

**Setup Guide**

# OpenSpaces

**Touch Panel PC / Doorsign**

# Introduction

This document describes the basic setup of a Kindermann OpenSpaces system. The required service that provides the (room booking) information can be installed on an application server (Windows operating system).

Make sure in advance that your production system meets the following system requirements and that the described, required data is available.

## Requirements

To put your door signs into operation and link them to Exchange / Microsoft 365 calendars, you need the following data and settings:

> **The door signs require fixed IP addresses.**

We recommend that you set up the devices via DHCP reservation. In this case, you will find the MAC addresses on the sticker on the devices.

If you want to set fixed IP addresses, you can do so via the Android settings of the doorsign.

> **An Exchange Server 2013 or newer.**

From this Exchange server, you will need the EWS address (which looks like this: <https://server/EWS/exchange.asmx>).

(Also applies to Microsoft 365)

> **For an on-premises Exchange Server:**

A user and password that is suitable for accessing the room mailboxes. The user must have the ApplicationImpersonation role in Exchange (<https://docs.microsoft.com/en-us/exchange/client-developer/exchange-web-services/impersonation-and-ews-in-exchange>).

> **For an Exchange Online (Microsoft 365) installation:**

An enterprise application ID and credentials to be created in Azure AD. How so can be found in the "Kindermann\_OpenSpaces\_Exchange.pdf".

> **The email addresses of the room mailboxes** that you want to retrieve.

> **A Windows device** (Server 2012 or newer, Windows 10 or newer) is required to install the OpenSpaces configuration tool to serve as an application server. This can also be the Exchange Server itself.

> **A network connection** between this application server and the digital door locks.

The following network ports are required for the operation of Room

> Communication between doorsign and service: **44470 TCP**

> Communication between service and doorsign: **2424 TCP**

# Installation with the help of the setup

With an OpenSpaces license, you get a setup with which the service and the configurator are installed: Setup\_OpenSpaces\_DE\_[versionnumber].exe.

The setup must be run as an administrator!

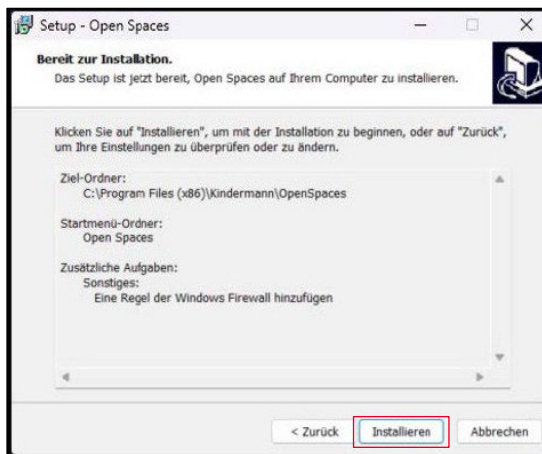
During setup, you can specify the installation path for the service, which is the default "C:\Program Files (x86)\Kindermann\OpenSpaces".

You also specify the program directory where configuration files, logs, and the cache are stored.

Here, the default is C:\ProgramData\Kindermann.

The configurator is stored in the Start menu, for which you can also adjust the default "Open Spaces" folder if necessary. The setup automatically creates a Windows Firewall rule so that the door signs can reach the OpenSpaces service even when the firewall is active on port 44470 TCP.

Confirm the respective configuration steps with "Next" and finally with "Install" to complete the installation process. After completion, you can finish the setup with "Finish" and start the configurator directly.



