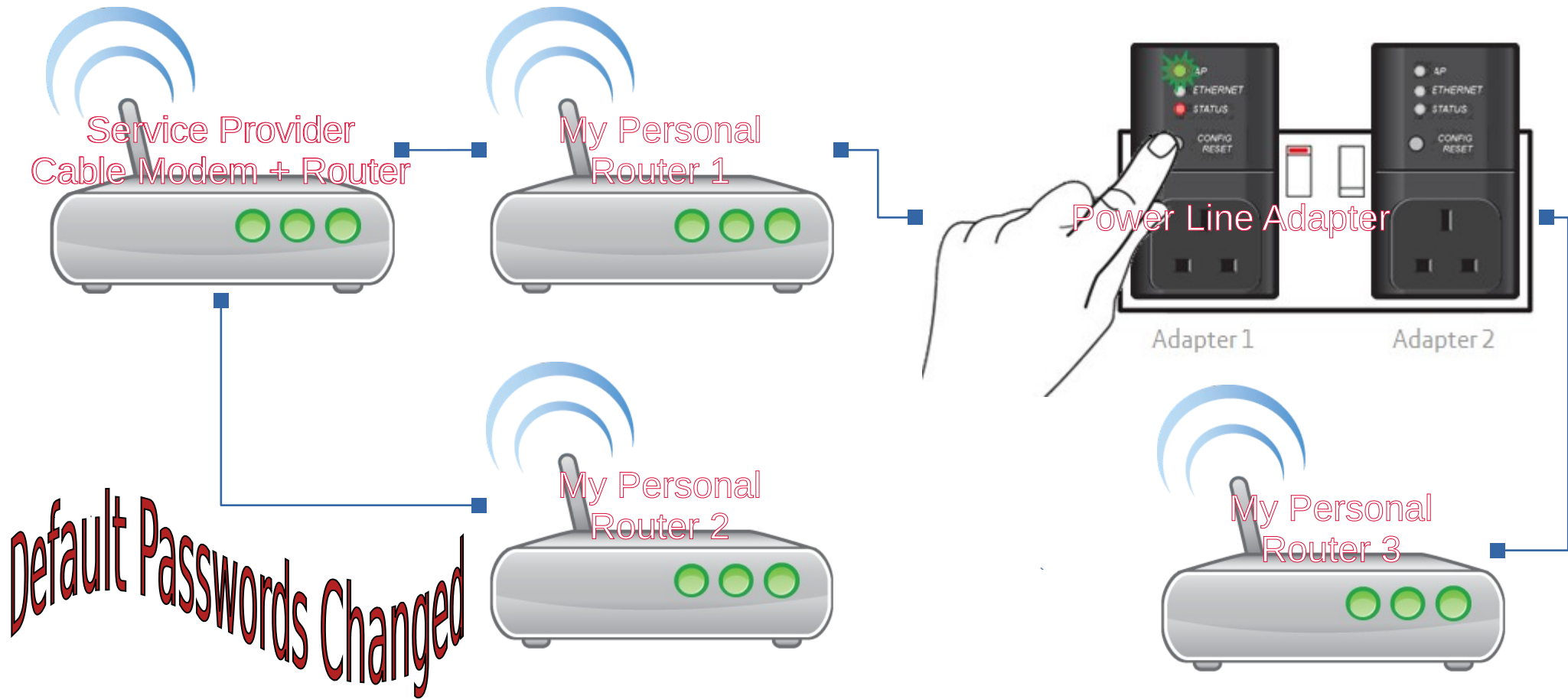


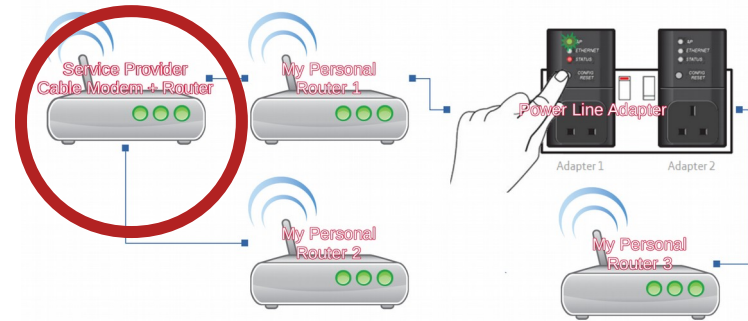
# Home Networks

How I set up my home network  
Is it not adequately secured?

# Overview



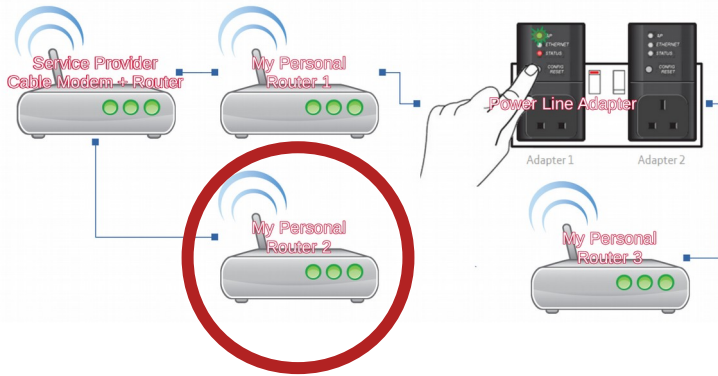
# Service Provider — Cable Modem / Router



