

DVBLink TVSource

Installation and configuration manual



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Introduction

DVBLink TVSource seamlessly integrates Satellite, Cable or Terrestrial TV channels into Windows Media Center, including support for MPEG-2 and MPEG-4 HD video, multichannel audio, EPG information, teletext and subtitles. DVBLink enables all native TV control features of Windows Media Center for these channels such as Guide listings, live TV, time shifting, one touch and timer recordings.

Combined with DVBLink Server Network Pack, DVBLink TVSource lets you enjoy your favorite TV channels throughout your whole house – in Windows MediaCenter, running on network computers, on UPNP enabled clients such as Sony PlayStation3, on nettops and laptops, running Windows 7 and on XBox 360.

Installation types

DVBLink TVSource local installation

If you plan to use a single PC to watch the television on, you need a local DVBLink TVSource installation:

- Windows 7
- Windows Vista with TV Pack
- 64 and 32 bits

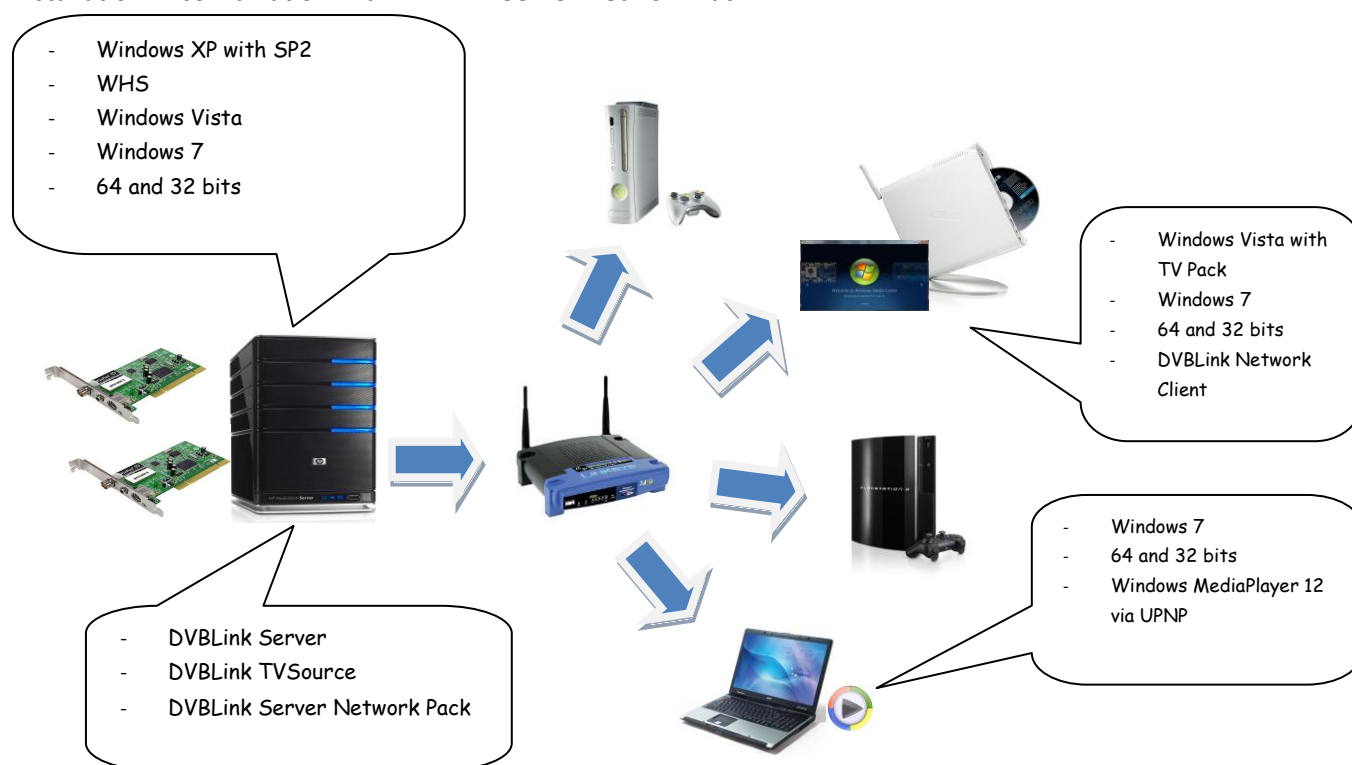


- DVBLink Server
- DVBLink TVSource

In this setup DVBLink software and tuner hardware are installed on the same computer. This computer should be connected to the source of the TV signal, e.g. satellite dish, cable, terrestrial antenna etc. You may install several tuners (also of different types and brands) in this computer and let DVBLink TVSource control them all.

DVBLink TVSource networked installation

If you would like to watch television on several computers and devices in your house, you need DVBLink TVSource installation in combination with DVBLink Server Network Pack:



In this setup DVBLink TVSource and DVBLink Server Network Pack should be installed on a server computer. This computer also hosts all tuner cards. These cards can be of the same or different type and brand and server can have any number of them. Server computer can run any Windows OS that is equal or higher than Windows XP with SP2. However if you also want to use server computer to watch the television on, you need to have either Vista with TV Pack or Windows7 OS.

DVBLink Server with Network Pack can stream live TV to different network clients such as:

- Computers, barebones, nettops and laptops running Windows 7 or Vista with TV Pack. You can watch TV on these clients in Windows MediaCenter with the help of DVBLink Network Client.
- Computers, barebones, nettops and laptops running Windows 7. You can watch live TV on these clients using Windows MediaPlayer as a UPNP client. No extra software installation is required in this case.
- Sony PlayStation3 as UPNP client
- XBox360 either as extender or UPNP client if combined with XBMC MediaCenter
- Other hardware or software UPNP clients

DVBLink Server controls access of all clients to the installed tuners and takes care that tuner access conflicts are resolved according to "first come first served" principle. The maximum number of streams that DVBLink Server can serve at any moment of time is equal to the number of installed physical tuners.

Preconditions

Before installing and configuring DVBLink TVSource please check the following:

- Correct tuner hardware installation and configuration
 - o Tuner card(s) should be installed in your computer and connected to the signal source (cable, satellite dish, terrestrial antenna etc.)
 - o Tuner card drivers should be installed
 - o Tuner card(s) should not be in use by any other DVB software, including Windows MediaCenter. DVBLink TVSource requires exclusive control of tuner hardware.
 - o It is recommended (but not required) to verify that tuner cards work using software bundled with them
- If you are using Windows Vista operating system you need TV Pack to watch TV on this computer and a special decoder DLL if you would like to watch h.264 video. You can find them here:
<http://dvblogic.com/phpBB3/viewtopic.php?f=32&t=2329>
- If you are running v1.x of DVBLink TVSource you have to uninstall it before installing this version. You may save tvsourceconfig.xml of your TVSource source to partially restore your current configuration

Installation and configuration order

DVBLink TVSource installation and configuration is done in a number of steps, namely:

- Installation
 - o DVBLink Server install
 - o DVBLink TVSource install
- Configuration
 - o Configuration of DVBLink Sources
 - DVBLink TVSource configuration
 - MC Guide Services configuration including Windows MediaCenter TV Setup
 - (optional)XMLTV configuration
 - o Configuration of DVBLink Server
 - Channel selection
 - Channel merge
 - Assignment of channel numbers
 - Configuration of EPG sources
 - o Windows MediaCenter configuration
 - TV Setup (if not done before)
 - DVBLink channel synchronization

The following chapters of this manual will walk you through all these steps.

Installation

DVBLink Server installation

To install DVBLink Server start DVBLinkServer.msi installation file. Once it is started you will be presented with the installation wizard. Follow the instructions of this wizard to install the software.

In course of installation you may be prompted by operating system whether to continue installation of unverified drivers. Answer Yes or Continue to these questions.

Once installation is completed you will be prompted to reboot the system. **Please reboot.** When system is rebooted, proceed with DVBLink TVSource installation.

DVBLink TVSource installation

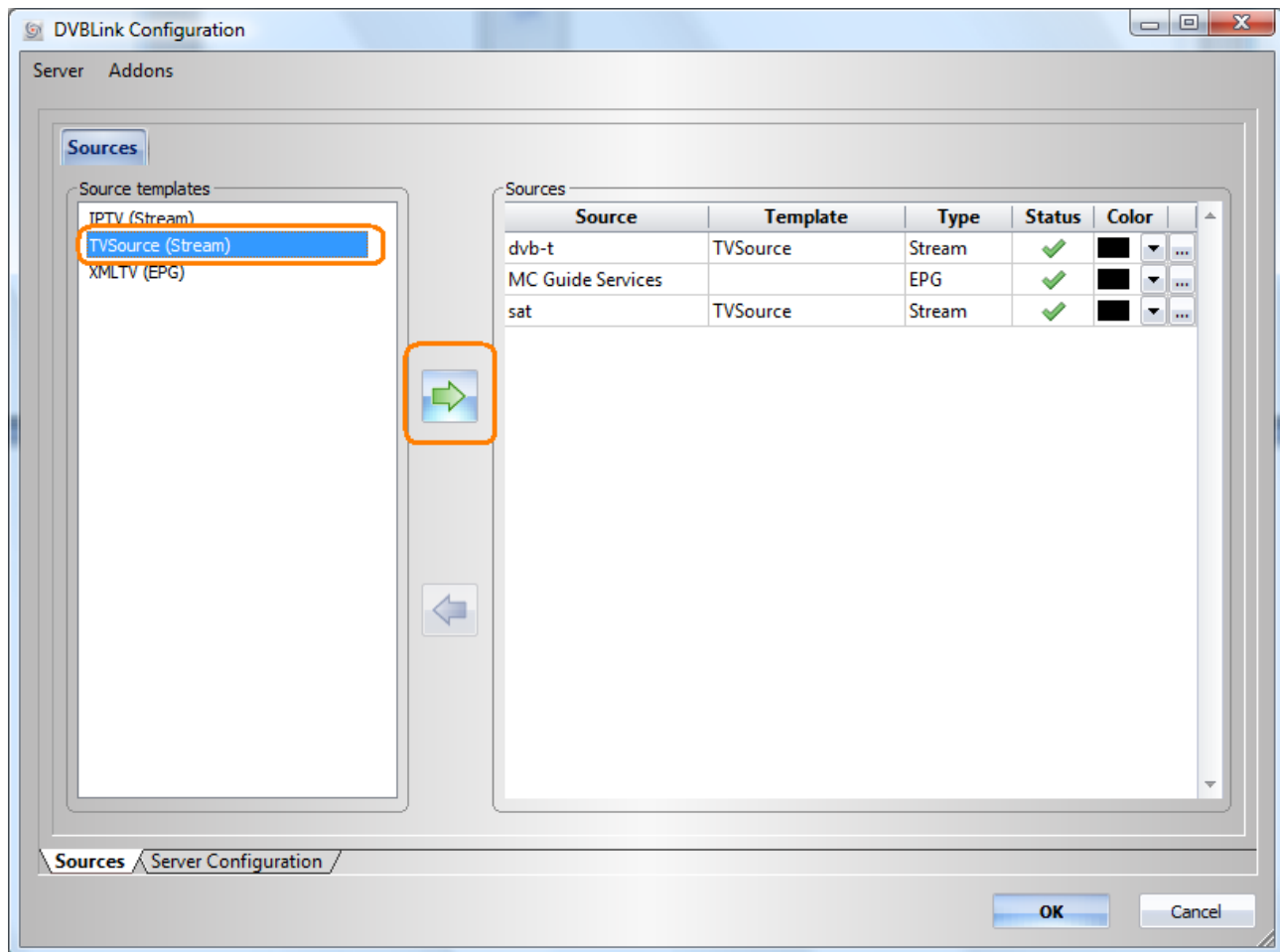
To install DVBLink TVSource start DVBLinkTVSource.msi installation executable. Once it is started you will be presented with the installation wizard. Follow the instructions of this wizard to install the software.

Configuration

At the end of DVBLink TVSource installation wizard will automatically launch DVBLink Server Configuration utility. It can also be started at any time from Windows Start menu -> DVBLink -> DVBLink Server Configuration.

Add DVBLink TVSource instance

DVBLink Server configuration utility shows all installed DVBLink sources, including DVBLink TVSource, under "Source templates" group. **To actually use DVBLink TVSource you need to add (instantiate) one DVBLink TVSource source for each hardware tuner card.** To add instance of the TVSource source, select TVSource template in the list on the left and press green button:



Enter name for a new instance of the TVSource source in the dialog that comes and press Ok button. The newly created source will appear in the list on the right side.

If you have several tuner cards in your computer, you need to add a separate DVBLink TVSource instance for each of them.

