



Dacorum U3A

Computer Support Group

26th January 2018

Agenda



- Open forum
- Identify subjects for breakout groups and later meetings
- Firefox Quantum and Internet Presentation
- Tea and Coffee break (about 3.00 pm?)
- Continue Presentation
- Breakout groups looking at individual problems

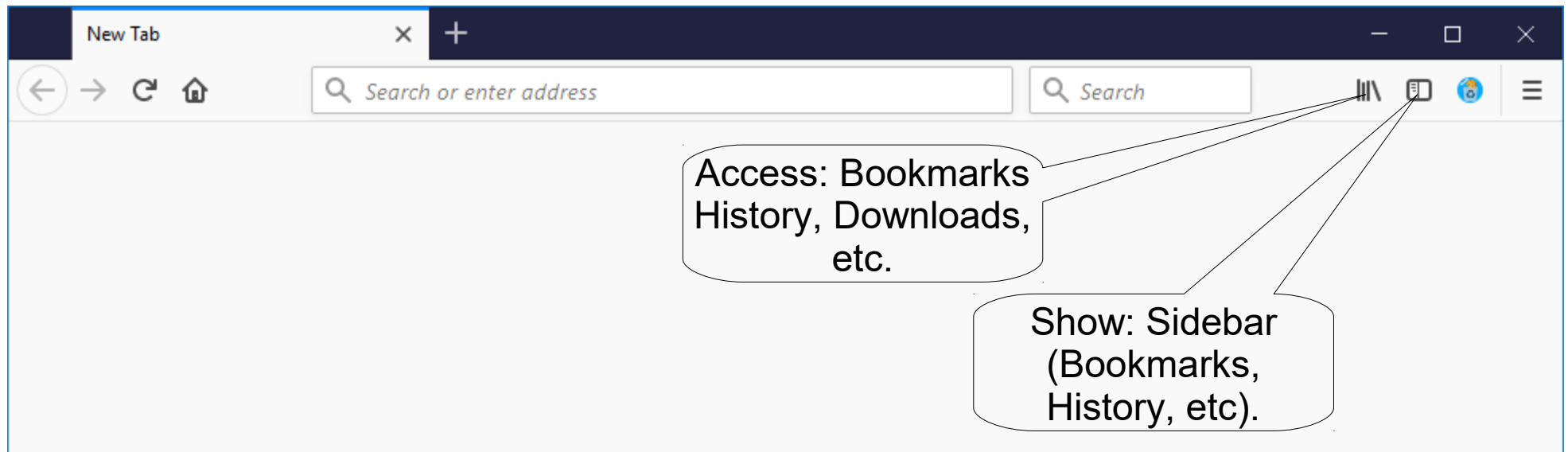
Firefox Quantum

The latest release of Firefox is said to be much faster. However it is a little different:

- The 'bookmark' icon has disappeared
- The format of the 'options' has changed
- Some 'add ons' no longer work

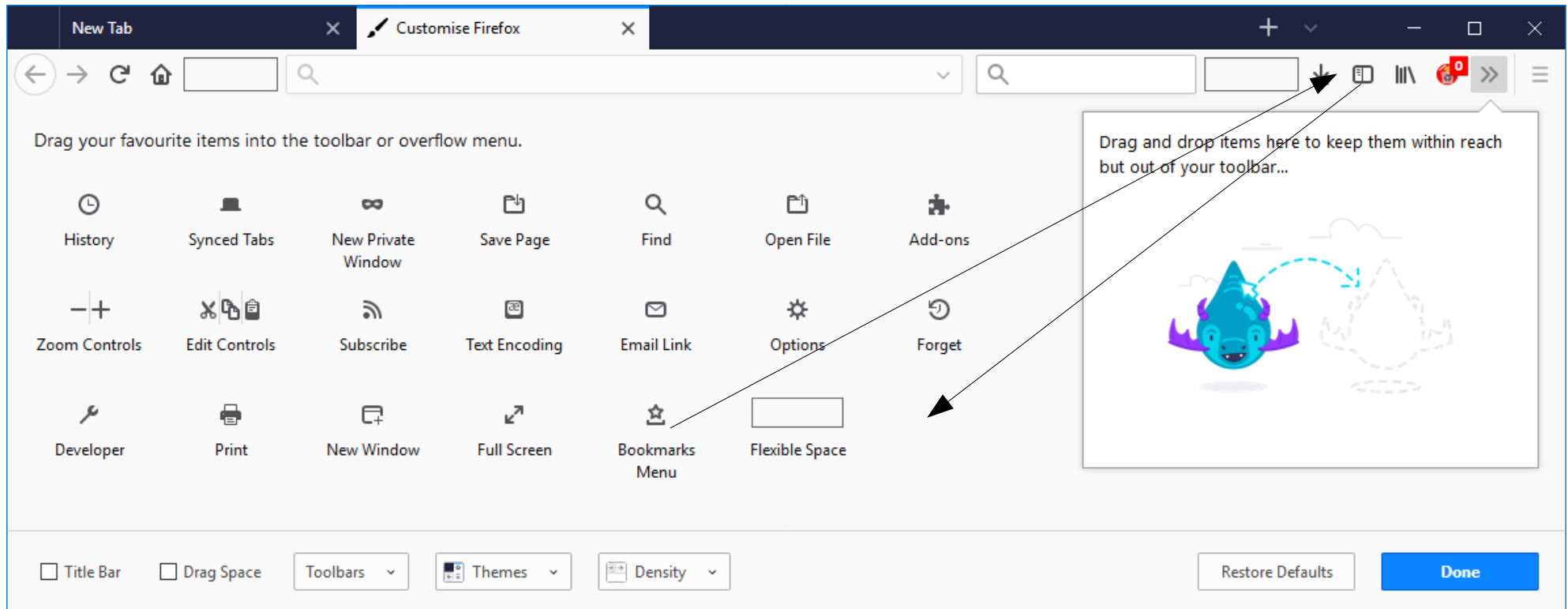
Default display

Two new icons (see below). When used, either of these will result in a 'sidebar' on the right or left of the display. The sidebar will remain until it is closed, taking up space on the screen. For bookmarks it is unlikely that you want to have permanent access so the loss of space can be a problem.



