

>PC Update

October 2020



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Publishing Information



The newsletter of

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Online membership form

Responsibility for content in this newsletter lies with individually named authors

Please remember to always bring your membership card to meetings

SIG Listings and up to date calendar are available on our homepage

Editorial October 2020



Hugh Macdonald

Welcome to the October issue of PC Update!

There's a lot of focus on Microsoft Windows in the club, and therefore in this magazine. And rightly so. It is used by over 80 percent of desktop users in Australia. However there are alternatives to Windows. The main one that members might want to consider (if they haven't already) is Linux.

Linux dominates everywhere else except the desktop. It powers a majority of Internet servers, and it underpins Android, the world's most popular smartphone operating system. So this month PC Update is taking a closer look at it on the desktop. Quite a significant number of members have contributed short pieces on why they use Linux, and why they prefer it to Windows. I've also written about my recent experience of switching some of my computers to Linux. Plus John Nelson has provided some helpful tips on some of the most useful Linux programs you can install. Most of the suggestions are available for Windows too, so if you're not a Linux user, check them out anyway.

Apart from that we have all the usual segments such as the President's Report, Yammer highlights, DOTW winners and the East SIG report.

Enjoy!

From The President October 2020



David Stonier-Gibson

There is very little new to report that hasn't already been reported via all-member emails, namely:

AGM deferred

As Secretary John Swale has already advised, we have decided to defer the AGM until 3rd February because we could not find a satisfactory way of running an AGM online and complying with the statutory requirements for an AGM. This means that this month's committee meeting will be the last "normal" meeting. After that we enter caretaker mode, and can make no major decisions or policy changes. Rest assured this does not preclude continuing work on the club rooms as soon as the Covid rules allows us access, as the budget already has provision for that.

Transition to G-Suite

I sent out an all-member email a few days ago with an update on the transition. It was also posted on Yammer in the All Company group. One thing that came out of that was that a number of people had reacted negatively to a very important notice about their email being redirected to yourname+migration@melbpc.org.au. It is essential that you do not attempt to reverse that redirect setting, lest you lose emails.

On a brighter note, we have had 3 or 4 people come forward and offer to assist with member support. That could make a significant difference, as quite a few members need that little bit of hand-holding to make the change smoothly.

Monthly Meeting October 2020

The August 2020 Monthly Meeting was held online on Wednesday 7th October 2020, with approximately 125 members in attendance. This was the program for the evening:

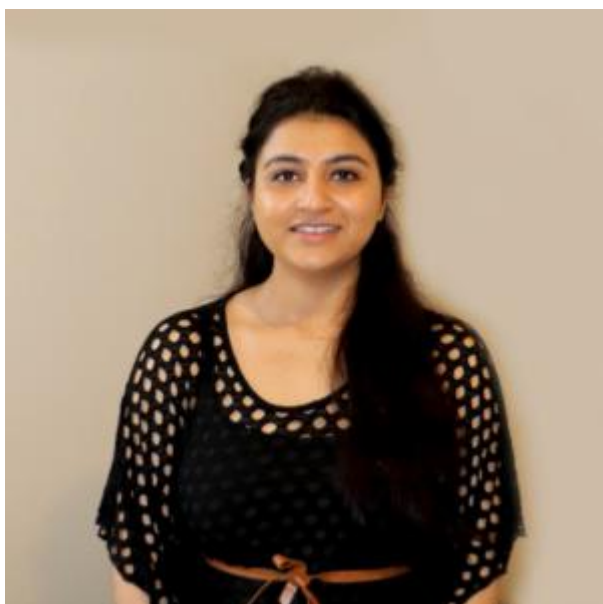
Guest Speakers: Esther Semo, Nish Gakkhar

Topic: Using technology to improve social good and facilitate a more digital government. Code for Australia will be shedding light on civic tech and why it matters for all citizens.



Esther Semo

Esther is Code for Australia's Head of Community + Communications. With a background in content writing and community development, it's Esther's role to bring together people from all over Australia to work on civic tech projects and tell stories about the amazing things we accomplish.



Nish Gakkhar

Nish is a software developer who has worked in IT with exposure to banking, music, and environmental industries. She's currently working Code for Australia as a Fellow with Smart Services Queensland to create accessible applications that assist businesses with compliance for food preparation.



Code for Australia

Code for Australia is a not-for-profit civic-tech organisation that brings together people from the public and private sectors to break down silos, work collaboratively and reimagine service delivery. When people from inside government and out can come together to design, develop and deploy solutions that meet everyone's needs. We're making progress by building stuff that matters, with everyone. Find out more about our programs here.

Meeting Agenda

7.00pm sharp: Meeting opens. Host is Stewart Gruneklee.

Guest speakers: Esther Semo, Nish Gakkhar.

Q & A with Peter Bacon.

Social break.

President's Report: David Stonier-Gibson.

What's New? with George Skarbek.

iHelp Online: Bert Alesich and iHelp Team.

9.00pm (approx): Close.

If you missed out the first time and would like to view any of these presentations, you can do so at <http://services.melbpc.org.au/videos/>

The username is videos and the password is drum286.

About iHelp

Leighton West



We are the RACV of the Computer World

A unique free service to members that is one of the best reasons for anyone joining, even if you never use us “It’s there if you need it”. Access to iHelp is not just appreciated, but in many cases the sole reason for maintaining membership. The Kangaroo is not the only thing unique to Australia.

Some members ring us once a year, others once a week, there is no limit to how much support you can get. We are however not Gurus, but have lots of contacts and the full resources of the Club. Every member knows “something” about computers, therefore collectively we can solve any problem.

iHelp can be accessed by Phone, Email, Web form, or Live chat, most questions are resolved on the spot or within the day.

Our Website provides a comprehensive window into all MelbPC Services and includes many Q&A questions and answers, Website Search facilities, Club Contacts, and useful Web Links to recommended Products and Services.

We are available most days 10 am to 3 pm Weekdays, Holidays, Public Holidays, and often over the weekend. In fact, the only day when you probably won’t get a response is Christmas day. Try us next time you have a computer problem!

For those interested or involved in giving support to members, we also maintain a public Microsoft Teams site. This includes iHelp, Home Visit, Yammer, SIG Leaders, or Office Volunteers who have some technical ability to help others. Members can add features and make private or group Phone calls, or Chat.

<https://www.melbpc.org.au/ihelp>

Your Favourite Linux Distributions

Hugh Macdonald

I've always been fascinated by Linux. When I was about fourteen or fifteen, in my quest to expand my computing knowledge, I attempted to install it for the first time. I think back then it was Red Hat Linux that I attempted to use. I can remember getting as far as the command prompt and typing *startx* and waiting for the X Window system to load. It never did, obviously because my graphics card at the time was not compatible. I had better luck on subsequent attempts using Corel Linux (yes, they made a version of Linux at one time) and Mandrake Linux (still around and now known as Majeia). But overall, it's been an on and off-again relationship between Linux and myself. In more recent years I've used versions such as Ubuntu and Linux Mint, but I've never really settled on a version, and I've never really settled on using Linux as my 'daily driver'.

Recently, perhaps bored by the enduring lockdown of Melbourne, I've decided to look more seriously at the feasibility of whether I could get by in the world of Linux on a more full-time basis. This time, out of the five computers that are in general use for the family, I've decided to switch two of them to Linux, while leaving two running Windows, and one running Mac OS. And in the quest to find the perfect version (or distribution or 'distro' as referred to in Linux parlance) and the reasons why I or anyone else thinking similarly might want to switch away from Windows, I once again turned to the good and knowledgeable members on Yammer (in the Linux Chat group) this month and asked them three questions:

1. What is your favourite Linux distro?
2. What is it about this particular distro that makes it your favourite?
3. What originally made you start using Linux and/or why would you recommend someone switch from Windows to Linux?

I got some really interesting personal reflections from members on why they have switched to Linux, what their favourite distribution is and why they think Linux is better suited to them than Windows. So interesting in fact, that I've published them all basically word for word later in this edition of PC Update. But in the meantime, for myself embarking on a greater use of Linux and for anyone else reading this who might be thinking similarly, I'll attempt to make sense of some of the information provided.

Firstly, what is Linux?

Linux is a personal computer operating system just like Windows or Mac OS is. In fact, it is remarkably similar to Windows and Mac OS, in terms of how it looks and how it operates. And 90% of the programs that you'd be familiar with using on Windows or Mac OS are also available on Linux. Programs like Firefox, Chrome, Thunderbird, Skype and Zoom are all available in Linux versions. Other commercial programs like Office and Adobe Creative Suite aren't available on Linux, but there are alternative programs such as LibreOffice, GIMP and Krita that will open their files and offer much of the functionality you'd be used to.

Why are there so many different versions of Linux?

Unlike Windows or Mac OS, there is no one single version of Linux, instead there are distributions. A Linux distribution or distro is the particular flavour of Linux that you choose to use. Whereas Windows comes in two flavours, Home and Professional, Linux comes in lots of different flavours. Many different organisations of all shapes and sizes (from multinational corporations to small groups of programmers who receive donations via PayPal) make these flavours of Linux. There are lots of similarities between the different flavours of Linux (just as there are between Windows Home and Windows Professional), but they will use different desktop environments by default and include different utilities. Fresh installs of Linux distributions are more feature-complete than clean Windows installs as they generally contain all the

major applications you'll need to use your computer on a day to day basis – web browser, email client, office suite, PDF reader and archive manager to name some of the common examples – so you won't have to go hunting around installing everything.

Why do some versions of Linux look different to others?

Unlike with Windows, where you can perform some light customisation to the graphical user interface, but on the whole it is the same for everyone, with Linux you have a plethora of choices of different graphical user interfaces, which are known as desktop environments. Common choices include Gnome, KDE, Cinnamon, XFCE, MATE and LXDE/LXQT. Member Greg Eden did a survey for me for this article, and Gnome was the most popular amongst the membership followed by Cinnamon and MATE. All these desktop environments have a slightly different take on the desktop-based graphical user interface. Some very closely resemble Windows, some will seem quite familiar to Mac users and others offer their own variation on the theme. No matter what distribution you use, you have the ability to switch to most other desktop environments if you find that the one you originally chose is not suitable.

How do I make the switch?

A good piece of advice that member Rob Brown offered was to firstly find an unused or seldom-used secondary computer and use this to initially install Linux on. This will take away the stress of suddenly switching your 'daily driver' to Linux and you can make an assessment of the suitability of it for your needs in a relaxed way.

The second thing you need to do is to choose a distribution (more on some of the choices below). The next thing you need to do is head to that particular distribution's website and download an ISO of it. An ISO is essentially an image of a USB stick in a file. Linux distributions are often close to 2GB in size, so you either need a fast NBN connection or else set it to download and then go away and do something else. Once you have downloaded it, on Windows you can then download a utility called Rufus which will write the ISO file to a blank USB stick for you (or overwrite a USB stick that isn't blank).

After this you can insert the blank USB stick in the computer you're going to use. On startup access the boot device menu, and select the USB stick and you'll launch into a live environment of the Linux distribution. Here you'll get to try out the Linux distribution for as long as you like until you're satisfied that you want to install it. Once you are satisfied, you'll find a shortcut (usually on the desktop) to launch the installer and then step through the options. After that you'll be prompted to reboot your computer and then you'll be setup with Linux.

So what do members think are the best Linux distros?

I got a variety of responses from members on their choice of favourite Linux distribution.

Ubuntu was one standout. This is a well-supported and easy to use distribution. It has a very easy to use installer, that is probably actually easier to use than the Windows installer. Its default desktop environment is Gnome, which is a nicely designed environment that is quite easy to use. Ubuntu is also a good choice for someone new to Linux because it is so widely used, and therefore most Linux software has a version for Ubuntu ready to download and install with one click.

Linux Mint was another. Linux Mint is based on Ubuntu, however, it has a different default desktop environment called Cinnamon (which closely resembles the Windows desktop) and some of its own utilities that are different to Ubuntu. It is another very good choice for beginners, and benefits from the fact that anything that can be installed on Ubuntu can be installed on Linux Mint.

Lubuntu was another common response. It is a variant of Ubuntu that uses the LXDE/LXQT desktop environment instead of Gnome. LXDE is much more lightweight than Gnome and so if you have older hardware or you just really care about performance, then Lubuntu can be a better choice. Everything else

mentioned above about Ubuntu applies to Lubuntu.

Manjaro was a response only from member Roger Brown. However, it is worth considering for anyone new to Linux because it is a rolling release. This means that it constantly updates itself (largely silently) and you are never required to do a major update to a new version. It has an easy to use installer, that only takes a few minutes to work through. By default it uses XFCE which is another lightweight desktop environment that closely resembles Windows, but you can also download it with Gnome.

Why do members think it's beneficial to switch from Windows to Linux?

In many experiences shared, members found that Linux gave them greater performance on their hardware than Windows did. This was apparent with all hardware as members noted the increased performance, but members particular cited the increased performance of older hardware. Members recounted having hardware that was well past it by Windows standard, but with a lightweight Linux distro installed (such as Lubuntu) the machine was suddenly rejuvenated and perfectly serviceable once again.

Many members cited Linux as a way of escaping from the nightmare of Windows updates. Most updates on Linux don't require a restart of the computer, they simply happen in the background. Whereas we've all had the frustration of starting up our computers, only to have to wait five minutes while a Windows update is applied.

Some members also mentioned the increased monetisation that Microsoft seems to be trying to extract from Windows. For example, advertisements are appearing directly in Windows programs, and Microsoft is making it harder and harder not to use a Microsoft account to sign in to Windows.

Another reason provided by members for the use of Linux over Windows was the better security offered by Linux. Although it has to be pointed out that Linux isn't immune from viruses or malware, for one thing, because it is less widely used than Windows it is less targeted and it is also designed in a different way to Windows that makes it more impenetrable to malicious software.

So there you have it – a brief primer on Linux, an explanation of distributions and desktop environments, and some reasons why you might want to make the switch from Windows. After this go and read each member's Linux story. You'll find them interesting, you'll find mention of some other distributions that are worthy of consideration and some other reasons why members have made the switch.

Remember that while this article is largely extolling the virtues of Linux, it isn't for everyone, and if you're perfectly happy with Windows then relax, it's a perfectly good operating system that I'll most likely continue to use for many years to come in some shape or form (whether through direct install or virtualisation) and many other members will too.

But if you do decide to make the switch, your first port of call should be the **Linux Chat group on Yammer**. There you'll find very knowledgeable members who've been using Linux for 20 years or more and are only too happy to answer any question you might have and even guide you through the entire process of getting setup with Linux.

As for me, for now, I've chosen Ubuntu for my two computers. However I am also interested to try Manjaro in more depth too, perhaps in a virtual machine for now. So far my switch has gone well. I have access to all the same major programs, so there's nothing I'm missing so far. Overall I'm enjoying the increased performance of my computers (which are both quite new laptops; one is an 8th generation i5 with 8GB RAM and an SSD, the other is a 10th generation i7 with 16GB RAM and an SSD), I like the better and more consistent interface design of the Gnome desktop environment in Ubuntu over Windows and I look forward to getting into some of the more advanced features of the Linux terminal in due course. Perhaps I'll have more on the topic in a future edition of PC Update.

Member Linux Stories

Editor: In response to my questions of a) What is your favourite Linux distro? b) What is it about this particular distro that makes it your favourite? and c) What originally made you start using Linux and/or why would you recommend someone switch from Windows to Linux? these are what members contributed via Yammer or email. They provide some good views on how to get into using Linux, appropriate distributions to pick and reasons for continuing to use Linux. Please enjoy them, and thank you to all the members who contributed these.

Arch Linux - Roger Brown

Arch Linux because..

...it's always bang up to date (being a rolling distribution) and you can customise it any way you want - simple and fast or flashy with all bells and whistles (or anything between) - it's all up to you.

Not the easiest to install (although there are ways and means to avoid the hard-line "Arch way" - hint: Zen installer) but once done there's nothing to change. And you'll find very little you can't install directly from the Arch repositories.

And Arch has by a country mile, the VERY BEST documentation - pretty nearly any issue you encounter with anything you install under Arch will be dealt with and in a simple easy to follow manner.

People new to the Arch world can also try the excellent Manjaro - a user-friendly version of Arch which is almost perfectly Arch compatible.

I started using Linux out of curiosity initially and in a sense, I started the hard way using Slackware - a distro for which I have a great deal of respect and which taught me a great deal.

Why would I recommend Windows users change to a distro where the updates all work and are locally mirrored so that they all download and install within seconds? And where even relatively modest hardware (mine is all second hand) absolutely flies compared to Windows?

Well, I leave that to you to figure out. I simply fall about laughing every time I read our Windows 10 Yammer group!!

Caveats:

Hardware support is vastly improved in Linux but you can't assume that any device you see on store shelves will necessarily work out of the box. A little research may be needed.

Linux is NOT Windows - it's a separate OS that does some things quite differently. If YOU are not the sort of person who's prepared to take time to learn new tricks, then stick to what you know.

And don't expect your favourite Windows programs to run. There are ways to achieve that but if you are looking at Linux to run Windows programs you're missing the point.

