VOD management system

User guide
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Introduction

VOD management system is used for management all the components included in VOD infrastructure. The procedure is as follows:

After logging you can see the homescreen.
1. Storage

Storage is used for storing the movies and streaming content to the boxes.

By clicking “Add storage” you add a new storage.

Fill in storage name and its IP.

By clicking “Edit” you edit the existing storage. You can edit its name and IP.

By clicking “Detail” you can see the storage details.
You can see the storage capacity, CPU, load, RAM and IOPS.

There are the details about the storage content: ID, title, type, profile/multi profile, uploading progress, status (done, waiting or copying) and information about location on the storage server, filesize, last update etc.

You can search for content using the searching box.

By clicking “Delete” you delete the content saved on the storage.

By clicking “Delete” you delete the storage.
2. Content

Content is used for adding the movies, editing the movies and setting of movie metadata. Content is also used for creating the movie packages, persons in the movies, movie genres and content providers.

There are five options: Movies, packages, persons, genres and content providers.

2.1 Movies

You can search for movie using the searching box.

By clicking “Add movie” you add a new movie.
Fill in a movie title and release date.

You find a new movie at the beginning of the movie list. Click on “Detail”.

There are two options: You can import movie data from the Internet or you can edit these data on your own.
By clicking “Try import data from the Internet” you import movie data from the Internet.

By clicking “Save this” you save movie data from the Internet.
By clicking “Edit” you edit movie data on your own.

By clicking “Back” you go back to the movie list.
By clicking “Detail” you can see the movie details.

There are three options: You can import movie data from the Internet or you can edit these data on your own or you can go back to the movie list.

By clicking “Delete” you delete a movie.
2.2 Packages

By clicking “Packages” you can see the information about the packages: package ID, package name, number of movies in a package, number of active movies in a package and number of customers in a package.

By clicking “Add package” you add a new package.

Fill in a package name.

You find a new package at the end of the package list. Click on “Detail”.
First you must add movies to the package.

Fill in a movie title and available dates.

By clicking “Edit dates” you can edit available dates.

By clicking “Remove from the package” you remove the movie from the package.
You can search for movie using the searching box.

By clicking “Delete” you delete a package.
2.3 Persons

By clicking “Persons” you can see the information about the persons: person ID and person name in alphabetical order.

By clicking “Add person” you add a new person.

Fill in a person name.

You find a new person sorted to alphabetical order. Click on “Edit”.
By clicking “Change” you can edit person name.

You can search for person using the searching box.

By clicking “Delete” you delete a person.
2.4 Genres

By clicking “Genres” you can see the information about the genres: genre ID, genre name in alphabetical order and number of movies in a genre.

By clicking “Add genre” you add a new genre.

Fill in a genre name.

You find a new genre sorted to alphabetical order. Click on “Edit”.

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By clicking “Change” you can edit genre name.

![Edit Genre screenshot](image1)

You can search for genre using the searching box.

![Genres search screenshot](image2)

By clicking “Delete” you delete a genre.

![Genres table screenshot](image3)
2.5 Content providers

By clicking “Content provider” you can see the information about the providers: provider ID, provider name in alphabetical order and the key that is used for seeing the movie statistics.

By clicking “Add provider” you add a new provider.

Fill in a provider name.

You find a new provider sorted to alphabetical order. Click on “Detail”.
You can see the movies from the provider.

There are the details about these movies: movie ID, movie title, original movie title, movie length, IMDb rating, release date, billing group, billing type and if the movie is public (=if the movie is visible on the box or not).

<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Original Title</th>
<th>Length</th>
<th>IMDb rating</th>
<th>Release</th>
<th>Billing groups</th>
<th>Billing type</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>'Gangnam Style' by Pay</td>
<td>'Gangnam Style' by Pay</td>
<td>12 min</td>
<td>6.7</td>
<td>14.10.2012</td>
<td>Basic</td>
<td>Free</td>
<td>☑</td>
</tr>
<tr>
<td>63</td>
<td>A Bug's Life</td>
<td>A Bug's Life</td>
<td>98 min</td>
<td>7.2</td>
<td>28.11.1999</td>
<td>Basic</td>
<td>Free</td>
<td>☑</td>
</tr>
<tr>
<td>34</td>
<td>After Earth</td>
<td>After Earth</td>
<td>100 min</td>
<td>5.6</td>
<td>31.05.2012</td>
<td>Basic</td>
<td>Pay per minute</td>
<td>☑</td>
</tr>
<tr>
<td>43</td>
<td>Age of Heroes</td>
<td>Age of Heroes</td>
<td>96 min</td>
<td>6.6</td>
<td>26.05.2011</td>
<td>Premium</td>
<td>Pay per minute</td>
<td>☑</td>
</tr>
<tr>
<td>58</td>
<td>Aldnochena Kobra 11 - Die Autohuhn</td>
<td>Aldnochena Kobra 11 - Die Autohuhn</td>
<td>90 min</td>
<td>6.1</td>
<td>12.03.1986</td>
<td>Basic</td>
<td>Pay per view</td>
<td>☑</td>
</tr>
<tr>
<td>62</td>
<td>Anohana: The Legend Continues</td>
<td>Anohana: The Legend Continues</td>
<td>119 min</td>
<td>6.6</td>
<td>18.12.2013</td>
<td>Test</td>
<td>Pay per minute</td>
<td>☑</td>
</tr>
</tbody>
</table>

