

Evoko Liso Room Manager

User Manual

May 2016

Contents

Preface	4
Installing Evoko Service on Windows	6
Required programs	6
NodeJS	6
7zip (7z)	6
MongoDB.....	8
.NET Framework.....	9
Installation process.....	10
Evoko Service Panel instructions	12
Log files	17
Uninstall / Re-install service for Windows	18
Installing Evoko Service on Linux	21
Download	21
Installation	21
Uninstallation	24
Evoko Service setup	25
Evoko Service setup wizard.....	25
Office 365	25
Exchange 2010	29
IBM Domino	31
Google.....	34
Evoko Booking	37
Download and install image on Evoko Room Manager	40
Download and write firmware image using Windows.....	40
Download image write tool - Win32DiskImager	40
Download and uncompress the image.....	40
Write the image to USB memory card.....	40
Download and write firmware image using Linux	42
Download and uncompress the image.....	42
Write the image to USB memory	42
Boot from USB and install firmware on Device	44
Boot and install firmware.....	44
Evoko Device setup with Evoko Server	46
Firmware upgrades	53
Upgrade firmware on device side	53
Device monitoring.....	53
Logs and error reports.....	58

Preface

The Evoko Liso Room Manager manual contains the full descriptions of some of the main features of the system, how to use those features and how to set them up.

The manual consists of several sections which describe the main actions that need to be undertaken in order to have the Evoko Service and Evoko Liso Room Manager up and running.

This is the first draft of the user manual and is prone to later changes and modifications.

Installing Evoko Service on Windows

In order to install Evoko Service on Windows the following instructions need to be followed with care.

Required programs

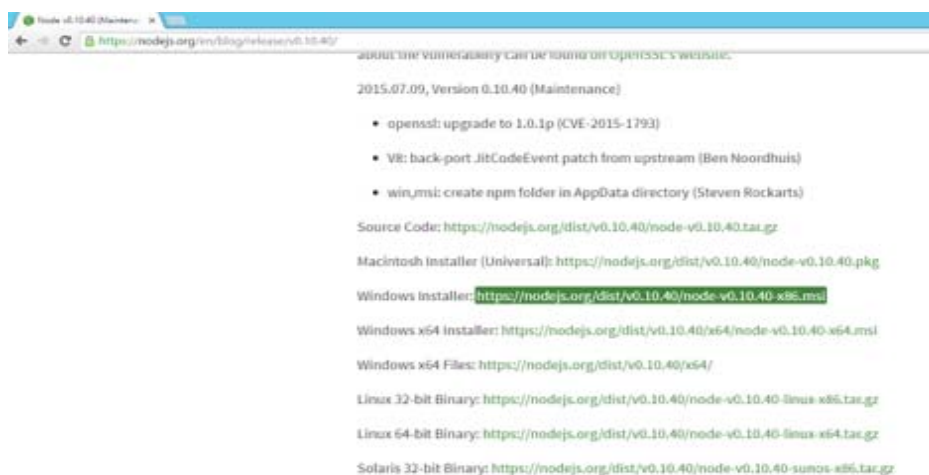
In order to complete the installation, several prerequisite programs need to be installed first.

Those programs in chronological order are:

1. NodeJS version 0.10.40 for 32-bit computer. Available at <https://nodejs.org/en/blog/release/v0.10.40/>
2. 7z archiving software available at <http://www.7-zip.org/download.html>
3. MongoDB available at <https://www.mongodb.org/downloads#production>
4. .NET Framework 4.5.2 available at [http://dotnetsocial.cloudapp.net/GetDotnet?](http://dotnetsocial.cloudapp.net/GetDotnet?tfm=.NETFramework)
tfm=.NETFramework

NodeJS

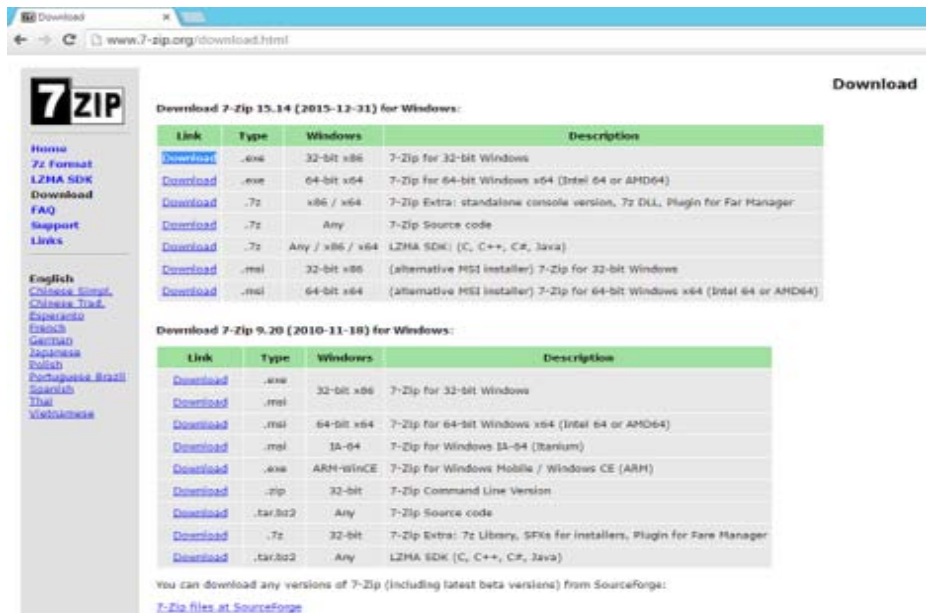
Download nodejs version 0.10.40 40 for 32-bit computer from <https://nodejs.org/en/blog/release/v0.10.40/>. Link for download is marked in the image below.



During the installation, default setup will be to add nodejs to environment path, that step should not be changed, and left as is.

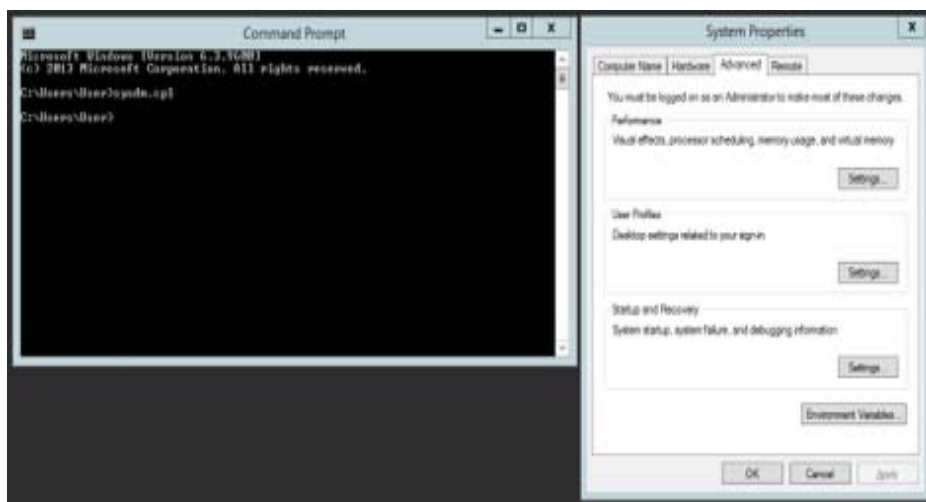
7zip (7z)

Download and install 7z archiving software available at <http://www.7-zip.org/download.html>. Link for download is marked in the image below.

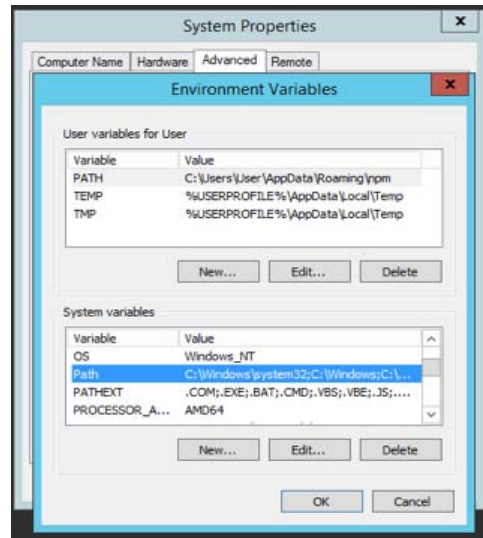


During the installation, 7z path to executable will not be added to system path, thus it will have to be added manually.

Open System Properties window. If you are not able to find the System Properties, open command prompt and type the following command: sysdm.cpl. It will open the System Properties window.

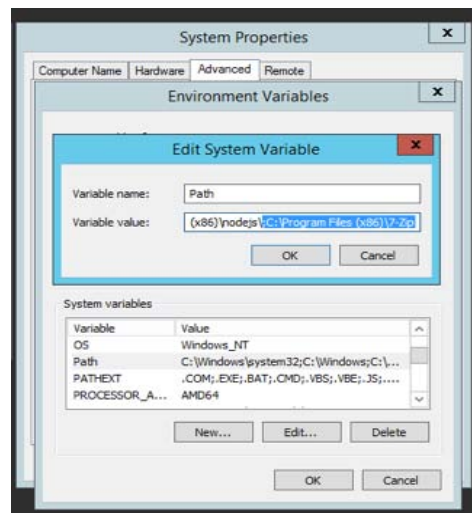


Go to the Advanced tab and press button environment variables. Under section System variables find variable “path”, select it and click button Edit.



Concatenate; C:\Program Files (x86)\7-Zip\ to existing value of system "path" environment variable. If previous value of system "path" environment variable, does not end with \ then add \;C:\Program Files (x86)\7-Zip\

Note: Path C:\Program Files (x86)\7-Zip\ is just used as an example it is not strict, you can install 7z on any location on your computer.



After you are done with editing, press OK button to exit Edit System variable and another OK button to exit Environment Variables.

MongoDB

Download and install MongoDB from <https://www.mongodb.org/downloads#production>



.NET Framework

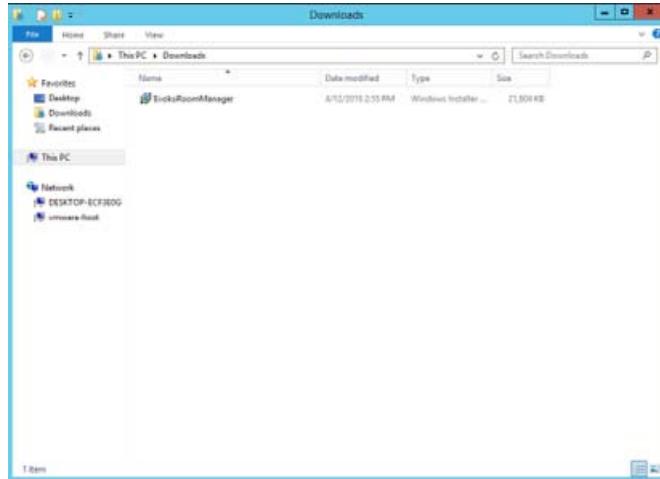
Download and install .NET Framework 4.5.2 available at
<http://dotnetsocial.cloudapp.net/GetDotnet?tfm=.NETFramework>



Restart machine to apply changes.

Installation process

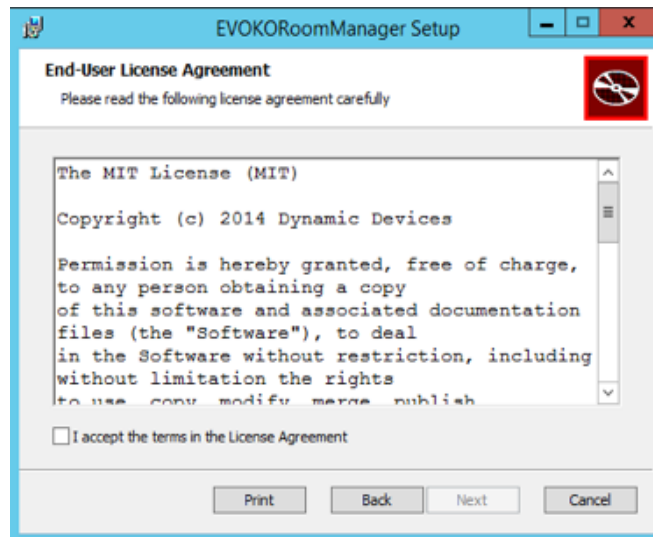
After the prerequisite programs have been installed the Evoko Service can be downloaded and installed. Download and install EvokoRoomManager.msi from Evoko Download Website.



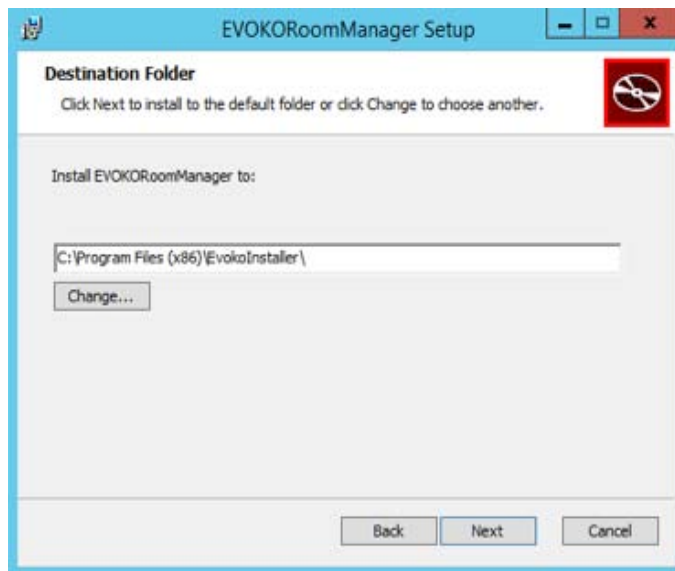
This is the initial installation step, just click button Next to continue with installation.