Ubuntu - Greg Eden

I use Ubuntu. I started way back with Red Hat in the late nineties and have used many distros over time. For a while, I ran Gentoo where every part of the system is compiled from source and tailored to the hardware. I have used Debian, mostly Debian Testing. I still run Debian on my Raspberry Pi 4 and my old Acer Chromebook. But on my high-end desktop and Dell Notebook I run Ubuntu. Ubuntu has a huge

ecosystem of variants and backers. All software available for Linux is easily installable on Ubuntu and commercial software is available through the partner repositories. Ubuntu just works.

Mageia - Dennis Parsons

My favourite Linux distribution is Mageia.

I use it out of habit mainly - I started off with Red Hat 20 or so years ago, progressed to Mandrake, which evolved into Mandriva, then Mageia. I continues to work well for me so I don't feel compelled to change.

I started using Linux initially because I liked the open-source ethos & it wasn't Microsoft. Being able to just download software from a repository for whatever task you wanted without having to search & locate a suitable safe download site really appealed.

Learning to use another operating system is a good way to learn about computing concepts rather than just learning to use a particular piece of software by following a recipe.

People complain that Linux is full of obscure commands & such but Windows is worse once you scratch below the surface trying to fix a problem when all the information it provides is a cryptic generic error code. Linux is different, not harder. If you can point & click then you can use Linux - my 86 year old father manages to & he's no computer wizz.

From an older user's perspective

I'll also tell this from my Mum & Dad's perspective as they both use Linux but neither of them could be described as being anything above "basic user" level.

a) What's a "distro".....? (Mageia is what they use)

b) It's what our son installed

c) Dad: My son said I couldn't continue using Windows XP so asked me to try Linux to see how I coped with it. Most of the programs I used like Firefox and Thunderbird were the same and he got my favourite card game running as well so I was happy. I need help with anything more complicated but did on Windows too so there's no difference there.

Mum: My son gave me a laptop running Linux & as I'd never been anything other than a very casual Widows user previously it wasn't any more difficult. I mainly use it for e-mail & now Zoom calls which my son sets up for us via TeamViewer.

Ubuntu - Tim McQueen

Ubuntu is my favourite Linux distribution

I use it mainly out of habit and because I 'can't be bothered' trying anything else.

I originally started using Linux because I have usually been a contrarian. I had early experience with ICL Singer and DG AOS & AOS/VS and Unix systems. I was strongly influenced by Roger Brown and Dennis Parsons's discussions about Linux and decided to give it a try.

I use Windows 8 at Vision Australia and have just bought a Windows 10 laptop. I find using Windows frustrating. Just downloading reasonable software (Zoom, Libre Office) is much more of a chore than it should be. I'm of Scottish ancestry and don't want to spend unnecessarily, and I'm also in favour of the Free Software foundation philosophy.

Lubuntu - Rob Brown

I started out using Linux with baby steps on a disused second PC so I could get used to the environment without breaking anything or losing anything on my main PC. I recommend this approach to any new users.

The initial driver for the move was a desire to use free software for my main computing needs and this kicked off with using Netscape Navigator (a predecessor of Firefox) and then Thunderbird for emails.

Once I discovered OpenOffice, as it was called then, I knew there were free open source options for most of my software needs. The quality of these has continued to improve with each passing year and now most things can be done as efficiently on OpenSource Software (OSS) as on commercial packages.

I tried a number of different Linux variants (called distributions) including Mandriva, OpenSuse, Fedora, Arch, Linux Mint, Peppermint and Ubuntu. After dual booting my favourite distro(s) with Windows for a while the UEFI bios replacement came along and upset the dual boot apple cart. While this situation did improve over a few years it was enough for me and many others to say “you know what I can get by just fine with Linux alone” and so I ditched my dual booting and went solo with Ubuntu as my settled preference for overall ease of use.

Desktop Environment (DE) choices are worth a special mention as there are so many to choose from. LXDE on Linux Mint was a preferred option for a few years until Mint decided to drop LXDE. It was not worth the small effort of installing LXDE over the base Mint distro each time a new version was released especially when a fast efficient lightweight distro called Lubuntu could do the job so nicely.

Most, if not all Linux distributions are based on one of the three earliest ones called Slackware, Debian and Red Hat Linux. But today there are hundreds to choose from each with their own personalities and DEs and the debate about which is best goes on but of course it is a personal choice.

Linux gives the individual freedom to control and use their PC the way they choose and set it up the way that best suits their needs.

A couple of the big things for me are updates and the support community. Updates are regular and are applied to the full set of installed software, not just the operating system files. And they are quick - all done in a few minutes, and can be done when you want them done not when you are keen to start-up the PC to do something urgent or shut it down and head off somewhere.

Knowing there is help available from a vast community of users and developers is very comforting but the need to seek out help these days is rare. Linux computing is amazingly reliable and free of bugs.

Linux Mint - Frank O'Loughlin

I changed over two old HP Laptops from Windows 10 to Linux Mint earlier this year. I did experiment with both Xubuntu & Lubuntu which I had dual booted with Windows 10, but I'm now preferring stand-alone Mint. Both computers are over 10 y/old now, one came with Windows Vista and the other with Windows 7. I am finding that they run better in Linux in that they boot up faster and they're not cluttered up with Windows programs and features that are not necessary for my needs. Linux MInt does everything that Windows did without the hassle of it having to be rebooted regularly because it is losing its WIFI Internet connection and/or not running properly. I am still a novice in the Linux environment but if I can't find what I want in Google there are knowledgeable Linux users on Yammer to guide me along.

I was concerned that the laptops were running hot under Windows, both of which still have their original HDDs and with Yammer personal help the memory was upgraded prior to the changeover. They both seem to cope better in Linux Mint as the fans and drives are not continually running at full speed like they were in Windows. I am expecting that they will both continue to do all that I need them to do for quite a while

yet. I am also much less concerned with getting virus attacks in Linux than I was when they were running Windows 10.

So all round I'm a happy recent convert to Linux.

Linux Mint - David Hatton

My current "daily driver" distribution is Linux Mint. I also have a separate minimal installation of Debian on a different machine which I use only for internet access to sensitive accounts, eg. online banking.

I find Linux Mint to be straightforward to install and, using the MATE desktop, it takes me about 10 minutes to set things up the way I like it. After that, I can just get on with "doing stuff" which, after all, is the reason for using a computer in the first place. And the updates "just work" - if I need to reboot the update software prompts me to do this. Usually, I can just keep working. I have been using various Linux distros as my daily driver for a bit over 20 years now, and I can recall only two occasions where there was a glitch caused by an update. On both occasions, the problem was quickly resolved by the next update.

I switched to Linux, specifically Slackware Linux, when I was using Windows 95. For some reason which is lost in the mists of time, I had needed to reinstall Win 95 - probably due to the upgrade of a hard disk or some other hardware change. At the time, I was using the MelbPC internet service. The Windows 95 re-install worked well, with one exception - I could not get the network connection to work again in spite of spending large chunks of time applying the latest updates and generally faffing around.

Totally frustrated by this situation, I decided to install Slackware from the then-new you beaut CDROM collection of four major distros. I chose Slackware mainly because I could understand the installation instructions better than the other alternatives. After some trial and error, I managed to get Slackware running and was rather surprised to see that the network connection, and hence the MelbPC internet connection, was working by the time the boot sequence had reached the desktop.

My reaction was - why am I messing about with Windows? I switched to Linux and haven't looked back!

For the home user especially, switching to Linux will give a stable computing facility for all the routine computing tasks and most of the more specialised activities. For a modest investment of time and effort, they will be able to concentrate on what they need to get done and won't be distracted by the glitches and seemingly endless fixes and "feature updates" of the current Windows world.

Linux Mint - Gordon Loughnan

I use Linux Mint MATE. It is easy to use and updates are done when I want to do them not at startup. I download free software when I need to do any extra tasks that require software that does not come with my distribution. I now use Windows on a separate notebook as Windows 10 had trouble running on my HP notebook that has no trouble at all with Linux.

Ubuntu - Stephen Zuluaga

Moving away from a pet peeve of Windows

I initially got fed up with Windows installs turning slow after about a year or so, and even though I've probably done tens of thousands of Windows deployments in my IT career, I wanted a computer to use, not a computer to wait for. I also hated the fact that I'd often open up my laptop, only to have a Windows update force itself upon me. This always happened at a bad time such as when I was about to do a presentation, start teaching a class or try to bring a customer's network back online.

With the exception of playing computer games (and I have kids now anyway), Linux is better for all of my purposes.

Trying to be pragmatic

When I jumped over to Linux about 5 years ago, I picked Ubuntu because it had the largest installed base, and it's proven to be compatible with an extremely large range of desktop and server software. Anyone who knows anything about web servers and associated software must understand Linux software, I didn't want to miss out on that skill set.

On my high-performance workstation and my primary laptop, I use Ubuntu, it does a good job of delivering a responsive UI, and I get a very reliable desktop experience. If I need Windows, virtualisation is my answer.

Waste not want not

I like that I can also get ongoing life out of old hardware with Linux distributions, for this Lubuntu is my goto lightweight distro. Windows does a terrible job of running well on old hardware, and if I take care of my computers, I want to continue to get utility out of them even when they aren't the latest and greatest hardware models. In my garage workshop setup, I want a computer I can use to research datasheets and design things on, I'd be too precious to bring my newer laptop into such a rough and ready environment like that with grinders, circular saws and soldering irons and the like.

Influenced by career

Another consideration, which might be a bit specific to me, is that as a systems and network engineering professional, most enterprise-grade networking and firewall equipment I have worked with runs some form of Linux. I didn't like the idea of having an inadequate knowledge of this ubiquitous platform that runs the internet, the cloud, and so much infrastructure, so I wanted to skill up. Also, Microsoft licences are expensive, especially if you scale up use of anything, I love that there are perfectly good database servers for instance that will happily run on free software, all which can have commercial support contracts subject to tight service level agreements. Bill Gates and Steve Ballmer did a good job promoting Fear Uncertainty and Doubt about open source, but today those ideas are not consistent with commercial reality, so we all benefit with an increasing set of options.

Command-line: So many people find CLI scary or difficult, and I totally disagree with that notion. While PowerShell is fantastic and a massive improvement over "DOS prompt", Linux shell is amazing, and so much more powerful for anything substantial. I now resent how fiddly it is to remotely interact with a Windows machine via command line, why can't it be as simple as SSH like it is on Linux?

Computers aren't a matter of religion

I'm not religious about my operating systems, I've supported all 3 major computer OSs, being Mac OS, Windows and Linux, but I would prefer to focus on fitness for purpose. Linux is more fit for a lot of my purposes, but that's not to say it's without its drawbacks when compared to other OSs.

Anyone who says Linux is user-unfriendly is probably holding on to old perceptions from the past based on poorly designed GUIs. All operating systems are dramatically more user friendly than they were in the past.

My Accountant wife and 4 and 6-year-old kids can use Linux and still be productive with their work, life admin and COVID19 homeschooling (and kinder), so I'd suggest anyone else can too.

Ubuntu - Sean Clarke

I'm a bit of an agnostic with regards to what OS or distribution I run. I'll use whatever I consider best suited to the task at hand. Over the years I have run most of the major Linux distributions and many of the specialised ones depending on what I needed.

What do I like about Linux? It's light on resources and long, long on uptimes.

The first Linux distribution I ran was Slackware. I installed it from floppy disks in late 1994 on a recently retired PC. I set it up as a fileserver and used it to teach myself networking.

In the time I've spent looking after MelbPC's servers, we've run Sun Solaris, BSD, Debian, Gentoo, CentOS, Ubuntu, Knoppix & Kali.

My two personal laptops dual boot Windows 7 and Ubuntu 18.04 LTS. I usually carry Knoppix & Kali handy on bootable media. The old family desktop dual boots into Fedora. My daughter has Windows 10 & Ubuntu Studio 18.04 LTS on her laptop. The 2 NAS servers run BSD and the fleet of 10 Raspberry Pis dotted about the place mostly run some variant of Raspbian.

Lubuntu - Aavon Fernando

My first interaction with computers was in 1995, a Pentium III and basically Windows was all my little world knew and all I ever thought I needed.

i just grabbed a mouse and *click click click*.

I started customizing my desktop setup and icons using Rainmaker on a Windows XP machine.

Windows XP was a breakthrough for me at least into the possibilities of what I could get a computer to do.

I first heard about Linux much later in life by reading PC magazines and learning to write executables in Notepad. I realized there was a whole other world I'd never been exposed to. So I tried a few variants of Linux from CDs that came with the magazines by loading them into Virtual Machines. I really liked the variety and ... the command line.

Security and Privacy

What finally made my mind up to go direct-install was updating to Windows 10.

One day I couldn't log in to my laptop: the password was incorrect.

This happened overnight, what was going on? Had I been hacked?

Nope, Microsoft had decided to link my Microsoft account and change my local password to one of that account.

I didn't like this at all. How much control did I really have over my devices?

So I took a deep dive and installed Ubuntu initially, which offered a dual boot option with an easy step by step process.

That started my slow migration away from being Windows dependent.

I now use:

Lubuntu (everyday driver), **Raspbian** (for Pi related projects), **Kali Linux** (for hrrmmmrhmm),

Tsurugi Linux (Computer Forensics focussed Linux variant)

I still use Windows for system administration practice and some applications, but on dual boot on my laptop. I may finally move to full virtualization after some time.

Lubuntu is my favorite as a lightweight distro. The LXDE/LxQt minimal design and simplicity. Everything

I need, every way I want it.

Linux Mint - John Nelson

I currently have a desktop PC, two notebooks and one netbook – all four are dual-booted with Windows 10 and Linux Mint.

I am a Windows user, slowly converting to a Linux user for general functions (emails, Net access, phone/camera downloads, graphics work, word processing).

Long term, I see Windows being used only for speciality programs for which I do not have a true alternative in Linux.

My favourite Linux distribution?

Mint Cinnamon (have also used Mint Mate, Mint Xfce, many versions of Ubuntu, all installed, and many other distros in trial mode)

What is it about this particular distribution that makes it my favourite?

Comes with plenty of programs to help get you started.

Easy to use

Seems very stable for what I do

What originally got me into Linux?

Windows out-grew my old PCs that worked well with Linux.

I was sick and tired of having doubt over Windows stability, particularly around update time.

The Linux domestic users I met seemed to be ‘happy little vegemites’ even though Linux doesn’t have the vast range of programs that exist in the Microsoft world.

Because installed distributions, plus installed applications, need far less storage capacity than Windows it was not a problem to install Ubuntu besides Windows on the same drive and dual-boot with Linux creating the boot menu. Hundreds of distros have been created based on Ubuntu and I found the Mint range to be ideal for my needs.

Why would I recommend someone switch from Windows to Linux?

Make use or better use of an older PC that struggles under Windows. There are many Linux distros designed specifically for low spec PCs.

Programs are Open Source or freeware

The Mint Software Manager makes it easy:

to see what programs are available,

to install them; and

to uninstall them.

Greatly reduced risk of virus/malware infections

To break free of the worry generated by risky Windows updates. There are far too many reports of Windows 10 issues as a result of software/hardware conflicts arising out of Windows 10 updates, with both small and major updates.

To break free of the need to constantly backup Windows OS and installed programs, for recovery purposes following possible system corruption/failure. I can't live without HDD/SSD clones and images – Programs such as Macrium Reflect, Aomei Backupper or Easeus Todo Backup are essential. I have lost track of the number of times I have had to help users whose PCs failed to start because of a Windows problem.

To break free of the need to constantly maintain Windows 10. For example:

Need to create a new Recovery Drive (USB) after a system major update;

Need to reverse program defaults changed by Windows updates;

Need to turn system protection back on and to create a Restore Point after removal by a Windows update;

Need to turn system protection back on and to create a Restore Point after an HDD/SSD change because Restore Points for C Drive are recorded by HDD/SSD serial nbr.

Need to turn-off Fast Start-up if a Windows update to Power settings has turned it on – This is needed off if dual-booting Windows and Linux, to allow Linux to see MS partitions/files.

You can test Linux OSs (and programs) without installing them onto your HDD/SSD, by use of a Live CD/DVD or USB. My preference is a Live USB because it loads quicker, can be used on multiple PCs including those without an optical drive and it can be wiped and used for another purpose.

There are many good sites providing help and guidance in the practical aspects of using Linux.

Extra info

I am very happy with the LibreOffice suite, in both Windows and Linux. I can create PowerPoint compatible presentations, edit pdf versions of Publisher files in Draw, create cards, newsletters and certificates in Writer. Attached are pdf versions of two docs created in Writer – an OBE Certificate and a birthday note. That is, Mint, 'straight out of the box', can create reasonably presentable documents from LO Writer that is included in the distro.

New users need to know how to obtain a distro iso, create a bootable USB and how to boot their PC from it. There are many programs, in both the Windows and Linux worlds, for creating a bootable installation USB. For example: Universal USB Installer, Rufus, Etcher, Unetbootin, Ventoy.

I believe every Windows 10 user should have a Linux Live USB in their repair kit, in addition to a Recovery Drive and Windows 10 Installation DVD/USB. If Windows does not start, and the Startup Repair function on the Recovery Drive or Windows 10 Installation media does not fix the problem, then a Linux Live USB could be used to boot the PC, in trial mode. If Linux runs, it is an indication the motherboard is OK. If Linux can see the HDD/SSD and its files then the drive can be considered to be OK. If the drive cannot be repaired with the MS tools mentioned above and a clone or image is not available then the Linux Live USB can be used to copy off the data files before more strenuous recovery attempts are undertaken.