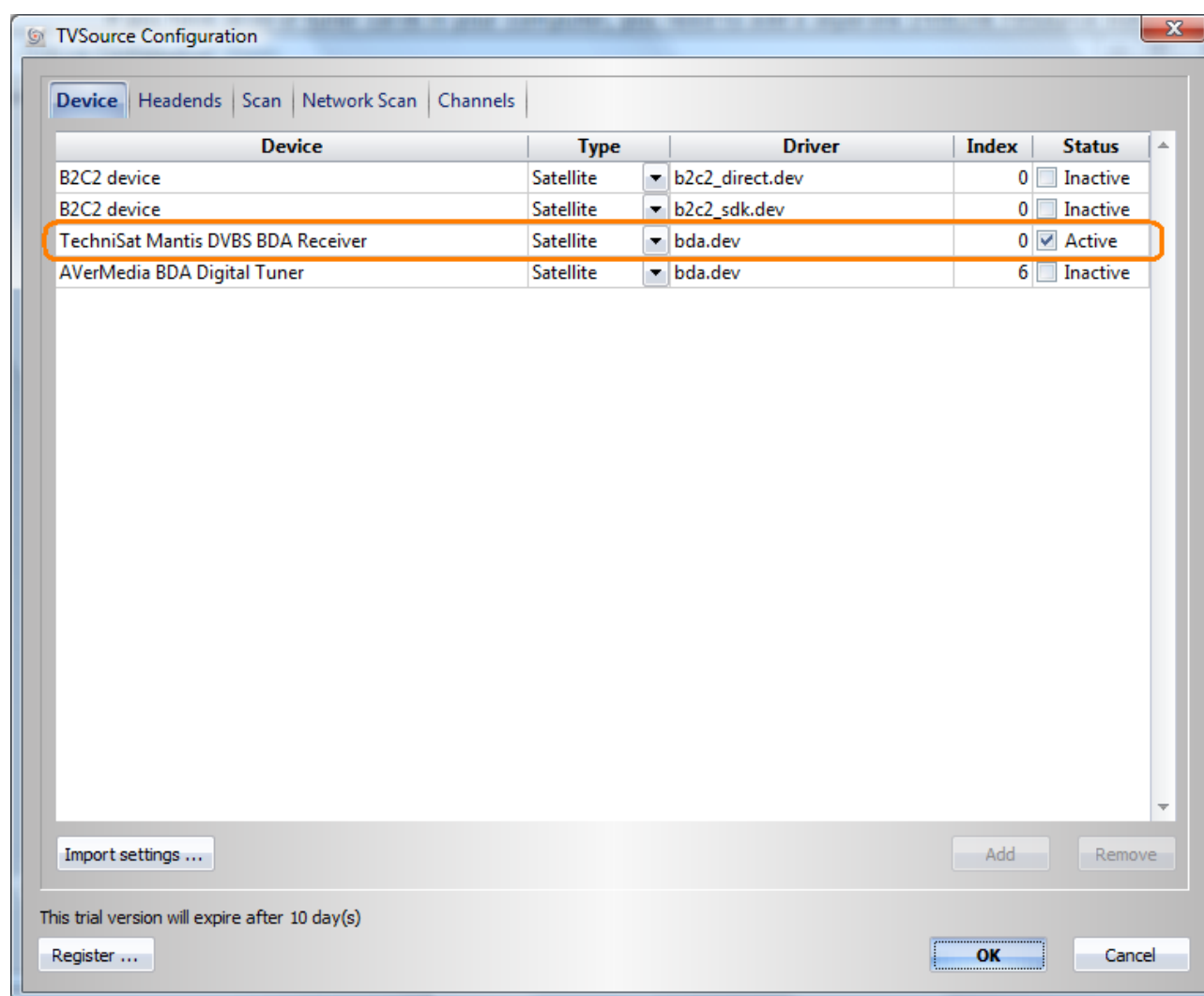
DVBLink TVSource configuration

Select a TVSource instance in the list on the right and press ... button next to this source to start its configuration dialog. DVBLink TVSource configuration is organized in a number of tab pages, each doing its step of configuration:

- Device setup
- Headends configuration
- Channel scan
- (Optional) Network scan
- (Optional) Channel preview and editing

Device setup

Device setup page of DVBLink TVSource configurator shows all installed tuner devices and lets you select the one that this TVSource instance will control:

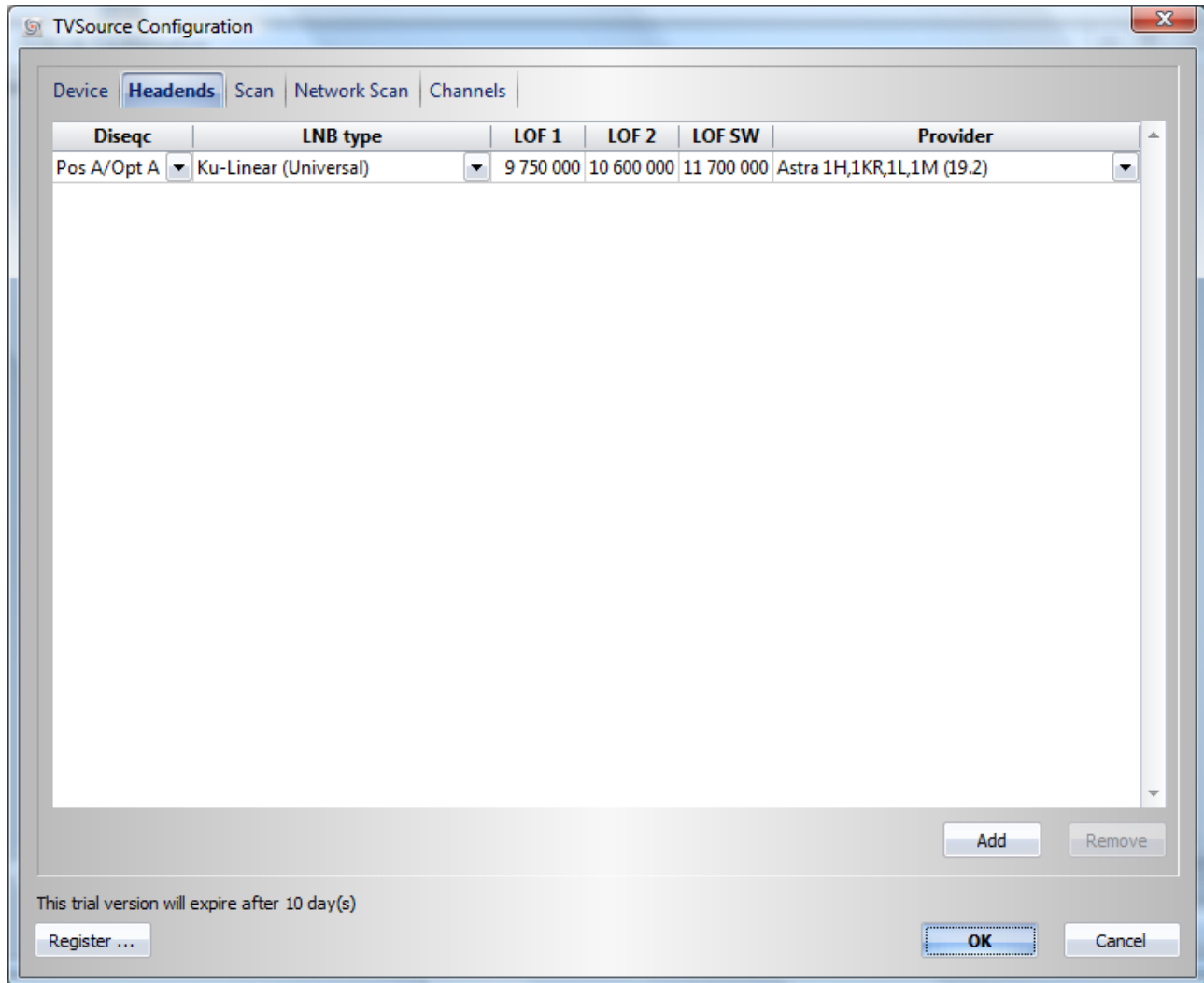


Tick Active check box next to this device and make sure that device type is correctly recognized. If it is not so, select a correct device type (*Satellite*, *Cable* or *Terrestrial*) using Type combobox.

Once you have selected active device for this TVSource instance, proceed with Headends configuration.

Headends configuration

Headends tab lets you select and configure where your TV channels come from:



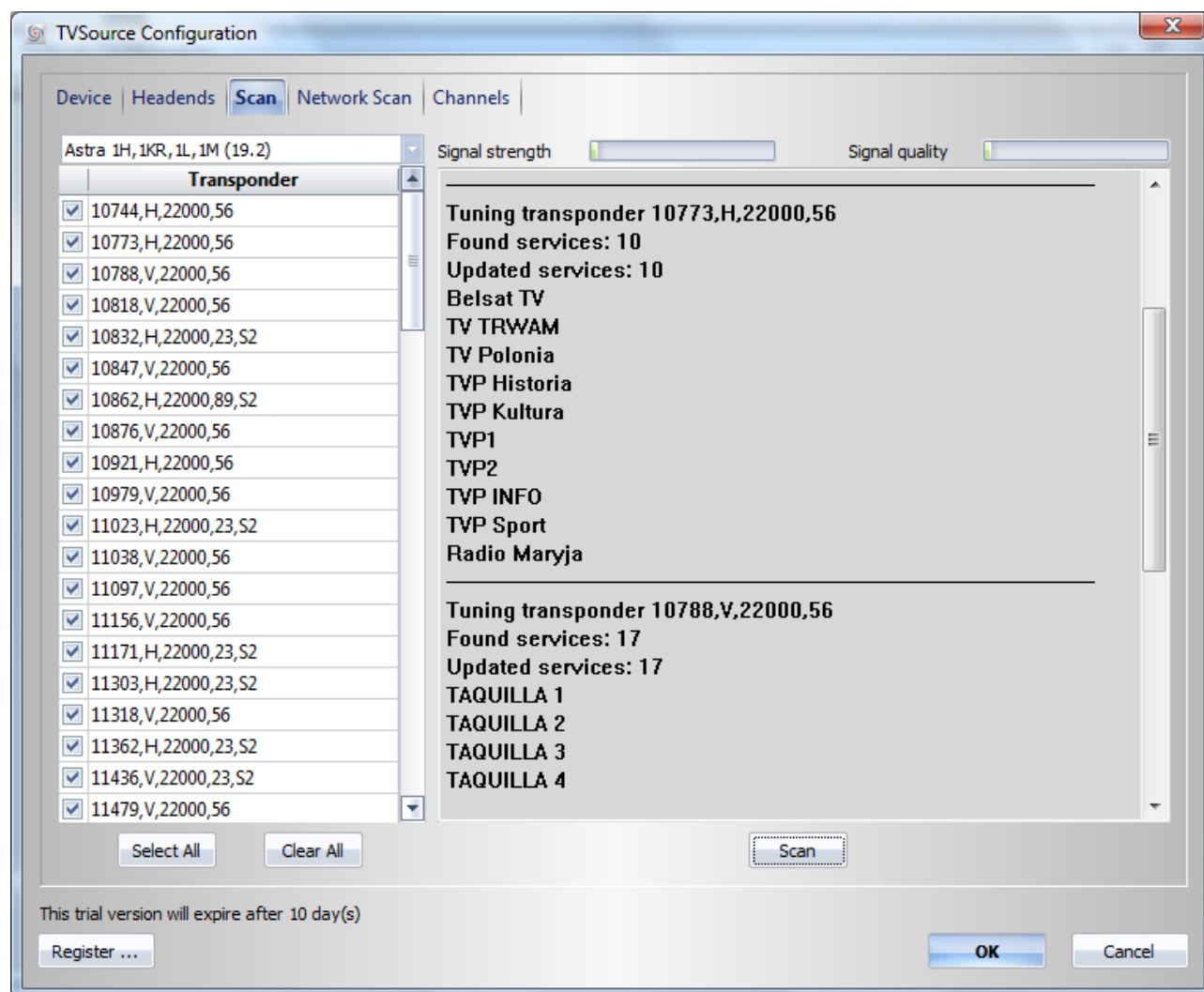
Meaning of the headend depends on the type of your tuner:

- For satellite tuner each headend describes a single LNB. Here you can select its diseqc configuration, LNB type and LOF values. *Please note that by default system sets LOF values depending on selected LNB type. You should only change them if you know what you do!* For each LNB you should select a channel provider – a satellite from the drop down list.
- For cable and terrestrial tuners headend is directly associated with a TV provider. You need to select your TV provider from the drop down list to complete the configuration.

If you do not see your satellite/provider in the list then you may need to add a transponder file for it. Please visit our forum at <http://dvblogic.com/phpBB3/index.php> for instructions on how to do it.

