User's Manual to PowerLIVE!

Release 2.14.3

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Contents

About

The PowerLIVE! program is used to record a results in competitions in powerlifting and weightlifting. It allows automated calculation of points according to defined formulas, generating reports with continuous state in categories, contingents, absolute order and other classificiations, to platform list, and many other functions.

The aim of the program is to replace the use of various types of Excel tables and to provide a simple and yet comprehensive program for full recording (evidence) and management of competitions, as well as to provide a standard for displaying the related order and other important information for the competitors, coaches, referees and viewers.

The output data of the program can be directly published on the web site Powerlifter.cz and provide information of the continous state (continuous results service) of competition even to the online viewer.

1.1 Features

- Evidence trojboje, vzpírání i samostatných disciplín dřep, benč, mrtvý tah, trh, nadhoz a dalších

- Supported rules for: IPF, IWF, IPC, GPC, WPC, WPF, WUAP, IRP, IPO, GPA, WRPF, XPC

- Podpora specifik oproti mezinárodně platným pravidlům pro ČSST, SAFKST, ČSV, SZV, FČST, SAST a FPF

- Various choices of competition level (individuals, contingents, international participation, ...)

- Různé vzorce pro přepočet bodů: IPF Formula, IPF GL Formula, Wilks, Dots, Reshel, Glossbrener, Schwartz/Malone, A.H., Sinclair, RELA, Peidi Score, Allometry Scaling, Siff, NASA, rozdíl a poměr váhy

- Podpora věkových koeficientů: Foster, Mc'Culloch (original i revised), Schwartz Masters, Malone/Meltzer, Meltzer/Faber, Huebner/Meltzer/Faber

- Podpora definice vlastního vzorce (základní vstupní proměnné a možnost aritmetických operací, bez funkcí)

- Support for units of weight (kg, lb), distances (cm, dcm, m, ...) and time, including their conversions

- Definition of custom categories and automatically compiling name by properties

- Support for automatic creation and assigning of competitors into competition categories according to competitors' data

- In categories can be set if the order is determined according to weights, calculated points or by the number of repetitions

- Support for multi-day competitions and competitions divided into morning and afternoon (definition within category)

- Automatic check of the competitor's assignment in the correct category as well as checking the correctness of the category definition according to the rules

- Automatic and configurable absolute order (women together, sub-juniors/juniors/masters, RAW/EQUIP)

- Supporting additional classifications outside the base categories, ie. you can, for example, create more absolute classifications using a defined filter

- For contiongents, you can define the weights and points achieved in the previous round(s), which is then used for calculation of order over all rounds

- The prognosis by declared attempts is supported in to platform list, in results and even in absolute order

- Teams, clubs and countries classifications based on achieved places, number of medals and lifts themselves

- Setting bar weight including collars for individual events (disciplines) and settings used discs, for 45kg and 50kg discs can be set a weight limit of which will be used

- Evidence of referees and other officials in the competition, one person may hold more assigned functions

- Definition of the time schedule of the competition and determination of the assigned function in their parts for registered officials (referees, loaders, ...)

- Performance classes according to ČSST rules valid from 1.1.2005 and all subsequent - EQUIP

- Performance classes according to ČSST rules valid from 1.1.2013 - RAW

- Performance classes according to ČAST rules for men of all age categories competing in EQUIP and RAW

- Performance classes according to FČST rules for EQUIP and RAW

- Performance classes according to SAKFST rules valid from 1.1.2011 - EQUIP

- Performance classes according to SAST rules for EQUIP and RAW

- Performance limits for nomination to M-SR and representation according to SAFKST rules valid from 1.1.2018

- Evidence of achieved records and record attempt for each competitor, records are displayed/marked on all related screens

- Bulk change of data for selected competitors eg. group, contingent or category

- Bulk change of data for selected categories eg. division and time schedule

- Support corrective attempts (even multiple times) and attempts to declare

- Calculator to calculate required lifts and possible placements according to entered data and the competitor

- At the competitor, it is possible to record the racks for squat and benchpress, which are then displayed on the screen "current competitor" and on the screen for loaders

- Filtering of competition evidence (list of competitors) by groups, time schedule and more

- Any grouping and sorting of the displayed records and columns

- All data is stored in a single XML file or in compressed form (PWLX, save up to 75% file size)

- Results data can also be retrieved from other sources such as Excels from GoodLift system, ČSV, from Petr Nepomucky and others

- Both the competition evidence and all reports can be exported to Excel, PDF and HTML or printed directly

- The results can be automatically published to the FTP server eg. on Powerlifter.cz or only automatically backed up on local disk in intervals

- Full support for communication within the network (TCP/IP protocol) and in the program is not needed to "click on refresh", data is always up to date. Within network clients is then possible to remotely update the program, run/connect and open screens or also restart and shutdown the PC.

