

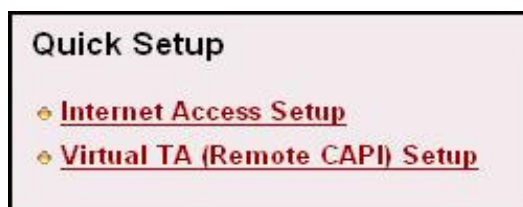
CHAPTER 5

Internet Access Setup

5.1 Introduction

In the **Quick Setup** group, you can configure the router to access the Internet with different modes, for instance, ISDN, PPPoE, PPTP, Dynamic/Static IP or Broadband Access with ISDN dial backup. Notice that the modes of ISN and Broadband Access with ISDN dial backup are only available for Vigor routers having the ISDN interface (e.g. Vigor2900i or Vigor2900Gi router). Use the following setup link on the Setup Main Menu to configure the Internet Access Setup.

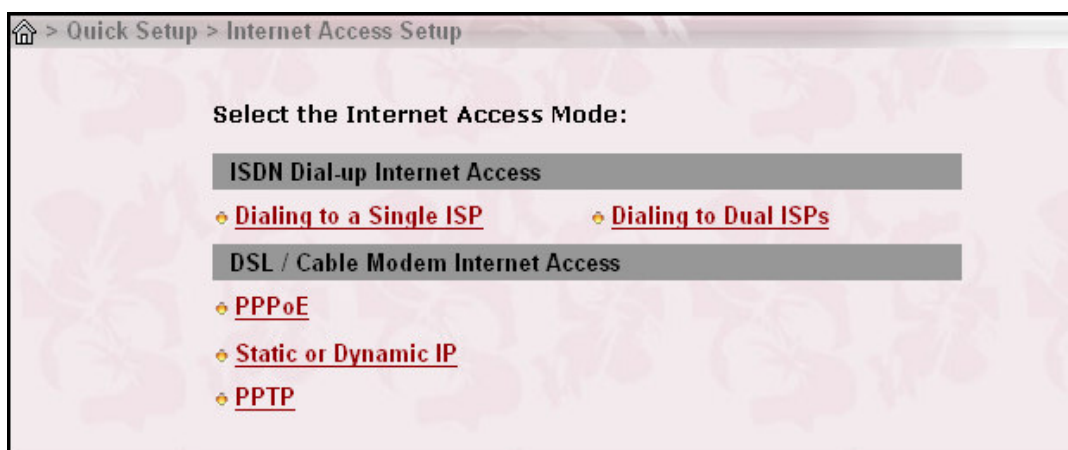
Quick Setup > Internet Access Setup



For most users, Internet access is the primary application. The router supports the Ethernet WAN interface for Internet access. The following sections will explain more details of various broadband access setup. When you click **Internet Access Setup** within the **Quick Setup** group, the following setup page will appear.

Five modes are available for Internet Access, that is, Dialing to a Single ISP, Dialing to Dual ISPs, PPPoE, PPTP, and Static/Dynamic IP.

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Dialing to a Single ISP: If you access the Internet via a single ISP, click here.

Dialing to Dual ISPs: If you have more than one ISP, click here to set two ISP dialup profiles. You will be able to dial to both ISPs at the same time. This is mainly for those ISPs that do not support Multiple-Link PPP (ML-PPP). In such cases, dialing to two ISPs can increase the bandwidth utilization of the ISDN line to 128kbps data speed.

PPPoE: This is used for most DSL modem users. All local users can share one PPPoE connection to access the Internet.

Static or Dynamic IP: On this page you are able to configure the WAN interface by using a static (fixed) IP or dynamic (DHCP client) IP address. Most cable users will use the dynamic IP address mode to get a globally reachable IP address from the cable head-end system. Before you connect a broadband access device, e.g. a DSL/Cable modem, to the router, you need to know what kind of Internet access is provided by your ISP.

