Wetek OpenELEC – TVHeadend Freesat Bouquet and XMLTV data

Install TVHeadend

Go to System, Settings, Add-ons

Select Install from Repository, OpenELEC Mediacenter OS Add-ons, Add-on Repository, OpenELEC Add-ons (unofficial) then Install.

Once installed go back to the Install from Repository menu level.

Select OpenELEC Add-ons (unofficial), Services, tvheadend then Install

Select the tvheadend Add-on and then Configure, set DVB Settings; Wait for frontend initialisation, Number of adapters to wait for 2, Wait for network 5s. Select OK

Return up to Install from Repository.

Select OpenELEC Mediacenter OS Add-ons, PVR Clients, Tvheadend HTSP Client then Install

Select the Tvheadend HTSP Client, Configure set Data Transfer, Asynchronous RPG Transfer to on.

Return to Home and Reboot

Note: - Do not enable TV until TVHeadend is set up

TVHeadend Setup

Using a webrowser go to http:// HYPERLINK "http://yourwetekip:9981/"yourwetekip HYPERLINK "http://yourwetekip:9981/":9981 – this will (if TVHeadend is installed) display the TVHeadend interface.

Picons and Icons

If you have them available you should setup the folders containing your picons and icons.
Select the Configuration tab, General,
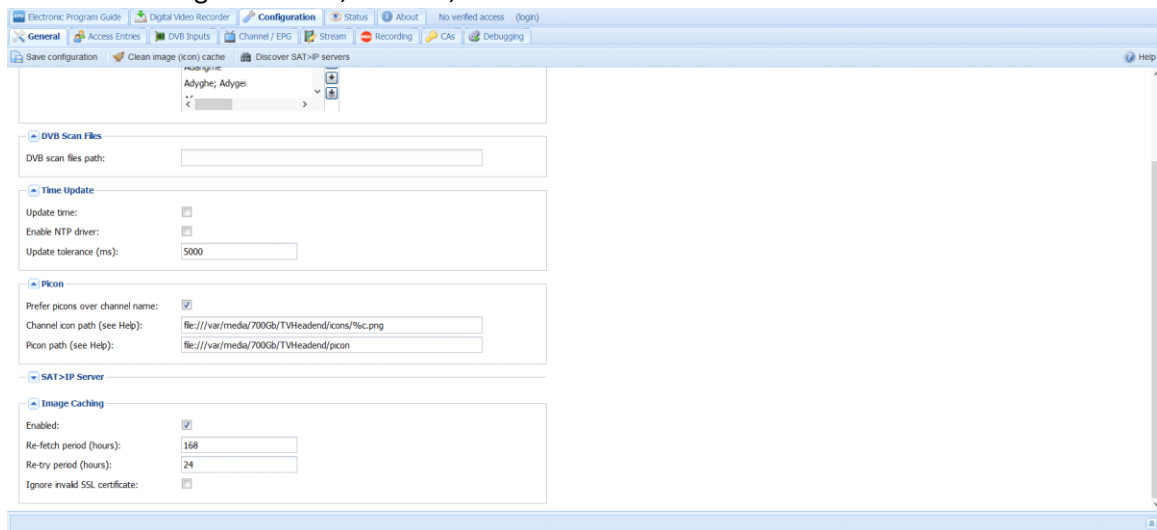
In the Picon section select Prefer picons over channel name:
Provide paths for Icons and Picons. The help section provides examples on types of path. I use local file storage e.g. file:///var/media/700Gb/TVHeadend/icons/%c.png

If you are using remote locations you can enable Image Caching to have them stored locally.

Save the configuration.

Configure the Network

Select the Configuration tab, DVB Inputs, Networks then Add.
Select DVB-S Network and set a Network Name e.g. Wetek,
Choose Pre-defined Muxes. 28.2E:Astra for Freesat,

Select Create.

