> **R o g e r   A c c e s s   C o n t r o l   S y s t e m   5**
> Application note no. 016
> Document version: Rev. B

Attendance reporting and monitoring

Note: This document refers to RACS 5 v1.6.6 or higher

Introduction

RACS 5 enables user attendance reporting and monitoring in VISO software. The offered functionalities enable to:

- Register users working time including attendance reports which can be:
  - reviewed and exported to a file by VISO operator
  - automatically sent to specified email accounts
  - available to users by web browser.
- Monitor number of users in zones.
- Locate users based on their current zones
- Report user statuses based on T&A Modes (e.g. exit on-duty, lunch break, etc.)
- Export T&A data to third party accountancy and T&A software.

Within this note it is assumed that RACS 5 system is already configured so it can offer access control features. Quick start of RACS 5 system is explained in AN006 Application note which is available at www.roger.pl.
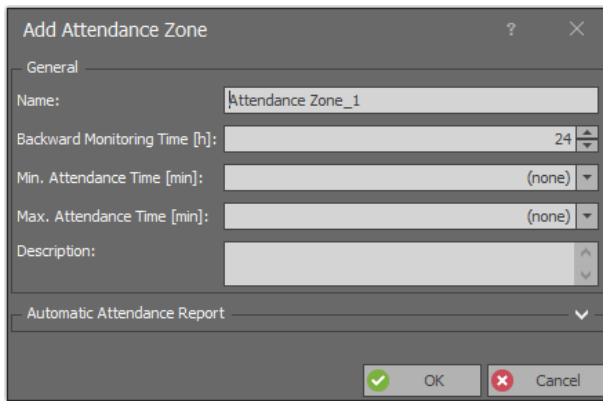

Note: More advanced Time&Attendance is offered by additional RCP Master 3 software.

Attendance zones

Reports and monitors in VISO software are based on Attendance Zones which are defined by indication of Entry and Exit Access points (readers). Attendance zone is a logic object on the level of the whole system and not particular access controller so it can include any available Access Points defined in the system. Additionally, single Access point can be assigned to multiple Attendance zones. In case of Attendance reports usually single zone in the whole premises is specified with entry and exit points corresponding to company entrances and exits. In such scenario attendance time equals to working time. While in case of monitors, Attendance zones are configured according to requirements of specific installation.

In order to define Attendance zone:

- In the top menu of VISO software select *Time and Attendance* command and then *Attendance Zones* icon.
- In the opened window select *Add* button and in the next window name the zone. Parameters which are available in the window will be explained further in this note. Close the window with *OK* button.

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- In the bottom select the tab *Entry Points* and then *Assign* button to indicate Access points which will be treated by the system as entry readers to the zone. Close the window with *OK* button.
- Similarly select *Exit Points* tab and indicate exit readers from the zone. Close the window with *OK* button.

Time and Attendance

Time and Attendance in VISO software is based on Time and Attendance Report which can be used to calculate attendance time of users in particular zone and then to generate reports which can be exported to such formats as pdf, html, rtf, docx, xls, csv and others. Report can also be sent automatically to email addresses and made available to users via web browser.

The calculations in the report are based on access granted events. The report is started by selection of *Time and Attendance* command in the top menu of VISO software and then *Time and Attendance Report* icon.

Settings

In the *Settings* area the time range, zone and users or filter can be selected for the report. Such filter is defined by selection of *Event log* command in the top menu of VISO software and then *Filters* icon. The filter enables more detailed selection of access granted events to be used in the report.

List and details

In the *List* area, the list of users is displayed along with their attendance data which can be sorted and searched. This basic report can be exported to file with *Report* button or as explained later it can also be automatically sent by email.

In the *Preview* area all detailed information can be displayed in the form of calendar (weekly and monthly) or table. Right clicking in calendar area enables to switch between different views and to select specific date.

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First-Last Report

The report which is started by selection of *First-Last Report* button shows user who was the first to enter the attendance zone and user who was the last to exit the attendance zone each day. The report can be exported with *Report* button.

First-Last Attendance Report

The report started with *First-Last Attendance Report* button shows summary list of entries and exits for selected users and their total time spent in the Attendance zone. This report includes only the first entries and the last exits, so if a user left workplace in the meantime then such additional entry and exit are not included in the *Total* field. The report can be exported with *Report* button.

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Detailed Attendance Report

The report started with *Detailed Attendance Report* button shows summary list of entries and exits for selected users and their total time spent in the Attendance zone. This report includes all entries and exits and based on this data the *Total time* is calculated. The report can be exported with *Report* button.

