



User Manual

Wireless N300 Multi-WAN Router

Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

| Revision | Date | Description |
|----------|--------------|-----------------------------------|
| 1.0 | May 24, 2013 | • Initial release for Revision A1 |

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Package Contents

- D-Link DWR-116 Wireless N300 Multi-WAN Router
- Power Adapter
- Manual and Warranty on CD
- External Wi-Fi antenna

Note: Using a power supply with a different voltage rating than the one included with the DWR-116 will cause damage and void the warranty for this product.

System Requirements

- A compatible 3G/4G LTE USB modem

Computer with the following:

- Windows®, Macintosh, or Linux-based operating system
- An installed Ethernet adapter

Browser Requirements:

- Internet Explorer® 7 and higher
- Mozilla Firefox 12.0 and higher
- Google™ Chrome 20.0 and higher
- Apple Safari 4 and higher

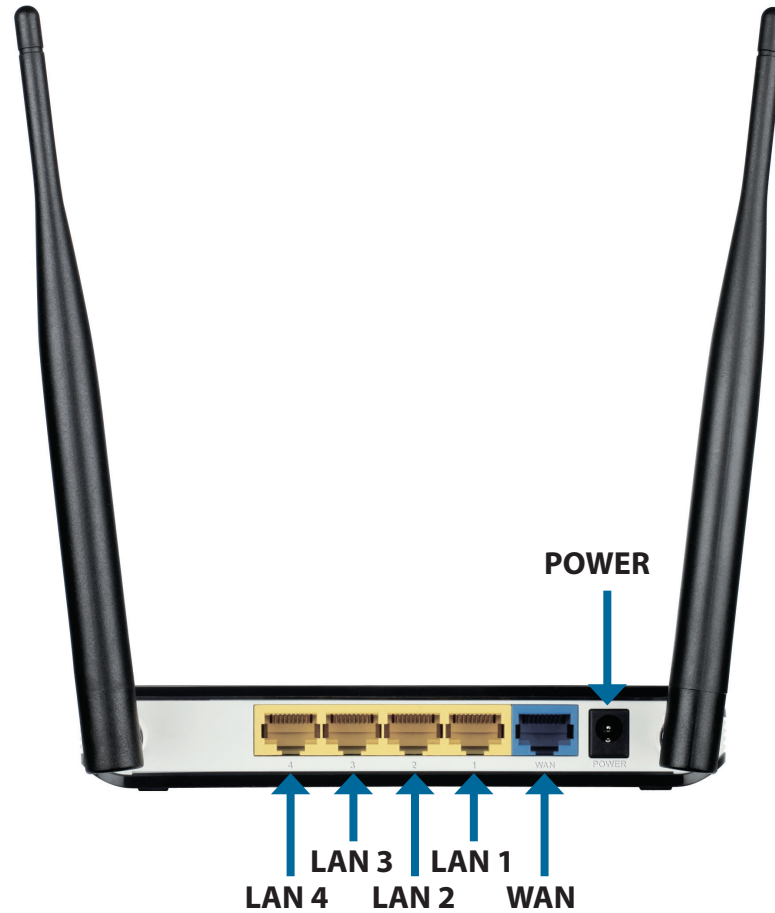
Introduction

The D-Link Wireless N300 Multi-WAN Router allows users to access mobile broadband networks worldwide. Once connected, users can transfer data and stream media. Simply connect your USB modem to share your 3G/4G LTE Internet connection through a secure 802.11n wireless network or using the 10/100 Ethernet port.

The Wireless N300 Multi-WAN Router can be installed quickly and easily almost anywhere. This router is great for situations where an impromptu wireless network must be set up, or wherever conventional network access is unavailable. The DWR-116 can even be installed in buses, trains, or boats, allowing passengers to check e-mail or chat online while commuting.

Hardware Overview

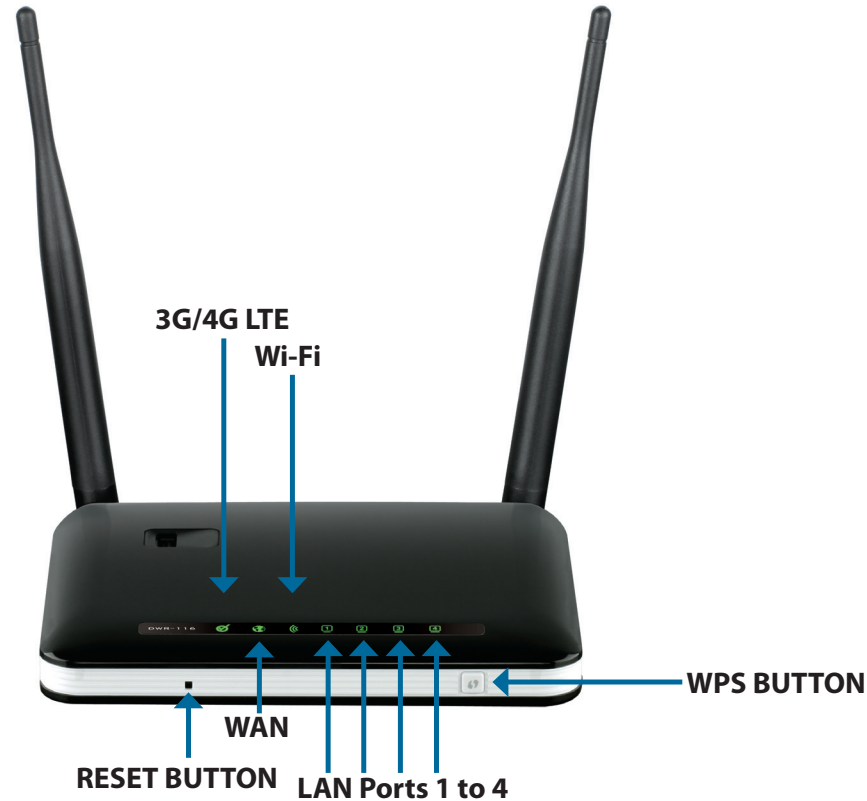
Back Panel



| Port | Function |
|-------------------|---|
| LAN Port | Connects to wired computers or devices. |
| WAN Port | Connects to the Internet. |
| Power Port | Connects to the power adapter. |