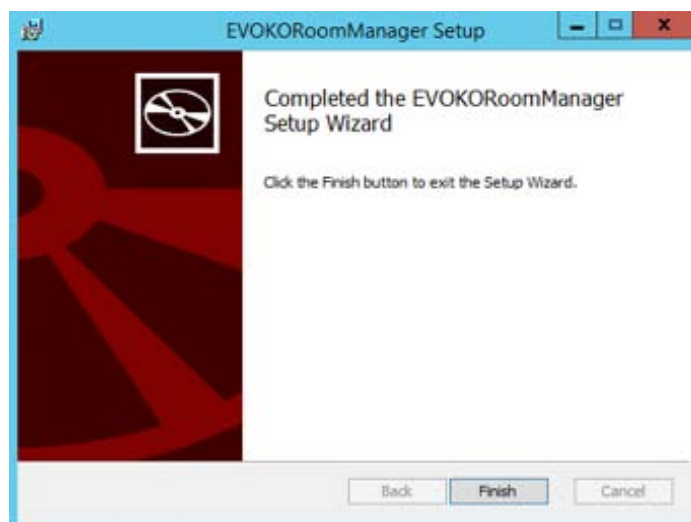
This is the installation license step where you need to accept the term in order to proceed with installation.



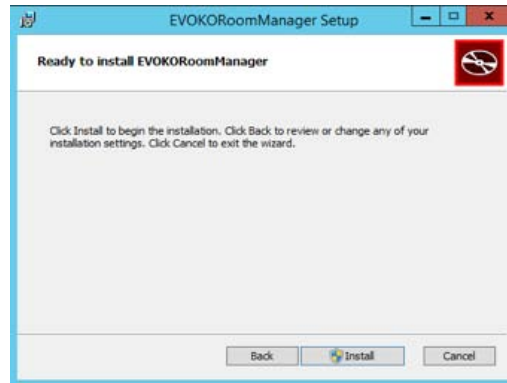
This is installation step, where you choose installation destination folder.



Once you have accepted the terms and choose the destination, you are left to perform actual installation. Please click OK if windows prompts you with question, do you allow this action.



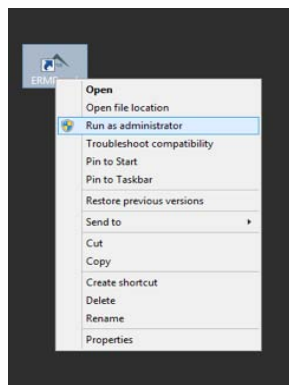
This is the final step of installation. Just click Finish and you are ready to use the product.



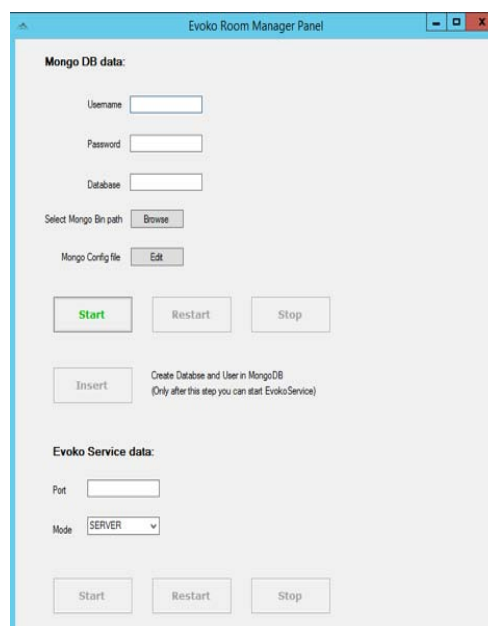
Run ERMPanel (Evoko Liso Room Manager Panel) as Administrator (Shortcut will be on Desktop). Admin rights are necessary because Evoko Liso Room Manager will programmatically do some things that require Admin rights. For example: Adding Environment variables.

Evoko Service Panel instructions

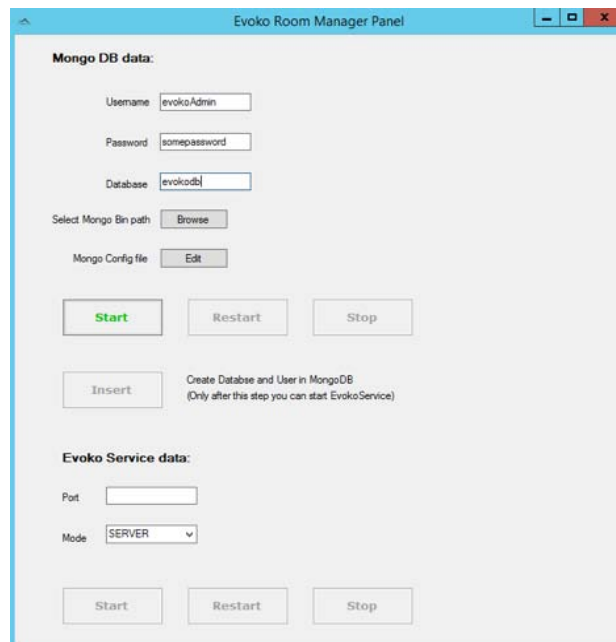
After a successful installation, the ERMPanel needs to be run. The shortcut for the ERMPanel is located on the Desktop. The ERMPanel should be run as the Administrator since it requires additional permissions to execute certain functions, such as adding environment variables.



This is the Evoko Service Main window. From here you can configure its Mongo database and application port. Also you can start and stop both database server and Evoko service.



In section Mongo DB data, you need to enter username and password for new MongoDB user and database name. Both username and database will be used only for Evoko Service purposes.



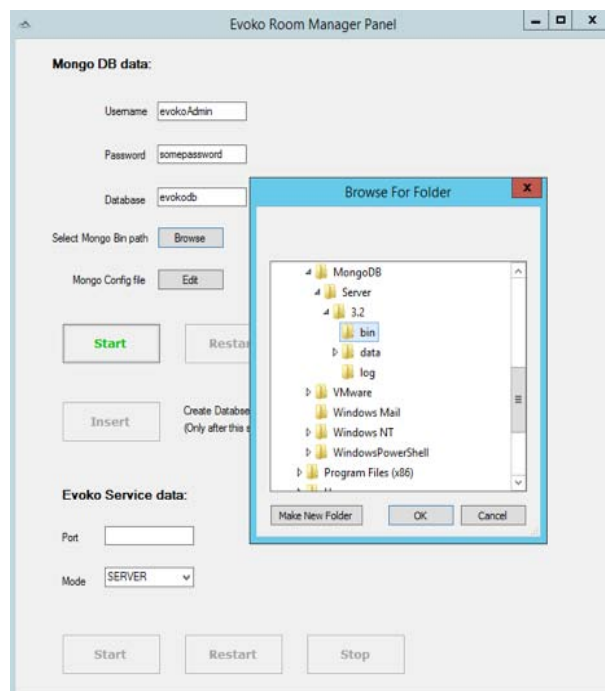
The screenshot shows the 'Evoko Room Manager Panel' window. The 'Mongo DB data:' section contains the following fields and buttons:

- Username:
- Password:
- Database:
- Select Mongo Bin path:
- Mongo Config file:
- Buttons: (green), ,
- Insert: (disabled)
- Text: Create Database and User in MongoDB (Only after this step you can start EvokoService)

The 'Evoko Service data:' section contains:

- Port:
- Mode:
- Buttons: , ,

You will need to select MongoDB bin path. It is path to the MongoDB executable under MongoDB installation folder.

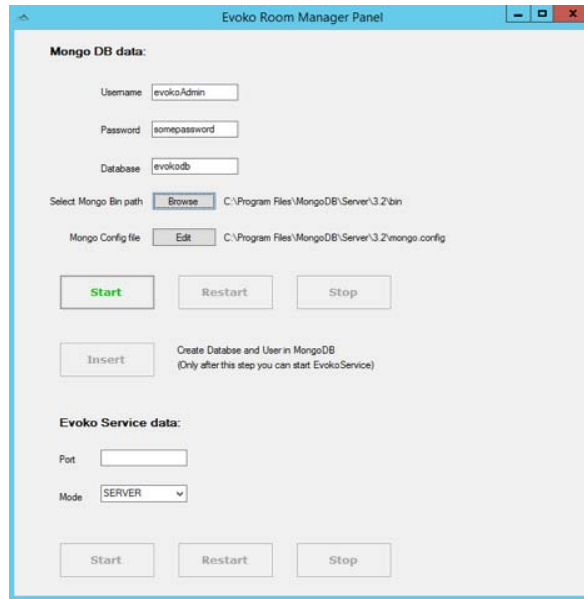


The screenshot shows the 'Evoko Room Manager Panel' window with the 'Browse For Folder' dialog box open. The dialog box displays the following tree structure:

- MongoDB
 - Server
 - 3.2
 - bin (selected)
 - data
 - log
 - VMware
 - Windows Mail
 - Windows NT
 - WindowsPowerShell
 - Program Files (x86)

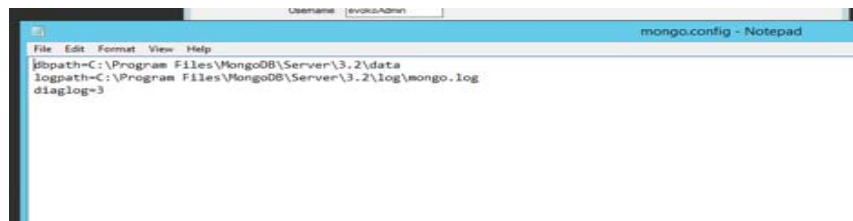
The 'bin' folder is selected, and the 'OK' button is highlighted.

After you select MongoDB bin path, application will automatically create mongo.config file with some default values.



The screenshot shows the 'Evoko Room Manager Panel' window. It has two main sections: 'Mongo DB data:' and 'Evoko Service data:'. In the 'Mongo DB data:' section, there are input fields for 'Username' (filled with 'evokoAdmin'), 'Password' (filled with 'somepassword'), and 'Database' (filled with 'evokodb'). Below these are 'Select Mongo Bin path' with a 'Browse' button and a text field showing 'C:\Program Files\MongoDB\Server\3.2\bin', and 'Mongo Config file' with an 'Edit' button and a text field showing 'C:\Program Files\MongoDB\Server\3.2\mongo.config'. There are three buttons: 'Start' (green), 'Restart', and 'Stop'. Below these is an 'Insert' button and a note: 'Create Database and User in MongoDB (Only after this step you can start EvokoService)'. The 'Evoko Service data:' section has a 'Port' input field and a 'Mode' dropdown menu set to 'SERVER'. At the bottom are 'Start', 'Restart', and 'Stop' buttons.

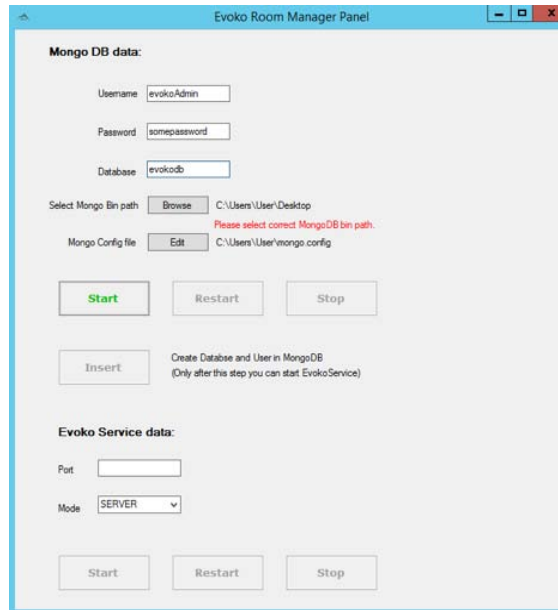
You are always free to edit mongo.config file by clicking on Edit button. Here are mongo.config default values opened in default text editor.



The screenshot shows a Notepad window titled 'mongo.config - Notepad'. The text inside the window is as follows:

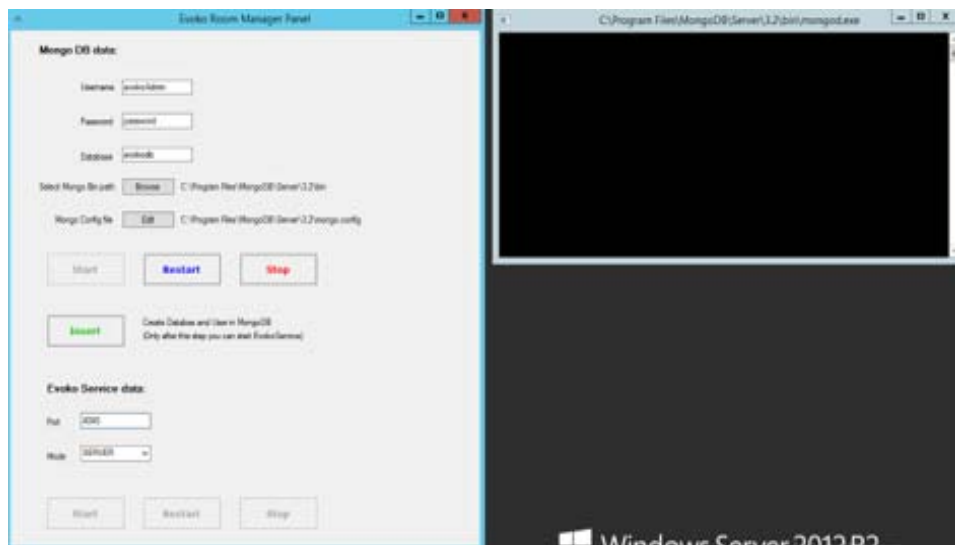
```
File Edit Format View Help
dbpath=C:\Program Files\MongoDB\Server\3.2\data
logpath=C:\Program Files\MongoDB\Server\3.2\log\mongo.log
diaglog=3
```

If you select wrong MongoDB bin path, as on the image below. You will be notified on attempt to start MongoDB service.

