

I. Installation

1. Connecting the Ekey Scanners

See the list of the supported [ekey FSX scanners](#) below:

101234	ekey FSX OM E REL
101235	ekey FSX OM E RFID
101236	ekey FSX OM E RFID REL
101237	ekey FSX OM E
101384	ekey FSX IN
101388	ekey FSX IN RFID
101427	ekey FSX WM
101428	ekey FSX WM RFID
101429	ekey FSX WM REL
101430	ekey FSX WM RFID REL
101444	ekey FSX OM I
101767	ekey FSX OM I RFID
101813	ekey FSX OM I REL
101814	ekey FSX OM I RFID REL
102023	ekey FSX OM E BL RFID
102024	ekey FSX OM E BL
102025	ekey FSX OM I BL
102026	ekey FSX OM I BL RFID

And other FSX type scanners like MyGekko FSX e.t.c.

- Note that the "ekey home" and "ekey net" scanners are NOT supported!
- To use the listed scanners without limitations into the *ekey FSX app* you require to get the license code for each scanner.

Connect the ekey FSX scanner to the one of the available RS-485 ports.

RS485 B <--> ekey scanner pin1 (green)

RS485 A <--> ekey scanner pin2 (yellow)

- 12-24V DC <--> ekey scanner pin3 (brown)

+12-24V DC <--> ekey scanner pin4 (white)

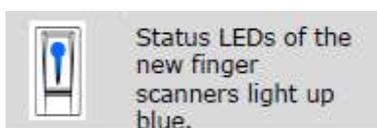
A group of up to 8 ekey FSX scanners can be connected to a single RS-485 line.

Scanners should be automatically detected by the application – see the *tab "Scanners"*.

If the connection to the RS485 line is successful, the scanner's status LED light changes from a blinking orange



to a steady blue colour:



Note:

- For LM devices with old CPU (LM2, LM3, LM4) is not recommended to use the built-in rs485 ports due to serial communications instability.
- The RS485 line can't be used together with the Modbus devices.

If you have no free LM RS485 native ports there is possible to use external "USB to RS485" converters with FTDI chips FT232RL, FT232R, FT232. Other serial chips like CH340 are not supported.

The following USB - RS485 converters are successfully tested:

- 1) FTDI FT232: [ekey USB Converter](#)
- 2) FTDI FT232R: [usb-rs485-we](#)
- 3) FTDI FT232RL: [Waveshare 17286 USB TO RS485](#)

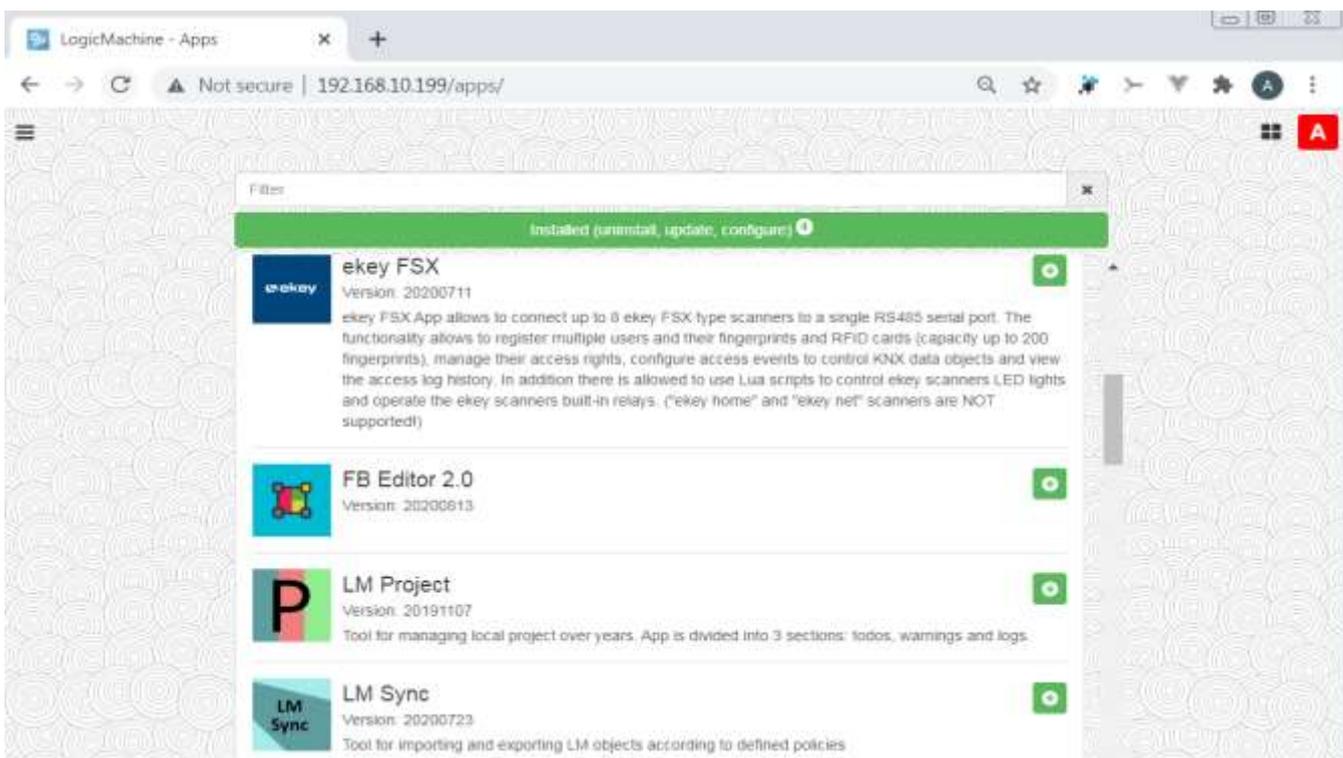
2. Installing the “ekey FSX app”

2.1. Download and install the last version installation package from:

<http://www.avu.lv/logicmachine/ekey-app/ekey-app-20241010.ipk>

or

2.2. Install it from the LogicMachine App store:



3. Installing the “ekey TA app”

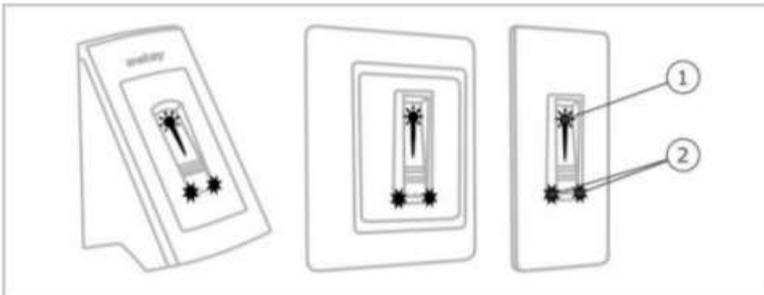
2.3. You can download the separate “ekey TA app” to expand this app with a “Time attendance” functionality

<http://www.avu.lv/logicmachine/ekey-app/ekey-TA-20241010.ipk>

4. Optical signals on the finger scanner

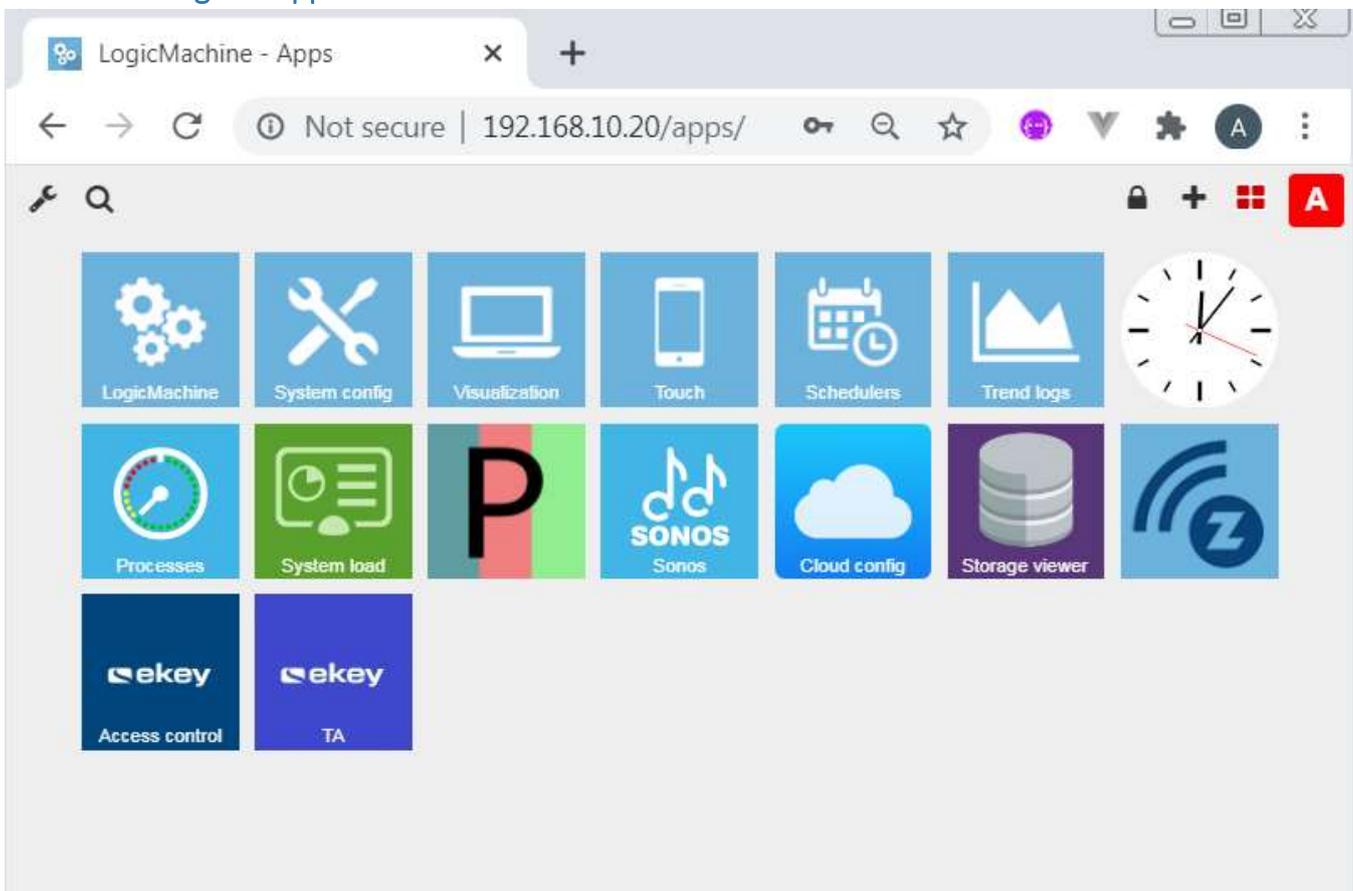
There are 2 types of LED:

- Status LED for operating status
- Function LED for indicating the function of the overall system.



1 Status LED
2 Function LEDs

5. Running the Application for the First Time



The active RS485 port name is registered into storage key "**app:ekey:port**"

When the active port is not known, the first run of the *ekey FSX App* will search for the port within all available RS485 serial lines and register it as active when at least one ekey scanner is connected to this port.

The sample view from the storage viewer app:

Key	Type	Value
app:ekey:enroll_status <input type="checkbox"/>	string	{"3":"ready","4":"ready","6":"ready","7":"ready"}
app:ekey:port <input type="checkbox"/>	string	/dev/RS485-2

The "app:ekey:enroll_status" contains information about the active scanner status. Possible status values are "ready", "enrolling", "enrolled", "enrollerror", "offline".

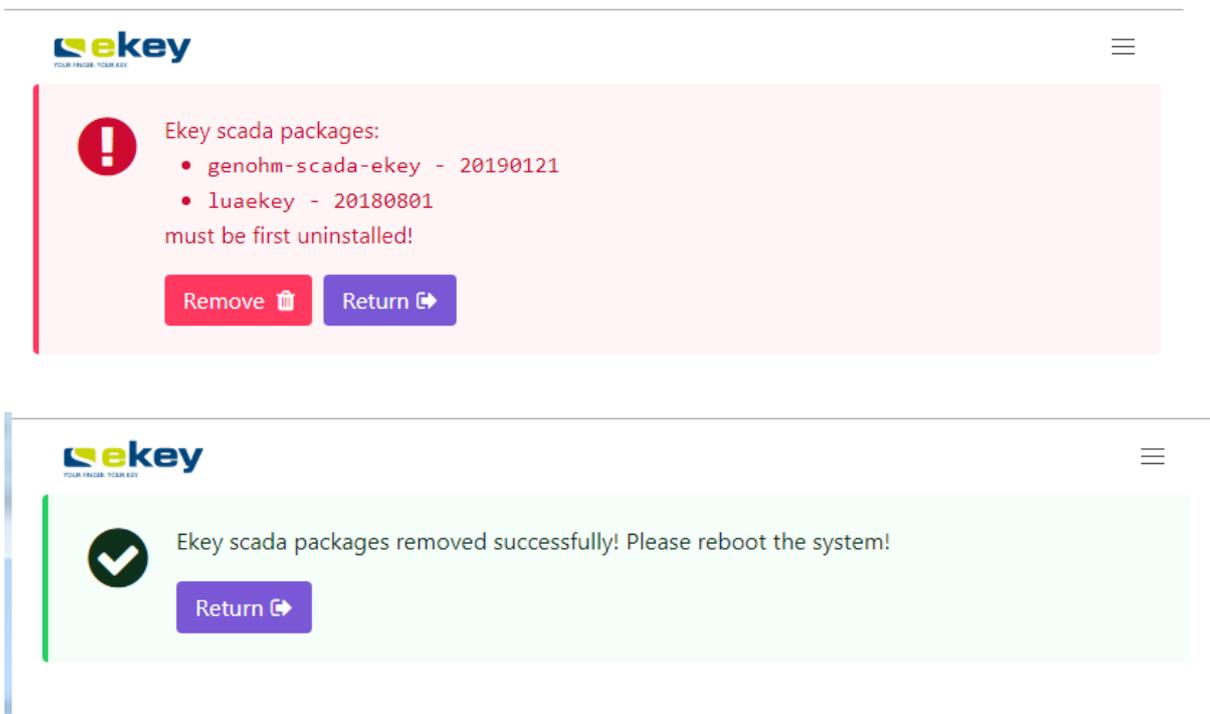
6. Migrating from the old "ekey scada LogicMachine application"

6.1. Removing the "ekey scada LogicMachine application"

If the "ekey scada LogicMachine application" is installed before, the first modal window will show you an option of uninstalling the corresponding packages.

You can press <Remove> to uninstall or press <Cancel> to exit the app. The existing database environment will not be deleted.

They will be used in this app after successful removal of 'old ekey packages'. The existing lua scripts will continue to operate in this environment.



II. Ekey FSX App

The installed “ekey FSX app” is ready for use if you can see all 6 tabs:

1. Tab “Users”

The system list contains the first 20 user records.

* If required the user list records can be expanded with a separate script to 200 records.

The columns from F1 to F10 and RFID show the “Key number” assigned to the selected Users credentials (Fingers 0... 10 or RFID 1..3 cards).

The green background color shows that the User credentials are registered in the internal database.

User	Name	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	RF1	RF2	RF3
1	I			2			1							
2	You				1									
3	He		1									1		
4	She									1				
5	User #005								1					
6	User #006													

Buttons: + Enroll, Delete

Fields:

User – User number

The icon  appears when the user ‘is checked’ for Time attendance event recordings.

Name – User name

F1, ... , F10 – The function Key number assigned to user fingers.

RF1, RF2, RF3 – The function Key number assigned to user RFID cards.

* Fields are visible when one of the active scanners has the property “is active RFID” = ‘Yes’.

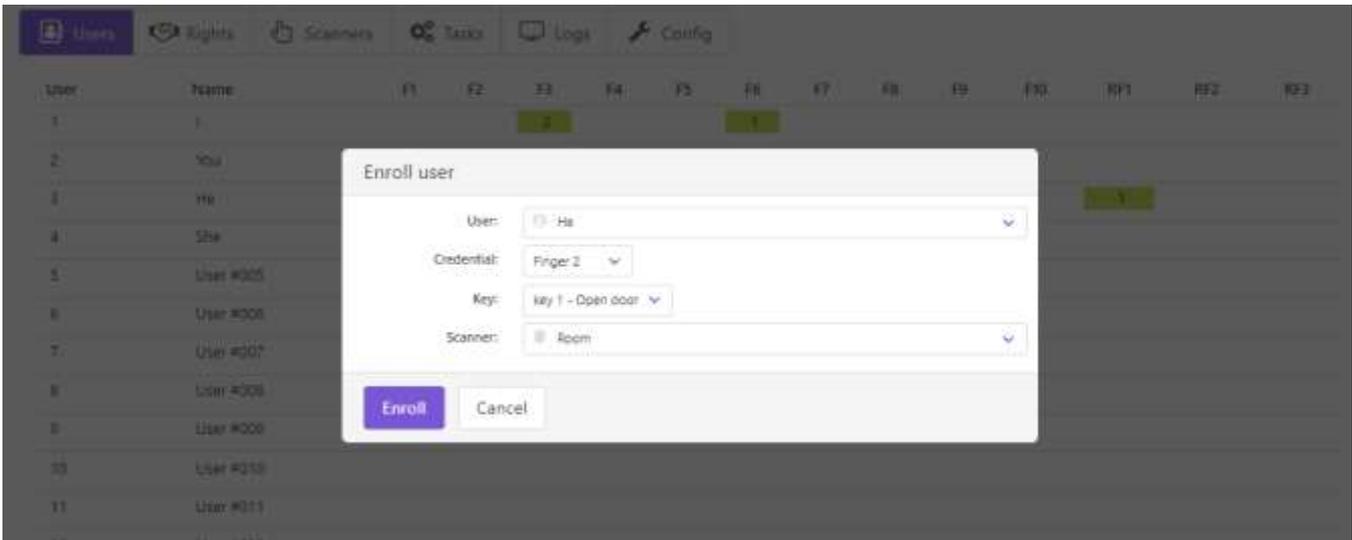
Commands:

<Click> on the selected User line filed Name – Opens the “User information” card

<Enroll> - open the modal window “Enroll user”

