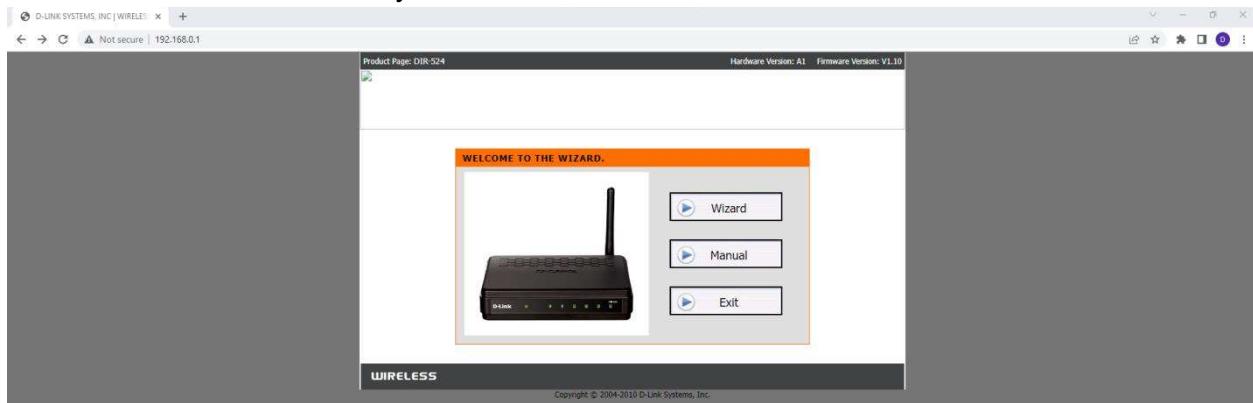


Experiment 6: Implement Wi-Fi security (WPA2, IP based, MAC Based)

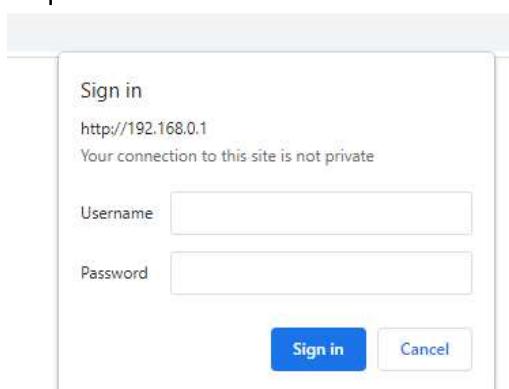
Step1: Switch On the D-Link Router.

Step2: Open a browser and search for dlinkrouter.local

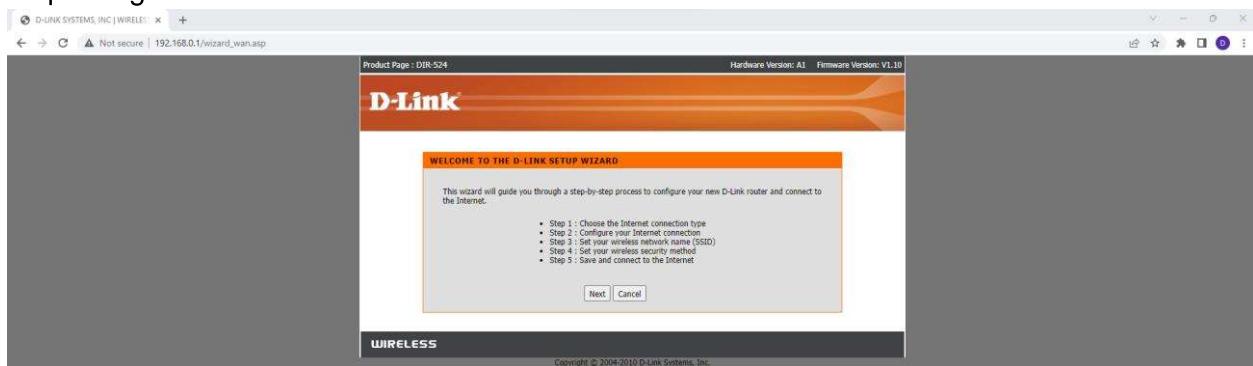
Run IP address of router in any of the browser