Change Icons

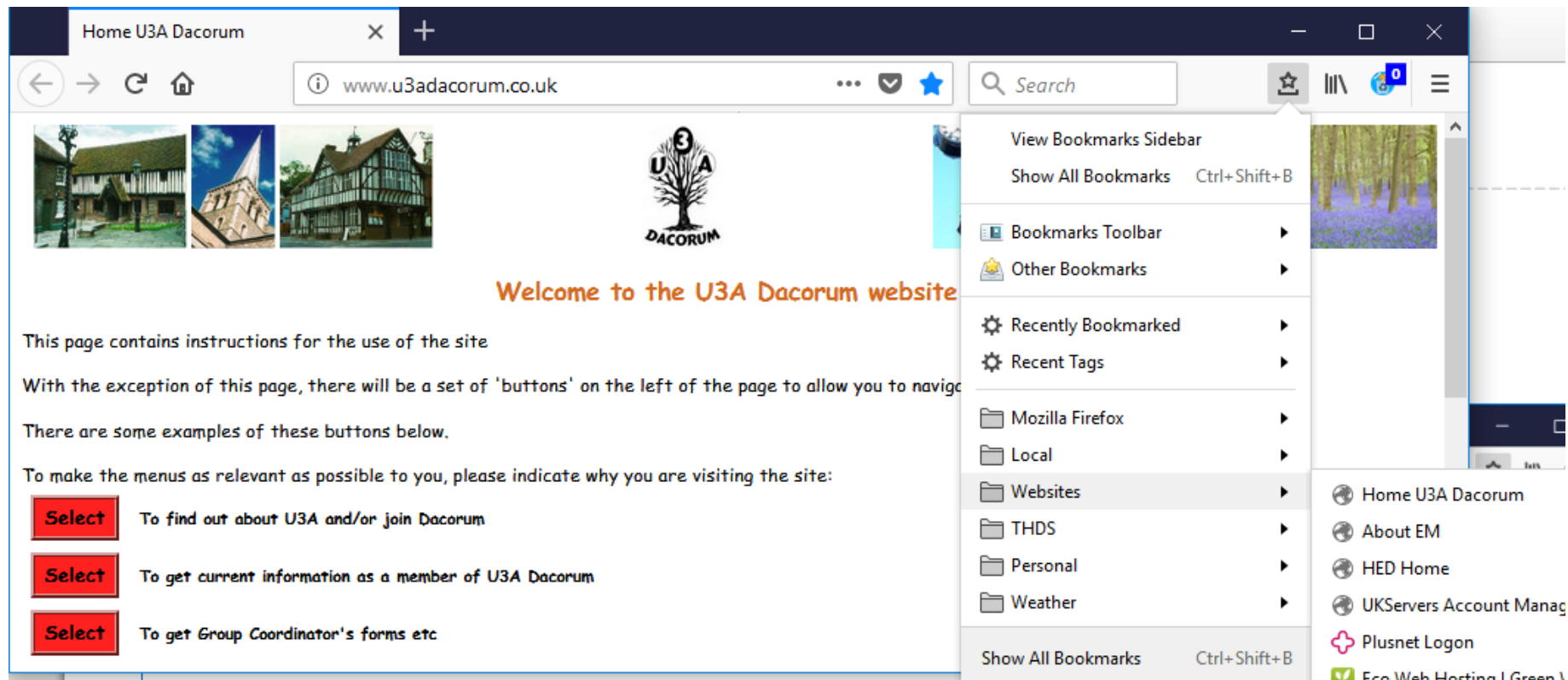
alt>View>Toolbars>Customise will show this:



Drag icons onto or off of the toolbar as required.

Result

When the bookmark icon is clicked:



