



**IMiS®/mDMS  
Manual**

Version 1.8.1803

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# 1 INTRODUCTION

This manual describes the usage of IMiS®/mDMS web service and client mobile application. It provides a user with useful technical and content-related information.

## 1.1 Purpose of the guide

The manual describes administrator tasks required for the management of the IMiS®/mDMS application. It is intended for:

- installation and deployment of the IMiS®/mDMS Client application on the iOS and Android mobile devices.
- management of IMiS®/mDMS Service administration interface.
- configuration of the IMiS®/mDMS Client application for running on mobile devices.
- administration of the users, user environment and document types.
- error identification and troubleshooting.

## 1.2 Target audience

The manual is intended for application developers and system administrators with knowledge of the IBM® Domino and Notes platform.

## 1.3 Scope and requirements

The manual describes administrative tasks and IMiS®/mDMS application settings in order for any IBM® Notes application to work on mobile devices.

For additional information contact the IMiS® technical support at the email address:

[support@imis.eu](mailto:support@imis.eu).

## 1.4 Conventions

The manual uses various styles and colours to highlight important information.

These are explained in the table below:

Style	Purpose
Regular	Basic information. Description of functionalities.
<u>Underlined text</u>	Topics in the chapter.
»Quotation«	Names of sections, headers, tabs and warnings.
[Red text]	Names of actions with selected settings. Options selectable from the dropdown menu. Values of Notes document fields
[Blue text]	Names of Notes document fields.
[Green text]	Section and contained section names.
[Violet text]	Header names.

## 1.5 Abbreviations

The table below shows the abbreviations used in the text and images of this guide:

Abbreviation	Meaning
IBM® Notes application	An application written in LotusScript.
IBM® Domino	A server platform for running IBM® Notes applications.
Apple® Store	A web store center for Apple® products.
Google® Play	A web store for Google® products.
CRM application	A test and demonstrative application developed in LotusScript for customer management support.
IMiS®/mDMS Service	A web service for forwarding IMiS®/mDMS application settings and IBM® Notes application data to a mobile device.
IMiS®/mDMS Client	A mobile application for display and running of IBM® Notes application on a mobile device.
IMiS®/mDMS Service Provider	An application used by IMiS®/mDMS Service for obtaining and running customized actions in an IBM® Notes application.

## 2 PRESENTATION

### 2.1 General

The architecture and concept of the IMiS®/mDMS environment enables the IBM® Notes application developers and mobile device users to transfer applications to their mobile devices in a fast and simple manner. No unnecessary intervening in the source applications, technical knowledge or special experience in application development for mobile devices is required.

The concept is based on the »application abstraction« approach, which enables the use and display of seemingly different applications in the same way, regardless of the mobile device and always through the user's native mobile device application.

The complex business logic that a source application may contain can be run directly from a mobile device. This way, the application retains a consistent performance and rules that apply. The scope of flexible application settings enables users to easily customize each application.

### 2.2 Characteristics

IMiS®/mDMS Service is a web service that specifies how to use an application and how it displays on mobile devices. Each service can join a number of different applications that can be distributed in the IBM® Domino domain through a mutual virtual application portal.

The main characteristics of IMiS®/mDMS are:

- Access of your enterprise documents and content anywhere from any mobile device.
- Use of any IBM® Notes application on mobile devices without any modification.
- Adjustment of application appearance and functionality without any intervention in the IBM® Notes application code or prior knowledge of the mobile platform specifics.
- Application appearance remains the same regardless of the mobile device.
- Consolidate all your IBM® Notes applications to run on mobile devices.
- Any Notes application can be displayed and used through native mobile device application.
- Secure your mobile access to enterprise data by using the latest encryption technologies and major EMM environments.
- Complex business logic of Notes applications can be easily used directly from mobile devices.



- Notification service let mobile user know about crucial workflow events.
- Workflows, embedded views and agents from Notes applications are easily handled and displayed on your mobile devices.
- Search for content and documents by metadata and content's full-text.
- Document data display in open or closed sections in portrait or landscape mode of a mobile device.

## 3 ARCHITECTURE

### 3.1 General

IMiS®/mDMS is a 3-tier system in the client-server model of architecture

([https://en.wikipedia.org/wiki/Multitier\\_architecture#Three-tier\\_architecture](https://en.wikipedia.org/wiki/Multitier_architecture#Three-tier_architecture))

with the following tiers:

#### **Presentation tier**

It is represented by the IMiS®/mDMS Client application for mobile platforms iOS in Android.

It is a native application of a mobile platform where the client is installed. It connects to the IMiS®/mDMS Service, which represents the Logical tier. It fully prescribes the manner of forwarded data presentation to the presentation tier via the configuration profiles.

IMiS®/mDMS Client is a thin or a light client ([https://en.wikipedia.org/wiki/Thin\\_client](https://en.wikipedia.org/wiki/Thin_client)), which is capable of dynamic rendering of data based on the IMiS®/mDMS Service configuration.

When logging in, the IMiS®/mDMS Service transfers display settings and application operation to the IMiS®/mDMS Client application. The latter does not contain or specify the manner of data presentation when installed or locally at a later time. Therefore, the same client version can display various applications of various users in a completely different manner.

It uses Hyper Text protocol to communicate with the Service layer

(HTTP - [https://en.wikipedia.org/wiki/Hypertext\\_Transfer\\_Protocol](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)), which can be optionally encrypted using latest encryption standards (PKI/TLS). Communication specifics are set by the IMiS®/mDMS Service.

User can also choose to use 3<sup>rd</sup> party MDM solutions such as MobileIron Inc. (<https://www.mobileiron.com>) or Citrix Systems, Inc. (<https://www.citrix.com/products/xenmobile>), which via their platforms enable management of connected devices and parameters of the IMiS®/mDMS Client.

### Logical tier

It is represented by the IBM® Notes application IMiS®/mDMS Service through its SOAP Service.

Service application contains:

- Configuration parameters of all NSF databases, which are exposed through IMiS®/mDMS platform.
- Administration interface for setting system related parameters.
- Operational monitoring.

IBM® Notes application settings are controlled by an administrator through an intuitive and easy-to-use interface without having expert knowledge on mobile platforms and/or IBM® Notes application development.

IMiS®/mDMS Service can access IBM® Notes applications (Data tier) locally or remotely and spread the application execution load on multiple IBM® Domino nodes.

Through IMiS®/mDMS Provider extensions it enables IMiS®/mDMS Client to execute application specific actions. They are implemented in surfaced applications backend business logic, which is crucial for correct and efficient action execution. This approach was taken due to the fact that the IMiS®/mDMS Service application business logic is totally abstract and doesn't allow user customization to drive custom actions.

IMiS®/mDMS Service is working with other IMiS® products (IMiS®/ARChive Server, IMiS®/Storage Connector), which extend IBM® Notes applications and add flexible and high-performance archiving solution to any IBM® Notes application.

## Data tier

It is represented by the existing IBM® Notes applications with documents and content data. Applications can be hosted locally on server or on other IBM® Domino servers to which the web server has access to. IMiS®/mDMS Service uses NRPC protocol to access databases and honors all security options configured by an administrator, which are in place for other IBM® Notes users. The Service can access the metadata of the documents or enclosed digital contents.

The database tier can optionally be represented by the IMiS®/ARCHive Server as a repository of digital and digitalized content.

For more information see <http://www.imis.eu/en/products/imisarchive-server>.

