DVBgrab 2.0

Installation and user manual

1 Installation and maintainance

The applications can be engaged as 2 separate ensembles, that we can call frontend and backend.

1.1 Frontend

It is an interface between application and user, in this case it is web application running on Apache server with PHP module. Also the database can run on the same server.

1.2 Backend

It is that part of application, which runs on the background and provides own records making. From the server, where backend is running, also the results distribute. If we don't have enough space, it is possible to divide the application to other server, which would take care of distribution and the records would be kept after their saving on the distributive server, e.g. by means of NFS sharing. Conversely, if we want, backend can run on the same server as frontend.
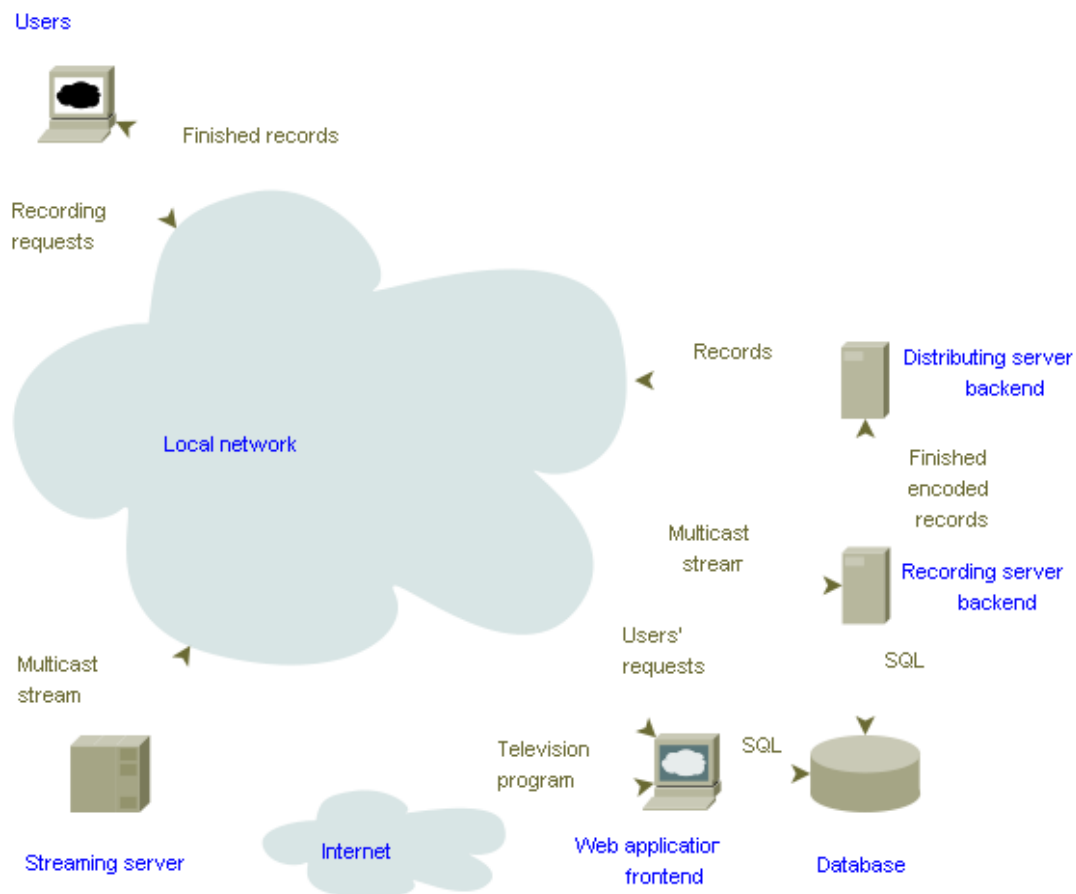
Figure 1.1: Components of DVBgrab

1.3 Necessary libraries and helping programs

1.3.1 Apache

We will need Apache as the web server both on backend and frontend server.

At least for backend server it is good to use either version 1.x or 2.2, because version 2.0 had some problems with files bigger than 2GB, what happens often to created grabs.