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Automatic Attendance Report (email)

RACS 5 system can automatically send basic attendance report to specified email addresses. This functionality is ensured by communication service from Roger SVC packet software which is installed on RACS 5 server. The report is sent in attachment as PDF file and it includes list of users and their total attendance times in Attendance Zone which in general perspective correspond to total working times. Individual report can be generated for each Attendance Zone. In order to define Automatic Attendance Report:

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- In the top menu of VISO software select *Tools* and then *SMTP Accounts*.
- In the opened window select *Add* to define SMTP server which will be used by RACS 5 system for email sending. Close the window with *OK* button.
- In the navigation tree of VISO software double click *Schedules* command.
- In the opened window select *Add*, name the schedule and select *General Purpose Momentary* type. Close the window with *OK* button.
- In the bottom select *Week Days* tab and then *Edit*.
- In the opened window select when report will be sent by right clicking day and hour. Schedules in RACS 5 are weekly based. For example, Friday 8:00 PM can be selected for report sending.
- In the top menu of VISO software select *Configuration* and then *Access User Persons*.
- Edit users who are supposed to receive reports and for each such user enter valid email address in *Contact Information* tab. If report are to be sent to a recipient who is not RACS 5 user then you can create new user in VISO software and enter valid email address without assigning any Access Credential, Authorisation(s) nor Authentication Factors (cards, PINs).
- In the top menu of VISO software select *Time and Attendance* command and then *Attendance Zones* icon.
- Add new or edit existing Attendance Zone and enter all details in *Automatic Attendance Report* area i.e. schedule, SMTP account and recipients. In the *Backward Monitoring Time* field you can define period for events which will be used in the report. If the report is supposed to cover 5 day working week then you can enter 5 x 24 h = 120h.

Report can be sent not only on weekly basis but also for example on the last day of month and in such case *Backward Monitoring Time* must also be adjusted properly. In order to define such Schedule:

- In the navigation tree of VISO software double click *Calendars* command.
- In the opened window select *Add* and name the calendar. Close the window with *OK* button.
- In the bottom select *Dates* tab and then *Edit*.
- In the opened window select the last day of month with left mouse button and then right click to mark the date. Repeat for successive months and then close the window with *OK* button.
- In the navigation tree of VISO software double click *Schedules* command.
- In the opened window select *Add*, name the schedule and select *General Purpose Momentary* type. Close the window with *OK* button.
- In the bottom select *Exceptions* tab and then *Edit*.
- In the opened window assign previously configured Calendar and select time for sending the report e.g. 8:00 PM.

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- Assign the Schedule to Attendance Zone.
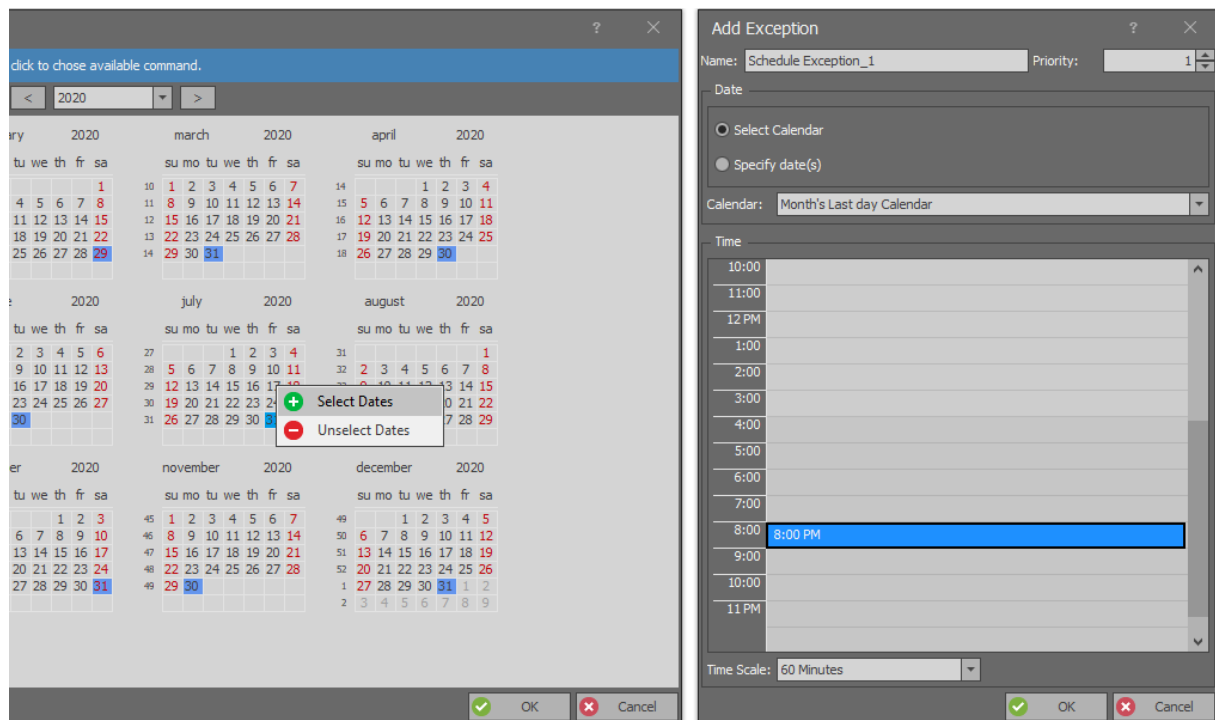
Attendance Report via web browser