Freeware versions of Macrium Reflect, Aomei Backupper and EaseUS Todo Backup run from Windows 10 can successfully create clones and images of HDD/SSD drives containing both Windows 10 and Linux OSs.

Installation of Linux might require BIOS/UEFI changes such as:

Turn on Legacy Boot

Turn off Secure Boot

Turn-off Fast Start-up (via Windows 10 if dual booting with Linux)

For a dual-boot system, a Linux-based 'Boot Repair Disk' (a bootable USB stick) comes in handy for repairing the Linux boot files if damaged (say, by a Windows update).

True Type fonts used in Windows installations can be used in Linux. When a .ttf file is opened in the file manager the font set is displayed with an Install button – an easy review and install process.

My process outline for creating a dual boot drive:

Windows 10 installed first;

Boot from Linux Mint Live USB (may need UEFI boot for Linux to see Windows);

Install Mint beside Windows 10. Mint creates the boot menu;

Re-boot PC from Mint Live USB again and, using GParted, create an NTFS data partition that can be used by both systems. I regard this partition to be a temporary storage area with required data copied-off to an external drive.

Linux can see the Windows file structure and can use files created by Windows apps but standard Windows systems cannot currently do the same with Linux systems.

Linux Lite - Neil Barker

Originally LXLE in about 2016 on a 2005 laptop to replace XP. Until an update of that ceased to work on that machine, so I moved to Ubuntu 16.04 LTS. Then through 18.04 LTS until the upgrade to 20.04 caused major issues, mainly due to the move from LXDE to LXQt requiring a new install. And a very different (poorer) experience. So Linux Lite it was from then, and that's now on a 2017 laptop I inherited. Works a treat. Boots in 30 sec and just a matter of setting it up for my user preferences and adding any extra stuff that's needed.

I have to say that Ubuntu 20.04 was a dog compared to Ubuntu 18.04 for older PCs, I think they lost the plot that that was what Ubuntu was supposed to be all about. And my other Linux bugbear is the constant package upgrades and program tweaks. Even though they all seamlessly work, and many are 'security patches', it seems developers have never heard of 'if it's not broken don't fix it' for the look and feel of things

Overall though, Linux just works.

Member Tips and Tricks: Top Linux Utilities

John Nelson

Editor's note: John Nelson has provided this list of common applications and utilities that you can download and use in your Linux distribution of choice. Some distributions will come with many of these already pre-installed. For any that aren't already installed look in the software manager/package manager and you will most likely find them. Many of these utilities are also available on Windows, and work just as well there too – an easy way for Windows users to download them is to use Ninite.

Office:

LibreOffice Office apps compatible with Microsoft Office files

Fonts / Ttf-mscorefonts-installer Fonts available via Software Manager, however common MS fonts package should be installed via the Terminal so that the MS Eula can be accepted. To input: `sudo apt install ttf-mscorefonts-installer`

Kate Text editor (ex-Office cat)

Calibre e-Book reader/converter (Ref home/user/calibre library)

pdf / Printer-driver-cups-pdf Create PDFs (files stored in folder 'PDF')

Gramps Genealogy – Family Tree creator

Internet:

Firefox Browser – suggest DuckDuckGo as search engine

Chromium Chrome based on this and it uses Chrome addons. Have installed this just in case needed to use Google Meet but have been able to use Firefox OK in Zoom & Google Meet.

Graphics:

Pinta Paint/drawing (Sim to Paint.Net, paste PrtScn grabs into this)

Gthumb Image viewer, organiser, some editing

Gimp Graphics/Paint – Powerful

Converseen Image converter & resizer

Krita Graphics/Paint – Good, easy to use

darktable Pro-type image editor, incl Raw photos

Utilities:

Zip / P7zip, P7zip-full, P7zip-rar For zipping & unzipping files

unrar For expanding .rar and .zip files

Krusader Ex-Accessories (new tools to /usr/bin) (Sim to Total Commander)

K3b CD/DVD burning app (needs MP3 codecs)

Qbittorrent For downloading torrent files

Media info-gui Codec identifier

Etcher Create bootable USB from iso file

Clonezilla Disk imaging/cloning

Multimedia (Audio/Video):

Audacity Audio editor

VLC Audio & Video player incl DVDs

Ubuntu-restricted-extras Incl MP3 codecs, MS fonts (need for iView)

Handbrake (not the CLI version) Video converter (incl DVD to single video file)

ffmpeg Audio & video encoder/decoder (for apps to use)

fre:ac CD ripper, uses online CD freedb

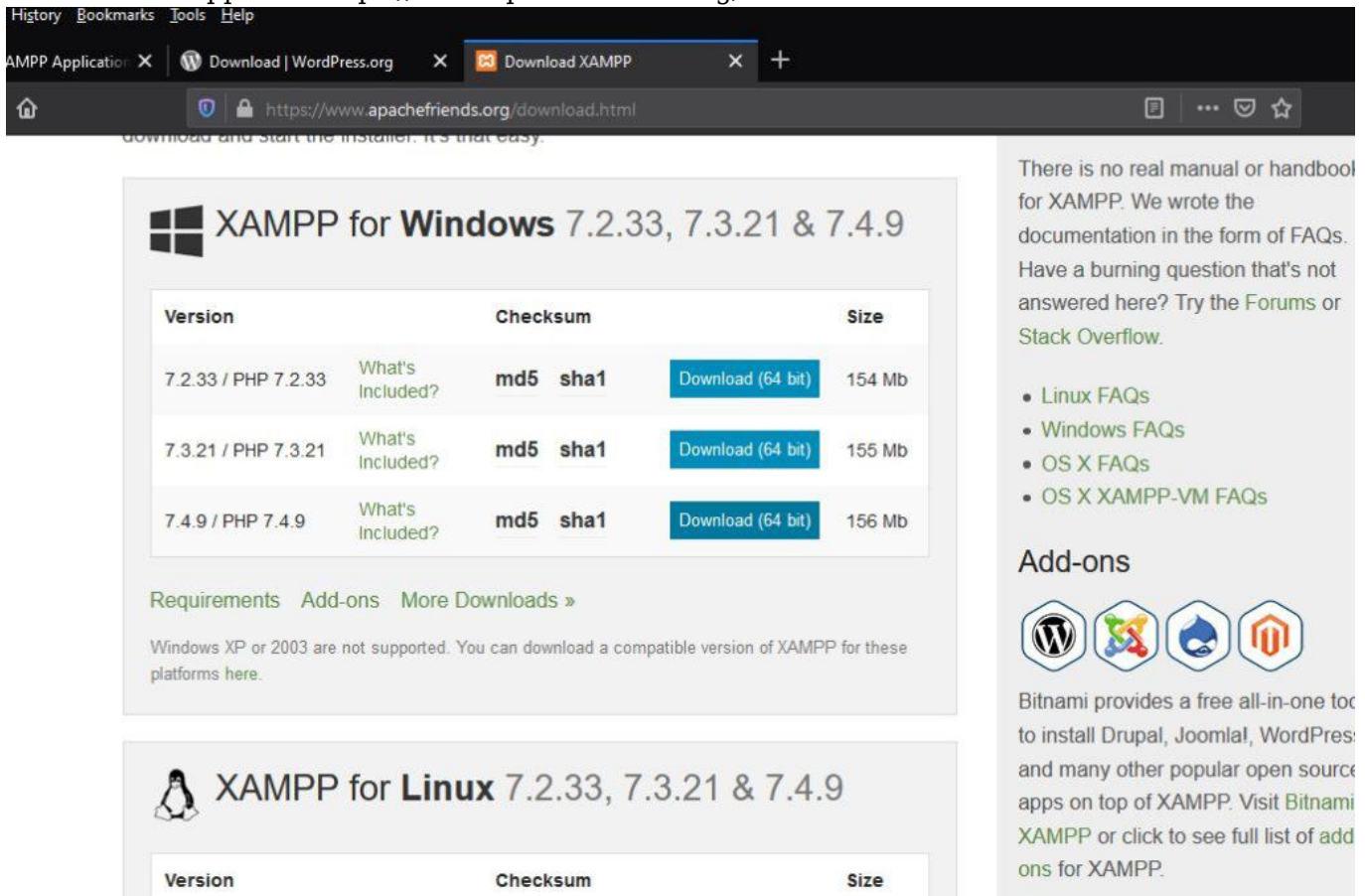
Kdenlive Video editor (Some alternatives: *OpenShot*, *Shotcut*)

Creating A Portable Web Server

Fleur Stephens

Have you ever wanted to try your hand at developing a website in WordPress but you don't have access to a web server? Would you like to play with multiple websites and WordPress themes without breaking your site?. With the right software you can create a web server on your own PC. In this tutorial I'm going to show you how to setup a web server on a USB stick, so you can access and work on your website wherever you go.

1. Download Xampp from <https://www.apachefriends.org/download.html>



The screenshot shows the XAMPP for Windows download page. The table lists three versions: 7.2.33 / PHP 7.2.33 (154 Mb), 7.3.21 / PHP 7.3.21 (155 Mb), and 7.4.9 / PHP 7.4.9 (156 Mb). The 7.4.9 version is selected. The page also includes links for requirements, add-ons, and more downloads.

Version	Checksum	Size
7.2.33 / PHP 7.2.33	md5 sha1	154 Mb
7.3.21 / PHP 7.3.21	md5 sha1	155 Mb
7.4.9 / PHP 7.4.9	md5 sha1	156 Mb

Requirements Add-ons More Downloads »

Windows XP or 2003 are not supported. You can download a compatible version of XAMPP for these platforms [here](#).

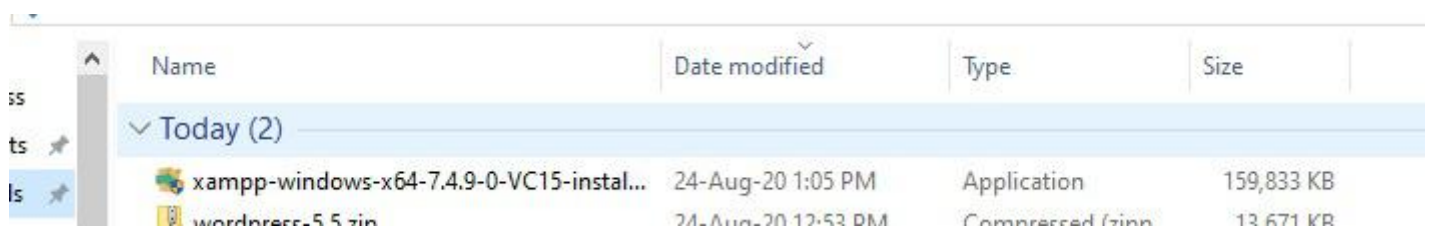
XAMPP for Linux 7.2.33, 7.3.21 & 7.4.9

Version	Checksum	Size
---------	----------	------

Choose your version and platform (Windows, Linux or Mac) and select download. I have selected the 7.4.9 version as I plan to install WordPress 5.5, which requires PHP 7.4 or higher to run.

Go to your download folder and double click your xampp download

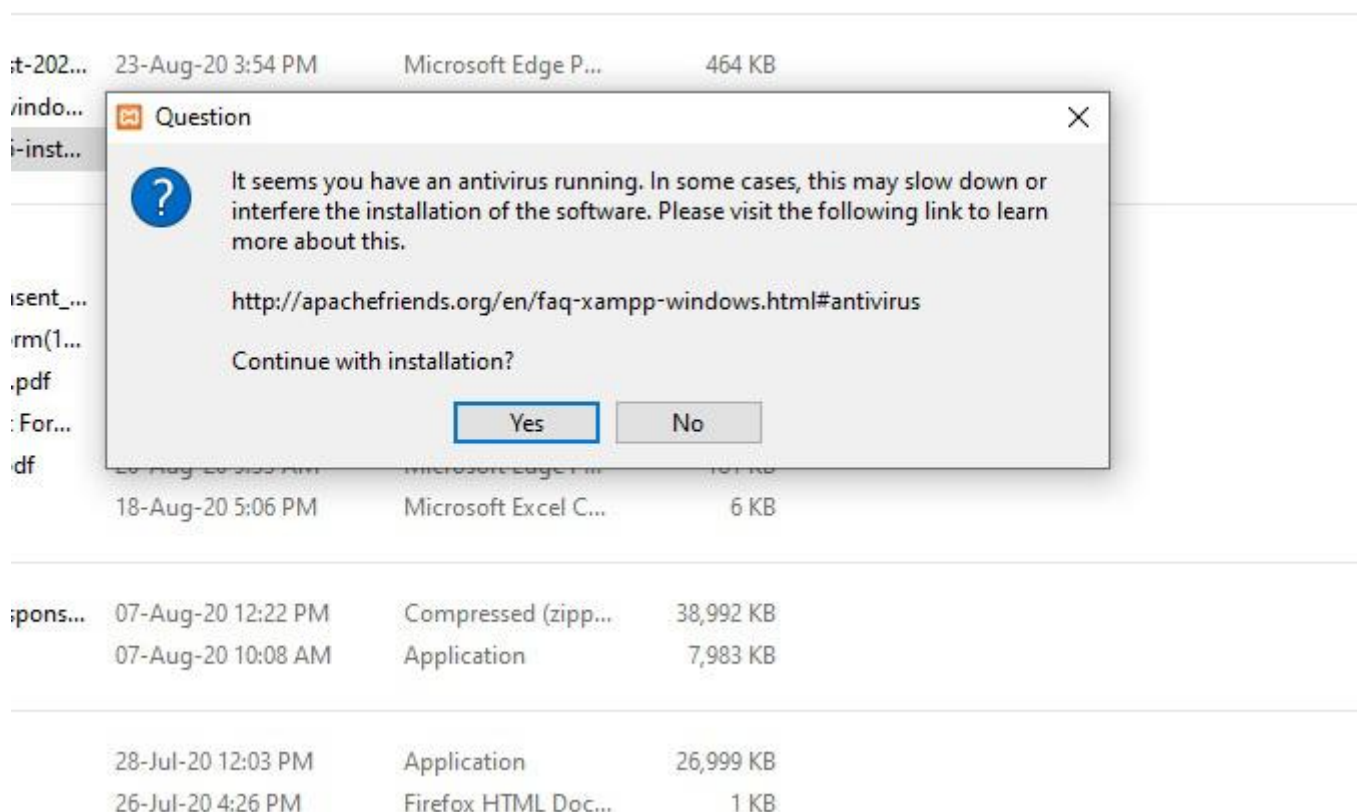
2. Install Xampp



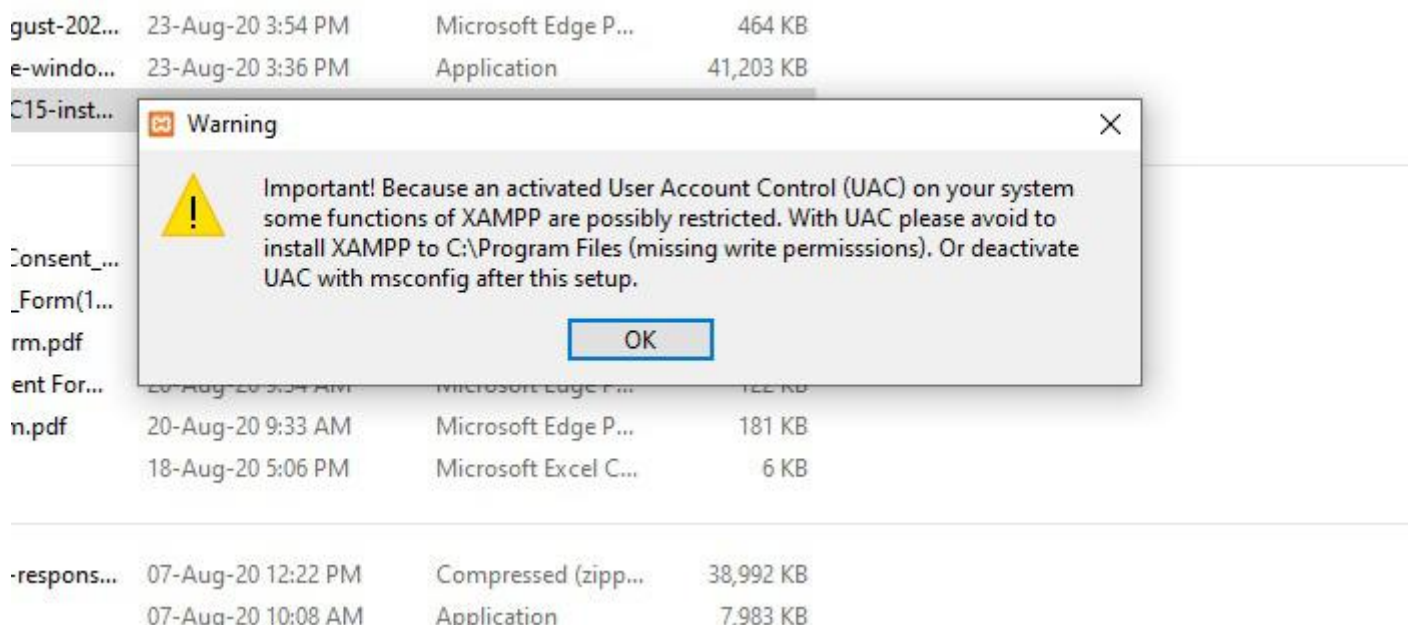
Select Yes when prompted for permission to make changes to your pc.

