

Web Interface – VLC Streaming.

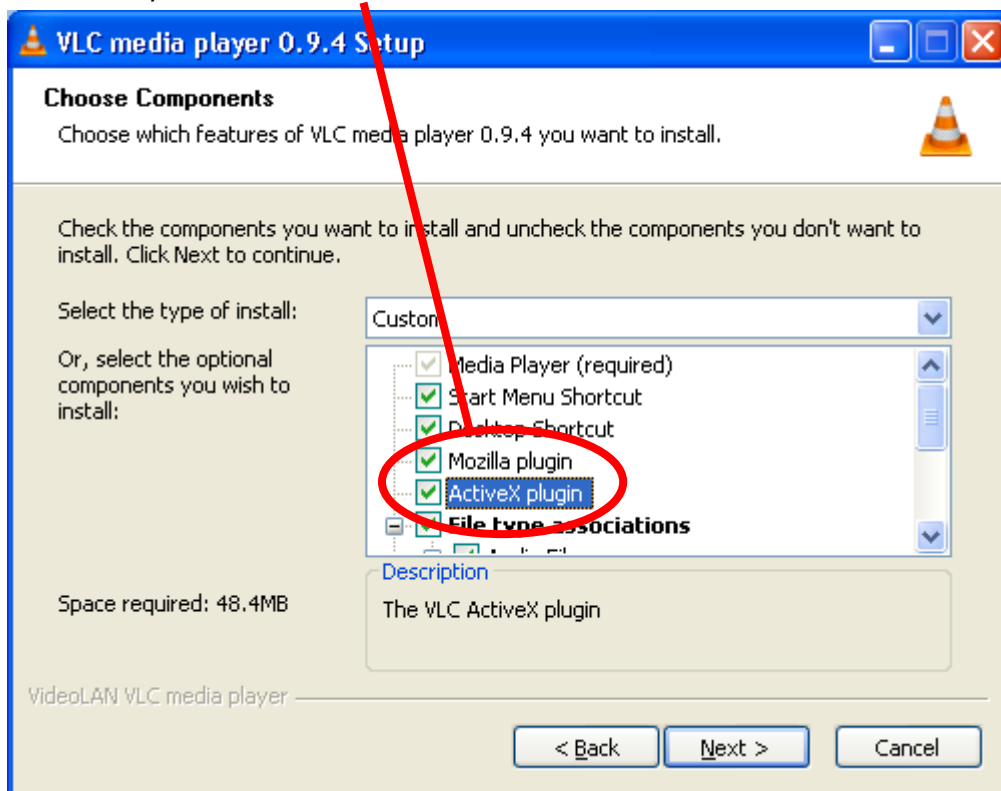
Before you start:

You will need to install VLC on the Web Interface PC and on the PCs you want to stream to.

See www.videolan.org for the latest version. I am currently using 0.9.4 for Windows.

When you are installing VLC, there are a few things that you MUST do:

1. Make sure that you install the Mozilla and ActiveX components – these are not installed by default and you must select them.



2. Once you have installed VLC, then you will need to **copy** the following files from your VLC installation directory to your windows directory...
 - avcodec-51.dll
 - libfontconfig-1.dll
 - libfreetype-6.dll
 - libgcrypt-11.dll
 - libgpg-error-0.dll
 - libiconv-2.dll
 - libxml2-2.dll
 - libz-1-2.dll

This is a workaround for some issues with VLC 0.9.4.0 and will enable video to display correctly in the web page that is launched by the web interface.

Configuring Streaming Information:

Go to the "VLC Streaming" page of the Web Interface Manager.