PPTP: Some DSL service providers supply a special DSL modem (e.g. Alcatel's DSL modem). This kind of modem only supports the PPTP tunnel to access the Internet. In these cases, you should create a PPTP tunnel that carries a PPP session and terminates on the DSL modem. Once the tunnel has been established, this kind of DSL modem will forward the PPP session

to the ISP. As long as the PPP session is connected, all the local users will be able to share this PPP session to access to the Internet.

For ISDN Internet users, you should click **Diaing to a Single ISP** or **Dialing to Dual ISPs** for detailed Internet settings.

For broadband access users, you need to know what kind of Internet access is provided by your ISP.

The following sections deal with four widely-used broadband access services. They are **PPPoE Client**, **PPTP Client**, **Static IP** for DSL, and **Dynamic IP (DHCP Client)** for Cable. In most cases, you will get a DSL or Cable modem from the broadband access service provider. The router is connected behind the broadband device (i.e. DSL/Cable modem) and works as a NAT or IP router for broadband connections.

5.2 Configuration

5.2.1 Connecting to a Single ISP

Internet Access Setup

The screenshot shows a window titled "Quick Setup > Internet Access Setup". Inside, there's a "Single ISP" section with a back arrow. It contains two main panels: "ISP Access Setup" and "PPP/MP Setup".

ISP Access Setup

- ISP Name:
- Dial Number:
- Username:
- Password:
- ☐ Require ISP callback (CBCP)
- Scheduler (1-15): => , , ,

PPP/MP Setup

- Link Type:
- PPP Authentication:
- Idle Timeout: second(s)
- IP Address Assignment Method (IPCP):
 - Fixed IP: ☐ Yes ☒ No (Dynamic IP)
 - Fixed IP Address:

At the bottom center is an "OK" button.

ISP Access Setup

ISP Name: Enter your ISP name.

Dial Number: Enter the ISDN access number provided by your ISP.

Username: Enter the username provided by your ISP.

Password: Enter the password provided by your ISP.

Require ISP Callback (CBCP): If your ISP supports the callback function, click this checkbox to activate the Callback Control Protocol during PPP negotiation.

Scheduler (1-15): Enter the index of schedule profiles to control the Internet access by time plan.

PPP/MP Setup

Link Type: There are four link types: Link Disable, Dialup 64 Kbps, Dialup

Internet Access Setup

128 Kbps, and Dialup BOD.

Link Disable: Disable the ISDN dial-out function.

Dialup 64Kbps: Use one ISDN B channel for Internet access.

Dialup 128Kbps: Use both ISDN B channels for Internet access.

Dialup BOD: BOD stands for bandwidth-on-demand. The router will use only one B channel under low traffic situations. Once the single B channel bandwidth is filled, the other B channel will be dialled automatically. For more detailed BOD parameter settings, refer to the **Advanced Setup** group > **Call Control and PPP/MP Setup**.

PPP Authentication:

PAP Only: Set the PPP session to use the PAP protocol to negotiate the username and password with the ISP.

PAP or CHAP: Set the PPP session to use the PAP or CHAP protocols to negotiate the username and password with the ISP.

Idle Timeout:

Idle timeout means the router will disconnect after being idle for a preset amount of time. The default is 180 seconds. If you set the time to 0, the ISDN connection will remain always connected to the ISP.

IP Address Assignment Method (IPCP)

Fixed IP, and Fixed IP Address:

In most environments, you should not change these settings as most ISPs provide a dynamic IP address for the router when it connects to the ISP. If your ISP provides a fixed IP address, check **Yes** and enter the IP address in the field of Fixed IP Address.

