MONTGOMERY VILLAGE, MD, April 21, 2018 – You are probably reading this article because you are curious about how a web site is created and may want to have one in your home. Using a web browser (Edge, Explorer, Firefox, Chrome, Opera, etc.) one can visit these web sites, obtain information, do business, get entertainment material and many other tasks required by our modern way of life. The question is why would you want to have a web server (web site) in your home and even in the computer that you use?

For many people, the answer is simple. They want to access personal information, leisure material, photos, videos and everything they need from their computers, whether at home or remotely. If you are not one of these people, you may still get benefit from learning how to do it.

Benefits are many. For example, we find material or create it and store it for use later. When we want to retrieve it, we spend a lot of time looking for it or we are away from home where the information is. We may also have music, photos or videos stored in either our computers or external/flash drives and hard drives and trying to locate them, especially when away from home, is either time consuming or impossible.

With a server, you can easily have all your stuff in one place and available at the speed of the Internet from your home or anywhere else, with a computer. Granted that you can also put all your material in a paid server (cloud) or carry it with you. The former is expensive and the latter not practical.

What you need

You can install a web server in your everyday computer, but it may not be the best solution. You may want to keep some of your personal and business information separate from your home server. The process is very similar when you install the server in an old computer that you don't use any more or that you seldom use. So...

- 1. An old computer. Even a single board computer (\$35) like a <u>Raspberry Pi</u> can host a web site/server;
- 2. Enough storage in the computer or in external drives to store your stuff. You can do it with as little as 16 gigabytes;
- 3. A computer with an optical (DVD), USB or Micro SD drive, that is about any computer today;
- 4. Ability to download and burn the operating system that you want to use to install;
- 5. A word processor that can save documents in HTML format, most have this ability. If you don't have one try OpenOffice, LibreOffice, NotePad++ or any of the many open source, free and easily installable in Windows;
- 6. Desire to learn and ability to synthesize information.

Linux or Windows

This article will only expand on a Linux installation. If you want to install Apache in a Windows environment, the process is more laborious. You can find information <u>here</u>.

There are numerous articles and videos on the installation of Apache 2 in a Linux environment. I have used some of these and will elaborate in what I found to be the best way to do it.

In this article, I will explain how to install Ubuntu or other operating system for older computers and then how to use this platform to install the Apache server. While it is possible to install Ubuntu server directly, it doesn't have a Graphics User Interface (GUI) that makes it more difficult for those not familiar with command line computing in Linux.

The easiest is to download a Linux distribution package like Ubuntu, install it and then install Apache 2 and other required addons. So here is one way to do that assuming that you are currently using Windows:

- A. If you intend to install the server in at least a dual core computer with two gigs of memory or more:
 - Go to <u>http://releases.ubuntu.com/16.04/</u> in your Windows 10 computer and download the .iso version of Ubuntu LTS (Long Term Support) for the computer where you want to set up the server, select between the 32 and 64-bit version;
 - 2. Right click the downloaded file and select burn to disk and chose whether you want to use either a DVD or a USB flash drive as your installation media. If you are using an older version of Windows, you have to look up instructions on how to burn an .iso file to installation media;
- B. If you want to use a Raspberry Pi (RPi), go to <u>https://www.raspberrypi.org/downloads/</u> and download either Rasbian or Noobs. The former is an operating system and the latter is a preinstallation program that let's you pick how you how to use the RPi. For this exercise you want to select the Raspbian option. Download it and follow the installation instructions at the site or do as A.2. above. Since the RPi uses a micro SD card you want to make sure that you have that capability in the computer that you are using to download and burn. Rufus is a good program for that if you need one.
- C. If you want to use a single core Pentium or Pentium M, you probably can't run Ubuntu well. Use one of the many plain vanilla distributions like <u>ChaletOS</u>. Instructions are like the ones for the other computer types. Follow A.2. to install it to the computer.
- D. Go to this <u>site</u> and download or view the instructions on how to install and configure the Apache 2 server. Apache is by far the most popular server worldwide. It is free and highly configurable. Most modern browsers can read PDF files. If yours can't, download and use a free PDF reader. The site where you downloaded the instructions was created by the author and resides in his basement in a 15-year-old dual core computer that he rescued from the metal recyclers.

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