The screenshot shows the MediaPortal Web Interface Manager interface. On the left is a navigation menu with options: Database, Web Interface, Users, Appearance, HTML, Logos, Translations, EPG, VLC Streaming (selected), and Logging. The main content area is titled "VLC Streaming" and includes the following sections:

- Enable VLC Streaming:** A checked checkbox.
- VLC Streaming Server:**
 - VLC Folder (must contain vlc.exe): C:\Program Files\VideoLAN\VLC (with a "Browse" button).
 - VLC Remote Control Port: 8070
 - TV Server Name / IP: kevin-laptop
- Streaming Output Options:** A table with columns: Card ID, Card, Streaming Port, and Transcode Options.
- VLC Streaming Clients:**
 - Internal Subnet IP Range: 10.0.0.0/24
 - External IP / Domain Name: www.xxxxxxxxx.com.au

At the bottom, there is a "Web Server Running" section with a "Stop Service" button, the version "0.6.0.5 Beta", and a "Save" button with a green checkmark.

Card ID	Card	Streaming Port	Transcode Options
1	7162 BDA DVBT Tuner	8085	usevideo=true,vcodec=mp2v,vb=500,scale=0.5,usex
2	7162 BDA DVBT Tuner		
3	7162 BDA DVBS Tuner		
4	7162 BDA DVBS Tuner		
5	7162 BDA Analog TV Tuner		
6	7162 BDA Analog TV Tuner		
7	RadioWebStream Card (builtin)		

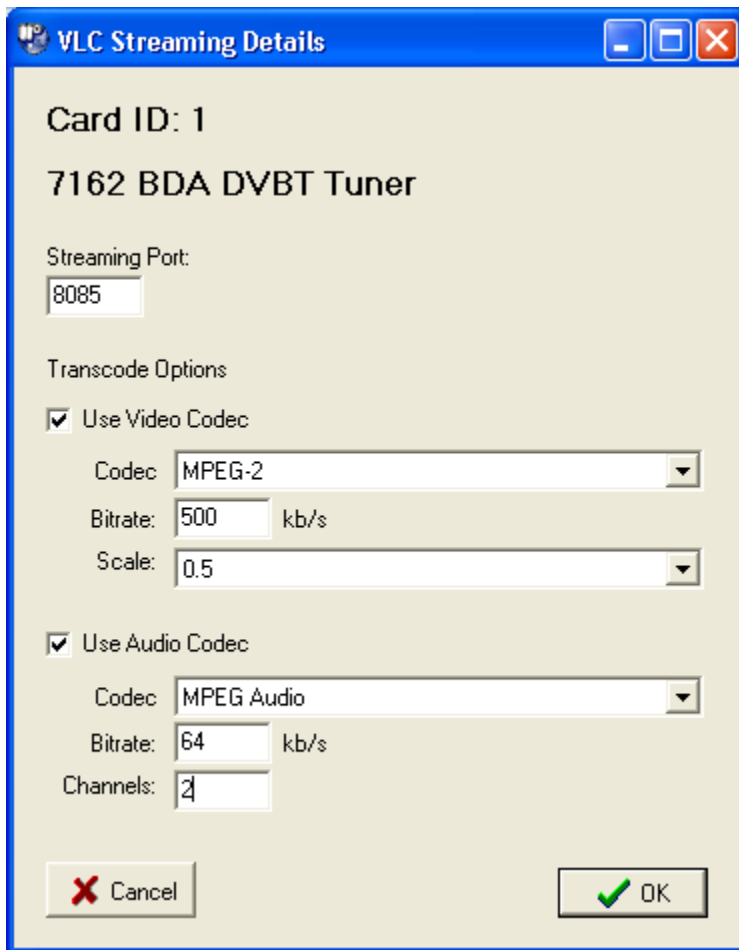
Find the directory where VLC is installed.

The port number for VLC Remote Control can be left as 8070 if it does not conflict with any other server you have running on the same PC. This is used locally by the web interface to send commands to the instance of VLC used for streaming.

Enter the IP address or network name of the TV Server PC (if you want to stream files, I think it will only work from the Web Interface PC).

You will see a list of your TV cards, as well as an entry for file streaming.

Edit the entries for each of the cards you want to stream...



Enter the port number you want to stream to. You will need to forward this port through your router to enable streaming over the internet.

The port number must be different for each TV card and for file streaming.

Select the Codecs and compression information you want to use for your stream. If you are only streaming locally, you may not want to select any codecs if you have good bandwidth on your network.

If you are planning on streaming over the internet with a reasonably fast connection, then the above settings are a good starting point.