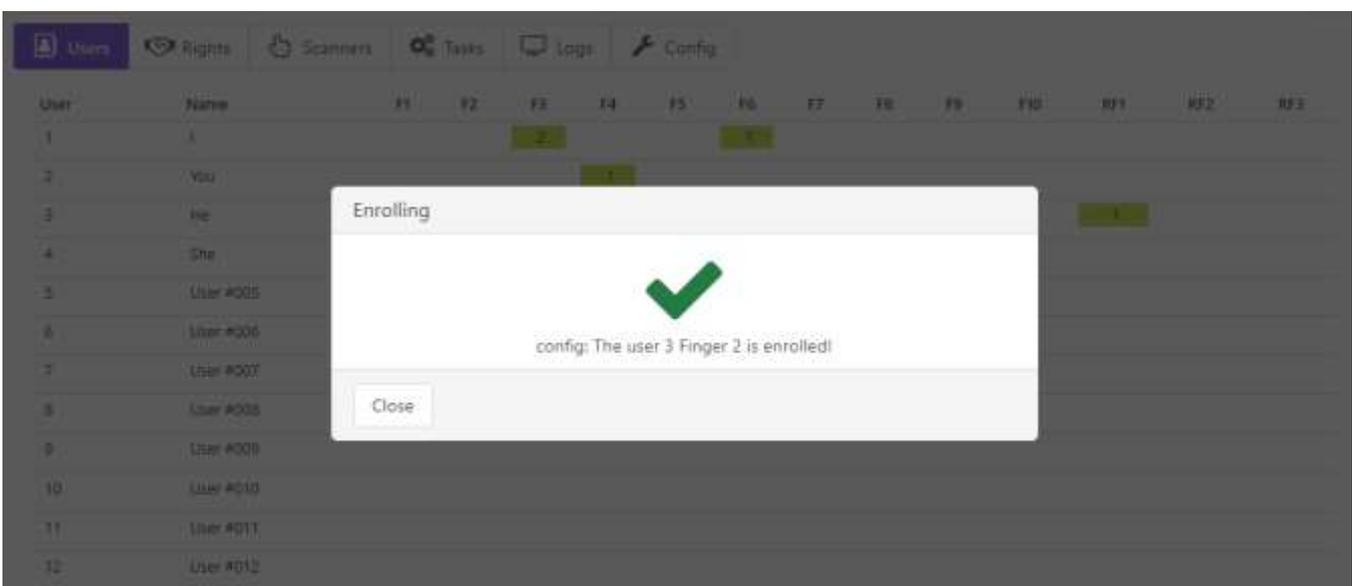
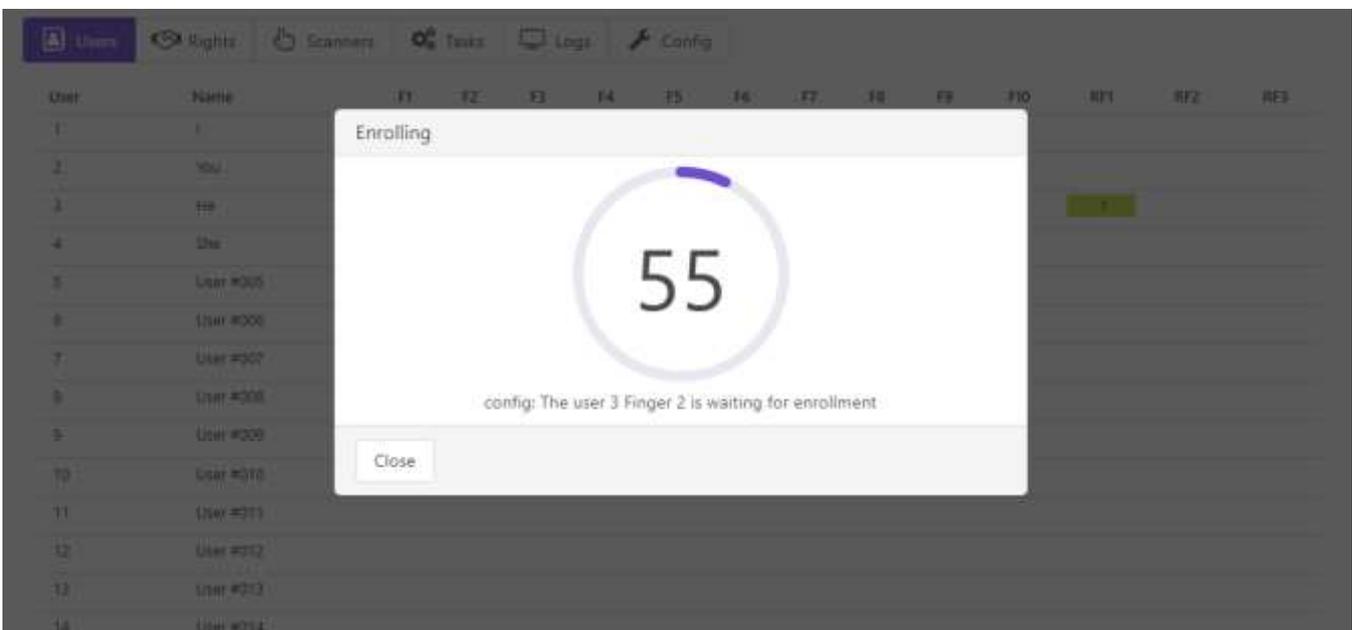
<Delete> - open the modal window “Delete user”

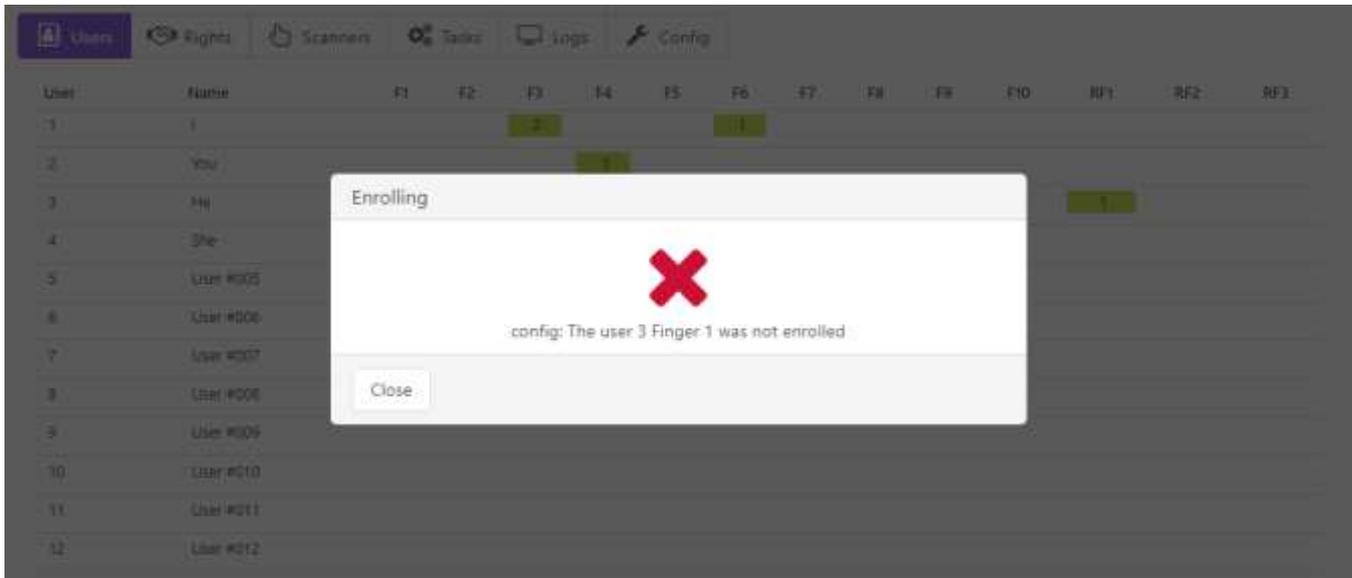
- a. “Enroll user”



Commands:

<Enroll> - Enroll the selected User Fingerprint for the chosen ekey Scanner.

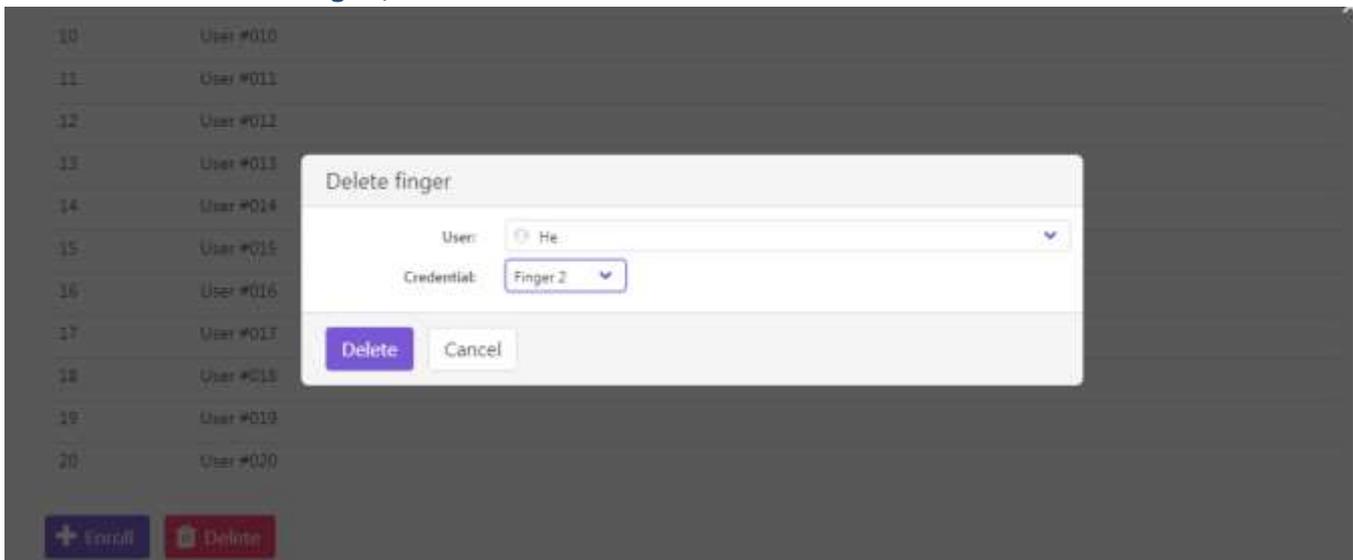




The system will wait 60 sec to perform the operation.

