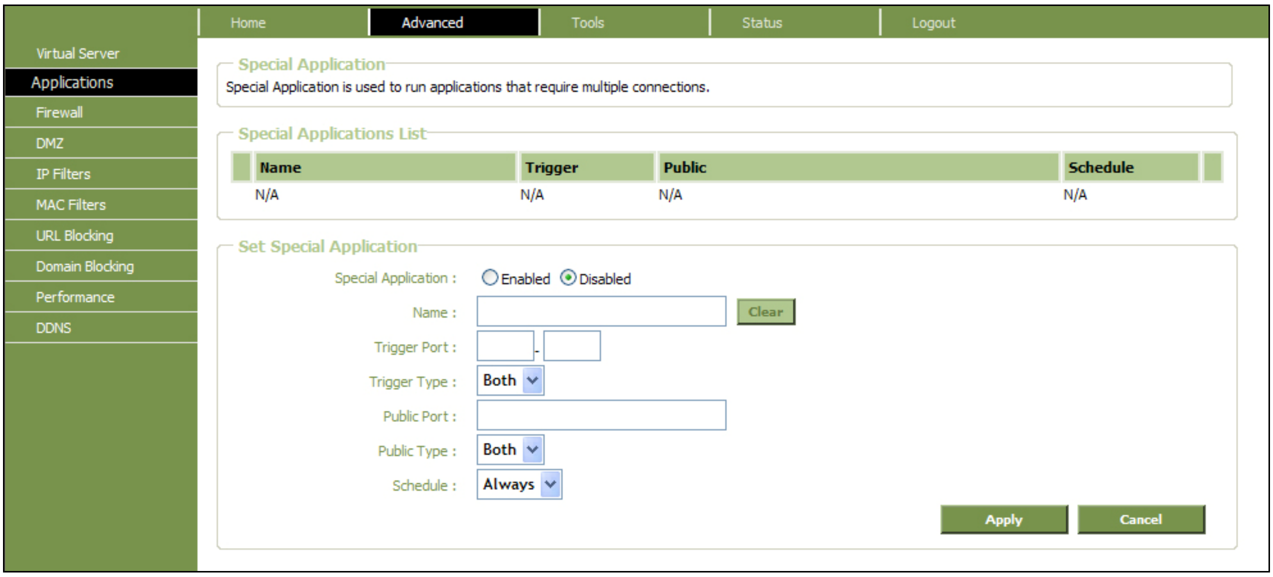
Note: If you do not know which protocol you need for your Virtual Server Rule, select “Both”. This option will pass both TCP and UDP traffic to the configured IP Address of your computer/server.

5. Enter the desired Port of your computer/server which needs the Virtual Server rule.
6. Enter the port which must be visible on the outside of your internet connection.
7. Click **Apply** to apply the created Virtual Server rule.

When the Virtual Server rule is saved, it will be shown in the Virtual Server List. To create more Virtual Server rules, repeat step 1 to 7. To remove a Virtual Server entry in the list, click the corresponding ☒ button. To modify a virtual server entry, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED - APPLICATIONS

Use this window to run special applications that require multiple connections. To use the Special Applications feature, enter the requested information for your application and click the **Apply** button.



Special Application

Special Application is used to run applications that require multiple connections.

Special Applications List

Name	Trigger	Public	Schedule
N/A	N/A	N/A	N/A

Set Special Application

Special Application : ○ Enabled ● Disabled

Name :

Trigger Port : -

Trigger Type : Both

Public Port :

Public Type : Both

Schedule : Always

Special Application window

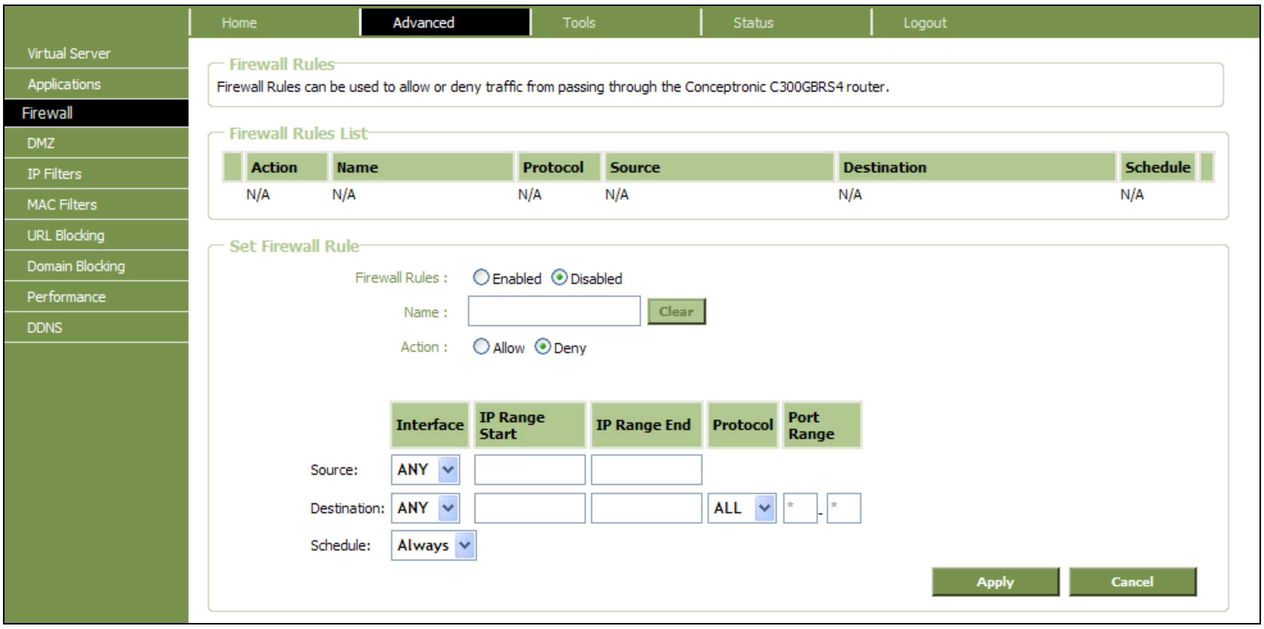
To configure a new application triggered port forwarding rule, follow these steps:

1. Click the **Enabled** radio button under Special Application.
2. Type a **Name** for the rule being created.
3. Type the **Trigger Port** or port range used for the rule.
4. Select the **Trigger Type** used for the rule, *TCP*, *UDP* or *Both*.
5. Type the **Public Port** number normally used for the application.
6. Select the **Public Type** used for the rule, *TCP*, *UDP* or *Both*.
7. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools → Schedule**.
8. Click the **Apply** button to put the rule into effect. The newly created forwarding rule appears listed in the Special Applications List.

To remove a rule in the list, click the corresponding ✖ button. To modify a virtual server entry, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED - FIREWALL

This window allows the user to allow or deny traffic from passing through the Wireless Broadband Router. Once you have completed your Firewall settings, click **Apply** to save your changes.



Firewall Rules

Firewall Rules can be used to allow or deny traffic from passing through the Conceptronic C300GBRS4 router.

Firewall Rules List

Action	Name	Protocol	Source	Destination	Schedule
N/A	N/A	N/A	N/A	N/A	N/A

Set Firewall Rule

Firewall Rules : ○ Enabled ● Disabled

Name : [ ] Clear

Action : ○ Allow ● Deny

	Interface	IP Range Start	IP Range End	Protocol	Port Range
Source:	ANY				
Destination:	ANY			ALL	* - *
Schedule:	Always				

Apply Cancel

Firewall Rules window

Configure the filter rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the Firewall Rules List.

