



## Common connectivity questions

### Description

# Frequently asked connectivity questions

We've put together some FAQs for common phone and internet connectivity questions across our website. You can also find them all here in the one location.

If you can't find your answer here or across our website, [get in touch with us](#).

## Internet

### 01. What costs are associated with a nbn® Sky Muster® satellite plan?

There are a number of ways costs can be applied to your plan.

- Firstly, your internet plan has **a fixed monthly cost**, which is billed consistently on the same day every month. This date typically marks the reset of your monthly data allowance, ensuring you start fresh each month.
- Your internet service provider might also impose **additional one-time fees**. These could cover setup, equipment (like routers or Analogue Telephone Adapters for VoIP), activation, speed tier changes, or early termination. You should carefully check all the possible fees that may apply to each plan as they differ with each provider.

Look for each plan's Critical Information Summary (CIS) and compare plan costs. These are located on all providers' websites and can be requested in-store. The CIS contains information about the plan, such as the price, fees for leaving the contract early, contract length, download limits, etc.

### 02. How is data managed with a nbn® Sky Muster® satellite plan?

Data allowance, measured in gigabytes (GB), is the amount of internet content you can use monthly. How much data you need depends on what you do and how long you spend online. Basic tasks like emails and browsing use little data while streaming movies or gaming consumes more.

If you use up your data within one month, your provider might slow your connection until the next billing cycle. This is called "shaping." For Sky Muster® plans, some providers offer



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additional metered data blocks, and you can upgrade at any time.

### How data is managed varies by nbn® Sky Muster® satellite plan type:

- With nbn® Sky Muster®, all data counts towards your monthly data allowance at a wholesale level, and there is a set amount per month to use for online activities.
- With nbn® Sky Muster® Plus, plans include different data usage allowances. These plans meter your video streaming and VPN traffic usage between 4pm and midnight. However, all other internet activities on nbn® Sky Muster® Plus plans will not count towards your monthly data allowance.
- With nbn® Sky Muster® Plus Premium plans, you can enjoy uncapped data usage for all your internet activities and a choice of speeds.

Note: Exclusions and fair use policies apply to all nbn® Sky Muster Plus Plans. Visit [nbnco.com.au/skymuster-plus](http://nbnco.com.au/skymuster-plus) for more info or contact a participating phone and internet provider. Contact a participating nbn® Satellite service provider for details on fair use conditions.

## 03. What is metered and unmetered content?

The content you use the internet for is categorised as metered, unmetered, or shaped.

- Metered content counts toward your included monthly data limit
- Unmetered content is not included in your data usage, allowing unlimited usage of included activities without speed changes.
- Shaped data occurs when you've used all your monthly data, slowing your connection significantly.



## Understanding unmetered activities on nbn Sky Muster plans

	Unmetered activities on nbn Sky Muster	Unmetered activities on nbn Sky Muster Plus	Unmetered activities on nbn Sky Muster Plus Premium
Wi-Fi calling e.g. using your mobile to make calls with aeroplane mode on	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
Audio streaming e.g. Spotify and ABC radio	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
Online gaming and software updates	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
Video calling e.g. FaceTime	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
Video streaming e.g. Netflix	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No - only unmetered between midnight and 4pm	<input checked="" type="checkbox"/> Yes
Cloud storage and file sharing platforms e.g. Google Drive and Dropbox	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes*
All PC and smartphone operating system updates incl. iPhone, PC software and application updates	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes*
Certain social media platforms incl. Facebook, Twitter, Instagram and LinkedIn	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
Any traffic related to an application which nbn cannot identify	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes*
Virtual Private Network (VPN) use	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> No - only unmetered between midnight and 4pm	<input checked="" type="checkbox"/> Yes

\*Fair Use Policy and shaping apply.  
nbn will assess whether an installation is standard, because practical and optimal installations differ at different locations. Check with your internet provider whether they have any other required equipment or fees.  
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## Free professional standard installation

nbn satellite equipment is professionally installed, with no charge to providers for a standard installation.\*

**The option to keep your copper phone line active**  
You can choose to keep your existing copper phone line active on all nbn satellite plans.

**Maintenance provided at no cost to providers**  
All nbn Sky Muster satellite plans are supported by nbn's Australian-based quality assured technical support teams that provide on-site visits and maintenance (if required) at no cost to providers.\*

## Participating nbn providers

For nbn Sky Muster, nbn Sky Muster Plus and nbn Sky Muster Plus Premium plans:



For nbn Sky Muster plans only:



## Don't want to worry about data limits?

Consider ordering an nbn Sky Muster Plus Premium plan, where you can enjoy unmetered data usage\* for all online activities - with no monthly data allowance to manage.