1.3.2 PHP

It is necessary to have module to Apache on web server. On recording server PHP interpreter accessible from command line is enough. Usually installation contains both. Application was tested for both PHP version 4 and 5. In PHP some extensions must be allowed, see below.

1.3.3 php-pear-Log

Log system, analogue log4j for Java. It is necessary for both servers and by means of it all messages are written to log files. 4 log files are used and they are in subdirectory log.

- **dvbgrab.log** – general messages of system
- **dvbgrab.log.sql** – all SQL statements, which are executed
- **dvbgrab.log.sys** – all command line statements, which are executed by PHP
- **dvbgrab.log.clean** – logging output from maintainance script.

Logging SQL and system commands can generate quite big logs, that's why after debug of application it should be turned off in dolib.inc.php.

1.3.4 php-json

Support for JSON (JavaScript Object Notation) to PHP. JSON is used for requests for a detail of TV show or record in the list of records. It is an alternative notation, which is returned for executing XMLHttpRequest from javascript. This extension facilitates generating JSON answers in the script, which loads a detail from database, and executing received answers on the web site.

1.3.5 php-adodb

A library for abstract approach to different databases. All executions to database translates from its syntax to syntax of used database machine.

1.3.6   XMLTV

If you want to use XMLTV module for loading television program, it is necessary to install this package. Either you'll find right there downloading script or you'll appreciate at least script tv_sort.

1.3.7   Database

DVBgrab should work with any database, that is supported in ADOdb. It is tested on Post-greSQL and MySQL, also the scripts for founding of database are ready in syntax for MySQL and PostgreSQL.

1.4   Downloading DVBgrab

DVBgrab is accessible on sourceforge.net. Available are also both published versions and reading from development repository subversion.

You'll find a link to versions on the website of the project http://dvbgrab.sourceforge.net/.

For export from the repository subversion use this:

Older version **dvbgrab-1.0**

```
svn export --username anonymous \
https://dvbgrab.svn.sourceforge.net/svnroot/dvbgrab/tags/dvbgrab-1.0 dvbgrab
```

Actual version **dvbgrab-2.0**

```
svn export --username anonymous \
https://dvbgrab.svn.sourceforge.net/svnroot/dvbgrab/tags/dvbgrab-2.0 dvbgrab
```

Development version

```
svn export --username anonymous \
https://dvbgrab.svn.sourceforge.net/svnroot/dvbgrab/trunk dvbgrab
```

1.5   Founding of database

In the subdirectory sql there are ready scripts convert.sh, mysql.sql, postgres.sql, data.sql.

- **convert.sh** – is for conversion database data from dvbgrab-1.0 to dvbgrab-2.0, though this conversion isn't recommended and it is more safe to convert only users' accounts. Both versions of DVBgrab keep running concurrently for some time (old DVBgrab keep available e.g. under another name) and actual requests let be solved in original version and when they are executed, cancel the old version and keep only the new one
- **mysql.sql** – founds all necessary charts for DVBgrab on MySQL

- **postgres.sql** – founds all necessary charts for DVBgrab on PostgreSQL
- **data.sql** – inserts some initial notations into the charts.

Into the chart param it inserts date of the last updating of users' accounts (sometimes in former times).

Into the chart tvgrabber adds two notations of scripts for downloading television program. These notations can be further modified by means of web configuration interface, but we can modify them already here. At least it would be good to choose some random terms of starting in cron, so that all installations of DVBgrab won't connect to servers along with the program. Into the chart the encoder will add five notations, one for MPEG-2 and four for MPEG-4 with differently big resolution of notation.

Then it will add television channels (ČT1, ČT2, Nova, Prima) to channel. Now it is good to check IP addresses and ports, from which system has to save the channels and to make sure that eventual xmltv module uses the same ID of channel as in this chart. If we add new channel, we determine also new name of the file with logo and we save logo to directory images.

Finally we can add several messages for users into the chart, that will display on the web interface in section News.

1.6 Configuration of DVBgrab

We save downloaded directory on web server to selected path (e.g. /var/www/dvbgrab). On web server apache we can set virtual server, which publishes directory with DVBgrab under another URL than the name of server, e.g. http://dvbgrab.domain.cz.

