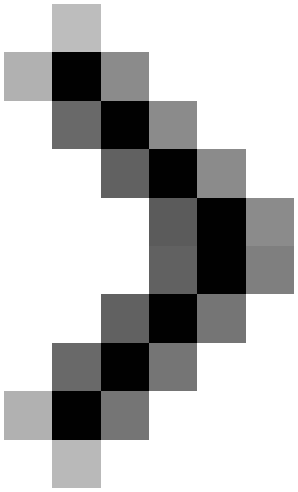
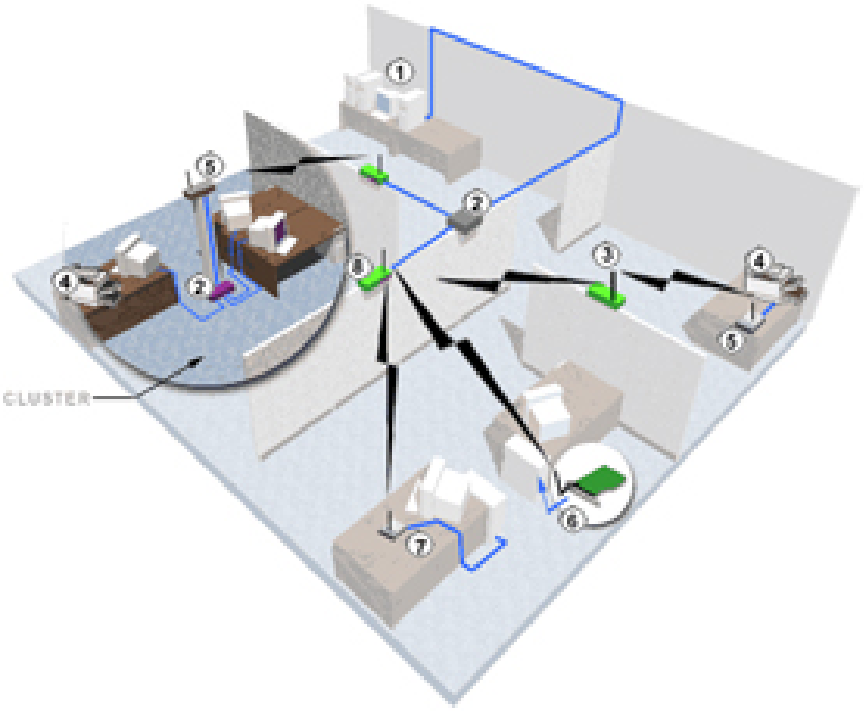
Turn an old PC into a LAN Server with RouterOS - Part 2

In this article, I will show you how to configure. When you're done, you'll have a basic router and you can experience advanced features.



Turn an old PC into a LAN Server with RouterOS - Part 1



In this article, I will show you how to use RouterOS software to make use of an old computer as a LAN server, which can save a lot of costs compared to buying a new Cisco router.

In Part 1 of this two-part series, we showed you how to load RouterOS software into an old PC to get advanced enterprise router features at a low cost.

In this article, I will show you how to configure. When you're done, you'll have a basic router and can experience its advanced features.

Configure DHCP to manage IP addresses

If you don't have to manually set up an IP address on every computer connected to the network, you will definitely want to enable the DHCP server on RouterOS.

This server will manage IP addresses on the network. Here's how to enable and configure the DHCP server using WinBox:

1. Click **IP** > **DHCP-Server** , and then click the **DHCP Setup** button.
2. Be sure to choose the correct name for the adapter and the network interface to connect to your local network, then click **Next** .
3. Specify a range or range of addresses, for example 192.168.1.0/24, and then click **Next** .
4. Enter the IP address of the Default Gateway IP - for example 192.168.1.1 (the router's IP address) - and click **Next** .
5. Skip the DHCP forwarding setting (DHCP relay) and click **Next** .
6. Enter the DHCP address range. If you want to be able to change to an address within 192.168.1.100-192.168.1.199, you can use the first 100 addresses for the router and access points (APs) or servers loaded with Static IP address. By doing so you can distinguish well between the addresses of the server or AP and the user.

