D-Link

Quick Installation Guide

This product can be set up using any current web browser, i.e., Internet Explorer 6x.

D-Link DFL-1500
Firewall/VPN
Router

Before You Begin

It's best to use a computer with an Ethernet adapter for configuring the DFL-1500. The default IP address for the DFL-1500 is **192.168.1.254** (LAN1 at the port number 3) with a Subnet Mask of **255.255.255.0**. You will need to assign your computer a Static IP address within the same range as the DFL-1500's IP address, say 192.168.1.2 to configure the DFL-1500. **See the Appendix if you need assistance in assigning a Static IP address for your network adapter.**

Check Your Package Contents

These are the items included with your DFL-1500 V.A1 purchase:

ENGLISH

• **DFL-1500 VPN/Firewall Router**

• **CD-ROM (containing Manual and Warranty)**

• **Console Cable (baud rate 9600)**

•**Ethernet Cable (RJ45)**

•**Power Cord**

If any of the above items are missing, please contact your reseller.

Device default value

You should have an Internet account already set up and have been given most of the following information as the following table. Fill out this table when you edit the web configuration of DFL-1500.

Items			Default value	New value
Password:			admin	
WAN1 (Port 1)	Fixed IP	IP Address	Not initialized	____.____.____.____
		Subnet Mask		____.____.____.____
		Gateway IP		____.____.____.____
		Primary DNS		____.____.____.____
		Secondary DNS		____.____.____.____
	PPPoE	PPPoE Username		____.____.____.____
		PPPoE Password		____.____.____.____
	DHCP			
WAN2 (Port 2)	Fixed IP	IP Address	Not initialized	____.____.____.____
		Subnet Mask		____.____.____.____
		Gateway IP		____.____.____.____
		Primary DNS		____.____.____.____
		Secondary DNS		____.____.____.____
	PPPoE	PPPoE Username		____.____.____.____
		PPPoE Password		____.____.____.____
	DHCP			
DMZ1(Port 3)		IP Address	10.1.1.254	____.____.____.____
		IP Subnet Mask	255.255.255.0	____.____.____.____
LAN1(Port 4)		IP Address	192.168.1.254	____.____.____.____
		IP Subnet Mask	255.255.255.0	____.____.____.____
LAN2(Port 5)		IP Address	192.168.2.254	____.____.____.____
		IP Subnet Mask	255.255.255.0	____.____.____.____

System Architecture

DFL-1500 is an integrated solution that can provide enterprises the maximum security and the best resource utilization. It contains stateful inspection Firewall, NAT, VPN, Intrusion Detection System, Dynamic Routing, Content Filtering, Bandwidth Management, WAN load balancer, Anti-Virus, in a single box. It also features high performance accelerator and wire-speed VPN encryption/decryption. It is the most cost-effective solution for enterprise.

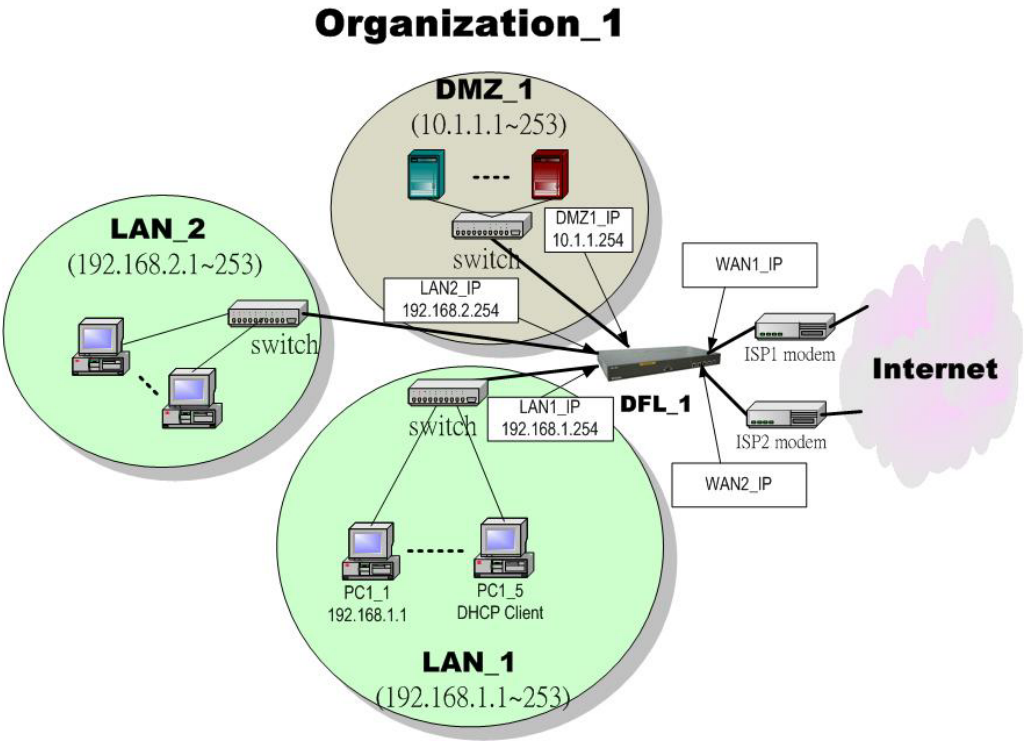
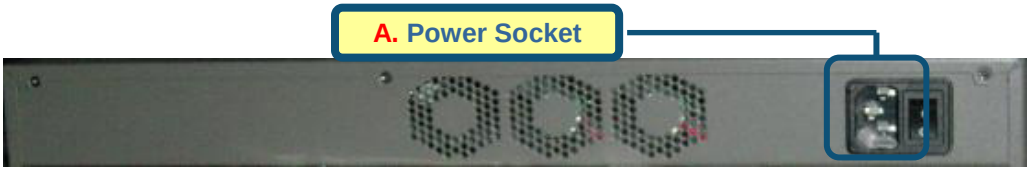