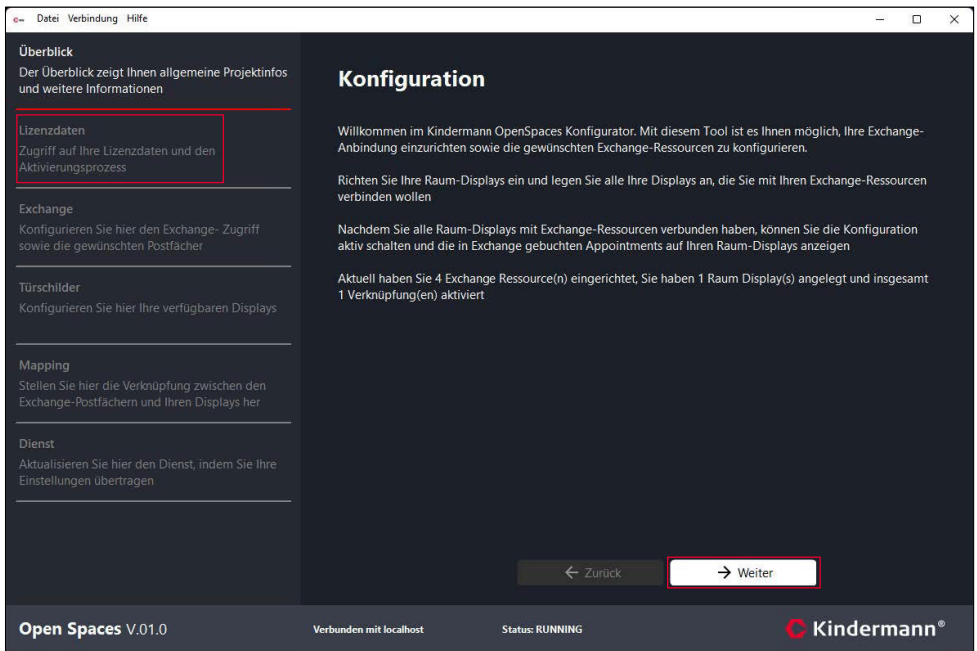
# Using the OpenSpaces Configuration Tool

After successful installation with the setup, the service is already installed and launched. In addition, the configurator starts directly after setup, in which connection data to the Exchange and the digital door signs can then be entered.

## Overview

The overview explains the task of the configurator.

Click the next tile "License" on the left, or "Next" at the bottom right (applies to the entire setup process).



**Hint:** Under each step of the four setup steps of the configuration tool, you will find the useful information on what needs to be entered where, where and what effect this entry has on the system.

After licensing, you can be jumped to the desired step at any time by clicking on the respective tab on the left. It is worthwhile to stick to the given order, especially during the initial setup.

# License

In addition to the setup, you will also receive a license file, which can be entered in this configuration step. To do this, click on "Load license from file" at the top and select the license key (.txt file) from your hard drive. Alternatively, you can enter the content of the text file or directly from the sent e-mail via the clipboard and the "License from clipboard" button, or enter the data manually ("Edit license" button).

Once you have entered the license, it still needs to be activated. When activated, the licensee ID is bound to the hardware. Activation only needs to be done once on the device. Even with a new license file, e.g. containing a new term, the activation does not have to be carried out again, as the licensee ID remains for each purchase.

Click on "Perform Activation" to bind the Licensee ID to your hardware. An internet connection is required for this. If this is not available on your application server, use "Offline Activation" and follow the next step of this guide.

The screenshot shows the configuration interface for Open Spaces V.01.0. The window title is "Datei Verbindung Hilfe". The interface is divided into a left sidebar and a main content area. The sidebar contains sections: "Überblick" (Der Überblick zeigt Ihnen allgemeine Projektinfos und weitere Informationen), "Lizenzdaten" (Zugriff auf Ihre Lizenzdaten und den Aktivierungsprozess), "Exchange" (Konfigurieren Sie hier den Exchange- Zugriff sowie die gewünschten Postfächer), "Türschilder" (Konfigurieren Sie hier Ihre verfügbaren Displays), "Mapping" (Stellen Sie hier die Verknüpfung zwischen den Exchange-Postfächern und Ihren Displays her), and "Dienst" (Aktualisieren Sie hier den Dienst, indem Sie Ihre Einstellungen übertragen). The main content area is titled "Lizenzdaten" and displays the following information: Lizenznehmer: Kindermann GmbH; Lizenznehmer ID: 224564df-bd23-4c92-bc0d-9b14cfe115dc; Anzahl Room-Displays: 3; Laufzeit: 29.05.2024; Lizenzschlüssel: f67e1cdef4874d445689c349e801b8d95. Below this, it states "Lizenz: Lizenzdaten sind gültig." and provides three buttons: "Lizenz bearbeiten", "Lizenz aus Datei laden", and "Lizenz aus Zwischenablage". A red box highlights the "Aktivierung" section, which displays the message "Aktivierung: Die Anwendung wurde erfolgreich aktiviert." At the bottom of the main content area, there are two buttons: "← Zurück" and "→ Weiter". The footer of the interface shows "Open Spaces V.01.0", "Verbunden mit localhost", "Status: RUNNING", and the "Kindermann®" logo.