<Cancel> - close the modal window.

b. "Delete fingers/RFID cards"



Commands:

<Delete> - Delete a selected User Credential or all User credentials

<Cancel> - close the modal window.

c. "User information"

The screenshot shows the 'User information' modal form. The background displays a 'Users' table with columns 'User' and 'Name', and an 'RFID' table with columns 'RFID 1', 'RFID 2', and 'RFID 3'. The modal form includes the following fields:

- Name: You
- Finger 1: [Dropdown]
- Finger 2: [Dropdown]
- Finger 3: Key 1
- Finger 4: [Dropdown]
- Finger 5: [Dropdown]
- Finger 6: [Dropdown]
- Finger 7: [Dropdown]
- Finger 8: Key 2
- Finger 9: [Dropdown]
- Finger 10: [Dropdown]
- RFID 1: Key 1
- RFID 2: Key 2
- RFID 3: [Dropdown]
- Description: [Text area]
- email: [Text field]
- Time attendance:

Buttons: Save, Cancel

Fields:

Name – User name

Finger 1 – the individual function Key assigned to selected user Finger 1

...

Finger 10 – the individual function Key assigned to selected user Finger 10

RFID 1 action – The individual function Key assigned to selected user RFID card 1.

* Field are visible when one of the active scanners has the property "is active RFID" = 'Yes'

...

RFID 3 action – The individual function Key assigned to selected user RFID card 3

* Field are visible when one of the active scanners has the property "is active RFID" = 'Yes'

Description – Extra information about the User.

email – User email address.

Time attendance – The property to allow the User access events be recorded for Time attendance.

Commands:

<Save> - save the changes in fields

<Cancel> - close the modal window.

2. Tab "Rights"

User	Name	Entrance	Back door	Room
1	I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	You	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	He	<input checked="" type="checkbox"/> schedule1	<input checked="" type="checkbox"/> schedule1	<input type="checkbox"/>
4	She	<input checked="" type="checkbox"/> schedule2	<input checked="" type="checkbox"/> schedule2	<input type="checkbox"/>
5	User #005	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	User #006	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	User #007	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Rows: The list contains User records indicating a User number (Field User) and its name (field Name)

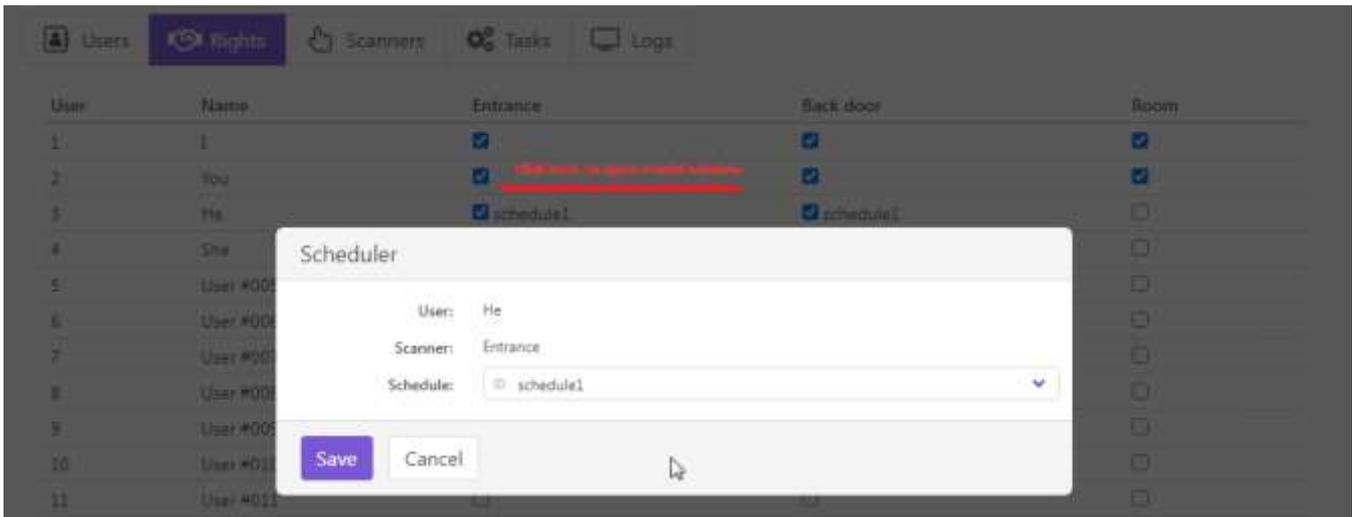
Columns: The next columns shows the scanner Names registered in the system.

Data: The cross-field value for a User (in Rows) and a Scanner (in Columns) can be either enabled or disabled by clicking on checkbox inside the column. If the value is enabled, then is possible to assign the scheduled rights.

In case when no Schedule is assigned to user/scanner cell then the functionality will work with full rights.

Commands:

<Click> on the checkbox field between User row and Scanner column to enable/disable User rights for the selected scanner. In case the value is set to “Enabled”, then you can assign the predefined Scheduler to User/Scanner cell by opening the modal window:



a. “Scheduler records”

The User rights is case of assigned Schedule will depend on actual KNX datagroup value assigned to selected LogicMachine scheduler. In case the value =1 (true) the access is allowed else disabled.

Name	Object	On/off object	Start date	End date	Events	Move up	Move down	Active	Duplic	Delete
ekery										
schedule1	154/1 schedule1	154/1 schedule1	01 January	31 December						
schedule2	154/2 schedule2	154/2 schedule2	01 January	31 December						

If the User has not access rights to the Scanner then

- 1) the scanner will recognize the user’s fingerprint but will not perform the access event
- 2) The scanner status LED will light up green, but function LEDs will short light up red:



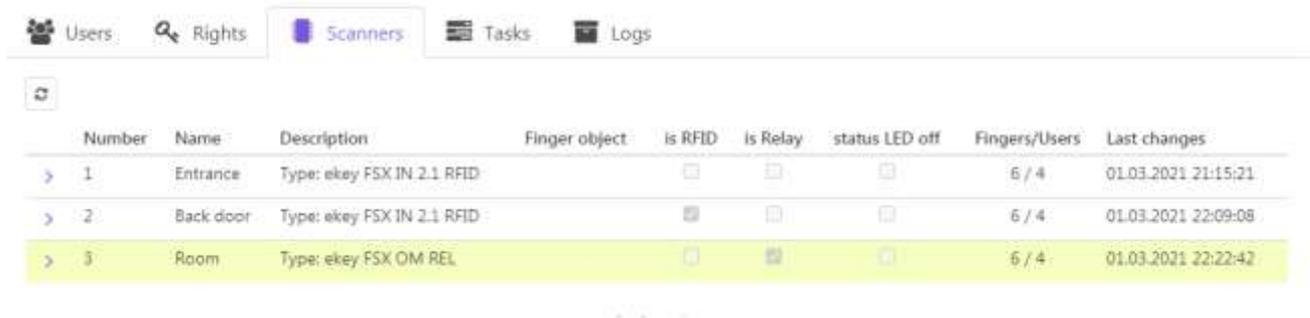
- 3) In the log file will be registered record “ ... is rejected”

Log time	Event description	Scanner	User	Action	Object
28.02.2021 20:21:14	access: Unknown fingerprint	Entrance		On	Entrance light
28.02.2021 20:20:56	access: User 1. Finger 7 is rejected	Back door	1	On/Off short	Bell
28.02.2021 20:20:52	access: User 1. Finger 7 is accepted	Entrance	1	On/Off short	Door1 - Entrance

3. Tab “Scanners”

The app can be operable if to the Logic Machine RS485 line are connected the *ekey FSX* type scanners. A RS485 serial port can be chosen among other available Logic Machine ports.

* As an alternative the USB RS485 Converters can be used to connect the scanners to the application.



The connected *ekey FSX* scanners automatically are added to the Scanners list. The app recognize the scanner type and create its initial Description.

Fields:

Number – Unique number.

The icon  appears when the scanner ‘is activated’ for Time attendance event recordings.

Name – Scanner short name.

Description – Extra information about the Scanner.

Finger Object - KNX Data group address to which the information about the access event will be sent.

