

CODEKS

v 9.0.1.64



Codeks User Manual

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November 2017 in Naklo

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Part

1

1. Codeks

This manual describes Jantar Codeks software. It contains description for working with either Codeks AC or Codeks TA application.

IMPORTANT!

The Codeks Manual arise from description of the Codeks AC application. Each section in which Codeks TA differs from Codeks AC is marked with **"ADDITIONAL for Codeks TA" or just "Codeks TA" in front of the chapter's name**. Otherwise all description of working with Codeks AC application is completely the same as working with Codeks TA application.

Codeks AC is a simple yet very capable access control management solution, designed to provide you with all necessary functions while maintaining ease of use.


Codeks TA application is intended for advanced users and for the construction of complex access control and time and attendance systems, with several buildings scattered in several locations and with a large number of users and doors. Despite its extraordinary performance, the application is still very easy to use. It supports multiple clients with different user rights for modification and control.

STAY INFORMED!

Keep in touch with latest in Codeks development and subscribe to new Codeks releases notification newsletter: <http://jantar.si/en/contacts/newsletter>



1.1. License Information

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- All rights not expressly granted here are reserved by Jantar d.o.o..
- Installing and using the Codeks signifies acceptance of these terms and conditions of the license.
- If you do not agree with the terms of this license you must remove Codeks files from your storage devices and cease using the product.

1.2. Disclaimer and Warranty

Disclaimer

The information in this document is subject to change without notice. While the information contained herein is assumed to be accurate, Jantar d.o.o., assumes no responsibility for any errors or omissions. We also reserve the right to discontinue or change the specifications of products without prior notice. No claim can be made in case of profit or loss from use or sale of all products bought or delivered by us. Errors reported will be corrected in new program and board releases.

Warranty

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Although we strive to include accurate and up to date information, Jantar d.o.o., without prejudice to the generality of this paragraph, does not guarantee that the information in this manual is complete, true, accurate and not misleading.

The information in this manual is designed for user purposes and not as a substitute for information from customer regulations, technical manuals / documents or other official posts. Customers using this manual, you can report errors or omissions, recommendations for improvement or other comments to Jantar d.o.o..

1.3. Contact Information

Jantar d.o.o. has more than 20 years of experience in the development and production of systems for access control, time attendance and visitor control. What sets us apart from our competitors is that all software and most hardware is developed and manufactured by us. Our systems are delivered and installed in airports, office buildings, financial institutions, factories, shopping centers, hospitals, etc.. - Virtually anywhere our clients need basic or advanced access control and time and attendance system.

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Web page: www.codeks.eu

Support

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Part

2

2. Description and Installation

In this part of user manual, you can find short description of minimum software and hardware requirements that you will need for a quick and easy set up for a successful starting of the Codeks software.

2.1. Cable installation

Cable installations must be ready before installation of Jantar hardware devices (communication converters, readers and controllers). It is not recommended to use old or previously used cable installations. We strongly advise against the usage of existing abandoned telephone lines (telephone twisted pairs). Cable installation must be clearly labeled on both sides.

The total length of cable must not exceed the maximal length of system specification. Suggested cable spare lengths are approximately 30cm for readers, 50cm for controllers and 30cm for door strikes.

Controller's housing should be mounted on the wall and cables ran inside the housing. Door strikes should be mounted in doors. Their maximal power consumption should not exceed 250mA otherwise additional power supply is needed. Please read details in hardware specification manual.

2.2. System Requirements

System requirements for successful operation of Codeks application.

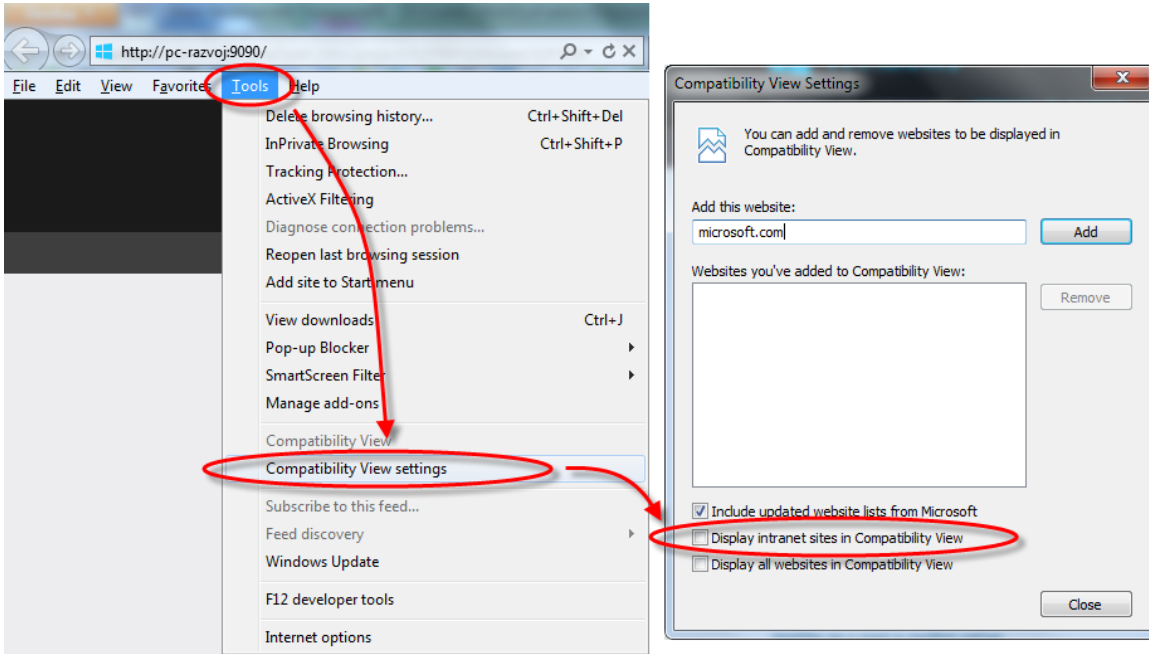
- PC with installed Windows XP or later
- Free USB port or ethernet (LAN) for hardware connection
- Display resolution at least 1366x768, recommended 1440x900
- Installed Microsoft .NET Framework 4.00 Extended (Client profile is not enough)
- A minimum of 1GB of RAM for Windows XP SP3
- Any PDF Reader for reports
- Internet access
- Browser version at least: IE9, Firefox 18, Chrome 24 (we do not guarantee the proper functioning of Codeks application if you are using other browsers)
- If you are using advanced database (Oracle, MS SQL, MY SQL) you must take care for the installation of this database yourself. You must also provide the data necessary to connect to that database. You will need this data for connection during the installation of Codeks application.

WARNING! Minimum requirements are sufficient for basic, initial systems eg. up to 10 users. If the system is larger, it will require a powerful computer with the latest software for the smooth functioning of the application.



ADDITIONAL WARNING!

When using IE for working with Codeks, option "Display intranet sites in Compatibility View" must be disabled. To do that, go to main menu of IE browser and click Tools/Compatibility View setting and disable checkbox at option "Display intranet sites in Compatibility View". You can check print screen on the next page.



2.3. Installing Software

Installing Codeks application starts automatically. If the installation does not start automatically, double-click on the file **CodeksSetup.exe** to start the installation Codeks software. It's possible to install Codeks with default database (SQLite) or with advanced database (MySQL, Oracle or Microsoft SQL Server).

There are two different ways of Codeks installations, described in this manual:

For installation Codeks with default SQLite database, follow the instructions in topic [2.3.2.](#)^[18].

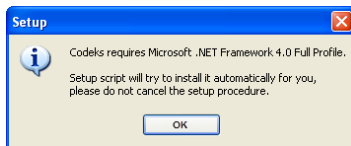
For installing the Codeks with advanced database MySQL, follow the instructions in topic [2.3.3.](#)^[22].

WARNING!

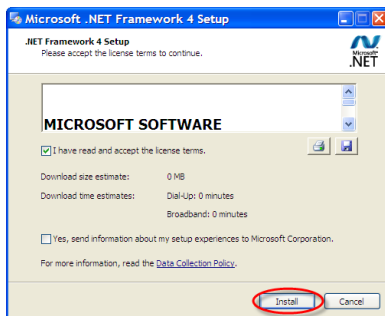
Before installing Codeks install .NET Framework 4 Extended([2.3.1.](#)^[17])!

2.3.1. DotNET Framework 4 Extended

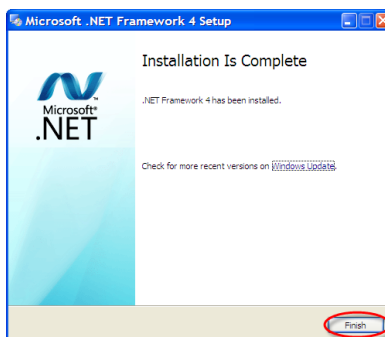
For proper functioning, Codeks needs DotNET Framework 4 Extended. If you do not have it installed, Codeks installation will install it automatically, otherwise this step will be skipped.



Install .NET Framework 4 Extended to your computer.

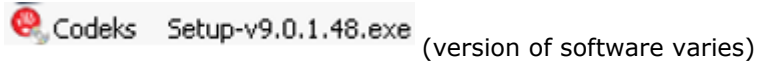


Click Finish to finish the installation.

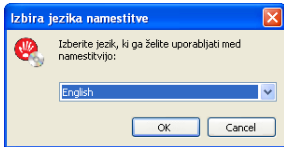


2.3.2. Installing Codeks Application with default database SQLite

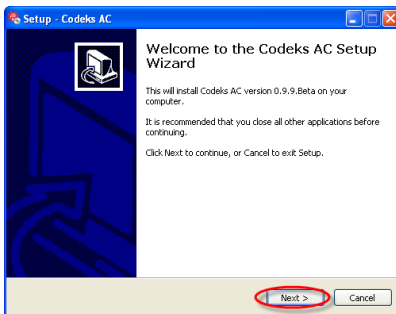
If you already have .NET Framework 4 Extended installed, you can begin with installing Codeks immediately. Contact the Jantar d.o.o. company to get installation file, for configuration and use of CodeksTA or CodeksAC software.



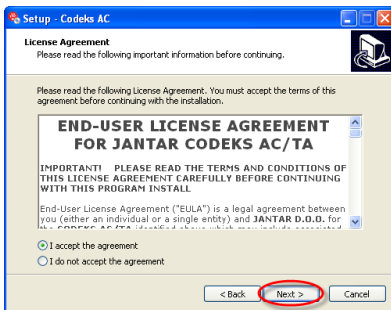
Choose installation language:



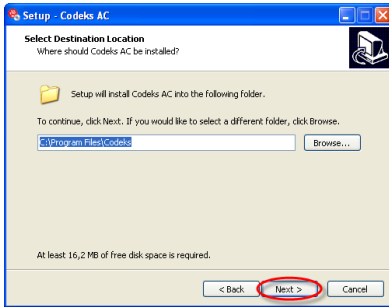
Begin with installation:



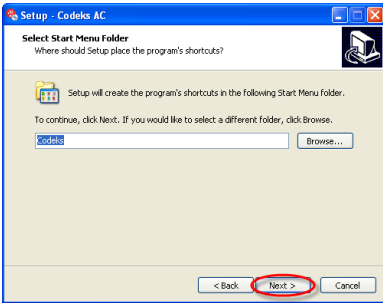
Read the License agreement:



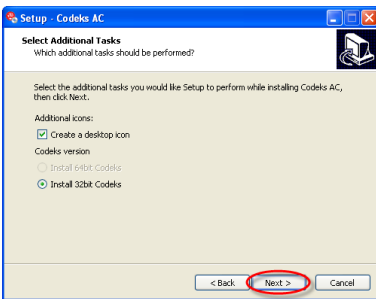
Choose install folder:



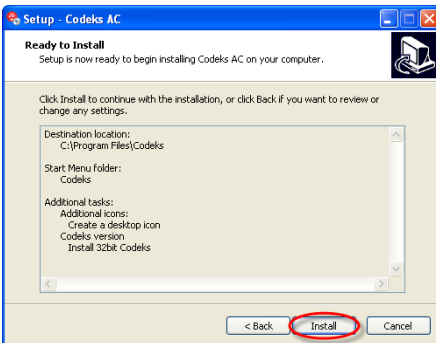
Create start menu shortcut:



Create desktop shortcut:



Install Codeks:

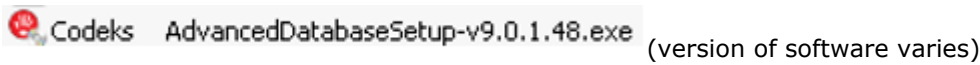


2.3.3. Installing Codeks Application with advanced database MySQL

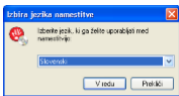
IMPORTANT!

In case **you don't have installed MySQL Server and MySQL Workbench and configured scheme (database) and connection, intended for Codeks software, first follow the manual caption [2.3.3.1.](#) and [2.3.3.2.](#)**

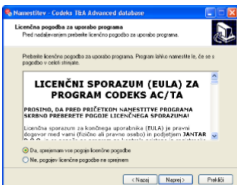
If you **already have .NET Framework 4 Extended** installed, you can **begin with installation** of Codeks. Contact the Jantar d.o.o. company to get installation file, for configuration and use of Advanced database in CodeksTA or CodeksAC software.



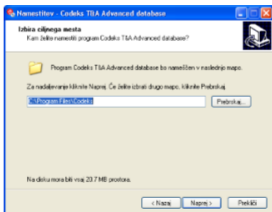
Run the installation file and select **language**.



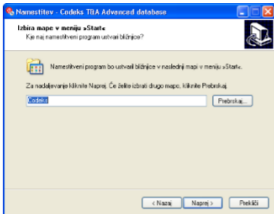
Mark the check box "I accept the agreement" for accepting the license agreement.



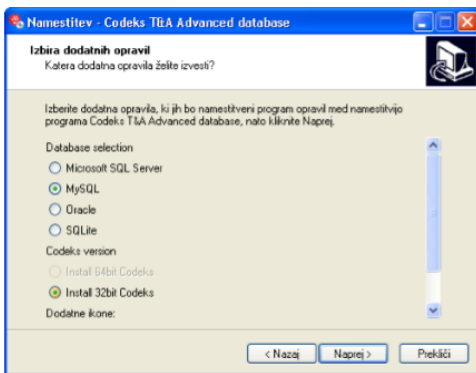
Select the **installation directory (C:\Program Files\Codeks** default path).



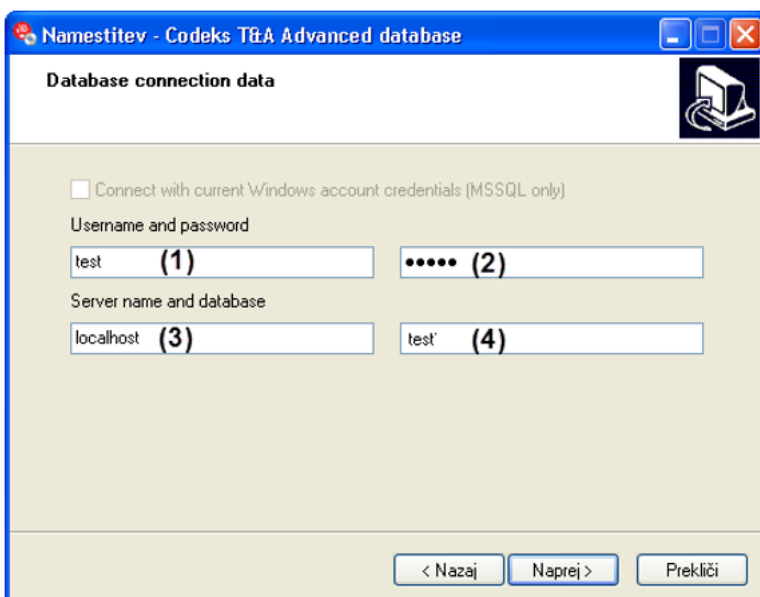
Create **shortcut** (optional).



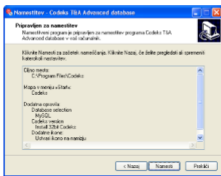
Mark the "MySQL" check box.



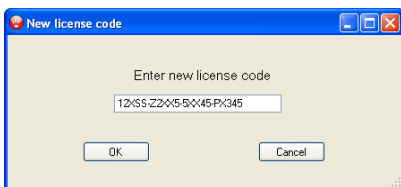
Type the **user name**["test"]⁽¹⁾ and **password**["test1"]⁽²⁾ of created user through the MySQL installation. In the second row, type the **server location name**["localhost"]⁽³⁾ and **database name/scheme**["test"]⁽⁴⁾, also configured through the installation of MySQL Workbench.



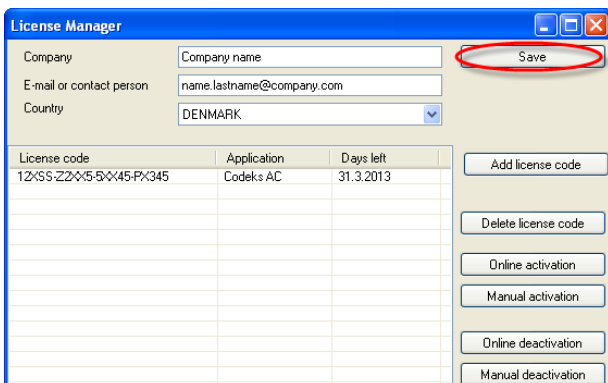
Complete the installation with the **"Install"** button.



Window will open where you must enter your license code which is printed on the accompanying CD. Enter your license code and click OK. You need to [activate](#)^[31] your license code within 30 days otherwise Codeks will stop to work until you activate it.



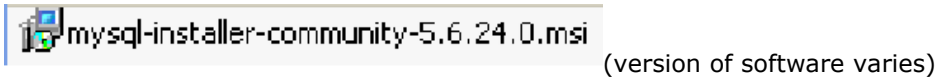
Enter your company name, contact person and country and click the **Save** button to save data.



Codeks Service Manager will open **Codeks first run** in your default web browser. First run is a page with information about successful installation, some basic information about software and default username and password for login. Follow the link "[How to Start?](#)"^[40].

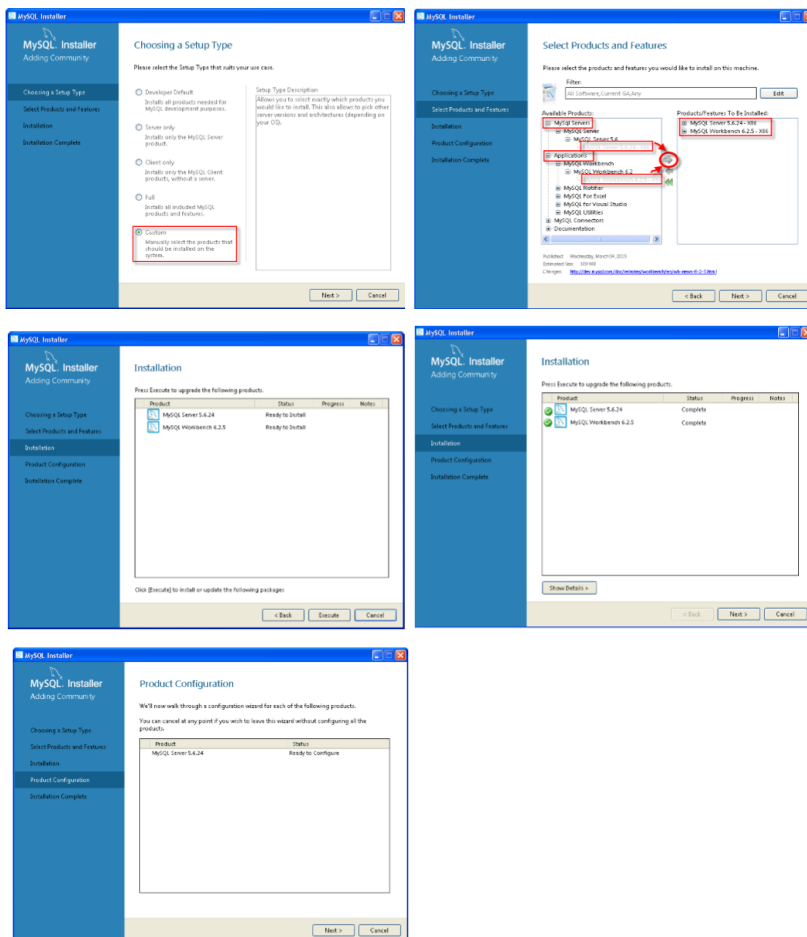
2.3.3.1. Installing MySQL - Server/Workbench

We created an example of MySQL database. Get the installation file of MySQL and run it.



Username, password, server name, database name ... are symbolic values, for test demonstration.

Accept the license terms and click "**Next**" button. Select the "**Custom**" check box and click "**Next**" button. In the next step expand "**MySQL Server**" and "**Applications - MySQL Workbench**" to the bottom of the hierarchical structure. The lowest structure files are "**MySQL server (version)-x86/64**" and "**MySQL Workbench (version) -x86/64**". The procedure is shown on the second image below this text. Selected files must appear in the right list named "**Products/Features To Be Installed**". Click "**Next**" button and than "**Execute**", for installation of software. When the program finish the installation of selected programs, click "**Next**". The program warns you, that the program is ready to configure. Again click "**Next**" button.

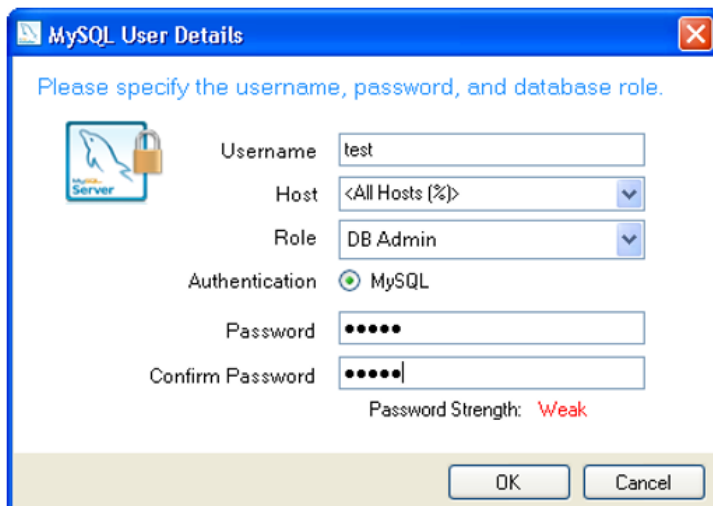
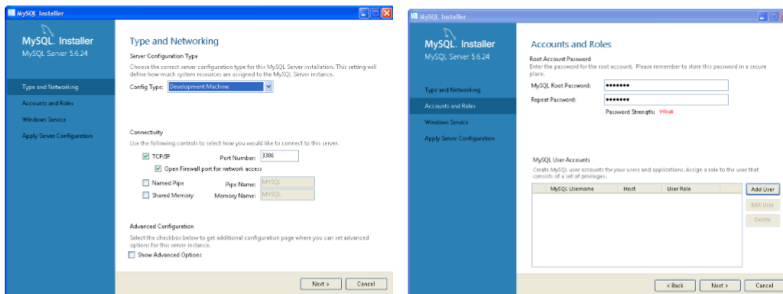


Select one of the option in the "**Configuration tipe**" combo box:

- "**Development Machine**" for basic use,
- "**Server Machine**" in case, you run several (different) server applications or
- "**Dedicated Machine**" only MySQL Server installation/run.

In shown case, we used "**Development Machine**". Leave default values of the "**TCP/IP**", "**Open Firewall port for network access**" and "**Port number = 3306**". Move forward with "**Next**" button and **double type** the **root password**, for administrator.

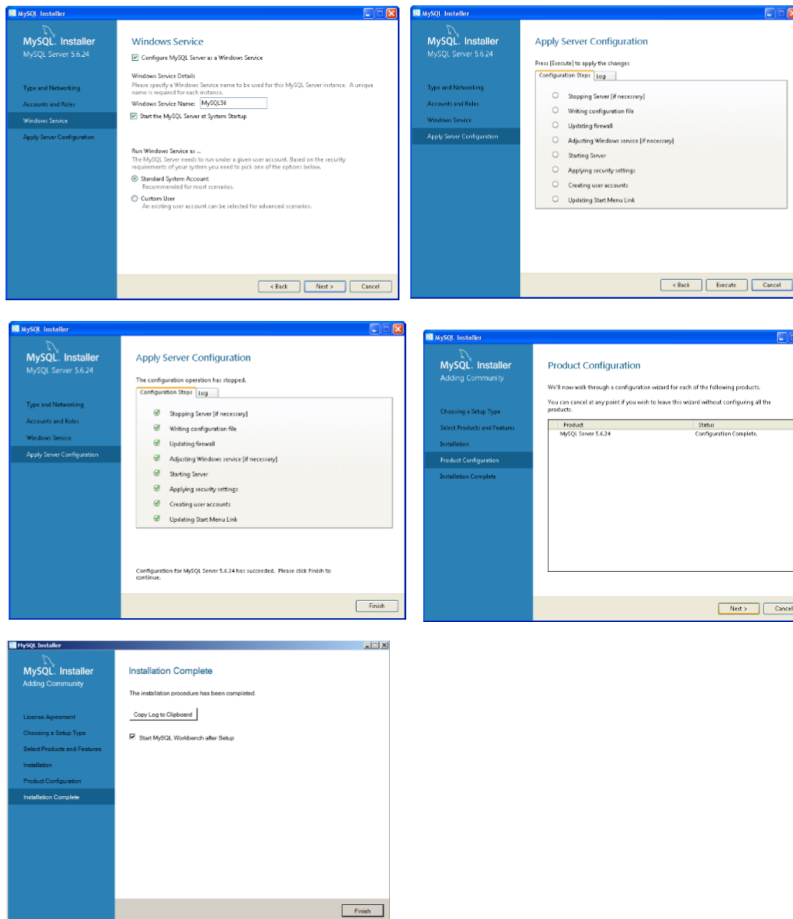
After that, click "**AddUser**" button and **create at least one user**. In shown case, named "**test**". Specify the rights (**All hosts** for global access; **localhost** for local access). **Check** the check box "**Authentication - MySQL**" and **set** the **password "test1"**. If the configuration was correct, the **user must appear on the list**, left of the "**AddUser**" button.



| MySQL Username | Host | User Role |
|----------------|------|-----------|
| test | % | DB Admin |

In "**Windows Service**" configuration, leave all settings as they are and click "**Next**" button. "**Execute**"

created settings and wait for system to finish. End the configuration with "**Finish**" button. The program will return back to the **MySQL Installation** wizard. If the installation was well done, the **status** of MySQL Server will turn into "**Configuration Complete**". Complete the installation with the "**Next**" button and leave the check box "**Start MySQL Workbench after Setup**" - checked.

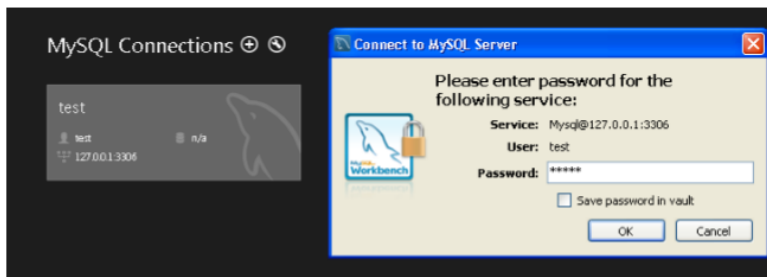
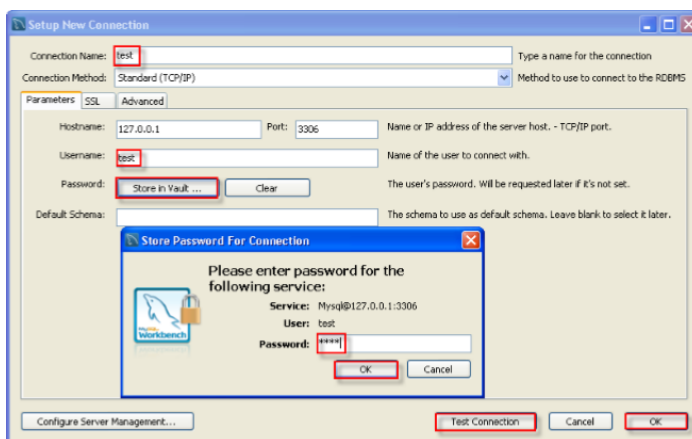


2.3.3.2. Configure MySQL Workbench user interface

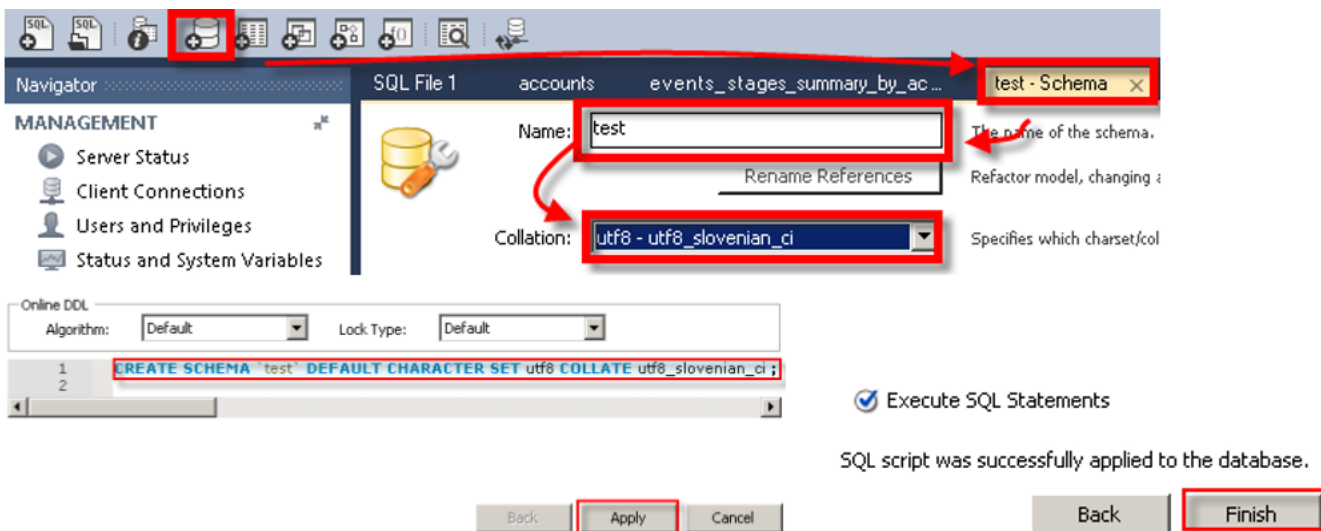
Create new connection in "MySQL Workbench" user interface. Do it with click on the icon, shown on the image below.



A window appears where you enter the **name of connection**, **user name["test"]** and **password ["test1"] (generated user through MySQL installation)**. With the button "Test Connection", check the legacy of data and click "OK". You created a **new connection** that is **shown on the second image below**. **Single click**, type the **password** again **and confirm with "OK"** button.

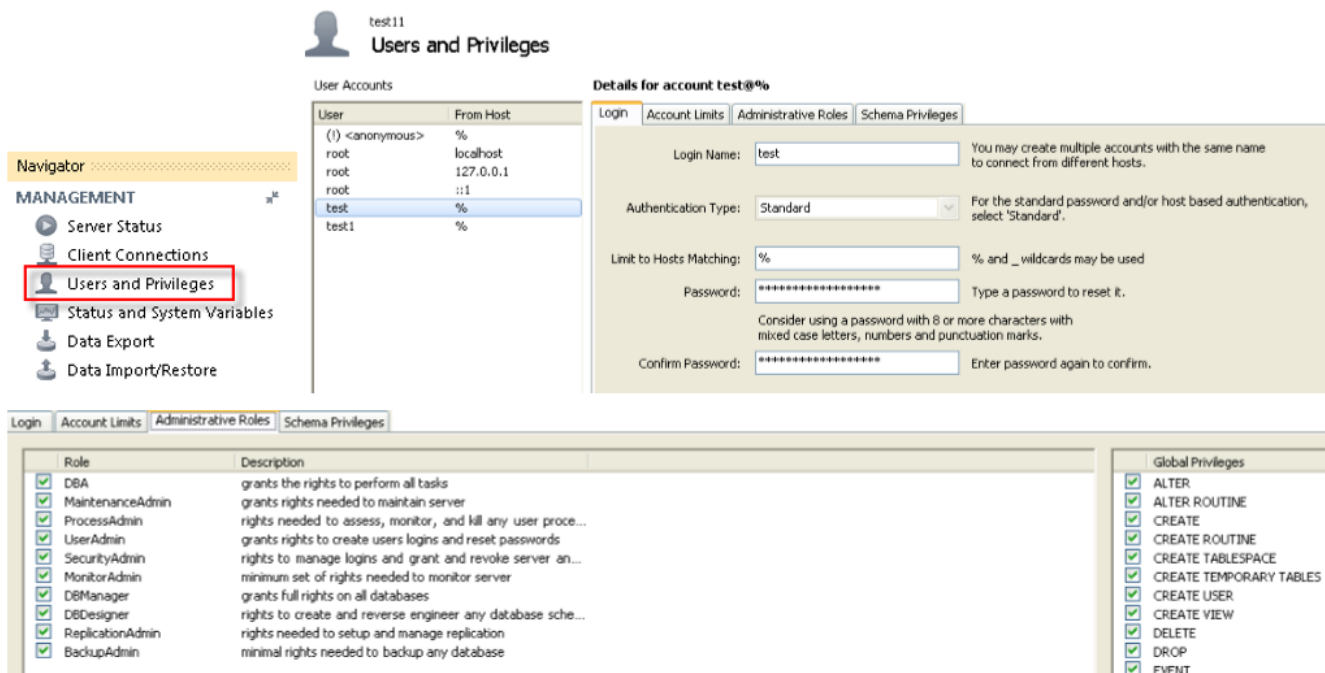


Click the **icon** for creation of **new scheme(database)**, **marked on the image below**. We name it "test", which will **presents name of database** and will contain created tables by installing the CodeksAdvancedDatabase software. Select the **collation** (check online for your country - for example "Server Default"), which presents the **rule for classifying characters**. Click the "Apply" button and new window will appear which **contains the SQL code** for creation of new scheme. You can code some extra commands if necessary. Again click "Apply" and complete the configuration with button "Finish".



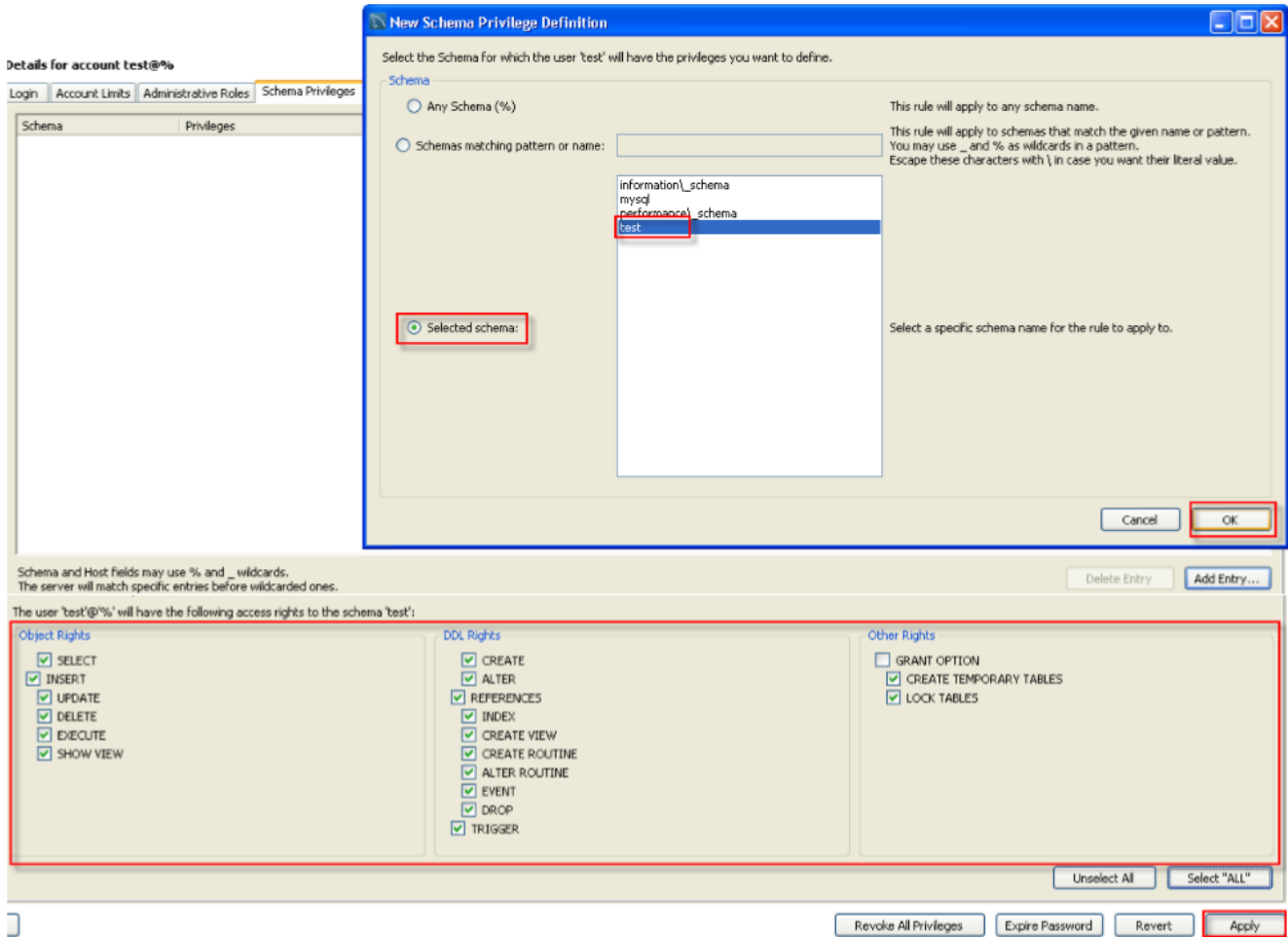
Click "**Users and Privileges**" on the left side in the "**Navigator**" section, for administrating users settings. In this window, you can create or modify users. In shown case we will modify the user, created trough the MySQL installation.

We can add the user with "**AddAccount**" button. In the "**Login**" tab, set the user name and password. Leave other settings default. In the "**Account limits**" also leave the default configuration. In the "**Administrative Roles**" tab, assign rights and commands for working with data.



In the "**Schema Privileges**" tab, click "**Add Entry...**" button and mark check box "**Select schema**", like it's

shown on the image below. Select the **database/schema "test"** and click "OK". Next step is selecting the **schema privileges rights**.



Summary of caption 2.3.3.1 and 2.3.3.2 is installing MySQL(Server and Workbench), creating scheme (database) and user with full rights, for working with database. Now we can begin with CodeksACAdvancedDatabase or CodeksTAAAdvancedDatabase installation, described in caption [2.3.3.](#)^[22]

2.3.4. Activating License Code

Software Codeks will not work without a valid license code which you enter during installation. License code is unlimited, but it must be **activated within 30 days**. If you do not activate your license code within that time, the application will stop working until you activate the code.

License code can be found on the accompanying CD box. If you didn't activate the code during installation, you can activate it within 30 days. The license code is activated through the License Manager window that can be accessed via Codeks Service Manager. Codeks Service Manager can be opened by double clicking on its icon, which is located on your computer desktop, or by double clicking on the file CodeksServiceManager.exe, which can be found in the folder C:\Program Files\Codeks.

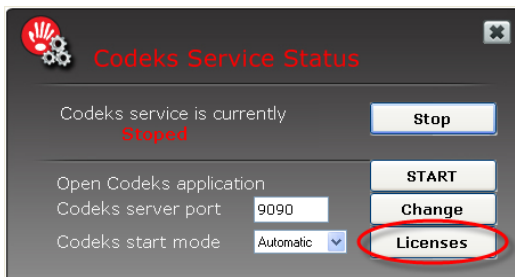
Codeks Service Manager icon



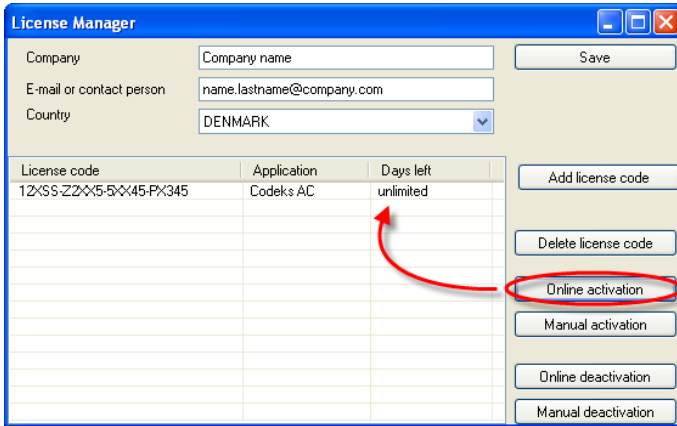
File CodeksServiceManager.exe in folder C:\Program Files\Codeks



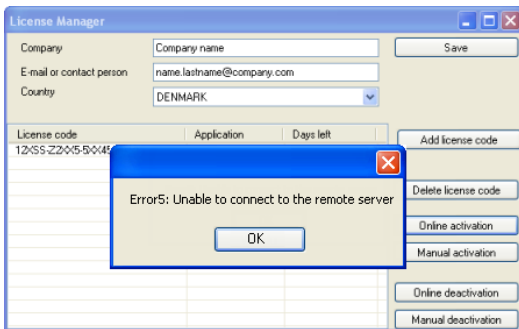
In the Codeks Service Manager click on the *Licenses* button. During activation of the license code the Codeks Service Manager must be Stopped.



License Manager window will open. If your computer is connected to the internet, choose licence code you wish to activate and click *Internet activation* button. If activation is successful, status in *Days left* column will change to *unlimited*.



If you do not have internet connection, program will show an error. In this case you can activate licence code manually, e.g. with your mobile phone or any other device with an internet access.



Select the license code you wish to activate and click on the *Manual activation* button.

1. ManualActivationForm window will open with your license code (**License code**) and the number of the activation request (**Challenge code**)
2. Use your mobile phone or any other device with internet access and go to <http://www.jantar.si/caf.html> where you fill in the form with Company data that you entered in the License Manager. Enter the **Challenge code**, mark the *Activation* field and click **Submit** button.
3. You will be redirected to the web page with the activation code named **Codeks activation code**
4. Enter the **Codeks activation code** in to the ManualActivationForm and click OK. If activation was successful, status in *Days left* column will change to *unlimited*.

ManualActivationForm

License code: DLH1B-J0CAA-S3NQ1-RAE1R
 Challenge code: 4FP9TD-BPPDDZ-M1582D-818DUA
 Codeks activation code:

Codeks activation

Company name:
 Company name
 Contact e-mail / person:
 name.lastname@company.com
 Country:
 Denmark
 Challenge code:
 4fp9td-bppddz-m1582d-818dua
 Activation
 Deactivation
 Submit

Codeks activation form - Mozilla Firefox

www.jantar.si/CodeksActivation.php?company=Company+name&contact=name

Codeks activation code:
 NQVXCZ-BQF40Z-Q97QLQ-VFTEAY

ManualActivationForm

License code: DLH1B-J0CAA-S3NQ1-RAE1R
 Challenge code: 4FP9TD-BPPDDZ-M1582D-818DUA
 Codeks activation code: NQVXCZ-BQF40Z-Q97QLQ-VFTEAY

2.3.5. Deactivating License Code

If you wish to move the Codeks application to another computer, you first need to deactivate license code on the computer where software is currently installed and then reactivate it on the new computer.

The license code is deactivated through the License Manager window that can be accessed via Codeks Service Manager. Codeks Service Manager can be opened by double clicking on its icon, which is located on your computer desktop, or by double clicking on the file CodeksServiceManager.exe, which can be found in the folder C:\Program Files\Codeks.

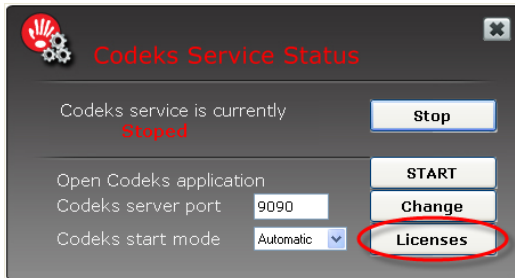
Codeks Service Manager icon



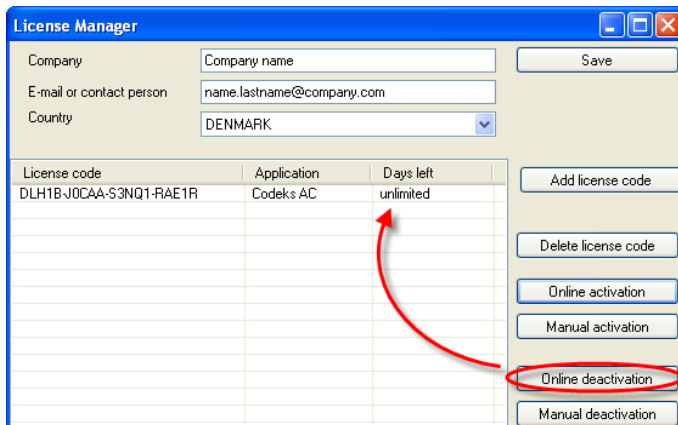
File CodeksServiceManager.exe in folder C:\Program Files\Codeks



In the Codeks Service Manager click on the *Licenses* button. During deactivation of the license code the Codeks Service Manager must be Stopped.



License Manager window will open. If your computer is connected to the internet, choose license code you wish to deactivate and click *Internet deactivation* button. If deactivation is successful, status in *Days left* column will change to remaining number of available days you have to test the application or message that testing period is over and, if you wish to use application, you have to activate the license code.



If you do not have internet connection, program will show an error. In this case you can deactivate license code manually, e.g. with your mobile phone or any other device with an internet access.

Select the license code you wish to deactivate and click the *Manual deactivation* button.

1. The program requires from you to confirm the deactivation of the selected license code.
2. Deactivation window will open, displaying deactivation number called **Challenge code**.
3. Use your mobile phone or any other device with internet access and go to <http://www.jantar.si/caf.html> where you fill in the form with Company data that you entered in the License Manager. Enter the **Challenge code**, mark the *Deactivation* field and click **Submit** button.
4. If the deactivation was successful, you will be redirected to the webpage showing deactivation status. Status in *Days left* column will change to remaining number of available days you have to test the application or message that testing period is over and, if you wish to use application, you have to activate the license code.

Codeks activation

Company name:
Company name

Contact e-mail / person:
name.lastname@company.com

Country:
Denmark

Challenge code:
20YRVZ-87K49V-169ENT-3D7DKN

Activation
 Deactivation

Submit

Codeks deactivation

Deactivation=success

2.4. Setting Firewall

Inadequate firewall settings can cause problems when searching for NET communication lines ([Hardware](#)^[169]). It can also cause problems when accessing Codeks applications from other computers.

User must ensure the following:

- Allow receiving of the TCP connections from web clients. This is default on port 9090.
- Communication must be allowed on TCP port 100 for communication with Spiders (if you are using Spider NET).
- Communication must be allowed on TCP port 1001 for communication with controllers, which are directly on the network (1001 is the default value which can be changed in hardware settings).
- Set the Firewall so that service will be able to send and receive UDP packages on port 65535 (searching for communication lines).

2.5. Backup of Codeks' Data

Backup is a MUST! Backup is entirely the responsibility of the owner and administrator of the system! The company Jantar is in no event responsible for the loss of your data! You can lose files by accidentally deleting or replacing them, because of a virus or worm attack, software or hardware failure, or a complete hard disk failure. To protect your files, you **MUST** create a backup. Backup is a set of copies of the files that is stored in a different location from the original files.

Making a backup copy

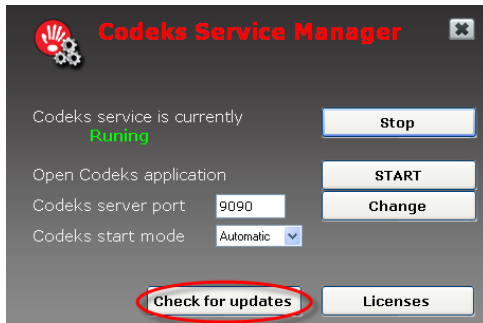
Making a backup copy of the Codeks program includes making a copy of your **database** as well as **some additional folders and files**. The procedure differs depending on the type of database used. The following procedure describes how to make a backup copy using the default SQLite database. If you are using an advanced database (Microsoft SQL Server, MySQL or Oracle), use an appropriate software tool to copy your type of database and follow the database backup procedure of the database's manufacturer.

1. Open the **Codeks Service Manager** program and **stop the Codeks service** by clicking the button **Stop**.
2. **Make a backup copy of your database:**
 - a) If you are using the default **SQLite database**, locate the Codeks program folder (**C:\Program Files\Codeks**) on the server's hard drive and **copy the folder named data**, which contains the SQLite database.
 - b) If you are using an advanced **database** (Microsoft SQL Server, MySQL or Oracle), use an appropriate software tool to copy your type of database and follow the database backup procedure of the database's manufacturer.
3. Then **copy all files with the .xml and .config extension** that are located in the Codeks program folder (C:\Program Files\Codeks).
4. Finally **copy the entire assets folder** located in the WebRoot folder (C:\Program Files\Codeks\WebRoot\assets). This folder contains:
 - EventPictures folder - this folder contains all pictures taken by the IP Camera when using the Codeks IP Camera Add-on.
 - GeneratedExports folder - this folder contains all created Exports (e.g. Statistics Column Export).
 - GeneratedReports folder - this folder contains all created Reports (e.g. Statistics Report).
 - Layouts folder - this folder contains all the uploaded layouts use in the Layouts editor.
 - Statisticsicons folder - this folder contains all the icons for statistics.
 - UserPictures folder - this folder contains all the uploaded pictures of employees.
5. Save all copied folder and filed in a safe and well-protected place. These files and folders contain important and security sensitive data.

2.6. Software Update

For software update, install a newer version of Codeks application on the computer where you have installed previous version. You don't need to uninstall previous version of the application.

1. Make [backup of Codeks' data](#)³⁶.
2. Open Codeks Service Manager in click *Check for updates*.



3. New window opens, where you can select the latest version of the Codeks application. If only one version is available, the program will automatically ask you if you wish to install it. With confirmation you will install the latest version of Codeks application.

2.7. Encrypted data transfer

Starting with the **Codeks 9.0.1.58** program version new **encrypted data transfer** features have been added to the Codeks software. Data encryption is now possible when communicating with devices and also to encrypt the transferred data between server and client.

We recommend that you implement the data encryption functions after you have already set up your controller network and installed the Codeks software.

Codeks 9.0.1.58 allows you to establish safe communication:

- with controllers in your network using [V9 communication](#)^[325] (also using custom encryption keys),
- between clients and your server with the use of [SSL certificates](#)^[330].

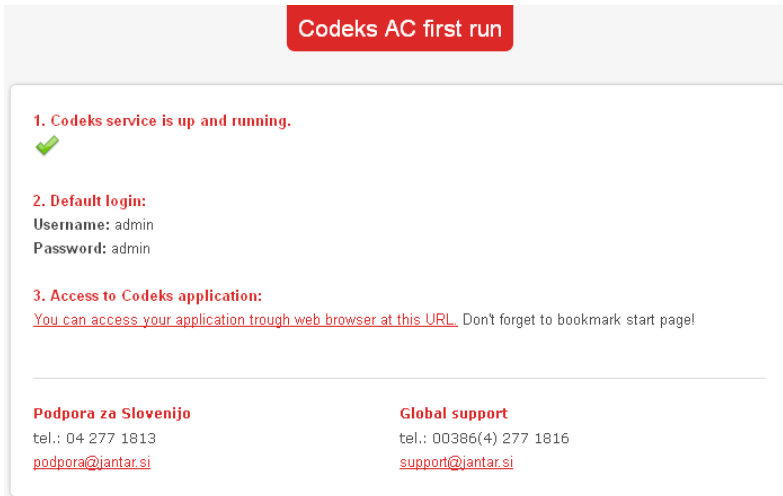
To enable encrypted data transfer you will need the additional programs **Codeks Device Manager** in **Codeks Service Manager**, which are part of the Codeks software package and should already be installed on your system. You can read more about this process in chapter [Encrypted data transfer](#)^[330].

Part

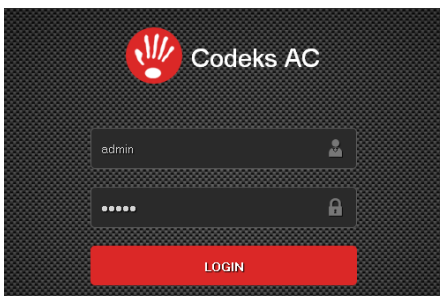
3

3. How to Start?

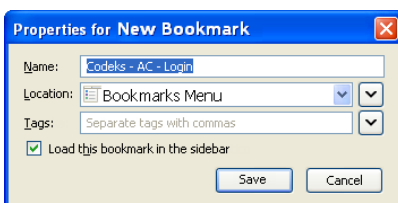
After a successful installation of hardware and software the Codeks application is ready to use. Codeks Service Manager will open **Codeks first run** in your default web browser. First run is a page with information about status of the installation, some basic information about the software and default username and password for login. Pictures in this manual are screenshots taken from user application, running in web browser.



Link to the application will open a login window in a new tab, where you enter username and password. Default user name is admin and default password is also admin. Due to security we recommend that you change them immediately after the first login. You can do that in [Administrators](#)^[128].



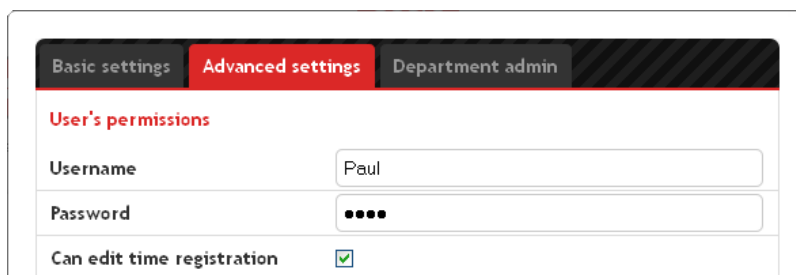
At the first launch the application will recommend that you create bookmark for the login window. For easier use we recommend that you add bookmark in your bookmark menu.



3.1. Codeks TA - User Statistics

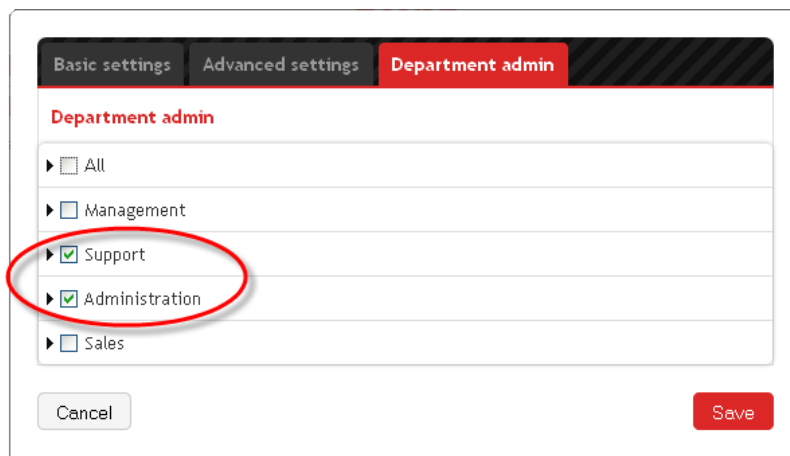
You can allow the users to view and edit their time registration hours. When adding or editing the user, administrator can set his *username* and *password*, which enable the user to login into application and view his registration hours. If you allow the user to edit his time registration hours then enable the *Can edit time registration* field.

In the Main Window click the *Users* icon. In the Users Editor click *Add* or *Edit user* and under *Advanced settings* tab set the User's permissions.



The screenshot shows the 'Advanced settings' tab selected. Under the 'User's permissions' section, the 'Username' field contains 'Paul', the 'Password' field is masked with dots, and the 'Can edit time registration' checkbox is checked.

You can also allow the user to view or edit time registration for a specific department. Under the *Department admin* tab enable the departments that the user will be able to view or edit.

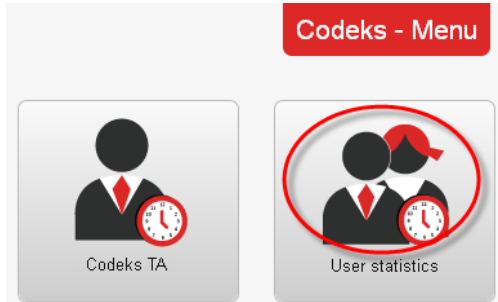


The screenshot shows the 'Department admin' tab selected. A list of departments is displayed with checkboxes: 'All', 'Management', 'Support', 'Administration', and 'Sales'. The 'Support' and 'Administration' checkboxes are checked and circled in red. 'Cancel' and 'Save' buttons are visible at the bottom.

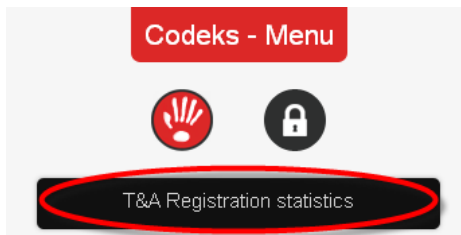
For user login you need the computer name where you have Codeks TA installed, port number where Codeks Service Manager accept requests and internet browser. The user runs the web browser and, in the address bar, type in an URL address of the computer where Codeks Service Manager runs in form of: `http://computer_name:port_number`. Replace 'computer_name' with an actual name of the computer and optionally include a port number. In case Codeks Service Manager runs on the same computer where the web browser is used, you can change the computer_name with localhost. For example: If computer's name is sandra123 and service accepts requests on port number 81, we direct our web browser onto this address:

http://sandra123:81.

Main Menu appears in the browser window. For viewing and editing of time registration hours the user must click *User statistics* button and write his username and password into Login form.



On the next menu the user must click on the *T&A Registration statistics*.



Time attendance Editor will open, where the user can view or edit his time registration hours and hours of the employees in the departments he can manage.

| Name | Last name | Department | Card |
|-----------|-----------|----------------|------|
| Paul | Stripe | Management | |
| Anthony | Jones | Support | |
| Josephine | Brown | Administration | |
| Zoya | West | Sales | |

Events 01.06 - 30.06 (5 weeks)

21. week (01.06 - 02.06)

- 01.06 Sat | Weekend
- 02.06 Sun | Weekend

22. week (03.06 - 09.06)

- 03.06 Mon, 07:00 - 15:22, +00:22, 0001 | Worktime
- 04.06 Tue, 07:00 - 14:58, -00:02, 0001 | Worktime
- 05.06 Wed, 08:00 - 16:06, +00:06, 0001 | Worktime
- 06.06 Thu Lea | Leave
- 07.06 Fri Lea | Leave
- 08.06 Sat ---- | Weekend
- 09.06 Sun ---- | Weekend

User

Paul Stripe (Employees)

June 01.06.2013-30.06.2013

Statistics overview

- Worktime 2 (16:20)
- Leave 0 (00:00)
- Weekend 0 (00:00)
- Not present 0 (00:00)

Part

4

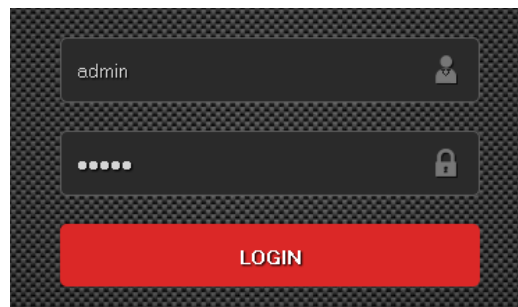
4. User Interface

In this part of the user manual are the guidelines for quick and effective work with the user application. Requirements for successful work with user application is properly installed Codeks. At first a brief overview of the user interface is given, and then procedures for working with individual parts of the program are described. Pictures in this manual are screenshots taken from user application, running in web browser. All lists in the application enables you to use right-click.

4.1. Login

Login window is the first window that appears after directing web browser to Codeks service's URL. It is intended for logging in the user into the application. In the Username field you enter the user name and in the Password field you enter your password. You should then confirm entered data by clicking on the *Login* button.

If entered data is correct the [Main Menu](#)^[45] will open, otherwise message is shown that the user name or entered password is incorrect. In that case, please correct the user name and/or password and confirm newly entered data by clicking on the *Login* button again.



Login window is intended for administrator and user login. Administrator will login with administrator's user name and password, which you can set in [Administrators](#)^[126].

ADDITIONAL for Codeks TA

Users will use user name and password which were assign to them, when they were added to the system (Users - [Advanced Settings](#)^[274]).

NOTE: After completing the installation of Codeks and first login, administrator's password and username is set to **admin**. We recommend that you immediately change the default username and password after first login. This can be done in [Administrators Editor](#)^[126].

4.2. Main Menu

After a successful login, application's Main Menu appears. This window represents a starting point for access to [Time & Attendance](#) ^[48] (Codeks TA), [Monitor](#) ^[119], [Settings](#) ^[125], [Reports](#) ^[123], [Hardware](#) ^[169], [Timetables](#) ^[210], [Users](#) ^[272], [Groups](#) ^[297] and [Send tables](#) ^[321].



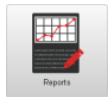
Time & Attendance icon is enabled when you use Codeks TA for work registrations of your employees. It enables you to work with time registration hours of your employees.



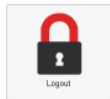
In Monitor you can view and monitor live or past events and track currently present employees.



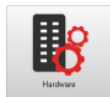
In Settings you can edit and work with Administrators, Macros, Counters, Function Groups, Events, Preferences and Holidays.



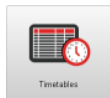
Reports enable you to overview event reports, user report and user access rights in PDF format. It also enables you to manage and use SQL reports.



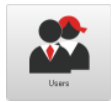
The Logout icon is used to exit from the application. To enter the application again, you must enter the username and password.



In Hardware Editor you can add, edit, delete or connect Locations and Hardware.



Timetables enable you to create, edit or delete timetables and time intervals.



In Users Editor you can add, edit or delete users. Users Editor also enables you to access the Groups Editor, where you can assign access rights to groups of users.



In Groups Editor you can define user's rights when using the system.



Send tables enables you to send tables to the connected controllers. You need to send tables to controllers every time you change any settings in the Codeks application.

Icons that are used in the application:



Home

The Home icon always returns the application to the Main Menu.



Back

The Back icon returns the application to the previous page.



Logout

The Logout icon is used to exit the application. To enter the application again, you must enter username and password.

Part

5

5. Codeks TA - Time Attendance

Time attendance editor is intended for reviewing and editing events that users create when they register on the controller. You can access Time attendance editor through the Main window with a click on the Time attendance icon or through User Editor.

In the upper part of the editor are icons for making [TA Reports](#)^[72]. In the central part of the Time attendance Editor is located event tree, where events are grouped according to day and week, when they were created. In the right part of the editor, at the top, is located window with the name of the selected user and *period selection*, where you can select desired period to review. According to selected period application displays hours, statistics and calculations for selected user. Below the period selection is *Statistics overview* where working hours are divided depending on individual statistic. Next is *Current period summary* displaying calculations for selected period and, at the bottom, *Year data* where you can set the number of leave and old leave days and set the maximum transfer hours.

Time attendance
Icons for access to statistics and generating reports

Home
 Back
 Logout

Period report
 Error report
 Report
 Statistics report
 Export
 Reports
 Custom reports
 Work obligation history

| Last name | Name | Personal ID | Department |
|----------------|----------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor Komerziala |
| Ahec | Jani | 578 | Teren |
| Bajde | Ludvig | 975 | Teren |
| Benkovič | Tilen | 127 | ...ktor Programerji |
| Gregorič | Majda | 688 | Podjetje Direktor |
| Kamenkova | Nat | 588 | ... Testni oddelek |
| Korošec | Janez | 567 | ...tor Proizvodnja |
| Merkovič-Logar | Maja | 457 | Teren |
| Oblak | Boris | 687 | ...ktor Programerji |
| Potokar | Peter | 698 | ...ktor Komerziala |
| Slokar | Sonja | 325 | ...ktor Komerziala |
| Smolnik | Katarina | 693 | Teren |
| Zupan | Mark | 597 | Teren |

List of users

Events 01.11 - 30.11 (5 weeks)

44. week (01.11 - 06.11)

- 01.11 Tue, PR | Praznik
- 02.11 Wed, -08.00, E000 | Ni prisoten
- 03.11 Thu, -08.00, E000 | Ni prisoten
- 04.11 Fri, -08.00, E000 | Ni prisoten
- 05.11 Sat, --- | Vikend
- 06.11 Sun, --- | Vikend

45. week (07.11 - 13.11)

- 07.11 Mon, -08.00, E000 | Ni prisoten
- 08.11 Tue, -08.00, E000 | Ni prisoten
- 09.11 Wed, -08.00, E000 | Ni prisoten
- 10.11 Thu, -08.00, E000 | Ni prisoten
- 11.11 Fri, -08.00, E000 | Ni prisoten
- 12.11 Sat, --- | Vikend
- 13.11 Sun, --- | Vikend

46. week (14.11 - 20.11)

- 14.11 Mon, -08.00, E000 | Ni prisoten
- 15.11 Tue, -08.00, E000 | Ni prisoten
- 16.11 Wed, -08.00, E000 | Ni prisoten
- 17.11 Thu, -08.00, E000 | Ni prisoten
- 18.11 Fri, -08.00, E000 | Ni prisoten
- 19.11 Sat, --- | Vikend
- 20.11 Sun, --- | Vikend

47. week (21.11 - 27.11)

- 21.11 Mon, -08.00, E000 | Ni prisoten
- 22.11 Tue, -08.00, E000 | Ni prisoten
- 23.11 Wed, -08.00, E000 | Ni prisoten
- 24.11 Thu, -08.00, E000 | Ni prisoten
- 25.11 Fri, -08.00, E000 | Ni prisoten
- 26.11 Sat, --- | Vikend
- 27.11 Sun, --- | Vikend

48. week (28.11 - 30.11)

- 28.11 Mon, -08.00, E000 | Ni prisoten
- 29.11 Tue, -08.00, E000 | Ni prisoten
- 30.11 Wed, E000 | Ni prisoten

Event editor

User

Adrovič Tamara
(Komerziala, Komerziala AC, Komerziala KM, _Zaposleni)

November 2016

November 01.11.2016-30.11.2016

Statistics overview

Statistic overview 0 (00:00)

[E000] Ni prisoten 20 (00:00)

[---] Vikend 8 (00:00)

[PR] Praznik 1 (08:00)

Current period summary

Current period summary 08:00

Period work obligation 168:00

Overtime transfer 00:00

Stimulation transfer 00:00

Period plus -512:00

Saldo period -160:00

Saldo -672:00

Split time 0

Lunch count 0

Drive count 0

Manual transfer saldo to overtime

Manual transfer saldo to stimulation

Manual transfer from prev. month

Month remarks

Save

Year data 2016

Leave 28/0

Old leave 28/28

Total first year leave 0

Set leave (days)

Set old leave (days)

Monthly overtime transfer [max] 0

Monthly stimulation transfer [max] 0

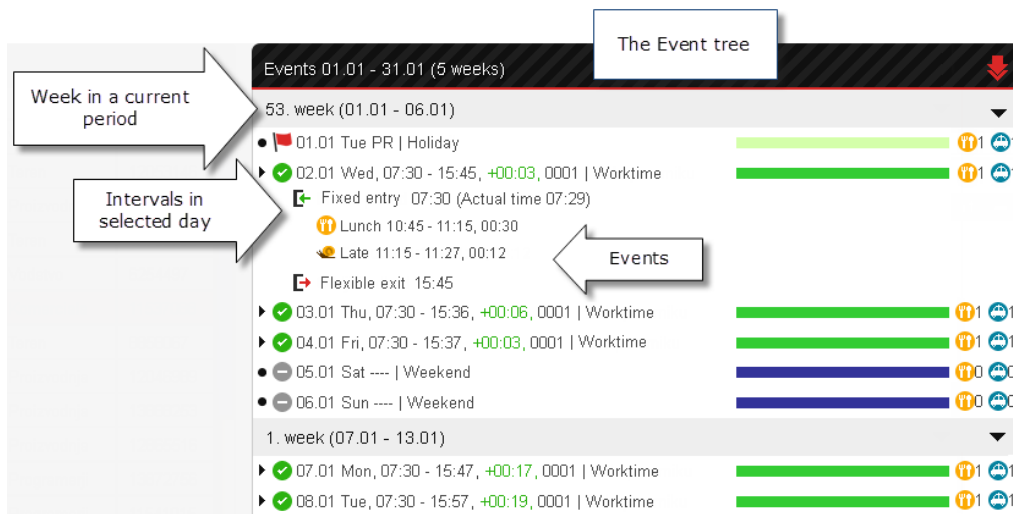
Set max. transfer (hours) 8

Allow negative transfer

Save







5.1. Events Review

User's events can be seen in the middle of Time attendance Editor. Event viewer displays events in the events tree, which consists of weeks and days during the period. Events are gathered in groups where each group comes under the day of the period, in which it was created. In the upper right part of the Editor's window we can select a period, we wish to review.



Weeks in event tree are marked with the number of the week and a date span. Individual days are marked with graphic icon of the statistic. Text description of the day provides time of arrival and departure from work, daily balance and a description of the statistic. Individual weeks and days in the event tree can be expand and collapse with the click on the triangle on the right side of the week's data and in front of each day. When you expand individual day, all of the events that belong to that day will be displayed.

Day in the events tree combines intervals which appear in chronological order. Interval description contains graphic icon associated to statistic and text description which varies depending on the type of interval. Type of the interval depends on the timetable by which the user records his arrivals and exits from work. The following types of intervals are already entered into the existing timetables and can be used in time and attendance registering.

-  Entry (event indicates arrival to work, text displays time of the arrival)
-  Exit (event indicates departure from work, text displays time of the departure)
-  Business (event indicates business exit, text displays time of the departure, arrival and duration)
-  Lunch (event indicates time used for lunch, text displays time of the departure, arrival and duration)
-  Private (event indicates private exit, text displays time of the departure, arrival and duration)
-  Overtime (event indicates recorded overtime, text displays start time, end time and duration)

You can read more about adding and editing intervals in timetables in chapters [Timetables](#)^[210] and [Add Work Interval](#)^[59].

5.2. Edit Period

The calendar year is divided into 12 months. Each of them presents its period, commencing on the first day of the month and lasts until the end of the month. The period is the basis for the calculation of work commitments, hours worked, overtimes, the number of meals and associated transport costs. Each period can be determined by number of paid overtime hours, stimulation hours and transfer of hours to the next period. You can choose the period that you would like to edit in the right upper part of the Events Editor.

User

In the User window you can see the name and last name of the user, the name of the group he belongs to and the current period.

The screenshot shows a window titled "User" with the following content:

- User name: Mlakar Franci
- Group: (Registracija 2014, Registracija 2014 AC)
- Month: March
- Year: 2014
- Current period: March 01.03.2014-31.03.2014

An arrow points to the month and year dropdowns with the text "Selection of the current period".

Current period summary fields are described in table below:

The screenshot shows a window titled "Current period summary" with the following fields:

- Period sum: 170:04
- Period work obligation: 168:00
- Overtime transfer: 00:00
- Stimulation transfer: 00:00
- Period plus: 420:24
- Saldo period: 02:04
- Saldo: 422:28
- Split time: 0
- Lunch count: 21
- Drive count: 21
- Manual transfer saldo to overtime: (with a red 'x' icon)
- Manual transfer saldo to stimulation: (with a red 'x' icon)
- Manual transfer from prev. month: (with a red 'x' icon)
- Month remarks:

A "Save" button is located at the bottom left.

The table below shows the fields of **Current period summary** window:

| Field | Description |
|------------------------|---------------------------------------------------------------------------|
| Period sum | Attained work hours and absences in current period. |
| Period work obligation | Working hours, that employee is obligated to carry out in current period. |

| Field | Description |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overtime transfer | Appears when you use function <i>Manual transfer saldo to overtime</i> . |
| Stimulation transfer | Appears when you use function <i>Manual transfer saldo to stimulation</i> . |
| Period plus | Difference between work obligation and carried out working hours in the previous period. |
| Saldo period | Difference between work obligation and carried out working hours in current period. |
| Saldo | The total surplus or deficit hours ("Period plus" + "Saldo period") |
| Split time | Number of days when more than one entry/exit was registered. |
| Lunch count | Number of lunches in current period. |
| Drive count | Number of transfers in current period. |
| Manual transfer overtime Saldo to overtime | Used when you will pay overtime hours to the employee. Enter the number of paid overtime hours in the field and press "Save". "Saldo" will be reduced for the entered number of hours. Paid overtime hours appear in the "Overtime transfer" field and on the report. |
| Manual transfer stimulation Saldo to stimulation | Used when you will pay stimulation hours to the employee. Enter the number of paid stimulation hours in the field and press "Save". "Saldo" will be reduced for the entered number of hours. Paid stimulation hours appear in the "Stimulation transfer" field and on the report. |
| Manual transfer from previous period | Number of hours transferred from previous period. Value will appear in <i>Period plus</i> . |
| Month remarks | Field for entering monthly particularities. |

NOTE: For registration of overtime hours the use of fixed timetable is necessary.

5.3. Edit Year

If you want to determine user's leave or days of old leave, you can do this in the *Year data* frame. In this frame you also determine maximum number of hours that user can transfer to the next period.

Year data 2014

| | |
|------------------------------------|------------------------------------------------------------------------------------------|
| Leave | 27/27 |
| Old leave | 5/5 |
| Set leave (days) | <input checked="" type="checkbox"/> <input style="width: 40px;" type="text" value="27"/> |
| Set old leave (days) | <input checked="" type="checkbox"/> <input style="width: 40px;" type="text" value="5"/> |
| Monthly overtime transfer [max] | <input checked="" type="checkbox"/> <input style="width: 40px;" type="text" value="50"/> |
| Monthly stimulation transfer [max] | <input type="checkbox"/> <input style="width: 40px;" type="text"/> |
| Set max. transfer (hours) | <input type="checkbox"/> <input style="width: 40px;" type="text"/> |
| Allow negative transfer | <input checked="" type="checkbox"/> |

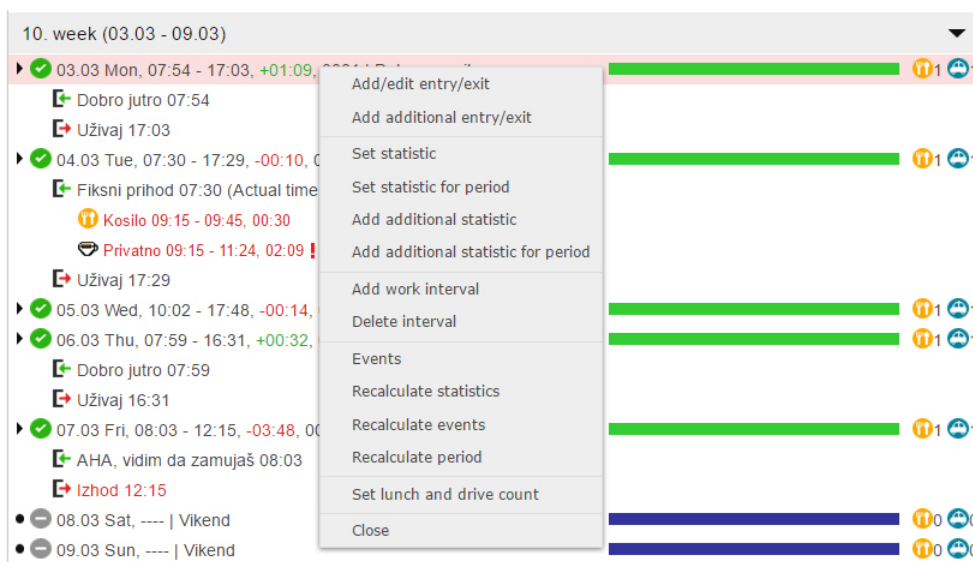
[Save](#)

Year data contains user data, that is valid for throughout the year. *Leave* and *Old leave* fields show days that are left of total number of leave in days, that we determine in *Set Leave (days)* and *Old leave (days)* fields. Fields for monthly overtime, stimulation and hour transfer is used for determination of maximum number of hours that user can transfer to next period. If you want to restrict the transfer hours, mark the box and enter the maximum number of transfer hours. If you don't want to restrict the transfer hours, leave the box

unmarked. If the field *Allow negative transfer* is enabled, the negative Saldo is carried over to the next period. After you finish, save data with the click on the *Save* button. Clicking in the crosshairs will entail invalidation of manual corrections.

5.4. Edit Day

In the *Time attendance Editor* you are able to edit events registered on controller, adding new intervals and removing existing intervals. We can assign a statistic to group of events (a code that categorizes attained hours and method of their calculation). With right-click on a day that you wish to edit, you will open a menu with the editing options.



In the table below are given descriptions of each option of the menu in the picture above:

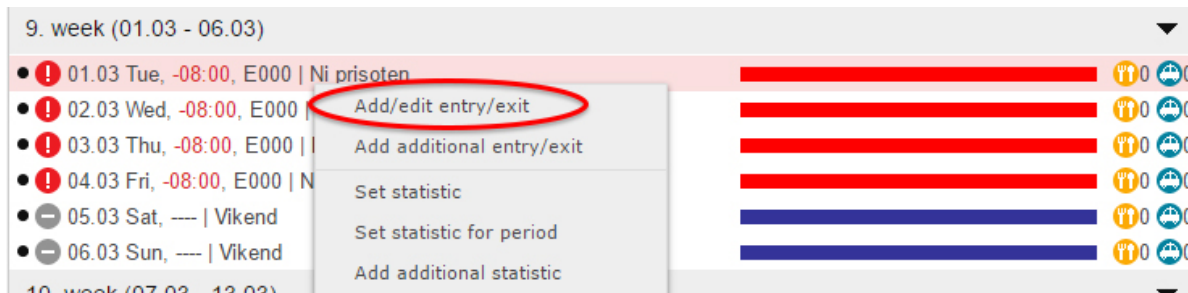
| Day editing | Description |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Add/edit entry/exit | Add time of entry and exit. |
| Add additional entry/exit | Add an additional entry and exit to a day. |
| Set statistic | Set statistic for selected day or interval. |
| Statistic for period | Set statistic for period. |
| Add additional statistic | Add additional statistic for selected day. |
| Add additional statistic for period | Add additional statistic for selected period. |
| Add work interval | Add new interval to selected day or interval. The list displays the intervals with the interval type General purpose (set in Timetables). |
| Delete interval | Delete existing entry/exit or interval. |
| Events | Display of actual events, registered on the controller. |
| Recalculate statistics | Recalculate daily hours sum, including manual editing, and recalculate Saldo. |
| Recalculate events | Undo manual data editing for selected day and reset to actual events, registered on the controller. |

| | |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recalculate period | If the field <i>Reset manual changes</i> is enabled, then the application deletes manual editing for selected period and recalculates events, registered on the controller. If the field <i>Reset manual changes</i> is not enabled, then the application recalculates selected period including manual editing and recalculates Saldo. |
| Set lunch and drive count | Set the lunch and drive count manually. |

5.4.1. Add/Edit Entry/Exit

Each day consists of entry, exit and the corresponding intervals. If you click on the triangle next to the day the tree will expand and display the intervals for this day (if the day is already expanded, the tree will close and hide the corresponding intervals). Day includes intervals of a different type (Entry - Exit, Lunch ...). New intervals are added to the day when the user registers on the controller or you can add them manually.