Hardware Overview

Front Panel and LEDs

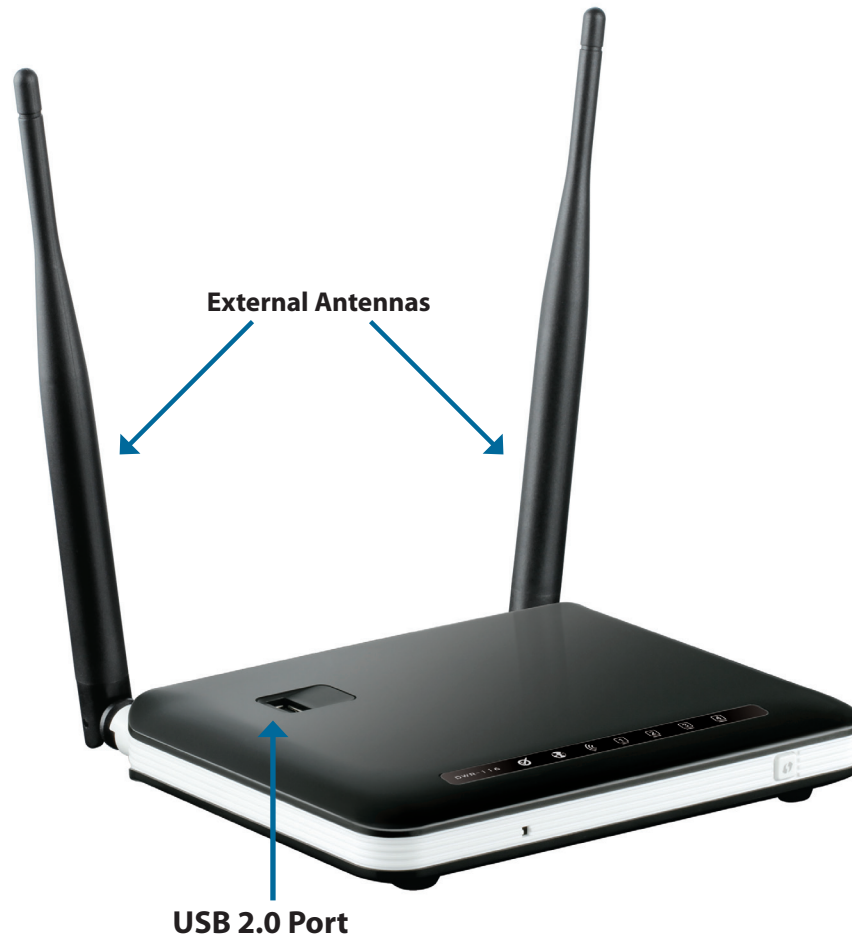


| LED | Description | | | |
|----------------------|-------------|----------------------------------|-------------------|--------------------|
| | Color | Solid | Blinking | Blinking (Fast) |
| 3G/4G LTE | Green | 3G/4G LTE connection established | Data transmitting | - |
| WAN | Green | WAN connection established | Data transmitting | - |
| Wi-Fi | Green | Wi-Fi active and available | Data transmitting | Device in WPS mode |
| LAN 1 - LAN 4 | Green | Ethernet connection established | Data transmitting | - |

Note: WPS mode can be activated by pressing, and holding the WPS button until the Wi-Fi LED begins to flash rapidly. You can find more details about activating WPS mode in the section titled “Wi-Fi Protected Setup” on page 32

Hardware Overview

Top



| Port | Function |
|-----------------|------------------------------------|
| USB Port | Connects to 3G/4G LTE Modem Dongle |
| Antennas | External WiFi Antennas |

Installation

This section will guide you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet or cabinet, or in an attic or garage.

Connect to Your Network

Note: Ensure that your DWR-116 Wireless N300 Multi-WAN Router is disconnected and powered **off** before performing the installation steps below.

1. Connect a USB modem to the **USB** port located on the top of the router.
2. Insert an Ethernet network cable into the **LAN** port on the back of the router. Plug the other end of the Ethernet cable into the LAN port of your computer or laptop. The Ethernet LED will turn green if the Ethernet connection is successfully established.

Note: The DWR-116 Wireless N300 Multi-WAN Router's LAN ports are "Auto-MDI/MDIX." Therefore, patch or crossover Ethernet cables can be used.

3. Configure the device using the setup utility.

Wireless Installation Considerations

The DWR-116 can be accessed using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the quantity, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or office. The key to maximizing the wireless range is to follow these basic guidelines:

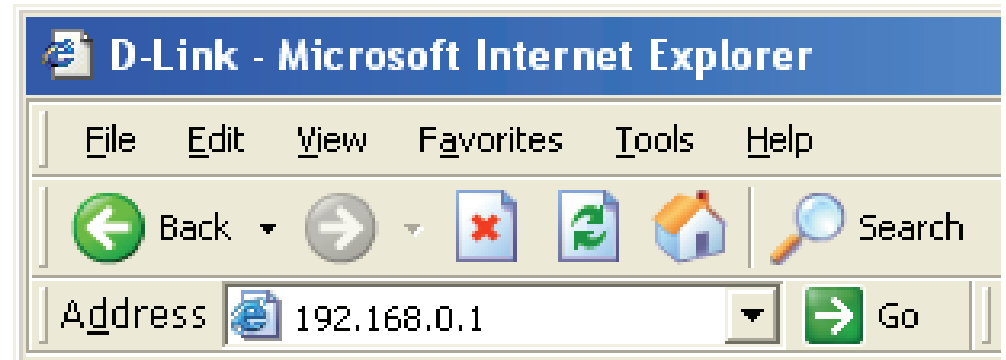
1. Minimize the number of walls and ceilings between the router and other network devices. Each wall or ceiling can reduce your adapter's range from 3 to 90 feet (1 to 30 meters).
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (0.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick. Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Try to position access points, wireless routers, and computers so that the signal passes through open doorways or drywall. Materials such as glass, metal, brick, insulation, concrete and water can affect wireless performance. Large objects such as fish tanks, mirrors, file cabinets, metal doors and aluminum studs may also have a negative effect on range.
4. If you are using 2.4 GHz cordless phones, make sure that the 2.4 GHz phone base is as far away from your wireless device as possible. The base transmits a signal even if the phone is not in use. In some cases, cordless phones, X-10 wireless devices, and electronic equipment such as ceiling fans, fluorescent lights, and home security systems may dramatically degrade wireless connectivity.

Configuration

This section will show you how to configure your new D-Link mobile router using the web-based configuration utility.

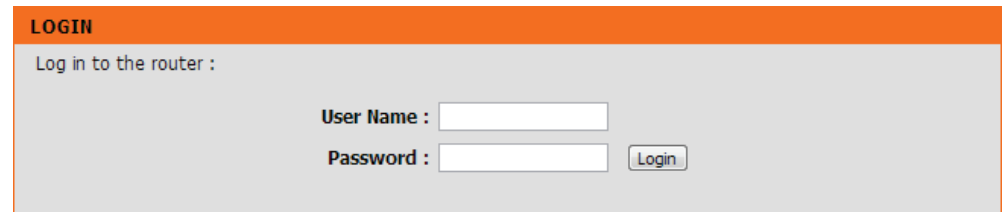
Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router. The default IP address of the router is 192.168.0.1.



Type **Admin** and then enter the password. By default, the password is blank.

If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.



Setup

Internet Connection Setup Wizard

The setup wizard guides you through the initial setup of your router. There are two ways to setup your Internet connection. You can use the Web-based **Internet Connection Setup Wizard** or you can manually configure using the **Manual Internet Connection Setup** wizard. This wizard will guide you through a step-by-step process to configure your D-Link router to connect to the Internet. Click **Internet Connection Setup Wizard** to begin.

If you want to enter your settings without running the wizard, click **Manual Internet Connection Setup** and skip to page “Manual Internet Connection Setup” on page 16.

INTERNET CONNECTION SETUP WIZARD

If you would like to utilize our easy to use Web-based Wizard to assist you in connecting your Router to the Internet, click on the button below.

[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.

MANUAL INTERNET CONNECTION OPTIONS

If you would like to configure the Internet settings of your Router manually, then click on the button below.

[Manual Internet Connection Setup](#)

Create a new password that will be used to access the router and then click **Next** to continue.

Click **Prev** to go back to the previous page or click **Cancel** to close the wizard.

STEP 1: SET YOUR PASSWORD

To secure your new networking device, please set and verify a password below:

Password :

Verify Password :

Select your time zone from the drop-down box and then click **Next** to continue.

Click **Prev** to go back to the previous page or click **Cancel** to close the wizard.

STEP 2: SELECT YOUR TIME ZONE

Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.

Time Zone :

Select the Internet connection type. The connection types are explained on the following page. If you are unsure of the correct connection type, you may have to contact your Internet Service Provider (ISP).

Click **Prev** to go back to the previous page or click **Cancel** to close the wizard.

Note: The DWR-116 supports several kinds of WAN interfaces, allowing you to assign either a WAN or a WWAN(3G/4G LTE) connection as the backup WAN. If the Primary WAN is down or unavailable, configure the backup WAN to **Enable**, and all the traffic will be routed through backup WAN. This feature is called **WAN Failover**. You can use WAN Failover if you need redundancy to your Internet connection or any other network.

STEP 3: CONFIGURE YOUR INTERNET CONNECTION

Please select the Internet connection type below:

- DHCP Connection (Dynamic IP Address)**
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
- Username / Password Connection (PPPoE)**
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this type of connection.
- Username / Password Connection (PPTP)**
PPTP client.
- Username / Password Connection (L2TP)**
L2TP client.
- 4G LTE / 3G Connection**
4G LTE / 3G.
- Static IP Address Connection**
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.