Configure TV Adapters

Switch to the TV adapters tab

On Universal LNB only entries associate them with the Network created earlier and Save.
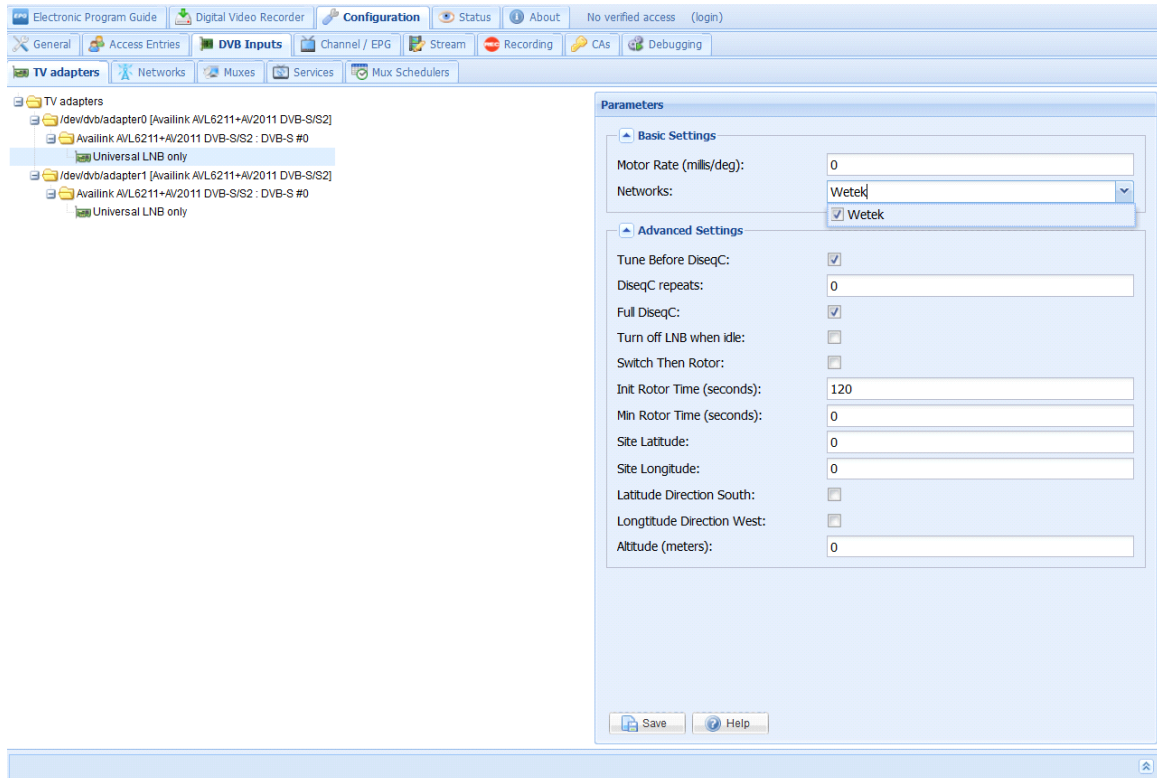
For each LNB select the folder above then the Enable checkbox and Save
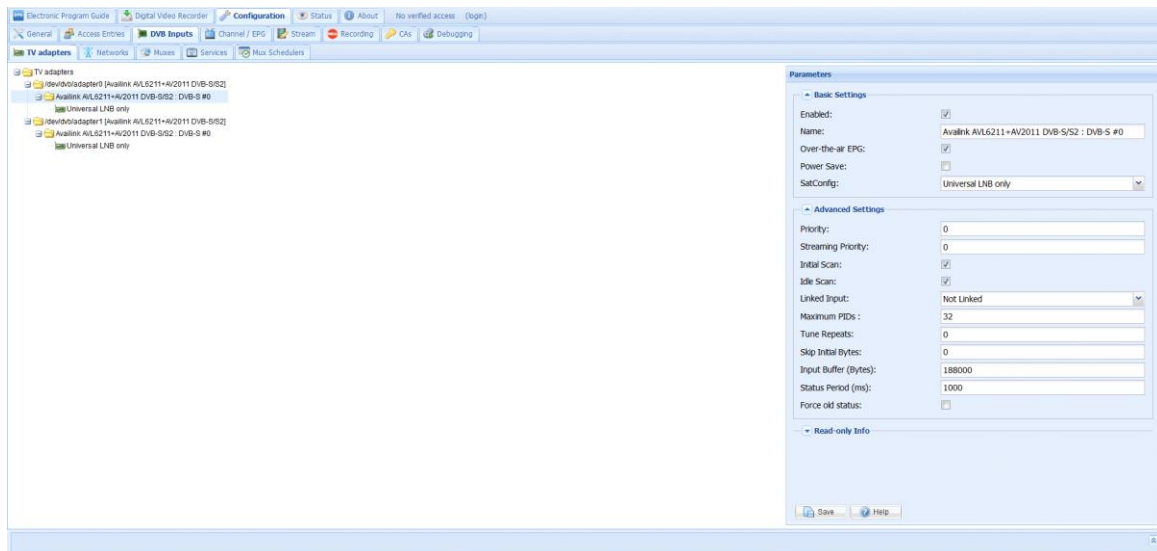
Muxes

