Installing OSMC On A Raspberry Pi

Using MAC OSX

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Introduction

This document will describe how to locate, download and install the Open Source Media Centre (OSMC) software for the Raspberry Pi.

We will perform the following actions:

1. Visit the OSMC web site at *https://osmc.tv*.
2. Download the SD card writing software.
3. Install the SD card writing software.
4. Create an SD card with the OSMC software.
5. Plug the SD card into an RPi computer and boot the media server.
6. Setup the network.
7. Watch TV Ontario.

Requirements

- A personal computer or laptop that has an SD card writer either built-in or using an add-on device (a USB multiple memory card reader/writer). You can use either a Mac system or a Windows system. The Operating System (OS) versions of either will be dependent on the OSMC installer program requirements.
- A Raspberry Pi (models 1, B, 2 etc.) with power supply, HDMI cable, network cable (or wireless USB adapter), and USB keyboard/mouse combination (I have a wireless USB Logitech K400 keyboard with built-in trackpad that is excellent for this purpose).
- A blank SD card or MicroSD card, depending on the Pi model. A microSD card to SD card adapter can be used if you only have an SD card writer on your computer and have a Pi 2. MicroSD cards can be used in a lot of today's devices, so I prefer buying microSD cards that come with an SD adapter right in the package. The microSD cards can then be used with SD card and microSD card devices.

The OSMC Web site

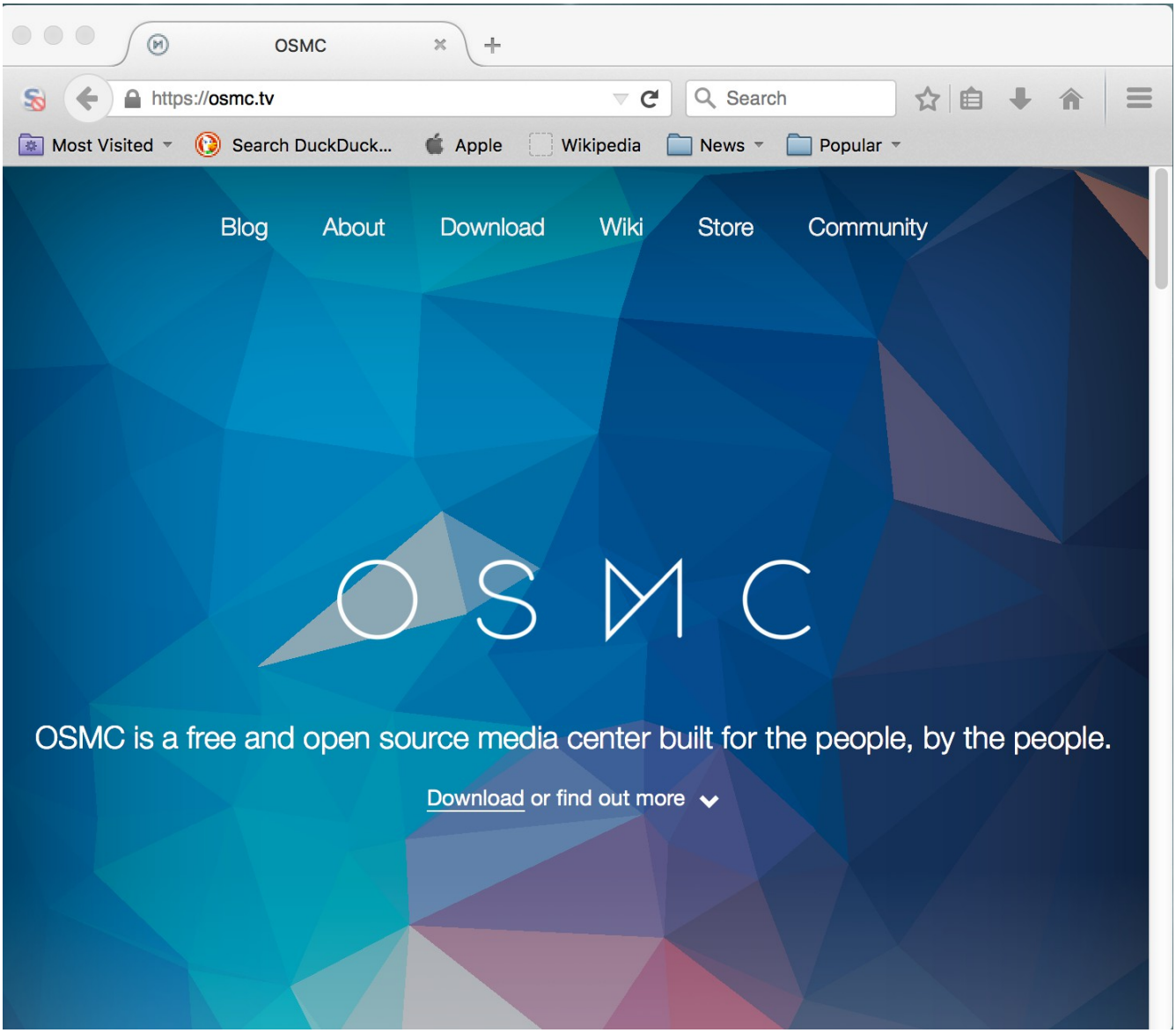

Illustration 1: The Open Source Media Centre home page as of Jan. 9, 2016

On your laptop or home computer, visit the OSMC web site by starting your favourite web browser (I'll use Firefox for this demo.) and type in/visit the URL: `https://osmc.tv` . Please read the entire home page (scroll down etc.) to become familiar with the project. Make a donation if you like.

Getting and Installing the SD Writer Software

The Download link on the home page is the obvious starting point. It leads us to https://osmc.tv/download/ :

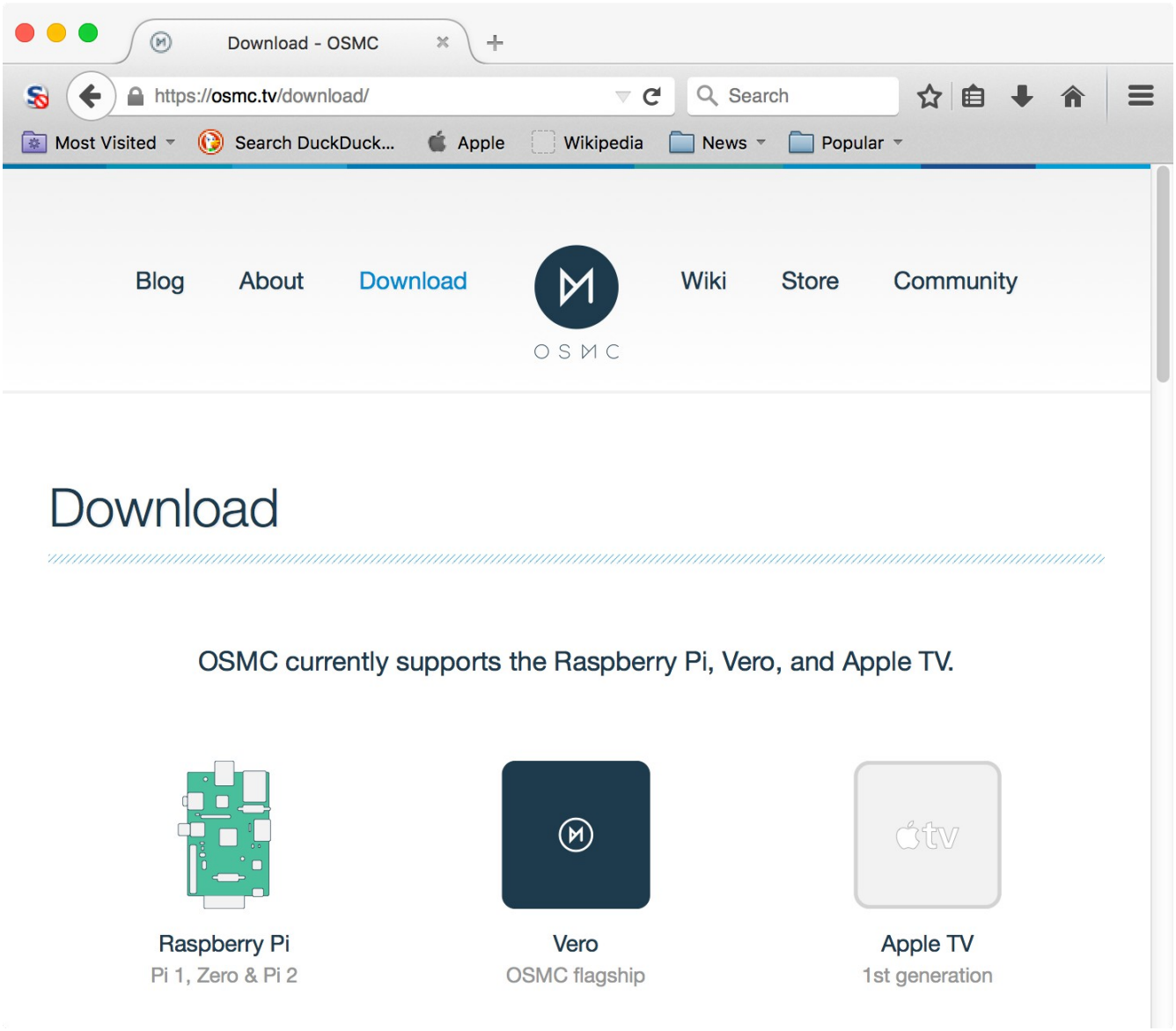

Illustration 2: The top part of the download page for OSMC

We need to scroll down on the Download page to see the choices for the SD card writing/installer software.

Installing the SD Writer

The result of scrolling down the Download page reveals an Installation section on that page and is shown in the next illustration.

