



## Newsletter No 22

September 2019



### Introduction

A thank you to all my customers but especially to my regular customers, some of whom have been my customers for over ten years.

My website [www.perthpc.com.au](http://www.perthpc.com.au) gets quite a bit of traffic and the link to this newsletter is hosted on that website as a PDF that is uploaded. The website is hosted by Sensis Yellow Pages and is very safe.

I cater for small to medium sized businesses, home offices and home users. My business is people as much as it is technology, if not, more so. I need to deal very carefully with the different knowledge levels of different customers and like any professional to take actions and make recommendations that are in my customer's best interest.

I now have a Blog which is basically a place where I can put articles often brief but that may be of interest to you. I update this from time to time.

<https://www.perthpc.com.au/blog>

I also have a Facebook page which you can access using the following link

[www.facebook.com/ashtontechnology](http://www.facebook.com/ashtontechnology).

I put links in here back to the blog or maybe just post something topical. Please check it out.

The newsletter is a bit long and can be more complex for some people than is ideal. I suggest just reading what you are interested in and asking questions if necessary.

If you have a question that you want to ask, I invite feedback and if I answer your question, I can include it in my Blog or next newsletter.

I'm also starting to more actively promote my own custom-built desktop systems as I have had one too many issues with mass produced systems from retailers caused by either hardware or software issues. It isn't the retailer's fault but just the nature of retail computers.

I do recommend a lot of customers to Harvey Norman in Joondalup and I often advise customers and help them get the best deal possible that matches their needs.

I also remind people that I have a BSc (Hons) degree and post graduate qualifications in Computer Science and Microsoft qualifications also as well as a National Police Clearance.

It is worth putting this into newsletters from time to time. You are paying for getting qualified and professional help from a trusted technician.

## Scams

Finally, scams are a big deal and I think getting worse each year, the Christmas period was very busy with people getting scammed. These scams operate by phone and email. Anyone phoning you and wanting uninvited access to your computer or any personal details should be suspect. Emails can often intimidate by sending email purported to be from your own account threatening you and extorting money from you. It doesn't hurt to change the password just in case but mostly these are just empty threats.

I recently heard about a scam that started by phone and involved agreeing to download an app onto their phone. Once downloaded within seconds \$9000 was stolen from their bank account. I don't know any more details, but it does go to show just how sophisticated and brazen these people are.

Yesterday I was at a customer's home. Several issues meant we needed to contact Telstra. We reset the modem amongst other things which meant that the phone connection was lost. The problem was sorted but typically Telstra will call back to finalise the ticket. A call back was received but it sounded phony, he did not use the customer's name and after handing the phone to me, it was obvious that they didn't know what the problem was. We subsequently confirmed with Telstra that the call hadn't been initiated by them. The scammers somehow knew though that we were expecting a call back from Telstra. Call me suspicious but I wonder if they had access to Telstra call logs. This has happened before and the customer in that case lost a lot of money.

Passwords are important and you should either keep them safe in a notebook, secure document or use a Password Manager such as LastPass (I use this). The problem with re-using the same password is that if you do get compromised then you may not know which site was compromised, causing you to change many passwords and likewise they may do some guessing and get access to more than one site. Often criminals will give you a compromised password as evidence that they have hacked you. This is where using the same password for years on many sites now puts you at risk as many websites are not that secure (say hobby websites and so on). It pays therefore to protect valuable sites with different passwords,

reducing your exposure and giving you the location of the site where your password may have been compromised.

Phishing is where a fraudulent email pretending to be from your Bank, PayPal, Telstra, FedEx, Australia Post and others gets you to login into a fraudulent web page, giving the criminals your username and password. Caution is required in replying to any email. If you have any doubts you can always initiate a contact yourself rather than using the email link.

