Source: Bing Chat AI

MobaXTerm: Basic Manual

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Content

Introduction and start-up

Tool overview

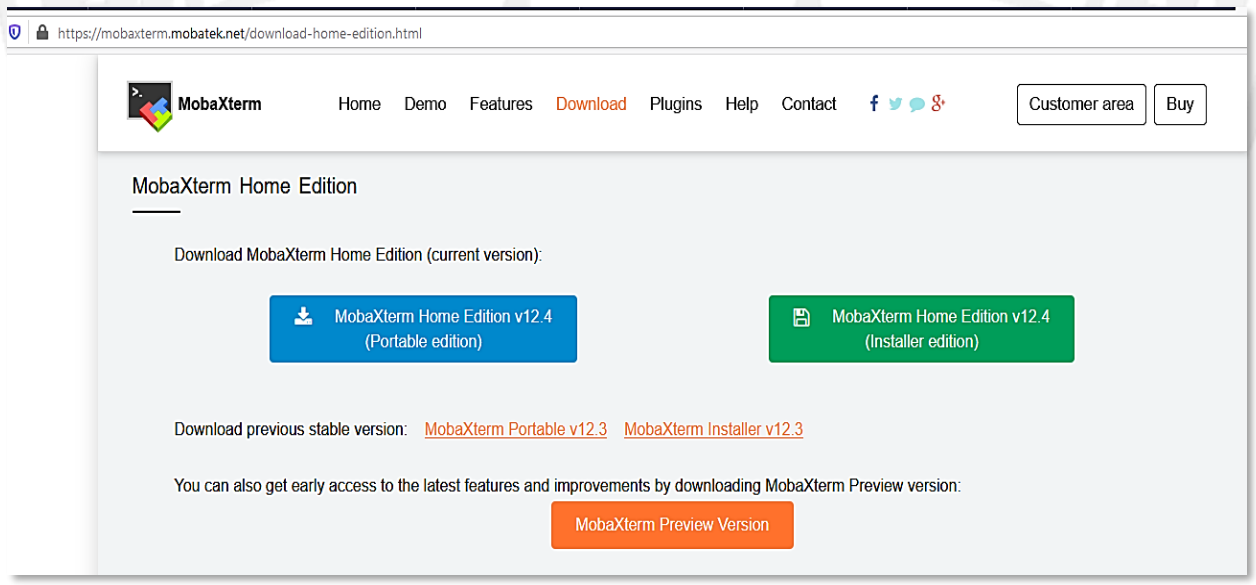
MobaXTerm (https://mobaxterm.mobatek.net/) is a client that supports many remote machine access protocols (SSH, *X11, RDP, VNC, FTP, MOSH,...*) and Unix commands (`bash`, `ls`, `cat`, `thirst`, `grep`, `awk`,, `rsync`, ...) on *Windows* systems. Among its most interesting capabilities we have:

- **Automatically export the graphical subsystem** from a remote *Linux* to the *Windows* client, so that any graphical application that is booted on the server can be viewed on the client, even if the server is in console mode.
- SSH client supporting **multiple tabs**, allowing complete text copying and pasting capabilities.

It is recommended to use *MobaXTerm* as an alternative *SSH* client to the well-known *Putty* or to boot graphical applications on the server whose interface is displayed on the client without having to change any settings or do operations to do so, which is extremely simple.

Download

MobaXTerm has a free version that we can download from here: https://mobaxterm.mobatek.net/download.html, and that is enough for our laboratories:_. It is important to choose the portable option, as it does not require installation and can be used in the lab without problems:

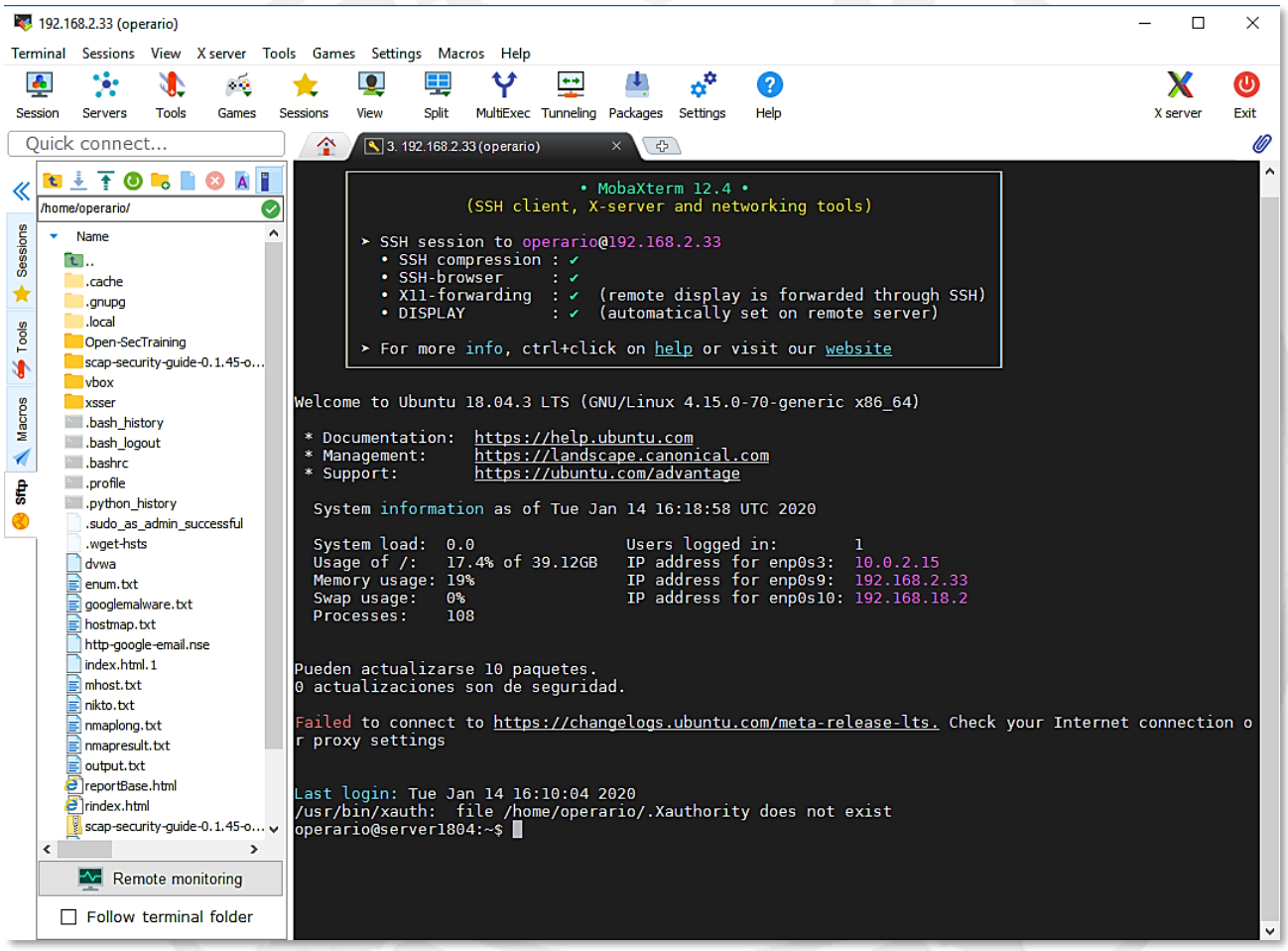


It is compatible with any Windows version

.Tool usage

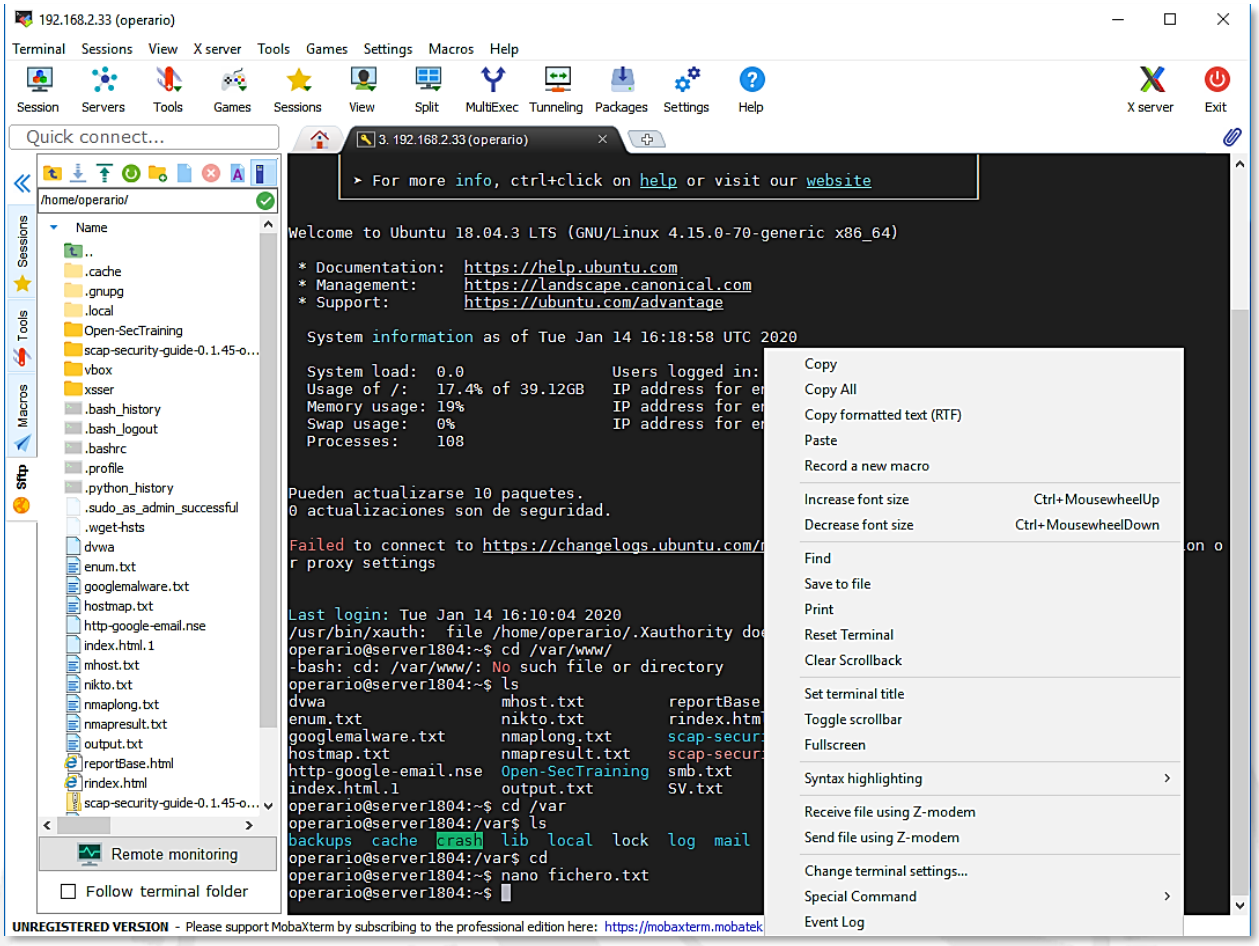
Preparing and connecting to the server

To connect in console mode to any remote server it is necessary to have the *OpenSSH Server* package installed on it (if we do not already) in that server with `sudo apt install openssh-server`. In case we have it we will see a console like this. In addition to the terminal, we have access to a browser with the remote files that we have read permissions.