Scan the code or visit  
nbn.com.au/SkyMusterPlus  
for more information

To download these images and keep them on record, click [here](#).

## 04. What does Peak/Off Peak mean?

**Standard Sky Muster® plans** metered for all internet usage divide the data allowance between peak and off-peak times.

- Peak hours are between 7am and 1am at your local time (18 hours of the day).
- Off-peak hours are between 1am and 7am at your local time (6 hours of the day).

Standard Sky Muster® plans that offer larger data allowances in off-peak times are often better value for money but may require you to use the internet at a time that does not suit your needs. Peak hours are likely to be the hours when you most want to use the internet.

Visit our article on using off-peak data for tips.



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**Sky Muster® Plus plans** only have a peak period for VPN and Video streaming usage, which is between 4 pm and midnight daily.

**Sky Muster Plus Premium** is uncapped for all internet usage, so there is no peak or off-peak period; you can use any application anytime, as there isn't a monthly data usage allowance.

## 05. Am I locked into a contract with nbn® Sky Muster® satellite plans?

Some contracts are available month to month, while others will have a minimum duration (such as one or two years) with the option to get reduced pricing or to bundle equipment. Longer contracts may not have upfront equipment and activation fees, but may add a charge if you want to end your service before the contract has run its full time.

If you need assistance in understanding a contract, there is good information on the [Australian Communications and Media Authority](#) (ACMA) website.

## 06. Is there a Fair Use Policy in place for nbn® Sky Muster® satellite plans?

**nbn® may have a Fair Use Policy in place to ensure internet connections are used fairly by both the end user and RSPs.**

### How the Fair Use Policy works

Your RSP buys its internet connection from nbn®. It then sells a part of that connection to you. The Fair Use Policy applied to each technology is just one of many policies applied by nbn® to regulate what can and can't be done on the nbn® network.

It aims to ensure the internet connection is fairly distributed among all the customers using it. Your service provider is responsible for ensuring you follow the requirements under the Fair Use Policy. Service providers can also implement their own Fair Use Policies, to ensure that the service they're buying from nbn® can be evenly provided to all their customers.

Please note, this is not a comprehensive overview of the Fair Use Policies, and you should ensure you contact your RSP for more information around the Fair Use Policy in place for your service.

## Phone

### 01. Can I get a landline?



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With the Universal Service Obligation (USO) in place, everyone will have access to a telephone connection of some kind. If you're using the nbn® fibre network for your internet (Australia's National Broadband Network), it will also deliver your voice services. Any previous landline services (like the old copper phone lines) will be deactivated.

However, if you access the internet through nbn® Fixed Wireless or nbn® SkyMuster® satellite, you can choose to keep your existing landline service. We recommend holding onto your standard landline service alongside your internet connection. This ensures reliable communication during all situations, including blackouts, emergencies, or local network outages.

Contact Telstra to find out how to get a landline on your property. When you talk to Telstra about your new landline service, they'll provide all the details on how that service will be set up for you. If you need any help requesting a new landline, feel free to [get in touch with us](#). We're here to support you every step of the way!

## 02. How do I ensure a smooth landline setup?

When setting up your landline connection with a provider, ask them, or the installer, what equipment they provide and additional equipment you might need to pay extra for. For instance, a PSTN (Public Switched Telephone Network) line doesn't automatically come with a phone handset. You can buy a handset from a phone retailer and connect it to your line.

Telstra offers a basic handset for a one-time cost of \$20\* or a \$3\* monthly charge on top of your phone bill. You can pick it up from a Telstra store, select Australia Post outlets, or have it delivered by courier for \$12\*. View more info on [their website](#).

\*(Please note that the costs mentioned here are accurate as of the time of this writing.)

More information

- Landline phones and the USO
- [ACCAN: The USO](#)
- [Australian Parliament House: The Telecommunications Universal Service Obligation \(USO\)](#)

## 03. What are the Standard Telephone Service (STS) plans and costs?

Telstra sets up STS plans to comply with their requirement under the USO. Telstra's national pricing ensures that customers in remote areas pay the same price for a STS as those in cities.

While STS used to be provided as a fixed-line service, Telstra can now offer different technologies, like satellite, for better value and connectivity in remote areas.