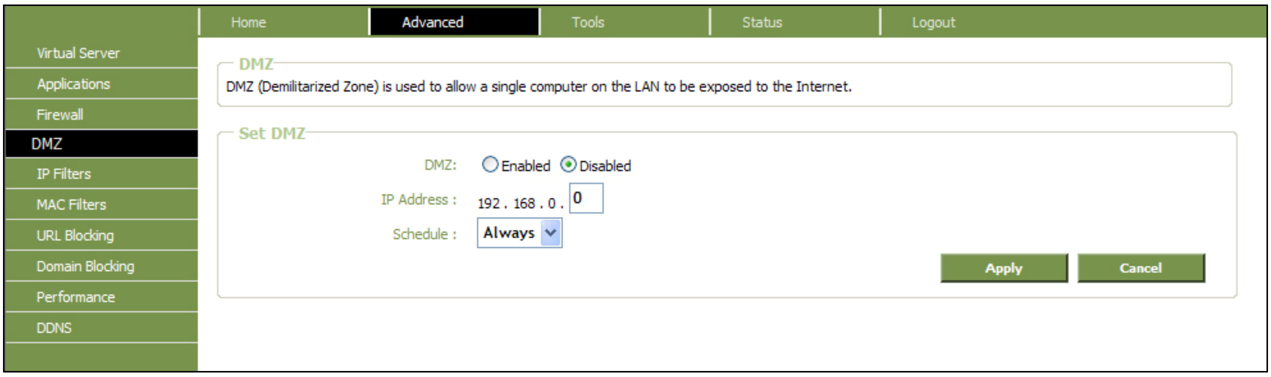
To configure a new application triggered port forwarding rule, follow these steps:

1. Click the **Enabled** radio button under Firewall Rules.
2. Type a **Name** for the rule being created.
3. Choose the **Action** to be applied, *Allow* or *Deny* (block) the traffic to pass through.
4. For the **Source** interface of the traffic, choose *LAN*, *WAN* or *Any* and type an IP address range to which to action specified in the rule.
5. For the **Destination** interface of the traffic, choose *LAN*, *WAN* or *Any* and type an IP address range to which to action specified in the rule. There is an option to specify the protocol, *ALL*, *TCP*, *UDP* or *ICMP*. For TCP and UDP traffic, a port or port range must be specified.
6. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools → Schedule**.
7. Click the **Apply** button to put the rule into effect. The newly created forwarding rule appears listed in the Firewall Rules List.

To remove a rule in the list, click the corresponding ☒ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED - DMZ

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through the DMZ.



DMZ (Demilitarized Zone) is used to allow a single computer on the LAN to be exposed to the Internet.

DMZ: ○ Enabled ● Disabled

IP Address : 192 . 168 . 0 . 0

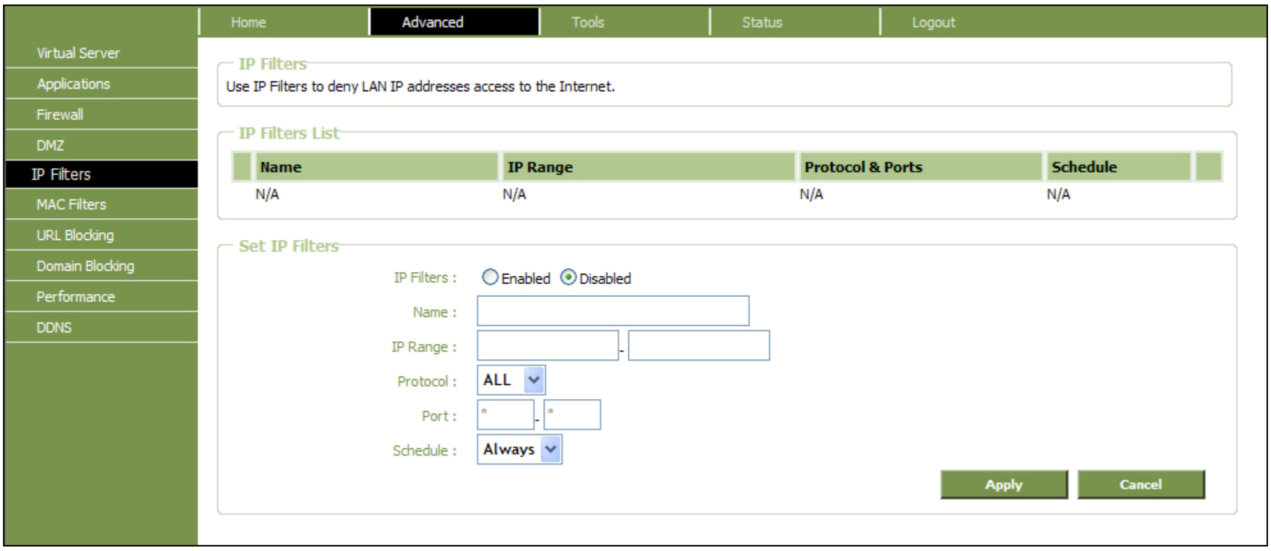
Schedule : Always

DMZ window

To designate a DMZ IP address, click the **Enabled** radio button, type in the **IP Address** of the server or device on your LAN, and click the **Apply** button. To remove DMZ status from the designated IP address, click the **Disabled** radio button and click **Apply**. It will be necessary to save the settings and reboot the Router before the DMZ is activated.

ADVANCED – IP FILTERS

This window allows the user to allow or deny LAN IP addresses access to the Internet. Rules are based on IP address and TCP/UDP port. Configure the filter rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the IP Filters List at the top of the window.



IP Filters

Use IP Filters to deny LAN IP addresses access to the Internet.

IP Filters List

Name	IP Range	Protocol & Ports	Schedule
N/A	N/A	N/A	N/A

Set IP Filters

IP Filters : ○ Enabled ● Disabled

Name :

IP Range : -

Protocol : ALL

Port : * - *

Schedule : Always

IP Filters window

Configure the filter rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the IP Filters List.

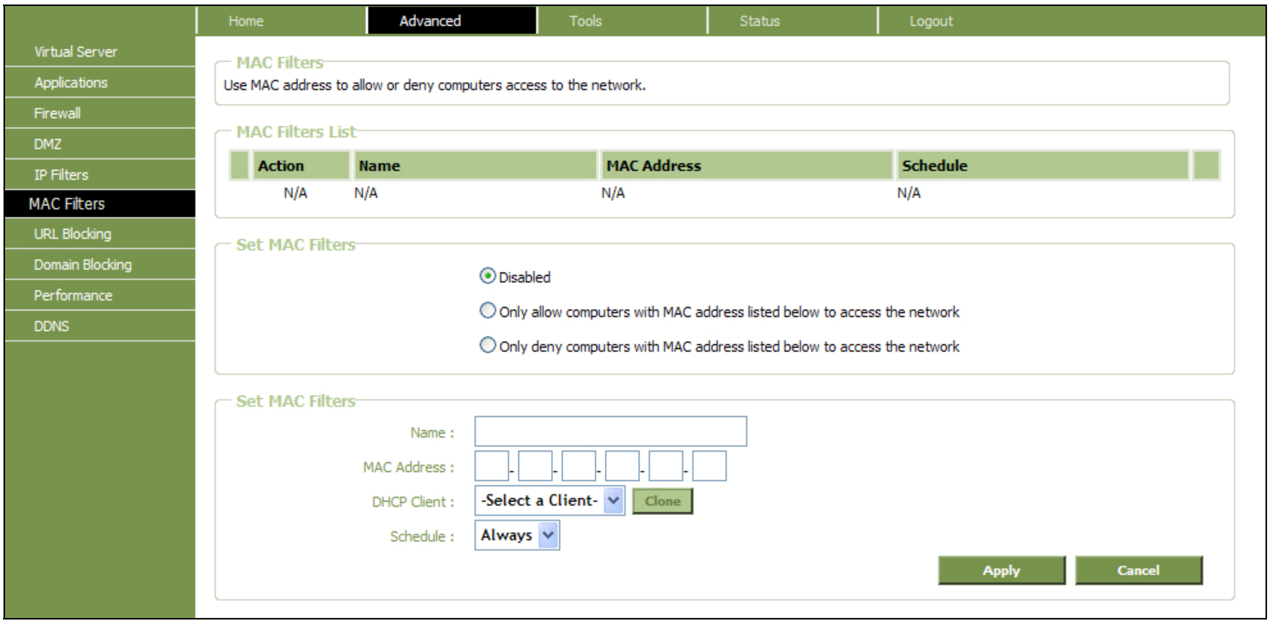
To configure a new IP Filter rule, follow these steps:

1. Click the **Enabled** radio button under IP Filters.
2. Type a **Name** for the rule being created.
3. Type the **IP Range** of address to which the rule applies.
4. (Optional) Select the Protocol used for the rule, TCP, UDP or Both, and type the Port or port range to which the rule is applied.
5. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools → Schedule**.
6. Click the **Apply** button to put the rule into effect. The newly created IP filter rule appears listed in the IP Filters List.

