



Linux is a fast, safe & easy to use FREE alternative to Windows or macOS, with excellent hardware support & a vast catalogue of available software. Unlike how Windows looks, where there's very little customization (generally just colour themes), in Linux, the entire desktop presentation is changeable & there are many to choose from. Depending on your hardware specification (or personal choice), we recommend the following 'desktops' & 'distributions' of Linux:

desktop	description	resources	distro	desktop	description	updates
Cinnamon	visually appealing	mid-high	Manjaro	C/K/M/X	cutting edge, easy to use & maintain, compatible, always up-to-date & lots of software	rolling
KDE	visually appealing	high	Mint	C/K/M/X	most popular Linux, easy to use, but not so up-to-date, so good for older computers	yearly
MATE	traditional	low-mid	Bluestar	K	very pretty, always up-to-date, but needs high spec computer	rolling
XFCE	minimalist	low-mid	Endless	androidish	pre-loaded with 100+ apps, 50000+ Wikipedia articles & hours of games, music & videos!	yearly
Trinity	like Windows XP!	low	Q4OS	T	designed for low spec computers & offers a familiar Windows (XP) experience	yearly
			PCLinux	K/M/X/T	easy to use, compatible & always up-to-date, but less software (popular still covered)	rolling

**We always use the same username & passwords for Linux: username=owner, password=id (or password) &, if applicable, root password=root.** If you change password, the system will insist on a 'secure' password & it'll have to be longer with a mix of upper/lower case letters &/or numbers/symbols!

If not already present, we install the following programs (if compatible with the computer hardware & version of Linux installed):

- GUPFW firewall, to prevent web based attacks.
- Opera web browser with built-in pop-up & ad-blocker & compresses data to/from internet (meaning it's good for slow connections) & has a VPN, allowing access to websites that are blocked by region.
- Chromium basic web browser that supports services like Netflix (requires free plug-in).
- Firefox very basic web browser, that supports very little (without adding plug-ins), but as such, can be quick.
- Adobe/Pepper Flash required by some websites (different versions required for different web browsers).
- Skype (NOTE: v4.37 is discontinued) internet text/voice/video chat & reduced rate computer to telephone calls.
- LibreOffice easy to use complete office package - compatible with Microsoft Word, Excel & PowerPoint.
- Thunderbird safe email client with built-in spell checker, anti-spam, anti-phishing & customizable interface.
- Deja-Dup file backup with scheduling.
- TeamViewer allows password protected remote (over internet) support, to save you bringing computer into shop.
- TimeShift create or schedule complete system 'snapshot' to allow rollback in the event of corruption/not booting.
- Wine/PlayOnLinux allows Windows programs/games to be installed & run in Linux (if compatible).
- Brasero CD/DVD audio/video/data (re)writer.
- Cairo Dock attractive animated program launcher.
- Cheese webcam viewer & recorder with visual effects.
- Clementine music player, manager, MP3 player synchronization & CD ripper.
- Midnight Commander twin window file manager.
- Pnsensor monitors motherboard, CPU & HDD temperatures & alerts if too high.
- SANE/Xsane Scanner Access Now Easy - support for scanner usage (device drivers still required) & graphic front-end.
- GIMP a free alternative to commercial image editing programs, such as Adobe Photoshop or Corel Painter.
- Shotwell picture viewer, grouping pictures by year, month & date for quick locating.
- VLC media player for audio or video files with many built-in codecs.
- Aisleriot large selection of patience/solitaire card games.
- Astro Menace 2D scrolling space shooter game.
- Mahjongg classic game of matching pairs of tiles.
- Mines clear hidden mines from a minefield.
- Quadrapassel falling blocks game (like Tetris).