As initial file we use distributional configuration file config.php.dist, which we copy as config.php. We check, if ADOdb refers to the library php-adodb, in case of need we modify target of the reference so that it will correspond to our ADOdb (in accordance to distribution).

If we want to use web configuration interface, it is necessary to set the right of writing also for the user, under who web server runs. We can provide that by starting of script configure.sh. Now we can begin to use administrative interface, which should be available on URL http://dvbgrab.domain.cz/setup.php. Eventually we can set everything directly by editing of file config.php.

More detailed description of options of the configuration file:

- **db_name** – Determins the name of database, which we founded for DVBgrab.
- **db_type** – Determins the type of database server, one of (access, ado, ado_access, ado_ms-sql, db2, odbc_db2, vfp, fbsql, ibase, firebird, borland_ibase, informix, informix72, ldap, mssql, mssqlpo, mysql, mysqlt, maxsql, oci8, oci805, oci8po, odbc, odbc_mssql, odbc_oracle, odbtp, odbtp_unicode, netezza. pdo, postgres, postgres64, postgres7, postgres8, sapdb, sqlanywhere, sqlite, sqlitepo, sybase, sybase_ase).
- **db_host** – The name of computer, on which database runs.
- **db_user** – The name of database user.
- **db_pass** – The password for access into database.
- **auth_db_used** – Determins, if users will be allowed to use password from any other external database. It means that if we have e.g. database of users of local network and

there passwords for any other services, then we can check users there.

Then the registration will check, if such user exists in external database. If he exists, he has to write the same password as the user of selected name has in external database. If he writes right password, he can be registered and in database of DVBgrab there is instead of his password only word „extern", which means that user uses external password. If the password doesn't correspond to external database, the registration is refused. If user with such name doesn't exist in external database, the registration can be executed and the password is saved into database of DVBgrab. The value 1 means to use external database, the value 0 means not to use.

User with external password is also limited that he can't change password by means of DVBgrab and also new generated password can't be sent to him in case of forgetting it (that should be solved by systems above external database).

- **auth_db_used_only** – Determins if also other users (than those with external password) can be registered and use DVBgrab. That's a way how to limit DVBgrab only for the users, who are registered in our external database (e.g. only registered users of local network). The value 1 means only those with external password, the value 0 means also the others.
- **auth_db_name** – The name of external database in database machine.
- **auth_db_type** – The type of database for external checking, it can gain the same values as db_type.
- **auth_db_host** – The name of computer, on which database for external checking runs.
- **auth_db_user** – The name of database user with access into external database.
- **auth_db_pass** – The password of this user for access into database.
- **auth_db_select** – SQL request for checking password of user, in this string two text strings will be replaced, dvbgrab_username is replaced by filled user's name and dvbgrab_password is MD5 of filled password. If this select returns at least one line, user's name and password are accepted.
- **auth_db_user_select** – SQL request for user, if he exists in external database. In this string only dvbgrab_username will be replaced. If at least one line returns, the user exists in external database. Returned lines should have the structure user's name, password in MD5, user's e-mail, ip address. If we can't determine any columns in accordance to external database, we return in corresponding column NULL.
- **error_status** – Amount of information about originated error:

  - 0 – Each error is published on website.
  - 1 – Each error is sent to designated e-mail.
  - 2 – Each error is ignored. This is default setting.

- **error_email** – E-mail, where information about errors of the web interface will be sent.
- **admin_email** – E-mail, where information about errors in recording system will be sent and from this e-mail e-mails to users will be sent.
- **report_email** – E-mail, where summary information about using of system will be sent.
- **proxy_server** – IP address of HTTP proxy server, if it has to be used for access to external websites (for downloaders television program).
- **proxy_port** – Port for HTTP proxy.
- **grab_history** – How many days recorded TV shows for downloading have to be kept.
- **tv_days** – For how many days in advance television program has to be loaded.
- **midnight** – What hour we'll consider as midnight by dividing TV shows into single days. (Then we understand a television day e.g. from six hour in the morning to six hour next day.)
- **hour_frac_item** – To how big sections we'll aggregate the list of TV shows. 24 should

be dividable by the value without rest. That provides vertical alignment of all television channels.