RACS 5 system users can access Attendance Reports via web browser. They can verify by themselves how many hours their worked or how many hours their subordinate employees worked. In order to configure the report via web browser:

- Enable RACS 5 system management by web browser according to VISO Web manual.
- Create VISO Operator with login and password according to AN040 application note. Assign predefined *Attendance Reports in VISO Web* Role to the Operator.
- In the top menu of VISO software select *Configuration* and then *Access User Persons*.
- Create new or edit existing Person and in the tab *Remote Management* assign the Person with previously created Operator. Due to such association the system will know whose attendance data will be displayed when Operator is logged to the system via web browser.
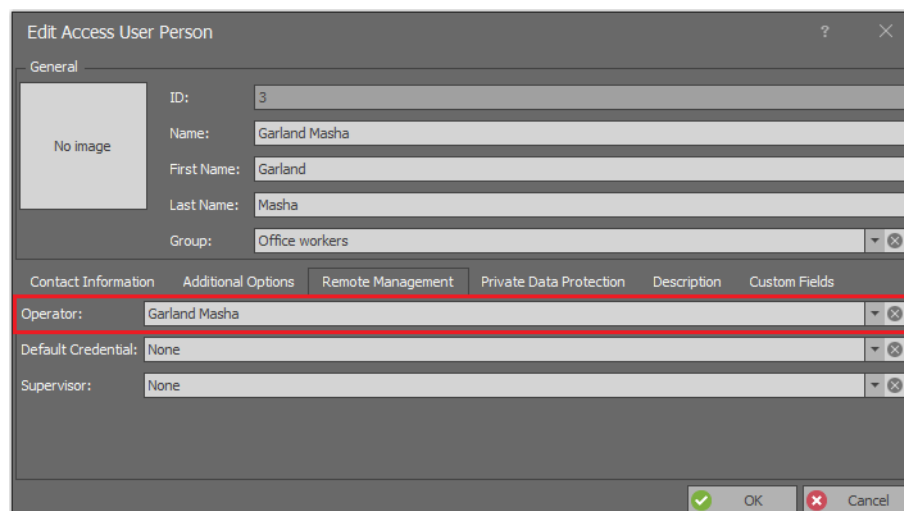
- Log into VISO Web app by entering Operator's login and password.