The subsequent configuration pages will differ depending on the selection you make during step 3 of the wizard.

DHCP Connection (Dynamic IP Address): Choose this if your Internet connection automatically provides you with an IP Address. Most cable modems use this type of connection. See page 12 for information about how to configure this type of connection.

Username / Password Connection (PPPoE): Choose this option if your Internet connection requires a username and password to connect. Most DSL modems use this style of connection. See page 12 for information about how to configure this type of connection.

Username / Password Connection (PPTP): Choose this option if your Internet connection requires Point-to-Point Tunneling Protocol (PPTP). See page 13 for information about how to configure this type of connection.

Username / Password Connection (L2TP): Choose this option if your Internet connection requires Layer 2 Tunneling Protocol (L2TP). See page 13 for information about how to configure this type of connection.

3G/4G LTE Connection: Choose this option if your Internet Setup Provider provided you with a user name and password to use with your 3G / 4G LTE enabled USB Dongle. See page 14 for information about how to configure this type of connection.

Static IP Address Connection: Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured. See page 14 for information about how to configure this type of connection.

DHCP Connection (Dynamic IP Address):

Mac Address: The default MAC Address is set to the Internet port's physical interface MAC address on the broadband router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone** button to replace the Internet port's MAC address with the MAC address of your PC.

Host Name: Enter the host name for your router or computer.

Click **Next** to continue, **Prev** to go back to the previous page or click **Cancel** to close the wizard.

DHCP CONNECTION (DYNAMIC IP ADDRESS)

To set up this connection, please make sure that you are connected to the Router with the PC that was originally connected to your broadband connection. If you are, then click the Clone MAC button to copy your computer's MAC Address to the Router.

MAC Address :

Host Name :

Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.

Username / Password Connection (PPPoE):

IP Address: Fill in if provided by your ISP. If not, keep the default value.

Username: The username/account name that your ISP provides to you for PPPoE dial-up.

Password: Password that your ISP provides to you for PPPoE dial-up.

Service Name: (Optional) Fill in if provided by your ISP.

Click **Next** to continue, **Prev** to go back to the previous page or click **Cancel** to close the wizard.

SET USERNAME AND PASSWORD CONNECTION (PPPOE)

To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP.

IP Address :

User Name :

Password :

Verify password :

Service Name : (optional)

Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.

Username / Password Connection (PPTP):

Address Mode: Choose Static IP only if your ISP assigns you an IP address. Otherwise, please choose Dynamic IP.

PPTP IP Address: Enter the information provided by your ISP.

PPTP Subnet Mask: Enter the information provided by your ISP.

PPTP Gateway IP Address: Enter the information provided by your ISP.

PPTP Server IP Address: IP address of PPTP server.

User Name: User/account name that your ISP provides to you for PPTP dialup.

Password: Password that your ISP provides to you for PPTP dial-up.

Username / Password Connection (L2TP):

Address Mode: Choose Static IP only if your ISP assigns you an IP address. Otherwise, please choose Dynamic IP.

L2TP IP Address: Enter the information provided by your ISP.

L2TP Subnet Mask: Enter the information provided by your ISP.

L2TP Gateway IP Address: Enter the information provided by your ISP.

L2TP Server IP Address: IP address of PPTP server.

User Name: User/account name that your ISP provides to you for PPTP dialup.

Password: Password that your ISP provides to you for PPTP dial-up.

SET USERNAME AND PASSWORD CONNECTION (PPTP)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need PPTP IP address. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

PPTP IP Address :

PPTP Subnet Mask :

PPTP Gateway IP Address :

PPTP Server IP Address (may be same as gateway) :

User Name :

Password :

Verify password :

Prev Next Cancel Connect

SET USERNAME AND PASSWORD CONNECTION (L2TP)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. You also need L2TP IP address. If you do not have this information, please contact your ISP.

Address Mode : Dynamic IP Static IP

L2TP IP Address :

L2TP Subnet Mask :

L2TP Gateway IP Address :

L2TP Server IP Address (may be same as gateway) :

User Name :

Password :

Verify password :

Prev Next Cancel Connect

3G/4G LTE Connection

User Name: (Optional) Fill in only if requested by ISP.

Password: (Optional) Fill in only if requested by ISP.

Dialed Number: Enter the number to be dialed.

Authentication: Select PAP, CHAP, or Auto detection. The default authentication method is Auto.

APN: (Optional) Enter the APN information.

SET 4G LTE /3G CONNECTION

User Name : (optional)

Password :

Verify password :

Dialed Number :

Authentication : Auto

APN : (optional)

Static IP Address Connection

IP Address: Enter the IP address assigned to your network connection.

Subnet Mask: Enter the subnet mask.

Gateway Address: Enter the default gateway.

Primary DNS Address: Enter the primary DNS server.

Secondary DNS Address: Enter the secondary DNS server.

SET STATIC IP ADDRESS CONNECTION

To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP.

IP Address :

Subnet Mask :

Gateway Address :

Primary DNS Address :

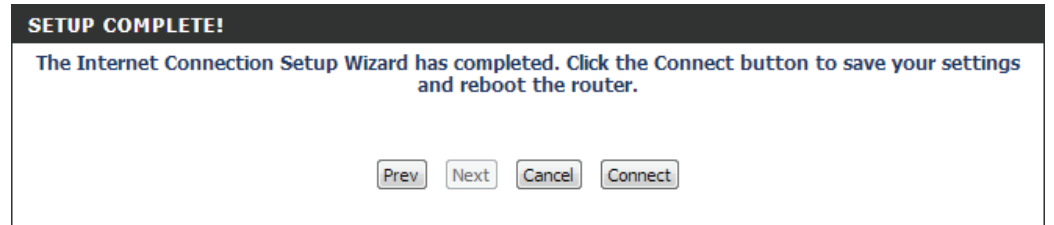
Secondary DNS Address :

You have completed the **Setup Wizard**.

Click **Connect** to save your settings.

A popup will appear, to confirm your settings.

Click **OK** to save your settings.



Manual Internet Connection Setup

Internet Connection Type

Several different Internet connection types can be selected depending upon the specifications of your Internet Service Provider (ISP).

My Internet Connection is: Select the Internet connection type specified by your Internet Service Provider (ISP). The corresponding settings will be displayed below. Please see the following pages for details on how to configure these different connection types.

Failover Internet Connection is: This connection can serve as a backup for your default connection. Click on the **Failover Setting** dropdown box in order to configure this setting. Please refer to page “Failover Setting” on page 23 for more details on how to configure settings.

The screenshot shows the D-Link DWR-116 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS, and LOGOUT, along with an Internet Offline indicator and a Reboot button. The main content area is titled "INTERNET CONNECTION" and provides instructions on selecting a connection type (Static IP, DHCP, PPPoE, PPTP, L2TP, and 3G). A note specifies that PPPoE users must remove or disable client software. Below the instructions are buttons for "Save Settings", "Don't Save Settings", and "Failover Setting...". The "INTERNET CONNECTION TYPE" section shows a dropdown menu set to "4G LTE /3G" and a "Failover Internet Type" set to "Disable (N/A)". A "Helpful Hints.." sidebar on the right provides additional guidance on selecting the correct connection type and contacting the ISP for support.

Dynamic IP (DHCP)

This section will help you to obtain IP address information automatically from your ISP. Use this option if your ISP didn't provide you with IP address information and/or a username and password.

Host Name: (Optional) Required by some ISPs.

Primary DNS Server: (Optional) Fill in with IP address of primary DNS server.

Secondary DNS Server: (Optional) Fill in with IP address of secondary DNS server.

MTU (Maximum Transmission Unit): You may need to change the Maximum Transmission Unit (MTU) for optimal performance. The default value is 1500.