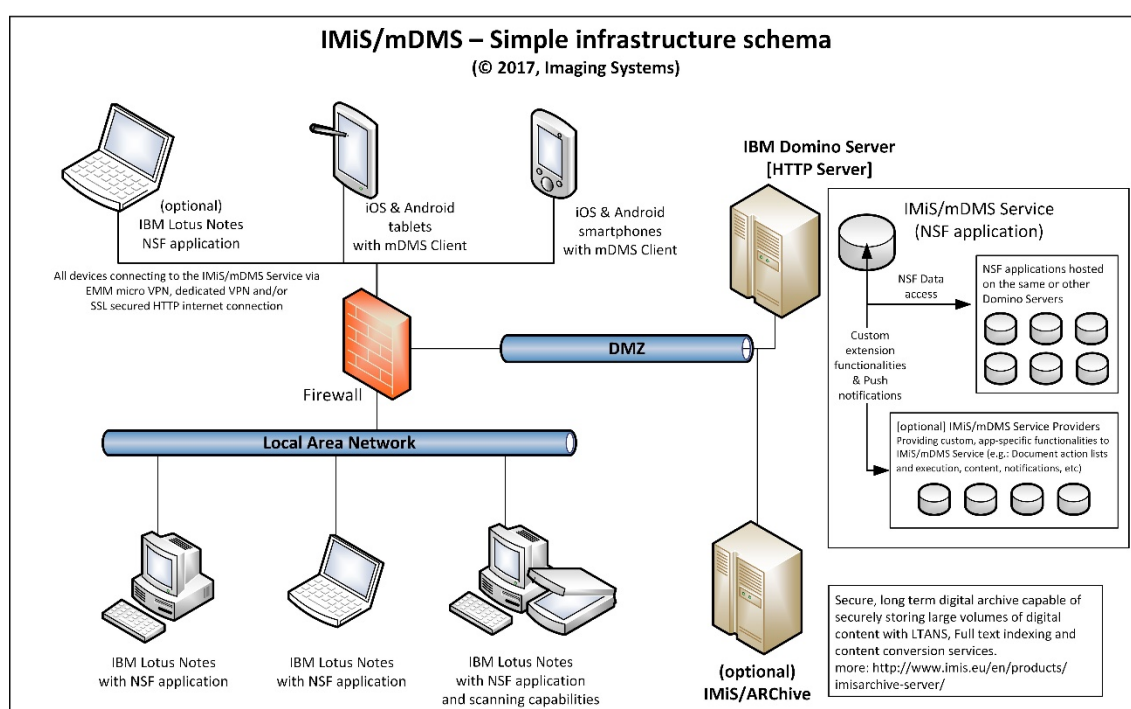


Image 1: The scheme of the IMiS®/mDMS infrastructure

## 4 SETTING UP APPLICATION OPERATION

This chapter defines IBM® Domino server administrator and mobile user tasks in order to set up an IBM® Notes application on a mobile device. Later on, an example of how to use a simple CRM application on a mobile device is presented.

## 4.1 Setting up operation on IBM Domino Server

For operation setup of any of the IBM® Notes applications on a mobile device, the administrator has to take the following steps at the IBM® Domino server:

1. Create an administration interface of IMiS®/mDMS Service.  
For more information see [chapter 5.2 Administration interface generation](#).
2. Form a set of documents. If the index is not available it needs to be prepared.  
If necessary, implement custom logic for document listing.  
For more information see [chapter 6.3 »Datasets«](#).
3. Determine what data will be displayed on the mobile device. The data needs to be sorted in sections so that the data quantity is controllable and the section is preferably used as a part of different types of documents. Create document types and specify their assigned sections.  
For more information see [chapter 6.4 »Datasources«](#) and [chapter 6.5 »Sections«](#).
4. Create two sections for attachments and IMiS® objects viewing. Set them to document types for which you want this functionality available.  
For more information see [chapter 6.5 »Sections«](#).
5. Create actions, place them in sections and place the sections to document types or data sets. Ensure action implementation.  
For more information see [chapter 6.5 »Sections«](#) and [chapter 6.6 »Actions«](#).
6. Determine the appearance of the mobile application.  
For more information see [chapter 6.1 »Device profiles«](#).

## 4.2 Setting up operation on iOS mobile device

For an IBM® Notes application operation setup on an iOS mobile device, the user takes the following steps at the mobile device:

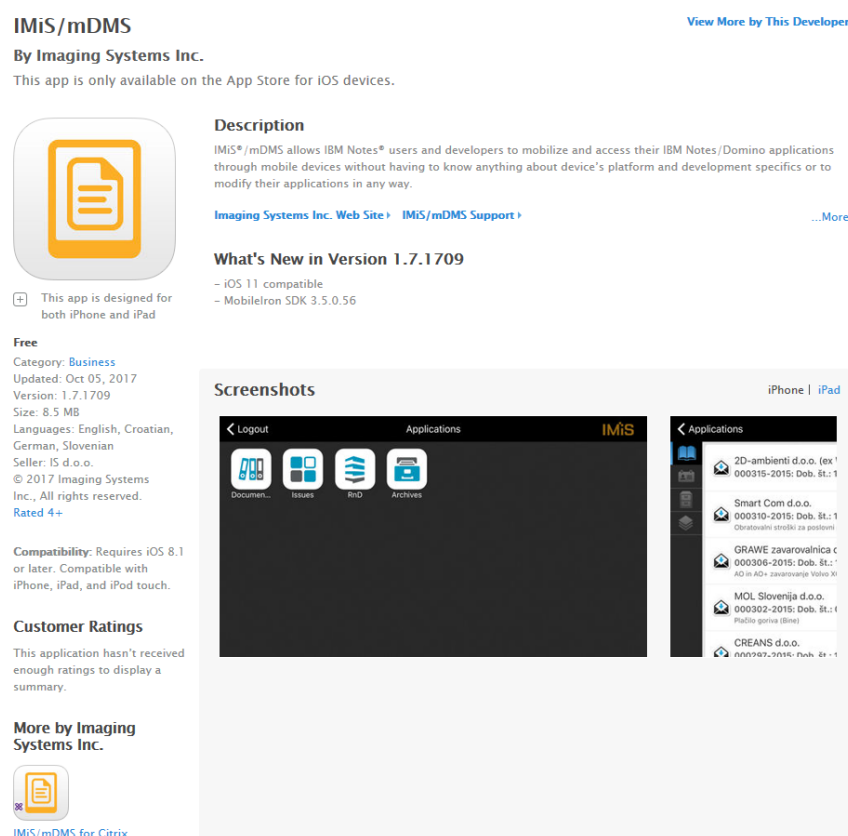
- Secure and reliable connection between the IMiS®/mDMS Client application and IMiS®/mDMS Service. On the mobile device the user must also install an application that enables a secure infrastructure: Cisco® AnyConnect, MobileIron® Mobile@Work, Citrix® Secure Hub, etc.

Owing to certain special features of the Citrix® secure infrastructure, the user can choose between two application versions: IMiS®/mDMS Client (basic and for MobileIron®) and IMiS®/mDMS Client for Citrix®.

The procedure of installing the IMiS®/mDMS Client application and a suitable secure infrastructure (Cisco®, MobileIron®, Citrix®) is described below.

### 4.2.1 Installing IMiS®/mDMS Client Application

The basic IMiS®/mDMS Client application, which the user installs on a mobile device, has been adapted for operation on the Cisco® AnyConnect and MobileIron® Mobile@Work secure infrastructures. It is available on Apple Store: <https://itunes.apple.com/us/app/imis-mDMS/id1017326823?mt=8>.



