

Why Labdoo Uses Linux

Tags:

[windows](#)

[linux](#)

[reason](#)

[legal](#)

[illegal](#)

[office](#)

[microsoft](#)

[ubuntu](#)

EN

If you receive Labdoo laptops, we strongly recommend to not overwrite the installation with Windows and to leave the installed Operating System Linux in place. There are many important reasons for that:



- **Linux is between 50-100% faster than Windows.** Installing Windows can make your laptop much slower.
- **Linux is an open and free software.** This is an incredibly powerful property. This basically means that people can freely use all the software provided by Linux without worrying about license violations. It means that you can fire up the [Ubuntu Software Center](#) and install any of its thousands of applications for free. This aspect is really important for schools and students, because it provides freedom to access powerful educational applications.
- **Many Windows versions are or will soon be out of support (XP, Vista or Windows 7).** This means that they will no longer be maintained and updated. The laptop you are receiving is fully updated and patched with a long-supported version.
- **Labdoo's software comes with more than 300 educational applications** in addition to the Firefox web browser, Skype, VLC, or the [Libre Office Suite](#) that offers all the Microsoft Office's functions.
- **Labdoo laptops come with more than 1,000,000 eBooks, videotutorials and Wiki Pages preinstalled, even in your local language.** If you install another operative system, you will lose all this content
- **Labdoo supports through its Global Support Program (LGS)** only the laptops that keep the original Labdoo software. You can find all the Labdoo video tutorials on the Desktop in the folder "Videos" and you can also find manuals in the folder "/home/labdoo/Public/how-to-start"
- **Separated user and permissions concept:** The creation of 3 different users -Teacher (labdoo) Student (student) and Guest (guest) eases enormously the learning process and the sharing of the laptop between students.
- **You still can still use Windows applications through Wine and VirtualBox** if you really need to, please continue reading below if you want to know how.
- **The Look and Feel of a Labdoo laptop is almost identical to that of a Windows machine.** Because we understand that you may be used to Windows operating systems, we've tuned Labdoo laptops to have a very similar user interface.

Use Windows under your Linux Laptop

If you need to run Windows applications, you can still use one of the following options with a Labdoo machine:

- **Wine** is a free tool, enabling Windows applications (exe) to run on Linux. Using Wine you are able to run many programs on Linux, even those developed for the Microsoft Windows OS. Wine can be used **without** installing the Windows OS. Of course, you will still need to buy or own the necessary licenses for these programs. Read more here <https://www.winehq.org/>, and <https://en.wikipedia.org/wiki/Wine>.



- **Installing multiple operating systems using VirtualBox**

If the laptop comes with 4 GB RAM or more, you can consider using [Virtualbox](#), a tool that allows you to install another operating system like Windows next to (or on top of) Linux. By doing so, you will be able to run Ubuntu as the host OS and Windows, or other operating systems, as a guest OS at the same time.

You also need to fulfill the legal and license regulations on the guest OS that we mentioned above. The images provided by [Labdoo for cloning laptops come with a preinstalled Virtualbox](#). There is also an [installation script to install Virtualbox](#) and its extensions for a Linux OS available.



Download handout as [odt](#) or [pdf](#)

How to Start a Labdoo Laptop?

Tags:

[start](#)

[log-in](#)

[first steps](#)

[how to](#)

[login](#)

EN

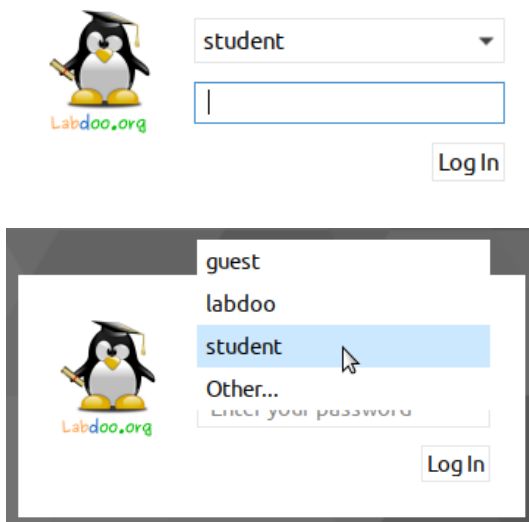

User Accounts and concept


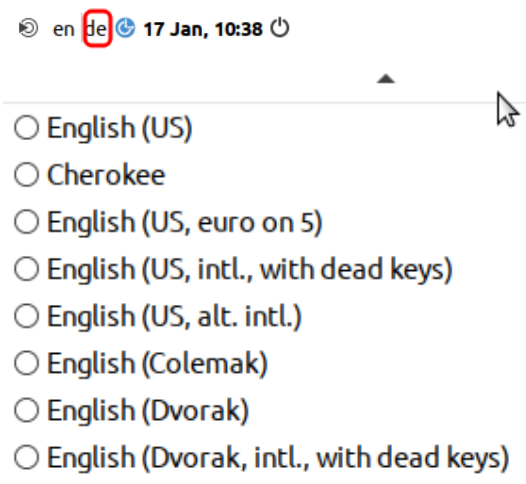
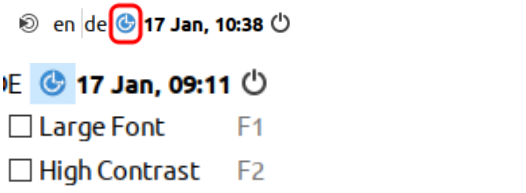
Each Labdoo laptop comes with the Ubuntu operating system preinstalled (release names: xx.04 LTS; xx = 2018, 2020 etc.) and with 3 users already created, ready to use:

- **student**: is a standard user account for students. The user student is not administrator, just a standard user. The password for this user is **labdoo** (you can change the current password or not.)
- **guest**: is an account which doesn't require a password to log in. All data will be automatically erased after the user logs off from this account
- **labdoo**: has super user rights / is administrator! **labdoo** is an administrator account and has all the access rights on the computer. Working under this account without a proper knowledge may crash the system! Therefore, it is recommended to have only teachers know the password of the user **labdoo**. The password is **labdooadmin**.

The letters of the password should match with the character set of the keyboard (latin letters and what you see on keyboard). Using other keyboards with, non-latin characters might lock you out of the computer.

Important: The keyboard layout can be changed manually at the time of log-in (see below). The system setting of the keyboard layout can be changed via the system file / etc / default / keyboard. Labdoo recommends storing the keyboard layout of the delivered computer in this system file (WYSIWYG).

User log in, select user	
Select a user language (after log in)	

	
Select a keyboard layout	
Settings for visually impaired users (optional)	

Important: the keyboard layout used when logging in will be set during the installation process of (L)Ubuntu. If you installed a computer using images for cloning this will be the German keyboard (DE). Otherwise, the keyboard layout used to install Ubuntu will be the one to remain. To change the layout after logging in, open a terminal (press Strg/CTL + Alt + T at the same time) and type `sudo nano /etc/default/keyboard` (press Enter). Next, change the keyboard code, (e.g., EN for English, FR for French, ES for Spanish etc.). You can optionally add the code of a specific country in the following line between the 2 quotation marks (z.B. CH for Switzerland). Then store the file (Strg/CTL + Alt + O (Enter), next Strg/CTL + Alt + X). **You will NOT modify the keyboard layout you have used after having already logged in. This can be changed using the setting or the keyboard layout icon in the task bar.**

Desktop MATE

The recommended desktop is MATE.