I have listed some ways to recognise scam emails:

1. The sender address may look similar to a real one but isn't valid i.e. `service@paypal.com.au`
2. The greeting will not contain your name
3. It may contain an attachment which is rare for legitimate emails
4. It may contain click on links (although legitimate emails sometimes have these too)

Two-stage authentication such as when a notification is sent to your mobile phone can also be overcome in this way. The criminals then log into say your Paypal and an authentication message is sent to your mobile phone which you then approve. Now they have complete access to your account. It is easy to prevent though by simply not allowing the access unless you are sure it is legitimate. It shows that even responding to texts are an issue. Most two-stage authentication takes place at the time of your transaction in real time such as from your bank.

Overall the threats are significant as many activities are now all done online including MyGov for health and pensions and ATO Tax portals for businesses. Institutions are fighting back by requiring extra Two-Stage Authentications which really do work but are potentially extra work for people.

When on internet be careful just what you click on, you may be downloading software that takes over your computer! If in doubt, just google the name of the software or website to get feedback on whether it is safe or not BEFORE clicking!

Remember that most of the time, if crooks get your credit card or bank details, it is because you gave it to them.

Current security software and backups of your data are also recommended to protect your files and photos from scammers.

If in doubt I can check your computer for potential vulnerabilities and scan for malware.

## Viruses and Security

Viruses and malware (a generic term for invaders that aren't viruses) are a significant issue for Windows users.

The best steps to prevent issues:

1. Windows 10 does have built-in Windows Defender which is free. It is still a good idea though to buy a paid antivirus, especially if you use your computer for your business. I recommend ESET.
2. Watch for opening email attachments that don't come from trusted sources.
3. Don't go onto dodgy websites even if the girls look inviting.
4. NEVER give bank account or credit card details over the phone unless you are 100% certain who they are. PAYPAL is recommended for online payments.

I would recommend using CCleaner for cleaning and Malwarebytes for checking for malware web browsers.

<https://www.piriform.com/ccleaner/download>.

<http://www.malwarebytes.org/mwb-download/confirm/>.

I am a reseller for ESET security products and it has been a really good move for my customers.



The most common product I sell is ESET NOD32 Antivirus for \$104.90 for 3 years. It is a good product and a good price and of course there are other products also.

ESET is not only an excellent security product but I keep your subscription details safe and can email you the complete information you need, download links, passwords and activation codes by a single click from the portal.

Another advantage is you can easily upgrade any subscription and add users at any time and for very reasonable prices. It cost a user for instance \$53 to add an extra user for 3 years. You can also upgrade or even downgrade products, they are very flexible. Multi-device products are available which cover Android or Google products such as Samsung tablets and phones in addition to your computer.

I have also become a reseller for Kaspersky. It uses the same portal as for ESET and I get excellent support for users, and I am looking forward to giving customers support for Kaspersky products also.



## Setting up New Computers or Devices

A significant part of my business is setting up new computers; transferring data, installing printers, wireless, and setting up accounts, antivirus and other programs.

A major problem for me setting up computers bought from retail shops is that they are often not tested properly and contain software or hardware defects that can cause a lot of issues for the customer. I now encourage customers to let me check these in my workshop first and install the latest updates. This can save a lot of heartache and expense.

In my opinion, people undervalue getting a new computer set up properly in the first place. It can save you a lot of trouble and I make sure that all questions are answered, and it is set up just the way you want it.

I suggest that if you want a new system setup by me...

1. Write down all user names and passwords that I may need.
2. Locate critical software such as Microsoft Office and Security Software (may be just a user name and password for an online account).
3. Make sure you know what email addresses you are using and are 100% sure which email program you are using.
4. Any critical business software such as MYOB or Quicken make sure you have all licensing information to hand and have checked compatibility with the new operating system.
5. Prioritise what you want done.

I allow 2.5 hours setup time included in the price of *my new desktop systems* and 1.5 – 2.5 hours is the typical setup time required.

## Custom Built Desktop Systems

I supply desktop systems for both home and business use.

Businesses almost always go for a desktop system, but I find home users often do too. A laptop is necessary though if you want portability.