Not included (unless pre-installed in particular version of Linux), but popular optional programs:

- DVDStyler DVD authoring - make DVDs from pictures or videos. Includes lots of templates.
- Inkscape vector graphics editor (like Adobe Illustrator or Corel Draw) for drawing, painting & image enhancement.
- OpenShot non-linear video editor - make DVDs or video files from pictures or videos. Includes visual effects.
- Spotify streaming (over internet) music player with millions of available tracks.
- Steam world's biggest gaming platform with over 3200 games available for Linux.
- Super Tux Kart 3D racing game with go-karts.
- XnConvert batch picture/image converter - supports size, resolution, quality, file format
- Xonotic 3D first person online shooter game.

1. If you have a router for your internet connection & it was already setup & previously in use, then nothing more is required to reconnect to the internet. If you use a network cable from the router, just plug it into the LAN port on your computer & you're connected! If you use wireless, click the connection icon near the clock & it will display available, in-range networks... select yours from the list, enter your wireless password (either the password entered when router was setup or whatever was assigned by the internet provider - often either written on a sticker on the router or supplied on a card) when prompted & you're connected. Do NOT try to install ANY software from your internet provider - it's not required & it won't be compatible! If you have a 3G/4G USB modem, plug it in, click connection icon near clock & select mobile network, then follow the prompts to specify your internet provider & service type (contract/PayAsYouGo) & it'll automatically connect. If you have a MiFi or use tethering from your phone/tablet, connect as per wireless above. Until connection is (re)established, you CANNOT browse internet, check email, search/access/download/update ANYTHING from the internet! Linux supports storing network settings in a 'key ring' for which a password is required - for simplicity, you can (but don't have to) use the same as your user password.
2. For wireless security on your router, make sure you're using WPA2 encryption (check router's manual for how to access settings). WEP (slow) & WPS are both easily 'crackable' & WPA1 isn't encrypted at all! Additionally, always change the default router name & password as there's software available to display default passwords based on router name. If someone (nearby) can access your router & they use your internet YOU could be faced with a large usage bill if they take you over your limit. It's illegal (fines & prison) & you should report such activity to the police! Most modern routers would already be set to WPA2, but if yours isn't, although it isn't required you change settings, obviously, it's highly recommended!
3. Similar to Microsoft & Apple app stores, Linux uses a software 'repository' (add/remove programs or software/package manager on menu) - this lists all programs compatible with that version of Linux & you can just browse or search list to install any program (click 'tick box' next to program & then click 'Apply'). As a general rule, do NOT put CD/DVD into computer to install (certainly not Windows based!) software. Mint, Endless, Q4OS & PCLinux also support installing downloaded (.DEB (.RPM for PCLinux)) programs (see below for recommended websites) & Manjaro & Bluestar have the AUR (Arch User Repository, enable via 'preferences' in package manager) which contains community maintained programs (e.g. Skype is by Microsoft, Chrome is by Google, etc) that are downloaded & compiled (takes longer than installing programs from main repository). Programs in the AUR may not be compatible with your hardware or Linux version (e.g. installing Epson printer driver for Canon printer!). Generally, look for 'Gnome', rather than 'KDE' versions of programs (unless running Q4OS or Bluestar, which use KDE) as most versions of Linux we install are Gnome based.
4. Currently, Microsoft do not offer a version of Microsoft Office for Linux (if they did, it wouldn't be free!), so we install LibreOffice (the new name for OpenOffice), which is FREE & compatible with Microsoft's Word (word processor), Excel (spreadsheet), PowerPoint (presentations) & also includes database & drawing. However, for greater compatibility if sending documents, it is recommended to set default file formats to use Microsoft 2003 (tools, options, load/save).
5. Currently, Apple, despite using (a heavily cut-down version of) Linux themselves (macOS/iOS), do not offer a version of iTunes for Linux, so for most iPhones, iPads, etc, use Clementine to copy/sync music. Whilst any files can just be copied to/from, some Apple devices (e.g. 7th gen iPod, iPhone 5, etc) are so basic they offer no option to update lists! For these, you'll have to use a computer with Windows & iTunes (iFunbox is better/quicker/easier) or just get a better phone, tablet, etc! There are similar limitations for GPS devices... although many use Linux on the device, they don't support Linux! However, with most, you can just copy the maps onto the memory card. It's also possible the Windows program (e.g. iTunes, TomTom, Garmin, etc) will run in Wine (see below), which is updated frequently to enhance compatibility. Web streaming services that use Microsoft's SilverLight (e.g. Netflix, BT Sport, etc), will need a browser plug-in to support it as, despite being a premium member of The Linux Foundation, Microsoft don't have a Linux version!
6. If you had requested a data backup, then your data files (i.e. documents, downloads, pictures, music & videos) will either be reintegrated, for single user backups, or stored in a folder called "My Backup", in the downloads folder. This folder will also contain any other files that can't just be 'copied back'.
7. To install Windows software, use PlayOnLinux & if it's in the supported program list, just select it to automatically download & install the program. For anything else, try installing the downloaded ".exe" program through Wine, but be mindful not everything will be compatible.
8. For email, if you used a 'web based' service (e.g. Yahoo, Outlook (the new name for Hotmail), Gmail, etc) then it's not stored on your computer so you just go to their website via an internet browser (after (re)connecting to internet (see above)) & sign-in to access your email & contacts as before. If you used 'client based' email (e.g. Microsoft Outlook, Windows Mail, Thunderbird, Incredimail, etc) then you may be able to import your contacts & old emails into Mozilla Thunderbird email client (already installed). You'll need to re-enter your email account details (e.g. email address, password, inbound/outbound mail servers, etc) & then import the email & contacts from the backup folder. Most internet providers include help on their website on how to do this.