If the activation is successful, this will be displayed to you and you can click on "Exchange" or "Next" at the bottom right.

# Offline Activation

If there is no Internet connection on the application server to activate the license, offline activation can be performed. After clicking on this button, a new window will open with which you can save an activation request.

This is a long string of characters that you can either save as a file or save to the clipboard. Send this string (or file) to [support@kindermann.de](mailto:support@kindermann.de) to request an activation code.

Once you have received it from us, you can download the code by clicking on the button "Load from file..." or type directly in the text box. Click "Apply Activation Code" to complete the offline activation.

Offline-Aktivierungsprozess ✕

## Schritt 1: Aktivierungs-Anforderung erstellen

Die Aktivierungs-Anforderung wird zur Offline-Aktivierung benötigt. Speichern Sie diese als Datei oder kopieren Sie sich die Daten in die Zwischenablage.

## Schritt 2: Aktivierungs-Code übernehmen

Nachdem Sie den Aktivierungs-Code erhalten haben, können Sie diesen in Ihr System einspielen.

# Exchange

In the "Exchange" configuration section, the connection data and room mailbox addresses are specified.

The first thing you need to do is enter the URL to your Exchange Server EWS. The best way to do this is to ask your IT department. If you are using Microsoft 365 (Exchange Online),

Under "Days in advance" you specify how many days the service reads appointments from the room mailboxes. The default value "3" means that appointments from today + 3 days are read, transferred to the door signs and thus displayed in the room occupancy on the door sign.

Clicking on the "Edit Authentication" button will open a new window.

The screenshot shows the configuration interface for Exchange and Postfächer in the Open Spaces application. The interface is divided into several sections:

- Exchange:** This section contains configuration fields for the Exchange service. The "Service URL" field is highlighted with a red box and contains the value "https://outlook.office365.com/EWS/exchange.asmx". Other fields include "Autodiscover-E-Mail" (empty), "Tage im voraus:" (set to 3), and two buttons: "Authentifizierung bearbeiten" (highlighted with a red box) and "Exchange-Verbindung prüfen".
- Postfächer:** This section displays a list of mailboxes. The table has columns for "SMTP", "Gemappt", and "Edit".

SMTP	Gemappt	Edit
berlin@kindermann.de	<input type="checkbox"/>	
eibelstadt@kindermann.de	<input type="checkbox"/>	
ochsenfurt@kindermann.de	<input checked="" type="checkbox"/>	
wuerzburg@kindermann.de	<input type="checkbox"/>	

At the bottom of the interface, there are navigation buttons: "← Zurück" and "→ Weiter". The footer includes the version "Open Spaces V.01.0", the connection status "Verbunden mit localhost", the application status "Status: RUNNING", and the "Kindermann" logo.

In this new window, the access data to the Exchange Server can be stored. First of all, it is crucial which login method to use.

For Microsoft 365, this is Modern Auth, and for on-premises Exchange Servers, it's Basic Auth. Specify all the values of each sign-in method.

In the case of a local Exchange Server (Basic Auth), a user and password are required that are suitable for accessing the room mailboxes. The user needs the ApplicationImpersonation role in Exchange (<https://docs.microsoft.com/de-de/exchange/client-developer/exchange-web-services/impersonation-and-ews-in-exchange>).