You may be hit with a warning popup in relation to your antivirus interfering with the installation. Select

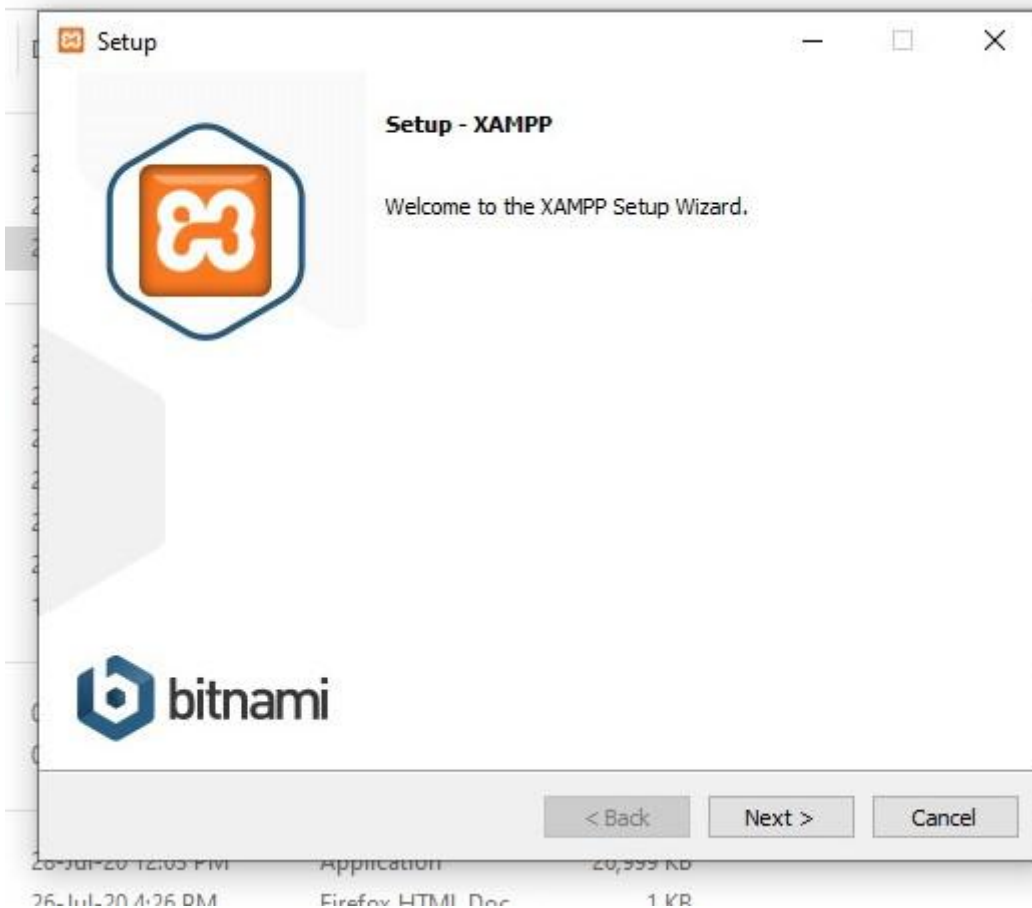
Yes as you are not installing locally so it will not be a problem.



The next problem you might encounter is UAC permission, if the following screen pops up select OK and just ignore it as we're not installing to a local drive, if we were installing to a local drive we could get around this by installing to the C:\XAMPP rather than C:\Program Files\Xampp

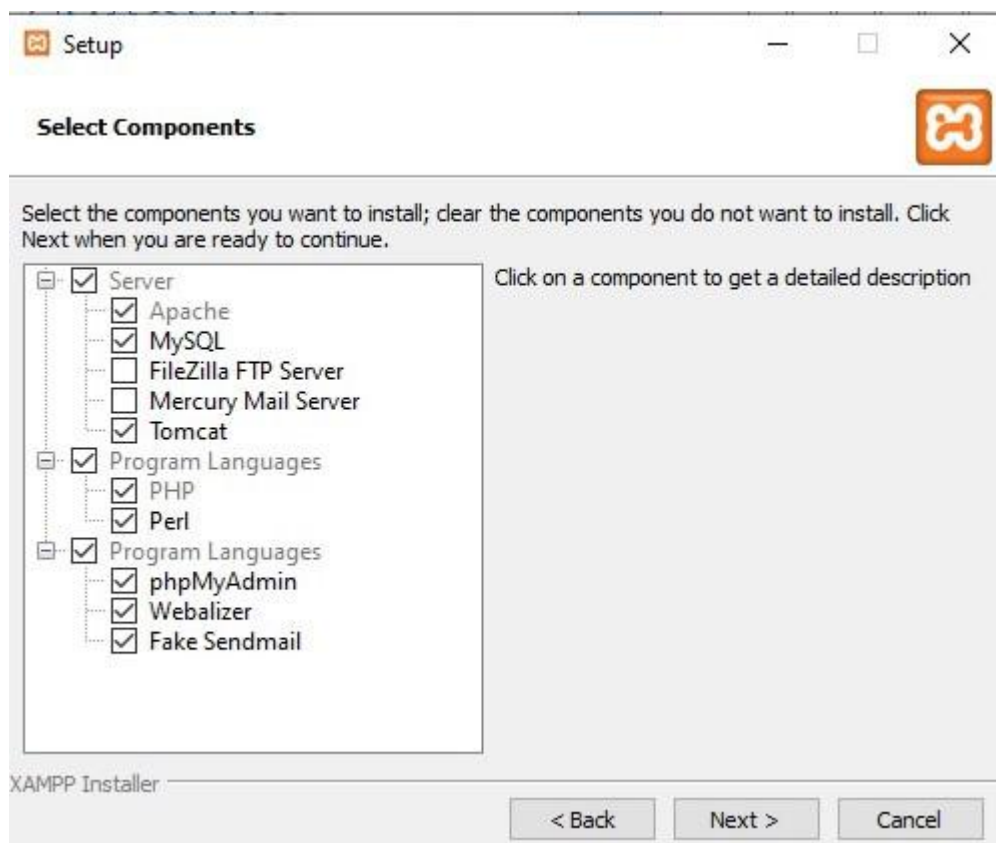


Next you will be greeted with the setup wizard, select **Next**



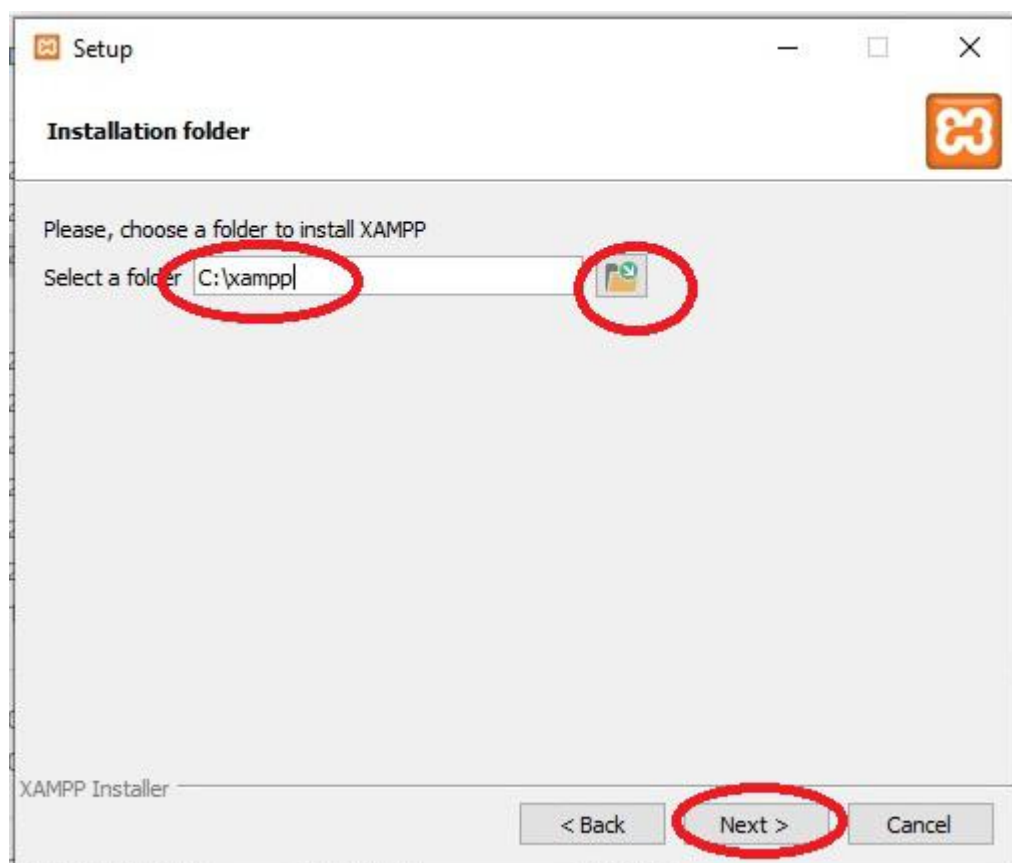
The next screen will offer you installation choices, I like to untick FileZilla and Mercury Mail Server, as I will not be using a Mail server and if I need File Zilla I can install it at a later date. I have left Tomcat as I might want to play with Java at some point. The choices for installation presented are as follows

- Apache (The webserver)
- MySQL (Database Tool) Will be required to run WordPress
- FileZilla FTP Utility (Would be used to transfer website to an online web host)
- Mercury Mail Server (An email Server)
- Tomcat (Java Server)
- PHP Programming Language (required by wordpress)
- Perl Programming Language
- phpMyAdmin (software to access the MySQL server)
- Webalizer (Analyses log files and can create html reports)
- Fake Sendmail (Software that allows you to test email sending e.g. forms)

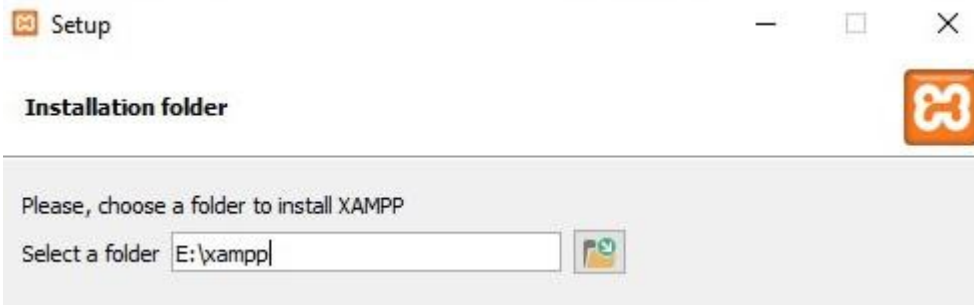


If you're planning on running WordPress; Apache, MySQL and PHP are the bare minimum, however I will also install Perl, phpMyAdmin and Fake Sendmail as my minimum.

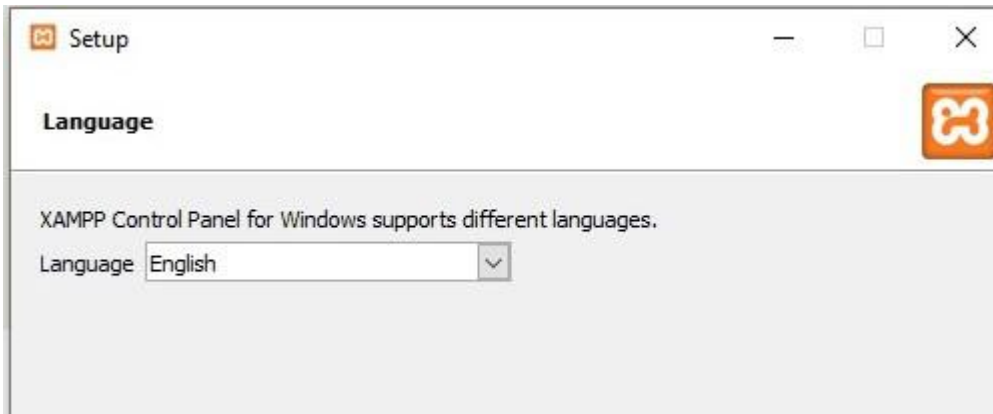
The next screen delivers you, the all important option, **Installation folder**. So obviously you need to change this to your USB drive (you can find this using the browse button, circled in red) don't forget to add the xampp folder.



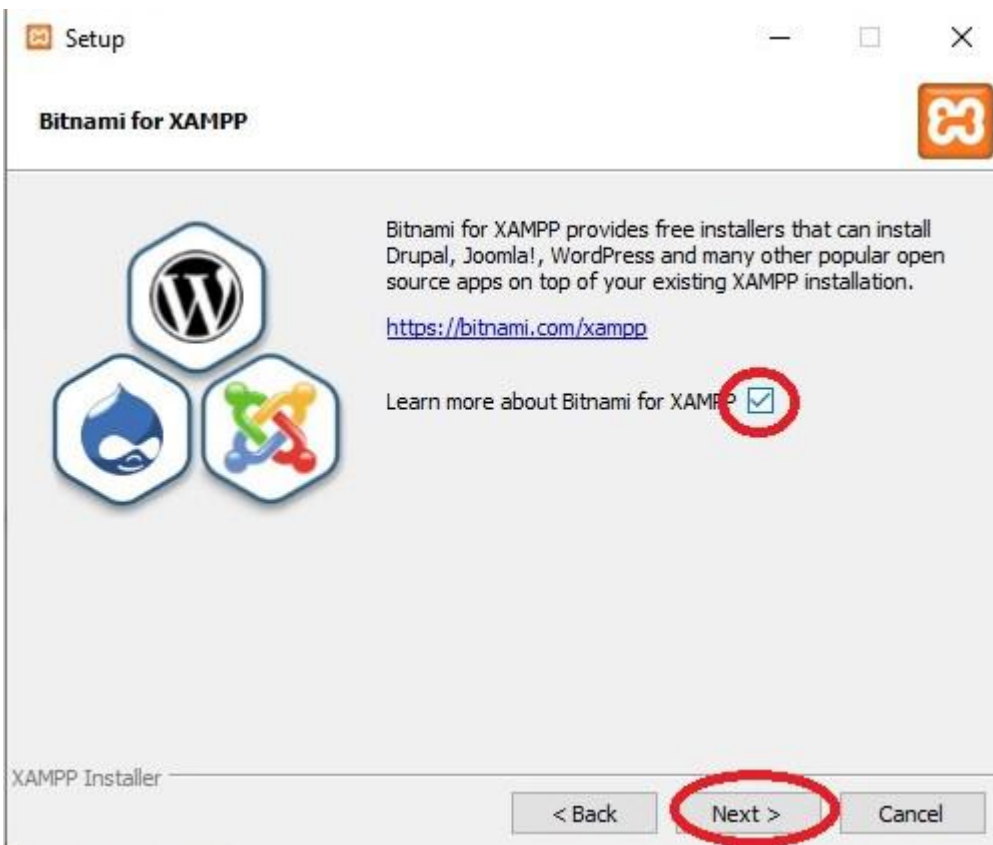
After changing the directory and adding the \Xampp, your page should look like the screenshot below.



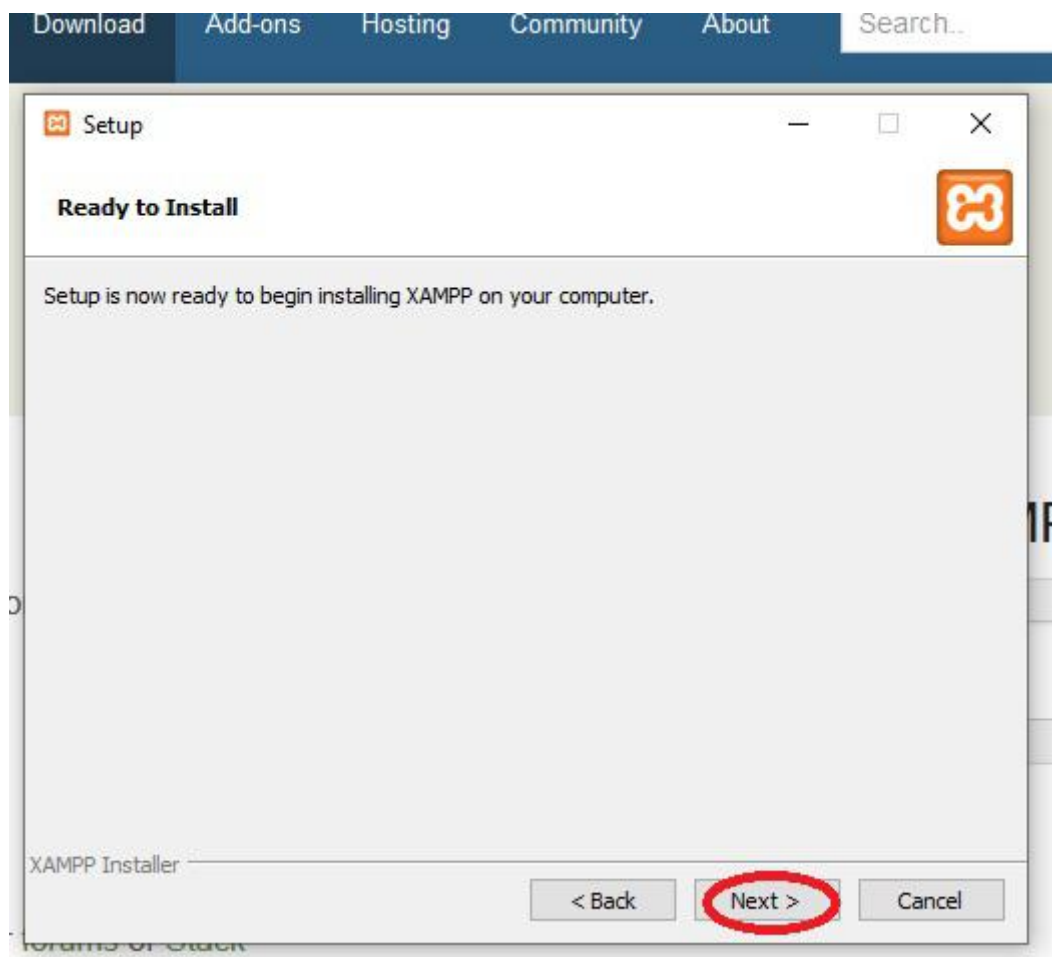
When you have changed the file path to your USB drive and added the folder name (XAMPP) select **next** to continue. This should cause the choose your language page to appear, so select your language (I highly recommend you leave it as English) and select Next



The next page offers you an introduction to Bitnami, if you leave the Bitnami box checked it will open the Bitnami webpage using your default browser. As we cannot use Bitnami installers on our portable webserver I recommend unchecking this box and selecting Next.