To remove a rule in the list, click the corresponding ✖ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED – MAC FILTERS

MAC filters are used to block or allow various types of packets through the WAN interface. This may be done for security or to improve network efficiency. The rules are configured for individual devices based on MAC address. Filter rules can be set up for source, destination or both. You can set up filter rules and disable the entire set of rules without loosing the rules that have been configured. Configure the MAC filter rules as desired and click the **Apply** button to create the rule.



MAC Filters

Use MAC address to allow or deny computers access to the network.

MAC Filters List

Action	Name	MAC Address	Schedule
N/A	N/A	N/A	N/A

Set MAC Filters

● Disabled

○ Only allow computers with MAC address listed below to access the network

○ Only deny computers with MAC address listed below to access the network

Set MAC Filters

Name :

MAC Address : - - - - -

DHCP Client : -Select a Client- Clone

Schedule : Always

MAC Filters window

Configure the MAC filter rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the MAC Filters List.

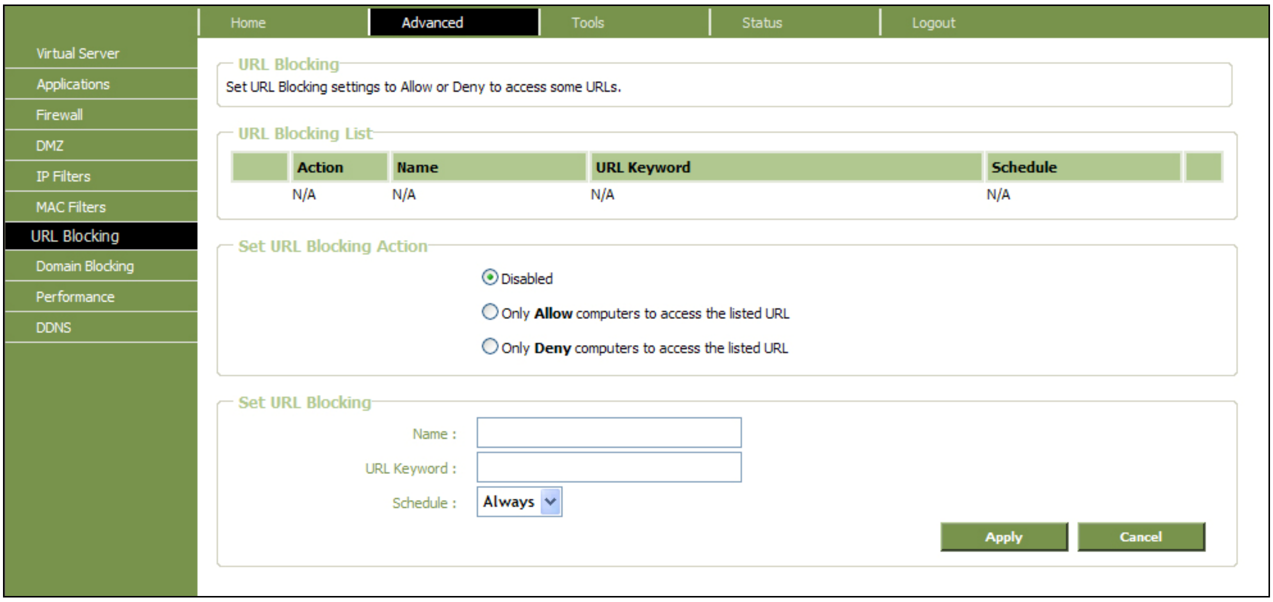
To configure a new IP Filter rule, follow these steps:

1. Click one of the options in the Set MAC Filters section to allow or deny access to the MAC filters on the list.
2. Type a **Name** for the rule being created.
3. Type the **MAC Address** to which the rule applies or select an active client from the **DHCP Client** drop-down list and click the **Clone** button to select the client, the MAC address will appear.
4. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools → Schedule**.
5. Click the **Apply** button to put the rule into effect. The newly created MAC filter rule appears listed in the MAC Filters List.

To remove a rule in the list, click the corresponding ✖ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED – URL BLOCKING

URL blocks are used to block or allow access to specific websites. Enter the URLs in the **URL Keyword** field and click the **Apply** button to add the Website to be blocked.



URL Blocking

Set URL Blocking settings to Allow or Deny to access some URLs.

URL Blocking List

	Action	Name	URL Keyword	Schedule	
	N/A	N/A	N/A	N/A	

Set URL Blocking Action

● Disabled

○ Only **Allow** computers to access the listed URL

○ Only **Deny** computers to access the listed URL

Set URL Blocking

Name :

URL Keyword :

Schedule : Always

URL Blocking window

Configure the URL blocking rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the URL Blocking List.

To configure a new URL blocking rule, follow these steps:

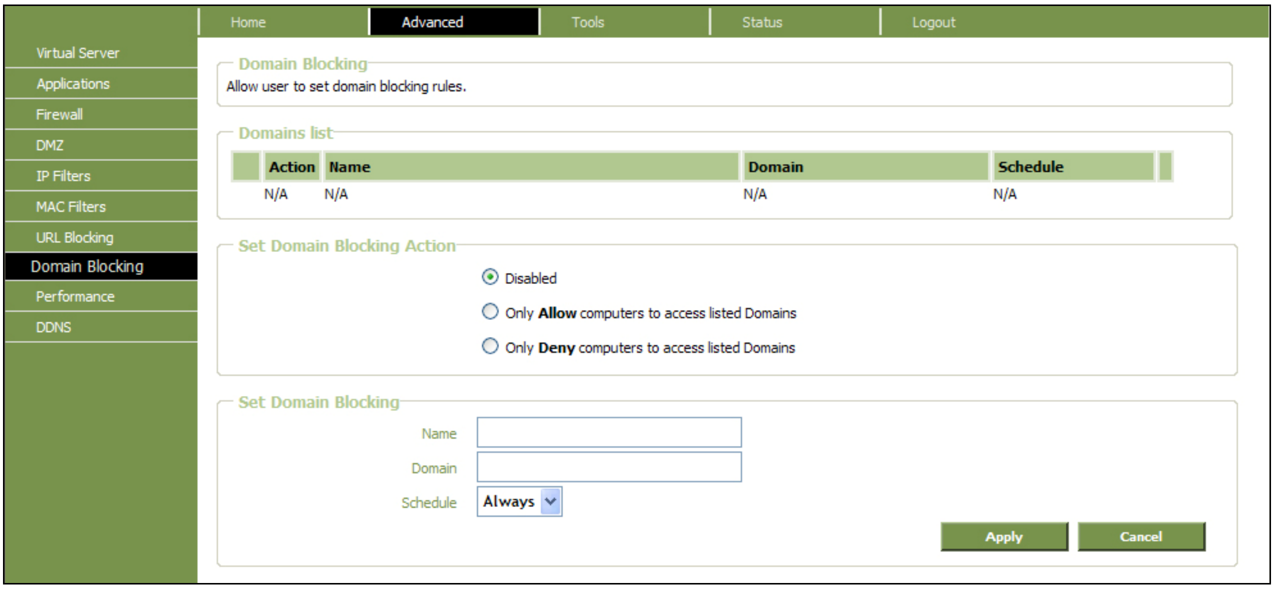
1. Click one of the options in the Set URL Blocking Action section to allow or deny access to the URL in the URL Blocking List.
2. Type a **Name** for the rule being created.
3. Type the **URL Keyword** to which the filter is applied.
4. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools → Schedule**.
5. Click the **Apply** button to put the rule into effect. The newly created URL blocking rule appears listed in the URL Blocking List.