9. Unlike Windows, Linux has substantial hardware support already built-in, so for the vast majority of devices (e.g. WiFi, Bluetooth, printer, scanner, webcam, etc), just plug it in & it'll be automatically & instantly recognized! Anything not supported, like Windows, will need device drivers installed (check AUR in Manjaro/Bluestar or manufacturer's website for other Linux). Also, like Windows, not everything is compatible!
10. Linux is MUCH safer than Windows, so although a firewall is highly recommended to stop attack attempts, anti-virus is optional (no Windows infection can infect Linux!). However, there are various free anti-virus programs available with Clam-AV & Comodo being quite popular.
11. Unlike Windows' monthly updates, Linux updates are released as soon as they become available & you'll be alerted when any are detected. These should be downloaded & installed as soon as possible. Updates can fix security issues, add new features or improve existing ones, but, unlike Windows updates, Linux updates also update all installed programs! Don't leave it too long to install updates (check weekly), else you can 'break' Linux! In addition, Manjaro & Mint Linux will alert you to new versions of the Linux kernel for easy upgrading. New kernels may contain security or bug fixes or have better or enhanced performance & hardware support. It's good practice to only update to newer Long-Term-Support (LTS) kernels (5 year's support) as others have less than 1 year's support before being discontinued.
12. When completing a Linux installation, if compatible with that version, we install & run TimeShift to create a 'snapshot' of Linux & all installed software - this allows complete system restore (without affecting data files) in the event of corruption or not loading (just boot from 'Live Linux' disc, install TimeShift & restore stored backup). We schedule TimeShift to update the snapshot weekly which only takes few minutes, if not many changes!
13. Google themselves say they are NOT a search engine(!) - they haven't been one for many years - they are a content provider, displaying mostly sponsored links. You'll often see the "did you mean..." message. However, virus writers pay Google for links to malicious websites, so check the link looks genuine before clicking it. Yahoo & Bing find substantially more applicable hits & are far safer.
14. Most of the computers we see with virus, spyware or malware infections got infected via Facebook, Google or email! Due to their popularity, they are specifically targeted by virus writers & scammers. To reduce the chances of getting infected, follow one simple rule: if something doesn't look right, or it just seems suspicious, then it most likely isn't safe, so don't click on it!
15. The world's greatest internet threat is the rise of ransomware infections - these encrypt all your data files & then demand £100's payment within a short time to decrypt them else they are permanently lost! They are mostly distributed by email & malicious websites (accessed by Google 'search' or malvertising (fake adverts)). ALWAYS backup important files & make sure all installed software is kept up-to-date.
16. We get a lot of customers telling us they've had callers, often saying they're from Microsoft or BT, claiming to have detected infections or problems on their computer & asking to allow access - which they use to upload programs or infections to support their claims - it's a scam that often costs £100's! Just say you don't have a computer! If you've already been a victim of this scam, contact the police & report it to your bank - you've been robbed!
17. Any important files (e.g. documents, pictures, music, videos, etc) should be 'backed up' each time they change - if you work on your computer weekly, then you backup weekly, if you work daily, then you backup daily! ALL hard disc drives fail - no exceptions - & infections/attacks can corrupt files! Make copies on external hard disc, USB flash drives or online storage, but ideally, not CD/DVD discs (short life span & unreliable).
18. Dust gets into computers & clogs up fans & air vents causing components to overheat & if temperatures get too high, they'll burn out! This can often be a costly repair, sometimes more than computer is worth! Check regularly for dust build up & clean when necessary. Thermal paste (between chip & heatsink) should be replaced if dried out. If portable computers have air vents on base or contain mechanical (rather than solid state) hard disc drive, they MUST be used on a flat & steady surface to limit overheating & drive damage (movement, while powered, causes heads to hit disc surface, damaging disc!). Since batteries are for portable use, after charging, remove when mains powered (switch off first!) else computer will actually be reducing battery capacity! Top up battery every few months to keep it 'alive'.