To Start a Program

There are many useful, fun and educational software and games installed. To start a program:

Click on the lower left corner on the Ubuntu icon (similar to Windows XP) → “Education” or

"game" → click on the program you want to start it.

In the folder "/Public", you will find a lot of useful reference manuals, such as OER, Offline wikis, e-books etc.

The icons for a video tutorial and an offline Wikipedia (Kiwix) are available on the desktop.

Optional: Desktops (user interfaces)

Labdoo laptops come with Ubuntu (Linux operating system based on Ubuntu) and the MATE desktop. MATE is fast and easy-to-learn. They can be installed on older laptops with at least 2 GB RAM and they will still run fast (recommended: 4 GB RAM).

Adjust languages, regional formats and keyboard settings

Depending on the country where the edoovillage is located, you may want to install one or more additional language(s) or keyboard(s).

You can adjust the language settings by selecting Preferences → Language Support. You may get messages like "Language support not completely installed, install now". Click on "Yes" and continue the installation.

In the next window select Install/Remove languages → select the language(s) needed → Apply → Apply System-Wide.

The new languages will show up in the language list (as shown above). Ubuntu will use the first language that appears in the table, then go to the next one, and continue. If no languages matched, English will be used as default language.

To change the priority of the languages → select and hold the right mouse button on the new language → move the language to its position and release the right mouse button → click "Apply System-Wide". The new language will be used after logging out and then logging in again or after rebooting the computer.

Regional formats

You can also adjust the local currency, notation of numbers, date and time, if available. Click on the tab "Regional formats" and select the format as shown in the list → Apply System-Wide.

Keyboard settings

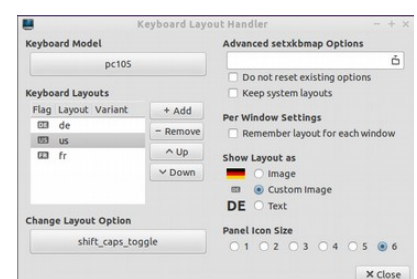
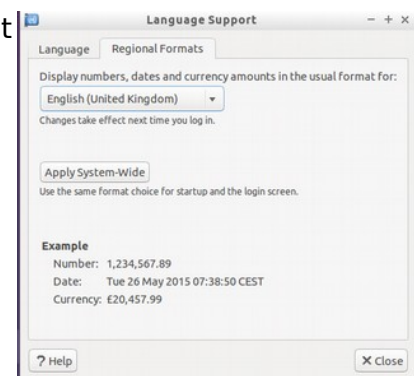
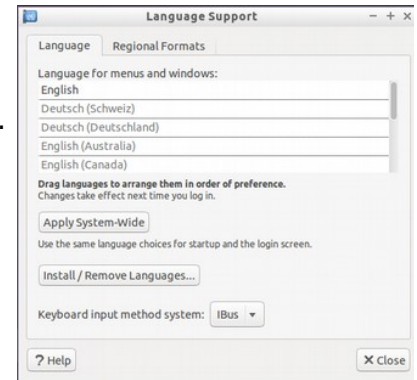
You may be able to skip this step if the laptop was cloned with images. Otherwise, you have to add a panel item to the task bar by clicking with right mouse button on the task bar → Add / Remove Panel Items → +Add → select "Keyboard Layout Handler" → +Add → optional: move the item position within the task bar by clicking "Up" or "Down".

Right click on the symbol "DE" (keyboard layout handler) in the task bar (another country abbreviation may be shown) → Keyboard Layout handler Settings → Remove the hook "Keep system layout", if activated, otherwise, you won't be able to add new layouts) →

+Add → Add a new keyboard layout
-Remove → Remove a keyboard layout
↑ Up → Move a keyboard layout entry in the list up
↓ Down → Move a keyboard layout entry in the list up

The maximum number of keyboard layouts is 4.

Manuals, video tutorials and more



You can open the folder </home/labdoo/Public/> for more manuals, video tutorials, offline wikis, etc. The icon of a video tutorial is placed on the desktop. You can watch it by using Firefox or other media player (view -> 1/2 size, zoom +/-).



Install codecs for multimedia, film and DVD

If your computer was installed using an image for cloning you will find on each desktop a script `installscript-codecs.sh`. Legal Notice Patent and copyright laws operate differently depending on which country you are in. Please obtain legal advice if you are unsure whether a particular patent or restriction applies to a media format you wish to use in your country. Without executing this script, you will not be able to watch videos or DVDs.



This script will install restricted codecs and restricted software for multimedia applications. Proceed only if you are sure that you want to install these codecs and restricted software.

Your computer must be connected to the internet while executing this script.

Programs for blind or visually impaired users

On the desktop you will find the icon of a **magnifier**. Click on it and you will get a magnifier which will follow your mouse. In the panel you will now see another magnifier icon. Right mouse click on that icon to open a settings menu.


Other programs for handicapped users are:

program	description	program name	screen shot
Orca	Screen reader; Wichtig: to toggle Orca on / off please press at the same time Alt + Super/Windows + o . To configurate Orca, open a terminal (User labdoo) -> type <code>orca -s</code> (Enter).	Orca	
pico2wave	Tool to read marked (high-lighted) text in any document. To toggle pico2wave on / off press the keys Alt + Super/Windows + p at the same time. Mark the text before, then press these keys and the text will be read out loud. If the piece of marked text is too long, an error will be reported.	pico2wave	
Elinks	Text-based web browser, running in a terminal (link on desktop).	Elinks	

More information on solutions for handicapped users can be found here <https://www.labdoo.org/content/programs-handicapped-users-barrier-free>.

Set volume

In the panel you will find an icon to mute or turn the volume up or down. Clicking on that icon will open a dialogue (mute, volume up or volume down). But there are much more settings for volume, microphone etc., which can only be accessed by a program called **alsamixer**:

Program	Descriptions	Program name	Screenshot
alsamixer	The program alsamixer is a tool to access all ALSA settings provided for the sound card. Frequent settings, which cannot be directly accessed with the X-user interface, are deactivated or down-regulated. With Alsamixer you can quickly find and activate these settings. Open a terminal (press <code>Ctrl/Strg + Alt + t</code> at the same time), type	alsamixer	

alsamixer (enter). Now you can adjust the volume settings, move the keys ← → to move to the next channel, ↑ ↓ to turn the volume up or down.

Printer settings, CUPS

A printer can be added and administrated by clicking **System Tools → Printers → + Add a printer**. Most printers, as far as they are connected to the computer or to network (LAN), will be recognized automatically.

For a more complex solution there is [Cups \(Common Unix Printing System\)](#), the most common print tool for Linux. Most printers can be used, jobs and spools administrated using CUPS. CUPS comes with an integrated web server. This server can be used to set up and manage a printer. Open a web browser and open: <http://localhost:631>. Only the user labdoo is allowed to access this page. In case a printer is locally connected to a computer [you can allow access for another computer to this printer via LAN](#).