- Location – Basement
- DHCP Server Enabled

- Disabled Wifi – both 2.4 Ghz and 5 Ghz
- Enabled Firewall – used the 'minimum' setting i.e. outgoing traffic isn't blocked, unsolicited incoming traffic is blocked
- 4 Ethernet Ports
  - 2 for personal routers
  - 2 for Voip Phones

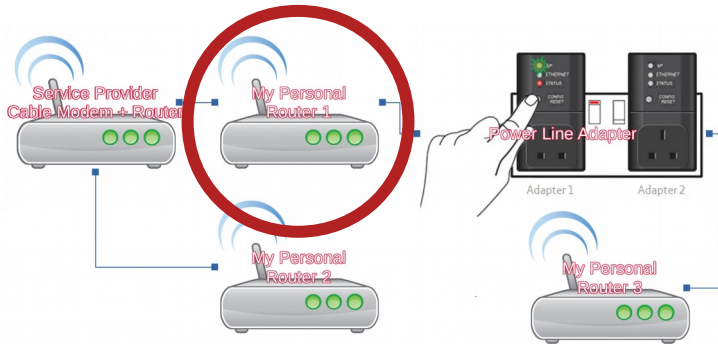
# My Personal Router 2 – Gaming PC / Guests



- Location - Basement
- Router – Linksys WRT 54G (really old) ~ DD-WRT
- DHCP Server Enabled

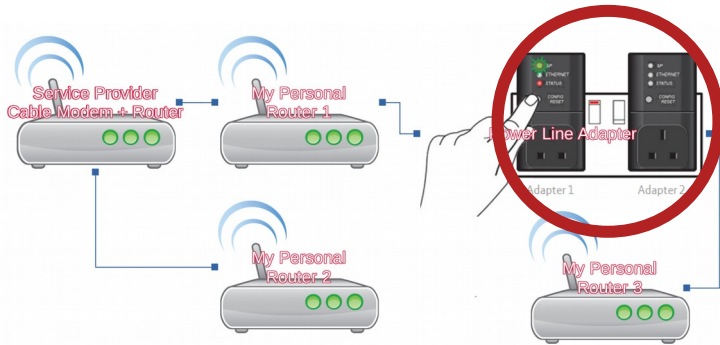
- Independent Subnet
- Gaming PC Connected to it
- Wifi enabled – WPA Encryption ~ for Guests or when Home Wifi malfunctions
- Set to re-start once a week at 2:30 AM
- Firewall Enabled – SPI Firewall – basic settings (e.g. Blocks anonymous WAN requests)
- Why QOS wasn't a preferred Option
  - When QOS was used – buffering was still an issue
  - Gaming traffic was slowing down everyone else's browsing experience
  - Having a separate router solved both issues ~ bandwidth wasn't an issue

# My Personal Router 1 – Main Router



- Independent Subnet
- Home Desktops / Laptops / Office Laptops
- Wifi enabled – WPA Encryption
- Set to re-start once a week at 2:30 AM
- Firewall Enabled – SPI Firewall – basic settings (e.g. Blocks anonymous WAN requests)
- Dedicated IP Address for each MAC Address
  - Added level of security – painful when a new device needs to connect
- Location - Basement
- Router – Linksys WRT 1200 (not that old) ~ DD-WRT
- DHCP Server Enabled ~ Max DHCP Users = 0

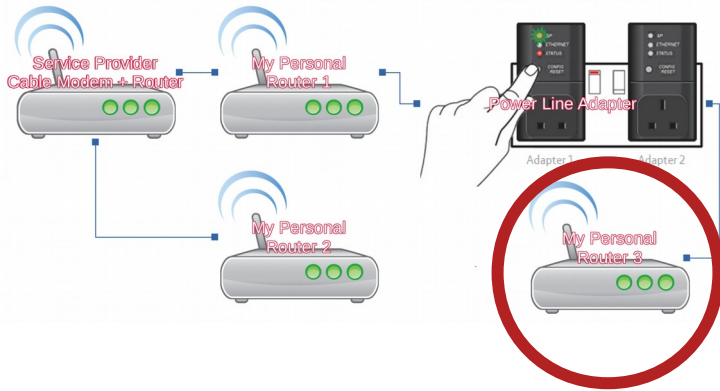
# Powerline Adapter — Connect to Room Upstairs



- ◆ Location – Basement / Family Room / Upstairs Room

- Needs to be paired ~ one cannot simply add another adapter to an available Power outlet
- Use the power outlet closest to the Fuse Box – has an impact on performance
- No Wifi capability – only Ethernet
- Tried using a Wifi ‘repeater’ - Upload and download speeds using Powerline Adapter were 3 times better
- Where do I have these adapters?
  - Room Upstairs – diagonally across from where the Routers are placed in the Basement – No Wifi signal
  - In the TV Shelf – behind the TV – due to it’s location – no wifi signal – Have a pc that helps make the TV ‘smart’.

# My Personal Router 3 – used as a switch



- Dlink Router – really old
- DHCP – Disabled – used as a switch
- Input / Output – use any of the 4 Ethernet Ports – not the WAN Port

- Used as a switch – doesn't assign IP Addresses
- Connected via Ethernet to the Powerline Adapter
- Basic Firewall enabled
- Wifi – using the Same SSID as 'My Personal Router 1'
- Could use a different one – that will enable me to know which router my device is connected to ~ don't see any benefit of using the Same SSID (except that you only need to connect once)
- Using the OOB Dlink Firmware
  - Room Upstairs – diagonally across from where the Routers are placed in the Basement
  - Extends wifi to the upstairs rooms

# Security Overview