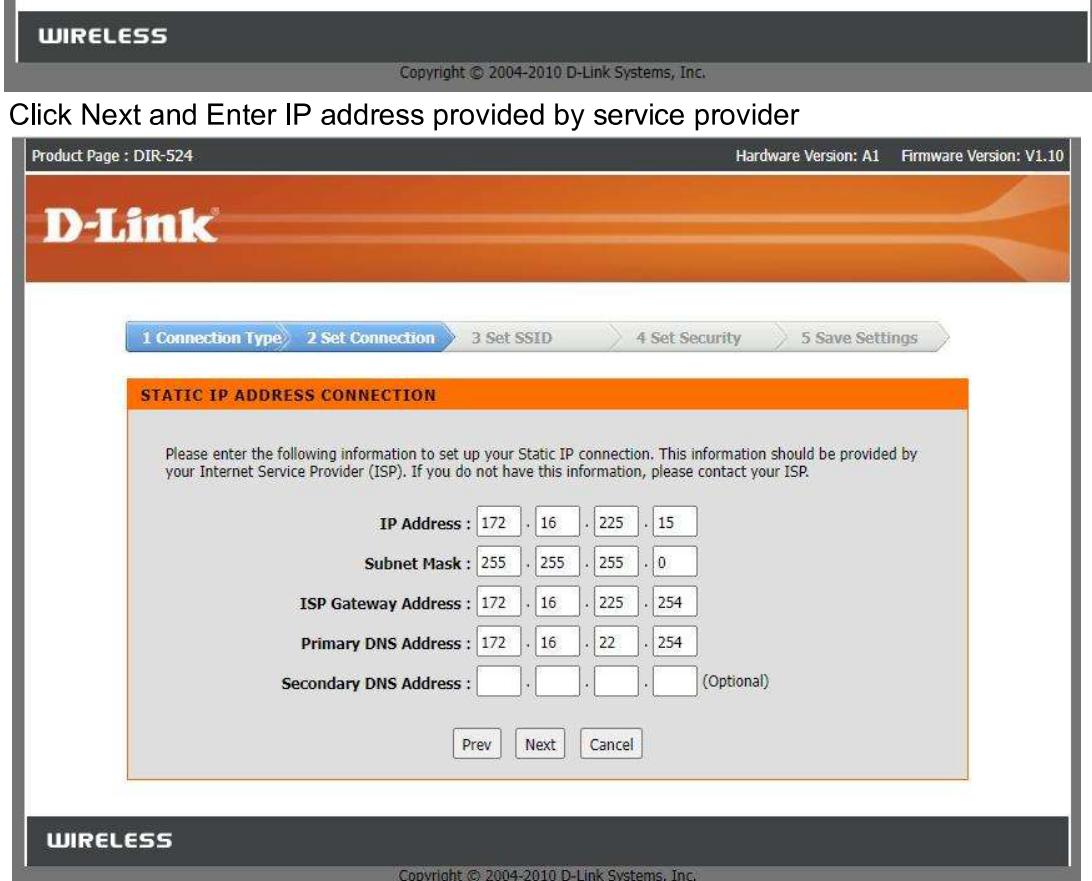
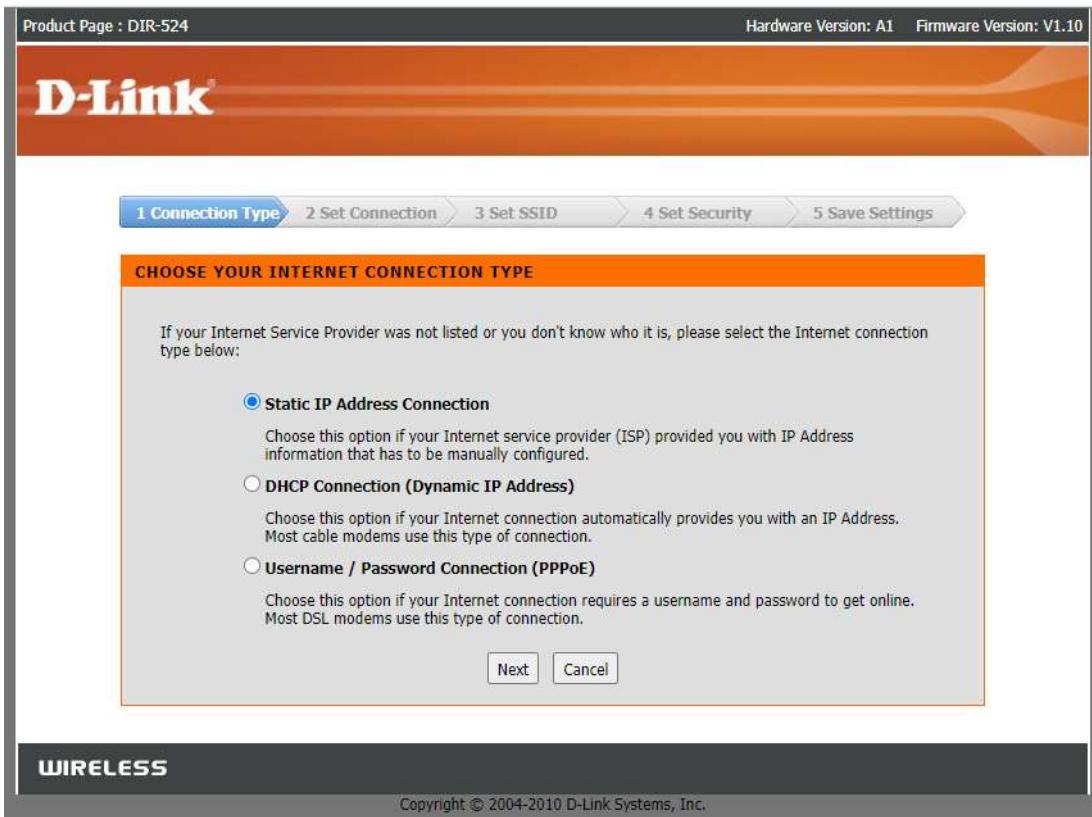
Step3: click Wizard