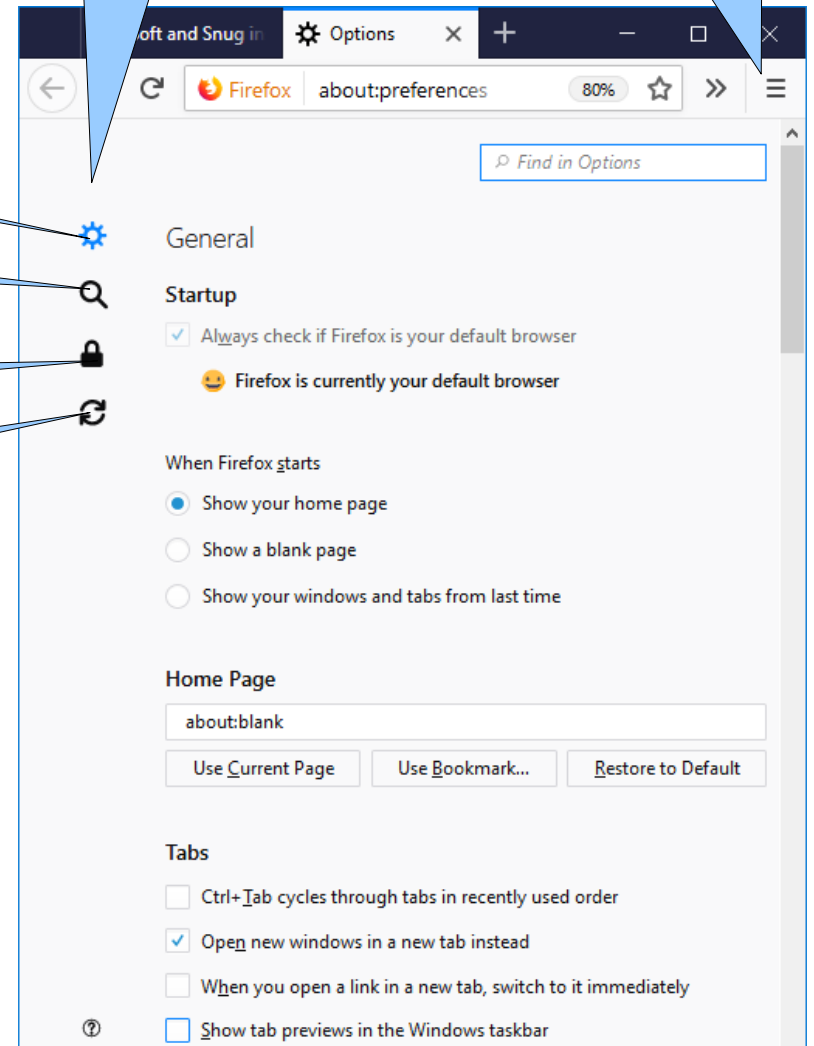
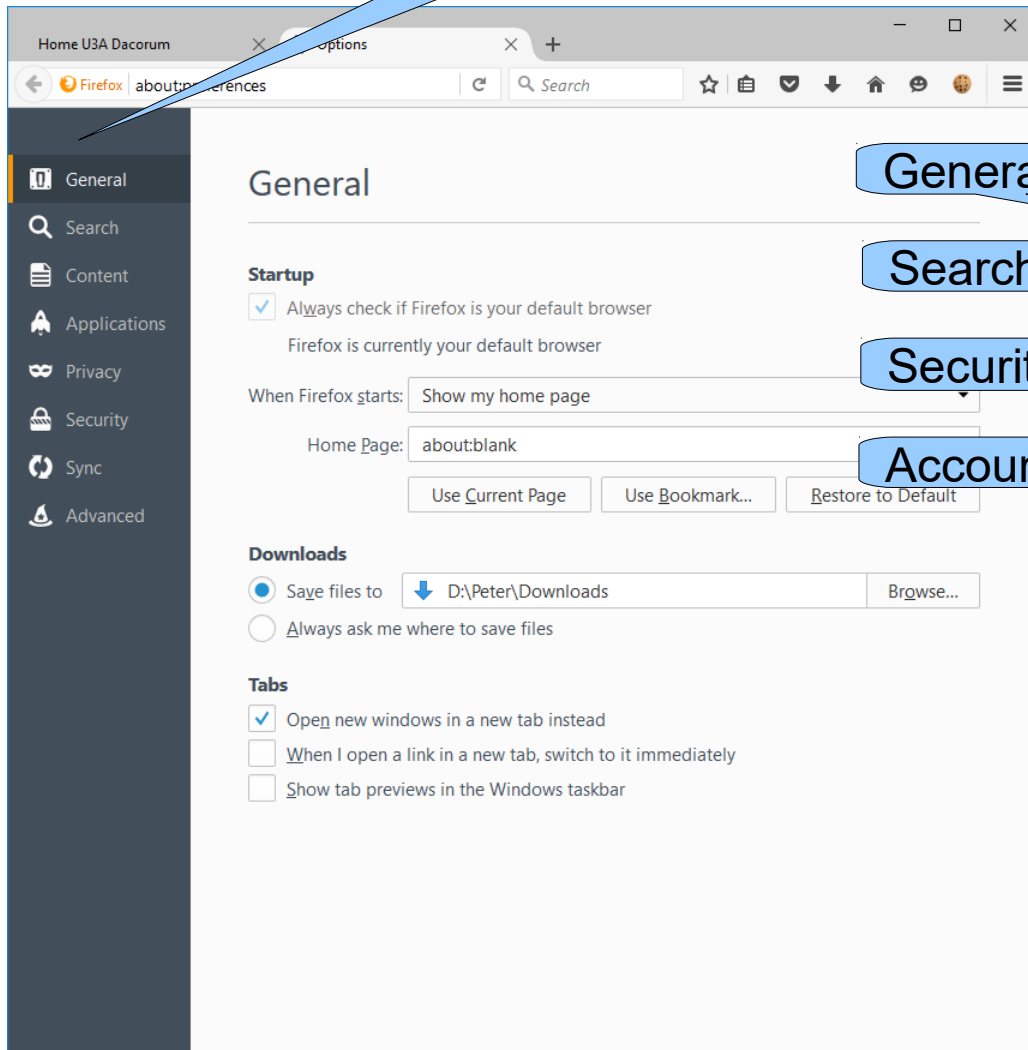
To bookmark the current page: click the blue 'star' to the right of the page address.

Firefox Options

Old options List

New options List

Click & Select Options



General

Search

Security

Account



General

Startup

Always check if Firefox is your default browser

Firefox is currently your default browser

When Firefox starts

Show your home page

Show a blank page

Show your windows and tabs from last time

Home Page

about:blank

Use Current Page

Use Bookmark...