When obtaining the data for the connection to a Microsoft 365 Exchange Server (Modern Auth) supports you with the "Kindermann\_OpenSpaces\_Exchange.pdf" guide.

The screenshot shows a dialog box titled "Authentifizierung bearbeiten". At the top, there are two radio buttons: "Modern Auth" (which is selected) and "Basic Auth". Below this, there is a form with several input fields, each with an information icon to its right:

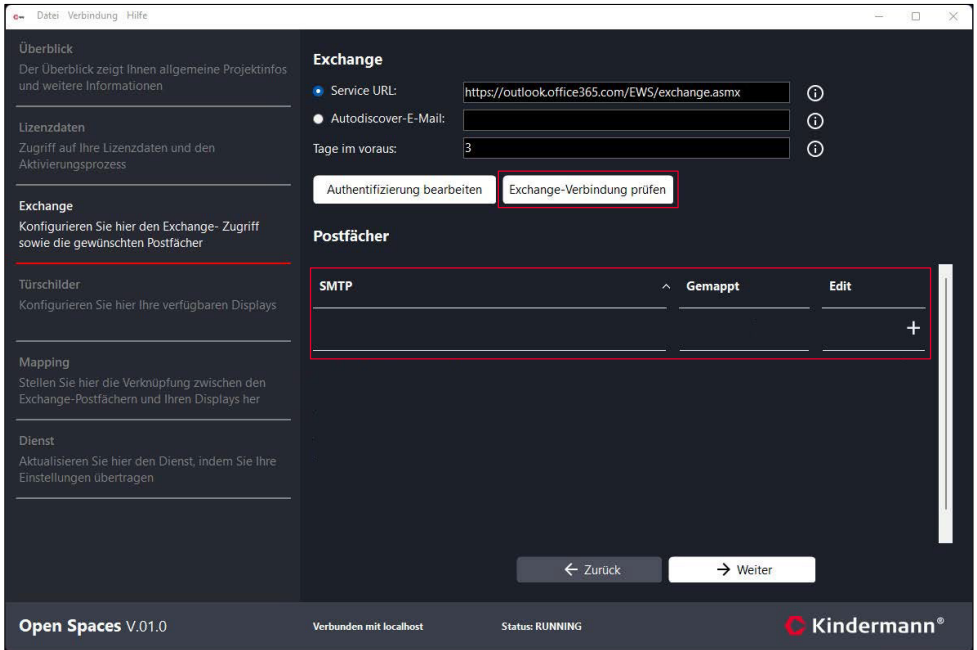
- App-ID: [Empty text box]
- Client-Secret: [Empty text box]
- Scope: `https://outlook.office365.com/default`
- Auth-Endpoint: [Empty text box]
- Token-Endpoint: [Empty text box]
- Redirect-URI: `http://localhost:8080/ews`

At the bottom right of the dialog, there are two buttons: "Abbrechen" and "Speichern".

Once you have entered all the data, click "Save" to confirm.



You then specify the addresses of the room mailboxes that you want to display on the digital door signs. To do this, click on the "+" symbol to create a new entry and enter the address of the mailbox. Repeat the process until you have specified all mailboxes. The trash can icon allows you to remove an entry, while the third icon allows you to create a duplicate of the selected entry.