By clicking “Change key” you automatically change the key that is used for seeing the movie statistics.

By clicking “Edit name” you can edit provider name.

You can search for content provider using the searching box.
By clicking “Delete” you delete a content provider.
3. Encoder

Encoders are used for encoding the movies from common format (avi, mpg, iso...) to the encrypted HLS format.

There are four options: Encoders, profiles, advanced profiles and multiprofiles.

### 3.1 Encoders

By clicking “Encoders” you can see the information about the encoders: Encoder ID, encoder name, encoder IP, source capacity (usage of sources folder), encoded capacity (usage of folder for storing encoded movies), load, tx, information about encoder availability and encoder status (ready, stopped or encoding).

By clicking “Add encoder” you add a new encoder.

Fill in encoder name and its IP.
By clicking “Edit” you edit the existing encoder. You can edit its name and IP.

By clicking “Detail” you can see the encoder details.

You can see the encoder ID, encoder IP, sources capacity (usage of sources folder), encoded capacity (usage of folder for storing the encoded movies), load, tx, encoder availability and encoder status (ready, stopped or encoding).

By clicking “Start Encoding” you start encoding.

By clicking “Stop Encoding” you stop encoding.
“Add movies for encoding” displays files in your source data directory. You can select the movie for the encoding process.

By clicking “Set encoding profile” the following form will display with these items:

Content: is used for adding a movie from content to the selected file

App: is used for selecting the program for encoding: Only segmentate, only encrypt, AV, VLC or HandBrake.

- Only segmentate: Firstly encoder segments a movie into the parts and then it encrypts a movie
- Only encrypt: The encoder encrypts a movie (under one condition: a movie must be segmented)
- AV, VLC and HandBrake – the applications for encoding

Profile: is used for selecting an encoding profile for a movie

Advanced profile: is used for selecting an advanced encoding profile for a movie

Trailer: a tick means it is a trailer

Storages: storages where the encoded movies are placed (after encoding process)

Note: profiles and advance profiles can be set only in AV, VLC and HandBrake application.
By clicking “Detail” you can see the encoder details.

The filter has 4 options:

- **Queue** – content that is waiting for encoding or is in the process of encoding
- **Finished** – content that has finished encoding without errors
- **Errors** – content that has finished encoding with some errors
- **All** – all encoded content (queue + finished + errors)

By clicking “Queue” you can see the files queue for encoding: priority (you change it by arrows), ID, file, content, type (trailer or movie), profile, advanced profile, app (OS/OE/VLC/AV/HandBrake), upload storage (the storage where the encoded movie will be copied) and transcoding progress.
By clicking “Finished” you can see the finished files: ID, file, content, type (trailer or movie), profile, advanced profile, app (OS/OE/VLC/AV/HandBrake), upload storage (the storage where the encoded movie will be copied), transcoding progress, playlist (link to movie) and log (info about encoding).

![Finished filter table]

By clicking “Errors” you can see the content that has finished encoding with some errors: ID, file, content, type (trailer or movie), profile, advanced profile, app (OS/OE/VLC/AV/HandBrake), upload storage (the storage where the encoded movie will be copied), transcoding progress and log (info about encoding).

![Errors filter table]

By clicking “All” you can see all encoded content: ID, file, content, type (trailer or movie), profile, advanced profile, app (OS/OE/VLC/AV/HandBrake), upload storage (the storage where the encoded movie will be copied), transcoding progress, playlist (link to movie) and log (info about encoding).

![All filter table]
By clicking “Edit” you edit:

Content: is used for adding a movie from content to the selected file

App: is used for selecting the program for encoding: Only segmentate, only encrypt, AV, VLC or HandBrake.
  - Only segmentate: Firstly encoder segments a movie into the parts and then it encrypts a movie
  - Only encrypt: The encoder encrypts a movie (under one condition: a movie must be segmented)
  - AV, VLC and HandBrake – the applications for encoding

Profile: is used for selecting an encoding profile for a movie

Advanced profile: is used for selecting an advanced encoding profile for a movie

Trailer: a tick means it is a trailer

Storages: storages where the encoded movies are placed (after encoding process)
By clicking “Add or remove” you add or remove the storages for copying the content files.
By clicking “Unset” you unset the encoding task from the queue and you delete the encoded movie files from the server.