Restore to Default

Tabs

Ctrl+Tab cycles through tabs in recently used order

Open new windows in a new tab instead

When you open a link in a new tab, switch to it immediately

Show tab previews in the Windows taskbar

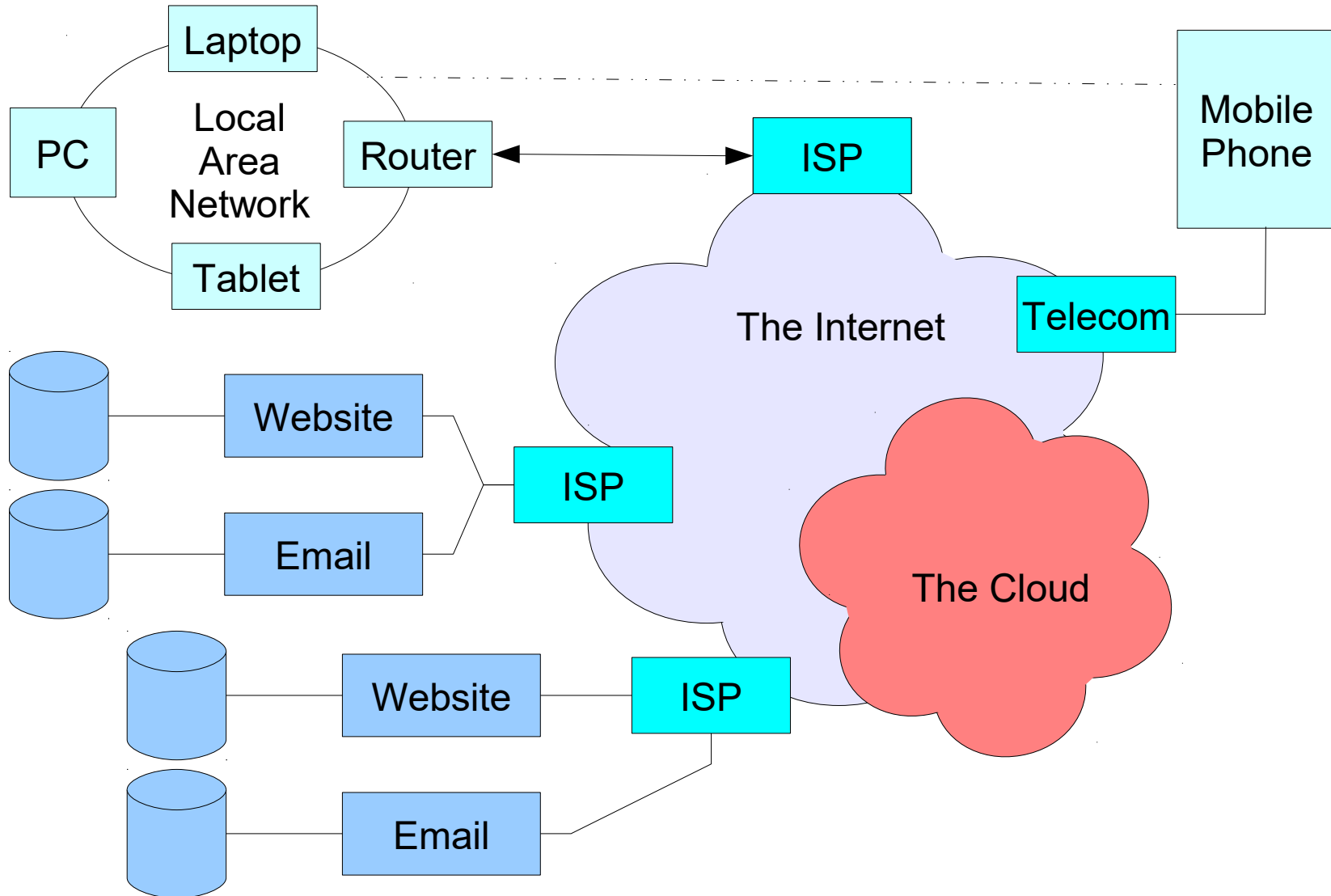
The Internet

The Internet consists of 3 parts:

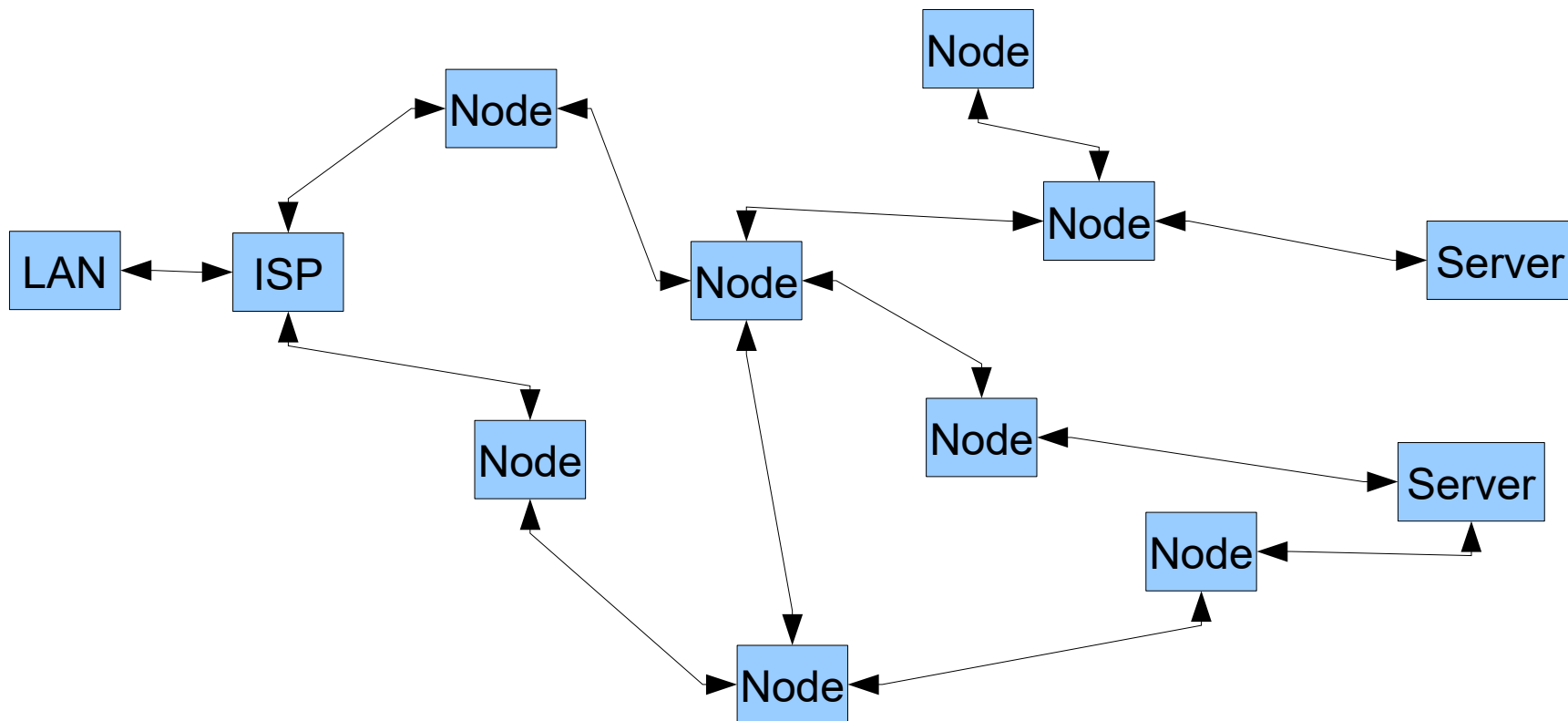
- Local Area Networks (LAN)
 - If you have a router, you have a LAN
- Global inter-connections (closely related to the Cloud)
- Servers
- A computer on a LAN can be a server, e.g. a printer is, in many ways, a server.