**IMiS/mDMS**  
By Imaging Systems Inc.  
This app is only available on the App Store for iOS devices.

**Description**  
IMiS®/mDMS allows IBM Notes® users and developers to mobilize and access their IBM Notes/Domino applications through mobile devices without having to know anything about device's platform and development specifics or to modify their applications in any way.

[Imaging Systems Inc. Web Site](#) [IMiS/mDMS Support](#) [...More](#)

**What's New in Version 1.7.1709**  
- iOS 11 compatible  
- MobileIron SDK 3.5.0.56

**Free**  
Category: Business  
Updated: Oct 05, 2017  
Version: 1.7.1709  
Size: 8.5 MB  
Languages: English, Croatian, German, Slovenian  
Seller: IS d.o.o.  
© 2017 Imaging Systems Inc., All rights reserved.  
[Rated 4+](#)

**Compatibility:** Requires iOS 8.1 or later. Compatible with iPhone, iPad, and iPod touch.

**Customer Ratings**  
This application hasn't received enough ratings to display a summary.

**More by Imaging Systems Inc.**  
[IMiS/mDMS for Citrix](#)

**Screenshots**  
iPhone | iPad

The screenshots show the app interface. The iPhone screenshot displays a list of applications with details like '2D-ambienti d.o.o. (ex 1 000315-2015: Dob. št.: 1', 'Smart Com d.o.o. 000310-2015: Dob. št.: 1', 'GRAWE zavarovalnica c 000306-2015: Dob. št.: 1', 'MOL Slovenija d.o.o. 000302-2015: Dob. št.: 1', and 'CREANS d.o.o. 000302-2015: Dob. št.: 1'. The iPad screenshot shows a similar list of applications.

Image 2: The presentation page with the information of the IMiS®/mDMS Client application on Apple Store



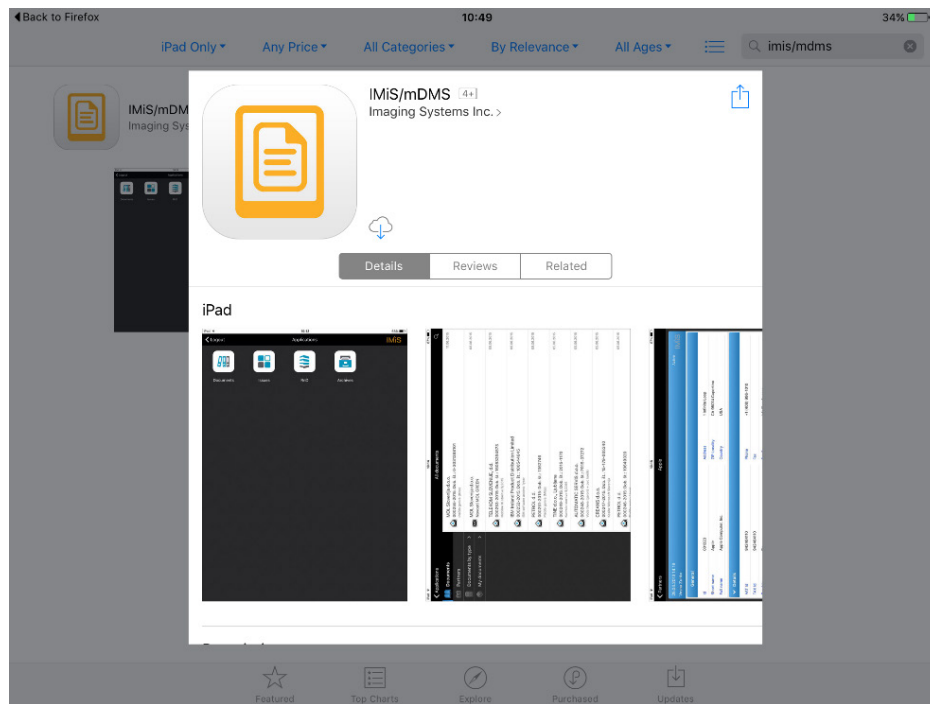


Image 3: The presentation page before the installation of the IMiS®/mDMS Client application from Apple Store

During installation of the IMiS®/mDMS application (basic and for MobileIron®) the set of available application settings expands in the following tabs:

- Settings showing device information, setting the device display language, and diagnostic data.
- Privacy sending device information (manufacturer, model, processor type) to the web service IMiS®/mDMS Service. For an example of the display see [chapter 7.2.3 Device environments](#)).
- Security setting the security management of the mobile device (MAM – Mobile Application Management).

The idea behind MAM is that the IT department monitors, manages and protects only specific business applications on the device, while leaving the rest up to the user. MAM can also perform policy control, data encryption, remote deletion, etc.

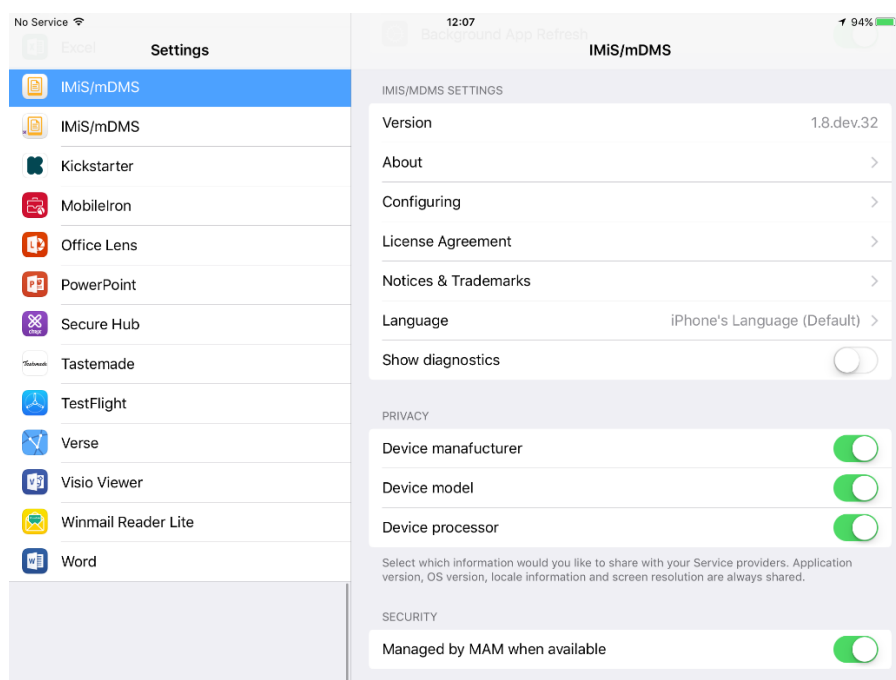


Image 4: Expanded set of available settings of the IMiS®/mDMS application

#### 4.2.1.1 Installation of Cisco® AnyConnect Application [Optional]

Cisco® AnyConnect Secure Mobility Client enables users secure remote access to business applications from desktop, portable and mobile devices via a Virtual Private Network. Connections in a VPN are virtual/dynamic and run like tunnels across a public TC infrastructure. Secure communication is ensured by a tunneling protocol (e.g. IP Security Internet Key Exchange v2 - IPsec IKEv2).

Cisco® has developed an intelligent VPN that adapts the transport protocol to the most effective methods, such as the Datagram Transport Layer Security (DTLS) protocol for delaying VoIP traffic or TCP-based access to applications.