Advantages of desktops are:

1. Longer system life due to replaceable parts.

2. Off the shelf parts availability for minimum downtime.
3. Superior performance due to more powerful CPU and memory.
4. Easy to upgrade memory, drives.
5. Harder to steal. A lot of thefts are opportunistic and quick so devices that get stolen are usually laptops.
6. Can put extra drives inside for backups.
7. Can be rebuilt without replacing entire system.
8. Can use any type of screen or size and even multiple screens with a wide range of connection options e.g. DisplayPort, HDMI, DVI and VGA.
9. More inputs such as typically six USB ports, Ethernet ports and multiple screen connections, HDMI, VGA and DVI.
10. I have found systems bought from retailers full of junk you don't need and occasionally hardware and software faults which can be a major problem. In my opinion they don't test them, just mass produce them.

The standard systems I sell are perfect for most customers even for demanding tasks.

The systems are built to the following priorities:

- Quiet
- Power Efficient
- Reliable
- Fast
- Upgradeable

I think all these things are important.

All my Standard Systems include 2.5 hours' installation time and are high quality systems. These systems are suitable for home or business use. I use the best quality components including 80PLUS Gold rated power supplies and Intel CPUs (much faster and more energy efficient than AMD but more expensive).

I concentrate on the basics and get them right. I use 8GB RAM now for new computers. Graphics cards are a waste of time for most people unless you want to play games or do intensive graphics work in which case I suggest spending at least \$500 on a good graphics card. A cheap graphics card is useless for gaming. The graphics built-in to the motherboard are plenty fast enough for most applications.

I use Samsung SSD drives for storing data. The reason is performance. An SSD can be up to 1000x faster than a normal mechanical hard disk drive you get in a computer. They are also much more reliable.

I also sometimes use M.2 SSD drives subject to price and availability. These are even faster and mount directly onto the motherboard. One is pictured below.



Cases are something that people don't think much about. The truth is it is mostly air inside, but a slightly bigger case gives room for future expansion. You may want extra drives or a graphics card, for example. A standard desktop PC can also be repaired the same day using off the shelf components, an important consideration for both businesses and home users.

I am now using the Jonsbo Quiet Angel case for my new system builds. This replaces the Fractal R6 which had availability issues and I found that this case is lighter and cheaper but very good. It is very similar to the Fractal in that it has filters and soundproofing. The case is extremely well built and robust and has a top reputation. The case also has easily removable filters for cleaning at the top and front. Soundproofing is also built into the unit with the result it is dead quiet. It only takes one annoying fan to be...well...annoying. As computers get older of course, some noise may creep in. I am VERY impressed with this case. The case dimensions are 232W x 523D x 464H. There is a front door, which is soundproofed but opens to reveal the DVD and front filter. The air filters really do work as I have found out inspecting customers systems after several years.



If you have a good quality case and power supply, it makes it an easy and sensible proposition to upgrade the system at some point in the future rather than throwing the lot out and buying a new one.

The systems use Asus or MSI motherboards, which are high-spec motherboards with a wealth of connections on them and are of high quality. I am a fan of Intel CPUs. The i3-8100 CPUs are very powerful with quad core processors running at 3.6 GHz. This is a MUCH FASTER CPU than any laptop or AIO is capable of running.

The standard system I am offering is \$1490 with GST and includes 2.5 hours setup at your home or office. This has 8G RAM, 250G SSD and the i3-8100 quad core processor. The faster i5-8400 adds \$130 with GST to the cost and is a six-core processor. Please note that the prices are subject to change due to availability of parts and variations in the AUD.

My systems also have DVD Burners standard. These are often left out of systems that you buy but are still useful for most customers. I personally find them handy still and you'll find most new laptops lack these.

I recommend adding \$130 for a 2 TB backup drive, installed inside the case. This makes backups easy and stress free. If you have an external drive, you want to use then fine. Backups are essential to prevent data loss and subsequent heartache.

The warranty is 12 months and covers hardware issues but not software issues (generally). The warranty isn't officially 'on-site' but much of the time I find myself coming out anyway as customers are often not comfortable plugging and unplugging things.

The nicest thing about a custom-built system is you can have anything you want, and I will make sure that what you get will be exactly what you want and need. The systems will also be reliable and made from the best components I can find, refined over a period of years.

