

PEAK Class 101: Networking Part I

Home networking has got easier and easier. We often have multiple PCs at home and it would be great if we could network them together to share resources. There are various network technologies we can choose from. Although it isn't hard to set up a home network, it is extremely helpful if you can understand some basic tech background / terms in networking.



Router

Simply put, a router is a small device that sits between your personal network and the Internet. It routes information between the two network segments, hence we call it a "router". Over time we have added more functions to it to make it more powerful (much like an all-in-one unit). These functions include firewall, full-duplex switch, NAT service, DHCP server, and wireless access point. We used to purchase multiple networking devices, one to fulfil each different function. However, networking manufacturers have now incorporated them into a small box no bigger than the size of a sheet of A4 paper.

IP Addresses

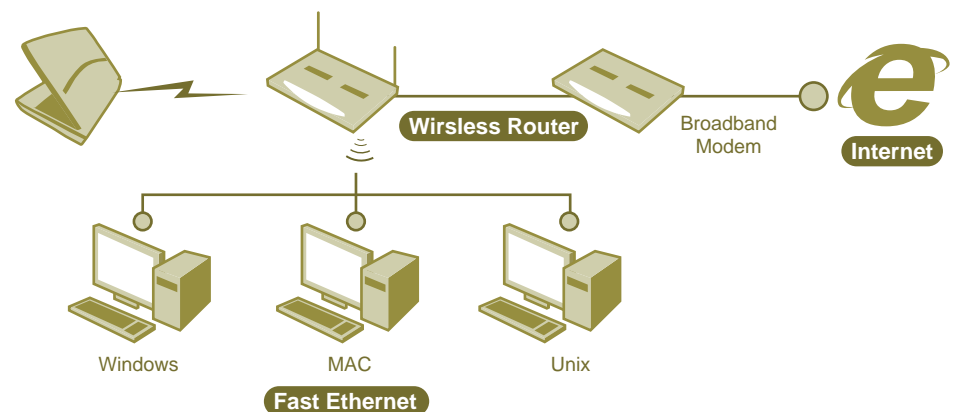
Just like your home address, each and every device on the internet has an IP address. Each piece of data travelling on the internet needs to have a destination IP address so it knows where to stop. A router usually has two IP addresses, one from your Internet Service Provider (ISP) and the other for your local area network. These two IP addresses are completely different from each other and people from outside should not have access to your internal IP address.

WAN (or Internet) port

As mentioned previously, the router sits between your personal network (we call it Intranet or LAN, Local Area Network) and Internet (we call it WAN, Wide Area Network). The WAN port connects your router to a broadband modem, so it can be allocated an IP address from your ISP.

LAN (or local) port

LAN ports connect to any networking device on your network. A router will generally have at least 4 LAN ports, meaning you can connect up to 4 network devices. It gives a different IP address to each LAN port. If you wish to expand your network, you'll need to purchase a hub (or a switch) and connect them to the router. The diagram below should help you to understand the concept. Remember that the wireless router connects to your local network via its LAN (Local Area Network) port and to your broadband modem via its WAN (Wide Area Network) port.



When you want to access the Internet and type a WWW address into your web browser, your PC sends the information flow (or data packets) to the router. The router then examines the packets and sends the data to its destination through the broadband modem. Returning information (such as the web page you have requested) is also examined by the router for pass-through to a specific local device, such as the PC which made the request for the web page.

For more details on the PEAK wireless router, click on the link below.

<http://www.peakhardware.com/products/productlist.asp?caid=3&said=18&oid=39>



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