- **grab_quota** – How many records a week the user can request.
- **user_inactivity_limit** – After how many days of inactivity user's account will be removed.
- **dvbgrab_log** – To which file information about recording process has to be saved.
- **grab_date_start_shift** – How many minutes beginning of recording TV show has to be moved, contrary to planned beginning of TV show.
- **grab_date_stop_shift** – How many minutes the end of recording TV show has to be moved, contrary to planned end of TV show.
- **record_time_after_last** – How long to record selected TV show, if we don't know next TV show (e.g. the last TV show in the night has next one next day in the morning). We set it in seconds.
- **hostname** – The name of computer, from which we distribute ready records. Eventually it can be also the whole preliminary part of URL (if we don't have virtual host in apache set into user's directory). It doesn't end by slash, so e.g. „http://grab.domain".
- **grab_storage** – The directory, to which TV shows will be saved. It is shared directory of all users. It doesn't end by slash.
- **grab_storage_size** – How many GB space we have reserved for recorded TV shows. (Limited by the size for directory grab_storage).
- **grab_storage_min_size** – Minimal amount of free space on recording disc, when we start to remove older records.
- **grab_root** – The directory, where references to ready TV shows will be saved. It has to be accessible for http server. In this directory users' directories will be founded. It doesn't end by slash.
- **grab_backend_lang** – The language, used in backend scripts (cz, sk, en, fr, ..). This will be used only in the case that the message is been sending to admin of DVBgrab or to user, whose last used language isn't saved yet.
- **grab_backend_strip_diacritics** – The sign, if national characters in recorded files should be replaced by their ASCII equivalents, or if the part of the name of record is only ID number of record. Diacritics in some file systems might be not supported or not set to UTF-8, in which we have the names of TV shows. That's why removing diacritics is used, but it isn't possible to solve diacritics completely universal for all characters from UTF-8. For Czech language it works good, in Chinese it would be better to use only ID. The name of TV show including diacritics is then in associated descriptive XML file. The value 0 determins using of ID, the value 1 the name of TV show.

In the last part there is a definition of downloaders television program. We can allow or forbid predefinated. We can also define the new one. Each downloader has 3 important parameters:

- **tvg_name** – The name of downloader.
- **tvg_cron_time** – The time of planned starting by means of cron daemon. Syntax of cron is directly set, that means 5 numbers indicating in sequence minute, hour, day in a month, month, day in a week. Instead of number we can use either asterisk (it means that this data doesn't matter) or */N, where N determins multiple unit, in which command has to be started (*/5 by minutes means each whole multiple 5 minutes). Then the value „0 23 * * 6" means that downloader has to be started every saturday, at 23:00. We choose these data preferably for night-time, when servers of provider won't be under heavy load. Also we try to choose them randomly if possible to minimalize probability that all installations of DVBgrab download from the same servers at the same time.

- **tvg_cron_cmd** – The command, which has to start cron daemon. Usually it will start with setting of working directory to downloading scripts, so that downloading scripts can load helping libraries from DVBgrab on the basis of their relative paths.

If we are already satisfied with configuration, we use the button „Save". That will update the file config.php and writes us information about actual configuration for cron daemon. There we replace „BACKEND_DIR" by real directory, from where backend scripts will be started and we'll copy the statement into the box. On recording server we'll use command crontab -e for editing configuration of cron daemon and we'll insert text from the box. Thereby we establish periodical executing of maintainance script, sending information about using DVBgrab and starting downloaders television program.

If we have recording server separately, it is necessary to move directory backend there. The best way is to do it by means of tar archiver, which replaces symbolic references from directory backend to shared files by their real copy. Then we extract created archive on target server and we replace subdirectory adodb either by right symbolic reference or we keep the copied one from the first server.

Automatic starting of DVBgrab, when the system starts, is provided by script service/dvbgrab, which we modify in accordance to actual location of script dvbgrab_service and we copy it to directory in accordance to distribution (e.g. /etc/init.d/dvbgrab). Then we'll plan, in which runlevels the service will start and where will stop.

1.7   The maintainance of recording server

The maintainance is performed by automatically started script clean.php.