Step4: Login with the credentials which are available on the router



Step 5: click Next



Click Next and enter the name of the wireless network

Product Page : DIR-524 Hardware Version: A1 Firmware Version: V1.10

D-Link

1 Connection Type > 2 Set Connection > 3 Set SSID > 4 Set Security > 5 Save Settings

WIRELESS NETWORK NAME (SSID)

Wireless Network Name (SSID)

SSID :

Prev Next Cancel

WIRELESS

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Product Page : DIR-524 Hardware Version: A1 Firmware Version: V1.10

D-Link

1 Connection Type > 2 Set Connection > 3 Set SSID > 4 Set Security > 5 Save Settings

WIRELESS SECURITY MODE

To prevent un from accessing your network, the router will automatically assign a security (WEP or WPA or WPA2) to your network.

Security Mode :

Prev Next Cancel

WIRELESS

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Step 6: click Next → save → continue



Step 7: click continue

The screenshot shows the D-Link DIR-524 router's configuration interface. The top navigation bar includes 'Product Page : DIR-524', 'Hardware Version: A1 Firmware Version: V1.10', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. On the left, a sidebar lists 'INTERNET', 'WIRELESS SETTINGS', and 'NETWORK SETTINGS'. The main content area is titled 'INTERNET CONNECTION :'. It contains instructions for configuring an Internet connection using Static IP, DHCP, or PPPoE. A note specifies that selecting PPPoE requires removing/disabling PPPoE client software. Buttons for 'Save Settings' and 'Don't Save Settings' are present. Below this is the 'INTERNET CONNECTION SETUP WIZARD :'. It describes the wizard's purpose and provides a note about launching it after following the Quick Installation Guide. The 'MANUAL INTERNET CONNECTION OPTIONS :' section allows selecting the connection type (Static IP is selected). The 'STATIC IP ADDRESS INTERNET CONNECTION TYPE :' section details static IP configuration fields: IP Address (172.16.225.15), Subnet Mask (255.255.255.0), ISP Gateway Address (172.16.225.254), MAC Address (1C-7E-E5-58-53-F3), Primary DNS Address (172.16.22.254), Secondary DNS Address (optional), MTU Auto (Manual), and MTU value (1500). A 'Helpful Hints...' sidebar provides guidance on choosing the correct Internet Connection Type.