Help function F1, manual

By pressing the key **F1** or **help in the menu bar** most programs will open a window and a manual for this program will show up.

Reset and restore user student

A student should log in as guest or as user student, but never as user labdoo (only teachers, administrators should use it). But even if you log in as user student, some menu bars or icons might be deleted by mistake. Everything can be "repaired", but you have to know how - and this knowledge might be missing at schools. But we offer a good solution for that - on the labdoo user's desktop you will find a script **restore_user_student.sh** (Double click to start the script, run in a terminal). **But be careful! This script will delete every(!) data / document stored or reset every setting configured since you received the laptop! So, make sure all data needed is assured! Sometimes this script is also helpful if you want to remove all of the data before giving the computer to another user.**

Log in as administrator labdoo

labdoo: is administrator (admin, "Super User")! This means that the user **labdoo** has all access rights, e.g., for updating, installing additional software and educational content etc. But as the admin you can accidentally "destroy" the laptop so that it does not start and can no longer be used, especially when users have none or poor experience with IT and Linux. And if the computer is "destroyed", the closest Labdoo hubs who can help with a reinstallation or give support are far away. That could become a real problem.

Therefore, sign up only as user **labdoo**, if you act carefully and already have experience with the administration of computers. Otherwise, it is better to log in as user **student**, who has not the administrator rights, but can also use all programs and content - and has less chances to destroy a computer by mistake.

The password to log in is at delivery **labdoo** (for all systems being delivered with Ubuntu 18.04 LTS or former releases, until about spring 2020). From Ubuntu 20.04 LTS ff. (starting about summer 2020) the password will change to **labdooadmin**. However, you should change this password immediately once you receive the computer at your school / project, because the user **labdoo** has administrator rights and only the teachers / maintainers and experienced users should have access as admins!

Have fun learning and playing with your Labdoo laptop!

The Labdoo team

Educational Software

Labdoo.org uses:

Educational software suitable for students of all ages (from preschool to high school)

Add-ons to provide barrier-free access for blind or handicapped users

Offline wikis and manuals so that educational content can be accessed even without Internet connection

Virus scanner ClamAV and other tools

Labdoo laptops are not limited to the default programs and tools provided by the Ubuntu operating system. By installing the prepared [Labdoo images for Cloning](#) or the [installation scripts](#) you can add more useful educational content. You can also download additional software by using the [Ubuntu Software Center](#) if your laptop is connected to the Internet.

If you have any questions on how to use these applications, please ask them to the Labdoo Global Support team as explained in the following page: <https://www.labdoo.org/content/what-if-i-want-receive-aid-lgs-support-teamu>.

Educational software

Each Labdoo device comes with educational software for children of all ages. There is educational materials for levels from preschool to high school. The computer is also equipped with barrier-free access to help handicapped or blind users.

Edubuntu is a collection of free educational programs that volunteers and developers around the world put together.

Below you can find a brief description on some programs. You can find more detailed information at www.edubuntu.org and at <http://wiki.ubuntuusers.de/Edubuntu>.




Game Collections






[GCompris](#), [Childsplay](#) and [Omnitux](#) are educational game suites for children aged 2 to 10. The suites contain arithmetic, spelling, letter, word-finding and memory games. The goal is to promote learning through game playing.

Gcompris

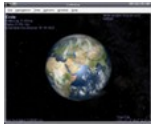




Gcompris contains more than 100 games and educational programs to help children learn in a fun way. There is a brief description of some of its key features below.

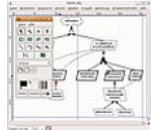



Icon	Menu	Description
	Discover the computer	Learn computer parts in different games.
	Go to the discovery games	Discover colors, sounds, the world and more.
	Puzzles	Learn logic, memory, puzzle, tossing, and patience.







	Games panel	Pastimes like chatting, drawing games...
	Mathematics	Learn how to count, how to calculate and about geometry.
	English Learning	English alphabets, reading, hangman game and more.
	Science activities	Learn electrical circuits, the water cycle, the operation of a lock...
	Strategy games	Pastime like chess, tic-tac-toe, Oware and balls in a line.

Astronomy and Geography

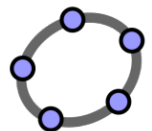

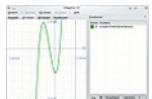



Program	Descriptions	Program name	Screenshot
Celestia	Celestia is a program which allows you to move virtually through space and visit other planets, stars and galaxies.	celestia-gnome	
Marble	Marble is a desktop globe. The program is similar to Google Earth. It is simple, yet very sophisticated and powerful. It supports a variety of other programs including OpenStreetMap and can reproduce it on its globe or on map view.	marble	
Stellarium	Stellarium is a planetarium program.	stellarium	




Graphic and Construction Software

Program	Descriptions	Program name	Screenshot
Dia	Dia is a diagram editor that provides a variety of options available to create attractive charts. Besides being able to place the objects scale-free, graphics can be included.	dia	
FreeCAD	FreeCAD is a parametric 3D modeler made primarily to design real-life objects of any size. Parametric modeling allows you to easily modify your design by going back to your model history and changing its parameters. FreeCAD is open-source and highly customizable, scriptable and extensible.	FreeCAD	
Freeplane	Freeplane is a program to create mind maps.	freeplane	
Gimp	GIMP (GNU Image Manipulation Program) is a free and open-source raster graphics editor used for image retouching and editing, free-form drawing, converting between different image formats, and more specialized tasks. [Update 20.04 LTS]	gimp	
GnuPaint	GnuPaint is a simple paint program, which is based on xpaint.	gpaint	

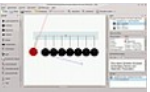
Inkscape	Inkscape is a vector-based graphics program like Adobe Illustrator, Freehand, CorelDraw or Xara X. The application provides a very user-friendly interface, which remains intuitive and clear in spite of its many functions.	inkscape	
LibreCAD	LibreCad is a very powerful free program for two-dimensional CAD drawings. You can create various technical drawings such as plans for buildings, interiors, mechanical parts or schemas and diagrams.	librecad	
Pencil	Pencil can create traditional hand-drawn animations (cartoons). It supports both bitmap and vector graphics.	pencil	
PLM	Practice how to program in Java, Python, Scala etc.	PLM	
TkGate	TkGate is a digital circuit simulator. Manuals in ~/Public/manuals-ubuntu/English/TKGate_2_0	TkGate	
Tux Paint	Tux Paint is a simple drawing program for young children. Images can be painted using stamps, brushes etc.	tuxpaint	
VYM	VYM (View Your Mind) is an easy-to-use application for creating mind maps.	vym	