The following diagram is a simplified view

Network View



Internet Physical



Domain Name Server



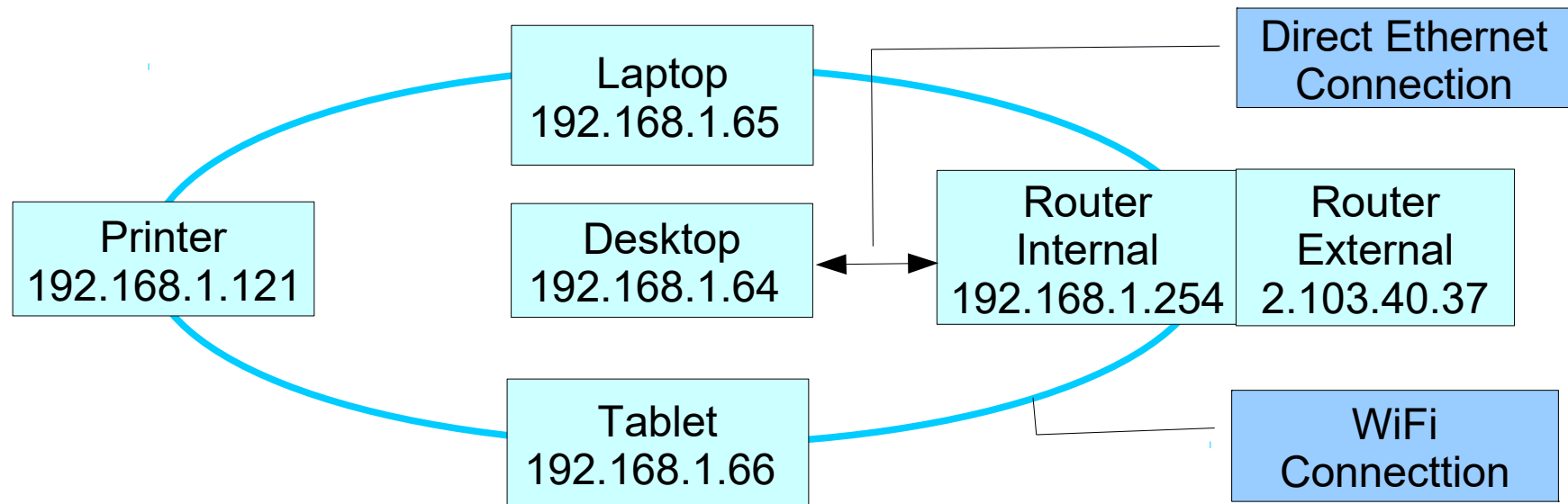
We almost never use the ip address when we make a request to the internet, we use the site name. Something has to convert the name to an ip address. This is the Domain Name Server.

A request inside a local network (eg to a printer) may also need conversion. This is usually in the router and is called DFHDNS. It is updated dynamically as devices are turned on.

The other DNS's in the Internet are also updated as 'domain's are changed (infrequently) and as addresses are 'leased'.

Local Area Network or Intranet

Typical Home Local Area Network



Each device has an IP address but this is internal to the Router. Any communication with the rest of the Internet is given the External address (extended with the internal address)

Ethernet

Ethernet connections are physical wires connecting device(s) to the router

Many devices can co-exist on a single Ethernet connection (but this is not usual)

Every device on an Ethernet connection sees ALL the messages. Hopefully only one will recognise it and reply.

If no reply is received by the sender within a reasonable time it assumes that there is an error

There is normally no need for extra security on an Ethernet connection

Wi/Fi

WiFi connections are radio waves connecting device(s) to the router

Many devices can co-exist in a WiFi environment

Every device in a WiFi environment sees ALL the messages. Hopefully only one will recognise it and reply.

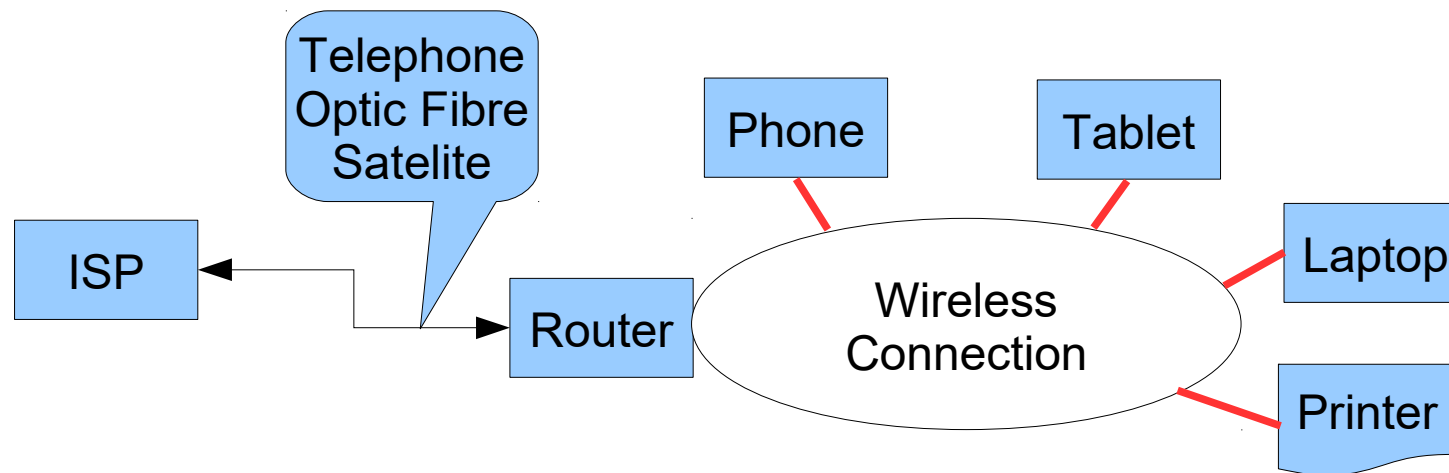
If no reply is received by the sender within a reasonable time it assumes that there is an error

There is no way to control which devices are within a WiFi environment. Therefore messages are usually encrypted to/from just one router

