

Newsletter No 20

September 2018



Introduction

My website 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.

I cater for small businesses, home offices and home users and this is a different market to big offices with servers with say a dozen or more employees.

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 also have a Facebook page which you can access via www.facebook.com/ashtontechnology.

I put links in here back to the blog or maybe just post something topical. Reviews can be posted here if you wish. 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 promote my own custom-built desktop systems more as I have had one too many issues with mass produced systems from retailers ranging from hardware to difficult to fix software issues.

[Custom Built Desktop Systems](#)

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

You may have read on Perth Now website, the following article from the 20th September...in which 1000 Australians got scammed on the Android Phones and Tablets using bogus banking apps. It should never have happened, but it was ESET, the security product I supply that found and reported it first. I am a reseller for ESET that provide security for Android phones such as your Samsung, LG etc.

[ESET Discovers Bogus Google Banking Phone App Scam](#)

A lot of my customers are getting scammed. Please don't accept any phone calls for anyone to **remotely service or access your computers**. I have had customers give bank and credit card details on the phone to people they think are from Microsoft or Telstra. If you give out details on the phone, the bank may not cover you for losses incurred so be very careful.

I have had Telstra customers scammed by scammers who have been able to access Telstra customer records. They target people who have recently contacted Telstra and know who you contacted and what the problem is. The customer has then given them bank or credit card details and their accounts accessed, and money taken. I took the trouble to report this to federal police. The person on the phone suggested, "lobby government to keep the call centres in Australia where they are subject to Australian law and we can enforce it". Interesting but not much consolation. I'm sure we would all like to keep these jobs in Australia and can speak to people whose English accents we can understand.

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.

Please note that most antivirus software checks websites and places a green tick next to them if they are OK. This is good insurance against dodgy websites.

Please never open email attachments or reply to them unless you are SURE.

Scams to get you to supply login details, birthdates (for identity fraud) or other personal information is a NO GO area unless you are 100% sure of who you are dealing with. If in doubt get their phone number, check it against the organisation on the internet before responding. You will also find fraudulent emails from Telstra, Banks, FedEx, Australia Post and others. Some of these are nasty and will destroy valuable data using crypto locker software then blackmailing you to get access again to your data.

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.

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. You will see at the start of the newsletter that 1000 Android users got scammed via bogus apps downloaded from the Google Play store.

[1000 Australians get Scammed from Google Phone App](#)

I have also become a reseller for Kaspersky, but this has only just happened. 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.

One of my most often asked questions is whether a desktop these days has been rendered redundant by AIO (All-in-Ones) and laptops?

The short answer is 'no' and desktops have the following advantages:

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.
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 which is standard now for good quality 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 will now be using M.2 NVMe based SSD devices for storing data. These are mounted on the motherboard and are just a wafer less than one mm thick and half the size of a credit card. The reason is performance. An M.2 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.



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 many businesses and even home users.

I am now using the Fractal Define R6 case for my new system builds. 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 and I fit i5 processors to my systems. The i3-8400 CPUs are very powerful with quad core processors running at 2.8 GHz. This is a MUCH FASTER CPU than any laptop or AIO is capable of running. I also offer the i3-8100 CPU as an option which runs at 3.6GHz and is quad core...and \$100 less, \$1590 with GST.

My systems also have DVD Burners standard. These are often left out of systems that you buy but are still useful for most customers.

The systems include data transfer, basic setup AND 2.5 hours on site at your home or business to set up printer and to do anything else that you may require. It is important that the system is setup just the way you want it to be.

The prices are \$1690 for the standard system with the 250G SSD option. These prices include GST. This will be for a six core Intel i5 processor although the i3 model is fine and drops the price by \$100 to \$1590 with GST.

I recommend adding \$110 for a 1TB 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. 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 user name 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.

The following article on my website might be a bit convoluted for some but have a look.

<https://irp-cdn.multiscreensite.com/e12f43a0/files/uploaded/NBN%20The%20Verdict.pdf>

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.