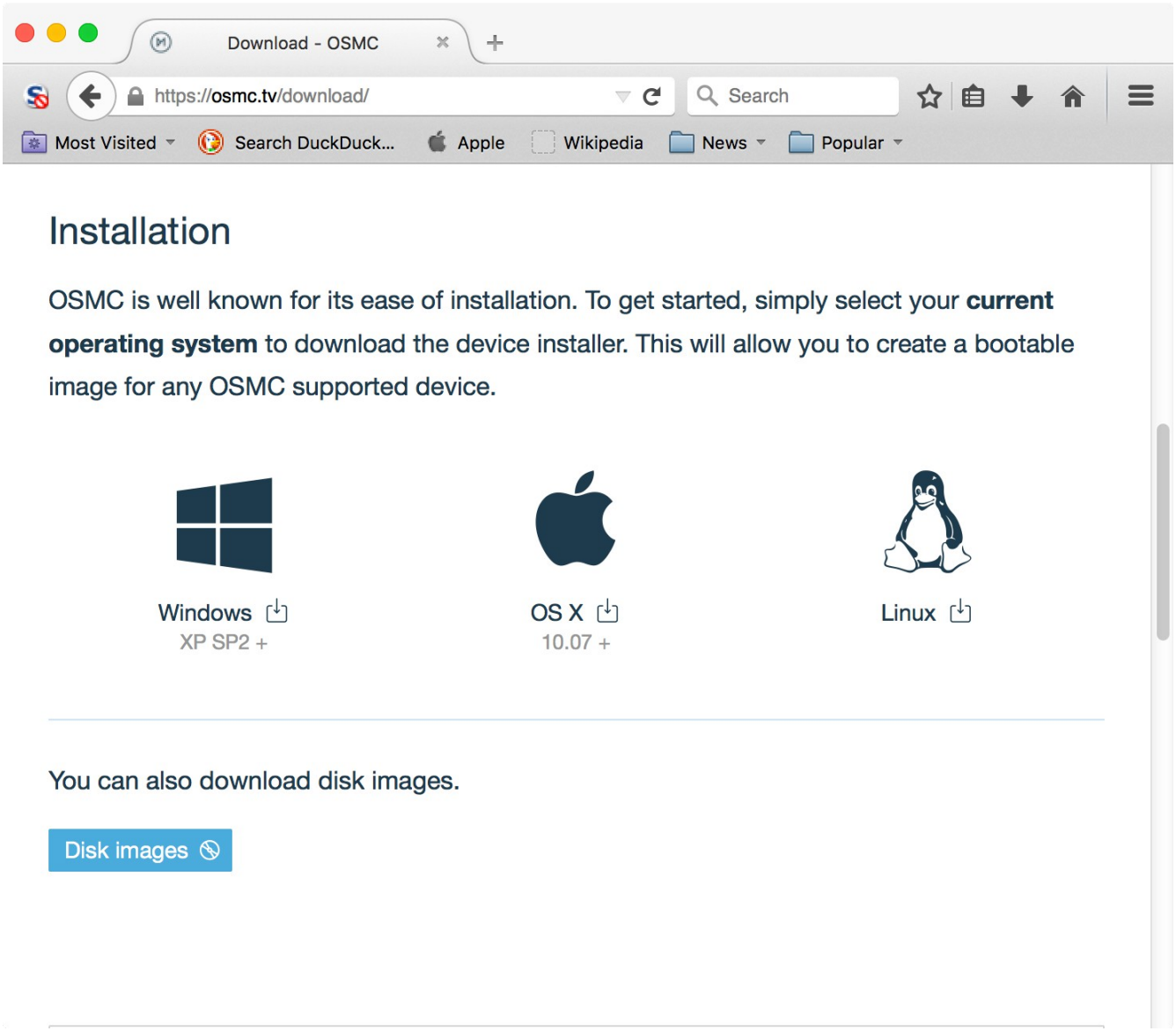

Illustration 3: The installation section after scrolling down the download page.

Use the link for your operating system. I'm using OS X 10.11 (El Capitan) for this demonstration as it will be done on a Mac. Clicking the OS X link (`http://download.osmc.tv/installers/osmc-installer.dmg`) displays the following dialog:

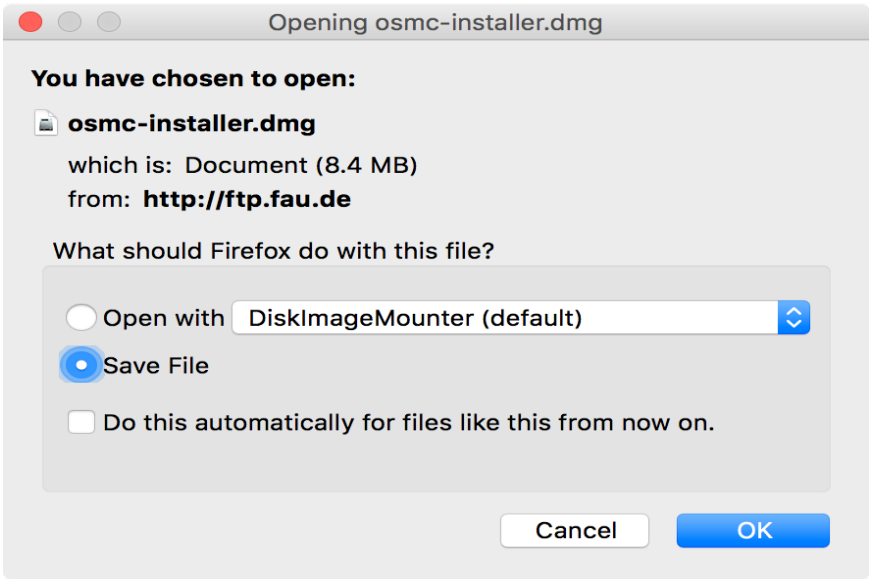

Illustration 4: Firefox osmc-installer.dmg download dialog box

Pressing OK saves the file to your browser's default download folder.

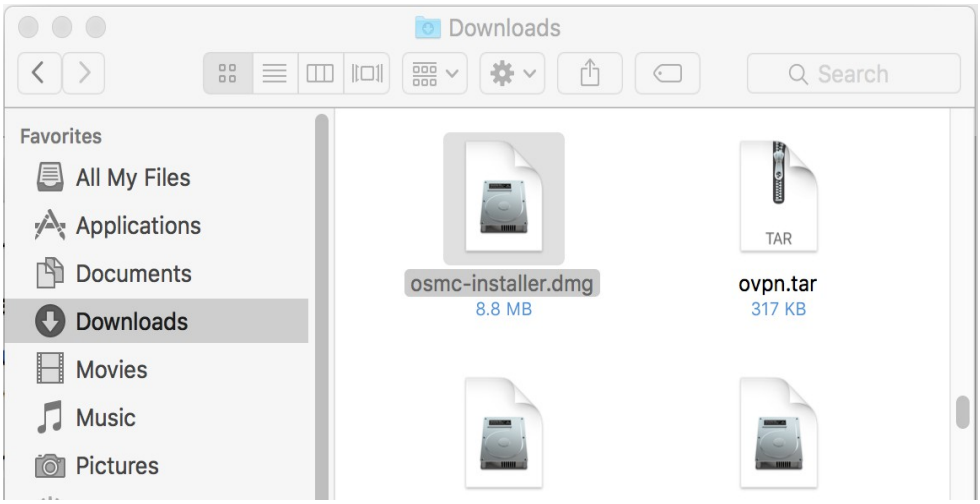

Illustration 5: The installer program located in my Downloads folder

The file we are interested in is called `osmc-installer.dmg`. Double clicking it will mount the disk image, open it and then display its contents. The window displayed looks like this:

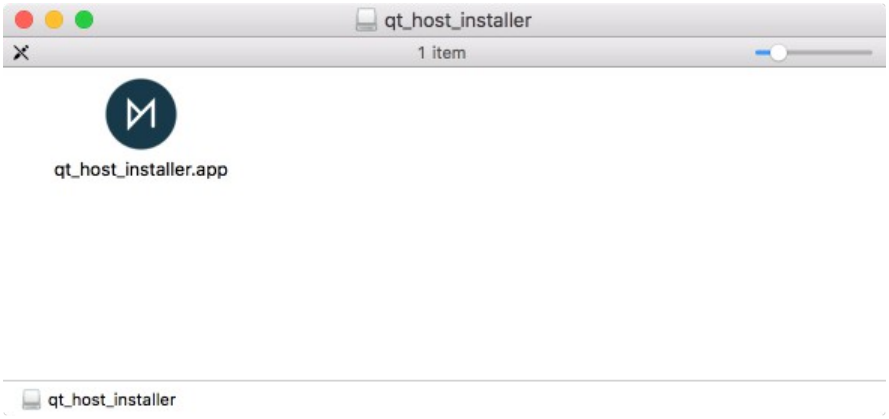

Illustration 6: The contents of the osmc-installer.dmg package showing the installer app.

The actual OSMC Installer app is named **`qt_host_installer`**. Drag the *`qt_host_installer.app`* into the Applications folder in any Finder window and the installer will be available from the Launcher. Its icon looks like this:

Illustration 7: OSMC Installer icon

Running the SD Writer (qt_host_installer)

Now that the installer is ready to go, let's run it. It may start up with something like this:

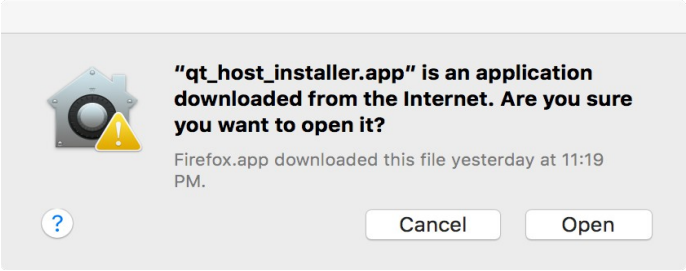

Illustration 8: Internet installation warning

It is safe (hopefully) to Open this application. If you don't have the option to open the app, you may need to right-click the app from the Applications folder and choose open from there.

The installer opens and its first screen is shown below:

Illustration 9: OSMC Installer - welcome / start screen

I've already selected English as the language in the first drop-down box. The second drop-down shows the list of choices for the "what would you like to install OSMC on?" question. I've selected Raspberry Pi, which includes all of the Pi one (1) models, since I have a normal SD card instead of a microSD card (used by the Pi 2).

Illustration 10: SD card for a Pi 1

Pressing the stylized right arrow (Next button) brings up the next screen which requests the version of OSMC to install.