Typical LAN

Most LANs are quite simple

In this example the **red** lines are connected when the device is switched on



Router

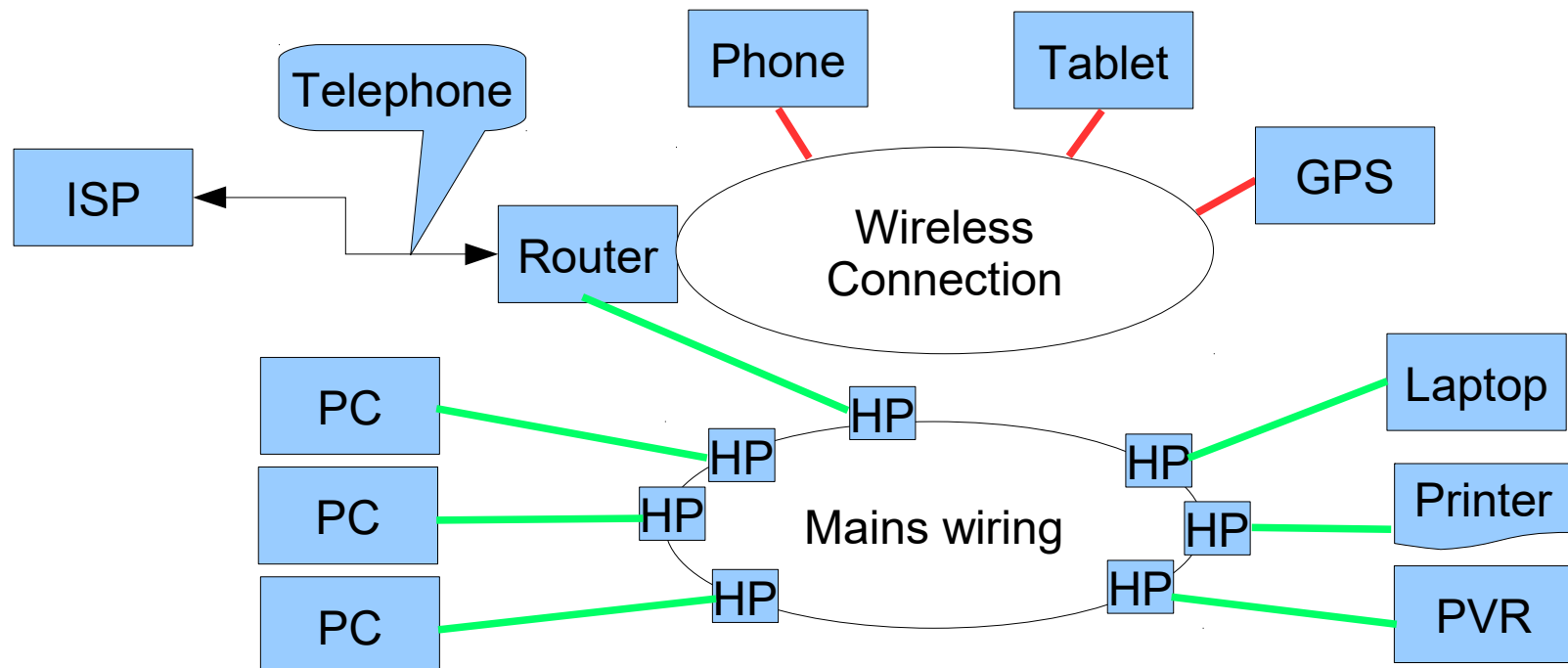
Responsible for:

- Conversion between the LAN and the Internet itself
- Encryption of WiFi messages
- (Probably) a simple firewall to check for unexpected messages types
- Identifying the LAN (its ip address)
- Local Domain Names
- Local host control Dynamic Host Control Protocol (DHCP)

My Network

My network looks more complex because I use Homeplugs (HP) which act a bit like mini routers

Each Homeplug connects 1 device through Ethernet cables. It has its own ip address.



External ip address

The internal ip addresses are controlled by the Router (addresses depend on the manufacturer)

The external ip address is set by the Internet Service Provider (ISP)

- Usually this is variable it is 'leased' for a period of time
- If necessary it can be fixed (possibly at a cost). This is necessary if a Website (or email server) is running on a computer in the LAN

Router Control

Each router display is different, this is mine:

192.168.1.1

UTILITY WAREHOUSE
The Discount Club

Usual address

External Def(s)

WiFi Control

Router	Broadband	Internet Access	Wireless
<ul style="list-style-type: none">Version Aqua (16.3)Device: TG588v v2Serial: CP1645CZ0SU	<ul style="list-style-type: none">Connected9.99 Mbps40 Mbps	<ul style="list-style-type: none">PPP ConnectedWAN IP: 2.103.30.47PPP user: 01442257899@uwclub.net	<ul style="list-style-type: none">TNCAPB72FBB (2.4GHz)
Local Network	Devices	WAN Services	Firewall
<ul style="list-style-type: none">DHCP EnabledGateway: 192.168.1.1Netmask: 255.255.255.0	<ul style="list-style-type: none">3 Ethernet Devices Connected0 WiFi Devices Connected	<ul style="list-style-type: none">DMZ DisabledDynDNS Disabled0 Port Forwarding Rules3 UPnP Rules	<ul style="list-style-type: none">Firewall Level: Normal
Diagnostics	Assistance	Management	IP Extras
<ul style="list-style-type: none">Icons for diagnostics and status	<ul style="list-style-type: none">Assistance: Disabled	<ul style="list-style-type: none">User ManagementLog Viewer	<ul style="list-style-type: none">4 Routes2 DNS Servers

Network Devices

Router can show connected devices

Devices

 refresh data

Ethernet Ports

Port 1	Port 2	Port 3	Port 4
Unknown:6D:E5 Unknown:4A:DF Unknown:4A:E9 Unknown:4A:EA Hilary-Laptop EPSON053983 Unknown:09:B7 DESKTOP-7CGUKU1 Unknown:4A:E0			

Wireless Networks

TNCAPB72FBB (2.4GHz)
Hilarys-iPhone Oregon7xx Caroles-iPad Hilary-Laptop iPad Geoffs-iPhone

Messages

Messages are broken into relatively short parts to reduce the effect of errors.

Each part can take different routes to the receiver (depending on the load on different parts of the network). The parts are re-assembled by the receiver.

Each part is numbered so that the receiver can re-assemble them into the correct order.

Each part is responded to separately so that the receiver can recognise missing parts.

Connection methods

Ethernet

- Simple fast and secure
- Not very flexible, may leave trailing cables and not all devices are supported

Wi/fi

- Simple and flexible
- Can be made secure, may suffer from interference, limited range

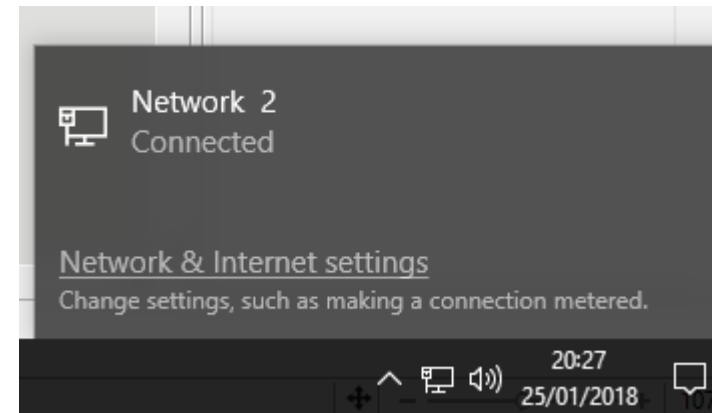
Homeplug (through Ethernet)

- Fast, flexible and secure
- Requires extra devices, initial setup and not all devices are supported

Ethernet status


To see the status of the Ethernet click on  in the 'system tray'

Click on 'Network & Internet Settings' to collect information about the connection.