Channel scan

To scan channel you need to proceed to "Scan" tab:

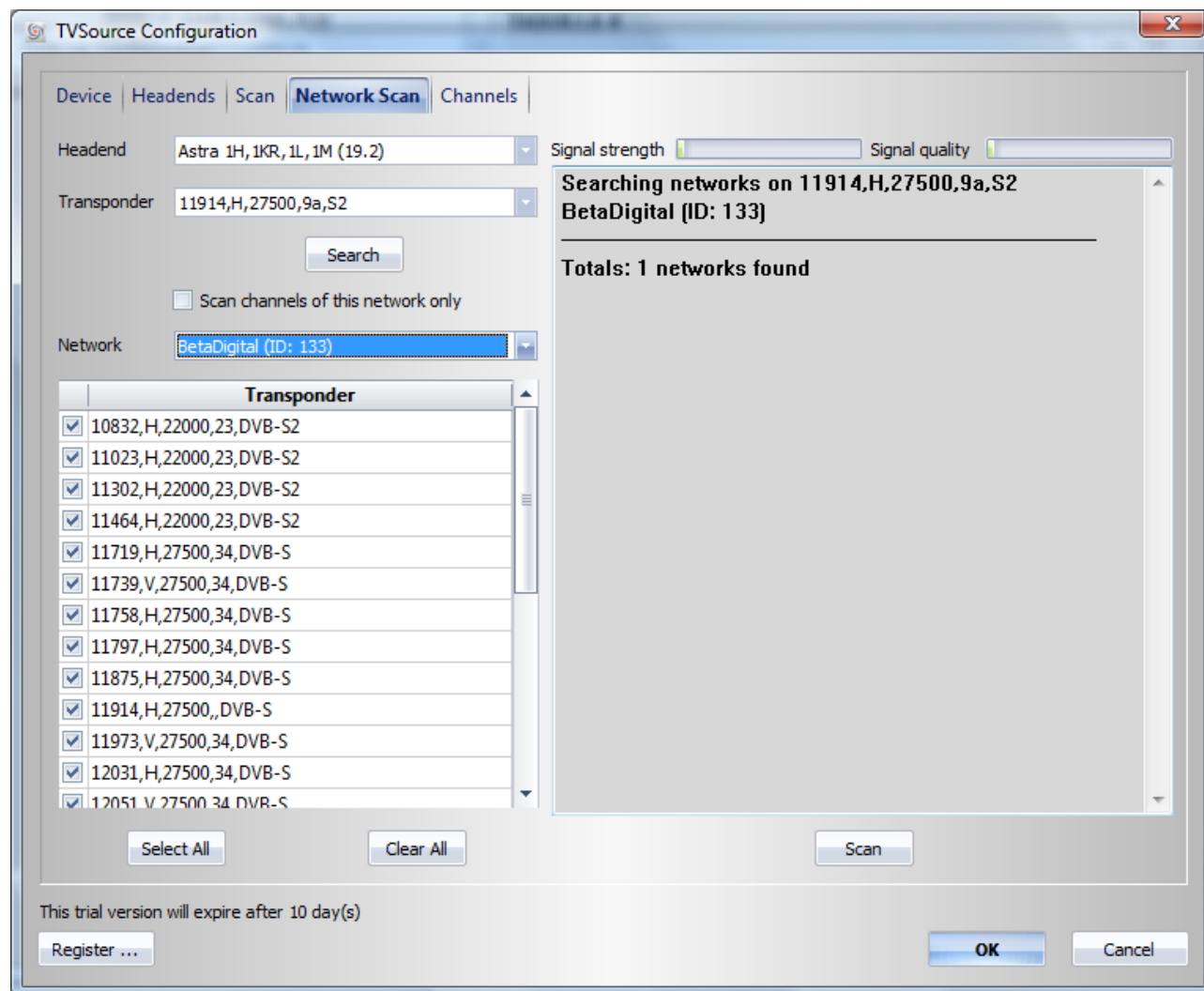


Select all transponders in the left pane (or a subset of transponders that you actually want to scan) and press scan button. TVSource will start scanning channels, showing progress in the right pane.

Select all your headends in the combobox at the left-top one by one and scan its channels.

Network scan (optional)

If your network provider broadcasts information about its channels and the transponders they are located on, you can use Network Scan option to find these channels:

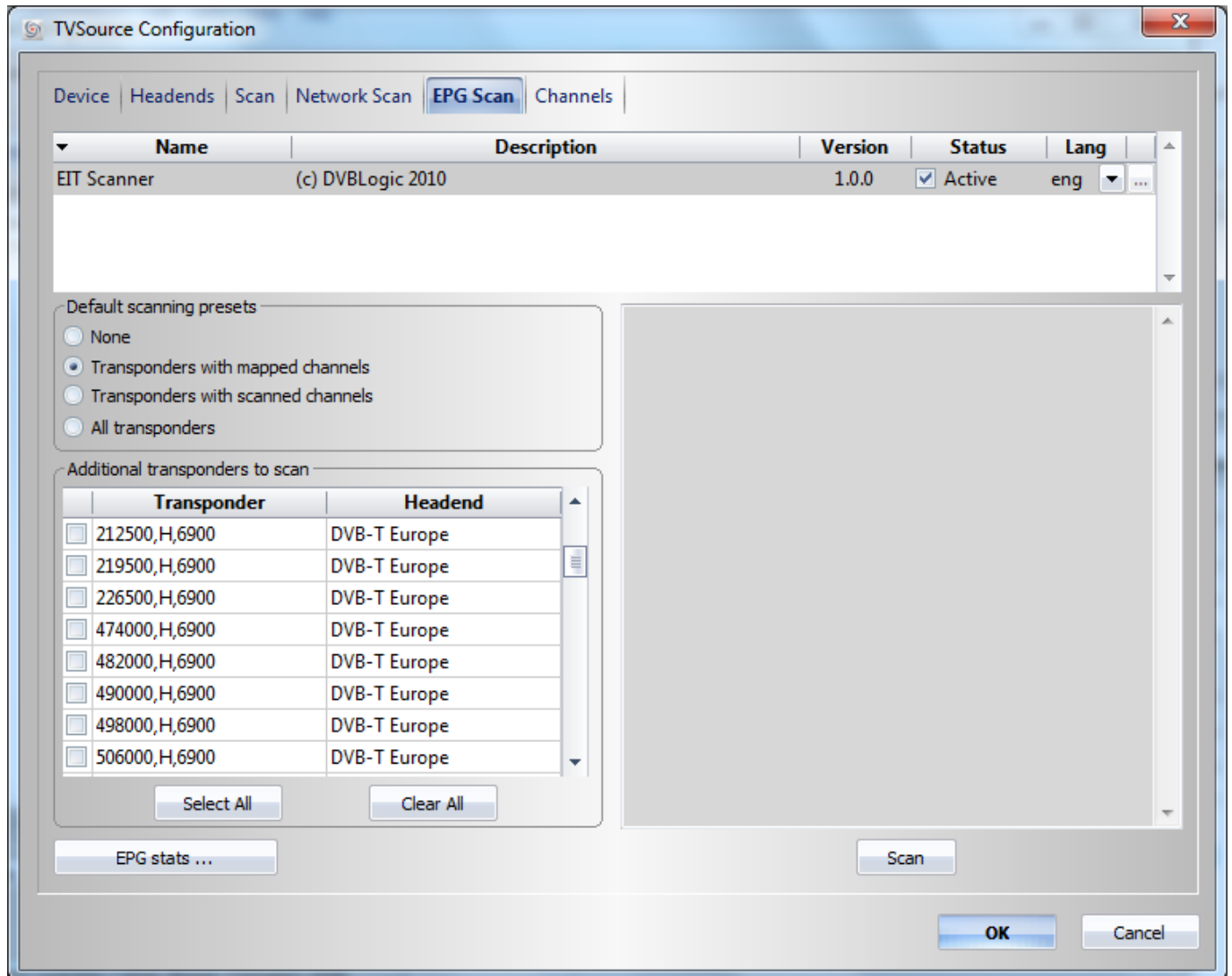


Your network operator can provide you with transponder information where DVBLink TVSource should search for the channels. Select this transponder and press "Search" button. DVBLink TVSource will search transponder and present you with a list of found networks and their transponders. Select your network and press "Scan" button to scan the channels.

EPG Scan (optional)

DVBLink TVSource can process EPG data that some providers send as a part of TV stream and make it available to Windows MediaCenter Guide. This EPG data can be particularly useful for TV channels where Windows MediaCenter does not have any Guide information or has it in a limited form.

The EPG data collection properties can be set up on the *EPG Scan* tab:



EPG data can be sent using a number of standards – as EIT packets (described in the DVB standard) or as alternative proprietary formats - OpenTV, MediaHighway etc. The grid on the top of the tab page lists all available parsers for different types of EPG data. Parsers can be made *Active* or *Inactive*.

EPG data can be broadcasted in several languages. *Lang* property allows selection of a particular language.

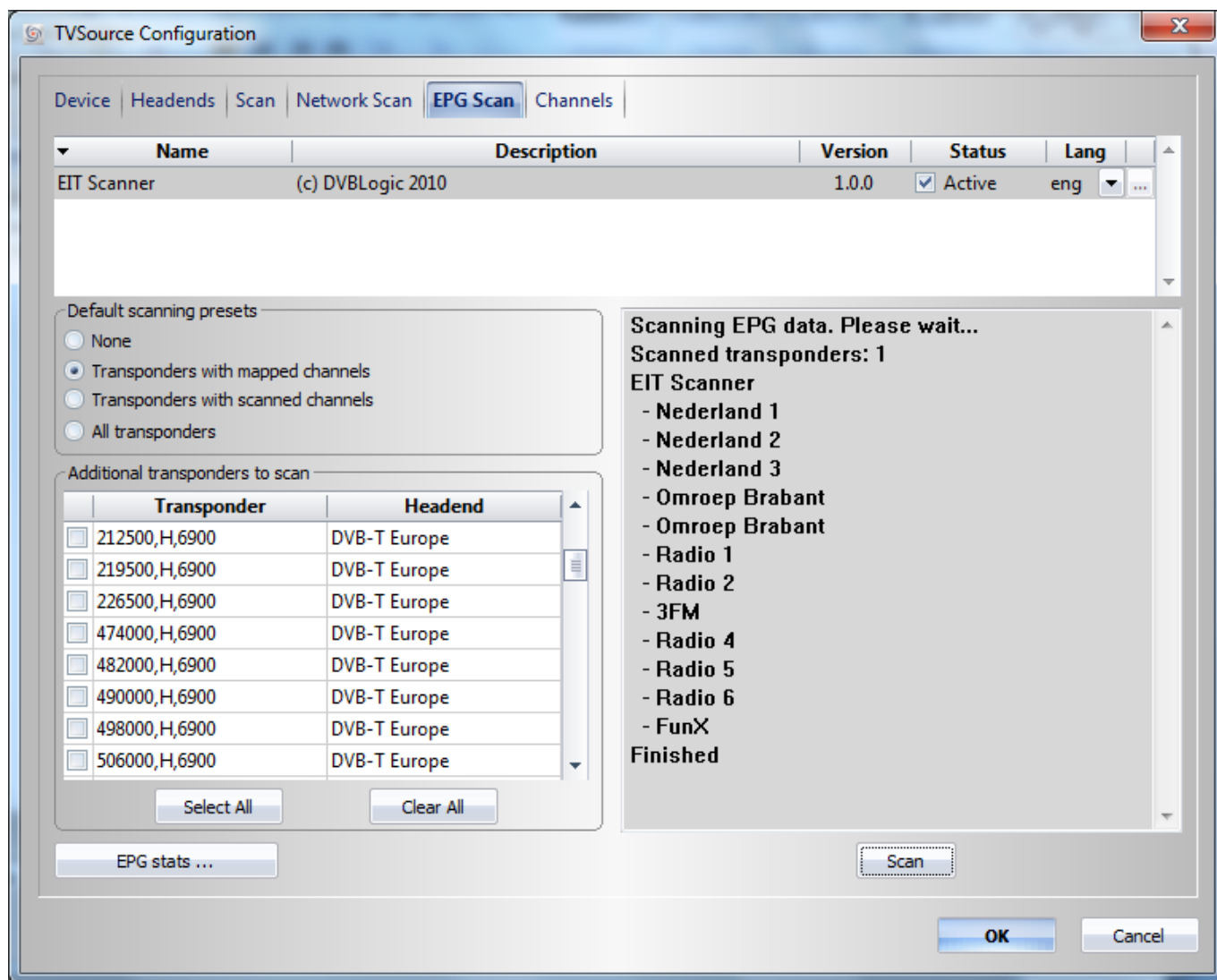
DVBLink TVSource scans transponders carrying EPG data every 12 hours in the background – e.g. when no TV recording or playback is taking place, collects EPG information and sends it to Windows MediaCenter. Scanning presets allow selection of these transponders. The following options are available:

- *None*. This option defines empty list of transponders to be scanned. It is particularly useful when transponders are manually selected using “Additional transponders” option.
- *Transponders with mapped channels*. This option creates a set of transponders, carrying DVBLink channels that are present in MediaCenter Guide.

- *Transponders with scanned channels.* This option creates a set of all transponders on which channels were found during channel scan.
- *All transponders.* This option includes all transponders for all headends.

It is possible to add some specific transponders to the scan using “*Additional transponders to scan*” option.