First event in the group is always Entry, then other events follow. Day ends with event of type Exit. Events in the day are sorted by time of creation. In case that there has not been made any event on the controller, the day is empty; no events. If you want to add a new event to the empty day, you need to add event of type Entry first. To do this, select the empty day in the event tree and then click on *Add/edit entry/exit* button (or double click on a day).



A new window opens (shown in the picture below) where you enter requested data. Window consists of text fields for description of events, selection of passage, selection of statistic, selection of dates of entry and exit, field for entry of arrival time (From), exit time (To) and the possibility of labeling errors. Between the two fields, for entering the time of entry and exit, the number of total hours in a day is displayed. If you only want to determine time of the entry, leave the field for exit time (To) empty (delete the time 00:00 with the *Delete* button). In that case system will not add event of type Exit. Please confirm entered data with the click on *Save* button. If you do not want to save data you can exit the window with the click on *Cancel* button. The procedure above may also be used for editing existing data. Edited data is colored red in the event tree and the exclamation mark icon. Errors are also indicated with an exclamation mark icon.

| | | | |
|---------------------------------------|----------------------------------------------|-------------------------------------|--------------------------------------------|
| Entry | <input type="text" value="Entry"/> | Exit | <input type="text" value="Exit"/> |
| Passage | <input type="text" value="Main entry"/> | Passage | <input type="text" value="Main entry"/> |
| Statistic | <input type="text" value="0001 - Worktime"/> | | |
| From | <input type="text" value="05.06.2014"/> | To | <input type="text" value="05.06.2014"/> |
| | <input type="text" value="07:56"/> + HH:mm | | <input type="text" value="16:08"/> + HH:mm |
| | | | <input type="text" value="08:12"/> |
| Entry error | <input type="checkbox"/> | Exit error | <input type="checkbox"/> |
| <input type="button" value="Cancel"/> | | <input type="button" value="Save"/> | |

NOTE!

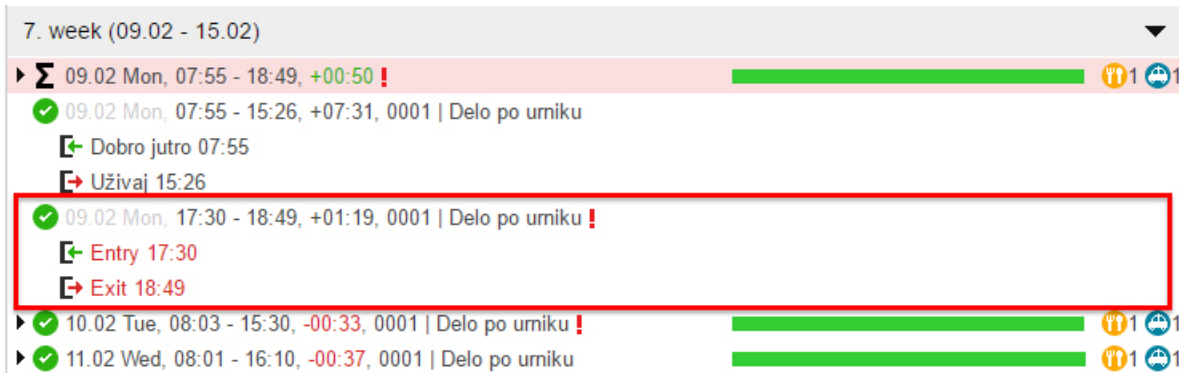
Entry/Exit can be entered also for **multiple users**. Select the users on the list of users by holding down SHIFT or CTRL key on the keyboard and then right-click on a certain day. Select *Add/edit entry/exit* on the menu and enter data that will apply for multiple users. Application will ask you to confirm adding interval for multiple users.

5.4.2. Add additional entry/exit

A user can be assigned an additional entry/exit. This functionality is useful when we need to add additional work hours to a user, after he has already registered an exit for that day.

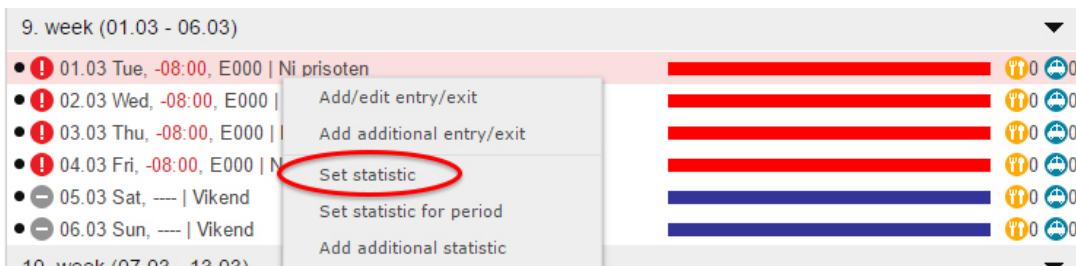
To add a new entry/exit to a user, right-click on a selected day and select **Add additional entry/exit** from the menu.

A new window will appear with identical options as when *adding the first entry/exit*. Set the entry/exit settings and click Save. The *newly added entry/exit section will appear in the event tree*. The new entry/exit has *the same properties* as the first entry/exit section and can also *be edited in the same way*.



5.4.3. Set Statistic

To set statistic for a certain day right-click on the day in the event tree and select *Set statistic* option.



A new window opens (picture below) where you can change statistic for selected day. Click the *Save* button to save the changes. Selected day will be assigned with new statistic. How to work, add and edit statistics is described in chapter [Statistics](#)¹³³.



5.4.4. Set Statistic for Period

Statistic for period can be added with a help of menu in [Edit Day](#)⁵³ or through the list of users. If you want to specify statistics for several users at a time, select them on the list of users by holding down SHIFT or CTRL key on the keyboard. Here is an example of adding leave for the selected user. Right-click on the user and select *Statistic for period* on the menu.

| Last name | Name | Personal ID | Department |
|-----------|--------|-------------|---------------|
| Adrović | Tamara | 607 | MedKamerciala |
| Ahec | Jani | | |
| Bajde | Ludvig | | |
| Benkovič | Tilen | | merji |
| Gregorič | Marija | | stor |
| Kamenkova | Nadja | | elek |
| Kornjanc | Lanez | | dnia |

In new window select the start (From) and end (To) dates of old leave and, with the statistics selector, choose *Old leave*. Enable the checkbox *Only when work obligation > 0* (work obligation is set in timetables), which means that the selected statistic will not be determined for days in which the user does not have work obligation, for example: Weekend. If you enable the checkbox *Do not modify holidays*, holidays will not change their statistic. After you finish with entering data, click *Save* button to save new statistic for selected days.

From:

To:

Statistic:

Only when work obligation > 0

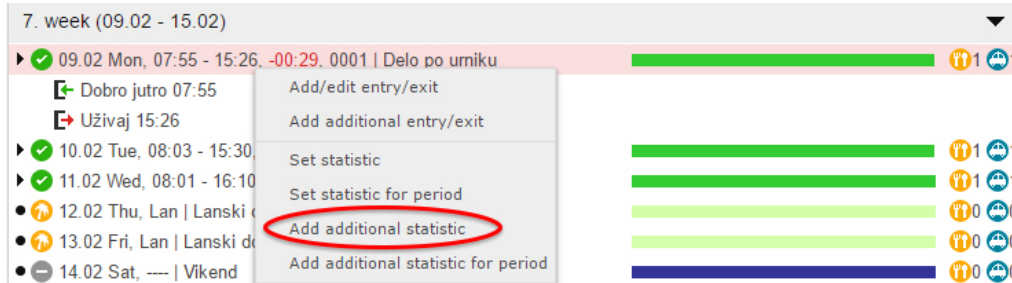
Do not modify holidays

Setting up user statistics is also possible through the event tree. Right-click on any day will open the action menu, where you can select the option *Set statistic for the period*. Enter the required information and save the settings.

| 7. week (09.02 - 15.02) | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▶ 09.02 Mon, 07:55 - 15:26, -00:29, 0001 Delo po urniku ▶ Dobro jutro 07:55 ▶ Uživaj 15:26 ▶ 10.02 Tue, 08:03 - 15:30 ▶ 11.02 Wed, 08:01 - 16:10 ● 12.02 Thu, Lan Lanski d ● 13.02 Fri, Lan Lanski d ● 14.02 Sat, --- Vikend | <ul style="list-style-type: none"> Add/edit entry/exit Add additional entry/exit Set statistic Set statistic for period Add additional statistic Add additional statistic for period |

5.4.5. Add Additional Statistic

To add additional statistic for a certain day right-click on the day in the event tree and select *Add additional statistic* option.

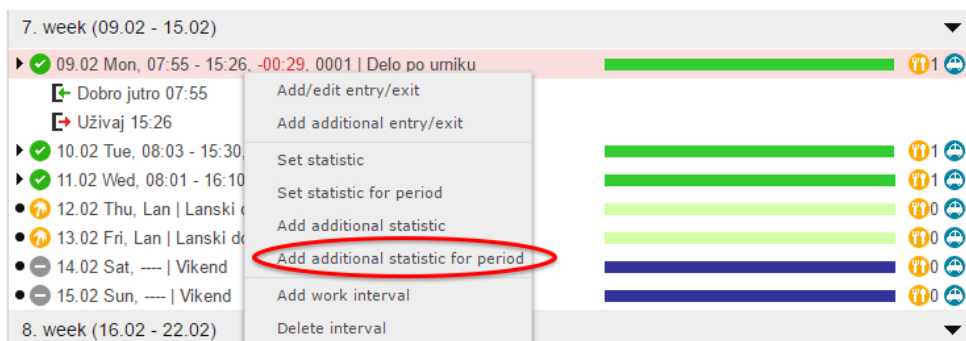


A new window opens (picture on the next page) where you can select additional statistic for selected day. Click the *Save* button to save the changes. Selected day will be assigned with additional statistic. How to work, add and edit statistics is described in chapter [Statistics](#)¹³³.



5.4.6. Add Additional Statistic for Period

To add additional statistic for period, right-click on any day in the event tree and select *Add additional statistic for period* on the menu.



In new window select the start (From) and end (To) dates of old leave and, with the statistics selector, choose *Old leave*. Enable the checkbox *Only when work obligation > 0* (work obligation is set in timetables), which means that the selected statistic will not be determined for days in which the user does not have work obligation, for example: Weekend. If you enable the checkbox *Do not modify holidays*, holidays will not

change their statistic. After you finish with entering data, click Save button to save new statistic for selected days.

5.4.7. Add Work Interval

Day can also be added with work intervals. Right-click on the day that you wish to add a new work interval to and select *Add work interval* on the menu. If there are intervals with *General purpose* type in the system (e.g. Lunch, Business, Private) a new menu will open, where you can select the interval you wish to add. New window opens, the same as for editing interval. Based on selected type, enter interval's start and end time and click the Save button. Newly created interval can be seen in selected day in the event tree. Next picture displays adding new work interval.

Window for entering interval data

| Adding interval | Description |
|-----------------|--------------------------------------------------------------------------------------------------------|
| Interval | You can select the interval in drop-down menu. |
| Entry | Display text at entry. |
| Passage | Passage where entry/start of the interval was registered. |
| From | Date and entry time of the interval. |
| Entry error | Mark the error at entry. In the tree of events the error is marked with the exclamation mark icon. |
| Add lateness | If the checkbox <i>Add lateness</i> is enabled, the application will calculate lateness automatically. |
| Exit | Exit text. |
| Passage | Passage where exit/end of the interval was registered. |
| To | Date and exit time of the interval. |
| Exit error | Mark the error at exit. In the tree of events the error is marked with the exclamation mark icon. |

Record of interval entry time

If you only want to set entry time, enter the time in the field *From* and leave the end time *To* unfinished (delete the time 00:00 with the *delete* button). Event will end when user registers on the controller (e.g. you can set start time of the lunch, and when user comes back, he will register on the controller and event Lunch will end).

Add lateness

If the checkbox *Add lateness* is enabled, the application will calculate lateness automatically.



Example:

Adding the Lunch interval, which duration (Max) is set to 30 minutes in timetables.

The user was at lunch for 56 minutes, from 11:00 to 11:56. Because the checkbox *Add lateness* is enabled, the application will automatically calculate 26 minutes long lateness.

Interval: Lunch

Entry: Lunch

Passage: Main entry

From: 05.06.2014
11:00 + HH:mm

Entry error:

Add lateness:

Exit:

Passage: Main entry

To: 05.06.2014
11:56 + HH:mm

Exit error:

00:30 + 00:26

Cancel Save

Lateness in the tree of events:

05.06 Thu, 07:56 - 16:08, +00:04, 0001 | Worktime

- ← Entry 07:56
- 🕒 Lunch 11:00 - 11:30, 00:30
- 🕒 Late 11:30 - 11:56, 00:26
- Exit 16:08

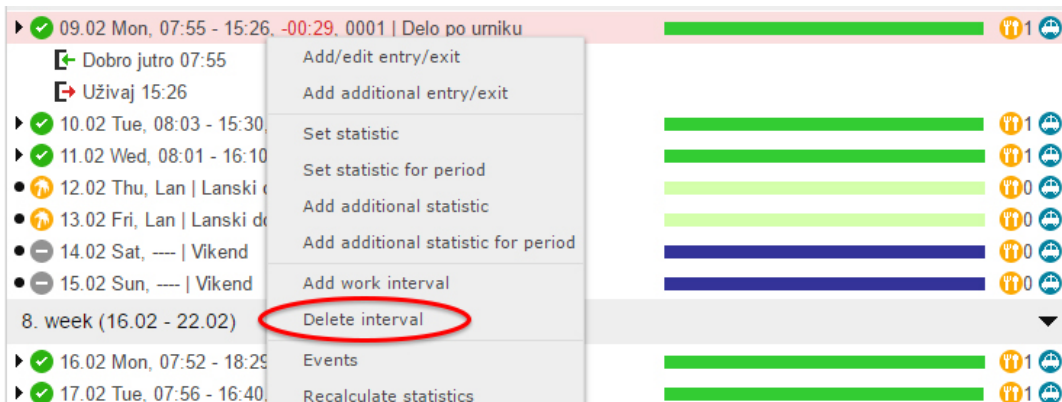
NOTE! Adding lateness is possible only when you are adding interval.

5.4.8. Edit Interval

To edit interval, either select it with double-click or select it with right-click and in the menu select *Add/edit entry/exit* option. In the new window edit the interval's data and confirm them with the *Save* button. If you only want to determine time of the entry, leave the field for exit time (To) empty (delete the time 00:00 with the *Delete* button). In that case system will not add event of type Exit. For example: you can manually determine the time of departure to lunch and leave the exit time empty. Lunch will be concluded with the user's registration on the controller.

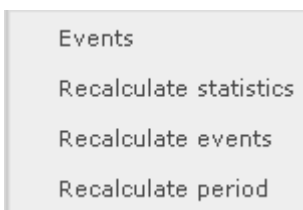
5.4.9. Delete Interval or Statistic

Individual intervals and statistics can also be deleted from the day they belong. Right-click on the interval or statistic that you wish to delete and select *Delete interval on the menu*. Before you can delete entry and exit for selected day, you need to delete all intervals which were entered for this day.



If you select the *delete interval* option, while the entire day is selected, the application will report a warning. You must delete the individual intervals within the day, before deleting the day itself.

5.4.10. Actual Events and Recalculate Events



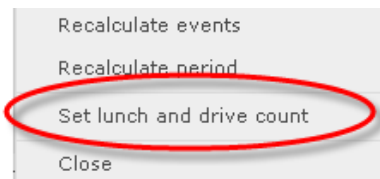
| Edit day | Description |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Events | Enables you to view actual events, registered on the controller. |
| Recalculate statistics | <i>Recalculate statistics</i> will recalculate daily hours sum, including manual editing, and recalculate Saldo. |
| Recalculate events | <i>Recalculate events</i> serves for repealing manual adjustments. Manual editing and adding or removing events is repealed and the values are recalculated from events, registered on the controller. |
| Recalculate period | <i>Recalculate period</i> enables you to recalculate events for selected period. If the field <i>Reset manual changes</i> is enabled, then the application deletes manual editing for selected period and recalculates events, registered on the controller. If the field <i>Reset manual changes</i> is not enabled, then the application recalculates selected period including manual editing and and recalculates Saldo. |

CAUTION! *Recalculating events* and with it the repeal of manual editing, is carried out for whole selected day. All manually added intervals and edited intervals will be lost!

Events and statistics which are recalculated over the users list **is carried out for the entire month!**

5.4.11. Set Lunch and Drive Count

Right-click on the day for which you wish to to set the number of lunch and drive and select the option Set lunch and drive count on the menu. With manual setting of lunch and drive you will change the calculated value of the application.



Window will open where you can manually set the lunch and drive count. Enable the checkbox and enter the number. Click the *Save* button to confirm the changes.

Set lunch and drive count

Lunch count 2

Drive count 2

5.4.11.1. Drive count mode

It's possible to count drives in three different ways: **Standard, DoubleDrive and StandardMulticount.** Choose one in the **settings of Timetable.**

Drive count mode StandardMultiCount
 Ignore holiday and weekend
 24h
 Timetable for shift planning

Cancel Save

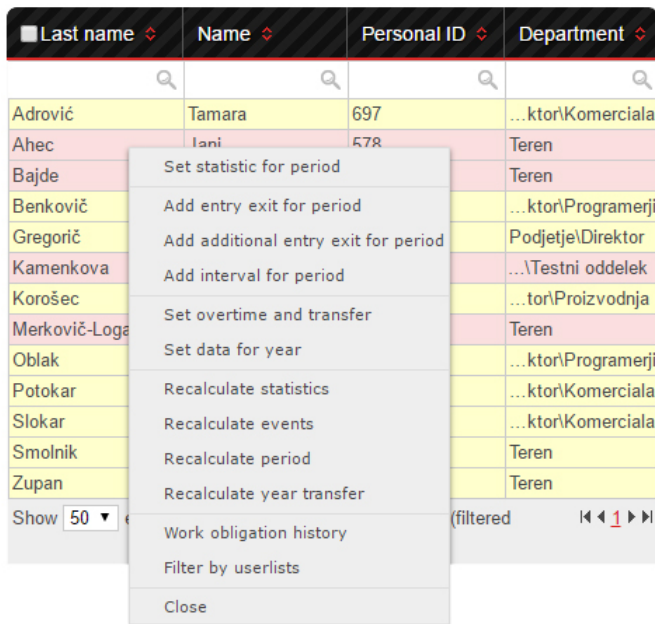
| Drive mode | count | Description |
|--------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard | 1 day, 1 drive | |
| DoubleDrive | | The employee is entitled with 1 drive on arrival at work and 1 drive when leaving work. In the event of the automatic arrival or exit, the employee is entitled with 1 drive. |
| StandardMultiCount | | The employee is entitled with 1 drive on arrival at work. If employee arrives more than once, the drive index will sum (one drive for one entry-exit session) |

Example of **StandartMultiCount**:

5.5. Edit time attendance for one or more users

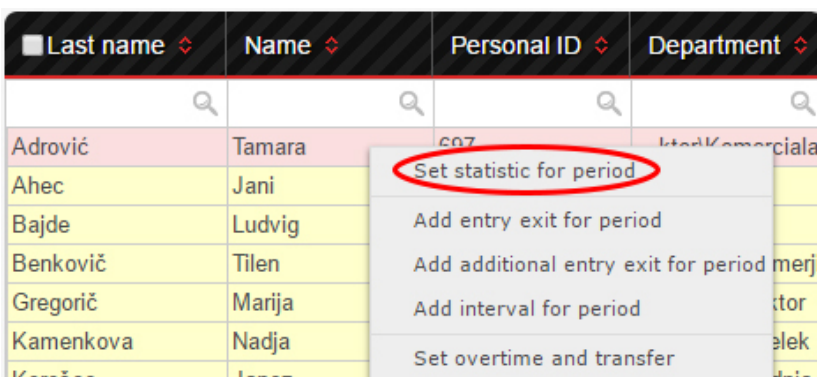
In the Time attendance editor you can edit user data for one or more users using the List of users on the left. Select multiple users by holding down the Ctrl or Shift buttons.

By right-clicking on the List of users a menu will appear, containing similar options as the right-click menu in the Event editor.



Set statistic for period

By clicking the *Set statistic for period* you can set a specific statistic to selected days for all the marked users.



A new pop-up window will open, where you can set the duration and select a statistic.

From

To

Statistic

Only when work obligation > 0

Do not modify weekends

Do not modify holidays

Add entry exit for period and Add additional entry exit for period

You can add an entry and exit or use the second option to add an additional entry and exit for all marked users.

| Last name | Name | Personal ID | Department |
|-----------|--------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor\Komerziala |
| Ahec | Iani | 578 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkova | | | ...\Testni oddelek |

Set statistic for period

Add entry exit for period

Add additional entry exit for period

Add interval for period

In the pop-up window you can edit the setting of the newly added entry and exit as well as set the time period.

Entry

Passage

Statistic

From

Entry error

Exit

Passage

Only when work obligation > 0

Do not modify weekends

Do not modify holidays

To

Exit error

Add interval for period

To add an interval for a selected time period to the marked users, select the *Add interval for period* option. The displayed list contains intervals set with the interval type General purpose (set in Timetables).

| Last name | Name | Personal ID | Department |
|------------|--------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor\Komerziala |
| Ahec | | 570 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkov | | | |
| Korošec | | | |
| Merkovič-L | | | |
| Oblak | | | |
| Potokar | | | |
| Slokar | | | |
| Smolnik | | | |
| Zupan | | | |

- Set statistic for period
- Add entry exit for period
- Add additional entry exit for period
- Add interval for period
- Set overtime and transfer
- Set data for year
- Recalculate statistics
- Recalculate events
- Recalculate period
- Recalculate year transfer
- Work obligation history
- Filter by userlists
- Close

- Čas na poti
- Delo pri stranki
- Frontdesk Replacement
- Late
- Malica
- Malica (star)
- Malica 2 (star)
- Nadure
- Not present
- Poslovno
- Poslovno (star)
- Poslovno dovolilnica
- Privatno
- Privatno (star)
- Privatno dovolilnica
- Privatno GG

In the pop-up window edit the interval settings and set the time period.

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Interval <input type="text" value="Poslovno"/></p> <p>Entry <input type="text" value="Poslovno"/></p> <p>Passage <input type="text" value="Glavni vhod"/></p> | <p>Exit <input type="text"/></p> <p>Passage <input type="text" value="Glavni vhod"/></p> <p>Only when work obligation > 0 <input checked="" type="checkbox"/></p> <p>Do not modify weekends <input checked="" type="checkbox"/></p> <p>Do not modify holidays <input checked="" type="checkbox"/></p> |
| <p>From <input type="text" value="01.12.2016"/></p> <p><input type="text"/> <input type="button" value="+"/> <input type="button" value="x"/> HH:mm 00:00</p> <p>Entry error <input type="checkbox"/></p> | <p>To <input type="text" value="01.12.2016"/></p> <p><input type="text"/> <input type="button" value="+"/> <input type="button" value="x"/> HH:mm</p> <p>Exit error <input type="checkbox"/></p> |
| <input type="button" value="Cancel"/> | <input type="button" value="Save"/> |

Set overtime and transfer

To edit the overtime and hour transfer settings select the *Set overtime and transfer* option.

| Last name | Name | Personal ID | Department |
|---------------|--------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor\Komerziala |
| Ahec | Iani | 578 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkova | | | ...\Testni oddelek |
| Korošec | | | ...tor\Proizvodnja |
| Merkovič-Loga | | | Teren |
| Oblak | | | ...ktor\Programerji |
| Potokar | | | ...ktor\Komerziala |

Set statistic for period

Add entry exit for period

Add additional entry exit for period

Add interval for period

Set overtime and transfer

Set data for year

Recalculate statistics

In the pop-up window you can edit the Saldo and monthly hour transfer settings.

Set overtime and transfer

- Manual transfer saldo to overtime + .HH:mm
- Manual transfer saldo to stimulation + HH:mm
- Manual transfer from prev. month + HH:mm

Cancel

Save

Set data for year

To set the yearly data for all marked users select the *Set data for year* option.

| Last name | Name | Personal ID | Department |
|---------------|--------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor\Komerziala |
| Ahec | Iani | 578 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkova | | | ...\Testni oddelek |
| Korošec | | | ...tor\Proizvodnja |
| Merkovič-Loga | | | Teren |
| Oblak | | | ...ktor\Programerji |
| Potokar | | | ...ktor\Komerziala |

- Set statistic for period
- Add entry exit for period
- Add additional entry exit for period
- Add interval for period
- Set overtime and transfer
- Set data for year**
- Recalculate statistics

In the pop-up window you can edit the settings of the *Year data section*.

Set data for year

Set leave (days)
 Set old leave (days)
 Monthly overtime transfer [max]
 Monthly stimulation transfer [max]
 Set max. transfer (hours)
 Allow negative transfer

Recalculate statistics, events, period, and year transfer

You can also select different options for editing data in the *Event editor*.

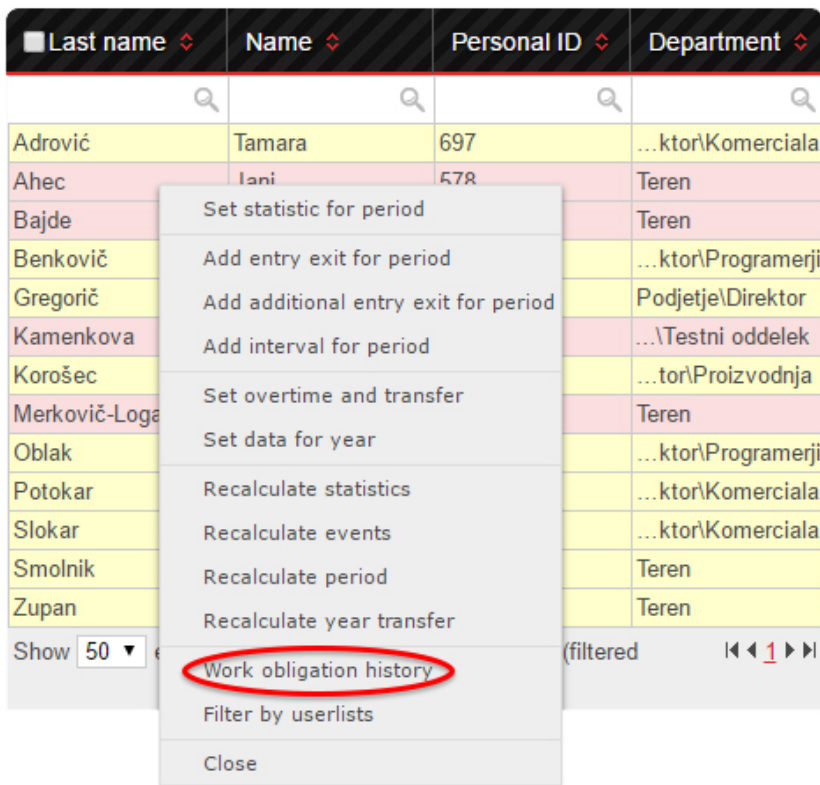
| Last name | Name | Personal ID | Department |
|---------------|--------|-------------|---------------------|
| Adrovič | Tamara | 697 | ...ktor\Komerziala |
| Ahec | Iani | 578 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkova | | | ...\Testni oddelek |
| Korošec | | | ...tor\Proizvodnja |
| Merkovič-Loga | | | Teren |
| Oblak | | | ...ktor\Programerji |
| Potokar | | | ...ktor\Komerziala |
| Slokar | | | ...ktor\Komerziala |
| Smolnik | | | Teren |
| Zupan | | | Teren |

- Set statistic for period
- Add entry exit for period
- Add additional entry exit for period
- Add interval for period
- Set overtime and transfer
- Set data for year
- Recalculate statistics**
- Recalculate events**
- Recalculate period**
- Recalculate year transfer**

| | |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recalculate statistics | The function will recalculate the daily hours sum, including the manual edited settings, and recalculate Saldo. The manual edited settings will not be overwritten. |
| Recalculate events | The function resets all manual adjustments. Manual editing and added or removed events are revoked and the values are recalculated from events, registered on the controller |
| Recalculate period | The function enables you to recalculate events for a selected period. If the field <i>Reset manual changes</i> is enabled , then the application deletes all manual edited settings for selected period and recalculates events, registered on the controller. If the field <i>Reset manual changes</i> is not enabled , then the application recalculates selected period including the manual edited settings and recalculates Saldo. |
| Recalculate year transfer | The function recalculates the yearly transfer and Saldo for all the marked users. |

Work obligation history

To change the Work history for marked users select the *Work obligation history* option.



In the new pop-up window you can edit the work history data of all the selected users simultaneously.

| Date | Type | Name |
|------------|-------|------------|
| 01.12.2012 | Group | Komerciala |
| 01.1.2015 | Group | Terenci |

Date: 01.12.2012

Type: Group

Group: Komerciala

Add Edit Delete

Close Save

Filter by userlists

Filters the List of users display by userlists.

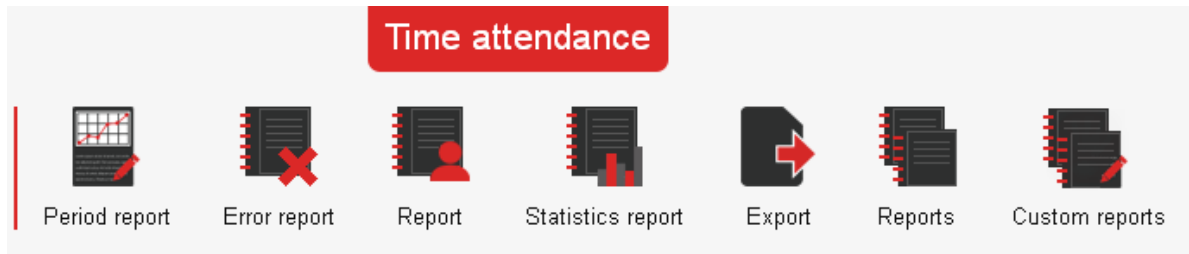
| Last name | Name | Personal ID | Department |
|--------------|--------|-------------|---------------------|
| Adrović | Tamara | 697 | ...ktor\Komerciala |
| Ahec | | 570 | Teren |
| Bajde | | | Teren |
| Benkovič | | | ...ktor\Programerji |
| Gregorič | | | Podjetje\Direktor |
| Kamenkova | | | ...\Testni oddelek |
| Korošec | | | ...tor\Proizvodnja |
| Merkovič-Log | | | Teren |
| Oblak | | | ...ktor\Programerji |
| Potokar | | | ...ktor\Komerciala |
| Slokar | | | ...ktor\Komerciala |
| Smolnik | | | Teren |
| Zupan | | | Teren |

Show 50 (filtered) 1

- Set statistic for period
- Add entry exit for period
- Add additional entry exit for period
- Add interval for period
- Set overtime and transfer
- Set data for year
- Recalculate statistics
- Recalculate events
- Recalculate period
- Recalculate year transfer
- Work obligation history
- Filter by userlists**
- Close
- Show all users
- Dopoldanska izmena
- Popoldanska izmena
- Nočna izmena

5.6. TA Reports

You can create various kinds of reports; Period report, Error report, user events Report, Statistics Report, Export in .csv format and Custom report.



All reports can be made for one user or a group of users selected in the users list. In the upper right part of the Time attendance Editor first select the period for which you wish to print a report. Each user is selected by clicking him on the list of users, additional users are selected, if you hold down SHIFT or CTRL key on the keyboard, while clicking on the other users.

When users are selected, you send request for report to the server, by clicking the desired report icon. In a few moments, browser offers an option to open or save report. Report can be printed in PDF file format, for which you need [Adobe Acrobat Reader](#), available free on the internet, or in CSV file format, that can be viewed in any standard text viewer (Notepad).

5.6.1. Period Report

Period report displays all working hours that are marked by a certain statistic, and number of the occurrences of certain statistic. The bottom two lines in user's period report show summary of data for desired period. This report contains data that are needed for payroll programs. You can see overall user registration, hours registered in different statistics, balance, late entries, etc.



Period report

Period: 1.6.2014 - 24.6.2014

| Personal ID | User | 0001 | E000 | E001 | 0003 | ---- | Hol | Lea | OldL | Lat | Busn | Lunc | Priv | |
|-------------|-----------------------------|--------------|-------|-----------------|-------|-------------------|-------|-------------------|-------|----------------|-------|------------------------|-------|----------------|
| 36246 | Stripe Paul (Management) | 09:22 | 00:00 | | 15:48 | 00:00 | 00:00 | 16:00 | | 01:14 | | 01:57 | 01:37 | |
| | | 12 | 0 | | 2 | 7 | 0 | 2 | | 3 | | 5 | 2 | |
| | | Total 131:10 | | Balance 183:14 | | Bal. period 03:10 | | | | Leave 23/27 | | Work obligation 128:00 | | Lunch count 14 |
| | | Days 17 | | Transfer 180:04 | | Overtime 00:00 | | Stimulation 00:00 | | Old leave 0/4 | | | | Drive count 14 |
| 5332 | Willson Samantha (Sales) | 114:37 | 00:00 | 00:00 | | 00:00 | 00:00 | 08:00 | 08:00 | | 00:57 | | 00:37 | |
| | | 13 | 0 | 1 | | 7 | 0 | 1 | 1 | | 1 | | 1 | |
| | | Total 130:37 | | Balance 478:55 | | Bal. period 02:37 | | | | Leave 21/22 | | Work obligation 128:00 | | Lunch count 13 |
| | | Days 17 | | Transfer 476:18 | | Overtime 00:00 | | Stimulation 00:00 | | Old leave 0/6 | | | | Drive count 13 |
| Sum : | | 213:59 | 00:00 | 00:00 | 15:48 | 00:00 | 00:00 | 24:00 | 08:00 | 01:14 | 00:57 | 01:57 | 02:14 | |
| | | 25 | 0 | 1 | 2 | 14 | 0 | 3 | 1 | 3 | 1 | 5 | 3 | |
| | | Total 261:47 | | Balance 662:09 | | Bal. period 05:47 | | | | Leave 44/49 | | Work obligation 256:00 | | Lunch count 27 |
| | | Days 34 | | Transfer 656:22 | | Overtime 00:00 | | Stimulation 00:00 | | Old leave 0/10 | | | | Drive count 27 |

| Legend | | | | | | | | | |
|-----------------|--------------------|-------------------|------------------|---------------|----------------|--|--|--|--|
| [0001] Worktime | [E000] Not present | [E001] Only entry | [0003] No return | [---] Weekend | [Hol] Holiday | | | | |
| [Lunc] Lunch | [OldL] Old leave | [Lat] Late | [Busn] Business | [Lunc] Lunch | [Priv] Private | | | | |



5.6.2. Error Report

Error report enables you to create report according to certain filters. It is usually used for review of deviations from planned timetables. This report is used to automatically find errors or other time attendance problems. You can select what kind of errors you would like to find and what are error limits.

From

To

Not present

Only entry

Interval < 3 min

Entry error

Exit error

Sum < + x HH:mm

Sum > + x HH:mm

Interval

▼

▼

▼

Statistic

▼

▼

▼

Select only options that you need on report. We recommend selective report of errors as too concentrated data may represent a significant problem with interpretation.

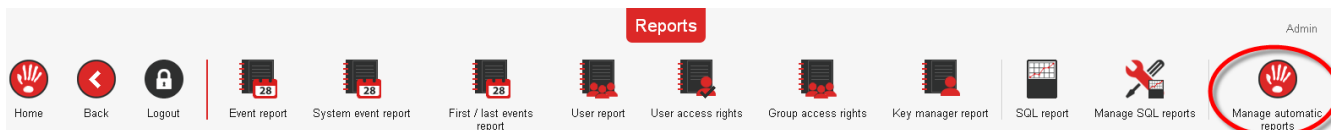
| Errors report options | Description |
|-----------------------|---------------------------------------------------------------------------------------------|
| Not present | User was absent. |
| Only entry | User did not register on exit. |
| Interval < 3 min | Application will add intervals which duration was less than 3 minutes. |
| Entry error | User has made not allowed entry (user had no valid time interval at registration on entry). |
| Exit error | User has made not allowed exit. |
| Sum < | Application will add days when summary is less than you specified. |
| Sum > | Application will add days when summary is more than you specified. |
| Interval type | Select time interval. |
| Statistic | Select statistic. |
| Add automatic report | Use configuration, create new automatic report and edit it in new window. |
| Use | Use configuration and open report. |

5.6.2.1. Automatic report

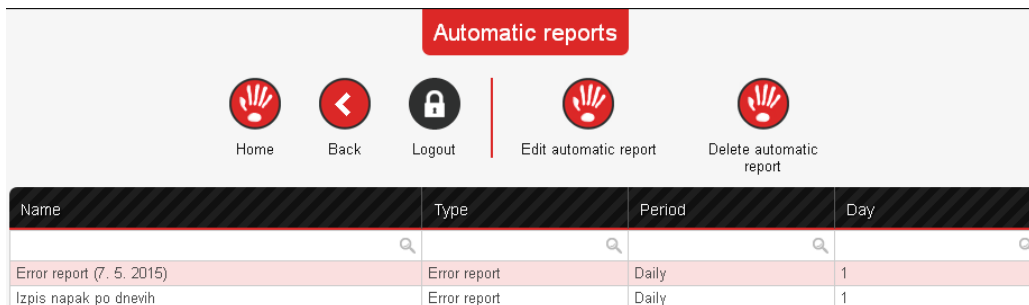
Add Automatic Report, allows setting daily or monthly automatic error reports of users. Users will get email about employee errors. If the check permission is checked, selected user will get error report via email, only for their employees. The result is pdf file.

5.6.2.1.1 Manage automatic reports

Manage error reports icon is placed in main menu of **Reports / Manage automatic reports**.

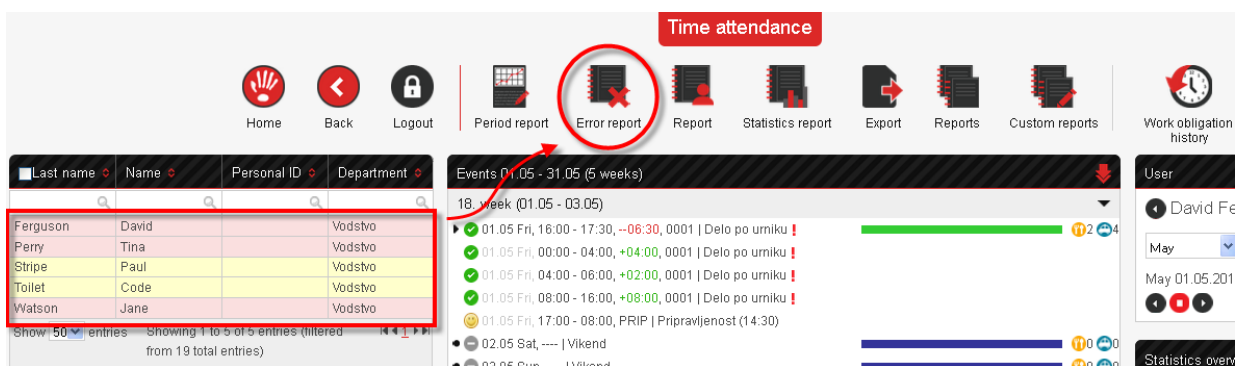


A new window **Automatic reports** opens.



5.6.2.1.2 Add automatic report

Go to Time attendance, select users for automatic report and click **Error report** icon.



Complete the form and press button **"Add automatic report"**.

From: 01.05.2015 To: 31.05.2015

Not present Entry error

Only entry Exit error

Interval < 3 min

Sum < HH:mm Sum > HH:mm

Interval: Select interval...
 Select interval...
 Select interval...

Statistic: Select statistic...
 Select statistic...
 Select statistic...

Cancel Add automatic report Use

A new windows opens **Edit Automatic report**. Follow the instructions on the image below:

Edit automatic report For daily or monthly report Day of sending (only for Monthly) Only for users, that selected user or admin have permissions for

Name: DailyAutomaticReport Remove user

Period: Daily Day 1 Check permissions

List of selected users

- Ferguson David
- Newman Anthony
- Perry Tina
- Stripe Paul

Selected users will get automatic report

| Name | Department |
|----------|-------------------|
| Cloud | Rosie |
| Ferguson | David Vodstvo |
| Johnson | Reilly |
| Mango | Daniel |
| Newman | Anthony |
| Perry | Tina Vodstvo |
| Stripe | Paul Vodstvo |
| Toilet | Code Vodstvo |
| Watson | Jane Vodstvo |
| Willson | Samantha |
| zz | AccessFirstFloor |
| zz | AccessSecondFloor |
| zz | FrontDeskNoAccess |

Single click to add a user on list of selected users

Administrators

- Admin Admin
- FrontDesk

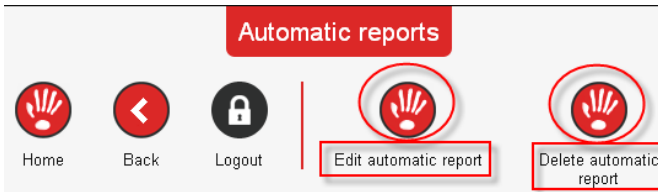
Selected admins will get automatic report

Save Close

If the check box "Check permissions" is not marked, selected users and administrators will get error report about all selected users in timetable.

5.6.2.1.3 Edit or delete automatic report

You can choose **Edit automatic report** or **Delete automatic report** in **Automatic reports** main menu. First select report and click the icon.



5.6.3. Report

Report creates a detailed report of arrivals and exits for selected users in given period. After clicking on the *Report* icon, application will ask whether to show the subintervals and actual event times. Select the options you want and click the *Use* button.

Show subintervals

Show actual event times

Report contains all arrivals and exits in chosen period, statistics of event groups, attained hours, overtime, balance, leave state ... Example of Report is shown on the next page.

| Date | | Start | End | Total | Statistic |
|------|----------|----------------------|-------|-------|-----------|
| Sun | 1.6.2014 | --:-- | --:-- | --:-- | Weekend |
| Mon | 2.6.2014 | 07:30 Entry ('07:13) | 15:36 | 07:24 | Worktime |
| | | 10:41 Lunch | 11:11 | 00:30 | Lunch |
| | | 11:11 Late | 11:53 | 00:42 | Late |
| Tue | 3.6.2014 | 07:30 Entry ('07:24) | 15:42 | 08:12 | Worktime |
| Wed | 4.6.2014 | 06:44 Izredno | 16:16 | 09:23 | Worktime |
| | | 10:39 Lunch | 11:09 | 00:30 | Lunch |
| | | 11:09 Late | 11:18 | 00:09 | Late |
| Thu | 5.6.2014 | 06:38 Exceptional | 15:30 | 07:56 | No return |
| | | 14:34 Private | 15:30 | 00:56 | Private |
| Fri | 6.6.2014 | --:-- | --:-- | --:-- | *Leave |
| Sat | 7.6.2014 | --:-- | --:-- | --:-- | Weekend |
| Sun | 8.6.2014 | --:-- | --:-- | --:-- | Weekend |

| User Paul Stripe (Management) | | Supervisor | |
|-------------------------------|--|---------------|--|
| Period 1.6.2014 - 30.6.2014 | | User | |
| Personal ID 16 | | Administrator | |
| User card 11537088 | | | |

| Sum | 131:10 | Statistics | 0001 | E000 | 0003 | ---- | Hol | Lea | Lat |
|-----------------|--------|------------|-------|-------|-------|-------|-------|-------|-------|
| Overtime | 00:00 | Time | 99:22 | 00:00 | 15:48 | 00:00 | 00:00 | 16:00 | 01:14 |
| Stimulation | 00:00 | Count | 12 | 0 | 2 | 7 | 0 | 2 | 3 |
| Balance | 183:14 | Statistics | Lunc | Priv | | | | | |
| Saldo period | 03:10 | Time | 01:57 | 01:37 | | | | | |
| Transfer | 180:04 | Count | 5 | 2 | | | | | |
| Work obligation | 128:00 | | | | | | | | |
| Leave | 23/27 | | | | | | | | |
| Old leave | 0/4 | | | | | | | | |
| Lunch count | 14 | | | | | | | | |
| Drive count | 14 | | | | | | | | |

5.6.4. Statistic Report

Statistic report shows statistics for each day in given period. This report is useful to visually check time attendance registrations over one month. It can be also useful to check if more users have their leave on same dates.

| Period statistic report (1.2.2013 - 28.2.2013) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------------|------------------|------------------|--------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Personal ID | User | Department | Saldo period | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. | 27. | 28. |
| 12 | Willson Samantha | Administration | 20:40 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | |
| 15 | Cloud Rosie | Cleaning service | 02:55 | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | |
| 16 | Brown Josephine | Administration | -01:27 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | |
| 18 | West Zoya | Support | -01:43 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | |

| Legend | | | | | | | | | | | |
|--------|-----------------|---|-------------------|---|--------------|---|-------------|---|----------|---|----------------|
| 🟢 | Worktime | 🔴 | Not present | 🟡 | Only entry | 🟠 | No return | 🟤 | Weekend | 🚩 | Holiday |
| 🟡 | Leave | 🟡 | Old leave | 🟡 | Late | 🟠 | Business | 🚨 | Sickness | 🏠 | Work from home |
| 🟡 | Maternity leave | 🔴 | Exceptional leave | 🟠 | Unpaid leave | 🟠 | Study leave | 🕒 | Lunch | 🔒 | Private |

5.6.5. Export

Export creates report in .csv file format, containing the same data as Period report.

Statistics Columns Report

MFERAC Odsotnosti is made for Slovenian market only.

Detail XML and Detail XML Work prediction

Detail XML creates report for selected users.

Detail XML work prediction creates work prediction report for selected users. Depended of users work obligation, XML "**<HOURS>**" tag must be predicted for all future days of current month. Data must be checked at the end of the month and differences adjusted.

Both reports can be opened, saved or used for other data processing.

The difference between the result of **Detail XML** (first image below) and **Detail XML Work prediction** (second image below) **using the same month and user:**

```

<REFKEY>20150508105756921800033</REFKEY>
<EMPNUMBER />
<SUBTYPE>E000</SUBTYPE>
<STARTDATE>20150528</STARTDATE>
<ENDDATE>20150528</ENDDATE>
<STARTTIME>0000</STARTTIME>
<ENDTIME>0000</ENDTIME>
<HOURS>0000</HOURS>
</Details>
- <Details>
  <REFKEY>20150508105756921800034</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>E000</SUBTYPE>
  <STARTDATE>20150529</STARTDATE>
  <ENDDATE>20150529</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105756921800035</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150530</STARTDATE>
  <ENDDATE>20150530</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105756921800036</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150531</STARTDATE>
  <ENDDATE>20150531</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105756921800037</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150530</STARTDATE>
  <ENDDATE>20150530</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105732031200033</REFKEY>
  <EMPNUMBER />
  <INFOTYPE />
  <SUBTYPE>0001</SUBTYPE>
  <STARTDATE>20150528</STARTDATE>
  <ENDDATE>20150528</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0800</HOURS> Prediction
  </Details>
- <Details>
  <REFKEY>20150508105732031200034</REFKEY>
  <EMPNUMBER />
  <INFOTYPE />
  <SUBTYPE>0001</SUBTYPE>
  <STARTDATE>20150529</STARTDATE>
  <ENDDATE>20150529</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0800</HOURS> Prediction
  </Details>
- <Details>
  <REFKEY>20150508105732031200035</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150530</STARTDATE>
  <ENDDATE>20150530</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105732031200036</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150531</STARTDATE>
  <ENDDATE>20150531</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>
- <Details>
  <REFKEY>20150508105732031200037</REFKEY>
  <EMPNUMBER />
  <SUBTYPE>----</SUBTYPE>
  <STARTDATE>20150530</STARTDATE>
  <ENDDATE>20150530</ENDDATE>
  <STARTTIME>0000</STARTTIME>
  <ENDTIME>0000</ENDTIME>
  <HOURS>0000</HOURS>
  </Details>

```

Description of XML tags:

```

<DETAILS> Details for one person, depended of date
  <REFKEY> Reference key
  <EMPNUMBER> Employee number
  <SUBTYPE> Subtype or statistic code
  <STARTDATE> Start Date of shift
  <ENDDATE> End date of shift
  <STARTTIME> Start time of shift
  <ENDTIME> End time of shift
  <HOURS> Sum of <STARTTIME> and <ENDTIME>
</DETAILS>

```

5.6.6. Custom report

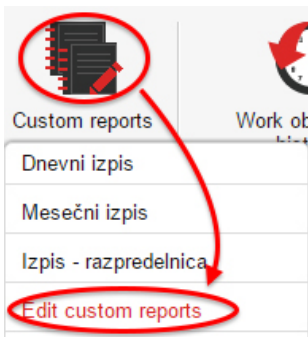
Custom reports enable you to create a completely customised output report, that can be used for further data processing. Custom reports can be used to prepare:

- data used in payroll programs,
- customised reports for calculating bonuses and incentives for employees,
- customised reports of leave absences and sick leave,
- spreadsheet reports suitable for use in other reports, etc.

Specially defined commands, in the .ini file syntax (INI file), are used to determine which data will be displayed in the custom report and also what form they will be displayed in.


This file format was chosen in order to enable easier import of reports, that were created in the Jantar V7 program, to Codeks. This means that the content of the Codeks custom reports is usually compatible with the Jantar V7 program, although in some cases differences could not be avoided.

Custom reports can be accessed through the **Custom reports icon** in the Time Attendance Editor. You can add or edit the reports at will by clicking the *Edit custom reports* option from the drop-down menu of the Custom reports icon. All newly-added custom reports will be displayed in the drop-down list of the Custom reports icon.




The Custom reports Editor will open. Here you can add, edit or delete custom generated reports.


Custom report




Home




Back




Logout



Add custom report



Edit custom report

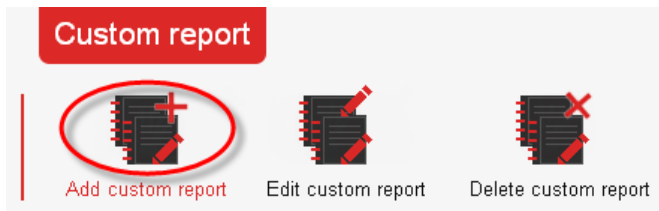


Delete custom report

| Name | Owner | Type |
|-----------------------|-------------|--------|
| Dnevni izpis | Admin Admin | Public |
| Mesečni izpis | Admin Admin | Public |
| Izpis - razpredelnica | Admin Admin | Public |

5.6.6.1. Add Custom Report

To add a new custom report, click the *Add custom report* icon.



In the new window, you can create your own report and *Save* it. In the [Report definition](#) ⁸² field, you can determine which data will be included and how this data will be displayed. The process of writing a custom report definition is described in the following chapters.

General information

Name

Report definition

```
[Report]
Mode=month
File=ure_{DATE()YYYYMM}.txt
DecimalSeparator=.
ExportZeroDays=0

# This line is used for standard statistics
Line={USER_EXTERNAL_ID}5{STAT}3.0 {HOURS}3.0

LineForCalculatedValues={USER_EXTERNAL_ID}5{STAT}3.0 {DAYS}3.0

Lunch=303
Drive=304

Formula_1={SUM_MINUTES}+MustWork;-4;-160;-207;-201;-206;-203;-221;-239;-6;-5;-205

Line_83={USER_EXTERNAL_ID}5{STAT}3.0 {DAYS}3.0

HourSum=
```

Owner

Type

| Add custom report | Description |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | The name of the report will be displayed in the drop-down list of the Custom reports icon in the Time attendance editor. |
| Report definition | The code of the report definition, written in the .ini file syntax. The following chapters describe how to create a custom report definition. |
| Owner | Select a user that will be the owner of the report. The report's owner has unlimited preview and editing rights for the report. |
| Type | Set the report to be public or private . Public reports can be accessed and used by all Codeks administrators. Private reports are only available to the report. |

5.6.6.2. Report Definition

The structure of the **report definition** is primarily determined by the **.ini file syntax rules**. In addition to that, you also have to be familiar with the data, available for display in Codeks, as well as the commands used to create a Codeks custom report.

5.6.6.2.1 Before writing the report definition

Before writing the report definition you have to determine **the report output file format** and **the type of data required in the output**.

1. The report output file format

In Codeks several report output file formats are supported. The output format of the report is set by the **ExportFormat** command, which is one of the required commands used in Codeks reports and is used in all types of report definitions (more about commands in [Table of commands - required commands](#)^[89] and chapter [Examples of reports](#)^[90]). The ExportFormat command can have four different settings:

- **CSV** or **TXT** for plain text files (.csv, .txt),
- **ExcelXML** spreadsheets for Excel 2003 XML (.xls) **[the format is obsolete and is being replaced]**,
- **Spreadsheet** setting to create spreadsheets for Excel 2007 and other newer spreadsheet editing programs (.odt, .xls),
- **XML** for structured XML files with XSLT transformations (.xml).

The use of additional form commands depends on the set output file format (more about commands in [Table of commands - additional form commands](#)^[89]).

2. Type of data required in the output

Codeks differentiates between two different data sources when generating an output report. The data source is set by using the **Mode** command, which has two settings:

- **day** uses the recorded intervals, which are displayed in the **List of events** of the Time attendance editor. With this Mode setting, it is possible to display all recorded intervals in a selected time period, without any cumulative statistic sums.
- **month** uses total sums of statistics, which are displayed in section **Statistics overview** and **Current period summary** of the Time attendance editor. This mode enables the display of cumulative statistic sums.

The use of some commands is dependent on the set data source (more about commands in [Table of commands](#)^[89]).

5.6.6.2.2 Definition structure

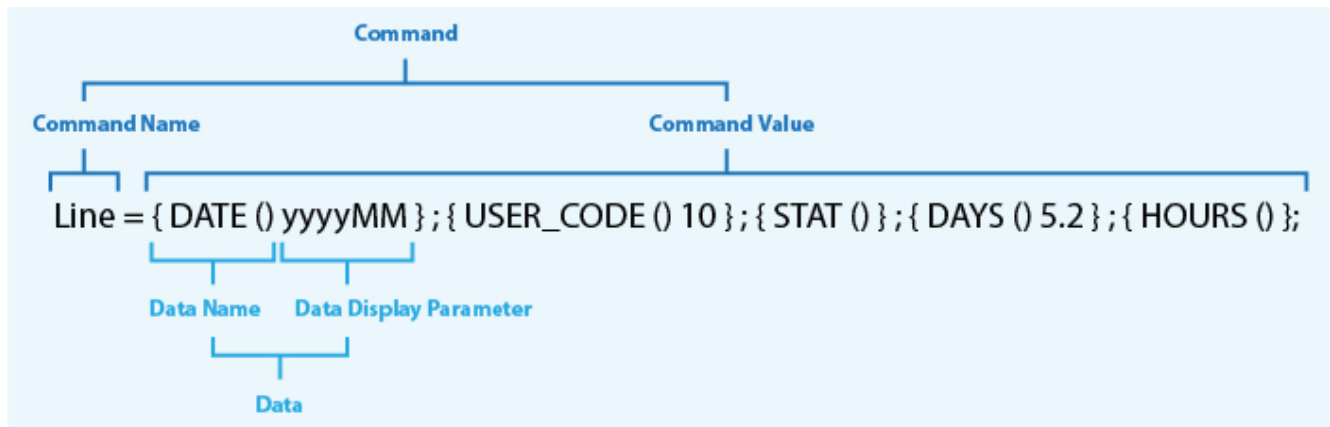
The first element in every report definition is the **[Report]** section.

In .ini files, the elements written in square brackets [] are called *sections*. The use of sections is not required in .ini files, as they do not determine any actions, but are only used to logically group together the content in an .ini file. In Codeks report definitions, however, the section **[Report]** is **mandatory**, because it marks the starting point of the custom report definition.

The section [Report] is then followed by required and additional form **commands**, that are used to set the output file format, data source and how the data will be displayed in the output file. All the commands available for use in Codeks custom reports are listed in the [Table of commands](#)^[89]. You can see examples of how the commands are used in generating a report definition in chapter [Examples of reports](#)^[90].

The report definition contains **commands** that determine how certain statistical or other data will be displayed in the output file.

Commands used in .ini files consist of the **command name** and **command value**, which are separated by an equals sign =.



The command value can be determined explicitly (e.g. Line_0001 = Redno delo) or set to consist of one or more **data** written in curved brackets (e.g. Line = {USER_CODE() 10};{STAT() };{HOURS() }). Data connect to specific information within the Codeks database and display the information in the output file. Every element, not contained in a curved bracket, will be displayed in the output file as if it was determined explicitly in the command value.

Example:

Definition is set to Line = {USER_CODE() 10};{STAT() };{HOURS()},

then the output is: 4567;0001;40

Data elements consist of the **data name** and **data display parameters**, which are used to set how the data will be displayed in the output file. The data names coincide with the naming of certain information within the Codeks database, which enables the information to be retrieved and displayed in the final output file. The data available for use in Codeks custom reports are listed in the [Table of data](#)^[94].

Data display parameters are used to set how a specific piece of information will be displayed in the output file. Parameters differ depending on the data type (text, time, counter and date). You can read more about data display parameters in chapter [Data display parameters](#)^[96].

ATTENTION!

When writing the names of data or data display parameters pay attention to the letter case. Codeks can differentiate between lowercase and uppercase letters, and consequently, the use of the correct letter case use is essential.

Comments can also be added to the report definition. To mark a row of text as a comment put a semicolon ; or a number sign # at the beginning.

Example:

; This is a comment.

This is also a comment.

5.6.6.2.3 Writing the Line command

The commands **Line**, **LineForCalculatedValues** and **Line_XXXX**, where XXXX stands for the code of a statistic or additional value, are used to determine, which data from the Codeks database will be displayed in the output file and how that data will be displayed. Line commands are the main, obligatory commands for plain text output files (.csv and .txt). For spreadsheet-type output files, the line commands are used in combination with column order and header design commands.

It is important to know the difference between **regular statistics** and **additional values** when working with line commands:

- **Regular statistics** contain two types of content: the time duration of a specific statistic and the repetition counter. Regular statistics are displayed in the *Statistics overview* section of the Time attendance editor. Example: The 0001 Work hours statistic records the individual work hours and counts the work days, this means that its time duration content has the value 176 hours and its repetition counter 22 days.
- **Additional values**, unlike regular statistics, only contain one type of content. They are displayed in the Time attendance editor in section *Current period summary*. All available additional values are listed in the [Table of additional values](#)^[85].

Example: The Lunch count additional value counts how many lunches a user has had in a month. Its content is a counter.

The **Line** command is used to determine the display of **regular statistics**. The **Line** command creates a separate row in the output file for each statistic, from the Codeks database. You can view and edit, which statistic from your database will be displayed in the output file, in the Statistics editor in the Settings menu. Here you can also view the codes of each statistic and the order, in which they will be displayed in the plain text output file.

Example 1:

The default statistics set automatically when installing Codeks are:

| Code | Statistic Name |
|------|----------------|
| 0001 | Worktime |
| E000 | Not present |
| E001 | Only entry |
| 0003 | No return |
| ---- | Weekend |
| PR | Holiday |
| Dop | Leave |
| Lan | Old leave |
| Zam | Late |

Primer 2: The Line command is set to

```
Line={USER_NAME()-20};{USER_ID()6};{DATE()dd.MM.yyyy};{STAT()4};{HOURS()6.2};{TIME() } .
```

For the user Franci Mlakar we wish to display all recorded statistics in the time period from the 1st to the 7th February 2014.

The output of the user information is displayed like this:

```
Mlakar Franci      ;      23;01.02.2014;----;      0;00:00
Mlakar Franci      ;      23;03.02.2014;0001; 25,45;25:27
```

Every statistic, recorded in the selected time period, is displayed in a separate row.

The **LineForCalculatedValues** command is used to define the display of **additional values**, which can be found in the *Current period summary* section of the Time attendance editor. The command is formed using the same data and data display parameters as used for the Line command. Pay attention to the content type that each additional value contains. The list of additional values is displayed in the [Table of additional values](#)

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TABLE OF ADDITIONAL VALUES

| Name of additional value | Description | Content type |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| MustWork | Work obligation expressed in hours (depending on the selected Mode setting it will display: month - monthly work obligation, day - daily work obligation) | Time |
| SplitTime | The number of days, when split working hours were registered (more than one entry/exit was registered). | Counter |
| Lunch | The number of lunches * when the Two Types lunch option is enabled, it counts the first lunch type. | Counter |
| Lunch2 | The number of lunches * when the Two Types lunch option is enabled, it counts the second lunch type. | Counter |
| Lunch2Minutes | The time duration of lunches in minutes | Time |
| Drive | The number of commutes to work. | Counter |
| HourSum | Hourly sum of completed work hours (includes the sum of all statistics) | Time |
| DaySum | Hourly sum of completed work hours (includes the sum of all statistics) | Time |
| Saldo | Saldo of users's hours for the selected time period | Time |
| SaldoTotal | Total saldo of user's hours | Time |
| Overtime | Overtime in hours | Time |
| PeriodPlus | The number of hours transferred from the previous period (month) | Time |

| Name of additional value | Description | Content type |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Stimulation | The number of hours that are used as the basis for calculating incentives and stimulation | Time |
| DayNumber | Returns the number of the day in the month (e.g. if the date is July 13th 2014, the displayed output will be »13«) | Date |
| EntryTime | Returns the recorded time of an entry * when more than one entry a day has been recorded, it displays all individual entry times | Time |
| ExitTime | Returns the recorded time of an exit * when more than one entry/exit a day has been recorded, it displays all individual exit times | Time |

ATTENTION!

The LineForCalculatedValues will display all additional values with their default values. If you explicitly do not want an additional value to be displayed in the output you must define the value as empty.

Example:
MustWork=
Lunch=
Using these settings the additional values MustWork and Lunch will not be displayed in the output file.

ATTENTION!

The names of regular statistics and additional values must not be the same.

Make sure that any manually set names (for example set by Line_XXXX command) do not coincide with existing names of statistics and additional values. The name repetition will, subsequently cause the repetition of information in the output file.

The command **Line_XXXX**, where XXXX stands for the code of a statistic or additional value, is used to adjust the display of each statistic, value, or contained content individually.

Example:
Line_0001 = {HOURS()6.2}
The content of the 0001 statistic will be displayed within 6 character spaces. Two character spaces are reserved for decimal values, one is taken by the decimal mark and that leaves 3 character spaces for integer numbers. It is important to know what [kind of content](#) a statistic or additional value contains and its order of magnitude.

The **Formula_XXXX** command, where XXXX stands for the code of a statistic or additional value, is used to set an additional calculation for a specific statistic. The list of formulas can be seen in the [Table of formulas](#).

A formula can also contain other formulas, that are embedded in it. The embedded formulas are then calculated prior to the original formula.

TABLE OF FORMULAS

| Formula name | Description | Use | Example |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SUM | <p>This formula is used when recalculating a statistic from other statistic values and constants.</p> <p>Supported mathematical operations:</p> <ul style="list-style-type: none"> • addition (+), • subtraction (-), • multiplication (*). <p>The formula will be calculated following the written order of operations, it will not follow the mathematical order of operations.</p> <p>When using the SUM formula both content types the statistic contains are recalculated.</p> | <p>FORMULA_XXXX = {SUM()~VALUES~}</p> <ul style="list-style-type: none"> • XXXX is the code of the statistic, which we wish to recalculate. • The ~VALUES~ contains the mathematical expression. <p>The mathematical expression contains listed statistic codes and constants. Each code or constant is preceded by a mathematical operator and the individual statistic codes or values are separated by a semicolon ; .</p> | <p>Formula_0001={SUM()+0001;+0003;-PR}</p> <p>The value of the 0003 statistic will be added to 0001, and then the PR statistic value will be subtracted.</p> |
| FLOOR_TO_HOURS | <p>This formula rounds the time duration component of a statistic to whole hours, but leaves the counter component unchanged.</p> <p>The formula is similar in function to the HOURS_FLOOR, but it can also be used as an integrated formula.</p> | <p>FORMULA_XXXX = {FLOOR_TO_HOURS() XXXX}</p> <ul style="list-style-type: none"> • XXXX is the code of the statistic, which's time duration content will be rounded to whole hours. | <p>Formula_0001={SUM()+{FLOOR_TO_HOURS() 0001};+0003;-PR}</p> <p>The formula sets a new value to the 0001 statistic. First the embedded formula FLOOR_TO_HOURS rounds the time duration content of 0001 to whole hours and then the value of 0003 is added and the value of PR subtracted.</p> |
| CONST | <p>This formula sets a constant value to the to a specific statistic.</p> <p>A constant can be set:</p> <ol style="list-style-type: none"> only for the time duration content of the statistic, for both the time duration and repetition counter contents of the statistic. <p>The constant value for time duration is specified in minutes and the constant for the repetition counter is specified in the number of repetitions.</p> | <p>a) FORMULA_XXXX = {CONST[A]},</p> <ul style="list-style-type: none"> • XXXX is the code of the statistic, which's time duration content will be reset, • A is the new constant value for the time duration content, defined in minutes <p>b) FORMULA_XXXX = {CONST[A,B]},</p> <ul style="list-style-type: none"> • XXXX is the code of the statistic, which's content will be reset, • A is the new constant value for the time duration content, defined in minutes • B is the new constant value for the repetition counter, defined by number of repetitions <p>A maximum of two constant values can be set, written after the CONST formula name in square brackets [] and separated by a comma , .</p> | <p>Formula_310={CONST [480,1]}</p> <p>The values are set to 480 minutes and one repetition.</p> <p>Formula_0001={SUM()+0001;+0003;+CONST [480,1]}</p> <p>480 minutes and one repetition is added to the sum of statistics 0001 and 0003.</p> |

| Formula name | Description | Use | Example |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LIMIT | <p>The LIMIT formula is used when setting a limit for the highest value of a statistic</p> <p>The value can be set to:</p> <ul style="list-style-type: none"> a numeric value, expressed in minutes and repetitions; the value of the work obligation, by using the additional value »MustWork«. <p>A limit can be set:</p> <p>a) only for the time duration value of the statistic,</p> <p>b) for both the time duration and repetition counter values of the statistic.</p> <p>The limit value for time duration is specified in minutes and the constant for the repetition counter is specified with the number of repetitions.</p> | <p>a) FORMULA_XXXX = {LIMIT[A]},</p> <ul style="list-style-type: none"> XXXX is the code of the statistic, which's content will be limited, A is the new limit value for the time duration content, defined in minutes <p>b) FORMULA_XXXX = {CONST[A,B]},</p> <ul style="list-style-type: none"> XXXX is the code of the statistic, which's content will be limited, A is the new limit value for the time duration content, defined in minutes, B is the new limit value for the repetition counter, defined by number of repetitions, <p>A maximum of two limits can be set, written after the LIMIT formula name in square brackets [] and separated by a comma , .</p> | <p>Formula_0001={LIMIT [480]}</p> <p>The highest value for time duration of the statistic 0001 is limited to 480 minutes. The counter value remains unchanged.</p> <p>Formula_0001={LIMIT [480,1]}</p> <p>The highest value for time duration of the statistic 0001 is limited to 480 minutes and the counter value is limited to one repetition.</p> <p>Formula_0001={LIMIT [MustWork]}</p> <p>The highest value for the time duration value of the 0001 statistic is limited to the value of work obligation (MustWork).</p> |
| COUNTOF | <p>The formula COUNTOF substitutes the time duration content of a statistic with the repetition counter content of the same statistic.</p> <p>ATTENTION! The formula COUNTOF is usually used when preparing the content of a certain statistic for further calculations.</p> | <p>FORMULA_XXXX = {COUNTOF [XXXX]}</p> <ul style="list-style-type: none"> XXXX is the code of the statistic, which's time duration content will be substituted with the repetition counter content. | <p>Formula_0001={SUM()+COUNTOF[0001];*CONST [480]}</p> <p>The time duration content of the 0001 statistic will be substituted by its repetition counter value. This step is taken so that in the next step the value can be multiplied by a constant.</p> |

5.6.6.2.4 Table of commands

| Command name | Description | Mode | Format | Default value | Allowed values |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REQUIRED COMMANDS | | | | | |
| [Report] | The [Report] section marks the beginning of the report and must necessarily be the first element in each report definition. Only comments can be inserted before the [Report section]. | | | | |
| Mode | Defines the data source to be used in the report. More about Mode settings in chapter Before writing the report definition 82 ↗. | | CSV or TXT ExcelXML Spreadsheet XML | Mode = month | month day |
| File | This command defines the name of the report file that is suggested to the user, when saving the report in a web browser. The user has the option of using the offered file name or entering a different name. The file name can also be defined to generate the export date by using dynamic functions. | month day | CSV or TXT ExcelXML Spreadsheet XML | File = CustomReport_{DATE ()yyyy-MM-dd}.txt | ~ custom text and dynamic function for generating the export date |
| DecimalSeparator | Defines the decimal mark used with decimal values. | month day | CSV or TXT ExcelXML Spreadsheet XML | DecimalSeparator = , (comma) | ~ custom mark (e.g. , . ; : etc.) |
| Line | The Line command determines how the regular statistics will be displayed. You can read more about the Line command in chapter Writing the Line command 84 ↗. ATTENTION! It is obligatory to use this command, when defining a plain text report. If the Line command is not explicitly defined, the output file will only display the values set in the default value for this command. | month day | CSV or TXT ExcelXML Spreadsheet XML | Line = {DATE() yyyyMM}; {USER_CODE()10}; {STAT()};{DAYS() 5.2};{HOURS()}; | ~ a description of the Line command can be found in chapter Writing the Line command 84 ↗ ~ Table of data 94 ↗ |
| LineForCalculatedValues | This command defines how the additional values will be displayed. You can read more about the LineForCalculatedValues command in chapter Writing the Line command 84 ↗. | month day | CSV or TXT ExcelXML Spreadsheet XML | ~ the same display as in the Line command. | ~ a description of the LineForCalculatedValues command can be found in chapter Writing the Line command 84 ↗ ~ Table of data 94 ↗ ~ Table of additional values 85 ↗ |
| Line_XXXX | Sets the display of a specific statistic or user information defined in the Line command. | month day | CSV or TXT ExcelXML Spreadsheet XML | ~ the same display as in the Line command. | ~ a description of the Line_XXXX command can be found in chapter Writing the Line command 84 ↗ ~ Table of data 94 ↗ |
| Formula_XXXX | Adds an additional calculation for a specific statistic or additional value. | month day | CSV or TXT ExcelXML Spreadsheet XML | Formula_XXXX = (empty value - if the command is not set, no additional calculations are performed) | ~ a description of the Formula command can be found in chapter Writing the Line command 84 ↗ ~ Table of formulas 87 ↗ |
| ExportEncoding | Sets the character encoding standard | month day | CSV or TXT ExcelXML Spreadsheet XML | ExportEncoding = Unicode | Unicode windows-1250 windows-1251 windows-1252 windows-1257 |
| ExportFormat | Sets the output format of the report file. More about setting the export format in chapter Before writing the report definition 82 ↗. | month day | \ | ExportFormat = TXT | CSV or TXT ExcelXML Spreadsheet XML |

| Command name | Description | Mode | Format | Default value | Allowed values |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ExportTimeCuts | Enables the display of Time cuts in the output file. | month day | CSV or TXT ExcelXML Spreadsheet XML | ExportTimeCuts = 0 (disabled) | 0 (disabled) 1 (enabled) |
| ExportStatsIntervals | Groups the display of intervals, that are repeated several days in a row. Example: Instead of displaying E000;02.11.2016 : 02.11.2016 E000;03.11.2016 : 03.11.2016 E000;04.11.2016 : 04.11.2016 the display is E000;02.11.2016 : 04.11.2016 | day | CSV or TXT ExcelXML Spreadsheet XML | ExportStatsIntervals = 0 (disabled) | 0 (disabled) 1 (enabled) |
| ExportZeroDays | When enabled, it also displays statistics, which's either content is equal to 0. | month day | CSV or TXT ExcelXML Spreadsheet XML | ExportZeroDays = 0 (disabled display) | 0 (disabled display) 1 (enabled display) |
| ExportZeroAny | When enabled, it does not display statistics, which's either content is equal to 0. | month day | CSV or TXT ExcelXML Spreadsheet XML | ExportZeroAny = 0 (enabled display) | 0 (enabled display) 1 (disabled display) |
| PageOrientation | Sets the page orientation of the output report. | month day | CSV or TXT ExcelXML Spreadsheet XML | PageOrientation = Portrait | Portrait Landscape |
| ADDITIONAL FORM COMMANDS | | | | | |
| XMLFontSize | Sets the font size. | month day | ExcelXML Spreadsheet | XMLFontSize = 6 | ~ <i>number value</i> |
| ColumnWidth | Column width | month day | ExcelXML Spreadsheet | XMLColumnWidth = Autofit | ~ <i>number value in millimeters</i> |
| XMLReportTitle | Sets the title of the report, which is displayed in the header of the spreadsheet. | month day | ExcelXML Spreadsheet | XMLReportTitle = (empty value - if the title is not specifically defined, it is not displayed) | ~ <i>custom title</i> |
| XMLMaxUsersPerPage | Enables the display of multiple users per page. | month day | ExcelXML Spreadsheet | XMLMaxUsersPerPage = 1 | ~ <i>number value</i> |
| XMLColumnsOrder | Lists all the statistics and additional values, which will be displayed in the columns of the spreadsheet. It also, sets the order in which they will be displayed in the output file. ATTENTION! It is obligatory to use this command, when defining a spreadsheet-type report. If the XMLColumnsOrder command is not defined, no data will be displayed in the output file. Each individual statistic or value separated by a semicolon ; , will be displayed in a separate column. | month day | month day | XMLColumnsOrder = (empty value - if the value is not set, it will not be displayed) | ~ <i>the command value consists of listed codes of statistics and additional values, separated by a semicolon ;</i> All (displays all statistics and time cuts) Statistics (displays all statistics) ExportableStatistics (displays all statistics marked for export) TimeCuts (displays all time cuts) ExportableStatisticsAndTimeCuts (displays all statistics marked for export and all time cuts) |
| ExportColumnHeaders | Displays the column headers. | month day | month day | ExportColumnHeaders = 0 (disabled display) | 0 (disabled display) 1 (enabled display) |
| ExportMonthSums | Displays the monthly sums of statistics in the lower part of the spreadsheet for each user. | day | ExcelXML Spreadsheet | ExportMonthSums = 0 (disabled) | 0 (disabled) 1 (enabled) |
| HeaderStyle | Sets the text orientation of the spreadsheet header. | month day | ExcelXML Spreadsheet | HeaderStyle = Horizontal | Horizontal Vertical |



| Command name | Description | Mode | Format | Default value | Allowed values |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Header_XXXX | Changes and defines the display of the column name. XXXX represents the code of a specific statistic. The command is used similarly to the Line_XXXX command. | month day | ExcelXML Spreadsheet | Header_XXXX = ~ the name of a statistic of additional value | ~ <i>custom column name</i> |
| ExportLegend | Displays the legend of all used codes and names, at the bottom of the spreadsheet report. It is used in combination with the Legend_XXXX command. | day | ExcelXML Spreadsheet | ExportLegend = 0 (disabled) | 0 (disabled) 1 (enabled) |
| Legend_XXXX | Sets the description of the codes and names, displayed in the legend. To enable the display of the legend the ExportLegend command must be enabled. | day | ExcelXML Spreadsheet | Legend_XXXX = (empty value – if the value is not set, it will not be displayed) | ~ <i>custom description of the value</i> |
| [Custom column] | A custom column can be added to the column display in spreadsheet type output files. First, add the new custom column to the column order, in the XMLColumnsOrder command. Next, using the Line_XXXX command, define what kind of information will be displayed in the custom column. Example: XMLColumnsOrder=DayNumber; NameLastname;DaySum Line_NameLastname= {USER_NAME()} In the example shown a column containing the user's name and last name has been added to the spreadsheet, using the custom column functionality. | month day | ExcelXML Spreadsheet | \ | ~ <i>custom content, similar to Line command value</i> |
| ExportUserHeaders | Displays the header cells of the spreadsheet, which contain the company name, address and VAT number, the name, ID number and department of the user, the report title and the export period. ATTENTION! Do not use ExportUserHeaders and ExportPageHeaders simultaneously. The commands display similar information and would consequently cause repeated display of the same information when exporting to PDF or printing. | day | ExcelXML Spreadsheet | ExportUsersHeaders = 1 (enabled) | 0 (disabled) 1 (enabled) |
| CompanyName | Sets the company name that will be displayed in the header of the spreadsheet. | month day | ExcelXML Spreadsheet | CompanyName = ~ the company name saved in the Codeks' settings | ~ <i>company name</i> |
| CompanyAddress | Sets the company address that will be displayed in the header of the spreadsheet. | month day | ExcelXML Spreadsheet | CompanyAddress = ~ the company address saved in the Codeks' settings | ~ <i>company address</i> |
| CompanyIDNumber | Sets the VAT identification number of the company that will be displayed in the header of the spreadsheet. | month day | ExcelXML Spreadsheet | CompanyIDNumber = ~ the VAT number of the company saved in the Codeks' settings | ~ <i>the VAT (Value Added Tax) identification number of the company</i> |

| Command name | Description | Mode | Format | Default value | Allowed values |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|
| ExportPageHeaders | <p>Writes the Company name and address, the report title and the time period to the document header.</p> <p>ATTENTION! The information will not be displayed inside the spreadsheet, but only in the document header. The headers will only be displayed when exporting the spreadsheet to PDF or when printing the spreadsheet.</p> <p>ATTENTION! Do not use ExportUserHeaders and ExportPageHeaders simultaneously. The commands display similar information and would consequently cause repeated display of the same information when exporting to PDF or printing</p> | day | ExcelXML Spreadsheet | ExportPageHeaders = 0 (disabled) | 0 (disabled) 1 (enabled) |
| XMLRootElementName | <p>The name of the hierarchically highest root XML element used in the output file. This element includes all other elements that contain user information of the selected users.</p> <p>ATTENTION! It is obligatory to use this command, when defining a structured XML output file.</p> | month day | XML | XMLRootElementName = (empty value – if the value is not set, it will not be displayed) | ~ the name of the root XML element in the output file |
| [XSLT] | <p>The [XSLT] section marks the beginning of the XSLT code written in the XSLT 1.0 syntax.</p> <p>ATTENTION! It is obligatory to use this command, when defining a structured XML output file.</p> | month day | XML | \ | \ |



Other form elements

% - When the % sign is used in combination with a statistic name, a list of all intervals that contain that statistic will be displayed, instead of the content value of the statistic.

Use:

- It can only be used along with the following settings: *Mode = day*, and *ExportFormat = ExcelXML or Spreadsheet*
- It is written in front of the statistic code (%XXXX, where XXXX stands for the code of the statistic).

Example:

`XMLColumnsOrder = Break;%Break`

The first column will display the daily sum of the Break statistic and the second column will display a list of all recorded intervals containing this statistic.

! - When the ! mark is used in combination with the code of a statistic or additional value, the value will only be displayed for the first user in a row.

Use:

- It can only be used along with the following settings:

Mode = day

ExportFormat = ExcelXML or Spreadsheet

XMLMaxUsersPerPage is greater than 1 (this means that more than one user per page/row is displayed).

- The exclamation mark ! is written in front of the statistic code (!XXXX, where XXXX stands for the code of the statistic).

Example: `XMLColumnsOrder=!DayNumber;0001;DaySum`

The value of DayNumber will only be displayed for the first user. It is unnecessary to repeat it for other users on the same page.