Go to the Muxes tab.

TVHeadend will list all the Muxes and initially show Scan Status as PEND.

TVHeadend will then scan all the Muxes for services. This will take some time to finish.

| | Electronic Program Guide | | Digital Video Recorder | | Configuration | | Status | | About | No verified access | (login) |

| General | Access Entries | DVB Inputs | Channel / EPG | Stream | Recording | CAs | Debugging |

| TV adapters | Networks | Muxes | Services | Mux Schedulers |

| Save | Undo | Add | Delete | Edit | Hide: Parent disabled | Help |

Play	Ena	EPG Scan	Network	Name	Ori...	Tra...	Scan Status	Scan Result ▼	# Servic...	# Cha...	AC-3 Detection
Play	✓	Enable (auto)	Wetek	11538V	65...	65...	IDLE	FAIL	0	0	Standard
Play	✓	Enable (auto)	Wetek	11567.5V	2	2096	IDLE	OK	17	0	Standard
Play	✓	Enable (auto)	Wetek	11582.25H	2	2097	IDLE	OK	15	0	Standard
Play	✓	Enable (auto)	Wetek	11597V	2	2316	IDLE	OK	20	0	Standard
Play	✓	Enable (auto)	Wetek	11611.75H	2	2099	IDLE	OK	3	0	Standard
Play	✓	Enable (auto)	Wetek	11671.75H	2	2103	IDLE	OK	12	0	Standard
Play	✓	Enable (auto)	Wetek	11685.5V	2	2104	IDLE	OK	29	0	Standard
Play	✓	Enable (auto)	Wetek	11307H	2	2109	IDLE	OK	16	0	Standard
Play	✓	Enable (auto)	Wetek	11307V	2	2110	IDLE	OK	17	0	Standard
Play	✓	Enable (auto)	Wetek	11344H	2	2313	IDLE	OK	12	0	Standard
Play	✓	Enable (auto)	Wetek	11344.5V	2	2112	IDLE	OK	17	0	Standard
Play	✓	Enable (auto)	Wetek	11385H	2	2113	IDLE	OK	9	0	Standard
Play	✓	Enable (auto)	Wetek	11385V	2	2408	IDLE	OK	10	0	Standard
Play	✓	Enable (auto)	Wetek	11425H	59	2315	IDLE	OK	20	0	Standard
Play	✓	Enable (auto)	Wetek	11426V	2	2116	IDLE	OK	13	0	Standard
Play	✓	Enable (auto)	Wetek	11225H	2	2105	IDLE	OK	22	0	Standard
Play	✓	Enable (auto)	Wetek	11225V	2	2106	IDLE	OK	5	0	Standard
Play	✓	Enable (auto)	Wetek	11265H	2	2107	IDLE	OK	19	0	Standard
Play	✓	Enable (auto)	Wetek	11265V	2	2108	IDLE	OK	10	0	Standard
Play	✓	Enable (auto)	Wetek	12000H	59	2000	PEND	NONE	0	0	Standard
Play	✓	Enable (auto)	Wetek	11126.5V	2	2068	PEND	NONE	0	0	Standard