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Plans and costs for Next Generation Wireless Link (NGWL), High Capacity Radio Concentrator (HCRC), and USO Satellite connections may not be listed on Telstra's website. It's important to keep copies of all the documents you receive and carefully check your bills for pricing and any unexpected fees or additions.

- Standard Copper Wire Connection: If you're looking for a standard copper wire connection, you can find pricing on Telstra's [Home Phone page](#).
- Financial Assistance: Available for pensioners and eligible Health Care Card holders.

## 04. What costs are involved with a mobile phone?

### 1. Service costs

All plans, except prepaid plans, have a fixed monthly service cost. This fee will be charged to you on the same day every month. These plans include specific things, like a set number of local calls, text messages, data, and national or international calls. You may have to pay extra charges if you use more than what's outlined. The details of these additional costs are in the contract you sign with the provider. Make sure you read it carefully and understand all terms before agreeing.

### 2. Prepaid service costs

In a prepaid plan, you pay for credit that covers your plan's inclusions, which can cost anywhere from less than \$10 to over \$100. Once you've used up all your credit, you can't make any calls or use the internet until you pay for more credit. Depending on your plan and provider, you can still receive calls and usually call your service provider and emergency services even without credit.

Recharging your phone with credit can be done automatically at the same time each month or manually purchased depending on your plan and provider.

### 3. Equipment & device costs

If you're paying off the phone with your plan, this will be an additional cost until you've paid off the device. Generally, all you need is the phone handset itself, plus the SIM provided to you by your service provider. Insert the SIM into the charged phone and turn the phone on. It should immediately see the network, register itself, and be available for use immediately.

### 4. Phone insurance

Plans with a handset may offer insurance against loss/damage. While insurance for your handset is optional, it can provide valuable protection for your phone investment. Customers should weigh the additional monthly cost over the contract's lifetime and consider alternative coverage options to make an informed decision.

### 5. Other extras

When choosing a mobile phone plan, be mindful of the additional features or extras some providers offer for a nominal monthly fee. These extras could include services like add-on data, international calling, or insurance coverage for your device. While these add-ons seem budget-friendly at just a few dollars per month, they can really add up and impact your



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monthly expenses.

## 6. Contract fees

Some contracts are available month to month, while others have a minimum duration (such as one, two or three years). Longer contracts may not have upfront equipment and connection fees but will charge if you terminate the service early. If you need assistance in understanding a contract, the Australian Communications and Media Authority (ACMA) has [useful information](#) on its website.

## 7. Data & extra services

There's no point paying for more data than you need, so it's worth checking your current usage before buying a new plan. It's also worth looking at the extras you can get with some phone plans like streaming services, international roaming, and overseas calls. Some of these may be free, while others may have additional fees. Check the fine print of your contract carefully to determine what you're signing up to.

## 05. Where can I get a satellite phone?

There are many resellers and providers of satphone suppliers and plans. It's worth first looking at Telstra and Optus options and comparing them with other providers. Check for reviews on network reliability, cost, and customer support. These checks are vital to avoid phone issues in a remote area.

- [Telstra](#)
- [Optus](#)

## 06. How much does a satellite phone cost?

Satphone prices vary, whether you're buying a standalone device or a SatSleeve to use with your smartphone. Standalone satphones or SatSleeves can cost anywhere from \$800 to \$1900. If you choose the SatSleeve, remember that it must be connected to a compatible smartphone (which may come at an extra cost) and needs its own network and plan to function.

Post-paid plans are available on all four phone networks, but pre-paid plans are only available on the Inmarsat and Iridium networks in Australia. You can also rent a Satphone unit as a safety option if you have plans to travel in a remote part of the country.

## 07. How much does it cost to call and message on a satphone?

A voice call can range from about \$2 to \$5 for a two-minute call, depending on your network and plan. You can also use SMS and internet data over satellite networks again, costs for these will vary between networks and plans.

## 08. What equipment do I need to use VoIP?



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You can use any of the following to use your internet connection to make phone calls:

1. Regular Phone: You can use a regular old-fashioned phone, but you might need an Analogue Telephone Adapter (ATA) to make it work with the internet. This ATA converts your ordinary plug phone's signal for internet use. Your service provider can guide you on how to set up a VoIP service with this.
2. VoIP Cordless Phone: a special cordless phone system explicitly made for VoIP.
3. Computer Software: If you prefer using your computer, you can use software like Skype. All you need is a headset with a microphone plugged into your computer to make calls over the internet.

