Vigor2900 Initial Setup

Top Setup Tips

Welcome to the Vigor2900 top setup tips. These notes supplement your full manual, distilling the most important information. When you first set up your Vigor2900, everything should go smoothly if you follow the instructions, but if you have problems, here is your checklist!

There are two parts to this guide, Part1 covers getting your PCs talking to the router. Part2 covers getting the router talking to your ISP and the Internet. The latest version of this document will be available from <u>www.draytek.co.uk/support</u> where you will also find other documentation and downloads for your router.

Part1-PCs/LAN communicating with Router

- Your PC should be connected to the router via a suitable Ethernet (RJ45) cable. Does the appropriate Ethernet switch LED (1/2/3/4) light up (green = 100mb/s, Amber = 10mb/s). The Vigor2900's Ethernet ports are auto-sensing to speed and cable configuration, so crossover/straight or uplink/normal connections will all be automatically adjusted for.
- 2. Every device on your network must have a unique IP address. The router's DHCP server facility will automatically allocate these to your client PCs, assuming that they are set to obtain their details automatically. The router's own IP address by default is 192.168.1.1 and all local PCs must have an UP address within the same 'subnet' for example 192.168.1.20 or 192.168.1.66. Only the last octet (and 8 bit binary number, represented in decimal –i.e. the number after the final dot) will vary this is known as a class C subnet.
- 3. Check that the PC is actually getting the IP details from the router. You can check this from the winipcfg utility. To run this, press the Windows Start button, select 'Run', type **winipcfg** and press OK.

themet Adapter Information —		
	Realtek RTI	.8029 Ethernet
Adapter Address	00-20-1	8-2F-F1-3F
IP Address	192.1	168.1.2
Subnet Mask	255.2	55.255.0
Default Gateway	192.1	58.1.1
OK R	eleage	Renew
Release All Re	new All	More Info >>

In the above example, the PC has been given an IP address of 192.168.1.2 and has been told that the default gateway (router) is at 192.168.1.1. Ensure that your network card is selected in the top pulldown box (not 'PPP Adaptor'). If you click 'Release', the details should be cleared 'Renew' should get them back.

If you do not have the winipcfg utility, you can try **ipconfig.exe** from the MS-DOS command prompt.

🎇 MS-DOS P	Prompt	
C:\>ipcon	nfig	
Windows I	IP Configuration	
0 Etherne	et adapter :	
I S C	IP Address : 192.16; Subnet Mask : 255.25 Default Gateway : 192.16;	3.1.10 5.255.0 3.1.1

Winipcfg is not supplied as standard with Windows 2000.

4. In **Windows XP**, you can check your PC's current IP address by opening Network Connections; if you select the LAN connection, the settings will appear on the left of the screen–like the example below. Here we can see that the Network connection is enabled and that the PC has obtained an IP address of 192.168.1.10.



You can obtain the same information by right-clicking on the Network Connection's icon in the system tray and selecting 'Status'.

👍 Local Area Connection Status	? 🛛
General Support	
Internet Protocol (TCP/IP)	
Address Type:	Assigned by DHCP
IP Address:	192.168.1.10
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.1
	Details
	Close

5. If your PC is not getting an IP address (as described in previous sections), you need to check that your PC's TCP/IP settings are correct. As mentioned earlier, we recommend that you make use of the router's DHCP facility which is enabled by default. From Windows98/Me Control Panel/Network, check your TCP/IP Properties are like this:

Configuration Identification Ac	cess Control	
The following network compon	ents are installed.	
Dial-Up Adapter	sints are inistalled.	
🐨 Realtek RTL8029(AS) PCI	Ethernet NIC	
TCP/IP -> Dial-Up Adapter TCP/IP -> NE2000 Ethern	et Card	
File and printer sharing for I	ficrosoft Network	
Remove	Properties	
TCP/IP Properties		? ×
Bindings Adv. DNS Configuration Gateway	anced N WINS Configuration	letBIOS
Obtain an IP address auto	omatically	
– O <u>S</u> pecify an IP address: –		
IP Address:	• •]
S <u>u</u> bnet Mask:		
	й бал бойно А.	
<u></u>		Cancel
A		
TCP/IP Properties		? ×
Bindings Adv		2017
DNS Configuration Gateway	anced WINS Configuration	NetBIOS
DNS Configuration Gateway	anced WINS Configuration	NetBIOS
DNS Configuration Gateway	anced WINS Configuration	NetBIOS \ IP Address
DNS Configuration Gateway New gateway.	anced WINS Configuration	NetBIOS IPAddress
DNS Configuration Gateway New gateway: . Installed galeways:	anced WINS Configuration <u>A</u> dd <u>B</u> emove	NetBIOS
DNS Configuration Gateway New gateway:	anced WINS Configuration	NetBIOS
DNS Configuration Gateway New gateway:	anced WINS Configuration Add Bemove DK	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway:	anced WINS Configuration <u>A</u> dd <u>Bemove</u> OK	NetBIOS IP Address Cance
DNS Configuration Gateway New gateway:	anced WINS Configuration	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway: Instaled galeway: Instale galeway:	anced WINS Configuration Add Bemove DK OK	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway:	anced WINS Configuration	Lance
DNS Configuration Gateway New gateway: Instaled galeways: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instalegaleway: Instaleway: Instaleway: <td>Anced WINS Configuration</td> <td>NetBIOS IP Address Cancel</td>	Anced WINS Configuration	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway: Instaled galeway: Instale DNS Instale DNS Host: DNS Server Search Erder	anced WINS Configuration Add Bemove Demoin:	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway:	anced WINS Configuration Add Eemove OK OK UNS Configuration	NetBIOS IP Address Cancel
DNS Configuration Gateway New gateway:	anced	Cancel
DNS Configuration Gateway New gateway: Instaled galeways: Instale DNS Instale DNS Host: Instale DNS	anced WINS Configuration Add Bemove OK OK Unced WINS Configuration Demoin: Add Bemove	NetBIOS IP Address Cancel

6. For **Windows XP**, the LAN/Network card setup is very similar to Windows98/Me, but the screens look a little different. Once your network card (Ethernet 10/100BaseT) is installed, it may be automatically set up correctly be default. You can check the settings from your PC's 'Network Connections' menu.

Ø	Documents	•0-	Control Panel			L/Lon
1	Settings	. 5	Network Connections		👰 Network Setup (Rename
	Run	89 1	Printers and Faxes Taskbar and Start Menu		New Connection	Sort by Name
D	Log Off					
0	Turn Off Computer			and the second second		

Select the TCP/IP protocol as shown below and click on 'properties' and then check that.

Obtain IP address & DNS Automatically are both selected:

	Authenticat	ion A	dvanced	1			
Connec	t using:						
1100 I	NETGEAR F/	4311 Fa	ast Ether	net Ada	pter		
This co	naction use	e the fo	ulowing i	tome:	C	Configu	re
	QoS Packe	et Sche otocol (duler TCP/IP) Unins	l		Propertie	es
Desc	iption						
Tran wide acro	amiasion Con area networ ss diverse int	trol Pro k protoc erconno	tocol/Int col that p ected ne	ternət Pr provides tworks.	otocol. commu	The defa inication	ult
Sho	w icon in not	ification	area w	hen con	nected		

aneral Alternate Configuration	
You can get IP settings assigne his capabilty. Otherwise, you ne he appropriate IP settings.	d automatically if your network supports eed to ask your network administrator for
⊙Obtain an IP address autor	matically
OUse the following IP addres	88
[P address:	
Sybnet mask:	
Default gateway:	· · · · ·
Obtain DNS server address	s automatically
OUse the following DNS ser	ver addresses:
Preferred DNS server:	2 2) 22 -
≜ternate DNS server:	a v a
	Ad <u>v</u> anced

7. For **Apple MacOS**, to select and enable the DHCP client facility on your computer, the TCP/IP control panel should be set like this for MacOS 8/9 and X respectively.