## Servicing

People ask me if a regular proactive service is a good idea. The answer is it is a good idea. I find it isn't just the computer that needs servicing, but people also need advice on changes in technology. I often help people setup email better, backups, security, phones and tablets in addition to issues on their computer.

Customers also accumulate annoying issues over time. I suggest just writing them down and when they annoy you enough, give me a call!

I always do security scans to double check that nothing is running on the computer that could be harmful as well as checking security software, windows updates and programs that are running that may be slowing down your computer (and that you don't need).

Many of these programs can also be downright malicious and these are termed **Malware** although the term also includes viruses. These programs may change your home page, pop up ads to annoy you and redirect your web searches. In some cases, of course, the malware can steal data or damage your operating system, rendering it inoperable.

I also check that important programs are up to date, that your security is up to date and working and that all windows updates have been done.

I check all backups are working but honestly 75% or more of non-business customers do not do backups. It means unfortunately, in 10 years or so time, most people will lose files and pictures by one means or another, it takes just one event. Business customers are more careful, and they need to be.

Dust build-up in desktops can cause the CPU to overheat. The critical area is the heat sink, which sits on top of the CPU. It may take some years for this to happen or maybe not at all, it just depends on the environment. It is worth checking yourself and can be cleaned using a compressor. I don't recommend a brush or a vacuum cleaner, a compressor is safer as no contact is made with components.

## Service Charges and Call-Out Jobs

It is important for call out jobs that you are prepared. If I am sorting an Internet issue, please ensure that you have your internet connection tested by your ISP before possibly wasting your money. You will also need to ensure that you know what your username and password is otherwise you can waste quite a lot of time.

It helps to write down the problem or problems that you are experiencing and to prioritise the list.

If your internet is slow also let me know. I sometimes use a hotspot from my phone to speed things up where I can.

I generally work 9 to 5 Monday to Friday but do Saturday morning jobs, if available at normal rates.

## NBN

Yes, you should upgrade to NBN as soon as you can. It will be faster and more reliable, or this is what I have found with my connection here in Woodvale, and also talking to customers who have it. People are sometimes unlucky of course but then so were customers prior to NBN. I see no reason not to make the change.

VOIP is the replacement for copper line phone technology and so now you hook up your phone through the new NBN modem. This generally works fine although it is another reason that people drop their landlines altogether. A mobile phone will work during a power failure while a VOIP phone won't. Mind you neither will a powered portable phone with power being needed for the base.

<https://www.nbnco.com.au/>

Please check out resources on the NBN link above, you will get a good idea of some of the issues involved.

One important issue is to make sure that the modem is placed where you want to place your

cordless phone base and your computer. The NBN contractors will often put it where they want to put the modem. It can be a problem for HFC connections using the Telstra Cable and Foxtel connections.

Telstra and possibly others also have handsets that connect directly to your Wi-Fi without needing to be plugged into the modem/router supplied.

### **Wi-Fi Issues**

These can be very annoying but there are a few ways to cover bigger houses. The first is if you have a choice of where to place the modem/router is to place it centrally. It sounds simple and is but, in some cases, it isn't considered. NBN with their HFC (uses the Foxtel/Telstra coaxial cable), just come in and if you either are not using Telstra cable already may just place the modem where the Foxtel installation is or was or simply put a hole through the nearest point to the road and put the modem there.

One solution for about \$200 - \$250 is to get someone in to run ethernet cable to a more suitable point in the house. At this point you can then plug in a switch or Wi-Fi Adapter, depending on whether you want just ethernet or a Wi-Fi connection.

Ethernet over Power adapters also work well supplying ethernet through the household wiring and I have supplied a few of these.

Mesh is a Wi-Fi system you can install one or more Wi-Fi adapters throughout your home or business, and it will behave as a single Wi-Fi SSID, instead of two separate Wi-Fi networks each with a different SSID (station identifier). These can be expensive but work well.

I have found in a few situations that the problem is caused by interference from other Wi-Fi close by. I can test for this.