5.2.2 Connecting to Dual ISPs

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The screenshot shows the 'Dual ISP' configuration page. At the top, a breadcrumb trail reads '> Quick Setup > Internet Access Setup'. The page title is 'Dual ISP'. The configuration is divided into two main columns. The left column contains 'Common Settings' with two items: '1. ☒ Enable Dual ISPs Function' and '2. ☐ Require ISP callback (CBCP)'. Below this is the 'Primary ISP Setup' section with fields for 'ISP Name' (isp1_name), 'Dial Number' (12345678), 'Username' (username1), and 'Password' (*****). It also includes an 'IP Address Assignment Method (IPCP)' section with radio buttons for 'Fixed IP' (No) and 'No (Dynamic IP)' (selected), and a 'Fixed IP Address' field. The right column contains the 'PPP/MP Setup' section with a 'Link Type' dropdown (Dialup BOD), 'PPP Authentication' dropdown (PAP or CHAP), and 'Idle Timeout' (180 second(s)). Below this is the 'Secondary ISP Setup' section with fields for 'ISP Name' (isp2_name), 'Dial Number' (87654321), 'Username' (username2), and 'Password' (*****). It also includes an 'IP Address Assignment Method (IPCP)' section with radio buttons for 'Fixed IP' (No) and 'No (Dynamic IP)' (selected), and a 'Fixed IP Address' field. At the bottom center is an 'OK' button.

Dual ISP	
Common Settings 1. <input checked="" type="checkbox"/> Enable Dual ISPs Function 2. <input type="checkbox"/> Require ISP callback (CBCP)	PPP/MP Setup Link Type: <input type="text" value="Dialup BOD"/> PPP Authentication: <input type="text" value="PAP or CHAP"/> Idle Timeout: <input type="text" value="180"/> second(s)
Primary ISP Setup ISP Name: <input type="text" value="isp1_name"/> Dial Number: <input type="text" value="12345678"/> Username: <input type="text" value="username1"/> Password: <input type="text" value="*****"/> IP Address Assignment Method (IPCP) Fixed IP: <input type="radio"/> Yes <input checked="" type="radio"/> No (Dynamic IP) Fixed IP Address: <input type="text"/>	Secondary ISP Setup ISP Name: <input type="text" value="isp2_name"/> Dial Number: <input type="text" value="87654321"/> Username: <input type="text" value="username2"/> Password: <input type="text" value="*****"/> IP Address Assignment Method (IPCP) Fixed IP: <input type="radio"/> Yes <input checked="" type="radio"/> No (Dynamic IP) Fixed IP Address: <input type="text"/>

Most configuration parameters are the same as that in the last section. This page provides a checkbox to enable the Dual ISPs Function and adds a secondary ISP Setup section. Check the corresponding box and enter the second ISP information. The setup page is depicted above.

5.2.3 Using PPPoE with a DSL Modem

Click **Internet Access Setup > PPPoE** to enter the setup page.

The screenshot shows the 'PPPoE Client Mode' configuration page. At the top, a breadcrumb trail reads '> Quick Setup > Internet Access Setup'. The page title is 'PPPoE Client Mode'. The configuration is divided into two main columns. The left column contains the 'PPPoE Setup' section with radio buttons for 'Enable' and 'Disable' (selected). Below this is the 'ISP Access Setup' section with fields for 'ISP Name', 'Username', 'Password', and a 'Scheduler (1-15)' field with a value of '=>'. The right column contains the 'PPP/MP Setup' section with a 'PPP Authentication' dropdown (PAP or CHAP), an 'Always On' checkbox, and 'Idle Timeout' (180 second(s)). Below this is the 'IP Address Assignment Method (IPCP)' section with radio buttons for 'Fixed IP' (No) and 'No (Dynamic IP)' (selected), and a 'Fixed IP Address' field. At the bottom right is the 'WAN physical type' section with a dropdown menu (Auto negotiation). At the bottom center is an 'OK' button.

PPPoE Client Mode	
PPPoE Setup PPPoE Link: <input type="radio"/> Enable <input checked="" type="radio"/> Disable ISP Access Setup ISP Name: <input type="text"/> Username: <input type="text"/> Password: <input type="text"/> Scheduler (1-15): <input type="text" value="=>"/> IP Address Assignment Method (IPCP) Fixed IP: <input type="radio"/> Yes <input checked="" type="radio"/> No (Dynamic IP) Fixed IP Address: <input type="text"/>	PPP/MP Setup PPP Authentication: <input type="text" value="PAP or CHAP"/> <input type="checkbox"/> Always On Idle Timeout: <input type="text" value="180"/> second(s) WAN physical type Auto negotiation: <input type="text"/>

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PPPoE Setup

PPPoE Link: Check **Enable** to enable the PPPoE client protocol on the WAN interface.