5.6.6.2.5 Table of data

| Data name | Description | Content type |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| USER DATA | | |
| USER_CODE | Displays the user code. * This data is only used when exporting user data originally created in the Jantar V7 program. | Text |
| USER_CARD | Displays the user's card number. | Text |
| USER_ID | Displays the user's personal identification number. | Text |
| USER_EXTERNAL_ID | Displays the user's external identification number. | Text |
| USER_EXPORT_ID | Displays the user's export identification number. | Text |
| USER_NAME | Displays the user's name and last name. | Text |
| USER_DEPARTMENT | Displays the code of the organisation unit. | Text |
| USER_DEPARTMENT_NAME | Displays the name of the organisation unit. | Text |
| USER_GROUP_ID | Displays the internal number of the user's main group. | Text |
| USER_GROUP_NAME | Displays the name of the user's main group. | Text |
| USER_CUST_FIELD1 | Displays the user's information entered in the first additional custom field. * The information must be entered subsequently for each separate user. The fields can be accessed when adding or editing a user on the Additional fields tab. | Text |
| USER_CUST_FIELD2 | Displays the user's information entered in the second additional custom field. * The information must be entered subsequently for each separate user. The fields can be accessed when adding or editing a user in the Additional fields tab. | Text |
| USER_CUST_FIELD3 | Displays the user's information entered in the third additional custom field. * The information must be entered subsequently for each separate user. The fields can be accessed when adding or editing a user in the Additional fields tab. | Text |
| INTERVAL DATA | | |
| DATE | month: Displays the period start date. day: Displays the interval start date. | Date |
| DATETO | month: Displays the period end date. day: Displays the interval end date (important when displaying night shifts). | Date |
| INTERVAL STATISTIC DATA | | |
| STAT | The data displays the statistic code (set in the statistic settings) when using the Line_XXXX command, or the name of the additional value, when using the LineForCalculatedValues command. | Text |
| HOURS | The data displays the statistic time duration in hours. Minutes are converted to decimal values. | Time |
| HOURS_FLOOR | The data displays the statistic time duration in hours, rounded to the lower whole-hour limit. This data can also work with negative values. | Time |
| ABS_HOURS_FLOOR | The data displays the statistic absolute time duration in hours, rounded to the lower whole hour limit. This data always displays only positive values. | Time |
| HOURS_ROUND(15) | The data rounds the time duration content of a statistic to half hours, using 15 minute increments. If the time value is from 0 to including 15 minutes past the last whole hour, the data will round the time value down to the last whole hour value. If the time value is from 16 to including 45 minutes past, the value will be rounded to half past (half hour mark). If the time value is from 46 to including 59 minutes past, the value will be rounded up to the next whole hour. Examples: The value of a statistic is 7 hours and 15 minutes. Using the HOURS_ROUND data the value will be rounded down to 7 hours. The value of a statistic is 7 hours and 37 minutes. Using the HOURS_ROUND data the value will be rounded to 7 hours and 30 minutes (7,5 hours). The value of a statistic is 7 hours and 46 minutes. Using the HOURS_ROUND data the value will be rounded to 8 hours. | Time |

| Data name | Description | Content type |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| HOURS_ROUND(30) | The data rounds the time duration content of a statistic to half hours, using a 30 minute increment. If the time value is from 0 to including 30 minutes past the last whole hour, the data will round the time value down to the last whole hour value. If the time value is from 31 to including 59 minutes past, the value will be rounded to half past (half hour mark). Examples: The value of a statistic is 7 hours and 30 minutes. Using the HOURS_ROUND data the value will be rounded to 7 hours. The value of a statistic is 7 hours and 31 minutes. Using the HOURS_ROUND data the value will be rounded to 7 hours and 30 minutes (7,5 hours). | Time |
| DAYS | Displays the repetition counter content of the statistic. | Time |
| ABS_DAYS | The data displays the absolute value of the number of days. | Time |
| MINUTES | The data displays the time duration of a statistic in minutes. | Time |
| HOURL_MINUTES | The data displays the remainder of minutes, after rounding the time duration content of a statistic to whole hours. Example: The time value of a statistic is 8 hours and 5 min, that is 485 minutes. In this case the data would return the value of 5. | Time |
| TIME | The data displays the time duration of a statistic in hours and minutes (hh:mm), unlike the HOURS data, which converts the minutes into decimal values. The data does not support any additional data display parameters. | Time |
| SIGN | The data displays if the value of the statistic is positive + or negative - . In some cases. the output file must contain the absolute value of the statistic and the mathematical sign associated with it is written in a different column. Any sign can be set to display if a value is positive or negative. The data can contain up to two signs: the first sign displays that the value is positive and the second that it is negative. Example 1: {SIGN()}+-} Example 2: {SIGN()}PN} | Mathematical operator |
| MINUTES2DAYS | The data displays the quotient between the recorded work hours and the work obligation. If the user worked exactly the same length of time as set by his work obligation, then the data will display the value 1. | Number |
| ADDITIONAL DATA | | |
| SKIP | Skips a selected statistic. When you want to exclude a certain statistic from the current report, you can use the data SKIP. Line_XXXX = {SKIP()} The statistic XXXX can keep the option "statistic for export" in the statistic settings enabled, because the SKIP data excludes its export only in the current report. | |
| EMPTY | Inserts the desired number of blank rows. Line = ... {EMPTY()}A... , where A is the number of blank rows. | Blank row |
| SPACE | Inserts the desired number of single spaces. Line = ... {SPACE()}A... , where A is the number of spaces. | Single space |
| \t (Tab) | Inserts a tab space. | Tab space |

5.6.6.2.6 Data display parameters

Data display parameters are used to determine the form, in which the data will be displayed in the output file. The use of parameters differs depending on the content type (text, time, counter and date) contained by the data. For more about content types see the [Table of data](#)^[94].

Keep in mind that Codeks distinguishes between uppercase and lowercase letters. The use of parameters is not necessary to enable the display of data. When using the display parameters the parameter hierarchy and order must be followed. In the following examples the **main parameters** for each data type are colored **dark blue** and the **secondary parameters** are colored **light blue**.

WARNING!

The order of the data display parameters is important. The order and hierarchy of the parameters must be followed in order to accurately form a data display.

Text:

Line_XXXX = {DATA_NAME() \$ - X .Y}

X X = minimum length. If the data consists of fewer characters, single spaces are added.

.Y Y = maximum length. If the data consists of more characters the surplus characters are not displayed.

\$ The leading zeros are displayed.

- The text is left-aligned. By default the text is right-aligned.

Examples:

Line = {USER_CARD()10} The display parameter is "10".

If the number of the user's card is 5678, the Line will display:

5678.

6 single spaces followed by the card number.

Line = {USER_NAME()-10.20} The display parameter is "-10.20".

If the user's name and last name are shorter than 10 characters, spaces will be added at the end, but if they are longer, the last letters will be cut off. The name "Rok Semič" will be displayed with an addition of 11 single spaces and the name "Ferdinand Semprimožnik" will be shortened to "Ferdinand Semprimožn".

Time and counters:

Line_XXXX = {DATA_NAME() \$ - ! X .Y}

X X = the total number of characters used to display the data. If the data consists of fewer characters, single spaces are added.

.Y Y = the number of decimal spaces. If this value is not set, whole numbers are displayed or the values are rounded to whole numbers.

ATTENTION!

When displaying time, the values are converted to decimal format. This means that the minutes are displayed as decimal values.

- \$** The leading zeros are displayed.
- The text is left-aligned. By default the text is right-aligned.
- !** The exclamation mark ! subtracts the decimal mark from the display.

Examples:

Line = {HOURS()5} In this case, the display parameter "5". It represents the total length of display. If a statistic had a time duration content of 12 hours and 20 minutes, the data would display the value " 12", the number 12 preceded by three single spaces. No decimal values would be displayed.

Line = {HOURS()5.2} In this case the display parameter is "5.2". The total length of display is set to 5 characters, two characters are used for decimal values and one for the decimal mark. If a statistic contained the value 12 hours and 20 minutes, the display would be 12,33.

If the statistic contained the value 6 hours in 15 minutes, the display would be 06,25.

A problem would arise, if the statistic had more than 99 whole hours. The display would be incorrect in this case.

Line = {HOURS()-7.2} In this case the total length of the display is "7", of which two characters are used to display decimal values and one character is used to display the decimal mark. If the statistic consisted of 12 hours and 20 minutes, the display would be 12,33 . The display would be left-aligned and two single spaces would be added at the end.

Line = {DAYS()3} In this case the display parameter is "3" and it represents the full length of the repetition counter. If the statistic contained the value 22, the display would be 22. The number 22 preceded by a single space.

Date:

Example: Line_XXXX = {DATE()dd }

The date consists of individual elements, which enable a completely custom date display. The parameters used to form a date are listed in the table below. The date display is also dependant on the regional setting of the server and user account, where Codeks service is running.

Table for date formatting

| Parameter | Description |
|-----------|----------------------------------------------------------------------------------|
| d | Day of the month, without the leading zero. 1 - 31 |
| dd | Day of the month, with the leading zero. 01 - 31 |
| ddd | Abbreviated weekday name. Mon, Tue ... |
| dddd | Full weekday name. Monday, Tuesday ... |
| M | Month, without the leading zero. 1 - 12 |
| MM | Month, with the leading zero. 01 - 12 |
| MMM | Abbreviated name of the month. Jan, Feb ... |
| MMMM | Full name of the month. January, February ... |
| y | Year, written with two characters and without the leading zero. 0 - 99 |
| yy | Year, written with two characters and the leading zero. 00 - 99 |
| yyy | Year, written with three characters and leading zeros. 001 - 999 |
| yyyy | Year, written with four characters and leading zeros. 0001 - 1999 |
| m | Minutes, without the leading zero. 0 - 59 |
| mm | Minutes, with the leading zero. 00 - 59 |
| h | Hours, written in a twelve-hour format and without the leading zero. 0 - 12 |
| hh | Hours, written in a twelve-hour format and with the leading zero. 00 - 12 |
| H | Hours, written in a twenty-four-hour format and without the leading zero. 0 - 24 |
| HH | Hours, written in a twenty-four-hour format and with the leading zero. 00 - 24 |

5.6.6.3. Examples of reports

EXAMPLE OF .CSV AND .TXT DEFINITION AND OUTPUT REPORT

The CSV or TXT values for the ExportFormat command are used to generate a plain text report. In the report example shown below monthly statistic sums have been displayed for several users. Each statistic for a selected user is displayed in a separate row. The user's name, user's ID number, the code of the statistic and the statistic's value are separated by a semicolon ; .

```

1  Ahec Jani      ;578 ;RD1;000000000000;
2  Ahec Jani      ;578 ;----;000000000000;
3  Ahec Jani      ;578 ;050D;00000000800;
4  Ahec Jani      ; 578;Delo;00000001600;
5  Bajde Ludvig   ;975 ;RD1;000000000000;
6  Bajde Ludvig   ;975 ;E000;000000000000;
7  Bajde Ludvig   ;975 ;----;000000000000;
8  Bajde Ludvig   ;975 ;050D;000000000000;
9  Bajde Ludvig   ; 975;Delo;00000001600;
10 Benkovič Tilen ;127 ;RD1;000000000000;
11 Benkovič Tilen ;127 ;E000;000000000000;
12 Benkovič Tilen ;127 ;----;000000000000;
13 Benkovič Tilen ; 127;Delo;00000001600;
14 Gregorič Marija ;688 ;RD1;000000000000;
15 Gregorič Marija ;688 ;----;000000000000;
16 Gregorič Marija ;688 ;050D;00000000800;
17 Gregorič Marija ; 688;Delo;00000001600;

```

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <p>[Report] section marks the beginning of the report definition.</p> | <p>[Report]</p> |
| <p>The set source of information are the total sums of statistics.</p> | <p>Mode=month</p> |
| <p>The suggested filename placeholder text in the browser.</p> | <p>File=mesečne_ure_{DATE()yyyyMM}.txt</p> |
| <p>The ExportFormat command is not explicitly set and this means the default value of the command will be used, thus, creating a plain text file (.csv or .txt).</p> | |
| <p>The set character encoding standard.</p> | <p>ExportEncoding=Unicode</p> |
| <p>The set decimal mark is a comma.</p> | <p>DecimalSeparator=,</p> |
| <p>Line is the main command used in plain text files and sets how the output data will be displayed in each row of the output file. This command is used only to set the output display of regular statistics.</p> | <p>Line={USER_NAME()-20};{USER_ID()-5};{STAT()4.4};{HOURS()\$!9.2};</p> |
| <p>The command is used to set the display of additional values.</p> | <p>LineForCalculatedValues={USER_NAME()-20};{USER_ID()5};{STAT()4.4};{ABS_DAYS()\$!9.2};</p> |
| <p>The command sets the display of the statistic named Delovna obveznost.</p> | <p>Line_Delovna obveznost={USER_NAME()-20};{USER_ID()5};{STAT()4.4};{HOURS()\$!9.2};</p> |
| <p>None of the statistics with null value (statistics which have not been recorded in the selected time period) will be displayed.</p> | <p>ExportZeroDays=0</p> |
| <p>An additional calculation for the statistic 0001 (work obligation).</p> | <p>Formula_0001={SUM()+MustWork}</p> |
| <p>Additional values that are defined as empty, will not be displayed in the output file.</p> | <p>HourSum= Saldo= DaySum= Plus= Overtime= SplitTime=</p> |
| <p>Only the additional values Lunch, Drive and MustWork, which have been assigned a value will be displayed in the output file.</p> | <p>Lunch=306 Drive=309 MustWork=Delovna obveznost</p> |



EXAMPLE OF EXCEL XML DEFINITION AND OUTPUT REPORT

ATTENTION!

The ExcelXML file format is obsolete and is being gradually phased out. The use of this file format is enabled solely to enable easier transfer of custom reports, created in the Jantar V7 program, to Codeks. All new spreadsheet-type reports should use the Spreadsheet value of the ExportFormat command.

The ExcelXML value of the ExportFormat command is used to generate a spreadsheet report suitable for Excel 2003. The example report that is shown below consist of:

- the report header, where company information and the export time period are displayed,
- the report core, where the users' daily information is displayed in separate columns,
- the bottom of the spreadsheet, where the monthly statistic sums and the legend with descriptions for all used codes are displayed.

| | A | B | C | D | E | F | G | H | I |
|----|-------------------|---------------------|-----------------|----------------------|-----------------|------------------------------------|-----------------|---------------|-----------------|
| 1 | Podjetje | | | | | | | | |
| 2 | Ulična cesta 2000 | | | | | Obdobje 1. 01. 2016 - 31. 01. 2016 | | | |
| 3 | 12345678 | | | | | | | | |
| 4 | | Dnevni izpis | | | | | | | |
| 5 | Dnevnik | Ahuc Jani | Dnevni seštevek | Bogdan Ludošk | Dnevni seštevek | Borivoje Tan | Dnevni seštevek | Črnejec Marja | Dnevni seštevek |
| 6 | 01 | 00:00-00:00 | 08:00 | 00:00-00:00 | 08:00 | 00:00-00:00 | 08:00 | 00:00-00:00 | 08:00 |
| 7 | 02 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 8 | 03 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 9 | 04 | 07:14-15:35 | 08:21 | 07:53-15:56 | 08:03 | 08:14-16:02 | 07:48 | 07:00-15:40 | 08:40 |
| 10 | 05 | 07:00-15:58 | 08:58 | 07:53-16:24 | 08:31 | 08:02-16:25 | 08:23 | 07:03-15:42 | 08:39 |
| 11 | 06 | 07:01-15:50 | 08:49 | 07:52-16:31 | 08:39 | 08:10-17:22 | 09:12 | 07:01-15:05 | 08:04 |
| 12 | 07 | 07:00-15:09 | 08:09 | 07:53-16:29 | 08:38 | 07:10-17:04 | 09:54 | 07:00-15:25 | 08:25 |
| 13 | 08 | 07:00-15:02 | 08:02 | 07:56-16:33 | 08:37 | 08:17-16:49 | 08:32 | 07:00-15:00 | 08:00 |
| 14 | 09 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 15 | 10 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 16 | 11 | 07:48-16:00 | 08:00 | 07:52-18:00 | 10:08 | 08:13-15:49 | 07:36 | 07:02-17:23 | 10:21 |
| 17 | 12 | 07:00-15:01 | 07:55 | 07:53-16:38 | 08:45 | 06:54-17:22 | 10:28 | RD1 | 00:00 |
| 18 | 13 | 07:00-17:06 | 09:20 | 07:54-16:36 | 08:42 | 07:30-15:31 | 07:07 | 07:00-16:06 | 09:06 |
| 19 | 14 | 07:00-15:05 | 08:05 | 07:55-16:34 | 08:39 | 08:12-15:14 | 07:02 | 07:00-16:12 | 09:12 |
| 20 | 15 | 07:00-15:08 | 08:08 | 07:53-17:02 | 09:09 | 09:00-13:40 | 04:40 | 07:03-15:00 | 07:57 |
| 21 | 16 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 22 | 17 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 23 | 18 | 07:40-16:07 | 08:27 | 07:55-16:56 | 09:01 | 08:00-17:56 | 09:56 | 07:00-15:40 | 08:40 |
| 24 | 19 | 07:02-15:14 | 08:11 | 07:58-16:45 | 08:47 | 07:17-17:33 | 10:16 | 07:01-15:41 | 08:40 |
| 25 | 20 | 07:00-15:15 | 08:15 | 07:53-16:47 | 08:54 | 08:07-18:20 | 10:13 | 07:00-15:37 | 08:37 |
| 26 | 21 | 07:00-18:00 | 11:00 | 07:48-16:56 | 09:08 | 08:02-15:52 | 07:50 | 07:00-15:38 | 08:38 |
| 27 | 22 | 07:00-15:15 | 08:15 | 07:51-16:58 | 09:07 | 08:03-14:50 | 06:47 | 07:00-15:00 | 08:00 |
| 28 | 23 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 29 | 24 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 30 | 25 | 07:00-16:10 | 09:10 | 07:54-17:12 | 09:18 | 07:50-19:34 | 11:44 | 07:00-15:44 | 08:44 |
| 31 | 26 | 07:00-16:26 | 09:26 | 07:15-16:51 | 09:36 | 08:13-16:57 | 08:44 | 07:00-16:38 | 09:38 |
| 32 | 27 | 07:00-15:09 | 07:57 | 07:00-16:06 | 09:06 | 08:09-18:20 | 10:11 | 07:03-15:00 | 07:57 |
| 33 | 28 | 07:00-15:19 | 04:27 | 07:47-17:19 | 09:32 | 08:00-16:47 | 08:47 | 07:00-15:00 | 08:00 |
| 34 | 29 | RD1 | 00:00 | 07:53-17:39 | 09:46 | 08:11-18:45 | 10:34 | 07:08-15:00 | 07:52 |
| 35 | 30 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 36 | 31 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 | ---- | 00:00 |
| 37 | Skupaj | | 166:55 | | 188:04 | | 183:44 | | 171:10 |
| 38 | Delo po urniku | | 158:55 | | 180:04 | | 175:44 | | 163:10 |
| 39 | Vikend | | 00:00 | | 00:00 | | 00:00 | | 00:00 |
| 40 | Praznik | | 06:00 | | 08:00 | | 06:00 | | 06:00 |
| 41 | Poslovno | | 06:36 | | | | | | 10:12 |
| 42 | Malica | | 07:08 | | | | | | |
| 43 | Privatno | | 05:09 | | | | 00:54 | | 02:51 |
| 44 | Maj | | | 19 | | 20 | | 20 | |
| 45 | Pre | | | 19 | | 20 | | 20 | |
| 46 | Legenda: | | | | | | | | |
| 47 | DayNumber | | | | | | | | |
| 48 | Dnevni seštevek | | | Seštevek ur v dnevnu | | | | | |
| 49 | | | | | | | | | |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <p>[Report] section marks the beginning of the report definition.</p> | <p>[Report]</p> |
| <p>The set source of information are the recorded day events.</p> | <p>Mode=day</p> |
| <p>The suggested filename placeholder text in the browser.</p> | <p>File=Place{DATE()}yyyyMM}.xls</p> |
| <p>The set decimal mark is a comma.</p> | <p>DecimalSeparator=,</p> |
| <p>All statistics will be displayed, including statistics with a null value (statistics which have not been recorded in the selected time period).</p> | <p>ExportZeroDays=1</p> |
| <p>The set character encoding standard.</p> | <p>ExportEncoding=windows-1250</p> |
| <p>The output file format is ExcelXML.</p> | <p>ExportFormat=ExcelXML</p> |
| <p>Monthly sums of recorded statistics will be displayed in the lower part of the spreadsheet for each user individually.</p> | <p>ExportMonthSums=1</p> |
| <p>Multiple users per page display is enabled and set to a maximum of 8 users on a single page.</p> | <p>XMLMaxUsersPerPage=8</p> |
| <p>Column width in millimeters.</p> | <p>XMLColumnWidth=60</p> |
| <p>Font size.</p> | <p>XMLFontSize=6</p> |
| <p>The report title that will be displayed in the spreadsheet.</p> | <p>XMLReportTitle=Dnevni izpis</p> |
| <p>The order in which the columns will be displayed in the output file (the main command for spreadsheet-type output file formats).</p> | <p>XMLColumnsOrder=!DayNumber;CustomColumn1;DaySum</p> |
| <p>Vertical alignment of the spreadsheet header.</p> | <p>HeaderStyle=Vertical</p> |
| <p>The legend of used codes and names will be included at the bottom of the spreadsheet.</p> | <p>ExportLegend=1</p> |
| <p>Company information.</p> | <p>CopmanyName=Podjetje d.o.o.</p> |
| <p></p> | <p>CompanyAddress=Ulična cesta 2000</p> |
| <p></p> | <p>CompanyIDNumber=12345678</p> |
| <p>The Line command determines how the regular statistics will be displayed.</p> | <p>Line={TIME() }</p> |
| <p>The LineForCalculatedValues command determines how the additional values will be displayed.</p> | <p>LineForCalculatedValues={TIME() }</p> |
| <p>List of commands that set the display of each statistic or additional value individually.</p> | <p>Line_DayNumber={DATE()}dd}</p> |
| <p></p> | <p>Line_EntryTime={DATE()}HH:mm}</p> |
| <p></p> | <p>Line_DaySum={TIME()}HH:mm}</p> |
| <p></p> | <p>Line_HourSum={HOURS()}6.2}</p> |
| <p></p> | <p>Line_CustomColumn1=DaySummary</p> |
| <p></p> | <p>Line_Mal={DAYS()}5.2}</p> |
| <p></p> | <p>Line_Pre={DAYS()}5.2}</p> |
| <p>The column names as they will be displayed in the head row of the spreadsheet.</p> | <p>Header_DayNumber=Dan</p> |
| <p></p> | <p>Header_DaySum=Dnevni seštevek</p> |
| <p></p> | <p>Header_CustomColumn1={USER_NAME()-20}</p> |
| <p>Descriptions of used codes and names displayed in the legend.</p> | <p>Legend_DayNumber=Dan v mesecu</p> |
| <p></p> | <p>Legend_DaySum=Seštevek ur v dnevnu</p> |
| <p>Additional values that are defined as empty, will not be displayed in the output file.</p> | <p>HourSum=</p> |
| <p></p> | <p>Saldo=</p> |
| <p></p> | <p>DaySum=</p> |
| <p></p> | <p>Plus=</p> |
| <p></p> | <p>OverTime=</p> |
| <p></p> | <p>SplitTime=</p> |
| <p></p> | <p>MustWork=</p> |



| | |
|---------------------------------------------------------------------------------------------------------------------|------------------------|
| Only the additional values Lunch and Drive, which have been assigned a value, will be displayed in the output file. | Lunch=Mal Drive=Pre |
|---------------------------------------------------------------------------------------------------------------------|------------------------|

EXAMPLE OF SPREADSHEET DEFINITION AND OUTPUT REPORT

The Spreadsheet value of the ExportFormat command is used to generate a spreadsheet report suitable for all newer spreadsheet editing programs. The example report that is shown below consist of:

- the report header, where company information and the export time period are displayed,
- the report core, where the users' daily information is displayed in separate columns,
- the bottom of the spreadsheet, where the monthly statistic sums are displayed.

| | A | B | C | D | E | F | G | H | |
|----|---------------------|-------|-------|----------------------|------|------------------------------------|-----|---|--|
| 1 | Podjetje | | | | | | | | |
| 2 | Ulična cesta 2000 | | | | | Obdobje 1. 01. 2016 - 31. 01. 2016 | | | |
| 3 | 12345678 | | | | | | | | |
| 4 | Dnevni izpis | | | | | | | | |
| 5 | Dan | Vhod | Izhod | Seštevek ur v dnevni | 0001 | To | Lea | | |
| 6 | 01 | 00:00 | 00:00 | 8 | 0 | 0 | 0 | | |
| 7 | 02 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 8 | 03 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 9 | 04 | 07:14 | 15:35 | 8,35 | 0 | 0 | 0 | | |
| 10 | 05 | 07:00 | 15:58 | 8,97 | 0 | 0 | 0 | | |
| 11 | 06 | 07:01 | 15:50 | 8,82 | 0 | 0 | 0 | | |
| 12 | 07 | 07:00 | 15:09 | 8,15 | 0 | 0 | 0 | | |
| 13 | 08 | 07:00 | 15:02 | 8,03 | 0 | 0 | 0 | | |
| 14 | 09 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 15 | 10 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 16 | 11 | 07:48 | 16:00 | 8 | 0 | 0 | 0 | | |
| 17 | 12 | 07:00 | 15:01 | 7,92 | 0 | 0 | 0 | | |
| 18 | 13 | 07:00 | 17:06 | 9,33 | 0 | 0 | 0 | | |
| 19 | 14 | 07:00 | 15:05 | 8,08 | 0 | 0 | 0 | | |
| 20 | 15 | 07:00 | 15:08 | 8,13 | 0 | 0 | 0 | | |
| 21 | 16 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 22 | 17 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 23 | 18 | 07:40 | 16:07 | 8,45 | 0 | 0 | 0 | | |
| 24 | 19 | 07:02 | 15:14 | 8,18 | 0 | 0 | 0 | | |
| 25 | 20 | 07:00 | 15:15 | 8,25 | 0 | 0 | 0 | | |
| 26 | 21 | 07:00 | 18:00 | 11 | 0 | 0 | 0 | | |
| 27 | 22 | 07:00 | 15:15 | 8,25 | 0 | 0 | 0 | | |
| 28 | 23 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 29 | 24 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 30 | 25 | 07:00 | 16:10 | 9,17 | 0 | 0 | 0 | | |
| 31 | 26 | 07:00 | 16:26 | 9,43 | 0 | 0 | 0 | | |
| 32 | 27 | 07:00 | 15:09 | 7,95 | 0 | 0 | 0 | | |
| 33 | 28 | 07:00 | 15:19 | 4,45 | 0 | 0 | 0 | | |
| 34 | 29 | 00:00 | 00:00 | 0 | 0 | 0 | 0 | | |
| 35 | 30 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 36 | 31 | 00:00 | 00:00 | 0 | 0 | 1 | 0 | | |
| 37 | Skupaj | | | 166,92 | | | | | |
| 38 | Delo po urniku | | | 158,55 | | | | | |
| 39 | To | | | 10 | | | | | |
| 40 | Praznik | | | 08:00 | | | | | |
| 41 | Poslovno | | | 06:36 | | | | | |
| 42 | Malica | | | 07:08 | | | | | |
| 43 | Privatno | | | 05:09 | | | | | |
| 44 | | | | | | | | | |
| 45 | | | | | | | | | |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Report] section marks the beginning of the report definition.</p> | <p>[Report]</p> |
| <p>The set source of information are the recorded day events.</p> | <p>Mode=day</p> |
| <p>The suggested filename placeholder text in the browser.</p> | <p>File=Place{DATE()}yyyyMM}.xls</p> |
| <p>The set decimal mark is a comma.</p> | <p>DecimalSeparator=,</p> |
| <p>All statistics will be displayed, including statistics with a null value (statistics which have not been recorded in the selected time period).</p> | <p>ExportZeroDays=1</p> |
| <p>The set character encoding standard.</p> | <p>ExportEncoding=windows-1250</p> |
| <p>The output file format is Spreadsheet.</p> | <p>ExportFormat=Spreadsheet</p> |
| <p>Monthly sums of recorded statistics will be displayed in the lower part of the spreadsheet for each user individually.</p> | <p>ExportMonthSums=1</p> |
| <p>Column width in millimeters.</p> | <p>XMLColumnWidth=20</p> |
| <p>Font size.</p> | <p>XMLFontSize=6</p> |
| <p>Page orientation is set to landscape.</p> | <p>PageOrientation=Landscape</p> |
| <p>The report title that will be displayed in the spreadsheet.</p> | <p>XMLReportTitle=Dnevni izpis</p> |
| <p>The order in which the columns will be displayed in the output file (the main command for spreadsheet-type output file formats).</p> | <p>XMLColumnsOrder = DayNumber;EntryTime;ExitTime;DaySum;0001;----;Lea</p> |
| <p>Horizontal alignment of the spreadsheet header.</p> | <p>HeaderStyle=Horizontal</p> |
| <p>The legend will not be displayed.</p> | <p>ExportLegend=0</p> |
| <p>Company information.</p> | <p>CopmanyName=Podjetje d.o.o. CompanyAddress=Ulična cesta 2000 CompanyIDNumber=12345678</p> |
| <p>The Line command determines how the regular statistics will be displayed.</p> | <p>Line={TIME() }</p> |
| <p>The LineForCalculatedValues command determines how the additional values will be displayed.</p> | <p>LineForCalculatedValues={TIME() }</p> |
| <p>List of commands that set the display of each statistic or additional value individually.</p> | <p>Line_DayNumber={DATE()}dd} Line_EntryTime={DATE()}HH:mm} Line_ExitTime={TIME()} Line_DaySum={HOURS()}6.2} Line_0001={HOURS()}6.2} Line_----={DAYS()}6.2} Line_Lea={HOURS()}6.2}</p> |
| <p>An additional calculation for the statistic 0001 (set to 480 minutes and one repetition).</p> | <p>Formula_0001={LIMIT[480,1]}</p> |
| <p>The column names as they will be displayed in the head row of the spreadsheet.</p> | <p>Header_DayNumber=Dan Header_EntryTime=Ulaz Header_ExitTime=Izlaz Header_DaySum=Dnevna suma Header_0001=0001 Header_----=To Header_Lea=Lea</p> |



| | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Descriptions of used codes and names displayed in the legend. | Legend_DayNumber=Dan v mesecu Legend_EntryTime=Čas vhoda Legend_ExitTime=Čas izhoda Legend_DaySum=Skupen dnevni delovni čas Legend_0001=Delovni čas Legend_----=Vikendi Legend_Lea=Letni dopust |
| Additional values that are defined as empty, will not be displayed in the output file. | Lunch= Drive= HourSum= Saldo= DaySum= Plus= OverTime= SplitTime= MustWork= |

ATTENTION!

When writing a report definition for the Spreadsheet file format it is necessary to set a value for the **File** command or at least determine the file extension. If the file name or file extension is not set, the web browser will report an error and will be unable to save the generated report.

EXAMPLE OF XML DEFINITION AND OUTPUT REPORT

The XML value of the ExportFormat command generates a structured XML output file. In the report example shown below, the user's information and monthly statistic sums are displayed in the form of a tree structure. The exact form of the tree structure is set by the XML code in the [XSLT] section of the report definition.