Mathematics and Statistics








Program	Descriptions	Program name	Screenshot
GeoGebra	GeoGebra is a free geometry software with which the mathematical properties of geometry, algebra and calculus can be drawn.	geogebra	
Jfractionlab	Educational program to practice fractions	Jfractionlab	
KAlgebra	KAlgebra is a mathematical computer program. Its basis is the language of content MathML, which can be used to describe the structure of a formula. It can run arithmetic and logical operations and two-and three-dimensional graphs are shown.	kalgebra	
KmPlot	KmPlot is a program to visualize mathematical functions.	kmplot	
Lybniz	Lybniz is a simple program for visualizing mathematical functions.	lybniz	
Phyton	Phyton is an integral part of Linux / Ubuntu and is already pre-installed on all Labdoo computers. More on https://wiki.ubuntuusers.de/Python/ , Editors https://wiki.ubuntuusers.de/Editoren/ , Development environments (IDE) https://wiki.ubuntuusers.de/Entwicklungsumgebungen/	python	
TurtleArt	A LOGO-like tool for teaching programming	TurtleArt	






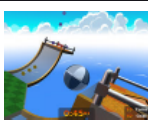

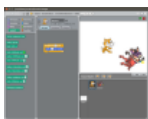
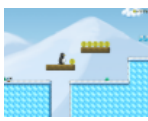
Tux	Tux of Math Command, also known as TuxMath, is a math coach, with which basic arithmetic can be practiced. The gameplay is based on the arcade classic Missile Command. Tux must save cities by solving mathematical problems before the destruction.	tuxmath	
Xabacus	Simulation of the ancient calculator	XAbacus	
XaoS	XaoS is a program which creates fractal graphics in real time.	XAbacus	

Physics



Program	Descriptions	Program name	Screenshot
Step	With Step you can learn and feel how physics works. You place some bodies on the scene, add some forces such as gravity or springs, then click "Simulate" and Step shows you how your scene will evolve according to the laws of physics.	step	

Games

Program	Descriptions	Program name	Screenshot
Atomix	Atomix is a game to preassemble molecules from individual atoms. The gameplay is based on the AMIGA game Atomix.	atomix	
biniax2	Colorful Logic game with arcade and tactics modes.	atomix	
Bumprace	BumpRace is a simple arcade game. You have to get from the start to the finish line without crashing into the blocks.	atomix	
eBoard, Gnuchess, Crafty (chess)	eboard is a graphical chess program which can function as an interface to Internet chess servers such as FICS and to chess engines such as Crafty. Gnuchess and Crafty are the matching chess engines.	eboard	
Frozen-Bubbles	FColorful 3D rendered penguin animations. The game idea is similar to Tetris.	frozen-bubbles	
gbrainy	gbrainy is a platform to train memory, arithmetical and logical capabilities with many sorts of different exercises of many difficulty levels.	gbrainy	
GCompris	GCompris is a collection of games for children. It combines a variety of games on various topics for different age groups. Thus, it contains for example GCompris Games on mathematics (small 1x1), colors, skill, working with computers etc. Recommended age 3 +.	gcompris	


Kanagram	Kanagram is a word game in which it is necessary to solve a mystery. A word is decoded by clever conversion of the given letters.	kanagram	
Kartoffelknülch	KTuberling is a program with several background images (tuberling, Egypt, the moon, Christmas, etc.) available so their designs can be modified.	ktuberling	
Ltris	LTris is a very polished Tetris clone, which offers three types of games. The classic mode, a figures mode, where different figures appear every level, and a multiplayer mode. LTris is highly configurable through its menu system.	ltris	
lbreakout2	lbreakout2 is a game similar to the classic breakout, featuring a number of added graphical enhancements and effects. You control a paddle at the bottom of the playing-field, and you need to destroy the bricks at the top by bouncing balls against them.	ltris	
minetest	Minetest is an open-world game, inspired by Minecraft. In a randomly generated world, raw materials are used to create tools and shape the environment.	minetest	
Neverball	Neverball is simple: you have to collect all the coins using a ball, but you control the floor, not the ball...	ri-li	
Ri-li	Ri-li is a skill game where you have to move a wooden train set by following the right course of different rail networks. The goal is to collect the different cars distributed throughout the level.	ri-li	
Scratch	With Scratch, you can program your own interactive stories, games, and animations — and share your creations with others in the online community.	sratch	
Supertux	SuperTux is a classic 2D jump 'n run side-scroller game with a style similar to the original SuperMario games.	supertux	

Language Learning




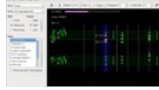

Program	Descriptions	Program name	Screenshot
Parley	Parley is a vocabulary trainer. The vocabulary is extensive and the game offers a variety of settings around the goal of creating word lists that will allow you to learn.	parley	
Anki	Anki is an alternative tool to Parley. Ready to use vocabulary and learning decks can be downloaded from here https://ankiweb.net/shared/decks/	anki	

Keyboard trainer



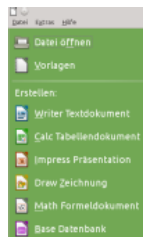

Program	Descriptions	Program name	Screenshot
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Tux Typing	Tux Typing helps children to learn how to write through playful touch. Recommended age 5 +.	tuxtype	
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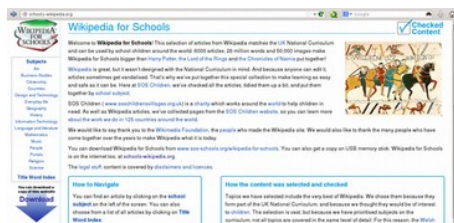
Music

Program	Descriptions	Program name	Screenshot
Gtick, KMetronome	Gtick and Kmetronome are a software metronomes.	Gtick, KMetronome	
Tux Guitar	Program to edit and view sheet music, especially for guitar.	Tux Guitar	
Solfege	Ear training software to help you practice intervals, chords, scales and rhythms (manuals in Public/manuals-ubuntu)	Solfege	
Piano Booster	Piano Booster is a new way to learn the piano just by playing a game.	Piano Booster	
VMPK	Virtual MIDI Piano Keyboard	VMPK	

Office Applications

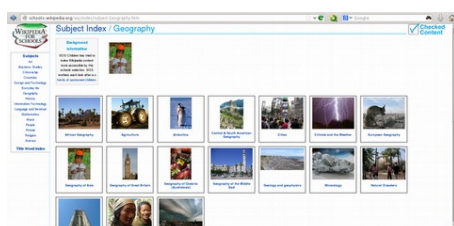
Program	Descriptions	Program name	Screenshot
Microsoft Teams for Linux	[Update 20.04 LTS] Microsoft Teams for Linux is a client that includes chat, meetings, and video for home learning. The service is integrated into the Office 365 Office suite with Microsoft Office and Skype. Teams is part of the Labdoo image for cloning and was included in 2020, during the corona crisis, to make home schooling easier since many schools use Teams for distributed lessons.	Microsoft Teams for Linux	
Skype	[Update 20.04 LTS] Microsoft Skype has been preinstalled on Labdoo computers since the release of 20.04 LTS. Skype also provides instant messaging services. Users can text, send videos, voice messages and images. Skype also allows video conference calls.	Skype	
LibreOffice Suite	LibreOffice is a powerful office suite; its clean interface and powerful tools allow you to unleash your creativity and grow your productivity. LibreOffice embeds several applications that make it the most powerful, free and open-source office suite on the market: Writer, the word processor; Calc, the spreadsheet application; Impress, the presentation engine; Draw, our drawing and flowcharting application; Base, our database and database frontend; and Math, for mathematical equations.	LibreOffice Suite	
LibreOffice Writer	Writer has all the features you need from a modern, full-featured word processing and desktop publishing tool. It's simple enough for a quick memo, but powerful enough to create complete books with contents, diagrams, indexes, and more. Feel free to concentrate on your message, while Writer will make it look great.	writer	