Is RFID – the scanner property, if the scanner is prepared to use RFID cards for access.

Is Relay - the scanner property, if the scanner is equipped with the on-board relay.

Status LED off – show if the scanner status LED is off

Fingers/Users – the information from the scanner how many fingerprints there are recorded and from how many Users (A total of 200 fingerprints can be used in this system for each scanner).

Last changes – date and time of the last scanner’s record save event.

A <Click> on the selected Scanner line open a “Scanner information” card

a. Scanner information

The screenshot shows the 'Scanner information' dialog box. The fields are as follows:

- Name: Entrance
- Description: Type: ekey FSX IN 2.1 RFID
- Serial number: 80206438200910 firmware: 06180115
- Activation code: 461690256
- Is Activated:
- Is active RFID:
- Is active Relay:
- status LED off:
- Finger object (uint16): [Dropdown menu]
- Fingers/Users: 6 / 4
- Time Attendance: [Select an event type dropdown]
- Service commands: Locate (green), Restart (grey), Clean (red), SyncToDB (yellow), SyncFromDB (yellow)

Buttons at the bottom: Delete (red), Save (purple), Cancel (grey).

Fields:

Name – Scanner name.

Description – Extra information about the Scanner.

Serial number – A scanner serial number and firmware information (read only)

Activation code – the scanner 'license key' assigned to selected scanner to unlock the full application functionality. Within 3 months after the scanner production date the scanner don't need license key. Without the valid code scanner will is not perform the Tasks after the positive fingerprint access event.

Before you will buy ekey FSX scanner please ask the License key.

When the ekey FSX fingerprint scanner is bought directly from the *ekey FSX app* developer the scanner License key is included in the scanner's price.

The License key is transferable for this scanner between multiple *ekey FSX app* installations.

Is Activated – True = if the Activation code was correct.

Finger Object - KNX Data group address on which will be sent information about the access event.

Is active RFID – the scanner property if the scanner is prepared for use ekey RFID cards

Is active Relay - the scanner property if the scanner is equipped with an on-board relay

Status LED off – Control the scanner status LED as on/off

Fingers/Users – the information from the scanner how many fingerprints there are recorded and from how many Users (A total of 200 fingerprints can be used in this system for each scanner)

Time attendance – Time attendance event recording setting. User can select the values:

'No' (default), 'Register only IN events', 'Register only OUT events', 'Register IN and OUT events'.

Commands:

Service commands:

<Locate> – locate locate scanner function (start/stop flashing function LED lights)

<Restart> – restart the scanner

<Clean> – delete all credentials (fingerprints and RFID cards) from the scanner

<SyncToDB> – copy all credentials from scanner to internal database

<SyncFromDB> – copy all credentials from internal database to scanner

<Delete> - Delete the scanner record. This command is available when the scanner is not connected to the selected RS485 port line.

<Save> - Save the scanner data and close the window.

<Cancel> - reject the changes and close the window

b. Scanner configuration

Number	Name	Description	Finger object	is RFID	is Relay	status LED off	Fingers/Users	Last changes
> 1	Entrance	Type: ekey FSX IN 2.1 RFID		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6 / 4	01.03.2021 21:15:21
∨ 2	Back door	Type: ekey FSX IN 2.1 RFID		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6 / 4	01.03.2021 22:09:08

Event type ID	Event type	Task
1	enter-key 1	<input checked="" type="checkbox"/> Back door - On/Off 3 sec.
2	enter-key 2	<input checked="" type="checkbox"/> Back door - Toggle.
3	enter-key 3	<input type="checkbox"/>
4	enter-key 4	<input type="checkbox"/>
5	enter-key 5	<input type="checkbox"/>
6	enter-key 6	<input type="checkbox"/>
7	enter-key 7	<input type="checkbox"/>
8	enter-key 8	<input type="checkbox"/>
9	enter-key 9	<input type="checkbox"/>
10	enter-no rights	<input type="checkbox"/> Jingle bell
11	enter-badfinger	<input type="checkbox"/> Entrance light ON

> 3	Room	Type: ekey FSX OM REL		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6 / 4	01.03.2021 22:22:42
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Fields:

Event type ID – Event type unique number.

Event type – Event type name.

Task – Task associated to scanner Event type.

- Keys are active and are assigned to User credentials (Fingers or RFID cards) if the record has green background color.

4. Tab “Tasks”

Task	Name	Action object	Action
1	Entrance - On/Off 3sec	Door1 - Entrance	On/Off short - delay 3 sec.
2	Back door - On/Off 3 sec.	Door2 - Back door	On/Off short - delay 3 sec.
3	Entrance - Toggle	Door1 - Entrance	Toggle
4	Back door - Toggle	Door2 - Back door	Toggle
5	Jingle bell	Bell	On/Off short - delay 1 sec
6	Entrance light ON	Entrance light	On
8	Security - Off	Security	Off

[+ New](#)

Fields:

Task – Task number

Name – Task name

Action object – Object (KNX data group) name

Action – Action information

Records:

Initially no Task records are registered. The user register in this list all Tasks required for access control.

Commands:

<Click> on the selected Task record line to open the “Task information” card

a. “Task information”

The screenshot shows the 'Task information' dialog box with the following fields and values:

- Task: 3
- Name: Entrance - Toggle
- Description: (empty)
- Object (boolean): 8/1/4 Door1 - Entrance
- Action: Toggle
- Delay (seconds): 0

Buttons: Delete, Save, Cancel

You can change only its Name and Delay values

Fields:

Task – Task number

Name – Task name

Description – Extra information about the Task.

Action object – Object (KNX data group) name

Action – Action name

Delay (seconds) – Action delay time in seconds

Commands:

<Delete> - Delete the selected Task record

<Save> - Save changes to Task record

<Cancel> - Close the modal window

5. Tab “Logs”

To view all events, incl. technical events, you need to set tickbox “Show all” to ‘Yes’.

Log time	Event description	Scanner	User	Action	Object
28.02.2021 20:21:14	access: Unknown fingerprint	Entrance		On	Entrance light
28.02.2021 20:20:56	access: User 1 Finger 7 is rejected	Back door	I	On/Off short	Bell
28.02.2021 20:20:32	access: Key 1: User 1 Finger 7 is accepted	Entrance	I	On/Off short	Door1 - Entrance
28.02.2021 20:19:40	config: set rights = ON for the user 1 and scanner 1	Entrance	I		
28.02.2021 20:19:24	config: Enrolled user 1 Finger 7 is replicated to scanner	Back door	I		
28.02.2021 20:19:24	config: Enrolled user 1 Finger 7 is replicated to scanner	Room	I		
28.02.2021 20:19:23	config: The user 1 Finger 7 is enrolled!	Entrance	I		
28.02.2021 20:19:06	config: The user 1 Finger 7 is waiting for enrollment	Entrance	I		
28.02.2021 20:19:06	config: Enroll request for user 1 Finger 7	Entrance	I		
28.02.2021 20:18:26	Info: ekey app v.20210221 daemon [30046655] is started: 28/02/2021 T20:18:26				
28.02.2021 20:18:26	Info: Found scanner serial:80208438200908: status:activated; firmware v.6190506	Back door			
28.02.2021 20:18:26	Info: Found scanner serial:80156618120276: status:NOT ACTIVATED; firmware v.6190506	Room			
28.02.2021 20:18:25	Info: Found scanner serial:80208438200910: status:activated; firmware v.6190506	Entrance			
28.02.2021 20:18:18	Info: The active RS-485 port is /dev/RS485				

① Log records explanation

- The *ekey FSX app* started and found 3 active *ekey* scanners on the '/dev/RS485' port
- The User 1 Finger 7 fingerprint is enrolled and this fingerprint data are replicated to the other 2 active scanners.
- For the User 1 is registered rights to allow access the scanner #1 with the name 'Entrance'
- After the system has controlled the 3 access events :
 - a) User 1 Finger 7 created positive access event on the scanner #1 (Entrance). The access is allowed.
 - b) User 1 Finger 7 created negative access event on the scanner #1 (Back door). The access is rejected.
 - c) The scanner #1 (Entrance) has not recognized the fingerprint .

Filter fields:

Show all - if “Yes” then include also additional technical Events (default value ‘No’)

Period: – Date from - Date to time interval (default value: today)

User: – Filter Log records only with selected User name

Scanner: – Filter Log records only with selected Scanner name

Object: – Filter Log records only with selected Object name

 – command to refresh the list of records

Fields:

Log time – the Event log data and time

Event description – Extra information about the Event.