MAC Address: The default MAC address is set to the Internet port's physical interface MAC address on the broadband router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone** button to replace the Internet port's MAC address with the MAC address of your PC.

Auto-reconnect: This feature enables this product to renew WAN IP address automatically when the lease time is expiring.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

INTERNET CONNECTION TYPE
Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is Dynamic IP (DHCP) ▼
Failover Internet Type is Disable (N/A)

DYNAMIC IP (DHCP) INTERNET CONNECTION TYPE
Use this Internet connection type if your Internet Service Provider (ISP) didn't provide you with IP Address information and/or a username and password.

Host Name :

Primary DNS Server :

Secondary DNS Server :

MTU : (bytes) MTU default = 1500

MAC Address :

Auto-reconnect : Enable

Support:
If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.
[More...](#)

PPPoE

Choose this Internet connection if your ISP provides you with a PPPoE account.

Username: The username/account name that your ISP provides to you for PPPoE dial-up.

Password: Password that your ISP provides to you for PPPoE dial-up.

Verify Password: Fill in with the same password in Password field.

Service Name: (Optional) Fill in if provided by your ISP.

IP Address: (Optional) Fill in if provided by your ISP. If not, keep the default value.

Primary DNS Server: (Optional) Fill in if provided by your ISP. If not, keep the default value.

Secondary DNS Server: (Optional) Fill in if provided by your ISP. If not, keep the default value.

MAC Address: MAC address of WAN interface. You can also copy MAC address of your PC to its WAN interface by pressing the **Clone** button. The **Restore MAC** button will reset the router to its default MAC address.

Maximum Idle Time: The amount of time of inactivity before disconnecting established PPPoE session. Setting it to zero or enabling **Reconnect Mode: Always-on** setting will disable this feature.

Maximum Transmission Unit (MTU): You may need to change the Maximum Transmission Unit (MTU) for optimal performance. The default setting of PPPoE is 1492.

Auto-reconnect: The device will dial-up PPPoE connection automatically.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

PPPOE

Enter the information provided by your Internet Service Provider (ISP).

Username :

Password :

Verify Password :

Service Name : (optional)

IP Address :

Primary DNS Server : (optional)

Secondary DNS Server : (optional)

MAC Address :

Maximum Idle Time : seconds

MTU : (bytes) MTU default = 1492

Reconnect Mode : Always-on Manual

I have entered on this page and verify them with your ISP if needed.

[More...](#)

PPTP

Choose this Internet connection if your ISP provides you PPTP account.

Address Mode: Choose Static IP only if your ISP assigns you an IP address. Otherwise, please choose Dynamic IP.

PPTP IP Address: Enter the information provided by your ISP. (Only applicable for Static IP PPTP.)

PPTP Subnet Mask: Enter the information provided by your ISP. (Only applicable for Static IP PPTP.)

PPTP Gateway IP Address: Enter the information provided by your ISP. (Only applicable for Static IP PPTP.)

PPTP Server IP Address: IP address of PPTP server.

Username: User/account name that your ISP provides to you for PPTP dial-up.

Password: Password that your ISP provides to you for PPTP dial-up.

Verify Password: Fill in with the same password in Password field.

Reconnect Mode: Choose **Always-on** when you want to establish PPTP connection all the time. If you choose **Connect-on-demand**, the device will establish PPTP connection when local users want to surf the Internet, and disconnect if there is no traffic after the time period set under Maximum Idle Time.

Maximum Idle Time: The time of no activity to disconnect your PPTP session. Set it to zero or choose Always-on to disable this feature. Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

INTERNET CONNECTION TYPE
Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is
Failover Internet Type is

PPTP
Enter the information provided by your Internet Service Provider (ISP).

Address Mode : Dynamic IP Static IP
PPTP IP Address :
PPTP Subnet Mask :
PPTP Gateway IP Address :
PPTP Server IP Address :
Username :
Password :
Verify Password :
Reconnect Mode : Always-on Connect-on-demand
Maximum Idle Time : seconds

Support:
If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.
[More...](#)

L2TP

Choose this Internet connection if your ISP provides you L2TP account.

Address Mode: Choose Static IP only if your ISP assigns you an IP address. Otherwise, please choose Dynamic IP.

L2TP IP Address: Enter the information provided by your ISP. (Only applicable for Static IP L2TP.)

L2TP Subnet Mask: Enter the information provided by your ISP. (Only applicable for Static IP L2TP.)

L2TP Gateway IP Address: Enter the information provided by your ISP. (Only applicable for Static IP L2TP.)

L2TP Server IP Address: IP address of L2TP server.

Username: User/account name that your ISP provides to you for L2TP dial-up.

Password: Password that your ISP provides to you for L2TP dial-up.

Verify Password: Fill in with the same password in Password field.

Reconnect Mode: Choose Always-on when you want to establish L2TP connection all the time. Choose Connect-on-demand and the device will establish L2TP connection when local users want to surf Internet, and disconnect if no traffic after time period of Maximum Idle Time.

Maximum Idle Time: The time of no activity to disconnect your L2TP session. Set it to zero or choose Always-on to disable this feature.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

3G / 4G LTE

Choose this Internet connection if you already use a SIM card for 3G/4G LTE Internet service from your mobile service provider company. The fields here may not be necessary for your connection. The information on this page should only be used if required by your service provider.

Username: (Optional) Fill in only if requested by ISP.

Password: (Optional) Fill in only if requested by ISP.

Dialed Number: Enter the number to be dialed.

Authentication: PAP, CHAP, or Auto detection. The default authentication method is Auto.

APN: (Optional) Enter the APN information.

PIN: Enter the PIN associated with your SIM card.

Reconnect Mode: Choose whether the device will reconnect to the 3G/4G network automatically or manually

Maximum Idle Time: The time of no activity required to disconnect the established 3G/4G LTE session. Set it to zero or choose Auto in Reconnect Mode to disable.

Primary DNS Server: (Optional) Fill in if provided by your ISP. If not, keep the default value.

Secondary DNS Server: (Optional) Fill in if provided by your ISP. If not, keep the default value.

Keep Alive: Disable or Use LCP Echo Request. This depends on ISP requirement.

Bridge Ethernet Ports: Activate this feature to change Ethernet WAN port to LAN port.

The screenshot shows the configuration interface for 3G/4G LTE. At the top, there is a 'Reboot' button. The main section is titled 'INTERNET CONNECTION TYPE' and contains a dropdown menu for 'My Internet Connection is' set to '4G LTE / 3G' and a 'Failover Internet Type is' set to 'Disable (N/A)'. Below this is the '4G LTE / 3G INTERNET CONNECTION TYPE' section, which prompts the user to 'Enter the information provided by your Internet Service Provider (ISP)'. This section includes several input fields: Username (optional), Password (optional), Verify Password (optional), Dialed Number, Authentication (set to Auto), APN (optional), Pin Code, Reconnect Mode (radio buttons for Auto and Manual, with Auto selected), Maximum Idle Time (set to 600 seconds), Primary DNS Server, Secondary DNS Server, Keep Alive (radio buttons for Disable and Use Ping, with Disable selected), and Bridge ethernet ports (checkbox for Enable, which is unchecked). At the bottom of the form are two buttons: 'Save Settings' and 'Don't Save Settings'. On the right side of the page, there is a 'Support' section with a link to 'More...' and a note about contacting the ISP if there are connection issues.

Static IP

Choose this Internet connection if your ISP assigns you a static IP address.

IP Address: Enter the IP address assigned to your network connection.

Subnet Mask: Enter the subnet mask.

Default Gateway: Enter the default gateway.

Primary DNS Server: Enter the primary DNS server.

Secondary DNS Server: Enter the secondary DNS server.

MTU: You may need to change the Maximum Transmission Unit (MTU) for optimal performance. The default value is 1500.