VLC Streaming Client Settings:

Internal Subnet IP Range: This is the range of IPs that are used on your local/home network. When the Web Interface serves a streaming window to these IPs it will use the internal address for the streaming server.

You can specify the IPs in 2 ways:

1. Add the number of bits in the subnet mask to the end of the network address. So, for a network configured with addresses in the range 192.168.1.1 to 192.168.1.255 with a subnet mask of 255.255.255.0, the correct notation would be 192.168.1.0/24.

2. Just enter the network portion of the address... For the above example, you would enter 192.168.1

The external IP / Domain name is used for clients connecting from outside your network.

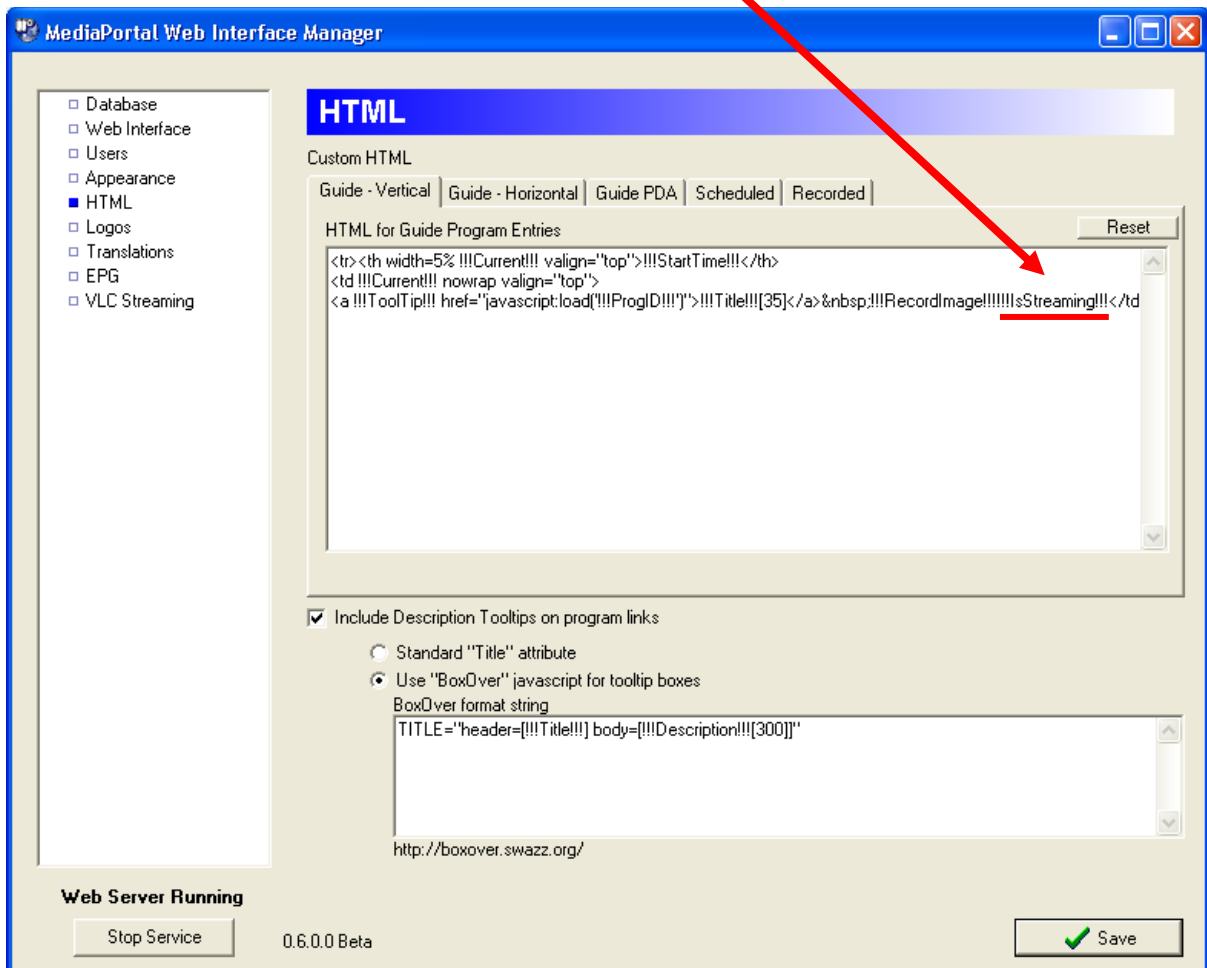
Configuring HTML:

You now need to make several changes to the HTML for the web interface if you want to see streaming buttons appearing beside current TV shows (vertical view only at this stage), and recorded programs (multi – delete view only).

Program Guide (Vertical):

Open the Web Interface Manager and go to the HTML page. Now select the “Guide – Vertical” tab.

You will need to add “!!!IsStreaming!!!” as shown below:

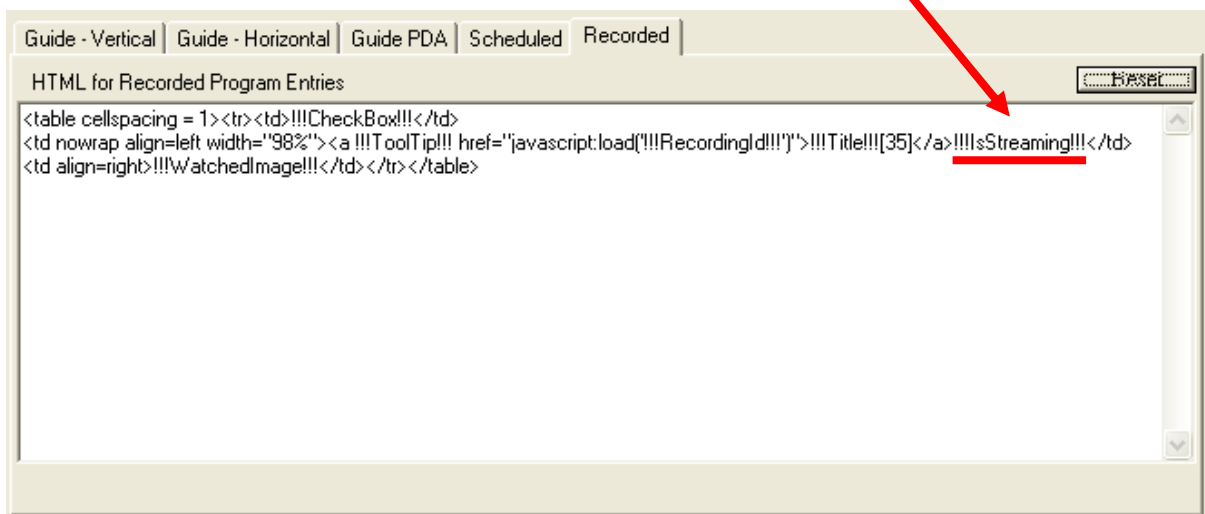


The screenshot shows the MediaPortal Web Interface Manager window. On the left is a navigation tree with 'HTML' selected. The main area is titled 'HTML' and contains a 'Custom HTML' section with tabs for 'Guide - Vertical', 'Guide - Horizontal', 'Guide PDA', 'Scheduled', and 'Recorded'. The 'Guide - Vertical' tab is active, showing a text area with the following HTML code:

```
<tr><th width=5% !!!Current!!! valign="top">!!!StartTime!!!</th>
<td !!!Current!!! nowrap valign="top">
<a !!!ToolTip!!! href="javascript:load('!!!ProgID!!!')>!!!Title!!![35]</a>&nbsp;!!!RecordImage!!!&nbsp;!!!IsStreaming!!!</td>
```

A red arrow points to the '!!!IsStreaming!!!' text in the code. Below the text area are options for 'Include Description Tooltips on program links', with 'Use "BoxOver" javascript for tooltip boxes' selected. A 'BoxOver format string' field contains: 'TITLE="header=!!!Title!!! body=!!!Description!!![300]"'. At the bottom, there is a 'Web Server Running' status, a 'Stop Service' button, the version '0.6.0.0 Beta', and a 'Save' button with a green checkmark.