Settings

Network & Internet

 Status

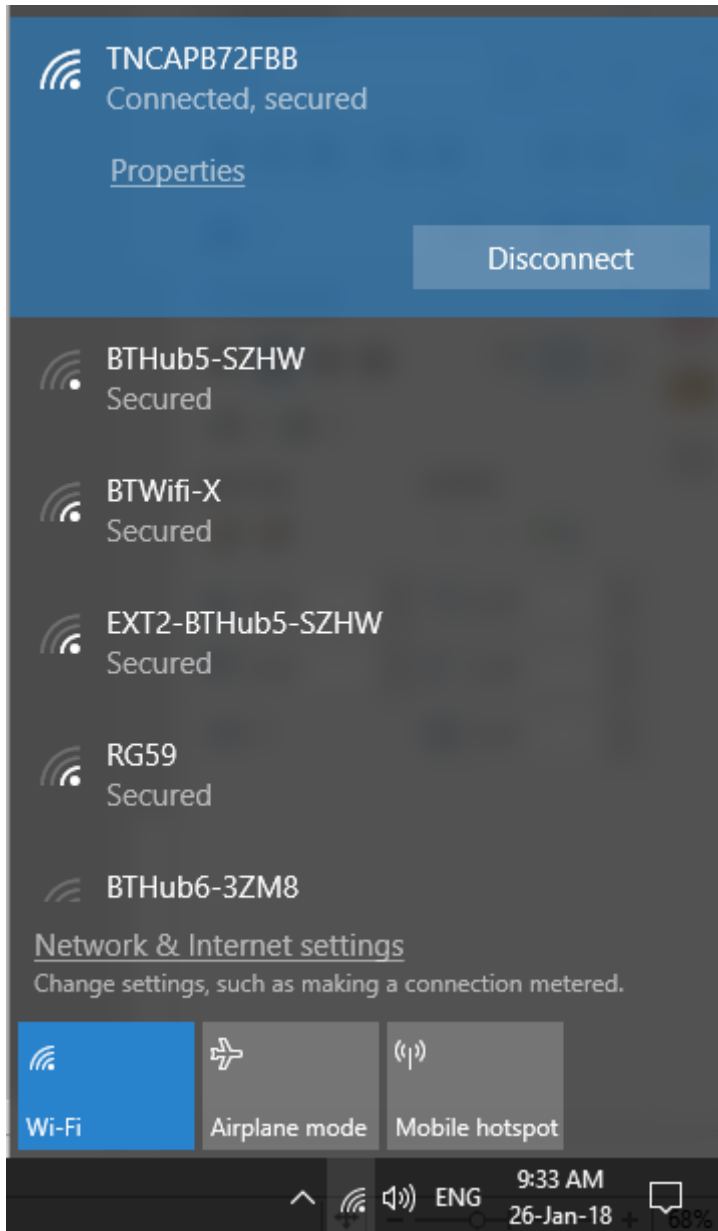
 Ethernet

 Dial-up

 VPN

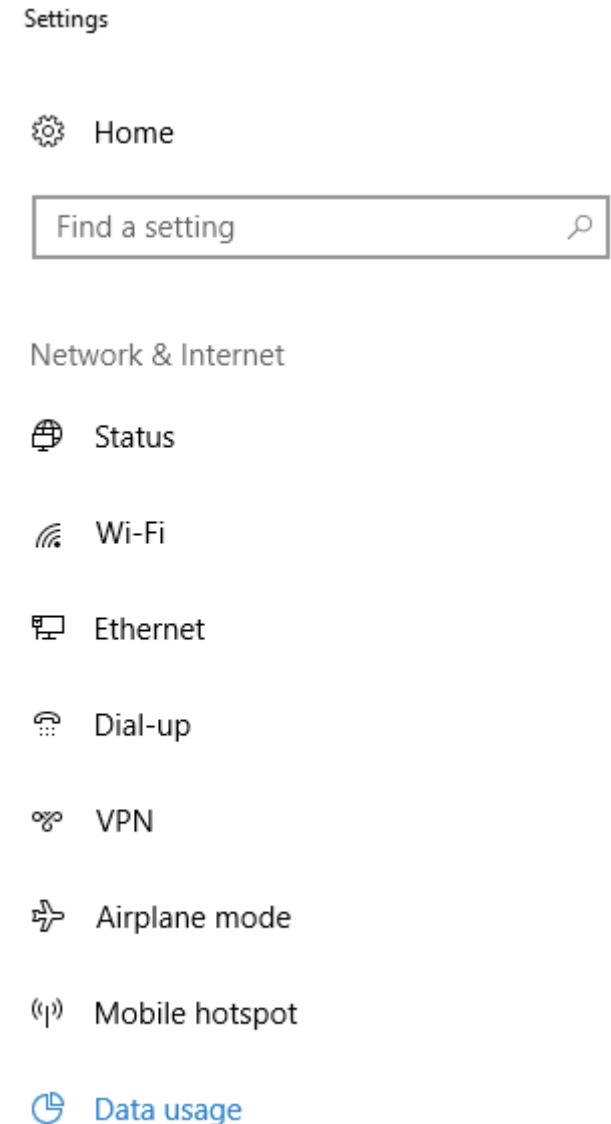
 Data usage

Both Wi/fi and Ethernet



← Available connection list

Network & Internet Settings →



Connection details

'Status' shows
information about
the router

IPv4 address: 192.168.1.238

IPv4 DNS servers: 192.168.1.1

Primary DNS suffix: lan

Manufacturer: Realtek

Description: Realtek PCIe GBE Family Controller

Driver version: 9.1.406.2015

Physical address (MAC): D8-CB-8A-C3-BC-C1

Network Connection Setting

 TNCAPB72FBB

In order to you must set up the ability to show that this computer can be 'seen' by other on the LAN.