MAC Address: The default MAC Address is set to the Internet port's physical interface MAC address on the broadband router. It is not recommended that you change the default MAC address unless required by your ISP. You can use the **Clone** button to replace the Internet port's MAC address with the MAC address of your Ethernet card.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

Reboot

INTERNET CONNECTION TYPE
Choose the mode to be used by the router to connect to the Internet.

My Internet Connection is
Failover Internet Type is

STATIC IP ADDRESS INTERNET CONNECTION TYPE
Enter the static address information provided by your Internet Service Provider (ISP).

IP Address :
Subnet Mask :
Default Gateway :
Primary DNS Server :
Secondary DNS Server :
MTU : (bytes) MTU default = 1500
MAC Address :

Support:
If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.
[More...](#)

Failover Setting

This connection can serve as a backup for your default connection.

Failover Type: This option can be set to either **Load Sharing** or to **Failover**. With **Load Sharing**, the data usage is distributed evenly over the two different internet connections. With **Failover**, the secondary Internet connection will be in standby mode, until the primary Internet connection fails.

Remote Host for Keep Alive: This option should be set to an external IP address that can be used to ensure that the 3G/4G LTE connection will be kept from going offline due to inactivity. An example would be Google's public DNS servers (8.8.8.8 or 8.8.4.4) or your Internet service providers DNS servers.

Primary WAN: This will automatically be set to the connection type selected during the **Internet connection Setup Wizard**, or set to the **My Internet Connection is** option which is found on the Manual Internet Connections settings page.

Secondary WAN: This can be set by clicking on **Add New Rule**, the available options will be shown in the drop down box that appears.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The 'FAILOVER SETTING' section is active, displaying the following configuration:

- Failover type:** Load Sharing (selected in the dropdown menu)
- Remote Host for Keep Alive:** (empty text field)

The 'FAILOVER LIST' table shows the following configuration:

| Primary WAN | Dynamic IP (DHCP) | |
|-------------------|-------------------|-----------------|
| Dynamic IP (DHCP) | | |
| Secondary WAN | - | Add New Rule... |

Buttons for 'Save Settings', 'Don't Save Settings', and 'Back' are visible at the bottom of the configuration area.

The screenshot shows the D-Link DWR-116 web interface. The 'FAILOVER SETTING' section is active, displaying the following configuration:

- Failover type:** Failover (selected in the dropdown menu)
- Remote Host for Keep Alive:** (empty text field)

The 'FAILOVER LIST' table shows the following configuration:

| Primary WAN | Dynamic IP (DHCP) | |
|-------------------|-----------------------------------|-----------------|
| Dynamic IP (DHCP) | | |
| Secondary WAN | 4G LTE /3G (selected in dropdown) | Add New Rule... |

Buttons for 'Save Settings', 'Don't Save Settings', and 'Back' are visible at the bottom of the configuration area.

Wireless Connection Setup Wizard

This section will help you to manually configure the wireless settings of your router. Please note that changes made on this section may also need to be duplicated on your wireless devices and clients. The Wireless Settings page allows you to configure how your router connects to the Internet. There are several ways to set up your wireless connection.

You can click on the Wireless Connection Setup Wizard button to start a wizard that will guide you through setting up your wireless settings.

If you want to manually configure your settings, click the Manual Wireless Connection Setup button and skip to “Manual Wireless Connection Setup” on page 28.

You can also set up a wireless connection to a device automatically, or configure your router automatically through Windows by clicking the Wi-Fi Protected Setup button. This is described in “Wi-Fi Protected Setup (WPS)” on page 32.

The screenshot shows the D-Link router's web interface for the DWR-116 model. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains menu items for INTERNET, WIRELESS SETTINGS, NETWORK SETTINGS, and LOGOUT, along with an Internet Offline indicator and a Reboot button. The main content area is titled "WIRELESS CONNECTION" and provides instructions on how to set up the wireless connection, including a note that changes made in this section must be duplicated on wireless clients and PC. It offers three options: using the Wireless Connection Setup Wizard, manually configuring wireless connection options, or using Wi-Fi Protected Setup. A "Helpful Hints.." sidebar on the right provides additional guidance for new users and advanced users.

D-Link

DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

INTERNET
WIRELESS SETTINGS
NETWORK SETTINGS
LOGOUT

Internet Offline
Reboot

WIRELESS CONNECTION

There are 3 ways to setup your wireless connection. You can use the Wireless Connection Setup wizard or you can manually configure the connection.

Please note that changes made on this section will also need to be duplicated to your wireless clients and PC.

WIRELESS CONNECTION SETUP WIZARD

If you would like to utilize our easy to use Web-based Wizard to assist you in connecting your Wireless Router to the Internet, click on the button below.

Wireless 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.

MANUAL WIRELESS CONNECTION OPTIONS

If you would like to configure the Internet settings of your Router manually, then click on the button below.

Manual Wireless Connection Setup

WI-FI PROTECTED SETUP

If you would like to configure the Wi-Fi Protected Setup of your Router, then click on the button below.

Wi-Fi Protected Setup

Helpful Hints..

- If you are new to wireless networking and have never configured a wireless router before, click on **Wireless Connection Setup Wizard** and the router will guide you through a few simple steps to get your wireless network up and running.
- If you consider yourself an advanced user and have configured a wireless router before, click **Manual Wireless Connection Setup** to input all the settings manually.

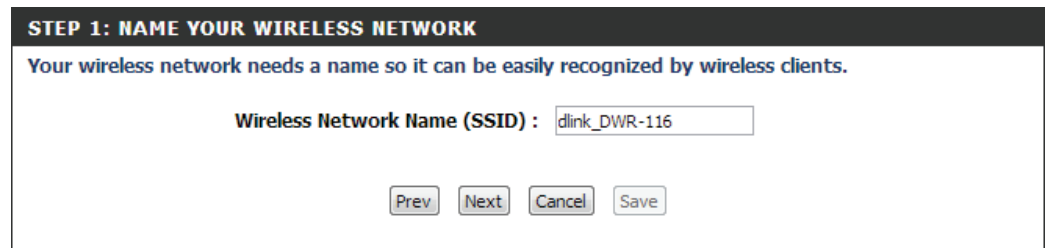
More...

This wizard will guide you through a step-by-step process to configure your D-Link router's wireless . Click **Next** to continue.

Note: While using the wizard, you can click **Prev** to go back to the previous page or you can click **Cancel** to close the wizard



Enter a name for your wireless network, then click **Next** to continue.



Select a level of wireless security to use, then click **Next** to continue.

STEP 2: SECURE YOUR WIRELESS NETWORK

In order to protect your network from hackers and unauthorized users, it is highly recommended you choose one of the following wireless network security settings.

There are three levels of wireless security -Good Security, Better Security, or Best Security. The level you choose depends on the security features your wireless adapters support.

BEST : Select this option if your wireless adapters SUPPORT WPA2

BETTER : Select this option if your wireless adapters SUPPORT WPA

GOOD : Select this option if your wireless adapters DO NOT SUPPORT WPA

NONE : Select this option if you do not want to activate any security features

For information on which security features your wireless adapters support, please refer to the adapters' documentation.

Note: All wireless adapters currently support WPA.

If you chose **BEST** or **BETTER**, select whether to use TKIP or AES encryption, then enter a password to use for your wireless network. It is recommended that you use AES if your wireless computers and devices support it, as it is more secure.

Click **Next** to continue.

STEP 3: SET YOUR WIRELESS SECURITY PASSWORD

Once you have selected your security level - you will need to set a wireless security password. With this password, a unique security key will be generated.

Wireless Security Password :

Note: You will need to enter the unique security key generated into your wireless clients enable proper wireless communication - not the password you provided to create the security key.

If you chose GOOD, select whether to use a HEX or ASCII password, then enter a password to use for your wireless network. If you choose HEX, you will need to enter a 10 or 26 digit password using only hex characters (0-9, A-F). If you choose ASCII, the password can be between 5 to 13 alphanumeric characters. Click **Next** to continue.