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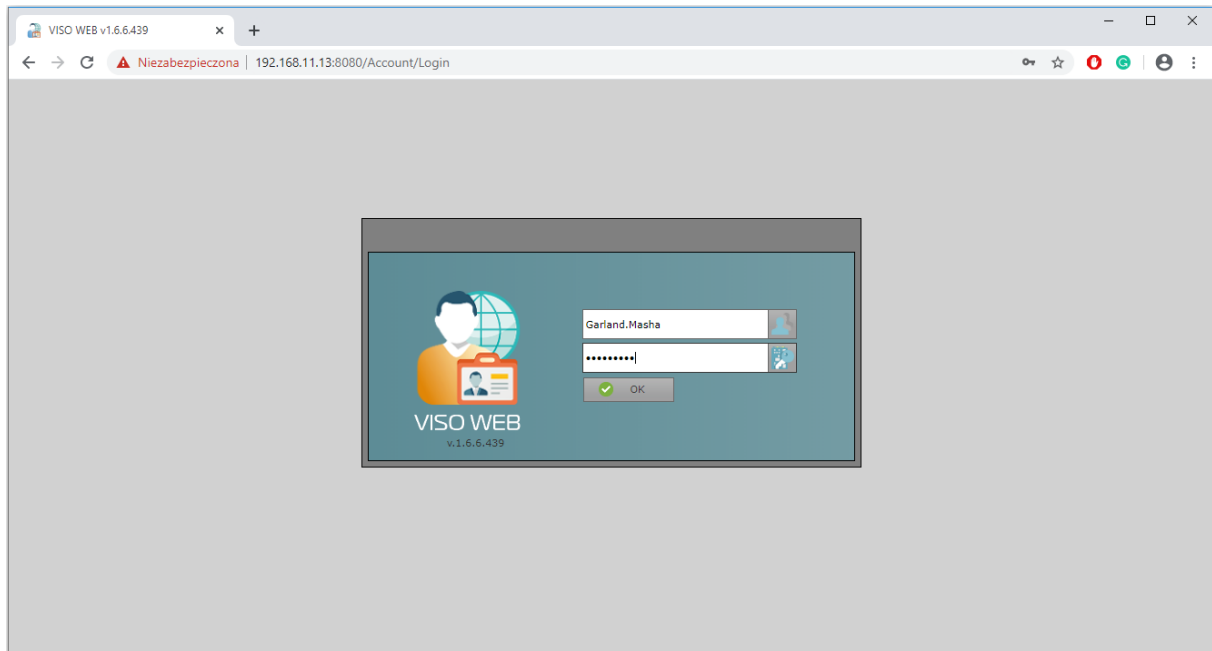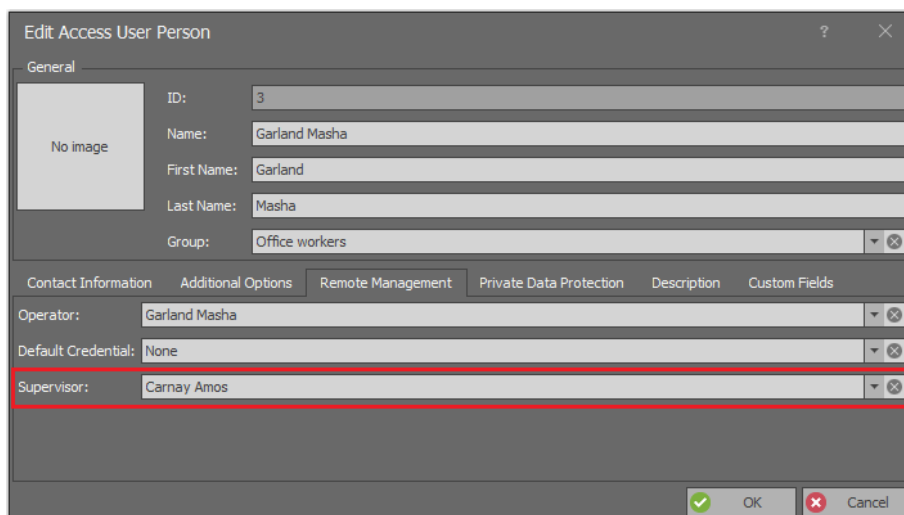
- Due to previously assigned predefined Role of the Operator only Attendance Report will be displayed in VISO Web. The button *Report* can be used to export data to PDF or XLS file.
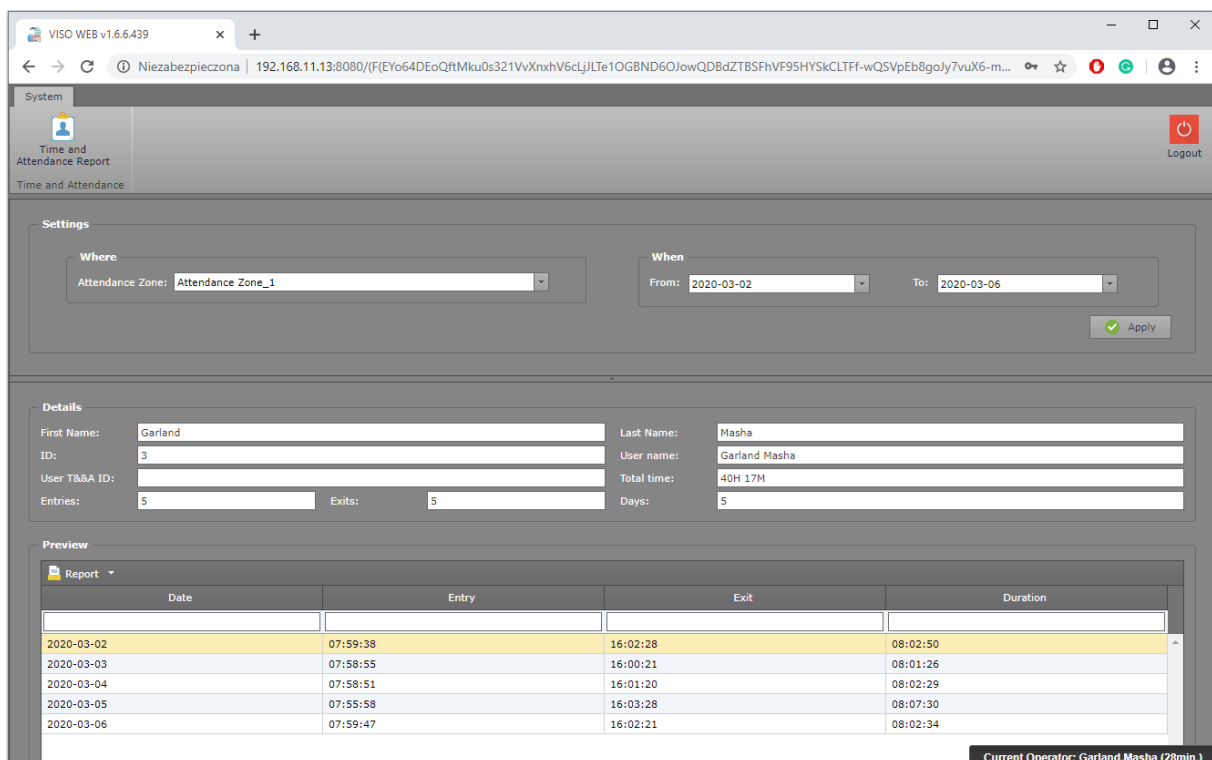
- Create more Operators and link them with users so they could access their Attendance Reports via web browser.