- Network client disconnection detection and the ability to reconnect with the server

- Own timer (timekeeping) with high precision and full synchronization support across connected clients over TCP/IP

- Support for referee's buttons (HW/SW, TCP/IP, weightlifting and powerlifting, support of colors, audio signals, timer, ...)

- Reports for federations: check of personal equipment, evidence of racks, registration from competition of individuals, cards for speakers

- Designer and print of certificates with the possibility of inserting a pre-printed masterpiece (template)

- Language localization of graphical interface and outputs: Czech, Slovak, English, Hungarian, Russian (in processing)

1.2 Screens and reports

- Current lifter with to platform list and eventually with a timer

- Current lifter in detail with previous and next attempt and eventually with a timer

- To platform list - grouped by competition system, detailed information about the competitor and his attempts, prognosis of totals and placements

- Related continuous order - shows competitors from categories according to the current group, and in the case of last attempts, the categories from the following group will also be displayed, the complete prognosis and achieved lifts in the events is also included

- Division of competitors into groups

- Results by categories - in totals and in events

- Results by contingents - in totals and events including previous rounds

- Absolute order of lifters - in totals and in events

- Control panel of the current lifter - click good lift/no lift, to platform list, timekeeping

- Control panel of the timer and signalization - automatic timekeeping and signaling of referees with the ability of manual intervention

- Control panel of the ceremony - setting the classification (order) to show on the current competitor's screen when announcing

- Platform assistant - information needed to correctly load the bar

- Teams, clubs and countries classification according to achieved placements of competitors

- Announcement of results by categories, contingents, absolute order and teams classification

- Timer-table and referees' signalization

Installation

The program is for Windows, Linux and Android. On Windows it can be fully operated including competition's evidence, records, network connectivity, etc. and for Linux is available only the network client (thin client) that allows you to display the defined screens. The Android devices then deal with referees signalization, which can be easily run over the Wifi network.

2.1 Hardware requirements

For common use on small competitions without network connectivity, practically any computer running Windows XP or later is enough. However, when using a network clients or when recording and/or streaming a video, the use of a more powerful machine and a high-quality network connection of individual stations must be considered.

Recommended:

- For convenient work is recommended to have the monitor/display with a resolution of at least 1440x900, but ideally 1920x1080 (Full HD)

- High quality battery in a laptop with a long battery life for reasons of possible power outages and also is sometimes a good idea to carry the laptop and have it operationally available elsewhere (e.g. in the athletic part of the schoolers in weightlifting - Czechia, Slovakia).

- In the case of a network connection, then high-quality high-gain antennas (5db or more) using WiFi and generally a fast router or switch (if wired only via UTP cables). This will not cause unnecessary delays in data transfers that are not bulky but often transmitted.

- For screens, the minimum resolution of monitor is 1280x1024, for timertable the diagonal at least 24 inches. Some screens supports also a lower resolution 1024x768.

Note: the recommendation applies especially to the computer with the main evidence

2.2 System requirements

Windows

Operating system	Windows XP, Vista, 7, 8, 8.1, 10, Windows Server 2003, 2008(R2), 2012(R2), 2016
Runtime environment	.NET Framework 4.0 and later [download]
Browser	Internet Explorer 8 (we recommend version 11 or newer)

Linux

Operating system	tested on RPi2/3 (Linux Debian) and PC (Linux Mint MATE 18 and 19)
Runtime environment	MONO 4.2 and later, GTK 2
Browser	Webkit (runtime libraries)

Android

Operating system	Android 4.1 (Jelly Bean) and newer (including current version 10 and 64-bit architecture)

2.3 Installation procedure

The first part of the procedure is same for all supported operating systems:

1. download program PowerLIVE!

2. unzip the downloaded zip file eg. to a folder on the Desktop

Furthermore, it is necessary to proceed according to the specifications of the operating system.

Windows

3. execute file `PowerLIVE!.exe`

4. fill in the registration information or insert the license key

5. define a competition (more in v *User interface*)

Linux

3. use MONO to run the `PowerLIVE!-Linux.exe` file

4. enter the PC name or IP address to connect to the PC with main evidence

5. open screens in the main evidence fro this client (more in v *User interface*)

How to install on specific devices:

2.3.1 Network clients

For a comfortable work with network clients, the program `PowerLIVE!-Launcher.exe` (further referred to as *Launcher*) is available. It allows you to run program instances on a remote basis, update versions, restart or shutdown PCs, etc. So it is not necessary to connect to the remote desktop of each of the computers, but only to control them using the form guide/network-manager directly from the main evidence (`PowerLIVE! .exe`).