STEP 3: SET YOUR WIRELESS SECURITY PASSWORD

Once you have selected your security level - you will need to set a wireless security password. With this password, a unique security key will be generated.

Wireless Security Password :

Note: You will need to enter the unique security key generated into your wireless clients enable proper wireless communication - not the password you provided to create the security key.

This completes the Wireless Connection Setup Wizard. Click **Save** to save your changes and reboot the router.

SETUP COMPLETE!

Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.

Wireless Network Name (SSID) : dlink_DWR-116

Wireless Settings

This section will help you to manually configure the wireless settings of your router. Please note that changes made on this section may also need to be duplicated on your Wireless Client.

Enable Wireless: Select this checkbox to enable wireless access. When you set this option, the following parameters take effect.

Wireless Network Name: Also known as the SSID (Service Set Identifier), this is the name of your Wireless Local Area Network (WLAN). Enter a name using up to 32 alphanumeric characters. The SSID is case-sensitive. The default name is "dlink_DWR-116".

802.11 Mode: B/G/N mixed: Enable this mode if your network contains a mix of 802.11b and 802.11g devices. G mode: Enable this mode if your network has only 802.11g devices. If you have both 802.11b and 802.11g wireless clients, disable this mode.

Auto Channel Scan: Click **Auto Channel Scan** to automatically select the channel that it will operate on. This option is recommended because the router will choose the channel with the least amount of interference.

Wireless Channel: Choose the clearest channel to help optimize the performance and coverage of your wireless network. By default the channel is set to 11. This can be changed to fit the channel setting for an existing wireless network or to customize your wireless network.

Visibility Status: Select **Invisible** if you do not want the SSID of your wireless network to be broadcast by the DWR-116. The SSID of your router will not be seen by site survey utilities. Therefore while setting up your wireless clients, you will have to manually enter your SSID to connect to the router.

D-Link

DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

WIRELESS NETWORK

Use this section to configure the wireless settings for this device. Please note that changes made on this section may also need to be duplicated on your wireless client.

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2.

Save Settings Don't Save Settings

WIRELESS NETWORK SETTINGS

Enable Wireless :

Wireless Network Name : (Also called the SSID)

802.11 Mode : B/G/N mixed

Auto Channel Scan :

Wireless Channel : 2.462 GHz - CH 11

Visibility Status : Visible Invisible

WIRELESS SECURITY MODE

Security Mode : None

Save Settings Don't Save Settings

Helpful Hints..

- Changing your Wireless Network Name is the first step in securing your wireless network. We recommend that you change it to a familiar name that does not contain any personal information.

Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will be able to see your wireless network when they perform scan to see what's available. In order for your wireless devices to connect to your router, you will need to manually enter the Wireless Network Name on each device.

If you have enabled Wireless Security, make sure you write down WEP Key or Passphrase that you have configured. You will need to enter this information on any

Security Mode: This device supports three wireless security modes, **WEP, WPA-Personal, WPA-Enterprise** or **None**. WEP is the original wireless encryption standard. WPA provides a higher level of security and WPA-Personal does not require an authentication server. When WPA-Enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

If you choose **WEP**, the following options will appear:

Authentication: Select whether to use Open or Shared authentication.

WEP Encryption: Select whether to use 64-bit or 128-bit encryption.

Default WEP Key: Select which WEP key (1-4) to use as the default key. This will also change the WEP Key text box to that WEP key for your to configure(1-4).

WEP Key: Set the WEP key/password for your wireless network. Based on whether you are using 64 or 128-bit encryption, and whether you are using a HEX or ASCII key, you will need to enter different numbers of characters for your key, as indicated below the WEP Key text box. ASCII keys may use letters and numbers only, and HEX keys may use numbers 0-9 and letters A-F only.

WIRELESS SECURITY MODE

Security Mode :

WEP

WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.

You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.

Authentication :

WEP Encryption :

Default WEP Key :

WEP Key :
(5 ASCII or 10 HEX)

If you choose **WPA-Personal**, the following options will appear:

WPA Mode: Select whether to use WPA2 only or WPA only. WPA2 only is the most secure, provided that all of your clients can support it.

Cipher Type: Select whether to use the TKIP or AES cipher. The AES cipher is the most secure, provided that all of your clients can support it.

Network Key: Enter the key/password you want to use for your wireless network. The key must be 8 to 63 characters long, and may only contain letters and numbers.

WIRELESS SECURITY MODE

Security Mode :

WPA

Use **WPA or WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode :

Cipher Type :

PRE-SHARED KEY

Enter an 8- to 63-character alphanumeric pass-phrase. For good security it should be of ample length and should not be a commonly known phrase.

Network Key :

(8~63 ASCII or 64 HEX)

If you choose **WPA-Enterprise**, the following options will appear:

WPA Mode: Select whether to use WPA2 only or WPA only. WPA2 only is the most secure, provided that all of your clients can support it.

Cipher Type: Select whether to use the TKIP or AES cipher. The AES cipher is the most secure, provided that all of your clients can support it.

RADIUS Server IP Address: Enter the IP address of your RADIUS server.

RADIUS Server Port: Enter the port used for your RADIUS server.

RADIUS Server Shared Secret: Enter the shared secret/password for your RADIUS server.

WIRELESS SECURITY MODE

Security Mode :

WPA

Use **WPA or WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode uses TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode :

Cipher Type :

EAP (802.1X)

When WPA enterprise is enabled, the router uses EAP (802.1x) to authenticate clients via a remote RADIUS server.

RADIUS Server IP Address :

RADIUS server Port :

RADIUS server Shared Secret :

Wi-Fi Protected Setup

Wi-Fi Protected Setup (WPS) System is a simplified method for securing your wireless network during the “Initial setup” as well as the “Add New Device” processes. The process is just as easy as pressing a button for the Push-Button Method or correctly entering an 8-digit code.

Enable: Enable/disable the Wi-Fi Protected Setup feature.

AP PIN: Shows the current PIN.

Generate New PIN: Create a random number that is a valid PIN. This PIN becomes the router’s PIN. You can then copy this PIN to the user interface of the wireless client.

Config Mode: Select whether the router is the **Enrollee** or the **Registrar**. If this is set to enrollee, the router will try to connect to other devices. If it is set to registrar, other devices will try to connect to the router.

Config Status: Displays the current state of WPS configuration. Clicking the **Release** button will disable any previously paired devices from connecting. You will need to reconfigure WPS on those devices to connect them again.

Disable WPS-PIN Method: This checkbox will disable pin authentication for WPS. You will have to use the push button on the router and the device you are trying to connect in order to establish a WPS pairing.

Config Method: Select whether the WPS authentication will use Pin code or push button method.

WPS Status: Displays the current state of the router’s WPS system.

Trigger: The **Trigger** button acts like the physical WPS push button, and will search for devices nearby that are trying to establish a WPS connection.

Note: The DWR-116 has a WPS push button on the front panel that will activate WPS mode by pressing and holding the button for approximately 6 seconds. The Wi-Fi LED will begin to flash rapidly when WPS mode has been activated.

The screenshot shows the D-Link web interface for the DWR-116 router. The top navigation bar includes 'D-Link', 'DWR-116', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar has links for 'INTERNET', 'WIRELESS SETTINGS', 'NETWORK SETTINGS', and 'LOGOUT', along with an 'Internet Offline' indicator and a 'Reboot' button. The main content area is titled 'WI-FI PROTECTED SETUP' and contains the following configuration options:

- WPS:** Enabled (radio button selected) / Disabled
- AP PIN:** 51288822 (with a 'Generate New PIN' button)
- Config Mode:** Registrar (dropdown menu)
- Config Status:** CONFIGURED (with a 'Release' button)
- Disable WPS-PIN Method:**
- Config Method:** Push Button (dropdown menu)
- WPS status:** IDLE (with a 'Trigger' button)

Buttons for 'Save Settings' and 'Don't Save Settings' are located at the bottom of the configuration area. A 'Helpful Hints..' section on the right provides additional information about WPS setup.