Figure 1 DFL-1500 default topology and port value settings.

1 Connecting the DFL-1500

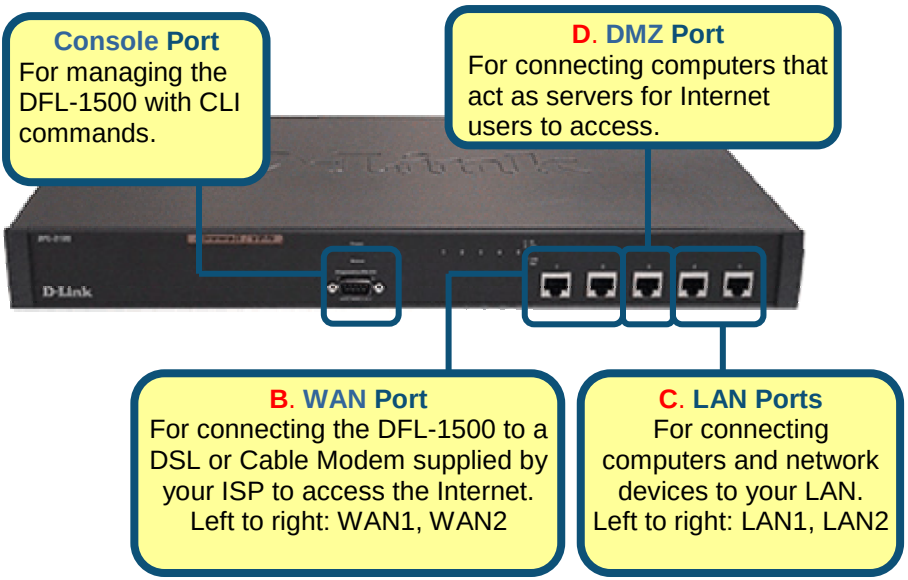
A. First, connect the power cord to the **Power Socket** at the back panel of the DFL-1500 and then plug the other end of the power adapter to a wall outlet or power strip. Press the switch to ON position. The Power LED will turn **ON** to indicate proper operation.



B. Using an Ethernet cable, insert one end of the cable to the **WAN port** on the front panel of the DFL-1500 and the other end of the cable to a DSL / Cable modem or other internet access devices.

C. Computers with an Ethernet adapter can be directly connected to any of the **LAN ports** using a **cross-over** Ethernet cable.

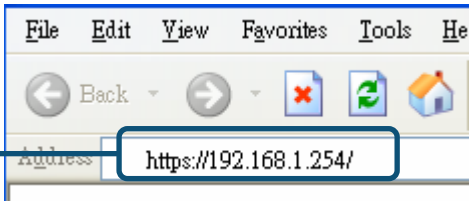
D. Computers that act as servers to provide Internet services should be connected to the **DMZ port** using an Ethernet Cable.



2 Using the Setup Wizard

A computer on your LAN1 must be assigned an IP address and subnet mask from the same range as the IP address and subnet mask assigned to the DFL-1500 in order to be able to make an HTTPS connection using a web browser. The DFL-1500 is assigned an IP address of 192.168.1.254 with a subnet mask of 255.255.255.0 by default. The computer that will be used to configure the DFL-1500 must be assigned an IP address between 192.168.1.1 and 192.168.1.253 with a subnet mask of 255.255.255.0 to be able to connect to the DFL-1500. This address range can be changed later. There are instructions in the DFL-1500 User's Guide, if you do not know how to set the IP address and subnet mask for your computer.

Open your Web browser and type **"http://192.168.1.254:8080"** or **"https://192.168.1.254"**into the URL address box. Then press the **Enter** or **Return** key.



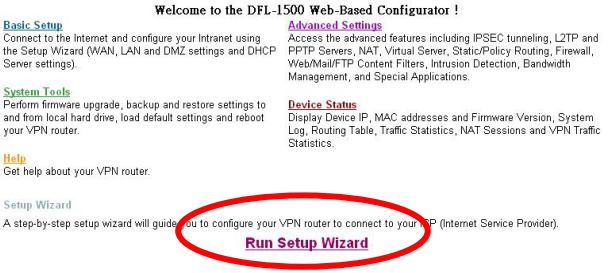
Step 1 — Login

Type "admin" in the account field, "admin" in the Password field and click Login.