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <PayrollData>
3  <USERDATA Name="Ahec Jani" PersonalId="578">
4  <statisticsum>
5  <StatId>1</StatId>
6  <StatName>RD1</StatName>
7  <StatDescription>Delo po urniku</StatDescription>
8  <StatSum>9535</StatSum>
9  <StatCount>20</StatCount>
10 </statisticsum>
11 <statisticsum>
12 <StatId>5</StatId>
13 <StatName>----</StatName>
14 <StatDescription>Vikend</StatDescription>
15 <StatSum>0</StatSum>
16 <StatCount>10</StatCount>
17 </statisticsum>
18 <statisticsum>
19 <StatId>6</StatId>
20 <StatName>PR</StatName>
21 <StatDescription>Praznik</StatDescription>
22 <StatSum>480</StatSum>
23 <StatCount>1</StatCount>
24 </statisticsum>
25 <statisticsum>
26 <StatId>10</StatId>
27 <StatName>Pos1</StatName>
28 <StatDescription>Poslovno</StatDescription>
29 <StatSum>396</StatSum>
30 <StatCount>3</StatCount>
31 </statisticsum>
32 <statisticsum>
33 <StatId>21</StatId>
34 <StatName>Mali</StatName>
35 <StatDescription>Malica</StatDescription>
36 <StatSum>428</StatSum>
37 <StatCount>16</StatCount>
38 </statisticsum>
39 <statisticsum>
40 <StatId>22</StatId>
41 <StatName>Priv</StatName>
42 <StatDescription>Privatno</StatDescription>
43 <StatSum>309</StatSum>
44 <StatCount>6</StatCount>
45 </statisticsum>
46 </USERDATA>
47 </PayrollData>

```

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>[Report] section marks the beginning of the report definition.</p> <p>The set source of information are the total sums of statistics.</p> <p>The suggested filename placeholder text in the browser.</p> <p>The output file format is XML.</p> <p>The set character encoding standard.</p> <p>The name of the root XML element used in the output file.</p> <p>An additional calculation for the statistic 0001 (work obligation).</p> <p>The section [XSLT] marks the beginning of the XSLT code.</p> | <p>[Report]</p> <p>Mode=month</p> <p>File=ure_{DATE()yyyyMM}.xml</p> <p>ExportFormat=XML</p> <p>ExportEncoding=Unicode</p> <p>XMLRootElementName=PayrollData</p> <p>Formula_0001={LIMIT[MustWork]}</p> <p>[XSLT]</p> <pre> <xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0"> <xsl:template match="userattendancedata"> <USERDATA> <xsl:attribute name="Name"> <xsl:value-of select="user/LastAndFirstName"/> </xsl:attribute> <xsl:attribute name="PersonalId"> <xsl:value-of select="user/@personalid"/> </xsl:attribute> <xsl:apply-templates select="statisticsums"/> </USERDATA> </xsl:template> <xsl:template match="statisticsums"> <statisticsum> <StatId><xsl:value-of select="@statisticid"/></StatId> <StatName><xsl:value-of select="@name"/></StatName> <StatDescription><xsl:value-of select="@description"/></StatDescription> <StatSum><xsl:value-of select="@statsum"/></StatSum> <StatCount><xsl:value-of select="@statcount"/></StatCount> </statisticsum> </xsl:template> </xsl:stylesheet> </pre> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

ATTENTION!

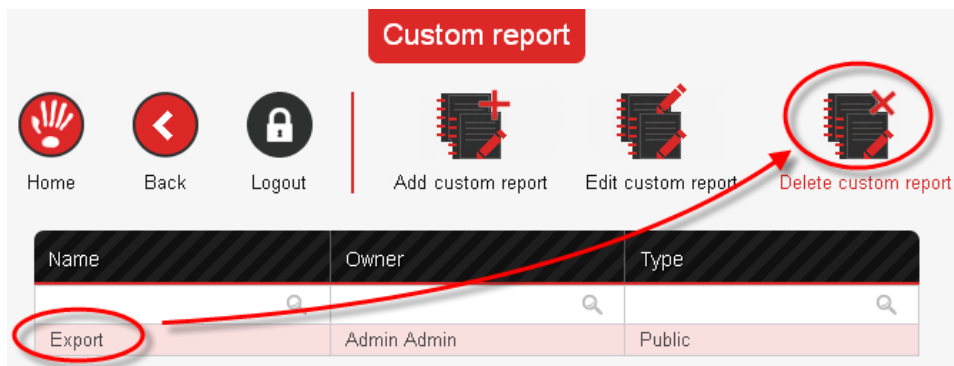
When writing an XML report definition the use of the **[Report]** and **[XSLT]** sections as well as the **ExportFormat=XML** and **XMLRootElement=~any name** commands is absolutely necessary.

5.6.6.4. Edit Custom Report

You can change existing report's data in Custom report Editor. On the list of reports select the report you wish to edit. Click the *Edit custom report* icon, edit report's data and save the changes. You can also edit the report with double click on it or through the menu which appears with the right-click on the report.

5.6.6.5. Delete Custom Report

On the list of reports select the report you wish to delete and click the *Delete custom report* icon. New window pops up in which you need to confirm deletion of the report. This will delete the report from the list of reports.



5.7. Work Obligation History

Work obligation history enables you to save user obligation history in event that, for example, you change the user's timetable from 8 hour work obligation to 4 hour work obligation. With work obligation history the user's history data will not be changed or lost if you recalculate his history data. With work obligation history you can change user's group, calendar or end time attendance.

Add button enables you to add new work obligation history. To edit or delete existing work obligation history, use *Edit* and *Delete* buttons.

When you are finished with adding work obligation history, click the *Save* button. To close the window click the *Cancel* button or the cross icon on the right-top part of the window.

| Date | Type | Name |
|-----------|---------------------|------|
| 20.8.2013 | Time attendance end | |

Date: 20.08.2013
 Type: Time attendance end

Add Edit Delete

Close Save

5.8. Presence bonus

Presence bonus calculation is a mechanism to award users for getting to work diligently. Codeks calculates due present bonus percentage from users daily statistics. It is calculated into selected statistic as statistic count.

Description: If presence bonus is enabled, the user gets 100% bonus after monthly statistic calculation. After that Codeks decreases presence bonus every time user has statistic with "**Decrease presence bonus**" setting. Bonus is decreased for percentage which is defined in time & attendance settings.

Setup:

1. Define new statistic into which you will count presence bonus. Settings of this statistic are not important for calculation.
2. Check "**Decrease presence bonus**" checkbox on all statistics for which you want to decrease presence bonus
3. In time & attendance settings set "**Present bonus calculation**" section
 - Select statistic into which you want to calculate presence bonus. Presence bonus is enabled with this setting.
 - Field "*Decrease presence bonus by %*" defines the percentage of presence bonus decrease on each statistic marked with "**Decrease presence bonus**" setting.
 - With "**Users entitled for presence bonus**" setting it is possible to limit presence bonus calculation only to users which are members of selected list.

5.9. Shifts (AddOn)

5.9.1. Instalng Codeks Addon Shifts

The installation file (**CodeksAddonShiftSetup.exe**) of application Shift - add on for Codeks application is available by [Jantar d.o.o.](#)^[13].

Follow the instructions from [Codeks/Instalng Codeks Application](#)^[18]. Process is the same.

5.9.2. Activating license code

To activate the license code, follow the instructions from [Codeks/Activating license code](#)^[31]. The difference is in license code.

5.9.3. Introduction

Department admin can control the unplanned arrivals, arranges employee shifts and standby shifts by using ShiftAddon.

We need two types of timetables to set up shift planning in Codeks software correctly:

- ordinary timetable containing all entry intervals (send to controllers) and
- timetables for organizing shifts which contain entry intervals

Codeks settings:

Shift planning intervals must be selected (added) into timetables for organizing shift and ordinary timetable. While creating new timetable for shift planning, check box named "Timetable for shift planning" have to be marked. Add entry intervals to timetable. Timetables for shift planning will be possible to select in Shift addon.

If there are any changes on intervals, send the tables to controllers.

In Calendars menu, click the Shifts icon for working with shifts. There you can add, edit and delete shifts or standby.

There are two approaches of scheduling users in shifts:

- scheduling by working time (MorningShift, AfternoonShift, NightShift ...) and
- scheduling by work group (Work group 1, Work group 2 ...).

There is a Editing tool for faster and easier planning days in selected shift. It's possible to sort shift tabs by drag and drop.

5.9.4. Sending notification for unplanned arrives

Go to **Codeks/Preferences Mail Settings** ¹⁵⁶ if the email is not configured yet.

| Program settings | | Time attendance | Mail settings | FrontDesk |
|-----------------------------------------------------|--|-----------------|-------------------------------------|-----------|
| SMTP Server Settings | | | | |
| SMTP port | | | 587 | |
| SMTP host | | | smtp.gmail.com | |
| Username | | | codeks@jantar.si | |
| Password | | | ***** | |
| SMTP use SSL | | | <input checked="" type="checkbox"/> | |
| Mail settings | | | | |
| Sender | | | codeks@jantar.si | |
| Name | | | Document | |
| Ignore whether user is present when notify by email | | | <input checked="" type="checkbox"/> | |
| Send mail on request | | | <input checked="" type="checkbox"/> | |
| Send mail on approval or rejection | | | <input checked="" type="checkbox"/> | |
| Send mail when statistic limit exceeded | | | <input checked="" type="checkbox"/> | |

Open **Settings/Preferences/Time attendance**. Check box **Send notification if users arrives to unplanned shift** must be marked. The system will automaticli send e-mail to the head of department in case that user will arrive outside the selected interval.

| Program settings | | Time attendance | Mail settings |
|-------------------------------------------------------|---------------------|----------------------------------|-------------------------------------|
| Leave announces settings | | ePermits Settings | FrontDesk |
| Night shift | | | |
| Night work start | 20:00 | <input type="button" value="+"/> | HH:mm |
| Night work end | 12:00 | <input type="button" value="+"/> | HH:mm |
| Time attendance | | | |
| Lock editing of TA data to including month (YYYY-MM) | 2010-01 | | |
| Automaticaly lock editing of previous month | | | <input type="checkbox"/> |
| Day of month to automaticaly lock editing | 15 | | |
| Show saldo on terminal | | | <input checked="" type="checkbox"/> |
| Show leave on terminal | | | <input checked="" type="checkbox"/> |
| Minimum time to count lunch | 04:00 | <input type="button" value="+"/> | HH:mm |
| Count second lunch | | | <input checked="" type="checkbox"/> |
| Codepage for exported files | Unicode | | <input type="button" value="v"/> |
| Minimum time to count second lunch | 12:00 | <input type="button" value="+"/> | HH:mm |
| Saldo calculate mode | StandardSaldoToPlus | | <input type="button" value="v"/> |
| Send notification if users arrives to unplanned shift | | | <input checked="" type="checkbox"/> |

5.9.5. Setting Shift Timetables and their intervals (Codeks)

Create timetables in Codeks software (in shown case "MorningShift", "AfternoonShift" and "NightShift"). Create, set and add the intervals to timetables. In shown case, we created fixed and flexible entry intervals for each timetable.

Because of sending tables to controllers the ordinary timetable must contain all intervals - include all entry intervals.

5.9.5.1. Example of morning shift

Create new timetable **MorningShift** and two intervals **MorningFixedEntry** and **MorningFlexibleEntry**. Insert required data and set the *interval type* **Entry**, for checking arrivals.

Basic data

Name

Only access timetable

Timetable for shift planning must be selected!

Timetable for shift planning

Create fixed and flexible entry interval and add them to **MorningShift** timetable.

IMPORTANT!
Intervals must be assigned to timetable that indicates entry of employee and to created timetable "Morning shift".
Intervals may not overlap!

5.9.5.2. Example of standby employee

Create new interval and for standby employee. If there is a need, create new statistic.

In shown case, the statistic is named **STBY Standby**. It serves for managing time of standby employee, when employee wasn't present. Otherwise the time calculates into work obligation.

In shown case the interval is named **StandbyWeekend**. Choose:

- **Standby interval - Interval type,**
- **STBY Standby - statistic,**
- **time** and
- **days.**

Create standby interval:

Interval data

Interval description Interval type

Text

From To

Valid from Valid till

Statistic

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Holiday Restday +1 day (night work) Exclusive Exclusive

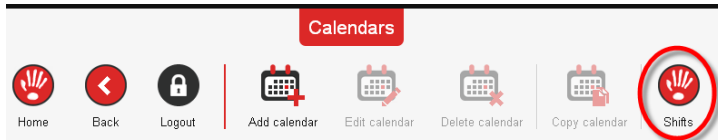
Interval color



5.9.6. Working with shifts (ShiftAddOn)

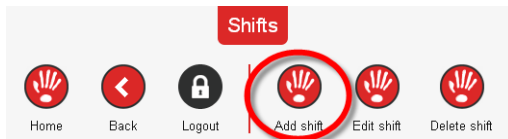
5.9.6.1. Adding, editing and deleting

The icon **Shifts** appears in the **Calendar menu** with successful installation of Shift add-on.



5.9.6.1.1 Add Shift

For adding new shift, press **"Add Shift"** icon.

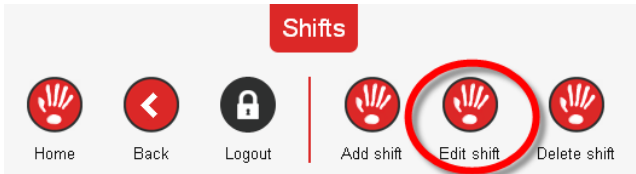


Name the shift with sense (of example "MorningShift", "WorkGroup1" ...) and choose *type* - **Shift**.

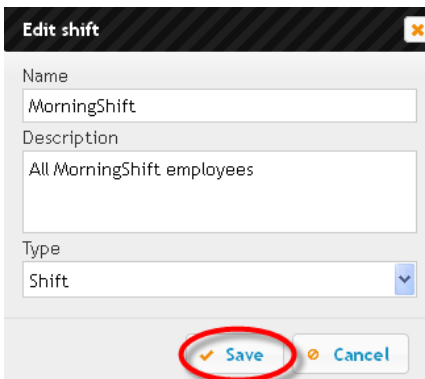
 Two side-by-side screenshots of the "Add shift" dialog box. The left screenshot shows the form with "MorningShift" entered in the Name and Description fields, and "Shift" selected in the Type dropdown. The right screenshot shows the form with "David Ferguson" entered in the Name field and "Shift for David Ferguson" entered in the Description field, with "Shift" selected in the Type dropdown. In both screenshots, the "Save" button is circled in red.

5.9.6.1.2 Edit Shift

Click the **"Edit Shift"** icon for editing selected shift:

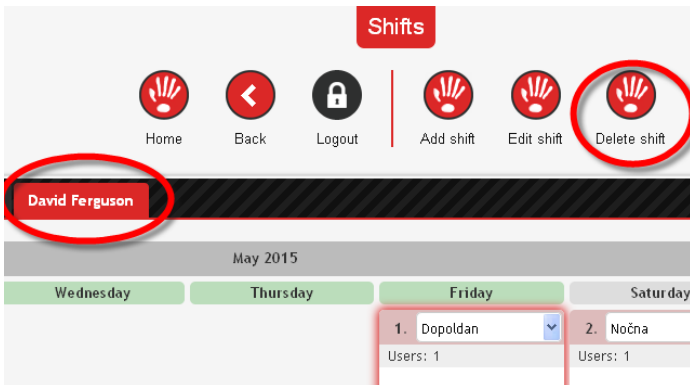


The window appear, for editing shift data:



5.9.6.1.3 Delete Shift

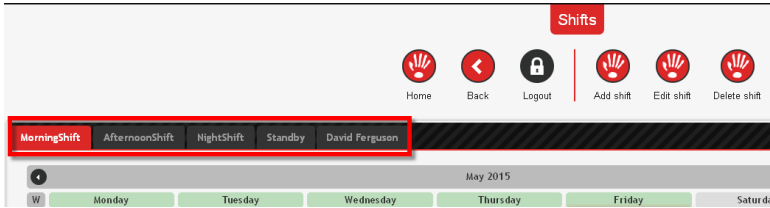
Chose the shift (tab) you want to delete and press **"Delete Shift"** icon.



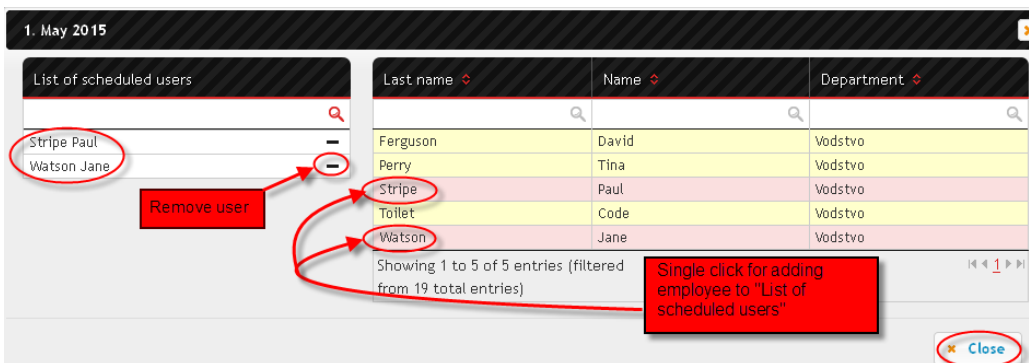
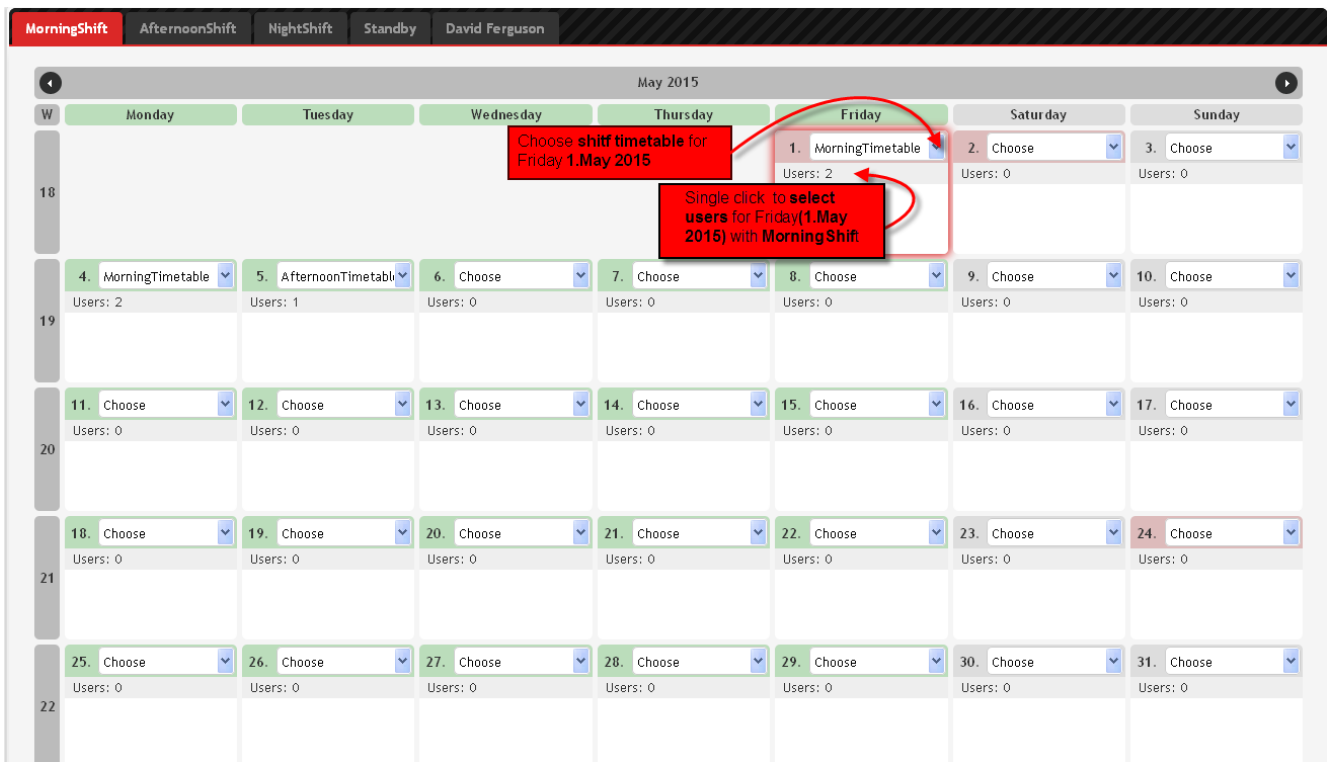
5.9.6.2. Working inside created shifts

5.9.6.2.1 Editing days in shifts

Choose the added shift "**MorningShift**".

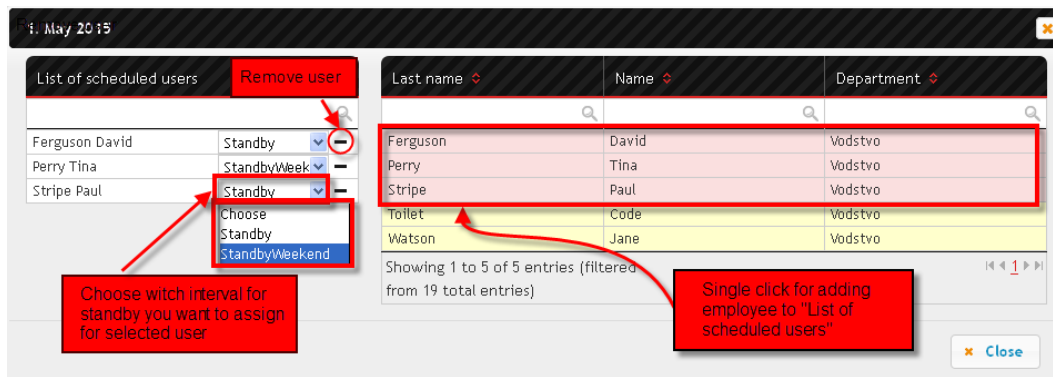
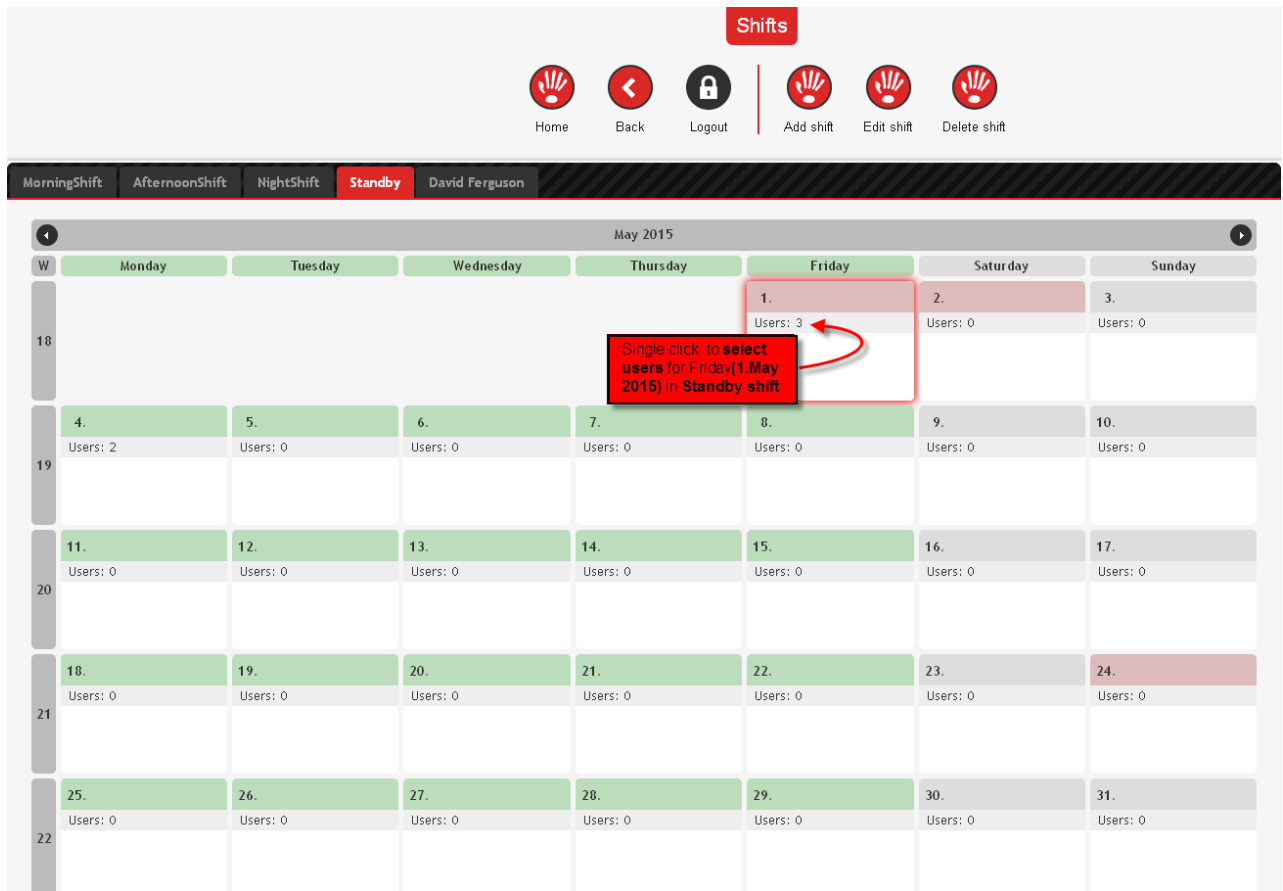


Select the day you want to prepare or edit. Follow the instructions on the images:



5.9.6.2.2 Editing days for standby employee

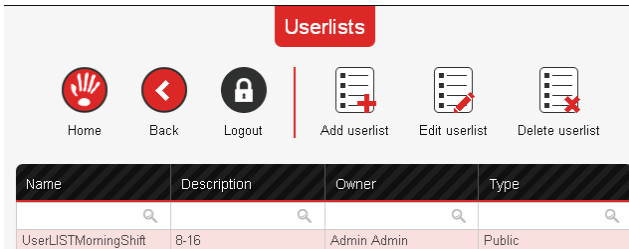
For standby shift, we created two intervals **Standby** and **StandbyWeekend**. Follow the instructions on the images:



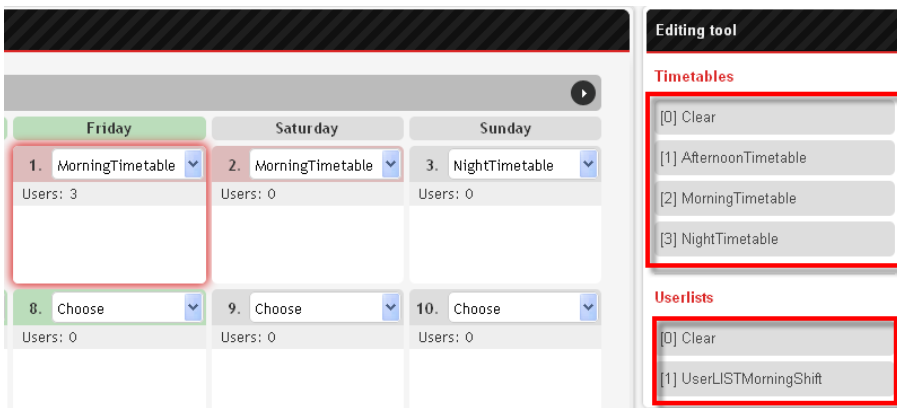
In drop-down list of selected users are only standby intervals.

5.9.6.2.3 Editing tool

We created a user list named **UserLISTMorningShift** which contains department admin and some other users, that usually work in the morning shift.



Editing tool provides fast adding prepared timetables and user lists, for selected day. Assigning timetables and adding user list is possible with one click. After selecting some timetable in editing tool, next day is automatically selected.

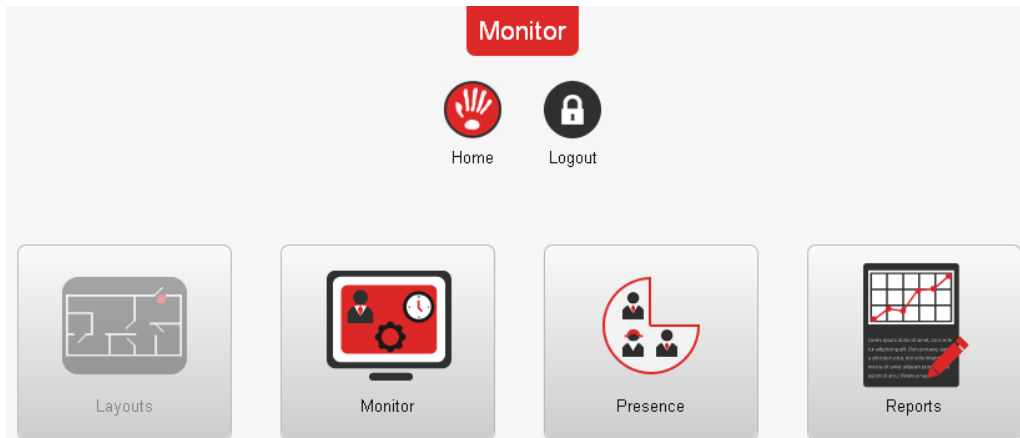


Part

6

6. Monitor

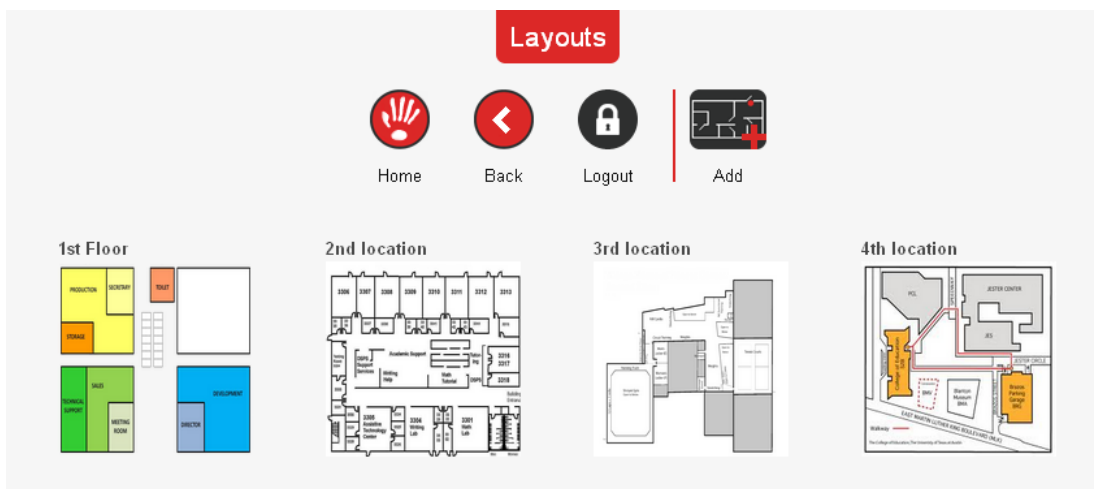
In the Monitor you can work with [Monitor](#)^[120], [Presence](#)^[122] and [Reports](#)^[161]. [Layouts](#)^[119] become enabled if you use Layouts Add-on Module.



6.1. Layouts

To work with layouts you need Layouts Add-on Module.

Layouts are used for monitoring your access points which are marked with layout markers. Live events for a certain place are simultaneously seen when you are monitoring a certain layout, which you select in Layouts Editor.



6.2. Monitor Live Events

In the Monitor you can follow *live events* or check [presence](#)^[122] of your users. *Live events* view displays all current events in your system according to the user who caused the event, user's card, location where the event occurred, date and time in which the event occurred and the name of the event. Live events will be displayed only when communication between controllers and the computer is properly established. On the left side of Monitor Editor is a list of locations. If no location is selected, the application will act as if all are selected. If you want to see the data for a specific location, select it with the help of checkbox.

The screenshot shows the Monitor interface with several callouts:

- Buttons for managing passages:** Home, Back, Logout, Live events, and Presence buttons.
- Icons for Live events and Presence:** A callout pointing to the Live events and Presence icons.
- Function groups buttons:** A callout pointing to a group of buttons including Open, Lock, Unlock, Toggle, Enable, Disable, Unblock, Storage Open, and Lock all.
- Event and user data:** A callout pointing to the user profile section for Stripe Paul.
- List of events:** A callout pointing to the table of events.
- List of locations:** A callout pointing to the location selection tree.

| User | Card | Location | Date and time | Event |
|---------------|---------|--------------------------------|--------------------|-------|
| Stripe Paul | 2569561 | ... /Main Storage/Exit Storage | 05.7.2013 10:57:27 | Exit |
| Jones Anthony | 536770 | ... Main Storage/Entry Storage | 05.7.2013 10:57:21 | Entry |
| Stripe Paul | 2569561 | ... Main Storage/Entry Storage | 05.7.2013 10:57:12 | Entry |
| Stripe Paul | 2569561 | ... Main Storage/Entry Storage | 05.7.2013 10:56:02 | Error |
| Stripe Paul | 2569561 | ... rduction/Entry Production | 05.7.2013 10:55:58 | Pass |
| Jones Anthony | 536770 | ... /Main Storage/Exit Storage | 05.7.2013 10:46:49 | Error |
| Jones Anthony | 536770 | ... Main Storage/Entry Storage | 05.7.2013 10:46:45 | Error |
| Jones Anthony | 536770 | Jantar/Sales/Technical support | 05.7.2013 10:46:44 | Pass |
| Jones Anthony | 536770 | Jantar/Production/Storage | 05.7.2013 10:46:42 | Pass |
| Jones Anthony | 536770 | Jantar/Sales/Entry Sales | 05.7.2013 10:46:42 | Pass |

Presence displays all users who accessed a certain place.

Buttons for managing passages enable you to do a certain action on a certain passage. If you want to manage a certain passage, you first need to mark it on the list of locations. When one or more passages are marked, buttons for managing passages enable. *Function groups buttons* appear when you enter function groups in your system.

| Button | Function |
|---------|----------------------------------------------------------------------------------------------------------------------------|
| Open | Doors are unlocked (opened) only for a few seconds. |
| Lock | Lock door, user can open it with valid card. |
| Unlock | Doors stay unlocked until you locked them. |
| Toggle | Switch from the current output state to the other. |
| Enable | Reader will be enabled until the next reset or restarting of the controller. |
| Disable | Disables reader, user can not open door with valid card. |
| Unblock | The reader is enabled for the period of time <i>Unblock for (sec)</i> , set in the controller's Times settings (Hardware). |

ADDITIONAL for Codeks TA

Table of Live events in Codeks TA application contains additional columns: *Button* that the user pressed before registering on the controller and *Time&Attendance* column where text, that is shown on the controller at user's registration, is displayed.

6.2.1. Search events

The search field in the columns of the List of events enable advanced search of the last 200 displayed events.

Write the desired **search word or phrase** into the search field or use **advanced operations** to filter the displayed results:

- to search for a specific word or phrase place the search words within apostrophes (e.g. to searching for the name Franci - „Franci“),
- the NOT operator enables the exclusion of results that contain the entered search word,
- the OR operator enables search for multiple words or phrases,
- to filter numeric values you can use operators:
 - greater than or equal to **>=**
 - greater than **>**
 - equal to **=**
 - less than or equal to **<=**
 - less than **<**
 - not equal to **!=**

The description for this advanced search can also be viewed when hovering over a search field.

| User | Card | Location | Date and time | Event |
|-------------|---------|---------------|--------------------|------------|
| Laznik Fran | 9345678 | Prihod 111001 | 06.3.2017 14:33:47 | Wrong card |

Quotes (") match phrases. (not) excludes a match from the results. (or) can be used to do Or searches. I.e. [red or blue] will match either red or blue. Numeric values support >=, >, <=, <, = and != operators.

6.3. Monitor Presence

You can set the readers to see who is present at a certain place. To calculate presence, Codeks uses reader's direction settings (entry, exit). In the Monitor under Presence tab you can, for example, see who is in the storage, computer room, etc. On the left side of Presence Editor is a list of locations. If no location is selected, the application will act as if all are selected. If you want to see the data for a specific location, select it with the help of checkbox.

Presence tab displays all users who passed a certain place through Entry reader. When they will exit the room they will use the Exit reader. [Entry and Exit readers](#)^[2021] must be set in the Hardware menu.

Example:

We want to follow presence in the Main Storage room. First we need to set the hardware and connect it with locations. The picture on the next page shows 3 steps, described below:

1. Direction for Entry storage reader must be set to Entry.
2. Entry storage reader must be connected to Entry Storage location.
3. Direction of Exit storage reader must be set to Exit and the reader must be connected to Exit Storage location.


After we set the hardware, we need to send tables to the controller.

Click on the Presence icon in the Monitor. To see who is in the Main Storage select *Time frame* and click the *Refresh* button.

Time frame **1 Hour**

| Username | Lastname | Time | Location |
|----------|----------|--------------------|-----------------------------------|
| Paul | Stripe | 03.7.2013 10:53:14 | Jantar/Main Storage/Entry Storage |
| Anthony | Jones | 03.7.2013 10:53:02 | Jantar/Main Storage/Entry Storage |

If you want to see report in PDF format, click the *Open report* button.




Present users

| Id | User | Card | Location |
|----|-----------------|---------|-----------------------------------------------------------|
| 1 | Paul Stripe | 2569561 | Jantar / Production / Entry Production 17.9.2013 13:32 |
| 2 | Josephine Brown | 7995133 | Jantar / Production / Entry Production 17.9.2013 13:32 |


6.4. Monitor Reports

Reports enable you to overview event reports, user report and user access rights in PDF format. It also enables you to manage and use SQL reports. Reports are described in detail in chapter [Reports](#)^{16th}.


Reports




Event report




System event report




First / last events report




User report




User access rights




Group access rights



Key manager report



SQL report



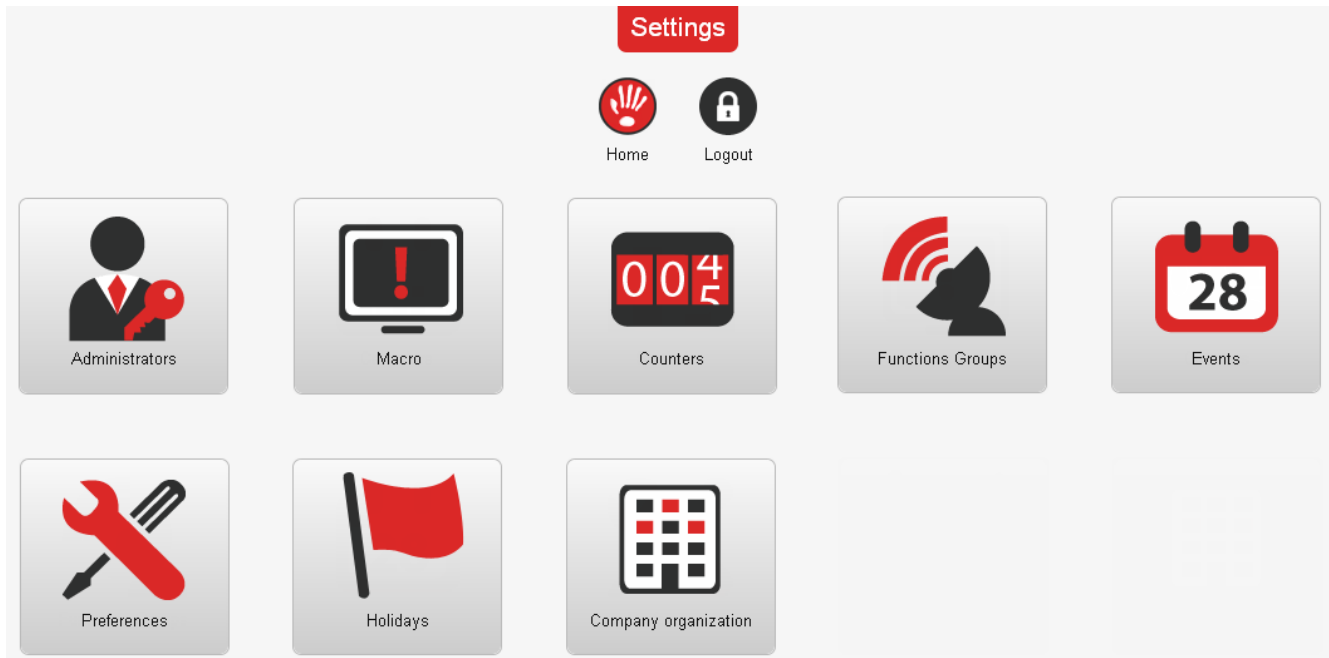
Manage SQL reports

Part

7

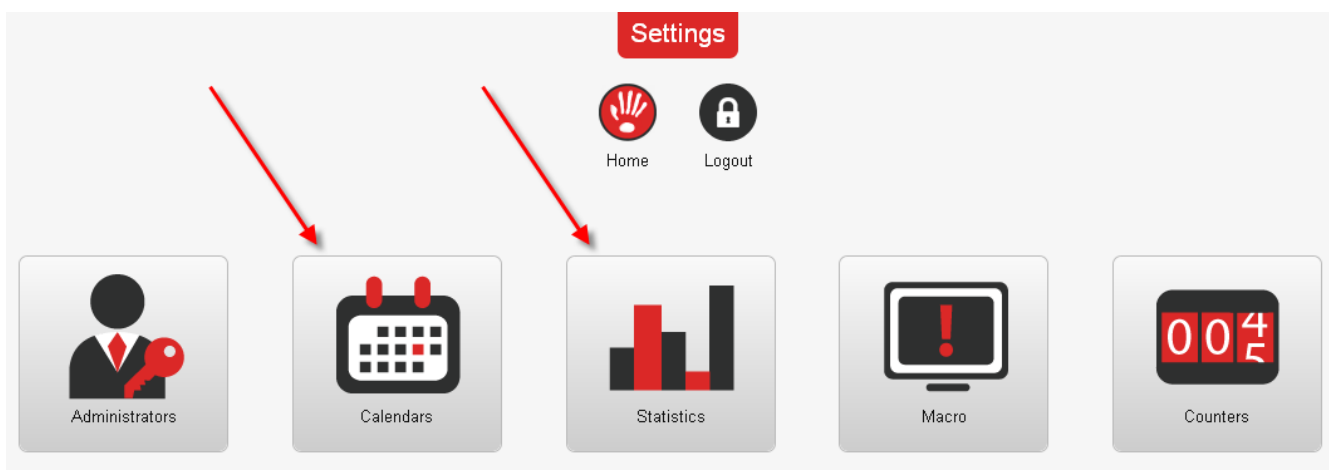
7. Settings

In Settings you can work with [Administrators](#)^[126], [Macros](#)^[140], [Counters](#)^[145], [Function Groups](#)^[147], [Events](#)^[149], [Preferences](#)^[151], [Holidays](#)^[157] and [Company organization](#)^[159].



ADDITIONAL for Codeks TA

In Settings you can also access to [Calendars](#)^[131] and [Statistics](#)^[133].



7.1. Administrators

To work with administrators, select Settings/Administrators in the Main Menu. This will open the Administrators Editor where you can add, edit or delete administrators.

In the Administrators Editor you can add administrators which will be working with the application. Codeks supports multiple administrators over computer network with different user rights. Administrators can use the application in different languages. Administrators Editor enables you to overview all administrator's actions in a certain date. All actions for a certain administrators can be viewed in PDF format by clicking on *Open report* button.

The screenshot shows the 'Administrators' management interface. At the top, there are navigation icons: Home (hand), Back (left arrow), Logout (lock), Add administrator (person with plus), Edit administrator (person with pencil), and Delete administrator (person with minus). A 'Report button' is also visible. Below the navigation is a date range selector (From: 04.07.2013, To: 04.07.2013) and a 'Show actions' button. The main content consists of two tables. The first table is a 'List of administrators' with columns for First name, Last name, and Username. The second table is a 'List of administrator's actions' with columns for Time, Action, Object type, Object, and Message.

| First name | Last name | Username |
|------------|-----------|----------|
| Admin | Admin | admin |
| Paul | Stripe | paul |

| Time | Action | Object type | Object | Message |
|-------------------|--------|---------------|--------|---------|
| 04.7.2013 - 12:15 | Read | Administrator | 0 | |
| 04.7.2013 - 12:10 | Read | User | | |
| 04.7.2013 - 12:10 | Read | Place | | |
| 04.7.2013 - 12:10 | Read | User | 0 | |

7.1.1. Add Administrator

To add a new administrator, click the *Add administrator* icon.

This close-up screenshot focuses on the navigation icons. The 'Add administrator' icon, which depicts a person with a red plus sign, is circled in red to indicate it should be clicked.

This will open new window where you can enter the data of the new administrator and set actions which he will be able to perform on Locations, Department, Hardware, Menu and Function groups.

Administrator's data

General information

First name

Last name

Username

Password

Super admin

Language

| General information | Description |
|---------------------|-----------------------------------------------------------------------------------------|
| First name | Administrator's first name |
| Last name | Administrator's last name |
| Username | Username that the administrator will use for login. |
| Password | Password that the administrator will use for login. |
| Super admin | When enabled, administrator can perform all actions on all sections in the application. |
| language | Language in which the administrator will be working with the program. |

Allowed actions

ATTENTION! First you need to set admin's rights under the Menu tab. Here you can select which menus will be seen by the administrator. Action *All* will enable the icon and action *None* will disable the icon of a certain menu. To use actions *Create*, *Delete* or *Write* you must also add action *Read*.

Locations Departments Hardware **Menu** Functions Groups

▶ All(None) ⬆ Actions

▶ Time attendance(None) ⬆ All

▶ Monitor(All) ⬆ None

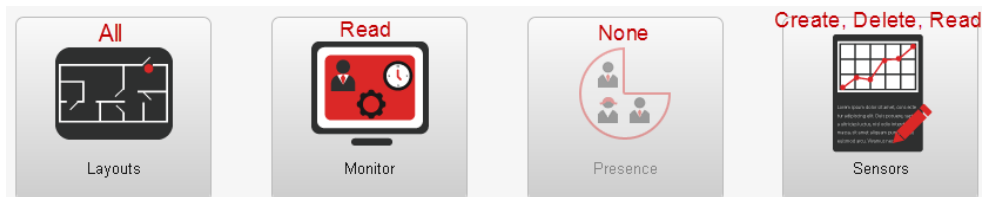
▶ Layouts(All) ⬆ Create

▶ Monitor(Read) ⬆ Delete

▶ Presence(None) ⬆ Read

▶ Sensors(Create Delete Read) ⬆ Write

Cancel Save



List of Actions enables you to select different actions which will be performed by the administrator. All

actions need to be specified for each menu separately.

| Actions | Description |
|---------|-------------------------------------------------------------------------------|
| All | All actions are allowed |
| None | No action is allowed |
| Create | Create new (To be able to use this action, also action Read must be added) |
| Delete | Delete old (To be able to use this action, also action Read must be added) |
| Read | Overview existing |
| Write | Edit existing (To be able to use this action, also action Read must be added) |

Set the administrator's data and allowed actions and click the *Save* button to create new administrator.

Example for Codeks AC:

You have two locations in your system and you want to set one administrator for each.

1. Create new administrator and add action *All* to *Hardware* under the *Menu* tab.
2. Under menu *Locations* add actions to the 1st location.
3. Under menu *Hardware* add actions to the hardware which is connected to the 1st location.

Do the same for the second administrator and 2nd location.

The image contains three screenshots of a software interface, each with a large green number indicating a step in a configuration process.

- Step 1:** The 'Menu' tab is active. In the left sidebar, 'Hardware(All)' is selected. On the right, the 'Actions' dropdown menu is open, and 'All' is selected.
- Step 2:** The 'Locations' tab is active. In the left sidebar, '1st location(All)' is selected. On the right, the 'Actions' dropdown menu is open, and 'All' is selected.
- Step 3:** The 'Hardware' tab is active. In the left sidebar, 'Spider NET - 1st location(All)' is selected. On the right, the 'Actions' dropdown menu is open, and 'All' is selected.

Example for Codeks TA:

If you want to set the rights for the secretary that will be working with time and attendance for a certain department, you need to add action *All* to *Time and attendance* under the *Menu* tab. Under the menu



Departments select the departments that she will be working with.

General information

First name

Last name

Username

Password

Super admin

Language

Locations Departments Hardware **Menu** Functions Groups

- ▶ All
- ▶ Time attendance(All)
- ▶ Monitor
 - ▶ Layouts
 - ▶ Monitor
 - ▶ Presence
 - ▶ Sensors

Actions

- All
- None
- Create
- Delete
- Read
- Write

Cancel Save

Locations **Departments** Hardware Menu Functions Groups

- ▶ All
- ▶ Boss
- ▶ Administration(All)
- ▶ Sales(All)
- ▶ Management

Actions

- All
- None
- Create
- Delete
- Read
- Write

Cancel Save

7.1.2. Edit Administrator

You can change existing administrator's data in Administrators Editor. On the list of administrators select the administrator you wish to edit. Click the *Edit administrator* icon, edit administrator's data and save changes. You can also edit the administrator with double click on it or through the menu which appears with the right-click on the administrator.

The screenshot shows the 'Administrators' management interface. At the top, there are navigation icons for Home, Back, and Logout. Below these are three action icons: 'Add administrator', 'Edit administrator' (circled in red), and 'Delete administrator'. A date range filter is set to 'From 11.04.2013 To 11.04.2013' with a 'Show events' button and an 'Open report' button. The main content area contains two tables. The first table lists administrators with columns for First name, Last name, and Username. The second table shows event logs with columns for Time, Username, Action, Object type, Object, and Message. A red circle highlights the 'Admin' row in the first table, and a red arrow points from this row to the 'Edit administrator' icon.

| First name | Last name | Username |
|------------|-----------|----------|
| Admin | Admin | admin |
| Paul | Stripe | Paul |

| Time | Username | Action | Object type | Object | Message |
|-------------------|----------|--------|---------------|--------|---------|
| 11.4.2013 - 13:30 | admin | Read | Administrator | 0 | |
| 11.4.2013 - 13:26 | admin | Write | EventType | 49 | |

7.1.3. Delete Administrator

On the list of administrators select the administrator you wish to delete and click the *Delete administrator* icon. New window pops up in which you need to confirm deletion of the administrator. This will delete the administrator from the list of administrators.

The screenshot shows the 'Administrators' management interface, similar to the previous one. The 'Delete administrator' icon is circled in red. A red arrow points from the 'Admin' row in the first table to this icon.

| First name | Last name | Username |
|------------|-----------|----------|
| Admin | Admin | admin |
| Paul | Stripe | Paul |

| Time | Username | Action | Object type | Object | Message |
|-------------------|----------|--------|---------------|--------|---------|
| 11.4.2013 - 13:30 | admin | Read | Administrator | 0 | |
| 11.4.2013 - 13:26 | admin | Write | EventType | 49 | |

7.2. Codeks TA - Calendars

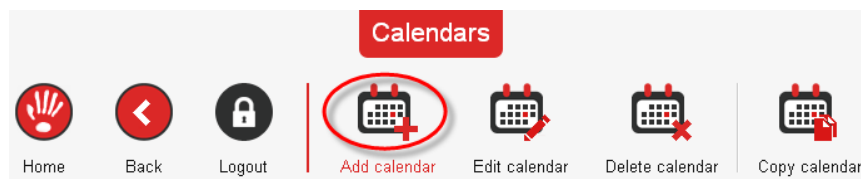
Calendars are used to determine work obligation for users, for example different work shifts. Calendar can be assign to the user in [advanced settings](#)^[274] or it can be determine in a certain [timetable](#)^[219]. To work with Calendars, select Settings/Calendars in the Main Menu.

NOTE: Application will first take into account the calendar which is set in user's advanced settings. If the user has no assigned calendar, the application will use the calendar which is determine in the timetable the user is assigned with. If there is also no calendar determined for this timetable, the the user will be assigned with work obligation which is set in this timetable.

For changing the calendars we advise you to contact Jantar d.o.o. or your local distributor.

7.2.1. Add Calendar

To add a new calendar, click the *Add calendar* icon.



This will enable calendar's data window where you can enter the data of the new calendar.

Name

Description

Editing tool

00:00

02:00

04:00

06:00

08:00

10:00

12:00

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Holiday

Change

| Wk | Mo | Tu | We | Th | Fr | Sa | Su |
|----|-------|-------|-------|-------|-------|-------|-------|
| 27 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | 04:00 | 04:00 | 04:00 | 04:00 | 04:00 | 00:00 | 00:00 |
| 28 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 04:00 | 04:00 | 04:00 | 04:00 | 04:00 | 00:00 | 00:00 |
| 29 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | 04:00 | 04:00 | 04:00 | 04:00 | 04:00 | 00:00 | 00:00 |
| 30 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | 04:00 | 04:00 | 04:00 | 04:00 | 04:00 | 00:00 | 00:00 |
| 31 | 29 | 30 | 31 | | | | |
| | 04:00 | 04:00 | 04:00 | | | | |

Cancel
Save

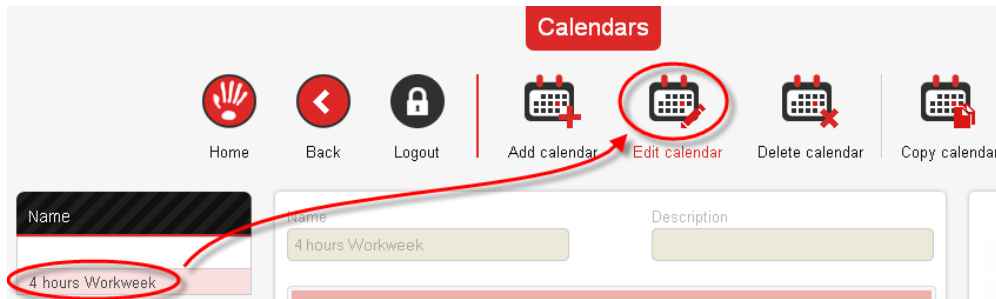
Name: The name of the calendar. The name should be short and descriptive.

Description: Description of the calendar.

Editing tool: The use of editing tool will ease the insertion of working hours into the calendar.

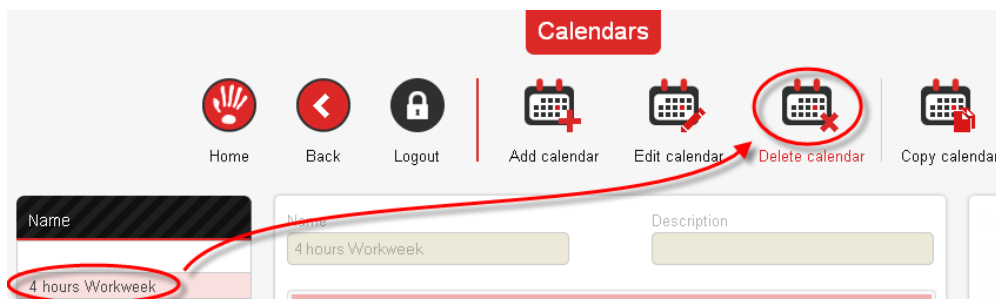
7.2.2. Edit Calendar

You can change existing calendar's data in Calendars Editor. On the list of calendars select the calendar you wish to edit. Click the *Edit calendar* icon, edit calendar's data and save changes. You can also edit the calendar with double click on it or through the menu which appears with the right-click on the calendar.



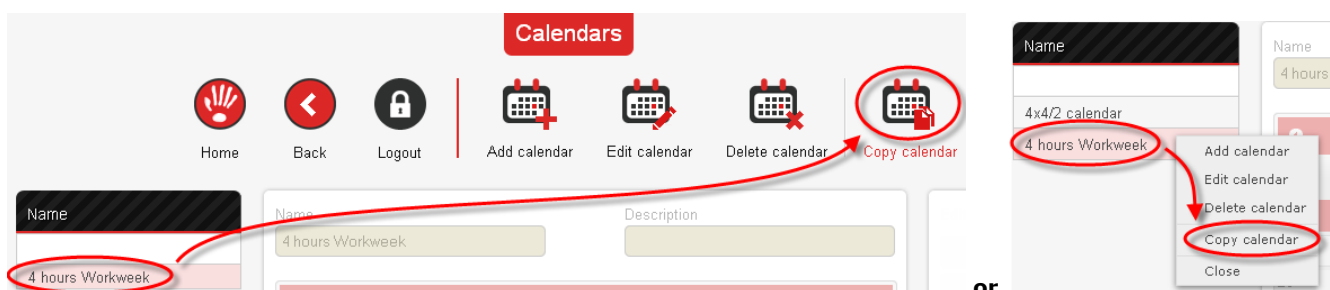
7.2.3. Delete Calendar

On the list of calendars select the calendar you wish to delete and click the *Delete calendar* icon. New window pops up in which you need to confirm deletion of the calendar. This will delete the calendar from the list of calendars.



7.2.4. Copy Calendar

New calendar can be added to the system by copying an existing one. On the list of calendars select the calendar you wish to copy and click the *Copy calendar* icon. To copy an existing calendar, you can also right-click on the calendar and select *Copy calendar* option on the menu. New calendar takes the name of the copied calendar and before the name text Copied is added (e.g. Copied-4 hours Workweek). You can change calendar's data with [editing](#) ^[132] calendar.



7.3. Codeks TA - Statistics

Statistics are used to describe the type of working day. They serve for distribution of attained hours in to categories which serve as basis for calculations in salary programs.

To work with statistics, select Settings/Statistics in the Main Menu. This will open the Statistics Editor where you can add, edit or delete statistics.

Statistics

Icons for working with statistics

Home Back Logout Add statistic Edit statistic Delete statistic

| Name | Code |
|----------------------|------|
| 0001 Worktime | 0001 |
| E000 Not present | |
| E001 Only entry | |
| 0003 No return | |
| Weekend | |
| Hol Holiday | |
| Lea Leave | |
| OldL Old leave | |
| Lat Late | |
| Busn Business | |
| Sick Sickness | |
| WHome Work from home | |

Editing statistic

Code: 0001
 Name: Wroktime
 Print position: 0
 Hours: Real
 00:00 + HH:mm
 Statistic infotype:

Add to statistic
 Count work hours
 Don't count work obligation
 Count drive
 Count statistics
 Export
 Overwrite
 Count lunch
 Count leave
 Count old leave
 Show statistic in reports
 Show statistic in Statistics overview
 This statistic indicates absence
 This statistic indicates absence MFERAC
 Decrease presence bonus
 Statistic's color

Daily: None 00:00 None Choose Notify
 Weekly: None 00:00 None Choose Notify
 Monthly: None 00:00 None Choose Notify
 Yearly: None 00:00 None Choose Notify

Statistic's icon
 Select existing icon: Prebrskaj _ Datoteka ni izbrana. Upload new icon
 Cancel Save

Handling overtime limits

7.3.1. Review Statistics

Statistics are divided into two groups; system statistic and user statistics. System statistics are assigned to the group of events automatically when new registration events are received. User statistics are set by application's administrator; groups of events are characterized by hand. You can assign statistic in the group

in manner described in the [Edit Day](#) ⁽⁵³⁾ chapter. The following table contains system statistics and their meanings.

| Statistic | Description |
|-------------|-----------------------------------------------------------------------------------------------------------------------|
| Worktime | User has completed working day. Entry and Exit event has been registered. |
| Not present | User did not register on the controller in the current day. |
| Only entry | User has registered arrival at work, his workday is in progress. |
| No return | User used, for his exit, time interval with automatic adding of exit. |
| Weekend | Marked the end of the week, the day Saturday and Sunday. |
| Holiday | Marks a national holiday. |
| Leave | User is on leave. |
| Old leave | User is using last years leave. |
| Late | The user has return to work late (after the General interval for exit already ended, for example: arrival from Lunch) |

On the left side of the Statistics Editor you will find all statistics in the system. On the right side of the editor you can see settings of the statistic that is selected on the left side. Every statistic has its own code (Statistic field), that is used in reports, text description (Description field), print position and a way how hours are calculated in a group of events, marked with this statistic (Hours field). In addition to these features, each statistic has certain characteristics that determines if statistic is used in reports and displayed in application. If the field *Show statistic in Statistics overview* is enabled, then statistic will be shown in the Statistic overview frame in Time Attendance Editor with icon selected in Statistic icon field. **NOTE:** If the field *Show statistic in reports* is not enabled, then this statistic will not be shown in reports!

The statistic determines calculation of hours in the Hours field. The following table below provides an explanation of options.

| Hours | Description |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| None | Calculation does not take into account times from events nor work obligation. Value is always set to 00:00. |
| Real | Calculation takes into account actual hours, calculated from events. |
| WorkObligation | Calculation takes into account only work obligation. Times of the events are not considered. |
| LeaveDayHours | Calculation takes into account leave hours (usually 8 hours) and actual hours, calculated from events. |
| RealPlusWorkObligation | Calculation takes into account work obligation and actual hours, calculated from events, which are registered as Worktime statistic. |
| FixedHours | Calculation takes into account fixed hours, set out in the Statistics Editor. |
| AskHours | Currently not in use. |
| Overtime | Calculation takes into account overtime. |
| RealAtMostWorkObligation | If the user works less then work obligation, then calculation takes into account only actual hours. If the user works more then work obligation, then calculation takes into account only work obligation. |
| FixedAndRealHours | Calculation takes into account fixed hours, set out in the Statistics Editor, and actual hours, calculated from events. |

| Hours | Description |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WorkObligationPlusSaldo | If the user works less then work obligation, then calculation takes into account only work obligation. If the user works more then work obligation, then calculation takes into account work obligation in plus hours. |

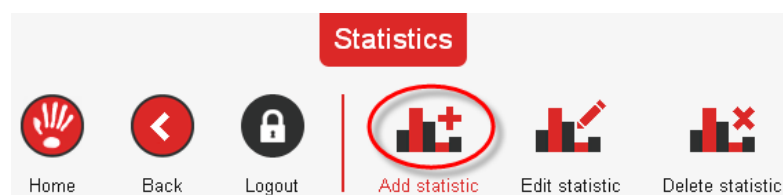
Example: Statistic Leave has a selected option *Leave hours + actual hours* in the Hours field. If worker announces leave and he comes to the work, work obligation will be taken into account and also the actual time he was at work. If worker works for 3 hours, 11 hours of work will be taken into account for that day. Statistic Worktime has a selected option *Just actual time*, what means that if worker works from 8:00 to 13:00, 5 hours will be taken into account for that day.

Table with description of existing statistics and their characteristics

| Code | Description | Hours | Add to statistic | Count work hours | Don't count in work obligation | Count Drive | Count statistics | Export | Overwrite | Count Lunch | Count Leave | Count Old leave | Show statistic in reports | Show statistic in Statistics | This statistic indicates absence |
|------|---------------------|------------------------|------------------|------------------|--------------------------------|-------------|------------------|--------|-----------|-------------|-------------|-----------------|---------------------------|------------------------------|----------------------------------|
| 1 | Worktime | Real | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| E000 | Not present | None | * | * | * | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| E001 | Only entry | None | * | * | * | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| 3 | No return | Real | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| ---- | Weekend | Real | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Hol | Holiday | RealPlusWorkObligation | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Lea | Leave | LeaveDayHours | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| OldL | Old leave | LeaveDayHours | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | ✓ | ✓ | ✓ | * |
| Lat | Late | Real | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Busn | Business | Real | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Sick | Sickness | RealPlusWorkObligation | * | * | * | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| Whom | Work from home | Real | * | * | * | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| Mat | Maternity leave | RealPlusWorkObligation | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Excl | Exceptional leave | RealPlusWorkObligation | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| UnpL | Unpaid leave | Work obligation | * | * | ✓ | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| StuL | Study leave | Work obligation | * | * | ✓ | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| Lunc | Lunch | Real | * | * | * | ✓ | ✓ | ✓ | ✓ | ✓ | * | * | ✓ | ✓ | * |
| Priv | Private | Real | * | * | ✓ | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| UnjA | Unjustified absence | Real | * | * | ✓ | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |
| OvrT | Overtime | Real | * | * | ✓ | * | ✓ | ✓ | ✓ | * | * | * | ✓ | ✓ | * |

7.3.2. Add Statistic

To add a new statistic, click the *Add statistic* icon.



New window will open, where you can enter statistic's general information. In *Statistic* field enter the statistic's code which will be used in reports, enter statistic's text *description* and select *statistic's type* in drop-down menu.

General information

Statistic

Description

Statistics types

All characteristics of statistics types are described in the next table. Hours are described in chapter [Review Statistics](#) ¹³³.

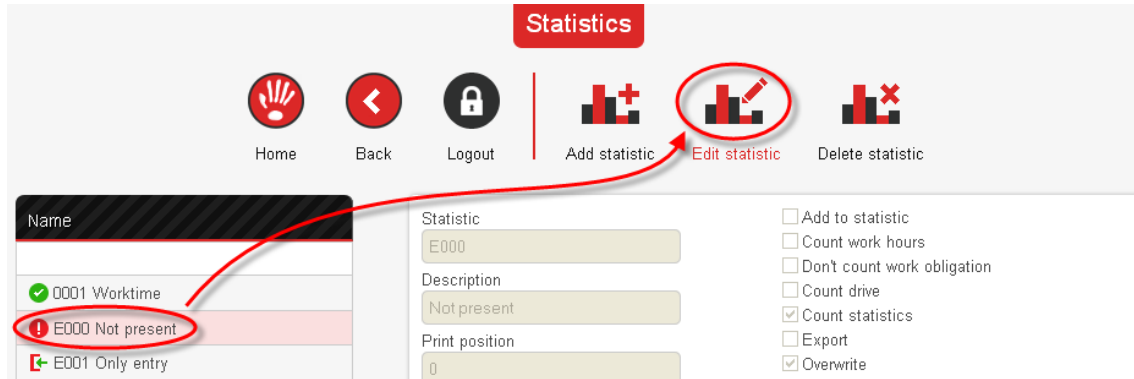
| Statistics types | Hours | Add to statistic | Count work hours | Don't count in work obligation | Count Drive | Count statistics | Export | Overwrite | Count Lunch | Count Leave | Count Old leave | Show statistic in reports | Show in overview | This statistic indicates absence |
|------------------------------------|--------------------------|------------------|------------------|--------------------------------|-------------|------------------|--------|-----------|-------------|-------------|-----------------|---------------------------|------------------|----------------------------------|
| Fix hours | FixedHours | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Holiday, only work obligation | RealAtMostWorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Leave | LeaveDayHours | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ | x |
| Minus Fix hours | FixedAndRealHours | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| No | None | x | x | x | x | ✓ | ✓ | ✓ | x | x | x | ✓ | ✓ | x |
| No and don't count statistic | None | x | x | x | ✓ | x | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| No, +Stat, -Saldo, +Drive | None | x | x | x | x | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Old holiday, only work obligation | RealAtMostWorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ | ✓ | x |
| Old leave | LeaveDayHours | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ | ✓ | x |
| Real hours | Real | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Real hours + work obligation | RealPlusWorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Real hours and not count statistic | Real | x | x | x | ✓ | x | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Real hours, don't count drive | Real | x | x | x | x | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Real hours, don't count lunch | Real | x | x | x | ✓ | ✓ | ✓ | ✓ | x | x | x | ✓ | ✓ | x |
| Use of overtime hours | None | x | x | x | x | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Work from home | Real | x | x | x | x | ✓ | ✓ | ✓ | x | x | x | ✓ | ✓ | x |
| Work obligation | WorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Work obligation + real hours | RealPlusWorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Work obligation + saldo | WorkObligationPlusSaldo | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |
| Work obligation MAX | RealAtMostWorkObligation | x | x | x | ✓ | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | ✓ | x |

When you enter statistic's general information, click the Save button. In Statistics Editor field for new statistic will enable with previous entered and selected data. Enter other statistic's data e.g. statistic's icon, color, print position, .etc and click the Save button to save new statistic.

| Name | Code | <input type="checkbox"/> Add to statistic <input type="checkbox"/> Count work hours <input type="checkbox"/> Don't count work obligation <input checked="" type="checkbox"/> Count drive <input checked="" type="checkbox"/> Count statistics <input type="checkbox"/> Count only once daily <input checked="" type="checkbox"/> Export <input checked="" type="checkbox"/> Overwrite <input checked="" type="checkbox"/> Count lunch <input type="checkbox"/> Count leave <input type="checkbox"/> Count old leave <input checked="" type="checkbox"/> Show statistic in reports <input checked="" type="checkbox"/> Show statistic in Statistics overview <input type="checkbox"/> This statistic indicates absence <input type="checkbox"/> This statistic indicates absence MFERAC <input type="checkbox"/> Decrease presence bonus |
|---------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0001 Worktime | 0001 | |
| E000 Not present | Worktime | |
| E001 Only entry | Print position | |
| 0003 No return | 0 | |
| Weekend | Hours | |
| Hol Holiday | Real | |
| Lea Leave | 00:00 + HH:mm | |
| OldL Old leave | Statistic infotype | |
| Lat Late | Statistic's color | <input checked="" type="checkbox"/> #33CC33 |
| Busn Business | Daily | |
| Sick Sickness | WorkObligationPlus | 00:01 AddToStat Ovtm - Overtime <input checked="" type="checkbox"/> Notify |
| WHom Work from home | Weekly | None 00:00 None Choose <input type="checkbox"/> Notify |
| | Monthly | None 00:00 None Choose <input type="checkbox"/> Notify |
| | Yearly | None 00:00 None Choose <input type="checkbox"/> Notify |
| | <input checked="" type="checkbox"/> Statistic's icon | |
| | Select existing icon | |
| | <input type="button" value="Prebrskaj ..."/> Datoteka ni izbrana. | <input type="button" value="Upload new icon"/> |
| | <input type="button" value="Cancel"/> | <input type="button" value="Save"/> |

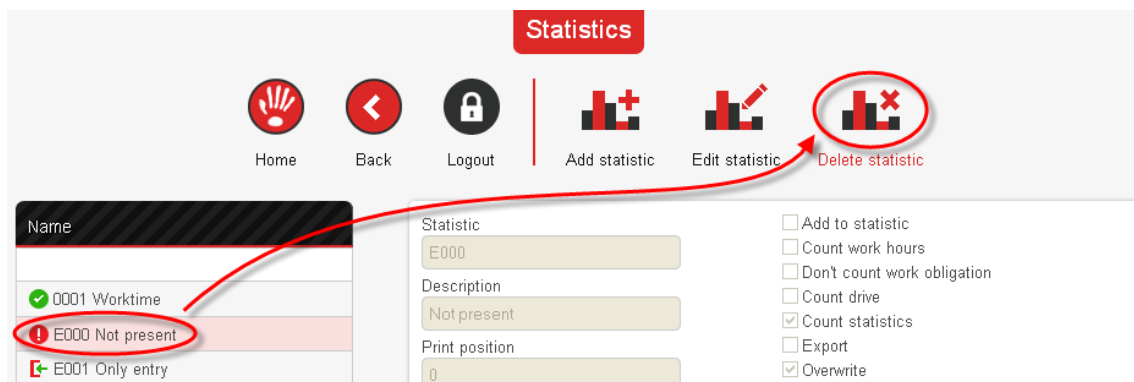
7.3.3. Edit Statistic

You can change existing statistic's data in Statistics Editor. On the list of statistics select the statistic you wish to edit. Click the *Edit statistic* icon, edit statistic's data and save changes. You can also edit the statistic with double click on it or through the menu which appears with the right-click on the statistic.



7.3.4. Delete Statistic

On the list of statistics select the statistic you wish to delete and click the *Delete statistic* icon. New window pops up in which you need to confirm deletion of the statistic. This will delete the statistic from the list of statistics.



7.3.5. Statistic limits

You can configure four checking overtime limits: **Daily, Weekly, Monthly** and **Yearly**.

Daily
 None 00:00 None Choose Notify

Weekly
 None 00:00 None Choose Notify

Monthly
 None 00:00 None Choose Notify

Yearly
 None 00:00 None Choose Notify

If there is a need for **daily handling overtime limits**, select one of five options in the first daily drop-down list.

Daily
 None 00:00
 None
 WorkObligation
 WorkObligationPlusFixedHours
 WorkObligationPlusMaxTransfer
 FixedHours
 MaxOvertime

| Hours | Description |
|-------------------------------|-----------------------------------------------------------|
| None | No limit is set. |
| WorkObligation | Limit the statistic with work obligation. |
| WorkObligationPlusFixedHours | Limit the statistic with work obligation and fixed time. |
| WorkObligationPlusMaxTransfer | Limit the statistic with monthly limit of transfer hours. |
| FixedHours | Limit the statistic with fixed time. |
| MaxOvertime | Limit the statistic with monthly overtime transfer. |

By any of selection appear's new drop-down list. There are four possibilities: **None, Discard, AddToStat** or **AddToOvertime**.

Daily
 WorkObligation 00:00 None

Weekly
 None 00:00
 None
 Discard
 AddToStat
 AddToOvertime

| Action | Description |
|---------------|------------------------------------------|
| None | Calculation does not take into account. |
| Discard | Ignore surplus limit. |
| AddToStat | Surplus counts in the selected statistic |
| AddToOvertime | Surplus counts in overtime |

Third drop-down list is activated by **AddToStat** choice. Surplus will count in selected statistic. Mark the

Notify check box for informing administrator over the email.

Daily

WorkObligation 00:01 AddToStat Ovtm - Overtime Notify

Weekly

Choose
0001 - Wrovertime

WorkObligationPlusFixedHours

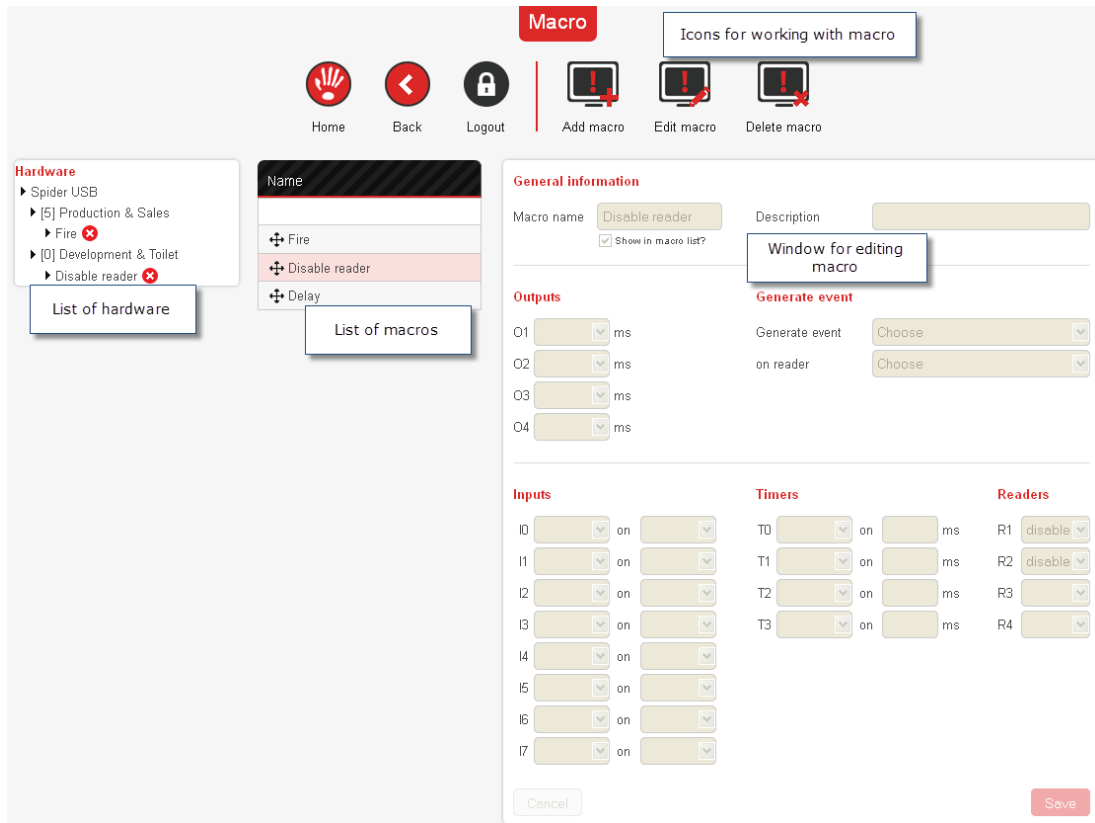
Example: When the user will exceed work obligation for two minutes the admin will get notification over the email. Surplus counts into overtime.

Daily

WorkObligationPlus 00:01 AddToOvertime Choose Notify

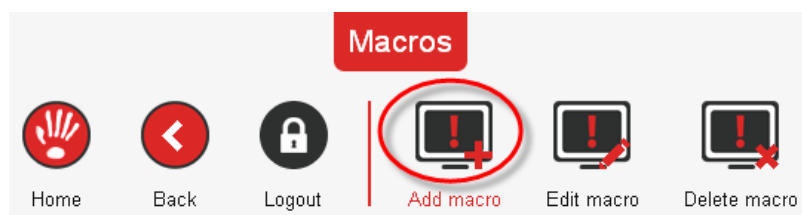
7.4. Macros

Macros are used to define custom buttons. You can define button that triggers many actions on more controllers and different task on each reader. To work with macros select Settings/Macros in the Main Menu. This will open the Macros Editor where you can add, edit or delete macros.



7.4.1. Add Macro

To add a new macro, click the *Add macro* icon. This will enable the window where you can enter data of the new macro.



Enter the name of the macro and its description. If you want to see this macro in macro lists in the application, enable *Show in macro list* field.

General information

Macro name Description

Show in macro list?

OUTPUTS

Outputs are intended for controlling of electric door strikes. Select the action that will perform on a certain door when the macro starts.

Outputs

- 01 Pulse ms
- 02 Unlock
- 03 Lock
- 04 Toggle

| | |
|--------|------------------------------------------------------------------------------------------|
| Pulse | With pulse you can set the duration of the door strike pulse in milliseconds (1 to 9999) |
| Unlock | Unlock the door |
| Lock | Lock the door |
| Toggle | Switch from the current output state to the other |

GENERATE EVENT

Select the event that will occur on a selected reader when the macro starts. This will generate the notification of the selected event, which will appear in the Monitor of the program.

Generate event

Generate event

on reader

INPUTS

Select the status of inputs which must be met to carry out another macro.

Inputs

I0 on

I1 on

I2 on

I3 on

I4 on

| | |
|---------|------------------------------------------------|
| Active | Selected input is active |
| Rising | Selected input is rising from 0 to 1 |
| Falling | Selected input is falling from 1 to 0 |
| System | Selected input is set to basic system settings |
| Print | Printing of a parking ticket |
| Inc | Increasing |
| Dec | Decreasing |

TIMERS

With timers you can activate or clear another selected macro in a selected time. Timers are shared between all the macros.

Timers

T0

T1

T2

T3

| | |
|-------|----------------|
| CLEAR | Deleting macro |
|-------|----------------|

READERS

Select the action that will perform on a certain reader when the macro is carried out.

Readers

R1

R2

R3

R4

| | |
|---------|----------------------------------------------------|
| Disable | Disable the reader |
| Enable | Enable the reader |
| Unlock | Unlock the reader for the time, set in the program |
| Bell | Reader will beep one time |
| Warning | Reader will signal pre-alarm by short beeps |
| Alarm | Reader will signal alarm by long beeps |

Example:

When macro command Fire is called, all four outputs (door strikes) will unlock. In the Monitor of the program the notification of the event Fire will appear on the reader 1. The macro set under Timers T0 will be cleared. All readers will signal alarm.

General information

Macro name Description

Show in macro list?

Outputs

O1 ms

O2 ms

O3 ms

O4 ms

Generate event

Generate event

on reader

Inputs

I0 on

I1 on

I2 on

I3 on

Timers

T0 on

T1 on

T2 on

T3 on

Readers

R1

R2

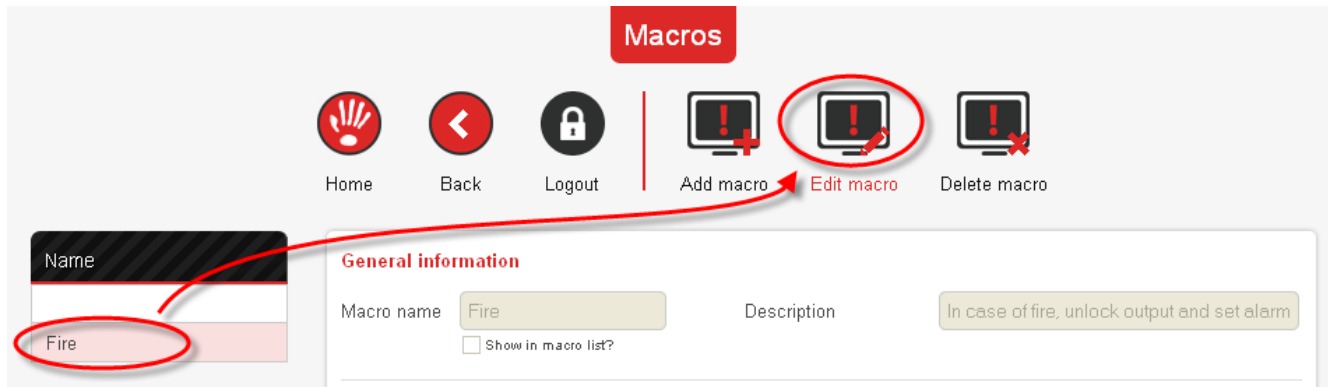
R3

R4



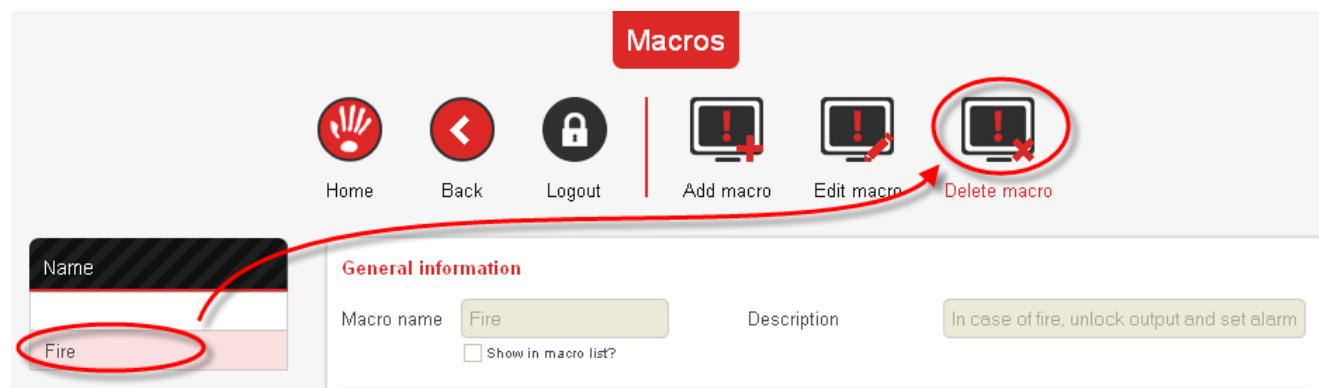
7.4.2. Edit Macro

You can change existing macro's data in Macros Editor. On the list of macros select the macro you wish to edit. Click the *Edit macro* icon, edit macro's data and save changes. You can also edit the macro with double click on it or through the menu which appears with the right-click on the macro.



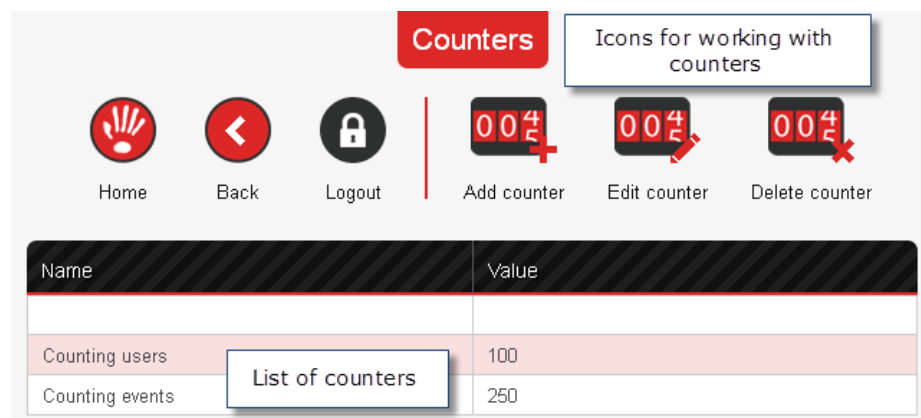
7.4.3. Delete Macro

On the list of macros select the macro you wish to delete and click the *Delete macro* icon. New window pops up in which you need to confirm deletion of the macro. This will delete the macro from the list of macros.



7.5. Counters

Counter are used to count, e.g., users, events etc. To work with counters, select Settings/Counters in the Main Menu. This will open the Counters Editor where you can add, edit or delete counters.



7.5.1. Add Counter

To add a new counter, click the *Add counter* icon.



New window will open where you can enter data of the new counter.

General information

Name

Description

Wrap value to 0 when max reached

Value

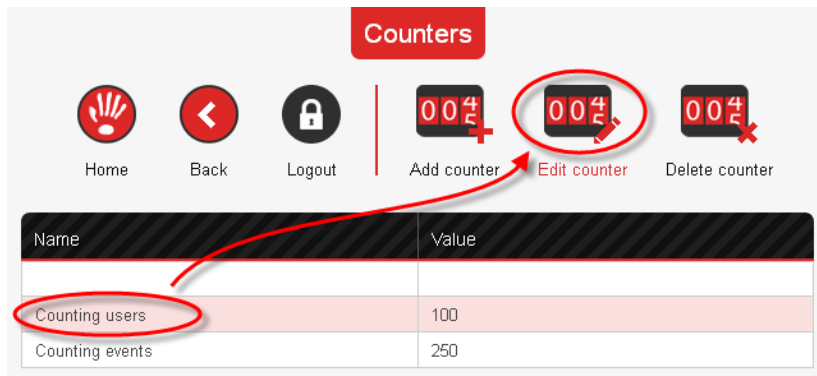
Max value

Min value

| | |
|----------------------------------|---------------------------------------------------------------|
| Name | Counter's name. The name should be short and descriptive. |
| Description | Description of the counter. |
| Wrap value to 0 when max reached | Enabled; the Value will turn to 0 after Max value is reached. |
| Counter's values | Enable you to set the values of the counter. |

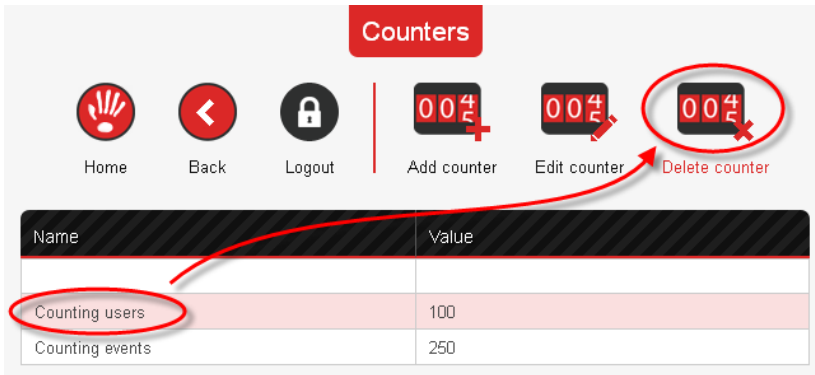
7.5.2. Edit Counter

You can change existing counter's data in Counters Editor. On the list of counters select the counter you wish to edit. Click the *Edit counter* icon, edit counter's data and save changes. You can also edit the counter with double click on it or through the menu which appears with the right-click on the counter.



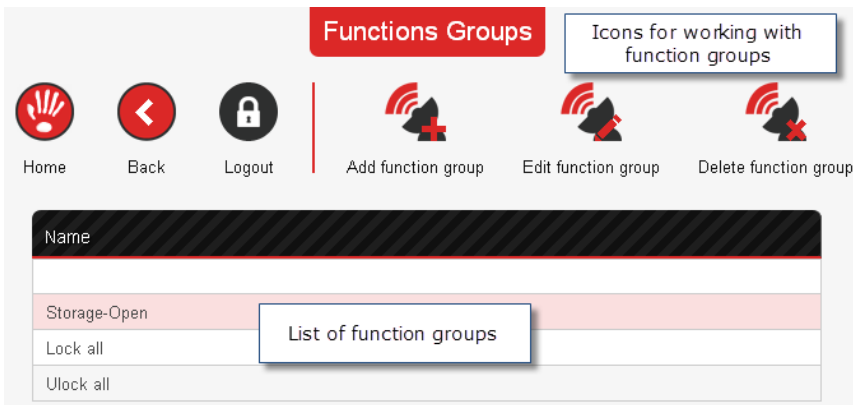
7.5.3. Delete Counter

On the list of counters select the counter you wish to delete and click the *Delete counter* icon. New window pops up in which you need to confirm deletion of the counter. This will delete the counter from the list of counters.

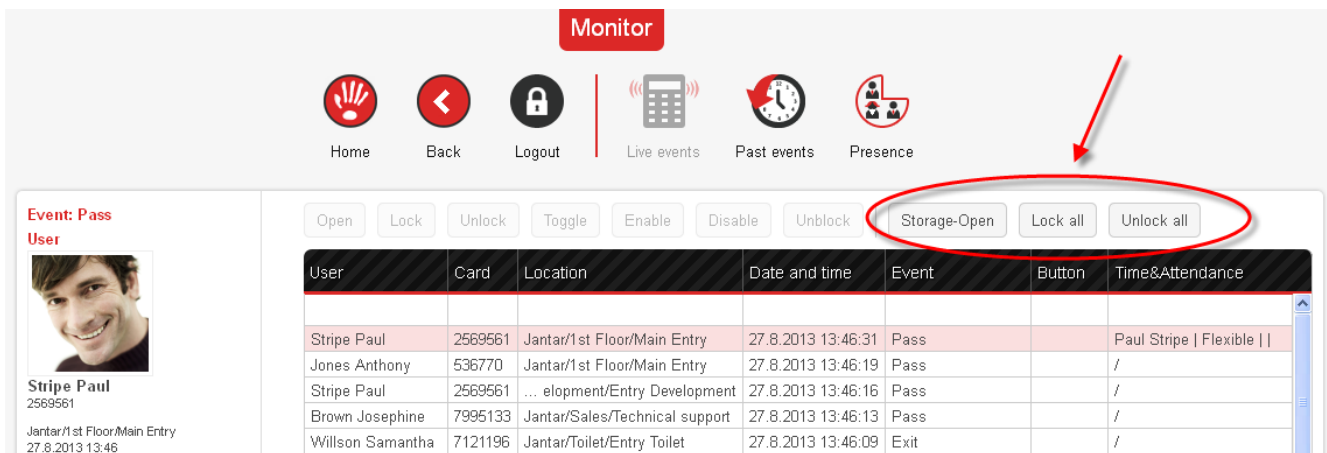


7.6. Function Groups

Function groups enable you to create button commands in the Monitor. To work with function groups, select Settings/Function groups in the Main Menu. This will open the Function groups Editor where you can add, edit or delete function groups.



Function group buttons will be displayed and can be used in the Monitor.



7.6.1. Add Function Group

To add a new function group, click the *Add function group* icon.



This will open a new window where you can enter data of the new function group.

General information

Name

Require event description

Generate event

Locations

- ▶ Jantar
 - ▶ Production
 - ▶ Entry Production
 - ▶ Storage (Open)
 - ▶ Sales
 - ▶ Entry Sales
 - ▶ Technical Support

Actions

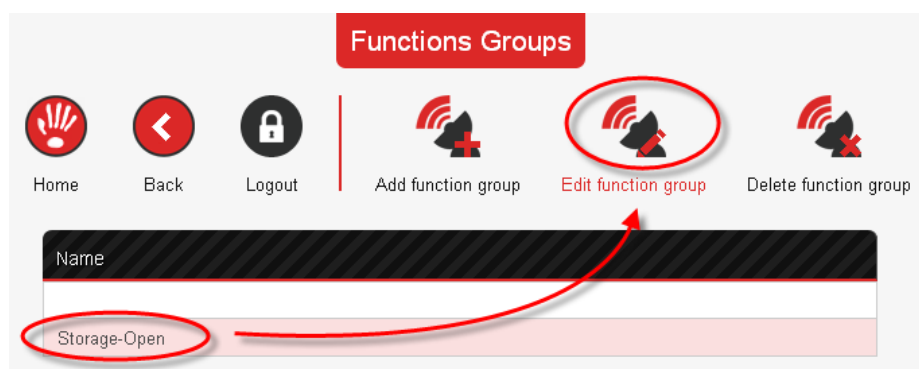
- Open
- Lock
- Unlock
- Toggle
- EnableSensor
- DisableSensor
- EnableReader
- DisableReader
- UnblockReader
- AlarmOn
- AlarmOff

Macro

| | |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Function group's name enables you to name the function group button which will be seen in the Monitor. The name should be short and descriptive. |
| Require event description | If enabled you need to write event description before you can activate function group button in the Monitor. |
| Generate event | Enables you to select the event that will generate when the function group button in the Monitor is used. |
| Locations | List of all locations. Actions can be set only for passages. |
| Actions | List of all actions which can be set for passages. |
| Macro | Enables you to select the macro that will start when the function group button in the Monitor is used. |

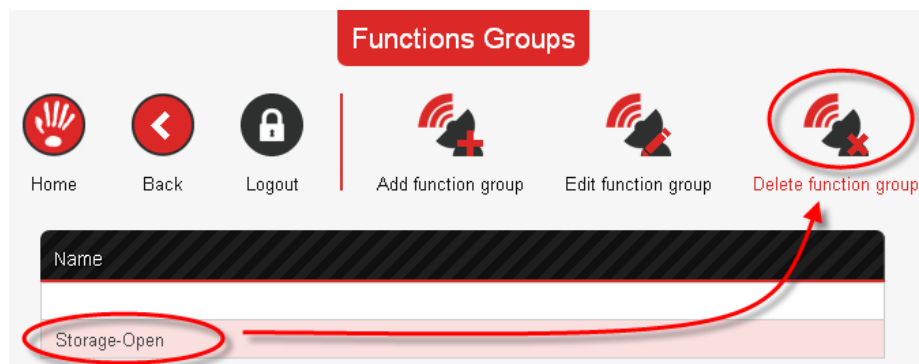
7.6.2. Edit Function Group

You can change existing function group's data in Function groups Editor. On the list of function groups select the function group you wish to edit. Click the *Edit function group* icon, edit function group's data and save changes. You can also edit the function group with double click on it or through the menu which appears with the right-click on the function group.



7.6.3. Delete Function Group

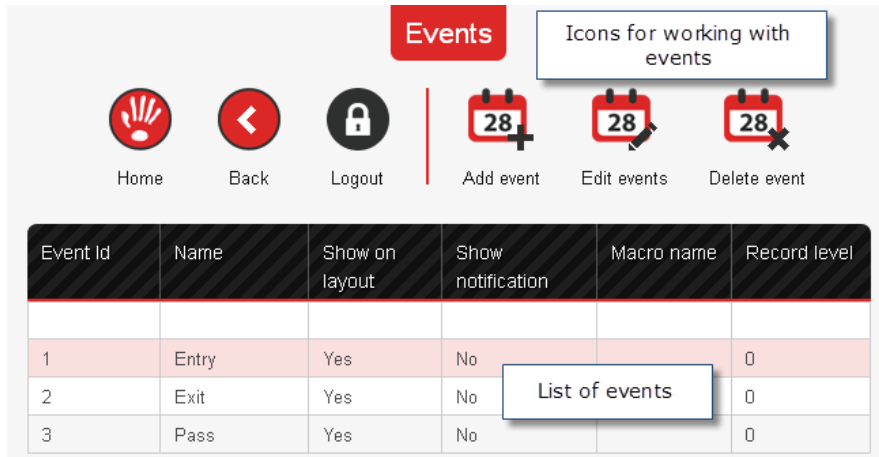
On the list of function groups select the function group you wish to delete and click the *Delete function group* icon. New window pops up in which you need to confirm deletion of the function group. This will delete the function group from the list of function groups.



7.7. Events

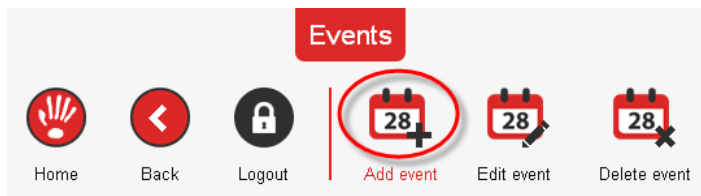
All events that are needed for normal operation are already determine in the menu. To work with events, select Settings/Events in the Main Menu. This will open the Evens Editor where you can add, edit or delete events.

IMPORTANT! Do not change or delete existing events otherwise the program will not work properly!



7.7.1. Add Event

To add a new event, click the *Add event* icon.



This will open new window where you can enter data of the new event. Click the *Save* button to create new event.

General information

Event name

Event Id

Show on layout

Show notification

Macro name

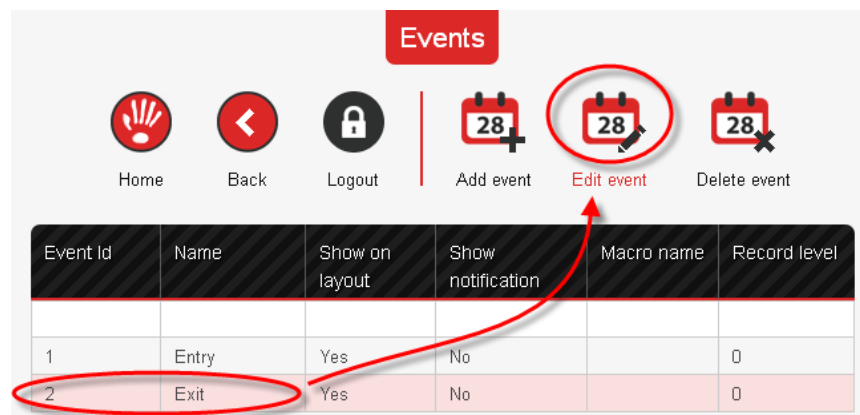
Sound

| | |
|-------------------|-------------------------------------------------------------------------------------------------------|
| Event name | The name of the event. |
| Event Id | A unique number of the event. |
| Show on layout | Enabled - event will be shown in the layout next to the layout marker in real time. |
| Show notification | Enabled - notification of the event will be displayed in the left corner of the program in real time. |
| Macro name | Select the macro that will start when this event occurs. |

| | |
|------------|--------------------------------------------------|
| Event name | The name of the event. |
| Sound | Select the sound that will accompany this event. |

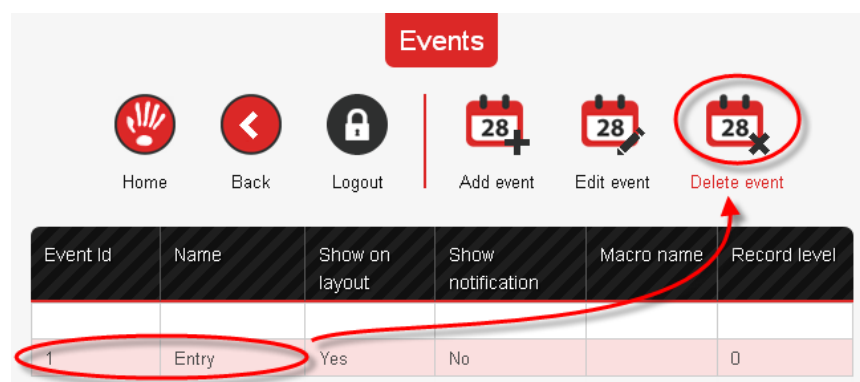
7.7.2. Edit Event

You can change existing event's data in Events Editor. On the list of events select the event you wish to edit. Click the *Edit event* icon, edit event's data and save changes. You can also edit the event with double click on it or through the menu which appears with the right-click on the event.



7.7.3. Delete Event

On the list of events select the event you wish to delete and click the *Delete event* icon. New window pops up in which you need to confirm deletion of the event. This will delete the event from the list of events.



7.8. Preferences

In Preferences you can set Program settings, Time attendance (Codeks TA) and Mail settings (Codeks TA). To work with program settings select Settings/Preferences in the Main Menu. After you finish with entering data, click the *Save* button to save settings.

7.8.1. Program Settings

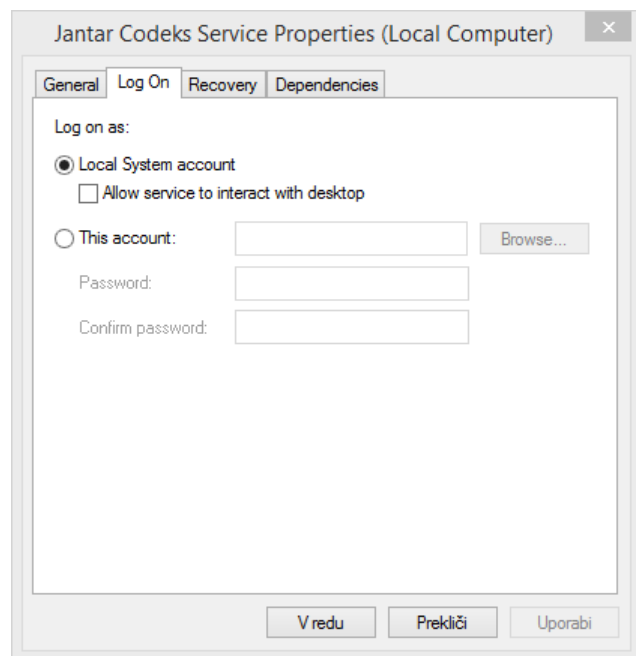
In the **Language** area you can set the language in which the application will display texts in the user interface. To apply the new selected language, you must logout and login again in the application. **Company data** fields are intended for entering company information, which will be displayed in reports. **Codeks service host name** is a name of the computer where Codeks Service is running.

| Language | Description |
|------------------------------------------|-----------------------------------------------------------------------------------|
| Language | Language in which the application will display texts in the user interface. |
| Company data | |
| Company | Company name |
| Company address | Company address |
| VAT ID | Company VAT ID |
| Codeks service host name | |
| Codeks service host name | A name of the computer where Codeks Service is running. |
| Additional for Codeks TA | |
| Authenticate users with Active directory | Enable the field, if you want to use Active directory for user authentication. |
| Windows domain for AD authentication | Enter required data, if you want to use Active directory for user authentication. |

7.8.1.1. Active Directory

Precondition for the the successful use of Active directory are regulated rights in Windows, with which Codeks service is running on the computer. It needs the right to log in to Active Directory and performs `PrincipalContext.ValidateCredentials(username, password)`, which can be a problem if Codeks works with rights Local System account. In this case, the Codeks' log file records error "ActiveDirectory authentication crashed", followed by the details of the system.

Problem can be eliminated with appropriate rights assigned to the System account or you can prepare for Codeks service, in the Control Panel, a new appropriate account in the domain, with which Codeks service has the right to access Active Directory. Path: Control panel/*Administrative tools/Services/Jantar Codeks Service* and tab *Log On*.



Settings

- In Program Settings enable the field for Active directory authentication and enter the domain
- Username enrolled in the advanced settings of user or administrator must be the same as in the Active Directory, without domain
- Large / small letters are not important in the username, but ARE important in the password!
- If user authentication with Active Directory is activated, the password will first be checked in Active directory. If this fails than the password, entered in the Codeks, will be checked (reserve option in the event of failure of Active Directory)
- If the user wishes to use authentication exclusively from Active directory, then he must leave the password field in the Codeks blank.

7.8.2. Codeks TA - Preferences Time Attendance

Start and end of night work in the **Night shift** area are important if the company work processes take place also in the night time. According to start and end time of night work, system classifies user's registered events into the correct day. **Time attendance** part enables additional settings of time attendance. **Import commands** function enables the integration of another system or application into Codeks software. **Automatic error report** sends the error report on to the registered e-mail address every end of the day.

| | |
|--------------------------------------------------------------------------------------------------------|-------------------------------------|
| Program settings Time attendance Mail settings | |
| Default fingerprint controller Automatic import / export Export | |
| Additional fields Lunch | |
| Night shift | |
| Night work start | 20:00 + HH:mm |
| Night work end | 12:00 + HH:mm |
| Time attendance | |
| Lock editing of TA data to including month (YYYY-MM) | 2010-01 |
| Automatically lock editing of previous month | <input type="checkbox"/> |
| Day of month to automatically lock editing | 15 |
| Super admin is allowed to edit TA even if already locked | <input type="checkbox"/> |
| Limit user TA overview (months) | 12 |
| Limit announce overview (months) | 12 |
| Show saldo on terminal | <input checked="" type="checkbox"/> |
| Show leave on terminal | <input checked="" type="checkbox"/> |
| Minimum time to count lunch | 04:00 + HH:mm |
| Count second lunch | <input checked="" type="checkbox"/> |
| Lunch count mode | Standard ▼ |
| Drive count mode | Standard ▼ |
| Codepage for exported files | Unicode ▼ |
| Minimum time to count second lunch | 12:00 + HH:mm |
| Minimum time to count second lunch in hours | 10:00 + HH:mm |
| Saldo calculate mode | StandardSaldoToPlus ▼ |
| Send notification if users arrives to unplanned shift | <input type="checkbox"/> |
| Worktime approval | <input type="checkbox"/> |
| Require exact mobile location | <input type="checkbox"/> |
| Presence bonus calculation | |
| Presence bonus statistic | None ▼ |
| Decrease presence bonus by % | 50 |
| Users entitled for presence bonus | All ▼ |
| Import commands settings | |
| Import commands | <input checked="" type="checkbox"/> |
| Import commands interval in minutes | 10 |
| Automatic error report | |
| Enable automatic error report | <input type="checkbox"/> |
| Send report to (e-mail) | |
| Report when day sum less than | 00:00 + HH:mm |
| Euhreka XML export | |
| CCODE | |
| SYSTID | |
| ta_day_stats_Lunch_Subtype | |
| ta_day_stats_Lunch_Infotype | |
| ta_day_stats_Lunch_Subtype | |
| ta_day_stats_Drive_Infotype | |

| Night shift | Description |
|------------------------|---------------------------|
| Night work start | Start time of night work. |
| Night work end | End time of night work. |
| Time attendance | |

| Night shift | Description |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lock editing of TA data to including month (YYYY-MM) | Editing of time attendance data to including entered month will be locked. |
| Automatically lock editing of previous month | If the field is enabled, editing of the previous month will automatically lock at the start of the new month. |
| Day of month to automatically lock editing | Day of month when editing of the previous month will lock. |
| Show Saldo on terminal | If the field is enabled, the controller will display user's Saldo when the user registers his card. |
| Show leave on terminal | If the field is enabled, the controller will display user's number of leave days when the user registers his card. |
| Count second lunch | If the field is enabled, application will count second lunch to all employees, which will work more than the hours set in <i>Minimum time to count second lunch</i> . |
| Codepage for exported files | It is used when you are exporting files from time attendance. It is important when exporting names of users and names of the organization units. Options are listed in the drop-down menu. |
| Minimum time to count second lunch | Work hours after which the application will count second lunch. |
| Drive count mode | <p>Standard - A user is assigned one drive to work per day.</p> <p>Double drive - A user is assigned two drives - to and from work. If the user registers an automatic Entry or Exit, only one drive will be assigned.</p> <p>Standard Multi Count - A user is assigned a drive every time he registers an Entry.</p> <p>No drive - The drive to work is not assigned or counted.</p> |
| Saldo calculate mode | <p>Sets how the additional registered work hours (Saldo period) will be distributed:</p> <ul style="list-style-type: none"> • StandardSaldoToPlus - The additional hours are first transferred to (1) Stimulation transfer, next the remainder is transferred to (2) Overtime transfer and last to the (3) Saldo period. (The Saldo period is transferred to the next period as the value of Period plus.) • SaldoToStimulation - The additional hours are first transferred to (1) Saldo period, next the remainder is transferred to (2) Overtime transfer and last to the (3) Stimulation transfer. (The Saldo period is transferred to the next period as the value of Period plus.) • SaldoToOvertime - The additional hours are first transferred to (1) Saldo period, next the remainder is transferred to (2) Stimulation transfer and last to the (3) Overtime transfer. (The Saldo period is transferred to the next period as the value of Period plus.) <p>ATTENTION! In order for the function setting to work correctly, the values of Manual transfer saldo to overtime, Manual transfer saldo to stimulation and Manual transfer from prev. month, in the Current period summary section of the Time attendance editor, must be set.</p> |
