



## Cornell University College of Veterinary Medicine Student Training Simulation Project

# Open VetSim Manager Configuration

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## History

**2017-Aug-18 – V 1.0 -- Original Release.**

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Update Section 2.8  
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**2018-Jan 12 – V1.6 - Added login info and initial network setup**

**2018-May 31 – V1.7 - Added OBS setup**

**2018-July 12 – V1.8 - Added additional OBS setup**

**2018-Nov 12 – V1.9 - Added additional OBS setup and updated suppressing of update messages**

**2018-Nov 15 – V1.10 - Added additional corrections from feedback**

**2019-Apr 29 – V1.11 - Updated URL to remote repository**

**2019-May 06 – V1.12 - Updated instructions for Ubuntu updates**

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## 1. Introduction and Overview

This document will describe the Open VetSim Manager configuration for the Cornell University College of Veterinary Medicine Student Training Simulation Project.

The Open VetSim Manager (OVM) can be any PC architecture computer which meets the minimum requirements. The minimum requirements are as follows:

1. 50GB hard drive
2. Dual i5 core processor
3. 8 GB main memory
4. 1 USB port
5. Video port
6. Network connection (LAN or WiFi)

The OVM is the main processing unit for the simulator. It handles the functionality for controlling the mannequin, serving the instructor interface web interface, and logging of events.

It is assumed the user has reviewed the documentation pertaining to system and software block diagrams, and the user has a basic understanding of Ubuntu.

## 2. OVM Configuration

### 2.1 Install Ubuntu

The OVM can be installed as a stand alone system or on a PC that already has an operating system such as Windows 10 as a dual boot. The user should download an ISO image of the latest Ubuntu LTS (currently 18.04) onto a USB flash drive. The downloads can be found here:

<https://www.ubuntu.com/download/desktop>

The utility Rufus can be used to create the ISO image on a flash drive. It can be found here:

<https://rufus.akeo.ie/>

Install the USB flash drive and power up the OVM. You will need to access the boot menu which is hardware dependent. Select the USB flash drive and follow the directions to install a complete copy of Ubuntu. If another OS is already installed, Ubuntu will detect this and ask if you want to erase the entire disk or install Ubuntu alongside the existing OS as a dual boot.

Set the user name to 'Vet Sim' and the password to 'vet'. You will get a warning for a short password which can be ignored. The account user will be set to 'vet'.

After installation be sure to remove the USB flash drive.

During the installation the OVM will attempt to establish a network connection either as a wired connection or over WiFi.

**NOTE: A network connection with public access is required to complete this installation.**

After the installation is completed, reboot the OVM and login using the credentials:

User: vet  
Password: vet

## 2.2 Install git and sim-mgr repository

After rebooting the OVM and logging in perform the following steps.

Click through the “What’s new…” slideshow.

After rebooting, log in to the Vet Sim account and re-open the terminal window.

> **CTRL-ALT-T**

> **sudo apt-get update**

After the above has completed click on the 3x3 grid on the bottom left of the screen and a list of installed applications will display. Click on ‘All’ at the bottom center of the screen. Locate and open the application ‘Software Updates’. The OVM will check for any additional Ubuntu updates. Follow the direction to update your software if any are detected. The updates will take several minutes. The updates will take several minutes. You will then be asked to reboot the computer.

After rebooting, log in to the Vet Sim account and re-open the terminal window.

Install git to download github repositories:

> **sudo apt-get -y install git**

Clone the repository for sim-mgr (do not clone as root account):

> **git clone https://github.com/openvetsim/sim-mgr.git**

## 2.3 Install Apache Server, MySQL Server and PHP 7.2

Navigate to the scripts directory:

> **cd /home/vet/sim-mgr/scripts/**

Run the following script:

> **./bash1.sh**

The message **PHP is RUNNING!!** should be echoed at the terminal.

## 2.4 Install phpMyAdmin

Run the second bash script:

```
> ./bash2.sh
```

When the window for configuring PHPMyAdmin appears do the following:

1. Press the “space” key to select apache2. An asterisk will then appear indicating that apache2 has been selected.
2. Press the tab key to highlight “OK”
3. Press “Enter”.

You will then be asked to reconfigure the database...click Yes

You will then be asked for a MySQL password. **Set the password for user phpMyAdmin to “vet\$im”.**

At the prompt:

**libmccrypt prefix [autodetect]:**

press ‘Enter’.

## 2.5 Install g++ Compiler, Libraries and simmgr User

Run the third bash script:

```
> ./bash3.sh
```

When the script prompts for the setup of the simmgr account, set password to ‘simmgr’ and accept defaults for account name, room number, home and work phone, and other. When prompted if the information is correct type ‘y’ then press ‘Enter’.

## 2.6 Installing the Web Based SIM Instructor Interface

Run the fourth bash script:

```
> ./bash4.sh
```

## 2.7 Install misc tools and 'vitals' User

Run the misc bash script:

```
> ./misc.sh
```

When the script prompts for the setup of the vitals account, set password to 'vitals' and accept defaults for account name, room number, home and work phone, and other. When prompted if the information is correct type 'y' then press 'Enter'.