Connect via: Ethernet Setup Configure: Using DHCP Server DHCP Client ID: IP Address: < will be supplied by server > Subnet mask: < will be supplied by server > Router address: < will be supplied by server > Router address: < will be supplied by server > Name server addr :: < will be supplied by server > Name server addr :: < will be supplied by server > Network Configure: Unitited Built-In Ethernet Configure: Using DHCP PPPGE AppleTalk Proxies Configure: Using DHCP PPPGE AppleTalk Proxies Configure: Using DHCP PPGE AppleTalk Proxies Configure: Using DHCP Client ID (Cptional) Bearch Domains (Optional) Exercit apple.com, earthlink.net			ault (DHCP))	
Configure : Using DHCP Server DHCP Client ID : IP Address: < will be supplied by server > Subnet mask: < will be supplied by server > Router address: < will be supplied by server > Router address: < will be supplied by server > Router address: < will be supplied by server > Network Network Dosalays Sound Network Startup Disk Location: Untitled Built-in Ethernet Using DHCP PPRE AppleTalk Proxies Configure: Using DHCP PPRE AppleTalk Proxies Configure: 192.168.1.1 DHCP Client ID (Optional) Example: apple.com, earthlink.net	Connec Setun	t via: Ethernet	3	9
DHCP Client ID: IP Address: < will be supplied by server > Subnet mask: < will be supplied by server > Router address: < will be supplied by server > Name server addr.: < will be supplied by server > Network Network Displays Sound Network Startup Disk Location: Untitled Built-In Ethernet Subnet Mask: 255.255.0 Router: 192.168.1.1 DHCP Client ID (Optional) Hernet Address: 00:30.65:84:00.4c Dample: apple.com, earthlink.net	Confi	gure: Using DHCP:	Server 🤤	9
IP Address: < will be supplied by server > Subnet mask: < will be supplied by server > Router address: < will be supplied by server > Search domain Name server addr.: < will be supplied by server > Name server addr.: < will be supplied by server > Network Complex Sound Network Startup Disk Cocation: Untitled Built-In Ethernet Configure Using DHCP PPPGE AppleTalk Proxies Configure Using DHCP PPGE AppleTalk Proxies Configure Using DHCP Provided by DHCP Server) Subnet Mask: 255.255.255.0 Router: 192.168.1.1 DHCP Client ID (Cprimal) Example: apple.com, earthlink.net	DHCP Clien	nt ID:		
Subnet mask: < will be supplied by server > Router address: < will be supplied by server > Router address: < will be supplied by server > Search domain Name server addr :: < will be supplied by server > Network Network Dosplays Second Network Startup Disk Lockation: Unstitled Suilt-in Ethernet Suint-In Etherenet Suint-In Ethernet Suin	IP Add	ress: < will be sup	plied by server >	
Router address: < will be supplied by server > Name server addr.: < will be supplied by server > Name server addr.: < will be supplied by server > Network Displays Sound Network Displays Sound Network Startup Disk Location: Untitled Suilt-in Ethernet TCP/IF PProE AppleTalk Proxies Configure Using DHCP IP Address: 192.168.1.10 (Provided by DHCP Server) Search Domains Subnet Mask: 25.5.255.0 Router: 192.168.1.1 DHCP Client ID: (Optional) Example: apple.com, earthlink.net	Subnet n	mask: < will be sup	plied by server >	
Name server addr :: < will be supplied by server >	Router add	ress: < will be sup	plied by server >	Search domains
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Network Disylays Sound Network Startup Disk Location: Untitled Built-In Ethernet TCP/IF PPPoE AppleTalk Proxies Configure Using DHCP Ormain Name Servers (Optional) IP Address: 192.158.1.1 DHCP Client ID (Cptional) Example: apple.com, earthlink.net				1
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TCP/IP PPPEE AppleTalk Proxies Configure Using DHCP Image: Configure Servers (Optional) IP Address: 192.168.1.0 Ormain Name Servers (Optional) Subnet Mask: 255.255.255.0 Router: 192.168.1.1 DHCP Client ID: (Optional) Ibernet Address: 00:30:65:84:00:4e	All Displays Sour	nd Network Startup Disk	T.	
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Once the addresses have been allocated by the router, they will appear in the screen above.

- 8. If you are **not** using DHCP (i.e. 'Obtain IP Address Automatically' as shown above) then you must manually give your PCs an IP address, This address must be within the same subnet as the router's own LAN IP address. This means that if the router is 192.168.1.1, then the other PCs must be numbered 192.168.1.nnn where 'nnn' is a number from 2 to 254. Additionally, each PC must have the 'Default Gateway' and "DNS Server Address" set to the router's IP address (192.168.1.1 unless you changed it.) None of this is necessary if you are using DHCP, hence it's recommended to rely on DHCP whenever possible.
- 9. To confirm the connectivity between your PC and the router, you can use the Windows 'ping' utility. This sends a small packet to the router, which the router sends back, to confirm the connectivity. From an MS-DOS prompt, enter 'ping 19.168.1.1'- you should get replies with a time in milliseconds (e.g. 12ms).