Once the EPG scan configuration is finished user may preview EPG scan results by performing a scan. Scan can take anywhere between 1 and 15 minutes depending on the number of transponders that have to be scanned and presence and quality of broadcasted EPG data. Scan progress and results (list of channels carrying EPG data) will be displayed in the right pane:



It is also possible to view EPG statistics per channel (number of events and available EPG date range) using “*EPG stats...*” button:

EPG statistics

eitscanner

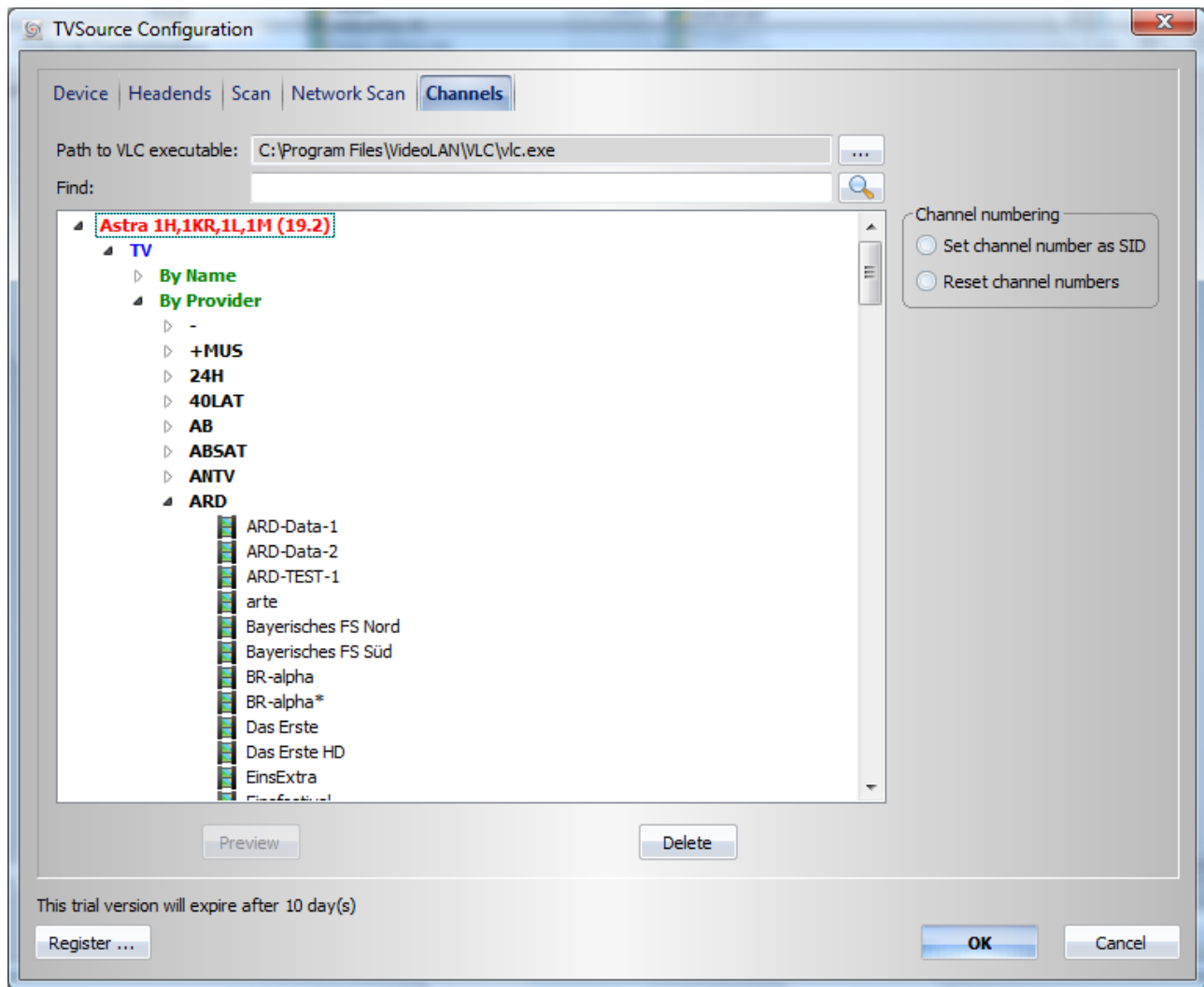
Channel name	Program count	EPG period
Nederland 1	182	2010-10-13 02:20 / 2010-10-17 00:15
Nederland 2	165	2010-10-13 02:05 / 2010-10-17 00:05
Nederland 3	261	2010-10-13 02:05 / 2010-10-17 01:35
Omroep Brabant	399	2010-10-13 02:00 / 2010-10-17 01:44
Omroep Brabant	35	2010-10-13 03:00 / 2010-10-17 00:00
Radio 1	87	2010-10-13 02:02 / 2010-10-17 01:02
Radio 2	42	2010-10-13 06:00 / 2010-10-17 01:02
3FM	41	2010-10-13 04:02 / 2010-10-17 00:02
Radio 4	50	2010-10-13 07:00 / 2010-10-17 01:02
Radio 5	70	2010-10-13 06:00 / 2010-10-17 01:02

OK

Important! EPG scan has to be performed at least once (either manually or automatically) before you can assign scanned EPG channels to your selected DVBLink channels. The assignment is done on "EPG Sources" tab of DVBLink configuration utility. Scanned EPG channels are available under "EIT scanner" in the EPG source selection dropdown box.

Scanned channels review

You can review scanned channels using “Channels” tab of DVBLink TVSource configurator:



This tab shows all channels, organized into a tree for each headend. You can navigate through the tree to review the scanned channels.

You can preview a particular channel using [VLC player](#). To do this you need to install VLC player on your computer and browse for its executable using ... button at the top of the tab. Then select the channel you want to preview and press “Preview” button. It will automatically start VLC, showing the channel that you have selected.

“Channels” tab contains functionality to set channel numbers to be equal to the channels’ SID. This functionality is especially useful for North American satellites where channel numbers are transmitted in this way. Channel numbers can also be reset to their default values using “Reset channel numbers” radio button.

Complete DVBLink TVSource configuration

When DVBLink TVSource configuration is completed and all channels are scanned, close the dialog by pressing Ok button.

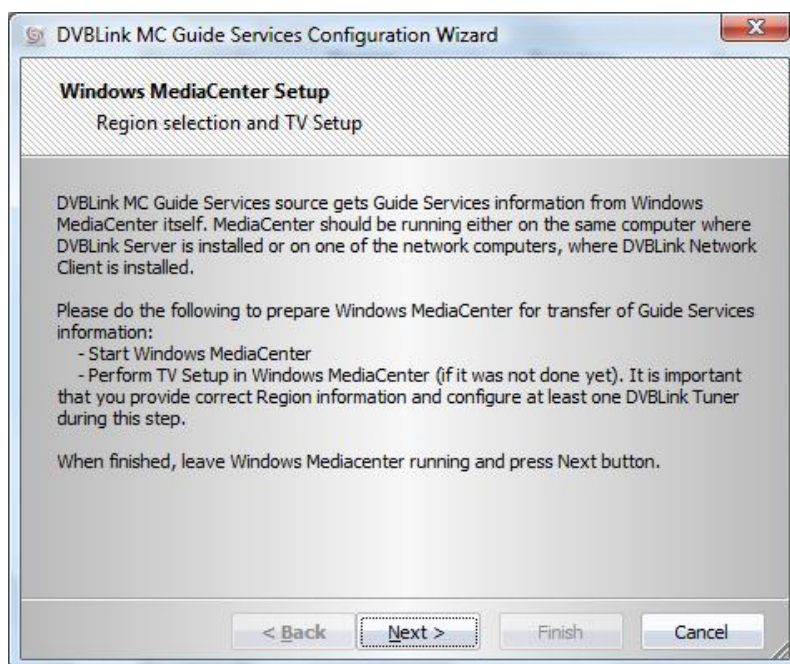
MC Guide Services configuration

MC Guide Service EPG source represents all channels for which EPG information is available from Microsoft as part of its own Guide information support. MC Guide Services source does not provide any EPG information on itself. It only serves as a helper for quick EPG configuration inside Windows MediaCenter.

It is highly recommended that you configure MC Guide Services source and actually use it for EPG channel mapping. It will greatly simplify your MediaCenter configuration and configuration of DVBLink network clients.

MC Guide Service has to be configured once before it can be actually used. During its configuration phase it downloads information about available Guide services from Windows MediaCenter.

Properly configured MC Guide Services source has a green tick mark at its status field. If status is shown with a red stop sign, press ... button next to the source itself. The configuration wizard will appear, which tells you exactly what has to be done:



You need to start Windows MediaCenter on this machine and perform TV Setup as described in Windows MediaCenter TV Setup chapter. Once TV Setup is finished, leave MediaCenter running (important!) and press Next button. MC Guide Services source will download its configuration data within 5-10 seconds and inform you about it once configuration is completed. If no information is downloaded within 15-20 seconds, you may need to close Windows MediaCenter and start it again.

Important! If you are installing DVBLink TVSource on the machine where there is no Windows MediaCenter – e.g. Windows XP, Windows Vista Professional or without TV Pack, WHS – you need to configure Windows MediaCenter on one of the network machines using DVBLink Network Client. Please refer to DVBLink Server Network Pack installation manual for the instructions on how it has to be done.

(Optional) XMLTV Source configuration

What is XMLTV?

If for some of your channels there is no EPG information provided by Windows MediaCenter, you may consider using alternative EPG source for them – XMLTV.

XMLTV EPG information is delivered in form of xml files. These files have internal structure, described by XMLTV standard (<http://www.xmltv.org/>).

Each xmltv file consists of a channel description section and a program description section. The first one lists all channels, present in the xml file, and their properties. The second one contains actual program for each channel. Each xmltv channel should be uniquely identified by its channel id. For example consider the following excerpt from xmltv file, showing structure of a channel description:

```
<channel id="293">
  <display-name lang="eng">Travel</display-name>
</channel>
```

XMLTV Source configuration

To use XMLTV EPG source you need to instantiate it first. To do this select XMLTV source in the left pane (Source templates) and press a button with green arrow.

XMLTV source will prompt you for the location on your hard drive where your XMLTV files reside.

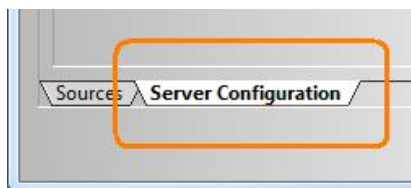
XMLTV file management

DVBLink reads all xmltv files from XMLTV input directory on its start-up and re-reads them every hour. Program for each channel is aggregated from all parts, found in different xmltv files.

When program needs to be updated, just copy new xmltv files to XMLTV Input directory either overwriting existing files or putting new ones next to old ones. DVBLink can handle up to 3 months of program information. *For the efficiency reasons it is strongly advised to remove (very) old and unreferenced EPG information from xmltv files, residing in XMLTV Input directory.*

Server configuration

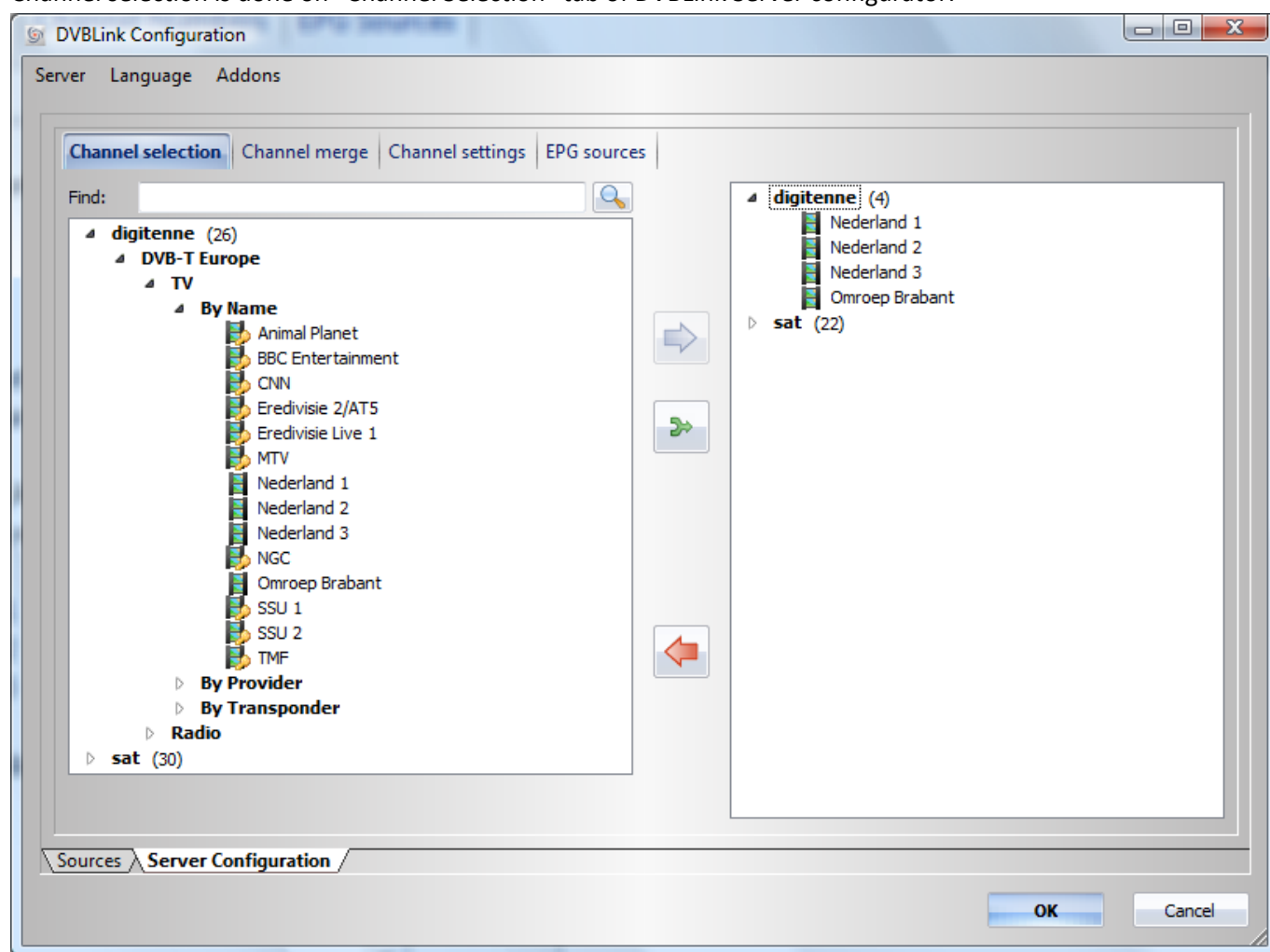
To do DVBLink Server configuration – channel selection, channel merge, channel numbering and mapping of EPG sources you need to switch DVBLink Server configurator to *Server Configuration* mode:



Server configuration: channel selection

Channel selection is a very important step. **By doing channel selection you are actually choosing the channels that will be available to Windows MediaCenter via DVBLink Server.**

Channel selection is done on “Channel Selection” tab of DVBLink Server configurator:



This tab has an overview of all available sources and their channels in the tree view on the right side. User can select individual channels or whole tree branch, containing multiple channels, and add them to selected ones by pressing green arrow button. Individual channels can be added also by double-clicking on them.

Selected channels are shown in the tree view on the right side of the window.

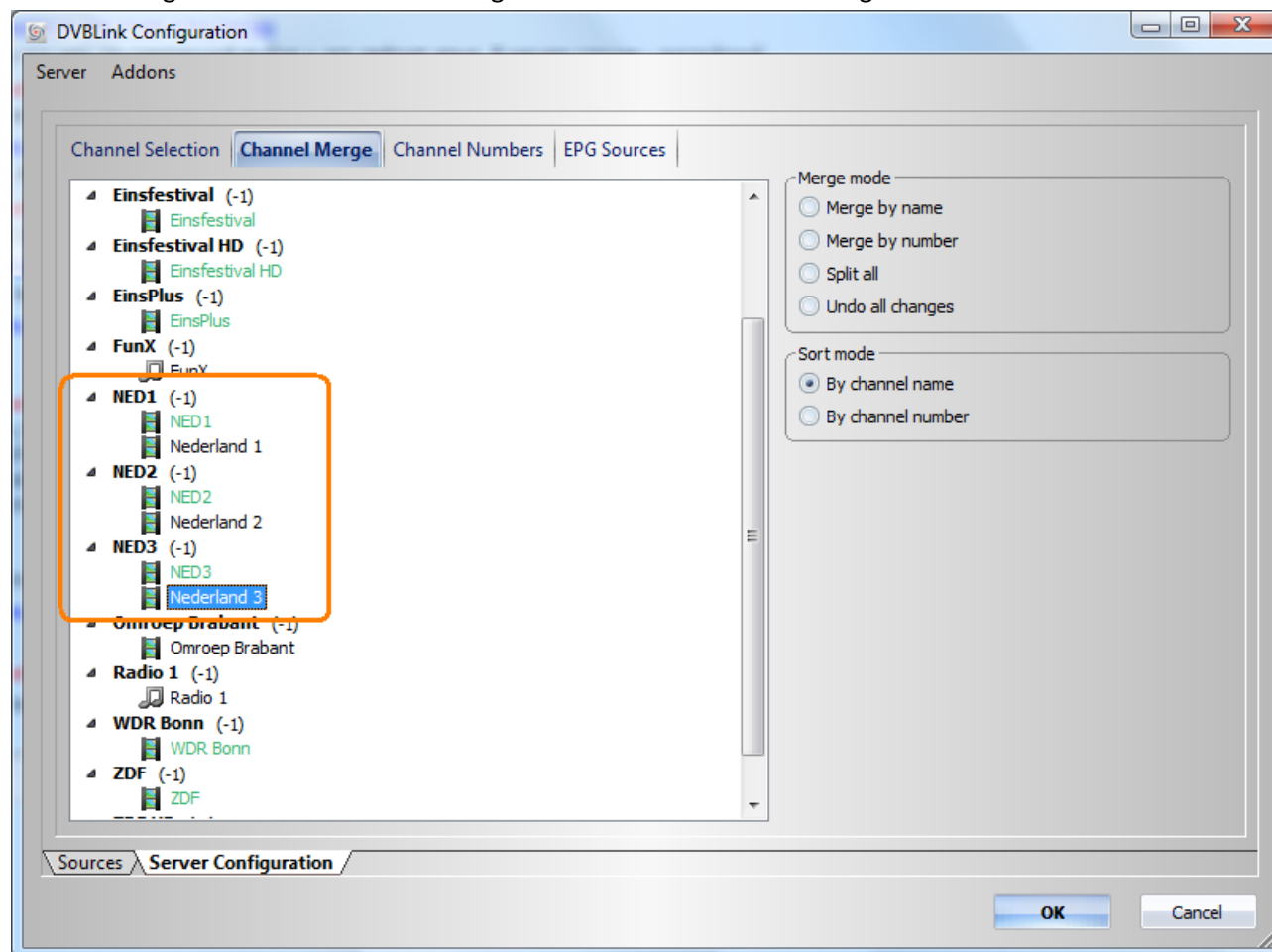
To remove a channel from the list of selected channels, highlight it in the tree on the right and press the button with red arrow.

Server configuration: channel merge

Channel merge is a very powerful and very important concept of DVBLINK Server. **By merging channels from different sources into a single logical channel user allows DVBLINK Server to perform efficient tuner sharing among all its clients.**

Merged channel combines individual channels, which provide the same logical content. These individual channels do not have to be physically identical – they may be offered by different networks (satellite, cable or terrestrial) or by different providers.

Channel merge is done on “Channel Merge” tab of DVBLINK Server configurator:



This tab has a tree view showing all selected channels. By default each selected channel will be individually available to MediaCenter unless user merges it with another channel.

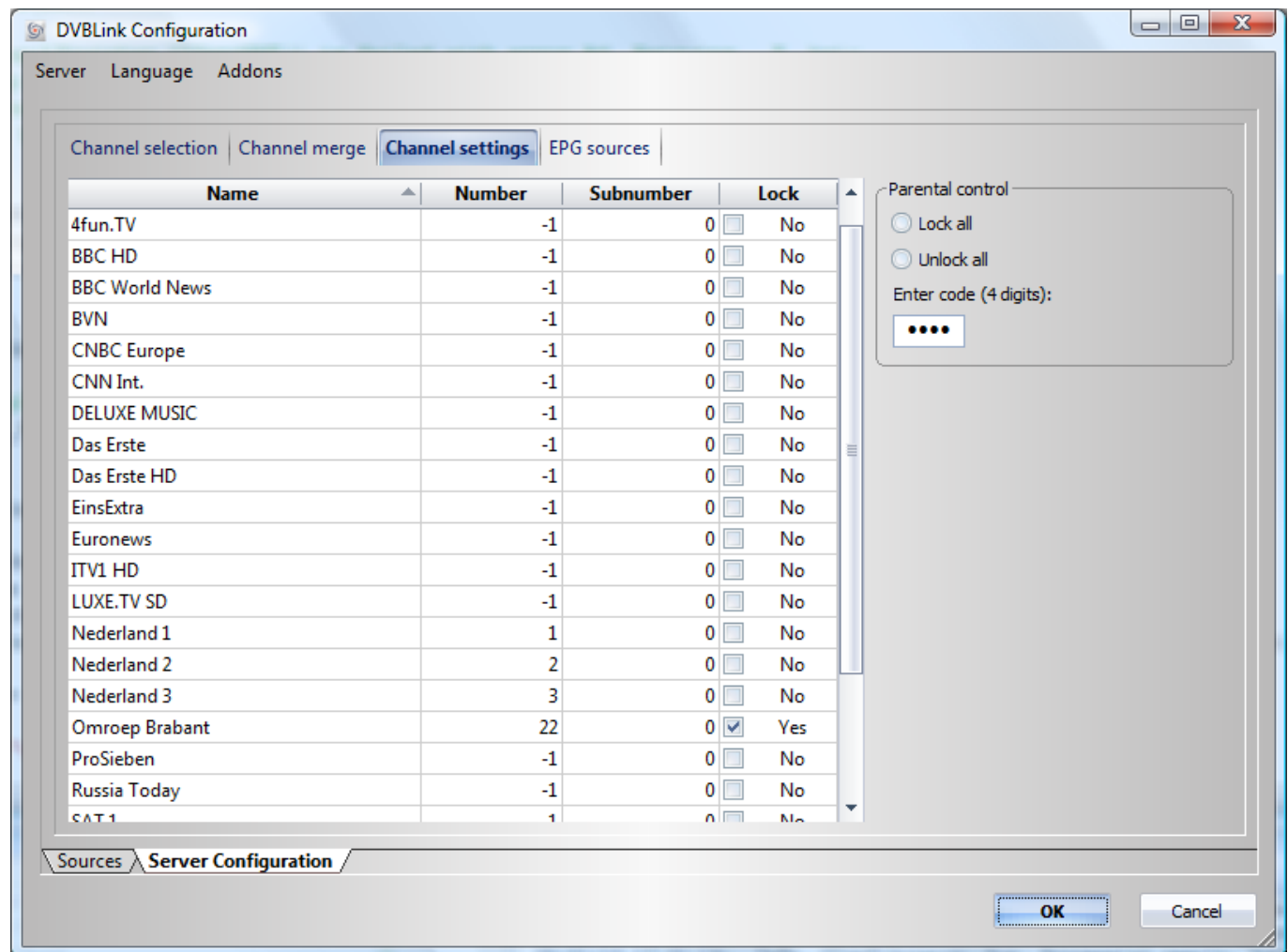
Consider the example in the picture above to understand how merge works. In this example we have 3 channels – Nederland1, Nederland2 and Nederland3 offered by a satellite provider and 3 channels – NED1, NED2, NED3 offered by a terrestrial provider. Each pair of these channels have identical content (e.g. these are actually the same channels) – Nederland1 and NED1, Nederland2 and NED2, Nederland3 and NED3. So for user it should not matter whether DVBLINK Server takes it from satellite or terrestrial provider when asked for one of these channels.

The channels can be merged by dragging and dropping them on another channel or with automation techniques like merging by channel name or by channel number.

Important! Try to merge as many channels as you can to fully exploit the sharing power of DVBLINK Server.

Server configuration: channel settings

“Channel settings” tab of DVBLink Server configurator allows user to specify channel numbers for each channel and its child lock settings:



This page shows all DVBLink channels together with their numbers. Channel number “-1” is a default value, meaning that Windows MediaCenter will assign number to this channel automatically.

To edit channel number of a particular channel navigate to this channel and press Enter or a digit to start editing. Press Enter to apply changes.

