One of the Camera’s functionality is to take 360 images and store it on a dedicated server.

**Hardware**:

Using a desktop PC with:

* Intel Core i5 or higher
* 4GB HDD3 RAM or higher
* 1TB Hard Drive
* Internet Connectivity
* 2 USB Ports

**Software**:

Although the host is windows, we will be using Ubuntu Server as a virtual machine. The next are the tools we need to install into Ubuntu.

* MySQL configured
* FTP server settings
* OpenSSH Server
* VNC Server/viewer to connect with Raspberry Pi

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**Step 1: Creating a new virtual machine in virtualbox:**

This step explain how to set up a new virtual machine to host Ubuntu Server. Below is a step-by-step guide:

* Download and install Oracle VirtualBox from<https://www.virtualbox.org/wiki/Downloads>.
* Open VirtualBox. Then click “**New**” button to create new virtual Machine.
* Give a name to the virtual machine.
* Select Type as “Linux” and version “Ubuntu (64 bit)”.
* Select memory(RAM) as 1GB.
* Press Next with default option on “**Create a new virtual hard drive now**”
* Select disk type as “**VMDK**” which is also compatible with VMware Workstation.
* Select “Dynamically allocated” option which will allocate the space as and when data is created. If you select the option “Fixed size”, it will allocate the total disk space at once.
* Allocate the disk space. I have selected 32GB to be the VM disk space.

Now a Virtual Machine is created now, but it does not have any operating system installed inside it. We will now install ubuntu Server 16.10 inside this newly created virtual machine.

**Step 2: Installing ubuntu Server 16.10 inside VirtualBox virtual machine**.

Installing the operating system inside a virtual machine is almost the same as installing it on a real hard disk, follow the next steps to complete the installation.

* Download Ubuntu server 16.10 ISO from<http://www.ubuntu.com/download/server>.
* Download Ubuntu server 12.04 LTS ISO from<http://www.ubuntu.com/download/server>.
* Power on the VM and select “Choose a virtual CD/DVD disk file” from “Devices->CD/DVD Devices”.
* Attach the download ISO to the VM and reset the VM from “Machine->Reset”.
* VM will boot with the attached ISO. Select “**English**” as language.
* select **“Install Ubuntu Server**”
* Select installation language as “**English**”.
* Select your country.
* Configure your keyboard Layout.
* Enter the hostname. This will be name of the system.
* Create user for accessing the machine as a non-root user.
* Configure system clock.
* Partition the disk. Use default options.
* Configure the proxy if your network is behind a proxy server.
* Select update policy.
* Install “OpenSSH server” with the OS so that we can directly login via ssh. Press space to select the option.
* Select “DNS Server” and “LAMP Server” as well.
* Install GRUB boot loader.

Ubuntu installation is now complete and the vm is ready to use.. Login with the username and password created above.