1.7.1   Removing inactive users

Removes users, who didn't sign up to DVBgrab in period of several days (wrt. config option user_inactivity_limit) and they didn't request anything. This will provide removing user and releasing his IP address after his moving from the dorm (unless he uses himself the function for immediate removing his account in advance). It removes also all his requests and his user's address book. An e-mail with information about the removing account will be delivered to the user.

1.7.2   Users' accounts updating

When the user changes the password or distributing IP address, new date of the last change is set in database. This script will always regenerate .htaccess files with every start for all users, who changed their settings between the last running of the script and actual time. Then it will move date of the last updating to the actual time.

1.7.3 Control of unknown users' accounts

Script will control, if there is appropriate database user for all directories, if not, they can be removed, eventually at least printed on the screen.

1.7.4 Removing needless .ts files

All records are saved to the file with .ts extension. With every start of the script these files are controlled, if there exists any unsatisfied request for encoding. If not, .ts file is removed. If yes, it is written to the log file, which format is missing yet to prepare.

1.7.5 Control of free space

In records directory an amount of used space and free space is watched.

The oldest records start to be removed, if maximum enabled size of records directory is exceeded (wrt. grab_storage_size) or if there is less free space than configured constant (grab_storage_min_size).

If it is necessary to remove also the records, which are finished for shorter time than planned records keeping (grab_history), a warning e-mail is sent to admin.

1.7.6 Removing old data

In a database we don't need to keep television program, that is several years old and it is good to display on the web also the finished records after removing. That's why only data older than three times the period for keeping records (3 x grab_history days) are removed from database. Users' requests are removed as well as format requests, own records and television program.

1.8 The manual maintainance of users

Sometimes it is necessary to remove manually those users, who e.g. move from the dorm and don't remove their accounts. If their IP address is given to a new user, who would like to register in DVBgrab before the period for automatic removing original account is exceeded by reason of inactivity, then registration fails by reason of IP conflict. In these cases the best solution is to set manually a date of the last activity of original account e.g. a year ago, and so removing account is provided by the maintainance script, including removing his address book and sending informational e-mail.

For spamming of registered users script backend/send_user_info.php might be used, in which we modify the text of the message and by its start we send the message including sign up data to every user of DVBgrab. This is suitable to use e.g. after the conversion of the database from DVBgrab version 1 to version 2, when the changes in the rules for characters in users names were performed.

1.9   The maintainance of backend scripts

Every start and stop of recording or encoding loops should be provided by script dvb-grab_service, which is a component of installation package. In this script we check the path to backend directory.

Script dvbgrab_service supports these parameters:

- **start** – starts recording and encoding loop
- **startg** – starts only recording loop
- **starte** – starts only encoding loop
- **stop** – stops both loops
- **stopg** – stops only recording loop
- **stope** – stops only encoding loop
- **restart** – restarts both loops
- **restartg** – restarts only recording loop
- **restarte** – restarts only encoding loop
- **status** – shows, if the loops are still running. Then the list of records (which are in the queue and also those which are just saved) is shown for every encoding format.

Stopping of encoding loop is supplemented with restoring of the queue for encoding (by the script backend/encode_queue_restore.php). It means that after stop of the loop request status returns from status „Encoding" to status „Ready", so they can be queued again after restart of the loop.

Displaying the queue for encoding and currently saved records can be provided also manually by means of the script backend/encode_queue_print.php.

We have startup script for operating system (/etc/init.d/dvbgrab), which uses dvbgrab_service when starting and stopping DVBgrab as system service.

2 User's guide

User's guide including screenshots will be placed later on the website of the project http://dvbgrab.sourceforge.net/, because the environment has black background which is not very suitable for printing.

2.1 Registration

Before the first using it is necessary to register your user's account. The registration is executed on opening site of the application. In the form of registration it is necessary to fill in:

2.1.1 User's name

Only small alphanumeric characters without diacritics (small letters of alphabet a-z a 0-9) are allowed. Then you'll use this user's name when you sign up and it will be also shown by your scheduled records. If such user's name already exists, error will be written.