Network Settings

Router Settings

This section will help you to change the internal network settings of your router and to configure the DHCP Server settings.

Router IP Address: Enter the IP address of the router. The default IP address is **192.168.0.1**.

If you change the IP address, you will need to enter the new IP address in your browser in order to access the web-based configuration utility.

Default Subnet Mask: Enter the **Subnet Mask** of the router. The default subnet mask is **255.255.255.0**.

Local Domain Name: Enter the local domain name for your network.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot displays the D-Link DWR-116 web-based configuration utility. The interface is divided into several sections:

- Header:** D-Link logo and navigation tabs: DWR-116, SETUP, ADVANCED, TOOLS, STATUS, SUPPORT.
- Left Sidebar:**
 - INTERNET
 - WIRELESS SETTINGS
 - NETWORK SETTINGS (highlighted)
 - LOGOUT
 - Internet Offline status with a globe icon.
 - Reboot button.
- Main Content Area:**
 - NETWORK SETTING:**

Use this section to configure the internal network settings of your router and also to configure the built-in DHCP server to assign IP address to the computers on your network. The IP address that is configured here is the IP address that you use to access the Web-based management interface. If you change the IP address here, you may need to adjust your PC's network settings to access the network again.

Please note that this section is optional and you do not need to change any of the settings here to get your network up and running.

Buttons: Save Settings, Don't Save Settings
 - ROUTER SETTINGS:**

Use this section to configure the internal network settings of your router. The IP address that is configured here is the IP address that you use to access the Web-based management interface. If you change the IP address here, you may need to adjust your PC's network settings to access the network again.

Router IP Address : 192.168.0.1

Default Subnet Mask : 255.255.255.0

Local Domain Name :
 - DHCP SERVER SETTINGS:**

Use this section to configure the built-in DHCP server to assign IP address to the computers on your network.

Enable DHCP Server :

DHCP IP Address Range : 50 to 199 (addresses within the LAN subnet)

DHCP Lease Time : 86400 (Seconds)

Primary DNS IP Address :

Secondary DNS IP Address :

Primary WINS IP Address :

Secondary WINS IP Address :

Buttons: Save Settings, Don't Save Settings
- Right Sidebar:**
 - Helpful Hints..
 - If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck **Enable DHCP Server** to disable this feature.
 - More...

DHCP Server Settings

The DWR-116 has a built-in DHCP (Dynamic Host Control Protocol) server. The DHCP server assigns IP addresses to devices on the network that request them. By default, the DHCP Server is enabled on the device. The DHCP address pool contains a range of IP addresses, which are automatically assigned to the clients on the network.

Enable DHCP Select this box to enable the DHCP server on
Server: your router.

DHCP IP Address Range: Enter the starting and ending IP address for the server's IP address pool.

DHCP Lease Time: The time period for the IP address lease. Enter the lease time in minutes.

Primary DNS IP Address: Assign a primary DNS Server to DHCP clients.

Secondary DNS IP Address: Assign a DNS Server to DHCP clients.

Primary WINS IP Address: Assign a primary WINS Server to DHCP clients.

Secondary WINS IP Address: Assign a WINS Server to DHCP clients.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The top navigation bar includes 'D-Link', 'DWR-116', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar shows 'INTERNET', 'WIRELESS SETTINGS', 'NETWORK SETTINGS', and 'LOGOUT'. The main content area is titled 'NETWORK SETTING' and contains instructions for configuring internal network settings. Below this is the 'ROUTER SETTINGS' section, which includes fields for 'Router IP Address' (192.168.0.1), 'Default Subnet Mask' (255.255.255.0), and 'Local Domain Name'. The 'DHCP SERVER SETTINGS' section is highlighted and contains the following configuration options:

- Enable DHCP Server:**
- DHCP IP Address Range:** 50 to 199 (addresses within the LAN subnet)
- DHCP Lease Time:** 86400 (Seconds)
- Primary DNS IP Address:**
- Secondary DNS IP Address:**
- Primary WINS IP Address:**
- Secondary WINS IP Address:**

Buttons for 'Save Settings' and 'Don't Save Settings' are located at the bottom of the DHCP settings section. A 'Reboot' button is also visible in the left sidebar. A 'Helpful Hints...' section on the right provides additional information about enabling DHCP.

Advanced Virtual Server

The device can be configured as a virtual server so that users can access services such as Web or FTP via the public (WAN) IP address of the router.

Well-known Services: This contains a list of pre-defined services.

Copy to: Copies the rule to the line of the specified ID.

Use schedule rule: You may select **Always On** or choose the number of a schedule rule that you have defined.

ID: Identifies the virtual server.

Server IP: Port: Enter the IP address of the computer on your local network that you want to allow the incoming service. In the next box, enter the port number that you would like to open.

Enable: Select this box to enable the rule.

Schedule Rule #: Specify the schedule rule number.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

D-Link

DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER

The Virtual Server option allows you to define a single 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.

Save Settings Don't Save Settings

Well known services --select one -- Copy to ID --

Use schedule rule ---ALWAYS ON---

VIRTUAL SERVERS LIST

| ID | Service Ports | Server IP : Port | Enable | Schedule Rule# |
|----|---------------|------------------|--------------------------|-----------------|
| 1 | | : | <input type="checkbox"/> | Add New Rule... |
| 2 | | : | <input type="checkbox"/> | Add New Rule... |
| 3 | | : | <input type="checkbox"/> | Add New Rule... |
| 4 | | : | <input type="checkbox"/> | Add New Rule... |
| 5 | | : | <input type="checkbox"/> | Add New Rule... |
| 6 | | : | <input type="checkbox"/> | Add New Rule... |
| 7 | | : | <input type="checkbox"/> | Add New Rule... |
| 8 | | : | <input type="checkbox"/> | Add New Rule... |
| 9 | | : | <input type="checkbox"/> | Add New Rule... |
| 10 | | : | <input type="checkbox"/> | Add New Rule... |
| 11 | | : | <input type="checkbox"/> | Add New Rule... |
| 12 | | : | <input type="checkbox"/> | Add New Rule... |
| 13 | | : | <input type="checkbox"/> | Add New Rule... |
| 14 | | : | <input type="checkbox"/> | Add New Rule... |
| 15 | | : | <input type="checkbox"/> | Add New Rule... |
| 16 | | : | <input type="checkbox"/> | Add New Rule... |
| 17 | | : | <input type="checkbox"/> | Add New Rule... |
| 18 | | : | <input type="checkbox"/> | Add New Rule... |
| 19 | | : | <input type="checkbox"/> | Add New Rule... |
| 20 | | : | <input type="checkbox"/> | Add New Rule... |

Save Settings Don't Save Settings

WIRELESS

Helpful Hints..

- You can select your computer from the list of DHCP clients in the **Computer Name** drop down menu, or enter the IP address manually of the computer you would like to open the specified port to.
- This feature allows you to open a range of ports to a computer on your network. To do so, enter the first port in the range you would like to open on the router in the first box under **Public Port** and last port of the range in the second one. After that you enter the first port in the range that the internal server uses in the first box under **Private Port** and the last port of the range in the second.
- To open a single port using this feature, simply enter the same number in both boxes.

[More...](#)

Application Rules

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). **Application Rules** allow some of these applications work with the DWR-116.

Popular Applications: Select from a list of popular applications.

Copy to ID: Copies the predefined application rule to the line of the specified ID.

ID: Identifies the rule.

Trigger: The name of the trigger.

Incoming Ports: Specify the incoming port for the trigger rule.

Enable: Select this box to enable the rule.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The main content area is titled "APPLICATION RULES" and contains the following information:

APPLICATION RULES
This option is used to open single or multiple ports on your router when the router senses data sent to the Internet on a 'trigger' port or port range. Special Applications rules apply to all computers on your internal network.

