



HOW TO SECURE YOUR PERSONAL WI-FI ROUTER

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1 Routers and security

Whether you already own a router that enables you to have a home Wi-Fi network, or whether you are in the process of getting your home connected to the Internet, there are several very important pieces of information to be aware of.

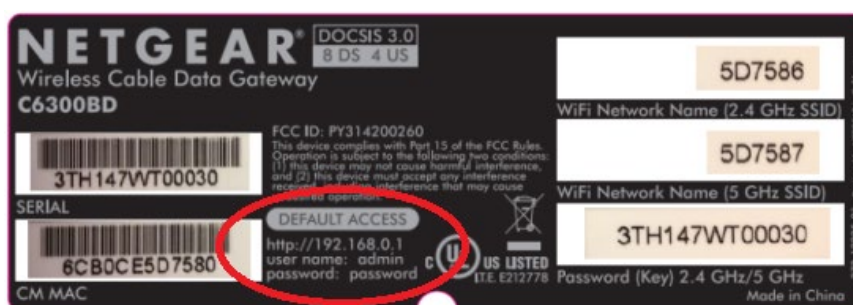
Setting up a home Wi-Fi network is surprisingly easy, but that does not mean you should necessarily use the most basic settings, as they are not secure.

2 Router's Administrator account and password

The administrator account on a router is what allows you to log into the router and change its settings. *This account name and password should be **unique and easy to remember, but hard to guess**.* If anyone can guess your router account information, they can log in and change your settings.

All routers have a default username and password. You should change this. These passwords are extremely easy to guess and are widely available on the Internet. Cybercriminals could use this information to intercept or redirect your internet traffic for their own malevolent purposes.

If you are unsure whether you have secured your router's username and password or wish to do so, look for a sticker on the bottom of the device. This sticker will contain some important information, including the default login details:

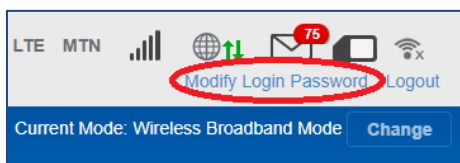


If your device does not display this information, you could do an Internet search using the brand and model of your device combined with 'default password' and/or 'default IP'. For example, search on 'Netgear C6300 default password'.

When you enter the address shown (e.g., <http://192.168.0.1>) into a browser on a device connected with your home Wi-Fi network, you will be prompted for a username and password. Enter the username and password as shown on your router's sticker or found on the web (e.g., 'admin' and 'password') and try to log in. If the

router allows you to log in, the default password has not been reset and you will need to strengthen the password.

Unfortunately, there are just too many makes and models of routers to give details in this document on how to do this. However, you should be able to easily find the place in the admin console to change the password (see the example below). Otherwise, find instructions on the Internet by searching for the brand and model combined with 'change default admin password', e.g., 'Netgear C6300 change default admin password'.



PLEASE NOTE: The router's Admin password is **NOT THE SAME** as the Wi-Fi password that you have to enter on your mobile devices to connect to the Wi-Fi. Both should be secure, but the Admin password protects your router, which, if an unauthorised person were to access it, could make life difficult for you.

3 Review your Wi-Fi credentials

If someone were to guess your Wi-Fi password, they could abuse your Internet connection while not even being in your house. It is, therefore, a good idea to **use a strong password for your Wi-Fi**.

If you are still using the default **Wi-Fi SSID name** (the Wi-Fi name that you connect to on your cell phone or laptop) like HuaweiB525 or DLink, *you should change it to something more unique*.

Do an Internet search on the brand, model and 'change wireless default password', e.g., 'Netgear C6300 change default wireless password', for instructions on how to make the required changes.

As an added note: Should the router offer you security options, select *WPA2-PSK [AES]*, which is the strongest network security currently available. If your router does not support it, you should seriously consider investing in a new, more secure router.

Below is an example of such changed information:

A screenshot of a router's web-based administration interface showing the Wi-Fi settings. At the top, there is a toggle for '2.4 GHz Network' which is turned on. Below this, there are three main settings: 'WiFi Name' with the value 'Melanie WiFi' and a 'Hide' checkbox; 'Encryption Mode' with a dropdown menu showing 'WPA/WPA2-PSK (recommend)'; and 'WiFi Password' with a masked input field showing eight asterisks.

4 Update the router's firmware

Firmware is a set of instructions programmed on a hardware device and can be considered its 'operating system'. The vendor may release firmware updates from time to time to make the device work more efficiently, fix bugs or security vulnerabilities, or add new functionality.

Ensure that your router's firmware is up to date using functionalities in the router software. To do this is not difficult, but depends on the make and model of the router. A general guideline is available at: <https://www.wikihow.com/Update-Router-Firmware>

5 Something went wrong

If, for some reason, you lose connectivity with your router during any of the above steps and you cannot access it anymore, or you have forgotten the admin password, you can reset the router to its factory default settings. To do so, look for a small button at the back or bottom of the router and press it with a paperclip or similar object. If you are unsure, search for on the Internet for the reset process for your router brand and model.

Once the reset is done, open a browser and enter the login information from the sticker on the bottom of the device to configure the router again as discussed above.

6 Additional information

Some helpful resources:

<https://stevesmarthomeguide.com/home-router-setup/>

<https://www.howtogeek.com/233159/how-to-find-your-wi-fi-password/>

<https://www.wired.com/story/secure-your-wi-fi-router/>

Document elements

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