| Import commands settings | |
| Import commands | The Import commands function enables the integration of another system or application into Codeks software. It enables you to enter and change data in Codeks application through commands that are recorded in the specially designed table in Jantar base. In this way it is possible to change time of arrival or departure from work for individual employees. It is also possible to set employees leave or any other statistic for a specific day or period. |
| Import commands interval in minutes | In this tab you can set only time in which the Codeks will import commands from the table. Technical specification and functionality description of the Import commands function is in sperate manual. |
| Automatic error report | |
| Enable automatic error report | If the field is enabled, the application sends the error report on to the registered e-mail address every end of the day. |
| Send report to (e-mail) | E-mail address of the recipient of the error report. |
| Report when day sum less than | The error report contains a list of employees whose total daily work hours is less than the listed hours. |

7.8.3. Codeks TA - Preferences Mail Settings

For SMTP server settings you can contact your Internet service provider.

| Program settings | Time attendance | Mail settings |
|-----------------------------------------------------|-------------------------------------|---------------|
| SMTP Server Settings | | |
| SMTP port | 587 | |
| SMTP host | smtp.gmail.com | |
| Username | codeks@company.com | |
| Password | | |
| SMTP use SSL | <input checked="" type="checkbox"/> | |
| Mail settings | | |
| Sender | codeks@company.com | |
| Name | T&A server Company | |
| Do not send links in email | <input type="checkbox"/> | |
| Ignore whether user is present when notify by email | <input checked="" type="checkbox"/> | |
| Send mail on request | <input checked="" type="checkbox"/> | |
| Send mail on approval or rejection | <input checked="" type="checkbox"/> | |
| Send mail when statistic limit exceeded | <input checked="" type="checkbox"/> | |

| SMTP Server Settings | Description |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SMTP port | SMTP port |
| SMTP host | SMTP host |
| Username | Username |
| Password | Password |
| SMTP use SSL | SMTP use SSL |
| Mail settings | |
| Sender | E-mail address from which the report will be sent. Address must be real. |
| Name | The name of the sender. |
| Do not send links in email | ENABLED - mails, send by Codeks, will not contain any hyperlinks(shortcuts) USE: Module: <i>ePermit, LeaveAnnounces, Shifts...</i> Settings: <i>Statistic limits</i> ^[139] (if "Send mail when statistic limit exceeded" is ENABLED) |
| Ignore whether user is present when notify by email | ENABLED - the application will not consider the absence of department managers. Email will be send to all users with permission for receive. DISABLED - the application takes into account the presence of department managers and in the case of absence of the head of department checks the presence of deputies in the hierarchy from top down. USE: Module: <i>ePermit, LeaveAnnounces, Shifts...</i> Settings: <i>Statistic limits</i> ^[139] (if "Send mail when statistic limit exceeded" is ENABLED) |
| Send email on request | ENABLED - when user confirms an permit or announce, the system will send an email to responsible person USE: Module: <i>ePermit, LeaveAnnounces, Shifts...</i> |
| Send mail on approval or rejection | ENABLED - when the permit or announce request will be approved or rejected, user will be informed by email. USE: Module: <i>ePermit, LeaveAnnounces, Shifts...</i> |
| Send mail when statistic limit exceeded | ENABLED - if some statistic is limited (<i>Statistic limits</i>) ^[139] , the system will send an email, when the limit will be exceeded. |

7.9. Holidays

To work with holidays select Settings/Holidays in the Main Menu. This will open the Holidays Editor where you can add, edit or delete events.

Holidays

Icons for working with holidays

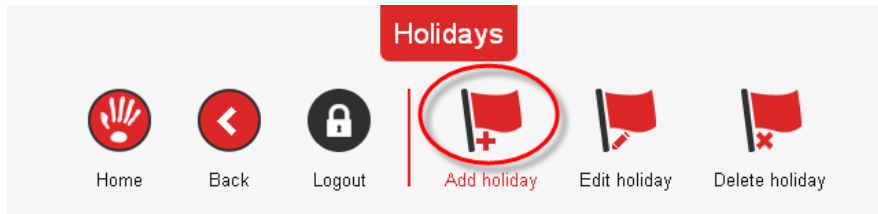
Home Back Logout Add holiday Edit holiday Delete holiday

| Holiday | Date | Recurring |
|----------|-----------|-----------|
| New Year | 01.1.2013 | Yes |
| Easter | 2013 | No |

List of holidays

7.9.1. Add Holiday

To add a new holiday, click the *Add holiday* icon.



A new window is opened where you can enter holiday's name, date and enable checkbox if this is a recurring holiday. Click the *Save* button to save the holiday.

General information

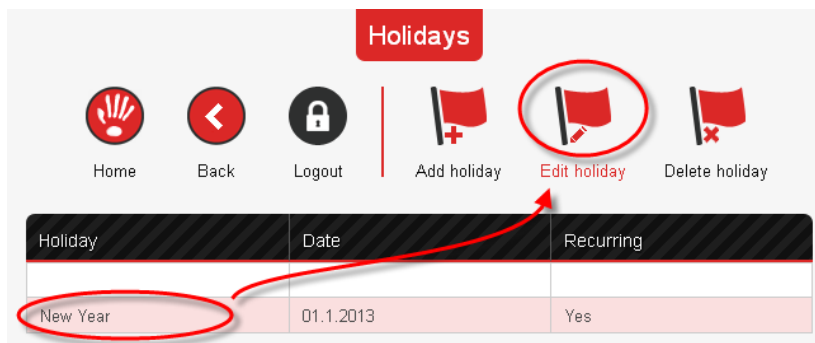
Holiday

Date

Recurring

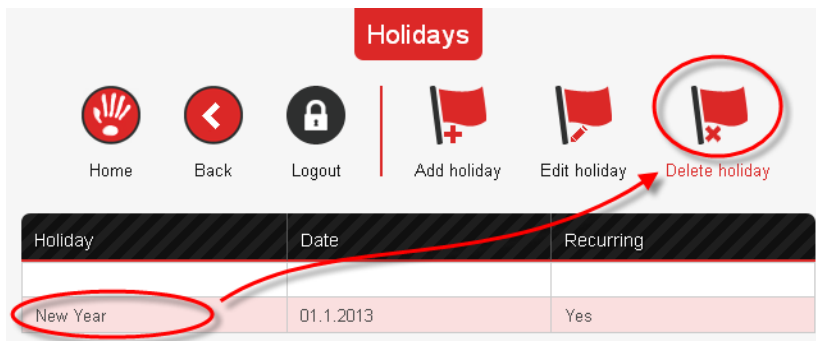
7.9.2. Edit Holiday

You can change existing holiday's data in Holidays Editor. On the list of holidays select the holiday you wish to edit. Click the *Edit holiday* icon, edit holiday's data and save changes. You can also edit the holiday with double click on it or through the menu which appears with the right-click on the holiday.



7.9.3. Delete Holiday

On the list of holidays select the holiday you wish to delete and click the *Delete holiday* icon. New window pops up in which you need to confirm deletion of the holiday. This will delete the holiday from the list of holidays.



7.10. Company Organization

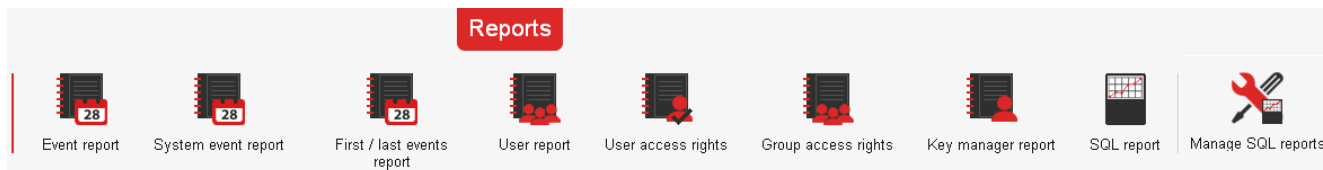
To work with Company organization click on the *Company organization* icon. Work with company units is described in details in chapter [Company organization](#)^[287].

Part

8

8. Reports

Reports enable you to overview event reports, user report and user access rights in PDF format. It also enables you to manage and use SQL reports.



IMPORTANT!

For all four parameters Locations, Hardware, Users and Event type applies if individual parameter filters are not included, the application will take into account all events in the system, regardless of whether the Select All field is enabled or not.

Example - Searching for events of the user who has been deleted from the Codeks

If you don't select any user in the User column or if you select all (Last name) the application will take into account all events for all users that have ever been in the Codeks system, even deleted ones. If you will select certain users or use filter, the application will take into account only selected users. The same applies for the Locations, Hardware and Event type.


8.1. Event Report

Event report displays all events according to filters you set in the Reports Editor. If no location is selected, the application will act as if all are selected. If you want to see the data for a specific location, select it with the help of checkbox. Events table and PDF report have two additional columns which are not used in Codeks AC application. They are intended for use in Codeks TA application where these two columns display Button and Time&Attendance.

| User | Card | Location | Date and time | Event | | |
|------------------|----------|--------------------------------|--------------------|-------|---|--|
| Paul Stripe | 13148279 | ... t floor / Entry Production | 22.8.2014 09:46:42 | Pass | 0 | |
| Samantha Willson | 4384468 | Jantar / 1st floor / Sales | 22.8.2014 09:46:37 | Pass | 0 | |
| Anthony Johnson | 536770 | Jantar / 1st floor / Sales | 22.8.2014 09:46:25 | Pass | 0 | |
| Samantha Willson | 4384468 | ... t floor / Entry Production | 22.8.2014 09:46:13 | Pass | 0 | |
| Paul Stripe | 13148279 | Jantar / 1st floor / Sales | 22.8.2014 09:46:09 | Pass | 0 | |

Showing 1 to 5 of 5 entries

Open report button will open Event report in PDF format.



Event report

| User | Card | Passage | Date and time | Event | Button | Time&Attendance |
|-----------------|----------|---------------------------------------|-------------------|-------|--------|-----------------|
| Stripe Paul | 13148279 | Jantar / 1st floor / Entry Production | 22.8.2014 9:46:42 | Pass | 0 | |
| Wilson Samantha | 4384468 | Jantar / 1st floor / Sales | 22.8.2014 9:46:37 | Pass | 0 | |
| Stripe Paul | 13148279 | Jantar / 1st floor / Support | 22.8.2014 9:46:32 | Pass | 0 | |
| Johnson Anthony | 536770 | Jantar / 1st floor / Support | 22.8.2014 9:46:18 | Pass | 0 | |
| Wilson Samantha | 4384468 | Jantar / 1st floor / Entry Production | 22.8.2014 9:46:13 | Pass | 0 | |
| Stripe Paul | 13148279 | Jantar / 1st floor / Sales | 22.8.2014 9:46:09 | Pass | 0 | |

ADDITIONAL for Codeks TA


In Codeks TA application the events table and PDF report have two additional columns which display Button and Time&Attendance.

[Open report](#)

| User | Card | Location | Date and time | Event | Button | Time&Attendance |
|------------------|----------|--------------------------------|--------------------|-------|--------|-------------------------------|
| Samantha Willson | 4384468 | ... dnig / [255] Company entry | 22.8.2014 10:27:54 | Pass | 1 | Illegal entry Balance 00:00 |
| Anthony Johnson | 536770 | ... dnig / [255] Company entry | 22.8.2014 10:27:42 | Pass | 2 | Private Balance 00:13 |
| Paul Stripe | 13148279 | ... dnig / [255] Company entry | 22.8.2014 10:27:18 | Pass | 0 | Flexible Balance 00:37 |
| Paul Stripe | 13148279 | ... t floor / Entry Production | 22.8.2014 09:46:42 | Pass | 0 | / |
| Samantha Willson | 4384468 | Jantar / 1st floor / Sales | 22.8.2014 09:46:37 | Pass | 0 | / |
| Paul Stripe | 13148279 | Jantar / 1st floor / Support | 22.8.2014 09:46:32 | Pass | 0 | / |

Showing 1 to 6 of 6 entries ◀▶ 1 ▶▶

Report in PDF format.



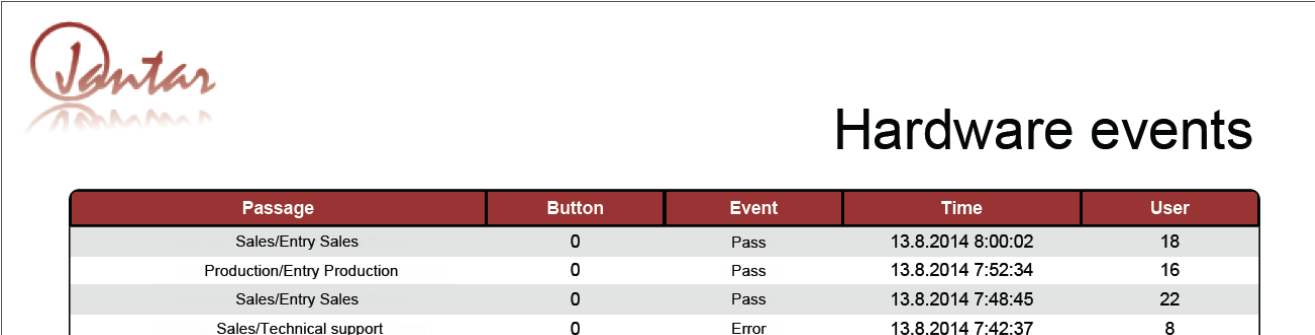
Event report

| User | Card | Passage | Date and time | Event | Button | Time&Attendance |
|-----------------|----------|---------------------------------------|--------------------|-------|--------|-------------------------------|
| Wilson Samantha | 4384468 | New Buildnig / [255] Company entry | 22.8.2014 10:27:54 | Pass | 1 | Illegal entry Balance 00:00 |
| Johnson Anthony | 536770 | New Buildnig / [255] Company entry | 22.8.2014 10:27:42 | Pass | 2 | Private Balance 00:13 |
| Stripe Paul | 13148279 | New Buildnig / [255] Company entry | 22.8.2014 10:27:18 | Pass | 0 | Flexible Balance 00:37 |
| Stripe Paul | 13148279 | Jantar / 1st floor / Entry Production | 22.8.2014 9:46:42 | Pass | 0 | |
| Wilson Samantha | 4384468 | Jantar / 1st floor / Sales | 22.8.2014 9:46:37 | Pass | 0 | |
| Stripe Paul | 13148279 | Jantar / 1st floor / Support | 22.8.2014 9:46:32 | Pass | 0 | |



8.2. System Event Report

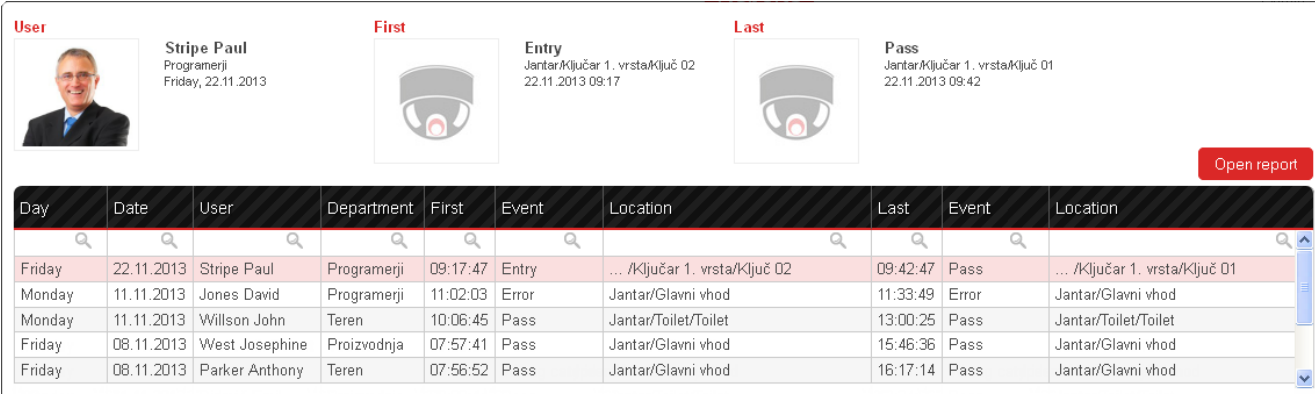
System event report displays all events on controllers according to filters you set in the Reports Editor. If no location is selected, the application will act as if all are selected. If you want to see the data for a specific location, select it with the help of checkbox.



| Passage | Button | Event | Time | User |
|-----------------------------|--------|-------|-------------------|------|
| Sales/Entry Sales | 0 | Pass | 13.8.2014 8:00:02 | 18 |
| Production/Entry Production | 0 | Pass | 13.8.2014 7:52:34 | 16 |
| Sales/Entry Sales | 0 | Pass | 13.8.2014 7:48:45 | 22 |
| Sales/Technical support | 0 | Error | 13.8.2014 7:42:37 | 8 |

8.3. First / Last Events Report


First / Last Event report displays all first and last events according to filters you set in the Reports Editor. If no location is selected, the application will act as if all are selected. If you want to see the data for a specific location, select it with the help of checkbox. To open a report in PDF format, click *Open report* button.



| Day | Date | User | Department | First | Event | Location | Last | Event | Location |
|--------|------------|----------------|-------------|----------|-------|--------------------------------|----------|-------|--------------------------------|
| Friday | 22.11.2013 | Stripe Paul | Programerji | 09:17:47 | Entry | ... /Ključar 1. vrsta/Ključ 02 | 09:42:47 | Pass | ... /Ključar 1. vrsta/Ključ 01 |
| Monday | 11.11.2013 | Jones David | Programerji | 11:02:03 | Error | Jantar/Glavni vhod | 11:33:49 | Error | Jantar/Glavni vhod |
| Monday | 11.11.2013 | Willson John | Teren | 10:06:45 | Pass | Jantar/Toilet/Toilet | 13:00:25 | Pass | Jantar/Toilet/Toilet |
| Friday | 08.11.2013 | West Josephine | Proizvodnja | 07:57:41 | Pass | Jantar/Glavni vhod | 15:46:36 | Pass | Jantar/Glavni vhod |
| Friday | 08.11.2013 | Parker Anthony | Teren | 07:56:52 | Pass | Jantar/Glavni vhod | 16:17:14 | Pass | Jantar/Glavni vhod |

8.4. User Report

The user can be selected on the list of users. Additional users are selected, if you hold down SHIFT or CTRL key on the keyboard, while clicking on the other users. User report also has column Signature, which enables the administrator to use this report for certification of receipt of the cards by the employees.




User report

| Card | User | Department | Personal ID | Valid till | Signature |
|---------|-----------------|----------------|-------------|------------|-----------|
| 2569561 | Stripe Paul | Boss | 1 | | |
| 7995133 | Brown Josephine | Administration | 2 | | |
| 4241182 | Smith Clark | Management | 3 | | |
| 1644666 | Parker Jasmine | Sales | 4 | | |
| 536770 | Jones Anthony | Students | 5 | 20.9.2013 | |

ADDITIONAL for Codeks TA

User report contains additional columns: *External ID*, which is used as additional ID for exports and connection with other programs and applications, and *Timetable* in which user's timetable is displayed.




User report

| Card | External ID | User | Department | Personal ID | Timetable | Valid till | Signature |
|---------|-------------|-----------------|----------------|-------------|-----------|------------|-----------|
| 2569561 | 24566 | Stripe Paul | Management | 1 | Flexible | | |
| 1644666 | 543222 | Parker Jasmine | Sales | 2 | Flexible | | |
| 4241182 | 13331 | Smith Clark | Support | 3 | Flexible | | |
| 7995133 | 754443 | Brown Josephine | Administration | 4 | Flexible | | |
| 536770 | | Jones Anthony | Students | 5 | | 27.9.2013 | |

8.5. User Access Rights

User access rights report displays all access rights for selected users.




User access rights

| Card | User | Group | Location | Timetable | Actions |
|----------|-------------|-------------|------------------------------------------|-------------------|---------|
| 2569561 | Stripe Paul | Employees | Jantar / Development / Entry Development | Always | Open |
| 2569561 | Stripe Paul | Employees | Jantar / Production / Entry Production | Always | Open |
| 2569561 | Stripe Paul | Employees | Jantar / Sales / Entry Sales | Always | Open |
| 15990287 | Cloud Rosie | Maintenance | Jantar / Development / Entry Development | Maintenance hours | Open |
| 15990287 | Cloud Rosie | Maintenance | Jantar / Production / Entry Production | Maintenance hours | Open |

ADDITIONAL for Codeks TA

User access rights report for Codeks TA, instead of first column Card, contains column *External ID*, which is used as additional ID for exports and connection with other programs and applications.




User access rights

| External ID | User | Group | Location | Timetable | Actions |
|-------------|----------------|-----------|------------------------------------------|-----------|---------|
| 24566 | Stripe Paul | Employees | Jantar / Development / Entry Development | Flexible | Open |
| 24566 | Stripe Paul | Employees | Jantar / Production / Entry Production | Flexible | Open |
| 24566 | Stripe Paul | Employees | Jantar / Sales / Entry Sales | Flexible | Open |
| 543222 | Parker Jasmine | Employees | Jantar / Development / Entry Development | Flexible | Open |
| 543222 | Parker Jasmine | Employees | Jantar / Production / Entry Production | Flexible | Open |

8.6. Group Access Rights

The report will display the name of the group and location, timetable and action with which a certain group can access this location.



Group access rights

| Group | Location > Timetable > Action |
|------------------|------------------------------------------------|
| Boss | Jantar d.o.o. / Main entry > Flexible > Unlock |
| Cleaning service | Jantar d.o.o. / Main entry > Flexible > Open |
| Employees | Jantar d.o.o. / Main entry > Flexible > Toggle |

8.7. Key Manager Report

In development.

8.8. SQL Report

SQL report enables you to use previously managed SQL reports.

The dialog box contains the following fields and controls:

- Name:** A dropdown menu with 'List of all users' selected.
- Description:** A text area containing 'This report displays a list of all TA users in PDF file'.
- Parameters:** A text area containing 'isTAParam=1'.
- Column widths:** A text area containing '80,80,40'.
- Landscape:** A checkbox that is currently unchecked.
- Buttons:** 'Cancel' and 'Use' (highlighted in red).

Name: With drop-down menu select the SQL report.

Description: Description of the SQL report, which was set in Manage SQL reports.

Parameters: Set or change parameters of the selected SQL report.

Column widths: Set or change column widths of the selected SQL report.

Landscape: Enable or disable landscape.

When finished, click the *Use* button to use the SQL report.

8.9. Manage SQL Reports

Manage SQL reports enables you to create new SQL command.

The dialog box contains the following fields and controls:

- Name:** A search bar with 'List of all users' and a search icon.
- Description:** A text area containing 'This report displays a list of all TA users in PDF file'.
- SQL:** A text area containing 'select Lastname
Firstname
Card from users where isTimeAttendance=isTAParam'.
- Parameters:** A text area containing 'isTAParam=1'.
- Column widths:** A text area containing '80,80,40'.
- Landscape:** A checkbox that is currently unchecked.
- Output file format:** A dropdown menu with 'Portable document format (.pdf)' selected.
- Buttons:** 'Add', 'Edit', 'Delete', 'Close', and 'Save' (highlighted in red).

Name: Name of the SQL report.

Description: Description of the SQL report.

SQL: Write SQL command.

Parameters: Set the parameters of the SQL report.

Column widths: Set column widths of the SQL report (in milimeters).

Landscape: Enable or disable landscape.

To add new SQL report to the list, click the *Save* button. When finished, click the *Close* button to close the window.

Part

9

9. Hardware

With hardware setup you define the actual hardware configuration in the Codeks application. To work with hardware, click on the Hardware icon in the Main window.

On the left side of Hardware Editor there is a list of locations. With right-click you can easily [add](#)^[172], [edit](#)^[176] or [delete](#)^[176] locations. List of hardware shows all hardware devices in your system. With right-click you can add, edit or delete hardware. In the right-upper part of the editor are icons for location and hardware wizards and icon for communication status. On the right side of the Hardware Editor there are Device settings. To edit a certain hardware device settings, select the device on the List of hardware, set its settings and click the Save button.

IMPORTANT!

After you set all the hardware, settings and check the communication, you need to [send tables](#)^[32]. If you fail to do that, the Codeks application **will not communicate properly** with the hardware.

Colors in Hardware Editor

Blue - indicates the selected location or hardware.

Green - green indicates locations, which belongs to the selected hardware device or hardware, which belongs to the selected location.

The screenshot displays the Hardware Editor interface. At the top, there is a navigation bar with icons for Home, Back, Logout, Add location, Add hardware, and Communication status. Below this, the interface is divided into three main sections: Locations, Hardware, and Device settings.

Locations: A search bar is present above a list of locations. The 'Production' location is highlighted in green. A callout box labeled 'List of locations' points to this list.

Hardware: A search bar is present above a list of hardware devices. The 'Spider USB' device is highlighted in blue. It has two sub-items: '[5] Populus 4' (with sub-items '[1] Reader1' and '[2] Reader2') and '[101] Populus 2' (with sub-items '[1] Reader1' and '[2] Reader2'). A callout box labeled 'List of hardware' points to this list.

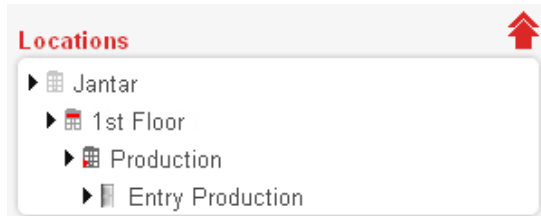
Device settings: A 'Save' button is located at the top right of this section. Below it, there are two tabs: 'Basic settings' (selected) and 'Options'. The 'Basic settings' tab shows a form with the following fields:

| | |
|-------------------|----------------|
| Type | USB |
| Name | Spider USB |
| USB Serial number | JAK20130506001 |
| Location | Production |

 A callout box labeled 'Device settings' points to the 'Basic settings' tab.

9.1. Locations

The tree structure of Locations consists of buildings, floors, rooms and passages which can be [add](#)^[172] in a certain order.



Types of locations and sub-locations:

- ▶ - Building: you can add floor, room or passage to the building.
- ▶ - Floor: you can add room or passage to the floor.
- ▶ - Room: you can add passage to the room.
- ▶ - Passage: you cannot add any sub-location to passage.

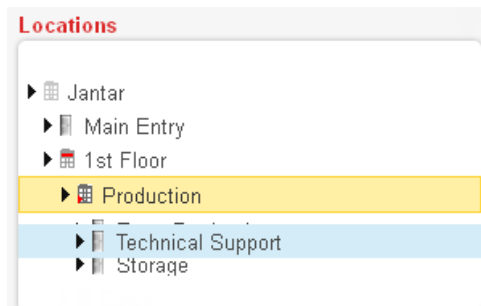
You can start your tree structure of locations with building or any other sub-location. You can add new location with [location wizard](#)^[171] or with the [right-click](#)^[172] on location. Location wizard allows you to add more locations or sub-locations at once. When you are adding sub-locations with the right-click, you can add only one type of sub-location at once.

WARNING! When you are adding locations take into consideration that you can [assign access](#)^[304] to groups only with passages.

ADDITIONAL for Codeks TA

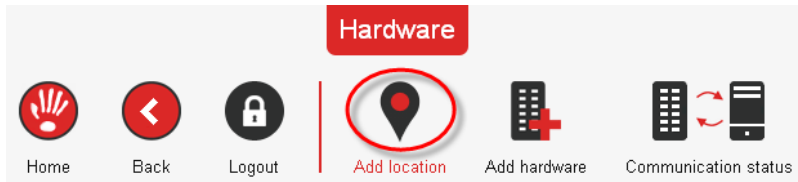
Keep in mind that for proper functioning of time registration, the passage must have the field **Enable time registration** enabled and that the proper reader must be connected to this passage.

You can use **drag&drop** to move locations. Select the location, drag it up or down the list and drop it into desired place. Blue color marks the selected location and yellow color marks the location of the drop.

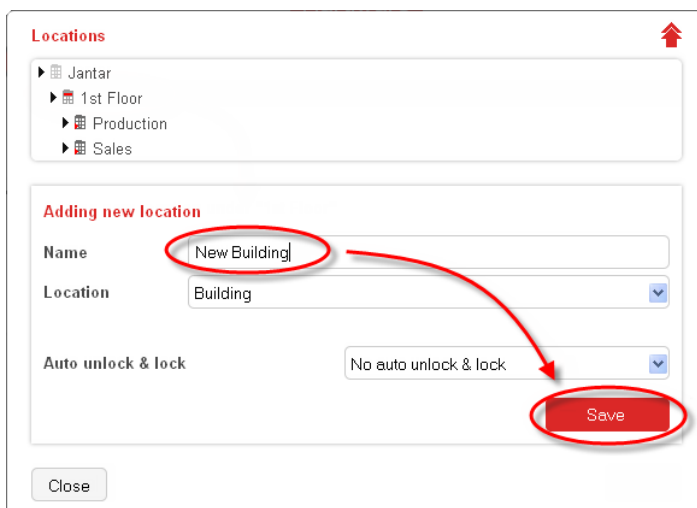


9.1.1. Location Wizard

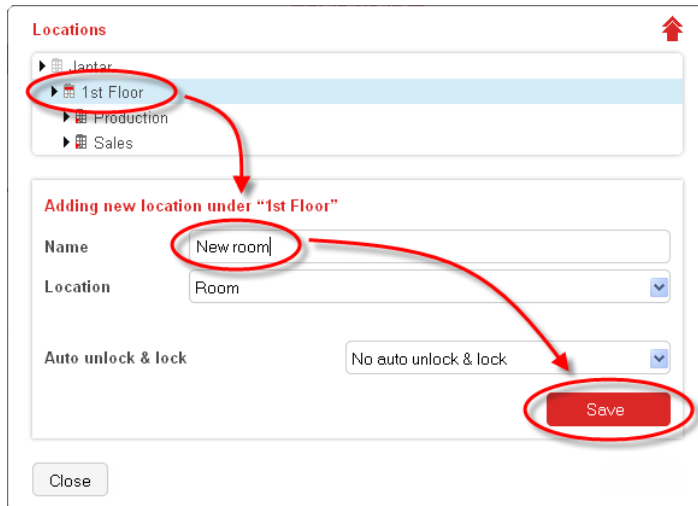
To add location with location wizard click on the *Add location* icon.



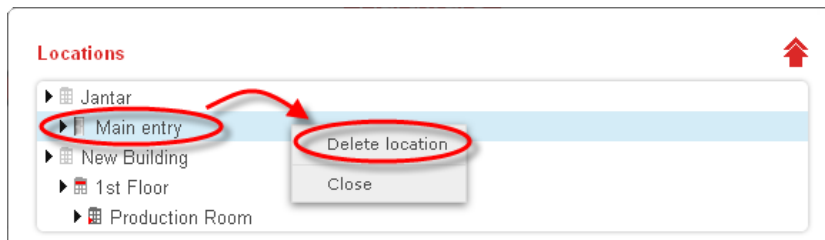
Location wizard will always offer you to start with adding Building. If you already have locations in your system, they will be shown on the list. Enter the name of location and click the *Save* button.

A screenshot of the 'Locations' management interface. At the top, a tree view shows 'Jantar' with sub-locations '1st Floor', 'Production', and 'Sales'. Below this is a form titled 'Adding new location'. The 'Name' field contains 'New Building' and is circled in red. The 'Location' dropdown menu is set to 'Building'. The 'Auto unlock & lock' dropdown menu is set to 'No auto unlock & lock'. A red arrow points from the 'Name' field to the 'Save' button, which is also circled in red. A 'Close' button is located at the bottom left of the form.

You can select any location and add a new sub-location to it. Blue color indicates selected location. Click the *Save* button to add sub-location to the selected location and click *Close* button when you are finished.



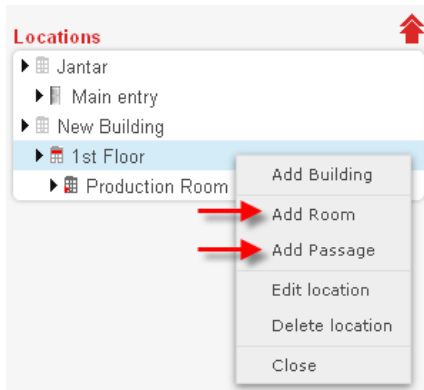
If you make a mistake, you can immediately delete the location. Right-click on the location you wish to delete and select *Delete location* on the menu. You cannot delete location with sub-locations. In this event you must first delete the sub-locations. After the removal, the location list is refreshed.



9.1.2. Add Locations and Sub-locations

Right-click on the location will open the action menu, where you can select the type of sub-location you wish to add. You can always add Building but other types of sub-location are offered depending on the type of the selected location.

You can add type Building with right-click on any location. You can add any sub-location to the Building. Type Floor can be added only with Room or Passage and type Room can be added only with Passage. Passage cannot have any sub-locations.



Select the type of location you wish to add sub-location to, enter the name of sub-location and click the Save button.

9.1.2.1. Codeks TA - Enable Time Registration

If the passage is used for time and attendance registration, you must enable the *Enable time attendance* field. The reader which is connected to this passage will be the reader, where employees will register.

9.1.2.2. Locations for Codeks Reservations add-on

With the Codeks Reservations add-on an additional setting is added for **Passage** locations - **Location for Codeks Reservations**.

When the setting is enabled **general settings for the Codeks Reservations locations** are displayed:

| Settings | Description |
|---------------------------|------------------------------------------------------------------------------|
| Smallest reservation unit | Sets the length of the basic unit a day is segmented into. |
| Minimum number of units | Sets the minimum number of basic units that must be reserved simultaneously. |

| Settings | Description |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Place must be reserved at least ____ minutes/hours/days in advance | Defines how much time in advance a space must be reserved. |
| Place can be reserved up to ____ minutes/hours/days in advance | Sets the maximum time a space can be reserved in advance. |
| Action | Sets the action to be carried out when a user registers at the controller of the reserved space. |
| | <p>VALUES:</p> <p>Open - The doors will open (unlock) only for a few seconds.</p> <p>Unlock - The doors will unlock and enable free passage.</p> <p>Toggle - This action toggles the current status of the door:</p> <ul style="list-style-type: none"> • if the doors were unlocked, this action locks them, • if the doors were locked, this action unlocks them. |

9.1.2.3. Auto unlock & lock

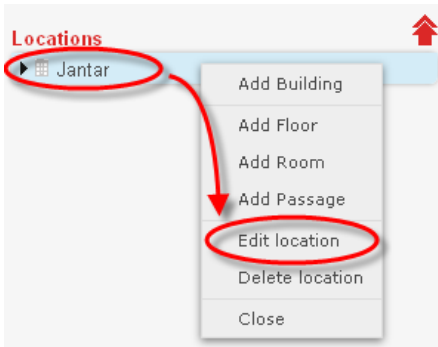
Auto unlock & lock can only be set for passages. It enables you to set automatic door unlock and lock during the selected time period. This comes in use if you, for example, want some doors automatically unlocked during normal opening hours.

You can set Auto unlock & lock when you are adding or editing passage. To set Auto unlock & lock timetable for a certain passage you must either choose one from the drop-down menu or [create a new timetable](#)²¹⁹. Select the timetable from the drop-down menu and click the *Save* button. The selected passage will automatically unlock and lock according to selected timetable.

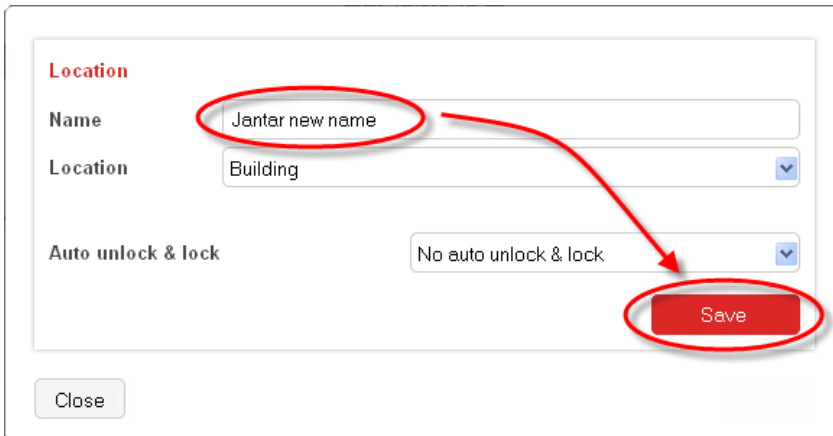
The screenshot shows a web form titled "Location". It has three main input fields: "Name" with the value "Entry Sales", "Location" with a dropdown menu showing "Passage", and "Auto unlock & lock" with a dropdown menu showing "Workweek Open". A red circle highlights the "Workweek Open" option in the dropdown, and another red circle highlights the "Save" button. A red arrow points from the "Workweek Open" circle to the "Save" button. A "Close" button is located at the bottom left of the form.

9.1.3. Edit Location

On the list of locations right-click on the location you wish to edit and select *Edit location* on the menu.

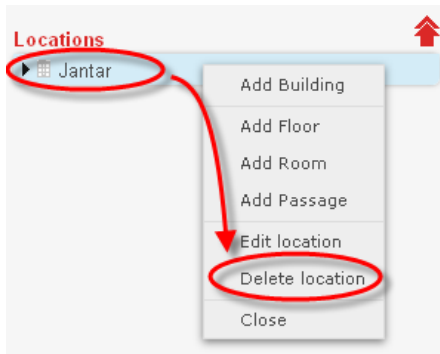


Edit location's data and save the changes by clicking the *Save* button.



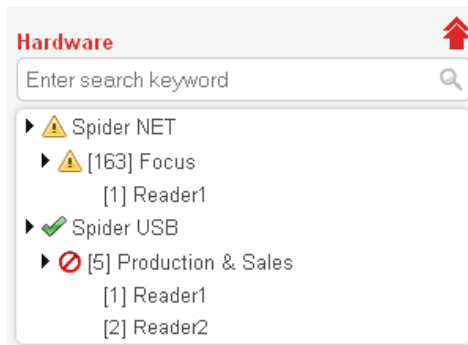
9.1.4. Delete Location

On the list of locations right-click on the location you wish to delete and select *Delete location* on the menu. New window pops up in which you need to confirm deletion of the location. You cannot delete location with sub-locations. In this event you must first delete the sub-locations. After the removal, the location list is refreshed.



9.2. Hardware Devices

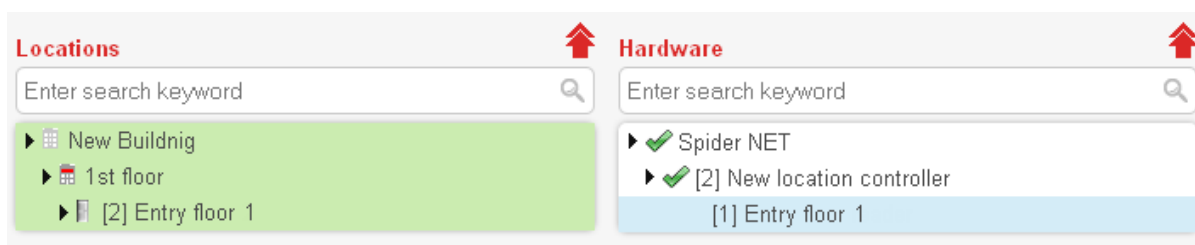
With hardware setup you define the actual hardware configuration in the Codeks application. To set the hardware properly, you must first add communication device. After you set all the hardware, settings and check the communication, you need to [send tables](#)^[32]. If you fail to do that, the Codeks application **will not communicate properly** with the hardware.



- ✓ - Communication is established and is working properly
- ⚠ - Communication is currently not established
- ⊘ - Controller is not in use

9.2.1. Hardware Wizard in 3 Steps

With hardware wizard you can set hardware and location tree in 3 steps.



9.2.1.1. STEP 1: Add Communication Line

First step of hardware wizard is adding communication line. If you want the application to find communication lines for you, click *Discover all communication lines* button.

Select communication line

Choose

If communication devices are properly connected and your [firewall settings](#)³⁵ correctly set, then the application will display all communication devices in a new pop-up window. To add the communication device, select it on the list.

Hardware discovery - Communications Lines

| Transport | IP Address | Port | USB Serial number | Port |
|------------|----------------|------|-------------------|------|
| Socket | 192.168.110.21 | 100 | | |
| SerialPort | | | | COM3 |

Is communication line you are searching for not on the list?

If you want to add new communication line to the system manually, click the *Add communication line* button. In this event you must know the device's IP address (type NET), Port (type Serial) or USB serial number (type USB).

Select communication line

Choose

In the *Communication line information* window you can set device's name, select its type, port and connect it to the location. If you want to connect it to existing location then select it in drop-down menu. Otherwise click the *Add* button to add new location where communication device is installed.

Communication line information

Name

Type

IP address

Port

Connect to location

If you already have communication line in the system and you want to add additional controllers to it, then select it in drop-down menu and click *Next*.

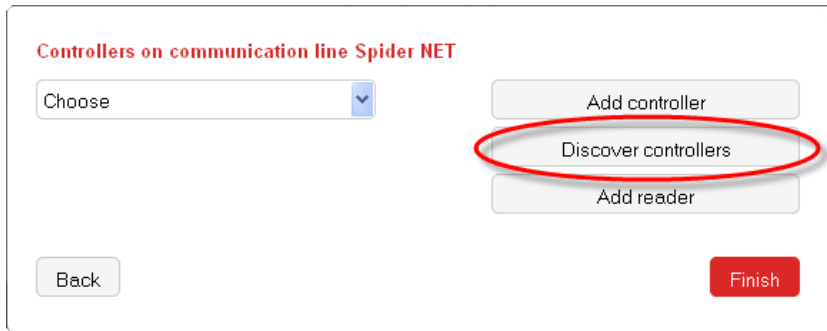
Select communication line

After saving the communication device the application will return to the first window of the wizard. To add controllers to the selected communication line click *Next*.

Select communication line

9.2.1.2. STEP 2: Add Controllers

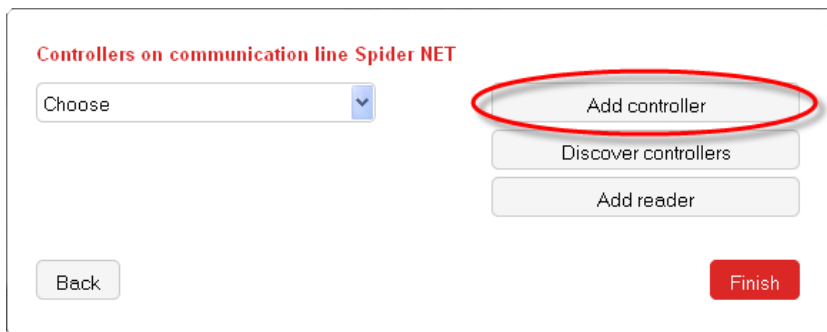
Second step of hardware wizard is adding controllers to the selected communication line. If you want the application to find controllers for you, click *Discover controllers* button. If the communication device and controllers are properly connected then the application will display all controllers on this communication line in a new pop-up window. After you select the controller a new window opens where you can set device's data and data of readers connected to it.



Controllers on communication line Spider NET

Choose

If you want to add controller manually, click the *Add controller* button. In this event you must know the controller's address.



Controllers on communication line Spider NET

Choose

When adding the controller you can determine its location and at the same time add the readers and create the passages that will be connected to these readers. If the field Add all readers is selected, the checkbox for creating passages will appear (Create passages and connect readers). If the checkbox is selected, the table will display as many passages as the controller has readers (e.g. 1 for Rex, 4 for Populus 4). New passages are created under the location to which the controller is connected. If the controller is not connected to any location, the passages are created on the first level in the location tree.

Passages can be freely renamed by clicking on the passage name in the table. In the table you can select which readers will be added (column Add), freely rename the passages (column Passage), mark those that are intended for Time and attendance (column T & A in Codeks TA), enable invert card number reading (column Invert), select the door number to which the reader is connected (column Door ctrl.) and choose with which input the reader is enabled (column Enabled by). When you are finished, click the *Save* button to add new controller.

Controller information

Name:

Type:

Use controller:

Controller address:

Connect to location:

Add all readers Create passages and connect readers

| Add | Passage | T & A | Invert | Door ctrl. | Enable by |
|-------------------------------------|----------------------|--------------------------|--------------------------|------------|-----------|
| <input checked="" type="checkbox"/> | [2] Entry Production | <input type="checkbox"/> | <input type="checkbox"/> | Door 1 | Reset |
| <input checked="" type="checkbox"/> | [2] Entry Sales | <input type="checkbox"/> | <input type="checkbox"/> | Door 2 | Reset |
| <input checked="" type="checkbox"/> | [2] Passage 3 | <input type="checkbox"/> | <input type="checkbox"/> | Door 3 | Reset |
| <input type="checkbox"/> | [2] Passage 4 | <input type="checkbox"/> | <input type="checkbox"/> | Door 4 | Reset |

The application will return to the pop-up window where you can select and add another controller. When you are finished, close the pop-up window by clicking on the cross in the top-right corner of the pop-up window. The application will return to the second window of the wizard where you can add the readers to the controller, if you haven't done this in step 2.

9.2.1.3. STEP 3: Add Readers

Adding readers comes in use if you haven't done this in step 2.

Third step of hardware wizard is adding readers to the selected controller. Select the controller in drop-down menu and click the *Add reader* button.

Controllers on communication line Spider NET

When adding the reader you can set its name, type, direction and number and connect it to the existing passage which you select in the drop-down menu. If you haven't create the passage for this reader yet, you can create it by enabling the field *Create passage and connect it to reader*. Passage can be freely renamed

by clicking on the passage name in the table. In the table you can freely rename the passage (column Passage), enable Time and attendance (column T & A in Codeks TA) if the reader is intended for registration of working hours, enable invert card number reading (column Invert), select the door number to which the reader is connected (column Door ctrl.) and choose with which input the reader is enabled (column Enabled by). When you are finished, click the *Save* button to add new reader.

NOTE: The passage's name will change according to the reader's name. If you change the passage's name, the reader's name will change simultaneously. Passage's name consists of:
[controller's address] "name of the reader" "reader's number" --- [2] Entry floor 1

Reader information

Name

Type

Direction

Reader number

Connect to passage

Create passage and

connect to this reader










| Passage | T & A | Invert | Door ctrl. | Enable by |
|-------------------|--------------------------|--------------------------|------------|-----------|
| [2] Entry floor 1 | <input type="checkbox"/> | <input type="checkbox"/> | Door 1 | Reset |

New reader is immediately shown on the list under selected controller. Click *Finish* when you are done with adding hardware.

Controllers on communication line Spider NET

[1] Entry Floor 1

All added locations and hardware will appear in the Hardware Editor.

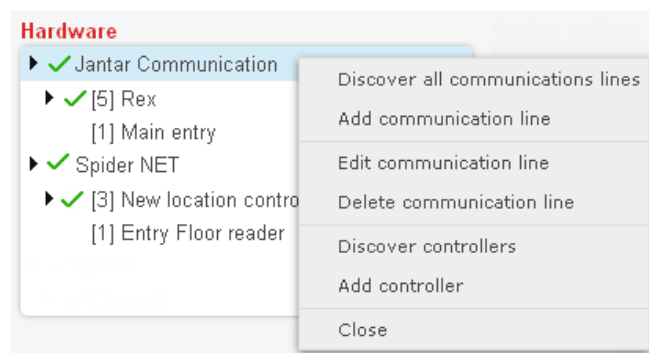
| Locations  | Hardware  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enter search keyword  | Enter search keyword  |
| <ul style="list-style-type: none">▶  New Buildnig▶  1st floor<ul style="list-style-type: none">▶  [2] Entry floor 1 | <ul style="list-style-type: none">▶  Spider NET<ul style="list-style-type: none">▶  [2] New location controller<ul style="list-style-type: none">[1] Entry floor 1 |



9.2.2. Communication Device

Communication devices are used for converting signals from serial protocol to RS485. This allows a greater distance between an access or time and attendance controllers, aligned into a communication line, and a computer or server with the software.

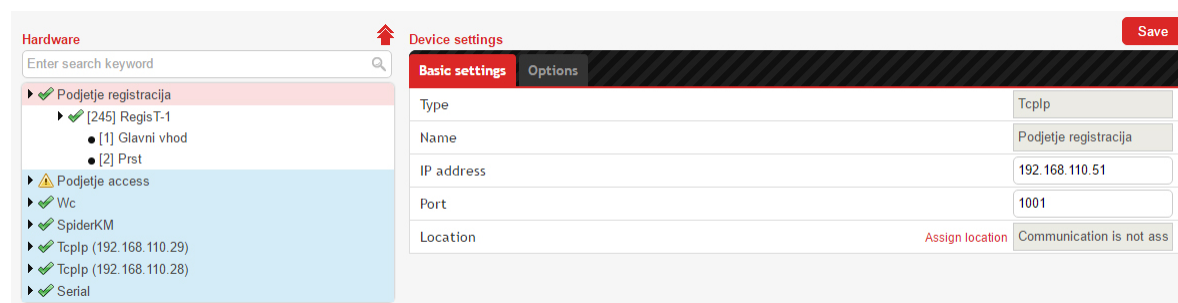
Right-click on a communication device will open action menu where you can select a certain action.



NOTE: If you have no communication lines in the system, right-click on the empty hardware window. Action menu will open, offering you to add or discover new communication line.

9.2.2.1. Communication Device Basic Settings

Select the communication device and under Basic settings set its parameters. The displayed parameters differ depending on the device type.



| | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------|
| Type | Device types (depending on the connection type - TcpIp , Serial or USB). |
| Name | The custom set name of the device. |
| IP address | device IP address (TcpIp type device only). |
| Port | The number of the primary port, through which the device connects with Codeks (TcpIp type device only). |
| USB Serial number | Identification number of the USB device (USB type device only). |
| COM port | COM port number (Serial device type only). |
| Location | Location within the company where the device is installed. |



9.2.2.1.1 Communication Device Options

The screenshot shows a web-based configuration interface. On the left, a tree view under 'Hardware' lists various device types: Podjetje registracija (with sub-items [245] Regis T-1, [1] Glavni vhod, [2] Prst), Podjetje access, Wc, SpiderKM, TcpIp (192.168.110.29), TcpIp (192.168.110.28), and Serial. The 'Serial' option is selected. The main area is titled 'Device settings' and has two tabs: 'Basic settings' and 'Options'. The 'Options' tab is active, showing a table of 'General settings'.

| Keyword | Value |
|------------------------------------------|-------------------------------------|
| Communication timeout (ms) | 2000 |
| Delay between receiving and sending (ms) | 2 |
| Event fetching delay (ms) | 250 |
| Protocol | V9 |
| Secure transfer | true |
| Encrypt communication | |
| TCP port2 (mobile) | 1002 |
| Offline address | 0 |
| Enable push events | <input checked="" type="checkbox"/> |
| Keep alive interval | 20000 |
| Key for data encryption | Default factory crypto k |

| | |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication timeout (ms) | Defined time period the system will wait before reporting a no connection status, if a controller does not respond, set in milliseconds. |
| Delay between receiving and sending (ms) | Elapsed time period between two sent messages, set in milliseconds. |
| Event fetching delay (ms) | Sets the periodic time sequence when Codeks sends an event query to the controllers, in milliseconds. |
| Protocol | Set communication protocol between the device and Codeks (V7 ali V9). The setting is dependant on the controllers in the network. (Older controllers only support the V7 communication protocol. Newer controllers with firmware version 9.2 or higher can also support V9 communication). |
| Secure protocol | {obsolete} |
| Encrypt communication | {obsolete} |
| TCP vrata2 (mobilno) | The number of the secondary port, through which the device connects with Codeks. |
| Offline address | {to be defined} |
| Enable push events | Enables Push communication ^[188] between controllers and Codeks. |
| Keep alive interval | Elapsed time period after which Codeks refreshes the connection with a controller. |
| Key for data encryption | Enabling the use of custom encryption keys for the encryption of communication between controllers and Codeks. This setting must be enabled to use a custom generated V9 encryption key ^[325] . |

The device type Serial also has the following additional settings in the Options tab: Baud rate, Parity and Stop bits.

The screenshot shows a web-based configuration interface. On the left, a 'Hardware' sidebar lists various devices, with 'Serial' selected. The main area is titled 'Device settings' and has a 'Save' button in the top right. It is divided into 'Basic settings' and 'Options' tabs, with 'Options' currently active. Under 'Options', there are two sections: 'General settings' and 'Serial interface'. The 'General settings' section contains a table with the following data:

| Keyword | Value |
|------------------------------------------|--------------------------|
| Communication timeout (ms) | 2000 |
| Delay between receiving and sending (ms) | 0 |
| Event fetching delay (ms) | 500 |
| Protocol | V9 |
| Secure transfer | true |
| Encrypt communication | <input type="checkbox"/> |
| TCP port2 (mobile) | 1002 |
| Offline address | 0 |
| Enable push events | <input type="checkbox"/> |
| Keep alive interval | 20000 |
| Key for data encryption | Default factory crypto k |

The 'Serial interface' section contains another table with the following data:

| Keyword | Value |
|-----------|-------|
| Baud rate | 19200 |
| Parity | None |
| Stop bits | 1 |

9.2.2.1.1.1 Push communication

By default Codeks communicates with all the active controllers in the network by sending regular periodic event queries. The controllers always send an answering message about the event status back to Codeks, even if no new events were registered since the last event query. This kind of communication, also known as **pull communication**, creates a lot of traffic on the communication lines, especially in systems with a large number of controllers.

The traffic on the communication lines can be considerably reduced by enabling the **push communication** option within Codeks. When push communication is enabled, Codeks no longer sends regular event queries to active controllers. Instead, the active controllers send a message to the server, only when they register an event. Thus the communication lines are considerably less occupied, as data transfer only runs when an actual event occurs.

To enable push communication you need a **Codeks software package, version 9.0.1.58 or higher** and **controllers that have their own inbuilt network interface and firmware version 9.7.8 or higher**.

Push communication can be enabled for every communication line individually.

1. To set push communication to a specific communication line, mark the **selected communication line** in the *List of hardware*.
2. In the Device settings section select the *Options* tab.
Find *Enable push communication* in the list below and **check it**.

The screenshot shows the 'Device settings' window with the 'Options' tab active. Under 'General settings', the following table is displayed:

| Keyword | Value |
|------------------------------------------|-------------------------------------|
| Communication timeout (ms) | 2000 |
| Delay between receiving and sending (ms) | 2 |
| Event fetching delay (ms) | 500 |
| Protocol | V9 |
| Secure transfer | true |
| Encrypt communication | |
| TCP port2 (mobile) | 1002 |
| Offline address | 0 |
| Enable push events | <input checked="" type="checkbox"/> |
| Keep alive interval | 20000 |
| Key for data encryption | Custom crypto key |

3. The last step is to set the setting *Keep alive interval* setting.

It is essential, that the connection between Codeks and the controllers is kept active, in order to ensure successful communication. Codeks keeps the connection to a selected controller alive by periodically sending "keepalive" packets to it. The recurring time period for sending the "keepalive" packets is defined by the *Keep alive interval* setting.

Keep in mind that the value of the *Keep alive interval* setting must be lower than the value of the *Timeout* setting. *Timeout* is a setting defined for each controller individually (for Jantar controllers the default setting is usually 1 min). If the controller does not exchange any messages with Codeks, before the time period set by *Timeout* has passed, it ends the connection.

WARNING!

The value of the *Keep alive interval* setting must not exceed the value of the *Timeout* setting, set for the controller (see the Codeks Device Manager documentation to learn how to set the *Timeout* setting). If the *Keep alive interval* value exceeds *Timeout*, the controller will end the connection. The broken connection will first have to be reestablished, before any further messages between the controller and Codeks can be exchanged. This cycle is repeated every time the *Timeout* time period is exceeded, which interrupts communication and is very time consuming.

WARNING!

With push communication enabled, data transfer between the controllers and Codeks is less frequent. Consequentially, a broken connection with a controller is only registered when the next "keepalive" packet is send to the controller (i.e. after the *Keep alive interval* time period has passed).

This time delay can be problematic in instances when real-time warnings of broken connections are important (e.g. break-in attempts).

9.2.2.2. Discover All Communication Lines

If you already have communication lines in your system, it will be shown on the list of hardware. Right-click on one of the communication devices and select *Discover all communication lines* on the menu. If the communication devices are properly connected and your [firewall settings](#) correctly set, then the application will display all communication devices in a new pop-up window. After you select your communication device a new window opens where you can set device's name, connect it to location and click the *Save* button to save it.

| Hardware discovery - Communications Lines | | | | |
|-------------------------------------------|----------------|------|-------------------|------|
| Transport | IP Address | Port | USB Serial number | Port |
| Socket | 192.168.110.21 | 100 | | |
| SerialPort | | | | COM3 |

Is communication line you are searching for not on the list?

9.2.2.3. Add Communication Line

NOTE: If you have no communication lines in the system, right-click on the empty hardware window. Action menu will open, offering you to add or discover new communication line.

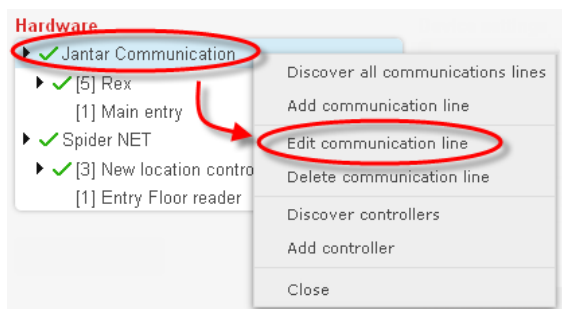
If you already have communication lines in your system, it will be shown on the list of hardware. Right-click on one of the communication devices and select *Add communication line* on the menu. When you are adding communication line manually you must know the device's IP address (type NET), Port (type Serial) or USB serial number (type USB).

Example for adding Spider NET:

| Communication line information | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------|
| Name | <input type="text" value="Spider NET"/> |
| Type | <input type="text" value="TcpIp"/> ▼ |
| IP address | <input type="text" value="192.168.110.21"/> |
| Port | <input type="text" value="1001"/> |
| Connect to location | <input type="text" value="New Building"/> ▼ |
| | <input type="button" value="Add"/> |
| | <input type="button" value="Cancel"/> <input type="button" value="Save"/> |

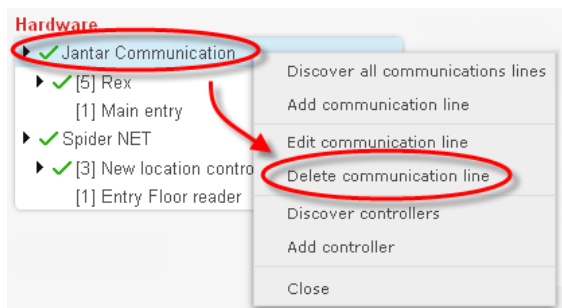
9.2.2.4. Edit Communication Line

On the list of hardware right-click on the communication line you wish to edit and select *Edit communication line* on the menu. Edit communication line's data and save the changes.



9.2.2.5. Delete Communication Line

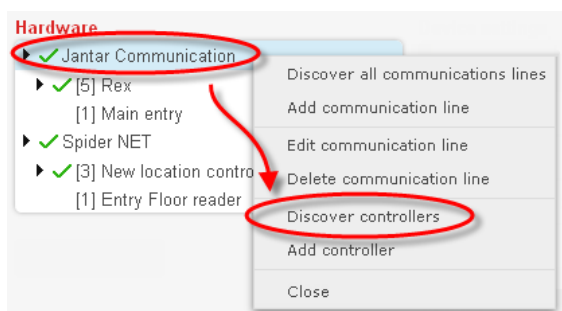
On the list of hardware right-click on the communication line you wish to delete and select *Delete communication line* on the menu. New window pops up in which you need to confirm deletion of the communication line. After the removal, the hardware list is refreshed.



NOTE: Take into consideration that when you delete communication line all controllers and readers under this line will also be deleted.

9.2.2.6. Discover Controllers

Discover controllers enables you to find all controllers which are properly connected to the selected communication device. To discover controllers, right-click on the communication device and select *Discover controllers* on the menu.



The application will display all properly connected controllers in a new pop-up window. After you select a controller a new window opens where you can set device's name, connect it to location and click the *Save*

button to save it. Application will return to pop-up window with all found controllers. You can add another controller to the communication line or close the window.

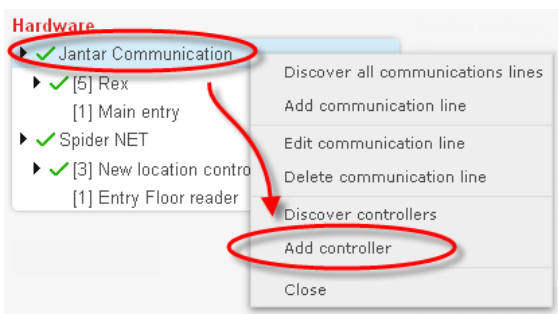
Controllers on communication line

Socket 192.168.110.21

| Controller address | Type | Model | Version |
|--------------------|-------|-------|---------|
| 3 | RexV9 | 2X39 | 9.0.39 |

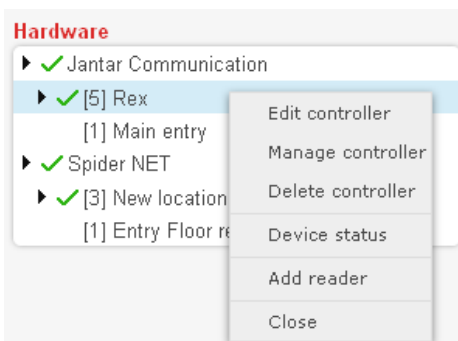
9.2.2.7. Add Controller

To add a new controller manually, right-click on the communication device on the list of hardware and select *Add controller* on the menu. When you are adding controller manually you must know the controller's address. Enter controller's data and click the *Save* button.



9.2.3. Controller

Right-click on a controller will open action menu where you can select a certain action.



9.2.3.1. Controller Basic Settings

Select the controller and under Basic settings set its parameters.

| Basic settings | | Options | Doors | Times | Anti pass back |
|--------------------|--------------------|---------|-------|-------|----------------|
| Type | Populus4 | | | | |
| Name | Production & Sales | | | | |
| Use Controller | Yes | | | | |
| Controller address | 5 | | | | |
| Location | Production | | | | |

Type: The type of the controller

Name: The name of the controller

Use controller: You can select Yes or No

Selecting Yes - The controller will send and receive data

Selecting No - The controller will not send or receive data

Controller address: This is a unique bus address the controller will respond to. The controllers on the bus (same communication line) have to have unique addresses or Codeks will not be able to communicate with controllers with the same address.

Keypad model: This options appears when the controller has keypad. Select the model of the keypad.

Location: Location where the controller is installed.

9.2.3.1.1 Controller Options

GENERAL SETTINGS

| Basic settings | | Options | Doors | Times | Anti pass back |
|----------------------------------|--------------------------|---------|-------|-------|----------------|
| General settings | | | | | |
| Keyword | Value | | | | |
| Silent pre break | <input type="checkbox"/> | | | | |
| Silent break | <input type="checkbox"/> | | | | |
| Sensor event | <input type="checkbox"/> | | | | |
| Tamper switch | <input type="checkbox"/> | | | | |
| Roll code check | <input type="checkbox"/> | | | | |
| Link cards | <input type="checkbox"/> | | | | |
| Disable overload protection | <input type="checkbox"/> | | | | |
| Card length | CardLen11 | | | | |
| Start Macro | | | | | |
| People count value | 0 | | | | |
| People count less or equal Macro | | | | | |
| People count greater Macro | | | | | |
| Communication timeout (ms) | 100 | | | | |
| Set time frequency in seconds | 600 | | | | |

Silent pre break: When enabled, the break-in or alarm procedure can be silent.

Silent break: When enabled, the break-in or alarm procedure can be silent.

Sensor event: When enabled, the event is recorded when push button (or active sensor) is pressed.

Tamper switch: When enabled, the tamper input on Populus2, Populus 4 and Regis terminal is enabled.

Roll code check: Not in use

Link cards: When enabled, only master card or two cards with the same link number can carry out a certain action on the passage. Link can be also used to link card & keypad.

Disable overload protection: When enabled, overload protection is disabled.

Card length: How much data about each card holder is stored in the controller - less data more users. You can select between 4 (only card numbers and time settings), 11 (card numbers, time settings, anti-passback, link users ...) and 24 (all functions).

Start Macro: Select macro which is executed after controller reset.

People count value: It is possible to count number of entry or exit impulses on each controller. Macro must be programmed in Settings/Macros. If People count value is less or the same as macro then first macro (People count less or equal Macro) will be started, otherwise (People count greater Macro) second macro will be started.

People count less or equal Macro: Starts if *People count value* is less or the same as macro.

People count greater Macro: Starts if *People count value* is greater than macro.

Communication timeout (ms): Defines the period of time before controller will send data to the application.

Set time frequency in seconds: Defines the period of time before controller collects data.

BLOCKING

| Blocking | |
|---------------|--------------------------|
| Keyword | Value |
| NC External 1 | <input type="checkbox"/> |
| NC External 2 | <input type="checkbox"/> |

When enabled, the inputs for Door 2 are used to block the readers. You cannot use the block and alarm function at the same time. Set the period of time for which the reader is unblocked for under tab [Times](#)¹⁹⁵.

NC External 1 or 2: Enables you to set the type of contact.

9.2.3.1.2 Controller Doors

INPUTS ENABLED

| Inputs enabled | |
|-----------------|-------------------------------------|
| Keyword | Value |
| Input 0 enabled | <input checked="" type="checkbox"/> |
| Input 1 enabled | <input checked="" type="checkbox"/> |
| ⋮ | |

Input enabled: When enabled, the input can be used.

NEGATE OUTPUT

| Negate output | |
|---------------------|--------------------------|
| Keyword | Value |
| Negate output Door1 | <input type="checkbox"/> |
| Negate output Door2 | <input type="checkbox"/> |
| ⋮ | |

Negate output: When enabled, the output state is negated (i.e. for magnets and locks which require power supply to remain locked, e.g. fireproof doors).

DOUBLE DOOR DIRECTION (with entry and exit reader/button)

| Double door direction (with entry and exit reader/button) | |
|-----------------------------------------------------------|--------------------------|
| Keyword | Value |
| Double Door 1 | <input type="checkbox"/> |
| Double Door 2 | <input type="checkbox"/> |
| ⋮ | |

Double door: When enabled, double door direction with entry and exit reader/button is used.

SENSOR AND SWITCH POLARITY

| Sensor and switch polarity | |
|----------------------------|--------------------------|
| Keyword | Value |
| NC Sensor Door1 | <input type="checkbox"/> |
| NC Switch Door1 | <input type="checkbox"/> |
| ⋮ | |

NC Switch: When enabled, NC – Normally Closed contact type for input door switch is used.

NC Sensor: When enabled, NC – Normally Closed contact type for input sensor is used.

9.2.3.1.3 Controller Times

Times can be only defined for controller. If you need some different time for a reader then use Macro instead of standard function.

DURATIONS, DELAYS

| Basic settings | | Options | Doors | Times | Anti pass back |
|-----------------------------|--------------------------------|---------|-------|-------|----------------|
| Durations, delays... | | | | | |
| Keyword | Value | | | | |
| Energy for (sec) | <input type="text" value="3"/> | | | | |
| Open in (sec) | <input type="text" value="3"/> | | | | |
| Open for (sec) | <input type="text" value="3"/> | | | | |
| Alarm in (sec) | <input type="text" value="3"/> | | | | |
| Unblock for (sec) | <input type="text" value="3"/> | | | | |
| Alarm delay line (sec) | <input type="text" value="3"/> | | | | |
| LCD Time (sec) | <input type="text" value="3"/> | | | | |
| Last card time (sec) | <input type="text" value="3"/> | | | | |
| Alarm pulse (sec) | <input type="text" value="3"/> | | | | |
| Input delay (sec) | <input type="text" value="3"/> | | | | |

Energy for: Defines period of time during which the door strike is not locked.

Open in: The Open in time can be longer than the Energy for if the impulse door strike is used.

Open for: Defines period of time during which the door can be left open.

Alarm in: If the door after the Open for period stay open, short beeps are signaled. If the door do not close in the Alarm in period, the alarm procedure is started, event is recorded and longer (more unpleasant) beeps are heard.

Unblock for: Defines the period of time for which the reader is enabled after the detected active input. If the latter stays active, the reader remains active as well.

Alarm delay line: Defines period of time after alarm sequence starts.

LCD Time: If controller has LCD then this time defines how long information on last registration will be present.

Last card time: Defines period of time after which the controller will accept the same card on the same reader again.

Alarm pulse: Defines the length of alarm sequence.

Input delay: Defines period of time of checking the input.

EXIT TIME

| Exit time | |
|------------------|--------------------------------|
| Keyword | Value |
| Enable Exit time | <input type="checkbox"/> |
| Exit time (min) | <input type="text" value="1"/> |

Enable Exit time: When enabled, Exit time is enabled.

Exit time: Defines the period of time in which the user must leave the place.

9.2.3.1.4 Controller Anti-passback

SETTINGS FOR ANTI-PASSBACK

| Settings for antipass back | |
|----------------------------|--------------------------|
| Keyword | Value |
| After reader | <input type="checkbox"/> |
| After door switch | <input type="checkbox"/> |
| Reset clears | <input type="checkbox"/> |
| Clear at 00:00 | <input type="checkbox"/> |
| Global antipass back | <input type="checkbox"/> |

After reader: Counts entry or exit when user register card on reader.

After door switch: Counts entry or exit when user opens door (you need door switch).

Reset clears: If controller is reset, anti-pass path is inactive until first card registration.

Clear at 00:00: Controller will reset path.

Global anti-passback: Anti-passback between more controllers. Also direction of reader must be set as "Entry" or "Exit"; if direction is set to "Pass" reader won't be part of anti-passback function.

IMPORTANT!

For global anti pass-back Codeks Service must be running. If not, all users will be able to pass.

9.2.3.1.5 Controller Advanced

CLOCK CALIBRATION

| Basic settings | | Net | Options | Doors | Times | Anti pass back | Advanced |
|----------------------------------|------------------------------------------|-----|---------|-------|-------|----------------|----------|
| Clock calibration | | | | | | | |
| Keyword | Value | | | | | | |
| Clock accuracy | Acurate <input type="button" value="v"/> | | | | | | |
| Time difference in 24h (seconds) | 0 <input type="text"/> | | | | | | |

Clock accuracy:

- Acurate - Controller's clock is accurate.
- Lags - Controller's clock lags.
- Overtake - Controller's clock overtakes.

Time difference in 24h (seconds): Set the time difference if the controller's clock lags or overtakes.

CONTROLLER LANGUAGE

| | |
|----------------------------|------------------------------------------|
| Controller language | |
| Keyword | Value |
| Controller language | English <input type="button" value="v"/> |

Controller language: Codeks AC - language in which the controller will display texts on its screen.

LCD BRIGHTNESS

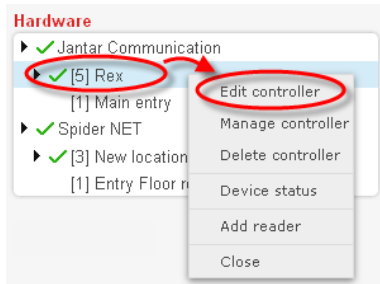
| | |
|-----------------------|------------------------------------|
| LCD Brightness | |
| Keyword | Value |
| Normal | 9 <input type="button" value="v"/> |
| Eco mode | 1 <input type="button" value="v"/> |

Normal: Set the brightness of the controller's display. 1 is the least bright and 9 is the most bright.

Eco mode: Set the brightness of the controller's display when it is in ECO mode. 1 is the least bright and 9 is the most bright.

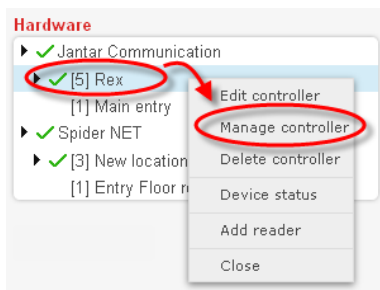
9.2.3.2. Edit Controller

On the list of hardware right-click on the controller you wish to edit and select *Edit controller* on the menu. Edit controller's data and save the changes.



9.2.3.3. Manage Controller

On the list of hardware right-click on the controller you wish to manage and select *Manage controller* on the menu.



New window opens where you can change controller's address, set present count and reset or brainwash controller.

2X39 - 9.0.39

Set controller address

Current address

New address

Set present count

Present

Set controller's address

Enables you to change controller's address. This is useful when you have two or more controllers with the same address or when you want to set controllers in a certain order. Enter new address in the *New address* window and click the *Set controller address* button.

Set present count

Present counter enables you to determine the number of users in the program. Enter counter number in the *Present* window and click the *Set present count* button.

Reset controller

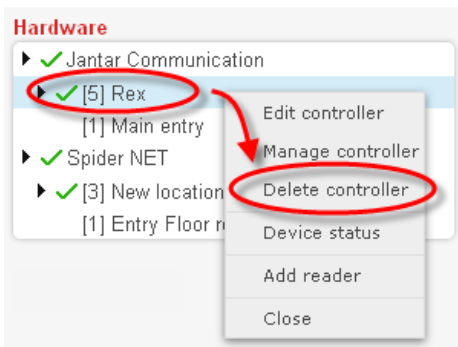
Clicking the *Reset controller* button will reset controller's inputs and outputs to basic settings.

Brainwash controller

Clicking the *Brainwash controller* button will delete all controller's memory (readers, users ...). Controller's address will be set to 255.

9.2.3.4. Delete Controller

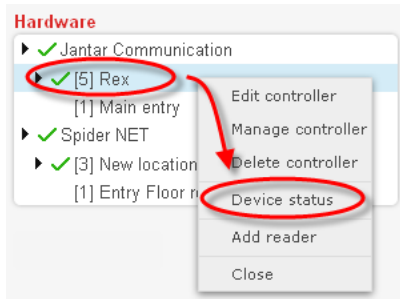
On the list of hardware right-click on the controller you wish to delete and select *Delete controller* on the menu. New window pops up in which you need to confirm deletion of the controller. After the removal, the hardware list is refreshed.



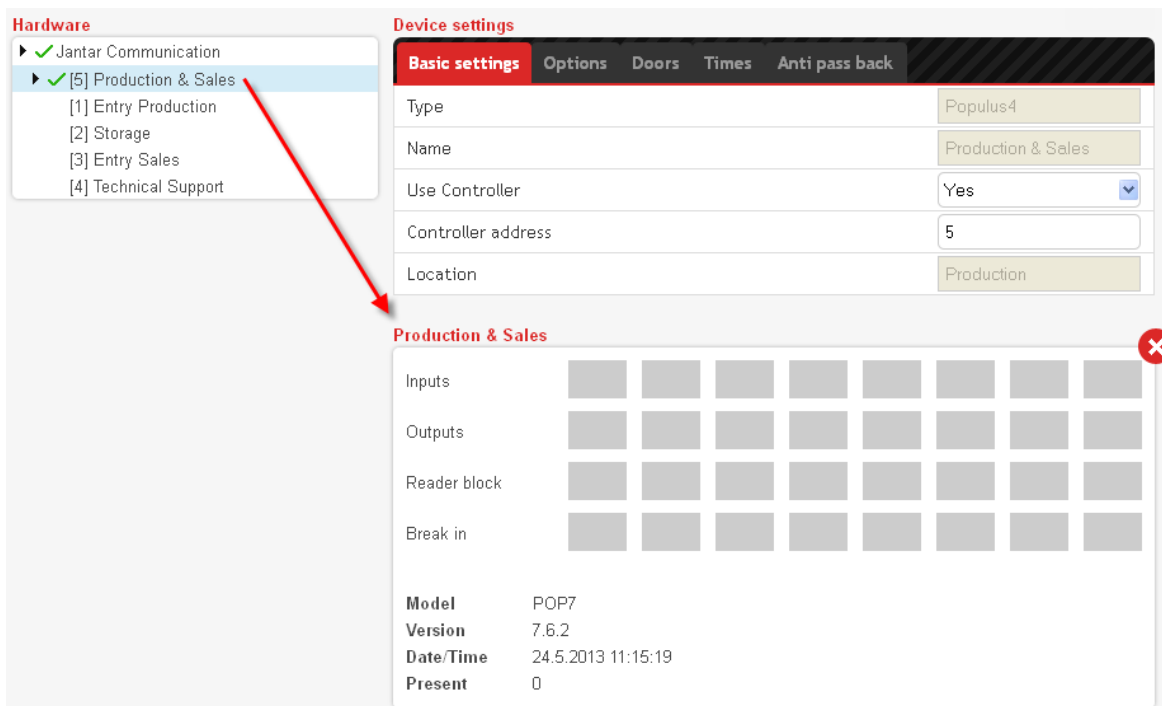
NOTE: Take into consideration that when you delete controller all readers under this controller will also be deleted.

9.2.3.5. Device Status

Device status displays basic information of the selected controller. On the list of hardware right-click on the controller and select *Device status* on the menu.



Under Device settings new window will open, where you can see controller's status.



Inputs: Green indicates currently active inputs

Outputs: Green indicates currently active outputs

Reader block: Green indicates currently blocked readers

Break in: Green indicates currently active door switch

Model: Name of the PCB (Printed Circuit Board)

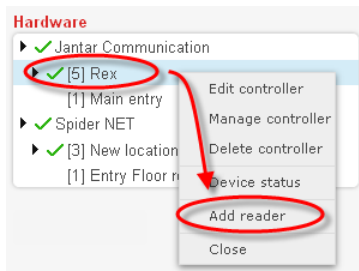
Version: Firmware version

Date/Time: Date and time of the controller's RTC (Real-Time Clock)

Present: Number of currently [present](#)^[122] users ([Entry and exit readers](#)^[202] must be set in the Hardware menu)

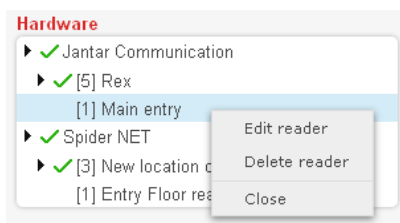
9.2.3.6. Add Reader

To add a new reader to the controller, right-click on the controller on the list of hardware and select *Add reader* on the menu. Enter reader's data and click the *Save* button.



9.2.4. Reader

Right-click on a reader will open action menu where you can select a certain action.



9.2.4.1. Reader Basic Settings

Select the reader and under Basic settings set its parameters.

| Basic settings | | Options |
|----------------|-----------------------------------------------------------------------|----------------------|
| Type | | R1D |
| Name | | Reader1 - Entry prod |
| Direction | | Pass ▼ |
| Reader number | | 1 ▼ |
| Location | Disconnect location Assign location | Entry Production |

Type: The type of the reader

Name: The name of the reader

Direction: There are three possible directions:

Pass: Only passing or if one reader is used for entry & exit

Entry: Entering the location

Exit: Exiting the location

Parameter 1 and 0 - If reader's type is set to wiegand custom.

Parameter 1: Shifting to the right

Parameter 0: Number of bits

Reader number: The reader number identifies the reader

Location: Location to which the reader is connected

Data migration from V7 to Codeks

The differences between the old and new controllers in reading and inverting the card number:

New V9 controllers with R1D reader will read the card number inversely compared to the old controllers.

Example:

| | Old controller | New V9 controller |
|--------------|----------------|-------------------|
| Not inverted | 3560267 | 7129810 |
| Inverted | 7129810 | 3560267 |

New V9 controllers with wiegand reader take into account "Inverted" setting, while the old controllers don't.

In V7 application, for invert reading of the wiegand reader it's "Parameter 0" had to be set to "99".

Codeks has two wiegand readers: wiegand_custom and wiegand. With "wiegand_custom" reader the user can set "Parameters 0 and 1" on his own. With "wiegand" reader the Codeks will set "Parameter 0" to "26" and "Parameter 1" to "0". If "wiegand" reader is connected to the old controller (which does not take into account "Inverted" setting for wiegand), then "Parameter 0" is set to "99" to ease the user's work.

9.2.4.1.1 Reader Options

GENERAL OPTIONS

| General options | |
|----------------------------------------------|--------------------------|
| Keyword | Value |
| Last card for controller | <input type="checkbox"/> |
| User + PIN | <input type="checkbox"/> |
| Dont end pulse on output (sensor switch off) | <input type="checkbox"/> |
| Enable key functions | <input type="checkbox"/> |
| Invert card number | <input type="checkbox"/> |

Last card for controller: When enabled, the *Last card time* set under controller's Times setting will apply for all readers controlled by the controller.

User + PIN: When enabled, the user must use card and PIN to carry out a certain action on passage.

Don't end pulse on output (sensor switch off): When enabled, the door will stay open for *Open for* period. Disabled - door will lock when user opens it otherwise will stay open for *Open for* period. For this

function to work properly you need to have proper electrical door lock.

Enable key functions: When enabled and you have `wiegand_custom` reader with keypad you can open, unlock, lock and toggle door output through keys.

Key functions:

- 1 – Open
- 2 – Unlock
- 3 – Lock
- 4 – Toggle
- A – Arm toggle (if alarm central is enabled)

Invert card number: When enabled, the reader will read invert card number.

DOOR CONTROL

| Door control | |
|--------------|--------------------------|
| Keyword | Value |
| Door1 | <input type="checkbox"/> |
| Door2 | <input type="checkbox"/> |
| Door3 | <input type="checkbox"/> |
| Door4 | <input type="checkbox"/> |

Door control: Defines which door output is activated for the reader (Door 1 is on hardware linked to O0, etc.).

BLOCKING AND ENABLING

| Blocking and enabling | |
|-----------------------|--------------------------|
| Keyword | Value |
| Blocked | <input type="checkbox"/> |
| Enabled by input 0 | <input type="checkbox"/> |
| Enabled by input 1 | <input type="checkbox"/> |
| Enabled by input 2 | <input type="checkbox"/> |
| : | |

Blocked: When enabled, the reader will be blocked and will not read cards. The reader can be enabled with action *Unblock* (in Monitor or Layouts) for the period of time *Unblock for (sec)*, set in the controller's Times settings (Hardware). Action *Enable* (in Monitor or Layouts) will enable the reader until the next reset or restarting of the controller.

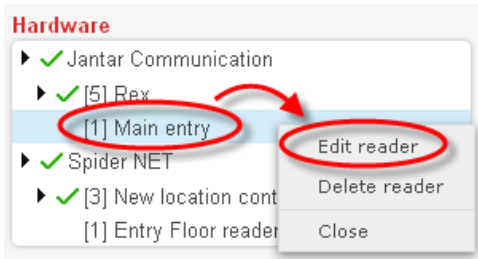
Enabled by input 1: Enabled by the input 1 (I2, door 2 switch) as an inductive loop or any other sensor.

Enabled by input 2: Enabled by the input 2 (I3, door 2 sensor) as an inductive loop or any other sensor.



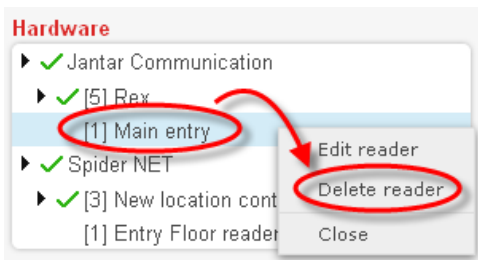
9.2.4.2. Edit Reader

On the list of hardware right-click on the reader you wish to edit and select *Edit reader* on the menu. Edit reader's data and save the changes.



9.2.4.3. Delete Reader

On the list of hardware right-click on the reader you wish to delete and select *Delete reader* on the menu. New window pops up in which you need to confirm deletion of the reader. After the removal, the hardware list is refreshed.



9.2.4.4. Protocol Readers

To set the Protocol readers properly you must be aware of three things:

1. Always use V9 communication!
2. Correctly enter the *Reader address* in the Codeks program!
3. Only addresses from 1-16 can be used for protocol readers!

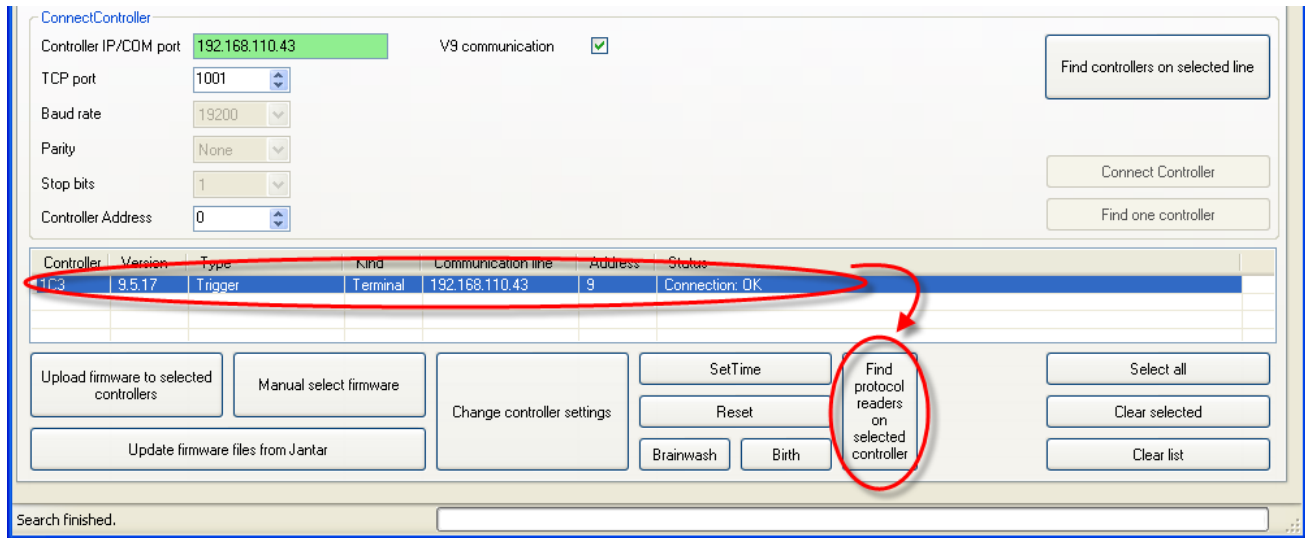
How to check or change the address of the protocol reader

If your reader has display, you can easily check the address of the reader. Just press button **F** and then **Enter**. If the reader doesn't have display or you wish to change the reader's address then use the Codeks Device Manager.

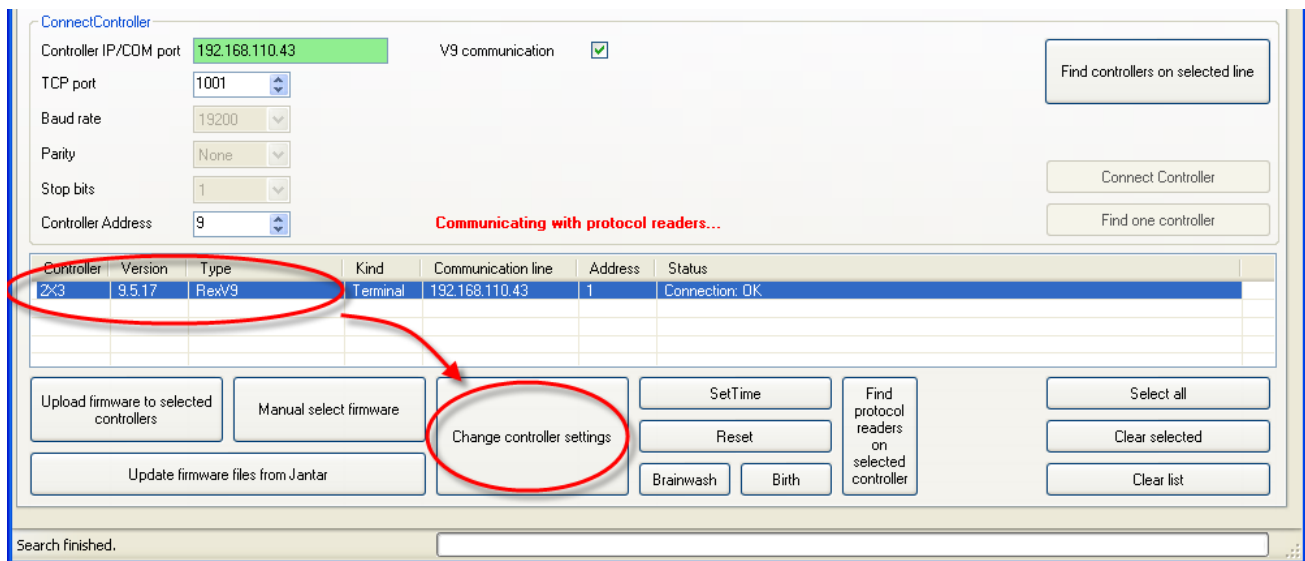
Open Codeks Device Manager, **enter** the controller's **IP** and **enable V9 communication**. Click *Find controllers on selected line* (make sure that controllers are not communicating with other software and that the Codeks Service is off).



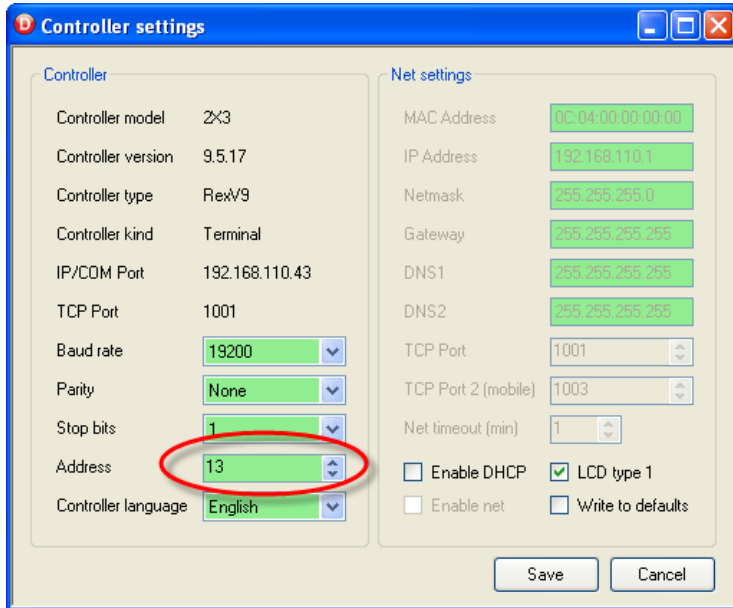
Codeks Device Manager will display controllers on selected line. Select the controller and click *Find protocol readers on selected controller*.



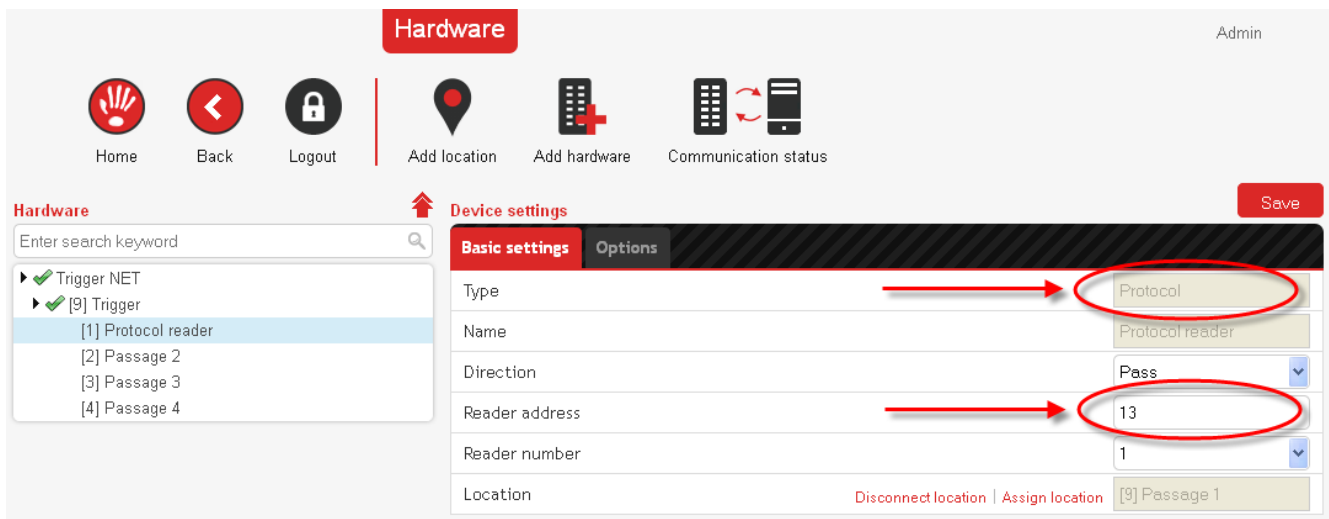
To check or change the address of the protocol reader select the reader and click *Change controller settings*.



Check or change the reader's address and save the changes.



Now open the Codeks application and go to Hardware Editor. Make sure that you set the **type of the reader to Protocol** and enter the **correct Reader address**. Save the changes and [send tables](#) ^[32].



If the configuration of the reader will not be properly set, the Location column in the Monitor will display the event on reader 15 (picture on the next page).