You need to do the following:

Option 1 (Windows 7 and earlier)

1. create a shortcut to `PowerLIVE!-Launcher.exe`

2. place it in `Start -> All Programs ->Startup`

3. run a shortcut one time or restart the computer

Option 2 (Windows 8 and later)

1. create a scheduled task using `Task Scheduler`

2. as a program to execute, select `PowerLIVE!-Launcher.exe`

3. in activation events set `After logon` *(interactive mode is required)*

4. run a scheduled task one time or restart the computer

Option 3 (Linux)

- follow the specifics for the particular distribution and window manager

- for example, you can draw inspiration in install/RPi2

Note: for a one-time test just launch `PowerLIVE!-Launcher.exe`

2.3.2 Firewall settings

The program uses three ports to operate:

1. TCP port 8125 (can be changed in guide/network-manager) is used to connect network clients with main evidence and to transfer data related to competition

2. UDP port 8127 is used for comunication of main evidence with the so called `Launcher`

3. TCP port 8126 is used to perform updates on a network clients

4. TCP port 9125 is used for comunication of software referees signalization

5. UDP port 9125 is used to find a managing server for referees signalization

In the event of a problem, always check the firewall settings first! In the case of version updates, there may also be a problem with locked files, ie they are used, and all instances of PowerLIVE! at the given client station must be terminated first.

2.4 Optional hardware

The program works together with other hardware, such as Quido-based signalization, or the mobile signalization for Android. In this section you will find the necessary steps to install the hardware on the system.

2.4.1 Mobile referees signalization (Android)

Referees buttons for weightlifting and powerlifting communicating over the network (Wifi) with the PowerLIVE! program that controls the competition. The application replaces flags or standalone hardware signalization, and accelerates the progress of the competition, primarily by comunicating directly with evidence where attempts are automatically marked as good lift or no lift. From the program PowerLIVE! then you can assign functions to each connected referee. By default, functions are assigned automatically according to the connection order.

Supported functions

- signaling red and white flag

- color cards indicating the reason and the kind of error in an invalid attempt

- scan and locate the TCP/IP server (evidence) on the local network

- disconnect detection and automatic reconnection

- vibration when sending a signal successfully (option to set it)

Basic conditions of use

1. Mobile devices must be connected to the same network as the main computer

2. You need to have installed PowerLIVE at least version 2.13.1-rev2 on the main computer

3. You need a registered license that allows mobile signalization on one side

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Note: Until the end of February 2019, it is possible to use the testing phase with an extended license for program PowerLIVE!. In the program settings, add license number VTK8-XMUN-6GYC-46F5.

Detailed installation procedure (Main computer, Windows)

1. Open *Timertable control panel* in the program PowerLIVE!

2. Check `Control of attempts using buttons`

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3. Set the communication mode to `Software buttons (TCP/IP)`

4. Set the communication port to `All IP addresses of the computer`

5. Press `Open port`

6. For detailed settings, a list of connected devices, and assigning functions, see 📝 `Edit Settings`

> **Warning:** The referees server uses TCP and UDP port 9125 to communicate with mobile devices. This port must be enabled in the firewall on the main computer or temporarily disable the firewall.

Detailed installation procedure (Mobile devices, Android)

1. Connect to the internet

2. Install the application Referees signalization from Google Play Store

3. Connect to the same network as the main computer

4. Launch the application `Referees signalization`

5. At startup, the refeers server is automatically searched for on the local network, if it does not, enter the IP address manually

6. Press `Connect` (unless you have set `automatic connection`)

If everything is OK, you can see the name of the competition, the current competitor and the assigned function on mobile devices. When you press some colored buttons, you will see their status on the `Lifter on table`, or if you do not have the assigned function, you will see the status in the list of connected devices in 📝 `Edit settings`.

Important steps in case of a problem

1. Only 127.0.0.1 is listed in the status bar or in the communication port drop-down list, then the host computer is not connected to the local network

2. Can not connect, make sure the referees server is running (see paragraph 5 `Open port`)

3. Can not connect, make sure you are connected to the same local area network

4. Can not connect, check firewall settings

5. Can not connect, try entering the IP address of the main computer

> **Warning:** On Android, it is not possible to translate local computer names to their IP addresses by default because of public DNS servers set up. You can only connect to the local computer's hostname if it is searched for, otherwise entering the IP address is required.

Own (Ad-hoc) Wifi network

If you do not have your own router and/or access point, nor is there a Wifi network available in the hall, you can set up an `Ad-hoc Wifi Network`. You need to have a Wifi adapter on your main computer.

In order to get your ad-hoc network working, you need to have a `Microsoft Virtual WiFi Miniport Adapter` installed, which is essentially software that handles the network and assigns IP addresses to client devices. This device installs automatically on Windows if there is a physical WiFi adapter supporting the hosted network.