ISP Access Setup

ISP Name: Enter the ISP name.

Username: Enter the ISP supplied username.

Password: Enter the ISP supplied password.

Scheduler (1-15): Enter the index of schedule profile to control the Internet access by time plan.

PPP/MP Setup

PPP Authentication: Select PAP or CHAP for widest compatibility.

Always On: Check to force the Internet access is always online, and you will see the **Idle Timeout** field will be blocked for input.

Idle Timeout: Idle timeout means the router will disconnect after being idle for a preset amount of time. The default is 180 seconds. If you set the time to 0, the PPP session will not terminate itself.

IP Address Assignment Method (IPCP)

Fixed IP: Check **No (Dynamic IP)** unless your ISP has provided you with a static IP address.

Fixed IP Address: If your ISP has provided you with a static IP address enter it

Internet Access Setup

here.

Click **OK**.

5.2.4 Using PPTP with a DSL Modem

Click **Internet Access Setup > PPTP** to enter the setup page, as shown below. Herein, we use an example to explain the corresponding setting. The exact settings should be provided by your DSL service provider.

PPTP Setup

PPTP Link: Check **Enable** to enable a PPTP client to establish a tunnel to a DSL modem on the WAN interface.

PPTP Server IP Address: Specify the IP address of the PPTP-enabled DSL modem. Refer to the user manual of the PPTP-enabled DSL modem.

ISP Access Setup

ISP Name: Enter the ISP name.

Internet Access Setup

Username: Enter the ISP supplied username.

Password: Enter the ISP supplied password.

Scheduler (1-15): Enter the index of schedule profile to control the Internet access by time plan.

PPP/MP Setup

PPP Authentication: Select PAP or CHAP for widest compatibility.

Always On: Check to force the Internet access is always online, and you will see the Idle Timeout field will be blocked for input.

Idle Timeout: Idle timeout means the router will disconnect after being idle for a preset amount of time. The default is 180 seconds. If you set the time to 0, the PPP session will not terminate itself.

IP Address Assignment Method (IPCP)

Internet Access Setup

Fixed IP: Check No (Dynamic IP) unless your ISP has provided you with a static IP address.

Fixed IP Address: If your ISP has provided you with a static IP address enter it here.

WAN IP Network Settings

Obtain an IP address automatically: Set the WAN interface as a DHCP client that will ask for the IP network settings from the DHCP server or PPTP-enabled DSL modem.

Specify an IP address: If you are not sure whether there are any DHCP services on the LAN2/WAN interface, you can manually assign an IP address to the interface. Note that the IP Address and Subnet Mask should be assigned within the same network as the PPTP-enabled DSL modem.

Click **OK**.

5.2.5 Using a Static IP or multiple Static IPs with a DSL/Cable Modem

In this application, you receive a fixed public IP address or a public subnet (ie. Multiple public IP addresses) from your DSL or Cable ISP. In most cases, a Cable ISP will provide a fixed public IP, while a DSL ISP will provide a public subnet. If you have a public subnet, you could choose an IP address or many IP address to assign to the WAN interface. Click **Internet Access Setup > Static or Dynamic IP** to enter the setup page, which is depicted as follows.

Access Control

Broadband Access: Select **Enable** to turn on the broadband access capability.

Keep WAN Connection

Enable PING to keep alive: Check to enable PING to keep alive function. Normally, this function is used for Dynamic IP environment. Here will ignore

Internet Access Setup

Static or Dynamic IP (DHCP Client)

Access Control
Broadband Access ☒ Enable ☐ Disable

Keep WAN Connection
☐ Enable PING to keep alive
PING to the IP
PING Interval minute(s)

WAN physical type
Auto negotiation

RIP Protocol
☐ Enable RIP

WAN IP Network Settings
☐ Obtain an IP address automatically
Router Name
Domain Name
* : Required for some ISPs
☒ Default MAC Address
☐ Specify a MAC Address
MAC Address: :
☒ Specify an IP address
IP Address
Subnet Mask
Gateway IP Address

OK

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the settings.