If shared passwords with other projects are used (e.g. shared with a password set for network logging), then submit here the same shared user's name. E.g. in Masaryk dorm Joe Smith has his user's name to e-mail and website of dorm „novakp" and password „12345". If he wants to use the same password also on website of DVBgrab, he has to submit again the user's name „novakp" and password „12345". Thereby it is checked that he is really Joe Smith and so-called external password will assign to him (it won't be saved in database of DVBgrab). If he changes later his password to 54321 on website of dorm, this change will appear immediately also in DVBgrab. These users don't have in DVBgrab available function for sending new generated password after forgetting the old one and also they can't change it in menu account (that should be provided elsewhere).

2.1.2 User's password

For used characters there is the same limitation as for user's name (small alphanumeric characters without diacritics). Password can be anything, only those users, who want to use external password (see above the previous paragraph), have to submit their actual password. The password is submitted twice because of the control. Those, who forget their password and don't have external password, can get the new one to e-mail, which is in the next item.

2.1.3 E-mail

User's e-mail, to which announcements about succesful recording of TV show (including links for its downloading) will be sent, eventually about errors. That's why it is necessary to submit valid e-mail. To this e-mail also the password will be send, if u ask for it after forgetting it.

2.1.4   IP address for downloading

It is submitted automatically with IP address, from which you register. Then in menu account it is possible to change it additionaly. From one IP address only one user can be registered. If the application shows error, that already somebody was registered from this address, it is necessary to write message to this user in order that he'll change IP address to his own one, if he doesn't answer, contact admin of application (he can remove conflicting account).

2.1.5   Video codec

Here you set your preferred compression method of finished records. The list of allowed formats is determined by admin of application. Usually MPEG-2 is available, it is format with low compression, suitable more for further modification than for keeping. Then one hour of TV show has approximately the size of 1GB. Then MPEG-4 variants decrease the size to approximately 500MB for an hour and their parameter „scale" determins ratio, by which the scale will be decreased (MPEG-4 scale 0.125 means, that resulting video will have the size 1/8 from the original and so the resulting file will be much more smaller).

The changes of preferred codec are possible to be executed in menu account and such rule proceeds, that codec which was set in the time of record request will be used for this scheduled record. If MPEG-2 is set and you request TV show ABC and then you find out that you want to record it in MPEG-4, you have to change setting of preferred codec, cancel the request of TV show ABC and request it again.

2.1.6   Icq, Jabber

If you want to let other users contact you, submit please also these data.

If the registration fails for some reason, information with the reason is written. If it succeeds, it is written that the user was successfully registered and he is automatically signed up.

2.2   Sign up

If the user signs up from the other computer or browser than he registered, eventually if validity of signing up expired, he has to submit again his user's name and password. Submitted data are saved to cookies of the browser and they are remembered for a period of 2 years. User's name and password are also removed from cookies of the browser, if you use reference to sign out from DVBgrab. So if you sign up from the computer, which is used by more users, it is necessary to sign out from DVBgrab always before leaving (reference in the upper right corner).

If you forget your password, it is possible to ask for sending new generated password to registered e-mail. It is enough to remember your user's name and e-mail, with which you registered. After signing up with new password it is suitable to change the password to better rememberable one in menu account.

2.3 Record request

The most frequent action is requesting record, this is executed in menu TV program. TV program is displayed for several days in advance, switching day is practised by selection in the upper part of website. In TV program it is also possible to search by submitting part of the name of TV show or its description. Both in program and in search results you request records by click on the name of TV show and confirming dialog window. Then the requested TV show changes colour of its background (showing that record is in scheduled status) and reference to cancel record appears. Number of records in a week is limited, actual number of requested records and limit are displayed in the upper right corner. Procedure is the same, if you want to request also the records, which someone requested already before you. Your scheduled records are differentiated from the others' records by icon of television in the left part of TV show. Further information about TV show is displayed in popup window, which displays after mouse is over the name of TV show. In this additional window both details of TV show and information about scheduled record (if someone requested it) are displayed.

TV show can be requested at latest 30 minutes after its beginning, naturally if nobody requested this TV show before, it will be recorded from the moment of requesting.