To remove a rule in the list, click the corresponding ☒ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

Note: The URL keyword blocking is applied to all forms of the word whether or not it appears separated in the URL. For example, blocking any URL with the word “sex” would block a URL with “sex” as part of it, so websites with “essex” or “sextant” in the URL would be blocked.

ADVANCED – DOMAIN BLOCKING

Domain blocks are used to block or allow access to specific domains. Enter a domain in either the Blocked Domains field or the Permitted Domains and click the **Apply** button to either add or subtract the domain to be blocked.



Domain Blocking

Allow user to set domain blocking rules.

Domains list

Action	Name	Domain	Schedule
N/A	N/A	N/A	N/A

Set Domain Blocking Action

● Disabled

○ Only **Allow** computers to access listed Domains

○ Only **Deny** computers to access listed Domains

Set Domain Blocking

Name

Domain

Schedule: Always

Domain Blocking window

Configure the Domain blocking rules as desired and click the **Apply** button to create the rule. The newly created rule appears listed in the Domain Blocking List.

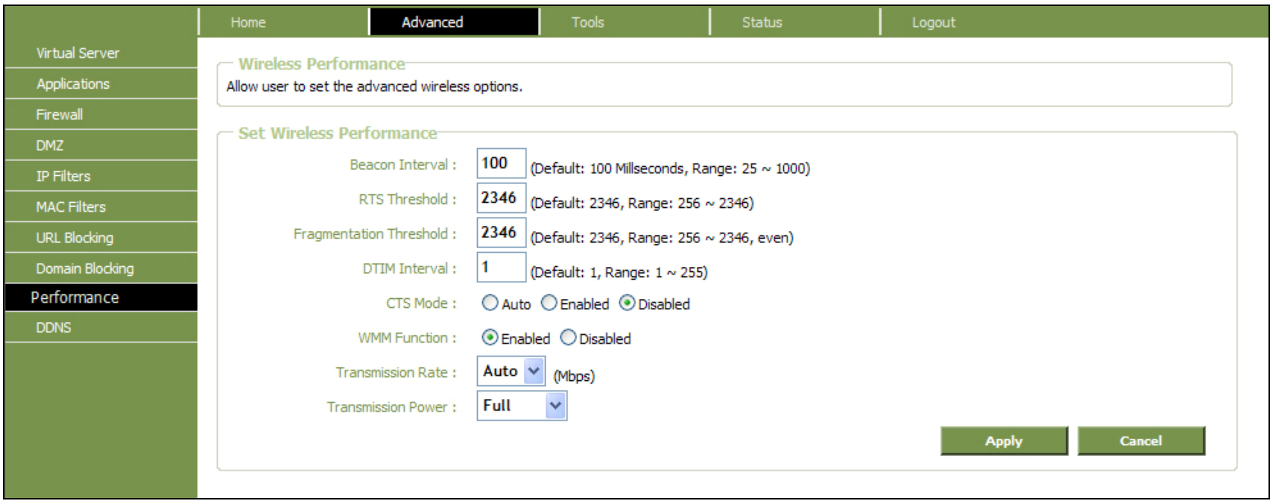
To configure a new Domain blocking rule, follow these steps:

1. Click one of the options in the Set Domain Blocking Action section to allow or deny access to the Domain in the Domain List.
2. Type a **Name** for the rule being created.
3. Type the **Domain** to which the filter is applied.
4. Choose an available Schedule for the rule to be applied. Schedules can be created in **Tools** → **Schedule**.
5. Click the **Apply** button to put the rule into effect. The newly created domain blocking rule appears listed in the Domain Blocking List.

To remove a rule in the list, click the corresponding ✖ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

ADVANCED - PERFORMANCE

This window allows the user to change wireless performance features pertaining to the Access Point portion of the Wireless Broadband Router. Click **Apply** to save your changes.



Wireless Performance

Allow user to set the advanced wireless options.

Set Wireless Performance

Beacon Interval : 100 (Default: 100 Millseconds, Range: 25 ~ 1000)

RTS Threshold : 2346 (Default: 2346, Range: 256 ~ 2346)

Fragmentation Threshold : 2346 (Default: 2346, Range: 256 ~ 2346, even)

DTIM Interval : 1 (Default: 1, Range: 1 ~ 255)

CTS Mode : ○ Auto ○ Enabled ● Disabled

WMM Function : ● Enabled ○ Disabled

Transmission Rate : Auto (Mbps)

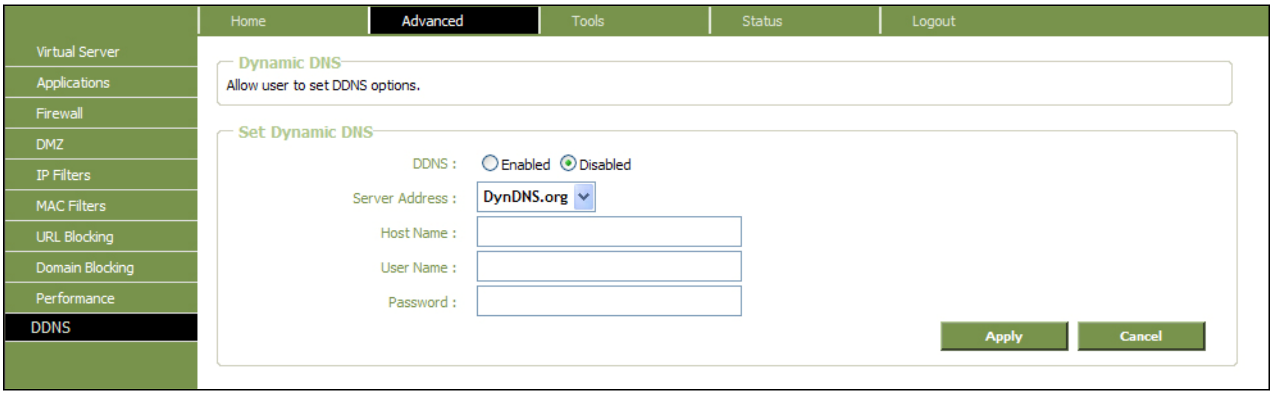
Transmission Power : Full

Wireless Performance window

Option	Description
Beacon Interval	Beacons are packets sent by an access point to synchronize a network. Specify the beacon value for the selected device(s) here. The default value of *100* is recommended.
RTS Threshold	The RTS value should not be changed unless you encounter inconsistent data flow. Only minor modifications to the value range between 256 and 2,346 are recommended. The default value is *2346*.
Fragmentation Threshold	This sets the fragmentation threshold (specified in bytes) and determines whether packets will be fragmented. Packets exceeding the byte setting will be fragmented before transmission. The default is *2346* bytes.
DTIM Interval	Delivery Traffic Indication Message is a countdown informing clients of the next window for listening to broadcast and multicast messages. The default value is *1*.
CTS Mode	The Clear To Send mode is designed to minimize collisions among wireless devices. Most users will want to keep the setting as *Auto*.
WMM Function	Enable or disable the Wireless Multi Media function.
Transmission Rate	A drop-down list for selecting the transmission rate: *Auto*.
Transmit Power	A drop-down list for selecting the transmit power of the device. You can choose among: *Full*, *Half*, *Quarter*, *Eighth*, *Min*.

ADVANCED - DDNS

The Router supports DDNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form *hostname.dyndns.org*, Many ISPs assign public IP addresses using DHCP, and this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be set up with one of the supported DDNS providers.



Dynamic DNS
Allow user to set DDNS options.