In typical application the Operator can only access data related to associated user but it is possible to assign supervisor to users. In such scenario the supervisor Operator can display Attendance Reports of all subordinate users (employees). Such association can be done in *Remote Management* tab.

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User location in the system

RACS 5 system offers various tools to locate current and past attendance of users in Attendance Zones.

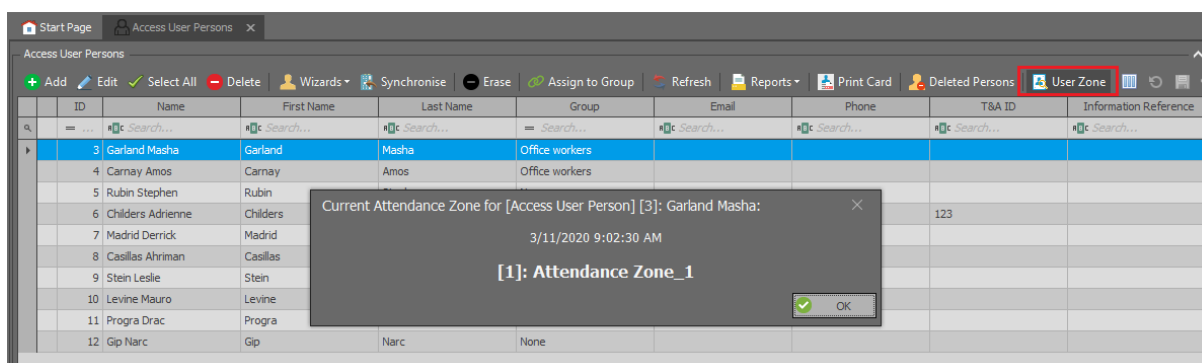Note: User location in Attendance Zones usually requires dedicated communication process to be operated in the background. The Attendance Zone monitoring process can be started in the window which is displayed by selection of *Tools* command in the top menu of VISO software and then *System Processes* icon.

Current Attendance Zone of user

In order to determine current Attendance Zone of a user:

- In the top menu of VISO software select *Configuration* and then *Access User Persons*.
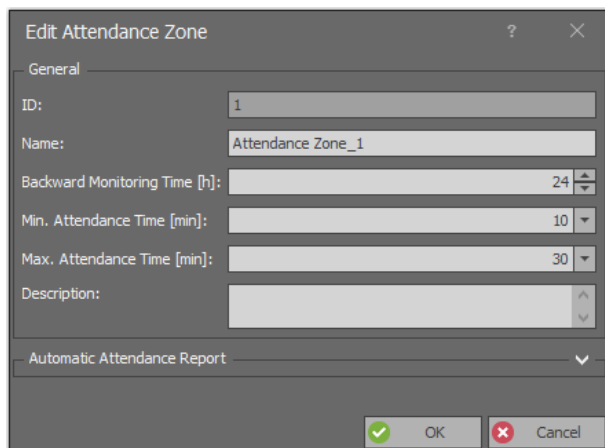- For selected user click *User Zone* button.