Each computer must be set up separately

Setting as a 'metered' connection allows some apps not to connect through this wi/fi

Connect automatically when in range

On

Network profile

Public

Your PC is hidden from other devices on the network and can't be used for printer and file sharing.

Private

For a network you trust, such as at home or work. Your PC is discoverable and can be used for printer and file sharing if you set it up.

[Configure firewall and security settings](#)

Metered connection

If you have a limited data plan and want more control over data usage, make this connection a metered network. Some apps might work differently to reduce data usage when you're connected to this network.

Set as metered connection

Off

Amount of data used

‘Data Usage’ will show how much data has been sent by **this** device in the last 30 days.

Remember, this does not include other devices on the LAN, including mobiles connected through wi/fi

⚙ Data usage

Overview

Total: 11.42 GB



■ Ethernet: 11.42 GB

From the last 30 days

[View usage details](#)

Data usage

Overview

Total: 1.13 GB



■ Wi-Fi: 184 MB

■ Ethernet: 975 MB

From the last 30 days


[View usage details](#)

Current traffic

Also from the wifi or Ethernet page you can select 'Network and Sharing Centre':

Click on 'Local Area Connection' to see access to more status information the amount of data being sent or received.

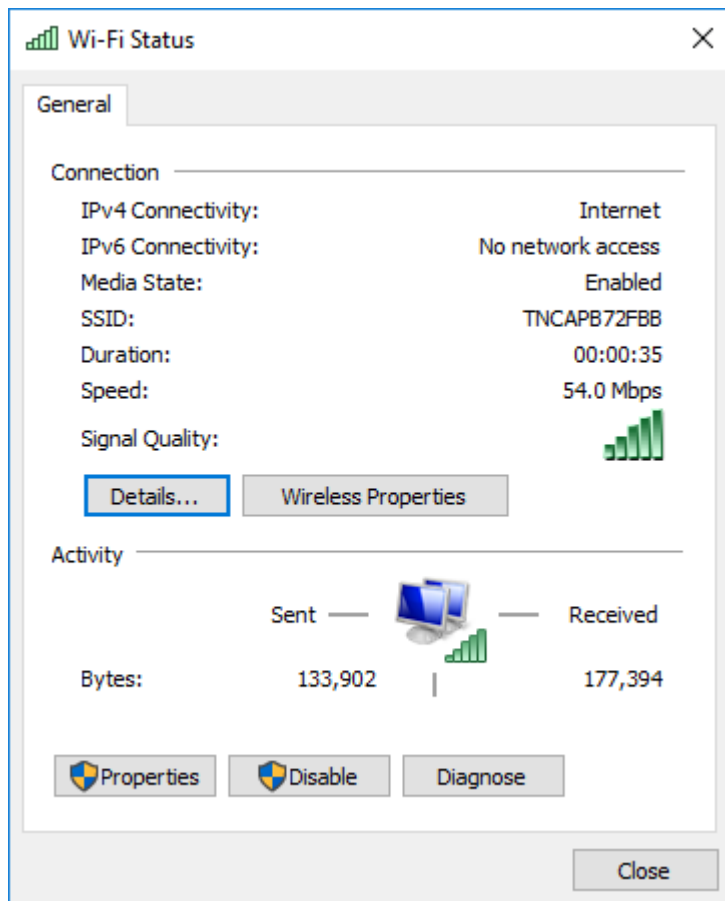
View your active networks

TNCAPB72FBB Private network	Access type: Internet HomeGroup: Ready to create Connections:  Local Area Connection
---------------------------------------	---

Change your networking settings

Current traffic 2


The 'speed' in the theoretical maximum, not the actual.



Wi-Fi Status


General

Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No network access
Media State:	Enabled
SSID:	TNCAPB72FBB
Duration:	00:00:35
Speed:	54.0 Mbps
Signal Quality:	

Details... Wireless Properties

Activity

Sent		Received
Bytes:	133,902	177,394

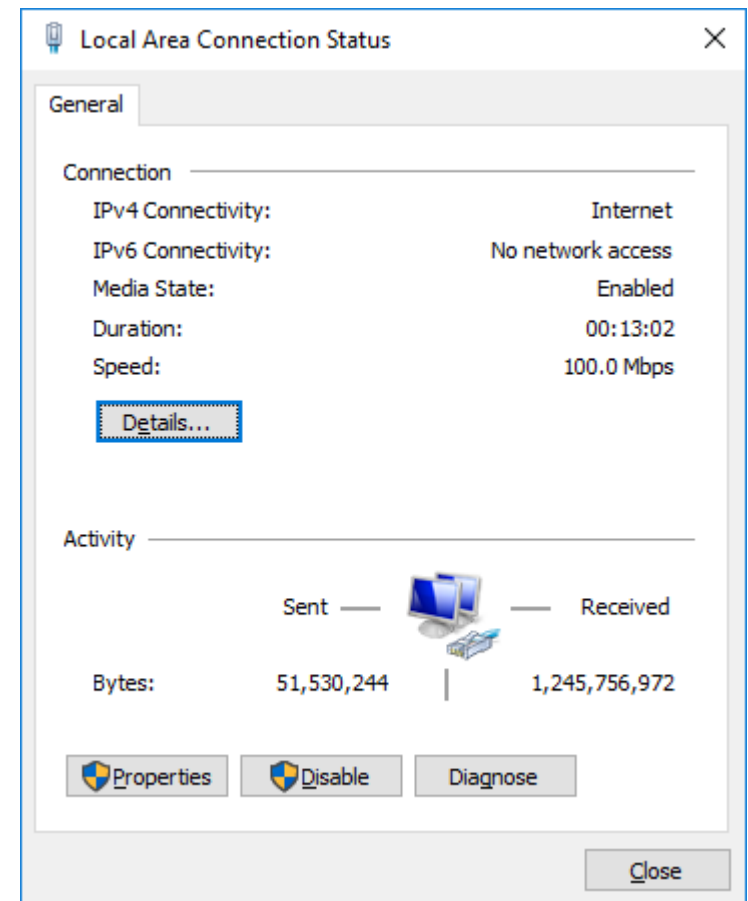
Properties Disable Diagnose

Close

Wi/fi



Ethernet



Local Area Connection Status


General

Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No network access
Media State:	Enabled
Duration:	00:13:02
Speed:	100.0 Mbps

Details...

Activity

Sent		Received
Bytes:	51,530,244	1,245,756,972

Properties Disable Diagnose

Close