To verify that the adapter is installed, follow these steps:

1. Open `Control panels`

2. Open `Network and Sharing Center`

3. Open `Change adapter settings`

4. Look for a connection containing `WiFi Miniport` in the adapter name

You can also verify hosted network support with the following command:

```
netsh wlan show drivers
```

In the ouput then look for `Hosted Network Support` and whether it says `yes`.

If everything is ok, the physical adapter is on and the virtual miniport adapter is present, then in Windows 7 and later, you can easily create a network by using the following commands:

```
netsh wlan set hostednetwork mode=allow ssid="NAZEV" key="HESLO"
netsh wlan start hostednetwork
```

it can be stopped and canceled by the following command:

```
netsh wlan stop hostednetwork
```

2.4.2 Hardware referees signalization (Quido)

This is a device (box) that is connected through a USB interface to a computer and allows for the control of attempts validity and in some variants a timer too. For proper operation, you need to install the required USB controller and then virtual serial port (COM) on your computer.

Detailed installation procedure (Windows only)

1. Download a driver for Papouch Quido USB 10/1 v2.06 [zip 3.11MB]

2. Unzip the downloaded zip archive, for example, to Desktop

3. Connect the device to your computer and wait for Windows to detect it

4. Open `Device manager` eg. via `Computer manager`

5. Find the device `Papouch Quido USB 10/1`, there will be a yellow triangle with an exclamation mark

6. Right-click on this device and select `Update driver`

7. Select the manual procedure from the disk, as the device type select `Universal Serial Bus controller`

8. In the unziped directory on the Desktop, look for `ftdibus.inf`

9. If you have more compatible devices, select `Papouch Quido USB 10/1`

10. After installing that USB controller, a new `USB Serial Port` appears in the device list and again with a yellow exclamation mark

11. To install the driver, repeat the same procedure, just select `ftdiport.inf` and the device type `Ports (LPT and COM)`

12. Once the installation of this device is complete, it will show a port number such as COM7 (or you can find it in the properties)

13. Verify functionality via *Timertable control panel* in the program PowerLIVE!

Note: It is possible that `USB Serial Port` is not immediately offered `Update driver`, in this case you will need to restart the computer and then it will be enabled, leave the device connected. For example, this procedure was necessary on Windows 7 Ultimate x64, and surprisingly this was not necessary on Windows XP.

How to connect it with the program

1. Open the *Timertable control panel* in the program PowerLIVE!

2. Check `Control of attempts using buttons`

3. Set the communication mode to `Štefaník Miroslav, Ing. (weightlifting)` or `Luděk Kalenský (powerlifting, colors)`

4. Set the communication port to a value by the installed device (see paragraph 12 in the instalation procedure)

5. Press `Open port`

If everything is OK then when you press some buttons, you will see its status (color) on the `Lifter on table`.

User interface

3.1 Timertable control panel

Note: obsah se připravuje

3.2 Publication of results

Formulář umožňuje průběžné zveřejňování dat tzv. výsledkový servis během soutěže popř. jednorázové nahrání nominace nebo startovní listiny na Powerlifter.cz nebo jiný server pomocí FTP. Rovněž lze souběžně generovat grafické prvky pro streamovací software a pořizovat lokální zálohu.