| Page | 1 of 2 | ▶ ▶| | Auto-refresh ✓ | Muxes 1 - 50 of 87 | Per page 50 |

System log
```
2016-01-16 10:02:20.645 opentv-ausat: registering mux 11538V in Wetek
2016-01-16 10:02:20.674 subscription: 0029: "scan" subscribing to mux "11538V", weight: 5, adapter: "Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0", network: "W
2016-01-16 10:02:30.000 mpegts: 11538V in Wetek - scan no data, failed
2016-01-16 10:02:30.000 subscription: 0029: "scan" unsubscribing
2016-01-16 10:02:30.004 mpegts: 11508.5V in Wetek - tuning on Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0
2016-01-16 10:02:30.639 opentv-ausat: registering mux 11508.5V in Wetek
2016-01-16 10:02:30.658 subscription: 002B: "scan" subscribing to mux "11508.5V", weight: 5, adapter: "Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0", network:
```

Progresses can be seen via the log information accesses via the ⬆ button at the bottom right of the window.

Alternatively you can watch the status page Stream or Subscriptions tabs.

| | Electronic Program Guide | | Digital Video Recorder | | Configuration | | Status | | About | No verified access | (login) |

| Stream | Subscriptions | Connections | Service Mapper |

Id	Hostname	Username	Title	Channel	Service	Start	State	Errors	Input (kb/s)	Output (kb/s)
0000006B			scan		12344H in Wetek	Sat 25 Jun 16:44	Running	0	0	0
00000069			scan		12363V in Wetek	Sat 25 Jun 16:44	Running	0	0	0