Experienced users might explore using a third-party VoIP Service Provider (VSP), usually for more complex VoIP needs or business-related requirements. For most people, the first three options should suffice.

## 09. What are my VoIP handset plan options?

Many Retail Service Providers have VoIP as an optional extra to their plans, possibly with a small additional monthly cost (around \$10-\$20). Like ordinary landline plans, there may be a cost per call. For example:

- Local & National calls : from 15c/call
- Mobile calls: from 22c/call
- International calls: from 5c/call
- 13/1300 Numbers: from 35c/call

Data used to make a call is prioritised over ordinary internet data. This means VoIP calls will be delivered using the best quality service available to you at that point in time. RSPs offer VoIP services of comparable quality to other voice services.

\*These costs are taken from [Ant Communications' Pay As You Go plan](#), which costs \$5/extra per month. Other plans from other providers may have higher or lower prices. They do not include the cost of the VoIP handset and other hardware, which is likely to be a once-off cost of between \$90 - \$200.

## 10. What VoIP computer software plans are there?

Software such as [Skype](#) is free to download and use when the person you want to call is using the same software. Any other calls may come at a cost, calculated as a one-off connection fee or charged per a specific period (seconds or minutes). Some extra benefits may require a paid subscription. Skype is the best-known and most well-supported of the VoIP packages.



## 11. Can I use my current phone number on the VoIP service?

Yes, but it will have to be â??portedâ?• across, which means itâ??s no longer associated with your landline. If you plan to keep your landline as well as using VoIP, youâ??ll need a new phone number for either the VoIP service or the landline. Give us a call if you need further clarification.

## 12. Can I get caller ID, MessageBank and other similar features on my VoIP service?

It depends on your service provider and your equipment. In most cases, yes, youâ??ll have all the same services as youâ??ve had on your landline, except for MessageBank.

MessageBank is owned and provided by Telstra. It works over VoIP, but only on an internet connection (including nbnÂ®) supplied by Telstra. It is unavailable on VoIP services provided by any other provider, including nbnÂ®. Standard Voicemail is still accessible though.

## 13. What about satellite lag?

The dedicated TC1 channel and dedicated VoIP equipment overcome the satellite lag to a certain extent. You may notice a slight delay when making the initial call, but the software does its best to make the service as quick as possible.

- â??Dedicated TC1 channelâ?• refers to a specific, reserved communication channel for a particular purpose.
- â??Dedicated VoIP equipmentâ?• means specialised equipment designed for making internet-based phone calls.

## 14. How much data does a VoIP call use?

An active VoIP phone call uses between 30Mb and 80Mb of data per hour. It varies depending on your service provider and equipmentâ??s â??codecâ?• (coder-decoder). Codecs compress the data sent during VoIP calls, promoting lower latency and higher audio quality.

There are two codecs used in Australia:

- G.729. This is the most common and a lower-quality codec. The TC1 channel can support up to four simultaneous calls at the same address using the G.729 codec. Each call uses about 30Mb of data per hour.
- G.711. This is a higher-quality codec. The TC1 channel can support one call at a time using this codec. Each call uses about 80 Mb of data per hour.



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\*VoIP calls are unmetered on nbn® Sky Muster® Plus plans. Note that the [TC1 channel](#) is not available with Plus plans at the time of writing.

## 15. Do I have to use my current service providerâ??s VoIP service?

No. There are third-party suppliers of VoIP services, generally to support business or complex phone setups. Theyâ??re called â??Voice Service Providersâ?•, or VSPs.

However, going through your service provider is generally the easiest option. Discuss your requirements with your trusted technical advisor to make the best decision for your needs.

## 16. Can I make emergency calls on my VoIP?

Yes, but check that with your provider before ordering your service.

# Equipment

## 01. How do I know if an antenna will work for me?

A desktop site survey can assist you with determining if there is mobile reception in your area, and what equipment might be needed to get connected.

We can do a free connectivity report to determine if an antenna will help in your particular situation.

Companies such as the two mentioned below, or a local antenna expert, can also conduct a desk check for a fee (as prices do change, check their website for current costs):

- [Telco Antennas](#)
- [OnWireless](#)

Their report will advise on likely signal levels, the sort of mobile services available, the best antenna and extension device for your location and where to point your antenna. These businesses can then put you in touch with a specialist in your area who understands the requirements for your state.