IMiS®/mDMS Client (for Cisco®) enables setting up a secure connection to IMiS®/mDMS Service via the Cisco® AnyConnect secure connection.

***Note:** In order for the IBM® Notes application to work on a mobile device, the user must ensure a Wireless Network Connection or enable mobile data transfer. The user sets up a network connection by entering the name of the connection located on the router and the password.*

If the Cisco® AnyConnect application has not yet been installed, the user downloads it to the mobile device from Apple Store: <https://itunes.apple.com/us/app/cisco-anyconnect/id1135064690?mt=8>.

## Cisco AnyConnect

[View More by This Developer](#)

By Cisco

This app is only available on the App Store for iOS devices.



This app is designed for both iPhone and iPad

Free

Category: Business

Updated: Sep 05, 2017

Version: 4.0.7077

Size: 24.1 MB

Language: English

Seller: Cisco

© 2017 Cisco Systems, Inc.

Rated 4+

**Compatibility:** Requires iOS 10.0 or later. Compatible with iPhone, iPad, and iPod touch.

## Customer Ratings

Current Version:

★★★★ 75 Ratings

All Versions:

★★★★ 96 Ratings

## More by Cisco



Cisco WebEx Meetings

## Description

This is the new AnyConnect application for Apple iOS.

Please report any questions to [ac-mobile-feedback@cisco.com](mailto:ac-mobile-feedback@cisco.com).
[Cisco Web Site](#) [Cisco AnyConnect Support](#) [Application License Agreement](#)
[...More](#)

## What's New in Version 4.0.7077

Bug fixes

Please report any issues to [ac-mobile-feedback@cisco.com](mailto:ac-mobile-feedback@cisco.com)

## Screenshots

iPhone | iPad

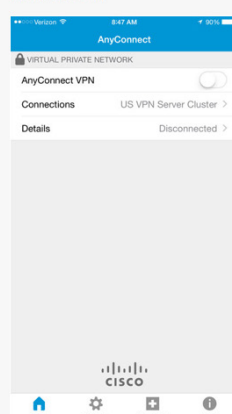


Image 5: View of the page for downloading Cisco® AnyConnect from Apple Store

After successful installation the user must configure the Cisco® AnyConnect application.

The user begins by choosing the section »Connections«.

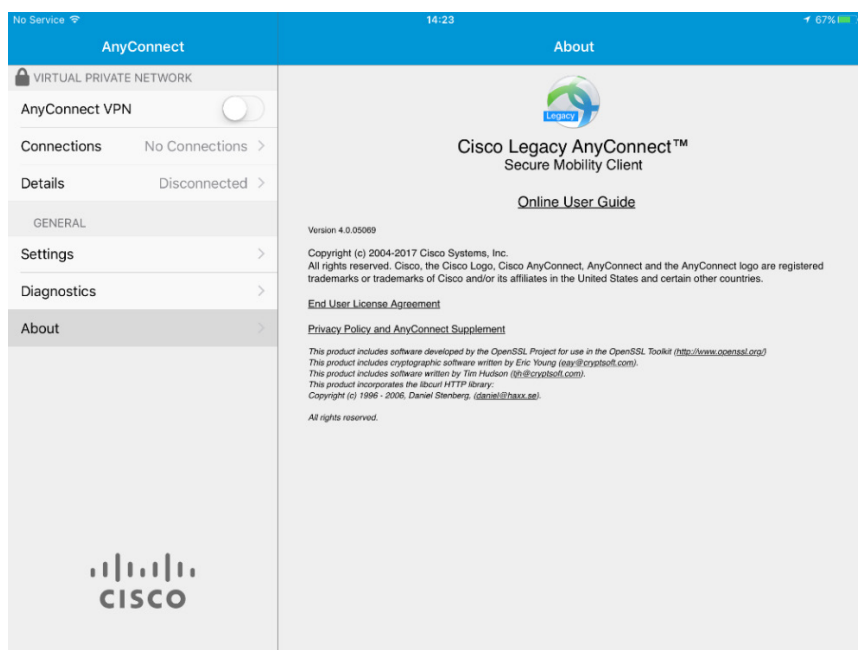


Image 6: View of the page after successful installation

The user continues by selecting »Add VPN Connection«.

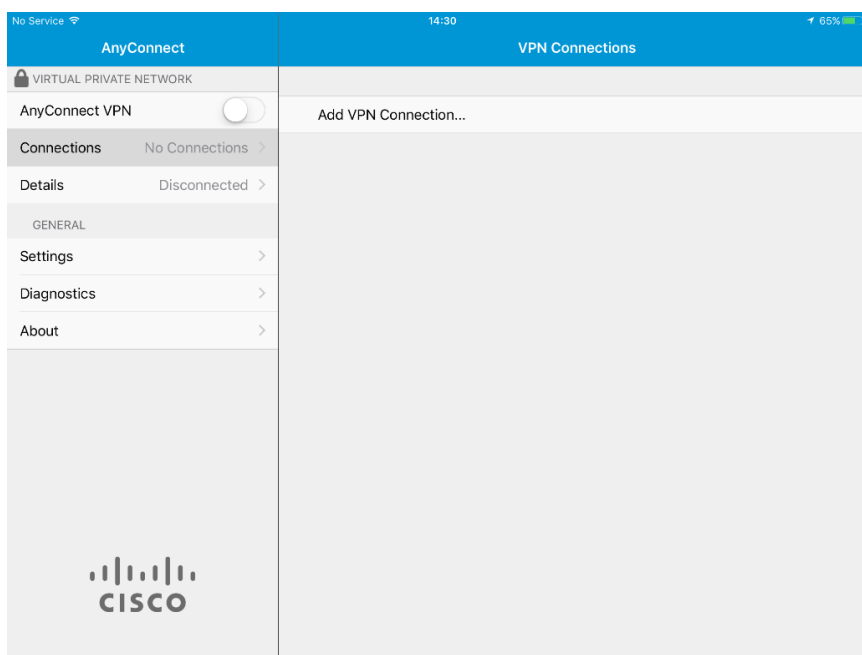


Image 7: Adding a new VPN connection

In the section »Server Address«, the user enters the address. In the next step, the user selects »Advanced Preferences«.

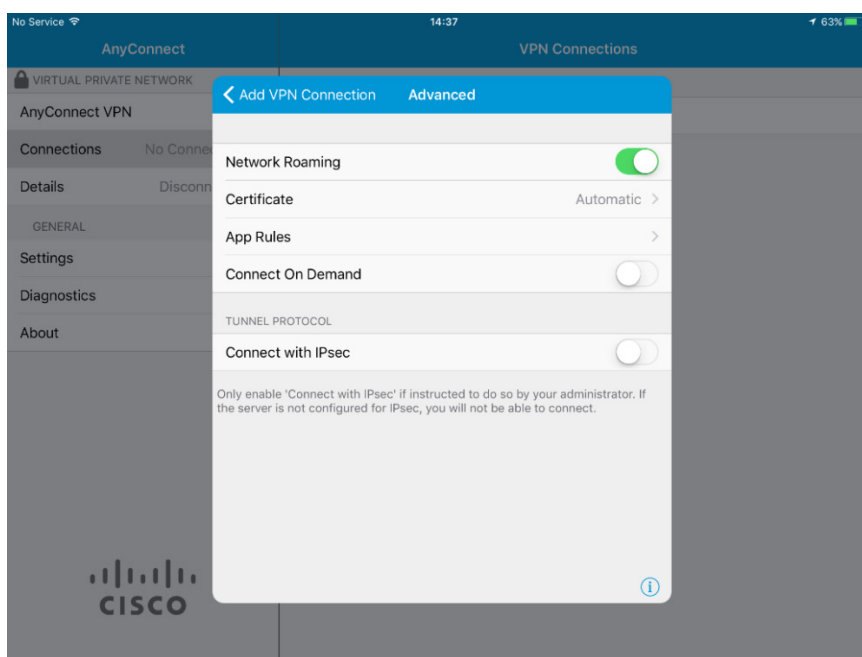


Image 8: Setting the configuration parameters of the Cisco® AnyConnect application

In the section »Advanced Preferences«, the user chooses the contained »Certificate« section. The user confirms the default selection »Automatic«.