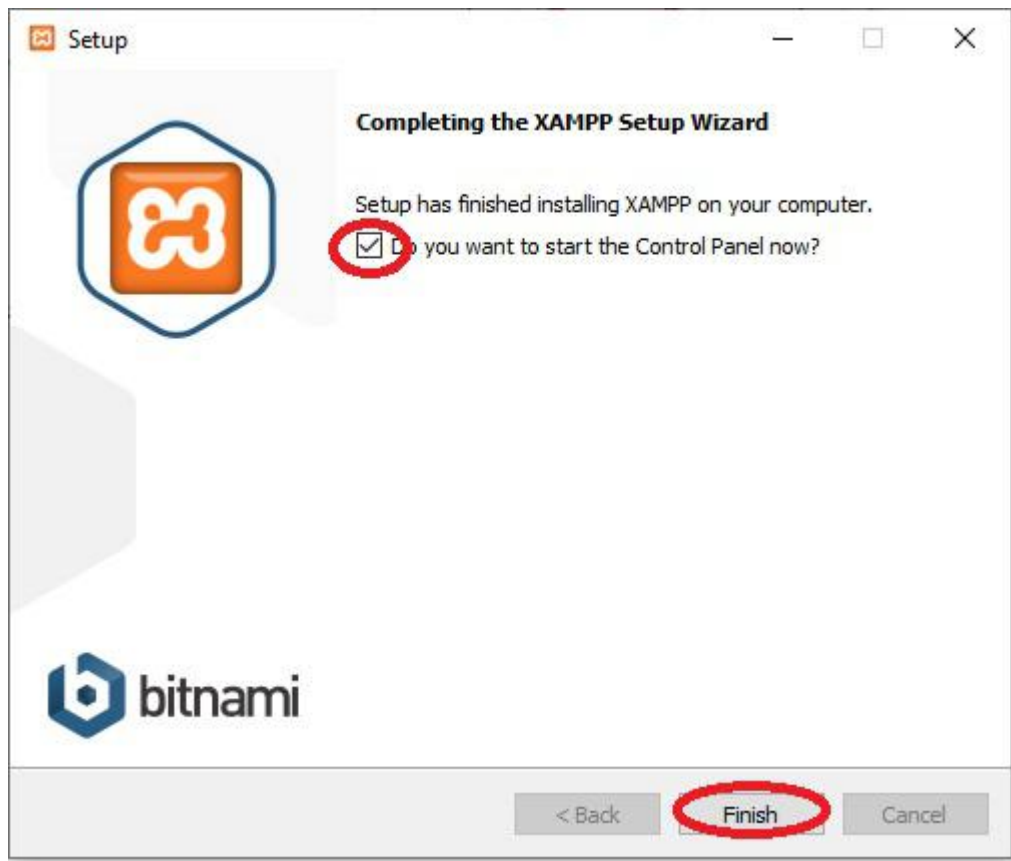
This should take you to the ready to Install page, select Next to begin the installation.



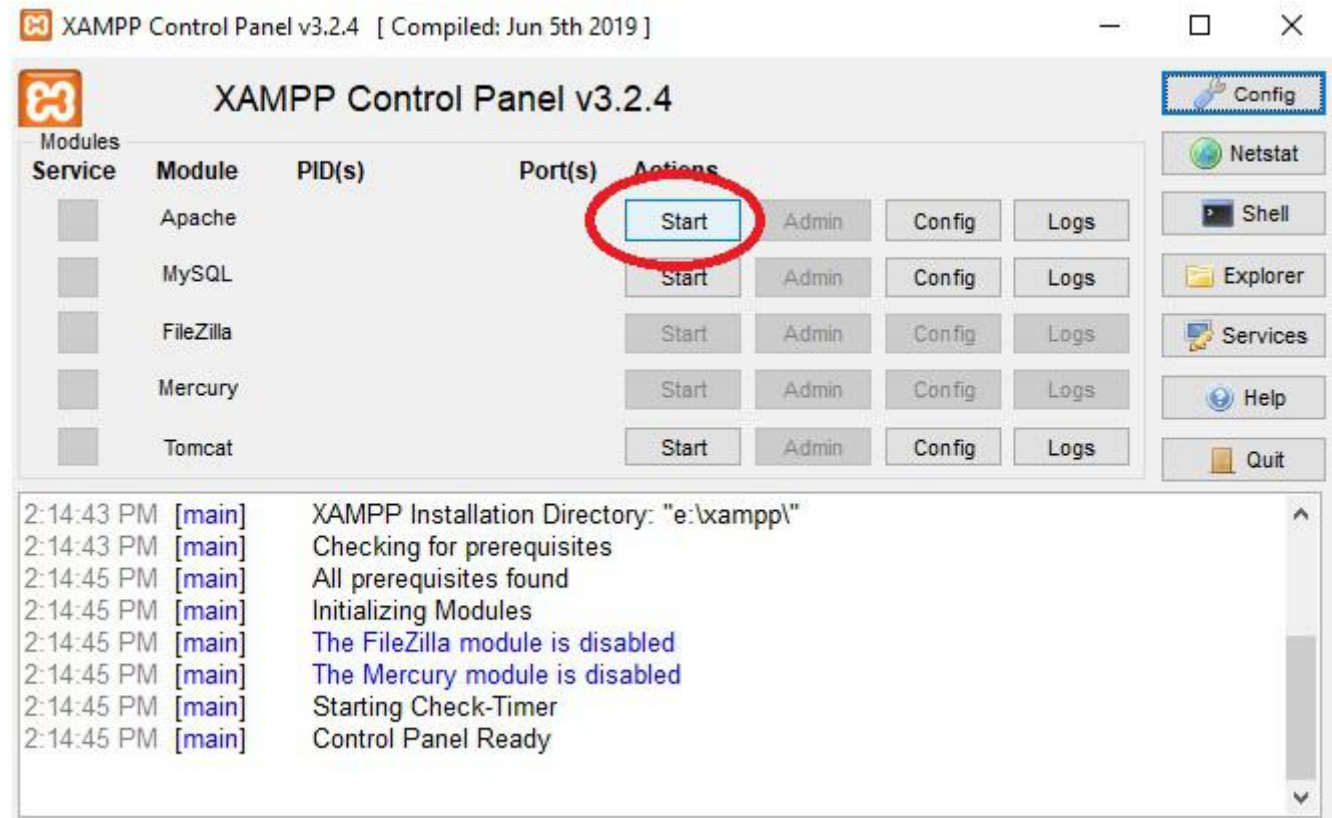
When the installation begins you should see the following.



Next is break time, depending on the speed of your USB this could take up to an hour or more. When you see the completing set up screen ensure you have Start the Control Panel checkbox selected then hit the Finish button at the bottom of the screen.



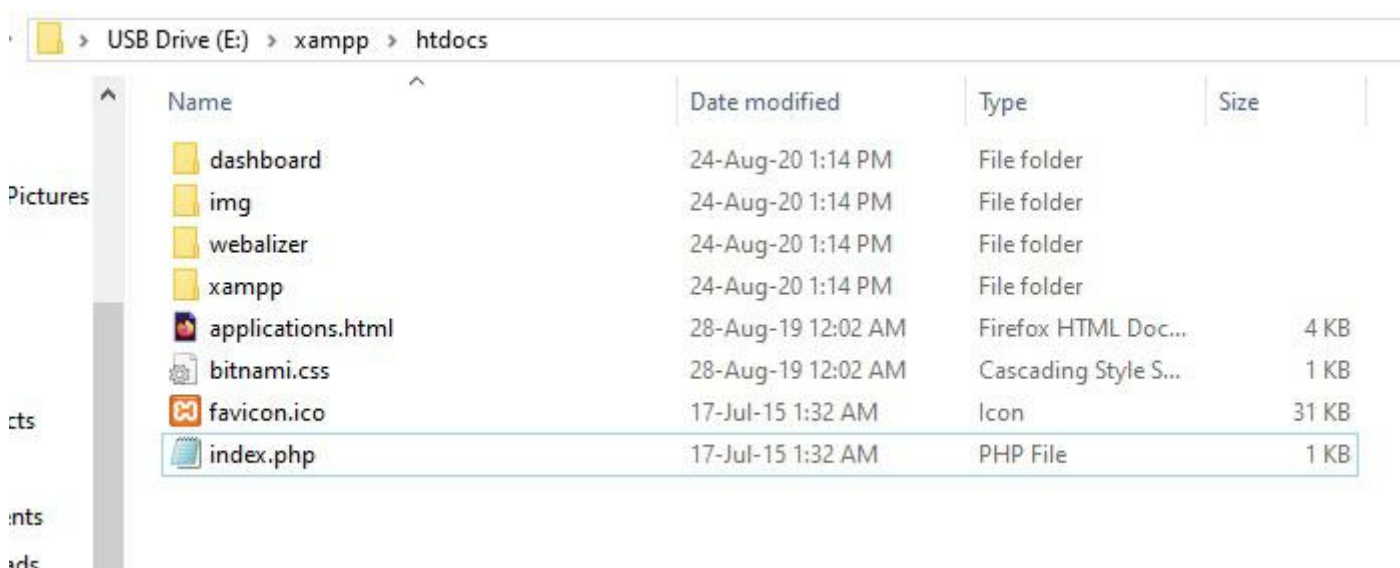
This should open the XAMPP Control Panel. On the control panel select the start button opposite Apache. This will start your webserver. If you would like to use phpMyAdmin, also start the MySQL on the XAMPP control panel. To use/access WordPress on your webserver you need to start both Apache and MySQL.



To see your webserver webpage open your browser and type in localhost, this should open your website.



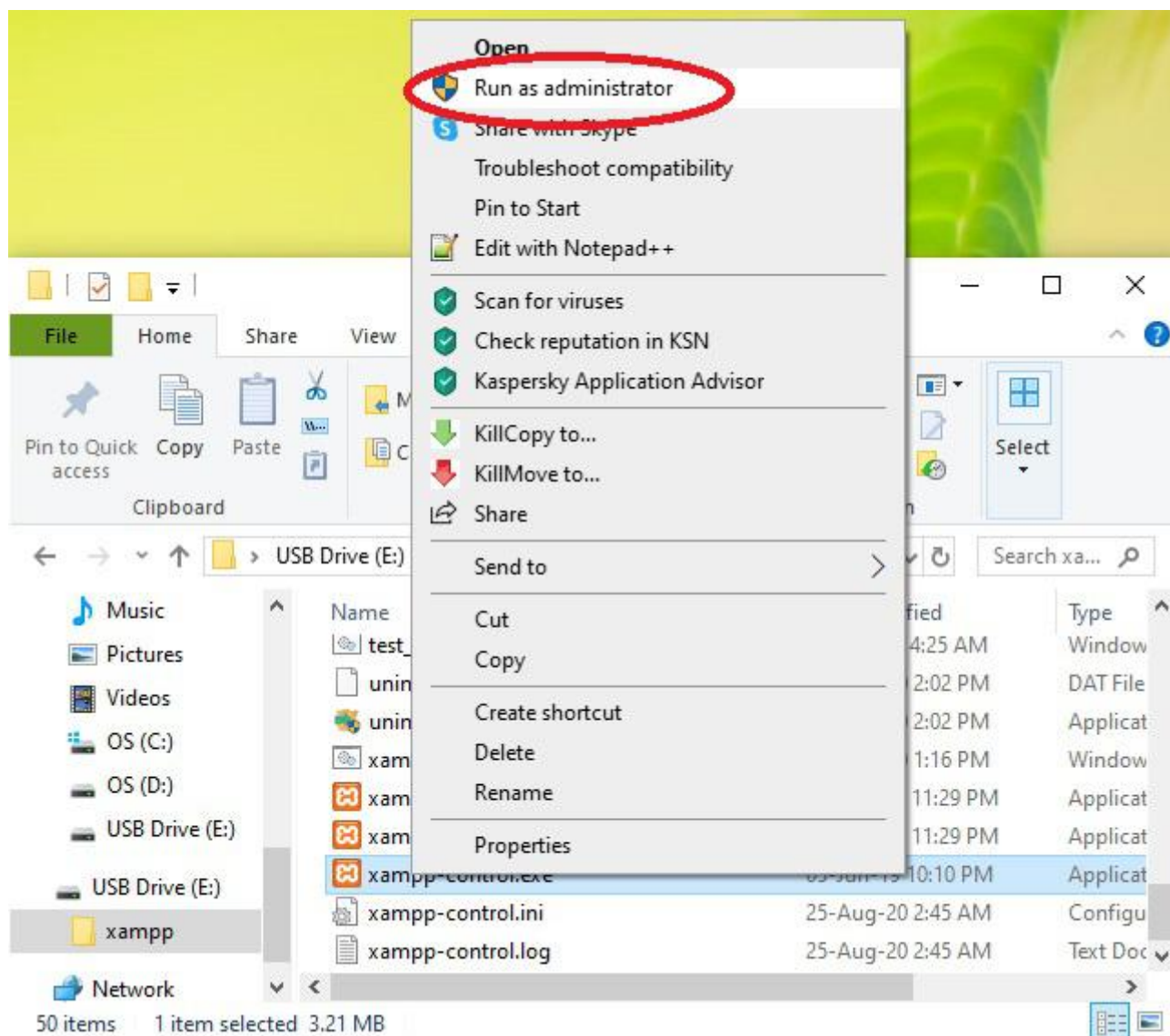
Where can I find my site files? If you followed the installation tutorial you should find your website files at htdocs, e.g. E:\xampp\htdocs where E is my USB drive designation.



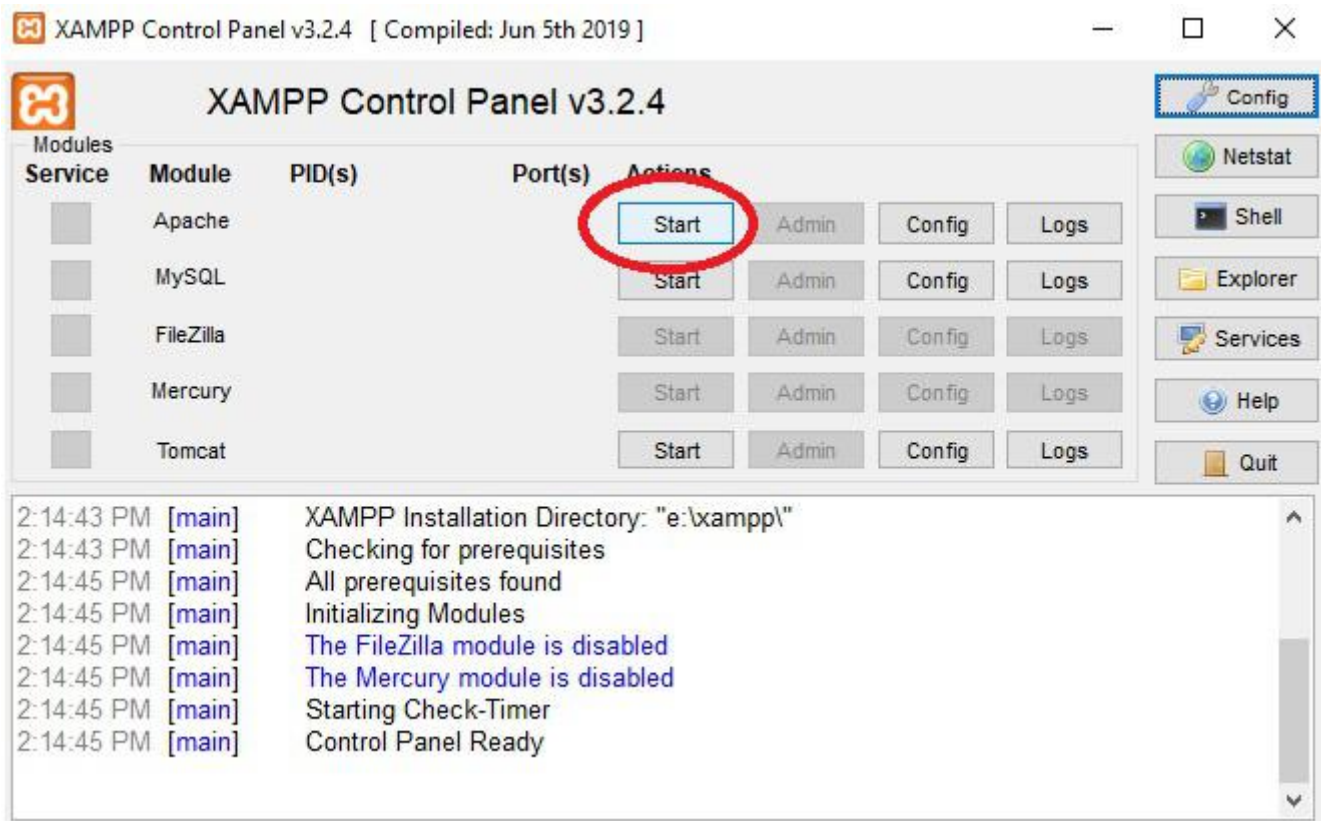
Don't forget to go back to the Xampp control panel and stop any services you have running when you're finished.