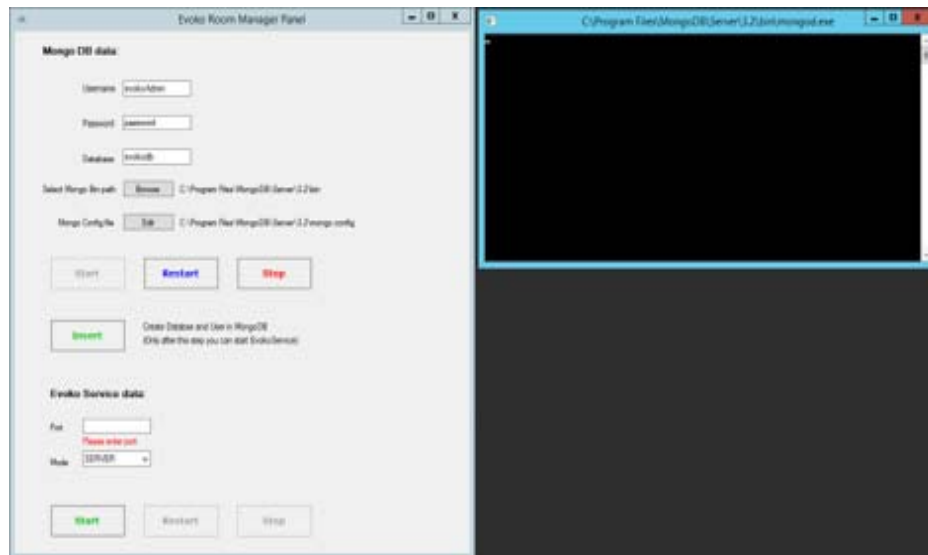


Clicking on the Start button will start MongoDB server. Console window for MongoDB service will pop up. You can monitor any MongoDB activity there.

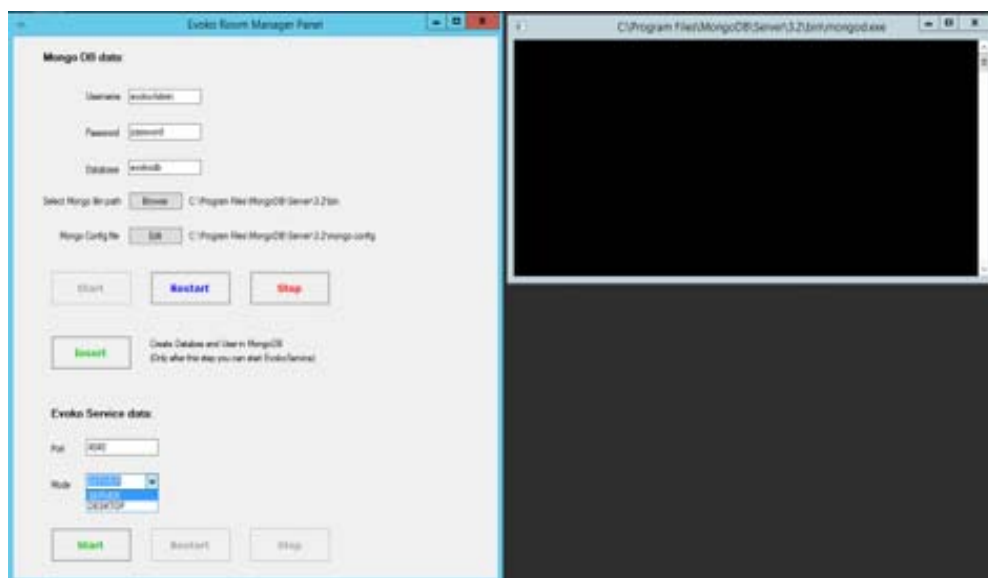
After you start MongoDB server you need to press Insert button in order to insert MongoDB data into the running MongoDB service. Just after that step, Evoko Service Start button will be enabled.



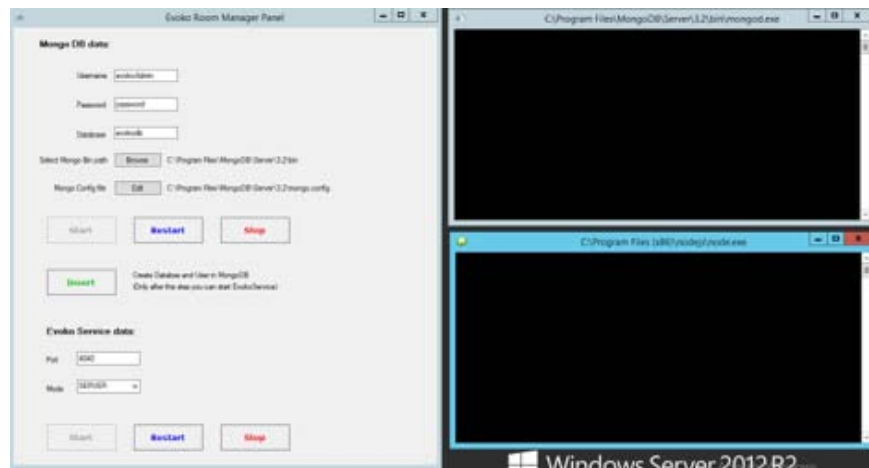
You will not be able to start Evoko Service before you enter port under which the application will run.



Another setting for Evoko Service is Service mode. It is set to SERVER by default.



If all mandatory fields are entered you can start Evoko Service by clicking on Start button. This will pop up nodejs console where you can monitor all Evoko Service activity.



Ultimate test of Evoko Service installation is opening Evoko Service homepage in web browser. You can do that by accessing <http://localhost:4040> (4040 is not strict value) on your local machine. You should have the same view as on the image below.

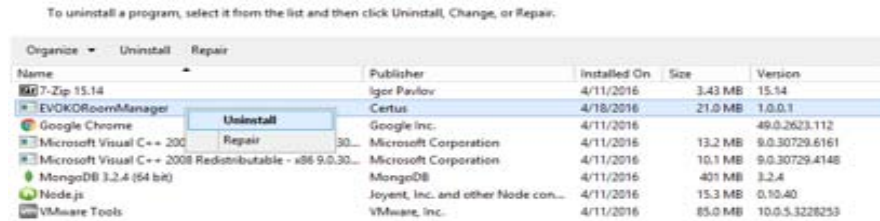


Log files

During application usage all activity will be logged into text log files in Log directory. The directory is placed in root installation folder. There is a log file for each day, and all files older than a month will be erased automatically.

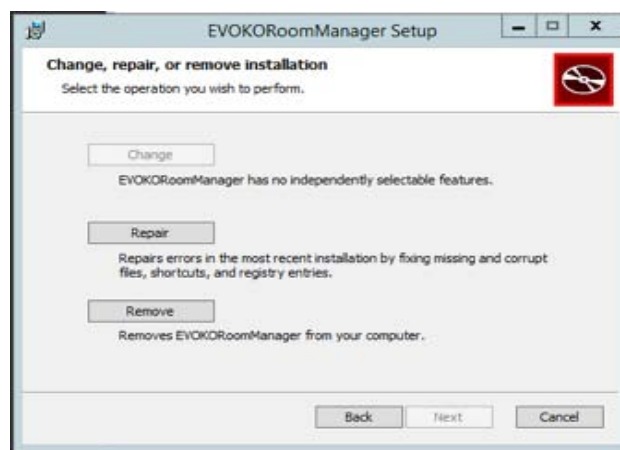
Uninstall / Re-install service for Windows

Reinstallation of device can happen in two cases. First is manually uninstalling the device via control panel. It is standard Windows program management. Please see image below.



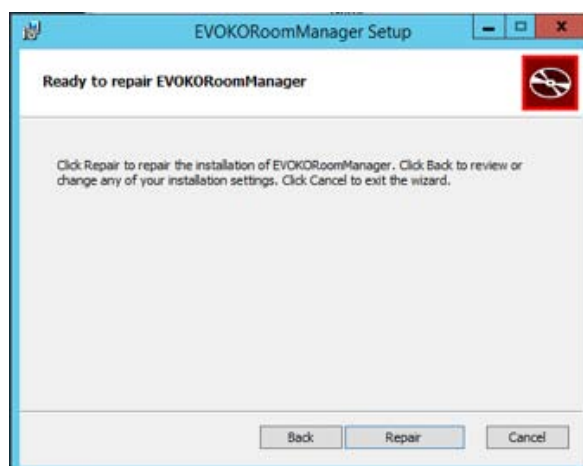
After installation is finished, just install EvokoRoomManager again.

The second option is to run the same installation setup again. For example: if we have EvokoRoomManager version 1.0 installed, and we run its installation setup, we will see the following screen.



From here we can choose option Repair that is equivalent to one step reinstall. Or we can choose Remove that will do the same as removing the program from control panel.

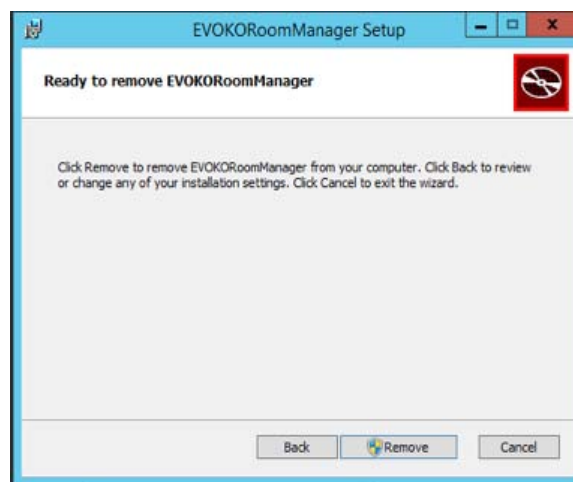
Repair option will open the following screen.



Just click Repair to go on the next screen.



Proceeding with Next button will Finish the installation. Remove option will apparently remove the installation. Just click Remove button.



Note:

If we have for example Evoko Liso Room Manager version 1.0 installed. And we try to install a different version for instance 1.1. The installation will appear as it is installing for the first time. This is allowing us to have two versions of Evoko Service, running on the same server. We should just be careful not to install another version in the same directory destination.

Installing Evoko Service on Linux

Download

In order to download the installation file for Linux it's necessary to go to the download page and download "installation.tar.gz" file that contains all the necessary sources to install the Evoko Service application on Linux.

Link to the Evoko Service installation is available and can be found below:

<http://31.192.228.56:7070/>

EvokoService Download Page

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Windows Device Linux

Windows Releases

Download	Version	Date	Status
Windows	demo_8	2016-04-13	Stable

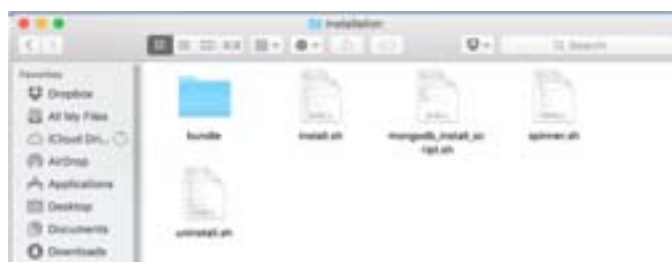
Linux Releases

Download	Version	Date	Status
Linux	demo_8	2016-04-13	Stable

Installation

First of all the downloaded file has to be uncompressed using the following command via terminal: **sudo tar xzf installation.tar.gz**

If the file has been successfully uncompressed there will be shown a few files that serve to install Evoko Service.



In order to run the installation, open the terminal and navigate to the folder where the files are and then type the following command: **sudo bash install.sh**

After running the previous command just follow the instructions. There will be a few steps that are necessary to be executed. In the text below each step that needs to be executed will be described:

Step 1:

At the start, the installation script will automatically recognize all tools that it needs in order to run Evoko Service and it will install them. If some of tools are not installed the

user will get a notification after which he has to allow access so all tools can be installed successfully.

```
erwin@ubuntu: ~/sprint8_demo -- ssh erwin@192.168.50.124 -- 90x24
Preparing to start installation of the application... [DONE]
✓ Curl is installed.
✓ Node is installed.
✓ NPM is installed.
✓ Python is installed.
✓ Mongo is installed.
✓ Meteor is installed.
✓ Git is installed.
✓ Supervisor is installed.
✓ Tar is installed.
Preparing to setup NodeJS version to v0.10.40... [DONE]
/usr/local/bin/n -> /usr/local/lib/node_modules/n/bin/n
n@2.1.0 /usr/local/lib/node_modules/n
Preparing to setup MongoDB credentials... [DONE]
db version v3.2.1
git version: a14d55980c2cdc565d4704a7e3ad37e4e535c1b2
OpenSSL version: OpenSSL 1.0.2d 9 Jul 2015
allocator: tcmalloc
modules: none
build environment:
  distmod: ubuntu1404
  distarch: x86_64
  target_arch: x86_64
Follow command will automatically create new instance of the database and user in MongoDB!
```

Step 2:

This step serves to setup MongoDB credentials. The user has to type username and password which are used so that Evoko Service would be able to communicate with the database. Username has to be unique and user has to type a minimum of six characters for both of these fields.

```
erwin@ubuntu: ~/sprint8_demo -- ssh erwin@192.168.50.124 -- 90x24
Preparing to start installation of the application... [DONE]
✓ Curl is installed.
✓ Node is installed.
✓ NPM is installed.
✓ Python is installed.
✓ Mongo is installed.
✓ Meteor is installed.
✓ Git is installed.
✓ Supervisor is installed.
✓ Tar is installed.
Preparing to setup NodeJS version to v0.10.40... [DONE]
/usr/local/bin/n -> /usr/local/lib/node_modules/n/bin/n
n@2.1.0 /usr/local/lib/node_modules/n
Preparing to setup MongoDB credentials... [DONE]
db version v3.2.1
git version: a14d55980c2cdc565d4704a7e3ad37e4e535c1b2
OpenSSL version: OpenSSL 1.0.2d 9 Jul 2015
allocator: tcmalloc
modules: none
build environment:
  distmod: ubuntu1404
  distarch: x86_64
  target_arch: x86_64
Follow command will automatically create new instance of the database and user in MongoDB!
```

Step 3:

This step serves to automatically install all NPM packages with a specific version that Evoko Service needs. The installed packages will be shown on the user's console so that the user would be able to get details about each package.

```
Preparing to install NPM packages... [DONE]
npm WARN package.json meteor-dev-bundle@0.0.0 No description
npm WARN package.json meteor-dev-bundle@0.0.0 No repository field.
npm WARN package.json meteor-dev-bundle@0.0.0 No README data
> fibers@1.0.5 install /home/erwin/evoko_service_deployment/bundle/programs/server/node_modules/fibers
> node ./build.js

`linux-x64-v8-3.14` exists; testing
Binary is fine; exiting
ansi-regex@0.2.1 node_modules/ansi-regex
ansi-styles@1.1.0 node_modules/ansi-styles
escape-string-regexp@1.0.3 node_modules/escape-string-regexp
```

Step 4:

This step serves to setup the PORT number for application. This PORT number has to be available from the outside so that the Evoko Liso Room Manager can communicate with Evoko Service without any restrictions. This is necessary if you are trying to install Evoko Service outside of your private network otherwise it will be available if both of them are in the same private network and you don't need to do any additional steps.