Buttons: Save Settings, Don't Save Settings

Popular applications: --select one-- Copy to ID --

| ID | Trigger | Incoming Ports | Enable |
|----|---------|----------------|--------------------------|
| 1 | | | <input type="checkbox"/> |
| 2 | | | <input type="checkbox"/> |
| 3 | | | <input type="checkbox"/> |
| 4 | | | <input type="checkbox"/> |
| 5 | | | <input type="checkbox"/> |
| 6 | | | <input type="checkbox"/> |
| 7 | | | <input type="checkbox"/> |
| 8 | | | <input type="checkbox"/> |
| 9 | | | <input type="checkbox"/> |
| 10 | | | <input type="checkbox"/> |
| 11 | | | <input type="checkbox"/> |
| 12 | | | <input type="checkbox"/> |

Buttons: Save Settings, Don't Save Settings

Helpful Hints..
• Check the **Application Name** drop down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop down menu to fill out the appropriate fields.
More...

QoS Engine

The **QoS Engine** improves your online experience by ensuring that certain applications traffic is prioritized over other network traffic, such as FTP or Web. For best performance, use the Automatic Classification option to automatically set the priority for the applications.

Enable QoS Packet Filter: Select this box to enable the QoS Packet Filter.

Upstream Bandwidth: Specify the maximum upstream bandwidth here (e.g. 400 kbps).

ID: Identifies the rule.

Local IP : Ports: Specify the local IP address and then specify the port after the colon.

Remote IP : Ports: Specify the remote IP address and then the port after the colon.

QoS Priority: Select **Low, Normal, or High**.

Enable: Select a checkbox to enable the particular QoS rules individually.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

QoS ENGINE

Use this section to configure QoS Engine. The QoS Engine improves your online gaming experience by ensuring that your game traffic is prioritized over other network traffic, such as FTP or Web. For best performance, use the Automatic Classification option to automatically set the priority for your applications.

Save Settings Don't Save Settings

QoS ENGINE SETUP

Enable QoS Packet Filter :

Upstream bandwidth : kbps

Use schedule rule ---ALWAYS ON--- Copy to ID --

QoS RULES

| ID | Local IP : Ports | Remote IP : Ports | QoS Priority | Enable | Use Rule# |
|----|---|---|--------------|--------------------------|-----------------|
| 1 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 2 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 3 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 4 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 5 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 6 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 7 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |
| 8 | <input type="text"/> : <input type="text"/> | <input type="text"/> : <input type="text"/> | High | <input type="checkbox"/> | Add New Rule... |

Save Settings Don't Save Settings

MAC Address Filter

The **MAC (Media Access Controller) Address Filter** option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.

MAC Address Control: Select this box to enable MAC filtering.

Connection Control: Wireless and wired clients with **C** selected can connect to this device and **allow/deny** connections from unspecified MAC addresses.

Association Control: Wireless clients with **A** selected can associate to the wireless LAN; and **allow/deny** connections from unspecified MAC addresses.

ID: Identifies the rule.

MAC Address: Specify the MAC address of the computer to be filtered.

IP Address: Specify the last section of the IP address.

Wake On LAN: Click **Trigger** to configure Wake On LAN.

C: If this box is selected, the rule will follow the connection control setting specified in MAC filtering settings.

A: If this box is selected, the rule will follow the connection control setting specified in MAC filtering settings.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

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MAC ADDRESS FILTER

The MAC (Media Access Controller) Address filter option is used to control network access based on the MAC Address of the network adapter. A MAC address is a unique ID assigned by the manufacturer of the network adapter. This feature can be configured to ALLOW or DENY network/Internet access.

Save Settings Don't Save Settings

MAC FILTERING SETTINGS

MAC Address Control : Enable

Connection control Wireless and wired clients with C checked can connect to this device; and allow unspecified MAC addresses to connect.

Association control Wireless clients with A checked can associate to the wireless LAN; and allow unspecified MAC addresses to associate.

DHCP clients -- select one -- Copy to ID --

MAC FILTERING RULES

| ID | MAC Address | C | A |
|----|----------------------|--------------------------|--------------------------|
| 1 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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Save Settings Don't Save Settings

Helpful Hints..

- MAC Address Control** allows you to assign different access right for different users.
- Connection control:** Connection control allows you to allow or deny the wired and wireless clients to connect to this device and the Internet. Check **Connection control** to enable the controlling.

If a client is denied to connect to this device, it means that the client can't access the Internet and some network resources. Choose **allow** or **deny** to allow or deny clients whose MAC addresses are not listed in the **Control table**.

- Association control:** The **Association control** process is the exchange of information between wireless clients and this device to establish a link between them. A wireless client is capable of transmitting and receiving data to this device only after the association process is successfully completed.

More...

URL Filter

URL Filter allows you to set up a list of websites that will be blocked from users on your network.

URL Filtering: Select this box to enable URL Filtering.

ID: Identifies the rule.

URL: Enter URL that you would like to block.

Enable: Click to enable the specific URL filter.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

 Enable'. The 'URL FILTERING RULES' section contains a table with 5 rows, each with an 'ID', a 'URL' input field, and an 'Enable' checkbox. At the bottom are 'Save Settings' and 'Don't Save Settings' buttons. A sidebar on the right contains 'Helpful Hints..' and 'More...'."/>

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URL FILTER

URL Blocking will block LAN computers to connect to pre-defined Websites.

Save Settings Don't Save Settings

URL FILTERING SETTING

URL Filtering : Enable

URL FILTERING RULES

| ID | URL | Enable |
|----|----------------------|--------------------------|
| 1 | <input type="text"/> | <input type="checkbox"/> |
| 2 | <input type="text"/> | <input type="checkbox"/> |
| 3 | <input type="text"/> | <input type="checkbox"/> |
| 4 | <input type="text"/> | <input type="checkbox"/> |
| 5 | <input type="text"/> | <input type="checkbox"/> |

Save Settings Don't Save Settings

Helpful Hints..

- Create a list of Web Sites to which you would like to deny or allow through the network.

More...

Internet Offline

Reboot

Outbound Filter

Outbound Filter enables you to control what packets are allowed to pass through the router. Outbound filter applies on all outbound packets.

Outbound Filter: Select this box to **Enable** the filter.

Use Schedule You may select **Always On** or choose the **Rule:** number of a schedule rule that you have defined.

Copy to ID: Copies the predefined filter to the specified ID

ID: Identifies the filter.

Source IP : Ports: Specify the local IP address and then specify the port after the colon.

Destination IP : Specify the remote IP address and then the **Ports:** port after the colon.

Enable: Select this box to enable the filter.

Schedule Rule #: Specify the schedule rule number.

Previous Page: Go back to the previous filter page.

Next Page: Advance to the next filter page.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

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OUTBOUND FILTER

Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets.

Save Settings Don't Save Settings

OUTBOUND FILTER SETTING

Outbound Filter : Enable

Use schedule rule --ALWAYS ON-- Copy to ID --

OUTBOUND FILTER RULES LIST

Allow all to pass except those match the following rules.
 Deny all to pass except those match the following rules.

| ID | Source IP:Ports | Destination IP:Ports | Enable | Schedule Rule# |
|----|-----------------|----------------------|--------------------------|-----------------|
| 1 | : | : | <input type="checkbox"/> | Add New Rule... |
| 2 | : | : | <input type="checkbox"/> | Add New Rule... |
| 3 | : | : | <input type="checkbox"/> | Add New Rule... |
| 4 | : | : | <input type="checkbox"/> | Add New Rule... |
| 5 | : | : | <input type="checkbox"/> | Add New Rule... |
| 6 | : | : | <input type="checkbox"/> | Add New Rule... |
| 7 | : | : | <input type="checkbox"/> | Add New Rule... |
| 8 | : | : | <input type="checkbox"/> | Add New Rule... |

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Save Settings Don't Save Settings

Helpful Hints..

- Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, Inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

More...