3.2.1 Výsledkový servis

Průběžná data lze zveřejňovat pomocí FTP serveru, na který se nahrává komprimovaný formát výsledkového souboru (.pwlx) po každé detekci změny během nastaveného intervalu. Při propojení s Powerlifter.cz je důležité uvádět i kód pro živé vysílání, na základě kterého se data propojí s rozhraním pro živý přenos (video, chat, výsledky). Kód je přidělován na požadavek vůči soutěži a v nastavení adresáře FTP serveru lze uvést zástupný text `{LiveCode}`, který se vždy nahradí aktuálním kódem soutěže.
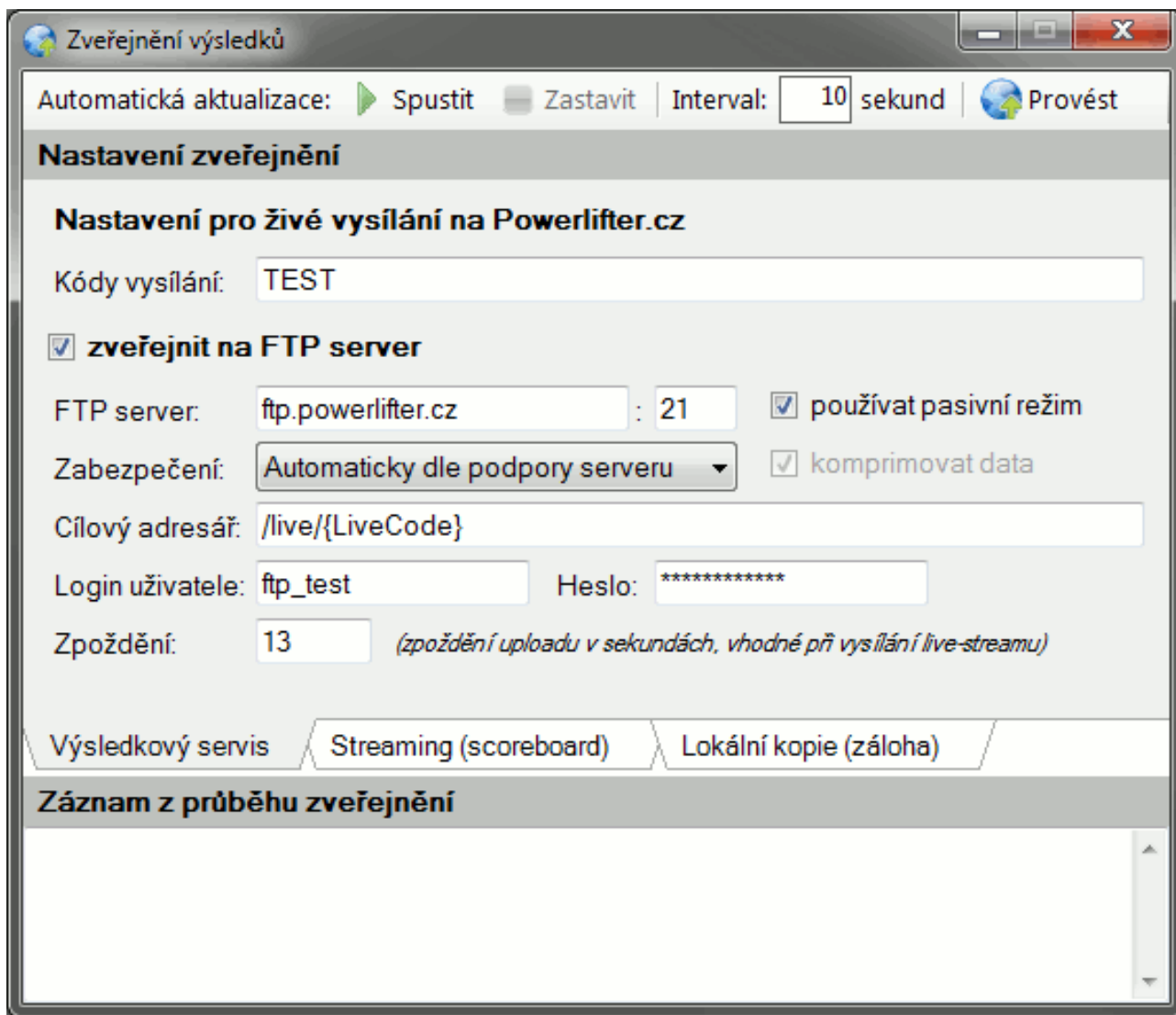
Fig. 3.1: *Zveřejnění průběžných výsledků na FTP(s) server*

Note: Nahrávání je šetrné k datům a např. soutěž s 50ti závodníky ve vzpírání spotřebuje během celého jejího průběhu méně než 20 MB. Není tak nutné se obávat i připojení přes omezená mobilní data.

3.2.2 Streaming (scoreboard)

Slouží k poskytování dat pro streamovací software formou grafiky a html obsahu.

Cílový adresář

Uveďte adresář, do kterého se budou ukládat vygenerované soubory a má k němu přístup i streamovací software.

Nastavení

Vyberte přednastavenou nebo vlastní šablonu. Seznam dostupných šablon je dán soubory v podadresáři `Resources\Scoreboard`. Šablona ovlivňuje barevné nastavení, velikosti, písmo apod.

Generované prvky

- Časomíra (odpočet času): `Timer.png` *(přesnost na sekundy)*

- Rozhodnutí rozhodčích (signalizace): `Referees.png`

- Obrazovka se souvisejícími výsledky: `Results.html` *(výsledky probíhající skupiny)*

- Informace o aktuálním závodníkovi: `Competitor.png` *(vlajka, jméno, ročník)*

- Informace o aktuálním pokusu: `Weight.png` *(váha na čince a eventuálně i vyznačení pokusu o rekord)*