## 02. Where do I get antenna equipment and advice?

The following companies can provide equipment and advice, and even installation in some cases:

- [Telco Antennas](#) â?? Advice, equipment and installation
- [OnWireless](#) â?? Advice, equipment and installation
- [PowerTec Technologies](#)â?? Equipment provider



- [NB Tec](#) ?? Equipment provider ?? offers a licensed solution that is a modem/antenna and booster in one that can connect to Telstra, Optus or Vodafone mobile networks.

## 03. What is 4G MIMO and why might I need it?

MIMO (Multiple Input Multiple Output) is a radio frequency technique that can double a 4G carrier's bandwidth. When you install a MIMO antenna, it could potentially double the download speed at your location. For example, the Wi-Fi routers in your home use MIMO to speed up local Wi-Fi transmissions. You would only use this type of antenna to improve 4G mobile broadband data use, not for improving mobile phone calls.

- See Telco Antennas for further details on [MIMO](#).
- Still need more info? Check out Telco Antennas [Frequently Asked Questions](#)

## 04. What indicates a good signal?

Your device measures signal strength in dBm (decibels per milliwatt), while 4G/5G signal strength is in RSRP (Reference Signal Received Power). Typically, 4G RSRP levels show about -20 dBm lower than your previous 3G RSSI (Received Signal Strength Indicator) levels.

For example, 100dBm (RSSI) would equate to around -120dbm (RSRP). RSRP provides a more accurate signal strength as it focuses solely on the usable signal, excluding noise and network interference.

So, even though 4G RSRP readings might appear lower, it does not mean your signal is weaker.

A general guide to signal strength capability:

<b>-50dBm to -90dBm</b>	Strong signal (stronger signals are possible)	Fast data
<b>-91dBm to -105dBm</b>	Good signal	Fast data
<b>-106dBm to -112dBm</b>	Fair signal	Useful and reliable data speeds may be attained
<b>-113dBm to -125dBm</b>	Reliable data possible	Performance may be slower, increased latency
<b>-126dBm to -136dBm</b>	Unreliable data	Performance will drop dramatically
<b>-136dBm to -140dBm</b>	Unreliable data	Disconnection

## 05. How do I choose an antenna?

There are a few things to consider when choosing and installing your antenna. Unless you are a technical expert, it is best to get assistance from an expert in this process, as some of the below



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steps can be complicated.

- **Selecting your antenna**

1. You need an antenna that works with your service provider's network. The chosen antenna must have appropriate directional gain for the terrain you're using it in. For example, high-gain antennas work best in flat areas with fewer obstacles to the signal path, like in the outback. Medium gain antennas reduce obstruction from buildings, trees or mountains.

In contrast, unity gain antennas don't change the received strength and are less obstructed by buildings, terrain or bushland, so they typically get used in rugged and hilly countries. You can learn more about directional gain [here](#).

2. Where there are several competing towers, an omni-directional antenna might be suitable.
3. For some locations, a good internal antenna placed in a suitable location by a window may be all that is required.

- **Choosing your antenna location**

1. While time-consuming, it is worth testing your signal in several locations with the antenna to find the right spot.
2. Outside signals can be detected with your mobile phone, but this can require complex processes depending on your mobile type.

For example, you can easily access this information on an Android device. However, iPhones require you to enter a code.

3. You can use the signal bars on your device to indicate signal strength. However, viewing your signal through dBm (decibel milliwatts) is a better indicator. The signal level will display a negative value in dBm. The lower the negative value, the stronger the signal, e.g., -81dBm is stronger (better) than -89dBm.
4. Ensure that the mobile phone and modem you are using are from the same network or service provider.

- **Choosing a suitable mast/pole for your antenna**

Your TV antenna may be suitable, but if it is not in the best location for the signal, you may need to consider installing a separate pole/mast. Consulting an expert at this time may be required.

- **Positioning a directional antenna**

1. Your desktop signal survey will have located the towers which service you.
2. Use Google Earth or similar to determine the direction of these towers from your location.
3. Point your antenna accurately by using local landmarks that indicate the direction of the required tower. You can also use a compass to identify directions identified from Google, or there are apps that can assist such as [Aus Phone Towers](#).
  - [Aus Phone Towers \(3G,4G,5G\) Apps on Google Play](#)
  - [Aus Phone Towers \(3G,4G,5G\) on the App Store \(apple.com\)](#)

- **Protecting your antenna**



1. A gas arrestor may assist in lightning protection of your equipment.
2. Install a gas arrestor and grounding (as required).
3. Seek professional advice for optimal installation of these devices. Contact your equipment provider.