Afterwards the user enters the data for accessing the Client Certificate, which the user has received from the administrator. After successfully installing the certificate, the user can log into the Cisco® AnyConnect application.

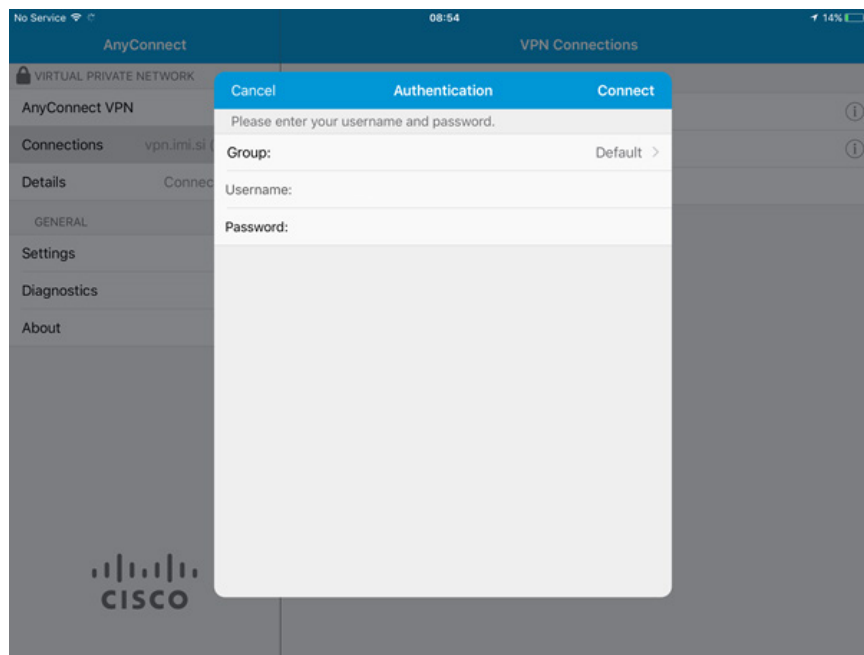


Image 9: User authentication in the Cisco® AnyConnect application

Cisco® AnyConnect application has been installed successfully.



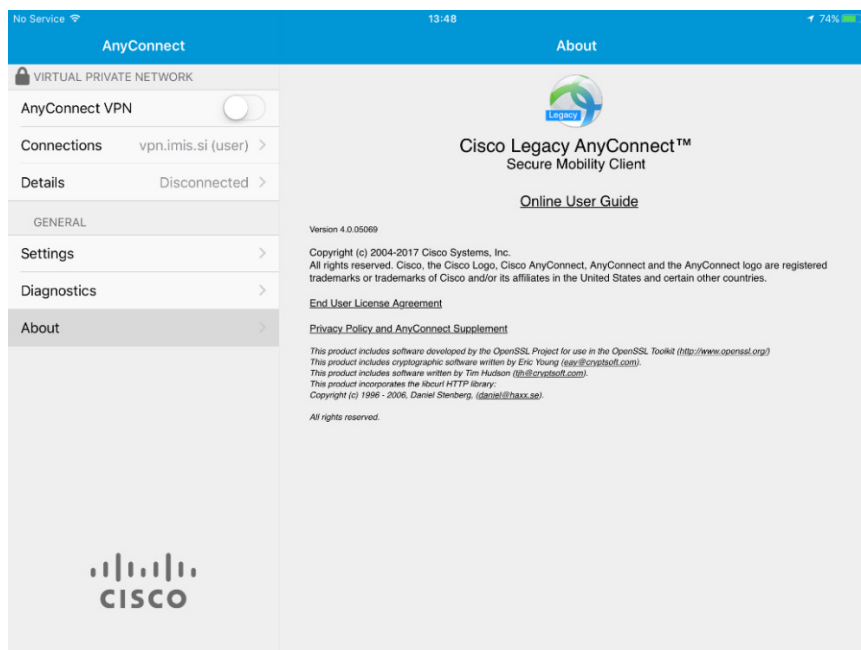


Image 10: View of the page after successful installation

The user logs into the Cisco® AnyConnect application.

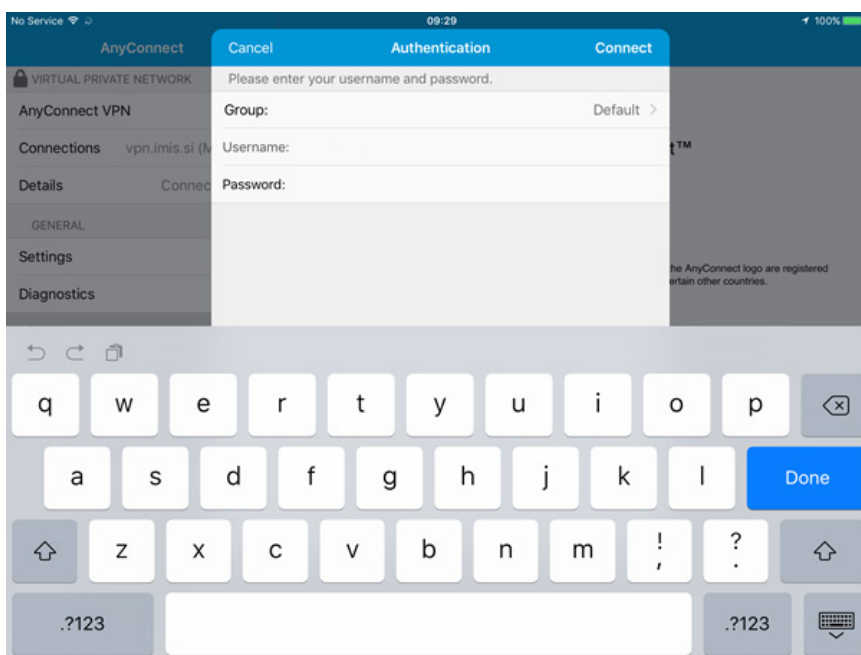


Image 11: User authentication in the Cisco® AnyConnect application

After successful installation of the Cisco® AnyConnect application and authentication, the user can open and log into the IMiS®/mDMS Client application and select a suitable profile.

For information about profile selection see [chapter 4.2.3 Entering and selecting a profile on iOS mobile devices](#).

#### 4.2.1.2 Installation of MobileIron® Mobile@Work Application [Optional]

IMiS®/mDMS Client (for MobileIron) enables setting up a secure connection to IMiS®/mDMS Service via the MobileIron MDM/EMM secure connection. It uses the AppTunnel functionality with all the protection mechanisms provided by MobileIron® MDM/EMM and IBM® Domino server, including PKI and the latest SSL protocols (e.g. TLS 1.2).