7. Specify the DNS server used by the ISP and click **Next** . It can be detected automatically; otherwise you can only use OpenDNSs: 208.67.222.222 and 208.67.220.220.
8. The default contract time (every three days) is OK; though if you like to change, click **Next** .
9. Click **OK** to close the dialog box.

Enable DNS Relay to easily configure the client

Next, you should enable the DNS Relay feature so that clients can be configured with the router's IP for their DNS server settings, then the router forwards DNS requests to the real server.

By default, DHCP provides clients with real DNS server addresses, and requests are sent directly. However, if you want to manually configure a static IP, you must manually enter the DNS information.

Remembering the router's IP address is always easier than remembering the DNS address provided by the ISP. Here's how to enable this feature with WinBox:

1. Click **IP** > **DNS** , then click the **Settings** button.
2. Check to make sure you have entered ISP DNS server addresses into Primary and Secondary fields.
3. Integrate the **Allow Remote Requests option** to enable DNS relay.
4. Click **OK** .

Enable NAT to share the Internet

The final step in creating a basic shared router is to enable Network Address Translation (NAT). This process ensures that sharing an Internet connection is possible.

It should be noted that each computer or device must have an IP address for communication on the network or on the Internet. However, usually you only get one IP address for your Internet connection. Thus, it is necessary to use NAT to "fool" the Internet into thinking that communication from any computer or device on your local network comes from your router.

In other words, it makes your router become a point of contact or transition between your network and the Internet.

This is how to enable NAT on RouterOS using WinBox:

1. Click **IP** > **Firewall** and select the **NAT** tab **.**
2. Click the **Plus** button to add a new firewall rule.
3. With **Chain** , select " **srcnat** ".
4. With the **Src Address** , enter the address range of the local network. For example, if the router's IP address is 192.168.1.1, you type **192.168.1.0/24** .
5. With **Out Interface** , select the interface name that will be connected to the Internet.
6. Click the **Action** tab.
7. With **Action** , select " **Masquerade** ".
8. Click **OK** to save the changes.

Wireless interface configuration for Wi-Fi access

If your computer has a wireless card, you can set up wireless access on the router.
Here's how to do it:

1. Click the **Wireless** menu button to bring up the Wireless Interface window. If RouterOS detects supported wireless cards, they will be listed here. Otherwise they will be disabled, making sure you can activate them.
2. With **mode** , select " **AP Bridge** ".
3. Configure basic wireless settings, such as band, frequency, SSID (network name) and security profile.
4. When done, close the wireless interface window.

Now you should configure wireless encryption to protect your network:

1. Select the **Security Profiles** tab **.**
2. Change the default profile by double-clicking it or clicking the **Add** button to create a new profile.
3. To use the simple method of WPA / WPA2 (PSK), select " **Dynamic Keys** " for **Mode** . Then check the **WPA PSK** or **WPA2 PSK authentication types** . Select **TKIP** if using **WPA** and **AES CCM** if using **WPA2** . Then type your password in the **Pre-Shared Key** boxes.

Next you need to create an IP address for the AP (wireless interface):

1. Click **IP** > **Addresses** , and then click the **Add** button (plus sign).
2. Type in an address inside the subnet, followed by a '/' and netmask. For example, enter **192.168.1.2/24** if the router's IP is 192.168.1.1/24.
3. Select the wireless adapter for the interface.
4. Click **OK** to save the changes.

If you want DHCP so that Wi-Fi users automatically receive IP addresses:

1. Click **IP** > **DHCP-Server** , and then click the **Add** button (plus sign).
2. Select an unused adapter for the interface.
3. For **Address Pool** , select " **dhcp_pool1** ".
4. Click **OK** to save the changes.

Discover the rest of RouterOS

In this article, you should note that we only configured basic services, creating a wireless router or running a simple wire. However, RouterOS can provide many other advanced services for LAN and WAN.

For example, you can use its RADIUS server to be able to run WPA / WPA2-Enterprise encryption for Wi-Fi connections. You can use a VPN server to protect remote connections on public hotspots or to connect your offices together.