Scanner – Scanner name at which Event occurs

User – User name who created Event

Action – Action name

Object – Object (KNX data group) name on which Action is performed

Commands:

<Save> – All selected LOG records are saved into the CSV format file (* or into the XLS format file when the luaxlswriter package are previous installed)

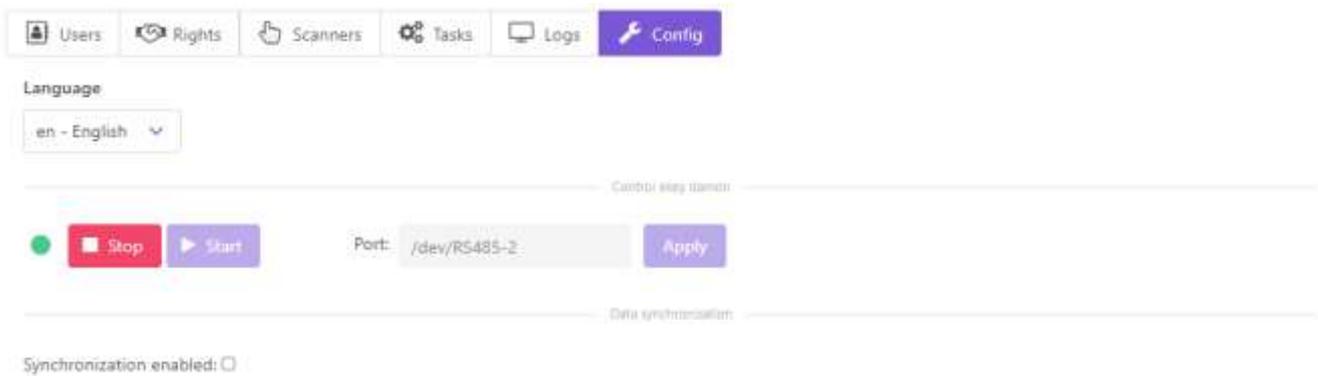
<Delete> - All selected LOG records are deleted from the LOG list. This command is available when the Filter field “Show all” = “Yes”

Logtime,UserName,Event,ScannerName,ActionName,ObjectName												
A	B	C	D	E	F	G	H	I	J	K	L	M
1	Logtime,UserName,Event,ScannerName,ActionName,ObjectName											
2	28-02-2021 20:21:14,,access: Unknown fingerprint,Entrance,On,Entrance light											
3	28-02-2021 20:20:56,,access: User 1 Finger 7 is rejected,Back door,On/Off short,Bell											
4	28-02-2021 20:20:32,,access: Key 1: User 1 Finger 7 is accepted,Entrance,On/Off short,Door1 - Entrance											
5	28-02-2021 20:19:40,,config: set rights = ON for the user 1 and scanner 1,Entrance,,											
6	28-02-2021 20:19:24,,config: Enrolled user 1 Finger 7 is replicated to scanner,Back door,,											
7	28-02-2021 20:19:24,,config: Enrolled user 1 Finger 7 is replicated to scanner,Room ,,											
8	28-02-2021 20:19:23,,config: The user 1 Finger 7 is enrolled,Entrance,,											
9	28-02-2021 20:19:06,,config: The user 1 Finger 7 is waiting for enrollment,Entrance,,											
10	28-02-2021 20:19:06,,config: Enroll request for user 1 Finger 7,Entrance,,											
11	28-02-2021 20:18:26,,info: ekey app v.20210221 daemon [30046655] is started: 28/02/2021 T20:18:26,,											
12	28-02-202 status:act firmware v.6190506,Back door,,											
13	28-02-202 status:NO firmware v.6190506,Room ,,											
14	28-02-202 status:act firmware v.6190506,Entrance,,											
15	28-02-2021 20:18:18,,info: The active RS-485 port is /dev/RS485,,,("type":"csv","records":14,"file_name":"ekeyLog_28-02-2021 20:24:13.csv")											

6. Tab “Config”

Consists of 3 separate blocks:

- Language
- Control ekey daemon
- Data synchronization



a. Language

Available languages (v.20241010):

Language	Backend (log records)	Frontend (app)
en – English	Yes	Yes
de – Deutsch	Yes	* English
es – Español	Yes	* English
nl – Dutch	Yes	* English
lv – Latviešu	Yes	Yes
lt – Lietuvių	Yes	* English

* - need translation

b. Control ekey daemon

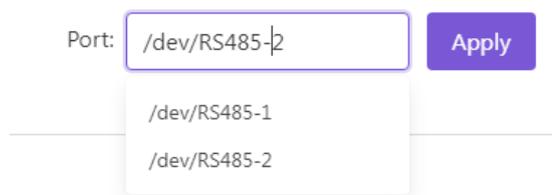
Daemon status: (● – is started, ● – is stopped)

Commands:

<Stop> - stop the ekey daemon

<Start> - start the ekey daemon

Field “Port” – the active serial port selected for communication to scanners. The value can be edited when the daemon is stopped.



c. Data synchronization

From ekey fsx app v.20220125 is available user data (fingerprints and RFID cards) synchronization between multiple ekey fsx app installations.

Field **“Synchronization enabled”** – enable/disable the synchronization functionality for incoming sync events (as a ‘slave’ device).

If the **“Synchronization enabled”** = *true* then the “remote hosts” list is available to define the remote hosts to exchange the user credential information. In this case this host as a ‘master’ device and remote host as a ‘slave’ device. The remote host status must be ‘green’ to allow outgoing data transfer to this selected remote host.

In this case all new credentials (fingerprint/rfid card) enrollment, delete or user data information changes will automatically sent to this host. The synchronization status is visible in field “Credential status”. This status can be also adjusted with user manual operations in “Remote host credentials” modal window by opening it in column “Sync details” with cmd  > .

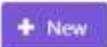
Data synchronization

Synchronization enabled:

Remote hosts:

Id	Disabled	Hostname	Connection status	Credentials status	Last sync	Sync details
1	<input type="checkbox"/>	LM2	 HTTP/1.1 200 OK		29.01.2022 21:42:08	
2	<input type="checkbox"/>	LM (daemon stopped)	 HTTP/1.1 200 OK		29.01.2022 21:42:29	
3	<input checked="" type="checkbox"/>	4n	 -- sync disabled --		29.01.2022 21:50:23	





Fields:

Id – Remote host ID

Disabled – the remote host communication status

Hostname – remote host name

Connection status –

‘Green’ : remote host sync status is ‘enabled’ , daemon is ‘running’;

‘Yellow’ : remote host sync status is ‘enabled’ , daemon is ‘stopped’;

‘Red’ : remote host ekey fsx app “sync status” is not enabled;

‘Black’ : remote host has not yet installed ekey fsx app or can’t connect.

Credential status – information - all credentials are synchronized or not

Last sync – last synchronization event date

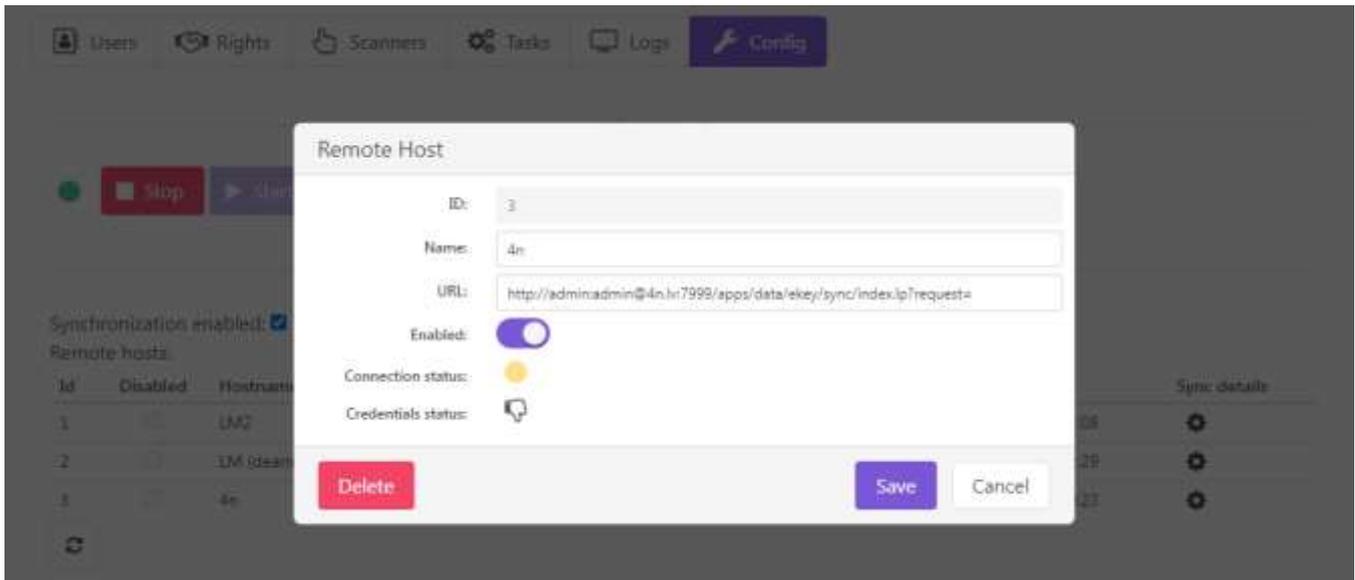
Commands:

<New> - start to register new remote host record by opening “remote host” modal window.