Now click on the "Recorded" tab to add "!!!IsStreaming!!!" here as well.



The screenshot shows a software window with a tabbed interface. The tabs are "Guide - Vertical", "Guide - Horizontal", "Guide PDA", "Scheduled", and "Recorded". The "Recorded" tab is selected. The window title is "HTML for Recorded Program Entries". The content area displays the following HTML code:

```
<table cellpadding = 1><tr><td>!!!CheckBox!!!</td>
<td nowrap align=left width="98%"><a !!!ToolTip!!! href="javascript:load('!!!RecordingId!!!')>!!!Title!!![35]</a>!!!IsStreaming!!!</td>
<td align=right>!!!WatchedImage!!!</td></tr></table>
```

The text "!!!IsStreaming!!!" in the HTML code is underlined in red. A red arrow points from the text above to the "Recorded" tab.

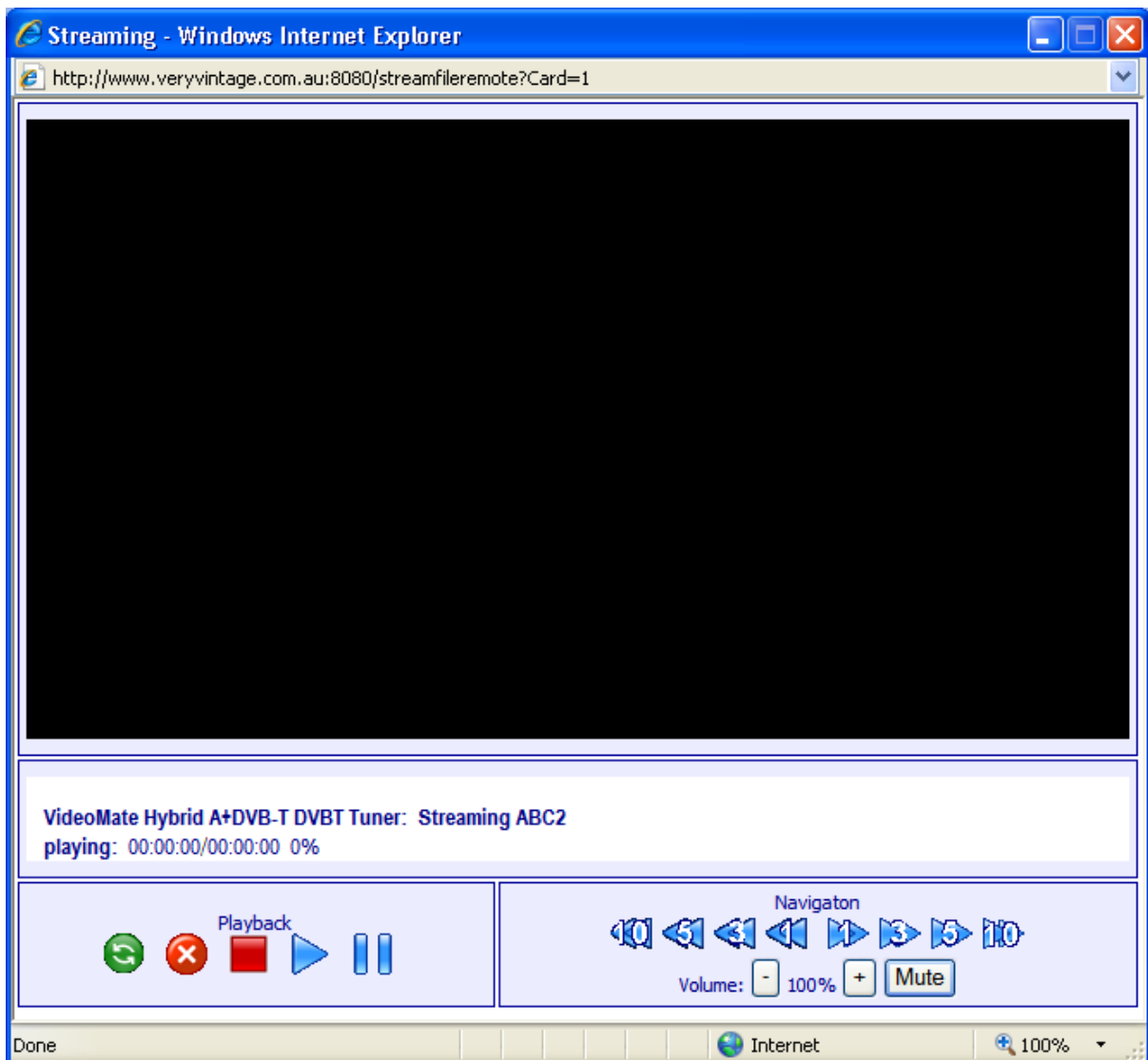
Steaming Clients

Streaming directly from the Web Interface

You can click on a streaming icon that appears either under the channel icon in the vertical view, next to the TV Card on the TV Service Page, or next to the recorded program on the “Recorded” page.

The streaming icon changes from **STR OFF** to **STR ON** when streaming starts.

This will cause a streaming window to open (it may take up to 1 minute if VLC needs to be re-initialised on the server).



Some of the buttons have different meanings in different situations.

If you are streaming a recording:






= Stop recording stream on the server



= Start recording stream from the beginning if it has been stopped



= Pause the stream on the server – this may cause the video to drop out if it is left for more than a few seconds, in which case you will need to click the refresh button  to reset the connection.

The navigation buttons  move the position back by 10, 5, 3 and 1 minute for some types of files (ones that show a current and total time) or by 10%, 5% etc for files that don't show a total time. The  buttons move the position forward.

If you are streaming live TV:



= Stop local player (note that the stream will continue from the server – you will not be timeshifting)



= Start local player



= Pause local player – this will act as a timeshifting buffer for short times

The navigation buttons  and  have no meaning for live TV

Common Buttons:

These are for both kinds of streaming.



= refresh connection. Click this if the picture freezes, it will refresh the streaming connection and it should start up again. If you are having to click this all the time, consider using higher compression on your streams.

You may need to click this if you change the streaming channel.