The screenshot shows the 'Monitor' interface with a navigation bar at the top containing icons for Home, Back, Logout, Live events, and Presence. Below the navigation bar are several control buttons: Open, Lock, Unlock, Toggle, Enable, Disable, and Unblock. The main content is a table with the following columns: User, Card, Location, Date and time, Event, Button, and Time&Attendance. The first row of the table is highlighted in red and contains the following data: Card User, 1246702, ...troller: Trigger, Številka čitalnika: 15, 06.11.2014 12:01:00, Wrong card, 0, /. A red circle is drawn around the 'Location' cell, and a red arrow points to it from the 'Presence' icon in the navigation bar.

| User | Card | Location | Date and time | Event | Button | Time&Attendance |
|-----------|---------|---------------------------------------------|---------------------|------------|--------|-----------------|
| Card User | 1246702 | ...troller: Trigger, Številka čitalnika: 15 | 06.11.2014 12:01:00 | Wrong card | 0 | / |
| Card User | 1246702 | Passage 1 [9] | 06.11.2014 11:59:59 | Wrong card | 0 | / |

9.3. Communication status

Communication status displays the difference between sent and unaccepted data packages of your hardware. The number of unaccepted data packages indicates that communication was interrupted. If communication is working properly the number of unaccepted data packages should not be very high in comparison with sent packages. If the number of unaccepted data packages is very high then you have a problem and you should check the communication between the hardware.

The screenshot shows a dialog box titled 'Communication status'. It contains two entries, each with a green checkmark icon: 'Jantar Communication' and '5462/0 - [5] Production & Sales'. A 'Close' button is located at the bottom left of the dialog box.

- ✔ - Communication is established and is working properly
- ⚠ - Communication is currently not established
- ⊘ - Controller is not in use

Part

10

10. Timetables

In addition to Groups, Timetables are a key feature in the Codeks system structure as they define the rights of users and groups as well as add functionality to controllers. Timetables define and limit time periods of:

- user's access rights at specific passages,
- users's work obligation (Codeks TA),
- user's daily work hours (Codeks TA),
- the use of time intervals for workplace absence during work hours (e.g. lunch, business exit, private exit, exit permits etc.) (Codeks TA),
- the use of function buttons on controllers (Codeks TA),
- the use and recording of different statistics (Codeks TA),
- ¹ tracking user attendance for shift work (Codeks TA),
- ² lunch brakes (Codeks TA).

¹ Enabled only when using the [Shifts \(AddOn\)](#)^[110] additional application.

² enabled only when using the Lunch additional application.

Timetables can be accessed by selecting the *Timetables* icon in the [Main Menu](#)^[45]. This will open the Timetables Editor where you can [add](#)^[219], [edit](#)^[268] or [delete](#)^[269] existing timetables and time intervals. Timetables can also be accessed through the menu shortcut in the Groups Editor.

Every **timetable** contains one or more **time intervals**. The time intervals are defined completely separately and can be assigned to several timetables simultaneously. By selecting specific time intervals you can create completely customised timetables. Time intervals enable event registration every time a user registers at a controller. The Codeks system uses the data of registered events in order to calculate the users' work hours or enable access to passages.

Colors in Timetables Editor

Blue - indicates the selected timetable on the *List of timetables*.

Green - indicates the intervals assigned to the selected timetable in the *List of all time intervals*.

Dark green - indicates the currently selected interval in the *List of all time intervals* and the *List of intervals in selected timetable*.

Red - indicates the currently selected interval in the *List of all time intervals*, if that time interval is not assigned to the selected timetable.

Timetables

Home Back Logout Add timetable Edit timetable Add interval Edit interval Delete interval Groups

Timetables

- Fixed
- Flexible

List of timetables

Intervals in timetable Fixed

- Business [07:30 - 15:30]
- Info [00:00 - 23:59]
- Cancel [00:00 - 23:59]
- Exceptional [00:00 - 23:59]
- Lunch [09:00 - 13:05]
- Fixed entry [00:00 - 06:00]
- Fixed exit [16:00 - 23:59]

List of intervals in selected timetables

List of all time intervals

| Name | Type | From | To | Start | Stop | Button |
|----------------|-----------------|-------|-------|-------|------|--------|
| Business | General purpose | 07:30 | 15:30 | | | 1 |
| Cancel | Cancel | 00:00 | 23:59 | | | 9 |
| Exceptional | Entry / Exit | 00:00 | 23:59 | | | 3 |
| Fixed entry | Entry | 00:00 | 06:00 | | | |
| Fixed exit | Exit | 16:00 | 23:59 | | | |
| Flexible entry | Entry | 00:00 | 06:00 | | | |
| Flexible exit | Exit | 16:00 | 23:59 | | | |
| Flexible | Entry / Exit | 00:00 | 23:59 | | | |
| Info | Info | 00:00 | 23:59 | | | 4 |
| Lunch flexible | General purpose | 09:00 | 13:05 | | | 5 |
| Lunch | General purpose | 09:00 | 13:05 | | | |
| Private 2 | General purpose | 06:00 | 16:00 | | | 2 |
| Private | General purpose | 00:00 | 23:59 | | | 2 |

Interval data

Interval description: Fixed exit
Interval type: Exit
Text: lzhod
From: 16:00 To: 23:59
Stop at: Use fixed time
Statistic: Worktime

Editing interval

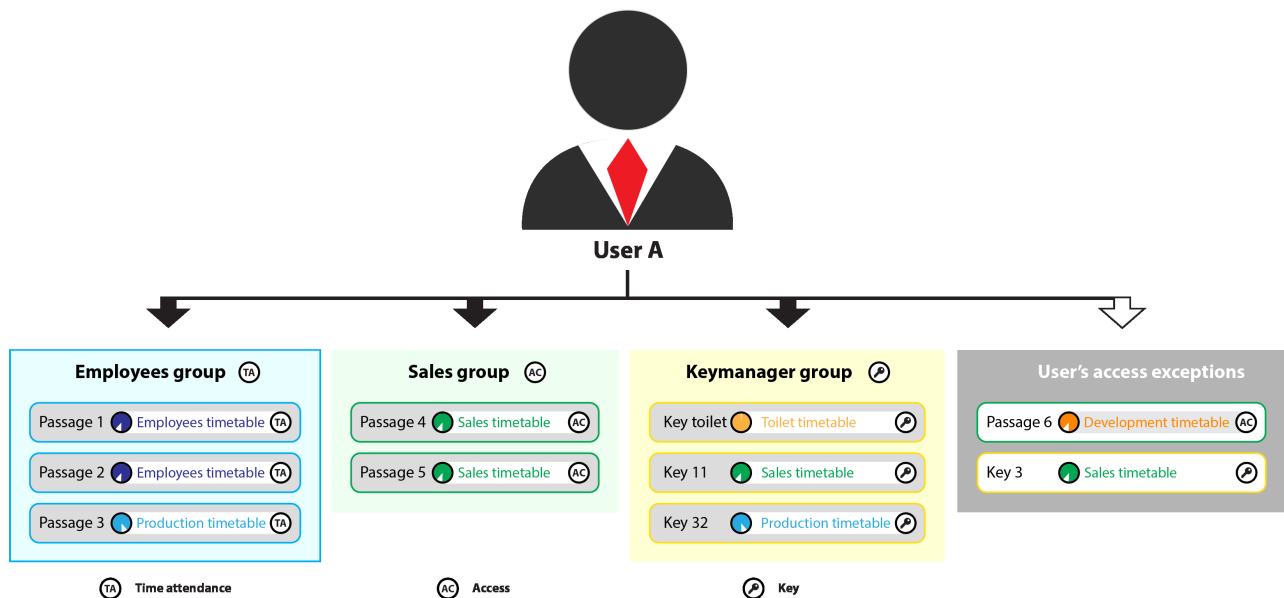
Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, Holiday, Interval color

Cancel Save

Using timetables

Timetables limit the time periods when a user has access rights at specific passages, can register his time attendance and can use different types of workplace absence (e.g. lunch, business exit, private exit, exit permits etc.).

A user's access rights are usually defined by the rights of groups he belongs to. The group access rights can be set in the Groups editor. Here you can set group rights for all the users assigned to a group by enabling access and setting a timetable for each specific passage. The following picture shows how a user is assigned access rights on specific passages by belonging to different groups.



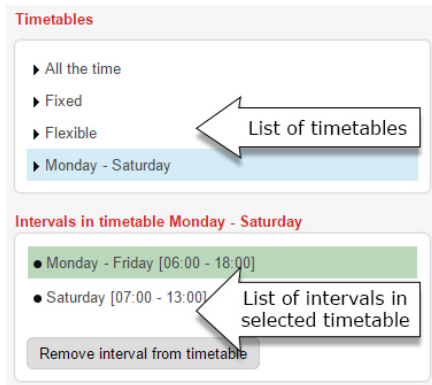
The process of defining group and user access rights by assigning different timetables to specific passages is described in chapter [Adding Group and User Access](#)^[304].

ADDITIONAL for Codeks TA

Adding a timetable for time registration to a group is described in chapter [Codeks TA - Assign Timetable to Group](#)^[305].

10.1. Timetable overview

The List of all timetables can be found on the left side in the Timetables editor. The currently selected timetable is colored blue. The list of all time intervals assigned to the currently selected timetable is shown under the List of timetables.



Timetables are essentially collections of time intervals. Time intervals define when users arrive at work, when they can take a lunch break, where and when they have access rights, etc. You can read more about different types of time intervals in chapter [Add New Time Interval](#)^[222]. All time intervals, shown in the middle section of the timetables editor, are defined completely independently and can be assigned to multiple timetables at the same time. Time intervals assigned to a selected timetable are colored green in the List of time intervals. The following picture shows the List of all time intervals.

List of all time intervals ↑

| Name | Type | From | To | Start | Stop | Button |
|-----------------|-------------------|-------|-------|-------|-------|--------|
| All the time | + Access | 00:00 | 23:59 | | | |
| Business | + General purpose | 07:30 | 15:30 | | | 1 |
| Cancel | + Cancel | 00:00 | 23:59 | | | 9 |
| Entry flexible | + Entry | 06:00 | 08:00 | | | |
| Exeption | + Entry / Exit | 00:00 | 23:59 | | | 3 |
| Exit flexible | + Exit | 14:00 | 16:00 | | | |
| Fixed entry | + Entry | 00:00 | 06:00 | 06:00 | | |
| Fixed exit | + Exit | 16:00 | 23:59 | | 16:00 | |
| Flexible | + Entry / Exit | 00:00 | 23:59 | | | |
| Info | + Info | 00:00 | 23:59 | | | 4 |
| Lunch | + General purpose | 09:00 | 13:00 | | | |
| Lunch flexible | + General purpose | 09:00 | 13:00 | | | 5 |
| Monday - Friday | - Access | 06:00 | 18:00 | | | |
| Private | + General purpose | 00:00 | 23:59 | | | 2 |
| Private 2 | + General purpose | 06:00 | 16:00 | | | 2 |
| Saturday | - Access | 07:00 | 13:00 | | | |

Some sample default timetables are already provided with the Codeks installation. You can use or edit them to meet the specific needs of your system.

10.2. Before adding a new timetable

Timetables in Codeks define when users and groups have access rights at specific passages, set the users' work obligation and enable the daily event registration. Additionally, they set and control the button functionalities of the controllers.

Timetables are one of the key elements in Codeks and require careful planning before generating.

TYPES OF TIMETABLES

In the Codeks application, there are two types of timetables: **access control timetables** and **timetables for time and attendance**.

- **Access control timetables** are used for only for access permission control, based on the user's identification. They enable different actions (e. g. unlocking doors) to be carried out when a user registers at a specific controller, but they do not enable time event and interval. Access control timetables are usually used to define the user's access rights at specific passages, rights to key access, relay controller access etc.
- **Time and attendance timetables** are used for time registration using controllers. They enable different actions to be carried out when a user registers at a specific controller, as well as time event and interval registration, which are used to calculate the users' statistics and other time registration information. Time and attendance timetables are used for work hour registration, assigning shift work, defining workplace absence intervals (e. g. lunch breaks), etc.

ACCESS CONTROL TIMETABLE PLANNING

1. Before planning the access control timetable set the **locations**, define your **company's organization structure** and connect your **controllers to the appropriate passages** (using the Hardware editor).
2. Next, organize all your **users into logical and appropriate groups** depending on the organization structure or same access rights.
3. In the next step define the **passages where each group will be allowed to pass**.
Depending on the number of groups, you should already be able to determine how many sets of timetables you will need to setup your system.
4. Determine **the days and times of the day**, when users will be allowed to pass at each passage.
Depending on the number of different access times for different access passages, you will be able to determine how many individual timetables you will need for each set of timetables.
Depending on different access rights for specific days of the week and time of day, you will be able to determine the time intervals assigned to each timetable.

ATTENTION!

Access control intervals assigned to a specific timetable, apply to all access passages the timetable is assigned to. It is not possible to define different access rights to different passages using the same timetable. If the time of the user's access rights at a specific passage differ from the rest you must create a new timetable for the passage in question.

5. Additionally, you can define **actions**, that will be carried out when a user registers at a specific passage (e.g. open, toggle, etc.).
6. Lastly, check if any of the users require special **user access exceptions**.

By planning out your timetable system, you will be able to determine the exact number of individual timetables required to define all group and user access rights.

TIME AND ATTENDANCE TIMETABLE PLANNING (Codeks TA)

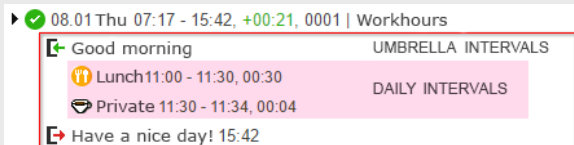
In addition to setting access rights at specific passages, time and attendance timetables also enable registration of daily events and set specific functions to the controllers' buttons.

1. Before planning the time and attendance timetable set the **locations**, define your **company's organization structure** and connect your **controllers to the appropriate passages** (using the Hardware editor). In addition, make sure to define controllers and **passages where time attendance registration** will be possible.
2. Next, organize all your **users into logical and appropriate groups** depending on the organization structure or the same distribution of work hours.
3. In the next step define the **passages where each group will be allowed register their time attendance**.
4. Define a typical day of a user, all from his arrival at work to his departure. This will help you set the required daily intervals the user will be able to use during the day.

THE STRUCTURE OF THE DAY

In Codeks all the registered time attendance events are displayed in the List of events of the Time attendance editor. Every day consist of:

- **umbrella intervals**, which start with a registered **Entry** event and end with a registered **Exit** event.
- **daily intervals**, that register within the umbrella intervals.



Every time a user registers at a controller where time attendance is enabled, a new daily event is recorded. What kind of event is recorded each time depends on the assigned time intervals in the selected timetable.

When planning the daily events, first determine the times for the umbrella intervals, which determine when and how the users will **arrive** and **depart from work**. To record entry and exit events use the interval types **Entry**, **Exit** and **Entry/Exit**. The intervals Entry and Exit are usually used when the users have a classically defined fixed timetable. The interval type Entry/Exit is usually used when users have a flexible timetable.

FIXED AND FLEXIBLE

The terms fixed and flexible are used to describe the type of time and attendance timetables that can be assigned to different users:

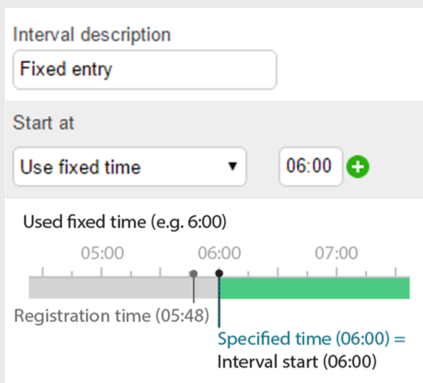
- **Fixed timetables** are used when the users have classically determined work hours based on the time of day. The users must arrive at work before a certain time of the day, and can only depart after completing a certain amount of hours set by their work obligation.
- **Flexible timetables** are used when it is not specifically determined when a user needs to be present in the workplace. The users have set work obligation hours, but can freely come and go during the day, and register their work hours discontinuously.

The term fixed and flexible also apply, when recording the individual time intervals:

- if the time of an interval is fixedly set, then a **fixed** pre-determined time will be recorded instead of the actual time of the registered event.

Example:

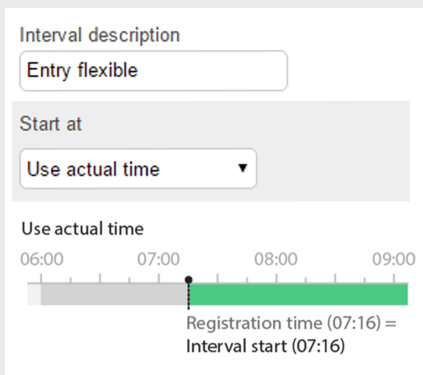
A Fixed entry interval is defined, that records any entry events registered before 6 a.m. In this case the term "fixed" applies to how the start of the user's work hours is recorded. Regardless of the actual time of event registration, the start of the Entry interval is always set to 6:00, in the event that the user registers his arrival before 6 a.m.



- if the time of an interval is **flexibly** set, this means that the actual time of event registration will be used every time a user registers an event at a controller during the interval duration.

Example:

An Entry flexible interval is defined, that records any entry events registered between 6 and 8 a.m. The term "flexible" describes how the start of the user's work hours will be recorded. The when a user registers an entry event between 6 and 8 a.m. the actual time of the event registration will be recorded as the start of the interval.



Daily intervals, such as lunch and private or business absence, are recorded within the entry-exit umbrella intervals. In addition to setting the arrival and departure times for the employees, you must also



determine when a user can have his lunch break, go to a business meeting, take private time during work hours etc. Daily intervals are set by using the General purpose type intervals, which enable the change of the user statistic being recorded.

Users often access the functionality of the general purpose interval using the buttons of the controllers.

EDITING AND USE OF CONTROLLER BUTTONS

Interval types General purpose, Info, Cancel, Permit interval and Automatic enable a controller button to be assigned to them in order to access the intervals functionality on the controller.

The screenshot shows a form for configuring an interval. The 'Interval type' dropdown menu is open, displaying the following options: 'Button (Edit)' (highlighted in red), '1 - Business' (highlighted in blue), 'Choose', '1 - Business', '2 - Private', '3 - Extra', '4 - Info', '5 - Lunch', and '9 - Cancel'. The form also includes fields for 'Interval description' (Business), 'Text' (Business), 'From' (07:30), 'Valid from', and 'Action'.

Read more about settings and the use of buttons for event registration in chapter [Edit Buttons](#)^[267].

Use of buttons at the controller:

1. When users want to enable the functionality of a certain interval, they first select and press the appropriate button on the controller.
2. After selecting the button, they register at the controller and the system starts the time count of the selected interval. In the event of selecting intervals Info or Cancel, the system displays the user's information or cancels the last registered event, respectively.
3. To end the selected interval, the users must select and press the same controller button again and then register at the controller.

5. If your system also contains passages, where the time and attendance registration is not enabled, but only control access, you must also **define the week days and times of the day**, when users will be able **to access these passages**.

Depending on the number of different access times for different access passages, you will be able to determine how many individual timetables you will need for each user group.

Depending on different access rights for specific days of the week and time of day, you will be able to determine the time intervals assigned to each timetable.

ATTENTION!

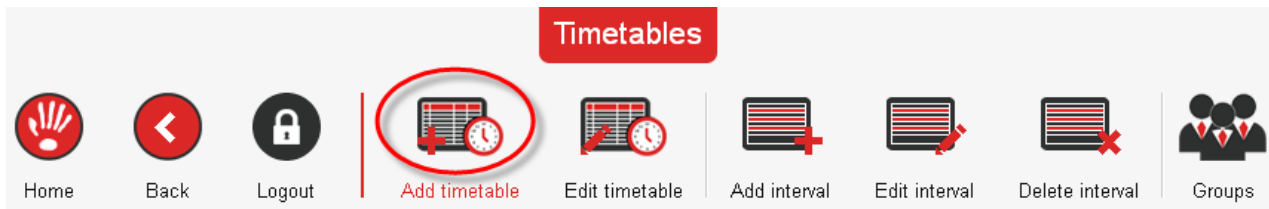
Access control intervals assigned to a specific timetable, apply to all access passages the timetable is assigned to. It is not possible to define different access rights to different passages using the same timetable. If the time of the user's access rights at a specific passage differ from the rest you must create a new timetable for the passage in question.

6. Additionally, you can define **actions**, that will be carried out when a user registers at a specific passage (e.g. open, toggle, etc.).
7. Lastly, check if any of the users require special **user access exceptions**.

By planning out your timetable system, you will be able to determine what kind of time and attendance timetable each user group will need, as well as define the exact number of individual timetables required to define all group and user access rights.

10.3. Add Timetable

To add a new timetable select the *Add timetable* icon in the Timetables editor.



A new window will open, where you can enter the name of your new timetable.

It is advised that a suitably descriptive and distinguishing name be assigned to the new timetable.

Basic data

Name

To save the set settings click the *Save button*. The new timetable will be visible and marked in the List of timetables. In the next step [add existing time intervals](#)^[264] to the selected timetable or [create new intervals](#)^[222].

ADDITIONAL for Codeks TA

When adding a new time attendance timetable, a large number of general settings can be set in addition to the name of the timetable. These settings enable you to set work obligation and other time attendance related settings, all of which are described below.

ADDITIONAL for Codeks TA

The following instructions describe how to add a timetable in the Codeks TA application.

Basic data

Name

Only access timetable

Calendar

Show sum text

Show event text

Show saldo text

Work obligation

| | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Monday <input type="text" value="08:00"/> <input type="button" value="+"/> HH:mm | Tuesday <input type="text" value="08:00"/> <input type="button" value="+"/> HH:mm |
| Wednesday <input type="text" value="08:00"/> <input type="button" value="+"/> HH:mm | Thursday <input type="text" value="08:00"/> <input type="button" value="+"/> HH:mm |
| Friday <input type="text" value="08:00"/> <input type="button" value="+"/> HH:mm | Saturday <input type="text" value="00:00"/> <input type="button" value="+"/> HH:mm |
| Sunday <input type="text" value="00:00"/> <input type="button" value="+"/> HH:mm | Holidays <input type="text" value="00:00"/> <input type="button" value="+"/> HH:mm |

Average work obligation HH:mm

Decrease leave for work obligation

Statistic id when work obligation is 0

Lunch count mode

Ignore holiday and weekend 24h

| Settings | Description |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | The name of the timetable |
| Only access timetable | With this setting enabled, the timetable will only be used for access control. All additional settings, listed below, will be hidden. |
| Calendar | Calendars are used to set work obligation for users when the set hours vary depending on the day of the week or month. Here you can choose one of the calendars you have created beforehand. |
| Show sum text | With this setting enabled the user's hour sum will be displayed on the controller, whenever the user registers. |
| Show event text | With this setting enabled the text of the time interval will be displayed on the controller, whenever the user registers. |
| Show saldo text | With this setting enabled the user's saldo will be displayed on the controller, whenever the user registers. |
| Work obligation | Sets the number of work hours the user is expected to be present at the workplace. Codeks enables different work obligations to be set for different days of the week. |
| Average work obligation | Sets the average number of work hours the user is expected to be present at the workplace. |
| Decrease leave for work obligation | Enables the user's yearly leave to be counted in hours and not days. This setting is useful when the user's work obligation hours vary depending on the day of the week or month. With this setting enabled the number of available leave is only decreased by the number of work obligation hours set for the specific day. This setting is usually used in combination with Calendars. |
| Statistic id when work obligation is 0 | Sets what statistic will be recorded on days when work obligation is set to 0. This setting is usually used in combination with Calendars. |
| Lunch count mode | <p>Sets the mode for counting lunches:</p> <p>Default - the lunch is assigned according to the general setting for Lunch count Mode (Main menu -> Settings -> Preferences -> Time attendance tab).</p> <p>Standard - lunch is assigned according to the current employment legislation (the first lunch is assigned after completed 4 hours of work and the second lunch is assigned after completed 12 hours of work).</p> <p>Two types - two types of lunches are assigned depending on the number of completed work hours. The number of hours is set by the <i>Minimum time to count second lunch</i> in the general settings for Time attendance (Main menu -> Settings -> Preferences -> Time attendance tab).</p> <p>Second lunch in hours - an additional lunch is assigned after a certain number of work hours. The number of hours is set by the <i>Minimum time to count second lunch</i> in the general settings for Time attendance (Main menu -> Settings -> Preferences -> Time attendance tab).</p> <p>No lunch - no lunch is assigned.</p> |

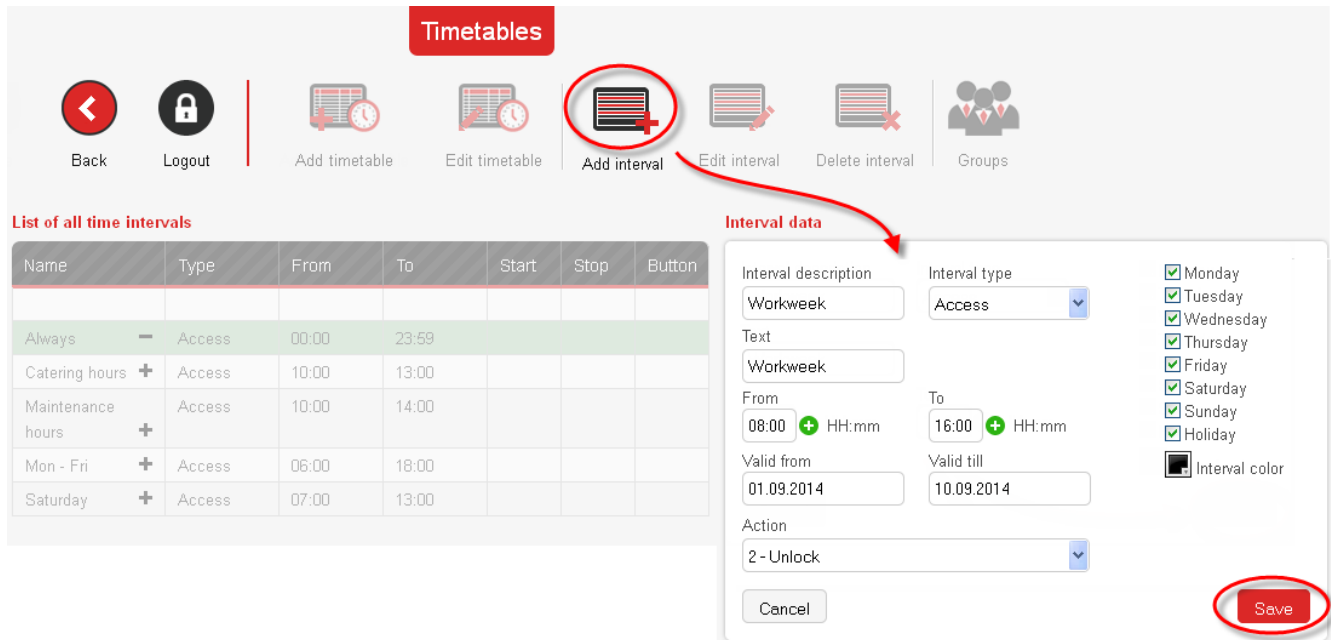


| Settings | Description |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drive count mode | Sets the mode for counting drives: Default - the drive is assigned according to the general setting for Drive count Mode (Main menu -> Settings -> Preferences -> Time attendance tab). Standard - the drive is assigned according to the current employment legislation Double drive - up to two drives per day can be assigned. Standard Multi Count - a drive is assigned every time a user registers an entry event. No drive - no drives are assigned. |
| Ignore holiday and weekend | With this setting enabled the system will not distinguish weekends and holidays when setting work obligation hours. This setting is usually used in combination with Calendars. |
| 24h | This function enables 24-hour workdays to be recorded correctly. This setting is usually used for shift work or standby duty. ATTENTION! It is obligatory that the user registers himself both at the beginning of a 24-hour work day as well as at the end, in order for the work hours to be recorded correctly. |

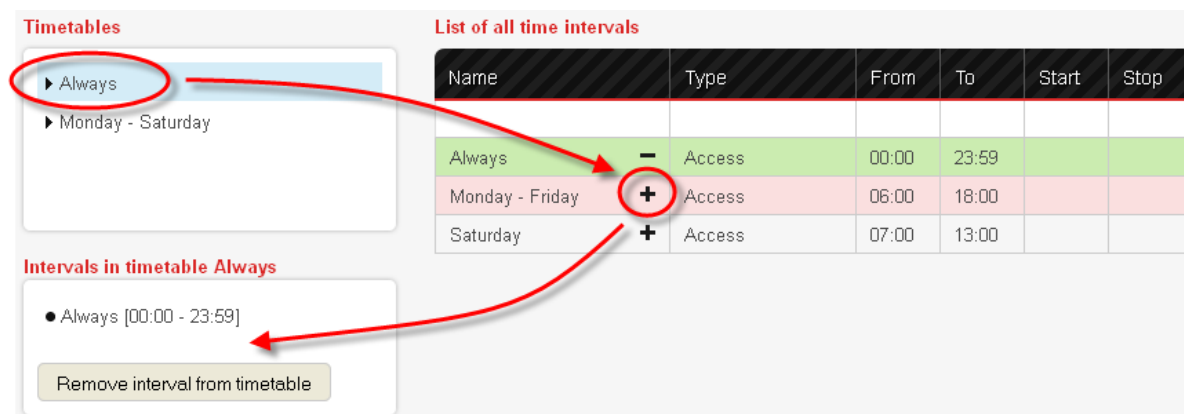
To save the set settings click the *Save button*. The new timetable will be visible and marked in the List of timetables. In the next step [add existing time intervals](#)^[264] to the selected timetable or [create new intervals](#)^[222].

10.3.1. Add New Time Interval

To add a new interval, click the *Add interval* icon in the upper menu of the Timetables Editor. This will enable the interval editor window, where you can enter the required data. To save the setting click the *Save* button.



The newly created time interval will be displayed in the List of all time intervals. To add a time interval to a selected timetable click on the + (plus) icon next to the interval name. When the time interval is successfully added to the timetable it will color green.



Access interval (Codeks AC)

The settings for access intervals are:

| Settings | Description |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interval description | The name of the interval. The name should be suitably descriptive to enable easier recognition in the list of intervals. |
| Text | The text that will be displayed on the controller when a user registers. |
| From | The start of the interval duration. |
| To | The end of the interval duration. The end time must always be greater than the interval start time. |
| Days of the week | Sets the day of the week, to which this interval will apply. |
| Interval color | Sets the color the interval will be displayed with when printing the timetable. |
| Valid from | The date the interval is valid from. |
| Valid till | The date the interval is valid till. The end date of interval validity must always be greater than the start date. |
| Action | <p>Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage.</p> <p>VALUES:</p> <p>Open The doors will open (unlock) only for a few seconds.</p> <p>Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open.</p> <p>Unlock The doors will unlock and enable free passage.</p> <p>Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them.</p> <p>Enable This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> <p>Disable This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> <p>Unblock This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)).</p> <p>Disable PIN This action disables the function of entering a PIN number on the controller.</p> <p>Enable PIN This action enables the function of entering a PIN number on the controller.</p> <p>* Macro You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu.</p> <p>* The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros.</p> |

| | | |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Interval description <input type="text" value="Monday - Friday"/> | Interval type <input type="text" value="Access"/> | <input checked="" type="checkbox"/> Monday |
| Text <input type="text" value="Monday - Friday"/> | | <input checked="" type="checkbox"/> Tuesday |
| From <input type="text" value="06:00"/> <input type="button" value="+"/> HH:mm | To <input type="text" value="18:00"/> <input type="button" value="+"/> HH:mm | <input checked="" type="checkbox"/> Wednesday |
| | | <input checked="" type="checkbox"/> Thursday |
| | | <input checked="" type="checkbox"/> Friday |
| | | <input type="checkbox"/> Saturday |
| | | <input type="checkbox"/> Sunday |
| | | <input type="checkbox"/> Holiday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> Restday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> +1 day (night work) |
| Valid from <input type="text"/> | Valid till <input type="text"/> | Interval color <input type="text" value="#000000"/> |
| Action <input type="text"/> | | |

ADDITIONAL for Codeks TA

The following chapters describe time intervals used with the Codeks TA application for time attendance registration.

Intervals for time registration (Codeks TA)

Several types of time intervals are available in the Codeks TA application. The types of intervals differ depending on the purpose of use:

| Types of interval | Description |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General purpose ^[228] | General purpose intervals enable the change of the statistic being recorded and are usually used to record daily intervals within work hours, such as lunch brakes, private or business exits, etc. Users often access the functionality of general purpose intervals using the buttons of the controllers. Read more about settings and the use of buttons for event registration in chapter Edit Buttons ^[267] . |
| Entry ^[238] | The Entry interval type is used to record daily entry events, which mark the beginning of all umbrella intervals, which in turn contain all daily intervals. The Entry interval is usually used to record the start of a user's work hours, when that user has a classically defined fixed timetable, with only one entry per day. |
| Exit ^[241] | The Exit interval type is used to record daily exit events, which mark the endings of all umbrella intervals. The interval is usually used to record the end of a user's work hours, when that user has a classically defined fixed timetable, with only one exit per day. By registering an exit event the recording of user's work hours is stopped. |
| Entry/Exit ^[247] | The Entry/Exit interval type is used to record entry events, which are the start of all umbrella intervals, as well as exit events, which are the end of all umbrella intervals. This type of interval is usually used when a user has a flexibly defined timetable, with multiple entries and exits per day. The user can freely come and go during the duration of the interval. |
| Access ^[254] | The Access interval enables a user access to specific passages during the duration of the interval (defined by settings From and To). |
| Info ^[256] | The Info interval enables the use of the additional functionality of displaying a user's information on the controller. The functionality of the Info interval can be accessed through a specific button, which the user presses before registering, on the controller. Read more about settings and the use of buttons in chapter Edit Buttons ^[267] . |
| Cancel ^[257] | The Cancel interval enables the use of the additional functionality of cancelling the last registered event on the controller. The functionality of the Cancel interval can be accessed through a specific button, which the user presses before registering, on the controller. Read more about settings and the use of buttons in chapter Edit Buttons ^[267] . |
| Time cut ^[258] | Time cuts are used to set the recording of additional statistical information. It is usually used when it is necessary to record the user's work hours depending on the time of day (e.g. how many hours did the user work in the morning, in the afternoon or at night). By using the Time cut interval the user's work hours are »cut up« and recorded in different statistic sets. The Time cuts interval type does not record any daily intervals and does not add any functionality to the controllers. Read more about the use of Time cut intervals in chapter Time cut ^[258] . |



| Types of interval | Description |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Automatic ^[266] | The Automatic interval type enables the user to set the recording of a daily statistic for a period of time, using a controller (e.g. the recording of leave days from the current registration until cancellation). Read more about the use of Automatic intervals in chapter Automatic ^[266] . |
| Automatic insert ^[267] | The Automatic insert interval enables a specific interval to be automatically inserted into the daily umbrella interval. The interval is used when a specific daily event, such as a lunch break, is recorded at the same time each day. The automatic insert is only initialized if an Entry type event, which is the start of all daily umbrella events, has been registered beforehand. |
| Permit interval ^[262] 1 1 Enabled only when using the ePermits (AddOn) additional application. | The Permit interval can only be used with the additional ePermits application. The interval enables the use of a beforehand announced and confirmed permit, by adding a new functionality to the controller. Users usually access the functionality of permit intervals using the buttons of the controllers. Read more about settings and the use of buttons for event registration in chapter Edit Buttons ^[267] . |
| Standby interval ^[263] | The Standby interval is used to record the time when a user is absent from the workplace and on standby. When a user registers at a controller during the duration period of this interval, the system stops recording hours to the Standby interval. The system resumes the recording of the Standby interval hours only after the user leaves the workplace and continues up until the end of the interval duration. |

Time intervals in the Codeks TA application have a larger number of additional settings than the simple access intervals. The settings are dependent on the selected interval type. The general settings, available for all types of time intervals, are described in the table below and all additional settings, dependent on interval type, are described in the following chapters.

General settings for the Codeks TA time intervals:

| Settings | Description |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interval description | The name of the interval. The name should be suitably descriptive to enable easier recognition in the list of intervals. |
| Interval type | Interval type selection. The additional settings displayed are dependent on the selected interval type. |
| Text | The text that will be displayed on the controller when a user registers. |
| From | The start of the interval duration. |
| To | The end of the interval duration. The end time must always be greater than the interval start time. |
| Days of the week | Sets the day of the week, to which this interval will apply. The settings Holiday and Restday enable setting intervals for special days. The additional setting Exclusive can be used to set intervals for combination days, for example, an interval is only valid for weekdays that are at the same time also a holiday. The +1 day (night work) enables night work that stretches into the next day. |
| Interval color | Sets the color the interval will be displayed with when printing the timetable. |
| Valid from | The date the interval is valid from. |
| Valid till | The date the interval is valid till. The end date of interval validity must always be greater than the start date. |



10.3.1.1. General purpose

General purpose intervals are usually used to define daily intervals, which are recorded within the umbrella interval during work hours. Examples of this kind of intervals are lunch breaks, business and private exits, exits using permits etc.


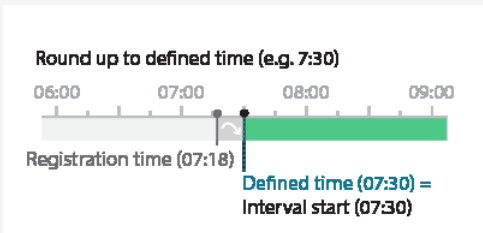
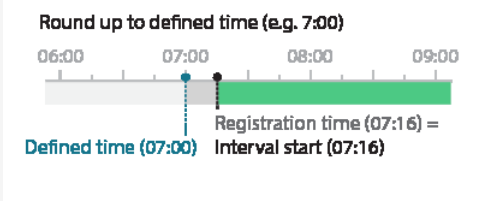
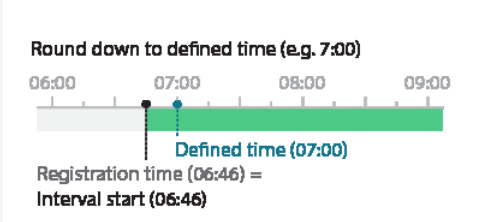
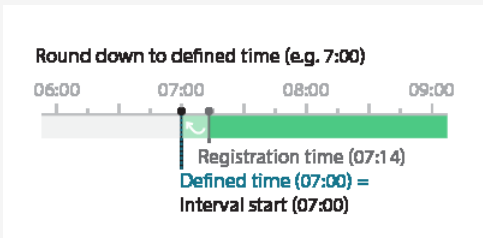
General purpose intervals enable the change of the statistic being recorded. Users often access the functionality of general purpose intervals using the buttons of the controllers. Read more about settings and the use of buttons for event registration in chapter [Edit Buttons](#)^[267].

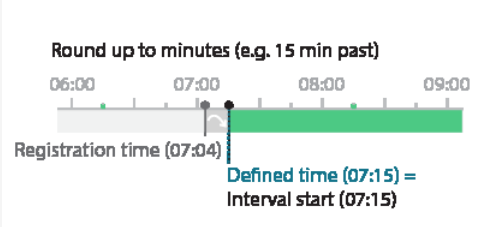
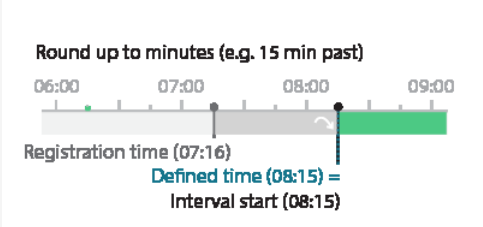

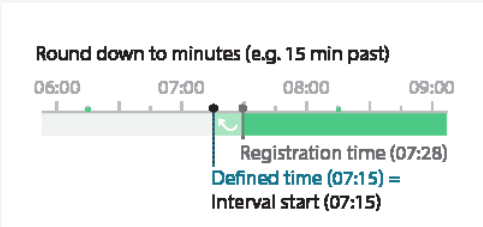
General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#)^[224]. The following table contains all setting specific to General purpose intervals.

| Settings | Description |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons ^[267] . |
| Action | Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage. VALUES: Open The doors will open (unlock) only for a few seconds. Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open. Unlock The doors will unlock and enable free passage. Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them. |

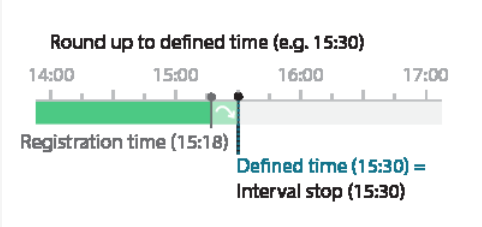
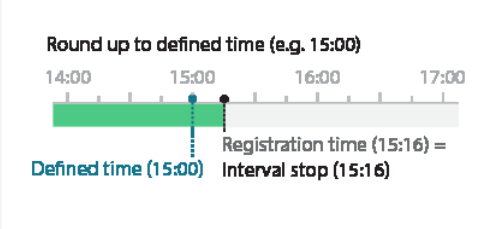
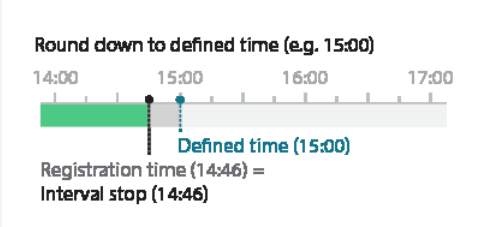
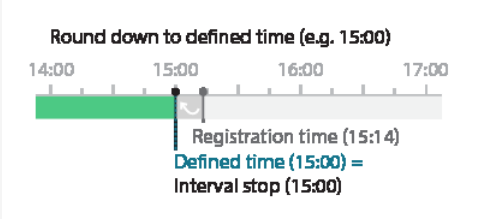
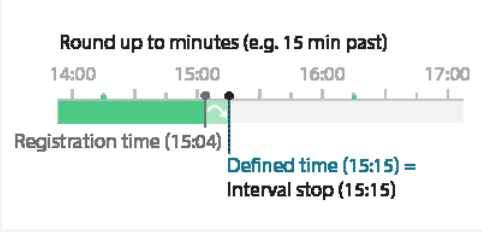


| Settings | Description |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enable | This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) |
| Disable | This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) |
| Unblock | This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)). |
| Disable PIN | This action disables the function of entering a PIN number on the controller. |
| Enable PIN | This action enables the function of entering a PIN number on the controller. |
| * Macro | You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu. |
| | * The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros. |
| Start at | Sets the start time of an interval. |
| | VALUES: |
| Use actual time | The start of the interval is the time of the user's actual registration at a controller. |
| Use fixed time | The start of the interval is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 8:00 in the morning -> 08:00). |
| Add minutes | The start of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15). |
| | <p>Add minutes (e.g. add 15 min)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18)</p> <p>Interval start (07:33)</p> |
| Subtract minutes | The start of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15). |
| | <p>Subtract minutes (e.g. subtract 15 min)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18)</p> <p>Interval start (07:03)</p> |
| Round up time | The start of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15). |
| | <p>Round up time (e.g. with 15 min periods)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18)</p> <p>Interval start (07:30)</p> |

| Settings | Description |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round down time The start of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15)</p>  <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:14) Interval start (07:00)</p> |
| | <p>Round up to defined time The start of the interval is set to: - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round up to defined time (e.g. 7:30)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:18) Defined time (07:30) = Interval start (07:30)</p> <p>- the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p> |
| |  <p style="text-align: center;">Round up to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:16) = Defined time (07:00) = Interval start (07:16)</p> |
| | <p>Round down to defined time The start of the interval is set to: - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round down to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (06:46) = Defined time (07:00) Interval start (06:46)</p> |
| |  <p style="text-align: center;">Round down to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:14) Defined time (07:00) = Interval start (07:00)</p> |

| Settings | Description |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round up to minutes</p> <p>The start of the interval is rounded to a defined number of minutes past a full hour: - the start time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round up to minutes (e.g. 15 min past) 06:00 07:00 08:00 09:00 Registration time (07:04) Defined time (07:15) = Interval start (07:15)</p> <p>- the start time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round up to minutes (e.g. 15 min past) 06:00 07:00 08:00 09:00 Registration time (07:16) Defined time (08:15) = Interval start (08:15)</p> <p>Example: The company uses several work shifts that start at different times of the day, but all shifts start 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i>, the company would need a large number of time intervals, set to start at 15 minutes past different hours, to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number to a single interval, that will round up the interval start to 15 minutes past the appropriate full hour.</p> <p>Round down to minutes</p> <p>The start of the interval is rounded to a defined number of minutes past a full hour: - the start time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round down to minutes (e.g. 15 min past) 06:00 07:00 08:00 09:00 Registration time (07:14) Defined time (06:15) = Interval start (06:15)</p> <p>- the start time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round down to minutes (e.g. 15 min past) 06:00 07:00 08:00 09:00 Registration time (07:28) Defined time (07:15) = Interval start (07:15)</p> |
| Stop at | Sets the end time of an interval. |

| Settings | Description |
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| | <p>VALUES:</p> <p>Use actual time</p> <p>The end of the interval (stop) is the time of the user's actual registration at a controller.</p> <p>Use fixed time</p> <p>The end of the interval (stop) is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 16:00 in the afternoon -> 16:00).</p> <p>Example: Lunch</p> <p>The interval Lunch is defined from 13:00 to 14:00, with the Stop at setting set to Use fixed time at 14:00. This means that the Lunch interval will always be concluded at 14:00. If a user registers the beginning of his lunch break at 11:50, he only has 10 minutes left before he is required to be back at his workplace. This setting is useful when you want to specifically define when a user must return to his workplace.</p> <p>Add minutes</p> <p>The end of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Add minutes (e.g. add 15 min)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:18) Interval stop (15:33)</p> </div> <p>Subtract minutes</p> <p>The end of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Subtract minutes (e.g. subtract 15 min)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:18) Interval stop (15:03)</p> </div> <p>Round up time</p> <p>The end of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up time (e.g. with 15 min periods)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:18) Interval stop (15:30)</p> </div> <p>Round down time</p> <p>The end of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:14) Interval stop (15:00)</p> </div> |

| Settings | Description |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round up to defined time</p> <p>The end of the interval is set to:</p> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.  <p>Round up to defined time (e.g. 15:30)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:18)</p> <p>Defined time (15:30) = Interval stop (15:30)</p> <p>- the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p>Round up to defined time (e.g. 15:00)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:16) = Interval stop (15:16)</p> <p>Defined time (15:00)</p> |
| | <p>Round down to defined time</p> <p>The end of the interval is set to:</p> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.  <p>Round down to defined time (e.g. 15:00)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (14:46) = Interval stop (14:46)</p> <p>Defined time (15:00)</p> <p>- a defined fixed time, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p>Round down to defined time (e.g. 15:00)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:14)</p> <p>Defined time (15:00) = Interval stop (15:00)</p> |
| | <p>Round up to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour:</p> <ul style="list-style-type: none"> - the end time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.  <p>Round up to minutes (e.g. 15 min past)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:04)</p> <p>Defined time (15:15) = Interval stop (15:15)</p> |

| Settings | Description |
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| | <p>- the end time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (15:16)</p> <p style="font-size: small; color: blue;">Defined time (16:15) =</p> <p style="font-size: small; color: black;">Interval stop (16:15)</p> </div> <p>Example: The company uses several work shifts that start and consequently end at different times of the day, but all the shifts start and end 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i> the company would need a large number of time intervals in order to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number of exit intervals to a single interval, that will round up the interval end to 15 minutes past the appropriate full hour.</p> <p>Round down to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour:</p> <p>- the end time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (16:14)</p> <p style="font-size: small; color: blue;">Defined time (15:15) =</p> <p style="font-size: small; color: black;">Interval stop (15:15)</p> </div> <p>- the end time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (15:28)</p> <p style="font-size: small; color: blue;">Defined time (15:15) =</p> <p style="font-size: small; color: black;">Interval stop (15:15)</p> </div> |
| Auto from | <p>The setting enables automatic recording of the interval start based on the value of the setting.</p> <p>Example 1: Business interval The business interval is defined from 8:00 to 16:00. The <i>Auto from</i> setting is set to <i>Use fixed time</i> at 8:00. If a user first registers an entry event at 10:00, the system will set the user's daily entry at 8:00 and record the Business interval from the entry event at 8:00 to 10:00.</p> <p>VALUES:</p> <p>Use actual time The start of the interval is the time of the user's actual registration at a controller.</p> <p>Use fixed time The start of the interval is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 8:00 in the morning -> 08:00).</p> |
| Auto to | <p>The setting enables automatic recording of the interval ending (stop) based on the value of the setting.</p> <p>VALUES:</p> <p>Use actual time The end of the interval (stop) is the time of the user's actual registration at a controller.</p> |

| Settings | Description |
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| | <p>Use fixed time The end of the interval (stop) is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 16:00 in the afternoon -> 16:00).</p> <p>Example 1: Business interval The <i>Business</i> interval is defined from 8:00 to 16:00 and the <i>Auto to</i> setting is set to <i>Use fixed time</i> at 16:00. A user uses the functionality of the <i>Business interval</i> exit at 10:00 and does not return for the day. The system will automatically record the <i>Business</i> daily interval from 10:00 to 16:00 and set an exit event for the day at 16:00.</p> <p>Set day work time The end of the interval (stop) is set to when the daily work obligation is reached. The number of work hours is entered in the additional field next to the setting's window.</p> <p>Example 1: Business interval The <i>Business</i> interval is defined from 6:00 to 20:00 and the <i>Auto to</i> setting is set to <i>Set day work time</i> to 8 hours. A user arrives to work at 7:00, then registers an exit using the <i>Business interval</i> exit at 10:00 and does not return for the day. The system will automatically record the exit event for the day when the daily work obligation is reached, in this case at 15:00. If the user registers any private absences during the day the exit time is appropriately adjusted.</p> <p>Set work time to work obligation The end of the interval (stop) is set to when the daily work obligation is reached. The number additional work hours to be added to the work obligation is entered in the additional field next to the setting's window.</p> <p>Example 1: Business interval The <i>Business</i> interval is defined from 6:00 to 20:00 and the <i>Auto to</i> setting is set to <i>Set work time to work obligation</i> (which is 8 hours) and 1:00 additional hour. A user arrives to work at 7:00, then registers an exit using the <i>Business interval</i> exit at 10:00 and does not return for the day. The system will automatically record the exit event for the day after 9 work hours, in this case at 16:00. If the user registers any private absences during the day the exit time is appropriately adjusted.</p> |
| Add entry | <p>When enabled the system will add an entry event when a user registers at a controller.</p> <p>Example: Work preparation The <i>Work preparation</i> interval is defined from 5:00 to 7:00 and the <i>Add entry</i> setting is enabled. A worker comes to work at 6:30 and registers at a controller. He simultaneously registers an entry event and starts the <i>Work preparation</i> interval by registering. After arriving he needs an additional 10-20 minutes before actually starting his work. Once he is done with his work preparations, he registers again and ends the <i>Work preparation</i> interval.</p> |
| Add exit | <p>When enabled the system will add an exit event when a user registers at a controller.</p> <p>Example: End of work The interval <i>Work end</i> is defined from 15:00 do 17:00 and the <i>Add exit</i> setting is enabled. A worker registers the star of the <i>Work end</i> interval at 15:30. After registration, he needs an additional 10-20 minutes to change before actually leaving the workplace. When he has changed his clothes, he again registers at a controller and ends the <i>Work end</i> interval. When registering the end of the <i>Work end</i> interval he also registers an exit event for the day.</p> |
| Max | <p>Sets the maximum duration of an interval.</p> <p>ADDITIONAL SETTINGS:</p> <p>Max count The setting sets the maximum number of daily repetitions of a specific interval.</p> <p>Repeat lateness The setting enables the user's tardiness (excess of the maximum interval duration) to be summed up together for all interval repetitions. (If the setting is not enabled, the user will not be able to use a certain daily interval again, if he has already exceeded the maximum interval duration time. If the setting is enabled the user will be able to use all interval repetitions, even if he has already exceeded the maximum interval duration time. The user's tardiness (excess time) is recorded to the Late statistic (default setting) or any other interval set by the <i>Count interval excess into</i> setting.)</p> |

| Settings | Description |
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| | VALUES: |
| Sum duration | <p>All repetitions of the interval are summed up together. The maximum allowed duration of all interval repetitions is entered in the additional field next to the setting's window.</p> <p>Example: Lunch The Lunch interval is defined from 10:00 to 13:00, with the Max setting set to <i>Sum duration</i> and the Max count set to 3. A user can take a lunch break up to three times between the hours of 10:00 and 13:00 for the total duration of 30 minutes. If the user exceeds the maximum defined interval duration of 30 minutes, his tardiness (excess time) is recorded into the interval set by the <i>Count interval excess into</i> setting. If the interval for the excess is not specifically defined, the excess time will be recorded into the Late statistic. Once the user uses up all 30 minutes of the lunch break, he can not register another repetition of the lunch break, even if he has not yet used all the daily repetitions of the interval.</p> <p>If the Repeat lateness setting is enabled the user can always make three repetitions of his lunch break even if he has already exceeded the maximum duration time of the interval. The total sum of the user's tardiness for all repetitions is recorded into the interval set by the <i>Count interval excess into</i> setting. If the interval for the excess is not specifically defined, the excess time will be recorded into the Late statistic.</p> |
| Clear after each interval | <p>Each repetition of the interval is recorded separately. The maximum allowed duration of a single repetition of the interval is entered in the additional field next to the setting's window.</p> <p>Example: Cigarette break The Cigarette break is defined from 8:00 to 16:00, the Max setting is set to Clear after each interval and a maximum duration of 5 minutes with 3 repetitions. A user can take three cigarette brakes per day, each lasting up to 5 minutes. If a worker exceeds the 5-minute limit, his tardiness (excess time) is recorded into the interval set by the <i>Count interval excess into</i> setting. If the interval for the excess is not specifically defined, the excess time will be recorded into the Late statistic.</p> |
| Round down over work obligation | <p>When the duration of the interval is longer than the daily work obligation, the recorded work hours will be rounded down to the previous time period. The time period for rounding is entered in the additional field next to the setting's window (e.g. round down every 15 minutes -> 00:15).</p> <p>Example: The daily work obligation is set to 8 hours and the time period for rounding is set to 15 minutes. If a user exits the workplace after 8 hours and 15 minutes, the system will record 8 hours and 15 minutes of work hours. If a user exits the workplace after 8 hours and 50 minutes, the system will record 8 hours and 45 minutes of work hours.</p> |
| Round down | <p>The total interval duration will be rounded down to the set maximum interval duration. The maximum interval duration is entered in the additional field next to the setting's window (e.g. maximum interval duration is 15 minutes -> 00:15).</p> <p>Example: The time period for rounding is set to 15 minutes. If a user exits the workplace after 6 hours and 25 minutes, the system will record 6 hours and 15 minutes of work hours. If a user exits the workplace after 4 hours and 37 minutes, the system will record 4 hours and 30 minutes of work hours.</p> |
| Set day work time | <p>The duration of the interval is equal to the daily work obligation, which is entered in the additional field next to the setting's window.</p> <p>Example: Lunch - 1 hour Each worker is assigned a 1-hour lunch break each day. The first half hour is required by law and is included within work hours. The second half hour is set to record into the Private statistic. If a worker exceeds the combined duration of the lunch break (1 hour), his tardiness (excess time) is recorded into the Late statistic.</p> <p>The first half hour of the lunch break is defined by the Lunch interval, which records the time Worktime statistic. The <i>Max</i> setting for this interval is set to 00:30 (30 minutes) and the <i>Count interval excess into</i> setting is set to Lunch - private. The second half hour of the lunch break is defined by the Lunch - private interval. The <i>Max</i> setting for this interval is also set to 00:30 (30 minutes) and the <i>Count interval excess into</i> setting is set to Late.</p> |
| Set work time to work obligation | <p>The duration of the interval is equal to the daily work obligation (defined by the timetable settings), but a limited number of additional work hours can be added to the daily work obligation. The maximum number of additional work hours is entered in the additional field next to the setting's window.</p> |



| Settings | Description |
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| Count interval excess into | <p>This setting defines into which interval the user's tardiness (excess time) will be recorded. It is possible to choose any of the beforehand defined General purpose type intervals.</p> <p>Example: Lunch The Lunch interval is defined from 10:00 to 12:00. A user registers the start of his lunch break at 11:50 and does not return before the interval end at 12:00. The time from 12:00 to the user's return is recorded into the interval set by the <i>Count interval excess into</i> setting. This kind of interval settings are used when you want to specifically define the time when users can take their lunch break, and define when they must be present back at the workplace.</p> |
| Statistic | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are: - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0).</p> <p>Example: The Exit interval is defined from 17:00 to 22:00 and set to record the Business trip statistic. If the user registers an exit event during the duration of this interval his work day is concluded using the Business trip statistic.</p> <p>WARNING! If the statistic setting of an Exit interval is set to <i>Interval does not count for any statistic</i>, the default daily statistic will be used to record the work hours.</p> <p>WARNING! If the default daily statistic is Not present and an Entry event has been registered for the day, the <i>Worktime</i> statistic will be used at the end of the day.</p> <p>WARNING! If the default daily statistic has the Overwrite setting enabled (Settings -> Statistics ^[133] editor), the newly selected statistic in the interval settings will overwrite it. If the default daily statistic does not have the Overwrite setting enabled, the newly selected statistic will not be able to overwrite it.</p> |

10.3.1.2. Entry

The Entry interval type is used to record daily entry events, which mark the beginning of all umbrella intervals. The daily umbrella intervals always start with an Entry event and end with an Exit event. Umbrella intervals contain all registered daily intervals, such as lunch brakes or business and private exits. The Entry interval is usually used to record the start of a user's work hours, when that user has a classically defined fixed timetable, with only one entry per day.

Interval description
Fixed entry

Text
Fixed entry

From
00:00 + HH:mm

Valid from

Action

Interval type
Entry

Button (Edit)
Choose

To
06:00 + HH:mm

Valid till

Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Sunday
 Holiday Exclusive
 Restday Exclusive
 +1 day (night work)

Interval color
#000000

Start at
Use fixed time 06:00 +

Add interval after entry
Choose

Statistic
0001 Worktime

Cancel
Save

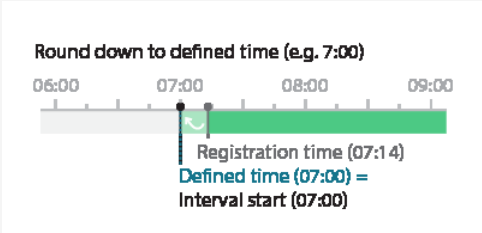
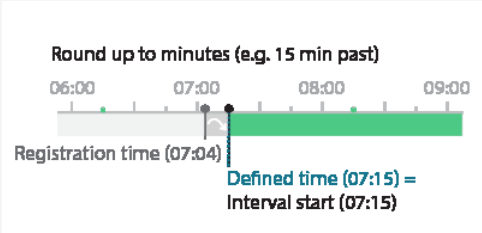
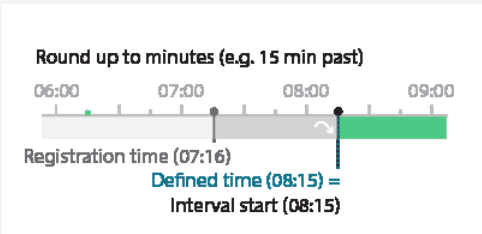
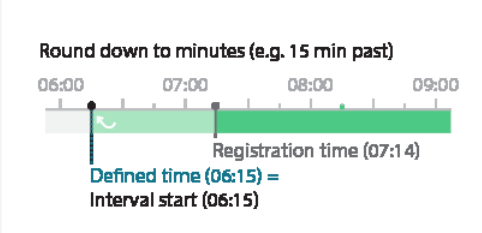
General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) ^[224]. The following table contains all setting specific to Entry type time intervals.

| Settings | Description |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons ^[267] . |
| Action | <p>Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage.</p> <p>VALUES:</p> <p>Open The doors will open (unlock) only for a few seconds.</p> <p>Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open.</p> <p>Unlock The doors will unlock and enable free passage.</p> <p>Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them.</p> <p>Enable This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> <p>Disable This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> <p>Unblock This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)).</p> <p>Disable PIN This action disables the function of entering a PIN number on the controller.</p> <p>Enable PIN This action enables the function of entering a PIN number on the controller.</p> <p>* Macro You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu.</p> <p>* The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros.</p> |
| Start at | <p>Sets the start time of an interval.</p> <p>VALUES:</p> <p>Use actual time The start of the interval is the time of the user's actual registration at a controller.</p> <p>Use fixed time The start of the interval is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 8:00 in the morning -> 08:00).</p> <p>Example: The Entry interval is defined from 7:00 to 9:00 and the <i>Start at</i> setting is set to <i>Use fixed time</i> with the value 8:00. If a user registers his entry anytime between 7:00 or 9:00, his work day will start recording from 8:00.</p> |



| Settings | Description |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Add minutes The start of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Add minutes (e.g. add 15 min)</p> <p style="font-size: small;">06:00 07:00 08:00 09:00</p> <p style="font-size: small;">Registration time (07:18) Interval start (07:33)</p> </div> <p>Example: A worker registers his daily entry, but still needs an additional 10 minutes to change his clothes before actually starting his work. The Entry interval for his arrival is defined from 7:00 to 8:00 and the <i>Start at</i> setting is set to <i>Add minutes</i> with a value of 00:10. If a user registers his daily entry at 7:30, the system will add an additional 10 minutes to the registered time and start the work day at 7:40.</p> |
| | <p>Subtract minutes The start of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Subtract minutes (e.g. subtract 15 min)</p> <p style="font-size: small;">06:00 07:00 08:00 09:00</p> <p style="font-size: small;">Registration time (07:18) Interval start (07:03)</p> </div> <p>Example: A cook in a restaurant registers his daily entry, but he has already spent at least 10 minutes changing his clothes before registering. The Entry interval for his arrival is defined from 7:00 to 8:00 and the <i>Start at</i> setting is set to <i>Subtract minutes</i> with a value of 00:10. If the cook registers his daily entry at 7:30, the system will subtract 10 minutes and start recording his work hours at 7:20.</p> |
| | <p>Round up time The start of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up time (e.g. with 15 min periods)</p> <p style="font-size: small;">06:00 07:00 08:00 09:00</p> <p style="font-size: small;">Registration time (07:18) Interval start (07:30)</p> </div> <p>Example: The <i>Round up time</i> setting is set to 00:15 minutes. If a worker comes to work at 7:47, the system will round up his arrival time and start recording his work hours at 8:00.</p> |

| Settings | Description |
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| | <p>Round down time The start of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15)</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> <p style="text-align: center;">Registration time (07:14) Interval start (07:00)</p> </div> <p>Example: The <i>Round down time</i> setting is set to 00:15 minutes. If a worker comes to work at 7:54, the system will round down his arrival time and start recording his work hours at 7:45.</p> |
| | <p>Round up to defined time The start of the interval is set to:</p> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up to defined time (e.g. 7:30)</p> <p style="text-align: center;">Registration time (07:18) Defined time (07:30) = Interval start (07:30)</p> </div> <p>- the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up to defined time (e.g. 7:00)</p> <p style="text-align: center;">Registration time (07:16) = Interval start (07:16) Defined time (07:00)</p> </div> <p>Example: The Entry interval is defined from 00:00 to 09:00 and the Round up to defined time is set to 08:00. If a user registers an entry event at 7:47, the system will round up the time and start recording the user's work hours at 8:00. If a user registers an entry event between 8:00 and 9:00, the system will start recording the user's work hours from the actual registration time.</p> <p>Round down to defined time The start of the interval is set to:</p> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down to defined time (e.g. 7:00)</p> <p style="text-align: center;">Registration time (06:46) = Interval start (06:46) Defined time (07:00)</p> </div> |

| Settings | Description |
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| | <p>- a defined fixed time, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p>Example: A worker arrives to work at 7:00. After arriving he needs an additional 10 minutes to prepare, before actually starting his work. The Entry interval for his arrival is defined using the <i>Add interval after entry</i> setting, which is set to the interval <i>Preparations</i> and the duration of the interval set till 7:10.</p> |
| <p>Round up to minutes</p> | <p>The start of the interval is rounded to a defined number of minutes past a full hour:</p> <ul style="list-style-type: none"> - the start time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.  <ul style="list-style-type: none"> - the start time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.  <p>Example: The company uses several work shifts that start at different times of the day, but all shifts start 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i> the company would need a large number of time intervals, set to start at 15 minutes past different hours, to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number to a single interval, that will round up the interval start to 15 minutes past the appropriate full hour.</p> |
| <p>Round down to minutes</p> | <p>The start of the interval is rounded to a defined number of minutes past a full hour:</p> <ul style="list-style-type: none"> - the start time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.  |

| Settings | Description |
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| | <p>- the start time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="text-align: center;"> <p>Round down to minutes (e.g. 15 min past)</p> <p>Registration time (07:28) Defined time (07:15) = Interval start (07:15)</p> </div> |
| <p>Add interval after entry</p> | <p>Enables an interval to be automatically added in the umbrella daily interval when registering an entry event. It is possible to choose any of the beforehand defined General purpose type intervals. The duration of the added interval is entered in the additional field next to the setting's window.</p> <p>Example: A worker arrives at 7:00, but needs an additional 10 minutes to get ready, before he actually starts his work. For the Entry interval the <i>Add interval after entry</i> setting is set to the General purpose interval <i>Preparations</i> and in the additional field next to the setting's window the end time of the added interval is set to 7:10.</p> |
| <p>Statistics</p> | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

10.3.1.3. Exit

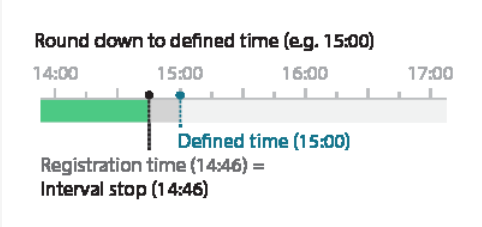
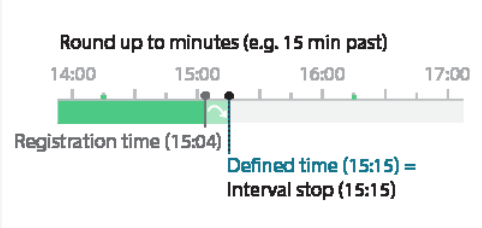
The Exit interval type is used to record daily exit events, which mark the endings of all umbrella intervals. The daily umbrella intervals always start with an entry event and end with an exit event. Umbrella intervals contain all registered daily intervals, such as lunch brakes or business and private exits. The Exit interval is usually used to record the end of a user's work hours, when that user has a classically defined fixed timetable, with only one entry and exit per day.

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Exit type time intervals.

| Settings | Description |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons [267]. |
| Action | Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage. VALUES: Open The doors will open (unlock) only for a few seconds. Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open. Unlock The doors will unlock and enable free passage. Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them. Enable This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) Disable This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) |

| Settings | Description |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Unblock This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)).</p> <p>Disable PIN This action disables the function of entering a PIN number on the controller.</p> <p>Enable PIN This action enables the function of entering a PIN number on the controller.</p> <p>* Macro You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu.</p> <p>* The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros.</p> |