MS-DOS Prompt	_ 🗆 ×
Microsoft(R) Windows 98 (C)Copyright Microsoft Corp 1981–193	99.
C:\>ping 192.168.0.254	
Pinging 192.168.1.1 with 32 bytes of c	lata:
Reply from 192.168.1.1: bytes=32 time=3 Reply from 192.168.1.1: bytes=32 time= Reply from 192.168.1.1: bytes=32 time=3 Reply from 192.168.1.1: bytes=32 time=3	8ms 1ms 1ms 1ms
Ping statistics for 192.168.0.254: Packets: Sent = 4, Received = 4, Lu Approximate round trip times in milli- Minimum = 1ms, Maximum = 3ms, Ave:	ost = 0 seconds: rage = 1ms

Part2-Router communicating with your ISP & the Internet

10. The above checks will confirm that your PC and network are connected to the router correctly, so you should be able to access the router's Web Configurator interface. This is the main method for setting up, controlling and monitoring the router. Load your standard web browser (e.g. MSIE, Netscape etc.) and in the address bar simply enter http://192.168.1.1 (which is the router's address). You can also get into the Web Configurator interface via the Router Tools "Smartstart" wizard. You will be asked for the router's administrator password (empty by default-you can change it later) and them the main router menu should appear as shown below. This main menu 'front page' also shows the version of firmware

installed in the router at the top.

RES 2 MBp://152.168.8.1/	
Dray Tek	Router Web Configurator
Setup Main Menu DreyTek Corp.	Model : Vigor25 Firmware Version : v≥1n Eulid Date/Time : Fri 3 LAN MAC Address : 001
Basic Setup (Setup First)	Quick Setup
>> Administrator Password Setup >> LAN TOP/IP and DHCP Setup	>> litemet
Advanced Setup	
>> Dynamic IDNS Satup	
>> Call Scheidule Setup	
>> NAT Satup	

11. If you cannot get into the router's web configurator or Dial-Up Networking, please try to dial when you try to access the internet, check your 'Internet Options' from Windows Control Panel. They should be set as shown below (varies with O/S). Select 'never dial a connection' to deny the PC using a dialup modem (DUN) connection.

Internet I	Properties				
General	Security	Content	Connections	Programs	Adva
	Use the li connect y	nternet Co vour comp	nnection Wiza uter to the Inter	idito inet.	<u> </u>
	up settings				e
e	MyISP			-	
					E
				-	<u></u>
•	lever dial a	<u>c</u> onnectio	n		
C)ial <u>w</u> henev	er a netwo	ork connection	is not preser	nt
04	Nways dial n	ny default	connection		
Press	and all the deside	THZ 981-	DOM NOT A		C.

Click on LAN Settings and ensure that no proxy is set. It should look like this.

_ocal Area Network (LAN) Settings
Automatic configuration Automatic configuration may override manual settings. To en use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server
Address: Port: Adv
<u>Bypass proxy server for local addresses</u>

If you have a software firewall installed, for example Zonealarm, Norton Firewall etc. or SBS Proxy server, these can sometimes interfere with access to the router.

12. It is very simple to set up the router for standard Internet access. You will need to known your login name and password for your ISP. Go straight to the Internet Access Setup menu on the top right, in the box.



Then on the next menu, select the PPPoE sub-menu.

```
DSL/Cable Modem Internet Access
>> <u>PPPoE</u>
```

13. In the PPPoE setup screen, enable the PPPoE client and enter ISP information, such as ISP Name, Username, and Password, as shown below. The ISP name is just for reference, but the username and password must be correct – check these with your ISP if you are not sure what to enter – these are the username and password that you use to log into your ISP.

PPPoE Setup	- 3A	PPP/MP Setup	<u></u>	
PPPoE Link	⊙ Enable ○ Disable	PPP Authentication	PAP or CHAP	
ISP Access Setup		🗌 Always On		
ISP Name	YourlSPName	Idle Timeout	180 second(s)	
Ucornomo	Viaor2000	IP Address Assignment Method (IPCP)		
osemanie	VIGUIZOO	Fixed IP	🔘 Yes 💿 No (Dynamic IP)	
Password	•••••	Fixed IP Address		
Scheduler (1-15)				
=> ,	,	WAN physical type		
		Auto negotiation 💌		

Once everything is entered as shown above, that's all what needed for a typical ISP setup.

Click **OK** to save those settings.