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 (using Windows Mail), automatically. 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 account 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 and Google both provide authentication applications that run on phones and iPads. Using these you can easily authenticate who you are.

Passwords and Security

The method I use to remember passwords is to store them in a password protected Excel spreadsheet. This 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.

Consider PayPal too for on line transactions as you can use PayPal for a wide variety of online transactions without having to give out your credit card details each time.

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.

I should also add that there are many free and paid applications to store your passwords for you.

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/>

This link can be used to download a trial. Remember it does take some setting up and it requires quite a bit of backup space.

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 more scary?

Desktop Systems versus Laptop and Tablet Systems

It is worth discussing this separately as opposed to burying it inside another section as I have done in my earlier newsletters.

Powerful electronics are now found in phones and tablets but really the process of offering more powerful electronics in smaller packages has been going on for many years now.

Desktop computers still run the most powerful processors and give users the most flexibility for future expansion. They run the most powerful processors as they have the room in the case for heat dissipation.

Another thing to note is an i7/i5/i3 processor in a laptop is not as powerful as a desktop, even though the designation looks the same. Very few laptops sport quad core processors whereas all i3 desktop processors are quad core and i5 processors in desktops are now six-core. The difference in performance is BIG. They will also consistently run faster clock speeds that would make a laptop melt.

Computer Buying Recommendations

General

You need to consider whether a computer is going to be your primary device for working on or is just a secondary device to take with you on holiday or work or just down to the café. A desktop is best for serious work. The size also means that thieves unlikely to take them if you do get broken into. Laptops can be attached to a desktop screen, but you also need to provide power, keyboard and mouse and use it in 'clam shell mode'.

If your device is portable then size, weight and battery life are all considerations as is price. If you want to use a device in brighter light, then low screen reflectivity and brightness are both important considerations.

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.

Desktops

If you are going to buy a desktop, then either get a generic system that can be repaired by any qualified technician using off the shelf parts or get an on-site warranty (such as one supplied by Dell). The problem with buying name brands such as HP and Asus, Dell, Acer etc. is that the parts are not

necessarily off the shelf components greatly complicating getting the desktop repaired, once out of warranty.

A desktop may or may not include extras such as screen, keyboard/mouse and webcam.

All in Ones (AIO)

An all in one is quite tempting as they offer touch screens, look tidy and come complete with all accessories. They work well enough and are good where the computer is visible and public, and the customer wants it to be tidy with as few cords as possible.

They are just another computer but typically have a mixture of laptop type components that cannot be easily replaced, or fixed, except by the manufacturer. If you buy one of these just make sure you are covered by a good on-site warranty.

Touch screens on an AIO, adds quite a lot to what you are paying. I find though, in practice, that touch screens do not get used that much on an AIO. Touch screens are ideal though on laptops where the screen is right next to the keyboard.

The main advantage of an AIO is it looks better on a desk in the living room with fewer cables while providing many of the benefits of a desktop. Extras such as cameras, keyboard and mouse are all supplied.

Tablets

I personally enjoy an iPad but my use is just email and web browsing. It is my preference for a tablet but Android has a lot to offer as well (and generally lower pricing).

Android tablets vary hugely in price but there is plenty to choose from. There are a huge range of applications available for Android devices, as there is with iOS too.

Laptops

People often ask me about brands. Dell give the best on-site warranties but places such as Harvey Norman also give excellent replacement warranties although you must pay extra for them. I recommend that you do. Asus and Acer have a good reputation also as does, HP and Lenovo.

One issue I do have with retail computers of any make is that sometimes they do come with software or hardware faults. If I set them up for you

I would encourage you to let me check them out and do all updates at my workshop before doing anything else. I have had too many machines that come with problems that ruin the customer experience and cost extra time and money.

I advise Intel i5 based laptops as a good middle of the road system giving good performance but not too expensive.

If you want very *compact* laptops, with high resolution IPS screens and SSD storage then these devices can get very expensive, often well over \$2000.