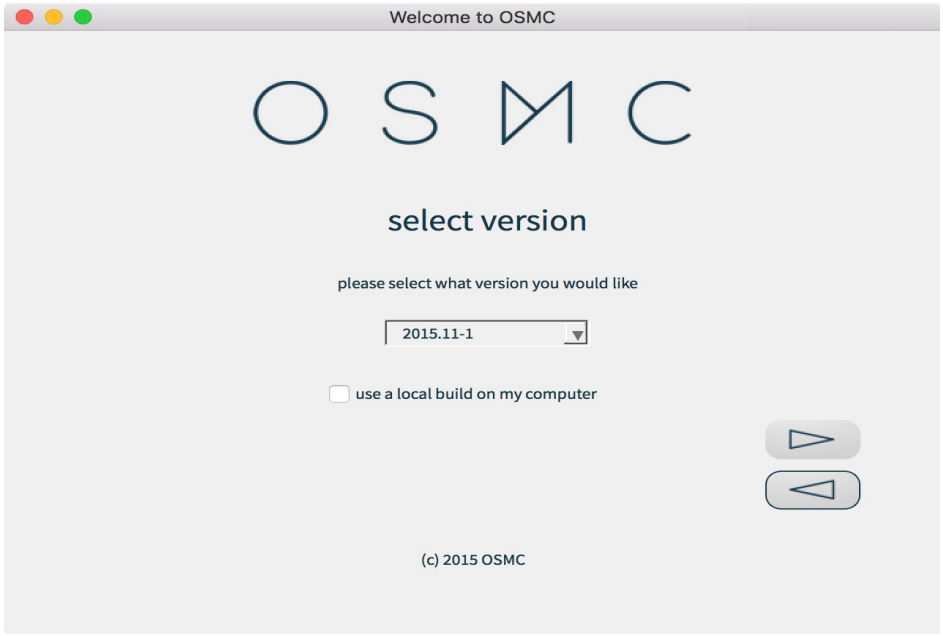

Illustration 11: OSMC Installer - version selection screen - choose the latest

It's usually best to choose the latest version (2015.11-1 as of this document). Press the next button (stylized right arrow), to proceed to the next screen. We see the output selection screen:

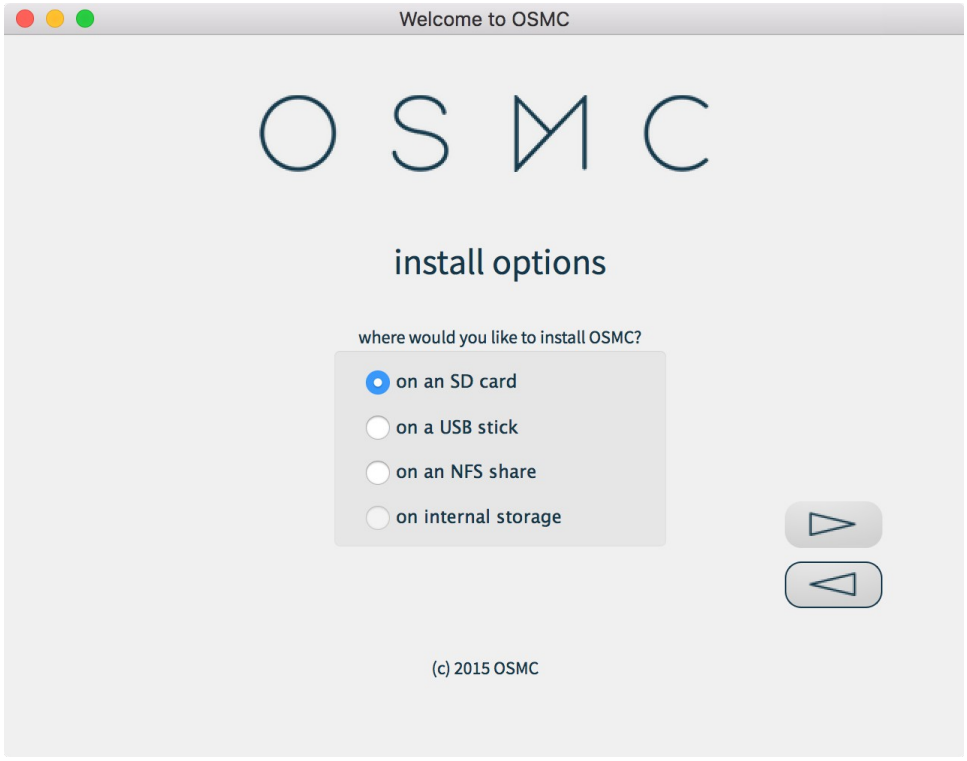

Illustration 12: OSMC Installer - installation options - select SD card

For the question “where would you like to install OSMC”, we select “on an SD card” and press next.

Setup the Network

We are offered the choice of how we are connecting our Pi to the network. This is very handy.

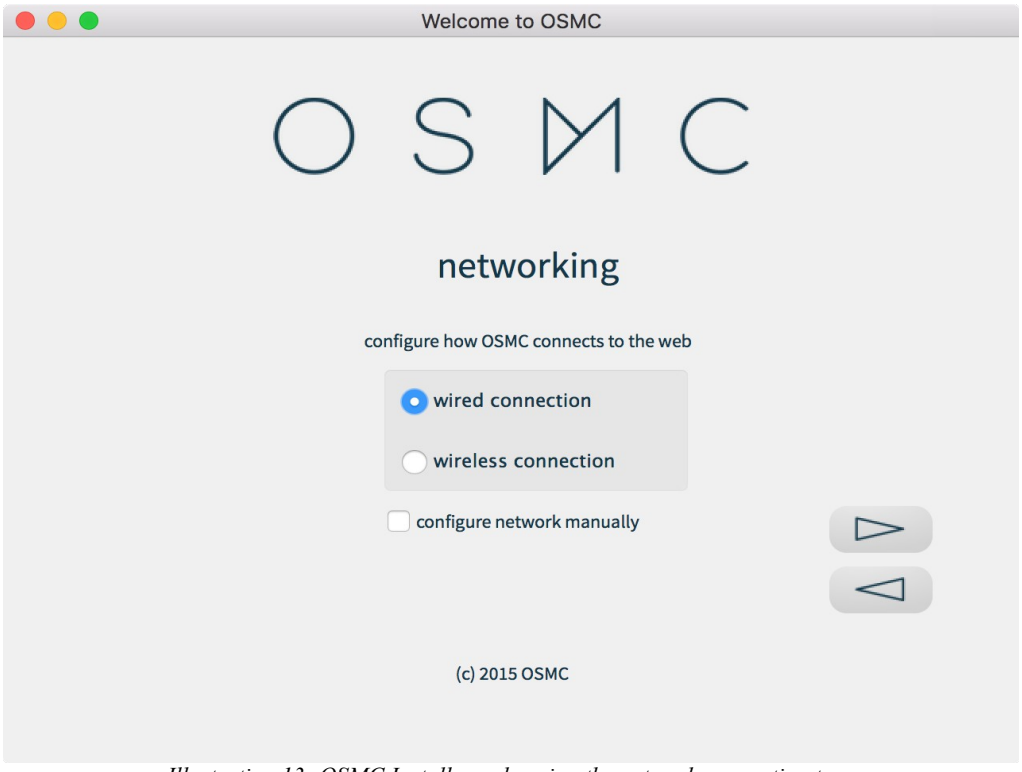

Illustration 13: OSMC Installer - choosing the network connection type

The default selection is a wired connection. I recommend using a wired connection if you can, since the wireless option is often less reliable due to possible interference from other wireless networks and devices (it's getting crowded in many neighbourhoods in terms of WiFi density).

If you select wired, the OSMC system will use Dynamic Host Configuration Protocol (DHCP) as a default to setup its networking environment (this is desirable and supported by most home/ISP supplied routers). You can opt to check the “configure network manually” option if you are a network expert and want to fully control OSMC's network settings. We won't do this.

However, if you use wireless, here is the screen you will see:

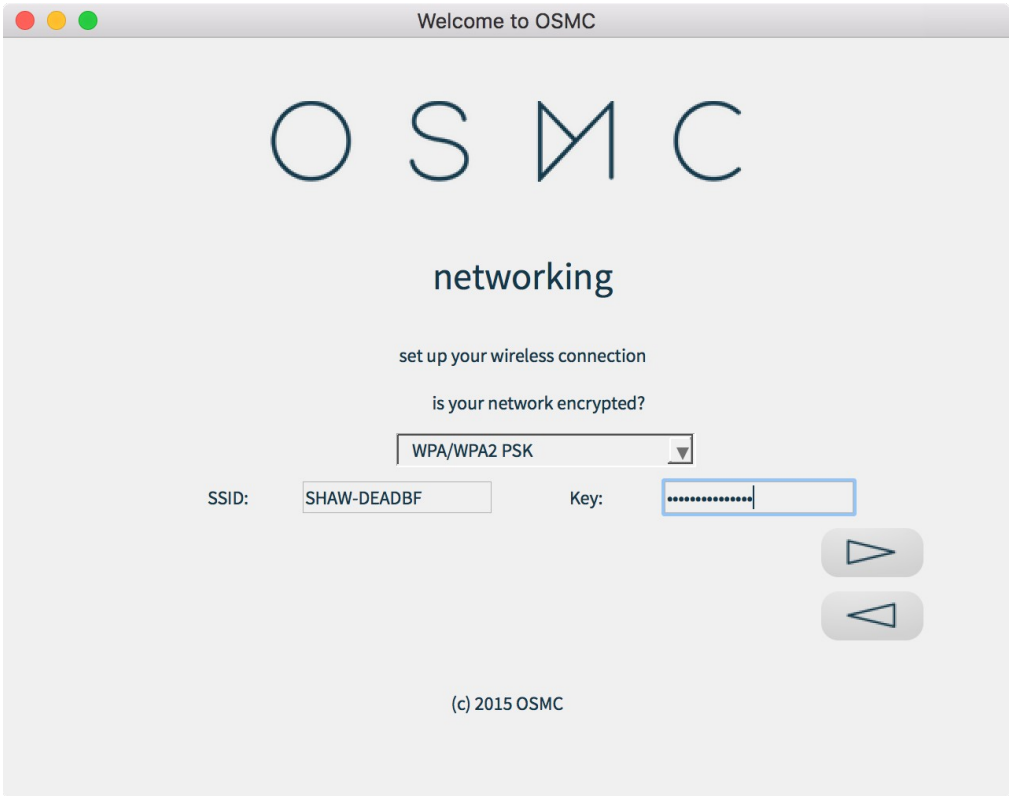

Illustration 14: OSMC Installer - wireless networking configuration screen

The wireless networking configuration screen is shown here with fictitious values for the SSID and key. The list of options for the "is your network encrypted?" question is shown below:

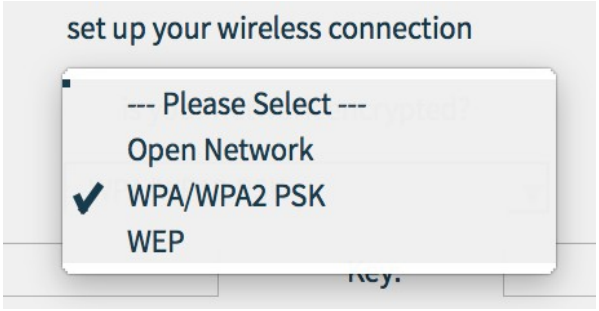

Illustration 15: Wireless security options - choose WPA2

Today, the safest option is WPA2. WEP is considered broken and should not be used. You can use an open network if you like, but other people that you don't know, will be allowed to use your network. You may not want this, as there are risks involved.