Finally, a more powerful Wi-Fi router or Wi-Fi adapter may provide the solution with more powerful antennas and better electronics giving greater range.

### **Email for Home and SOHO**

I am a big fan of online email such as Microsoft Mail (addresses ending in live.com or outlook.com or Hotmail.com) or others such as Gmail. I think these are fine for most users. The most important

thing you can do though is to carefully record your passwords and make sure you have up to date additional security such as mobile phone numbers etc.

If you sign onto your Windows 10 computer with your Microsoft Account (it is better if it is linked to a Microsoft email account, create one xxx@outlook.com if you need to), it will set up your online contacts, calendar and email online so you never have to worry about losing email, contacts or calendar information. Very handy and easy. The next best account to use is a Gmail account if you are using the free Windows mail account it should synchronise google calendars and contacts too although it doesn't with Microsoft Outlook.

An even easier way is simply to access your email via your web browser as both Microsoft and Google have good online webmail systems.

Any online email account will synchronise with any other computers, tablets and devices you have which is a big advantage to many customers.

### **Email for Business Users**

If you have a domain name, then your email can be setup on hosted Microsoft Exchange with iiNet or Microsoft. It is currently \$6.95 per month with iiNet for one email address. These accounts are not only very secure but are very easy to setup, have out of office messaging and even deleted message protection if you accidentally delete an important message.

A domain name is any name you choose and costs next to nothing but must be renewed every year. Some people have a domain name for their personal email using their own name, it doesn't have to be a business. It is about \$15 every two years.

I find many home and business users seem to want the emails to be stored on their computer using what they call POP (Post Office Protocol). It simply checks periodically, say every 15 minutes whether there are any emails. It then drops the email into a folder which exists on your computer then periodically clears the message off the server. It is very simple and basic. Every ISP (Internet Service Provider) provides this service. This is fine but doesn't work so well if you want to SYNCHRONISE your emails across say a laptop, desktop, phone and tablet. I can in many cases set these email

accounts up as an IMAP account which does do this synchronisation by storing the email on the ISP server (say Telstra server).

If you set up an online email account such as Google or Microsoft Hotmail/outlook then make sure you include contact numbers and preferably also an alternative email address in case of forgotten passwords.

## Two Factor Authentication

This is a way of additionally securing your email by requiring you to give additional log in information on another device such as a phone or tablet. This makes it impossible to merely use a password to get in on a new device. It is commonly used on Gmail and Microsoft email accounts.

Microsoft, Apple and Google both provide authentication applications that run on phones and iPads. Using these you can easily authenticate who you are.

You will be familiar with these maybe from banking apps that you use that will require two-factor authentication in some situations such as transferring large sums. It may also require authentication if a new phone or computer tries to access your bank account.

## Password Storage

Recording passwords means you can vary passwords and don't fall into the trap of making all passwords the same with the result that one leaked password can give people access to everything. I think even writing them down and hiding the bit of paper or on a notepad, somewhere in your bookshelf is safer than having the same password used for everything. It is very important that you record what each username and password is for and that it is clear, concise and kept up to date.

The other thing to consider is to keep your security questions written down also as these may be required. You will find that Hotmail and Gmail will sometimes send you reminders to update your security details. It is a good idea to do this as you could one day find you lose access to your own account! It is a good idea to change your passwords occasionally, if you can.

Consider PayPal too for online transactions as you can use PayPal for a wide variety of online

transactions without having to give out your credit card details each time.

I should also add that there are many free and paid applications to store your passwords for you. I use a product called LastPass and it costs just a few dollars per month to use. It runs on phones, iPads and computers so it can synchronise across all of them.

## Spam

Spam is a fact of life and can't be prevented entirely.

I would use 'unsubscribe' only for companies you recognise.

Marking spam as junk and blocking the sender is another thing you can do. This won't stop it coming in but will redirect it to junk where you can then periodically get rid of it. If you have most of your spam going into the junk folder, even if you can't stop it coming in will help keep your mail folder much smaller.

Remember to empty your junk and deleted items folder regularly. I sometimes see customers who have stored thousands of emails in the deleted items folder and junk mail folders. It gets to the point where it is hard to monitor.