RIP Protocol

Enable RIP: Check to turn RIP packets exchange on WAN interface. For most Internet access, you don't need to check the option.

WAN IP Network Settings

Specify an IP address: As we are using a static IP, you have to select the option to specify an IP Address, Subnet Mask, and Gateway IP Address.

Click **OK**.

If you have multiple public IPs to be assigned on the WAN interface. Click **WAN IP Alias**, the following windows will be pop-up. Thus, you can assign additional IPs on the page, and click **OK**.

WAN IP Alias - Microsoft Internet Explorer

WAN IP Alias (Multi-NAT)

Index	Enable	Aux. WAN IP	Join NAT IP Pool
1.	<input checked="" type="checkbox"/>	192.168.100.60	<input checked="" type="checkbox"/>
2.	<input type="checkbox"/>	<input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/> . <input type="text" value=""/>	<input type="checkbox"/>

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5.2.6 Using a Dynamic IP (DHCP Client) with a DSL/Cable Modem

This application is mostly used by Cable ISPs. Click **Internet Access Setup > Static or Dynamic IP** to enter the setup page.

Access Control

Broadband Access: Select **Enable** to turn on the broadband access capability.

Keep WAN Connection

Enable PING to keep alive: Check to enable PING to keep alive function. Normally, this function is for Dynamic IP environment. If you need to enable the function, assign a public IP address in the PING to the IP and a timer in the PING Interval.

Internet Access Setup

Static or Dynamic IP (DHCP Client)

Access Control
Broadband Access ☒ Enable ☐ Disable

ISDN Dial Backup Setup
Dial Backup Mode None

Keep WAN Connection
☐ Enable PING to keep alive
PING to the IP 0.0.0.0
PING Interval 0 minute(s)

WAN physical type
Auto negotiation

RIP Protocol
☐ Enable RIP

WAN IP Network Settings
☒ **Obtain an IP address automatically**
Router Name *
Domain Name *
* : Required for some ISPs
☒ Default MAC Address
☐ Specify a MAC Address
MAC Address:
00 · 50 · 7F : 00 · 00 · 01
☐ **Specify an IP address** WAN IP Alias
IP Address 192.168.100.11
Subnet Mask 255.255.255.0
Gateway IP Address 192.168.100.1

OK

RIP Protocol

Enable RIP: Check to turn RIP packets exchange on WAN interface. For most Internet access, you don't need to check the option.

WAN IP Network Settings

Obtain an IP address automatically: The option must be enabled.

Router Name: Depending on your Cable ISP, this option may or may not be left blank. Some ISPs require this name for access authentication.

Domain Name: Depending on your Cable ISP this field may or may not be left blank.

Default MAC Address & Specify a MAC Address: These two options are mutually exclusive. Some Cable ISPs use a specific MAC address for access authentication. In such cases you need to check the **Specify a MAC Address** box and enter the MAC address in the MAC Address fields. Click **OK** and

restart the router to allow the settings to take affect.

5.2.7 Configuring ISDN dial backup for broadband access

Due to no ISDN interface in the Vigor2900 and Vigor2900G models, the ISDN dial backup facility and its associated setup options are not available for these models. Please refer to the previous figure, you can find out the ISDN Dial Backup Setup.

ISDN Dial Backup Setup

Dial Backup Mode: Three options are provided for dial backup mode.

None: Disable the backup function.

Packet Trigger: The backup line is disconnected until a packet from a local host triggers the router to establish a connection.

Always On: If the broadband connection is no longer available, the backup line will automatically connect and stay always-on until the broadband connection is recovered.

For ISDN dial backup function, you must create a dial backup profile. Please click **Internet Access Setup > Dialing to a Single ISP** to enter the backup profile setup page.