If the MobileIron® Mobile@Work application has not yet been installed, the user downloads it to the mobile device from Apple Store:

<https://itunes.apple.com/us/app/mobileiron-mobile-work-client/id320659794?mt=8>.



Image 12: View of the page for downloading MobileIron® Mobile@Work from Apple Store

After successful installation, the user continues by configuring the MobileIron® Mobile@Work application.

The user obtains configuration parameters from the MobileIron® administrator. During the procedure, the user enters the username, the address of the MobileIron® server, and the password. Before completing the procedure, the user adds a few security settings. To ensure a higher level of application security, the user must log into Secure Apps with a passcode.

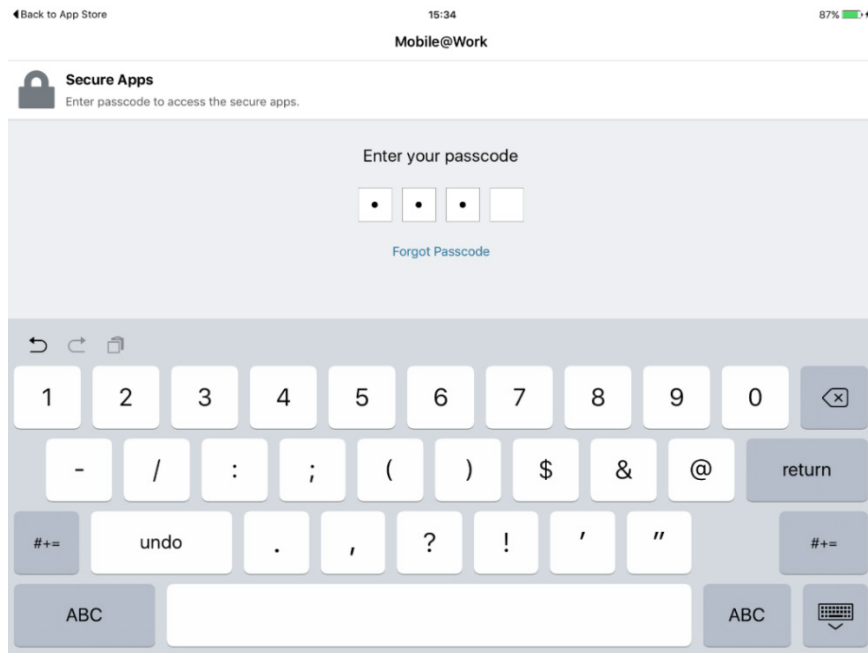


Image 13: Entering a passcode for accessing the MobileIron® security platform

MobileIron® Mobile@Work application has been installed successfully.

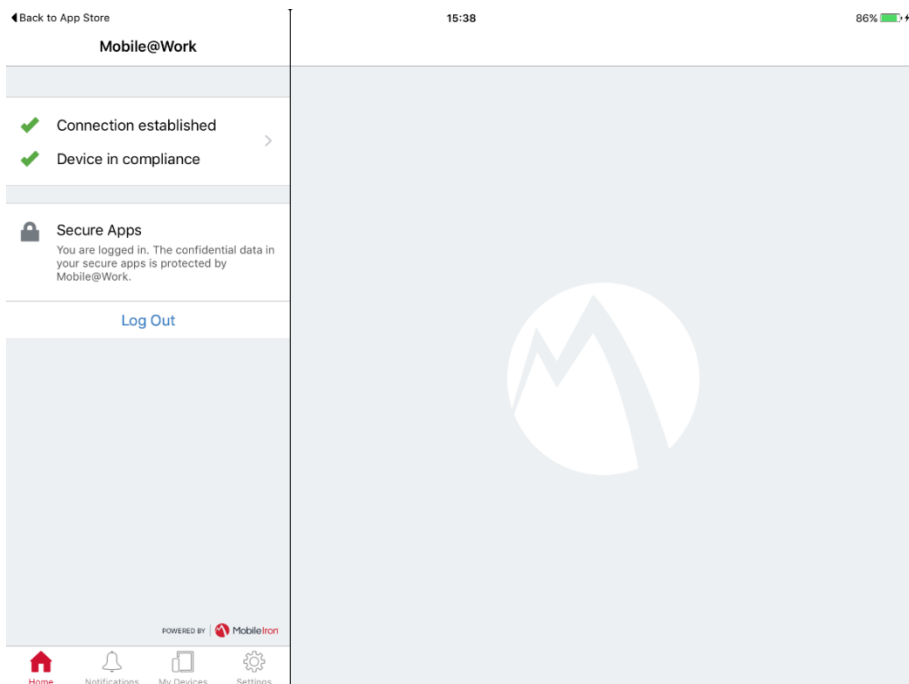


Image 14: View of the page with successfully installed MobileIron® Mobile@Work

After successful installation of a secure infrastructure and the IMiS®/mDMS application, the user selects a suitable profile. For information about profile selection see [chapter 4.2.3 Entering and selecting a profile on iOS mobile devices](#).

In the event that configuration parameters have not been installed successfully, or in the event of problems, see [chapter 9.1.1 MobileIron® configuration has not been installed properly](#).

## 4.2.2 Installing IMiS®/mDMS Client for Citrix Applications

IMiS®/mDMS Client (for Citrix) enables setting up a secure connection to IMiS®/mDMS Service via the Citrix Secure Hub infrastructure. It uses the MicroVPN functionality with all the protection mechanisms provided by Citrix Secure Hub and IBM® Domino server, including PKI and the latest SSL protocols, e.g. TLS 1.2.

The IMiS®/mDMS Client application for Citrix, which the user installs on a mobile device and which has been adapted for operation on the Citrix® Secure Hub infrastructure, is available on Apple Store: <https://itunes.apple.com/us/app/imis-mdms-for-citrix/id1153384796?mt=8>.

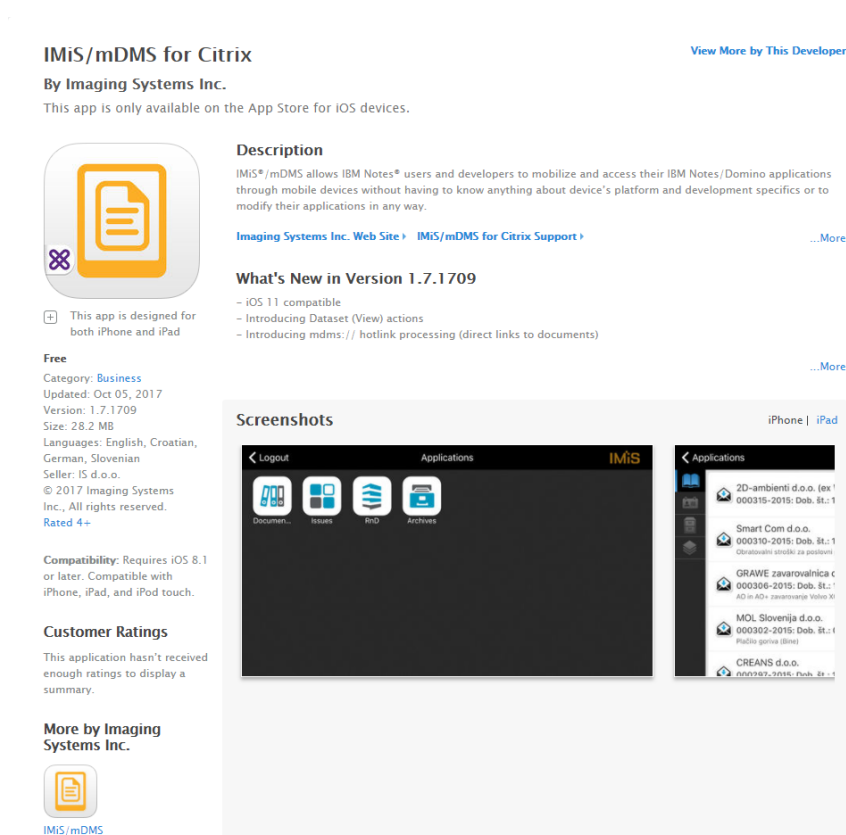


Image 15: View of the page with information about IMiS®/mDMS Client for Citrix on Apple Store