Set Dynamic DNS
DDNS : ○ Enabled ● Disabled
Server Address : DynDNS.org
Host Name :
User Name :
Password :

Dynamic DNS window

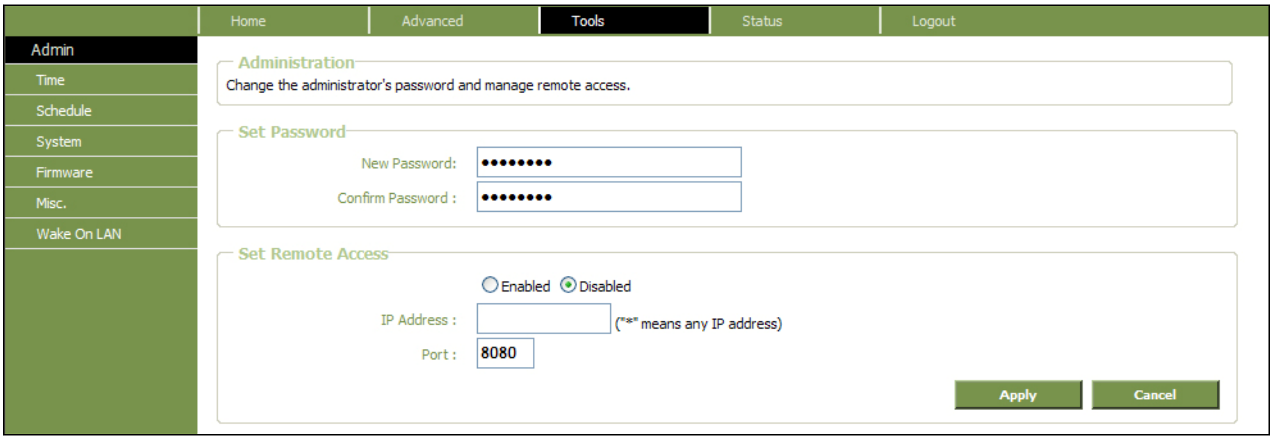
Please note that DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server. Enter the required DDNS information and click **Apply** to set this information in the Router.

Option	Description
Server Address	Select one of the DDNS registration organizations form those listed in the drop-down list. Available servers include DynDns.org and No-IP.com
Host Name	Enter the host name of the DDNS server.
User Name	Enter the username given to you by your DDNS server.
Password	Enter the password or key given to you by your DDNS server.

Tools

TOOLS - ADMIN

If you click on Tools menu and then Admin, the following page will open.



Administration

Change the administrator's password and manage remote access.

Set Password

New Password: ••••••••

Confirm Password : ••••••••

Set Remote Access

○ Enabled ● Disabled

IP Address : ("*" means any IP address)

Port : 8080

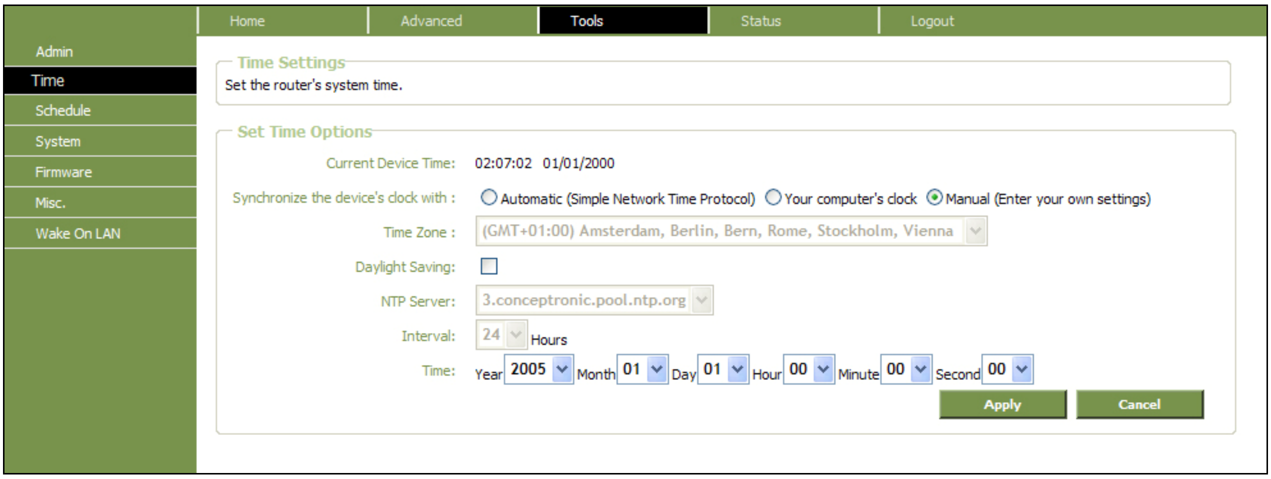
Administrator Settings window

Enter your new password in the **New Password** field and then type it again in the **Confirm New Password** field.

The Administration window is also used to enable remote management access to the Router. To enable remote management of the Router, click the **Enabled** radio button and type the IP Address of the remote network used for management. Click the **Apply** button to activate remote management from the chosen IP address. Be sure to save the new setting.

TOOLS - TIME

The Router provides a number of options to maintain current date and time including SNTP.



Time Settings

Set the router's system time.

Set Time Options

Current Device Time: 02:07:02 01/01/2000

Synchronize the device's clock with : ○ Automatic (Simple Network Time Protocol) ○ Your computer's clock ● Manual (Enter your own settings)

Time Zone : (GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

Daylight Saving: □

NTP Server: 3.conceptronic.pool.ntp.org

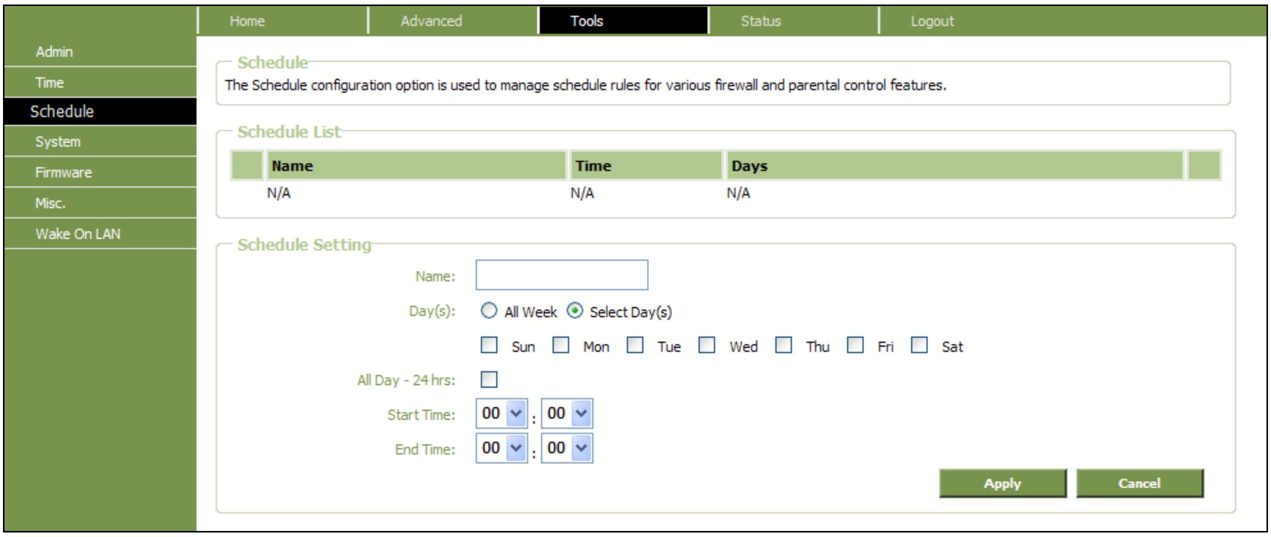
Interval: 24 Hours

Time: Year 2005 Month 01 Day 01 Hour 00 Minute 00 Second 00

Time window

To configure system time on the Router, select the method used to maintain time. The options available include *Automatic (Simple Network Time Protocol)*, *Your computer's clock* or *Manual (Enter your own settings)* by default. If you opt to use SNTP, you must select the **NTP Server** URL from the drop-down list. Click the **Apply** button to set the system time.