Step 2 — Run Setup Wizard

Click the Run Setup Wizard.

After login to DFL-1500 web configurator
BASIC SETUP > Wizard



Step 3 — System Name

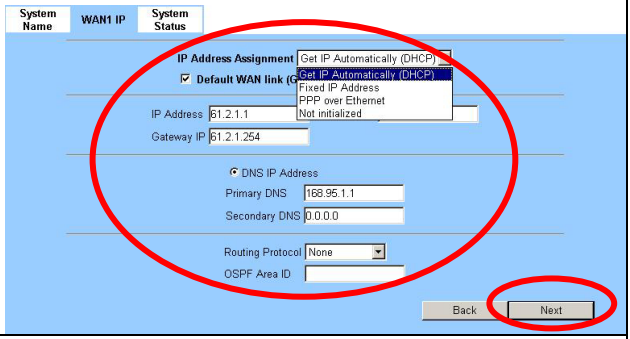
Enter the Host Name and the Domain Name, followed by clicking the Next.

BASIC SETUP > Wizard

Step 4 — WAN Connectivity

To setup the first WAN link, make WAN1 as the Default WAN link (Gateway/DNS). Choose the type of IP Address Assignment provided by your ISP to access the Internet. Here we have four types to select. This will determine how the IP address of WAN1 is obtained. Click Next to proceed.

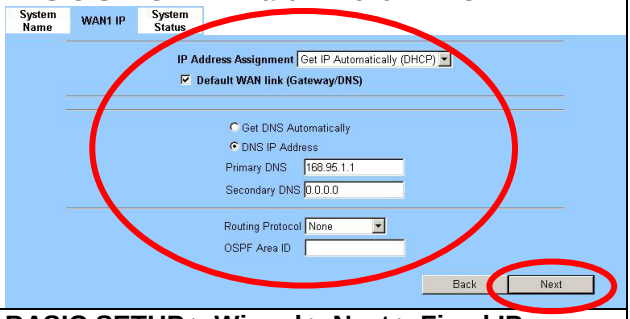
BASIC SETUP > Wizard > Next



Step 4.a — DHCP client

If Get IP Automatically (DHCP) is selected, DFL-1500 will request for IP address, netmask, and DNS servers from your ISP. You can use your preferred DNS by clicking the DNS IP Address and then completing the Primary DNS and Secondary DNS server IP addresses. Click Next to proceed.

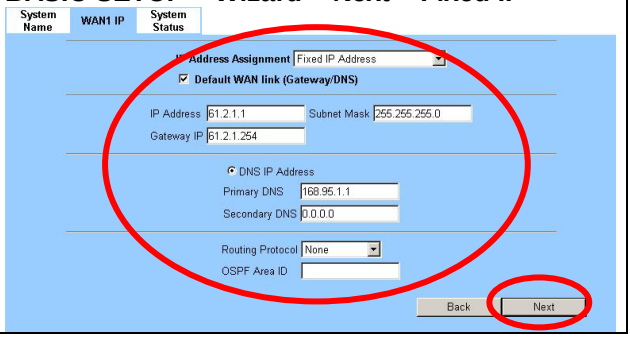
BASIC SETUP > Wizard > Next > DHCP



Step 4.b — Fixed IP

If Fixed IP Address is selected, enter the ISP-given IP Address, Subnet Mask, Gateway IP, Primary DNS and Secondary DNS IP. Click Next to proceed.

BASIC SETUP > Wizard > Next > Fixed IP



Step 4.c — PPPoE client

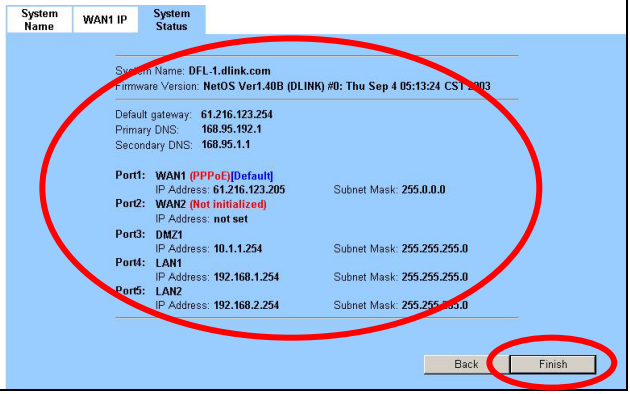
If `PPP over Ethernet` is selected, enter the ISP-given `User Name`, `Password` and the optional `Service Name`. Click `Next` to proceed.

BASIC SETUP > Wizard > Next > PPPoE

Step 5 — System Status

Here we select PPPoE method in WAN1 port. Then the DFL-1500 provides a short summary of the system. Please check if anything mentioned above is properly set into the system. Click `Finish` to close the wizard.

BASIC SETUP > Wizard > Next > Next



Basic Setup

Setting up a VPN and configuring the Firewall on the DFL-1500 requires a deeper understanding of the protocols and security features of the DFL-1500 than can be presented here. If you need additional information about setting up a VPN or configuring the Firewall, please consult your *DFL-1500 User's Guide* or your Network Administrator.