Vynucení vygenerování vlajky lze použít pro národní soutěže, kde u závodníků není uvedena země. Ta se místo toho čerpá z místa konání v nastavení soutěže.
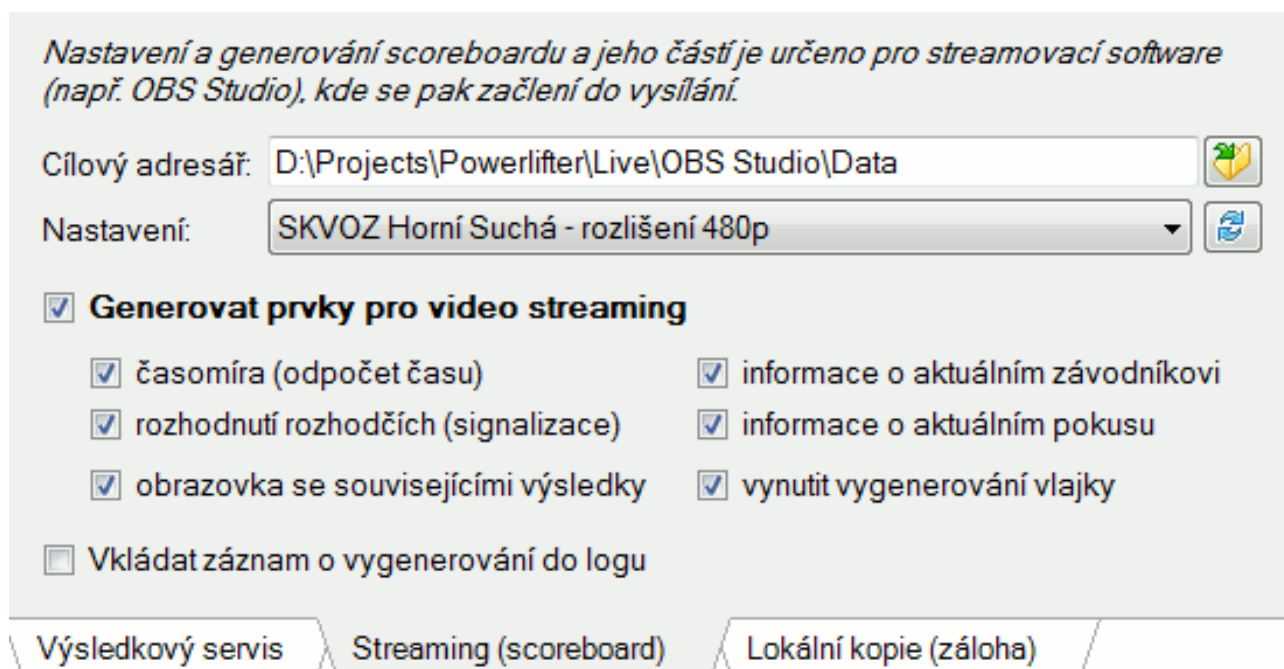

Fig. 3.2: *Generování grafických prvků pro streamovací software*

Níže je uveden příklad scoreboardu sestaveného v OBS Studiu, kde je využito prvku s údaji závodníka, signalizace rozhodčích, časomíry (schovaná pod signalizací, zobrazí se vždy jedno nebo druhé) a váhy na čince. Vlastní šablony, jako je např. zde použitá pro SKVOZ Horní Suchou, lze volně vytvářet dle vzoru existujících šablon v podadresáři programu `Resources\Scoreboard`.

Fig. 3.3: *Příklad překryvného scoreboardu v OBS Studiu*

3.2.3 Lokální kopie (záloha)

Lokální kopie je především určena pro automatické zálohování datového souboru. Slouží tak k ochraně před výpadky napájení, selháním hardware, neočekávaným pádem software nebo uživatelským pochybením. Data jsou automaticky komprimovaná (.pwlx) a šetří místo na disku. Soubor tohoto formátu je možné otevřít jako jakýkoliv jiný datový soubor v programu PowerLIVE!.

Místní adresář

Uveďte adresář na lokálním disku (možnost i síťových \\ UNC cest), do kterého se budou ukládat záložní soubory.

Vytvářet adresář pro každý den

V místním adresáři vytvoří dílčí podadresář pro každý den (dle data detekce změny) ve formátu `YYYY-MM-DD` *(např. 2021-09-18)*. Tato volba slouží spíše k organizačnímu uskupení souborů a rychlejšímu nalezení v případě již nahromaděných více soutěží.

Přidat časové razítko do názvu souboru

Základní název souboru `Results.pwlx` bude rozšířen o časovou značku ve formátu `YYYYMMDD_HHMM_`. Výsledný název tak bude např. `20210918_1630_Results.pwlx`. Touto volbou docílíte změnových záloh a ochraně proti uživatelským chybám. Lze se vrátit v čase a otevřít potřebný soubor. Bez této volby se pouze přepisuje poslední stav.