TOOLS – SCHEDULE



Schedule

The Schedule configuration option is used to manage schedule rules for various firewall and parental control features.

Schedule List

	Name	Time	Days	
	N/A	N/A	N/A	

Schedule Setting

Name:

Day(s): ○ All Week ● Select Day(s)

□ Sun □ Mon □ Tue □ Wed □ Thu □ Fri □ Sat

All Day - 24 hrs: □

Start Time: 00 : 00

End Time: 00 : 00

Schedule window

The Schedule configuration option is used to manage scheduled rules for various firewall and parental control features.
Enter the information needed for your schedule setting and click **Apply** to add it to the Schedule List.

To remove a rule in the list, click the corresponding ☒ button. To modify a rule in the list, click the corresponding ✎ button, make the desired changes, and then click the **Apply** button.

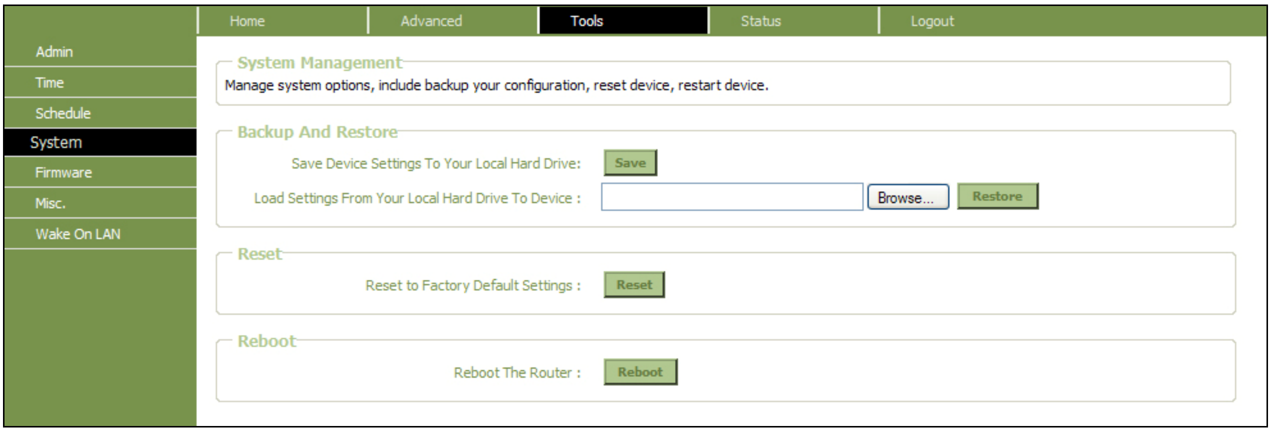
TOOLS - SYSTEM

Once you have configured the Router to your satisfaction, it is a good idea to back up the configuration file to your computer. To save the current configuration settings to your computer, click the **System** button in the **Tools** directory to display the System Settings window. Click the **Save** button to Save Device Settings to Your Local Hard Drive. You will be prompted to select a location on your computer to put the file.

To load a previously saved configuration file, click the **Browse** button and locate the file on your computer. Click the **Restore** button to Load Settings from Your Local Hard Drive to Device. Confirm that you want to load the file when prompted and the process is completed automatically. The Router will reboot and begin operating with the configuration settings that have just been loaded.

To reset the Router to its factory default settings, click the **Reset** button. You will be prompted to confirm your decision to reset the Router. The Router will reboot with the factory default settings including IP settings (192.168.0.1) and Administrator password (admin).

To simply restart the Router, click the **Reboot** button.



System Management

Manage system options, include backup your configuration, reset device, restart device.

Backup And Restore

Save Device Settings To Your Local Hard Drive:

Load Settings From Your Local Hard Drive To Device :

Reset

Reset to Factory Default Settings :

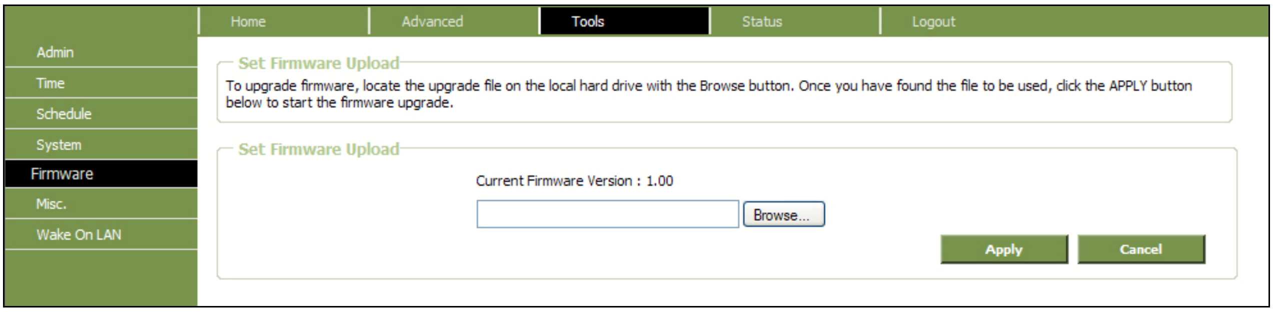
Reboot

Reboot The Router :

System Settings window

TOOLS - FIRMWARE

Use this window to load the latest firmware for the device. Note that the device configuration settings may return to the factory default settings, so make sure you save the configuration settings with the System Settings window described above.



To upgrade firmware, locate the upgrade file on the local hard drive with the Browse button. Once you have found the file to be used, click the APPLY button below to start the firmware upgrade.

Current Firmware Version : 1.00

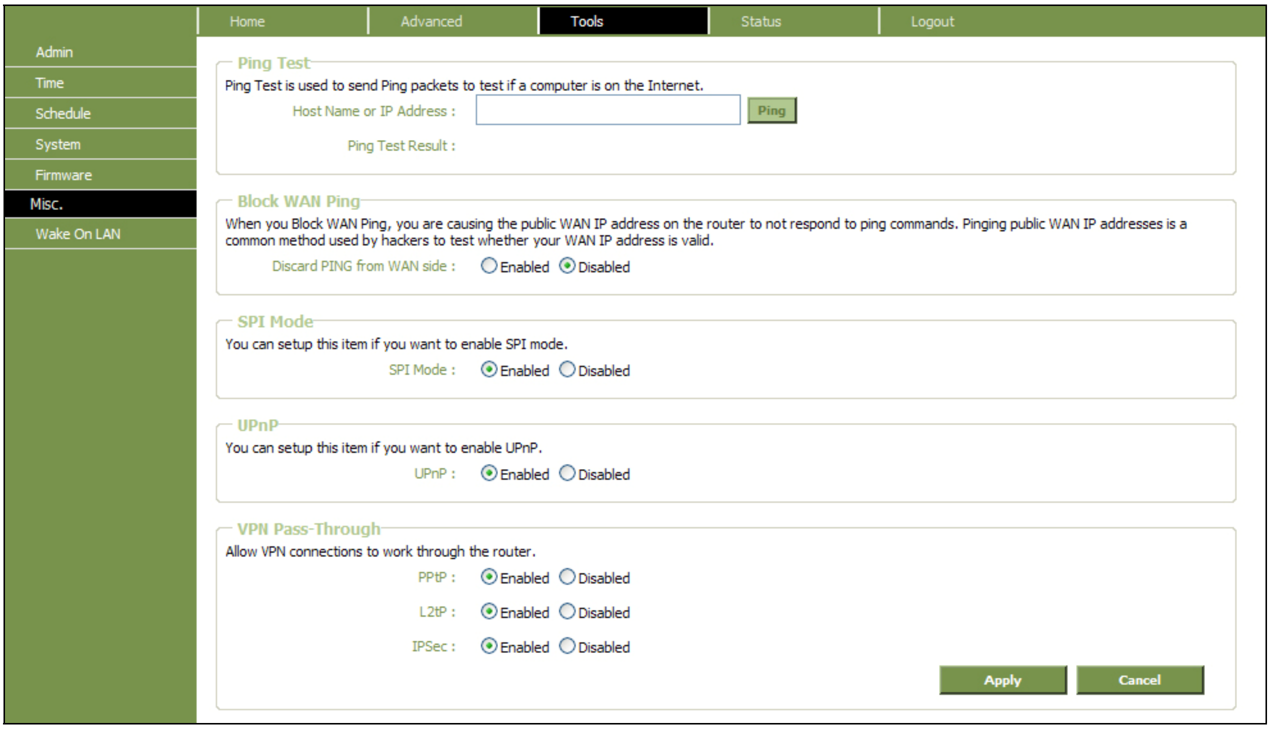
Firmware Upgrade window

To upgrade firmware to the router, type in the name and path of the file, or click the **Browse** button to search for the file. Click the **Apply** button to begin copying the file. The file will load and restart the Router automatically.