Press next on either the wired connection selection screen, or the wireless connection options screen to continue.

Write the SD Card

Once you've completed / selected your network configuration, you'll come to the writing-to-the-SD-card stage. Now is the time to **insert your SD card**, if you haven't already.

A screen shot of this step follows:

Illustration 16: OSMC Installer - device selection - click refresh as needed

If you don't see your card, make sure it is inserted, and then **click the refresh button**.

On my system, the SD card is shown as disk 2, as seen above. The installer will only see SD card devices, so the risks of choosing the wrong disk are reduced. Make sure the size matches what you expect on the card. I have a 16GB card which is seen as 15.5GB (it is normal for there to be a discrepancy between the advertised space and the detected space).

One nice thing about this installer is that it will automatically use the entire SD card, so you won't need to manually expand the system's partitions. You'll have to **click on the device line so it is highlighted** as shown in the illustration.

Press **next**.

The license agreement screen is displayed.

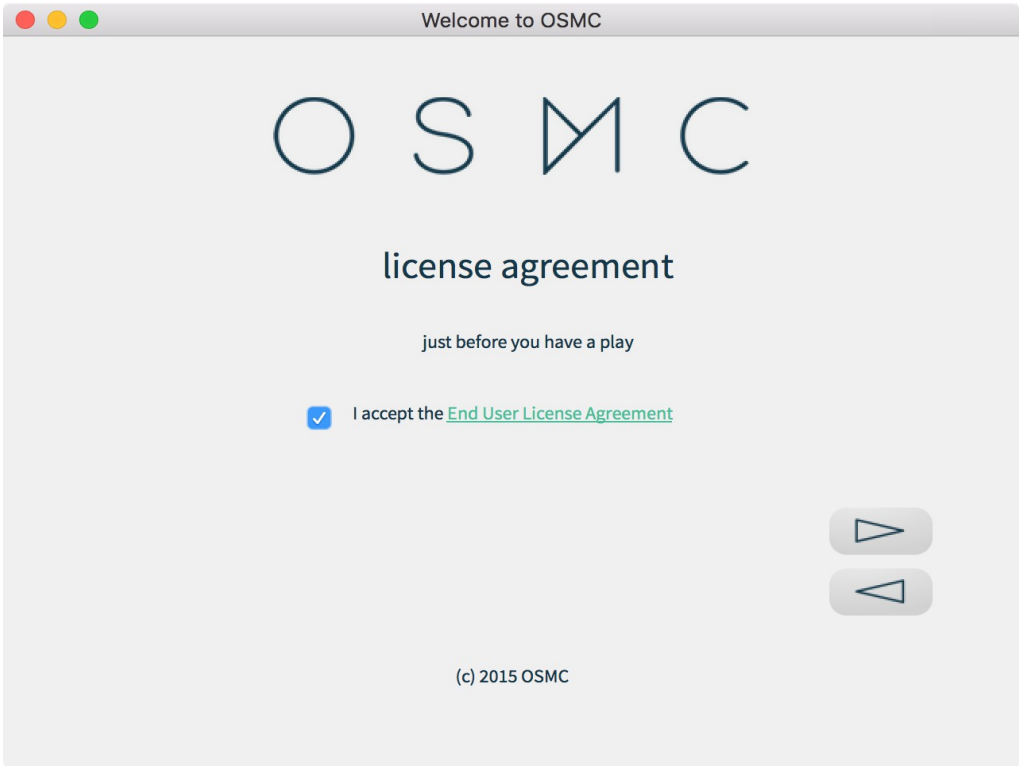

Illustration 17: OSMC Installer - license agreement

Check the "I accept" box. I recommend that you click on the "End User License Agreement" and read through it. Make sure it doesn't subject you to offering up your first-born, or something otherwise evil.

Press **next**.

The software's latest version will now be downloaded:

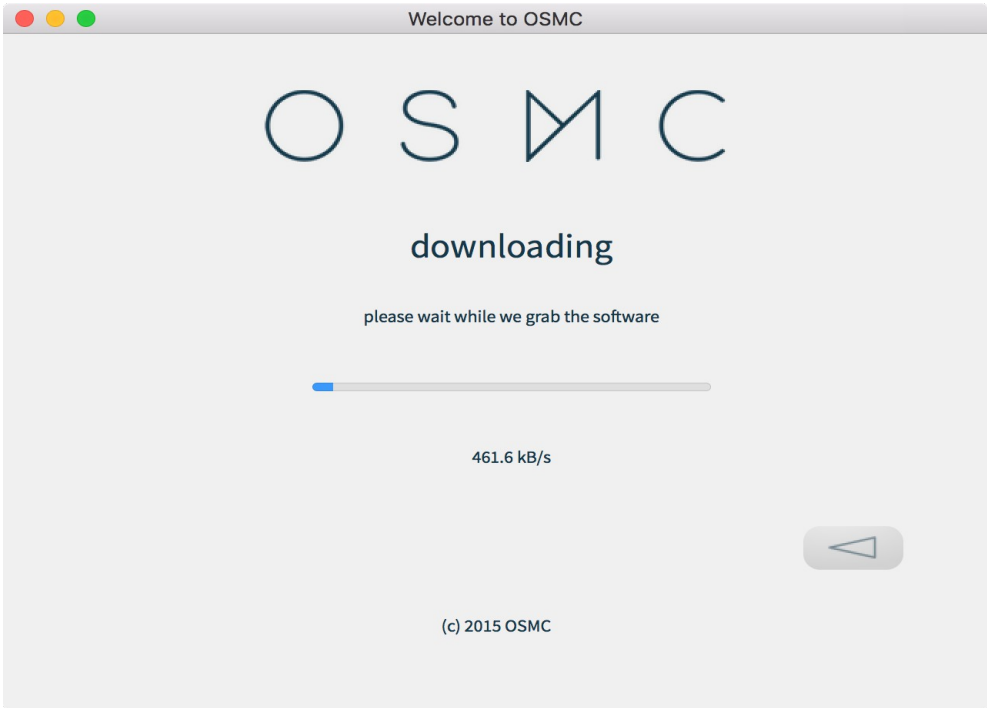

Illustration 18: OSMC Installer - downloading the software

The images are about 150MB in size, so may take some time to download, depending on your Internet connection speed. After downloading, the installation will begin:

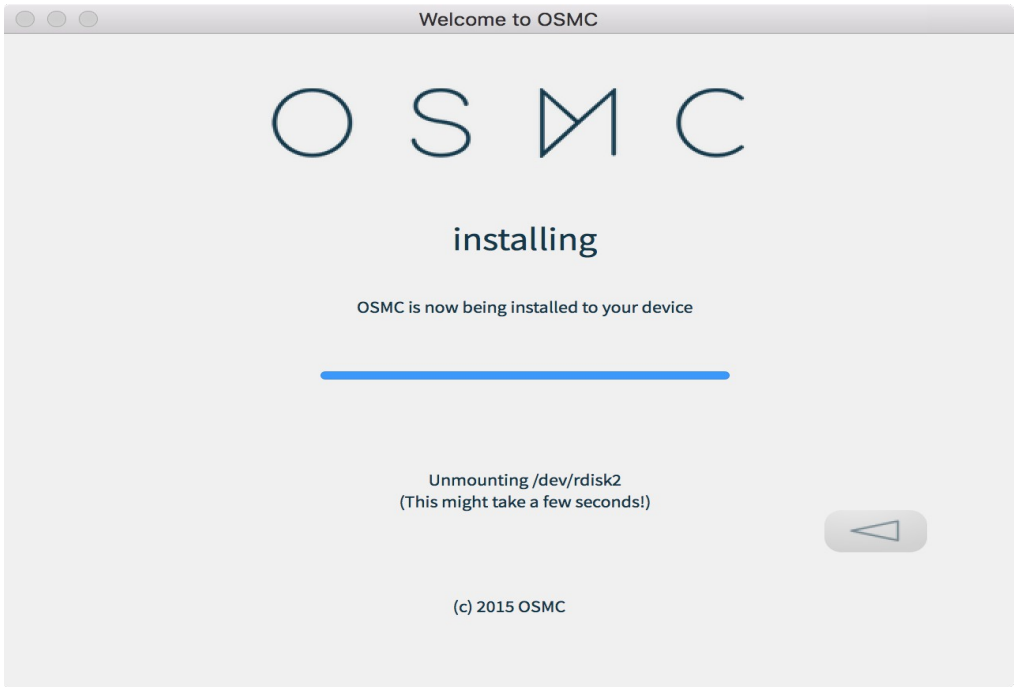

Illustration 19: OSMC Installer - the actual installation of the disk image

At this point, a warning will be displayed:

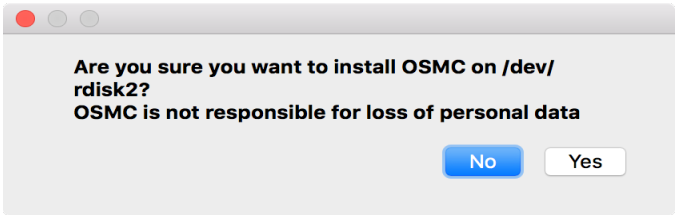

Illustration 20: OSMC Installer - warning about writing to SD card

Choose the Yes option if you can confirm that the correct card is selected. You will be prompted to enter your administrative user's credentials, since writing to an entire disk is a privileged operation.