Step 8: In manual internet connection setup wizard

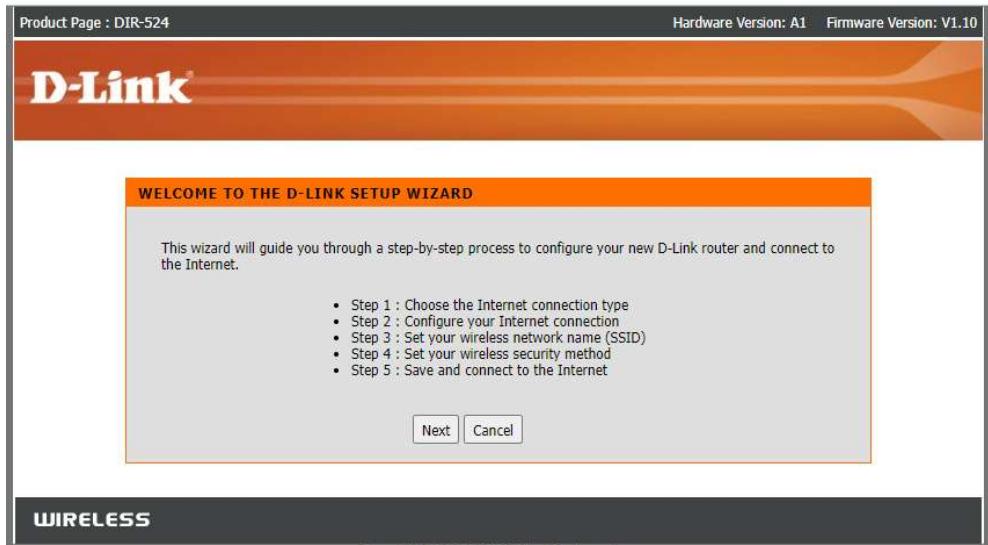
INTERNET CONNECTION SETUP WIZARD :

The Internet Connection Setup Wizard will walk you through setting up your Internet connection and setting up a wireless network.

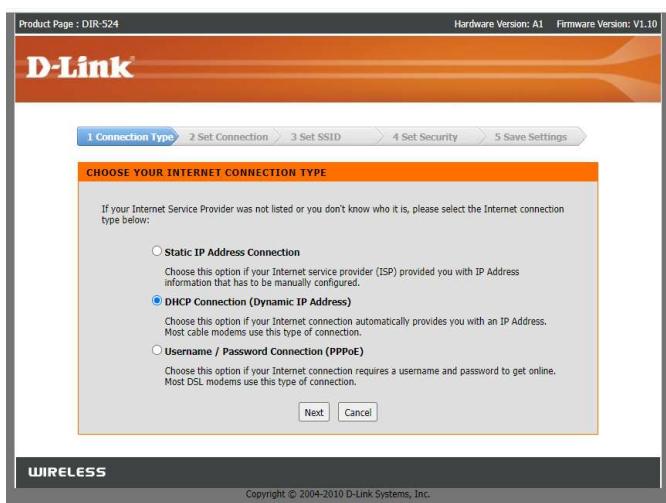
Internet Connection Setup Wizard

Note: Before launching the wizard, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.

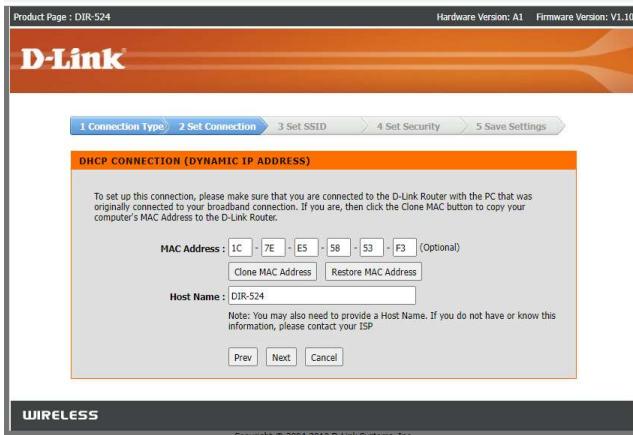
Step 9:



Click next



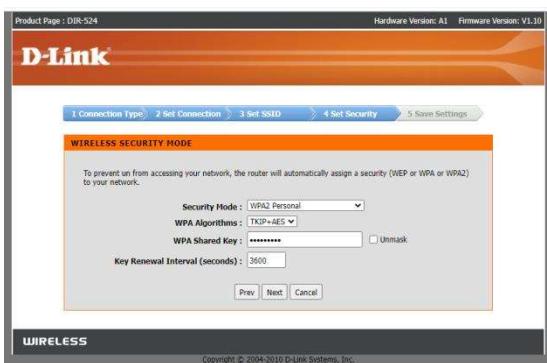
Click Next



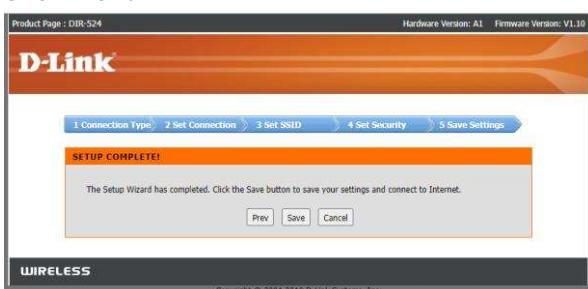
Click Next



Click Next



Click Next



Click Continue

The screenshot shows the D-Link DIR-524 router's configuration interface. At the top, it displays 'Product Page : DIR-524' and 'Hardware Version: A1 Firmware Version: V1.10'. Below this, there are two main sections: 'WIRELESS' and 'WIRELESS BASIC SETTINGS'. The 'WIRELESS BASIC SETTINGS' section contains fields for Wireless Mode (Wireless Router), Enable Wireless (Enabled), Wireless Network Name (SSID) (D-Link_DIR-524), Region (India), Channel (1), 802.11 n-mode (Auto), Bandwidth (20 MHz in Both Bands), Extension Channel (40Mhz only) (None), NPHY Rate (Auto), SSID Broadcast (On), AP Isolation (Off), Advertise WMM (Enabled), and Multicast Forwarding (Off). The 'WIRELESS SECURITY MODE' section shows Security Mode set to WPA2 Personal. The 'WPA2 PERSONAL' section details the security settings, including Cipher Type (TKIP+AES), Pre-Shared Key (*****), Verify Pre-Shared Key (*****), and Network Key Rotation Interval (3600 seconds). On the right side, there are 'Helpful Hints...' sections for Wireless Mode, Wireless Network Name(SSID), SSID Broadcast, and WDS Settings.

WIRELESS BASIC SETTINGS :

Use this section to configure the wireless settings for your D-Link Router. Please note that changes made in this section may also require you to change settings on your wireless clients. To secure your wireless network, you should enable wireless encryption. This device supports three types of wireless encryption: WEP, WPA(Personal), and WPA2(Personal).

Wireless Mode : Wireless Router
Enable Wireless : Enabled
Wireless Network Name(SSID) : D-Link_DIR-524
Region : India
Channel : 1
802.11 n-mode : Auto
Bandwidth : 20 MHz in Both Bands
Extension Channel (40Mhz only) : None
NPHY Rate : Auto
SSID Broadcast : On Off
AP Isolation : On Off
Advertise WMM : Enabled
Multicast Forwarding : On Off

WIRELESS SECURITY MODE :

Security Mode : WPA2 Personal

WPA2 PERSONAL :

WPA2 is a newer implementation of the stronger IEEE 802.11i security standard, and is the recommended form of wireless encryption. In this mode, the router will only connect to wireless clients that also support WPA2 security.

Cipher Type : TKIP+AES
Pre-Shared Key : ***** Unmask
Verify Pre-Shared Key : *****
Network Key Rotation Interval: 3600 (seconds)

Helpful Hints...

Wireless Mode
This wireless router can be operated in Wireless Router mode or Access Point (AP) mode. In Wireless Router mode, the WAN port connects to the Internet, and the wireless and LAN connections will be in the same network. In Access Point mode, wireless, WAN, and LAN connections will all be in the same network.

Wireless Network Name(SSID)
Changing your Wireless Network Name (SSID) is the first step in securing your wireless network. Change it to something you can remember, but does not contain any personal information.

SSID Broadcast
SSID Broadcast allows wireless clients to see your wireless network when scanning for networks. Disabling SSID Broadcast can help make your network more secure by hiding it from scans for wireless networks. If you disable SSID Broadcast, you will need to manually enter the Wireless Network Name (SSID) for each wireless device you want to connect.

WDS Settings
Wireless Distribution System (WDS) allows you to connect to other Access Points (APs) to wirelessly create a large network. WDS supports WEP, WPA, and WPA2 encryption. To use WDS, you must enable WDS, set all of your APs to use the same WDS key, and then connect them.

WDS :

Wireless Distribution System (WDS) allows you to connect to other Access Points (APs) to wirelessly create a large network. To do this, you must enable WDS, set all of your APs to use the same channel, and then enter the MAC addresses of the other APs you want to connect to.

		Status
WDS MAC1 :	1C - 7E - E5 - 58 - 53 - F3	N/A
WDS MAC2 :		N/A

Bridge Restriction : Enabled Disabled

Bridge Link Detection Interval : (seconds)