- **Final checks**

Once the installation is complete, re-check the signal level and fine tune the antenna direction by using your indoor modem, hotspot mobile phone or Cel-Fi repeater signal level screen. This will also check that your coaxial connections are solid and correct. Coaxial connectors and long cable runs cause signal loss. Good quality connectors and well planned cable runs minimise this.

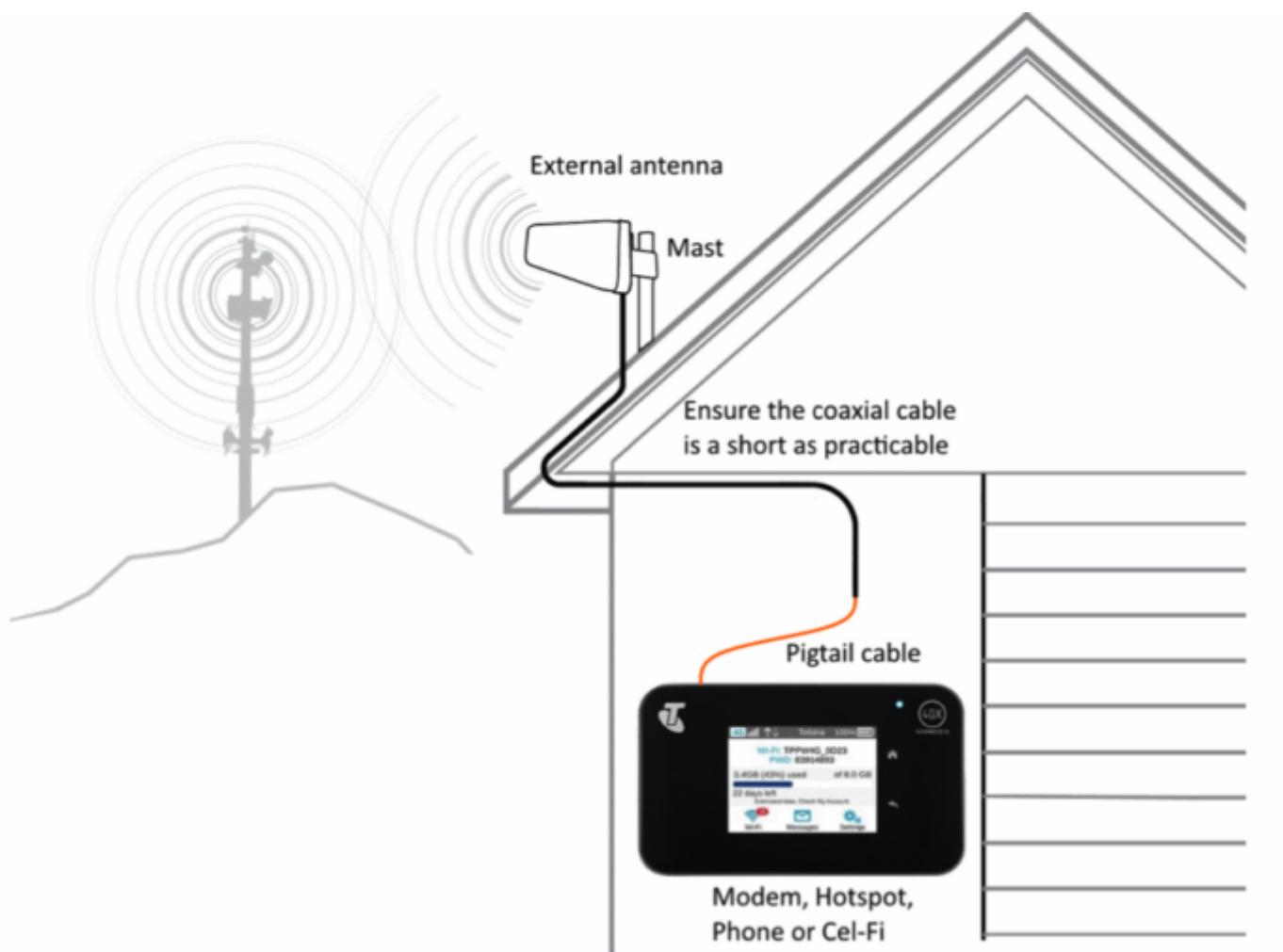
1. Use N-type connectors where possible; for example, in the antenna to cable connector.
2. Ensure all external connections are waterproofed with self-amalgamating butyl rubber tape.
3. Ensure the coaxial cable run from antenna to equipment is as short as possible and is the best lowest-loss cable you can afford. It is no good installing a great antenna only to lose precious signal and potential performance by using poor quality, high loss coaxial cable or having an extremely long cable run.