Having done that, we get the installing screen.

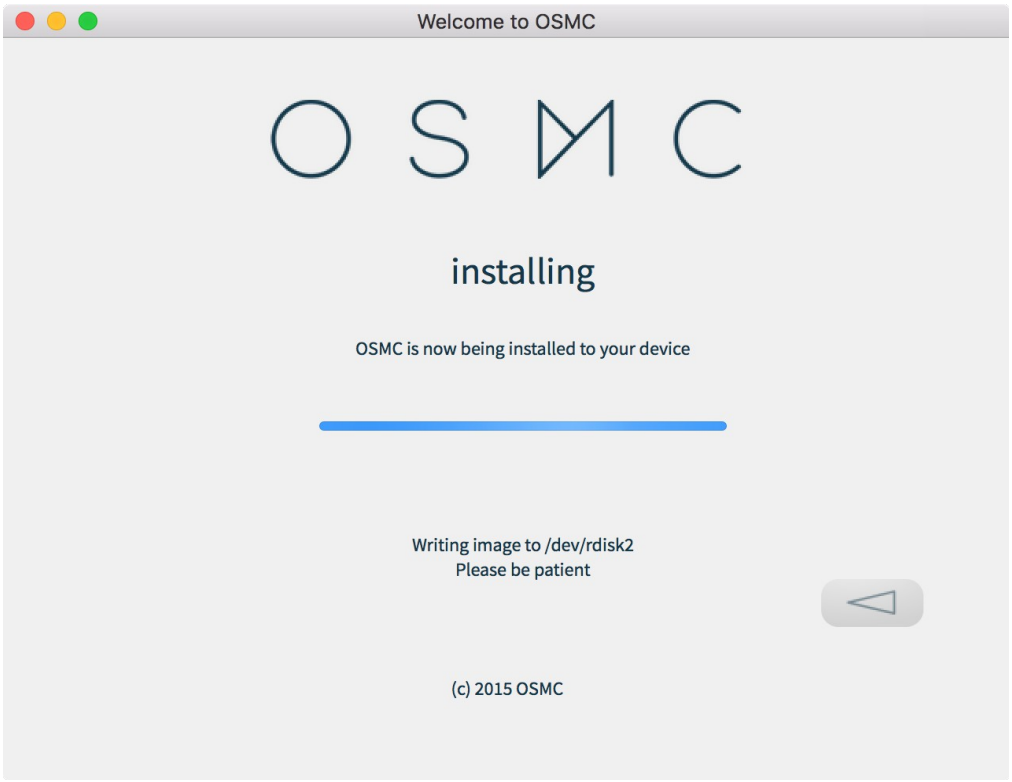

Illustration 21: OSMC Installer - writing the image to the SD card

We are patient, and we are eventually rewarded (after a few minutes) with the congratulatory screen shown below:

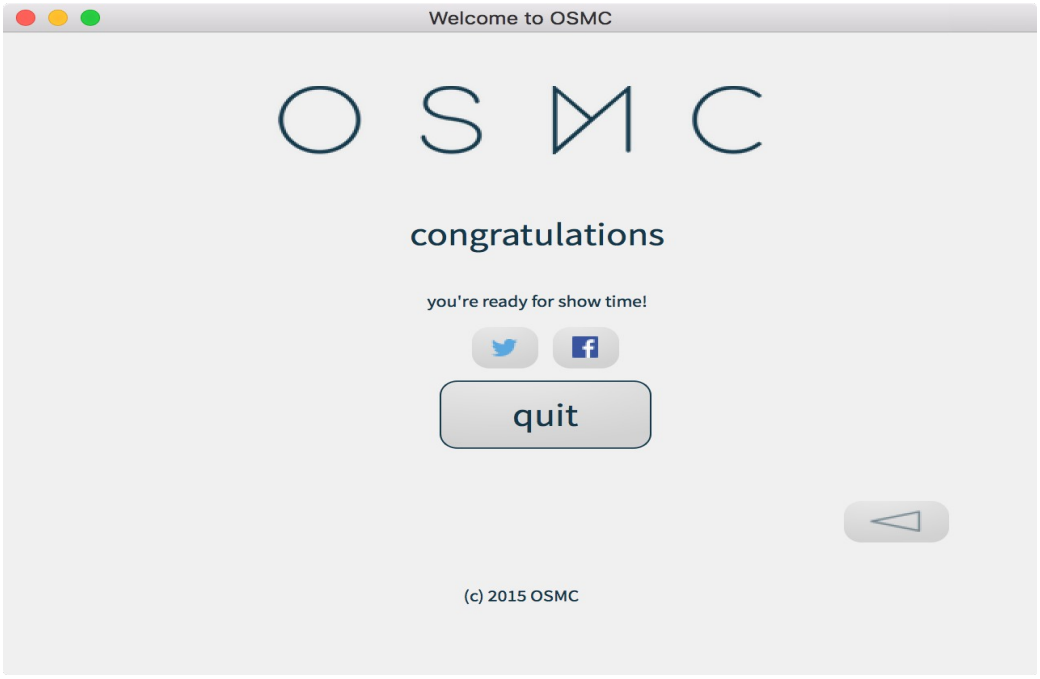

Illustration 22: OSMC Installer - finished!

Note that "**quit**" will eject / unmount the SD card so that you can remove it.

Hook up the Raspberry Pi

Take the SD card and place it in your powered off Raspberry Pi. Connect the following:

1. HDMI cable – find an available HDMI input on your TV and make a note of its number. This number will be useful when you try and select the source input using your TV's remote control. It will look like `HDMI 1` or `HDMI2`. Plug one end on your HDMI cable into this port and then plug the other end into the PI's HDMI port.

Illustration 23: HDMI plug at the rear of the TV

2. Ethernet cable – If you chose the wired connection option, then you'll need to plug in your ethernet cable into your home router and then into the Pi's ethernet port.

Illustration 24: The Pi's ethernet port with a cable plugged in

3. Wireless adapter – If you chose the wireless option, plug in your Pi's USB wireless device.
4. Keyboard USB controller – If you have a USB based keyboard and mouse, plug this USB transceiver in. Here is an image of the keyboard I use:

Illustration 25: Portable, small keyboard / trackpad combo - Logitech K400

5. Power – Turn on the TV. Plug the Pi into its power source.

You should now set the TV's input source to the HDMI port you selected above. My Pi looks like this with all the connections:

Illustration 26: Raspberry Pi 1 with all connections

Initial Configuration

The Pi will boot and you will see various things on the TV screen and eventually this screen:

Illustration 27: Initial OSMC screen - formatting device

It says “Formatting device”. The next screen is:

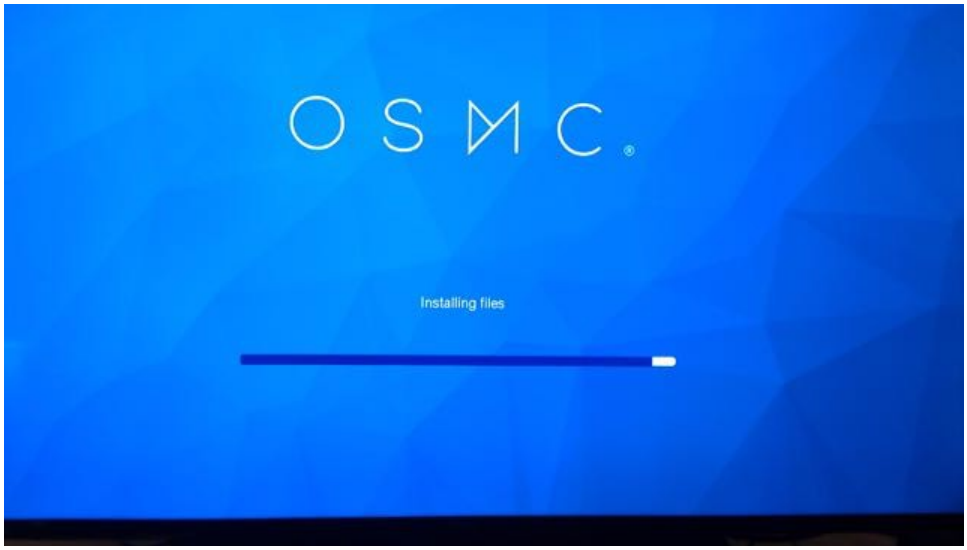

Illustration 28: Initial OSMC screens - installing files

It says “Installing files” and can take several minutes, so be patient. Once completed, you'll see:

Illustration 29: Initial OSMC screens - successful installation

It says “OSMC installed successfully”. The system will then reboot and the screen will go blank with optional writing in the upper left corner. The OSMC splash screen will reappear during the boot process. It looks like this:

Illustration 30: OSMC Splash Screen on boot

The screen may go blank again and flicker as the system boots. Initially, you'll see this default screen displayed:

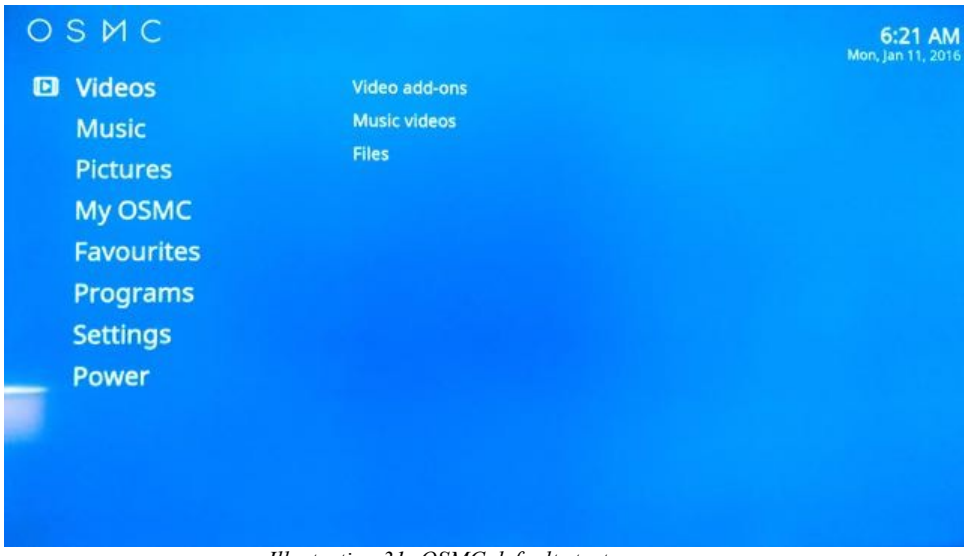

Illustration 31: OSMC default startup screen

However, this screen won't be displayed for very long, so wait for a few minutes before using your keyboard. What will then happen is that the first-run wizard will start:

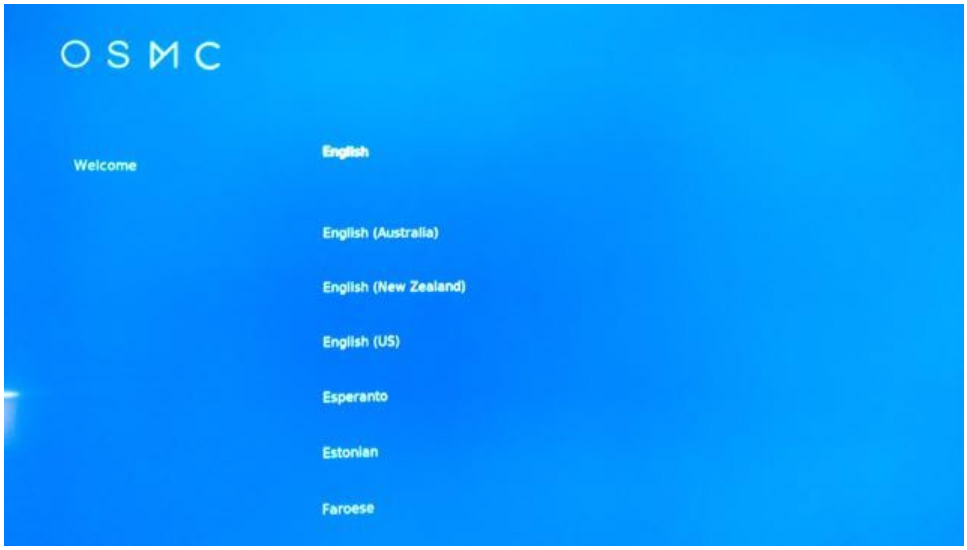

Illustration 32: OSMC First-run wizard - select language

Scroll through the languages using the keyboard's arrow keys and selected your language. **Pressing ENTER** will activate the selection. A confirmation screen will be displayed:

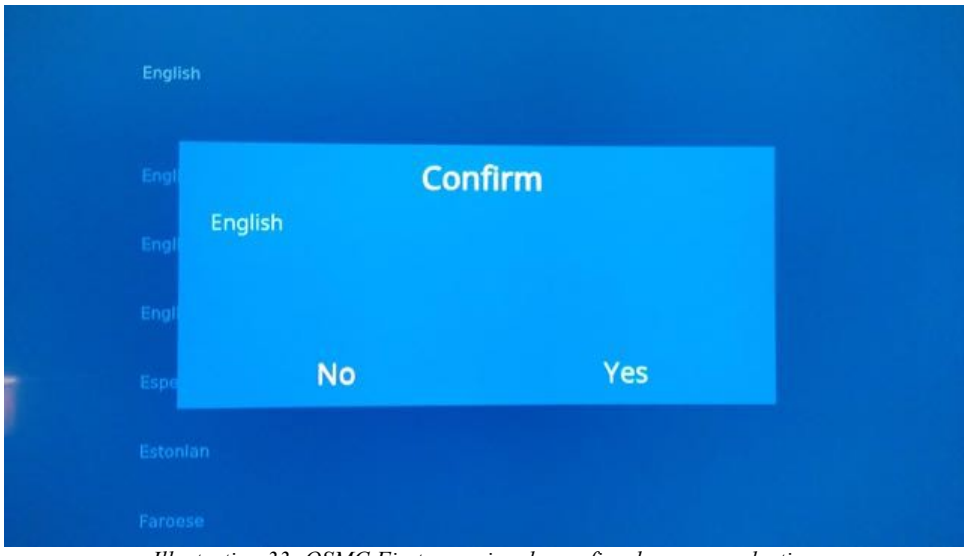

Illustration 33: OSMC First-run wizard - confirm language selection

Use the arrow key to select "**Yes**" and then press **ENTER**.

Next is the Time Zone selection:

Illustration 34: OSMC First-run wizard - selecting time zone - America / Vancouver

To select the time zone, first choose the region, which, for Victoria PiMakers et al, is America. Then choose the Vancouver setting to get the Pacific time zone. **Use arrow keys** to select and then press **ENTER** when done. Adjust the time zone selection if your live somewhere else.

The system will ask for a preferred hostname. The default is shown and selected on this next illustration:

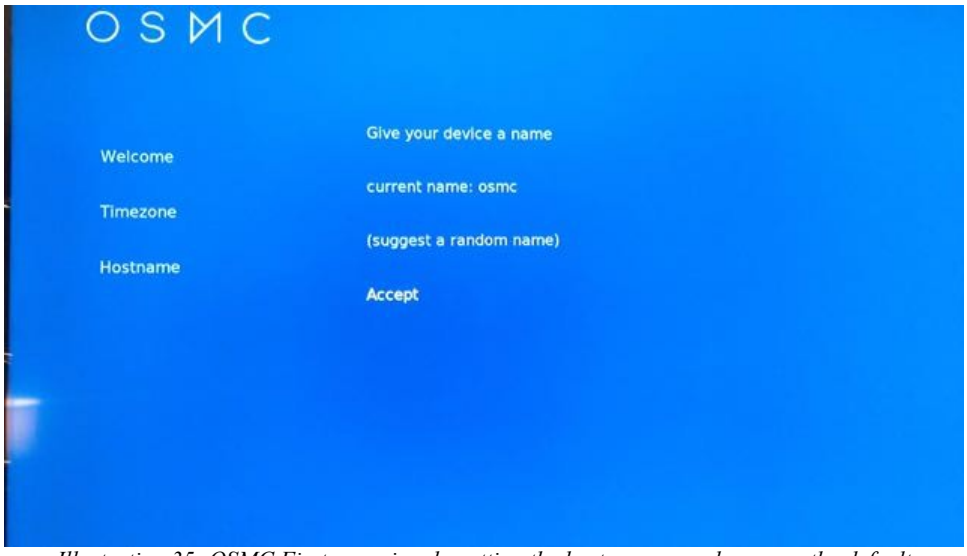

Illustration 35: OSMC First-run wizard - setting the hostname - used osmc as the default

Use the arrow keys to move the highlighted item to "**Accept**" and press **ENTER** to use the default hostname of **`osmc`**.

The license screen is displayed again. Make sure the **Continue** item (on the right of the screen) is highlighted and press **ENTER** to accept the license.

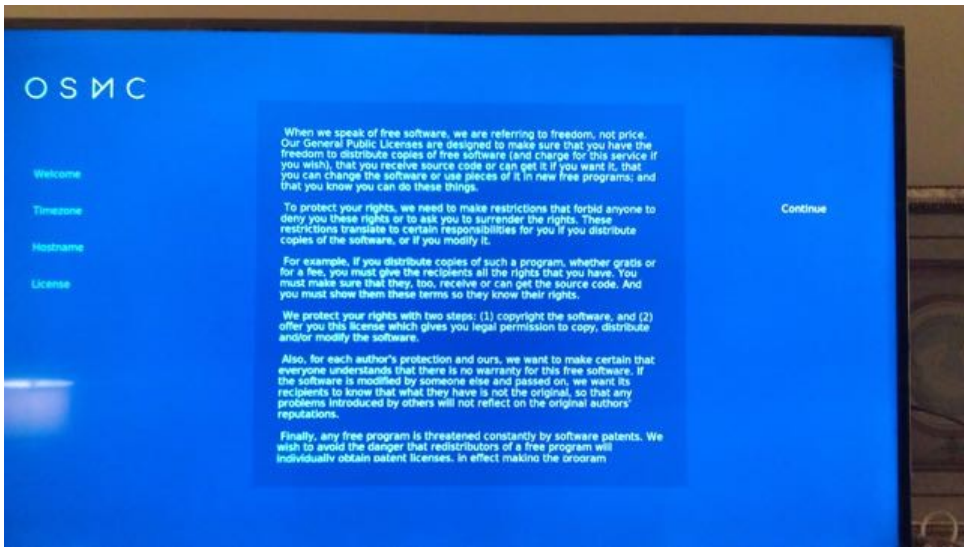

Illustration 36: OSMC First-run wizard - accepting the license

You'll now be asked to choose the Look and feel / appearance of the system. There are two choices: the first is to use the default OSMC style, which we'll use; the second is the older Kodi style. You can set this later in the settings, so just choose the default for now.

Illustration 37: OSMC First-run wizard - choosing the Look + feel - OMSC default

Use the default OSMC look and feel by **highlighting "OSMC" with the arrow keys** and pressing **ENTER**.

The next step will ask if you wish to sign-up for the OSMC newsletter:

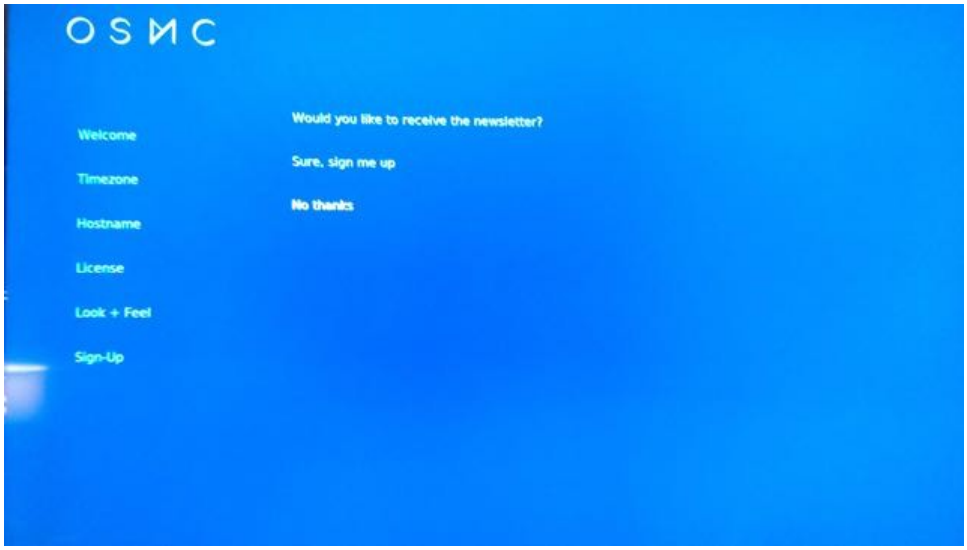

Illustration 38: OSMC First-run wizard - newsletter sign-up - declined

Use the arrow keys to **highlight "No thanks"** and press **ENTER**.