Notice:

The PORT number has to be available only for the Evoko Service application. Before it is chosen, please check if it is available because there will be no option to change it after.

```
semver@4.1.0 node_modules/semver
source-map@0.1.32 node_modules/source-map
fibers@1.0.5 node_modules/fibers
Preparing to setup PORT number for the application... [DONE]
Enter the PORT number (range 80-60000) for the application: 3100
```

Step 5:

This step serves so the user can decide which version of Evoko Service he wants to install. There will be a SERVER and a DESKTOP version. In order to choose any of them the user has to type numbers one or two so that the script would be able to continue with a next step.

```
Please choose number (1) or (2)!:
1) SERVER
2) DESKTOP
#?
```

Step 6:

In this step installation script will automatically create "evoko_service_run_script.conf" file and put it to the location "/etc/supervisor/conf.d/". This file is used by Supervisor process manager and contains parameters such as path to the application, commands for running application and path where log files are. Purpose of it is that, after installation, user is able to start, stop or restart application via Supervisor process manager or he can read log files whether the application is running or not.

Step 7:

This step serves to finish installation and run Evoko Service. On the console will be shown all details about the application such as the IP address, path of installation and port number. There are also shown all commands for maintaining of Evoko Service.

```
Application is running on http://192.168.0.19:3100.
Please use follow commands to manage with the application:
```

process manager	command	description
sudo supervisorctl		Command for run process manager.
-----	stop evoko_service	----- Command for stop application.
-----	start evoko_service	----- Command for start application.
-----	restart evoko_service	----- Command for restart application.
-----	tail evoko_service	----- Command for read log file of application.
-----	clear evoko_service	----- Command for clear log file of application.
-----	help	----- Command for more information about process manager.

Notice:

If the user wants to see the log files for the Evoko Service either Desktop or Service mode, he will locate them in the following folder:

/var/log/long.err.log
/var/log/long.out.log

If the user wants to see logs even when the application is working, he has to run the "Supervisor" process manager with the following command:

sudo supervisorctl

In the console of the Supervisor process, the user has to type the following command:

tail evoko_service

After this command all the logs from the Evoko Service application will be shown on the user's console.

Uninstallation

In order to remove Evoko Service it's necessary to go in the folder where it is installed (/home/{user}evoko_service_deployment) and there will be a file with the name "uninstall.sh". To run this file just type the following command in the console:

sudo bash uninstall.sh

If the script is runs successfully the user will get a notification about removing an application and he should have to confirm this action like on the image below.

```
Searching for the Evoko Service application... [DONE]

Evoko Service application was installed!
Do you want to uninstall this application? Please choose number (1) or (2):
1) Yes
2) No
#? 1
```

If you confirm action for removing this application you will get another question where you have to decide whether remove database together with the application or remove only the application.

Notice:

If you confirm this option, you will lose all data from database so when next time install Evoko Service, database will be empty.

```
Preparing to start uninstallation of the application... [DONE]
db version v3.2.1
git version: a14d55980c1cd565d4704a7e3ad37e4e535c1b2
OpenSSL version: OpenSSL 1.0.2o 9 Jul 2015
allocator: tcmalloc
modules: none
build environment:
  distmod: ubuntu1404
  distarch: x86_64
  target_arch: x86_64
mongodbi: evoko_service_db
user: evoko2016
password: *****

Do you want to remove this database and user too? Please choose number (1) or (2):
1) Yes
2) No
#? 1
```

Evoko Service setup

Evoko Service setup wizard

In order to install the Evoko Service system a wizard installation process needs to be completed. The installation process is composed out of several steps for each of the available integrations. All steps need to be completed in order for the installation to be successful.

The initial screen of the installation wizard process is the following:

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

Type of Booking

Credentials

Setup Account

NTP settings

Next

☐ Office365
☐ Exchange 2010
☐ IBM Domino
☐ Google
☐ Evoko Booking

Description

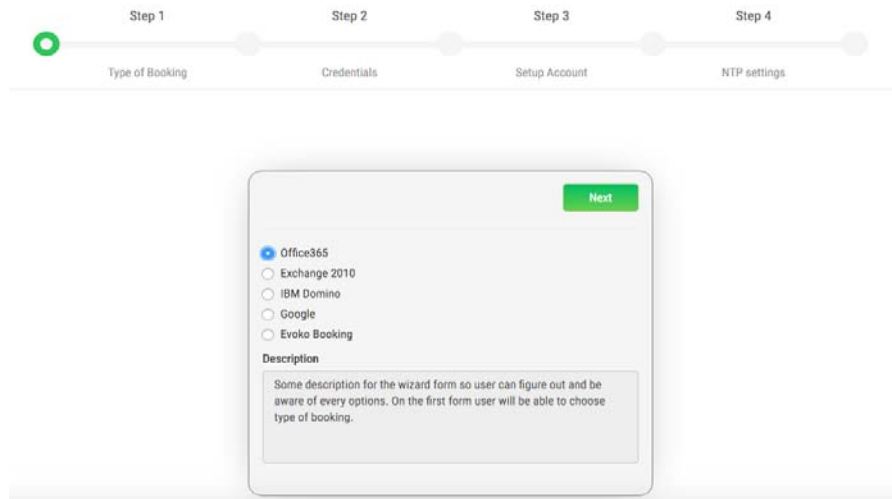
Some description for the wizard form so user can figure out and be aware of every options. On the first form user will be able to choose type of booking.

From this point the setup varies based on the chosen integration system. A walkthrough for setup of each of the integration systems is described below.

Office 365

At Step 1 choose the Office 365 integration from the radio button list

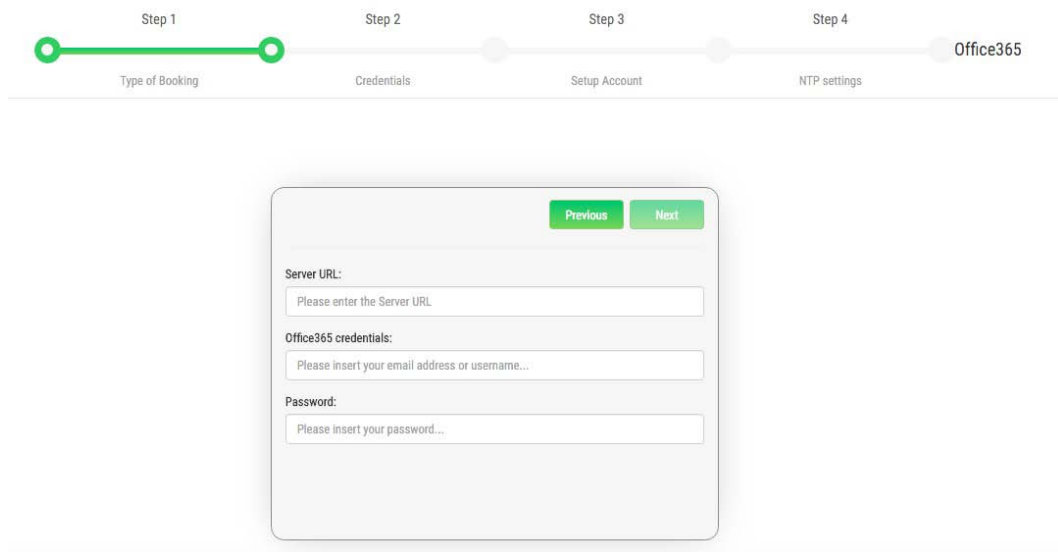
Welcome to the Evoko Room Service Installation Screen



The image shows the first step of the installation wizard. At the top, a progress bar indicates four steps: Step 1 (Type of Booking), Step 2 (Credentials), Step 3 (Setup Account), and Step 4 (NTP settings). Step 1 is currently active, marked with a green circle. Below the progress bar, a form is displayed with a 'Next' button in the top right corner. The form contains a list of radio buttons for selecting the type of booking: Office365 (selected), Exchange 2010, IBM Domino, Google, and Evoko Booking. Below this list is a 'Description' section with a text box containing the following text: 'Some description for the wizard form so user can figure out and be aware of every options. On the first form user will be able to choose type of booking.'

At Step 2 it is necessary to enter the server URL for Office365 then valid Office365 credentials, email and password. If all necessary fields are entered correctly proceed to the next step.

Welcome to the Evoko Room Service Installation Screen



The image shows the second step of the installation wizard. The progress bar at the top now shows Step 1 completed (green line) and Step 2 (Credentials) as the current step (green circle). Step 3 (Setup Account) is also marked with a green circle, and Step 4 (NTP settings) is marked with a green circle. A label 'Office365' is positioned to the right of the progress bar. Below the progress bar, a form is displayed with 'Previous' and 'Next' buttons in the top right corner. The form contains three input fields: 'Server URL:' with a placeholder 'Please enter the Server URL', 'Office365 credentials:' with a placeholder 'Please insert your email address or username...', and 'Password:' with a placeholder 'Please insert your password...'.

At Step 3 it is necessary to enter NTP server data to synchronize the device time with an appropriate NTP server time. For example, one of the valid NTP server for Europe is europe.pool.ntp.org.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4 Office365

Type of Booking Credentials NTP settings Subscription

Previous
Next

NTP server address:

Description:

Some description for the wizard form so user can figure out and be aware of every options. On the fourth form user will be able to insert NTP server address.

At Step 4, a subscription endpoint can be entered. The subscription endpoint is the external endpoint of the system where the service will be running. The endpoint is the external access point through which Office 365 will push notifications. When a subscription endpoint is applied the push notification system is used. Which means that real-time updates of events will be activated. If the subscription endpoint is omitted then a poll based notification system will be used where the check for new or updated events is done based on a 10 second interval.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4 Office365

Type of Booking Credentials NTP settings Subscription

Previous
Next

Subscription endpoint:

Notice:

Enter the subscription endpoint if you intend to have push subscription enabled. Push subscription allows for real-time update of meetings within rooms. If the subscription endpoint field is left empty the default fallback using pull subscription will be activated. This will ensure the fetching of new meetings based on a time interval, however it does not guarantee real-time updates.

At Step 5 the user needs to agree with all the supplied conditions after which the installation process for Office 365 is successfully completed.

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

Type of Booking

Credentials

NTP settings

Subscription

Office365

Previous

Next

Conditions:

Some description for the wizard form so user can figure out and be aware of every options. On the third form user will be able to insert it's own email address. After successfully installation, user will receive email with password and PIN number.

☒ I agree with conditions!

Finish

After the final step, by clicking the next button, the user is navigated to a page which displays the newly created username and password.

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

Type of Booking

Credentials

NTP settings

Subscription

Office365

Username:

anders.karlsson@certusinternational.onmicrosoft.com

Password:

p!VWz1Kj

Notice:

Please make note of the displayed credentials and record or write them down for safe keeping!

Confirm

Exchange 2010

At Step 1 choose the Office 365 integration from the radio button list

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings

Next

☐ Office365
☒ Exchange 2010
☐ IBM Domino
☐ Google
☐ Evoko Booking

Description

Some description for the wizard form so user can figure out and be aware of every options. On the first form user will be able to choose type of booking.

At Step 2 it is necessary to enter the server URL for Exchange 2010 then valid Exchange 2010 credentials, email and password. If all necessary fields are entered correctly proceed to the next step.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings

Exchange 2010

Previous Next

Server URL:
Please enter the Server URL

Exchange 2010 credentials:
Please insert your email address or username...

Password:
Please insert your password...

At Step 3 it is necessary to enter NTP server data to synchronize the device time with an appropriate NTP server time. For example, one of the valid NTP server for Europe is europe.pool.ntp.org.

Welcome to the Evoko Room Service Installation Screen

Step 1
Type of Booking

Step 2
Credentials

Step 3
NTP settings

Step 4
Subscription

Exchange 2010

PreviousNext

NTP server address:

Description:
Some description for the wizard form so user can figure out and be aware of every options. On the fourth form user will be able to insert NTP server address.

At Step 4 the user needs to agree with all the supplied conditions after which the installation process for Office 365 is successfully completed.

Welcome to the Evoko Room Service Installation Screen

Step 1
Type of Booking

Step 2
Credentials

Step 3
NTP settings

Step 4
Subscription

Exchange 2010

PreviousNext

Conditions:
Some description for the wizard form so user can figure out and be aware of every options. On the third form user will be able to insert it's own email address. After successfully installation, user will receive email with password and PIN number.

☒ I agree with conditions!

Finish

After the final step, by clicking the next button, the user is navigated to a page which displays the newly created username and password.

Welcome to the Evoko Room Service Installation Screen

Step 1
Type of Booking

Step 2
Credentials

Step 3
NTP settings

Step 4
Subscription

Exchange 2010

Username:

Password:

Notice:
Please make note of the displayed credentials and record or write them down for safe keeping!