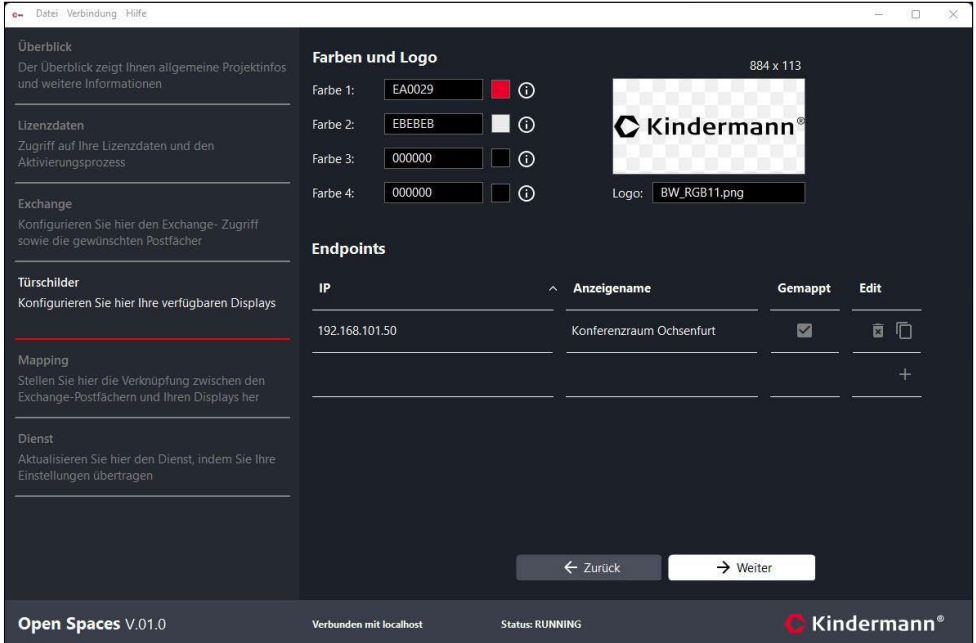


If all mailboxes are specified, you can check whether the connection to the Exchange server is working for each mailbox that has been created. To do this, click on "Check Exchange Connection" and select the mailbox you want to check.

Then you can go to the next step on the left under "Door signs" or on the bottom right with the button

# Door Signs

In this configuration step, the digital door signs are created. These require a fixed or reserved IP address on the network that the service can use to identify them. As before in the Exchange tab, use the "+" symbol to add new entries. For each entry, enter the IP of the respective door sign and the room name that should be displayed on this device. Use the trash can button to remove an entry. You can use the copy symbol to create a duplicate of the selected entry, and the IP will continue to be counted.



Under "Logos and Colors" you can click on the preview window to select your logo file from the hard drive and select the desired color values to the left of it, which will be taken over by the door sign. Enter the color values as the HEX value. Alternatively, you can click on the color preview to select colors using the color palette that appears.