That was the final step and the congratulations screen is displayed:

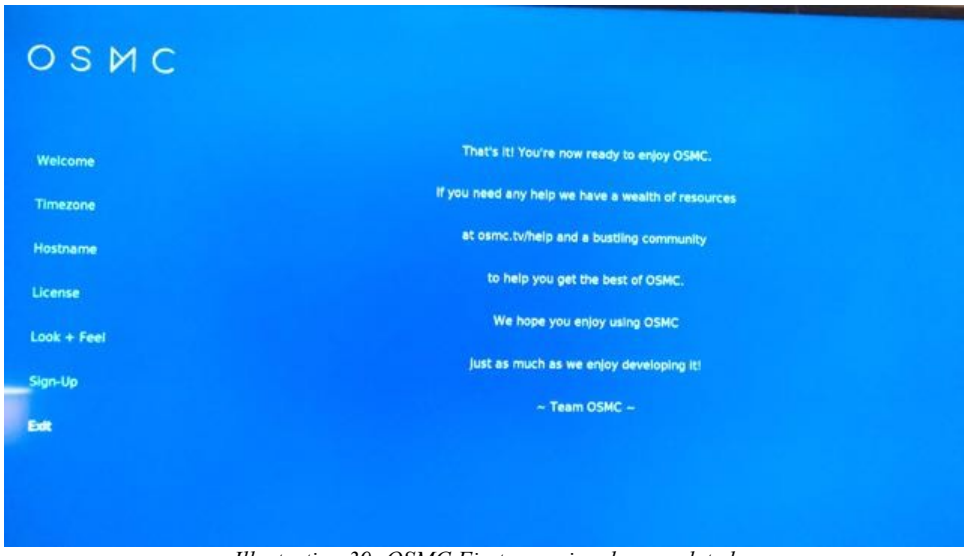

Illustration 39: OSMC First-run wizard - completed

Press **ENTER** to Exit the first-run wizard. We'll be taken back to the default startup / home screen.

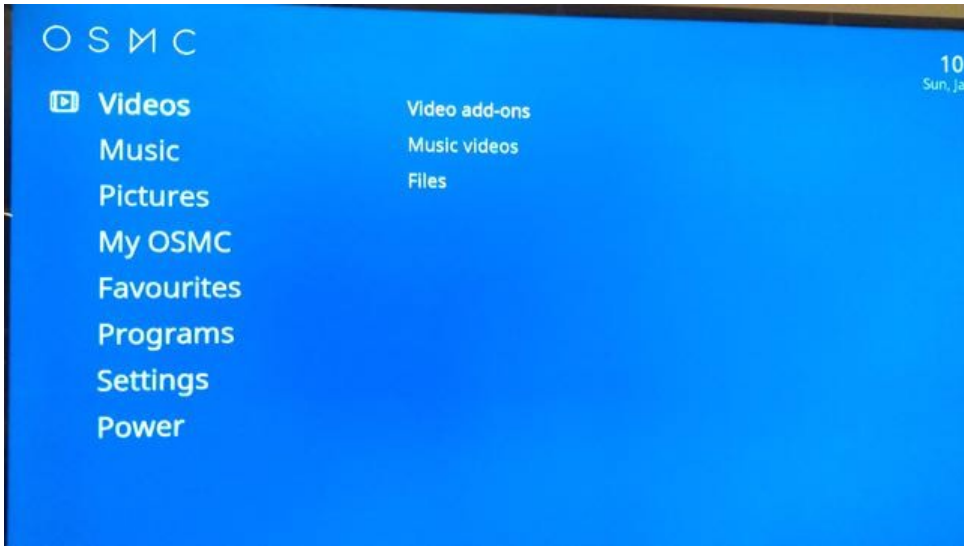

Illustration 40: OSMC default home screen

What usually happens now, and whenever you power-on your OSMC Pi, is that the system will start to automatically update itself. You should usually let this proceed. Often, a dialog like the following will occur:

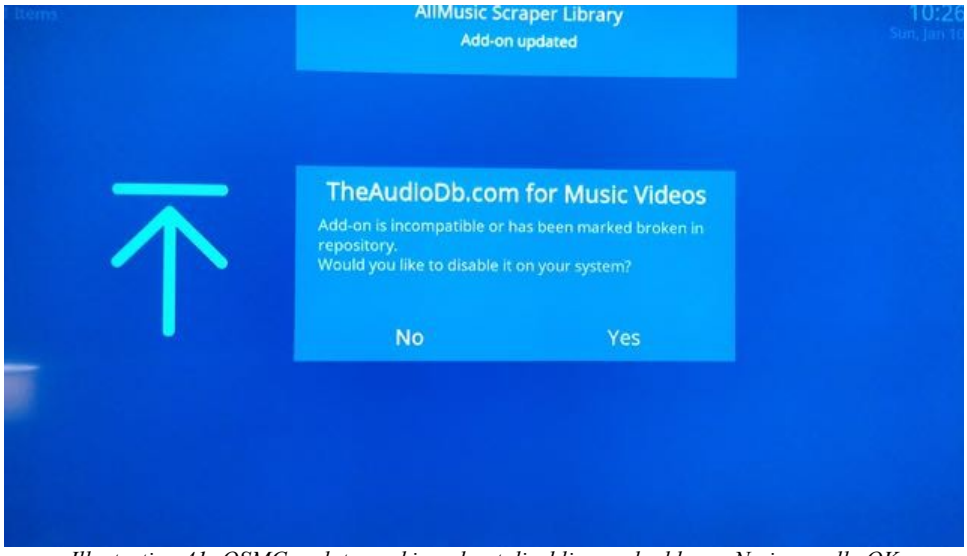

Illustration 41: OSMC update - asking about disabling and add-on - No is usually OK

In many cases, this question can be answered "**No**". Do not disable the add-on, as the add-on may be itself updated in a few minutes. There may be one or more of these dialogs during the startup/update process. Let the system continue until there are no more of the following types of messages at the top of the screen:

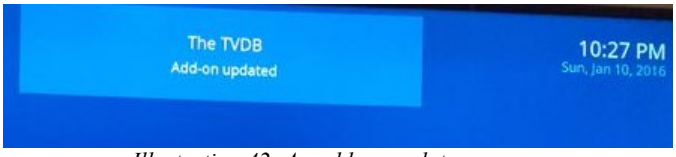

Illustration 42: An add-on update message

Once the updates are done, the system will return to the home screen.

Illustration 43: Portion of the home screen display

Use the arrow keys to highlight the "Video add-ons" item and press **ENTER**.

We'll see the "Video: Add-ons" screen. This is where we'll **choose "Get More..."** in order to look at

the various TV / movies options available.

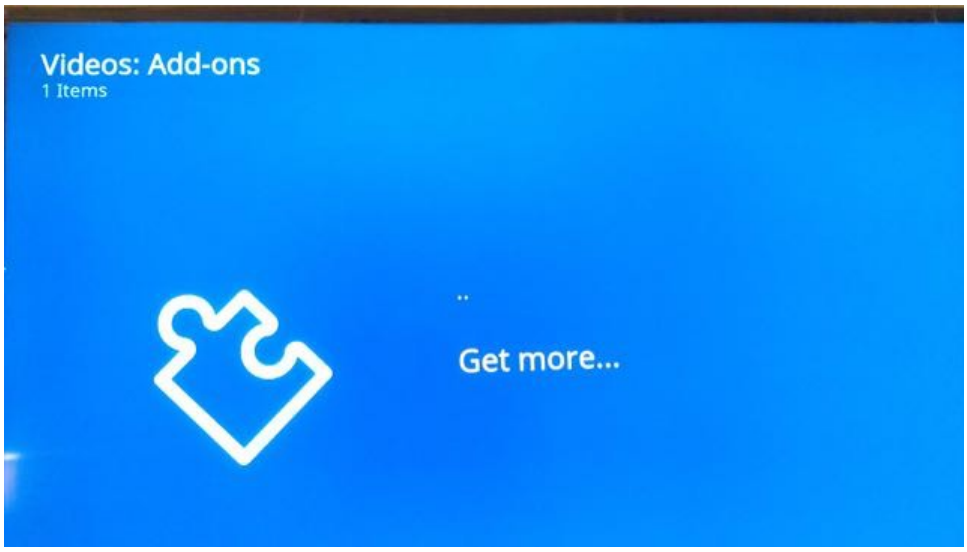

Illustration 44: The Video: Add-ons screen showing no add-ons and a Get more... option

Highlight the "Get more..." command and press **ENTER**. For demonstration purposes, we'll install a TV Ontario add-on. I've chosen TV Ontario because it has a breadth and depth of content that may be interesting to people across Canada, it is not necessarily Ontario specific.

Watch A TV Channel

After pressing get more, a large list of add-ons is displayed (about 300 items). They are in alphabetical order, so if you know what you are looking for, it will be easy to find. In our case, we can go backwards by hitting the UP arrow key to head towards the T section and eventually see the TV Ontario add-on.

Illustration 45: Selecting the TV Ontario add-on

When found and **highlighted, press ENTER**.

We'll see the TV Ontario information screen, with an Install command near the bottom left.