Confirm

IBM Domino

To install IBM Domino booking type, it is necessary to choose the appropriate option from the main installation screen.

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

Type of Booking

Credentials

Setup Account

NTP settings

Next

☐ Office365

☐ Exchange 2010

☒ IBM Domino

☐ Google

☐ Evoko Booking

Description

Some description for the wizard form so user can figure out and be aware of every options. On the first form user will be able to choose type of booking.

At Step 2 it is necessary to enter the server URL for IBM Domino then valid IBM Domino credentials, email and password. If all necessary fields are entered correctly proceed to the next step.

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

IBM Domino

Type of Booking

Credentials

Setup Account

NTP settings

Previous

Next

Server URL:

Please enter the Server URL.

IBM Domino credentials:

Please insert your email address or username...

Password:

Please insert your password...

At Step 3 it is necessary to enter valid user email address. Password will be generated automatically and send to entered email address. Received data will be used for operation on device (PIN), and for enter to Evoko Service page (password).

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4 IBM Domino

Type of Booking Credentials Setup Account NTP settings

Previous Next

Your email address:

Repeat email address:

Password will be automatically generated and sent to your mail!

At Step 4 it is necessary to enter NTP server data to synchronize the device time with an appropriate NTP server time. For example, one of the valid NTP server for Europe is europe.pool.ntp.org.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4 IBM Domino

Type of Booking Credentials Setup Account NTP settings

Previous Next

NTP server address:

Description:
Some description for the wizard form so user can figure out and be aware of every options. On the fourth form user will be able to insert NTP server address.

At Step 5 user need to check options for agree with all conditions and installation process for IBM Domino is done.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4 IBM Domino

Type of Booking Credentials Setup Account NTP settings

Previous

Conditions:
Some description for the wizard form so user can figure out and be aware of every options. On the third form user will be able to insert it's own email address. After successfully installation, user will receive email with password and PIN number.

☐ I agree with conditions!

Finish

After the final step, by clicking the next button, the user is navigated to a page which displays the newly created username and password.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings

Username:

roommate

Password:

FpYpOLRU

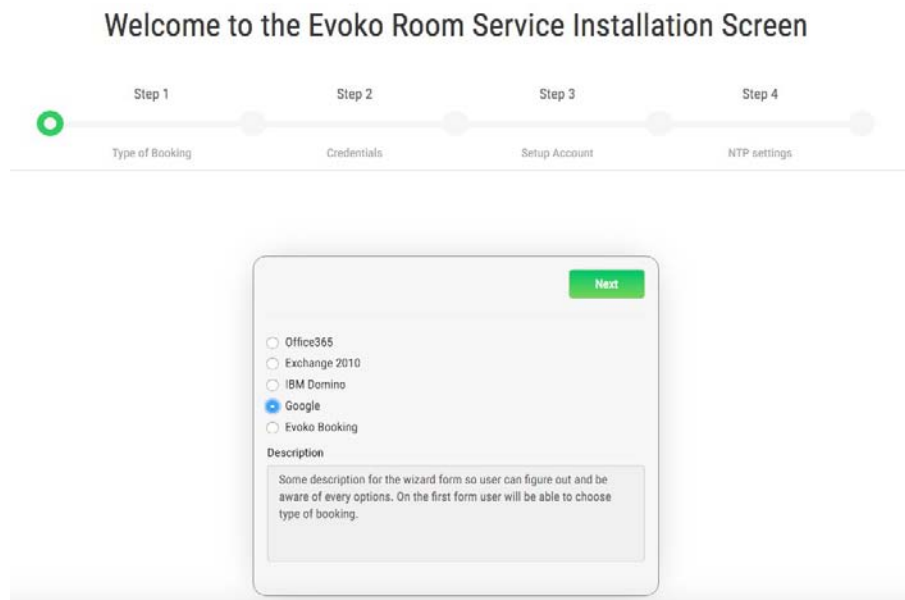
Notice:

Please make note of the displayed credentials and record or write them down for safe keeping!

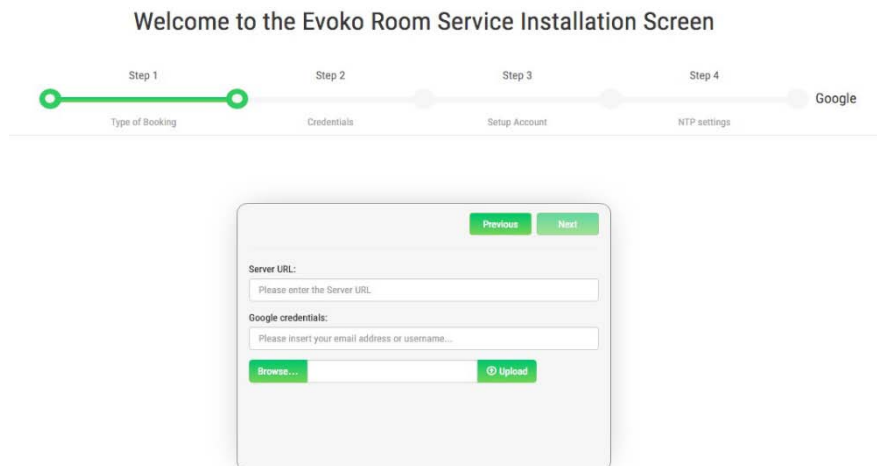
Confirm

Google

To install Google booking type, it is necessary to choose an option from the main installation screen.



At Step 2 it is necessary to enter the server URL for Google then valid Google credentials, (email). Also, user need to upload .p12 file. This file (.p12) is the combined format that holds the private key and certificate and is the format most modern signing utilities use. If all necessary fields are entered correctly proceed to the next step.



At Step 3 it is necessary to enter valid user email address. Password will be generated automatically and send to entered email address. Received data will be used for operation on device (PIN), and for enter to Evoko Service page (password).

Welcome to the Evoko Room Service Installation Screen



A form for Step 4, 'NTP settings'. It has a 'Previous' button and a 'Next' button. The form contains two input fields: 'Your email address:' and 'Repeat email address:'. Below the fields is a note: 'Password will be automatically generated and sent to your mail'.

At Step 4 it is necessary to enter NTP server data to synchronize the device time with an appropriate NTP server time. For example, one of the valid NTP server for Europe is europe.pool.ntp.org.

Welcome to the Evoko Room Service Installation Screen



A form for Step 4, 'NTP settings'. It has a 'Previous' button and a 'Next' button. The form contains one input field: 'NTP server address:'. Below the field is a 'Description:' section with text: 'Some description for the wizzard form so user can figure out and be aware of every options. On the fourth form user will be able to insert NTP server address.'

At Step 5 user need to check options for agree with all conditions and installation process for Google is done.

Welcome to the Evoko Room Service Installation Screen



A form for Step 5, 'Conditions'. It has a 'Previous' button and a 'Finish' button. The form contains a 'Conditions:' section with text: 'Some description for the wizzard form so user can figure out and be aware of every options. On the third form user will be able to insert it's own email address. After successfully installation, user will receive email with password and PIN number.' Below the text is a checkbox labeled 'I agree with conditions!'.

After the final step, by clicking the next button, the user is navigated to a page which displays the newly created username and password.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings

Username:

Password:

Notice:
Please make note of the displayed credentials and record or write them down for safe keeping!

[Confirm](#)

Evoko Booking

To install Evoko Booking booking type, it is necessary to choose an option from the main installation screen.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings

[Next](#)

☐ Office365

☐ Exchange 2010

☐ IBM Domino

☐ Google

☒ **Evoko Booking**

Description

Some description for the wizard form so user can figure out and be aware of every options. On the first form user will be able to choose type of booking.

At Step 2 it is necessary to enter the valid Evoko Booking credentials, email and password. If all necessary fields are entered correctly proceed to the next step.

Welcome to the Evoko Room Service Installation Screen

Step 1 Step 2 Step 3 Step 4

Type of Booking Credentials Setup Account NTP settings **Evoko Booking**

[Previous](#) [Next](#)

Evoko Booking credentials:

Please insert your email address...

Password:

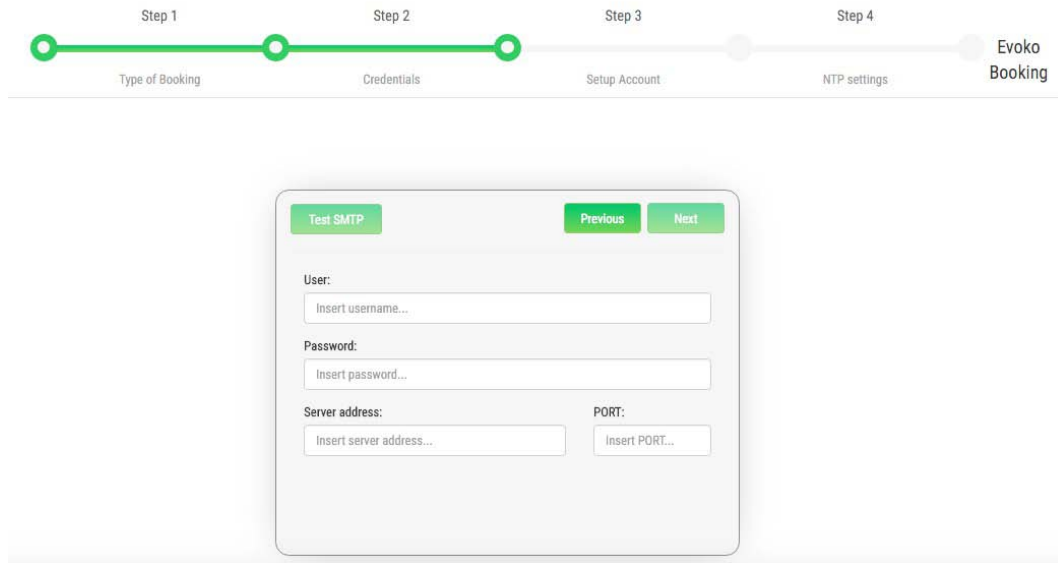
Please insert your password...

Repeat password:

Please repeat your password...

At Step 3 it is necessary to enter valid SMTP connection credentials. For example user can enter valid gmail address (firstname.lastname@gmail.com) and password. In field server address user enter smtp.gmail.com and in field port, enter 587. After that the SMTP connection can be checked by clicking on the Test SMTP button and if all entered data is valid proceed to the next step.

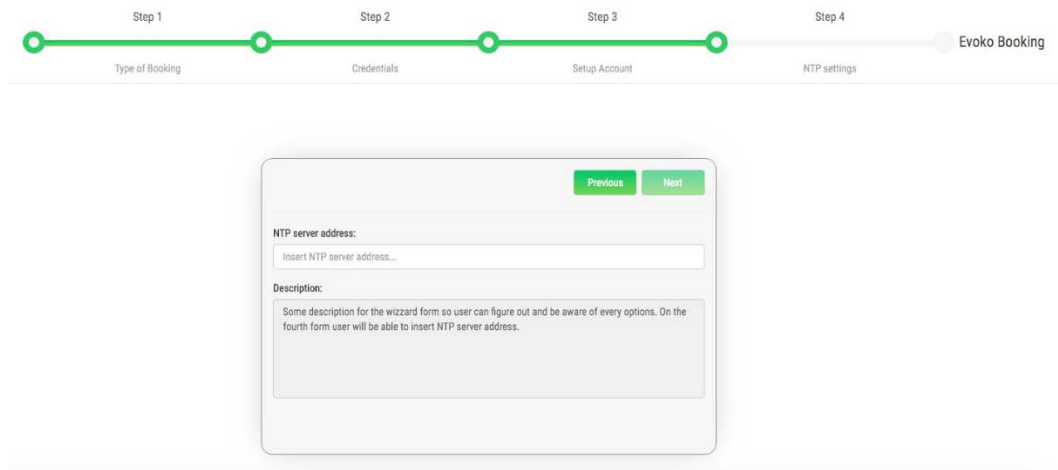
Welcome to the Evoko Room Service Installation Screen



The image shows the 'Evoko Room Service Installation Screen' with a progress bar at the top. The progress bar has five steps: Step 1 (Type of Booking), Step 2 (Credentials), Step 3 (Setup Account), Step 4 (NTP settings), and Evoko Booking. Step 4 is currently selected. Below the progress bar is a form titled 'Test SMTP' with a 'Previous' button and a 'Next' button. The form contains three input fields: 'User:' (Insert username...), 'Password:' (Insert password...), and 'Server address:' (Insert server address...). There is also a 'PORT:' field (Insert PORT...). The form is set against a light gray background.

At Step 4 it is necessary to enter NTP server data to synchronize the device time with an appropriate NTP server time. For example, one of the valid NTP server for Europe is europe.pool.ntp.org.

Welcome to the Evoko Room Service Installation Screen



The image shows the 'Evoko Room Service Installation Screen' with a progress bar at the top. The progress bar has five steps: Step 1 (Type of Booking), Step 2 (Credentials), Step 3 (Setup Account), Step 4 (NTP settings), and Evoko Booking. Step 5 is currently selected. Below the progress bar is a form titled 'NTP server address:' with a 'Previous' button and a 'Next' button. The form contains one input field: 'NTP server address:' (Insert NTP server address...). Below the input field is a 'Description:' section with the text: 'Some description for the wizard form so user can figure out and be aware of every options. On the fourth form user will be able to insert NTP server address.' The form is set against a light gray background.

At Step 5 user need to check options for agree with all conditions and installation process for Evoko Booking is done.

Welcome to the Evoko Room Service Installation Screen

Step 1

Step 2

Step 3

Step 4

Evoko Booking

Type of Booking

Credentials

Setup Account

NTP settings

Previous

Conditions:

Some description for the wizard form so user can figure out and be aware of every options. On the third form user will be able to insert it's own email address. After successfully installation, user will receive email with password and PIN number.

☐ I agree with conditions!