<Edit> - start to edit selected remote host record by opening “remote host” modal window

<Sync details> - open the modal window “Credentials sync list” for the selected remote host record

i. "Remote host"

Fields:

Id – Remote host ID

Name – remote host name

URL – connection string and string parts

`https://username:password@192.168.0.10/apps/data/ekey/sync/index.lp?request=`

`https://` or `http://` - secure or unsecure data communication

username - can be used LM "admin", but suggested to create a separate user for sync function

password – user password

ip address - 192.168.0.10

request path – `’/apps/data/ekey/sync/index.lp?request=’`

Enabled –

Connection status –

Credential status –

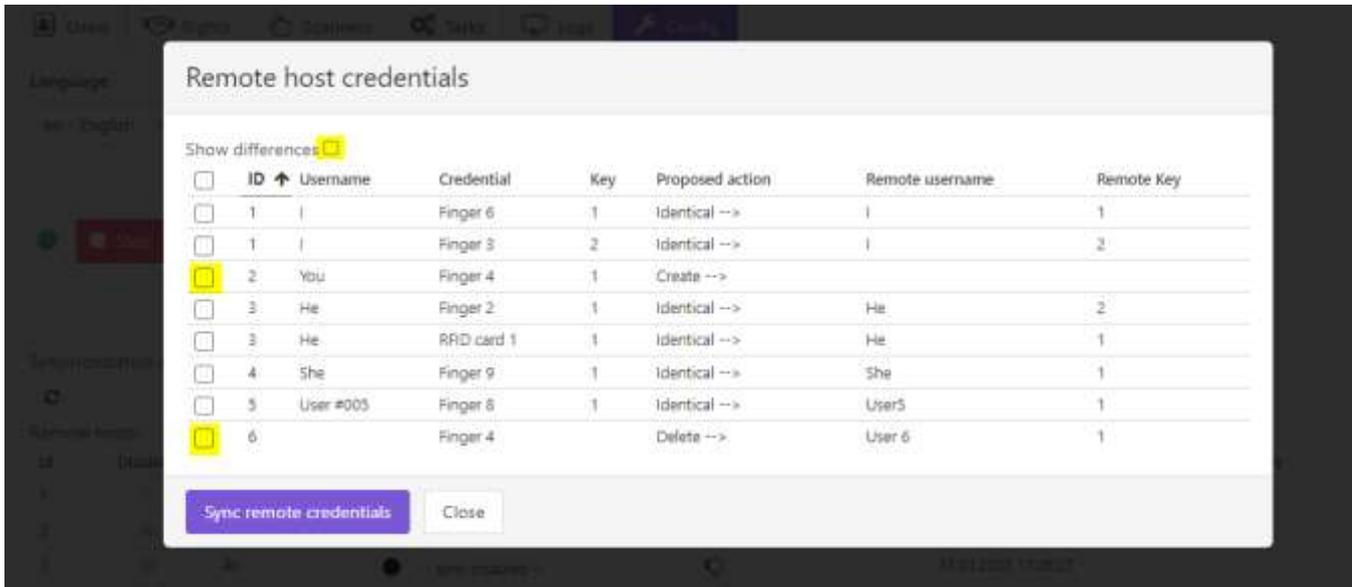
Commands:

<Delete> - Delete the record and close the modal window

<Save> - Save the record and close the modal window

<Cancel> - close the modal window

ii. "Remote host credentials"

Filter field:

Show differences - if "Yes" then show only unsynchronized records (default value 'Yes')

Fields:

UserID – User number

Username – User name

Credential – Credential description

Key – Function key assigned to user credential

Proposed action – Information what type of command (Create, Update, Delete) will be performed on the remote host

Remote Username – Username on the remote host

Remote Key – Function key for the user credential on the remote host

Commands:

<Update credentials> - Perform command on selected records

<Cancel> - close the modal window

Ekey TA App

Tab “Attendance”

The screenshot shows the Ekey TA App interface for the 'Attendance' tab. At the top left is the Ekey logo. Below it is a tab labeled 'Attendance'. The main area contains a table of attendance records. Above the table are several filter and summary controls: a 'Show last' checkbox, a 'Period' dropdown set to '7/11/2020 - 7/11/2020', a 'User' dropdown set to 'Select user...', and a 'Type' dropdown set to 'Event type...'. To the right of these are summary statistics: 'Sum(WT) 03:15:56' and 'Sum(RT) 13:30:20'. The table itself has the following data:

User	Name	Event type	From now	Event time	Work time (WT)	Day Rest time (RT)	Registration time	Scanner
1	Me	IN	00:00:20	11.07.2020 23:15:59	0:02:02	13:29:22	11.07.2020 23:15:59	Entry door
4	She	OUT	13:29:34	11.07.2020 09:46:45	1:17:50		11.07.2020 09:46:45	Exit door
3	He	OUT	13:29:46	11.07.2020 09:46:33	1:56:04	0:00:58	11.07.2020 09:46:33	Exit door

At the bottom right of the table area, there are three buttons: a blue button with a refresh icon, and two grey buttons with left and right arrow icons.

Filter fields:

Show last - if “Yes” then the list will show the summary information for each User with a “Time attendance” =‘Yes’ property (default value ‘Yes’)

Period: – Date from- Date to time interval (default value: today)

User: – Filter Log records only with selected User name

Type: – Filter Log records only with selected Event types ‘IN’ or ‘OUT’ (default value = both)

Sum(WT) – Sum of WorkTime (hh:mm:ss) for the filed “Work time (WT)”

Sum(RT) – Sum of RestTime (hh:mm:ss) for the filed “Day Rest time (WT)”

 – command to refresh the list of records

Fields:

User – User number

Name – User name

Event type – ‘IN’ event as Work time start condition or ‘OUT’ as Work time end condition

From Now – Time elapsed from selection time

Event time – The datetime value for time attendance calculation

Work time (WT) – Work time period or sum of periods calculated as (Out time – IN time)

Day Rest time (RT) – Rest time period or sum of periods calculated as (IN time – OUT time) in the same calendar day

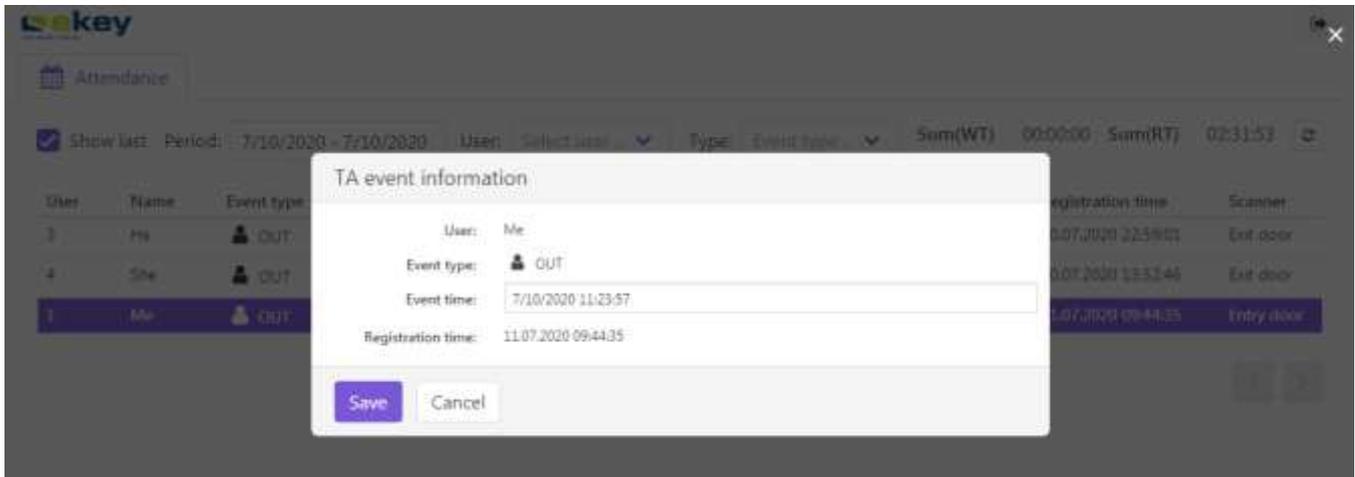
Registration time – The actual datetime value when the TA event was recorded

Scanner – Scanner name where the Time attendance event was recorded

Commands:

<Click> on the selected record field “Event time” or “Event type” will open the modal window “TA event information”

d. “TA event information”



Fields:

User: - User name /read only/

Event type: - Event type (IN or OUT) /read only/

Event time: - Event Time /editable value within time period between time interval from previous to next TA event Registration time /

Registration time - actual TA event registration time /read only/.

- If the Event time <> Registration time then the Event record will show the difference with the  icon:

User	Name	Event type	Event time	Registration time	Scanner
1	Me	OUT	10.07.2020 11:23:57 	11.07.2020 09:44:35	Entry door

Commands:

<Save> - Save the changes

<Cancel> - close the modal window.