| Stop at | <p>Sets the end time of an interval.</p> <p>VALUES:</p> <p>Use actual time The end of the interval (stop) is the time of the user's actual registration at a controller.</p> <p>Use fixed time The end of the interval (stop) is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 16:00 in the afternoon -> 16:00).</p> <p>Example: The Exit interval is defined from 16:00 to 18:00 with the <i>Stop at</i> setting set to <i>Use fixed time</i>. If a user registers an exit event anytime during this interval, the system will record the user's exit at 16:00.</p> <p>Add minutes The end of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15).</p> <div> <p style="text-align: center;">Add minutes (e.g. add 15 min)</p> <p style="text-align: center;">14:00 15:00 16:00 17:00</p> <p style="text-align: center;">Registration time (15:18) Interval stop (15:33)</p> </div> <p>Example: A worker registers his daily exit from the workplace, but still needs an additional 10 minutes to change his clothes before actually leaving the workplace. The exit interval for his departure is defined from 16:00 to 18:00 and the <i>Stop at</i> setting is set to <i>Add minutes</i> with a value of 00:10. If a user registers his daily exit at 15:30, the system will add an additional 10 minutes to the registered time and conclude the work day at 15:40.</p> <p>Subtract minutes The end of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15).</p> <div> <p style="text-align: center;">Subtract minutes (e.g. subtract 15 min)</p> <p style="text-align: center;">14:00 15:00 16:00 17:00</p> <p style="text-align: center;">Registration time (15:18) Interval stop (15:03)</p> </div> <p>Example: A cook in a restaurant registers his daily exit when leaving the restaurant. Before the registration, he spent at least 10 minutes changing his clothes after concluding his work. The exit interval is defined from 16:00 to 18:00 and the <i>Stop at</i> setting is set to <i>Subtract minutes</i> with a value of 00:10. If the cook registers his daily exit at 16:30, the system will subtract 10 minutes from his workday and conclude the day at 16:20.</p> |

| Settings | Description |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round up time The end of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15).</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up time (e.g. with 15 min periods)</p> </div> <p>Example: The setting <i>Round up time</i> is set to 00:15 minutes. If a worker leaves the workplace at 15:48 the system will round up the time and conclude his workday at 16:00.</p> |
| | <p>Round down time The end of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15)</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> </div> <p>Example: The setting <i>Round down time</i> is set to 00:15 minutes. If a worker registers an exit event at 15:54, the system will round down his workday to 15:45.</p> |
| | <p>Round up to defined time The end of the interval is set to:</p> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up to defined time (e.g. 15:30)</p> </div> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round up to defined time (e.g. 15:00)</p> </div> <p>Example: The setting <i>Round up to defined time</i> is set to 15:00. If a worker registers his daily exit at 14:47, the system will conclude his workday at 15:00. But if a worker registers his exit event anytime after 15:00, the system will conclude his workday at the time of his actual registration.</p> |

| Settings | Description |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round down to defined time</p> <p>The end of the interval is set to:</p> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.  <p>Round down to defined time (e.g. 15:00)</p> <p>Registration time (15:14) Defined time (15:00) = Interval stop (15:00)</p> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window. |
| | <p>Round up to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour:</p> <ul style="list-style-type: none"> - the end time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.  <p>Round up to minutes (e.g. 15 min past)</p> <p>Registration time (15:16) Defined time (16:15) = Interval stop (16:15)</p> <ul style="list-style-type: none"> - the end time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window. <p>Example:</p> <p>The company uses several work shifts that start and consequently end at different times of the day, but all the shifts start and end 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i> the company would need a large number of time intervals in order to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number of exit intervals to a single interval, that will round up the interval end to 15 minutes past the appropriate full hour.</p> |

| Settings | Description |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round down to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour: - the end time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="text-align: center;">Registration time (16:14)</p> <p style="text-align: center;">Defined time (15:15) = Interval stop (15:15)</p> </div> <p>- the end time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="text-align: center;">Registration time (15:28)</p> <p style="text-align: center;">Defined time (15:15) = Interval stop (15:15)</p> </div> |
| <p>Add interval before exit</p> | <p>Enables an interval to be automatically added before the end of the umbrella daily interval when registering an exit event. It is possible to choose any of the beforehand defined General purpose type intervals. The duration of the added interval is entered in the additional field next to the setting's window.</p> <p>Example: A worker concludes his work at 15:00, but needs an additional 10 minutes to change his clothes, before he leaves the workplace. For the Exit interval, the <i>Add interval before exit</i> setting is set to the General purpose interval <i>Preparations</i> and in the additional field next to the setting's window the end time of the added interval is set to 15:10.</p> |
| <p>Max</p> | <p>Sets the maximum duration of an interval.</p> <p>ADDITIONAL SETTINGS:</p> <p>Max count The setting sets the maximum number of daily repetitions of a specific interval.</p> <p>VALUES:</p> <p>Sum duration All repetitions of the interval are summed up together. The maximum allowed duration of all interval repetitions is entered in the additional field next to the setting's window.</p> <p>Clear after each interval Each repetition of the interval is recorded separately. The maximum allowed duration of a single repetition of the interval is entered in the additional field next to the setting's window.</p> <p>Round down over work obligation When the duration of the interval is longer than the daily work obligation, the recorded work hours will be rounded down to the previous time period. The time period for rounding is entered in the additional field next to the setting's window (e.g. round down every 15 minutes -> 00:15).</p> <p>Example: The daily work obligation is 8 hours and the <i>Max</i> setting is set to <i>Round down over work obligation</i> with the value 00:15. If a worker registers his daily exit event after 8 hours and 25 minutes, the system will round down his work hours to 8 hours and 15 minutes. If a worker registers his daily exit event after 8 hours and 56 minutes, the system will round down his work hours to 8 hours and 45 minutes.</p> <p>Round down The total interval duration will be rounded down to the set maximum interval duration. The maximum interval duration is entered in the additional field next to the setting's window (e.g. maximum interval duration is 15 minutes -> 00:15).</p> <p>Example: The <i>Max</i> setting is set to <i>Round down</i> with a value of 00:15. If a user registers an exit event after 6 hours and 25 minutes, the system will round down his work hours to 6 hours and 15 minutes. If a user registers an exit event after 4 hours and 37 minutes, the system will round down his work hours to 4 hours and 30 minutes.</p> |

| Settings | Description |
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| | <p>Set day work time The duration of the interval is equal to the daily work obligation, which is entered in the additional field next to the setting's window.</p> <p>Example 1: The <i>Max</i> setting is set to 08:00. If a worker works less than 8 hours, the system will record his actual number of work hours. If a worker works more than 8 hours, the system will only record 8 work hours and no more.</p> <p>Example 2: Overtime The <i>Max</i> setting is set to 08:00 and the <i>Add interval before exit</i> setting is set to the <i>Overtime</i> interval. If a user works less than 8 hours, the system will record his actual number of work hours. If a worker works more than 8 hours, the excess time will be recorded into the Overtime interval.</p> <p>Set work time to work obligation The duration of the interval is equal to the daily work obligation (defined by the timetable settings), but a limited number of additional work hours can be added to the daily work obligation. The maximum number of additional work hours is entered in the additional field next to the setting's window.</p> <p>Example 1: The daily work obligation is 8 hours and the <i>Max</i> setting is set to <i>Set work time to work obligation</i> with 1 additional work hour. If a worker works less than 9 hours, the system will record his actual number of work hours. If a worker works more than 9 hours, the system will only record 9 work hours and no more.</p> <p>Example 2: Overtime The set daily work obligation is 8 hours, the <i>Max</i> setting is set to <i>Set work time to work obligation</i> with 1 additional work hour, and the <i>Add interval before exit</i> is set to the <i>Overtime</i> interval. If a user works less than 9 hours, the system will record his actual number of work hours. If a worker works more than 9 hours, the excess time will be recorded into the Overtime interval.</p> <p>An additional criteria can be set to disable recording of overtime hours before 16:00. In the additional field next to the <i>Add interval before exit</i> the value 16:00 is entered. If a worker now works more than 9 hours but registers his daily exit before 16:00, the excess time will not be recorded, neither into the worker's work hours nor as overtime hours. If a worker works more than 9 hours and registers his daily exit after 16:00, the excess time will be recorded into the Overtime interval.</p> |
| Statistics | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). <p>Example: The Exit interval is defined from 17:00 to 22:00 and set to record the Business trip statistic. If the user registers an exit event during the duration of this interval his work day is concluded using the Business trip statistic.</p> <p>WARNING! If the statistic setting of an Exit interval is set to <i>Interval does not count for any statistic</i>, the default daily statistic will be used to record the work hours.</p> <p>WARNING! If the default daily statistic is Not present and an Entry event has been registered for the day, the <i>Worktime</i> statistic will be used at the end of the day.</p> <p>WARNING! If the default daily statistic has the Overwrite setting enabled (Settings -> Statistics ¹³³ editor), the newly selected statistic in the interval settings will overwrite it. If the default daily statistic does not have the Overwrite setting enabled, the newly selected statistic will not be able to overwrite it.</p> |



10.3.1.4. Entry / Exit


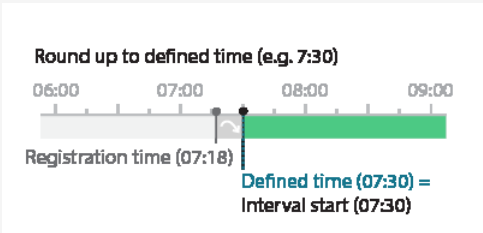
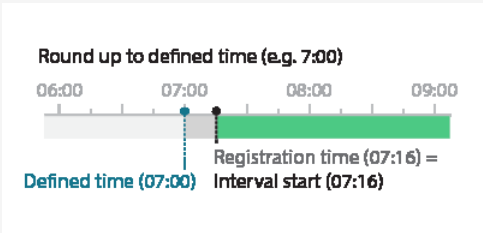
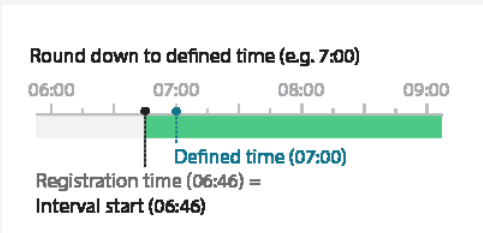
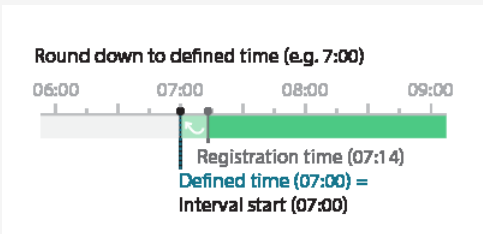
The Entry/Exit interval type is used to record entry events, which are the start of all umbrella intervals, as well as exit events, which are the end of all umbrella intervals. The Entry/Exit interval is usually used to record the start and end of a user's work hours, when that user has a flexibly defined timetable, with multiple entries and exits per day. The daily umbrella intervals always start with an entry event and end with an exit event. Umbrella intervals contain all registered daily intervals, such as lunch brakes or business and private exits.

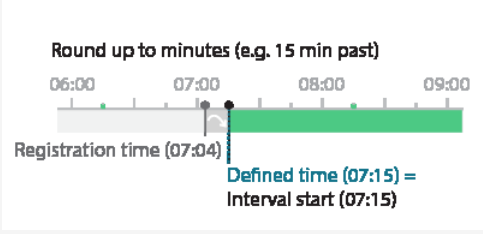

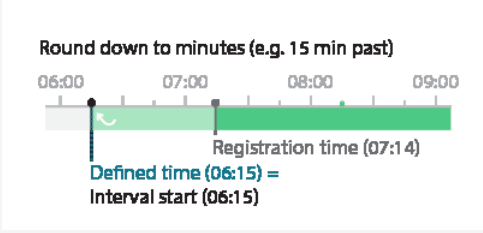
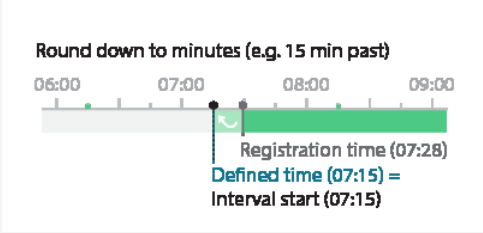
General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Entry/Exit type intervals.

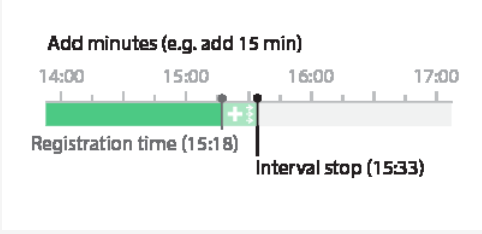
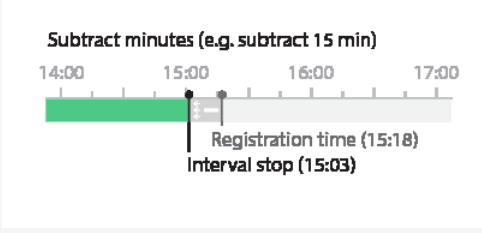
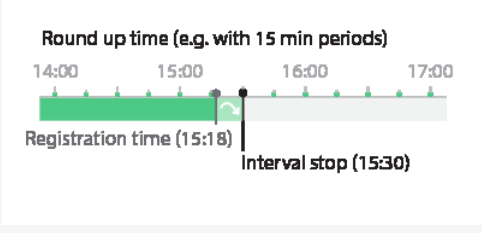

| Settings | Description |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons [267]. |
| Action | Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage. VALUES: Open The doors will open (unlock) only for a few seconds. Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open. Unlock The doors will unlock and enable free passage. Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them. Enable This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) |

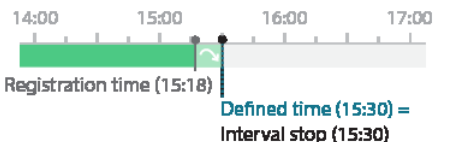



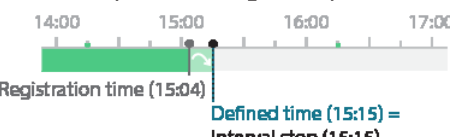
| Settings | Description |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Disable This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> <p>Unblock This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)).</p> <p>Disable PIN This action disables the function of entering a PIN number on the controller.</p> <p>Enable PIN This action enables the function of entering a PIN number on the controller.</p> <p>* Macro You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu.</p> <p>* The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros.</p> |
| Start at | <p>Sets the start time of an interval.</p> <p>VALUES:</p> <p>Use actual time The start of the interval is the time of the user's actual registration at a controller.</p> <p>Use fixed time The start of the interval is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 8:00 in the morning -> 08:00).</p> <p>Add minutes The start of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15).</p> <div> <p>Add minutes (e.g. add 15 min)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18) Interval start (07:33)</p> </div> <p>Subtract minutes The start of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15).</p> <div> <p>Subtract minutes (e.g. subtract 15 min)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18) Interval start (07:03)</p> </div> <p>Round up time The start of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15).</p> <div> <p>Round up time (e.g. with 15 min periods)</p> <p>06:00 07:00 08:00 09:00</p> <p>Registration time (07:18) Interval start (07:30)</p> </div> |



| Settings | Description |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round down time The start of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15)</p>  <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:14) Interval start (07:00)</p> |
| | <p>Round up to defined time The start of the interval is set to: - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round up to defined time (e.g. 7:30)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:18) Defined time (07:30) = Interval start (07:30)</p> |
| | <p>- the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round up to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:16) = Defined time (07:00) = Interval start (07:16)</p> |
| | <p>Round down to defined time The start of the interval is set to: - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round down to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (06:46) = Defined time (07:00) Interval start (06:46)</p> |
| | <p>- a defined fixed time, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window.</p>  <p style="text-align: center;">Round down to defined time (e.g. 7:00)</p> <p style="text-align: center;">06:00 07:00 08:00 09:00</p> <p style="text-align: center;">Registration time (07:14) Defined time (07:00) = Interval start (07:00)</p> |

| Settings | Description |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round up to minutes</p> <p>The start of the interval is rounded to a defined number of minutes past a full hour: - the start time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round up to minutes (e.g. 15 min past)</p> <p>Registration time (07:04) Defined time (07:15) = Interval start (07:15)</p> <p>- the start time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round up to minutes (e.g. 15 min past)</p> <p>Registration time (07:16) Defined time (08:15) = Interval start (08:15)</p> <p>Example: The company uses several work shifts that start at different times of the day, but all shifts start 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i> the company would need a large number of time intervals, set to start at 15 minutes past different hours, to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number to a single interval, that will round up the interval start to 15 minutes past the appropriate full hour.</p> <p>Round down to minutes</p> <p>The start of the interval is rounded to a defined number of minutes past a full hour: - the start time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round down to minutes (e.g. 15 min past)</p> <p>Registration time (07:14) Defined time (06:15) = Interval start (06:15)</p> <p>- the start time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p>  <p>Round down to minutes (e.g. 15 min past)</p> <p>Registration time (07:28) Defined time (07:15) = Interval start (07:15)</p> |
| Add interval after entry | Enables an interval to be automatically added in the umbrella daily interval when registering an entry event. It is possible to choose any of the beforehand defined General purpose type intervals. The duration of the added interval is entered in the additional field next to the setting's window. |

| Settings | Description |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stop at | Sets the end time of an interval. |
| VALUES: | |
| Use actual time | The end of the interval (stop) is the time of the user's actual registration at a controller. |
| Use fixed time | The end of the interval (stop) is set to a defined fixed time. The fixed time is entered in the additional field next to the setting's window (e.g. fixed time at 16:00 in the afternoon -> 16:00). |
| Add minutes | The end of the interval is set to the time of the user's registration with an added number of additional minutes. The number of minutes that is added to the registration time is entered in the additional field next to the setting's window (e.g. add 15 minutes -> 00:15). |
| |  <p style="text-align: center;">Add minutes (e.g. add 15 min)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:18) Interval stop (15:33)</p> |
| Subtract minutes | The end of the interval is set to the time of the user's registration minus a defined number of minutes. The number of minutes that is subtracted from the registration time is entered in the additional field next to the setting's window (e.g. subtract 15 minutes -> 00:15). |
| |  <p style="text-align: center;">Subtract minutes (e.g. subtract 15 min)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:18) Interval stop (15:03)</p> |
| Round up time | The end of the interval is rounded up to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round up with 15 minute time periods -> 00:15). |
| |  <p style="text-align: center;">Round up time (e.g. with 15 min periods)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:18) Interval stop (15:30)</p> |
| Round down time | The end of the interval is rounded down to the next set time period. The defined time period is entered in the additional field next to the setting's window (e.g. round down with 15 minute time periods -> 00:15) |
| |  <p style="text-align: center;">Round down time (e.g. with 15 min periods)</p> <p>14:00 15:00 16:00 17:00</p> <p>Registration time (15:14) Interval stop (15:00)</p> |

| Settings | Description |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round up to defined time</p> <p>The end of the interval is set to:</p> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Round up to defined time (e.g. 15:30)</p>  <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:18) Defined time (15:30) = Interval stop (15:30)</p> </div> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">Round up to defined time (e.g. 15:00)</p>  <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Defined time (15:00) Registration time (15:16) = Interval stop (15:16)</p> </div> |
| | <p>Round down to defined time</p> <p>The end of the interval is set to:</p> <ul style="list-style-type: none"> - the time of the user's actual registration, if the user's registration was made before the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Round down to defined time (e.g. 15:00)</p>  <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (14:46) = Interval stop (14:46) Defined time (15:00)</p> </div> <ul style="list-style-type: none"> - a defined fixed time, if the user's registration was made after the defined fixed time. The fixed time is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">Round down to defined time (e.g. 15:00)</p>  <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:14) Defined time (15:00) = Interval stop (15:00)</p> </div> |
| | <p>Round up to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour:</p> <ul style="list-style-type: none"> - the end time is rounded to a defined number of minutes past the current full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window. <div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">Round up to minutes (e.g. 15 min past)</p>  <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: x-small;">Registration time (15:04) Defined time (15:15) = Interval stop (15:15)</p> </div> |

| Settings | Description |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>- the end time is rounded to a defined number of minutes past the next full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Round up to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (15:16)</p> <p style="font-size: small; color: blue;">Defined time (16:15) =</p> <p style="font-size: small; color: blue;">Interval stop (16:15)</p> </div> <p>Example: The company uses several work shifts that start and consequently end at different times of the day, but all the shifts start and end 15 minutes past a full hour. Without the functionality of the <i>Round up to minutes</i> the company would need a large number of time intervals in order to set up their timetable system. With the <i>Round up to minutes</i> functionality they can reduce the number of exit intervals to a single interval, that will round up the interval end to 15 minutes past the appropriate full hour.</p> <p>Round down to minutes</p> <p>The end of the interval is rounded to a defined number of minutes past a full hour: - the end time is rounded to a defined number of minutes past the previous full hour if the user has registered before the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (16:14)</p> <p style="font-size: small; color: blue;">Defined time (15:15) =</p> <p style="font-size: small; color: blue;">Interval stop (15:15)</p> </div> <p>- the end time is rounded to a defined number of minutes past the current full hour if the user has registered after the defined number of minutes past the current full hour. The defined number of minutes is entered in the additional field next to the setting's window.</p> <div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: center;">Round down to minutes (e.g. 15 min past)</p> <p style="font-size: small;">14:00 15:00 16:00 17:00</p> <p style="font-size: small;">Registration time (15:28)</p> <p style="font-size: small; color: blue;">Defined time (15:15) =</p> <p style="font-size: small; color: blue;">Interval stop (15:15)</p> </div> |
| Add interval before exit | Enables an interval to be automatically added before the end of the umbrella daily interval, when registering an exit event. It is possible to choose any of the beforehand defined General purpose type intervals. The duration of the added interval is entered in the additional field next to the setting's window. |
| Max | <p>Sets the maximum duration of an interval.</p> <p>ADDITIONAL SETTINGS:</p> <p>Max count The setting sets the maximum number of daily repetitions of a specific interval.</p> <p>VALUES:</p> <p>Sum duration All repetitions of the interval are summed up together. The maximum allowed duration of all interval repetitions is entered in the additional field next to the setting's window.</p> <p>Clear after each interval Each repetition of the interval is recorded separately. The maximum allowed duration of a single repetition of the interval is entered in the additional field next to the setting's window.</p> <p>Round down over work obligation When the duration of the interval is longer than the daily work obligation, the recorded work hours will be rounded down to the previous time period. The time period for rounding is entered in the additional field next to the setting's window (e.g. round down every 15 minutes -> 00:15).</p> |

| Settings | Description |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>Round down The total interval duration will be rounded down to the set maximum interval duration. The maximum interval duration is entered in the additional field next to the setting's window (e.g. maximum interval duration is 15 minutes -> 00:15).</p> <p>Set day work time The duration of the interval is equal to the daily work obligation, which is entered in the additional field next to the setting's window.</p> <p>Set work time to work obligation The duration of the interval is equal to the daily work obligation (defined by the timetable settings), but a limited number of additional work hours can be added to the daily work obligation. The maximum number of additional work hours is entered in the additional field next to the setting's window.</p> |
| Statistic | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

10.3.1.5. Access

Access intervals define when a user will be able to access a specific passage and what kind of action will be performed, depending on the time of day or week.

Access intervals are used in the Codeks TA application as well as in the Codeks AC application. They define access permits and enable access control, however, they do not enable daily event recording or statistics recording.

Interval description:

Interval type:

Text:

From: HH:mm

To: HH:mm

Valid from:

Valid till:

Action:

Monday
 Tuesday
 Wednesday
 Thursday
 Friday
 Saturday
 Sunday
 Holiday Exclusive
 Restday Exclusive
 +1 day (night work)

Interval color:

| Settings | Description |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action | <p>Sets the action, that will be carried out, when a user registers at a passage, during the duration of a specific interval. The set action will substitute any existing actions set by group rights at the same passages. Action are used, when different actions must be performed at different times at the same passage.</p> <p>VALUES:</p> <p>Open The doors will open (unlock) only for a few seconds.</p> <p>Lock The doors will lock and any further passage will only be enabled by registering at the controller. This action is used in combination with the action Open.</p> <p>Unlock The doors will unlock and enable free passage.</p> <p>Toggle This action toggles the current status of the door: - if the doors were unlocked, this action locks them, - if the doors were locked, this action unlocks them.</p> <p>Enable This action unblocks a blocked reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.)</p> |



| Settings | Description |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disable | This action blocks a reader. (If the reader is blocked, no actions or functions will be performed, when a user registers at the controller.) |
| Unblock | This action unblocks a reader only for a specific number of seconds. The time is set in the Hardware editor (Reader settings -> Times tab -> Reader unblock time (sec)). |
| Disable PIN | This action disables the function of entering a PIN number on the controller. |
| Enable PIN | This action enables the function of entering a PIN number on the controller. |
| * Macro | You can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu. * The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter Macros. |

10.3.1.6. Info

The Info type interval is used to enable the additional functionality of displaying the user's data (presence, saldo and available leave days) on the controller.

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Info type time intervals.

| Settings | Description |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Buttton | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons [267]. |

Use of Info functionality:

1. To display the user's information on the controller a user must first select the appropriate Info button.
2. After selecting the Info button, the user proceeds by registering at the controller.
3. The controller will display the user's presence status, saldo and his currently available leave days.

Read more about settings and the use of buttons for event registration in chapter [Edit Buttons](#) [267].

10.3.1.7. Cancel

The Cancel interval enables the additional functionality of cancelling the last registered event on the controller. The functionality of the Cancel interval is used, when a user registers an incorrect event at the controller, e.g. the user selected the Business instead of the Private button.

| | | |
|---------------------------------------------------------------------------|-----------------------------|-----------------------------------------------|
| Interval description Cancel | Interval type Cancel | <input checked="" type="checkbox"/> Monday |
| Text Cancel | Button (Edit) 9 - Cancel | <input checked="" type="checkbox"/> Tuesday |
| From 00:00 + HH:mm | To 23:59 + HH:mm | <input checked="" type="checkbox"/> Wednesday |
| Valid from | Valid till | <input checked="" type="checkbox"/> Thursday |
| | | <input checked="" type="checkbox"/> Friday |
| | | <input checked="" type="checkbox"/> Saturday |
| | | <input checked="" type="checkbox"/> Sunday |
| | | <input checked="" type="checkbox"/> Holiday |
| | | <input type="checkbox"/> Restday |
| | | <input type="checkbox"/> +1 day (night work) |
| | | Interval color #000000 |
| | | <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> Exclusive |
| <input type="button" value="Cancel"/> <input type="button" value="Save"/> | | |

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Cancel type time intervals.

| Settings | Description |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons [267]. |

Use of Cancel functionality on the controller:

ATTENTION!

A user can only use the Cancel functionality on the controller within 30 seconds of the incorrectly registered event. After the 30 seconds have expired the incorrectly registered event can no longer be cancelled using the controller and must instead be manually corrected in the Time attendance editor.

1. To cancel an incorrectly registered event on the controller a user must first select the appropriate Cancel button, assigned to the Cancel interval.
2. After selecting the Cancel button, the user proceeds by registering at the controller.
3. The controller will display a message that the last event was successfully cancelled.

Read more about settings and the use of buttons for event registration in chapter [Edit Buttons](#) [267].

10.3.1.8. Time cut

Time cut intervals do not record any daily intervals nor set additional functionalities to controllers. Their main feature is enabling the recording of users hours into different statistics depending on the time of day or week. Time cut intervals are used when the user's work hours must be recorded separately depending on when they were performed (e.g. when nightly overtime hours are paid differently than daily hours).

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Time cut type time intervals.

| Settings | Description |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Max | Sets the longest duration of an interval. |
| | ADDITIONAL SETTINGS: |
| Required percent of presence | The setting defines the minimum percent of the set interval duration the worker must be present at the workplace in order for his work hours to be recorded in the selected interval statistic. VALUES: |
| Sum duration | All repetitions of the interval are summed up together. The maximum allowed duration of all interval repetitions is entered in the additional field next to the setting's window. |
| Clear after each interval | Each repetition of the interval is recorded separately. The maximum allowed duration of a single repetition of the interval is entered in the additional field next to the setting's window. |
| Round down over work obligation | When the duration of the interval is longer than the daily work obligation, the recorded work hours will be rounded down to the previous time period. The time period for rounding is entered in the additional field next to the setting's window (e.g. round down every 15 minutes -> 00:15). |
| Round down | The total interval duration will be rounded down to the set maximum interval duration. The maximum interval duration is entered in the additional field next to the setting's window (e.g. maximum interval duration is 15 minutes -> 00:15). |
| Set day work time | The duration of the interval is equal to the daily work obligation, which is entered in the additional field next to the setting's window. |
| Set work time to work obligation | The duration of the interval is equal to the daily work obligation (defined by the timetable settings), but a limited number of additional work hours can be added to the daily work obligation. The maximum number of additional work hours is entered in the additional field next to the setting's window. |



| Settings | Description |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Statistics | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

Use of a Time cut interval type

The following example shows the use of time cut intervals:

Workers in a company are assigned to different shifts, which are paid differently depending on the time of day. Their work obligation is set by timetables for shifts (Shifts Add-on), but the number of hours each worker has done in the morning, afternoon and night still need to be separately recorded. These statistical data is recorded using Time cut interval types, which enable the workers' hours to be "cut up" and recorded separately depending on the set criteria.

1. First, three new Time cut intervals are created: morning work (from 6:00 to 14:00), afternoon work (from 14:00 to 22:00) and night work (from 22:00 to 6:00). The intervals are valid during weekdays and all have a set start and end time.
2. The Max setting is set to Sum duration and the maximum duration is set to 8 hours in the additional field next to the settings window. A worker 's hours are recorded in a specific Time cut interval, only if he has been present at the workplace at least 1 hour during the duration of the interval. The additional setting *Required percent of presence* is, thus, set to 12,5%.
3. Every time cut interval can record a worker's hours into a separate statistic. The *Statistics* setting can be set to any existing statistic or statistic designed especially for Time cut intervals. (Adding a new statistic is described in chapter [Add statistic](#)^[135].)
4. The Time cut intervals are set and can begin recording workers' work hours. The recorded data will not be shown in the List of events in the Time attendance editor, instead, the Time cut interval data will only be displayed in specific reports, which export the Time cut interval data.

10.3.1.9. Automatic

The Automatic interval type enables users to set their own statistic for period using a controller.

The statistic for period is usually set in the Time attendance editor of the Codeks application or by leave announces (using the additional application Codeks Leave Announces). However, the Automatic interval type enables a statistic for period to be set using a controller.

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Automatic type time intervals.

| Settings | Description |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons [267]. |
| Statistics | This setting sets which statistic the interval's duration and repetition will be recorded into. The default set statistics are: <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

Setting the daily statistic using a controller:

The functionality of the Automatic interval type is used to record daily statistics such as Leave or Sick leave. It is usually set the day before the start of the time period of the selected daily statistic.

1. Before registering the Exit event of the day, the user selects the appropriate button, which will enable the functionality of the Automatic interval.
2. After selecting the button, the user proceeds by registering at the controller. From this point on the selected daily statistic will be recorded automatically for the user every day.
3. The automatic recording of the daily statistic is cancelled the next time the user registers an Entry event, i.e. when he returns from leave or sick leave.

10.3.1.10. Automatic insert

The Automatic insert interval enables a specific interval to be automatically inserted into the daily umbrella interval. The interval is used when a specific daily event, such as a lunch break, is recorded at the same time each day. The automatic insert is only initialized if an Entry type event, which is the start of all daily umbrella events, has been registered beforehand.

| | | |
|--------------------------------------------|-----------------------------------|---------------------------------------------------------------------|
| Interval description Automatic interval | Interval type Automatic insert | <input checked="" type="checkbox"/> Monday |
| | | <input checked="" type="checkbox"/> Tuesday |
| | | <input checked="" type="checkbox"/> Wednesday |
| | | <input checked="" type="checkbox"/> Thursday |
| | | <input checked="" type="checkbox"/> Friday |
| | | <input type="checkbox"/> Saturday |
| | | <input type="checkbox"/> Sunday |
| | | <input type="checkbox"/> Holiday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> Restday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> +1 day (night work) |
| Text Automatic interval | | Interval color #000000 |
| From 12:00 + HH:mm | To 12:30 + HH:mm | |
| Valid from | Valid till | |
| Statistic Lun Lunch | | |
| Cancel | | Save |

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to automatic insert type time intervals.

| Settings | Description |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Statistics | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

10.3.1.11. Permit interval

The Permit interval can only be used with the additional ePermits application. The interval enables the use of a beforehand announced and confirmed permit, by adding a new functionality to the controller. Similar to the functionalities of daily intervals (chapter [General purpose](#)^[226]), the users usually access the functionality of Permit intervals by pressing the Permit button before registering at the controller.

| | | |
|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------|
| Interval description <input type="text" value="Permit - private"/> | Interval type <input type="text" value="Permit interval"/> | <input checked="" type="checkbox"/> Monday |
| Text <input type="text" value="Permit - private"/> | Button (Edit) <input type="text" value="Choose"/> | <input checked="" type="checkbox"/> Tuesday |
| From <input type="text" value="00:00"/> + HH.mm | To <input type="text" value="00:00"/> + HH.mm | <input checked="" type="checkbox"/> Wednesday |
| Valid from <input type="text"/> | Valid till <input type="text"/> | <input checked="" type="checkbox"/> Thursday |
| | | <input checked="" type="checkbox"/> Friday |
| | | <input type="checkbox"/> Saturday |
| | | <input type="checkbox"/> Sunday |
| | | <input type="checkbox"/> Holiday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> Restday <input type="checkbox"/> Exclusive |
| | | <input type="checkbox"/> +1 day (night work) |
| | | Interval color <input type="text" value="■"/> |

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#)^[224]. The following table contains all setting specific to Permit interval type.

| Settings | Description |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Button | A button can be assigned to interval types which enable adding a new functionality to controllers. A user accesses the functionality of the interval by selecting the appropriate button before registering at the controller. Read more about settings and the use of buttons for event registration in chapter Edit Buttons ^[267] . |

10.3.1.12. Standby interval

The Standby interval is used to record the time when a user is absent from the workplace and on standby (e.g. is on call duty or can be called in as a replacement). Unlike other types of intervals, the Standby interval already has a set time duration, which is reduced by the amount of time the user spends at the workplace. When a user is called to work and registers at a controller, the Standby interval stops being recorded and the user's presence at the workplace is recorded by another interval. The system resumes the recording of the Standby interval hours only after the user leaves the workplace and continues up until the end of the interval duration.

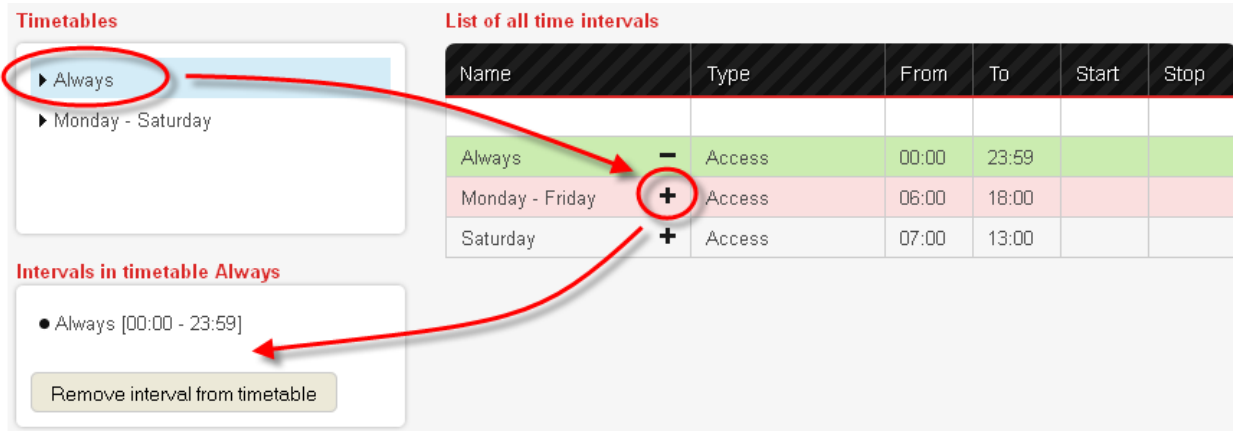
| | | |
|--------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------|
| Interval description <input type="text" value="Standby"/> | Interval type <input type="text" value="Standby interval"/> | <input type="checkbox"/> Monday |
| | | <input type="checkbox"/> Tuesday |
| | | <input type="checkbox"/> Wednesday |
| | | <input type="checkbox"/> Thursday |
| | | <input type="checkbox"/> Friday |
| | | <input checked="" type="checkbox"/> Saturday |
| | | <input checked="" type="checkbox"/> Sunday |
| | | <input checked="" type="checkbox"/> Holiday |
| | | <input type="checkbox"/> Restday |
| | | <input checked="" type="checkbox"/> +1 day (night work) |
| | | Interval color <input type="text" value=""/> |
| Text <input type="text" value="Standby"/> | | <input type="checkbox"/> Exclusive |
| From <input type="text" value="22:00"/> + HH:mm | To <input type="text" value="06:00"/> + HH:mm | <input type="checkbox"/> Exclusive |
| Valid from <input type="text" value="01.02.2017"/> | Valid till <input type="text" value=""/> | |
| Statistic <input type="text" value="--- Weekend"/> | | |
| <input type="button" value="Cancel"/> | <input type="button" value="Save"/> | |

General settings for the time intervals are described in chapter [Intervals for time registration \(Codeks TA\)](#) [224]. The following table contains all setting specific to Standby interval type.

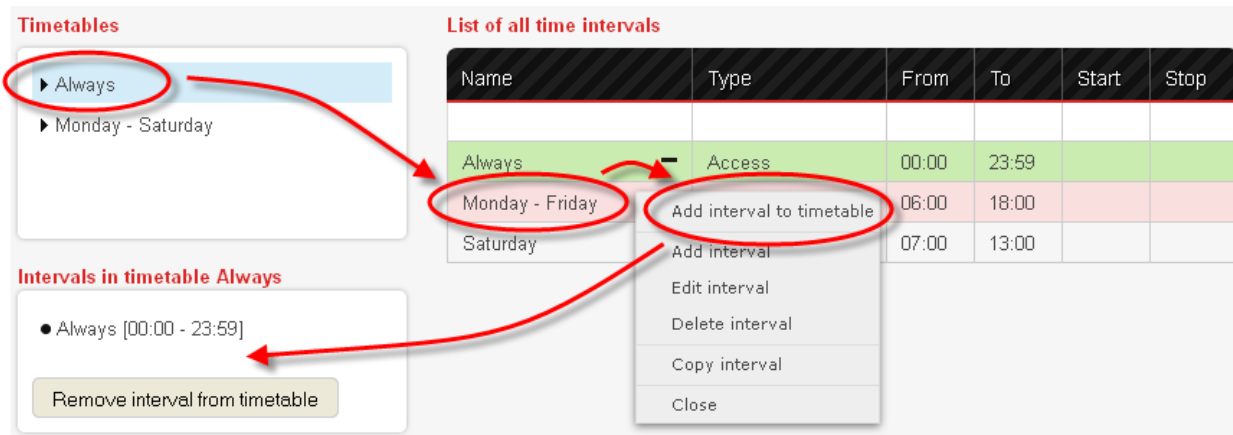
| Settings | Description |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Statistics | <p>This setting sets which statistic the interval's duration and repetition will be recorded into.</p> <p>The default set statistics are:</p> <ul style="list-style-type: none"> - <i>Holiday</i> for holidays, - <i>Weekend</i> for weekends, - <i>Not present</i> for work days (when work obligation is >0). |

10.3.2. Add Existing Time Interval

On the list of timetables select the timetable and click the *plus* icon (+) next to the time interval you wish to add to this timetable. Time interval will immediately appear on the List of intervals in the selected timetable.

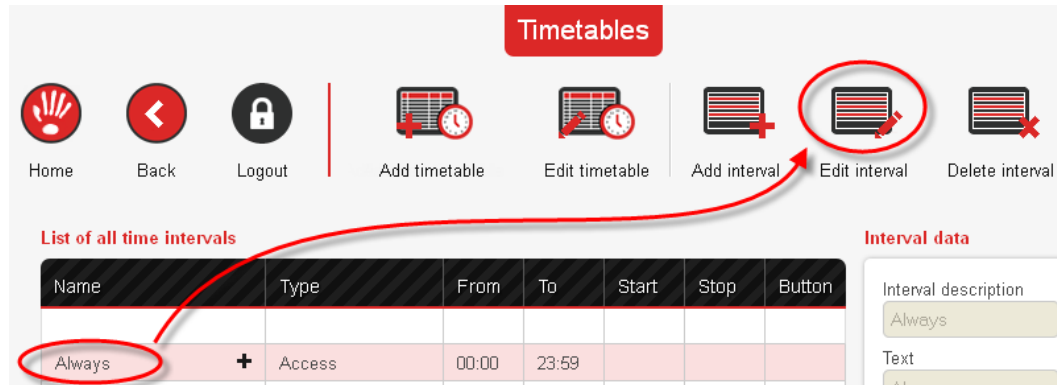


You can also add time interval to the timetable with right-click on time interval. First select the timetable, then right-click on the time interval you wish to add to the selected timetable and select option *Add interval to timetable*. Time interval will immediately appear on the List of intervals in the selected timetable. This option is shown in the picture on the next page.



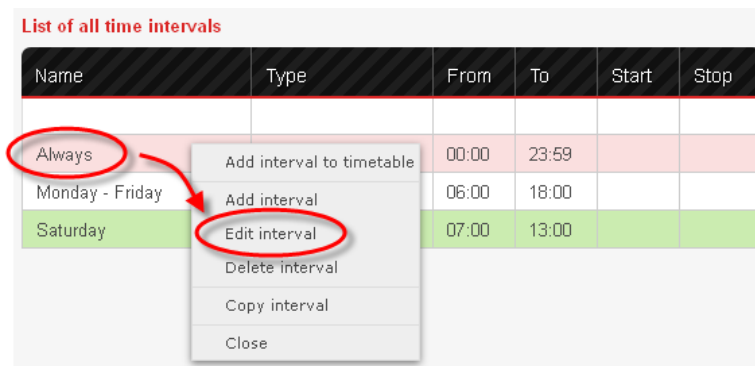
10.3.3. Edit Time Interval

If you want to edit time intervals, first select the time interval in the *List of all time intervals* table and click *Edit interval* icon in the upper menu.



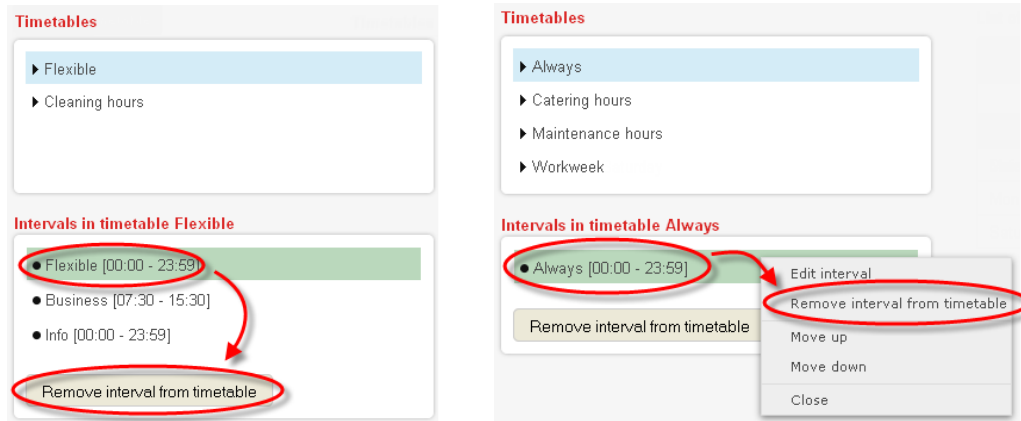
On the right side of the editor the *Interval data* window will enable. In this window you can edit interval's data. Window is the same as for [adding new intervals](#)^[222]. Change the data in accordance with need and save changes with the click on the *Save* button.

Window for editing interval data will also enable by double-clicking on a certain time interval or you can right-click on the time interval and select *Edit interval* option on the menu.



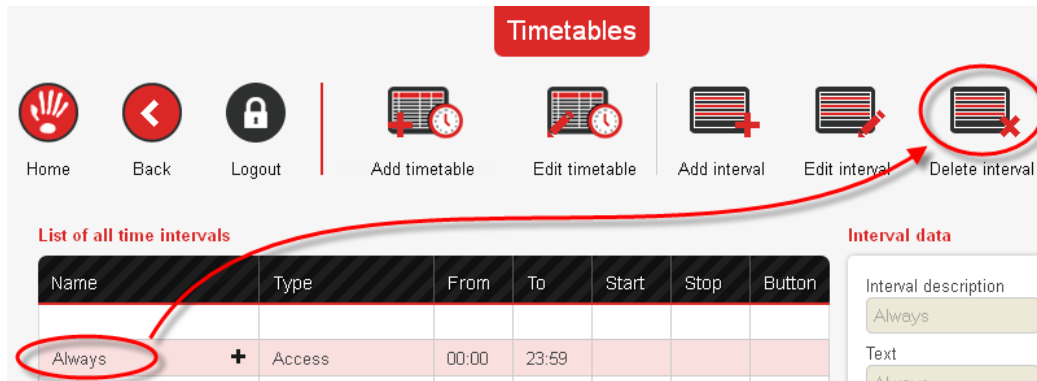
10.3.4. Remove Time Interval from Timetable

If you wish to remove a certain interval from the timetable, select the interval in the *Intervals in timetable* list and click *Remove interval from timetable* button, located at the bottom of the list. Interval will be removed from the timetable, but it will still be visible in the *All time intervals* list and can be used with other timetables. You can also remove interval from the timetable with a help of a menu. Right-click on the interval in the *Intervals in timetable* list and select the *Remove interval from timetable* option.

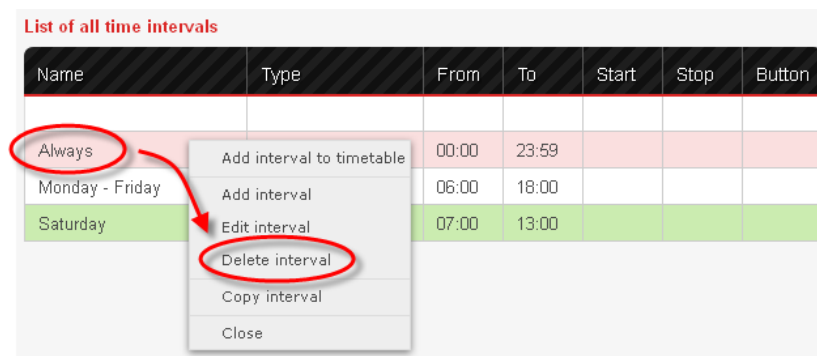


10.3.5. Delete Time Interval

If you want to delete time intervals, first select the time interval in the *List of all time intervals* table and click *Delete interval* icon in the upper menu. New window pops up in which you need to confirm deletion of the interval. If the time interval was assigned to one or more timetables, the application will inform you with a warning.

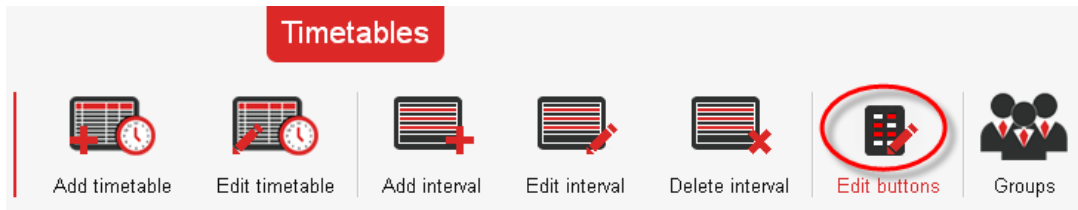


You can also right-click on the interval and select *Delete interval* option on the menu. Interval will be permanently deleted from the *List of all time intervals* table and you will not be able to use it anymore.

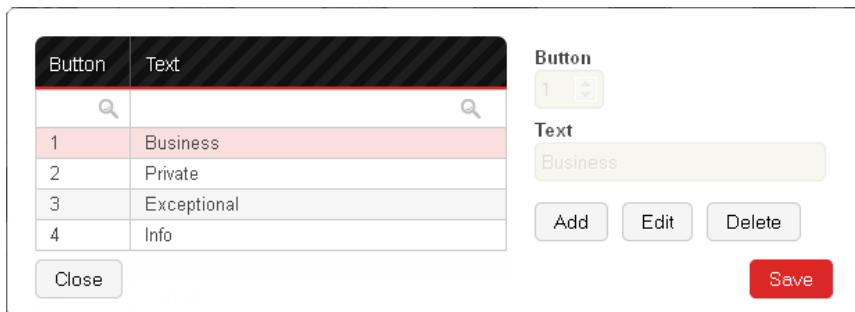


10.3.6. Codeks TA - Edit Buttons

With buttons you can determine the number that the user must press before registering on the controller in a certain interval. If you want to edit buttons select *Edit buttons* icon on the menu.



With buttons *Add*, *Edit* and *Delete* you can work with existing and new added buttons. Buttons which are used at a certain interval cannot be deleted.



10.3.7. Copy Time Interval

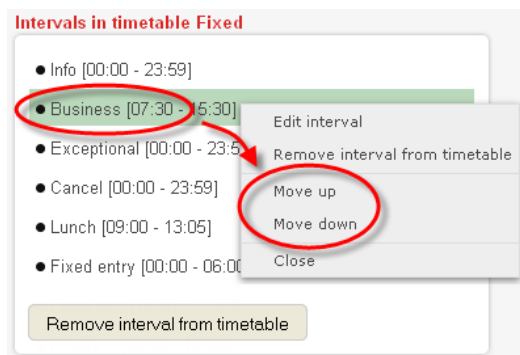
New interval can be added to the system by copying an existing one. To copy an existing interval, right-click on the interval and select *Copy interval* option on the menu. New interval takes the name of the copied interval and before the name text Copied is added (e.g. Copied-Business). You can change interval's data with [editing](#) ⁽²⁶⁵⁾ interval.

| Name | Type | From | To | Start | Stop | Button |
|----------------|------|--------|-------|-------|------|--------|
| Always Open | + | Access | 00:00 | 23:59 | | |
| Business | | Access | 07:30 | 15:30 | | 1 |
| Cancel | | Access | 00:00 | 23:59 | | 9 |
| Exceptional | | Access | 00:00 | 23:59 | | 3 |
| Fixed entry | | Access | 00:00 | 06:00 | | |
| Fixed exit | | Access | 16:00 | 23:59 | | |
| Flexible entry | | Access | 06:00 | 08:00 | | |

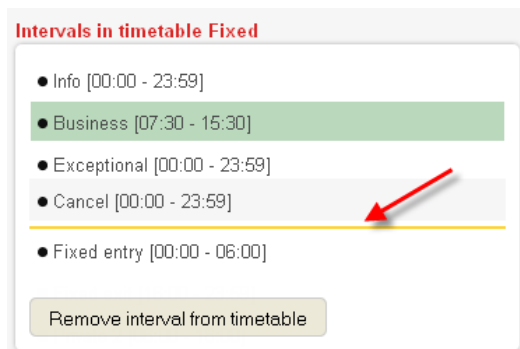
10.4. Intervals in Timetable

Intervals in a certain timetable determine times of arrivals to work, time for lunch, business hours ... Intervals can be moved up and down the list.

To move interval up or down the list, right-click on the interval and select wanted action on the menu.

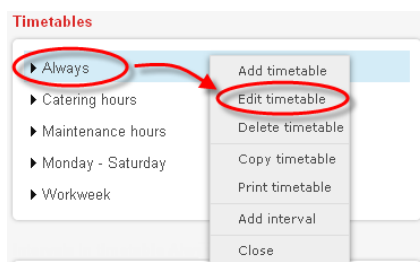


You can also use drag&drop to move intervals. Select the interval, drag it up or down the list and drop it into desired place. Yellow line marks the place of the drop.



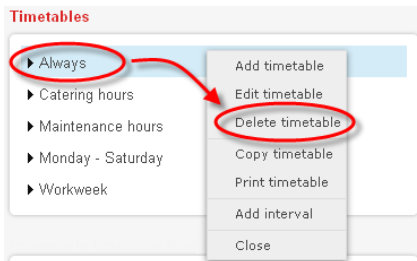
10.5. Edit Timetable

On the list of timetables select the timetable you wish to edit. Click the *Edit timetable* icon in the upper menu, edit timetable's name and save the changes. You can also edit the timetable with double click on it or through the menu which appears with the right-click on the timetable.



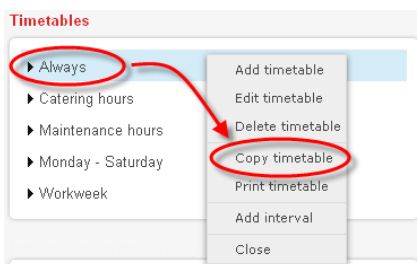
10.6. Delete Timetable

You can delete timetable in Timetables Editor. Right-click on the timetable you wish to delete and select *Delete timetable* option on the menu.



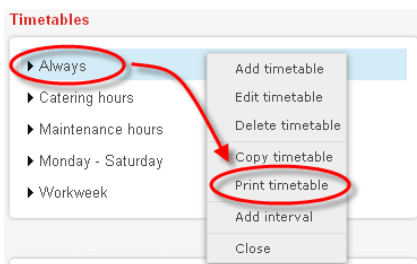
10.7. Copy Timetable

New timetable can be added to the system by copying an existing one. To copy an existing timetable, right-click on the timetable and select *Copy timetable* option on the menu. New timetable takes the name of the copied timetable and before the name text Copied is added (e.g. Copied-Flexible). You can change timetable's data with [editing](#) ^[268] timetable. You can [delete](#) ^[265] or [edit](#) ^[265] intervals in the timetable.



10.8. Print Timetable

In the Timetables Editor right-click on the timetable you wish to print and select *Print timetable* option.



This sends a request for PDF document with timetable's data to the server. In a few seconds the browser offers you to save or print PDF report. You can open document immediately or you can save it for further

use.

Picture below shows the appearance of printout.

| Monday - Saturday | |
|------------------------------------------------------------------------------|---------------------|
| ■ Access (Mon - Fri) 06:00 - 18:00 | Mon Tue Wed Thu Fri |
| ■ Access (Saturday) 07:00 - 13:00 | Sat |
| ■ Access (Maintenance hours) 10:00 - 14:00 | Mon Wed Fri |

ADDITIONAL for Codeks TA
 The next picture shows Timetable report from Codeks TA application.

| Timetable report | | Night work start | | 20:00 | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Hol |
|-------------------------------------------------------------------------------|----------|------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Flexible | | Night work end | | 12:00 | 08:00 | 08:00 | 08:00 | 08:00 | 08:00 | 00:00 | 00:00 | 08:00 |
| ■ Entry / Exit (Flexible) 00:00 - 23:59 | | | | | | | | | | | | |
| ■ General purpose (Business) 07:30 - 15:30 | Button 1 | | | | | | | | | | | |
| ■ Info 00:00 - 23:59 | Button 4 | | | | | | | | | | | |
| ■ Cancel 00:00 - 23:59 | Button 9 | | | | | | | | | | | |
| ■ Entry / Exit (Exceptional) 00:00 - 23:59 | Button 3 | | | | | | | | | | | |
| ■ General purpose (Private) 00:00 - 23:59 | Button 2 | | | | | | | | | | | |



Part

11

11. Users

Users Editor represents starting point for adding, editing and deleting users. Through Users Editor you can access [groups](#)^[297] and [company organization](#)^[287], make [user lists](#)^[292] and with [User report](#)^[295] print the list of selected users.

Users Editor window is divided into 3 parts. In the upper part of the Users Editor window are icons for editing users and access to groups and company organization. You can also create different lists of users and print user reports. Below the icons, on the left side of the Users Editor window is a frame with detailed data of the selected user. Left bottom side of the editor enables you to display the users according to lists or type of the card. On the right part of the editor window is the list of all users in the system and search fields for easier searching of the users.

ADDITIONAL for Codeks TA

Codeks TA has additional icon for accessing [Time attendance](#)^[48] in the upper menu.

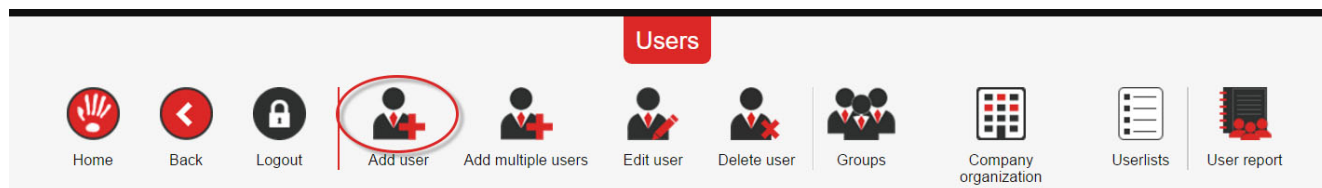
| Last name | Name | Personal ID | Card | Group | Department |
|-------------------|--------------|-------------|----------------------|---------------------|----------------------------------------------|
| _CleanServis | Čistika | 2000 | 15487963 | Čistilke, Čistik... | Čistilke |
| _Gost | Gost | 3218337 | Frontdesk No... | | |
| _Kartica za ključ | Emergency | 57864978 | Vsi ključ, Vsi kl... | | |
| _Pristop | Frontdesk | 500 | 11112222 | Frontdesk All n... | |
| _Replacement | _Replacement | | 12907972 | Frontdesk No... | |
| _Vsa vrata | Koda | 1000 | 2591 | Koda, Koda AC | |
| Adrovič | Tamara | 697 | 49978999 | Komerciala, Ko... | Podjetje/Direktor/Komerciala |
| Ahec | Jani | 578 | 11537548 | Terenci, Terenc... | Teren |
| Bajde | Ludvig | 975 | 95687485 | Terenci, Terenc... | Teren |
| Benkovič | Tilen | 127 | 78985124 | Dir... | Podjetje/Direktor/Programerji |
| Gregorič | Marija | 688 | 954678921 | Vo... | Podjetje/Direktor |
| Kamenkova | Nadja | 569 | 65897421 | Registracija 20... | Podjetje/Direktor/Proizvodnja/Testni oddelek |
| Korošec | Janez | 567 | 13898253 | Proizvodnja, Pr... | Podjetje/Direktor/Proizvodnja |
| Merkovič-Logar | Maja | 457 | 78513649 | Terenci, Terenc... | Teren |
| Oblak | Boris | 687 | 5373081 | Programerji, Pr... | Podjetje/Direktor/Programerji |
| Potokar | Peter | 698 | 97896541 | Programerji, Pr... | Podjetje/Direktor/Komerciala |
| Siokar | Sonja | 325 | 65487954 | Koda AC, Kom... | Podjetje/Direktor/Komerciala |
| Smolnik | Katarina | 693 | 9927510 | Registracija 20... | Teren |
| Zupan | Mark | 597 | 6975213 | Vodstvo, Vodst... | Teren |
| 222 | Ključ 1 | | 15478965 | | |
| 222 | Ključ 2 | | 57896458 | | |
| 222 | Ključ 3 | | 45660421 | | |

Users with expired card (Advanced Settings / Valid till) will color bright yellow on the list of users.

| | | | | |
|------|--------|------|---------|----------------|
| Ward | Silvia | 9433 | 5674433 | Administration |
|------|--------|------|---------|----------------|

11.1. Add User

You can add a new user to the application in Users Editor. Click the *Add user* icon.



A new window is opened where you can enter user's information.

Basic settings
Advanced settings
Additional cards

Biometric data

User

Name

Last name

Personal ID

Email

Groups Add group

Company organization Add organization unit

- ▶ Proizvodnja
 - ▶ Sestavljalni oddelek
 - ▶ Testni oddelek
- ▶ Teren
- ▶ Stranišče
- ▶ Čistilke

Card Read card

Allow card number input on keypad

PIN

Cancel
Save

| Basic settings | Description |
|----------------|-------------------------------------------------------------------------------------------|
| Name | User's name. |
| Last name | User's last name. |
| Personal ID | User's unique ID (e.g. social security number, personal VAT number, sequence number ...). |
| Email | User's email. |

| Basic settings | Description |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Groups | Groups, according to which the user is assigned a timetable and user access rights. ATTENTION! A user can only be assigned one <i>Time and attendance group</i> . The number of all other group types assigned to a single user is unlimited. You can read more about assigning groups and group types in chapter Groups ^[297] . ATTENTION! The order in which the groups are assigned to the user is important. The user rights assigned by a higher-ranking group will always override a lower-ranking group. |
| Company organization | Organization unit, which the user belongs to. To add a new organization unit, click the <i>Add organization unit</i> button. |
| Codeks TA Enable time registration | When enabled, the user will be able to register his work hours. |
| Codeks TA Time registration start date | Clicking on the field will open a calendar. Select the first day when the user will start with time attendance registration. In <i>Time Attendance editor</i> the days before the <i>Time registration start date</i> are colored gray. |
| Card | Proximity card (user card) which the user will use to access locations. (Read user card ^[283]) ATTENTION! The number of cards equal to or less than 1024 is not allowed. This card numbers are reserved for fingerprints. |
| Allow card number input on keypad | When enabled, allows the user to use the <i>Card number</i> as a code to open the door. It cannot be enabled when the PIN is entered. |
| PIN | PIN the user will use together with his card to open the door. PIN codes can only be entered manually. PIN can be used only together with card. (User + PIN under reader's Options settings must be enabled) |

11.1.1. Advanced Settings

Advanced tab enables you to set advanced user settings.

| Other | Description |
|--------------|------------------------------------------------------------------------------------------------------------------------------------|
| Upload photo | The user can be assigned with the picture that will be displayed in Users Editor. You can use .jpg. or .png format of the picture. |

| Advanced user settings | |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Valid from | Enables you to issue a card with limited validation. Enter the date into <i>Valid from</i> field and after that date the card will be able to open doors until <i>Valid till</i> date. |
| Valid till | Enables you to issue a card with limited validation. Enter the date into <i>Valid till</i> field and after that date the card will not open doors and event Expired will be recorded. Users with expired card will color bright yellow on the list of users. |
| Master card | No link limit for master cards. |
| Follow user | Enables you to follow the user at his path. |
| Hide user | Enables you to hide users. Monitor will display only the event which occurred but not the user who caused it. |
| Link code | Link code is user link number. If <i>Link cards</i> option on the controller is enabled than users with same link number can open door after both cards are registered. Users with cards, that card type is set to Master, can normally open door (link is ignored). |
| User card type | Type of the user card. FrontDesk is a special application for visitor reception and issuing temporary cards to users and is not a part of Codeks AC. If you do not have FrontDesk application always select <i>User card</i> type. |

After you enter all the data, check their compliance and click the *Save* button to save the settings.

ADDITIONAL for Codeks TA

Codeks TA application also has *User's permissions* and a few more options in section *Other*.

Basic settings
Advanced settings
Department admin

Additional cards
Biometric data

User's permissions

Username

Password

Edit own time and attendance View own time and attendance

Edit own year data

Other

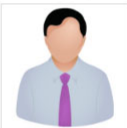
Language

Calendar

External ID

Export ID

Upload photo



Advanced user settings

Valid from

Valid till

Master card

Follow user

Hide user

Link code

User card type

| User's permissions | Description |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Username | Username the user will use to login for viewing time registration hours. |
| Password | Password the user will use to login for viewing time registration hours. |
| Can edit time registration | Enabled field allows the user to edit his time registration hours. If the user has, in Department admin ^[277] tab, selected one or more departments, he will be able to edit time registration for users in the selected departments. |
| Other | |
| Language | Select the language in which the user will use the application. |
| Calendar | Enables you to select the calendar ^[137] which determines work obligation for the user. |
| External ID | External ID can be used as additional ID for exports and connection with other programs and applications. |
| Export ID | User's export ID. |
| Upload photo | The user can be assigned with the picture that will be displayed in Users Editor. You can use .jpg. or .png format of the picture. |

ADDITIONAL for Codeks Reservations add-on

With the Codeks Reservations add-on an additional setting is added in the *Advanced settings* tab - **Allow locations reservation.**

The screenshot shows the 'Advanced settings' tab for a user. Under the 'User's permissions' section, there are several settings:




- Username: test
- Password:
- Edit own time and attendance: View own time and attendance:
- Edit own year data: **Allow location reservation**: (This setting is circled in red in the image)

This setting enables each user individually to reserve rooms and spaces using the Codeks Reservations add-on.

11.1.2. Codeks TA - Department Admin

| Department | View | Edit | Delete |
|------------------------|--------------------------|--------------------------|--------------------------|
| ▶ All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Podjetje | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Direktor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Komerciala | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Programerji | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Proizvodnja | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Sestavljalni oddelek | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Testni oddelek | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Teren | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Stranišče | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Čistilke | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▶ Knjižigovodstvo | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

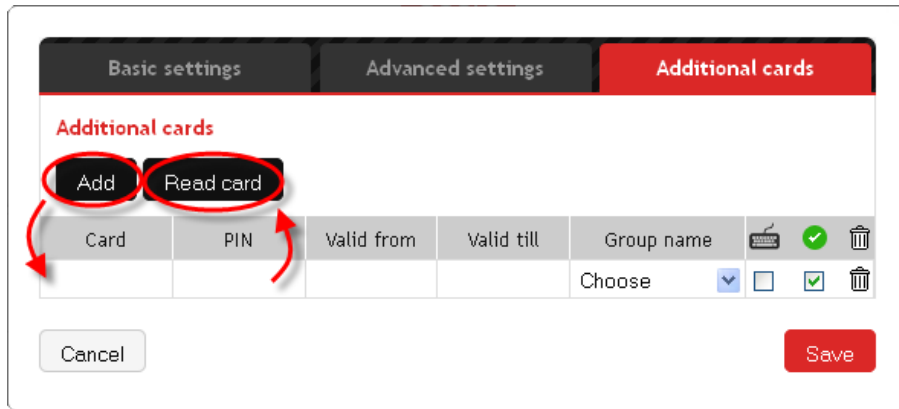
| User's permission | Description |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| All | If you enable field All, the user will be able to view or edit time registration for all employees in all departments. |
| Individual department | Select the departments the user will manage. He will be able to view or edit time registration for all employees in selected departments. |

| User's permission | Description |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| All | If you enable field All, the user will be able to view or edit time registration for all employees in all departments. |
| Individual department | Select the departments the user will manage. He will be able to view or edit time registration for all employees in selected departments. |
|  | View time and attendance |
|  | Edit time and attendance |
|  | Edit year data |

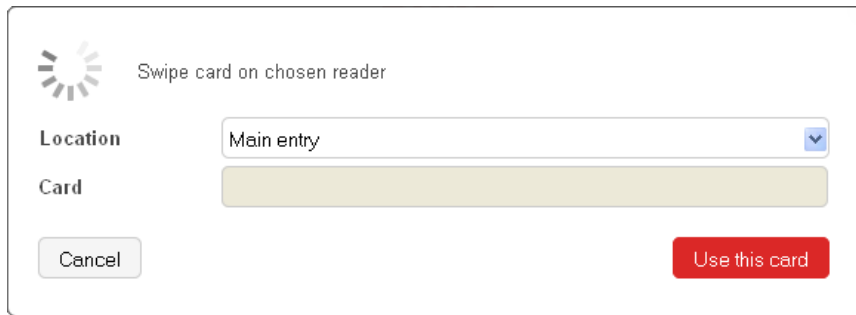
11.1.3. Additional Cards

Additional cards tab is intended for adding additional cards to the user, e.g. additional card, remote key, etc.

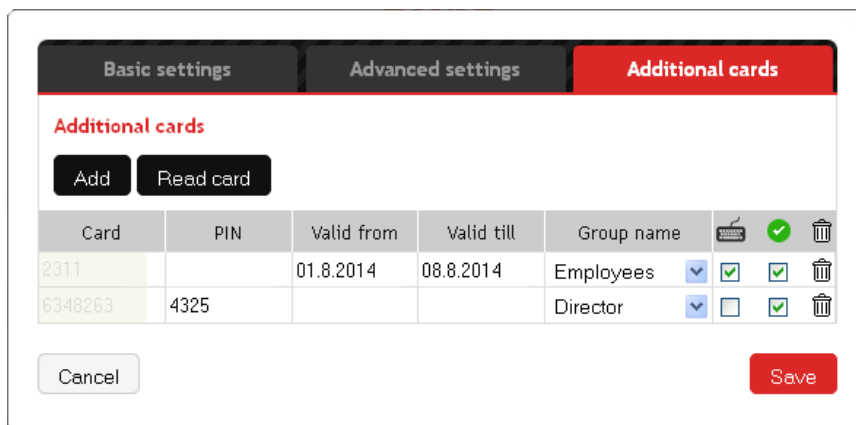
To add a new field for the new card, click the *Add* button. You can enter card number manually or click the *Read card* button to read the card on a certain location.



New window pops up in which you need to select the location where you will read the card.



Approach the card to the reader and in 1-2 seconds card's number will appear in the Card field. In case that the card number does not appear in the Card field, you can enter it manually - card number is shown in the Monitor under [Live Events](#) ⁽¹²⁰⁾ as the last system Event with the name **CardX**. After saving, the card's number cannot be changed anymore. You can either edit the card's data or delete the card.



NOTE-1: Additional card without a selected group has identical access as the user's main card.

Additional card with the selected group has identical access as the group, except in locations where the user has exceptionally denied access in this timetable. If the location or timetable differs from the exceptions, the additional card has enabled access.

NOTE-2: Each card, fingerprint, remote key... occupies one user place in the controller. So if the user has for example two cards, three fingerprints, one remote key and a contactless key pendant, there are 7 filled user places in the controller for only one user.

11.1.3.1. Virtual cards

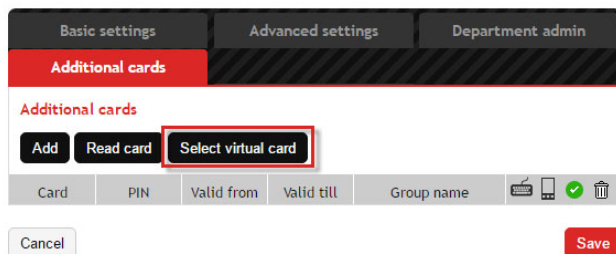
Codeks Virtual card is a replacement of physical plastic RF card. Adding the virtual cards in Codeks application is possible by buying the license code. It's possible to buy license for one or a set of cards and is dedicated for use in web interface or mobile device application.

Add the license code into Codeks Service Manager and activate it. There is no trial period with virtual card license code, that's why you have to activate it before use. Virtual cards will be added to Codeks with activating the license code where you can assign it to the users.

Choose virtual card number written like a set of numbers (124567 ...) in Additional cards tab of user's settings. On the list of additional cards you can see added card with checked - check box, under the small phone image. Now it's enabled for user to register in web interface or smart phone application by typing his username and password. Jantar application has to be installed (on mobile device) for registration over the mobile devices.

11.1.3.1.1 Configuration of virtual card

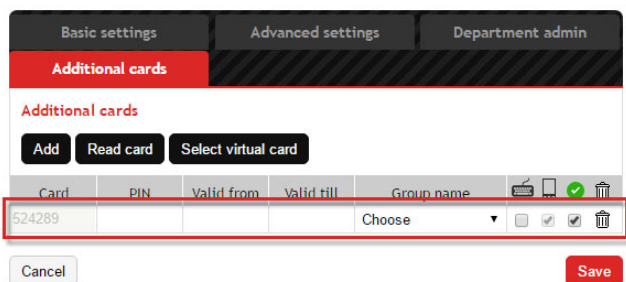
For configuration of mobile card, go to Additional cards in user's settings and click **"Select virtual card"** button.



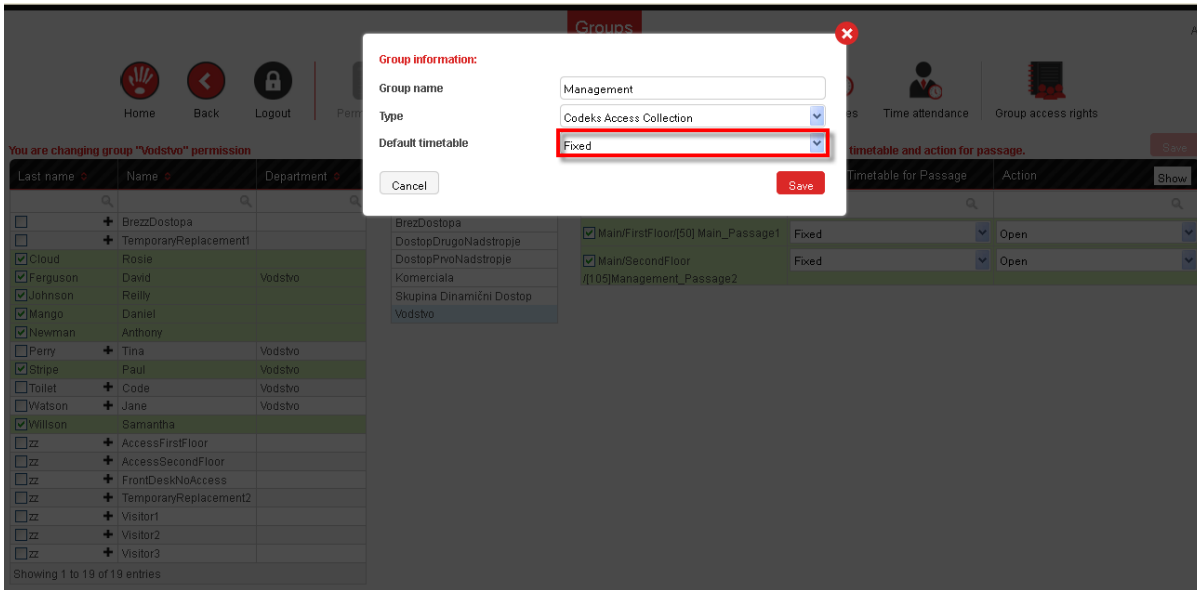
Select one of the specified number in drop-down list.



Selected card is added to additional cards list.



WARNING: If the configuration doesn't work correctly, check **Default Timetable of users group**. Some timetable must be set!

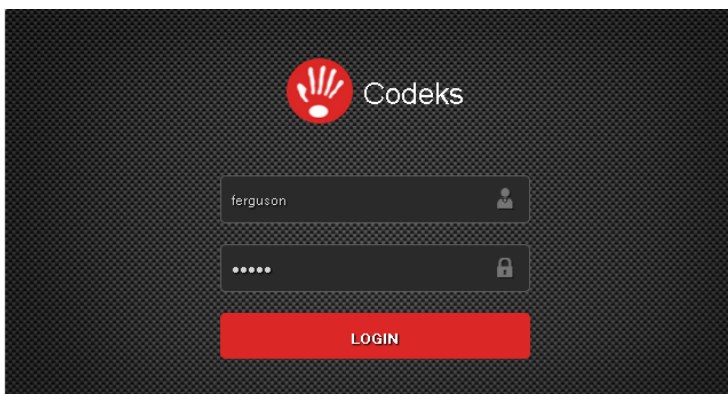


11.1.3.1.2 Use of Virtual card (web interface, smart phone aplikation)

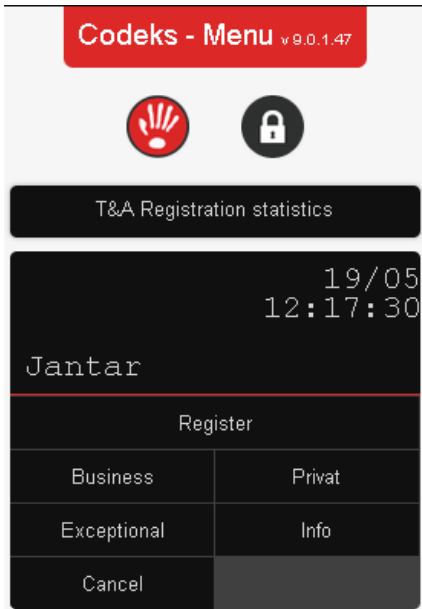
Click **"User statistics"** icon for registration over the web browser.



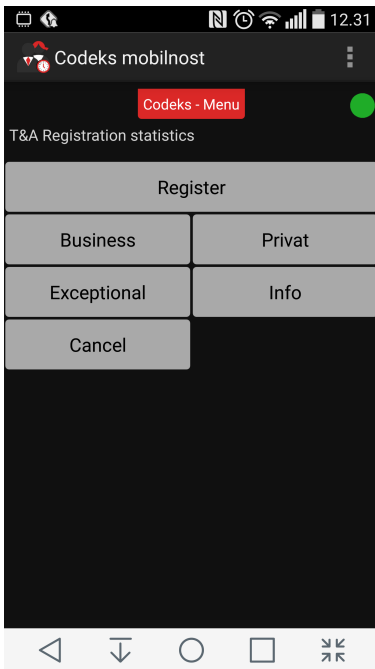
Register with username and password.



Check **T&A registration statistics** or **register**. Process of registration is similar to registration on controllers.



Using registration with mobile card over the smart phone, make sure that you have installed the application "**Codeks mobilnost**". Process of registration is similar to registration on controllers.

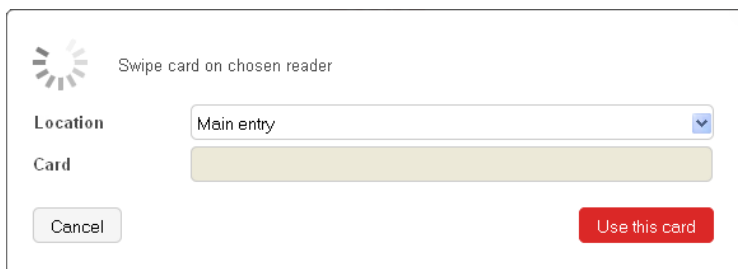


11.2. Read User Card

You can add a card to the user when adding or editing user under *Basic settings* tab. To read the user card, click on the *Read card* button.



New window pops up in which you need to select the location, which is connected to the reader on which you will read the card.



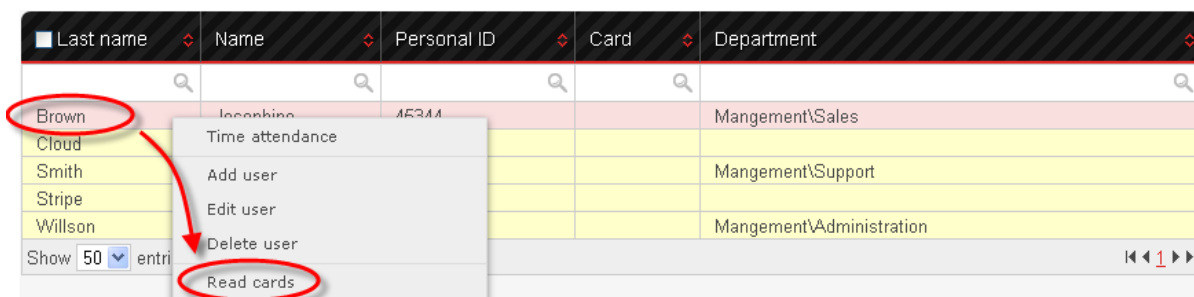
Approach the card to the reader and in 1-2 seconds card's number will appear in the Card field. In case that the card number does not appear in the Card field, you can enter it manually - card number is shown in the Monitor under [Live Events](#)^[120] as the last system Event with the name **Wrong card**.

WARNING!

While reading the card, the system will use the first card, which will be registered on the selected reader. That is why you need to make sure, no user will register at that time.

11.3. Read Cards for Multiple Users

To read cards for multiple users, right-click on the first user without a card and select *Read cards* on the menu.



Select the Location and read the cards one by one on the reader. If *Auto save* is enabled, confirmation for each card is not necessary. If *Auto save* is disabled, you need to save each enrolled card with the click on the *Save* button. When you are finished, click the *Close* button, which will add the cards to the system.

Location: Storage
User: Brown Josephine
Card: 2569561 [Save]
Auto save:
161932 Stripe Paul 1
7995133 Smith Clark 2
[Close]

Users can be selected by holding down SHIFT or CTRL key on the keyboard and clicking on users. That is how we can add cards only to the selected users which are marked with red.

WARNING! Be careful not to overwrite existing user's card!

| Last name | Name | Personal ID | Card | Department |
|-----------|-----------|-------------|---------|--------------------------|
| Brown | Josephine | 45344 | | Mangement\Sales |
| Cloud | Rosie | 563563 | 5747488 | |
| Smith | Clark | 13568 | | Mangement\Support |
| Stripe | Paul | 875859 | 646362 | |
| Willson | Samantha | 86890 | | Mangement\Administration |

Show 50 entries Showing 1 to 5 of 5 entries

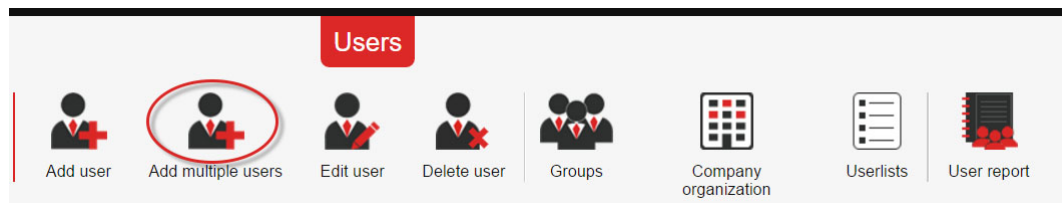
11.4. Lost or Damaged Card

Each card has a unique code which can be read with the reader and assigned to individual user. If the card is damaged or lost, you can simply delete and replace it, which means the user is assigned with a new card.

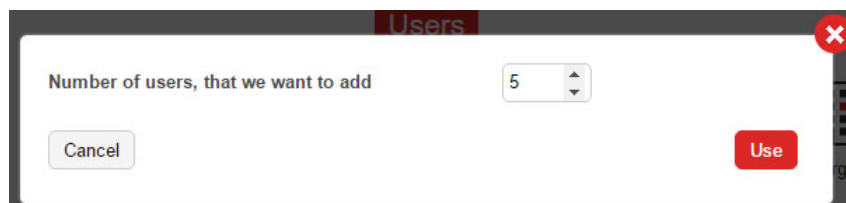
One card cannot be assigned to two users. You can assign the card, which has been previously used, to another user ONLY if you previously assign the first user with another card or delete him or his card code from the system.

To replace the user's card you can use the same procedure as for [reading cards](#)^[283].

11.5. Adding multiple users



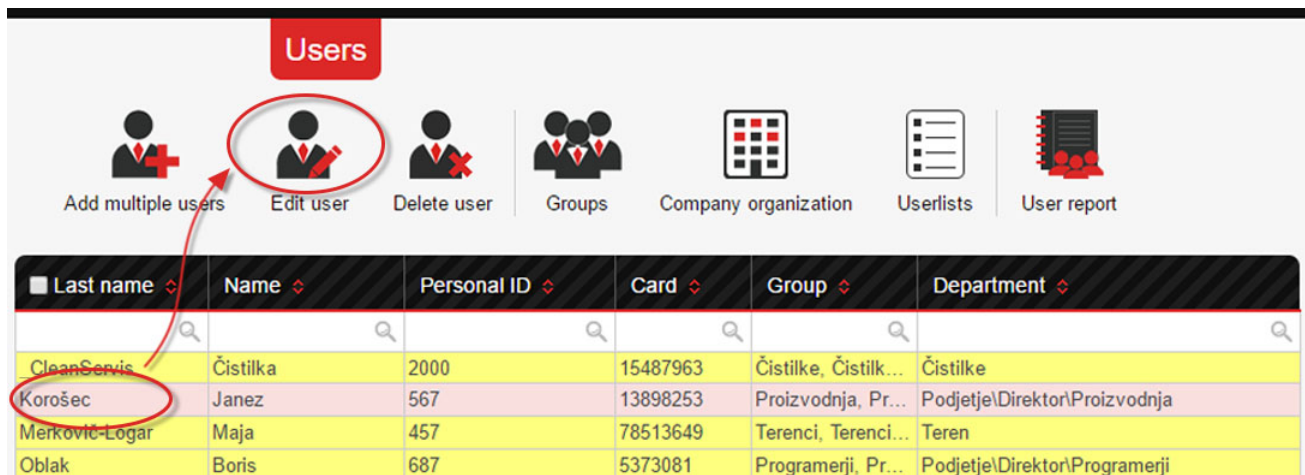
By clicking on the **Add multiple users** icon you can create a number of new users simultaneously. After clicking the icon a pop-up window will appear, where you can enter the number of new users you wish to create.



Click **Use** and the entered number of new users will appear in the List of users. In the next chapter ([Edit user](#)^[286]), you can read how to add user's data to the newly created users.

11.6. Edit User

On the list of users select the user you wish to edit. Click the *Edit user* icon, edit user's data and save the changes. You can also edit the user with double click on it or through the menu which appears with the right-click on the user.

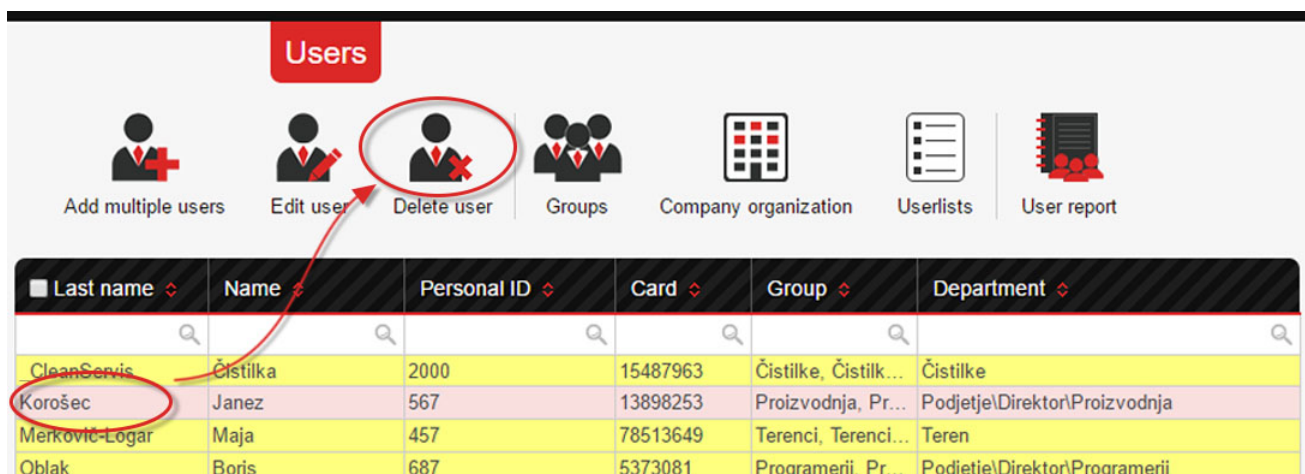


The screenshot shows the 'Users' management interface. At the top, there is a red 'Users' header. Below it are several icons: 'Add multiple users', 'Edit user' (circled in red), 'Delete user', 'Groups', 'Company organization', 'Userlists', and 'User report'. Below the icons is a table with columns: 'Last name', 'Name', 'Personal ID', 'Card', 'Group', and 'Department'. The table contains the following data:

| Last name | Name | Personal ID | Card | Group | Department |
|----------------|----------|-------------|----------|----------------------|-------------------------------|