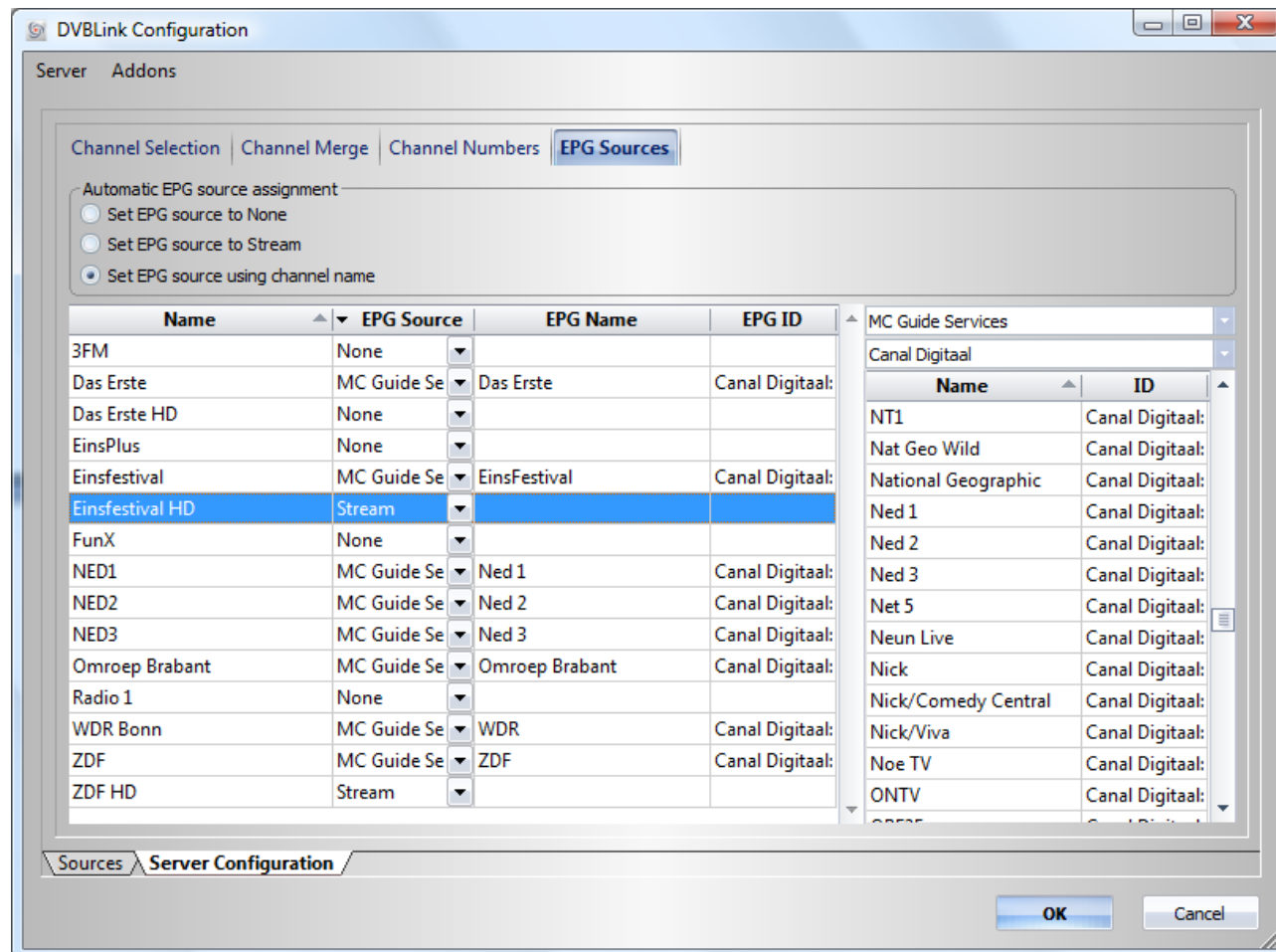
Channel numbers do not have to be consecutive – they may start from any number and have gaps.

Child lock feature allows user to specify which channels require entering a child lock code to be viewable. This tab also allows specification of the lock code itself. The code should consist of 4 digits. The default value is **0000**.

Server configuration: EPG Sources

Important! Perform EPG source mapping for your DVBLink channels! It will greatly simplify channel synchronization process in Windows MediaCenter (both local and remote).

EPG Sources tab of DVBLink Server configurator helps user to assign source of EPG information to each DVBLink channel:



This page shows list of DVBLink channels on the left and all available EPG sources and their channels on the right. Next to the available EPG channels you may opt for getting EPG information from the stream or turn it off completely (by selecting *None* in EPG Source combobox).

To assign an EPG channel to a particular DVBLink channel, select this channel in the left table and double click on the desired EPG channel in the right table. Double click on the DVBLink channel to remove existing EPG channel mapping.

Important! Try to map as many DVBLink channels as possible to the EPG channels of MC Guide Services source. EPG information for these channels is provided by Microsoft itself as part of its Windows MediaCenter functionality.

Tip! Use "Set EPG source using channel name" function when mapping EPG channels. It will intelligently compare names of the channels to find a best match.

Windows MediaCenter Setup

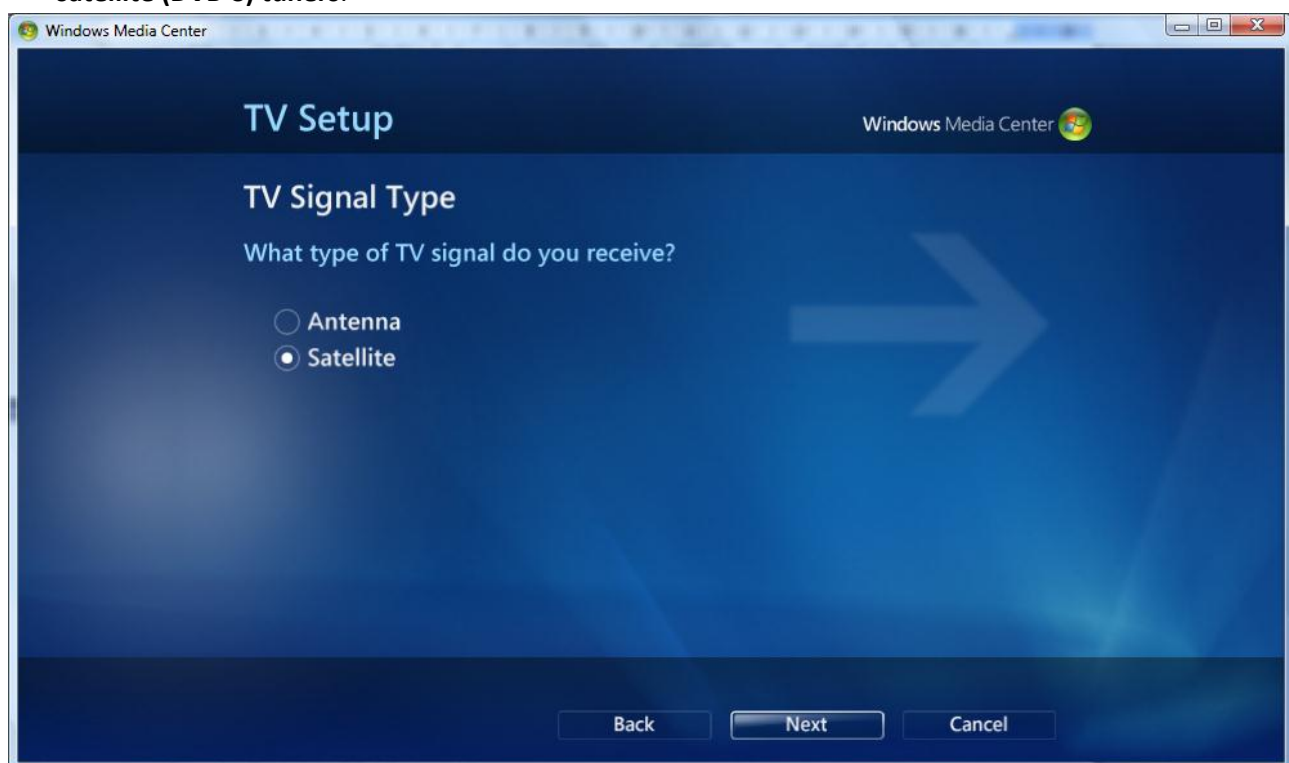
TV Setup

(You can skip this part if you have already performed TV Setup to configure MC Guide Services source)

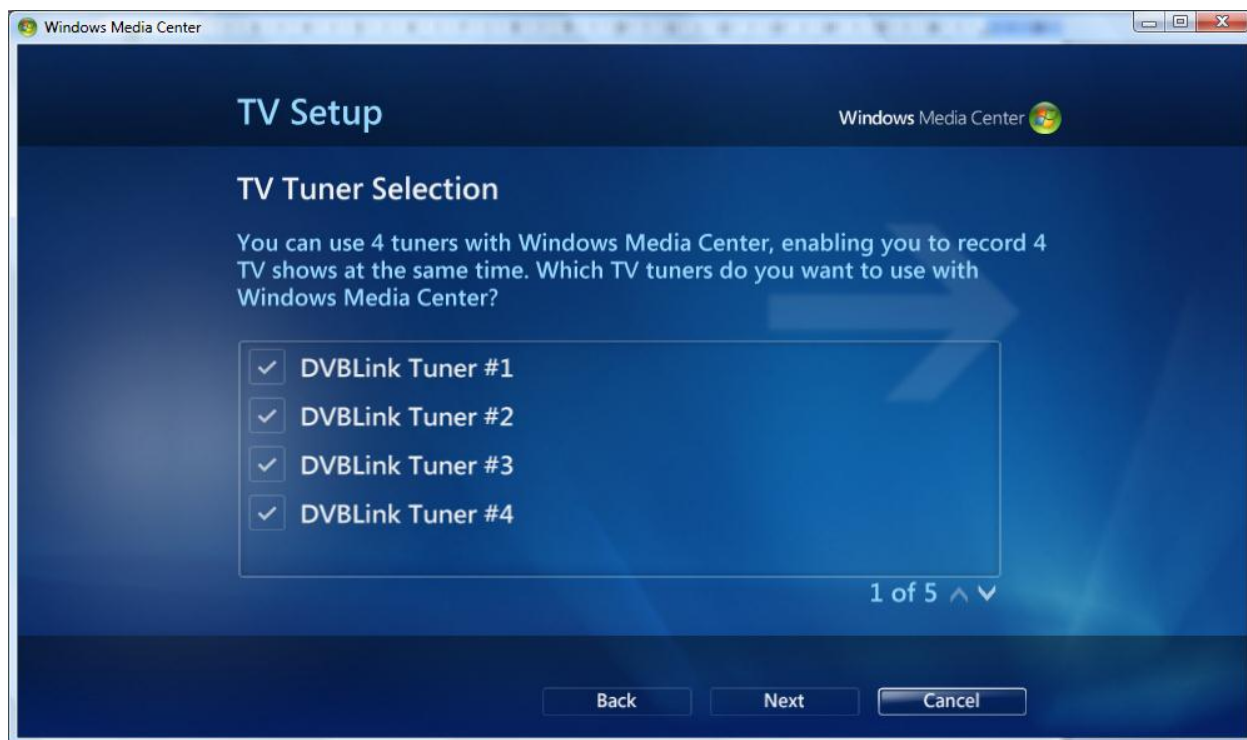
TV Setup should be performed only once when DVBLink Server is installed for the first time.

To do TV Setup start Windows MediaCenter and go to Settings -> TV -> Setup TV Signal. This starts a TV Setup wizard. Follow the steps of the wizard to setup your TV Signal:

- Select your actual Region
- Enter your actual postcode
- Agree to the terms of Guide services
- At this point Media Center starts downloading of latest TV setup data for your region
- If prompted to select which tuner you would like to setup – select **Satellite! DVBLink Tuners are virtual satellite (DVB-S) tuners:**



- Tuner selection: select all DVBLink Tuners. Unselect all other satellite tuners (if you have them present):



- Select a satellite: **Select any satellite from the list** (like ABS-1 satellite, shown in the picture below). **It does not matter which satellite you select here.** You will not see any channels from this particular satellite as they will be substituted with DVBLINK channels during channel synchronization procedure.

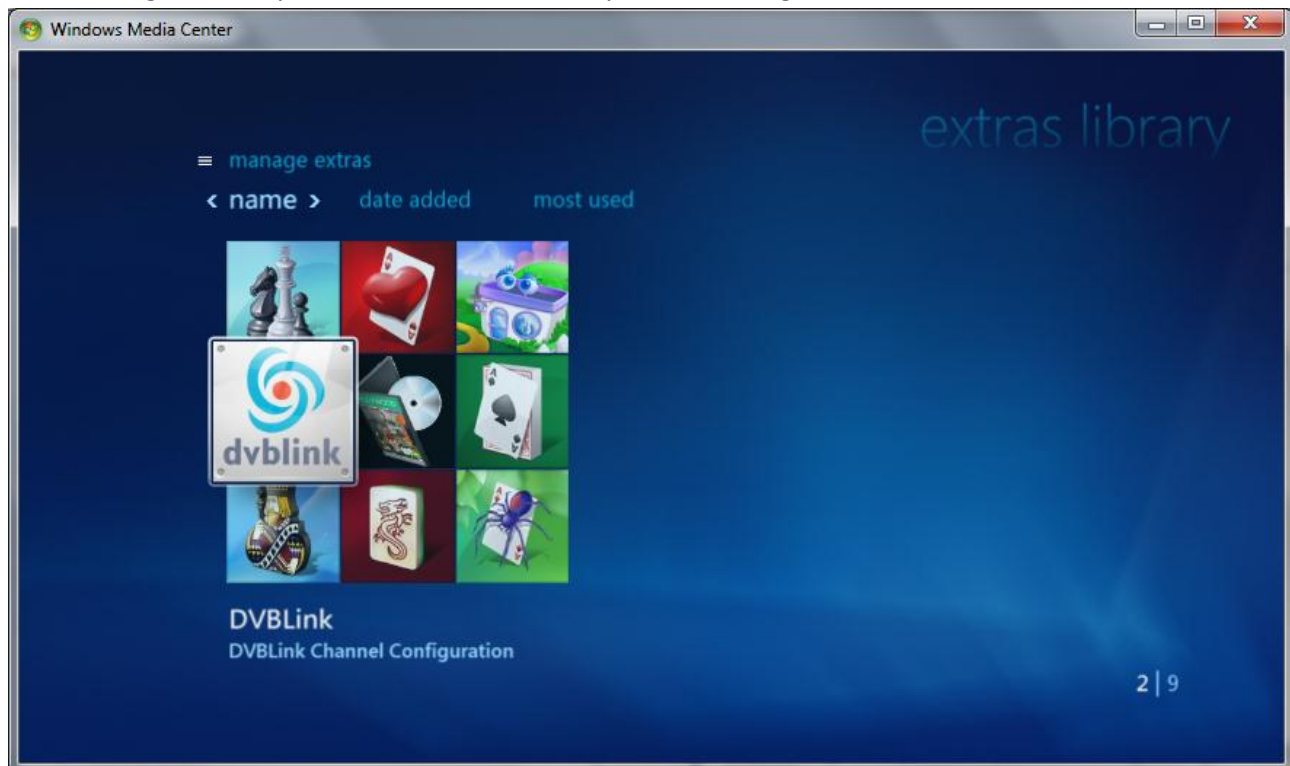


- Select LNB type: select Universal LNB type
- Press Next on the Satellite Summary screen
- At this point MediaCenter will ask you whether you want to configure other available tuners. You may want to configure additional tuners if you have them (*those which are not controlled by DVBLINK Server!*).
- Review the TV Signal Configuration summary and press Next
- Press Finish to finish TV Signal setup