Please Note:
Each configuration page has buttons on the bottom labeled **Apply** and **Reset**. When you configure any page, you must press the **Apply** button to make the configuration effective. You **CANNOT** configure multiple pages, and then press **Apply**. Each page must have the configuration information 'applied' before going on to the next page.

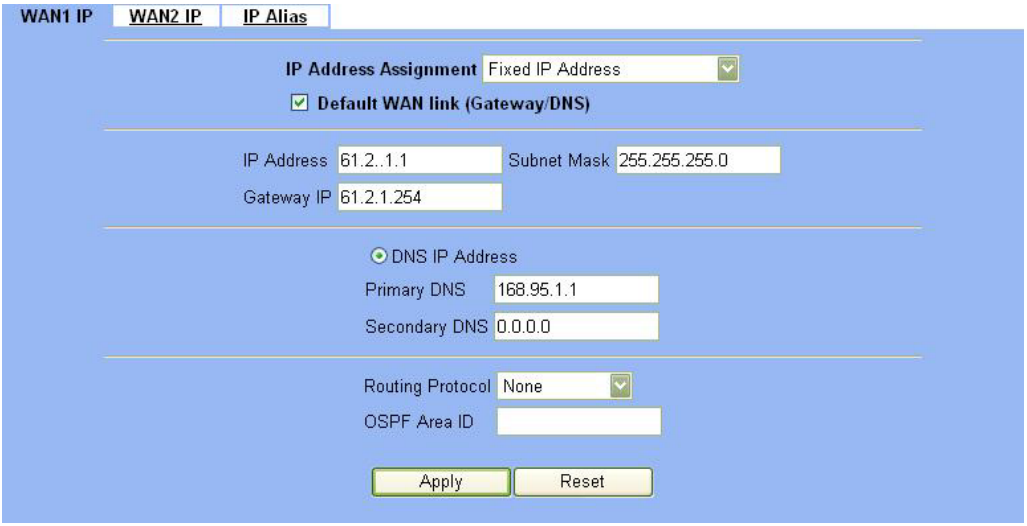
WAN Settings

The WAN Settings page allows you to modify the protocol that the DFL-1500 will use to connect to your ISP and obtain the necessary network address information.

The usage of these pages is essentially the same as those introduced in the wizard pages. The ISP Settings page allows you to modify the way that the DFL-1500 obtains its network settings from your Internet Service Provider (ISP). The entry fields on the page will change depending upon which of the following options you choose: **Fixed IP Address, Get IP Automatically,** and **PPPoE**.

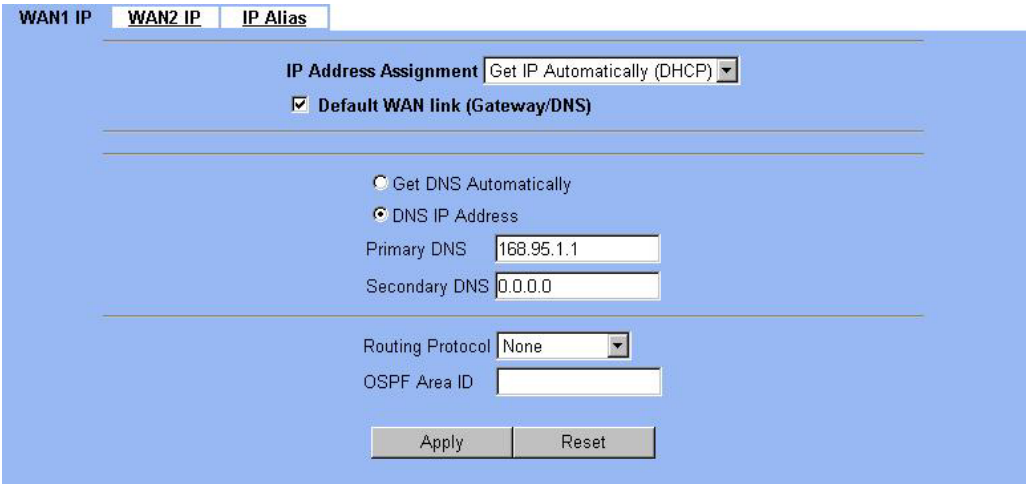
1. Fixed IP Address

If your ISP has assigned you an IP address that will never change, choose this option. When this option is chosen, the following fields appear to allow you to enter the network address information. The example shows that the ISP assigns an IP 61.2.1.1, a netmask 255.255.255.0, a default gateway 61.2.1.254, and DNS (168.95.1.1).