| CleanServis | Čistilka | 2000 | 15487963 | Čistilke, Čistilk... | Čistilke |
| Korošec | Janez | 567 | 13898253 | Proizvodnja, Pr... | Podjetje\Direktor\Proizvodnja |
| Merkovič-Logar | Maja | 457 | 78513649 | Terenci, Terenci... | Teren |
| Oblak | Boris | 687 | 5373081 | Programerji, Pr... | Podjetje\Direktor\Programerji |

11.7. Delete User

On the list of users select the user you wish to delete and click the *Delete user* icon. New window pops up in which you need to confirm deletion of the user. This will delete the user from the list of users.



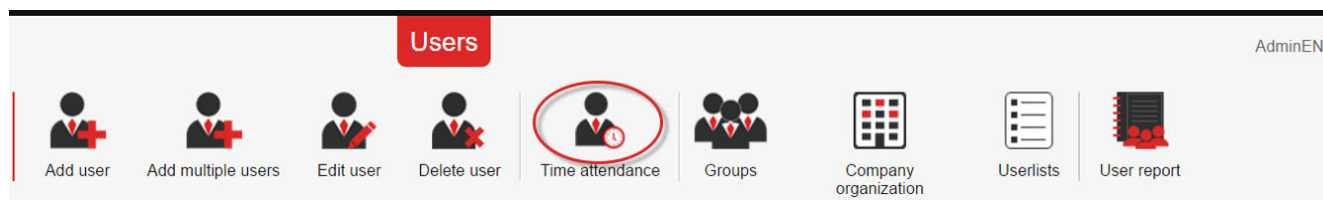
The screenshot shows the 'Users' management interface. At the top, there is a red 'Users' header. Below it are several icons: 'Add multiple users', 'Edit user', 'Delete user' (circled in red), 'Groups', 'Company organization', 'Userlists', and 'User report'. Below the icons is a table with columns: 'Last name', 'Name', 'Personal ID', 'Card', 'Group', and 'Department'. The table contains the following data:

| Last name | Name | Personal ID | Card | Group | Department |
|----------------|----------|-------------|----------|----------------------|-------------------------------|
| CleanServis | Čistilka | 2000 | 15487963 | Čistilke, Čistilk... | Čistilke |
| Korošec | Janez | 567 | 13898253 | Proizvodnja, Pr... | Podjetje\Direktor\Proizvodnja |
| Merkovič-Logar | Maja | 457 | 78513649 | Terenci, Terenci... | Teren |
| Oblak | Boris | 687 | 5373081 | Programerji, Pr... | Podjetje\Direktor\Programerji |

WARNING! When you are deleting users, take into consideration that deleted users and their data cannot be restored.

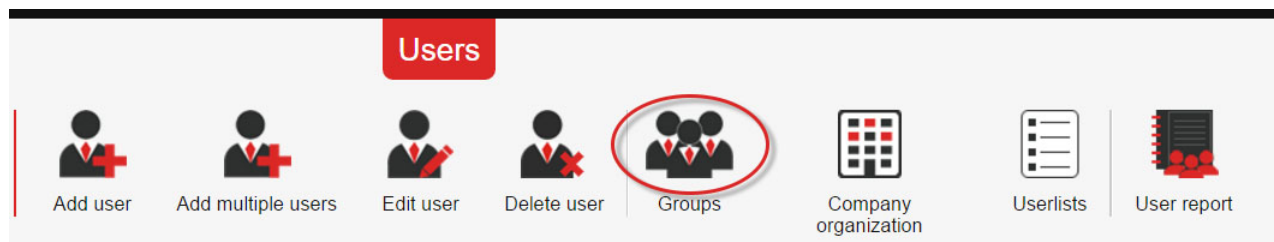
11.8. Codeks TA - Time and attendance

Codeks TA has an additional icon for Time attendance in the upper menu. Time attendance can also be accessed through the Main menu and the Groups Editor. Working with Time attendance is described in detail in chapter [Time attendance](#)^[48].



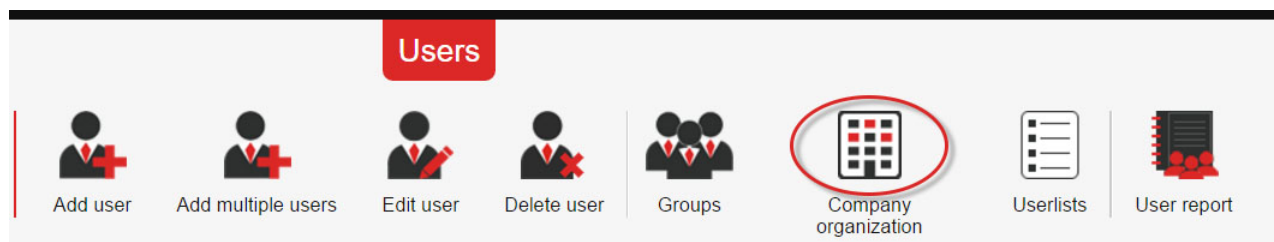
11.9. Groups

To work with groups, click on the Groups icon in the Users Editor. Groups can also be accessed through the Main window or Timetables Editor. Working with groups is described in detail in chapter [Groups](#)^[297].



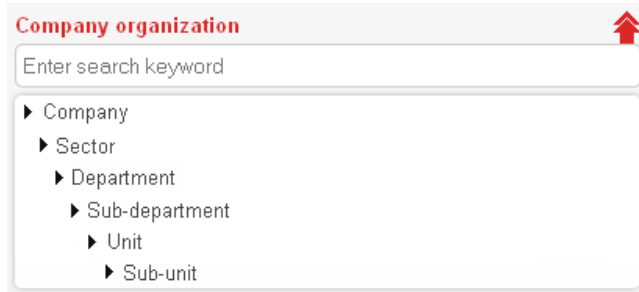
11.10. Company Organization

To work with organization units, click the *Company organization* icon in the Users Editor.



Types and hierarchy of organizational units:

Tree structure of company organization consists of company, sector, department, sub department, unit and sub unit, which can be added in a certain sequence.



Company: you can add company, sector, department, sub-department, unit or sub-unit to the company.

Sector: you can add sector, department, sub-department, unit or sub-unit to the sector.

Department: you can add department, sub-department, unit or sub-unit to the department.

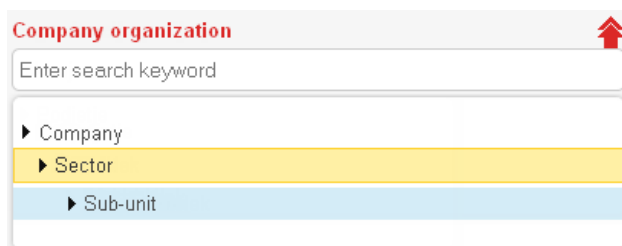
Sub department: you can add sub-department, unit or sub-unit to the sub department.

Unit: you can add unit or sub-unit to the unit.

Sub unit: you can add sub unit to the sub-unit.

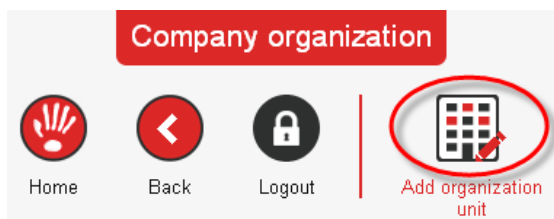
You can start your tree structure of organization units with company or any other sub-unit. You can add new organization unit with [organization wizard](#)^[289] or with the [right-click](#)^[290] on organization unit. Organization wizard allows you to add more organization units or sub-units at once. When you are adding sub-units with the right-click, you can add only one type of sub-unit at once.

You can use **drag&drop** to move organization units. Select the organization unit, drag it up or down the list and drop it into desired place. Blue color marks the selected organization unit and yellow color marks the organization unit of the drop.



11.10.1. Organization Wizard

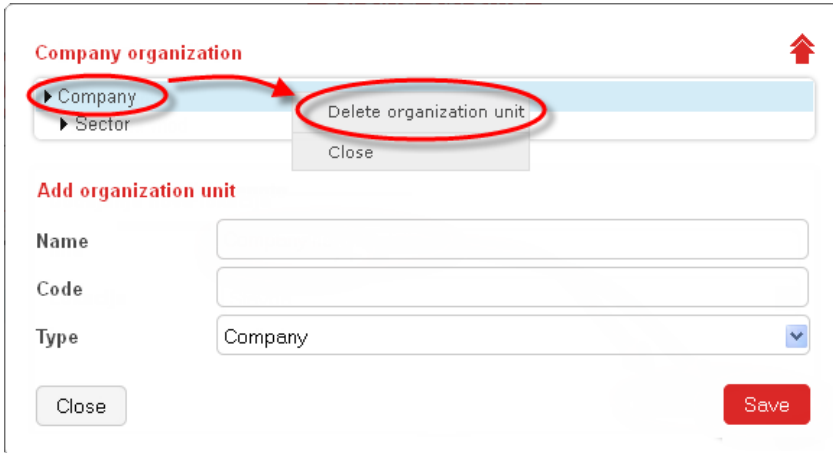
To add organization unit with the wizard click on the *Add organization unit* icon.



Organization wizard will always offer you to start with adding Company. If you already have organization units in your system, they will be shown on the list. Enter the name of organization unit and click the *Save* button.

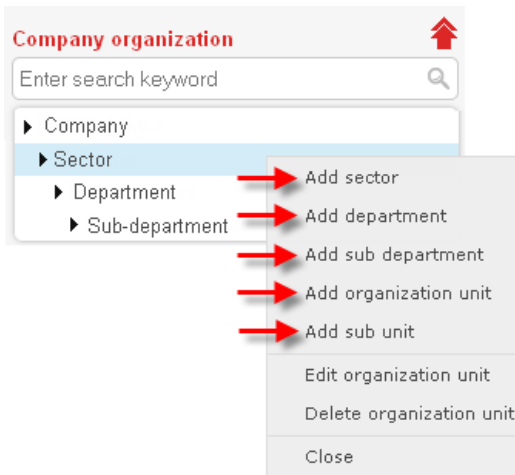
You can select any organization unit and add a new sub-unit to it. Blue color indicates selected location. Click the *Save* button to add sub-unit to the selected unit and click *Close* button when you are finished.

If you make a mistake, you can immediately delete the organization unit. Right-click on the organization unit you wish to delete and select *Delete organization unit* on the menu. You cannot delete organization unit with sub-units. In this event you must first delete the sub-units. After the removal, the organization unit list is refreshed.



11.10.2. Add Organization Unit

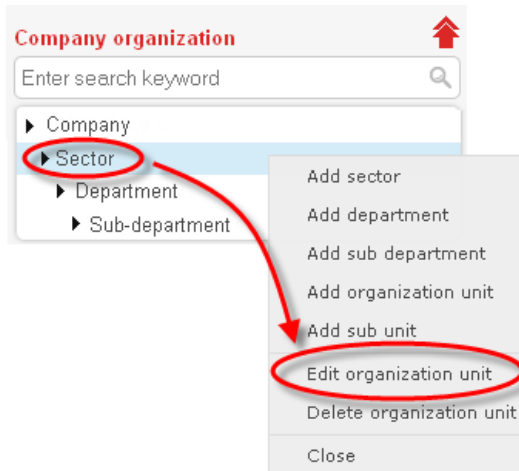
Right-click on the organization unit will open the action menu, where you can select the type of sub-unit you wish to add. You can always add Company but other types of sub-units are offered depending on the type of the selected organization unit.



Select the type of organization unit you wish to add sub-unit to, enter the name of sub-unit and click the Save button to add sub-unit to the list.

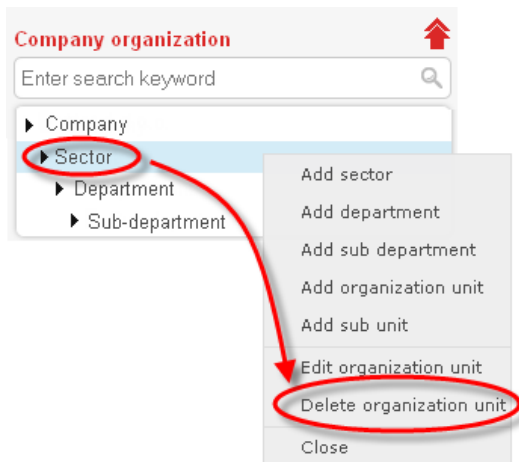
11.10.3. Edit Organization Unit

On the list of organization units select the organization unit you wish to edit. Click the *Edit organization unit* icon, edit unit's data and save the changes.



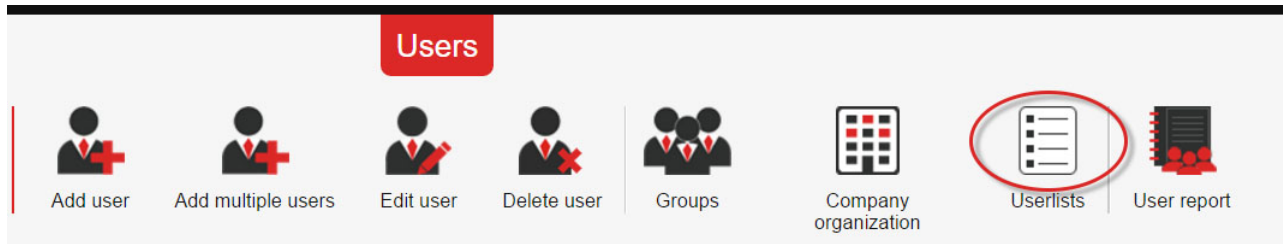
11.10.4. Delete Organization Unit

On the list of organization units select the organization unit you wish to delete and click the *Delete organization unit* icon. New window pops up in which you need to confirm deletion of the organization unit. After the removal, the organization unit list is refreshed.



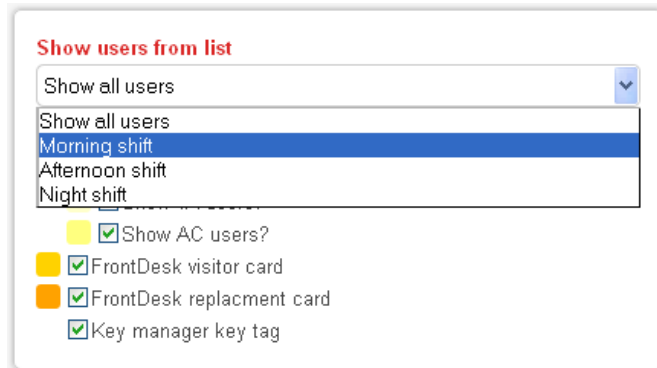
11.11. Codeks TA - User Lists

To work with users lists, click the *Users lists* icon in the Users Editor.

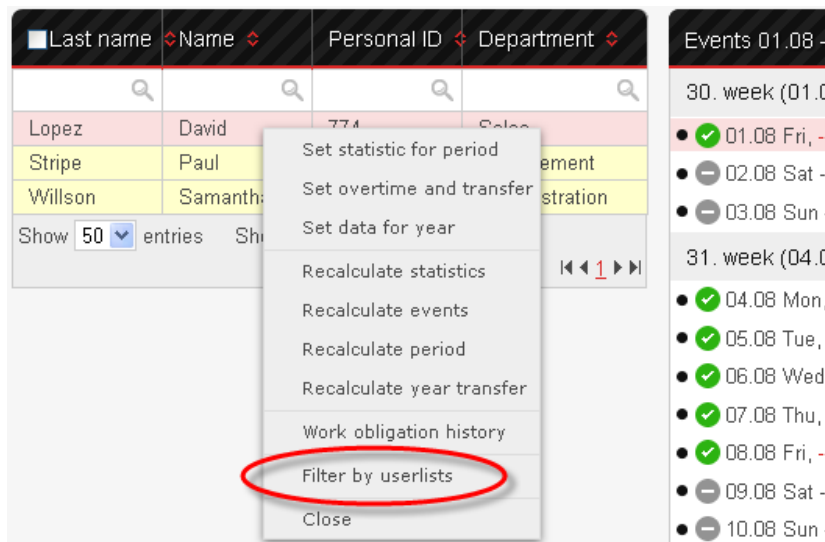


Lists can be used in User Editor or with Time and Attendance, where users can be filtered according to the list.

Users Editor

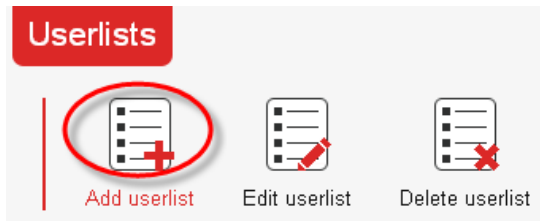


Time and Attendance



11.11.1. Add List

To add a new list, click the *Add list* icon.



In the new window enter the name of the userlist and enter its description. Select the owner of the userlist in select its type which can be public or private. If the type of the userlist is private, it can be seen only by the owner. Select the users by holding down SHIFT or CTRL key on the keyboard in clicking on the users. To save the new userlist, click the *Save* button.

General information

Name

Description

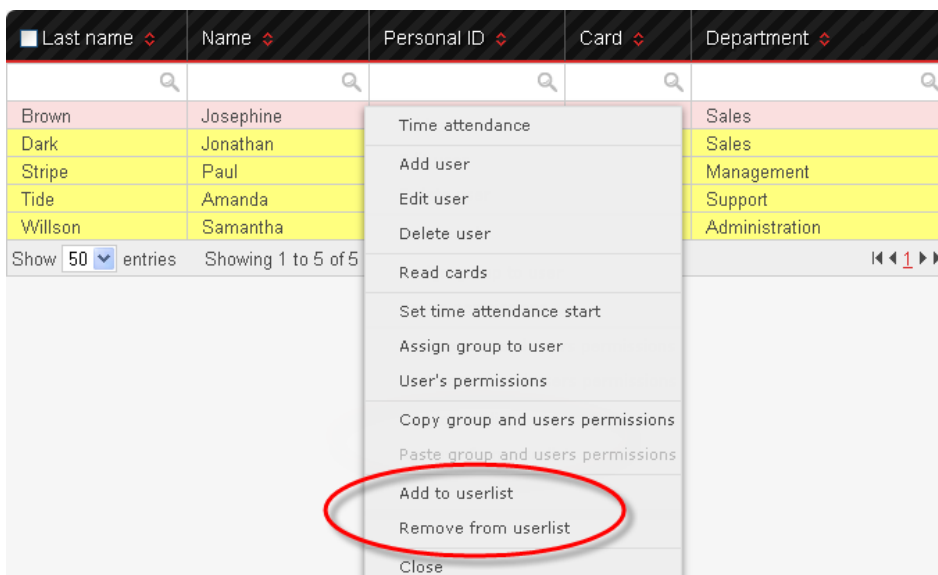
Owner

Type

| Last name | Name | Department |
|-----------|-----------|----------------|
| Brown | Josephine | Sales |
| Dark | Jonathan | Sales |
| Stripe | Paul | Management |
| Tide | Amanda | Support |
| Willson | Samantha | Administration |

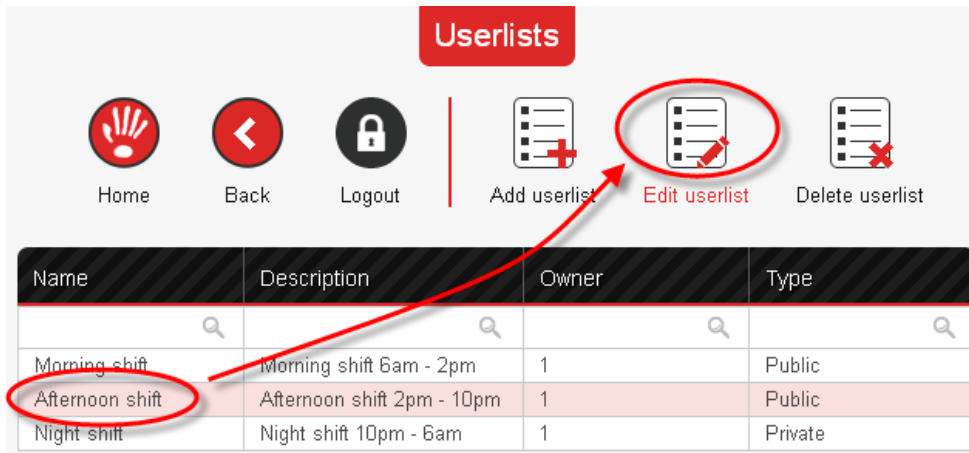
Showing 1 to 5 of 5 entries

Users can also be added or removed from the userlist by using the menu in the Users Editor.



11.11.2. Edit List

On the list of userlists select the userlist you wish to edit. Click the *Edit userlist* icon, edit userlist's data and save the changes. You can also edit the userlist with double click on it or through the menu which appears with the right-click on the userlist.

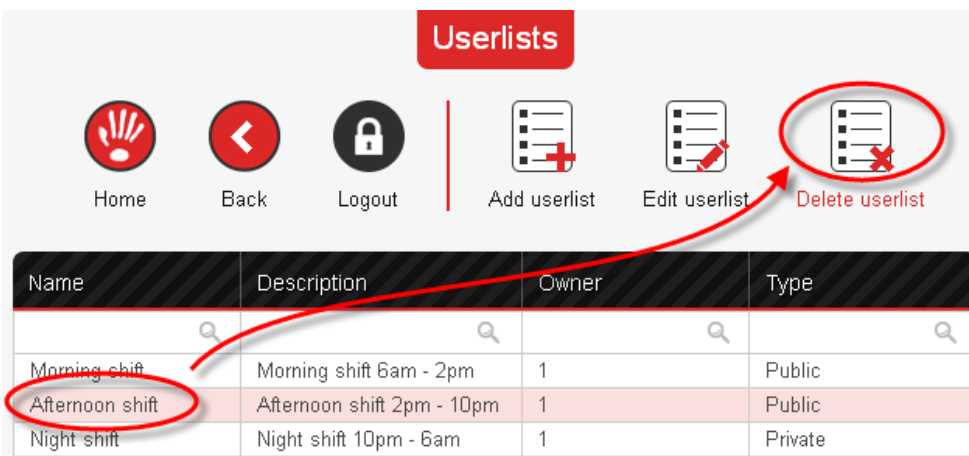


The screenshot shows the 'Userlists' management interface. At the top, there are navigation icons: Home, Back, Logout, Add userlist, Edit userlist (circled in red), and Delete userlist. Below the navigation is a table with the following data:

| Name | Description | Owner | Type |
|-----------------|----------------------------|-------|---------|
| Morning shift | Morning shift 6am - 2pm | 1 | Public |
| Afternoon shift | Afternoon shift 2pm - 10pm | 1 | Public |
| Night shift | Night shift 10pm - 6am | 1 | Private |

11.11.3. Delete List

On the list of userlists select the userlist you wish to delete and click the *Delete userlist* icon. New window pops up in which you need to confirm deletion of the userlist. This will delete the userlist from the list of userlists.

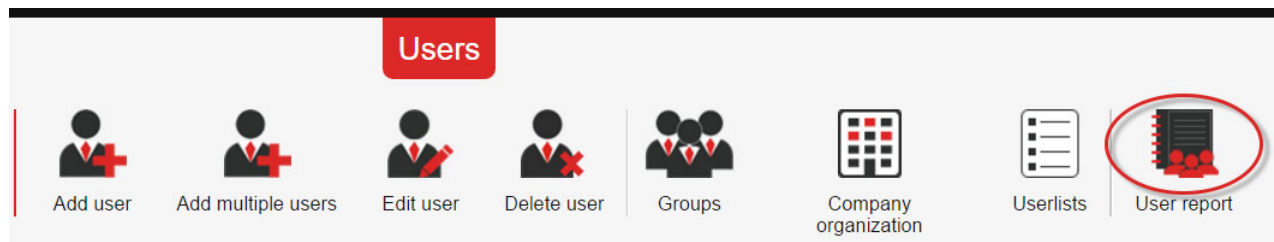


The screenshot shows the 'Userlists' management interface. At the top, there are navigation icons: Home, Back, Logout, Add userlist, Edit userlist, and Delete userlist (circled in red). Below the navigation is a table with the following data:


| Name | Description | Owner | Type |
|-----------------|----------------------------|-------|---------|
| Morning shift | Morning shift 6am - 2pm | 1 | Public |
| Afternoon shift | Afternoon shift 2pm - 10pm | 1 | Public |
| Night shift | Night shift 10pm - 6am | 1 | Private |

11.12. User Report

User report enables report of all or just selected users. To create the user report, click the *User report* icon in the Users Editor.



The user can be selected on the list of users. Additional users are selected, if you hold down SHIFT or CTRL key on the keyboard, while clicking on the other users. User report also has column Signature, which enables the administrator to use this report for certification of receipt of the cards by the employees.




User report

| Card | User | Department | Personal ID | Valid till | Signature |
|---------|-----------------|----------------|-------------|------------|-----------|
| 2569561 | Stripe Paul | Boss | 1 | | |
| 7995133 | Brown Josephine | Administration | 2 | | |
| 4241182 | Smith Clark | Management | 3 | | |
| 1644666 | Parker Jasmine | Sales | 4 | | |
| 536770 | Jones Anthony | Students | 5 | 20.9.2013 | |

ADDITIONAL for Codeks TA

User report contains additional columns: *External ID*, which is used as additional ID for exports and connection with other programs and applications, and *Timetable*, in which user's timetable is displayed.



User report

| Card | External ID | User | Department | Personal ID | Timetable | Valid till | Signature |
|---------|-------------|-----------------|----------------|-------------|-----------|------------|-----------|
| 2569561 | 24566 | Stripe Paul | Management | 1 | Flexible | | |
| 1644666 | 543222 | Parker Jasmine | Sales | 2 | Flexible | | |
| 4241182 | 13331 | Smith Clark | Support | 3 | Flexible | | |
| 7995133 | 754443 | Brown Josephine | Administration | 4 | Flexible | | |
| 536770 | | Jones Anthony | Students | 5 | | 27.9.2013 | |

Part

12

12. Groups

Groups define the actual rights the users have when using the system. These rights are described as actions the system will execute, when the user brings his card near a reader or enters a PIN code. Editing the group rights is described in more detail in chapter [Access](#)^[302].

Several types of groups are available:

- **Codeks TA - Time and attendance group** – This is a key group in Codeks TA, because it defines the user's work obligation and sets their default access rights.

ATTENTION! A user can only be assigned one *Time and attendance group*.

ATTENTION! The order in which the groups are assigned to the user is important. The user rights assigned by a higher-ranking group will always override a lower-ranking group.

- **Access control group** – This is the basic group type used in Codeks AC, as it defines the user access rights. A user can be assigned multiple Access control groups.
- **Key manager group** – This group type is designed for controlling user access to keys with the use of the Keymanager device.
- **Relay controller group** – This group type is designed for defining relay controller access rights.
- **FrontDesk visitors collection** – This group type is designed for defining visitor's rights when using the additional Codeks FrontDesk application.

All groups types can have an unlimited number of users.

ADDITIONAL for Codeks TA

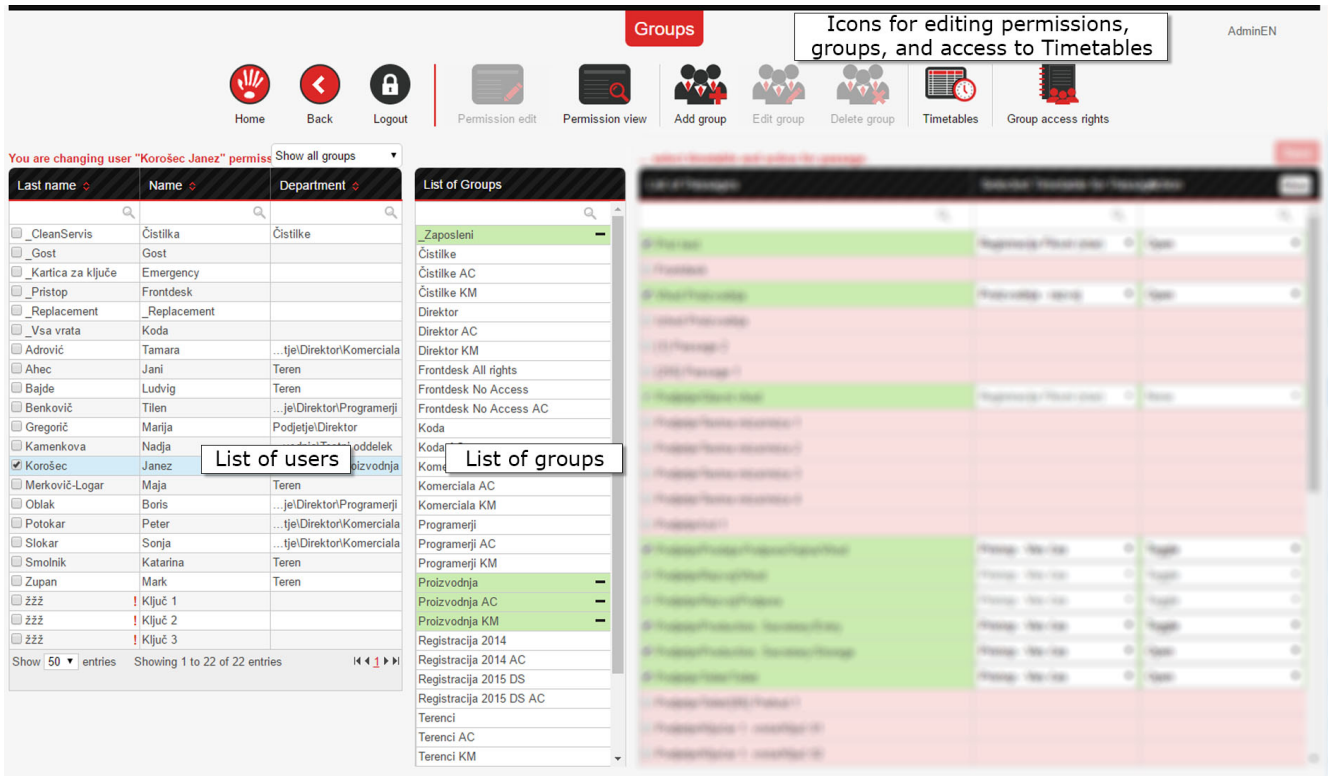
When adding users to groups keep in mind that a single user can only be assigned one *Time and attendance group*. This group sets the user's work obligation and their basic access rights. Assigning more than one *Time and attendance group* to the same user could cause a problem of conflicting user's rights.

The number of Access control, Key manager, and FrontDesk visitors collection groups assigned to a single user is unlimited.

ADDITIONAL for Codeks TA

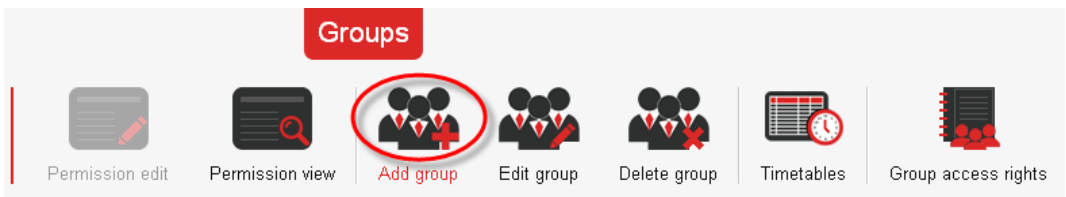
In the Group Editor you will also determine on which location a certain group can register their work hours, according to a certain timetable.

Groups Editor will open where you can [add](#)^[298], [edit](#)^[299] or [delete](#)^[299] groups. Groups can also be accessed through Users and Timetables Editor.



12.1. Add Group

To add a new group, click the *Add group* icon.



A new window is opened where you can enter group's name, select the type of the group and save entry. Type of the group should always be *Codeks Access Collection*, except when you are adding group for FrontDesk add-on, which enables visitors control.

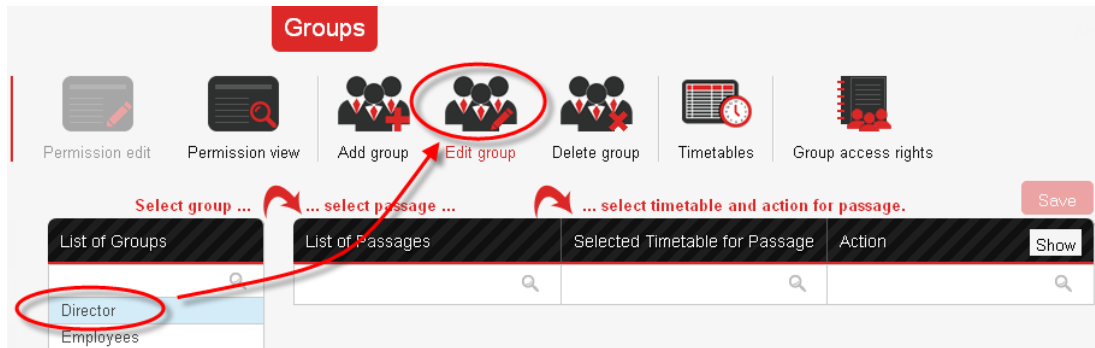
Group information:

Group name

Type

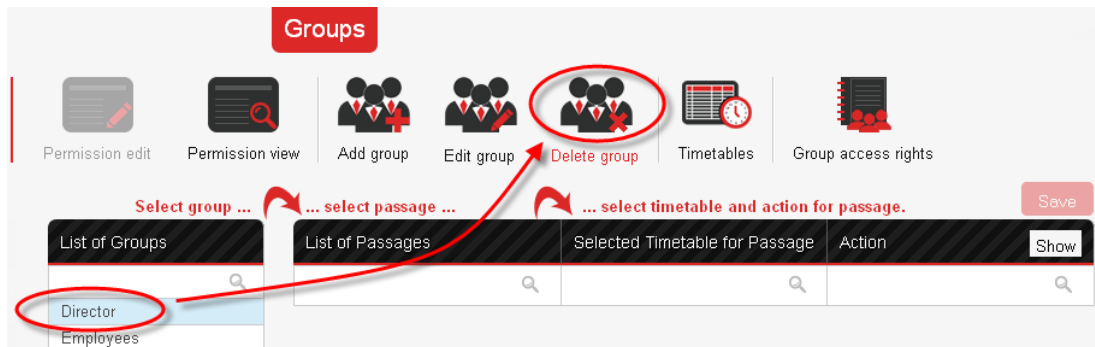
12.2. Edit Group

On the list of groups select the group you wish to edit. Click the *Edit group* icon, edit group's data and save the changes. You can also edit the group with double click on it or through the menu which appears with the right-click on the group.



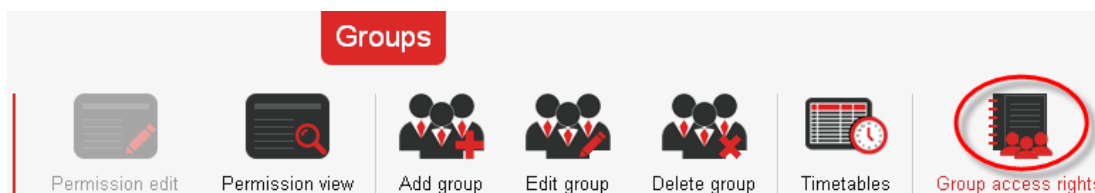
12.3. Delete Group

On the list of groups select the group you wish to delete and click the *Delete group* icon. New window pops up in which you need to confirm deletion of the group. This will delete the group from the list of groups.

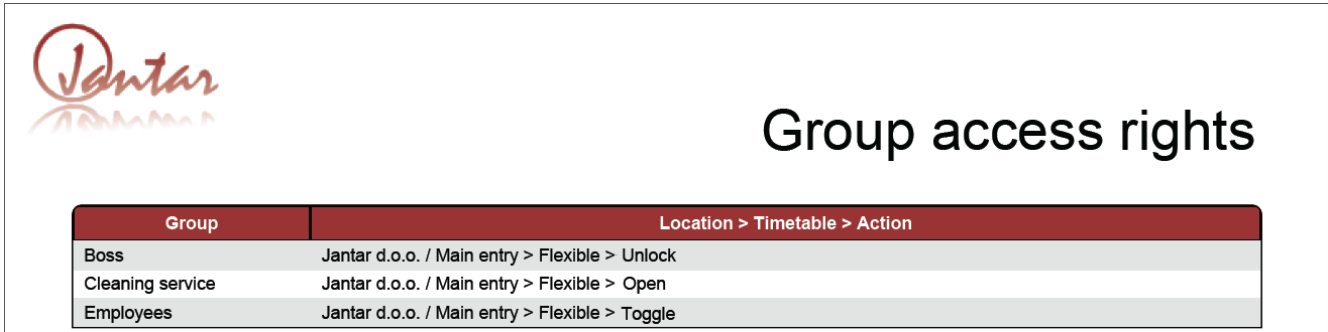


12.4. Group Access Rights

To review or print access rights of groups, click the *Group access rights* icon in the Groups Editor.



The report will display the name of the group and location, timetable and action with which a certain group can access this location.

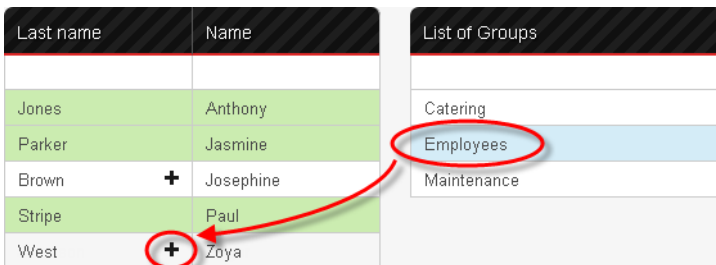


| Group | Location > Timetable > Action |
|------------------|------------------------------------------------|
| Boss | Jantar d.o.o. / Main entry > Flexible > Unlock |
| Cleaning service | Jantar d.o.o. / Main entry > Flexible > Open |
| Employees | Jantar d.o.o. / Main entry > Flexible > Toggle |

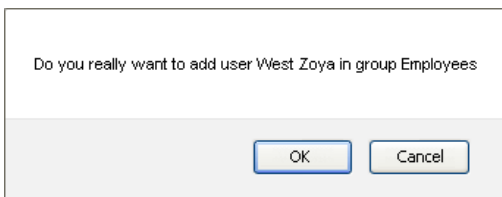
12.5. Add User to Group

You can add the user to the group in the Users Editor, when you are adding or editing the user, or in the Groups Editor by clicking the *plus* icon (+) next to the user.

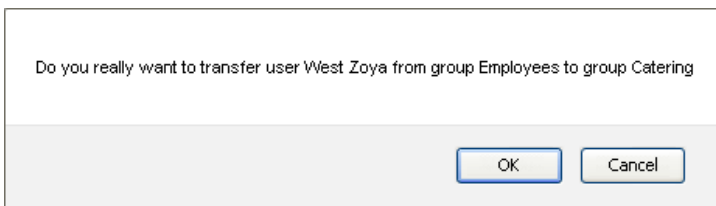
First select the group and then click the *plus* icon (+) next to the user you wish to add to the selected group.



Application will ask you for confirmation.



If the user already belongs to some other group, the application will also ask for your confirmation.



Part

13

13. Access

With adding access for a certain group to a certain passage you enable this group and all its belonging users to access this passage in a certain timetable.

IMPORTANT!

You can connect readers which will open the doors only with passages, therefore **you can add access only to passages**. To connect readers to a certain passage you must first [set the hardware](#)^[169].

After you finish working with access you need to [send tables](#)^[321]. If you fail to do that, the Codeks application will not work properly with the hardware.

13.1. Group and User Access

In the Group Editor you can determine access rights at specific passages for groups or a single user. You can enable or disable access at a selected passage, set a timetable, and select an action to be executed. Note that [locations](#)^[170] and [hardware](#)^[169] must be set before you can add a passage access to a group or user.

The screenshot displays the 'Groups' management interface. At the top, there are navigation icons for Home, Back, Logout, Permission edit, Permission view, Add group, Edit group, Delete group, Timetables, and Group access rights. A 'Save changes button' is highlighted with a red arrow. Below the navigation bar, there are three main panels:

- List of users:** A table with columns for Last name, Name, and Department. A user named 'Korošec, Janez' is selected, and a 'List of users' tooltip is visible.
- List of Groups:** A list of groups including 'Zaposleni', 'Čistilke', 'Čistilke AC', 'Čistilke KM', 'Direktor', 'Direktor AC', 'Direktor KM', 'Frontdesk All rights', 'Frontdesk No Access', and 'Frontdesk No Access AC'. A 'List of groups' tooltip is visible.
- List of Passages:** A table with columns for Passage name, Selected Timetable for Passage, and Action. Passages are color-coded: green for enabled access and red for disabled access. A 'Dynamic access' tooltip is visible over the 'Registracija Fiksni (star)' entry.

Buttons for 'List of passages', 'Timetables', and 'Actions and macros' are also present.

When a single user from the **List of users** is selected, all the groups assigned to the user color *green* in the List of groups. The user access rights set by all the assigned groups are shown in the List of passages. Passages with enabled access are colored *green* and passages with disabled access are colored *red*. It is also possible to **set access exceptions** for a user. Exceptions are access rights that are not defined by a group, instead they are set specifically for a selected user. Adding access exceptions to users is described in more detail in chapter [Adding group and user access](#)^[304].

To allow access to a group at a certain passage, select the group from the **List of groups**. You can choose a group from the list of groups or create a new one. The users that belong to the selected group will color *green*.

IMPORTANT! When enabling the *Permission edit*, pay attention to the **red text above the List of users**. This text informs you who's access rights you are currently editing.

You are changing group "Direktor AC" OR You are changing user "Benkovič Tilen"

The **List of passages** can display all the passages in your system. To enable a group to access a certain passage, enable the field next to the name of the passage. The enabled passages will color *green* and the drop downs for setting a timetable and actions will appear.

The List of passages actively filters the displayed passages according to the selected group type:

- when a **Time and attendance group** is selected, only the *passages* that enable *time registration* will be displayed,
- when an **Access control group** is selected, all the *passages* where *physical crossing* is possible will be displayed, excluding the passages for Key Manager key inserts and Relay controller passages,
- when a **Key manager group** is selected, only the *key inserts passages* will be displayed,
- when a **FrontDesk visitors collection** group is selected, *all the passages* in your system will be displayed, including the passages for Key Manager key inserts and Relay controller passages.

When editing the access exceptions for a user all the passages in your system, including the passages for Key Manager key inserts and Relay controller passage, are displayed.

In the drop down menu of **Timetables** you can select the timetable that defines, when the selected group will be able to access a selected passage.

In the drop down menu of **Actions** you can choose from different actions the reader can perform when the card with appropriate rights is approached to the reader or an appropriate PIN code is entered:

| Actions | Description |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Open | This action causes the door to open (unlock) only for a few seconds. |
| Lock | This action causes the door to stay locked which means no person can pass the door without using the card. |
| Unlock | This action causes the door to stay unlocked which means anybody will be able to pass the door from this moment on until the door is locked again. |
| Toggle | This action will toggle the door lock/unlock status which means the door will lock (if it was unlocked) or unlock (if it was locked). |
| EnableReader | This action will unblock blocked reader. |
| DisableReader | This action will block unblocked reader. |
| UnblockReader | This action will unblock blocked reader for the time set in under controller's settings under <i>Unblock for</i> . Option <i>Blocked</i> under reader's settings must be enabled. |
| DisablePIN | This action will disable the use of PIN code. |
| EnablePIN | This action will enable the use of PIN code. |
| Macro* | Additionally you can set a macro to be executed when a user accesses a passage. All available macros are displayed at the bottom of the Action drop-down menu. |

* The list displays only the macros that are currently added in Codeks. You can edit macros using the Macros editor (Main menu > Settings > Macro) described in chapter [Macros](#)^[140].

By clicking on the **Show** button a new column will be added for setting [Dynamic access](#)^[307]. You can set a Dynamic access option for a selected group or user. Setting this option is not necessary to enable normal function of group or user access.

13.1.1. Adding Group and User Access

To add group and user access to a passage, select Users/Groups in the Main Menu. You can only add an access right to a passage.

IMPORTANT: To be able to assign access to the group, **Permission edit** icon must be selected (grayed out). If **Permission view** is selected, you can only review connections between groups and passages.

IMPORTANT! When enabling the **Permission edit**, pay attention to the **red text above the List of users**. This text informs you who's access rights you are currently editing.

You are changing group "Direktor AC" OR You are changing user "Benkovič Tilen"

Adding group access

Select a group you wish to edit from the List of groups. The selection will color *blue*. Enable a specific passage from the List of passages on the right and select a timetable to set, when the users of the group can access this passage. Select an action to be executed and click **Save**. The passages where *access is enabled* will be colored *green* and passages with *disabled access* are colored *red*.

The screenshot shows the 'You are changing group "Direktor AC" permission' interface. It features three main panels: 'List of Groups', 'List of Passages', and 'Selected Timetable for Passage/Action'. In the 'List of Groups' panel, 'Direktor AC' is selected and highlighted in blue. In the 'List of Passages' panel, 'Podjetje/Prodaja-Podpora/Sejna/Vhod' is selected and highlighted in green. In the 'Selected Timetable for Passage/Action' panel, 'Pristop - Ves čas' is selected, and the 'Toggle' action is chosen. A red 'Save' button is visible in the top right corner. Red arrows point to the selected group, passage, and action.

Adding user access

Select a user you wish to edit from the List of users. The selection will color *blue*. All the groups assigned to the user will color *green* in the List of groups. The default user's access rights set by all the assigned groups are shown in the List of passages. Passages with *enabled access* are colored *green* and *passages with disabled access* are colored *red*.

It is also possible to set **access exceptions for a user**. Exceptions are access rights that are not defined by a group. You can add or remove access permissions at specific passages for the selected user directly. The **added user permission** will be colored *dark green* in the List of passages and the **added user bans** will be colored *orange*.

The screenshot shows the 'You are changing user "Korošec Janez" permission' interface. It features three main panels: 'List of Groups', 'List of Passages', and 'Selected Timetable for Passage/Action'. In the 'List of Groups' panel, 'Korošec Janez' is selected and highlighted in blue. In the 'List of Passages' panel, 'Frontdesk' is selected and highlighted in green, and 'Vhod Proizvodnja' is highlighted in orange. In the 'Selected Timetable for Passage/Action' panel, 'Registracija Fiksni (star)' is selected, and the 'Open' action is chosen. A red 'Save' button is visible in the top right corner. Red arrows point to the selected user, passage, and action. Below the main interface, a legend shows a green box for 'Frontdesk' labeled 'user's permission' and an orange box for 'Vhod Proizvodnja' labeled 'user's ban'.

13.1.2. Codeks TA - Assign Timetable to Group

You can assign a certain timetable to the group in the Groups Editor. First select the group you wish to assign with the timetable. Selected group will color blue and the users which belong to selected group will color green. On the right side of Groups Editor select the passage and from the drop-down menu select the timetable according to which this group will come to work. Click the Save button to save changes.

The screenshot shows the Groups Editor interface with the following components:

- Top Bar:** "You are changing group 'Direktor AC' permission" and "Show all groups" dropdown.
- List of Groups:** A table with columns "Last name", "Name", and "Department". The "Direktor AC" group is selected and highlighted in blue.
- List of Passages:** A table with columns "List of Passages" and "Selected Timetable for Passage/Action". The "Podjetje/Prodaja-Podpora/Sejna/Vhod" passage is selected and highlighted in green.
- Dropdown Menu:** A menu is open for the selected passage, showing various timetables. The "Gibljivo" timetable is highlighted in blue.
- Buttons:** A "Save" button is visible in the top right corner.

NOTE: To be able to assign timetable to the group, *Permission edit* icon must be selected (grayed out). If *Permission view* is selected, you can only review connections between groups and locations.

13.1.3. Edit Group Access

Select the group for you wish to edit access. Selected group will color blue. On the right side of the Groups Editor edit group access and click the Save button to save settings.

| List of Groups | List of Passages | Selected Timetable for Passage | Action |
|-------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|--------|
| <input type="checkbox"/> _Zaposleni | <input checked="" type="checkbox"/> Prst test | Direktor | Open |
| <input type="checkbox"/> Čistilka | <input checked="" type="checkbox"/> Podjetje/Prodaja-Podpora/Sejna/Vhod | Pristop - Ves čas | Toggle |
| <input checked="" type="checkbox"/> Direktor AC | <input checked="" type="checkbox"/> Podjetje/Production. Secretary/Entry | Pristop - Ves čas | toggle |
| <input type="checkbox"/> Direktor KM | <input checked="" type="checkbox"/> Podietie/Production. Secretarv/Storagee | Pristop - Ves čas | Open |
| <input type="checkbox"/> Frontdesk All rights | | | |

13.1.4. Remove Group Access

First select the group which will color blue. On the right side of the Groups Editor unselect the passage from which you wish to remove access and click the Save button to save settings.

| List of Groups | List of Passages | Selected Timetable for Passage | Action |
|-------------------------------------------------|------------------------------------------------------|--------------------------------|--------|
| <input type="checkbox"/> _Zaposleni | <input checked="" type="checkbox"/> Prst test | Direktor | Open |
| <input type="checkbox"/> Čistilka | <input type="checkbox"/> Frontdesk | | |
| <input checked="" type="checkbox"/> Direktor AC | <input checked="" type="checkbox"/> Vhod Proizvodnja | Direktor | Open |
| <input type="checkbox"/> Direktor KM | <input type="checkbox"/> Izhod Proizvodnja | | |
| <input type="checkbox"/> Frontdesk All rights | | | |

13.1.5. Set Timetable and Action for Selected Passages

To change the timetable and/or action for multi passages at once, first select the group and select all passages, for which you wish to set the timetable and action. Right-click on the selected group and select *Set timetable and action for selected passages* on the menu.

| List of Groups | List of Passages | Selected Timetable for Passage | Action |
|-------------------------------------------------|------------------|--------------------------------|--------|
| <input type="checkbox"/> Direktor | | | |
| <input checked="" type="checkbox"/> Direktor AC | | Direktor | Open |
| <input type="checkbox"/> Direktor KM | | | |
| <input type="checkbox"/> Frontdesk All rights | | | |
| <input type="checkbox"/> Frontdesk No Acce | | Direktor | Open |
| <input type="checkbox"/> Frontdesk No Acce | | | |
| <input type="checkbox"/> Koda | | | |
| <input type="checkbox"/> Koda AC | | | |
| <input type="checkbox"/> Komerciala | | | |
| <input type="checkbox"/> Komerciala AC | | | |
| <input type="checkbox"/> Komerciala KM | | | |

A new window opens where you can select the timetable which will be assigned to all selected passages. Click on the Save button for confirmation.

General information

Selected Timetable ▼

for Passage

Action ▼

13.1.6. Dynamic Group and User Access

Dynamic group access enables you to grant dynamic access to groups or users. You need to have at least two readers, one to grant dynamic access and one to delete dynamic access.

If you assign new dynamic access to already existing dynamic access, application will take into account the new dynamic access instead of the previous one. In this way you can create multiple levels of access. If you only need one level of dynamic access, then you must select "Choose" in the Dynamic access drop-down menu (picture under point 2) for the Dynamic access Group.

Example:

The user in the group Employees can open Storage door, only after he entered the passage through the main door named Entry Production. The user will be able to enter the Storage in Workweek timetable. When the user leaves the production room he must use the exit reader named Exit Production. This action will disable him from entering the Storage after leaving the production room.

1. First we need to determine entry and exit reader in Hardware Editor. This can be done when editing the reader. For Entry reader select Direction *Entry* and for Exit reader select Direction *Exit*.

Reader information Entry reader

Name

Type ▼

Direction ▼ ↖

Reader number ▼

Connect to passage ▼

Reader information Exit reader

Name

Type ▼

Direction ▼ ↖

Reader number ▼

Connect to passage ▼

Direction can also be set in Basic settings table.

The screenshot shows the 'Device settings' interface with three main sections: 'Locations', 'Hardware', and 'Device settings'. The 'Device settings' section is active and shows the 'Basic settings' tab. A red arrow points from the '[1] Entry Production Reader' in the Hardware list to the 'Entry' dropdown menu in the Direction field.

| Field | Value |
|---------------|-------------------------|
| Type | wiegand |
| Name | Entry Production Reader |
| Direction | Entry |
| Reader number | 1 |
| Location | Entry Production |

2. Next, in the Groups Editor, select the group or user you wish to edit. Click the Permission edit in the upper menu (pay attention to the text above the List of users that informs you who's access rights you are currently editing).

In this example, with the Employees group selected, enable the passage Entry Production. Set the timetable Production - research, select the action Open, and click the Show button (in the upper right corner). A new column will be added for setting Dynamic access. From the drop-down menu select the group who's rights you want the Employee group to get when they pass through the Entry Production. You need to make sure the group selected in the Dynamic access has permission to access the Entry Production passage. We will select the group Storage. Thus we have successfully added the access rights of Storage group to our Employee group.

The screenshot shows the Groups Editor interface with three main sections: 'List of Groups', 'List of Passages', and 'Selected Timetable for PassagAction'. The 'List of Groups' section has 'Employees' selected. The 'List of Passages' section has 'Entry Production' selected. The 'Selected Timetable for PassagAction' section has 'Production - research' selected. The 'Dynamic access' section has 'Storage' selected.

| List of Groups | List of Passages | Selected Timetable for PassagAction | Dynamic access |
|----------------|------------------------------------------------------|-------------------------------------|----------------|
| Employees | <input type="checkbox"/> Prst test | Production - research | Storage |
| Čistilke | <input type="checkbox"/> Frontdesk | | |
| Čistilke AC | <input checked="" type="checkbox"/> Entry Production | | |
| Čistilke KM | <input type="checkbox"/> Exit Production | | |
| Direktor | | | |
| Direktor AC | | | |

3. In the next step we have to take away the Storage group rights from the Employees group.

Select the passage Exit Production, set the timetable Workweek, and action Open. Click the Show button and select the group Employees from the Dynamic access drop-down menu. Thus we have successfully taken away the group rights of the Storage group from the Employees group and reset the groups original access rights.

The screenshot displays a web interface for managing user access. It features a sidebar on the left titled "List of Groups" and a main table on the right. The sidebar lists various groups, with "Employees" circled in red. A red arrow points from this group to the "Exit Production" row in the table. The table has four columns: "List of Passages", "Selected Timetable for Passage", "Action", and "Dynamic access". The "Exit Production" row is highlighted in green and has its "Dynamic access" cell containing "_Employees" circled in red. Above the table, there are three red arrows with labels: "Select group ..." (pointing to the sidebar), "select passage ..." (pointing to the "List of Passages" column), and "select timetable and action for passage." (pointing to the "Selected Timetable for Passage" and "Action" columns). A "Save" button is located in the top right corner.

| List of Groups | List of Passages | Selected Timetable for Passage | Action | Dynamic access |
|----------------------|------------------------------------------------------|--------------------------------|--------|----------------|
| Employees | <input type="checkbox"/> Prst test | | | |
| Čistilke | <input type="checkbox"/> Frontdesk | | | |
| Čistilke AC | <input checked="" type="checkbox"/> Entry Production | Production - research | Open | Storage |
| Čistilke KM | <input checked="" type="checkbox"/> Exit Production | Workweek | Open | _Employees |
| Direktor | <input type="checkbox"/> [1] Passage 2 | | | |
| Direktor AC | <input type="checkbox"/> [255] Passage 1 | | | |
| Direktor KM | | | | |
| Frontdesk All rights | | | | |

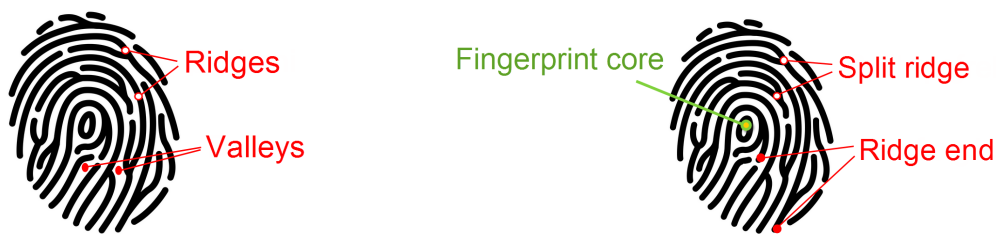
Similarly as described in the example above you can set a Dynamic access for a single user. The process is the same, just make sure you are editing the access rights of the user and not a group.

Part

14

14. Fingerprints

Fingerprint is biometric physiological characteristic, on which the verification and identification of people is based. Among all the biometric characteristics (iris, face, voice, palm, etc.), the fingerprint belongs to the highest level of reliability. Fingerprints are made up of unique patterns of ridges (raised areas) and valleys (the space between the ridges). Identification is usually based on minutiae points located on ridges. The minutiae is the point where the ridge ends (ridge end) or splits (split ridge). Each minutiae is assigned with information such as type, location and direction. On each fingerprint there can be found the center part, which is called the fingerprint core.



Fingerprint serves as a user card, but it can not be granted with special rights, as can be done with the card. Fingerprint is assigned with the same rights as the user.

WARNING!-1 Card numbers that are equal or less than 1024 are reserved for fingerprints and should not be used as card numbers. If you already have the cards with this numbers in your system you should change them before enrollment of fingerprints.

WARNING!-2 Required version Codeks application that works with the newer 9.6 version for fingerprints enrollment must be 9.0.1.44 or later. Older versions of Codeks application are not compatible with newer 9.6 version for fingerprints enrollment.

WARNING!-3 Regardless on the number of the fingerprints readers in the system, the entire system can have only 989 enrolled fingerprints.

NOTE: Each card, fingerprint, remote key... occupies one user place in the controller. So if the user has for example two cards, three fingerprints, one remote key and a contactless key pendant, there are 7 filled user places in the controller for only one user.

14.1. Preparation Before Enrolling Fingerprints

Before using fingerprints you must first edit the hardware and correctly connect the fingerprint reader to the system. The fingerprint reader in Codeks application can be used as a stand-alone reader or as an external wiegand reader for our controllers that support wiegand readers. The fingerprint reader in Codeks application can be used as a stand-alone reader or as an external Wiegand reader for our controllers that support Wiegand readers. If two fingerprint readers are used as a standalone reader, it is highly recommended that each has their own communication line, since the time of sending tables will be significantly shorter. After properly connected hardware it is necessary to [send tables](#)^[32] to controllers before enrolling fingerprints. In this way, the reader will delete all until then enrolled fingerprints, which may have been intended for previous use, testing, etc.

The fingerprint reader as external wiegand reader:

- Select the communication line which can differ from the communication line of the controller.
- Set the device's address.

The fingerprint reader as a stand-alone reader:

In Settings you can determine the default fingerprint reader. Open the Settings / Default fingerprint controller and select the default reader in the drop-down menu. Reader on which you will enroll the fingerprints can also be selected when enrolling the fingerprints (Biometric data tab), but the default reader will be already selected. This is practical in cases where the reader for enrolling fingerprints is always the same and so the possibility of using a false reader becomes insignificant. In case of larger systems, it is

recommended that you use a special fingerprint reader dedicated only for enrolling.

WARNING! While writing fingerprints the system will record the first fingerprint which will be used on the reader, so you must be careful that in the meantime no user will register on this reader and that the reader for enrolling fingerprints is properly selected.

14.2. Enrollment of Fingerprints

WARNING! Among all biometric fingerprint characteristics fingerprints belong to one of the most reliable and accurate features. However, due to poor image quality of fingerprint image the performance of automatic fingerprint recognition can be lower or wrong. **Therefore it is crucial to capture high quality image of fingerprint for successful automatic fingerprint recognition!**

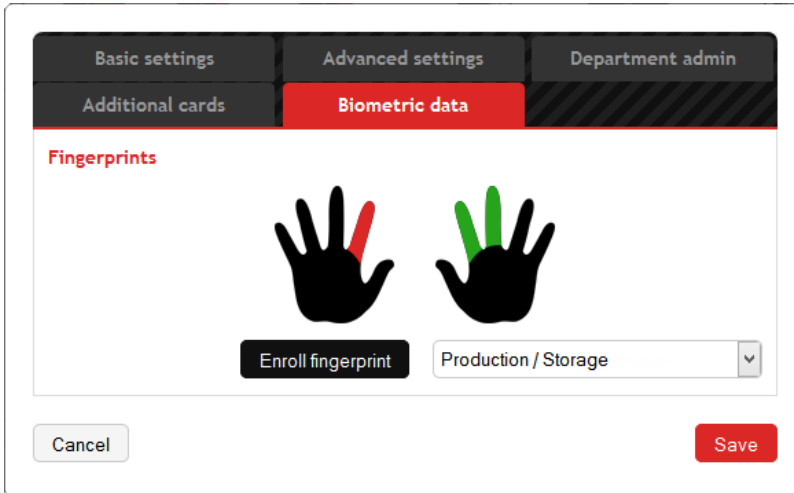
Fingers are exposed to many tasks, so they can be dirty, wet, dry, worn, etc. The most common cause for poor fingerprints reading is dryness of the fingers. In this case you need to moisten the fingers, for example with a short breath to the finger. It is necessary for you to scan the fingerprint really carefully so that the structure of ridges and valleys is clear and thus enable better identification of fingerprints for later use. Entering fingerprints is an operation that requires some time, so take your time and slowly and carefully enroll the fingerprints. More clear and sharp fingerprint image will enable greater and better recognition performance for later use.

Fingerprints can be enrolled **only for existing users**, therefore only when editing user. Select the user you wish to enroll the fingerprints for and click the *Biometric data* tab. Picture will display left and right hand, where you can select the fingers, which you will enroll.

Red - Indicates the selected finger.

Light green - Indicates the fingerprints that are already enrolled.

Dark green - Indicates the fingerprint that is already enrolled and it is selected. When you select already enrolled fingerprint, option to [delete](#)^[318] the fingerprint will enable.



Select the finger which will color red and click the *Enroll fingerprint* button.



In order for more reliable use of fingerprints, the user must **scan the fingerprint twice**. First scan of fingerprint is for identification and second for the fingerprint verification. With verification of the fingerprint the reader verifies whether the reading of the fingerprint in later use will be effectively and thus greatly reduces the possibility of false reading.

When the reader is ready for enrollment you will hear three short beeps. User should carefully place the finger on the sensor of the reader. It is important to put the fingerprint core in the center of the fingerprint sensor and the finger **must be placed straight on, NOT sideways or just with the tip of the finger**. If the first scan of the fingerprint is not properly performed, the screen will display the text **Enrolling new finger failed**. In this case, you have to repeat the enrollment of the fingerprint.

Properly placed finger



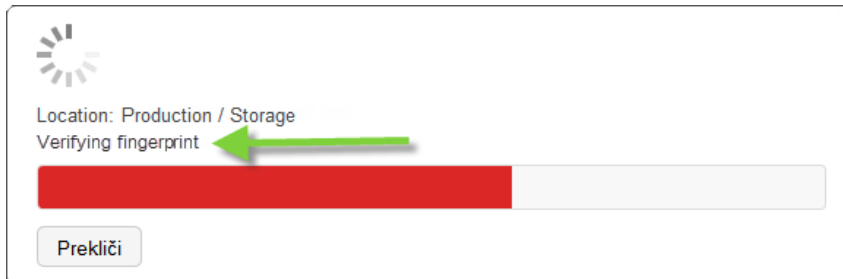
Sideways placed finger



Tip of the finger

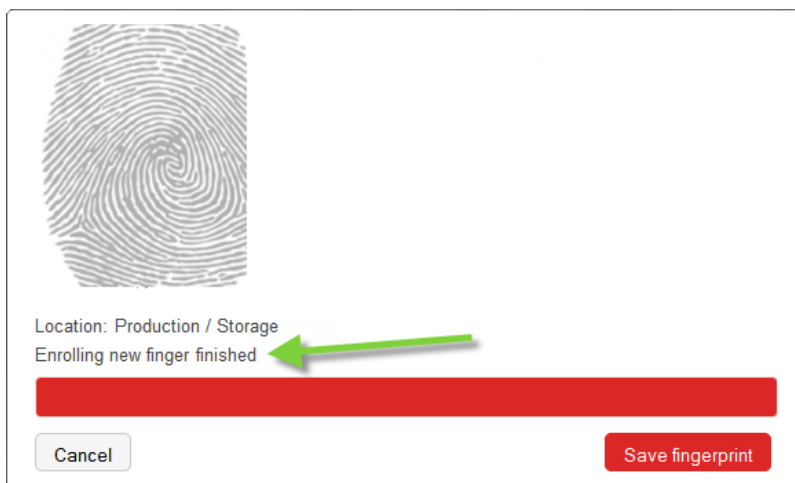


The reader will signal successful scanning with a short beep. After the beep, the user must withdraw the finger and wait for the reader to write the fingerprint. The window for enrollment will display the text **Verifying fingerprint** and at the same time the reader will start beeping repeatedly, indicating that it is ready for verification of the registered fingerprint.



The reader will beep repeatedly for 15 seconds. In this time the user must place **already enrolled finger** on the reader so that the reader can verify it. If the user doesn't place the finger on the reader, or if he places the wrong finger or he places it incorrectly, the verification will not be successful and the text **Verification of enrolled finger failed** will be displayed. In this case, you have to repeat the enrollment of the fingerprint.

After the beep, the user must withdraw the finger and wait for about 15 seconds for the reader to write the fingerprint. If the verification of the fingerprint is successful, the image of the fingerprint will appear on the screen, where the lines (ridges and valleys) of the fingerprint must be sharp and clear, and the text **Enrolling new finger finished** will be displayed.



If you are not satisfied with the fingerprint image, click the *Cancel* button and repeat the enrollment until the picture is clear and sharp, so that you can provide a reliable reading of the fingerprint for later use. You must also consider that people may have damaged or worn finger pads (e.g. manual workers), so in these cases it is more likely that the fingerprint image will not be clear and sharp. The poor image of the fingerprint can be caused by excessive finger moisture, insufficient moisture, damaged or worn finger pads,

excessively long artificial nails, etc.

| The reasons for the poor fingerprint image | Solution |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cold, dry fingers | Employees who work outdoors often have dry fingers. In the case of cold or dry fingers employee must moisten the finger prior to enrollment, e.g. by blowing warm breath to the finger. |
| Moist, sweaty fingers | Some employees are working in very humid, warm or even hot places and therefore can have moist and sweaty fingers. In this case, the employee must prior to enrollment of fingerprints thoroughly wipe the fingers with a dry cloth, handkerchief or clothing. |
| Damaged pads | In the case of damaged pads the capture of clear fingerprint picture is very difficult, so in this case you should be especially cautious when enrolling the fingerprint. The finger should not be too dry or too moist and must be correctly placed on the sensor. It is more likely that due to damaged pads the recognition of fingerprints will not be good at enrollment as well as in later use. |
| Dirty fingerprints sensor | With each fingerprint enrollment dirty particles remain on the sensor that can cause the poor image capture of fingerprint. That is why we recommend that you clean the sensor every 5 enrolled fingers. |

Examples of improperly enrolled fingerprints are shown in the next table.



Missing information of the fingerprint in the upper part of the picture. Picture is smeared in the right bottom part, probably because the finger was too moist during enrollment.



In this picture there is no clear difference between ridges and valleys. Picture is smeared in several parts, probably because the finger was too moist or dirty during enrollment.



Fingerprint is smeared, there is no clear difference between ridges and valleys. The finger was probably too moist or dirty during enrollment.



Missing information of the fingerprint in several parts of the picture. Finger was probably too dry during enrollment.



Missing information of the fingerprint in several parts of the picture. Finger was probably too dry during enrollment.

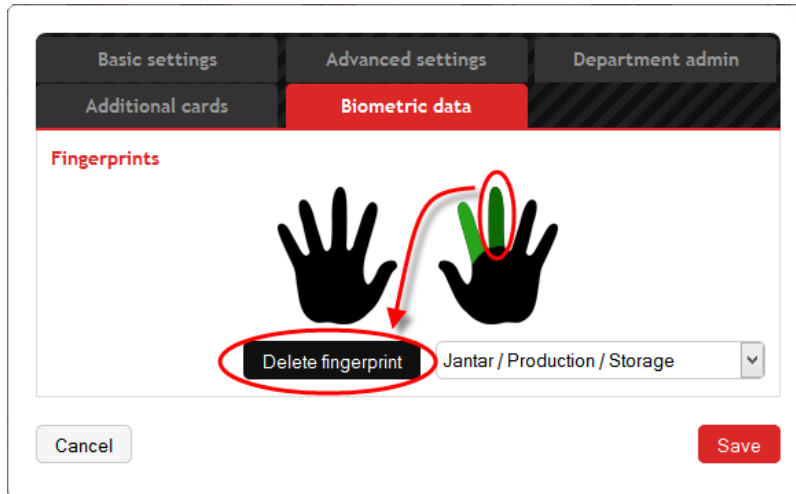


While this is clear and clean picture of fingerprint, the user will most likely have problem with verification because the finger core is not in the center of the picture and therefore a big part of fingerprint information is missing.

When you are satisfied with the fingerprint image, click on the *Save fingerprint* button. After saving all the fingerprints you need to [send tables](#)^[32] to the controllers. The fingerprints images are large data, so sending tables can sometimes be a little long process. For example, sending 70 fingerprints to the controller Rex F (communication 485) takes about 3 minutes and 30 seconds at a speed of 115,200 baud.

14.3. Delete Fingerprint

If you want to delete the fingerprint from the system, select enrolled fingerprint on the picture and click the *Delete fingerprint* button.



14.4. Using Fingerprint Reader

WARNING! When enrolling fingerprint with your employees, you have a unique opportunity to **educate** them **on the proper use of a fingerprint reader**. If the employees will not use the fingerprint reader correctly the result will be incorrect reading and loss of user confidence in the system which in turn leads to dissatisfaction of employees and management.

For successful use you must follow two rules!

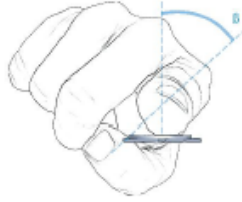
- 1. Carefully and accurately enter the fingerprints**
- 2. Teach the employees how to properly use the fingerprint reader**

For the successful operation of the fingerprint system the proper use is extremely important. Users must be instructed on proper use. User should carefully place the finger on the sensor of the reader. It is important to put the fingerprint core in the center of the fingerprint sensor and the finger **must be placed straight on** , **NOT sideways or just with the tip of the finger**. Properly placed finger is shown in the following picture.

Properly placed finger



Sideways placed finger Tip of the finger



USER ANALYSIS

One of the most important factors when optimizing a system is the knowledge of the target group, that is an analysis of the system users. Below is a list of more general issues to think of:

Age:

The age of the user can be connected to the level of technical experience, but not necessarily. If for example the user is very young, the fingers can be very small and the motions can be less balanced than of an adult user.

Technical experience:

If the user has vast technical experience, it is more likely that he or she is skilled to deal with other techniques as well.

Work environment:

Some workplaces may negatively affect the fingerprints, for example damage of the finger pads in building environment, or the use of fingerprint system is more difficult by the nature of the work, for example greasy hands in production. This should be considered before deciding on fingerprint identification system.

Attitude towards new technology:

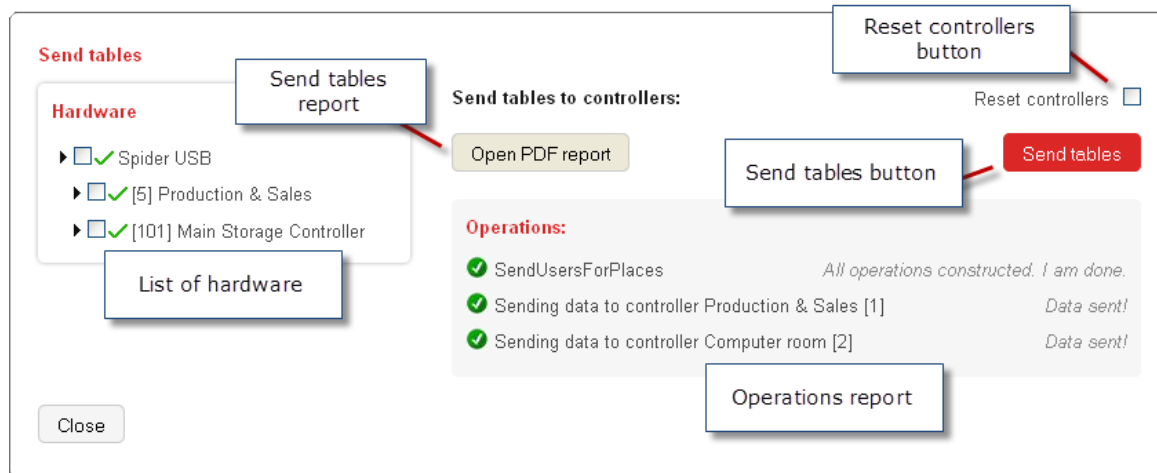
If the user has a positive attitude against new technology, it is possible that he or she will try harder to make the new device function well. The importance of this parameter is depending on the extent of which the user can influence the system performance. In the fingerprint sensor case behavior of the user is crucial to the system, and therefore the attitude is very important because the user is more likely the make a stronger effort in order to succeed.

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15. Send tables

To send tables to the hardware, select Send tables in the Main Menu. With this command Sent tables window will open. Here you can send tables to one or more properly connected controllers. Tables become valid the very moment the controllers have them. You need to send tables to controllers every time you change any settings in the Codeks program. If controller is not in use or not connected properly then tables will not be sent to this controller.



On the *List of hardware* you can select controllers to which you will send tables to. If no controllers are selected, tables will be sent to all connected controllers in the system.

- ✓ - Controller is connected
- ⚠ - Controller is not connected
- ⊘ - Controller is not in use

When *Reset controllers button* is enabled it will reset controllers' inputs and outputs to basic settings after sending tables.

Send tables button enables you to send tables to selected controllers.

Send tables report enables you to overview all last sent data to the controllers. Report is in PDF format.

Operation report displays rapid report of sending tables to the controllers.

- ✓ - Data was sent successfully
- ✗ - Data was not sent successfully

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16. Other tools and functions

16.1. Data export from V7 and import to Codeks

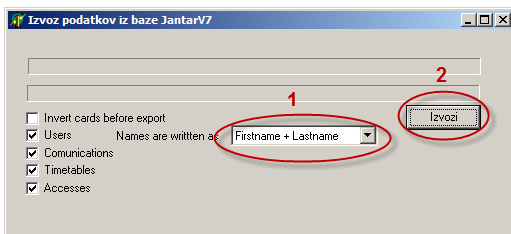
To export your data from Jantar V7 to the newer Codeks program you first need need the *Codeks AC or TA software, version 9.0.1.57 or higher*, installed on your system. Included in the software package is also the **JantarImportGui.exe** file, which you will need to *import your data to Codeks*. Additionally, you will need the **ExportV7.exe** file (dated 23 August 2016) to export your data from Jantar V7.

ATTENTION!

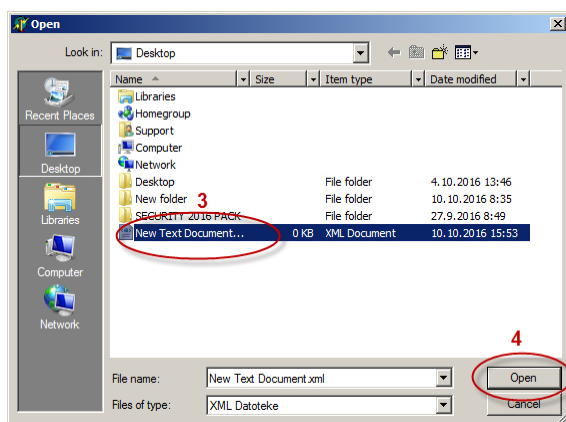
You must run the ExportV7.exe and JantarImportGui.exe files as administrator.

Exporting data from your Jantar V7 database

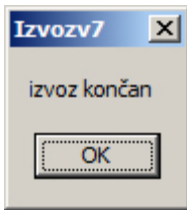
1. Start by creating a new text document with an **.xml** extension (e.g. *Text_document.xml*).
2. Run the **ExportV7.exe** file *as administrator*.
3. In the new window select the *same order of the name and last name* as they are used in Jantar V7 from the drop-down menu.
Click **Izvozi** (Export).



4. In the new window select **the text document you created in step 1** (e.g. *Text_document.xml*).
5. Click **Open**.



When the export is finished the "izvoz končan" ("export finished") window will appear.



6. All of the exported data is now written **in the new text document** (e.g. *Text.document.xml*).

Importing data to the Codeks database

1. First **stop the Codeks service** using the *Codeks Service Manager* program.
2. Run the **JantarImportGui.exe** file (C:\Program Files\Codeks) as administrator.
3. In the new window click **Open file** and navigate to **the text document** (e.g. *Text_document.xml*), containing your exported data. Click **Open**.
4. Uncheck the **Ignore first row** and **Import TASStartDate** options.
5. Click **Import from data**.
6. You have **successfully imported your data to the Codeks database**.

The differences between the old and new controllers in reading and inverting the card number:

New V9 controllers with R1D reader will read the card number inversely compared to the old controllers.

Example:

| | Old controller | New V9 controller |
|--------------|-----------------------|--------------------------|
| Not inverted | 3560267 | 7129810 |
| Inverted | 7129810 | 3560267 |

New V9 controllers with wiegand reader take into account "*Inverted*" setting, while the old controllers don't.

In Jantar V7 application, for invert reading of the wiegand reader it's "Parameter 0" had to be set to "99".

Codeks has two wiegand readers: **wiegand_custom** and **wiegand**.

- With "**wiegand_custom**" reader the user can set "Parameters 0 and 1" on his own.
 - With "**wiegand**" reader the Codeks will set "Parameter 0" to "26" and "Parameter 1" to "0".
- * If "wiegand" reader is **connected to the old controller** (which does not take into account "*Inverted*" setting for wiegand), then "Parameter 0" is set to "99" to ease the user's work.

16.2. Encrypted data transfer

Codeks software packages, versions **9.0.1.58 or higher**, enable safer communication:

- with controllers in your network by using the [V9 communication protocol](#)^[325] (also with custom generated encryption keys),
- between the client and server, by using [SSL certificates](#)^[330].

Codeks Device Manager

Using the Codeks Device Manager program you can:

- set basic device parameters,
- upload and update firmware,
- edit connections and connect with your devices.

Codeks Service Manager

Using the Codeks Service Manager program you can:

- run the Codeks software on your server,
- edit and add licence codes for your software,
- enable encrypted V9 communication using the custom generated encryption key,
- enable safe HTTPS communication with clients.

16.2.1. V9 communication

Newer controllers with **firmware version 9.2 or higher** enable V9 communication. *V9 communication* has the following advantages, compared to the *older V7* communication:

- it enables better encryption and the use of custom generated encryption keys,
- it enables faster processing, e.g. when searching for controllers in your network,
- it is better adapted to working with controllers, that have their own network interface and
- it enables PUSH communication between the Codeks program and controllers, which greatly relieves the communication lines, because messages are only sent by the controllers, when an event is registered.

ATTENTION!

All controllers on the **same communication line** must have the **same communication protocol**. It is not permitted to mix V7 and V9 communication.

16.2.1.1. Use of custom V9 encryption key

Newer controllers with **firmware version 9.2 or higher** enable the use of **custom generated V9 encryption keys for V9 communication**.

You can create your custom V9 encryption key using the Codeks Device Manager program. Generate the encryption key by following the instructions in the Codeks Device Manager documentation. Codeks Device Manager also enables you to write a custom generated encryption key onto selected controllers and communicate with them on the hardware level.

ATTENTION!

After writing the custom V9 encryption key onto selected controllers you can no longer communicate with them by using the default factory-assigned encryption key. To establish communication with the selected controllers you must also assign your new custom encryption key to the [controllers' communication lines](#)^[329] using the Codeks program.

To enable communication between the Codeks program and controllers, that were assigned the newly generated custom V9 encryption key, you must:

- [add the file](#)^[326] containing the custom encryption key to the Codeks program folder,
- [enable the use](#)^[327] of custom V9 encryption keys using Codeks Device Manager and
- [set V9 communication](#)^[329] using the custom generated V9 encryption key to selected controllers in the Codeks program.

The listed steps are described in more detail in the following chapters.

16.2.1.2. Adding custom encryption keys in Codeks program

This step is also described in Codeks Device Manager program documentation.

Check if the **CodeksCommunicationCryptoKey.txt** file has already been added to your Codeks program folder.

If the file has already been added, continue on to chapter [Enabling use of custom V9 keys with Codeks Service Manager](#)^[327].

If the file is not yet added, follow these steps:

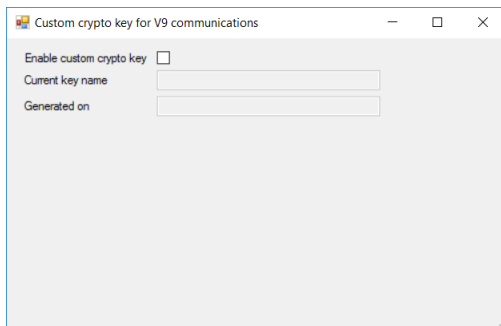
1. In the Codeks Device Manager program folder find the **CodeksCommunicationCryptoKey.txt** file.
2. Make a copy of the file and add it to the Codeks program folder (C:/Program Files/Codeks).

16.2.1.3. Enabling use of custom V9 keys with Codeks Service Manager

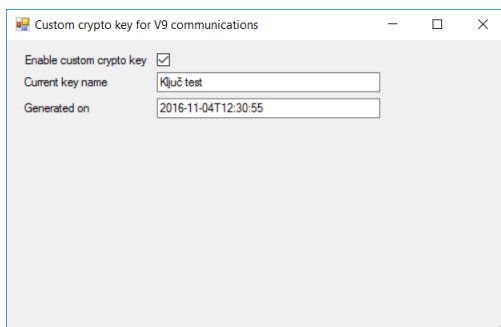
1. Open the Codeks Service Manager program.



2. Click on the **Comm security** button. A new window opens.



3. In the new window check the **Enable custom crypto key option**, to enable the option of adding your custom generated V9 encryption key. The fields below will now display the custom encryption key written in the **CodeksCommunicationCryptoKey.txt**. If the key data does not appear in the fields automatically, check if the **CommunicationCryptoKey.txt** file is added to the Codeks program folder.



TIP

It is assumed that you have already generated your custom V9 encryption key using the Codeks Device Manager before starting this process.

We recommend that you generate your custom encryption key beforehand. You can find the instructions on how to generate your custom V9 encryption key in the Codeks Device Manager program documentation.

ATTENTION!

To enable the use of custom V9 encryption keys the **Enable custom crypto key** function **must always be enabled**.

If the function is not enabled the Codeks application can only use the default factory encryption key to communicate with any controller. Communication with controllers assigned with a custom V9 encryption key **will not be possible**.

ATTENTION!

The **CodeksCommunicationCryptoKey.txt** file contains **your new custom encryption key**. The file contains security sensitive information and must, consequently, be protected against theft or destruction.

ATTENTION!

It is essential to make an additional backup copy of the CodeksCommunicationCryptoKey.txt file and store it in a safe location. Be especially careful when transferring the file to another computer.

In order to restore communication with a device, in the event of losing the custom encryption key, the device settings must be reset back to factory settings. Devices that cannot be reset to factory settings, can unfortunately no longer be used.

4. Close the window.

You have successfully enabled the V9 communication using your custom generated encryption key. In the last step you will assign your custom V9 encryption key to the communication lines of the selected controllers.

16.2.1.4. Assigning the custom V9 encryption key to communication lines

You can set the custom V9 encryption key to **any communication line individually**. This enables the simultaneous use of newer controllers, which can already use the V9 communication protocol, and older controllers, that can only use the V7 communication protocol, within the same system.

1. Open the Codeks application and log in with your administrator user name and password.
2. Click the **Hardware** button.

In the *List of hardware* find the communication line for which you wish to change the V9 encryption key and mark it.

IMPORTANT!

Using the Codeks application you can only change the V9 encryption key for the communication line itself. All the controllers and readers that are connected to the same communication line must be assigned the same encryption key.

To enable communication all the controllers and readers that are connected to a specific communication line must use the same encryption key that is assigned to the communication line itself.

3. Select the **Options** tab in the *Device settings* and find the **Key for data encryption** settings. The default setting is **Default factory crypto key**. To set your custom V9 encryption key select **Custom Crypto key** from the drop-down menu.

The screenshot displays the Codeks application interface. At the top, there is a navigation bar with icons for Home, Back, Logout, Add location, Add hardware, and Communication status. The main content area is divided into three panels: Locations, Hardware, and Device settings.

The **Hardware** panel shows a tree view of communication lines. The line "Podjetje access" is selected and highlighted with a red oval. A red arrow points from this oval to the "Key for data encryption" setting in the **Device settings** panel.

The **Device settings** panel has two tabs: "Basic settings" and "Options". The "Options" tab is active. Under "General settings", the "Key for data encryption" is set to "20000". A red oval highlights this value, and another red arrow points from the "Custom crypto key" option in the dropdown menu to this oval.

| Key | Value |
|------------------------------------------|--------------------------|
| Keyword | |
| Communication timeout (ms) | 2000 |
| Delay between receiving and sending (ms) | 2 |
| Event fetching delay (ms) | 500 |
| Protocol | V9 |
| Secure transfer | true |
| Encrypt communication | |
| TCP port2 (mobile) | 1002 |
| Offline address | 0 |
| Enable push events | <input type="checkbox"/> |
| Keep alive interval | 20000 |
| Key for data encryption | Custom crypto key |

4. Save your changes by clicking the **Save** button in the top right corner.

Using the same procedure you can individually assign a custom encryption key to any communication line in your network.

16.2.2. Encrypted data transfer

The main advantage of using the *HTTPS (HyperText Transfer Protocol Secure)* communication is the encryption of data transferred between the client and server. The use of *SSL (Secure Sockets Layer)* certificates guarantees that the user is **truly communicating with your server** and that all the **data sent is protected** against unauthorized viewing.

When establishing HTTPS communication your server sends an encryption key, stored in a SSL certificate, to the user. The following chapters describe the use of SSL certificates in the Codeks software in more detail. The Codeks software enables the use of **commercial (bought) SSL certificates** as well as **custom generated ("self-signed") SSL certificates**.

16.2.2.1. Obtaining the certificate

Obtaining a commercial SSL certificate

Commercial SSL certificates are issued by a world-known and accredited Certificate Authority institution, and can be purchased from a SSL certificate vendor of your choice. The selected vendor will guide you through the process of obtaining your certificate. After completing the process they will issue you a *SSL certificate (*.pfx)* and *the certificate password*. By using a SSL certificate when communicating with a client, your server presents itself as safe and guarantees that all the data transferred by the client is encrypted.

The most important advantage of commercial SSL certificates is, that their issuers are already regarded as "*Trusted Root Certification Authorities*" by most of the web browsers. By comparison when using a **"self-signed" certificate** a warning will be displayed, that the **issuer is unknown**. Before connecting to the page, the browser will require the users confirmation that the connection is safe.

Obtaining a custom generated ("self-signed") certificate

It is not necessary to purchase a SSL certificate. The Codeks software also enables you to use a **"self-signed" certificate**, that you can generate yourself. The main disadvantage of "self-signed" certificates is, that web browsers report a warning of an unknown certificate issuer and inform the user that the connection may not be safe. To avoid this issue you need to manually add the certificate issuer to the browsers list of "*Trusted Root Certification Authorities*", on every client computer.

ATTENTION!

The Codeks software enables the use of "self-signed " certificates, but we do not recommend their use.

While "self-signed" certificates enable encrypted communication between the client and server, they do not guarantee that the server itself is safe and trustworthy. Issuers of commercial SSL certificates guarantee that the server, the user is accessing, has been validated and is safe. There, however, is no such guarantee when using "self-signed" certificates.

You can research how to generate a "self-signed" certificate yourself or generate one by using the files provided on the [Jantar forum \(forum.jantar.si/forum/sl/\)](http://forum.jantar.si/forum/sl/).

After obtaining the certificate, the next step is to add it to your server ([Adding the certificate to the server](#)^[331]) and then enable the use of the certificate using the Codeks Service Manager ([Enabling safe communication using Codeks Service Manager](#)^[333]).

16.2.2.2. Adding the certificate to the server

The process of adding the SSL certificate to your server is the same no matter what kind of certificate you are using (commercial or "self-signed" certificat).

1. Write **mmc** into the *Start menu search box*.

Start the **mmc** program (**Microsoft Management Console**).

2. In the *console window* chose **File -> Add/Remove snapp-in ...**

3. In the new window chose **Certificates** and click **Add >**.

4. In the new window chose **Computer account** and click **Next**.

5. Chose **Local computer** and click **Finish**.

Click **OK** to close the window.

6. In the *console window* double-click **Certificates (Local Computer)**.

Double-click **Personal**. Double-click **Certificates**.

7. Click **More actions -> All actions -> Import ...**

8. In the *Certificate Import Wizard* click **Next**.

9. Select **Browse ...** and navigate to your SSL certificate (*.pfx).

Above the Open and Cancel buttons select the **Personal information exchange (*.pfx)** file type.

Select your certificate and click **Open**. Click **Next**.

Now **enter the certificate password** and click **Next**.

10. Select the option **Place all certificates in the following store** and in the **Certificate store** field select **Personal**.

Click **Next** and then **Finish**. At the end the system informs you that the import was successful.

Close the console window.

You have successfully added your certificate to your server. In the next step you will [enable HTTPS](#)

[communication protocol using the program Codeks Service Manager](#)³³³.

16.2.2.3. Enabling safe communication using Codeks Service Manager

To enable encrypted communication between the client and server you must import your *SSL certificate* into the Codeks program and *set the communication protocol to HTTPS*:

1. Start the **Codeks Service Manger** program.
2. Click the **SSL Certificates** button.
3. On the displayed list in the new window find and mark **your certificate**. Select **HTTPS** from the drop-down list below and click **Save**.
4. Two notifications will appear, when the installation is successfully concluded:
„**SSL certificate successfully deleted.**“
„**SSL certificate successfully added.**“

Safe communication between the client and server has been successfully enabled.

The change in the used communication protocol can also be seen in the browser address bar:



From now on **https://** (instead of **http://**) will always be displayed in the address bar when using the Codeks client application.

ATTENTION!

If you have enabled safe HTTPS communication some time after installing the Codeks software, **inform your users** of the Codeks application URL change. The previous URL address will no longer display the Codeks client application.

ATTENTION!

If you are unable to establish safe (HTTPS) communication with your server using a mobile device, change the communication port of your mobile device. Enable the port 443 to communicate with your server. The port 443 is regarded as the default communication port, for safe (**https://**) communication according to the HTTPS protocol standard.

Part

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17. Change log

1. Changes in the v 9.0.1.58 version

- Added description of new functionalities associated with adding multiple groups to one user (revised descriptions in chapters Users, Groups and Access)
- Descriptions of group types (in chapter Groups)
- Revised description of assigning access to groups and users (added functionalities of filtering passages depending on marked selection, removed User permission descriptions)
- Description of changed dynamic access assigning
- User permissions chapter removed
- Added chapter Other tools and functions
- Added chapters:
 - Data export from V7 and import to Codeks (revised)
 - V9 communication (use of custom V9 encryption keys)
 - Encrypted data transfer (use of SSL certificates in Codeks)
 - Edit time attendance for one or more users
 - New description of Custom reports.

2. Changes in the v 9.0.1.45 version

- Description of new fields of the intervals (Timetables)