Examples:

1. How to list all today TA events:

The Filter field "Show last" = 'No'

Show last Period: 7/11/2020 - 7/11/2020 User: Type: Event type... Sum(WT) 03:15:56 Sum(RT) 13:30:20

User	Name	Event type	From now	Event time	Work time (WT)	Day Rest time (RT)	Registration time	Scanner
1	Me	IN	00:28:07	11.07.2020 23:15:59		13:29:22	11.07.2020 23:15:59	Entry door
4	She	OUT	13:57:21	11.07.2020 09:46:45	1:17:50		11.07.2020 09:46:45	Exit door
1	Me	OUT	13:57:29	11.07.2020 09:46:37	0:02:02		11.07.2020 09:46:37	Exit door
3	He	OUT	13:57:33	11.07.2020 09:46:33	1:16:44		11.07.2020 09:46:33	Exit door
1	Me	IN	13:59:31	11.07.2020 09:44:35			11.07.2020 09:44:35	Entry door
3	He	IN	15:14:17	11.07.2020 08:29:49		0:00:58	11.07.2020 08:29:49	Entry door
4	She	IN	15:15:11	11.07.2020 08:28:55			11.07.2020 08:28:55	Entry door
3	He	OUT	15:15:15	11.07.2020 08:28:51	0:39:20		11.07.2020 08:28:51	Exit door
1	Me	IN	15:27:43	11.07.2020 08:16:23			11.07.2020 08:16:23	Entry door
3	He	IN	15:54:35	11.07.2020 07:49:31			11.07.2020 07:49:31	Entry door

2. How to list all today TA events for selected user :

The Filter field "Show last" = 'No' and User = 'He'

Show last Period: 7/11/2020 - 7/11/2020 User: He Type: Event type... Sum(WT) 01:56:04 Sum(RT) 00:00:58

User	Name	Event type	From now	Event time	Work time (WT)	Day Rest time (RT)	Registration time	Scanner
3	He	OUT	13:57:13	11.07.2020 09:46:33	1:16:44		11.07.2020 09:46:33	Exit door
3	He	IN	15:13:57	11.07.2020 08:29:49		0:00:58	11.07.2020 08:29:49	Entry door
3	He	OUT	15:14:55	11.07.2020 08:28:51	0:39:20		11.07.2020 08:28:51	Exit door
3	He	IN	15:54:15	11.07.2020 07:49:31			11.07.2020 07:49:31	Entry door

3. How to list today's summary information for selected user :

The Filter field "Show last" = 'Yes' and User = 'He'

Show last Period: 7/11/2020 - 7/11/2020 User: He Type: Event type... Sum(WT) 01:56:04 Sum(RT) 00:00:58

User	Name	Event type	From now	Event time	Work time (WT)	Day Rest time (RT)	Registration time	Scanner
3	He	OUT	13:56:53	11.07.2020 09:46:33	1:56:04	0:00:58	11.07.2020 09:46:33	Exit door

4. How to list today's summary information for all users:

The Filter field "Show last" = 'Yes'

Show last Period: 7/11/2020 - 7/11/2020 User: Type: Event type... Sum(WT) 03:15:56 Sum(RT) 13:30:20

User	Name	Event type	From now	Event time	Work time (WT)	Day Rest time (RT)	Registration time	Scanner
1	Me	IN	00:26:14	11.07.2020 23:15:59	0:02:02	13:29:22	11.07.2020 23:15:59	Entry door
4	She	OUT	13:55:28	11.07.2020 09:46:45	1:17:50		11.07.2020 09:46:45	Exit door
3	He	OUT	13:55:40	11.07.2020 09:46:33	1:56:04	0:00:58	11.07.2020 09:46:33	Exit door

The TA event registration:

- I. When user register the new TA Event, the system always will show the feedback what type of event this is by short switching the scanner LED lights

IN event : start of the Work time period		OUT event: end of the Work time period	
1. Time attendance record registration:			
 <p>left function LED diode will switch green 0.3 seconds</p>		 <p>right function LED diode will switch red 0.3 seconds</p>	
2. “Auto correction” of Time attendance record Time			
Scanner “Time attendance” = ‘Register only IN events’	Scanner “Time attendance” = ‘Register only OUT events’	Scanner “Time attendance” = ‘Register IN and OUT events’	
When the user register two sequential IN events then a. the application will generate the missing previous OUT event with the Event Time = last known access event Registration Time before the duplicate IN event b. left function LED diode will switch 2x green 0.3 seconds to indicate that the previous Work period time = 0h and it must be manually adjusted to correct value.	When the user register two sequential OUT events then a. the application will generate the missing previous IN event with the Event Time = last known access event Registration Time after the previous OUT event; b. right function LED diode will switch 2x red 0.3 seconds to indicate that the closed Work period time = 0h and it must be manually adjusted to correct value.	When the user register two sequential events within 60 second time interval (this an indication that user forget to register previous TA event) then the previous TA event Time will be automatically corrected the same way as previous described when the user forget to register IN and OUT events.	
3. “Manual correction” of Time attendance record Time			
select the TA record you want to correct the Time value then <Click> on the record field “Event time” or “Event type” to open the modal window “TA event information” and change the “Event time” value to required.			

III. Other functions

1. Control the scanner function LED lights

```
require('rpc').request('127.0.0.1', 8712, 'ekeyekeyekey', {
  cmd = 'ekey_fs_leds',
  colour = 0x1b,          -- red red ; default = 0x0d (off off)
  time = 0xFFFFFFFF,      -- Duration of the required status in [ms]; default = 0xFFFFFFFF (indefinitely)
  scanner = 1
})
```

Cmd ; LED left ; LED right

0x0d off off

0x0e green off

0x0f off green

0x10 green green

0x11 flashing green off

0x12 flashing green green

0x13 off flashing green

0x14 green flashing green

0x15 flashing green flashing green

0x16 * flashing green flashing green

0x17 ** flashing green flashing green

0x18 *** flashing green flashing green

0x19 red off

0x1a off red

0x1b red red

0x1c yellow off

0x1d off yellow

0x1e yellow yellow

0x1f green red

0x20 green yellow

0x21 red green

0x22 yellow green

0x23 red yellow

0x24 yellow red

2. Control the scanner onboard-relay

```
require('rpc').request('127.0.0.1', 8712, 'ekeyekeyekey', {
  cmd = 'ekey_fs_relay',
  scanner = 1, -- selected scanner by ID value;
  command = 2, -- switch type command: 0 = Off; 1=On; 2=impulss; Default = 0
  relayID = 1, -- scanner relay ID ; Default = 1 (the scanner onboard-relay)
  impulss = 3000 -- duration of the required status in [ms] or default: 3000ms
})
```

3. The scanner “Finger object” script example

The positive access Event information sent to Scanners assigned “Finger object” can be decoded by creating the event-based script on the scanner “Finger object” datagroup:

```
-----
value = event.getvalue()
require('custom.ekey.lib')
local u = ekeylib.get_event_result(value)
-- log(u)
alert('event_type_code: %d, event_type: %s, Scanner: %d, User: %d, Finger: %d, Relay: %d, rfid_card: %d, Credential: %d,
rfid_is_used: %d, Username: %s, has_rights: %d, email: %s, datagroup: %d, message: %s', u.event_type_code, u.event_type,
u.scanner, u.user, u.finger, u.relay, u.rfid_card, u.credential, u.rfid_is_used, u.username, u.has_rights, u.email, u.object,
u.event)
-----
```

4. Control the ekey FSX daemon status

you can create a resident script to control the ekey daemon status using internal function:

```
-----
require('custom.ekey.lib')
local status = ekeylib.check_ekey_daemon ()

if status then
    alert(' ekey_daemon_status - true' )
else
    alert(' ekey_daemon_status - false' )
end
-----
```

5. Configure function keys - add name, hide if unused

Excute script

```
-----START:-----
db:execute('UPDATE ekey_FS_event_types SET name2="Open door", disabled = 0 WHERE id =1')
db:execute('UPDATE ekey_FS_event_types SET name2="Alarm", disabled = 0 WHERE id =2')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =3')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =4')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =5')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =6')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =7')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =8')
db:execute('UPDATE ekey_FS_event_types SET name2="", disabled = 1 WHERE id =9')
-----END-----
```

Result:

User information

Name:

Finger 1:

Finger 2:

Finger 3:

6. Service commands

- 1) **Install the luaxlsxwriter.imx6.ipk and the related packages**
<http://192.168.0.10/apps/data/ekey/sync/index.lp?request=install-XLS-packages>
 (* not available on LM devices with old CPU (LM2, LM3, LM4):
- 2) **Remove the luaxlsxwriter.imx6.ipk and the related packages**
<http://192.168.0.10/apps/data/ekey/sync/index.lp?request=remove-XLS-packages>
- 3) **Update the scanner firmware to v.6190506**
<http://192.168.0.10/apps/data/ekey/sync/index.lp?request=FW-update&scanner=1>
 , where "scanner" - the selected scanner field "Number" value from the tab "Scanners"

7. App tiles / icons

For Logic Machine:

Default	Icon	Lua installation code:
Yes		os.execute('wget -O /home/apps/store/data/ekey/icon.svg www.avu.lv/logicmachine/ekey-app/icons/icon-ekey.svg ')

-		os.execute('wget -O /home/apps/store/data/ekey/icon.svg www.avu.lv/logicmachine/ekey-app/icons/icon-fingerprint.svg
-		os.execute('wget -O /home/apps/store/data/ekey/icon.svg www.avu.lv/logicmachine/ekey-app/icons/icon-ekey-blue.svg
-		os.execute('wget -O /home/apps/store/data/ekey/icon.svg www.avu.lv/logicmachine/ekey-app/icons/icon-fingerprint-blue.svg

For SE Wiser:

Yes		os.execute('wget -O /home/apps/store/data/ekey/icon-se.svg www.avu.lv/logicmachine/ekey-app/icons/icon-se-ekey.svg
-		os.execute('wget -O /home/apps/store/data/ekey/icon-se.svg www.avu.lv/logicmachine/ekey-app/icons/icon-se-fingerprint.svg

* You need to unlock an option that blocks os.execute() and other similar functions in lua scripts:
Utilities > General configuration > Block unsafe functions

V. Feedback:

- Questions and suggestions please send to email: agris@avu.lv