- **Locate the phone, modem or Cel-Fi device as close as possible to the antenna.**

- **Choose the correct pigtail to interface your coaxial cable to your modem, hotspot, phone or Cel-Fi repeater.**

1. The pigtail is a short flexible piece of coaxial cable which adapts the antenna cable connection to your specific device.
2. If a MIMO antenna is used, you'll need to install two cable runs.

For more detailed information on antennas, visit [Telco Antennas](#).



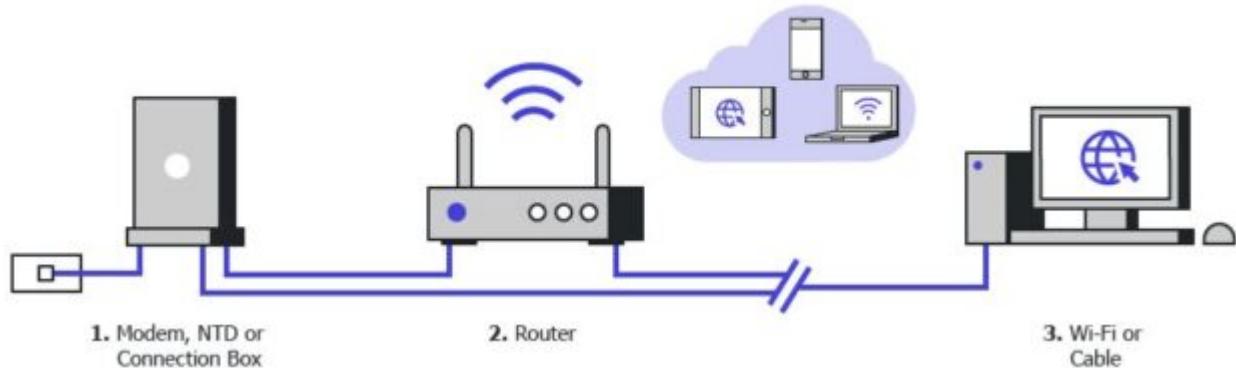
A typical external antenna setup

## 06. Do I need to upgrade my router?

Routers can become less reliable as they age. A replacement after four years is recommended. If you experience any of the following situations, and identify issues by testing your router through a few troubleshooting methods, it might be time to purchase a new router:

- Poor performance – your Wi-Fi is dropping out, you're having speed issues, or your Wi-Fi signal is noticeably reduced.
- Your white router is turning yellow/brown from overheating
- If you're switching connection types, or trying to improve connectivity around your house, upgrading your router might help. Contact your new service provider and your trusted technical advisor.

## 07. How do I set up my router?



## Internet connection

1. The external line connects first to the **modem, Network Termination Device (NTD), or connection box**. You can connect your computer directly to this box with an ethernet cable.
2. The modem, NTD or connection box may then connect to a **router**. Sometimes the modem is combined with a router in the same box.
3. The router sends the internet connection to all your devices, either wirelessly (through **Wi-Fi**) or using an **ethernet cable**.

This example is for a separate internet connection box (modem, or Network Termination Device, depending on the sort of connection you have), router, and all other devices.

- The external line connects first to the modem, Network Termination Device (NTD), or connection box. You can connect your computer directly to this box with an ethernet cable.
- The modem, NTD or connection box may then connect to a router. Sometimes the modem is combined with a router in the same box.
- The router sends the internet connection to all your devices, either wirelessly (through Wi-Fi) or using an ethernet cable.

## 08. Are all routers the same?

All routers have standard features:



- Power source: Most will have a cord that runs from the device to mains power, but some smaller units are battery-operated.
- Ethernet ports: This is where the internet connection is received from the modem (if it's a separate unit), and plugged into the device using an ethernet cable. Routers for nbn® Sky Muster® connections must also have a WAN/internet port that supports DHCP (Dynamic Host Configuration Protocol), which assigns each device with an IP address so devices don't clash on the network.
- Antennas: Most routers now send and receive Wi-Fi signals. Many routers have an antenna to improve reception. These can be inside or outside of the device.

Not all routers are suitable for use with all internet connections; you may not be able to repurpose an ADSL router for an nbn® connection, for example. Always check with your supplier that the router you're looking at will support the connection you're using.