System log
```
2016-06-25 16:40:32.806 bouquet: new bouquet 'BSkyB Bouquet 10 - Commercial S: Dundee'
2016-06-25 16:40:32.806 bouquet: new bouquet 'BSkyB Bouquet 10 - Commercial S: Grampian'
2016-06-25 16:40:40.069 mpegts: 11068V in Wetek scan complete
2016-06-25 16:40:40.069 subscription: 003D: "scan" unsubscribing
2016-06-25 16:40:40.080 mpegts: 11024H in Wetek - tuning on Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0
2016-06-25 16:40:40.118 opentv-ausat: registering mux 11024H in Wetek
2016-06-25 16:40:40.130 subscription: 0041: "scan" subscribing to mux "11024H", weight: 5, adapter: "Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0", network: "Wetek", service: "Raw PID Subscription"
2016-06-25 16:40:47.633 bouquet: new bouquet 'BSkyB Bouquet 14 - Interactive : North Yorkshire'
2016-06-25 16:40:47.688 bouquet: new bouquet 'BSkyB Bouquet 6 - HD Scotland: Border Scotland'
2016-06-25 16:40:50.713 bouquet: new bouquet 'BSkyB Bouquet 1 - DTH England: South Lakeland'
2016-06-25 16:40:50.714 bouquet: new bouquet 'BSkyB Bouquet 1 - DTH England: North Yorkshire'
2016-06-25 16:40:50.714 bouquet: new bouquet 'BSkyB Bouquet 1 - DTH England: Border England'
2016-06-25 16:40:50.714 bouquet: new bouquet 'BSkyB Bouquet 1 - DTH England: Granada'
2016-06-25 16:40:52.140 bouquet: new bouquet 'BSkyB Bouquet 9 - Commercial En: South Lakeland'
2016-06-25 16:40:52.141 bouquet: new bouquet 'BSkyB Bouquet 9 - Commercial En: North Yorkshire'
2016-06-25 16:40:52.142 bouquet: new bouquet 'BSkyB Bouquet 9 - Commercial En: Border England'
2016-06-25 16:40:52.142 bouquet: new bouquet 'BSkyB Bouquet 9 - Commercial En: Granada'
2016-06-25 16:40:53.106 bouquet: new bouquet 'BSkyB Bouquet 2 - DTH Scotland: Border Scotland'
2016-06-25 16:40:54.634 bouquet: new bouquet 'BSkyB Bouquet 10 - Commercial S: Border Scotland'
2016-06-25 16:40:55.654 bouquet: new bouquet 'BSkyB Bouquet 5 - HD England: South Lakeland'
2016-06-25 16:40:55.654 bouquet: new bouquet 'BSkyB Bouquet 5 - HD England: North Yorkshire'
2016-06-25 16:40:55.654 bouquet: new bouquet 'BSkyB Bouquet 5 - HD England: Border England'
2016-06-25 16:40:55.654 bouquet: new bouquet 'BSkyB Bouquet 5 - HD England: Granada'
2016-06-25 16:40:59.690 mpegts: 11052.75H in Wetek scan complete
2016-06-25 16:40:59.693 subscription: 003F: "scan" unsubscribing
2016-06-25 16:40:59.708 mpegts: 10994H in Wetek - tuning on Availink AVL6211+AV2011 DVB-S/S2 : DVB-S #0
```
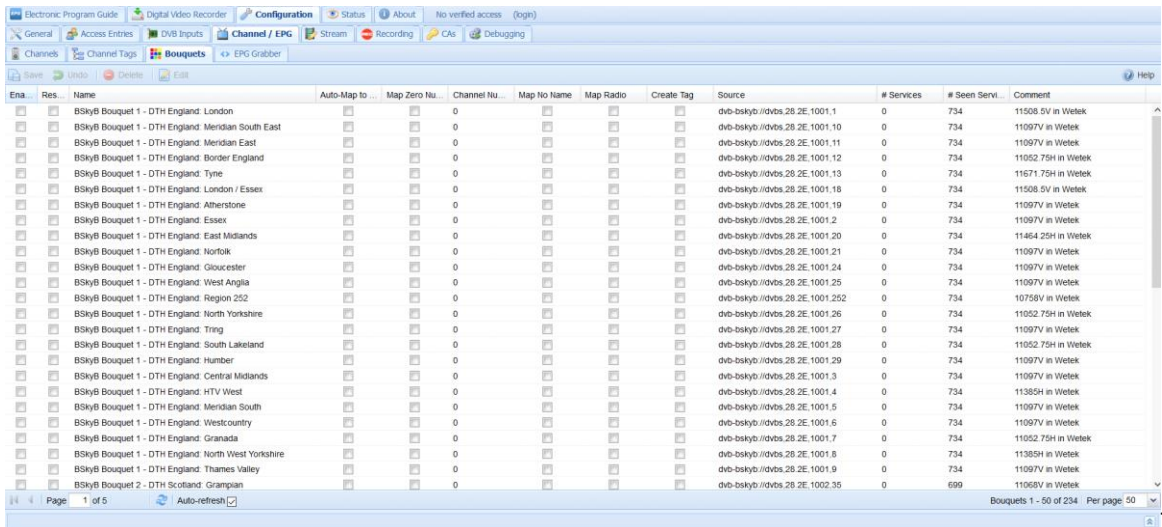
Bouquets

When the Muxes scan has completed (approx. 15 – 20 Minutes) TVHeadend will have discovered the available Services. Bouquets can now be used to map those Service to channels.

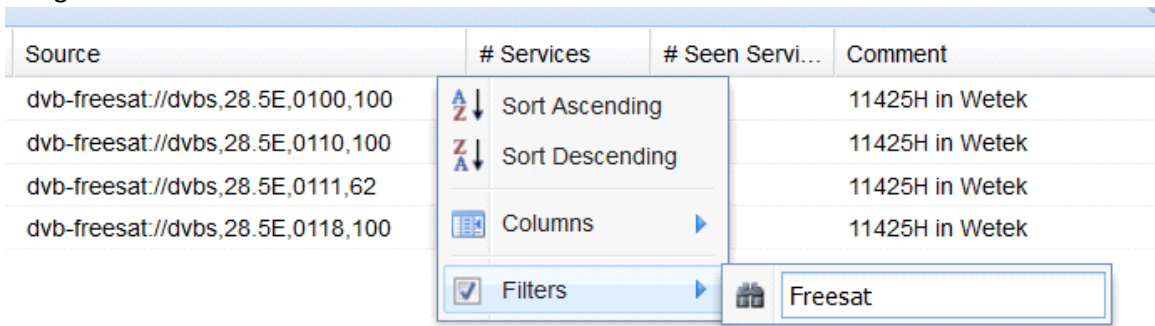For this exercise I am setting up freesat but this can be used for Sky as well.