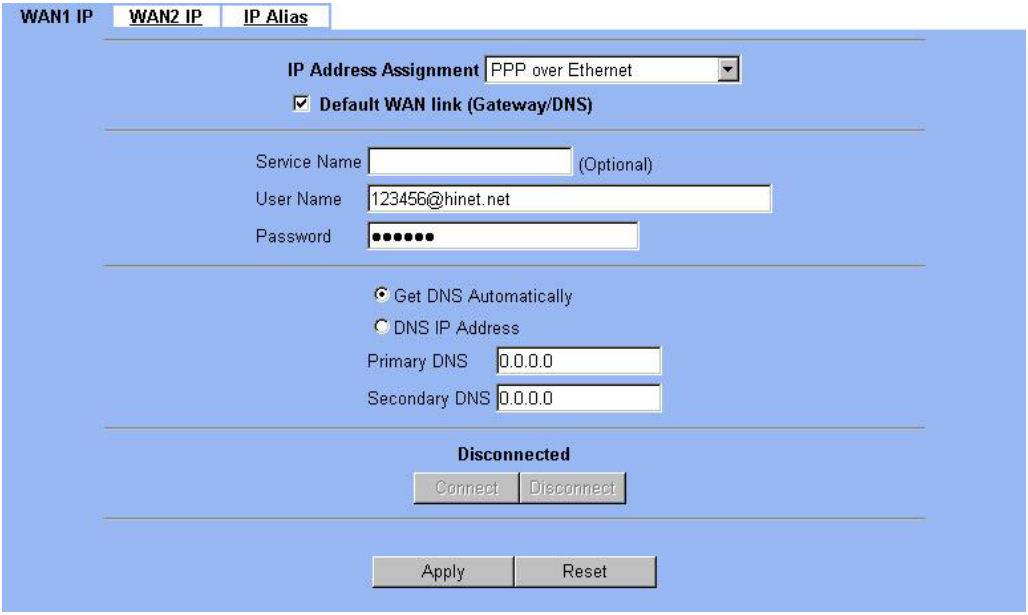
2. Get IP Automatically

If your ISP uses the Dynamic Host Configuration Protocol (DHCP) to assign an IP address, subnet mask, default gateway and DNS addresses, choose this option.



3. PPPoE

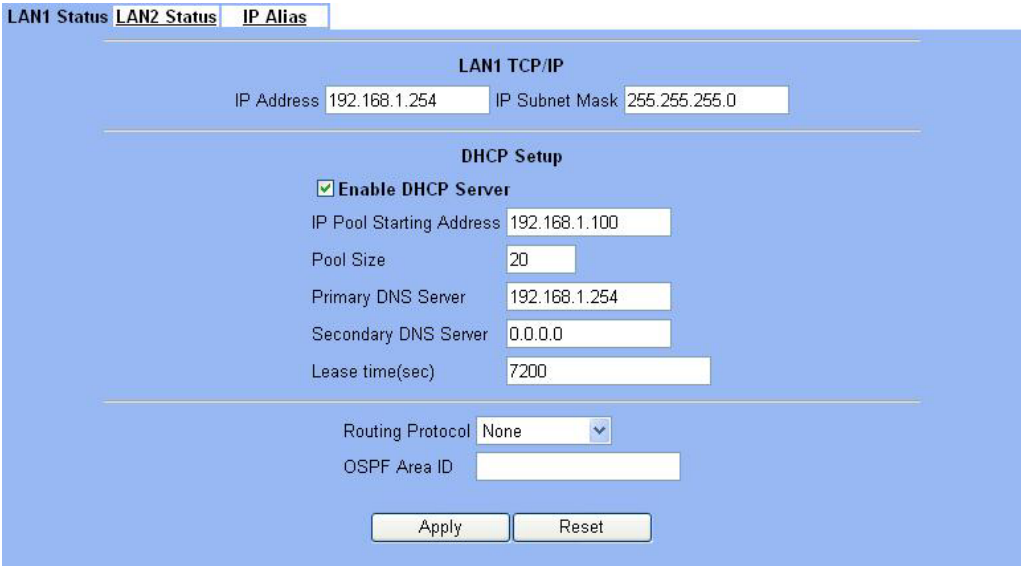
If your ISP uses Point-to-Point Protocol over Ethernet (**PPPoE**), choose this option. When this option is chosen, the following fields appear to allow you to enter the network address information:



To simplify the initial settings of the DFL-1500, the Network Address Translation **is automatically configured if the** NAT Basic mode **is selected. Then the DFL-1500 will let all private-IP traffic from the subnets of LAN/DMZ ports to access the Internet using the global IP address assigned by the ISP.**

LAN Settings

The LAN Settings page allows you to modify the IP address and subnet mask that will identify the DFL-1500 on your LAN. This is the IP address you will enter in the URL field of your web browser to connect to the DFL-1500. It is also the IP address that all of the computers and devices on your LAN will use as their Default Gateway.



IP Address – this is the IP address that will be assigned to the LAN port. The default is **192.168.1.254** with a subnet mask of 255.255.255.0.

IP Subnet Mask – this is the subnet mask corresponding to the LAN port's IP address, above. The default is 255.255.255.0.