I think at the bottom end of the market in laptops be very careful that it is fast enough. A customer might say that performance is not important but when you get a very slow laptop, you may just change your mind and it is too late.

A laptop with electronic storage (an SSD) is both extremely fast AND robust especially for a laptop. A normal mechanical HDD can be damaged easily by a sharp knock or a small drop of even an inch. I would recommend a 250G SSD for most users.

Screens

I would for desktop use, recommend 24-inch screens. These are 1920 x 1080 and have become a standard for the desktop. If you want top quality then you can purchase an IPS screen, which will give brighter images and better contrast, colour reproduction and viewing angles. Expensive IPS screens often offer higher resolutions also.

I find generally though, even, a standard \$200 Asus 24-inch HD monitor is fine for most people.

Laptop screens are obviously much smaller but bear in mind that you can always output a laptop image to a big desktop screen and run the laptop in 'clamshell' mode. The IPS screen again offers many advantages in laptops but are more expensive.

Office 365

Office 365 is \$99 for Personal and \$129 for Home covering five users. I think smaller home-based businesses may find this suitable.

The subscription, gives you, all the Microsoft Office products plus **1000GB OneDrive storage**.

You can download Office for iPad, iPhones or Android phones, which some people may find useful.

Each user can have their own Microsoft account and you simply send them the link to download and use the product. This means five employees or members of the family can use get Office. The subscription is controlled and accessed through your Microsoft account. You can deactivate and reassign each of the five users you are allowed at any time. You can also get Office for Mac if you are an Apple Mac user.

The other advantage of subscription software is you will always get the latest product without extra cost.

Office subscriptions for Business offer much more including Hosted Exchange email, for your domain-based email and even online conferencing. The business version of OneDrive is more fully featured and includes SharePoint features for sharing and collaborating on documents.

Printers

A laser printer is still the best way to go. I would generally say avoid colour or consideration of photo printing unless you really need it. The reason is a mono laser printer is cheap, fast and very reliable to run.

If you must go colour, then Brother colour lasers are good and generally run well on generic toner.

If you need a business printer then I strongly advise get an MFC that has a feeder and does duplex scanning as well as printing. Very useful. I have just purchased a Brother MFC-L2750 and it works well. I use a Brother HL-3170DW for colour printing (it does double sided printing). It costs under \$300 and you get a lot of value for what it does.

If you wonder why I don't combine both and just get a colour laser, it is because colour laser printers are always slower and are quite expensive as an MFC printer which combines both print and scan duplexing functions.

Inkjet printers seem fragile to me and I think unless you really want colour and photo printing, a laser is better. Remember that photo printing is best done by putting photos on a stick and going to

Officeworks, it is better and a lot cheaper than an inkjet. Inkjet colour refills are also expensive, and I would NOT recommend using generic ink refills.

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 purchase decisions.

It is important to consider how to connect these devices to the internet too and Wi-Fi is not always the best method to connect. I find Powerline adapters and a five-port hub is a good solution for connection and avoids the time outs you can get with Wi-Fi when downloading media.

NAS (Network Attached Storage) Devices

The three options for businesses and homes to share files locally (as opposed to 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.

I recently put in place a dual NAS active/passive server setup for a business. 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.

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 or an external HDD plugged into the USB Port.

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

Datto Backup Systems

This section is relevant to businesses rather than home users.

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 been testing a system for business Backups from a company called Datto. The system works well, and I think it will be useful for both home and business customers who have valuable data to back up.

The system they have caters for slow ADSL connections. They have a service called a 'round trip' which are included in the monthly subscription up to three times per year. They send a drive which plugs into the local backup device they provide then it gets couriered to Sydney where they use that to synchronise your backups with the cloud. The cloud backup can also be setup to backup to the cloud say only out of business hours or on the weekend to avoid internet congestion. This is important on slow ADSL connections.

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, literally 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. I think that the Alto is fine for most small businesses though.

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.

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 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.

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