Go to Configuration, Channel / EPG tab then the Bouquets tab.
If you see nothing Refresh the Browser window and try again.

This displays the Bouquets that have been found. Filter these via the #Service Column dropdown list using Freesat as the filter.


Initially not all Freesat Bouquets are listed, to get these on the England HD: - line select Enabled and rescan, now select Save. The list should refresh and all Freesat Bouquets are listed.

Either scroll through the pages to find the name of your region e.g. England HD: N West/Granada or filter the name column.
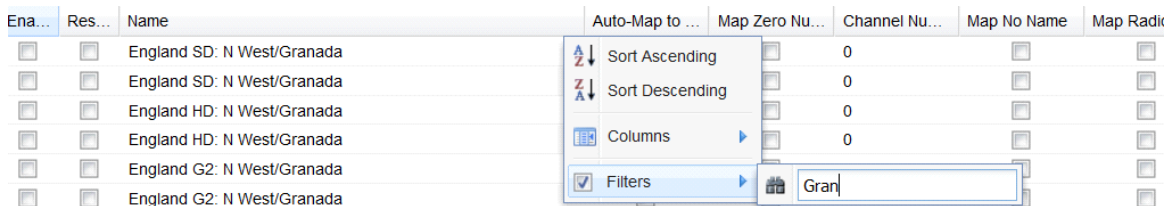
For one of the HD lines select Enabled, Rescan Auto Map to Channels and (if you want to) Map Radio as well. The Save
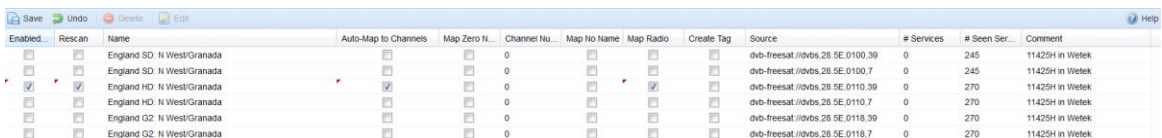
TVHeadend will now subscribe to the Channels in the Bouquets. (this can be seen in the log screen if you have it open.

Channels

Select the Channels tab to see the channels, these will have the Freesat channel numbers and will have appropriate tags for SD, HD, TV Channels and Radio for your region.

Having setup Picon and Icon information earlier TVHeadend will also pickup information for the Channel Icons.

You may want to disable channels that you do not want or need by unticking the Enable box for the channel and saving. For example none of the Interactive channels will work with TVHeadend.

Additional Channels

There are additional FTA channels that are not mapped by this process which you may wish to include.

To view additional channels go to Configuration, DVB Inputs, Services tab, you can now filter on Encrypted to see all the unencrypted services. If there is a channel name this shows it has already been mapped.

Find the names of the channels you want to add and make a note of its Mux e.g. Horse & Country 11567.5V

On the Configuration, Channel /EPG, Channels tab select the Add button on the tool bar.

Enter the name of your Channel, Choose the associated Service (The mux will help you find it) select the Tags you want, enable then select Create.

EPG Grabber

General Config

You may wish to set General Config elements to update Channel Name Number or Icon from grabber supplied information.

Having made any changes Save the configuration.

Over the Air Grabbers

As standard TVHeadend will default to having a number of grabbers configured. You can see this if you go to the Electronic Program Guide as this will have started populating once the Channels were mapped via the Bouquets.

You may wish to just enable the UK: Freesat and EIT: DVB Grabbers

Having made any changes Save the configuration.
At any time you can use the Trigger OTA Grabber to update the EPG.