Performing a Firmware Upgrade can sometimes change the configuration settings. Be sure to back-up the Router’s configuration settings before upgrading the firmware.

TOOLS - MISC

To perform a standard Ping test for network connectivity as well as a number of miscellaneous network tasks, click the **Misc.** button in the **Tools** menu to view the Miscellaneous Configuration window.



Ping Test

Ping Test is used to send Ping packets to test if a computer is on the Internet.

Host Name or IP Address :

Ping Test Result :

Block WAN Ping

When you Block WAN Ping, you are causing the public WAN IP address on the router to not respond to ping commands. Pinging public WAN IP addresses is a common method used by hackers to test whether your WAN IP address is valid.

Discard PING from WAN side : ○ Enabled ● Disabled

SPI Mode

You can setup this item if you want to enable SPI mode.

SPI Mode : ● Enabled ○ Disabled

UPnP

You can setup this item if you want to enable UPnP.

UPnP : ● Enabled ○ Disabled

VPN Pass-Through

Allow VPN connections to work through the router.

PPtP : ● Enabled ○ Disabled

L2tP : ● Enabled ○ Disabled

IPSec : ● Enabled ○ Disabled

Miscellaneous window

Ping Test

The Ping test functions on the WAN and LAN interfaces. Type the **Host Name or IP Address** you want to check in the space provided and click the **Ping** button. Read the Ping test result in the space immediately below.

Block WAN Ping

The Block WAN Ping feature allows the user to block hackers who may be trying to test whether your WAN IP address is valid.

SPI mode

Stateful Packet Inspection mode is an active firewall the user can enable to keep track of the state of network connections.

UPnP Settings

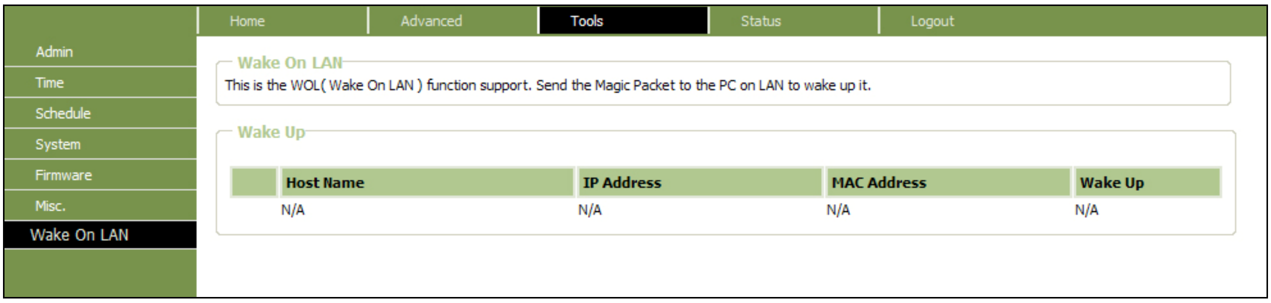
UPnP supports zero-configuration networking and automatic discovery for many types of networked devices. When enabled, it allows other devices that support UPnP to dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices. DHCP and DNS service can also be used if available on the network. UPnP also allows supported devices to leave a network automatically without adverse effects to the device or other devices on the network. UPnP is a protocol supported by diverse networking media including Ethernet, Firewire, phone line, and power line networking.

VPN Pass-Through

This feature allows VPN connections to pass through the Router. It is enabled by default.

TOOLS – WAKE ON LAN

To wake LAN Clients in your network, you can use the Wake On LAN page in the router configuration. This page shows all active DHCP leases and the created Static DHCP entries.



Wake On LAN

This is the WOL(Wake On LAN) function support. Send the Magic Packet to the PC on LAN to wake up it.

Wake Up

	Host Name	IP Address	MAC Address	Wake Up
	N/A	N/A	N/A	N/A

Wake On LAN window

If there are clients present in the Wake Up list, you can awake them by pressing the **Wake Up** button behind the client.

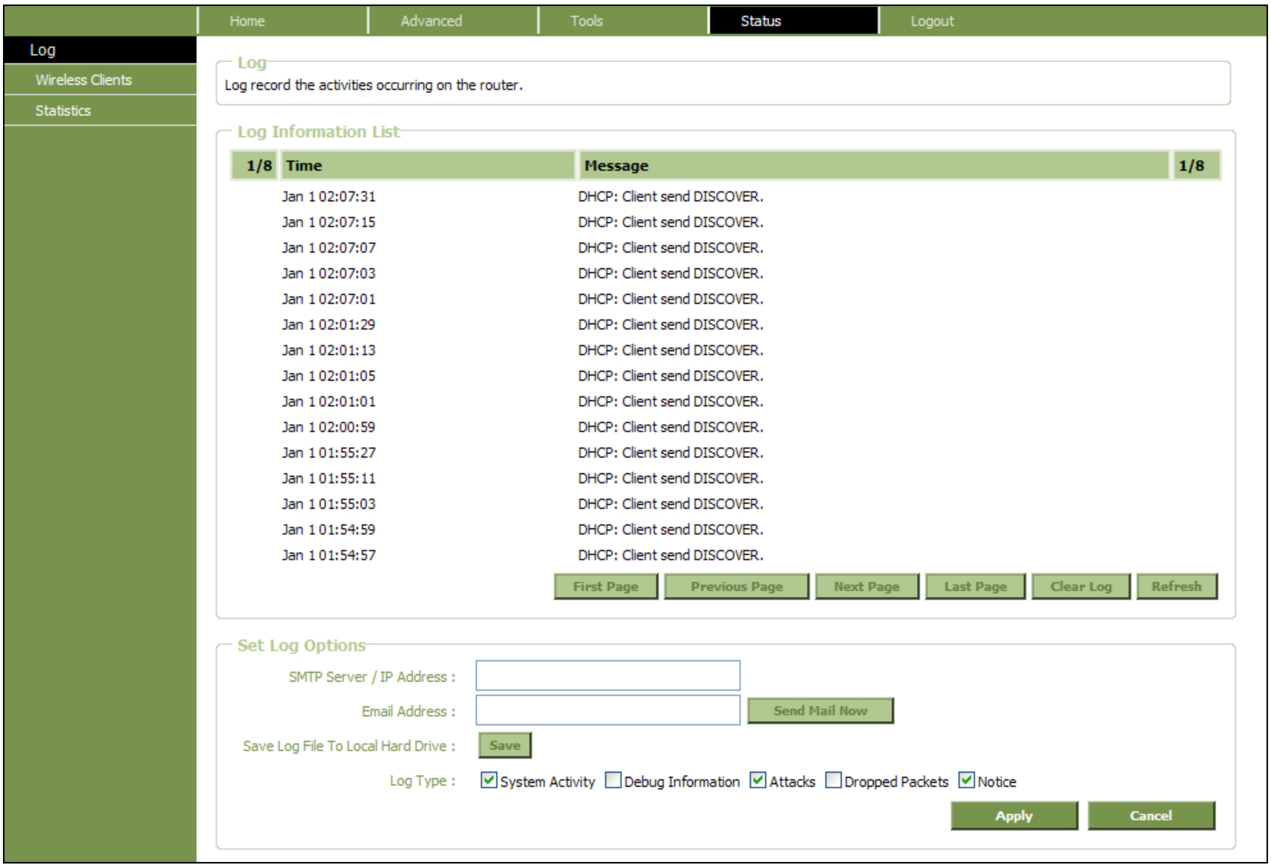
When you click this button, the router will send a Magic Packet to the client. If Wake On LAN is supported and activated on the LAN Client, the system will turn on automatically after receiving such package.