**Troubleshooting:** (there is substantial online support for all versions of Linux... just check their websites & forums)  
If updates, upgrade or installs fail, for whatever reason (e.g. power cut disconnected internet), you might need to delete the update 'lock' file or refresh or repair system files before trying again. In a Terminal window (press Ctrl + Alt + T, or select via start menu), check the following (remember, Linux is case sensitive for filenames & parameters, so, for example, "S" is not the same as "s"):

<p><b>For Debian/Mandriva based Linux (e.g. Mint, Endless, Q4OS, PCLinux, etc):</b>          For Mint, <a href="https://linuxmint.com/faq.php">https://linuxmint.com/faq.php</a>          For Endless, <a href="https://support.endlessm.com">https://support.endlessm.com</a>          For Q4OS, <a href="https://q4os.org/documents.html">https://q4os.org/documents.html</a>          For PCLinux, <a href="http://pclinuxshelp.com">http://pclinuxshelp.com</a> (check for help/info as is different)</p> <p>sudo apt-get autoclean remove partial packages          sudo apt-get clean remove cached packages          sudo apt-get autoremove removes dependencies after package removed          sudo apt-get update refresh package lists          sudo apt-get upgrade upgrade packages &amp; Linux          sudo apt-get dist-upgrade upgrade packages, resolving conflicts          sudo apt-get -f install correct broken dependencies          sudo dpkg --configure -a reconfigure packages          sudo fsck check files on disc (like Windows CHKDSK)</p> <p>To enable blocked WiFi, from Terminal, type: rkill list, then rkill unblock n (where n=adapter number) &amp; after, restart to enable.          To add additional software repositories, from Terminal, type: sudo apt-add-repository ppa:developer/repository-name (replacing developer &amp; repository-name as applicable)          To install downloaded .tar.gz software: right-click file, select extract here &amp; make a note of folder name from Terminal, type cd /home/username/folder/package-name (replacing username, folder &amp; package-name as applicable) look for README file, open &amp; follow instructions (often, just type: install.sh)          To upgrade Mint from 18.0/1 to 18.2, see: <a href="http://blog.linuxmint.com/?p=3306">http://blog.linuxmint.com/?p=3306</a>          PCLinux is Mandriva based (RPM packages) so has different procedures to above: (un)install software: Applications, Software Centre, Synaptic Package Manager          Reload refresh package list          Mark All Upgrades, Apply update          search/select kernel, Apply (old kernels kept for compatibility) upgrade</p>	<p><b>For Arch based Linux (e.g. Manjaro, BlueStar, etc):</b>          For Manjaro, <a href="https://wiki.manjaro.org">https://wiki.manjaro.org</a>          For Bluestar, <a href="http://bluestarlinux.sourceforge.net/index.php?action=forum">http://bluestarlinux.sourceforge.net/index.php?action=forum</a></p> <p>sudo rm /var/lib/pacman/db.lck removes program update lock          sudo pacman-mirrors -g refreshes software mirrors          sudo pacman-key --refresh-keys refreshes signature keys          sudo pacman-key --populate archlinux manjaro load signature keys          sudo pacman -Syyu synchronize repository &amp; update system          sudo pacman -Suu update system</p> <p>If not booting to Manjaro desktop, boot Manjaro DVD, run Terminal, type: manjaro-chroot -a, sudo pacman -Syyu, then reboot (if asked to delete an existing settings file: sudo rm /path/name &amp; retry)          Can also be corrupted/incompatible graphic drivers, run Terminal, type: mhwd -li to list which graphics driver is installed          sudo mhwd -r pci name-of-graphics-driver -f to remove driver          sudo mhwd -a pci free O300 -f to install open-source driver</p> <p>If Manjaro Cinnamon desktop icons not showing, run Terminal, type: sudo rm /home/username/.config/nemo/desktop-metadate (then logoff/on)          To install TimeShift (Linux 'snapshot' utility) in Manjaro, first install: <i>vala</i>          To create desktop shortcuts: right click desktop, create launcher, enter name &amp; command with optional parameter (e.g. name=Outlook, command=opera <a href="http://www.outlook.com">www.outlook.com</a>)          Periodically, update software servers to get fastest/most up-to-date lists: Package Manager, menu, Preferences, Official Repositories, Refresh Mirror List</p>
<p>To add a printer: do NOT install anything from the CD that came with the printer - that's for Windows (&amp; possibly Apple) only &amp; it wont work! click menu, Administration, Printers, Unlock (Manjaro), Add. If printer is not automatically detected &amp; installed, like Windows, you'll need to download &amp; install the device driver (if a printer/scanner, it's likely there will be separate drivers for each) from manufacturer's website (e.g. Epson.co.uk). For Mint, type printer manufacturer name in menu search box &amp;, if listed, select it to download &amp; install the drivers for you! For Manjaro/Bluestar, search AUR (enter just model number digits &amp; often, printer model numbers are within a series, e.g. 5751=5700) to install device driver. After installing driver(s), retry add.          NOTE: Although Brother, Canon, Epson &amp; HP have extensive Linux support, Lexmark have almost zero &amp; are unlikely to be compatible!          Canon call their printer drivers, "cnijfilter-model number/series" &amp; their scanners use "scangearmp(2)". Epson often use "escpr" &amp; "imagescan".          For general scanner support, we've installed "sane" (Scanner Access Now Easy) &amp; "xsane", a graphical 'front-end' for easy usage.          To add Windows fonts, after copying to /usr/share/fonts/ttf or /usr/share/fonts/truetype (depending on Linux version), from Terminal type: sudo fc-cache -fv          If getting a program conflict error during updating, uninstall the listed program, retry the update &amp; then reinstall the program.          If your hardware/devices are supported/working with open source device drivers, then avoid proprietary drivers as they often don't work/cause problems.          For ANY operating system, if getting ANY errors, your first checks/reference points should be the publisher's forum on their website.</p>	

There are several useful websites we recommend:  
[www.softpedia.com](http://www.softpedia.com) huge library of free & trial software  
[www.sourceforge.net](http://www.sourceforge.net) biggest library of open source software  
[www.pkgs.org](http://www.pkgs.org) large collection of software (select latest Ubuntu for compatibility)  
[www.cupoflinux.com](http://www.cupoflinux.com) help & troubleshooting for any version of Linux  
<http://tutoriaforlinux.com> simple instructions for how to install or setup various hardware or software in Linux

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