List of users in Attendance Zone

Collective location of users in particular Attendance Zone is based on Attendance Monitor which shows users inside and outside the zone. If *Current Events* is selected as *Operating Mode* then attendance status is based on access granted events from the time range specified by the parameter *Backward Monitoring Time* which is defined when Attendance zone is created/edited and the point of reference is present time. During Attendance Zone configuration it is also possible to specify *Max. Attendance Time* and *Min. Attendance Time*. When any of these values is exceeded by a user then such user is displayed in colour in the Attendance Monitor. If *Past Events* is selected as *Operating Mode* then the reference point can be specified in the past by selection of date and time. Therefore the first mode enables to monitor current attendance while the second enables to monitor attendance in the past (e.g. week ago).

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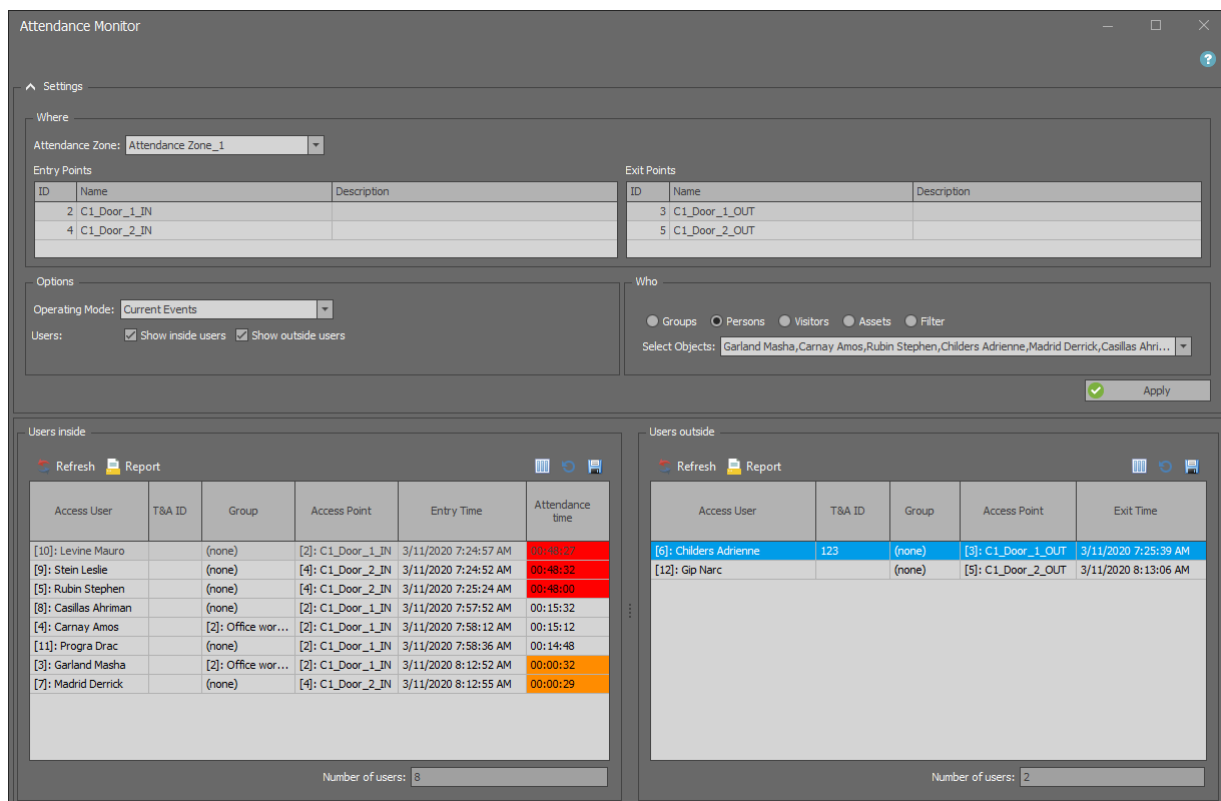
The monitor enables selection of users and group of users or filter. Such filter is defined by selection of *Event log* command in the top menu of VISO software and then *Filters* icon. The filter enables more detailed selection of access granted events to be used in the monitor.