Status

Use this window to quickly view basic current information about the LAN, WAN, and wireless interfaces and device information including Firmware Version and MAC address.

STATUS - LOG

The system log displays chronological event log data. Use the navigation buttons to view or scroll log pages.



Log record the activities occurring on the router.

1/8	Time	Message	1/8
	Jan 1 02:07:31	DHCP: Client send DISCOVER.	
	Jan 1 02:07:15	DHCP: Client send DISCOVER.	
	Jan 1 02:07:07	DHCP: Client send DISCOVER.	
	Jan 1 02:07:03	DHCP: Client send DISCOVER.	
	Jan 1 02:07:01	DHCP: Client send DISCOVER.	
	Jan 1 02:01:29	DHCP: Client send DISCOVER.	
	Jan 1 02:01:13	DHCP: Client send DISCOVER.	
	Jan 1 02:01:05	DHCP: Client send DISCOVER.	
	Jan 1 02:01:01	DHCP: Client send DISCOVER.	
	Jan 1 02:00:59	DHCP: Client send DISCOVER.	
	Jan 1 01:55:27	DHCP: Client send DISCOVER.	
	Jan 1 01:55:11	DHCP: Client send DISCOVER.	
	Jan 1 01:55:03	DHCP: Client send DISCOVER.	
	Jan 1 01:54:59	DHCP: Client send DISCOVER.	
	Jan 1 01:54:57	DHCP: Client send DISCOVER.	

SMTP Server / IP Address :

Email Address :

Save Log File To Local Hard Drive :

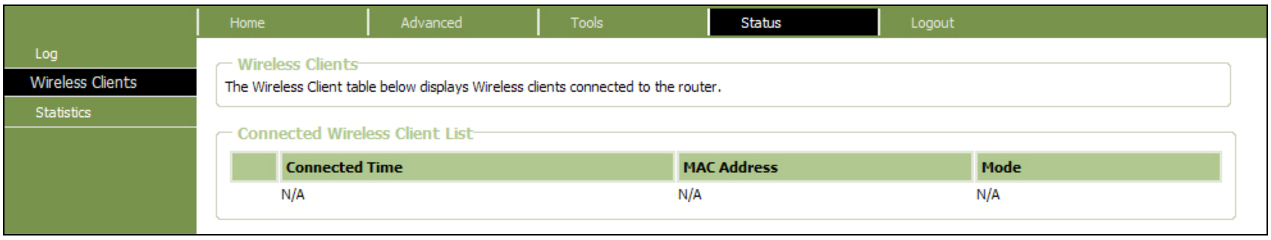
Log Type : ☑ System Activity ☐ Debug Information ☑ Attacks ☐ Dropped Packets ☑ Notice

View Log window

You may also save a log by sending it to an admin e-mail address.
Complete the information on this window and then click the **Apply** button.

STATUS – WIRELESS CLIENTS

This window displays all the wireless clients currently connected to the AP portion of the Wireless Broadband Router.



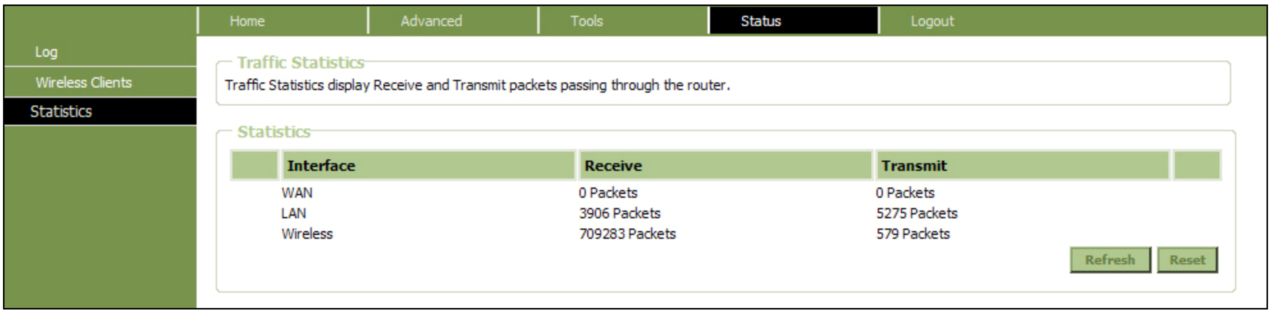
The Wireless Client table below displays Wireless clients connected to the router.

	Connected Time	MAC Address	Mode
	N/A	N/A	N/A

Connected Wireless Client List window

STATUS - STATISTICS

Use this window to monitor traffic on the WAN, LAN, and Wireless connections.



Traffic Statistics

Traffic Statistics display Receive and Transmit packets passing through the router.

Statistics

Interface	Receive	Transmit
WAN	0 Packets	0 Packets
LAN	3906 Packets	5275 Packets
Wireless	709283 Packets	579 Packets

Traffic Statistics window

Click **Refresh** to view traffic information.

Click **Reset** to reset the traffic information.

Technical Specifications

Standards

- IEEE 802.11b/g
- IEEE 802.11n Draft 2.0
- IEEE 802.3
- IEEE 802.3u

Device Management

Web-Based – Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers.

Data Rate

For 802.11n:

- MCS - 0 ~ 15 at 20MHz & 40MHz mode.
- 64 data rates supported in C300GBRS4.
- (Max data rate: 300Mbps)

For 802.11g:

- 108, 54, 48, 36, 24, 18, 12, 9 and 6Mbps

For 802.11b:

- 11, 5.5, 2, and1Mbps

Security

- 64- and 128-bit WEP
- WPA – WiFi Protected Access (WPA-TKIP/PSK/AES)
- 802.1x (EAP-MD5/TLS/TTLS/PEAP)
- MAC Address Access Control List

Wireless Frequency Range

- 2.412 GHz to 2.4672 GHz (2400 ~ 2483.5MHz ISM band)

Wireless Operating Range

- 802.11n (Full Power with 2x 2dBi gain diversity dipole antenna)
- Indoors up to 100 meters (328 feet)
- Outdoors up to 400 meters (1312 feet)
- 2x Dipole antenna with 2dBi gain

Antenna Type

- 3x Dipole antenna with 2dBi gain

Operating Voltage

- 5VDC, 3A

Radio and Modulation Type

For 802.11n:

- BPSK, QPSK, 16QAM, 64QAM, OFDM

For 802.11g:

- BPSK, QPSK, 16QAM, 64QAM, OFDM

For 802.11b:

- DQPSK, DBPSK, DSSS, and CCK

LEDs

- Power
- Status
- WLAN
- LAN
- Internet
- WPS

Temperature

Operating: 32ºF to 113ºF (0ºC to 45ºC)
Storing: -4ºF to 149ºF (-20ºC to

Humidity

Operating: 10%~95% (non-condensing)
Storing: 5%~95% (non-condensing)

Certifications

FCC Class B
CE Class B
C-Tick
UL
TUV

Dimensions

L = 199mm
W = 118mm
H = 35mm

Weight

313.5g

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2. buildroot
3. busybox-1.00
4. vconfig
5. iptable-1.2.9
6. mathopd
7. pppd-2.4.2
8. dnrd-2.10
9. klogd
10. syslogd
11. telnetd
12. wireless tools
13. bpalogin
14. hostapd-0.3.7
15. smtpclient
16. ntpclient

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Version 2, June 1991

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