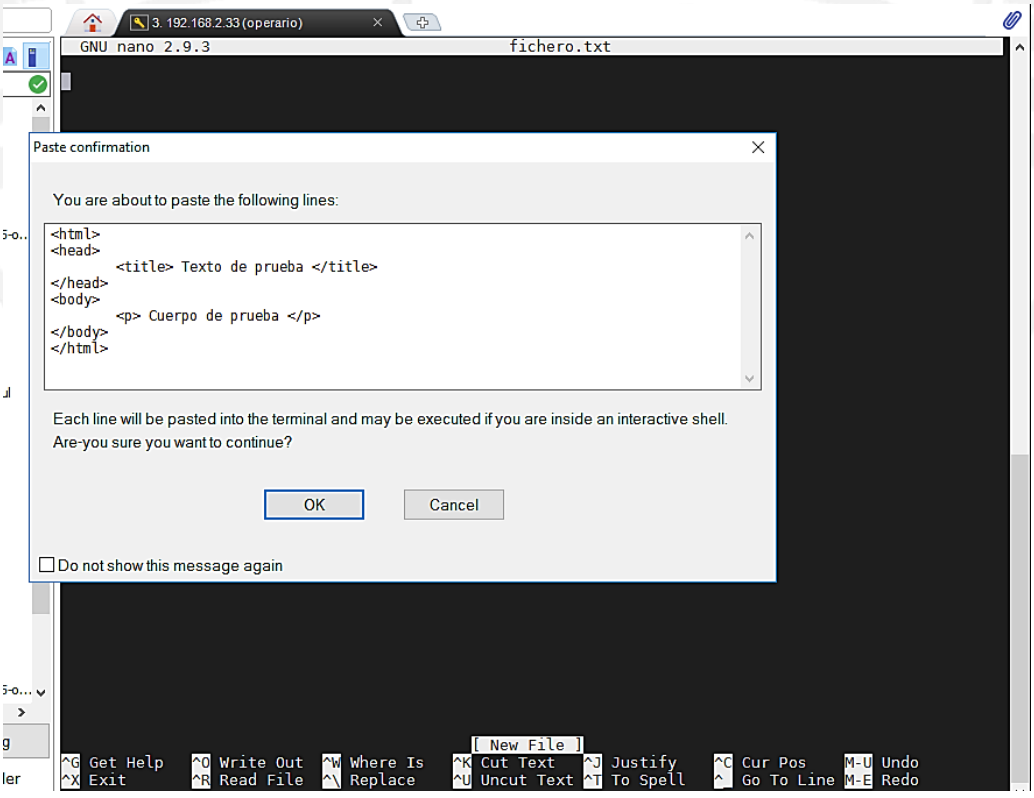


If we right click on the terminal window we will be asked if we want to assign this button to the ***Paste*** command or the context menu. We assign the latter to see the following options (including ***Paste*** As well). The ***Paste*** option allows us to **copy any text from the client machine to the server without problems**, which is especially useful in laboratories that require copying many commands. In addition, it does so without installing a GUI, so it does not impose any additional resource usage on the server. Note that this functionality also exists with *Putty*.

The *MobaXTerm* console supports many more commands that can be useful to us (see image) and that we encourage you to try 😊 Note that the option to ***Copy*** the contents of the terminal window is also included.