Color 1 = Fields: Time and Room Name

Color 3 = Text: Time and room name

Color 2 = Fields: Booking and Tools

Color 4 = Text: Booking and Tools

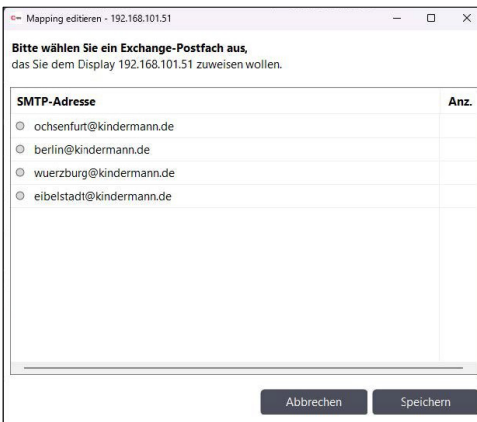
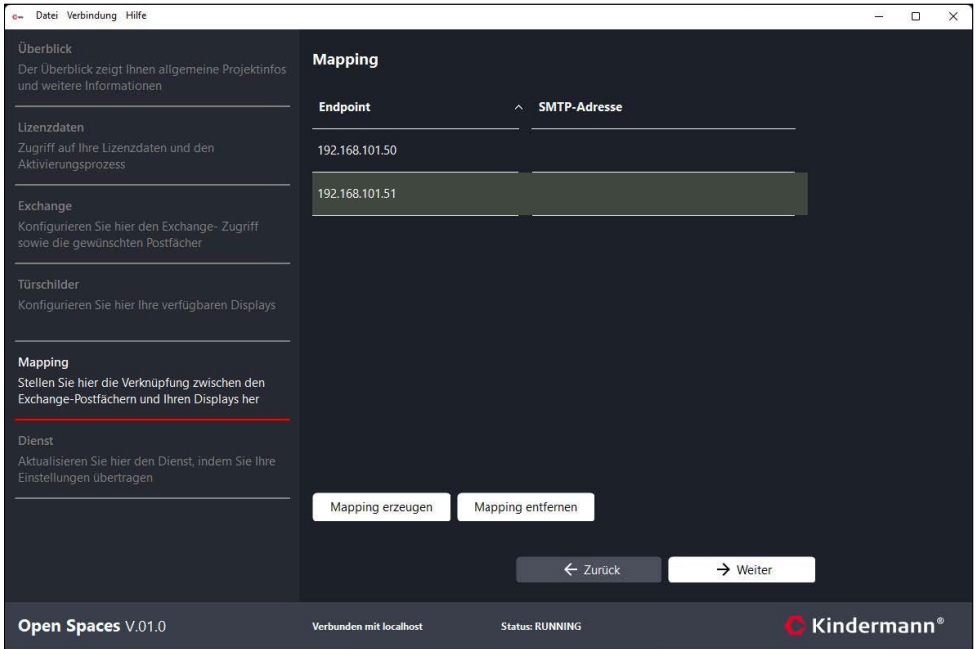
You can now go to the next page under "Mapping" on the left or with the "Next" button at the bottom right.




**Note:** The scaling of the logo is not controlled by the resolution, but by the real size of the image. If the logo is too small, remove transparent or colorful borders and/or use a larger image.

# Mapping

In the penultimate step, "Mapping", the IPs of the digital door signs are now simply linked to the previously specified Exchange addresses. You'll see a list of all registered door sign IPs. Double-clicking on it will open a new window in which you can select a room mailbox address to send the appointments from this calendar to this door sign.



 **Note:** It is also possible to bind several door signs to the same Exchange calendar, e.g. if a room has several entrances.

Once you have linked all the door signs, you can continue to the last step by clicking on "Service" on the left or on "Next" at the bottom right.

# Service

In the last section, you'll get an overview of what configurations you've done in the previous steps. With "Transfer Configuration" you transfer the settings to the service and thus to the door plates. You can also simply restart the service on this page.

Überblick  
Der Überblick zeigt Ihnen allgemeine Projektinfos und weitere Informationen

Lizenzdaten  
Zugriff auf Ihre Lizenzdaten und den Aktivierungsprozess

Exchange  
Konfigurieren Sie hier den Exchange- Zugriff sowie die gewünschten Postfächer

Türschilder  
Konfigurieren Sie hier Ihre verfügbaren Displays

Mapping  
Stellen Sie hier die Verknüpfung zwischen den Exchange-Postfächern und Ihren Displays her

**Dienst**  
Aktualisieren Sie hier den Dienst, indem Sie Ihre Einstellungen übertragen

**Dienst**  
Sie können Ihre Änderungen an den OPEN SPACES-Service übertragen. Damit die neue Konfiguration aktiv wird, wird der Dienst anschließend neu gestartet.

Modul	Status
• Websocket	Nicht geändert
• Türschilder	Geändert
• Exchange	Geändert
• Postfächer	Geändert

Konfiguration übertragen Dienst neu starten

← Zurück → Weiter

Open Spaces V.01.0 Verbunden mit localhost Status: RUNNING Kindermann®

When transferring via the "Transfer Configuration" button, a dialog appears, which you can access via

Congratulations, you've successfully completed the configuration. As soon as the door signs are installed and reach the IP address of the server stored there via the network connection, the appointments from the room mailboxes are now displayed.

# Service & Support

Technical questions  
[support@kindermann.de](mailto:support@kindermann.de)

Repair enquiries, complaint processing, spare parts ordering,  
[service@kindermann.de](mailto:service@kindermann.de)

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