## 09. Can a router help manage my data usage?



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You may be able to install specific software or firmware on your router (depending on your device) to help assist managing data usage to some degree. The software works by allowing you to monitor the traffic coming from specific devices, or what remote services are using data. Some routers also have options to increase security across your network.

We recommend you find a trusted network advisor to assist you in installing and managing this software as it can be quite technical.

Some popular data management firmware suppliers are:

- [Gargoyle](#)
- [DD-WRT](#)

For more information on monitoring network traffic, you can visit the following sites:

- [How to Monitor Network Traffic](#)
- [How to Monitor the Bandwidth and Data Usage of Individual Devices on Your Network](#)
- [How to Monitor Your Internet Bandwidth Usage and Avoid Exceeding Data Caps](#)

## General

### 01. What can the Regional Tech Hub do for me?

Regional Tech Hub offers personalised one-on-one support through our phone line, booking system, connectivity reports, and escalation forms. Explore a wealth of resources and troubleshooting guides about mobile, internet and other technology options, and keep up to date with latest technology advancements and news.

### 02. How do I get in touch with the Regional Tech Hub?

There are a number of ways to get in contact with us, depending on the kind of support you need. Visit our contact page for more information.

### 03. What is data?

Everything on a computer takes the form of a file.

This file has a size thatâ??s measured in bytes (b), kilobytes (Kb), megabytes (Mb), gigabytes (Gb) etc.

When you view content, or do anything, on the internet, youâ??re actually transferring files from the remote system across the network and into your computer or device.



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These files are known as **data**.

## Uploads and downloads

Data is both uploaded and downloaded.

- When you're looking at things using an internet connection – watching movies, playing games, doing your banking, reading emails, doing research – **you're downloading data**.
- When you push information into the internet – managing a website, sharing work with other people, sending emails – **you are uploading data**.
- Some online activities upload and download data. For example, making a video call through programs like Zoom, Skype, Whatsapp or FaceTime.

Most internet plans have faster speeds for downloaded data than they do for uploads.

If you send a lot of information over the internet, such as sending a video or high-quality image file, you need to pay more attention to your upload speeds and inclusions than someone who is sending emails and uploading the odd social media post.

## Why does it cost money?

Data takes up space. It requires storage at the remote system, and it takes up space as it's transferred to you. Even if the content didn't cost anything for you to access it, it still costs someone money when it travels into your computer, or TV, or iPad.

## How much do I get?

On average, a household watching the odd movie, using email, doing web research and browsing, can expect to use 50Gb – 80Gb of data per month.

**Included data**, or your **quota**, is one of the parts of a broadband connection plan. It's generally measured in gigabytes (Gb) these days, although you might still find some very basic mobile plans measured in megabytes – Mb (there's 1000 Mb to one Gb).

Some plans allow you **unlimited** data. That is, you can use as much as you like during a month. There is always a compromise, however; you may have to pay a lot more than the average plan, or you may be speed-limited after a certain amount of data has been used.

Many plans available to rural, regional and remote customers will specify the amount of data you can use each month – they are **metered**.

**nbn** Sky Muster Plus satellite service plans differentiate between specific kinds of data, allowing some to be metered – that is, counting toward your monthly quota – and others to be



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unmetered. Broadly speaking, streaming audio-visual services such as watching videos are metered; everything else is unmetered.

### **What can I do if I've used my quota for the month?**

What happens after you have used your quota for the month will be outlined in your contract from your internet service provider.

Your service provider may:

- slow down (shape•) your connection speed to a level that only supports email and very basic web browsing.
- allow you to purchase more data (this can be very expensive).
- suggest that you upgrade your internet plan to the next level• up. This upgrade will apply until you manually change it, and will generally take effect at the beginning of your next monthly billing cycle (although some providers do offer mid month plan changes).
- cut off access to the internet entirely (this usually is only relevant for pre-paid mobile plans).

You can often upgrade your plan through your provider's customer portal.

For further information, contact your RSP.

### **Can I get it back?**

No. When you've used it it's gone, even if you didn't mean to use it.

See our pages on Controlling data usage, and Using off-peak data for some suggestions on managing your data inclusions.

### **Want to know more?**

- Controlling data usage
- Metering
- Nbn Fair use Policy

## **Didn't find the answers you were after?**

Chat to us on our hotline with one of our team members and let's get the conversation started. If we don't answer, we'll get back to you in no time at all.

[1300 081 029](tel:1300081029)

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