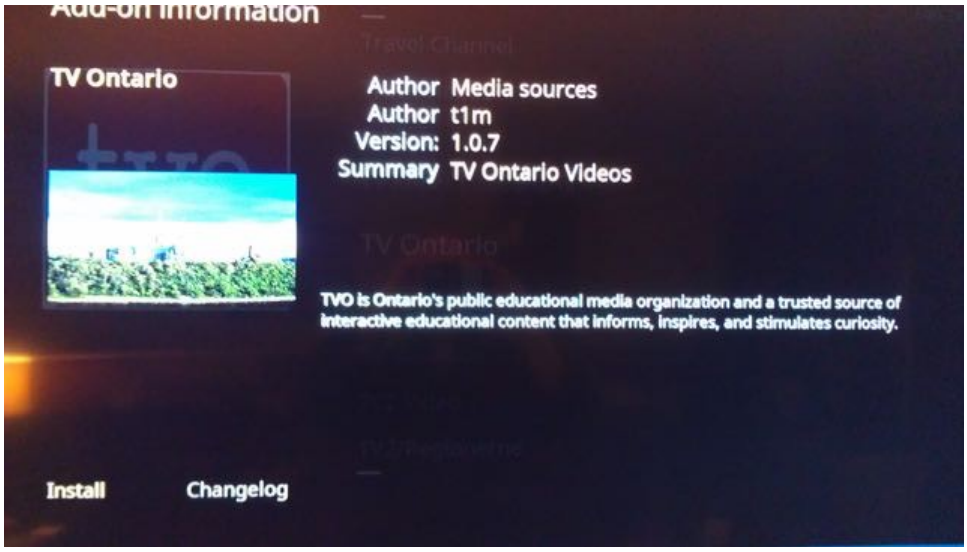

Illustration 46: TV Ontario add-on information with Install command at bottom left

Make sure "Install" is highlighted and press ENTER. We are returned to the add-on list where we'll see the TV Ontario add-on being installed and enabled as shown in this next sscreen.

Illustration 47: Installing and enabling the TV Ontario add-on

Once complete, we'll see this screen showing that the TV Ontario add-on is enabled.

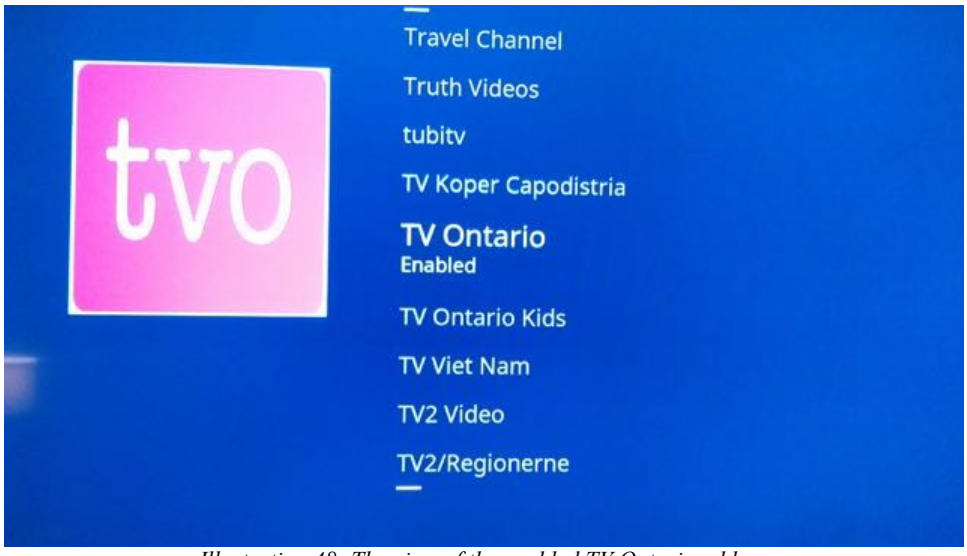

Illustration 48: The view of the enabled TV Ontario add-on

Now we can return to the parent screen by hitting the **ESC** key to back out through the various menus levels. **Hitting ESC** once returns us to:

Illustration 49: The Videos: Add-on screen now shows the TVO add-on

To use / watch the add-on, **highlight it and press ENTER**. The system will display a list of letters:

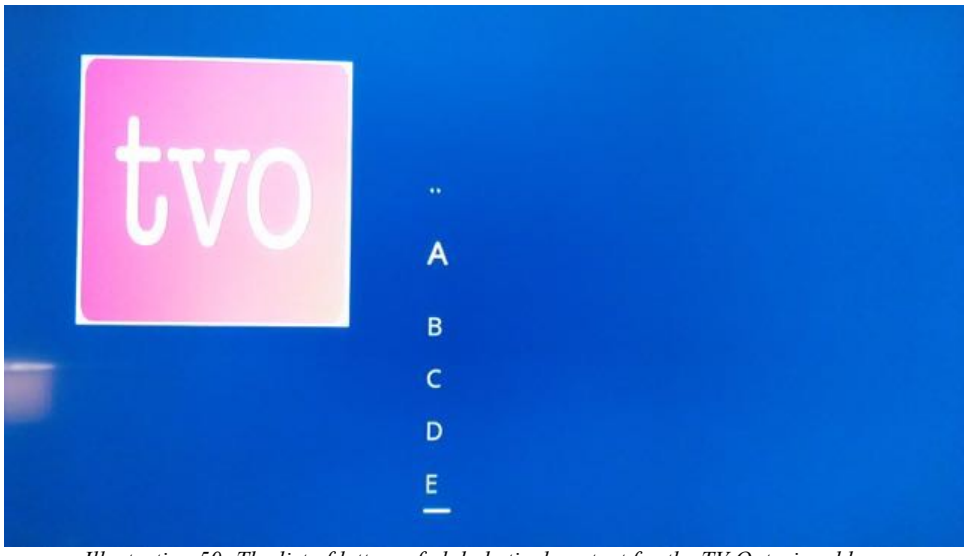

Illustration 50: The list of letters of alphabetical content for the TV Ontario add-on

Shows are listed alphabetically, so as an example we'll **highlight "A"**, press **ENTER** and choose a program from the list. Note that since we have just installed the add-on, we'll see the following initialization screen:

Illustration 51: Initializing the TVO add-on

Let the initialization finish. After the initialization finishes, we'll see a list of programs. **Scroll down and highlight "A History Of Scotland"**.

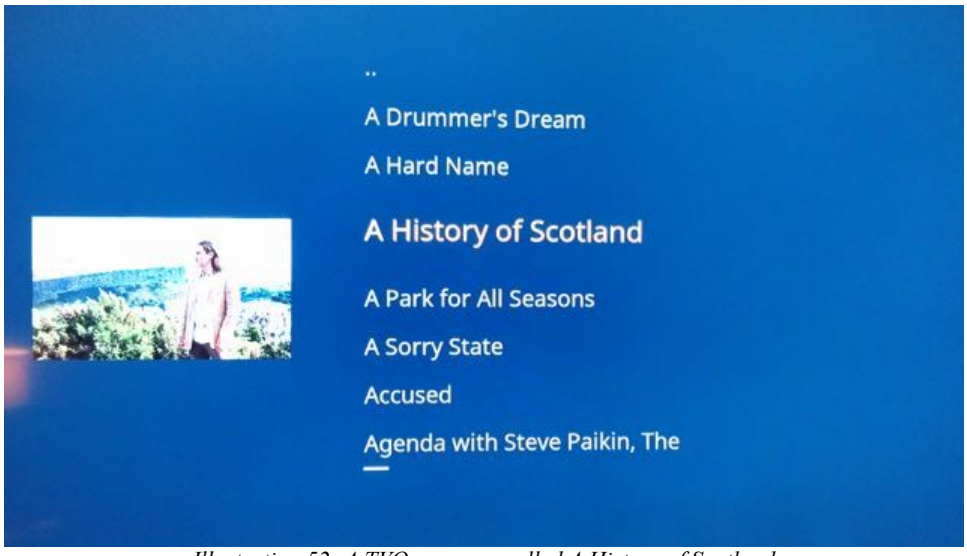

Illustration 52: A TVO program called A History of Scotland

Pressing **ENTER** to start the program gives the following list of episodes:

Illustration 53: A History of Scotland's episode list - ep. 1 selected

With episode 1 selected, pressing **ENTER** should start the program:

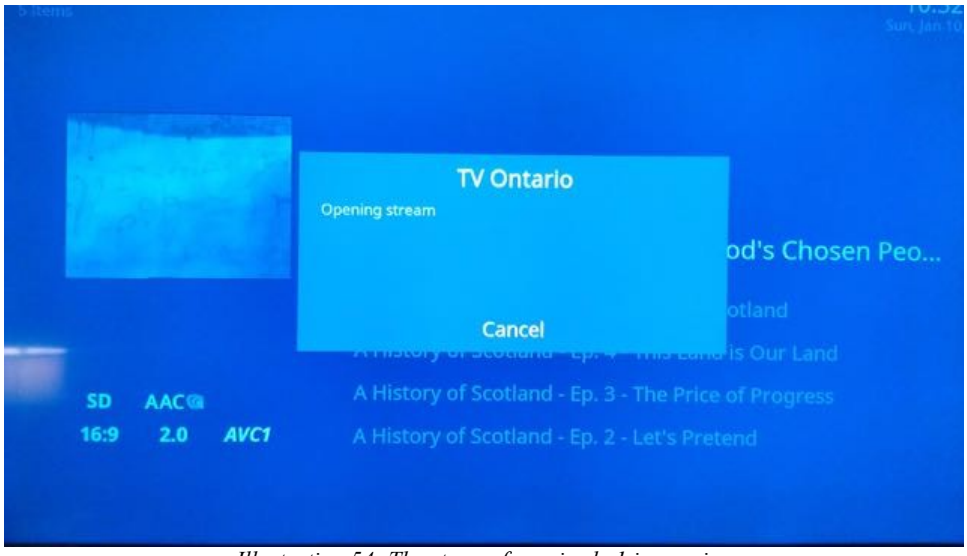

Illustration 54: The stream for episode 1 is opening

The program starts by displaying the "Opening stream" message. Eventually, we see the show start:

Illustration 55: The opening scene of episode 1 of A History of Scotland on TVO

That's it! You've installed a TV channel and started watching an episode of a program hosted by that channel.

Conclusion

This document showed how to download, install and create an Open Source Media Centre instance for the Raspberry Pi computer. It was produced for the Victoria Pi Makers and Others group.