Microsoft Outlook has different settings for spam filtering so make use of this filter to reduce clutter in your Inbox.

Remember any filter requires that you check your junk folder for any legitimate emails that have got through.

## Backups

Backups are essential to not only protect your data, but also to help prevent downtime and cost as your software is reinstalled.

Look at it this way, if you lose everything on your system would you be upset? If the answer is 'yes', then you should be doing backups.

I will also say that 80% of all the documents, photos etc. on the planet stored in people's computers whether they be a desktop, or a laptop won't exist in 10 years' time. Over 20 years I would guess that figure will increase to over 90%. The reason is people just assume that their photos and valuable documents, videos etc. will always be

safe but they aren't. They can be lost through carelessness, theft, fire, viruses or equipment failure. Backups are essential if you have a business but still very important if you have documents and photos of a personal nature that you don't wish to lose.

Backups are of two types, disk/partition images and, files and folders backup. The image will be a snapshot of your entire disk including all operating system files and programs, as well as most likely your data (although this could reside on another drive). An image restore will have you back as your computer was at the time of the last backup, as though nothing had happened. A files and folder backup won't backup operating system files or programs but will save your data (provided you put it into your user profile, that is desktop, documents, music, pictures etc.).

Data loss can result from drive failure, but malware, fire and theft are other possible causes. One backup therefore should be in a data safe or another physical location. The more valuable the data is; the more steps should be taken to protect it.

A backup can be a simple copy and paste or may use software such as Windows 7 backup or file history built into Windows 8.1 and Windows 10. Software programs that you pay for such as Acronis True Image or Backup Assist, will give a more comprehensive range of backup options but takes more effort to setup and understand.

Windows 10 uses 'File History' and this is activated by simply using Search to find it and then turn it on.

Obviously in both cases you will need a suitable location on which to do the backup, either a second drive inside a desktop or an external drive or a network storage location such as on a NAS.

Any critical business software should be backed up in more than one location.

I should note too that Windows 10 Backup doesn't give you any reporting, so it is up to you to check that the backups are running.

I have tried a few backup programs now and after some time and trialling have decided that Acronis True Image is the best package and I use it myself. I don't resell this but merely offer it as a

recommendation. It currently sells for \$69.99 AUD which is excellent value.

<https://www.acronis.com/en-au/homecomputing/thanks/acronis-true-image-2019/>

It does need some setting up and monitoring though. I set it up for customers so that notification messages are emailed to them

### **Cloud Storage**

This is a topic that seems to strike fear into many customers, yet it can be the very thing that makes everything you do much easier and more secure.

We all think that everything is safer on our computer than on say a Google server or a Microsoft Server yet that isn't true. People underestimate the risks of what they are familiar with and overestimate the risks of what they are not familiar with.

I have customers who lose ALL their photos and documents at least on a monthly basis, all gone either encrypted, overwritten or on a dead hard drive, yet the thought of giving data over to a cloud server is somehow more frightening.

### **Travel Guide for the Internet**

I have done a travel guide already on my blog.

<https://www.perthpc.com.au/travel-guide-for-internet>

I could add to this the section in this newsletter on [Two Factor Authentication](#) as a way of securing your emails further. This works with Gmail and Microsoft emails.

## Home Entertainment

Many of my customers have Smart TVs and Media Players. I can help setup and install these devices or provide the advice you need to make decisions.

Wi-Fi connections are fine but if you can use cabled ethernet, it is better. I use Ethernet over Power Adapters together with a five-port switch at home and have connected Foxtel, the DVD player, the Apple TV and the TV itself to this hub.

## Network Attached Storage Devices (NAS)

The three options for businesses and homes to share files locally (as opposed to public cloud products such as OneDrive and Dropbox) are:

1. Linux based NAS.
2. A standard PC running Windows 7 or Windows 10.
3. Windows Server running on a PC.

The Linux NAS and I use exclusively Synology as I am familiar with these, are an interesting choice and are getting more popular year on year for both business and home users. The latest NAS from Synology are using Intel Celeron quad core processors which are very powerful and will even transcode 4K video. They have more than enough power for most any task.