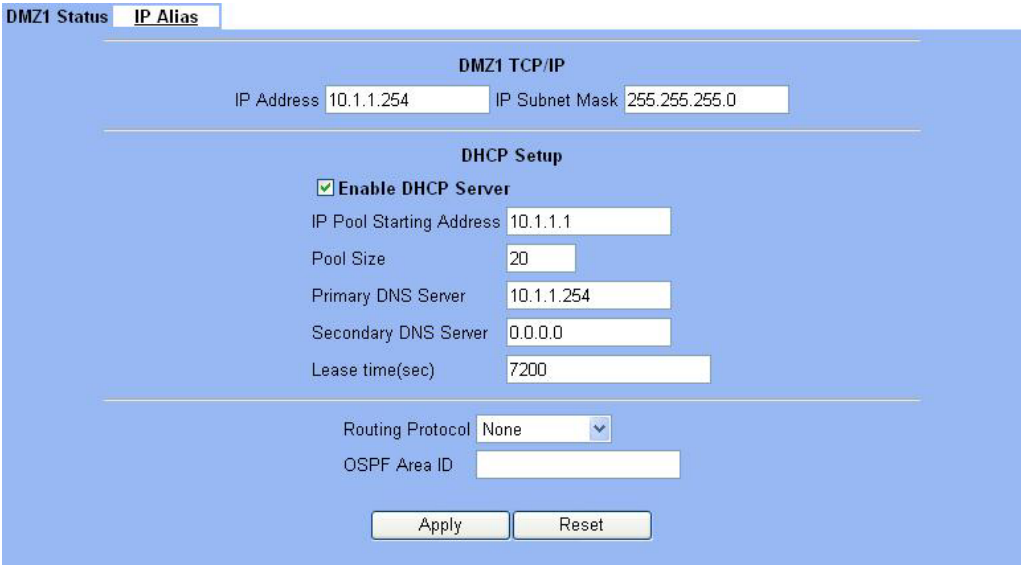
The IP address assigned to the DFL-1500 here, must be on the same subnet (be within the same IP address range) specified on the **DHCP Servers**. The DHCP Server fields allow you to configure the DFL-1500 to be a DHCP Server on your LAN. The DFL-1500 can then automatically assign IP addresses, subnet masks, default gateway and DNS server addresses to computers on your LAN. The computers on your LAN must have a DHCP client enabled to get their network address information from the DFL-1500.

IP Pool Starting Address – the first IP address of the range from which the DFL-1500 will assign to each of the computers on your LAN.

Pool Size – the number of IP addresses which the DFL-1500 will assign to the computers on you LAN.

DMZ Settings

The DFL-1500 has one **DMZ** port for connecting servers that are exposed to the public Internet for accesses. The **DMZ** port is assigned an IP address of **10.1.1.254** with a subnet mask of 255.255.255.0 by default. Note that the DMZ IP address is on the **10.1.1.x** subnet while the LAN ports are on the **192.168.1.x** subnet by default.



IP Address – this is the IP address that will be assigned to the DMZ port. The default is **10.1.1.254** with a subnet mask of 255.255.255.0.

IP Subnet Mask – this is the subnet mask corresponding to the DMZ port's IP address, above. The default is 255.255.255.0.

The IP address assigned to the DFL-1500 here, must be on the same subnet (be within the same IP address range) specified on the **DHCP Servers**. The DHCP Server fields allow you to configure the DFL-1500 to be a DHCP Server on your DMZ. The DFL-1500 can then automatically assign IP addresses, subnet masks, default gateway and DNS server addresses to computers on your DMZ. The computers on your DMZ must have a DHCP client enabled to get their network address information from the DFL-1500.

IP Pool Starting Address – the first IP address of the range from which the DFL-1500 will assign to each of the computers on your DMZ.

Pool Size – the number of IP addresses which the DFL-1500 will assign to the computers on you DMZ.

Virtual Server Settings

Virtual Servers are computers connected using the **DMZ** port. They act as servers to provide services to your LAN ports or other Internet users on the WAN ports. The Virtual Server setting page maps one global IP address – an IP address that is valid on the Internet, usually assigned by your ISP – to one local IP address from the IP address range assigned to the DFL-1500's **DMZ** port. The default DMZ IP address is **10.1.1.254**, so the servers' IP must range from **10.1.1.1** to **10.1.1.253**, with a subnet mask of 255.255.255.0.