XMLTV EPG Data

1st Get your data

The method I use to get my data is from Schedules direct using mc2xml on a separate Window machine. This is updated daily and the file copied to the USB attached to my Wetek.

Configure TVHeadend

We must firstly stop any over the air Grabbers.

Open the TVHeadend web interface and go to Configuration, Channel /EPG.
In the Over the air Grabbers section deselect all the over the air grabbers and save.

Configure Kodi

Openelec has a built in script for handling XMLTV data and this first has to be configured via Kodi.

Go to System, Settings, Add-ons, My Addons, Services, tvheadend and Select Configure.
You will then be presented with the XMLTV screen
Set XMLTV Configuration to FILE
Set File Location to the file you are using.

Reboot

Configure TVHeadend

Open the TVHeadend web interface and go to Configuration, Channel /EPG
(note: Open up the Log section to monitor what happens)

In the Internal Grabber section select the drop down list you should ee an XMLTV option, select this and save.

In the log section you should see something like this:

```
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file: grab
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file
spawn: Executing "/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file"
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file: grab took 4 seconds
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file: parse took 1 seconds
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file:    channels   tot=  229 new=   0 mod=   0
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file:    brands     tot=    0 new=   0 mod=   0
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file:    seasons    tot=    0 new=   0 mod=   0
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file:    episodes   tot=    0 new=   0 mod=   0
/storage/.kodi/addons/service.multimedia.tvheadend/bin/tv_grab_file:    broadcasts tot=    0 new=   0 mod=   0
```

Change to the Channels tab and for each channel you can now select an entry from you XMLTV file by double clicking in the EPG Source column for that channel.

Once selected select Save before proceeding to the next page.

Once fully updated change the Internal Grabber back to Disabled and save, then change it back to XMLTV and Save. TVHeadend will reread and parse the XML file to update the EPG this can take some time for this first run..

Note: I do not believe you can mix Over the Air Grabbers with the XMLTV grabber so if you can only get partial XMLTV data you will not be able to select an over the air grabber as the source.

With some XML data TVHeadend appears to be able to match up the data to channels automatically. Schedules direct has multiple display names for each channel and TVHeadend appears to only look at the first one. e.g.

<channel id="I101.24325.schedulesdirect.org">
  <display-name>101 BBC1NW</display-name>
  <display-name>101</display-name>
  <display-name>BBC1NW</display-name>
  <display-name>BBC One (North West)</display-name>
  <display-name>BBC1</display-name>
  <icon src="https://s3.amazonaws.com/schedulesdirect/assets/stationLogos/s24325_h3_aa.png" />
</channel>

Note if earlier you set General Config elements to update Channel Name Number or Icon these will be updated from the XMLTV info.

| Channel 4 | 104 | https://s3.amazonaws.com/schedulesdirect/assets/s... | ✓ | XMLTV: 104 C4 (I104.17155.schedulesdirect.org) |
| Channel 5HD | 105 | picon://1_0_19_1E46_809_2_11A0000_0_0_0.png | ✓ | |

If your data does not auto populate the EPG Source then if you quick you can type the channel name or number (if it is in the display-name) to filter the list presented.

Recording

Digital Video Recorder Profiles

Under Configuration, Recording, Digital Video Recorder Profiles you can change the defaults so you can have the recordings stored in sub directories and define how the files are named etc.

Timeshift

If you want the Timeshift function then go to Configuration, Recording, Timeshift. Set the option to enabled and set the storage path, (mine is on a USB drive and works fine albeit with some stutter on startup). Set the other parameters as meets your needs.

Enable Kodi to access TVHeadend

Back on the Wetek box, go to System, Settings, TV

Guide

Select number of days if you want more than 3.

Set Don't Cache in Local Database.

General

Set Use Channel Numbers from Backend – This means you get the standard channel numbers

Select Enable.

Kodi will now load the TV and Radio information from TVHeadend so when you go back to the Home Menu you will see TV and Radio (if you selected Radio stations earlier) displayed.