LibreOffice Calc	Calc is the spreadsheet program you've always needed. Newcomers find it intuitive and easy to learn. Professional data miners and number crunchers will appreciate the comprehensive range of advanced functions. Wizards can guide you through choosing and using a comprehensive range of advanced spreadsheet functions. You can also download templates from the LibreOffice template repository, for ready-made spreadsheet solutions.	calc	
LibreOffice Impress	Impress is a truly outstanding tool for creating effective multimedia presentations. Presentation, edition and creation is flexible, thanks to different editing and view modes: Normal (for general editing), Outline (for organizing and outlining your text content), Notes (for viewing and editing the notes attached to a slide), Handout (for producing paper-based material), and Slide Sorter (for a thumbnail sheet view that lets you quickly locate and order your slides).	impress	
LibreOffice Draw	Draw lets you produce anything from a quick sketch to a complex plan, and gives you the means to communicate with graphics and diagrams. With a maximum page size of 300cm by 300cm, Draw is an excellent package for producing technical drawings, general posters, etc. Draw allows you to manipulate graphical objects, group them, crop them, use objects in 3D and much more.	draw	
LibreOffice Base	Base is a full-featured desktop database front end, designed to meet the needs of a broad array of users. But Base also caters to power users and enterprise requirements, and provides native-support drivers for some of the most widely employed multi-user database engines: MySQL/MariaDB, Adabas D, MS Access and PostgreSQL. In addition, the built-in support for JDBC- and ODBC-standard drivers allows you to connect to virtually any other existing database engine as well.	base	
LibreOffice Math	Math is the LibreOffice suite's formula editor, that can be invoked in your text documents, spreadsheets, presentations and drawings, to enable you to insert perfectly formatted mathematical and scientific formulas. Your formulas can include a wide range of elements, from fractions, terms with exponents and indices, integrals, and mathematical functions, to inequalities, systems of equations, and matrices.	math	
Firefox	Firefox Internet Browser is also useful to read local, off-line educational content. Firefox is the default browser.	firefox	
Netsurf	Fast and easy to use internet browser	netsurf	
pdf Split and Merge	PDFsam is our free and open source desktop application to split, merge, extract pages, rotate and mix PDF files.	pdfsam	
pdf shuffler	PDF-Shuffler helps the user to merge or split PDF documents and rotate, crop and rearrange their pages using an interactive and intuitive graphical interface.	pdfshuffler	
Thunderbird	[Update 20.04 LTS] Mozilla Thunderbird is a free and open-source[11] cross-platform email client, news client, RSS, and chat client developed by the Mozilla Foundation. Thunderbird is an email, newsgroup, news feed, and chat (XMPP, IRC, Twitter) client. The vanilla version was not originally a personal information manager (PIM). However, the Mozilla Lightning extension, which is now installed by default, adds PIM functionality. Additional features, if needed, are often available via other extensions. https://en.wikipedia.org/wiki/Mozilla_Thunderbird	Thunderbird	



Kiwix, Xowa, Kolibri Offline reader and tools for educational content

Labdoo computers come with preinstalled programs to read offline content, such as Kiwix. It allows you to access offline wikis and learning content without being connected to the Internet. Depending on the language, availability and size of the hard drive, Labdoo will have already preinstalled some learning content. Using the tools a lot of additional OER - Open Educational Resources, license-free learning content can be downloaded in different languages.




The programs mentioned below are already preinstalled on "cloned" Labdoo computers, mostly in the language of the target country. There may be more or less content, depending on the size of the disk-drive. They can be found:

locally on a Labdoo computer in the folder /home/labdoo/Public

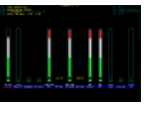
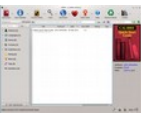




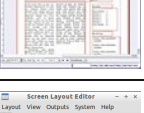
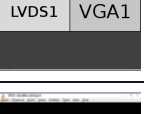
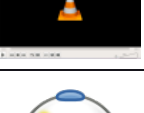



online on the server of the tools developer



on our FTP server <http://ftp.labdoo.org/download/install-disk/wiki-archive/>

Program	Descriptions	Program name	Screenshot
kiwix (since end of 2020)	Since end of 2020, cloned IT donations are coming with the Kiwix tool. In the folder /home/labdoo/Public/kiwix/wikis you will find preinstalled learning content (zim and meta files). Further learning content can be downloaded from the web. Note: All users these saved in the aforementioned folder, but these new folders must be opened once or else their content will not appear on the list. To activate new contents for another user, click on the folder symbol at the upper right corner, navigate to the above folder and click on the content to activate it. A great feature of Kiwix - if you click on the 3 dots (...) in the upper right corner, you can start the Kiwix server. An IP address is displayed and it can be used by other computers, cell phones or tablets to get connected, read the learning content on their devices and learn using it.	kiwix	
kiwix Add-On for Firefox (since end of 2020)	The preinstalled Kiwix add-on in Firefox will display zim archives for Kiwix. This allows you to access the zim archives with learning content in the folder /home/labdoo/Public/kiwix/wikis. However, this browser extension does not offer all the functions of the Kiwix app; the browser plug-in is still in beta phase.	kiwix plug-in Firefox	
Xowa (until end of 2020)	Until the end of 2020, Labdoo used Xowa as a tool to display offline wikis http://xowa.org/ . Since then, Xowa was replaced by Kiwix to clone images. If you want to continue using Xowa, you can install it, set it up manually and load wikis from the Xowa server yourself. Labdoo also removed the Xowa archives from its FTP server at the end of 2020. Instead, the most common zim archives for Kiwix are still available on our FTP server.	xowa	

Kolibri	Another tool for offline content is Kolibri, based on mySQL database. It comes preinstalled, but not configured. Download content from: https://catalog.learningequality.org/#/public	kolibri	
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- **Additional Programs**