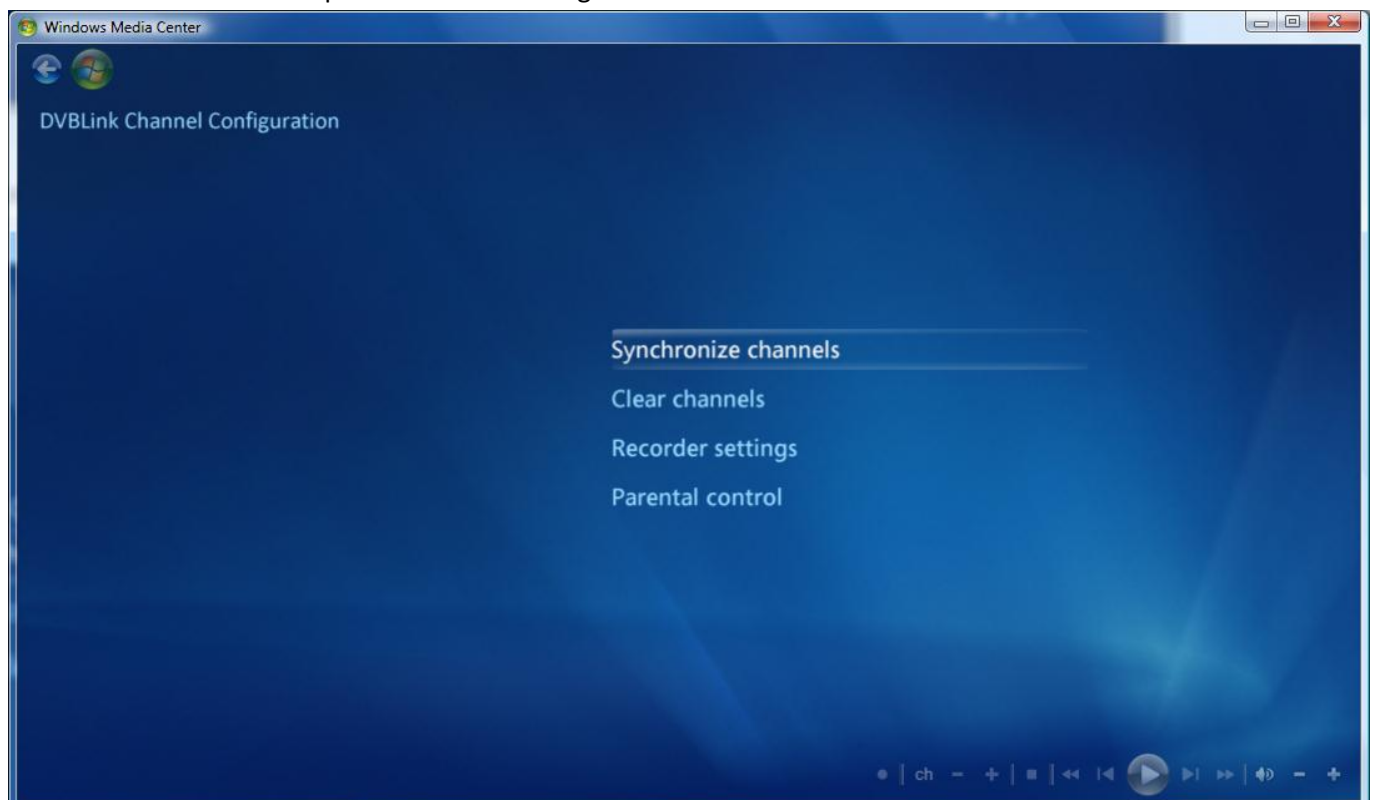
DVBLink configuration

DVBLink channel synchronization is done via DVBLink Channel Configuration MediaCenter addin. This addin is located in

- Extras section of MediaCenter if you are running Win7
- Program library section of MediaCenter if you are running Vista

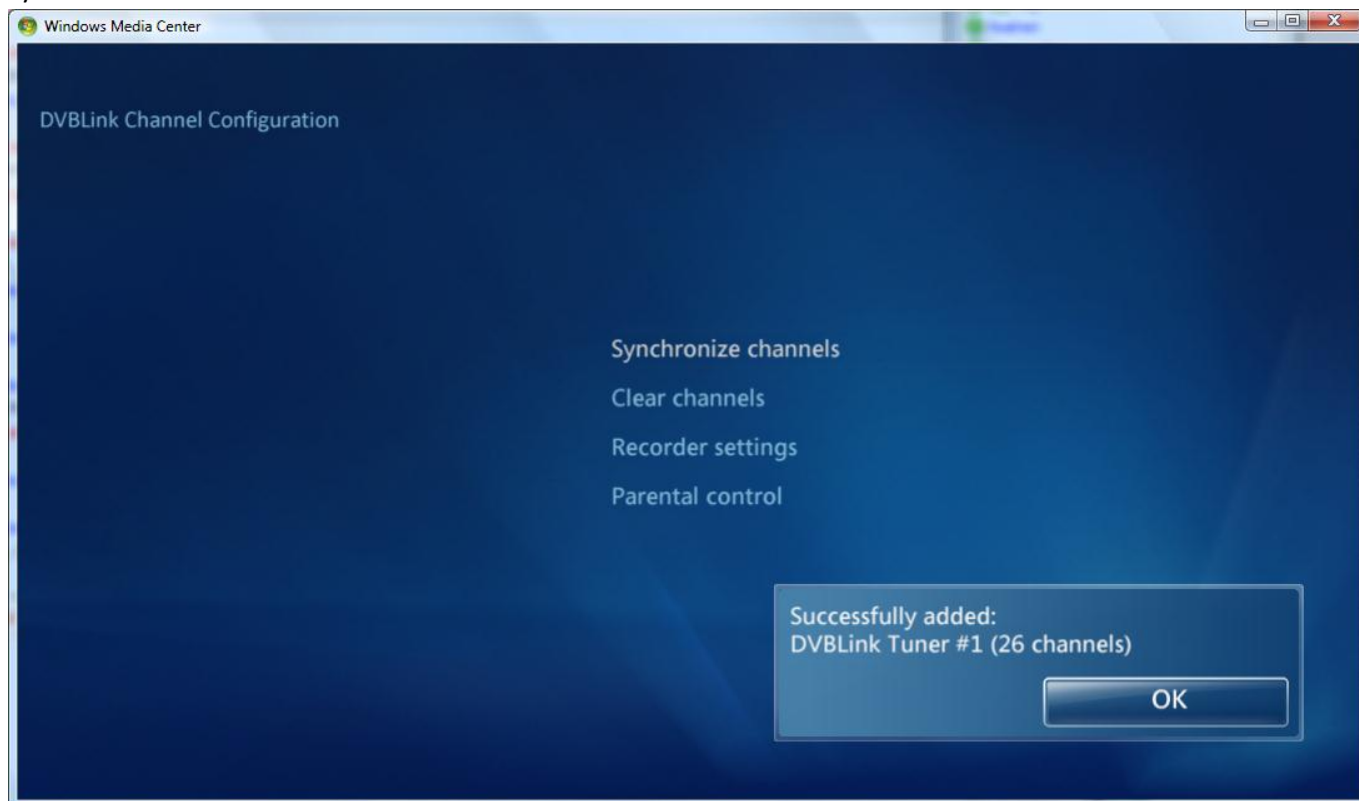


When addin is launched it presents the following screen to a user:



Channel synchronization

When *Synchronize channels* button is pressed, addin starts channel synchronization. This procedure may take some time depending on the number of channels, which have to be synchronized and speed of your computer. When channel synchronization is finished, user will be presented with a dialog, showing DVBLink tuners for which synchronization was done:



Recorder settings

In a multi DVBLink client environment DVBLink Server allows for one MediaCenter to be a “**default recorder**”. DVBLink Server guarantees that channel change requests from this MediaCenter will succeed even at the cost of other connected clients for your timer recordings to happen.

You can select whether this particular MediaCenter is the default recorder in the Recorder settings menu:



Press “Set as default” button to make this MediaCenter the default recorder.

Press “Reset” button to reset default recorder status.

At this point your DVBLink installation and configuration is completed and you can start watching TV in your Windows MediaCenter. Enjoy!

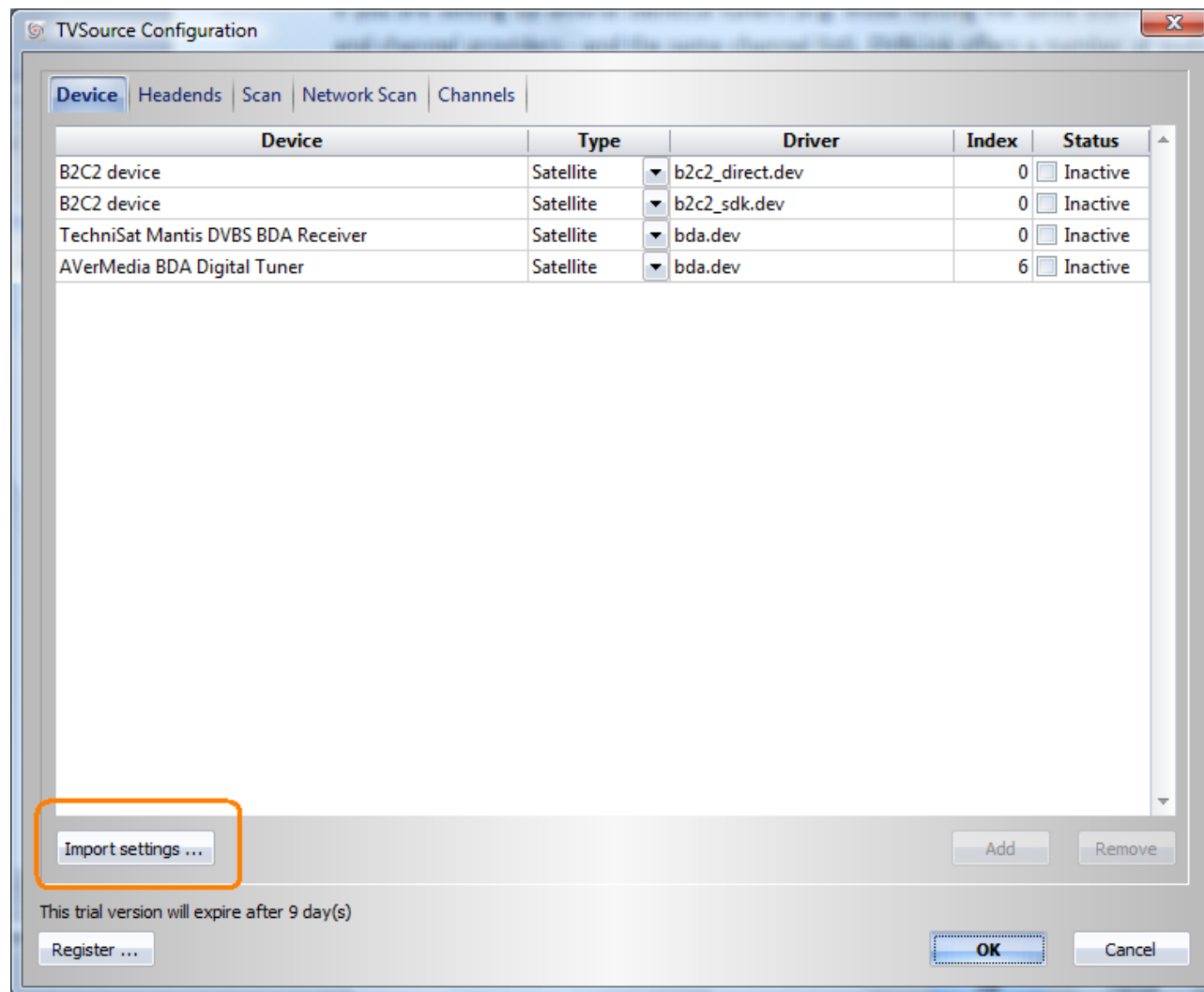
Setting up multiple identical tuners

If you are setting up several identical tuners (e.g. those having the same scanning properties – headends and channel providers - and the same channel list), DVBLink offers a number of tools that greatly simplify this work.