An advantage of anything Linux based is generally reliability and much less risk of hacking or malware. Windows is a huge target for hackers and it is a complex operating system too. The NAS have a well- deserved reputation for being bullet-proof reliable.

The number of disks required is determined mainly by storage requirements. These days a 2 Bay NAS with two 4TB NAS drives will give a total storage of 4TB which is adequate for most homes and businesses. If more storage is needed you can go for 4 or even 8 Bay NAS devices which can give huge amounts of storage. This would give storage of 12TB and 24TB respectively. It does this while providing RAID 5 or RAID 6 (for 8 drives) protection for your data so a simple drive failure won't destroy your data.

There are a multitude of other functions that a NAS can provide:

1. Backups of other computers

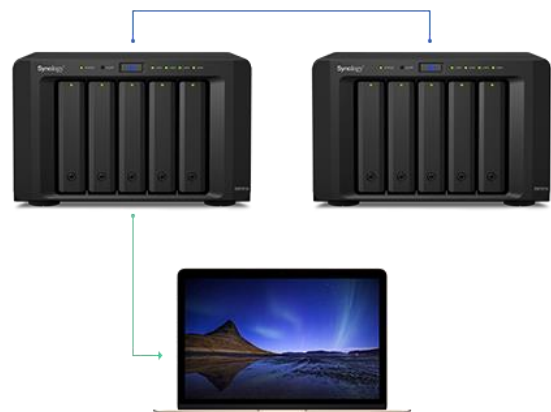
2. Private Cloud (making Documents, Photos and Music available to your laptop, tablet or phone while travelling)
3. Music, Photo and Video streaming to Apple TV and similar on your local network.
4. A download station for files (safer than using your computer)
5. Set up your own Web Server
6. Email Server

The NAS itself does require backup, either to another NAS, cloud (such as Datto) or an external HDD plugged into the USB Port.

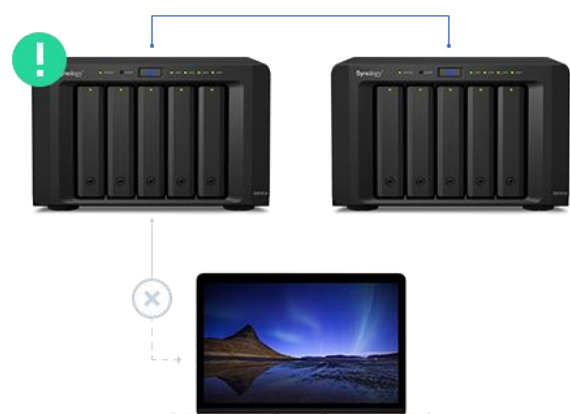
If you are interested, then please contact me for further information.

## Synology High Availability Cluster

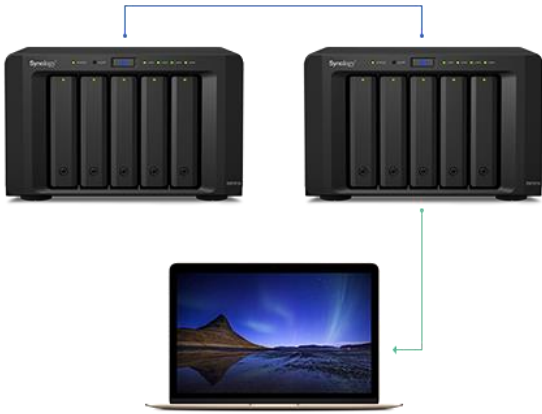
This is called the Synology High Availability Cluster. One NAS will take over if the other unit experiences a fault so the risk of downtime, any at all, is a low possibility event. Each NAS is RAID protected so a disk failure will mean business as usual and the drive is replaced when convenient.



Normal situation - left server is active



Active server is experiencing an error



Right server becomes active and start re-syncing

If you run a business and can't afford downtime due to a file server this is definitely the way to go and I have several businesses using these. It is the most reliable system you can have except for very high end Windows Server Cloud based systems.