## 2.8 Application User Setup and Instructor Interface Test

In the terminal window do the following:

1. Type in `sudo mysql`
2. Type `GRANT ALL ON *.* to 'phpmyadmin'@'localhost';`
3. Type `FLUSH PRIVILEGES;`
4. Type `exit.`

### Add database vet and table Users

1. Open a browser and go to <http://localhost/phpmyadmin>
2. Login with user 'phpmyadmin' and password 'vet\$im'.
3. Click on 'Databases'. Create a new database 'vet' with default options
4. Ignore all errors
5. Click on 'Import' then 'Browse' then 'Home'. Navigate to `./sim-mgr/Users.sql`
6. Click the 'Go' button.
7. You should see a new table 'Users'.

### Test Instructor Interface:

1. Open a browser
2. Go to URL `localhost/sim-ii`
3. Login using User: admin, Password: admin
4. You should see the instructor interface open with the scenario default ready to start.
5. Click on 'Start Scenario'. You should see a log appear.
6. Click on 'Terminate Scenario'.
7. Click on 'Debrief'. You should see the Debrief Viewer with a new log file.



## 2.9 Set up Auto Login

In the graphic interface follow these steps:

1. Click on the Show Applications icon in the lower left hand corner of the desktop.  
The icon is a 3x3 array of dots.
2. Click on 'All' in the bottom center of the screen.
3. Click on Settings
4. Select Details then Users
5. Select account 'vitals'
6. Click the unlock icon at the top of the window.
7. Enter the password for the vet (sudo) account
8. Set Autologin to 'ON'

## 2.10 Set Up Default Password Keyring

A non-password protected keyring needs to be created:

Login to the 'vitals' account

1. Click the Show Applications icon in the lower left hand corner of the desktop.  
Click 'All' to see all applications.
2. In the search box type in the keyword 'pass'. The utility 'Password and Keys' should appear.
3. Open the utility.
4. Click the green 'plus' to add a new key
5. Select 'Password Keyring'.
6. Click 'Continue'
7. Name the new keyring 'Default'
8. Leave the password blank and confirm that the password is not set and save the keyring.
9. Right click the new keyring and set as 'Default'.

## 2.11 Open Broadcaster Setup

The application Open Broadcaster has been installed as part of the automated setup. This application is used for recording audio and video during simulations which can then be played synched to a log file for review and critiques.

The video and audio sources must be configured for proper recording. There are three components for recording: audio, video cameras, and the vitals screen. The directory for saving the recording, OBS hotkeys, and the video format must also be configured.

### 2.11.1 Audio Setup

1. Reboot the OVM. Click through the “What’s new...” slideshow. The simulated vital sign monitor should be displayed.
2. Type the F11 key. The vital sign monitor should minimize allowing access to the desktop.
3. Connect all webcams that will be used for recording the simulations.
4. Click on the Show Applications icon in the lower left hand corner of the desktop (3x3 grid array)
5. In the upper left hand corner of the display click the search icon and type in “obs”. The Open Broadcaster icon should be displayed. Click on the icon to open the application.
6. When prompted to accept the license click ‘OK’. Click ‘NO’ for autoconfig. Click ‘OK’ when prompted again.
7. Under “Sources” click the plus sign (“+”).
8. Select “Audio Input Capture (Pulseaudio), then “Create New” and click “OK”.
9. Select the audio source from the dropdown presented and click “OK”. The audio source should now be listed in the Sources window.

### 2.11.2 Webcam Setup

1. Under “Sources” click the plus sign (“+”).
2. Select “Video Capture Device (V4L2)” and then “Create New” and click “Ok”.
3. Select the video source and click “Ok”. The video source should appear in the sources list and the video feed will appear in the live window.
4. Repeat steps for each video camera.

### 2.11.3 Vitals Screen Record Setup

1. Under “Sources” click the plus sign (“+”).
2. Select “Window Capture” and then “Create New” and click “Ok”.
3. Select the window “Vet School Simulator – Mozilla Firefox”. The screen should appear in the sources list and the video feed will appear in the live window.
4. Check the box that says “Swap red and blue”.
5. Click “OK” to save the screen recording. The different video sources can be resized and moved so that they are all visible.

#### 2.11.4 Video Recording Format and Path Setting

1. Click “Settings” then “Output”.
2. Set “Recording Path” to “/var/www/html/simlogs/video”.
3. Set video “Recording Format” to “mp4”.
4. Click “OK” to save the setting.

#### 2.11.5 Hot Keys

The hot keys are used to programmatically start and stop the recording of Open Broadcaster.

1. Click “Settings” then “Hotkeys”.
2. In “Start Recording” click CONTROL A (hold down Ctrl and type ‘a’).
3. In “Stop Recording” click CONTROL B (hold down Ctrl and type ‘b’).
4. Click “OK” to save the setting.

Click “Exit” to close OBS.

Reboot the OVM. OVM is now configured.