Finish

Download and install image on Evoko Room Manager

Download and write firmware image using Windows

In order to write the image on to the device using Windows there are a few steps to complete and one prerequisite step.

Download image write tool - Win32DiskImager

Win32DiskImager is a tool that is used to write images onto USB or SD cards.

- Go to <https://sourceforge.net/projects/win32diskimager/> and download the tool
- Install the tool

Download and uncompress the image

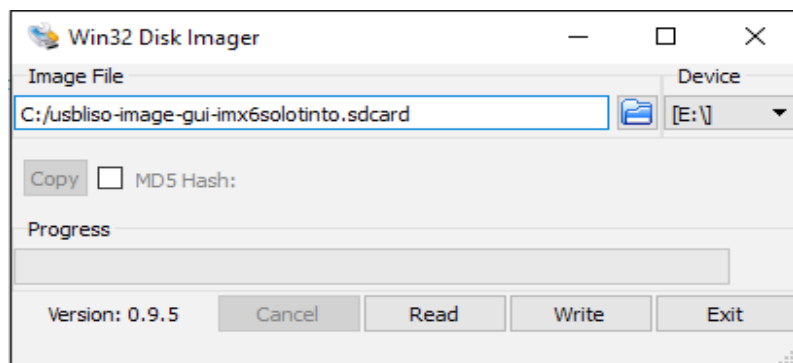
- Go to <http://31.192.228.56:7070/> and download the appropriate USB image
- Uncompress the image with your favorite zip tool (e.g. open source tool 7-zip is good)

You should now have an image file on your hard drive with extension sdcard, e.g. usbliso-image-gui-imx6xxx_date_vx.y.sdcard.

Write the image to USB memory card

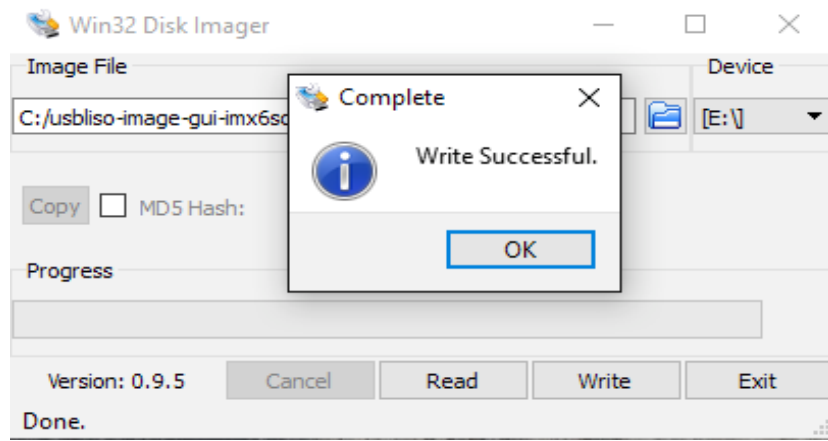
Recommended size for memory card is 8 Gbyte, but larger should also work.

- Start Win32DiskImager and select image and device to write to
- Press Write



Warning: Writing image will overwrite and destroy everything on selected device with content of this image.

- Wait a few minutes until writing is complete and then you can remove the USB memory card from PC



Download and write firmware image using Linux

Download and uncompress the image

- Go to page <http://31.192.228.56:7070/> and download USB image
- Uncompress image using this command **gunzip usbliso-image-gui-imx6xxx_date_vx.y.sdcard.gz**

You should now have an image file on your hard drive with extension sdcard, e.g. usbliso-image-gui-imx6xxx_date_vx.y.sdcard.

Write the image to USB memory

After inserting the memory card, make sure that the memory card is not mounted since it might disturb content during writing or before removing USB memory card. This can be done with one of the following ways depending on the Linux installation.

- Select “Eject card” if it is visible on the Desktop
- Use these commands

```
Find which device USB has: sudo fdisk -l
Find out where USB is mounted (if at all): df
Unmount any partitions with: sudo umount /media/xxx/xxx
```
- Write image to device with commands (where ? is to be replaced with device found using fdisk -l according to above)

```
sudo dd if=./usbliso-image-gui-imx6solotinto.sdcard
of=/dev/sd? bs=1M && sync
```
- Wait a few minutes until image is write is ready and remove USB memory card

Warning: Writing image will overwrite and destroy everything on selected device with content of this image.

Example of commands used here:

```
mir@mir-hp ~ $ gunzip usbliso-image-gui-imx6solotinto.sdcard.gz
mir@mir-hp ~ $ sudo fdisk -l
[sudo] password for mir:
Download and uncompress image
Disk /dev/sda: 256.1 GB, 256060514304 bytes
255 heads, 63 sectors/track, 31130 cylinders, total 500118192 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0xb442274e

   Device Boot      Start         End      Blocks   Id  System
/dev/sda1 *         2048        46874623   23436288    83  Linux
/dev/sda2           46876670   500117503   226620417    5  Extended
/dev/sda5           46876672   62498815    7811072    82  Linux swap / Solaris
/dev/sda6           62500864   500117503   218808320    83  Linux

Disk /dev/sdb: 7761 MB, 7761035264 bytes
4 heads, 32 sectors/track, 118424 cylinders, total 15158272 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x435fbeb4

   Device Boot      Start         End      Blocks   Id  System
/dev/sdb1           8192        24575     8192      c   W95 FAT32 (LBA)
/dev/sdb2          24576       5627903   2801664    83  Linux

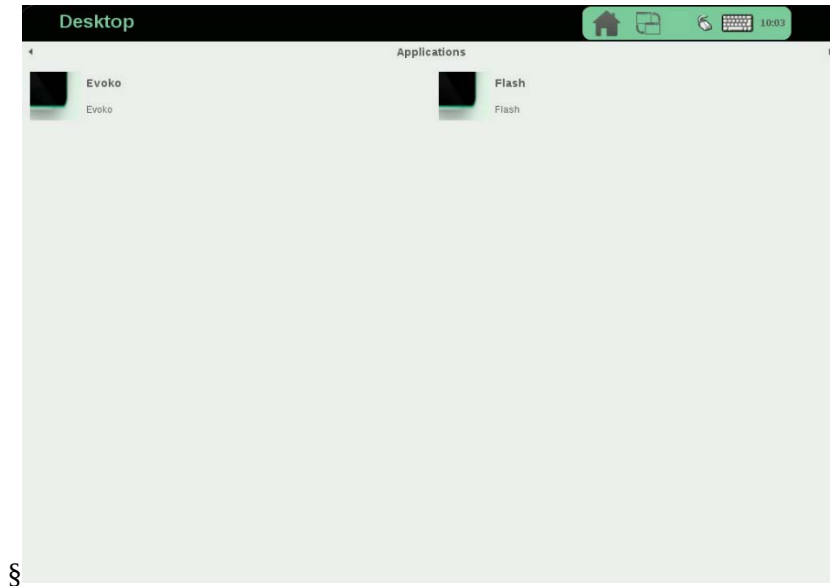
mir@mir-hp ~ $ df
Filesystem            1K-blocks      Used Available Use% Mounted on
udev                  8137508         4    8137504    1% /dev
tmpfs                 1630620       1568    1629052    1% /run
/dev/sda1             22937060     12787884    8960980    59% /
none                   4              0          4    0% /sys/fs/cgroup
none                  5120           0        5120    0% /run/lock
none                 8153096       18620    8134476    1% /run/shm
none                 102400        36      102364    1% /run/user
/dev/sda6            215242828    121088352    83197676    60% /home
/dev/sdb2            2560784     1726888     693816    72% /media/mir/b9bb9f8c-3b87-4451-9601-d30504a73f11
/dev/sdb1             8050         5831       2219    73% /media/mir/Boot imx6so
mir@mir-hp ~ $ sudo umount /media/mir/b9bb9f8c-3b87-4451-9601-d30504a73f11
mir@mir-hp ~ $ sudo umount /media/mir/Boot\ imx6so
mir@mir-hp ~ $ sudo dd if=./usbliso-image-gui-imx6solotinto.sdcard of=/dev/sdb bs=1M && sync
2752+0 records in
2752+0 records out
2885681152 bytes (2,9 GB) copied, 585,068 s, 4,9 MB/s
mir@mir-hp ~ $
```

Note in this case, the memory card is /dev/sdb and has two partitions mounted that needs unmount before writing image.

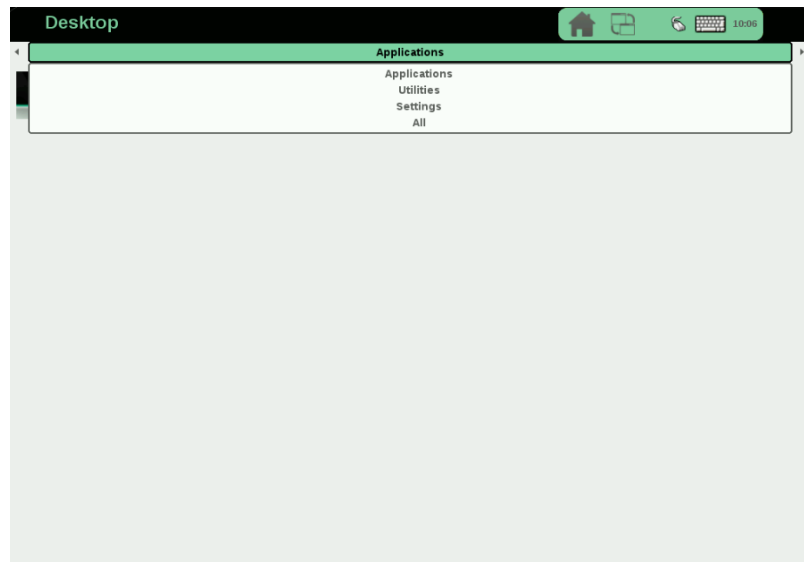
Boot from USB and install firmware on Device

Boot and install firmware

- Insert USB memory card with firmware image written to it into device
- Power on the device by inserting power cable
- When desktop appears, there is an icon called “Flash”



- Press “Flash” and wait approx. 3-4 minutes
- When desktop re-appear, go to “Utilities” by pressing the menu at top of desktop and select “Utilities”



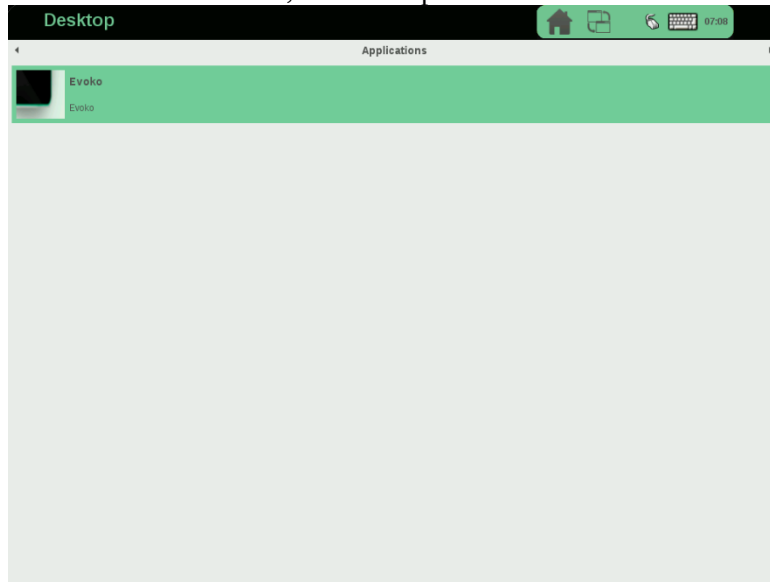
- Press Shutdown icon and wait for device to turn off
- Remove USB stick
- Remove power and insert Power again after a few seconds
- Device boots from internal memory and can now be installed

Evoko Device setup with Evoko Server

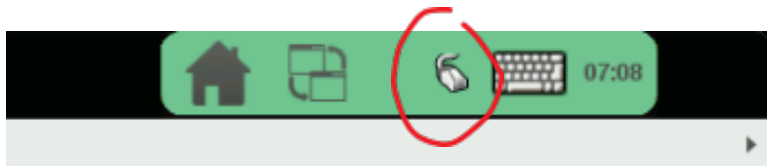
After installing the latest device firmware from USB memory stick, remove the USB and restart the device by

- Press “Shutdown” icon on utilities desktop
- Unplug the power and plugin power again

After boot the first time, the desktop looks this.

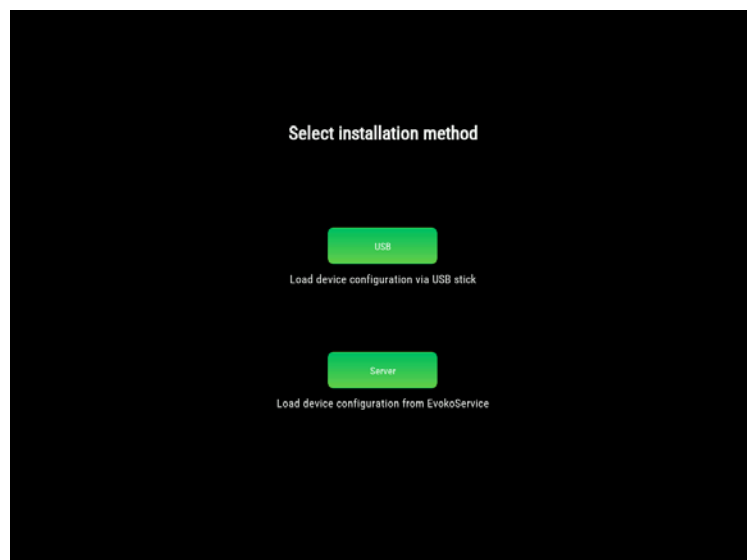


If you want to use WiFi you need to configure it before starting the application.