How To Restart your Server

To start Xampp, plug in your USB drive, open file explorer, locate the XAMPP folder, scroll to the end of the folder, locate xampp-control.exe and right click run as administrator. See the screenshot below.



This may cause the windows permission screen to pop up if it does so, select Yes allow changes to be made. If all has gone to plan the Xampp Control Panel should pop up on your screen. Select the services you wish to start (Apache to run localhost) , give it a moment and you should be able to view your webserver via localhost on your web browser.



Next month I will return with a tutorial on how to setup WordPress on your portable web server, so stay tuned for that.

NBN upgrades explained: how will they make internet speeds faster? And will the regions miss out?

Thas Ampalavanapillai Nirmalathas, *University of Melbourne*

The federal government has announced a A\$3.5 billion upgrade to the National Broadband Network (NBN) that will grant two million households on-demand access to faster fibre-to-the-node (FTTN) internet by 2023.

Reports from the ABC suggest the plan would go as far as to upgrade the FTTN services to fibre-to-the-premises (FTTP) – although this wasn't explicitly said in Minister for Communications Paul Fletcher's announcement.

The minister said the upgrade would involve expanding current FTTN connections to run along more streets across the country, giving people the option to connect to broadband speeds of up to one gigabit per second. Improvements have also been promised for the hybrid fibre coaxial (HFC) and fibre-to-the-curb (FTTC) systems.

Altogether the upgrade is expected to give about six million households access to internet speeds of up to one gigabit per second. But how will the existing infrastructure be boosted? And who will miss out?

Getting ahead of the terminology

Let's first understand the various terms used to describe aspects of the NBN network.

Fibre to the Premises (FTTP)

FTTP refers to households with an optical fibre connection running from a device on a wall of the house directly to the network. This provides reliable high-speed internet.

The "network" simply refers to the exchange point from which households' broadband connections are passed to service providers, such as Telstra, who help them get connected.

Fibre to the Node (FTTN)

The FTTN system serves about 4.7 million premises in Australia, out of a total 11.5 million covered under the NBN.

With FTTN, households are connected via a copper line to a "node" in their neighbourhood. This node is further connected to the network with fibre optic cables that transfer data much faster than copper cables can.

With FTTN systems, the quality of the broadband service depends on the length of the copper cable and the choice of technology used to support data transmission via this cable.

It's *technically* possible to offer high internet speeds when copper cables are very short and the latest data transmission technologies are used.

In reality, however, Australia's FTTN speeds using a fibre/copper mix have been slow. An FTTN connection's reliability also depends on network conditions, such as the age of the copper cabling and

whether any of the signal is leaking due to degradation.

Fibre to the Curb (FTTC)

The limitations of FTTN mentioned above can be sidestepped by extending fibre cables from the network right up to a curbside “distribution point unit” nearer to households. This unit then becomes the “node” of the network.

FTTC allows significantly faster data transmission. This is because it services relatively fewer households (allowing better signal transmission to each one) and reduces the length of copper cable relied upon.

Hybrid Fibre Coaxial (HFC)

In many areas, the NBN uses coaxial cables instead of copper cables. These were first installed by Optus and Telstra in the 1990s to deliver cable broadband and television. They’ve since been modernised for use in the NBN’s fibre network.

In theory, HFC systems should be able to offer internet speeds of more than 100 megabits per second. But many households have been unable to achieve this due to the poor condition of cabling infrastructure in some parts, as well as large numbers of households sharing a single coaxial cable.

Coaxial cables are the most limiting part of the HFC system. So expanding the length of fibre cabling (and shortening the coaxial cables being used) would allow faster internet speeds. The NBN’s 2020 corporate plan identifies doing this as a priority.

Minister Fletcher today said the planned upgrades would ensure all customers serviced by HFC would have access to speeds of up to one gigabit per second. Currently, only 7% of HFC customers do.

Mixing things up isn’t always a good idea

Under the original NBN plan, the Labor government in 2009 promised optical fibre connections for 93% of all Australian households.

Successive reviews led to the use of multiple technologies in the network, rather than the full-fibre network Labor envisioned. Many households are not able to upgrade their connection because of limitations to the technology available in their neighbourhood. Also, many businesses currently served by FTTN can’t access internet speeds that meet their needs. To avoid internet speeds hindering their work, many businesses need a minimum speed between 100 megabits and 1 gigabit per second, depending on their scale.

Currently, no FTTN services and few HFC services can support such speeds.

Moreover, the Australian Competition and Consumer Commission’s NBN monitoring report published in May (during the pandemic) found in about 95% of cases, NBN plans only delivered 83-91% of the maximum advertised speed.

The report also showed 10% of the monitored services were underperforming – and 95% of these were FTTN services. This makes a strong case for the need to upgrade FTTN.

Who will benefit?

While the NBN’s most recent corporate plan identifies work to be done across its various offerings (FTTN, FTTC, HFC, fixed wireless), it’s unclear exactly how much each system stands to gain from today’s announcements.

Ideally, urban and regional households that can't access 100 megabits per second speeds would be prioritised for fibre expansion. The expanded FTTN network should also cover those struggling to access reliable broadband in regional Australia.

Bringing fibre cabling to households in remote areas would be difficult. One option, however, could be to extend fibre connections to an expanded network of base stations in regional Australia, thereby improving the NBN's fixed wireless connectivity capacity.

These base stations "beam" signals to nearby premises. Installing more stations would mean fewer premises covered by each (and therefore better connectivity for each).

Regardless, it's important the upgrades happen quickly. Many NBN customers now working and studying from home will be waiting eagerly for a much-needed boost to their internet speed.

Thas Ampalavanapillai Nirmalathas, Group Head – Electronic and Photonic Systems Group and Professor of Electrical and Electronic Engineering, *University of Melbourne*

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Google News favours mainstream media. Even if it pays for Australian content, will local outlets fall further behind?

Axel Bruns, Queensland University of Technology

Google's role in delivering audiences to news outlets has been under scrutiny of late. The Australian Competition and Consumer Commission's initiative to redirect advertising revenue from Google and Facebook to news publishers has led to threats of a news boycott by both companies.

Australia's news media businesses have faced revenue loss and job cuts for some time now, blaming Google and Facebook for poaching advertising revenue.

But rather than share revenue with the publishers whose content they feature, it seems the tech behemoths would rather remove Australian news content from their platforms altogether. Into this heated debate arrives a new study of Google News search recommendations in the US. The research, published today in *Nature Human Behaviour*, examines Google News search results across more than 3,000 US counties - evaluating the balance between local and national news outlets in search results on a wide range of topics.

The findings show Google News generally privileges national news outlets over local ones, especially for topics of national interest. This makes it even more difficult for local outlets to compete with their larger national counterparts - but shifting the balance between the two isn't easy.

A handful of winners

In one sense, the research findings merely show Google News is working as advertised: it points readers interested in major issues to leading national outlets. Larger, better-funded media businesses are likely to have more in-depth coverage than local publishers.

Meanwhile, Google News will feature more local content when users search for issues with a local angle. And while the study didn't cover Australia, it probably works similarly here, too.

Nevertheless, the research found the three most prominent national US outlets account for about one-sixth of all search results. This echoes research published last year, which also documented Google News featuring a very narrow range of leading news outlets.

The authors of that study worried this "highly concentrated" set of results was "empowering a handful of prominent outlets and marginalising others", rather than offering a comprehensive range of perspectives on the news.

The 'filter bubble' argument

The two studies mentioned above offer a powerful argument against the persistent (but unsubstantiated) idea that search engines and social media place us in "filter bubbles".

This is the idea that the information we encounter online depends on our personal identities, ideologies and geographical location. If the filter bubbles hypothesis were true, it would indeed threaten to deepen social divides.

But an increasing number of timely studies suggest something different: if there is a filter bubble, we're all in it together.

In other words, when different users search for news on Google, they likely see the same results from the same handful of media outlets – regardless of who and where they are.

Tweaking the results

From this perspective, the uniformity and predominantly national focus of Google News results may even be welcome, as it ensures searchers of all backgrounds have access to a shared stock of information.

At the same time, however, Google's channelling of users towards major national news outlets affects their local competitors' ability to generate advertising revenue. The rich (in readership) get richer (from advertising), while outlets featured less in search results struggle.

In a market already suffering from substantial pandemic-induced downturns, this undermines smaller outlets' ability to survive in the long term. "News deserts" (areas without local news outlets) are growing rapidly in the US and in Australia.

Policy makers might be tempted to arrest this decline by forcing Google News to provide more links to local rather than national news outlets. But even if Google agreed to this, it would come at a cost.

Major national outlets are prominent because local outlets simply can't provide the same comprehensive coverage of non-local issues. Instead, they draw on wire services and syndicated content.

Making Google feature more content from local outlets would direct more revenue towards those news organisations, but could also reduce the quality and diversity of news provided to users. They might end up only seeing local adaptations of content from a small number of wire services.

While this approach might save some local news outlets, it would undermine citizens' understanding of the world around them.

The lion and the mouse

The Australian initiative to make Google (and Facebook) pay for the news they show on their sites could be seen as a more sensible alternative.

Revenue generated from the news media bargaining code could be used to increase the strength and diversity of the domestic news industry, enabling smaller outlets to provide a better range of content for Google News to feature.

But even if Google was willing to share advertising revenue, the devil lies in the detail. If that money was distributed based on current Google News recommendation patterns, major news outlets would receive the lion's share. Local news organisations would still miss out – along with the ABC and SBS, which are not included in the ACCC's proposal.

So it would be good news for News Corp and Nine Entertainment, but not so much for everyone else.

To rebuild Australia's local news industry, the industry heavyweights would have to give up some of their own hard-fought share of the money. But you don't need to consult Google to work out how likely that is.

Axel Bruns, Professor, Creative Industries, *Queensland University of Technology*

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DOTW Winners September 2020

Roger Brown

DOTW is a lighthearted look at some of the sillier events of the week. Don't take it too seriously and do pop over to Chit Chat on Yammer and vote each week. Thanks to those of our members who occasionally 'feature' for taking the gentle humour in such good part.

Our September "winners" were

- Former prime minister Tony Abbott for his statement in London that the media had spread "virus hysteria" and older people should left to deal with the virus unassisted (or worse).
- More than a thousand anti-lockdown protesters who say they will join a "Freedom Walk" on the Tan after previous clashes between demonstrators and police.
- Melbourne City Council parking administration which apparently operated a "the customer is always WRONG" and fined drivers for confusing "O" and "0" when entering their car details into council parking terminals.
- Liberal MP Tim Smith for a Facebook poll "Should Daniel Andrews Resign," where all voting emoticons indicated a YES vote. Facebook users instead improvised to vote no.

East SIG Report September 2020

Neil Muller

East SIG convener Paul Woolard opened the September meeting for the second time via the internet conferencing software Zoom along with Frank Maher the Zoom host. Another large audience attended, with members as far away as Echuca and Queensland joining the meeting.

The night's first presentation was by **Dave Botherway** expanding on his talk from last month on Zoom, titled "Making more use of Zoom". Before beginning the presentation Dave noted that depending on a user's device, be it a Windows computer, an Android or iPad tablet, or a smartphone, the Zoom screen may have a different appearance from the graphics he will be showing. The PC's capacity, the internet connection, or attending as a host or guest can all result in the Zoom screen having a slightly different appearance. The graphics following have all been taken from a Windows desktop computer.

There are 2 types of Zoom users. The first is the host & co-host. The host sets up the session and invites attendees. They control the session and can pass the role to another person if required. The second type of user are those invited to attend the meeting and are called Guests. Guests can act as permitted by the host. You can refer to the August meeting report for greater details on these roles.

The Zoom window comprises 3 sections. The main user toolbar is at the bottom of the screen, a panel at the top of the screen, and the participants' view in the middle. Participants can appear in Grid View or Speaker View. Dave gives more details on this section later in his presentation. In Figure 1 meeting participants appear in **Grid View**. The names of each participant are usually shown below and to the right of their video display, however, I've removed the names for privacy reasons.

TOP PANEL TOOLS



USER TOOLBAR

Figure 1 - The Zoom Window

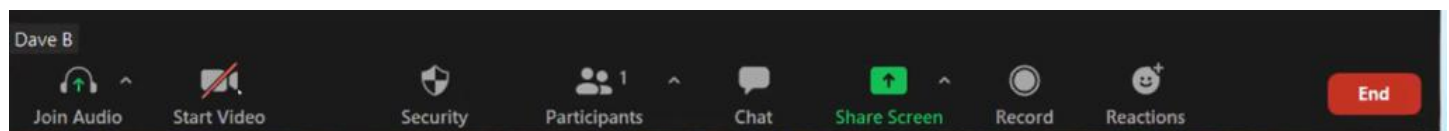


Figure 2 - The Hosts User Toolbar

The User Toolbar at the bottom of the Zoom window is the location of the controls you'll use first. (Note that the host's User Toolbar above is slightly different from that of Guests toolbar. Those differences will be noted as they are encountered later in the presentation.)

Toolbar icons from left to right are:

- **Join Audio** - Click this icon to **Start** or **Mute Audio**. Select the up arrow icon to the right of the icon to change audio settings. It is recommended that audio is left muted unless talking as this will minimize background noise that everyone else will hear. The host is able to mute everybody if needed, but can't unmute them. As an alternative to clicking the **Unmute Audio** icon to speak, the space bar can be held down while talking and then release when finished. This did not always work when tested later.
- **Start Video** - Clicking this icon will **Start Video** & **Stop Video**. The red diagonal line through the icon in Figure 3 indicated the video is stopped. By selecting the up arrow to the right of the icon offers further options to **Select a Camera**, **Choose a Virtual Background**, and adjust **Video**

Setting. When selecting a virtual background a window opens where you choose from a selection of backgrounds. Alternatively, you can upload your own background.

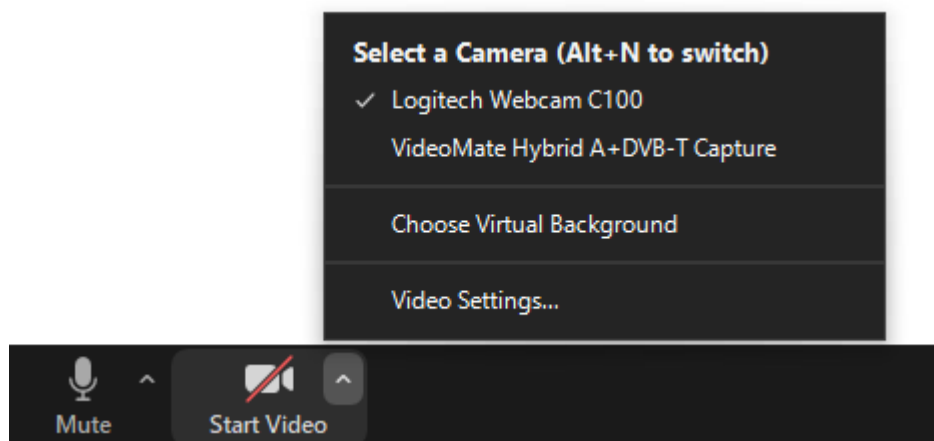


Figure 3 -Zooms User Toolbar (Guest) - Start Video

- Security - This option is only shown on the host's or co-host's screen. If you are hosting a meeting, selecting **Enable Waiting Room** allows the host to control who is allowed entry to the meeting. Other understandable options are shown in Figure 4 below.