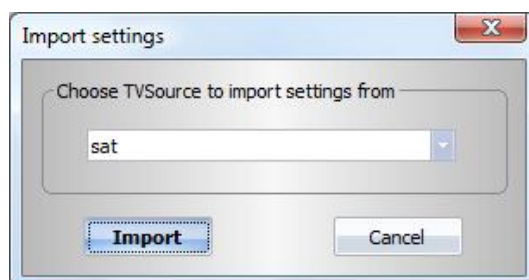
In general you have to do the whole setup and configuration work for one of the tuners and then copy the settings to all others with the help of two tools: tuner settings import and smart channel selection.

Tuner settings import

This tool copies tuner configuration and scanned channels to another TVSource instance. To use the tool open configuration dialog of the TVSource source to copy the setting to by pressing its ... button:



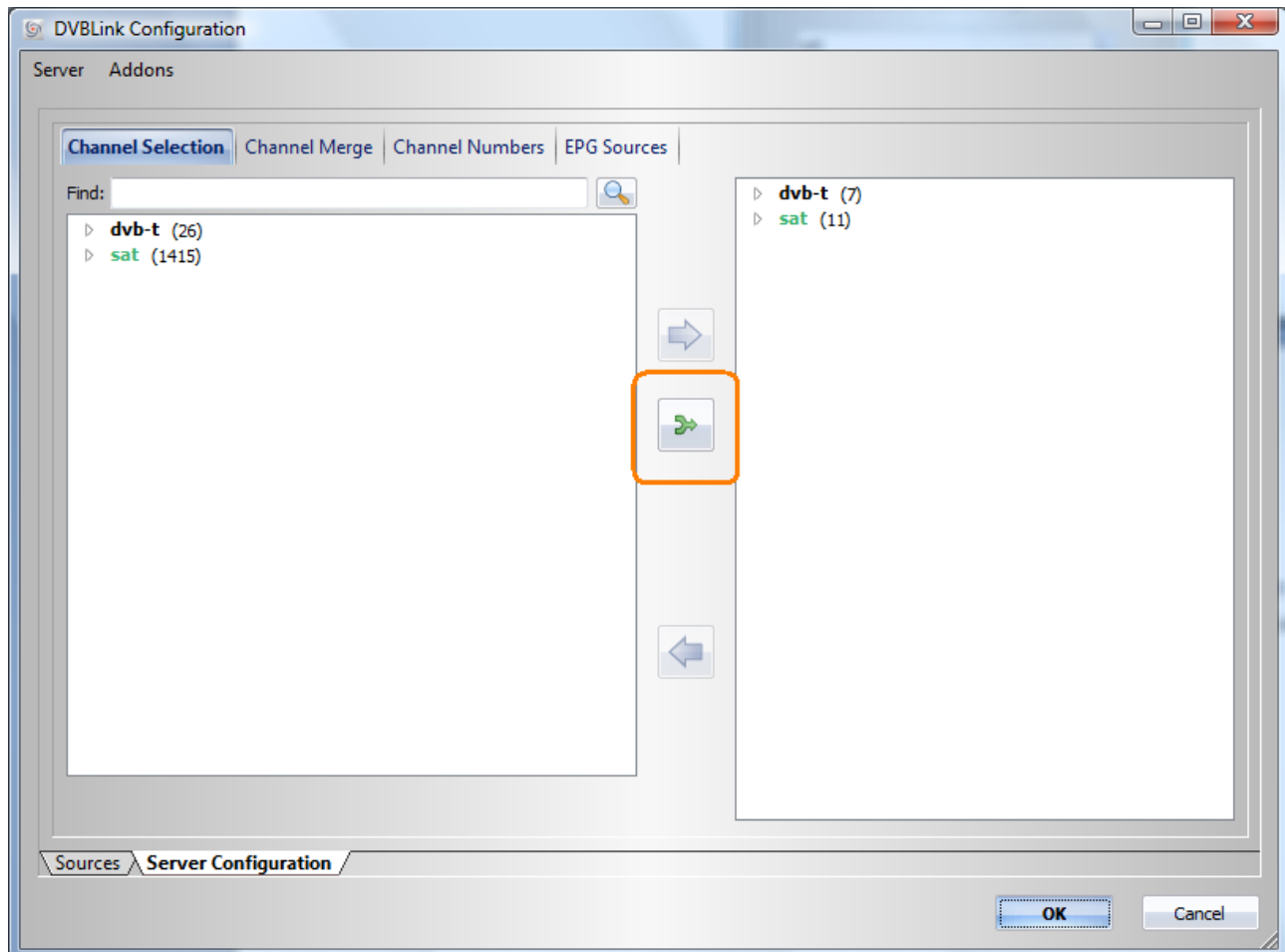
Press *Import settings...* button and select the TVSource source to copy the settings from:



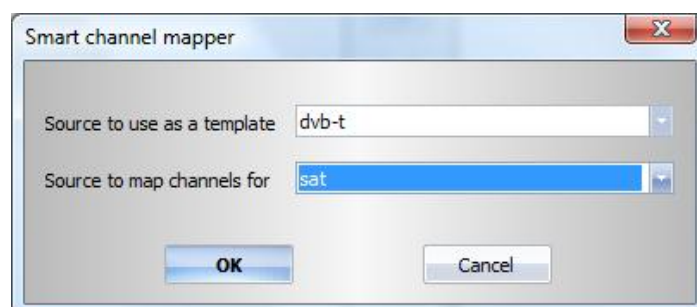
Press Import button to copy tuner configuration data and scanned channels.

Smart channel selection

Smart channel selection uses one of the sources with selected channels as a template and selects the same channels of another source. Smart selection functionality is accessed through a special button on Channel Selection tab of DVBLink Server configurator:



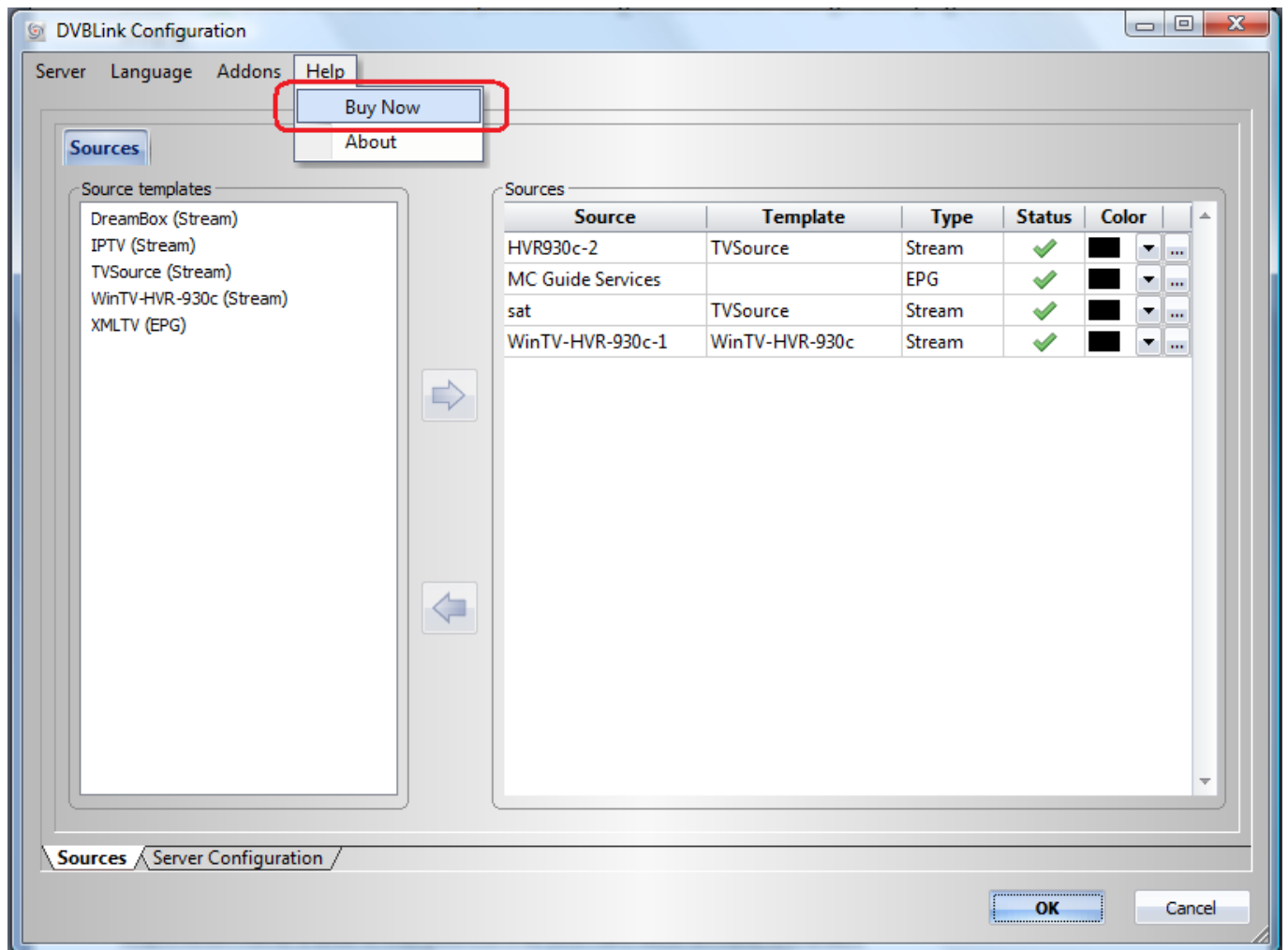
Once pressed it shows smart channel selection dialog that allows you to choose a source to be used as a template and source to apply this template to:



When Ok button is pressed DVBLink automatically selects all channels that are selected in the template source.

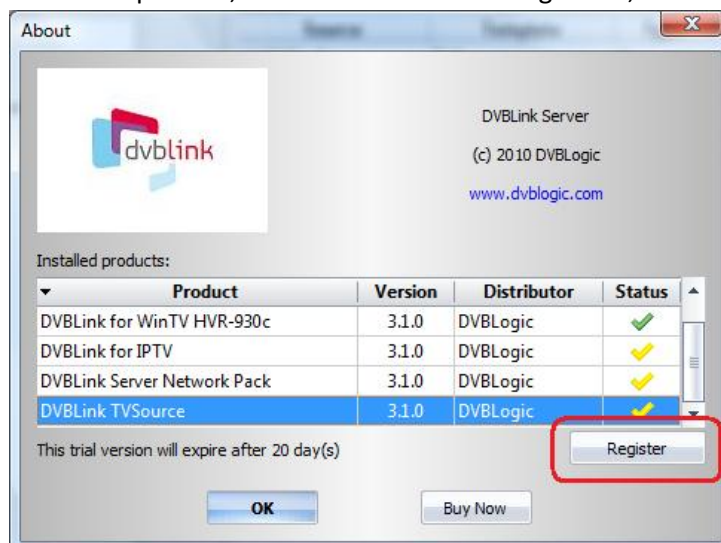
Software registration

DVBLink TVSource license can be purchased using DVBLink Server Configuration program:

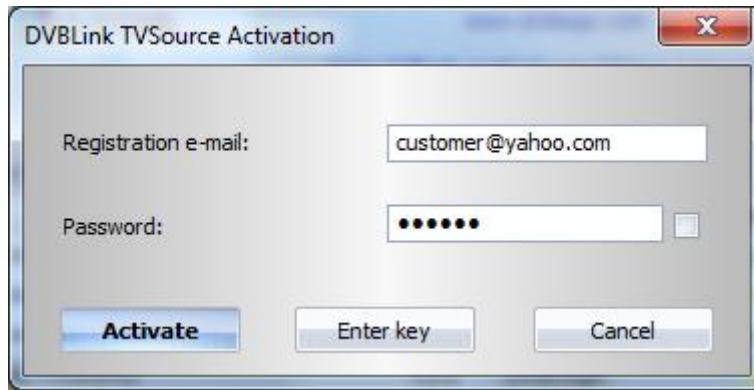


Once we have received your order, we will immediately send to you an e-mail containing information how to access our DVBLink License Portal.

To activate your copy of the DVBLink product, run DVBLink Server configurator, select Help->About menu:



Select the product in the product list and press Register button for Activation dialog to appear:



Enter your DVBLink license portal login information, that you have received in the e-mail, into the correspondent dialog fields and press Activate button.

Please remember that registration information of DVBLink TVSource is locked to a specific PC, where it is running. It might happen that after HW changes the registration information becomes invalid. If this is the case, please contact DVBLogic at **info@dvblogic.com** to get a new key.

Support

If you have problems to get DVBLink TVSource running, visit our forums at

<http://dvblogic.com/phpBB3/index.php>

There you will be helped by our developers to solve your problem.