Format, in which TV show will be saved, is determined by user's preferred codec, which is set in the moment of requesting (see above section Video codec by user's registration).

2.4 Cancelling record

You can cancel only those grabs, which haven't been telecasted yet. Cancelling can be executed in the list of TV shows by click on the reference „cancel request". You can quickly switch to actually scheduled records from menu „My records".

2.5 Watching status

The record after its requesting goes through several statuses, at first it is only scheduled.

Current status of the record is shown by means of background colour and more accurately by means of the text, which is the part of detailed popup window.

Consecution of single statuses of the record:

- **Scheduled** – from the first request by any user until beginning of recording.
- **Recording** – it should come into this status several minutes before expected beginning of TV show.
- **Recorded** – several minutes after expected end of TV show the status should switch to this status (it differentiates from status „Recording" only by text in window with details).
- **Encoding** – after some time (it can take also several hours until the old records become encoded) TV show is the first in the queue and encoding to selected format can begin.
- **Encoded** – after completion of encoding, this status differentiates again only by text in detailed window and usually it doesn't take for a long time.
- **Ready** – record is published in user's directory and e-mail with this information is sent to the user, also reference for downloading should be displayed in menu „My records".

- **Deleted** – records are kept on recording server only for period defined by admin and it can be shortcut in case free space on disc runs short, so by removing record its status switches to this.
- **Missed** – the first error status signifying that recording server wasn't probably running at all in the period of telecasting TV show. It won't be possible to get these records again.
- **Failed** – the second error status, which can signify only error by encoding, if it is removable error, it is possible that admin removes error and TV show will be published later and will be in status „Ready".
- **Undefined** – the last error status, which happens only in extraordinary situations. All error statuses are marked by the same background colour.

2.6   Downloading records

The most simple way to download records is to click on link, which comes in informative e-mail. You can download your records also from the list in „My records", where link is displayed by finished records in the last column. The last possibility is direct access to URL with user's directory (e.g. http://records.domain/smithj), where are also displayed all user's finished files.

There are always 2 files to every record, avi or mpg with own record and XML, in which there is further information.

Error-free downloading can be checked by calculation of MD5 of downloaded file and by matching with MD5 sum listed in XML file, eventually at least the size of downloaded file should be the same as the size listed in XML file.

In XML file you can check also beginning and end of TV show and its recording.

XML file is displayed in web browser in the form of well-arranged chart, which is created from XML file in accordance to XSL template.

It is generated in user's directory (in accordance to the language, which is used by user on the web interface of DVBgrab) in the file dvbgrab.xsl. If you want to display also downloaded XML files, copy also this file to them to the directory.

The name of the file has following structure, „DVB-" as prefix, then date of recording in format Ymd-Hi (year, month, day, hour, minute) in order that directory with records will be in chronologic and alphabetic sequence. Then follows the name of channel (after removing diacritics) and the name of TV show, either after removing diacritics or only ID of record. The name of series can also contain section defining number of series, episode and part, eventually total count (e.g. S2/5E8P1/2 means that it is 8th episode, 2nd series of 5, 1st part of 2).

2.7   Playing record

It is the best to play records in a program VLC (VideoLAN Client free to download on http://www.videolan.org/), because it is using the same codecs as DVBgrab. In Linux there are no problems with codecs usually.

2.8 Changes in account settings

On the web interface you can change several parameters of user's account.

You are not allowed to change your user's name, if you want another one, you have to cancel your account and create the new one.

Changing password isn't allowed by external passwords, see above section registration.

Changing downloading IP address might not approve immediately. If the change doesn't approve until 24 hours, contact your admin.

Changing video codec approves in accordance to description in section registration.

About all executed changes an informative e-mail is sent to user's actual address.

2.9 Removing account

If you don't want to use or can't use DVBgrab any more, please cancel your user's account in bottom part of website, accessible through menu account. It will release your downloading IP address to user, who can get it after you. Otherwise your account will be removed after e.g. 30 days of inactivity. When you cancel your account, all your scheduled records and user's directory with records for downloading will be removed automatically.

3 Screenshots

Figure 3.1: Login page

Figure 3.2: Main page

Figure 3.3: Records listing

Figure 3.4: User account settings