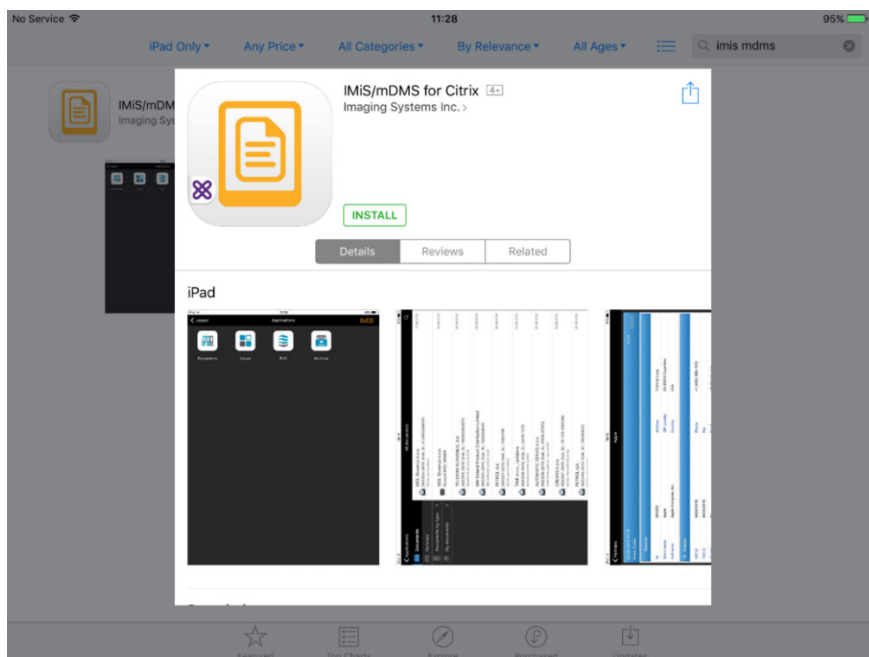


Image 16: View of the page before installing IMiS®/mDMS for Citrix applications on a mobile device

After successful installation of IMiS®/mDMS for Citrix, the user must also install the Citrix® Secure Hub application for a secure connection.

#### 4.2.2.1 Installing Citrix® Secure Hub Application

If the user wants to set up a secure and reliable connection between the IMiS®/mDMS Client application and IMiS®/mDMS Service via the Citrix® Secure Hub secure infrastructure, the user must also install the Citrix® Secure Hub application.

The user can download it to the mobile device from Apple Store:

<https://itunes.apple.com/us/app/citrix-secure-hub/id434682528?mt=8>.

## Citrix Secure Hub

[View More by This Developer](#)

By Zenprise

This app is only available on the App Store for iOS devices.



This app is designed for both iPhone and iPad

Free

Category: Business

Updated: Dec 14, 2017

Version: 10.7.20.4

Size: 57.7 MB

Languages: English, Arabic, Danish, Dutch, French, German, Hebrew, Italian, Japanese, Korean, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, Turkish

Seller: Zenprise

© 2017, Citrix Systems, Inc.

Rated 4+

Compatibility: Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

## Customer Ratings

Current Version:

★ ★ 69 Ratings

All Versions:

★ ★ 584 Ratings

More by Zenprise



## Description

Citrix Secure Hub (formerly known as Worx Home) provides direct access to your workspace for all mobile, web, virtual Windows and SaaS apps. It provides single sign-on capabilities and the enforcement of device and app-level security policies. Access all apps from a single interface

[Zenprise Web Site](#) [Citrix Secure Hub Support](#)

[...More](#)

## What's New in Version 10.7.20.4

Bug fixes and performance enhancements.

Got feedback? Write to [xenmobile2@citrix.com](mailto:xenmobile2@citrix.com)

## Screenshots

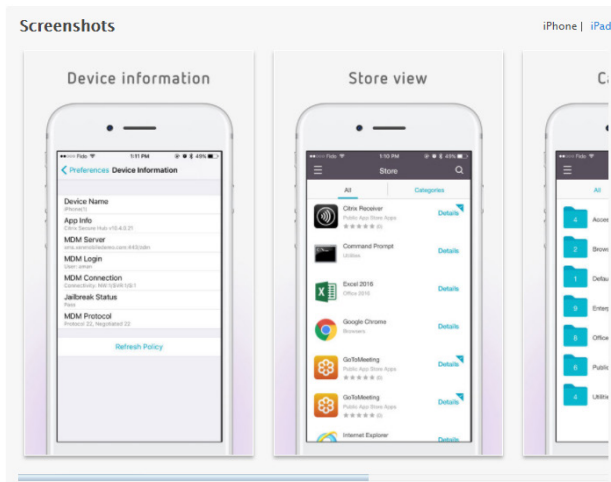


Image 17: View of the page with information about Citrix® Secure Hub on Apple Store

After successful installation of Citrix® Secure Hub, the user logs in with credentials.

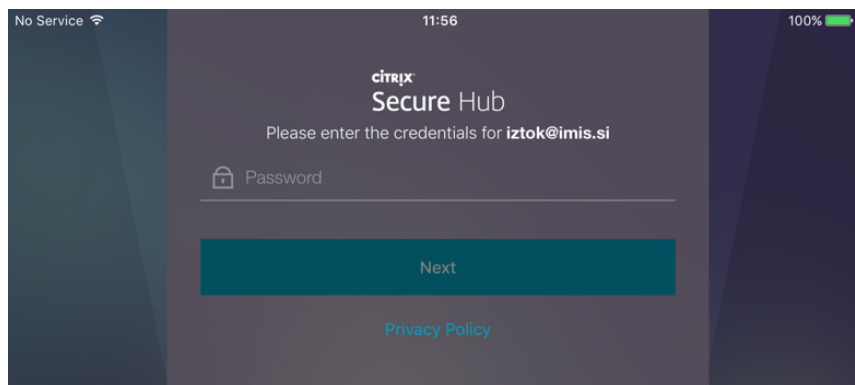


Image 18: Logging into the Citrix® Secure Hub secure platform

After a successful login, the user selects the IMiS®/mDMS application for Citrix.

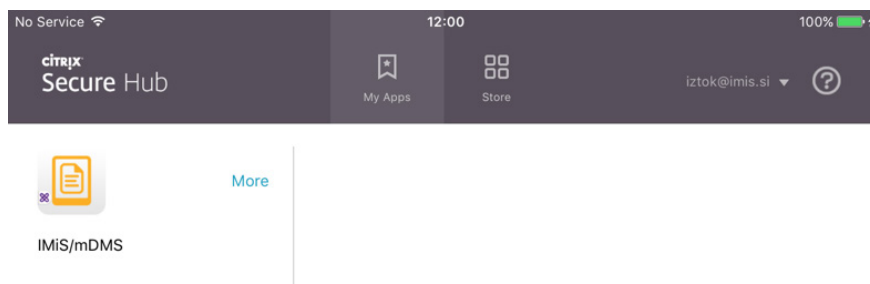


Image 19: View of the selection of the IMiS®/mDMS application for Citrix

By selecting IMiS®/mDMS Client for Citrix, the application opens. A dialog box for profile selection appears. The procedure of entering and selecting a profile is described below.