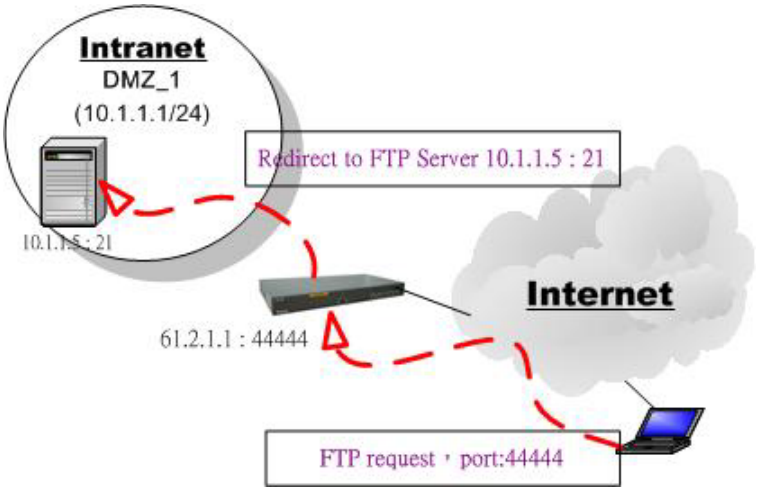
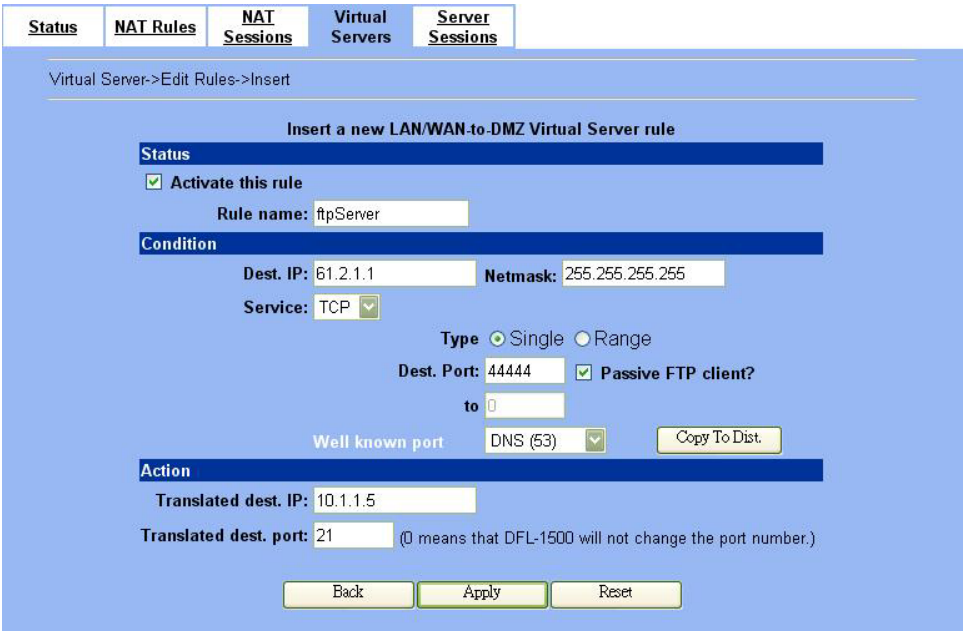


Figure 2 Internet host connects to the Virtual Server behind DFL-1500.

As the above Figure 2 illustrated, the server 10.1.1.5 provides FTP service and is located on the DMZ region behind DFL-1500. By this way, DFL-1500 will act as a Virtual Server role which redirects the packets to the real server 10.1.1.5. And you can announce to the internet users that the ftp server ip/port is 61.2.1.1/44444. So, all of the internet users can connect the 61.2.1.1/44444 to get ftp service.

An example virtual server: Customize the rule name as the ftpServer. For any packets with its destination IP equaling to the WAN1 IP (61.2.1.1) and destination port equaling to 44444, ask DFL-1500 to translate the packet's destination IP/port into 10.1.1.5/21. Check the Passive FTP at this port to maximize the compatibility of the FTP protocol. This is useful if you want to provide connectivity to passive FTP clients. For passive FTP clients, the server will return them the private IP address and the port number for them to connect back to do data transmissions. Since the private IP from them cannot be routed to our zone, the data connections would fail. After enabling this feature, the DFL-1500 will translate the private IP/port into an IP/port of its own. Thus the problem is gracefully solved. Click Apply to proceed.



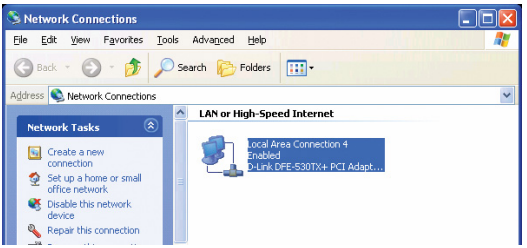
Dest. IP– an unique, global IP address that is valid in the Internet. This will be one of the IP addresses assigned by your ISP, or the single IP address assigned by your ISP, if your ISP assigns you only one IP address. Use Netmask to specify a range of the dest. IP (see the example above).

Service – TCP or UDP or Any of them. Choose a port number (range) to explicitly indicate which application traffic to redirect.

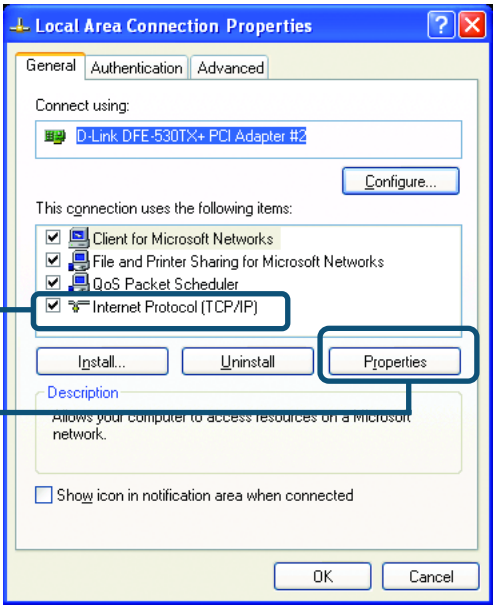
Translated Destination IP – the IP address of the computer that will act as a server for this application you are setting up.