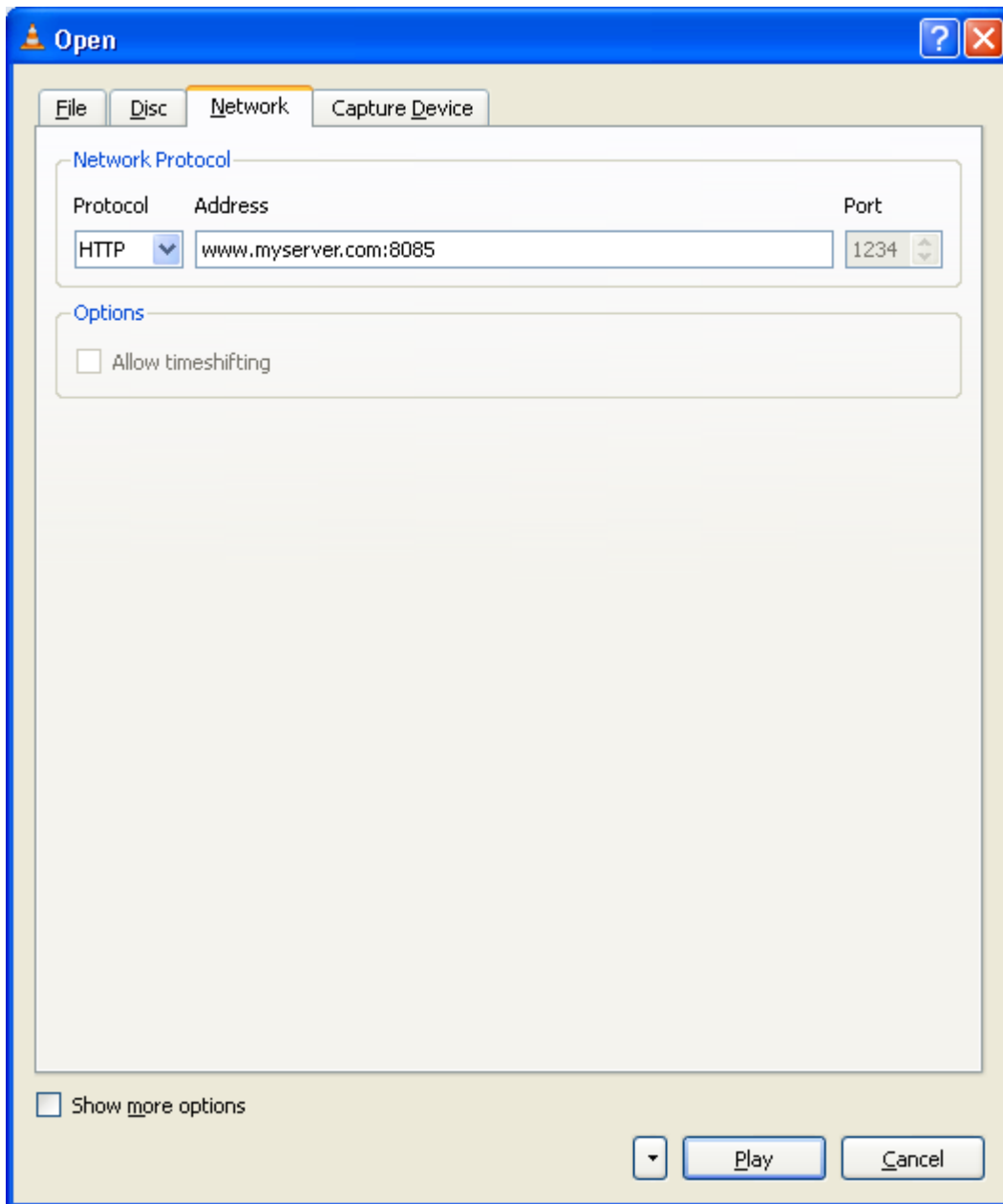


= kill button. This will stop streaming on the server and close the streaming window

Streaming with the Native VLC Client

You can also use VLC itself if you know the address and port of your streaming server...

On the client PCs, start up VLC and open the Media menu. Select “Open Network” and then select the HTTP protocol from the dropdown box.



Where “www.myserver.com” is the address of your streaming server and “8085” should be changed for the port number you are using.

Now click play. If you are not currently streaming anything, nothing will happen, and you will most likely get an error message that VLC could not connect. Just close the message and leave VLC running for now. You will need to do this each time (sorry) so you may want to create a shortcut with “...vlc.exe http://www.myserver.com:8080” as the target.

Streaming

Once you have completed the setup, you will see streaming icons next to the “current” program in the Guide (New Interface – Vertical Layout only at this stage), or on the TV Server Page next to each card.

If the icon is green, then VLC streaming is already running for this card/channel – click on it to Stop / Start streaming.

If you are using the TV Server page, select a channel from the dropdown first, then click on streaming.


On the client machine, with VLC running as described in the previous section, click on play. If your firewall settings and router settings are correct, then you should see your stream.

Recorded programs can also be steamed from the recorded page BUT ONLY IN MULTI-DELETE VIEW. Just click the stream button.

Unfortunately, at this stage, there is no way to fastforward or rewind streams from files, and no way to pause TV streams – but I am working on it (and waiting for VLC to fix their telnet interface!).

Changing streams

When you change channel, the stream is stopped and restarted – this stops the stream from continually going back to the beginning of the timeshift file.

If you are using the Web Interface streaming window, you may need to click the refresh connection button. 

If you are using the native VLC client..

You will need to click on the stop button on the VLC client and then click play to start streaming the new channel. You should not have to close VLC. Give it about 20 seconds to start streaming again. If you get a connection error and you are sure it is streaming, just press play again – you may have been too quick.

If you stop TV and restart it you will have to “Stop/Play” on the client. If the client stops mid stream (as can happen if the bandwidth drops momentarily) just click pause and then play. It will sometimes stop when minimised, just click pause/play.

When you change streaming files, you will need to “Stop/Play”.