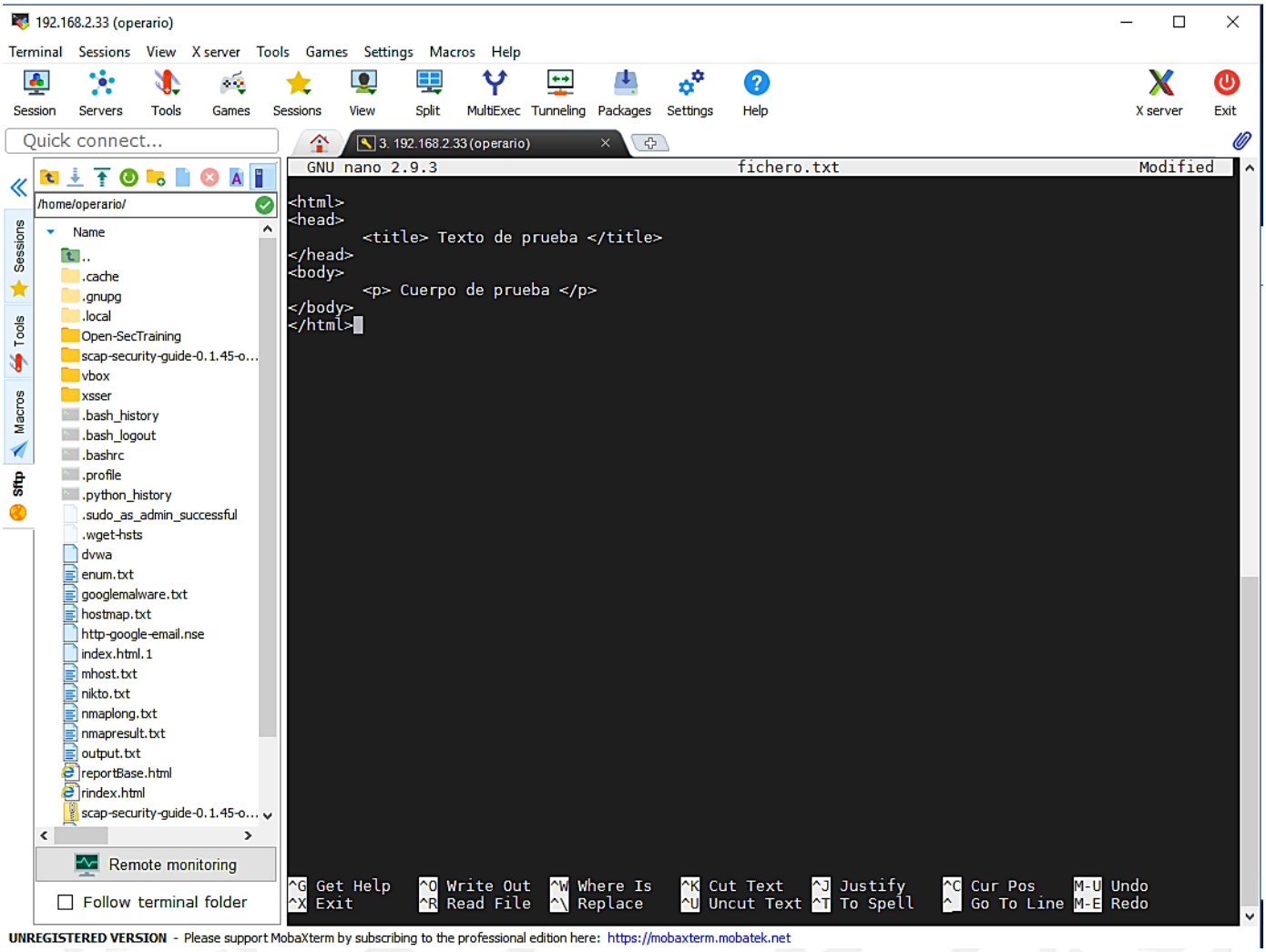


One thing to keep in mind is that before pasting texts we will be offered a **preview** of what we want to paste just in case. We can disable this preview if we don't want to use it.



And finally, the terminal will copy the text on the program that we have active: either an editor like the nano, or the OS shell itself. This makes creating documents, modifying them, or executing commands from laboratory

scripts on machines without GUI very simple. If you also combine this with multiple simultaneous terminals thanks to `tmux`, you will have a very advanced text-based work environment.



Running graphical applications on the server without booting a GUI

As we said earlier, one of the most interesting features of *MobaXTerm* is to be able to automatically **use graphical applications installed on the server** from the *Windows* client that connects to the server, but without needing to have a full GUI installed or booted on the server. That is convenient because it allows you to use GUI programs on an *Ubuntu* that does not have a full GUI installed, **only the base of the *X11* subsystem**, which takes less space than a GUI (about 500 Mb): https://developer.ibm.com/tutorials/l-lpic1-106-1/

To do this we install the following packages that give us the base of the X11 system: `sudo apt install xorg openbox`. Once this is done, we can install any graphic application, such as *Firefox* with `sudo apt install firefox`. **Please note that in our VM there is a GUI installed, so this step is not necessary. Thanks to this you can use GUI applications from your host without booting the GUI (`startx`), though, which may save you resources.** This is a viable option if you opted to install your own VM for the course from scratch, and you did not install the GUI yet: you can now choose to install only the base X11 system.

If we start *Firefox* on the server from *MobaXTerm*, its interface will be automatically displayed on our Windows client without installing an entire GUI. Therefore, with *MobaXTerm* we cover all the use cases that we may need in laboratories:

- Copying text blocks
- Pasting text blocks
- Testing applications with GUI installing as little software as possible on the *Ubuntu* machine of the course.