Program	Descriptions	Program name	Screenshot
alsamixer	The program alsamixer is a tool to access all ALSA settings provided for the sound card. Frequent settings, which cannot be directly accessed with the X-user interface, are deactivated or down-regulated. With Alsamixer you can quickly find and activate these settings.	alsamixer	
calibre	Calibre is a cross platform program to manage and convert e-books	calibre	
Laby	Laby is a program to learn the programming in OCaml, Python, Lua, Ruby, Prolog, C or Java. An ant has to be moved safely through a maze without stepping into spider webs or other traps.	laby	
Nanny	Nanny Parental Control is an application to monitor and control what children are allowed to do on the PC.	nanny	
Kino	Kino is a simple video editor for GNU / Linux, which also offers the ability to directly program the videos from the camcorder to take screenshots ("capture").	kino	
ScolaSync	Graphic tool to copy data to or from a set of USB storage media	ScolaSync	
Scribus	Scribus is a desktop publishing program. It is used to create professional layouts, and it is similar to Adobe PageMaker, QuarkXPress or Adobe InDesign.	scribus	
ARandR	ARandR is a tool to configurate the monitor settings, e.g., a second monitor or a Beamer.	ARandR	
VLC	VLC is a complete media player that supports almost all media files, audio CDs, DVDs and more.	vlc	
guvcview	guvcview / GTK+ UVC Viewer allows you to control webcams that are supported by the UVC or GSPCA / SPCA5xx driver. The software offers, among other things: Image control, sound recording (.pcm, .mp2 ...), video recording (.avi, .mkv ...) and image recording in various formats (.jpg, .png, .bmp and .raw). The supported formats depend on the webcam used.	guvcview	
cheese	Cheese is a webcam application that is similar to Photo Booth on Mac OS X. Images or videos from the webcam can be provided with various filters and saved. A countdown counts down until the image is created so that you can say 'Cheeeese' in good time. The saved images or videos can then be sent directly by e-mail or transferred to other applications.	cheese	
Audacity	Audacity is a free, open-source and easy-to-use graphical audio editor and recorder.	audacity	

KRDC	KRDC is a VNC client / desktop sharing application, compatible with RDC Remote Desktop for Windows. A remote computer can be operated using VNC. The screen content of another computer is displayed on the local computer. Mouse and keyboard entries are sent back from the local computer (here the client, also called the viewer) to the remote computer (the VNC server runs on the host).	krdc	
FileZilla	FileZilla is a convenient and fast FTP and SFTP client with a wide range of options. Among other things, it supports the resumption of cancelled data transfers, the management of various FTP sites, SSL, drag+drop and much more.	FileZilla	

- Virus scanner [ClamAV](#) (ClamTK)



Linux doesn't normally need a virus scanner due to the Linux security concept. There are very few (not to say - none) viruses in Linux desktop. Nevertheless, some companies still offer virus scanner for extra security, for example to protect the file server being used by Windows clients.

Some edoovillages also request a tool to be able to scan a USB drive and remove any possible virus from it. ClamAv is recommended for this purpose (ClamAV is automatically installed if you are using the installation scripts or cloning images).

To serve the purpose, we recommend the license free, open-source virus scanner called ClamAV

<https://help.ubuntu.com/community/ClamAV> (You can use ClamTK to start the program).

More modules and the virus signatures may need to be installed in order to run the program smoothly. Therefore, please run either the installation script for Labdoo FTP site (<http://ftp.labdoo.org/download/install-disk/installskripts/installscript...>) or use the cloning images since all the programs are already preinstalled in the images.

Parts of this wiki content is based on text and graphics taken from www.edubuntu.org and <http://wiki.ubuntuusers.de/Edubuntu>

Responsibilities when Receiving a Dootronic

[This page is part of the 'Dootronics Welcome Package' which can be found in [this page](#).]



Dear Laptop receiver:

We are very pleased to have the opportunity to contribute to your project by providing technology to help bridge the digital divide.

With every right comes responsibilities. Technology, when adequately used, can provide very powerful means to aid those that are most in need. But if used improperly, it can also damage our environment. By receiving the above items, you are automatically accepting to abide by the following Labdoo global responsibilities:

(1) The items received will be used only for the purpose described by your organization at the time you solicited this donation. If you intend to use it for a different purpose, you will contact first the Labdoo team at contact@labdoo.org.

(2) In the case that an incidence occurs to any of the received items, you will contact the Labdoo team by going to <https://www.labdoo.org/content/labdoo-global-support-lgs> and writing on that wall your incidence, including the tagging number of the laptop(s) related to the incidence and a brief explanation. The following incidences must always be reported:

- (2.1) At the end of life of any of the received items, so that the item can be properly recycled.
- (2.2) When an item breaks, malfunctions or any change in its status.

(3) Every six months, please write also a message to the wall at <https://www.labdoo.org/content/labdoo-global-support-lgs> with the list of laptops that you have and their status (working or not working). If we do not hear from you, Labdoo won't be able to provide more educational laptops and tablets to your project.

(4) Labdoo laptops are offered for free to you for education purposes. In return, you agree to not use the laptops for commercial reasons and you agree not to charge any fee for the usage of the laptops.

We thank you for your commitment to make our world a better place and we wish you best of luck in your humanitarian mission.

The Labdoo Team.



Keyboard Layout

[Please print and attach this sheet to your dootronic shipment to ensure that the recipient knows how to use the computer. To print this sheet, click on 'Printer-friendly version' at the bottom of this page. Make sure to print it using the double page option in your printer settings to minimize the amount of paper used. Also, please print only one copy of this document for each group of laptops shipped together.]

Useful links keyboard layouts

<http://ascii-table.com/keyboards.php>
<http://commons.wikimedia.org>

<http://dominicweb.eu/african-keyboard/> - a free keyboard for Android phones and Windows-running computers allowing for typing of all languages of Africa that are based on latin script

You can also enclose a print-out of specific keyboard layouts with the laptop. Here is a collection of frequently used keyboard layouts <http://ftp.labdoo.org/download/documents/material/keyboard%20layouts/>

Language													
German	ESC	Bild ↑	Bild ↓	Druck	Ende	Einfg	Entf	Pause	Pos 1	Strg	←	↑	↓
English	ESC	page (up)	page (down)	print	end	Ins	Del	pause	Home	CTRL	Backspace	Shift	Caps
French	Échap	⌘	⌘	ImpÉc	Fin	Inser	Suppr	Pause	↵	CTRL	← Suppr arrière	Maj	Verr Maj ↵ Entrée
Spanish	ESC	Re Pág	Av Pág	Impr	Fin	Insert	Supr	Pausa	Inicio	Ctrl	Retroceso	Mayús	Bloq Mayús Entrar

Tags:

Samba / Windows Server

Starting from April 2018 and with the 18.04 LTS (L)Ubuntu release, a Samba server comes pre-installed on image cloned laptops. This means that a Labdoo laptop can be used as a server to other computer clients allowing these clients to access all the educational content in the server. This is a powerful configuration as it allows many types of devices (laptops, tablets, mobile phones, etc.) to access the educational content in the server without the need to have access to the Internet or the need to replicate the educational software in many devices.

Due to the speed of the server or the network, there are limitations in the number of computer clients that can be supported by one computer server. If too many clients are connected, the performance of the data transfer will become slow. So if you have many computer clients, it may be necessary to have more than one computer server.

This page describes how you can convert a Labdoo laptop into your own computer server to provide access to other computer clients. With a few simple steps a server can be set-up, check out the next instructions on how to do that!

Install Samba server

1. Install the package "samba" by running in a terminal `sudo apt-get install samba` or via the Linux package manager, e.g. synaptic.
2. Type `smbd` [Enter] in a terminal to start the Samba server manually. To avoid starting this program each time manually, you can add "smbd" as a command in **menu → Preferences / Settings → Personal / Personal → StartUp Applications / Start Programs → with "Add" → Name: Samba / command: smbd / Comment: add start up of Samba Server..** This will start the Samba server every time you reboot the system.
3. If necessary, install additional extensions to the system's file managers to bring a better use experience. For instance you can install "caja-share" by typing in a terminal `sudo apt-get install caja-share` or by using the synaptic package manager (this extension is also part of the Labdoo Image since April 2018).