By clicking “Delete” you delete the encoder.
3.2 Profiles

By clicking “Profiles” you can see the information about the profiles: profile ID, profile name and output video bitrate and resolution.

By clicking “Add profile” you add a new profile.

Fill in profile name, bitrate, res(x) and res(y) (resolution). If you add 0 on res(x) and some number on res(y) the encoder will fill res (x) by aspect ratio of source content. If you add 0 on both resolution parameters the encoder will use resolution from source content.
By clicking “Edit” you edit the existing profile.

You can edit profile name, bitrate, res(x) and res(y). If you add 0 on res(x) and some number on res(y) the encoder will fill res(x) by aspect ratio of source content. If you add 0 on both resolution parameters the encoder will use resolution from source content.

By clicking “Delete” you delete the profile.
3.3 Advanced profiles

By clicking “Advanced profiles” you can see the information about the advanced profiles: advanced profile ID, advanced profile name and advanced profile encoding settings (preset, tune, level etc).

By clicking “Add profile” you add a new advanced profile.

Fill in advanced profile name and advanced profile encoding settings (preset, tune, level etc).
By clicking “Edit” you edit the existing advanced profile.

You can edit advanced profile name and advanced profile encoding settings (preset, tune, level etc).

By clicking “Delete” you delete the advanced profile.
3.4 Multiprofiles
By clicking “Multiprofiles” you can see the information about the multiprofiles: multiprofile ID and multiprofile name and the profiles that multiprofile contains.

By clicking “Add multiprofile” you add a new multiprofile.

Fill in multiprofile name.

By clicking “Edit” you edit the existing multiprofile.
You can edit multiprofile name or you can add or remove the profiles.

By clicking “Delete” you delete the multiprofile.
4. Billing
Billing is used for setting the prices for the movies and for setting the customer details.

There are two options: Groups and Customers.

4.1 Groups
By clicking “Groups” you can see the information about billing groups: group ID, group name, price per view, loan time per view (in hours), price per minute and number of movies.

By “Add billing group” you add a new billing group.

Fill in billing group name, price per view, loan time (in hours) and price per minute.

By clicking “Edit” you edit the existing billing group.
You can edit billing group name, price per view, loan time and price per minute.

By clicking “Detail” you can see the billing group details.

There are the details about these movies: movie ID, movie title, original movie title, movie length, IMDb rating, release date, billing group, billing type and if the movie is public (=if the movie is visible on the box or not).

You can search for a movie using the searching box.
By clicking “Delete” you delete the billing group.

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Price per view</th>
<th>Loan time per view (hours)</th>
<th>Price per minute</th>
<th>Movies count</th>
<th>Edit</th>
<th>Delete</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic</td>
<td>4.00</td>
<td>24.00</td>
<td>9.20</td>
<td>10</td>
<td>Edit</td>
<td>Delete</td>
<td>Delete</td>
</tr>
<tr>
<td>2</td>
<td>Premium</td>
<td>10.00</td>
<td>48.00</td>
<td>9.20</td>
<td>4</td>
<td>Edit</td>
<td>Delete</td>
<td>Delete</td>
</tr>
</tbody>
</table>
4.2 Customers

By clicking “Customers” you can see the information about the customers. You can see customer ID, customer name, customer identificator and his balance.

**Note:** A new customer can be imported only from xml import file.

You can search for customer using the searching box.

By clicking “Customer detail” you can see the customer details.
By clicking “Show overall” you can see the customer billing information.

By clicking “Show orders” you can see the customer orders sorted by date and time.

By clicking “Delete” you delete the customer.
5. Admin
Admin is used for account management and the other settings.

There are four options: Users, settings, device profiles and import logs.

5.1 Users

By clicking “Users” you can see the information about the users: user’s ID, username, user’s full name, if the user is admin or not, if the user is active or not, the date when the user was created and his last activity.

By clicking “Add user” you add a new user.
Fill in username, password, user full name, his description, click if the user is a super admin (super admin can see the admin menu) and click if the user has active access.

By clicking “Edit” you edit the existing user.

You can edit user name, his password and description, click if the user is a super admin (super admin can see the admin menu) and click if the user has active access.

By clicking “Delete” you delete the user.
5.2 Settings

By clicking “Settings” you can see the information about the settings of currency and date, billing server, the next import and api password.

By clicking “Currency and date” you change the currency and currency format that is shown on STB and date format that is written in management system. Write down the requested changes and click “Save changes”.