APPENDIX

To assign a Static IP address to the Ethernet adapter, please do the following steps. The examples below are using a DFE-530TX+ in Microsoft Windows XP, and Mac OS X.
Note: Screens in other Operating Systems will look a bit different, but the steps are the same.

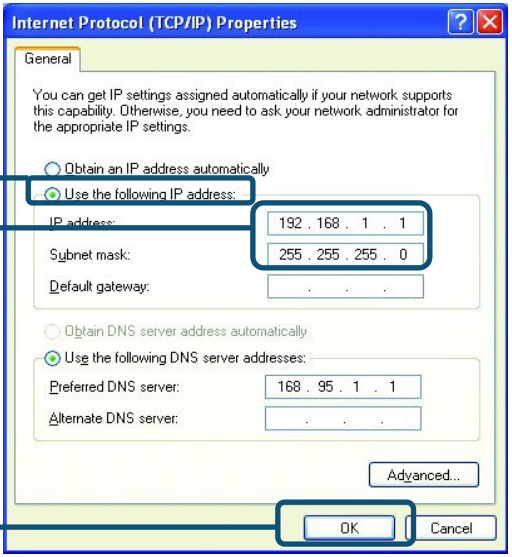


For **Microsoft Windows XP:**
Go to **Start** > **right click** on **My Network Places** > select **Properties** > **Double-click** on the **Network Connection** associated with the Ethernet adapter (i.e., D-Link DFE-530TX+).



Click Internet Protocol (TCP/IP)

Click Properties



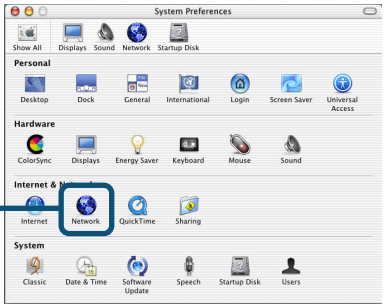
Select Use the following IP address

Enter the following:
IP address: 192.168.**1.1**
Subnet mask: 255.255.255.0

Click OK

Setting a Static IP address for
Apple Macintosh OS X:

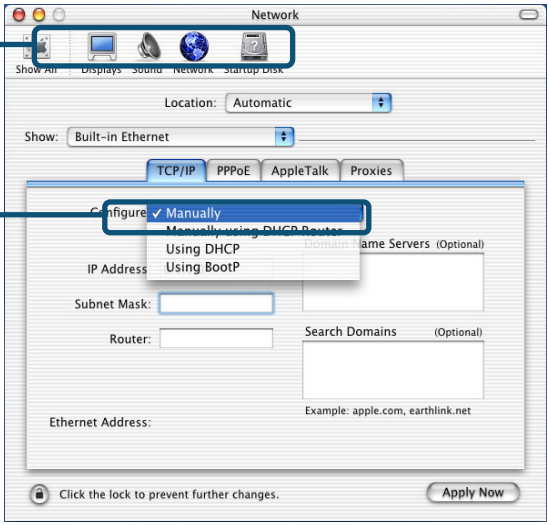
Go to **the Apple Menu** and **Select System Preferences**.



Click on Network

Select Built-in Ethernet in the Show pull-down menu

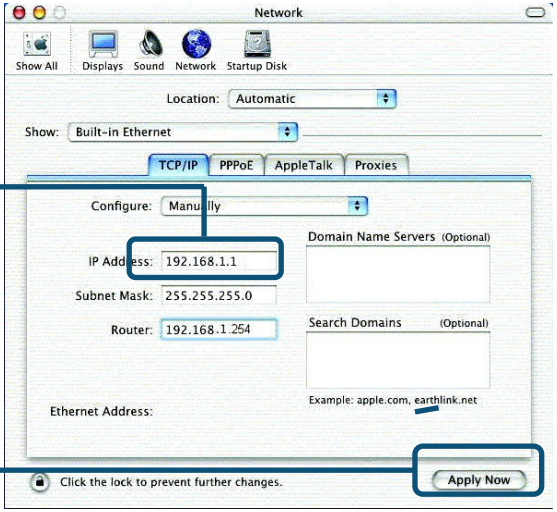
Select Manually in the Configure pull-down menu



Enter the following:
IP address: 192.168.**1.1**
Subnet mask: 255.255.255.0

Enter the IP address information, the Subnet Mask and the Router's IP address.

Click on
Apply Now



NOTES

Technical Support

Software updates and documentation are available on the **D-Link** website.

D-Link provides free technical support for customers within the United States for the duration of the warranty period on this product.

U.S. customers can contact **D-Link** technical support through our web site or by phone.

D-Link Technical Support over the Telephone:
(877) 453-5465
24 hours a day, seven days a week

D-Link Technical Support over the Internet:
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email: support@dlink.com

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