14. Once your ISP details are set, if your DSL line cable is connected to the router, you can check that the router is online and has connected to the ISP successfully. From the main menu setup > Online Status, a screen like this will appear:

						System	Uptime: 0:2:6
LAN Status		Prim	ary DNS 168	.95.1.1	Secor	dary DNS	194.98.0.1
	IP Address	ТХ	Packets	RX Pack	(ets		
	192.168.1.1		982		826		
WAN Status			GW IP Addr	61.230.19	2.254		
Mode	IP Ad	dress	TX Packets	TX Rate	RX Packets	RX Rate	Up Time
PPPoE	61.230.2	202.48	14	5	14	2	0:00:27
						>> Drop	PPPoE or PPTP

Don't be overwhelmed by all of this information; it's quite easy to follow and there are only a couple of pieces of information which are needed to confirm correct operation. Once the router is in Showtime state, it will automatically log into your ISP. This is indicated by the **WAN Status** section. The mode should be shown as PPPoE and the IP address which the router has assumed from your ISP will be shown under **IP Address**. In our example, that is 61.230.202.48. Depending on your service option with your ISP, that will change each time you log in (dynamic address) or it will always be the same (static address). This is generally known as your **public** (or WAN facing) IP address.

In summary, if you have a public IP address shown, the router is set up and logged into your ISP correctly. You should now be able to surf the internet! Try entering a web address into your browse (for example <u>www.draytek.com.tw</u>).

15. If you are unable to browse the web still, check if you can ping the Internet from the router (see earlier for an explanation of pings). If you telnet to the router (see main FAQ for details on how to run telnet) then you can try to ping an external IP address (i.e. one elsewhere on the internet). If the ping comes back, then that confirms that the router is happily connected to the Internet and can send/receive data. Pings will have a trip time, for example 97ms.

ew Telnet 192.168.1.1	- 🗆	X			
		1			
Password:					
*** WARNING ***********************************	xx				
* System has no password.	×				
* Please set password, using "sys passwd" commands.	×				

Type ? for command help					
> ip ping 140.113.13.101					
Pinging 140.113.13.101 with 64 bytes of Data:					
Receive reply from 140.113.13.101, time=130ms					
Receive reply from 140.113.13.101, time=70ms					
Receive reply from 140.113.13.101, time=50ms					
Keceive reply from 140.113.13.101, time=50ms					
Receive reply from 140.113.13.101, time=50ms					
Packets: Sent = 5, Received = 5, Lost = 0 (0% loss)					
		-			

You can also ping from the router to an internal IP address, e.g. ip ping 192.168.1.10. Note that the IP address example given above may not be a real address - you must ping a known/real/active IP address. If the address doesn't exist, or is unreachable, you will not get a ping reply.

16. If you cannot get the router logged into the ISP, you can telnet to the router and check the call log (log -c). If it shows a CHAP failure then either your username or password is almost certainly incorrect. The ISP Name field is arbitrary so you can put anything you like in there, but the username and password must be correct.

Windows 95/98/2000/ME/XP all have a Telnet program built in. For other Operating systems, you can normally download a freeware Telnet utility. To run regular Telnet under Windows select as follows:



Windows2000 and WindowsXP have a 'DOS' based Telnet program, so you cannot capture text with it. Instead you can use Windows Hyperterminal, and select Port23 (telnet) connection rather than a modem or COM port:

Connect To		? X
Regional DrayTek		
Enter details for	the host that you want to call:	
<u>H</u> ost address:	192.168.1.1	
Port nu <u>m</u> ber:	23	
Connect using:		_
Collineor dould.		
	OK Can	cel

Here is an example log:

In the above log, the router logged in successfully. If your ISP "idle timeout" is set to always-on (-1) then the *Dial-Up Triggered by*.... line will not show. When the LINK light on the router comes on, the router is successfully logged in.

log -c

```
03:10:43.690 >>> Dial-up triggered by user : 192.168.1.10
proto=udp, to 222.204.192.12 port=2311
03:10:44.650 PPP Start (PPPoE)
03:10:47.990 CHAP Login Failed (PPPoE)
```

In the above example log, the login has failed, most probably due to an incorrect username or password.

17. If you need to capture the log text, for example to send it to your support contact for examination, you need to open a Telnet session to the router, as shown above and start a text capture (give it a suitable filename, for example *Edward01.txt*. Then enter the appropriate log commands to display the logs, and finally close the text capture, which will leave you with a text file you can email.



18. You may be asked for full logs (or a WAN log) by your support contact. Firstly, reboot the router (turn it off, then on). Wait approximately 1-2 minutes for the router to attempt to log on to the ISP, or if your problem relates to a specific operational problem, wait until that problem has occurred in order that the logs will show it. To actually output and capture (save the log to a file for emailing), open a telnet session and start the text capture as described above and then enter the following commands at the prompt.

```
>sys ver
>adsl status
>log –c –t
>log –wt -t
```

Then close the text capture and email the text file to your support contact, along with a report of the problem etc.

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