Note: Monitor window can be dragged and dropped to be displayed beyond VISO main window. Additionally, multiple monitors can be started at the same time, each for individual Attendance zone.

Evacuation Report

Automatic reporting of users as reaction on event registered in RACS 5 system is explained in AN044 application note. Such functionality is mainly dedicated for RACS 5 operation with fire alarm system and in case of emergency it enables automatic generating and sending of Evacuation Report i.e. current list of users inside Attendance Zone. The list can be sent to email address and/or printer.

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User status monitoring

User status monitoring requires T&A Status Monitor which can be used to gather such information as where is the user (e.g. at work, on-duty exit) and what is he doing (e.g. lunch break, on call). The functioning of T&A Status Monitor is based on T&A Modes, which are also used in case of RCP Master 3 software operation with RACS 5 system. T&A Modes can be automatically or manually selected by user who identifies at Access Point (reader). Apart from predefined modes such as Entry, Exit, Lunch break, etc. it is possible to define own modes in the window displayed by selection of *Time and Attendance* command in the top menu of VISO software and then *T&A Modes* icon.

T&A modes

In order to define automatic selection of default T&A Mode by user when access is granted:

- In the navigation tree of VISO software within particular MC16 access controller double click *Access Points* command.
- In the opened window select one of previously created points and then *Edit* button.
- In the next window, select *T&A Options* tab, specify required mode in *Default T&A Mode* field e.g. *Entry* and enable the option *Register T&A Event when physical access is granted*. The default mode can also be controlled by schedule so for example the same Access point can be entry point in the morning and exit point in the afternoon. The *T&A Mode* type schedule is defined by selection of *Schedules* command in the navigation tree of VISO software.
- Repeat the steps for remaining Access Points as needed.
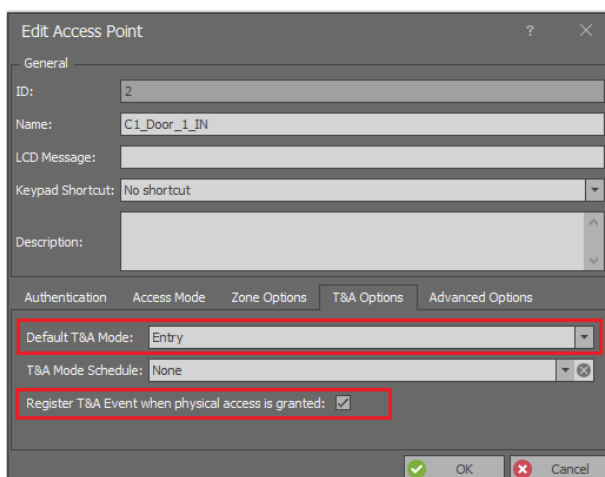
In order to define manual selection of T&A Mode by user with function key on reader's keypad before access is granted:

- In the navigation tree of VISO software within particular MC16 access controller double click *Access Points* command.
- In the opened window select one of previously created points, in the bottom select *Function keys* tab and then *Add* button.
- In the newly opened window select the button to indicate the location of function key.
- In the next window, in the *Name* field of *Object* area select exemplary terminal MCT12M-IO (ID=101) and *F[1]* as *Key Code* if F1 key on keypad of the reader is supposed to be used for T&A mode selection. Close the window with *OK* button.

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- In the opened window select the function *[153]: Set Momentary T&A Mode* and select T&A mode in *Parameter* field e.g. *[5]: Lunch Break*. If no option is selected in *Authentication and Authorisation Options* box then no Authorizations is required and the F1 key can be used by anyone as user authentication for the key will not be necessary. Close the window with *OK* button.

- As needed, define more keys in similar way assigning the same function *[153]* but with other T&A Mode in *Parameter* field. Then such keys can be used for temporary (8s) selection of particular T&A Mode by user.
- Additionally for each Access Point used for selection of T&A mode click *Edit* button in the top, in the opened window select the tab *T&A Options* and enable the option *Register T&A Event when physical access is granted*. If any T&A Mode is specified in *Default T&A Mode* field then it will be effective till another T&A Mode is selected with function key and then it will be restored after 8s from such key pressing. Close the window with *OK* button.

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Authorisations

Both mentioned above methods for T&A Mode selection and registration require additional configuration of Advanced Authorisation for function *[155]: Register T&A Event* and then assignment of such Authorisation to users who are supposed to generate T&A events used in T&A Status Monitor.