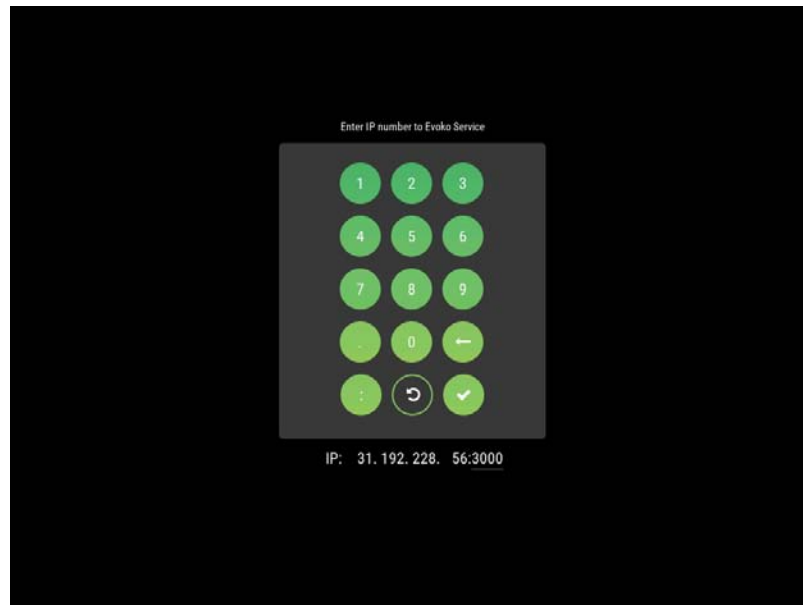
Press the Evoko icon to start the application the first time.

After approximately 20 seconds, you get this screen. Select “Server” installation.



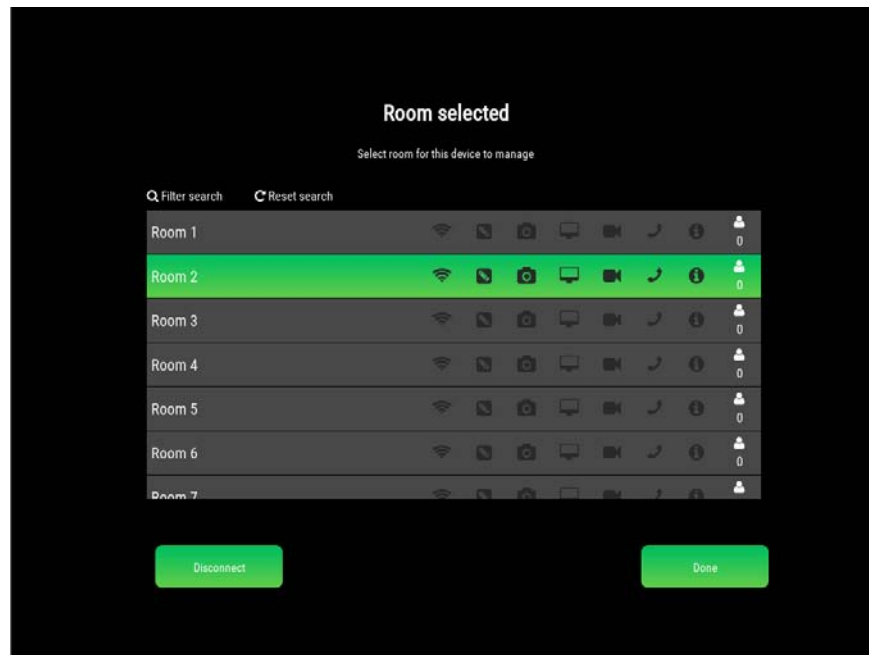
You are now requested to enter the IP number to the EvokoServer. To enter this information, you first need to check this IP number on the computer where Evoko Server is installed. Default port for application is 3000, however if you selected a different port during installation of Evoko Server you need to enter this port instead.

- Enter the 4 IP numbers with a  between each number.
- Then press  followed by the port number
- Finally press  to go to next step



You now come to the final setup step where you select the room that this device should handle. The rooms listed here are the activated rooms inside Evoko Server. If you see no rooms, please check that you have activated rooms in Evoko Server first.

Press the room you want to setup and then press Done.



You now enter the application and should see the room name and clock for the selected room.

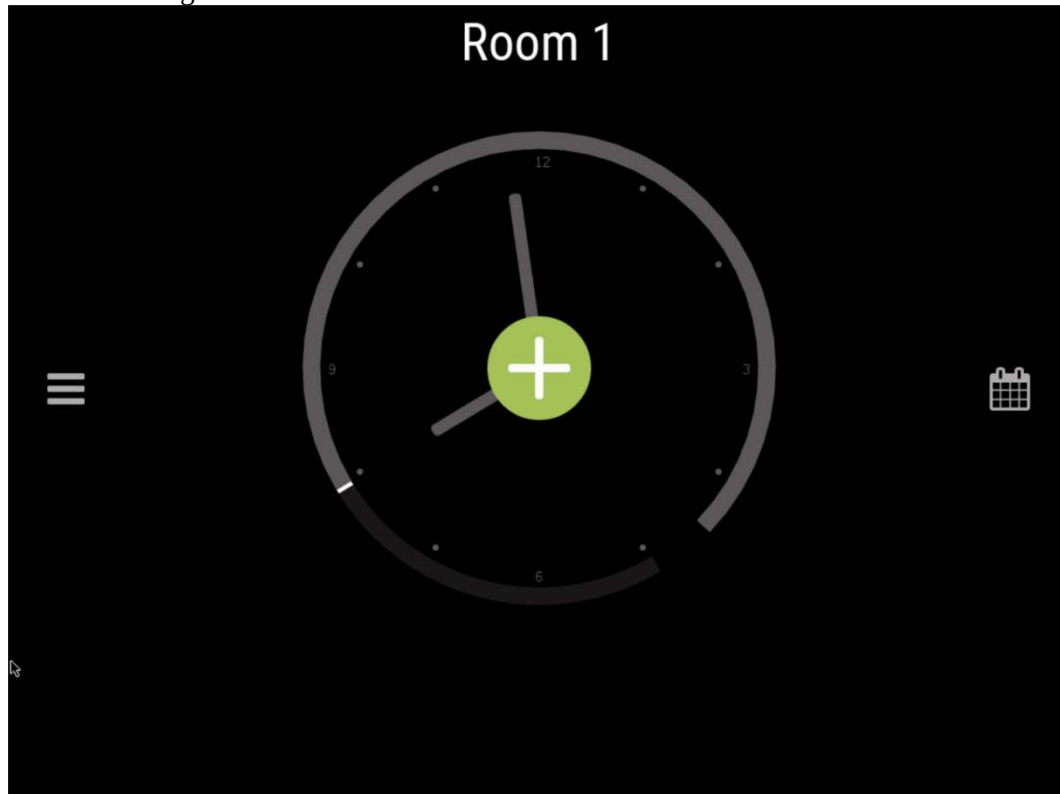


Booking

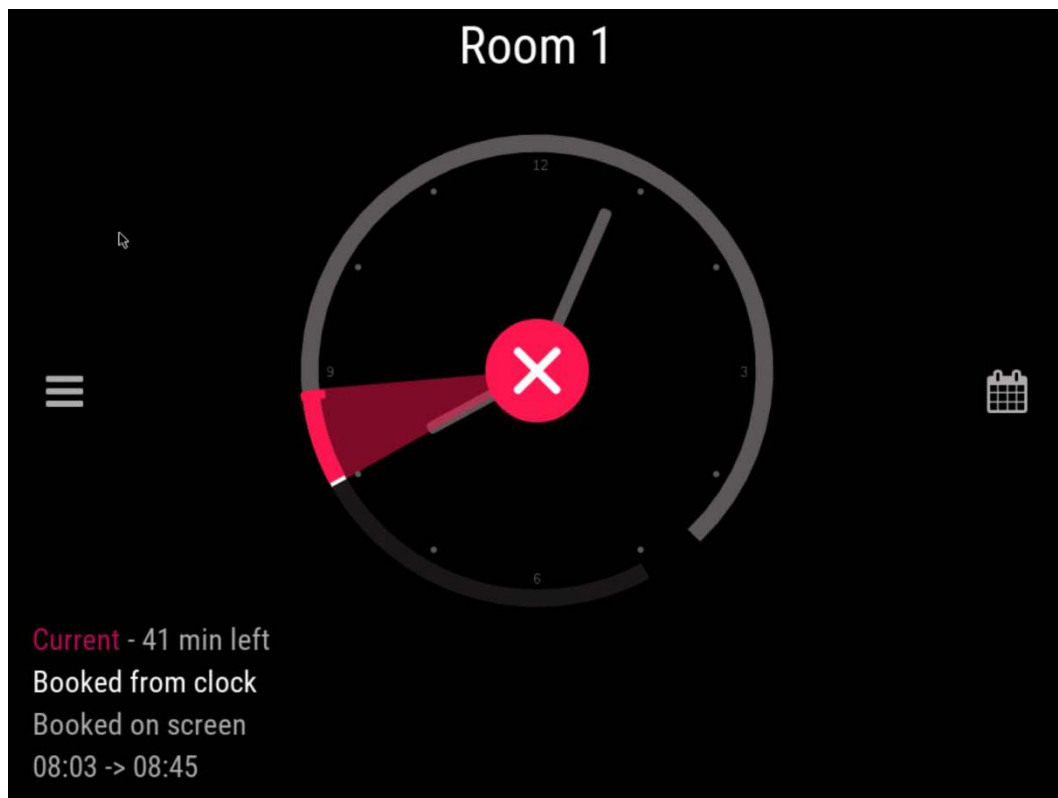
To make a booking you have 3 options, all starts with clicking the room name. Depending on your settings some of the actions may require authentication by PIN or RFID. Just follow the on screen instruction.

From clock

Click then the green “+” button.to book



Then you can drag the slider handle to adjust the length of the meeting.

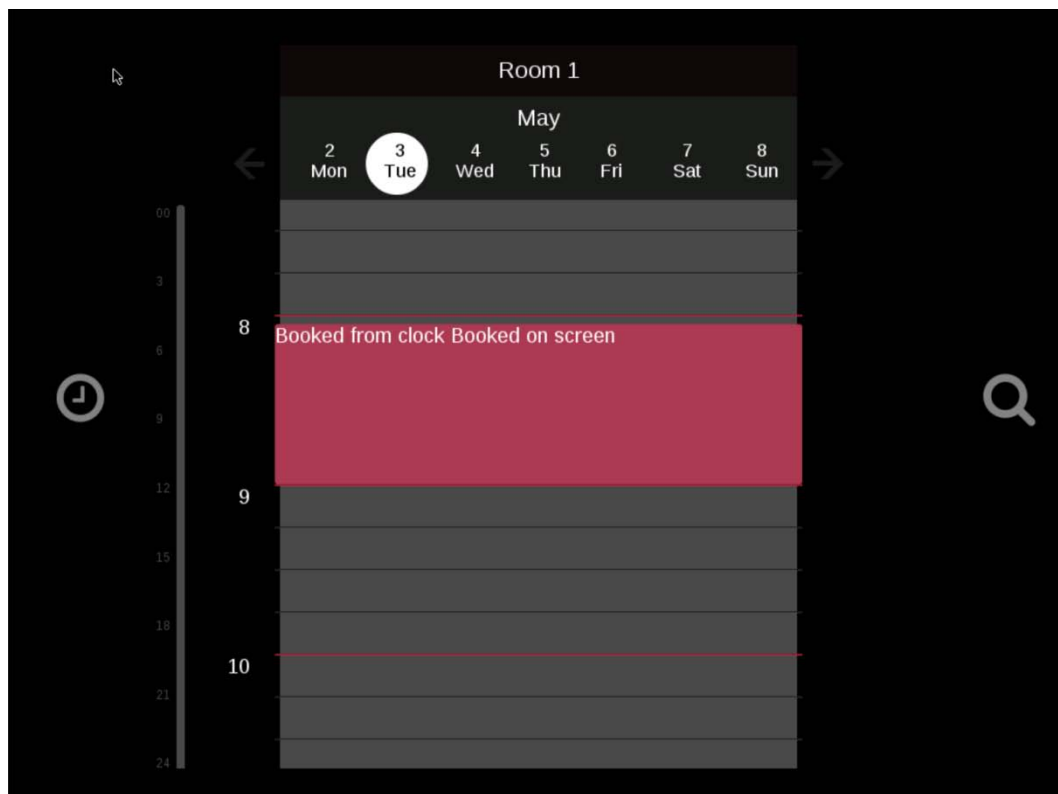


To end an ongoing booking press

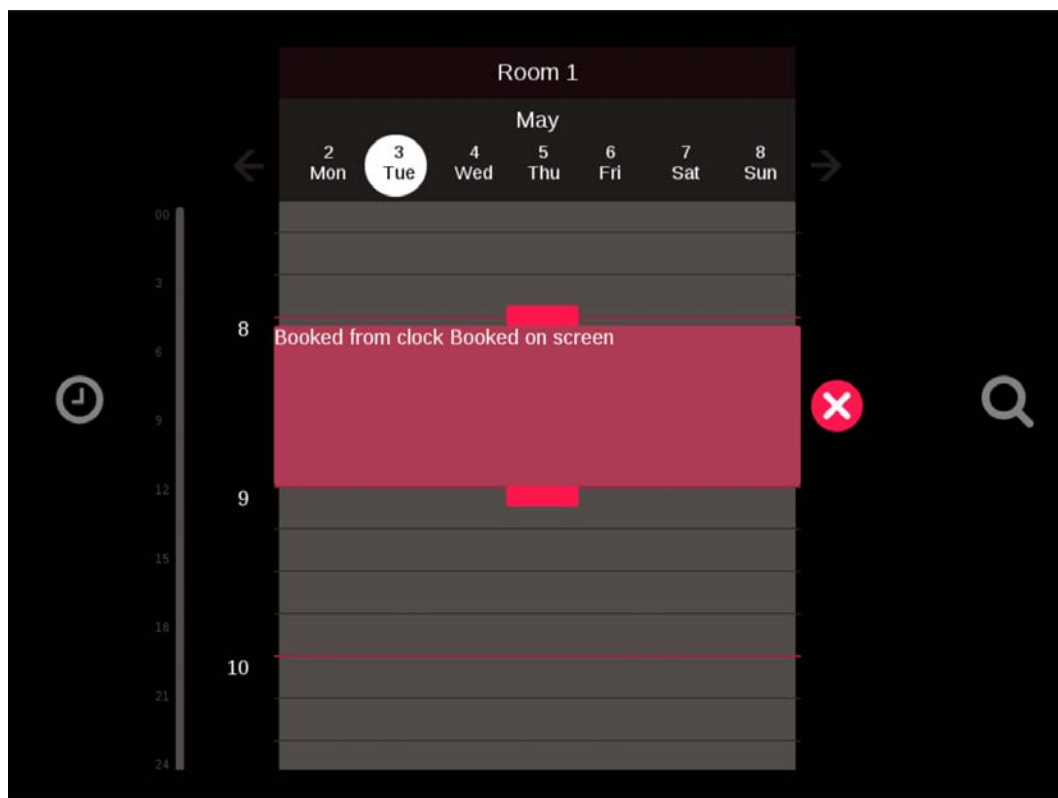
From calendar

It is also possible to book from the calendar view. You reach it by clicking the calendar icon on the clock view.