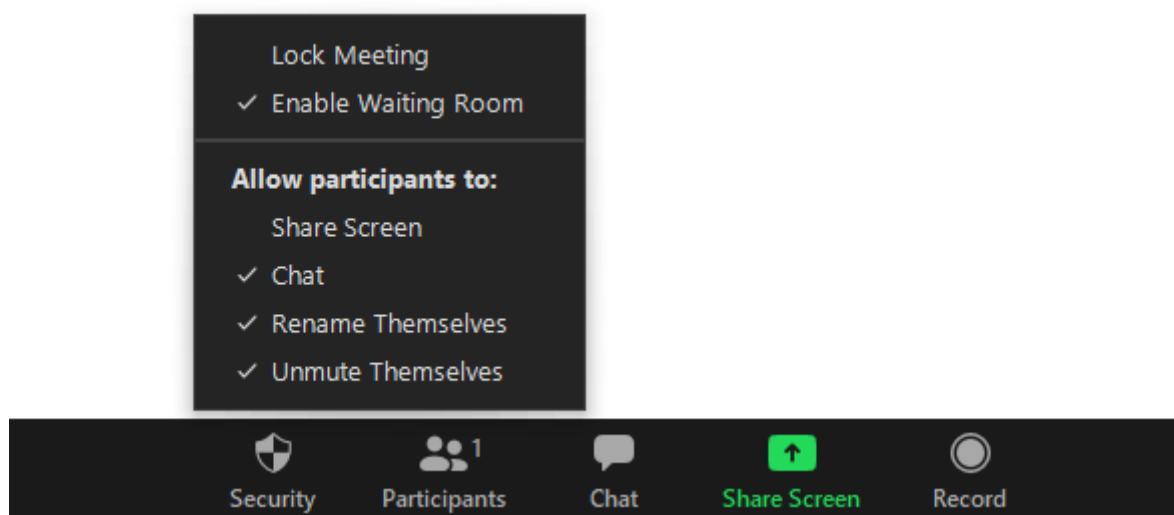


Figure 4 - Zoom User Toolbar - Security (Host only)

- *Participants* - The number attending the meeting is shown beside the **Participants**. When you click on the **Participants** icon, a panel showing participant names (Figure 5) opens on the left side of the Zoom window. To the left of the participant's names are icons that show whether participants have their audio and video turned on or off. The host can mute all microphones if extraneous noise is heard during a presentation. The series of icons at the bottom of the **Participants** panel (Figure 5) are used by participants to signal the host or co-host. The **Raise Hand** icon should be used when asking questions. When participants fill more than a single Zoom window as in Figure 1, using the **Raise Hand** makes it easier for the host or co-host to tell when someone wishes to ask a question. The **Yes & No** icons are for taking polls and the **go slower** and **go faster** are used to assist the presenter.

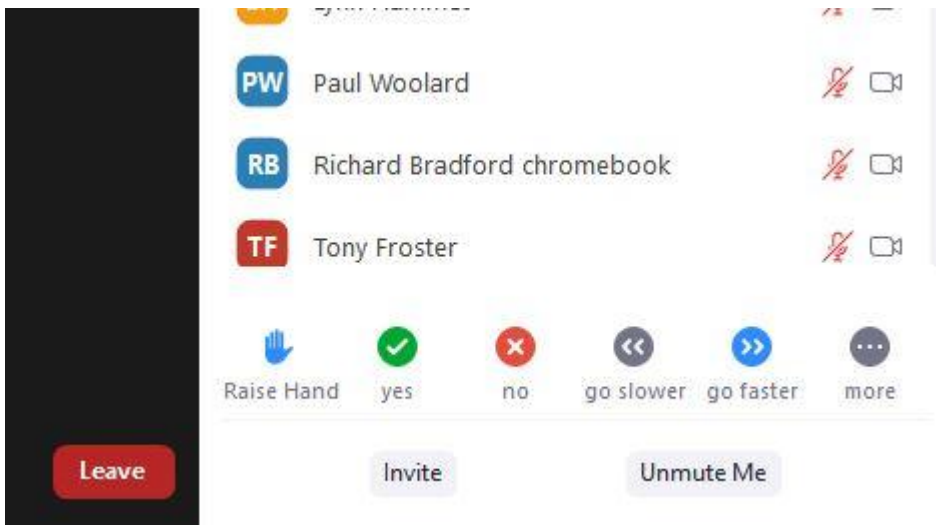


Figure 5 - Participants panel

- *Chat* - Audience members can chat by text to everyone or to just one person attending the meeting. When sending messages, the text will appear above the **Chat** icon on the Toolbar. The message will remain for a short time and then disappears from view. Figure 6 below shows how both messages to everyone and private messages are displayed. At the bottom of the chat window is where you type your message. Those using iPads will find the **Chat** function is triggered by press the 3 dots at the top right-hand corner of the screen.

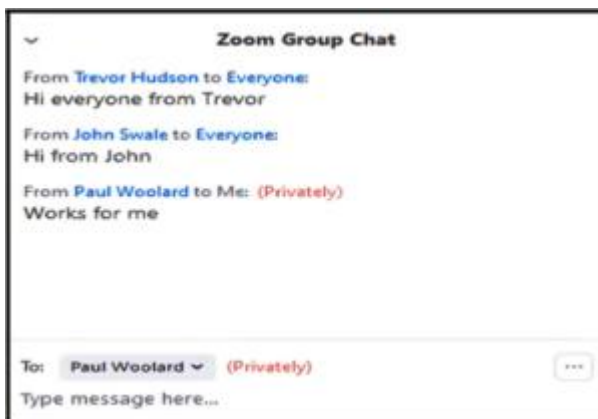


Figure 6 - Zoom User Toolbar - Chat function

- *Share screen* - This feature is activated by selecting the green **Share Screen** icon on the toolbar. Refer to Figures 4 and 8. Sharing your screen with others at a meeting is controlled by the host and allows the sharing of content from a guest's screen to everyone. When a guest selects **Share Screen** the Window shown in Figure 7 opens. Options available in Figure 7 are to share your computers **Screen**, share a **PowerPoint** presentation, share a **Whiteboard** or share other programs and devices you may have open.

When sharing a video or PowerPoint with audio, you must tick the **Share computer sound** tick box on the bottom left of the Window. This ensures that audio comes directly from the video or PowerPoint. A second tick box to the right **Optimize Screen Sharing for Video Clip** should also be ticked. This allows Zoom to change the resolution of the video to suit the speed of the PC and the internet bandwidth available. The presenter will also need to hide the presenter bar at the top of his screen otherwise it may

cover a portion of the screen being viewed by others. The final step is to click on the **Share** button.

When playing a YouTube video Dave has found it easier to download the video to your PC and play it from there. Dave uses a browser add-on called Download Helper for this.

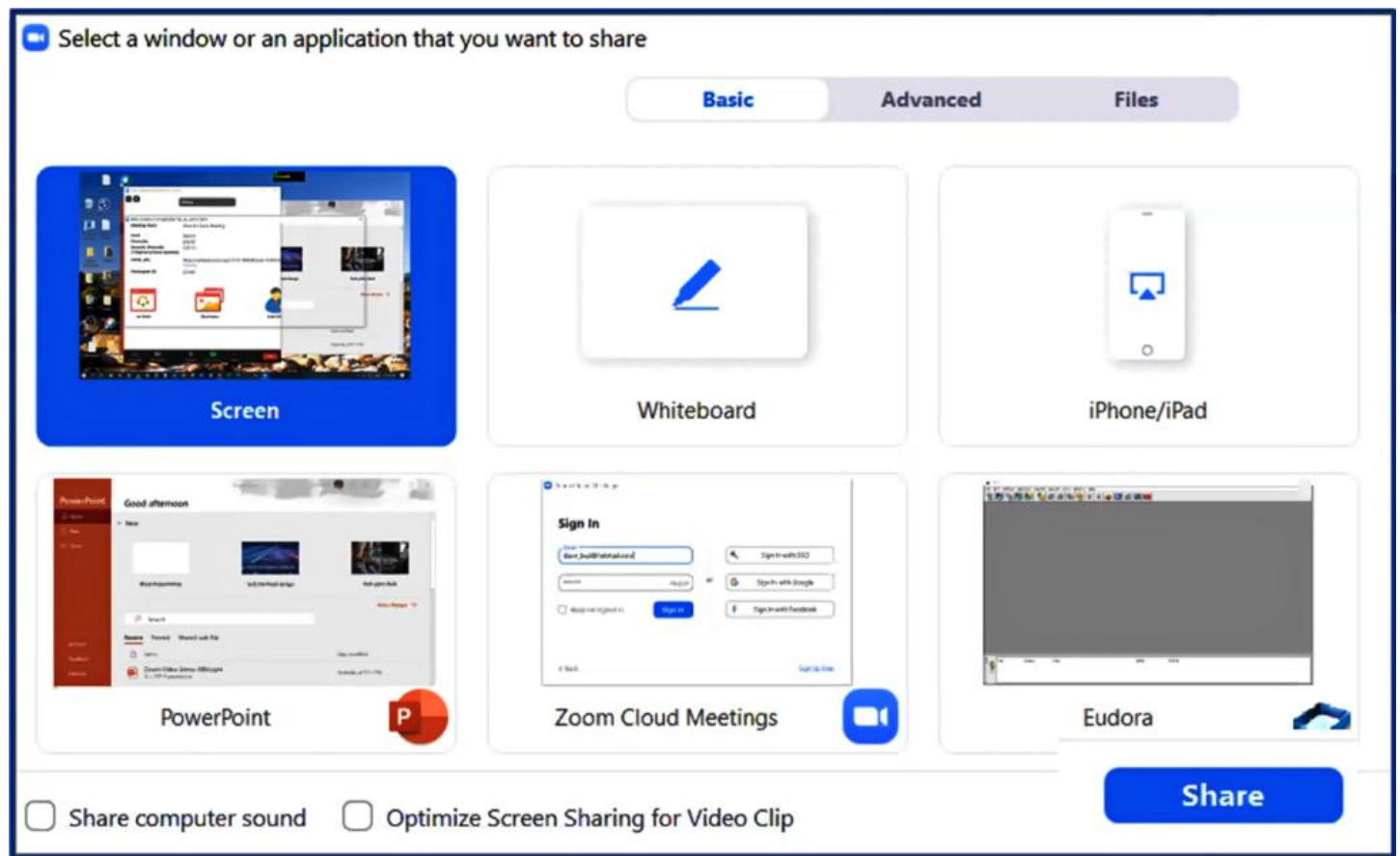


Figure 7 – Share Screen window

- **Record** – The host or co-host controls whether the meeting can be recorded. When the meeting is being recorded, a red dot is displayed at the top left of the Zoom screen. The recording can be stored in the cloud or on the hosts or co-hosts PC.
- **Reactions** – When selecting the **Reactions** icon 2 emoji's pop up. Clicking either the clapping hand or thumbs up icon displays that reaction on screen. The emoji selected appears briefly on the top left of the guest's screen image to give feedback to the presenter. IPad users will need to press the 3 dots at the top right-hand corner of its screen to display their emoji's.

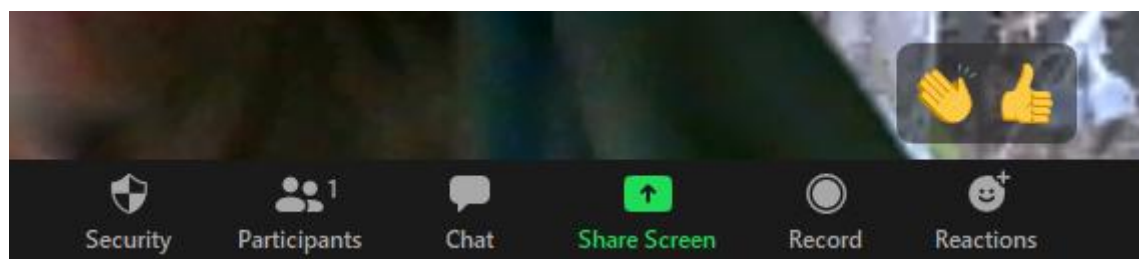


Figure 8 – Zoom User Toolbar – Reactions Icon

- **Leave / End** – This icon varies depending on whether you are the host or a guest. The **End** icon

(Figure 2) is displayed on a host's PC and allows the host to end the meeting. The **Leave** icon shown in Figures 1 and 5 appears on a guest's PC and is selected when leaving the meeting.

The toolbar can be hidden from view if it obstructs part of a presentation by pressing the ALT key. Pressing the ALT key again will return the toolbar to view.

The second area of the Zoom screen you're likely to use is the Top Panel. This panel has icons both on the top left and top right of the Zoom window as can be seen in Figure 9 below.



Figure 9 -Zoom Top Panel

The far right icon (a circle with i within) displays meeting information such as the session number. To its right, a green shield displays other settings. These 2 icons appear when hosting a meeting.

On the far right side of the Top Panel is the **Enter Full-Screen** icon. Selecting this icon will cause the Zoom window to completely fill the computer screen. Pressing **ESC** on the keyboard will **Exit Full Screen**.

In the centre of the Zoom Window is the participants area where videos from all those joining the meeting appear. Participants can change their display settings (if allowed by the host) by right-clicking on their video feed. A window appears giving options to **Mute My Audio**, **Stop Video**, **Rename** (this option allows a guest to change the name displayed below their video), and **Edit Profile Picture** (the image displayed when the video feed is stopped). The panel showing these options is shown in Figure 10.

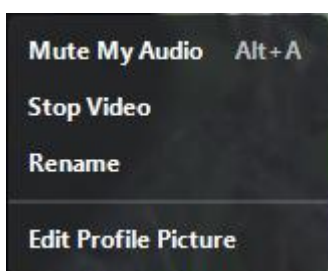


Figure 10 - Video and Display options

On the top right of the Zoom window are 2 icons, **Speaker View / Gallery View** & **Maximise**. These are shown in figure 11 below.

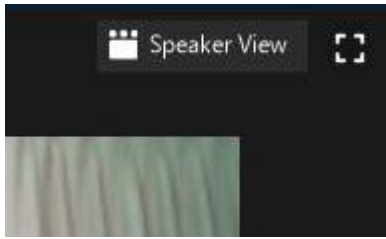


Figure 11 – Speaker view & Maximise icons

The **Speaker View** icon toggles between **Speaker View** and **Gallery View** when selected.

When **Speaker View** is selected the person speaking will appear in a larger video window than audience members. The size of the window they appear in will depend on the number of participants at the meeting. In large meetings, **Speaker View** will reduce the number of participants displayed on a single screen but will make it easier to see who is speaking.

Gallery View displays a small image of all participants in a grid pattern. (Refer to Figure 1) The grid expands and contracts as participants join and leave the meeting. When someone is speaking, the frame around their grid image is highlighted. Even with the frame highlighted it can be difficult to determine who is speaking in a large grid. The number of participants that can be shown in the grid pattern is dependent on the resolution of the screen display and the internet bandwidth available. On my HD monitor, the grid was 5 x 5 whereas on my Lenovo tablet it's 2 x 2.

When a PowerPoint or YouTube video is being presented, **Gallery View** or **Presenter View** disappears and is replaced by a smaller overlay window showing participants. This smaller window may still obstruct the presentation but can be dragged out of the way or reduced in size. At the top of the window are 4 icons that adjust its size. When one of these icons is selected the view of participants can be reduced from a small grid down to a single bar. The view selected is denoted by the blue bar as seen in Figure 12 where only the speaker's name is displayed. The fifth icon located at the top right displays the speaker on top of his presentation.



Figure 12 – Speaker view icon

At this stage of the presentation, Dave gave members the opportunity to investigate the various features mentioned in his talk. This opportunity was well-received by all those present.

Following Dave's presentation, **George Skarbek** commenced his usual Q&A segment.

Q: I can no longer use the PrtScr (Print Screen) or Alt + PrtScr keys on my keyboard and believe some unknown program I may have loaded has hijacked the PrtScr function. I've previously used these keys to copy to a graphic program such as Irfanview or used it as a shortcut for Faststone Capture. My question is

how can I get my PrtScr key back? I should add that I haven't tried a different keyboard yet to determine if that might be the problem.

A: I haven't come across that but will look into it. Alternatively, you can use the keyboard shortcut WinKey + Shift + S to cut out a portion of the screen. The clipped portion is saved to the clipboard, which you can then paste into a graphic program.

[Kelvin Cording] Have a look at keyboard mapping in Google and you'll find a lot of information on mapping keys to particular functions.

Q: I've just bought a new 4K monitor which was advertised as operating at 60 Hertz. When I connect it up I'm only getting 30 Hertz. I think it's a HDMI 1.4 problem. I'm using the cable that came with the monitor as the instructions with it were very specific about using the included cable. I've googled this and it appears HDMI 2 is what I should be using. How do I get around this problem? Does the connection from the computer have to be 1.4 or does the cable have to be 1.4Hz?

A: I would speak to the manufacturer first. HDMI 1.4 has a pretty substantial bandwidth so should cope with that very easily, but it would appear you need HDMI 2. If your computer doesn't have the bandwidth to put out HDMI 2 you're in trouble. Are you sure that the drivers on your computer are putting out HDMI 2.0? Run some diagnostic by pressing WinKey + R and key in dxdiag.exe and that will bring up information about your screen and video card and may give you a clue. *(Tech Ed: HDMI 1.4 doesn't have enough bandwidth to support 4K at 60Hz. Purchase a new video card.)*

Q: Recently I received a number of emails supposedly from "Cortana at Microsoft" giving a summary of what I've been doing in the last few weeks. This email included snippets of my outgoing emails. Does that mean Microsoft is monitoring my email accounts?