By clicking “Billing server” you change the billing server IP which will be demanding for export, you generate a new api key and change script url. Write down the requested changes and click “Change”.
By clicking “Import” you change URL of import xml file, the import interval in minutes (how often VOD imports the customers), import logs archivation time in minutes and the date and time of the next customer import. Write down the requested changes and click on “Change import settings”.

By clicking “Password” you change api password. Write down current api password, new api password, rewrite new api password and click “Change password”.

5.3 Device profiles

By clicking “Device profiles” you can see the information about device profiles.

You can see the device ID, device name and preferred (profiles or multiprofiles).

Note: the device is added automatically, you must add the profiles.

By clicking “Edit order” you edit the profile priority. You change it by arrows.

By clicking “Change preferred” you change preferred.
You can choose profiles or multi profiles.

By clicking “Edit” you edit the existing device profile.

You can add or remove profiles.
5.4 Import logs

By clicking “Import logs” you can see the information about the import logs. There are the details about the import process. If an error occurs you can see it here.

![Import logs table]

- By clicking “Import logs” you can see the information about the import logs. There are the details about the import process. If an error occurs you can see it here.
6. XML import and export

XML export documentation

Example:

```xml
<xml>
<accounts>
  <account>
    <name>Johnny Bravo</name>
    <id>BCD12345</id>
    <import_balance import="2014-03-19 22:54:36">75.35</import_balance>
    <orders_price>18.05</orders_price>
      <order ordered="2014-03-20 18:35:55" type="free" unit_price="0.00" seconds="0" total_price="0.00" expired="2014-03-20 18:35:55">Cars</order>
      <order ordered="2014-03-20 16:31:28" type="pay_per_minute" unit_price="0.05" seconds="3602" total_price="3.05" expired="2014-03-20 17:31:30">Frozen</order>
      <order ordered="2014-03-20 10:25:31" type="pay_per_view" unit_price="10.00" seconds="78" total_price="10.00" expired="2014-03-22 10:25:31">Pulp Fiction</order>
    </orders>
  </account>
</accounts>
```

Description:

- every new account in new account tag
- name: customer name
- id: external user id from billing server
- import_balance: balance get from billing server
  - parameters:
    - import: last import date for this customer before export
- orders_price: total orders price from last import
- orders: customer orders from last import
  - parameters:
    - from: start date of orders output
    - to: end date of orders output
  - order: represents if a customer press play movie, movie name is between tags
    - parameters:
      - ordered: date and time of play movie start
      - type: billing type of movie (possibilities: free, pay_per_view, pay_per_minute)
      - unit_price: price for unit order (for pay_per_view it is price per view, for pay_per_minute it is price per minute)
      - seconds: how much seconds customer watched the movie
      - total_price: total price of order (for pay_per_view it is same as unit price, for pay_per_minute it is unit price multiplied by watch time in minutes)
      - expired: time when order expired (for pay_per_view it is order time + loan time set by management server, for pay per minute it is time when customer ended playing)
      - when played pay_per_view movie multiple times between expiration it is added in order list with null unit and total price
      - free movies are added with null unit and total price
XML import documentation:

Example:
<xml>
  <account>
    <name>Jozef Sosovica</name>
    <external_id>BCD12345</external_id>
    <username>abc2@antik.sk</username>
    <password type="ATK1">password12345</password>
    <pin>1234</pin>
    <services>
      <vod>
        <billing type="postpaid" balance="75.35" />
        <packages>
          <package from="2014-01-31" to="2014-04-02" id="Basic" />
          <package from="2014-02-01" to="2014-09-15" id="Free" />
          <package from="2014-01-01" to="2014-09-15" id="New" />
        </packages>
      </vod>
    </services>
    <devices>
      <limits stb="5" phone="10" all="20" other="5" />
      <device id="ATK00162A800011" />
      <device id="ATK00162A800012" />
    </devices>
  </account>
</xml>

Description:

- every new account in new account tag
- name: customer name
- external_id: external user id from billing server
- username: username for vod server (without spaces)
- password: password for vod account (must be with parameter type="ATK1")
- pin: pin used for playing movie on stb (must have 4 character number)
- services:
  - vod:
  - billing:
  - type:
    - prepaid – customer cannot go under zero credit;
    - postpaid – customer can go to the minus credit;
    - free – free account, all movies will be free for this customer;
    - disabled – disabled vod service
- balance: actual balance from billing server for vod service
- packages: pre-ordered packages (package must be defined in management server)
- **package:**
  - *from:* start date from which the package is available
  - *to:* end date to which the package is available
- **devices:** list of MAC addresses of user devices (must be ATK before MAC)
- **limit:**
  - *stb:* limit for connected stbs for customer
  - *phone:* limit for connected smartphones for customer
  - *all:* total limit for all devices for customer
  - *other:* limit for other devices (except stbs and smartphones)
- **device:**
  - *id:* MAC address of device (must be ATK before MAC)