In order to define required Authorisation:

- In the navigation tree of VISO software expand *Authorisations* command, double click *Advanced Authorisation* command and select *Add* button in the opened window.
- In the next window select the function *[155]: Register T&A Event*. If the option *Includes authorisations for all rules* is enabled then the Authorisation will be universal in such extent that it will allow T&A registration on each Access Point in the system.
- Upload settings to controllers.
- Assign the Authorisation to users for example by means of Edit Person Online wizard which is available after selection of *Wizards* command in the top menu of VISO software.

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Monitoring

The main condition for functioning of the monitor is proper registration of T&A events by users when access is granted. Then the system operator can gather information on current status of users as well as history of their statuses in a time range specified by the parameter *Backward Monitoring Time [h]*. It is also necessary to indicate Attendance zone in the monitor and users. Similarly as in case of Attendance Monitor instead of users or users groups the event filter can be selected. Such filter is defined by selection of *Event log* command in the top menu of VISO software and then *Filters* icon. The filter enables more detailed selection of T&A events to be used in the report.
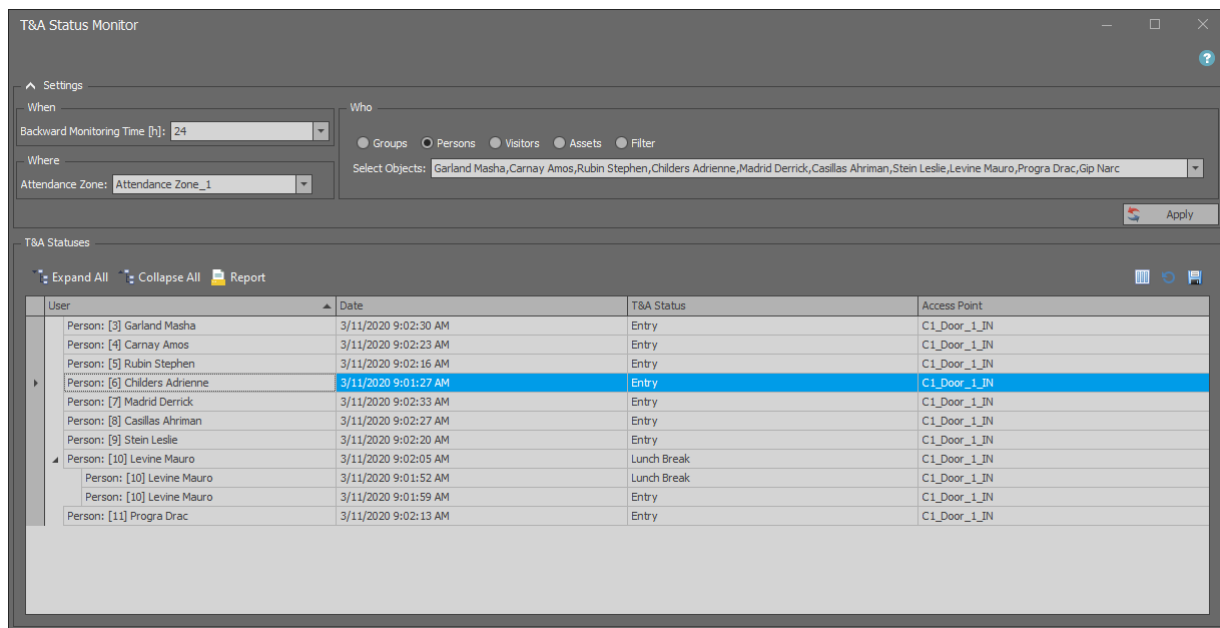
Note: Monitor window can be dragged and dropped to be displayed beyond VISO main window. Additionally, multiple monitors can be started at the same time, each for individual Attendance zone.

T&A data export to third party systems

Events which are registered in RACS 5 system can be exported to third party systems for the purpose of Time and Attendance. In such scenario, mentioned earlier T&A Modes must be applied in order to distinguish which access granting should be considered as work starting and leaving.

T&A data can be exported manually to file after selection of *Event Log* command in the top menu of VISO software, then *Event log* icon and *Export* button in the opened window. The data can also be exported automatically as a reaction for specific event which is defined by selection of *Event Log* command in the top menu of VISO software, then *Event Types* icon and *Actions* tab for selected event. More information on alerts and notifications is given in AN041 application note.

There are predefined T&A data formats in VISO software and it is possible to define own format by selection of *Tools* command in the top menu of VISO software and then *T&A Formats* icon.

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