A: That's an interesting and worrying question. I don't know whether Microsoft is or someone else is involved.

[Frank Maher] I received a similar email which I quickly deleted. I believe it came from using Yammer.

[George] I'd download the free version of Malwarebytes and run that. The free version is as good as the paid version for what you would need. Malwarebytes can check for items that don't have a virus signature like hidden snippets from Cortana.

[Trevor Hudson] After the last Windows 10 update, Cortana displayed something that was only recorded in the calendar on my phone. I found where you unsubscribe and I did that. *(Tech Ed: According to Microsoft, "the Briefing email helps you stay in control of your calendar and to help you better prepare for the day ahead". More information can be found at <https://docs.microsoft.com/en-us/Briefing/be-overview>. MelbPC's email service is based on Microsoft's business email platform and the briefing email is probably not useful for personal users. You can unsubscribe by clicking on the Unsubscribe link at the bottom of the emails.)*

After a short break **Trevor Hudson** showed a video he'd prepared on "How to overcome geo-blocking". Geo-blocking is used to stop users from watching their TV subscription services such as Netflix or Stan on an internet-connected device, when they are out of the country. Trevor showed the steps needed to overcome geo-blocking starting with how to determine your IP address and finding and using a VPN (Virtual Private Network). The aim is to make the subscription service think that your device is still in Australia when you are out of the country. You do this by selecting Australia for your VPN service. Although the better quality VPNs require payment, Trevor named a number of free VPNs in his presentation. These free VPNs were add-ons to the popular Firefox and Opera browsers. For more details on unlocking geo-blocking, Trevor's video can be viewed on YouTube by searching the title of this presentation.

George Skarbek followed with “Hints, Tips, Suggestions and a bit of What’s New”. Last month George briefly touched on Windows PowerToys and the overlay app. Microsoft purchased Windows PowerToys in 2018 (*Tech Ed: No, Microsoft made Windows PowerToys open source in 2018*) and it can be downloaded at <https://github.com/microsoft/PowerToys>.

With PowerToys installed, if you hold down the Windows key for a short time the overlay shown in Figure 13 appears.

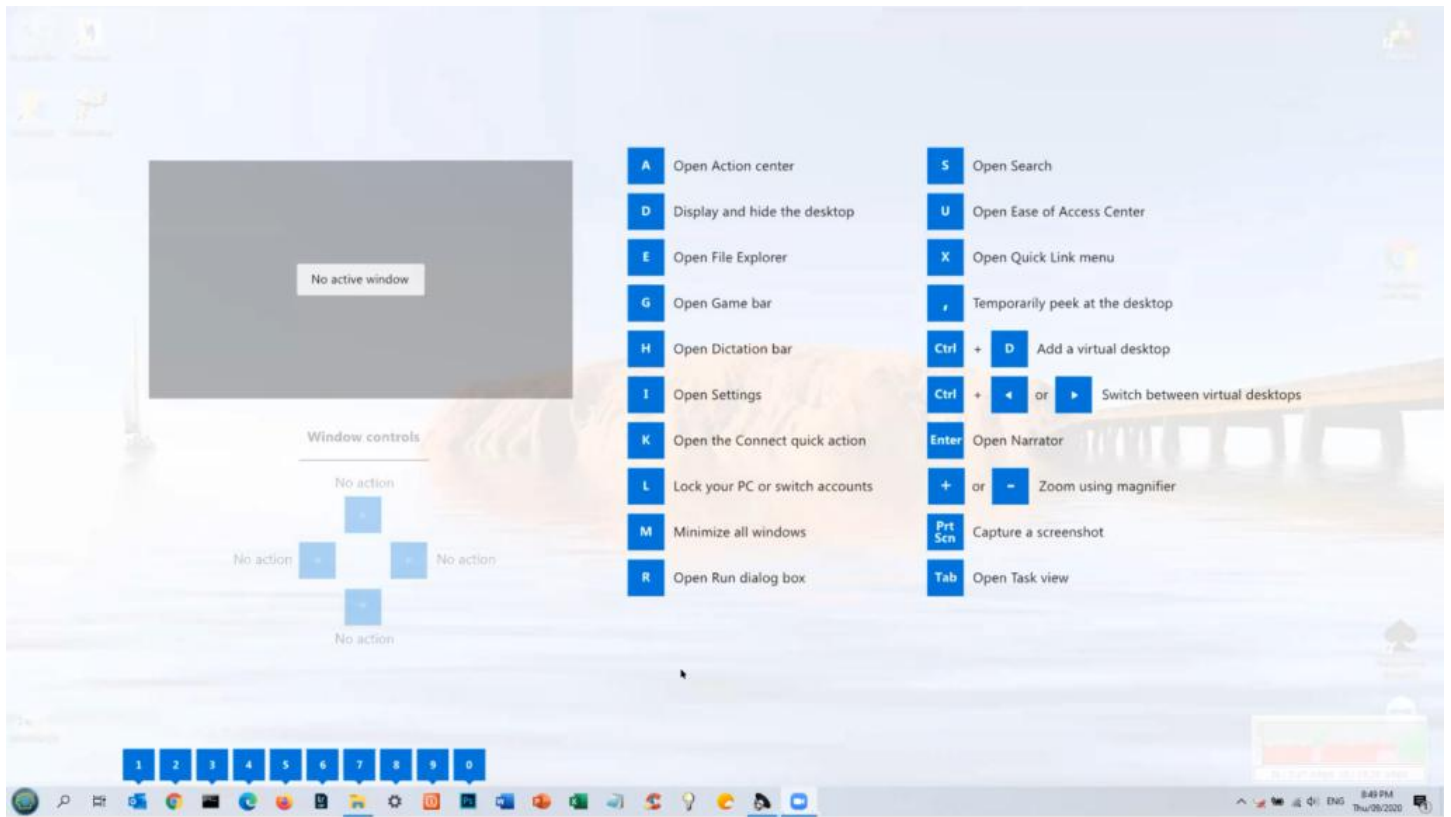


Figure 13 – PowerToys overlay

The purpose of the overlay is to save windows users from remembering large numbers of keyboard shortcuts. From the overlay, if the letter “I” (Open Settings) is pressed, the Setting Windows will open. Type **Clipboard** in the settings search box then press enter and the clipboard settings window opens. George demonstrated this technique to show an alternate way to get to settings and to highlight some clipboard features.

The first item in the Clipboard settings window is **Clipboard history**, a setting George highly recommends members turning on. With **Clipboard history** turned on, all items copied during the current windows session are sent to the clipboard. To display the clipboard history, press the keyboard shortcut **WinKey + V** to bring up a list of all items copied to the clipboard. (This shortcut should be easy to remember because it’s similar to the paste shortcut **Ctrl + V**). From here select the clipboard item you want from the list to paste it into your open document. All text, HTML, and images less than 4 MB in size can be stored in the clipboard. Larger items won’t be stored in history. Clipboard history stores a maximum of 25 entries, with the oldest items disappearing as new ones appear. Clips can be **pinned** to the list which remains in history when the computer is next booted. George then used Clipboard history to demonstrate how to paste both images and text into a Word document.

Along with the overlay tool above, PowerToys has a number of other good tools, but also some very primitive ones in the early stages of their development. The next PowerToys tool George demonstrated was one that can rename multiple files with a single click. In Windows Explorer highlight multiple files

then right-click on the highlighted area. This will open a context menu where all files in the selection can be renamed when **PowerRename** is selected from the list. George demonstrated this by renaming a group of images, then used undo to return files to their original names. Another PowerToys tool that's also available in the context menu is **Resize pictures**. This was also demonstrated. George recommends looking at PowerToys as there are other tools that should be useful to members.

Where George lives, the Melbourne weather radar is not that reliable for picking up light rain. Instead of checking the Melbourne radar when planning to head off for a walk or bike ride, George checks local webcams in his area (Glen Waverley). George showed the view from 2 live webcams at the Moorabbin airport that he's conveniently located on the bookmarks bar in Google Chrome. Search for local webcams in your local area and you may find some you can add as tabs or bookmarks in your browser.

Another area that's had George's interest of late is the current COVID-19 pandemic. Two websites that analyse data differently on the spread of the virus were viewed. The first <https://ncov2019.live> gives a live update of the world's COVID-19 statistics. Statistics show both global and country data. The data is presented as tables that are easy to read with countries shown in rows and data for that country shown in columns. A selection of the main column headings are, confirmed cases, cases per million head of population, critical cases, deceased etc. in order running across the page. When selecting the column heading, countries are ranked in order, highest to lowest. When the "deceased" column header was selected, the USA moved to the top row having the highest current deaths at 195,245. Australian data is listed per state further down the table.

The second website viewed <https://ourworldindata.org/coronavirus-data> shows the coronavirus data in graphical form rather than in tables. There is an immense amount of world data available on numerous other topics on this website. George showed a number of webpages on various other topics from this site. The data is represented in graphical form with the ones viewed having an x-axis displaying time in years. Clicking on any time period on the x axis will update the graph to represent that time period. This site is one well worth investigating for the immense amount of interesting data available.

The next topic covered relates to a presentation George gave to East SIG about a year ago. That topic was how to dispose of your computer, particularly related to passwords stored in the browser. George recently discovered an item in the Windows Control Panel called **Credential Manager** that really concerned him. Selecting Credential Manager in Control Panel opens up 2 lists, **Web Credentials**, and **Windows Credentials**.

Under the **Web Credentials** heading is displayed websites that the user has visited that have stored passwords. When selecting a website from the list (Figure 14) the web address, login id, saved by Internet Explorer, and password is shown. Here the password is shown as a series of dots but can be displayed by clicking on "show". A password is required to open show.

To investigate this further George opened Internet Explorer and deleted the password then rebooted his computer. When opening **Web Credentials** a second time it showed that the password was still listed, even though the password had been deleted. That was a nasty surprise to George that you can wipe your internet data from the browser, but Credential Manager still displays ones log in data including your passwords.



Figure 14 – Credential Manager

Finally George finished his talk with a short look at “What’s New”. A brief summary of the items presented included:

- The World’s biggest sensor for a digital camera at 3,200 million megapixels, with a sensor 60 metres wide and taking 3 ½ years to make.
- Three new home cinema 4K projectors released by Sony featuring a laser light source. The cheapest costing around US\$10k
- Support for Windows 10 release V1803 was due to run out this November. Due to the COVID-19 pandemic support has been extended to May next year. Version 1803 is now 2 ½ years old so George recommends updating now.
- *(Tech Ed: V1803 reached end of support back in November last year. V1809 was to end in May this year but has been extended to November this year. V1903 support end in December this year. <https://support.microsoft.com/en-us/help/13853/windows-lifecycle-fact-sheet>)*
- Some audience members noted that they have been unable to update their computers running V1803. Windows would attempt to update only to fail and rollback to the original version. George suggested obtaining an ISO file of a later version of Windows from Microsoft and run the ISO as an update. Running the ISO as an update would retain existing programs and data.

Yammer Highlights September 2020

Dennis Parsons

Our move to Google G Suite

This is a new group created by Harry Lewis to aid with the transition from MS Office365 based email to Google based G Suite Gmail.

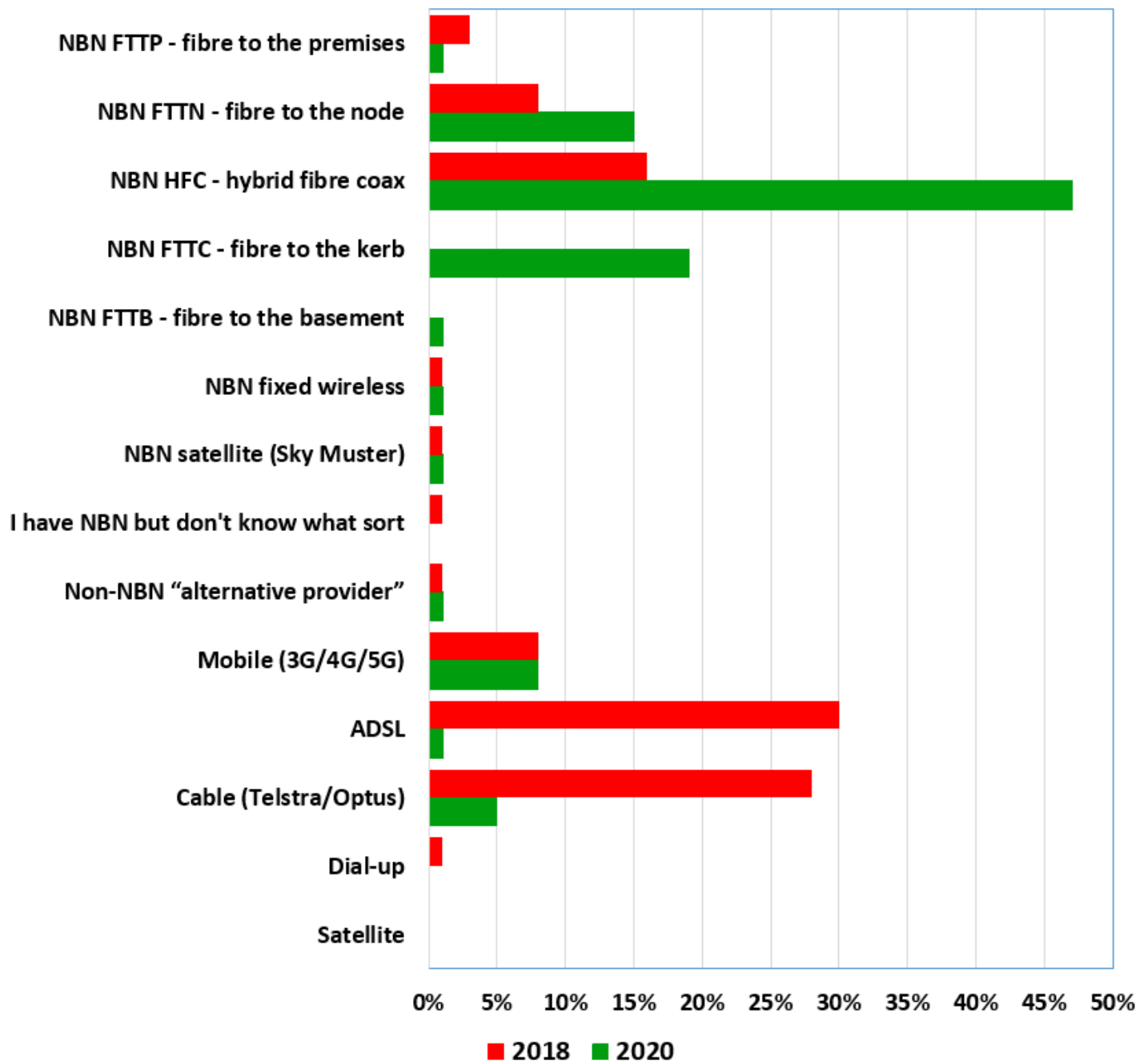
It's the place to ask all your questions about the transition and find out what's going on – one of the transition team or other Yammer users will have an answer for you. All you need to do is subscribe to the group in Yammer – click on “MELBOURNE PC USER GROUP INC.” at the top of your list of subscribed groups on the left, or just follow this link:

<https://www.yammer.com/melbpc.org.au/#/threads/inGroup?type=in_group&feedId=41621381120>

NBN Questions and Comments

Back in March 2018 I conducted a survey on Yammer asking members to indicate which sort of Internet connection they used at home, ranging from dial-up through to satellite and whether it was an NBN based connection or otherwise.

What type of Internet connection do you use at home?



The results, shown here in red, were split roughly 2 to 1 in favour of the non-NBN based connection types. ADSL and Telstra and Optus cable were the dominant technologies at ~30% each, with NBN HFC next at ~15%. All other connection types were under 10%. Looking at the graph the concentration of red on the lower half reflects the dominance of the older technology.

It was suggested I re-run the survey to see how the connection landscape has changed, so last month (September 2020) I did so.

Given the official pronouncement that the roll-out of the NBN has been completed, despite the recent announcement of bulk upgrades of FTTN connections to FTTP, it's hardly surprising that NBN connections, shown here in green, well and truly dominate. The previous connection king, ADSL, has all but vanished with Telstra and Optus cable not far behind at 5%. The high concentration of green on the upper half of the graph reflects the overwhelming dominance of NBN connections - some 85% of all connections.

I was a little surprised that NBN HFC is so dominant with close to a 50% share of connections, triple what

it had in 2018, but a quick examination of the 2018 data gives a large hint – Telstra cable connections have been converted directly to NBN HFC.

The number of FTTN connections has doubled to 15% and FTTC has gone from 0 to ~20%. The FTTC roll-out only started at the end of 2017 so the large increase isn't surprising.

Unfortunately for our members FTTP is still very uncommon – I'm the only member lucky enough to have it in 2020! Hopefully a few of the FTTN connections will be included in the FTTP upgrade plan.

2018 survey: <<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=1037427240>>

2020 survey: <<https://www.yammer.com/melbpc.org.au/#/Threads/show?threadId=834063525208064>>

Note I've taken a couple of liberties: in 2018 there was no 'Non-NBN "alternative provider"' category and I've moved one entry from FTTP to this category to reflect what one member would have chosen. In 2020 I've also added one entry for this category to cater for a non Yammer user.