



The home network



How a typical internet connection works.





The Router

- The box that connects your house to the world - usually supplied by your ISP
- The router has one IP address facing out
- The router allocates a private address to each of the devices inside your house.





IP addresses

- IPv4 addresses are a group of four numbers from 0 to 255.
- Several address ranges are reserved for internal use.
- 192.168.0.1 is often the router's internal address.



IP address types

- An IP address is how a computer knows which other computer it is “talking” to.
- IP addresses are matched to names we can understand, EG: 82.69.102.32 is www.carrybridge.co.uk
- The names are matched to the numbers by records held on DNS servers (more later)

Inside addresses

- The router hands out private IPs to devices that ask for one. They will usually be in the range 192.168.0.2 - 192.168.0.254
- It will also allocate its own address as the “gateway” to the internet...
- ...and itself as the DNS server. It queries external DNS servers to match names to IP.

Firewall

- A firewall acts as a one way door. You can see the internet, but the internet can't see you.
- A router will have the firewall activated, unless you have changed it.
- Windows has a firewall, to protect you from internal threats, EG: a visitor's virus infected laptop.