Clicking in the calendar will create a booking.

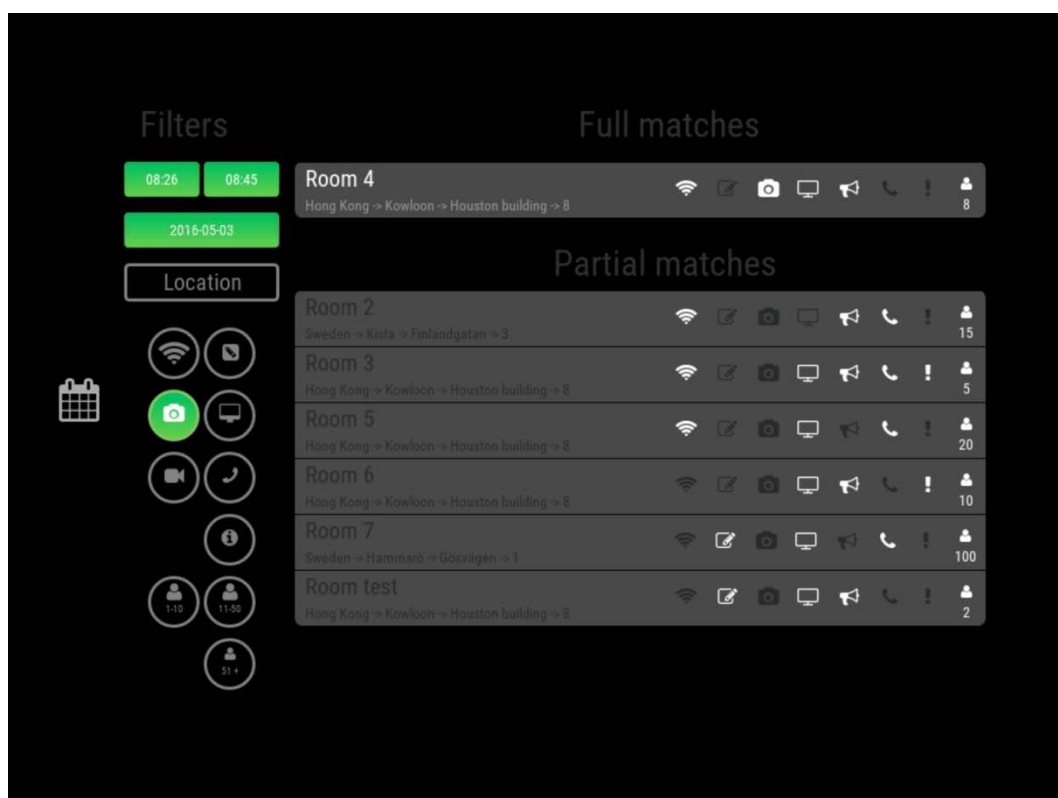


To edit any meeting from this screen, just select the meeting by tapping on it and dragger handles will appear to change duration of the meeting. Pressing the red “X” will cancel the meeting.



From filter view

From the calendar view click the magnifying glass icon

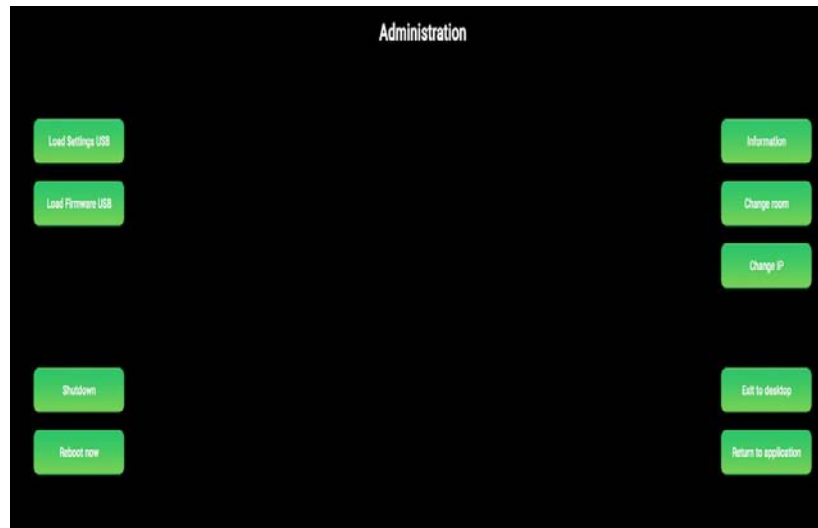


In the filter view you can book any room available. And you can use the filters to find a suitable room at a convenient date and time with the equipment you need for the meeting.

Firmware upgrades

Upgrade firmware on device side

Navigate to the administrator page on the device. Following options should be available:



At the top right corner of the screen click on the information button. The device information screen should open, like in the following picture.



On the information screen, the current and latest available firmware versions are specified. To update firmware on the device, click on the “Update firmware” button on the same page. The device will then check if a new firmware image is available and if it does, download it from the service to the device. After that, the device will begin with the firmware update.

Device monitoring

Login to the Evoko service. On the service dashboard menu go to the “Monitoring” page and the device monitoring page will open. The monitoring page shows a preview of all devices that are or were connected to the service.

Active devices

Check for updates Upgrade all devices Download firmware update						
Mac address	Room name	Last reboot time	Status	Current Firmware	New Firmware	Download
f2:10:e9:f4:dd:01	Room 1	Tue, Apr 26, 2016 1:10 PM	Offline	2016_04_03_v0.1		

The devices are identified by their MAC address. For every device, following information or statuses are given:

1. MAC address – Stands for Media Access Control and represents the device unique id.
2. Room name – Room on which the device is registered.
3. Last reboot time – How long the device is active.
4. Status – The device status, can be “Online” or “Offline”.
5. Current firmware – Current firmware version installed on the device.
6. New firmware - New firmware version that is available to upgrade devices (if any).
7. Download – Status flag indicating that new firmware is downloaded to the service from release server.

Above the device list there are three buttons: Check for updates, Upgrade all devices and Download firmware update. The button “Check for updates” checks on the release server if new a firmware version is available and updates the “New firmware” column in the device list if new firmware was found.

The button “Download firmware update” downloads firmware from the release server to the service and when the download is finished, updates the “Download” flag on the device list to signal user that firmware has been successfully downloaded.

The last button, “Upgrade all devices”, sends a message to the all active devices, signaling them to start firmware upgrade at once. All active devices will then download new firmware from the service and perform an upgrade operation of its firmware. By clicking on any device at the device list, a “Device details” page will open that contains various data about the selected device.

Device details

Back Send logs	
Device MAC	f2:10:e9:f4:dd:01
Room name	Room 1
Firmware version	2016_04_03_v0.1
Status	Offline
Status logs	Show status logs
Kernel logs	Show kernel logs
Evoko logs	Show evoko logs
Boot logs	Show dmesg logs
Upgrade	Upgrade this device

Following data about the selected device is available:

1. Device MAC – Stands for Media Access Control and represents device unique id.
2. Room name – Room on which the device is registered.
3. Firmware version – Current firmware version installed on the device.
4. Status – The device status, can be “Online” or “Offline”.
5. Status logs – Shows device monit (monitoring tool) logs.
6. Kernel logs – Shows device kernel logs.
7. Evoko logs – Shows device application logs.
8. Boot logs – Shows device boot (or dmesg) logs.

9. Upgrade – Opens a dialog that allows the user to perform firmware upgrade on the selected device.

Above the device information list there are two buttons: “Back” button returns the user back to the monitoring page and “Send logs” button opens a dialog that allows the user to send mail to the support with all logs and allows the user to enter a reason why the logs are being sent or a step by step instruction on how to replicate the potential problem (This functionality is described in detail in the “Send error and logs” section). If the user clicks to see any of the logs, a new page will open containing data of the selected logs. The following picture shows the look of the log page when “Show status logs” are clicked:

Monit logs

Back

Type	Name	Status	PID	Uptime	Memory	Memory percent	CPU	Last updated
process	chrome	Running	4918	0m	162.4 MB	16.2%	N/A	Mon, Apr 25, 2016 3:34 PM
process	service	Running	1395	2h 32m	3.0 MB	0.3%	N/A	Mon, Apr 25, 2016 3:34 PM
process	ntpd	Running	1388	2h 32m	11.4 MB	1.1%	N/A	Mon, Apr 25, 2016 3:34 PM
process	nodejs	Running	4866	0m	69.9 MB	7.0%	N/A	Mon, Apr 25, 2016 3:34 PM
process	mongodb	Running	1312	2h 32m	47.2 MB	4.7%	N/A	Mon, Apr 25, 2016 3:34 PM
system	ima&solotinto	Running	N/A	N/A	361.1 MB [36.0%]	N/A	70.5%us 7.7%sy 0.3%wa	Mon, Apr 25, 2016 3:34 PM

If the user clicks on the Upgrade button on the Device details page, a dialog will open up where the user can initiate immediate or delayed device upgrade. For delayed upgrade, the user needs to enter the date and time in his own time zone which will be converted to the corresponding time zone on the device.

Select upgrade schedule

☐ Upgrade now

Schedule:

Upgrade

✕ Cancel

Google Drive will be used as a release server and the administrator needs to ensure the connection between Evoko service and the release server. On the global settings page he needs to enter Google Drive credentials which are already predefined:

Release server google domain URL:

<https://www.googleapis.com>

Release server service account:

liso-service@liso-project.iam.gserviceaccount.com

Release server account email:

anders.karlsson@certus.international

Release server credentials (google drive):

Browse...

Upload

Release server google domain URL:

<https://www.googleapis.com>

Release server service account:

liso-service@liso-project.iam.gserviceaccount.com

Release server account email:

anders.karlsson@certus.international

As part of the release server connection settings, a P12 key file needs to be uploaded only once.

Logs and error reports

In order to manage error reports and logs the user needs to navigate to the monitoring page on the Evoko Service. On the monitoring page, a list of active devices will be shown.

Active devices

Check for updates Upgrade all devices Download firmware update						
Mac address	Room name	Last reboot time	Status	Current Firmware	New Firmware	Download
f2:10:e9:f4:dd:01	Room 4	Mon, Apr 25, 2016 9:23 AM	Online	2016_04_03_v0.1		

Then by clicking on one of the active devices from the list a new page called Device details will be shown with information for the selected device. On that page a user can choose to see four different types of logs (monitoring program logs, kernel logs, application logs and boot logs).

Device details

Send logs	
Device MAC	f2:10:e9:f4:dd:01
Room name	Room 4
Firmware version	2016_04_03_v0.1
Status	Online
Status logs	Show status logs
Kernel logs	Show kernel logs
Evoko logs	Show evoko logs
Boot logs	Show dmesg logs
Upgrade	Upgrade this device

There is also a button for sending logs and reports to support email address. By clicking on that button a popup dialog will be shown for inserting description and step by step instructions.

Send Logs to the Support

Description

Please enter your description here...

Step by step instructions

Please enter your instruction here...

Close

Send

In the field called description the user can write a description of the problem (reason why logs are sent to the support) and in the field called step by step instructions, information which can help support to reproduce the problem.

All device logs are retrieved directly from a selected device and sent over email to the support. Figure below shows the logs received by e-mail.

☐	☆	Anders Karlsson	Dmesg logs - Dmesg Logs: Type: dmesg Date: 2016-04-22T11:37:24+00:00 Type: dmesg Logs: Booting Linux on phys
☐	☆	Anders Karlsson	Evoko logs - Evoko Logs: Type: evoko Date: 2016-04-22T11:37:24+00:00 Logs: Apr 22 11:00:08 imx6solutinto daemor
☐	☆	Anders Karlsson	Kernel logs - Kernel Logs: Type: kernel Date: 2016-04-22T11:37:24+00:00 Logs: Apr 22 11:00:07 imx6solutinto syslog.
☐	☆	Anders Karlsson	Monit logs - Monit Logs: Type: monit Date: 2016-04-22T11:37:24+00:00 Event: monitProcess Name: chrome Status:
☐	☆	Anders Karlsson	Issue description - Description: Error happen on device in thouse Instructions step by step: 1. Open up console 2. Clos

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Canada, Industry Canada (IC) Notices

This device complies with Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Canada, avis d'Industrie Canada (IC)

Cet appareil est conforme avec Industrie Canada exemptes de licence RSS standard(s).

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Devraient également être informés les utilisateurs que les radars à haute puissance sont désignés comme utilisateurs principaux (c.-à-utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient provoquer des interférences et / ou endommager les appareils LE-LAN.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a

manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (antennes sont supérieures à 20 cm à partir du corps d'une personne).