Fig. 3.4: *Pořizování lokální kopie (automatické zálohy)*

Tutorials

4.1 Live streaming

In order to make the broadcast available on Powerlifter.cz, where the current state of the competition will be available to the viewers, as well as to the competitors and coaches at the venue, the following steps should be taken. Many of these are just recommendations, but tested in practice. Server Powerlifter.cz uses third party services such as Ustream.tv, Livestream, Youtube, Facebook and others. However, the results service (updated state of the competition) is directly dependent on the program PowerLIVE! and is an exclusive service provided by the server Powerlifter.cz.

How to set up live streaming

1. Please contact us (preferably by e-mail) requesting a Live Broadcast for a competition, and include the following information in the message:

   - what kind of competition it is (name, venue, date/schedule, federation, rules, propositions/invitation)

   - optionally predefined xml data file from the program PowerLIVE!

   - the streaming service(s) and the necessary information for its connection to Powerlifter.cz (see below)

2. Agree to the terms, scope of provided services and prices

3. We will set up the competition page, broadcast profile and make the live interface available for this competition and then we will send you the following information:

   - url address of the competition page and the interface for live streaming

   - predefined xml data file (if you didn't send, see paragraph 1)

   - live broadcasting code (see `Publishing progress of the competition`)

Note: This is a paid service (see Nabídka služeb a licencí).

Required software

1. Install the program PowerLIVE! (see *Installation*)

2. For video streaming use a OBS Studio

3. Or old but still usable Adobe FMLE (Flash Media Live Encoder)

General recommendations

   - use H.264 codec for encoding videos (see individual services for detailed settings)

   - use AAC codec for encoding audio (see individual services for detailed settings)

- resolution and bitrate depends on the quality of the outgoing line (upload), and consideration should also be given to the connection possibilities of viewers

- streaming software usually does not support IP cameras or a paid version is required

Note: In the quality and resolution setting (bitrate etc.) you need to find a compromise by internet connection, but I would not recomend to use higher quality because people usually complain about chopping/laging. The stream is usually transfered cross-country (through the servers of the selected service) and then back to the viewers in different locations and some internet providers do not have a sufficient reserved bandwitch for foreign countries.

Next, we will show you what is needed, how to set up and what is appropriate for streaming services. The various provided services can be combined in different ways in the live interface.

Note: The created channel can also be used for other competitions, so it is preferable to choose a generic name. However, it is not possible to use only one channel for multiple live broadcasts at one time.

4.1.1 Ustream.tv

This service allows both streaming video and chat usage for viewers.

1. Sign up for http://www.ustream.tv

2. Create a channel `Dashboard -> Channels -> Create new channel`

3. Generate HTML embed code `Embed -> Player -> Embed code (copy to clipboard)`

4. Generate HTML embed code `Embed -> Chat -> Embed code (copy to clipboard)`

5. Download a file with settings for `FMLE` in `Remote -> Download the Flash Media Encoder XML file` or you need to set the streaming software manually

Send us: channel url address, embed code for video, embed code for chat

> **Caution:**
>
> - In a free version, the video stream contains ads and allows a maximum of 50 active (concurrent) viewers.
>
> - Chat is restricted to Ustream.tv registered users only.

4.1.2 Livestream

This service allows both streaming video and chat usage for viewers.

1. Sign on for https://secure.livestream.com/myaccount/launchchannel

2. Create a channel in `My Account -> Channels` (the channel does not need to be verified, the name is displayed in the chat interface)

3. Generate HTML embed code `Embed -> Live chat -> Grab embed code`

Send us: channel url address, embed code for video, **embed code for chat**

Benefits of the service:

- chat for viewers that does not require login

- the viewer can choose his own nickname

- moderation by the channel owner

- banning based on user names or IP addresses

> **Caution:**
>
> - Free video streaming is limited (500kbit, active viewers, ...).
>
> - NEW livestream account is not supported, video can not be embedded in pages

4.1.3 Youtube

The recommended video streaming service, chat can also be used, but with some limitations.

1. Sign on for Youtube respectively for Googlu

2. Create live channel by Live streaming guide

3. Find a channel ID at https://www.youtube.com/account_advanced

4. At <channel url address>/live, you'll find live streaming and chat

Send us: channel url address, **channel ID** (see 3)

Benefits of the service

- video stream has no limit to resolution, bitrate, and active viewers

- Youtube is known and popular service

Recommendation

- Encoding settings for live streaming

> **Caution:**
>
> - When starting/stopping a streaming Youtube creates a new video (other ID), so a channel ID required. By that a viewer has always the access to the currently active stream (not just the last recordings).
>
> - Embeded chat can only be used if an AdSense account is linked with the channel
>
> - It is necessary to strictly observe copyrights, especially for audio (music on competitions), so that the channel is not blocked and the recordings can be shared.