Users can be assigned access or not to folders containing data shared on the NAS, each with their own password.

Remote access is also made easy by Synology applications that run on phones and computers.

### Datto Backup Systems

Datto are a U.S. company but have servers and an office here in Sydney. I have dealt with them frequently and they are extremely helpful and professional.

These can be used to backup a NAS, Windows server or individual computers and they have a variety of devices which backup locally then out of work hours back up to the cloud.

NBN helps now as the upload speeds are 10 – 50 times faster than ADSL.

These Datto systems provide quarterly round trips of data (if you have a large amount) whereby you they send a hard drive which is plugged into their device and then returned to them and it is loaded and synchronised with your existing cloud backup.

These are available from \$140 per month with GST for the basic Alto model which contains just one Hard Disk Drive of 2TB. The backup is instantly retrievable from the machine in your premises, but it is also additionally backed up to the cloud for added protection in event of water or fire damage or theft. Datto maintain the data servers in Sydney.

The amount you are paying of course includes up to 2TB cloud storage.

I have trialled and tested this system for my own business, and it works very well.

I believe with NBN a lot more businesses can afford to use the cloud for a variety of services including backup. A computer and backups can both be taken, during a break-in or by fire and flood. A cloud backup is the safest option for a business or even a home if you can justify it.

The device can also handle Linux and Mac computers as well as a PC, so it is all covered.

The management system for these devices is of a high standard and easy to use and weekly backup reports can be generated.

The Alto is the base system, but they also have other systems at higher level so please enquire for details. A NAS for instance is available which is ideal for backing up the Synology High Availability Cluster.

### Windows Servers

A normal Windows PC can function as a file server and destination for backups. This can be a good option if you have a spare computer in the home or office.

Windows Server normally means using Windows Server software and a sophisticated RAID setup and the power to enable multiple users to access the server simultaneously. These are very specialised and tailored to the needs of individual customers.

Windows Servers are serious business machines executing many functions including allowing access to a remoted desktop while not in the office, running applications from the server, as well as file sharing and backup. SQL Server databases are hosted by the Server.

A visit to your business will be necessary to determine your needs.

## Retail Printers and Computers

I often refer customers to Harvey Norman in Joondalup and advise them or occasionally even purchase equipment on their behalf.

The most commonly purchased items are laptops, All-in-Ones and printers. I do custom desktop systems but if people want a less expensive system then they can also purchase desktops from retailers such as Harvey Norman.

The most simple and reliable printer is a monochrome Laser printer. These are cheap, both to buy and run, they are quiet and very reliable.

If you need colour, then the two choices are a colour Laser printer or an inkjet. An inkjet is simple and cheap although it may cost a bit to run. A colour Laser can also be costly to run but is generally quicker and lasts longer as well.

The other consideration is whether you want a document feeder and whether you want duplex scanning and/or printing.

You can also buy high volume inkjet printers with refillable tanks but these cost about \$600.

Bigger businesses often lease quite elaborate printers with extra functions and high throughput capabilities.

I recommend Intel based Laptops such as the i3/i5/i7 and a Solid-State Drive (SSD). An SSD is not only very fast but very robust and this is important for a laptop as Hard Disk Drives (HDD) are easily damaged by even small drops when running. A laptop costing about \$900 is adequate.

## **Credit Cards and EFTPOS**

I now accept credit cards with NO extra charges (thanks to changing my Merchant Services provider) and EFTPOS for payment. This makes life simpler for me and it is probably more convenient for customers as well, as the handling of cash is reduced.

## **Hours of Work**

I am available 7 Days and Evenings but obviously outside normal times, I won't always be available. Please try not to call before 8am in the morning or after 8pm at night. I have my phone on silent during these times.

I do charge extra for call out work outside of 9-5 Monday to Friday or on weekends and Public Holidays. Saturday morning, I will do call out jobs at no extra charge by prior arrangement. I do understand most people must work for a living, so I do make allowances. I also have business customers who can't afford to be off-line for very long.

## **Contact details**

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