Set up the Shared Folders

1. Open Caja as administrator/root by running `sudo caja` [Enter] in a terminal and right click on the folder you want to share. Click in the context menu "Share". Please notice that if Caja is not started as root, the menu item "Sharing" will not appear.
2. Activate "Share this folder" and "Guest access", then enter your own "Share name".
3. Close Caja.
4. Alternatively for LXDE Desktop, install instead the File Manager PCManFM: Go → network → usually then the server is already recognized and displayed, otherwise Windows network → Workgroup → Server name select, usually labdoo-00000xxxx where xxxx is the Labdoo ID of the computer.
5. Finally, don't forget that the computer must be connected to the network via LAN cable or WiFi.

Access to the server via tablet, mobile phone, laptop or PC clients

Depending on your client and operating system installed and in use (Android, iOS, Windows, Linux etc.) access to the server may be different. Below you will find some examples and tips. There are also useful programs such as file managers, browsers, pdf viewers or ebook readers on your device. Check if your file manager is able to connect to a server (not all apps are able to) or if additional extensions need to be installed.

Access to the Server Using a Client

- In a (L)Ubuntu officially cloned Labdoo laptop comes with the file manager Caja. Either use the Menu → Places or use Caja and in the left column go to "Browse the Network" to scan and show all the servers in the network.
 - Android - open your file manager and click on "network". The network will be scanned for SMB-shares which will be shown in a file manager. If your installed file manager is not able to handle SMB, you have to install one with this ability. We recommend the file managers **Ghost-Commander** (to be installed using the apps store Google Play: both Ghost Commander and Ghost Commander - Samba Plugin need to be installed) or **the X-plore** add on.
 - iOS (Work in Progress)
 - Windows (Work in Progress)
- To open the "Public" shared folder just double-click it. Then confirm "Connect as anonymous" to get connected.
- For a faster experience, nearly all operating systems and file managers offer a way to bookmark favorite folders. Use it to bookmark the access to the server.

Connecting to the Server Using Ghost Commander in Android

The example Ghost Commander is similar to other file managers.

1. Start Ghost Commander.
2. Open "home" directory (arrow with dot right upper corner).
3. Click on "Windows shares".
4. In the window "Connect to Windows PC" click on "Search". No further input should be needed to connect to the server.
5. Click on "Workgroup".
6. Click on the name of the server you want to connect to.
7. The shares of the server should be listed in your file manager.

To create a Bookmark Using Ghost Commander

1. Click and hold on for about 2 seconds on the share you want to bookmark until a context menu opens.
2. Click on the context menu "NAME_OF_THE_FOLDER as favorite".
3. Now you will see the share at /Home (Arrow and dot upper right corner) /Favorites and have direct access, provided the SMB server is online and connected to the local network.

Note: Some file managers first store documents and pages locally before opening and displaying them. This can end up filling up the memory in your device. Cleaning up the

memory can help.

Display Educational Content and Documents

- **Off-line web content:** can be shown in your client's browser. Local off-line content must be stored using relative links (not absolute links).
- **pdf:** to be displayed and read using a PDF viewer.
- **Office documents:** It does not matter if you want to open and read Microsoft Office, LibreOffice, OpenOffice documents etc. in all these cases a viewer software app must be installed which can handle the file content.
- **Video / audio files:** In this case the client must also have matching software / apps installed to watch videos or to listen to audio files.

Make Xowa Accessible from other Devices

Xowa comes with an http-server to help share Xowa wikis within a local network. Navigate to the folder `/home/labdoo/Public/xowa` and open a terminal (e.g. using the file manager Caja: File → open a terminal here). Run the Xowa-jar file in this folder as follows:

For 64 Bit installations: `java -jar xowa_linux_64.jar --app_mode http_server` [Enter]

For 32 Bit installations: `java -jar xowa_linux.jar --app_mode http_server` [Enter]

Don't close this terminal window, as otherwise the Xowa process will be stopped. So leave it open as long as Xowa is used by other client devices.

Some devices, operating systems and browsers can resolve the hostname into its IP address. The IP address is like the address number of a home, which controls the access to each device inside your LAN (Local Area Network).

If the IP address cannot be resolved automatically you can get it manually. From the server computer, first right mouse click on the network/WiFi symbol on the desktop → Connection Information → read IP address (often similar to 192.168.1.xxx). Notice: The IP address will change every time, when you reboot the server (if you run DHCP for dynamic IPs in your network). It might be helpful to assign a static IP address to your server.

Read Xowa Content on any Client

The following is based on the IP address 192.168.1.133 just to illustrate an example. Instead of this IP address, use your server's IP address. Open the browser of your choice on your device (tablet, mobile phone, PC) and type the address of the server:

SERVER_IP_ADDRESS:8080

In our example: 192.168.1.133:8080:8080

Related Links and References

https://en.wikipedia.org/wiki/Samba_%28software%29

<https://help.ubuntu.com/community/Samba/SambaServerGuide>

https://en.wikipedia.org/wiki/Ubuntu_MATE

https://en.wikipedia.org/wiki/PCMan_File_Manager

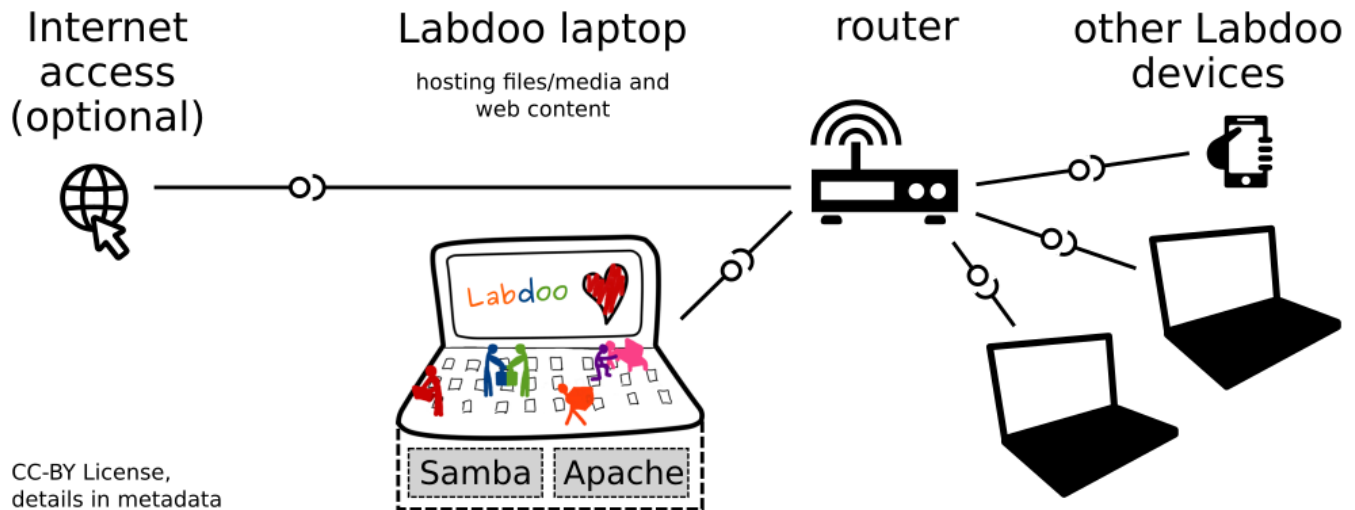
Tags:

Using a Laptop as WiFi Hotspot to provide educational data to mobile devices

Introduction

If a Labdoo laptop is member of a LAN or WiFi network, it can provide data (educational content) to other devices of that network, e.g. to mobile phones or tablets. This can be done either by some network share – e.g. via samba (smb) or e.g. via a web server (e.g. Apache web server). In both cases, educational content on that laptop could be accessed by other mobile devices (mobile phones, tablets) via their web browser. This might be a reasonable use case if these mobile devices do not contain Labdoo educational content (e.g. due to having not enough disc space for this content) or no having internet connection.

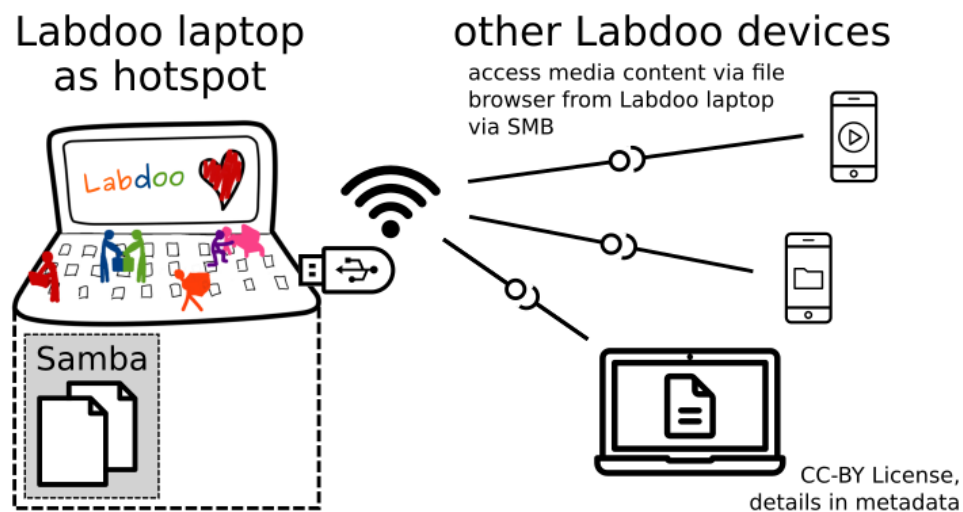
In the case of a WiFi connection, we commonly assume that our laptop is connected to a WiFi router, to which all other mobile devices are connected.



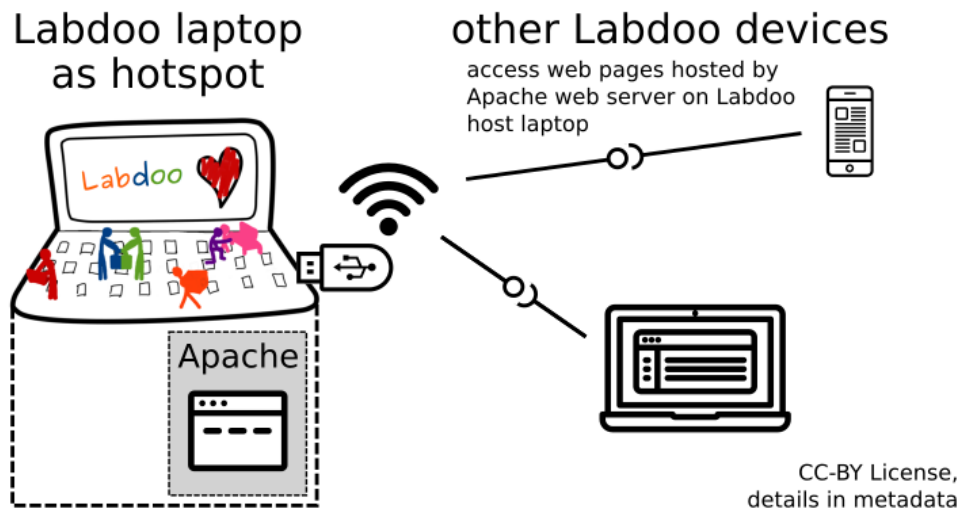
But what do we do if no WiFi router is available? If a WiFi USB-adaptor or a built-in Wifi is available on it, is possible to use a laptop as hotspot and host a WiFi network. There are 2 options - use a Samba (smb) file server, which offers a Windows-compatible server (easy to start and handle). Or you can use Apache server, which is bringing a full web server to a laptop (more complex), being able to spread content and web-sites locally and world-wide (if connected to internet).

Such a setup is outlined in this document.

using Samba (smb) server



using Apache web server



Target Group

The target groups are Labdoo schools, which do not have a running WiFi network, but need a network to provide file, content and/or Internet access to other mobile devices.

Example: The Labdoo school have tablets or smartphones, but no Labdoo content on them.

Then the school is able to use a Labdoo laptop as server and spread the educational content to mobile devices. The number of mobile devices to be provided by one laptop depends on its capacity, mainly speed of CPU, disc and WiFi connector. In our tests we found 3 - 10 devices a reasonable number of clients to be connected to one laptop.

Each Labdoo laptop comes with a preinstalled Samba server (smb). How to start the smb-server and how to connect mobile devices to it is explained [here](#).

You will find most content on each laptop in the folder `/home/labdoo/Public/wikis`. Navigate in a browser of your mobile device to the sub-folder (language) needed. Search for the start file, in most cases `index.html`, `start-here.html` or similar. Then you can read and use links etc. on your mobile device as reading on a laptop. Please note that Xowa content does not work using a web browser.

Technical Aspects

Most modern smartphones can be used to host a WiFi network. However, not all WiFi chips of laptops or USB-sticks (and their drivers) support this feature. According to the Ubuntu Users Wiki [1], these WiFi chips do the job:

- chips driven by the hostap driver or
- chips working with a current mac80211/nl80211 sub-system

A detailed description on how to set up the laptop as a WiFi hotspot is given in the Ubuntu Users Wiki [1]. The procedure works with (L)Ubuntu 14.04 - 18.04 LTS.

- provide files access (e.g. via Samba, offering Windows-compatible file services) and / or
- run a webserver to provide browser based access on educational content (e.g. via Apache)
- share its Internet connection (e.g. if the Laptop has WWAN)

to mobile devices connected to the WiFi.

References

[1] https://wiki.ubuntuusers.de/WLAN_Router/

Thank you, Daniel Neumann, Labdoo Hubs Hamburg / Rostock, for contributing this text (hamburg-hub@labdoo.org).

Tags:

[wifi](#)
[laptop](#)
[server](#)
[mobile devices](#)
[tablet](#)
[samba](#)
[web server](#)