4.1.4 Facebook

Setting up and using Facebook is under construction.

4.1.5 Powerlifter.cz

Our service connects everything together and provides a complete service including ongoing results (updated in time) to the viewers.

1. Launch the program PowerLIVE! and open the xml data file of the competition

2. Open the form *Publication of results*

3. Provide the `Live broadcast code`

4. Provide supplied information for sending results to FTP server

You can find a more detailed description and meaning of each field in *Publication of results*.

Keyboard shortcuts

Keyboard shortcuts can be used throughout the program to speed up your work. Most of them are generally valid across the entire program, and some of them have modified functionality according to the currently active window. A detailed description of the shortcuts and their use is given below.

5.1 General shortcuts

Shortcust valid across the entire program with possible modification in specific forms.

Shortcut	Description
Ctrl + N	create a new competition
Ctrl + O	open results file or connect to TCP/IP server
Ctrl + S	save competition data to a file or save card (form) data
Ctrl + Shift + S	save competition data to another file ("Save as")
Ctrl + P	opens the form for printing and exporting
F1	opens the form "About"
F10	opens the competition settings
F11 / Ctrl + M	opens the screens manager
Alt + F12	opens the program settings
ESC	closes current window except main evidence and control panels
Ctrl + 0..9	switch tabs or side menus in the order they are displayed
Ctrl + > / Ctrl + right	switch to the next tab
Ctrl + < / Ctrl + left	switch to previous tab
Ctrl + + / Shift + F4	add record (can also be used for drop-down lists)
Ctrl + - / F8 / Ctrl + F8	remove a record / clear the selection in drop-down lists
Delete / Shift + Delete	remove a record only if the table is not in edit mode and no other text box is active
F4 / Enter	edit the selected record
F2	edit the cell in a table
Ctrl + C	copy the contents of the displayed table cells to the clipboard
Ctrl + Shift + C	copy the contents of all (even hidden) table cells to the clipboard

5.2 Competition evidence

Shortcuts modification for the interface of the main evidence.

Shortcut	Description
Ctrl + P	when the "Competition Status" tab is active, print and export are pre-set according to the displayed report

5.3 Competition settings

Shortcuts extension and modification for competition settings.

Shortcut	Description
Ctrl + 0	switch to basic data
Ctrl + 1	switch to rules settings
Ctrl + 2	switch to events definition
Ctrl + 3	switch to time schedule
Ctrl + 4	switch to referees and officials
Ctrl + 5	switch to bars and discs
Ctrl + 6	switch to signalization
Ctrl + 7	switch to competition categories
Ctrl + 8	switch to contingents
Ctrl + 9	switch to other classifications
Ctrl + down	swith to the next item in side menu
Ctrl + up	switch to the previous item in side menu

Note: general shortcuts valid for all tabs

5.4 Lifter card

Shortcuts extension and modification for lifter card.

Shortcut	Description
Ctrl + 0	switch to basic data on the first blank field
Ctrl + 1	switches to an attempts tab on attempt to declare (opener, current or next attempt)
Ctrl + 2	switches to the tab "achieved lifts and records" and activate a cell to enter the nomination weight
Ctrl + Tab	on the attempts tab will switch to the next event and eventual attempt to declare
Ctrl + Shift + Tab	on the attempts tab will switch to the previous event and eventual attempt to declare
+ / -	add / remove record (only valid on tab *achieved lifts and records*, does not apply to the selected attempt or event)

Note: keyboard shortcuts to add and remove a record are only valid for records and drop-down lists

5.5 Screen window

Only the shortcuts listed below apply to the screen window.

Shortcut	Description
F	toggle full screen on / off
ESC	turns full screen off

5.6 Timer control panel for athletics

Shortcuts extension and modification for the timer control panel for athletics

Shortcut	Description
Ctrl + Enter	start timer
Space	lap
S	start / stop timer
L	lap
R	reset timer

Roadmap

Plan to develop and extend the functionality of the program PowerLIVE!.

6.1 Current goals

Note: the following list is compiled based on user requests

- support more groups to the competitor respectively disciplines in different groups
- to work on printing and also on exports to other formats (pdf, excel)
- to allow contingents to evidence and display points for each previous round, currently only the sum of all the previous rounds is available
- linking to a database of federations, clubs, competitors (members) eventually creating your own directory
- to support the possibility of multiple stages and groups against events (disciplines)

6.2 Long-term goals

Note: internally **version 3.0**, which we are working on continuously

- rework (extend) the structure of classifications
- support any number of classifications in categories, contingents, for kilos, points or even various combinations
- the ability to assign a competitor in different contingents and in different categories, in any number of assignments
- the ability to control multiple competitors on the same stage at the same time