### 4.2.3 Entering and selecting a profile on iOS mobile devices

Based on the settings in the configuration, IMiS®/mDMS Service exchanges data with IMiS®/mDMS Client and displays it. Based on the set »Device Profiles«, different configuration packages are created for each device and platform at user login.

#### 4.2.3.1 Selecting a new profile

After a successful installation of the IMiS®/mDMS application on a mobile device, run the application. First choose a profile.

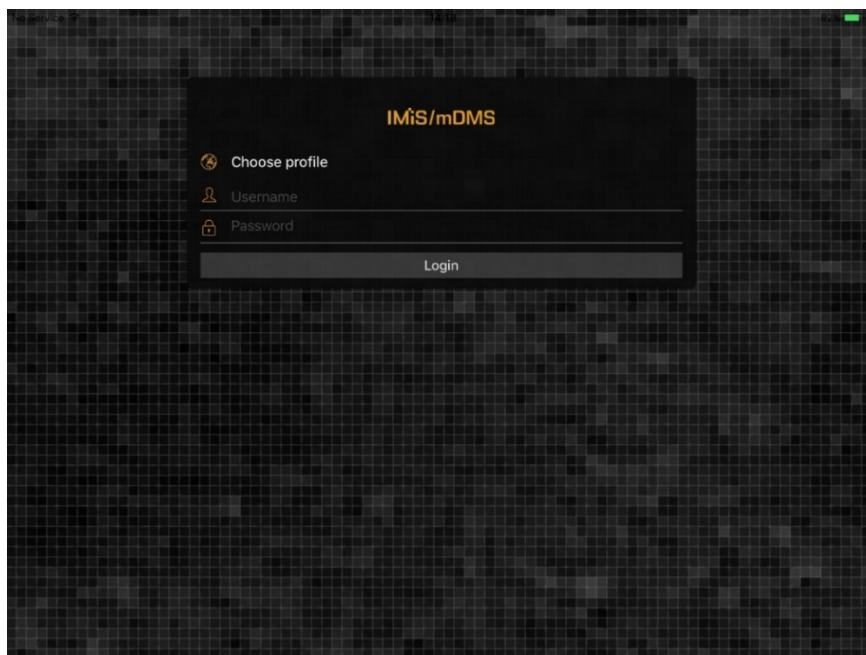


Image 20: Choosing profile of the IMiS®/mDMS Client application

#### 4.2.3.2 Adding a profile

The user adds a profile with the »Add« button, when the list of available profiles opens.



Image 21: Adding a new profile

When the profile's dialogue box opens, the user inserts the following data.

- Name: any profile name.
- Service address: address of the web service IMiS®/mDMS Service.
- Option: a possibility to ensure a higher security level.

The following options are available within the »Credentials store«:

- »Off«: username and password from the previous login are not shown at the next login.
  - »Save username«: username is saved at login and is shown at the next login;
  - »Save credentials«: username and password are saved at login in encrypted form ([https://en.wikipedia.org/wiki/Data\\_Encryption\\_Standard](https://en.wikipedia.org/wiki/Data_Encryption_Standard)) and are shown at the next login;
  - »Protect saved credentials«: username and password are saved at login in encrypted form, which is protected with a passcode and fingerprint (TouchID) or face recognition (FaceID), if the device supports this functionality or if the user has registered fingerprint).
- QR code: A QR code, which the user captures by choosing the »Scan« button.





Image 22: Entering data for creating a new profile

#### 4.2.3.2.1 Entering profile data manually

In the event of adding individual profiles, the user can enter the profile data manually.

After save, a QR code is created automatically from the Service Address.

For more information on the QR code see [chapter 8.4 QR code](#).

#### 4.2.3.2.2 Automatic capture of profile data from other sources

Since the adding of multiple profiles to one or multiple users is time consuming, it would be sensible for the user to capture and download profile data from other sources via a QR code.

For more information on capturing data via a QR code see [chapter 8.4 QR code](#).

#### 4.2.3.3 Selecting an existing profile

The user selects and ticks the chosen profile. In case of a new profile, it is automatically ticked.

If the user wishes to correct the profile data, he selects »Settings«.

The user confirms the entry by clicking »Back«.

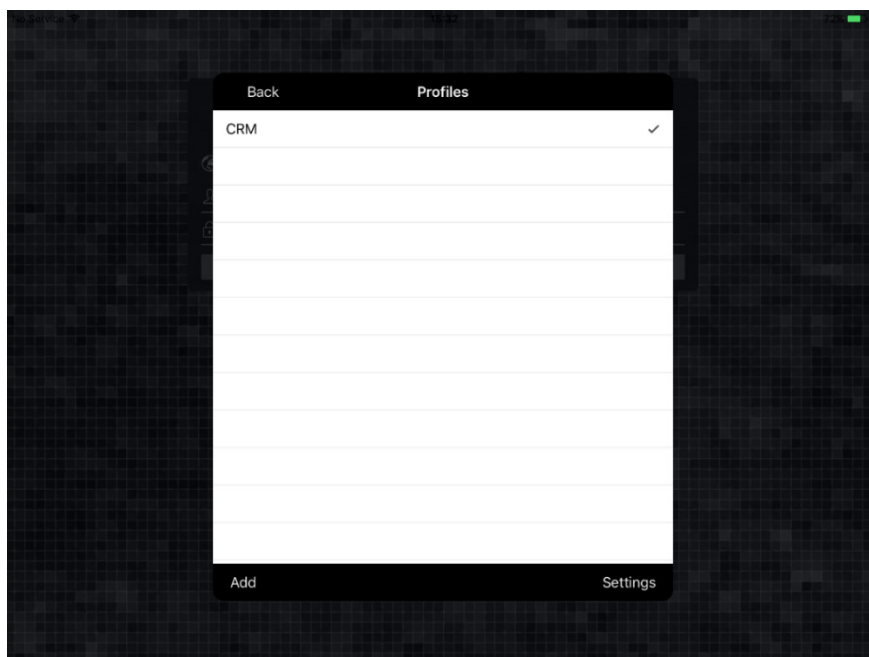


Image 23: Selecting a suitable profile

#### 4.2.3.4 Login into application profile with the username and password

In the mobile device settings, the user sets whether login will be enabled with just a username and password or whether it will require a passcode too.

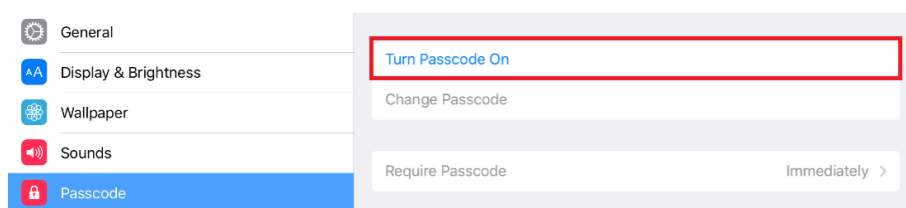


Image 24: Example of enabling a passcode in iPad settings (iOS v9.3.5)

If the user selects »Turn Passcode Off« in the IMiS®/mDMS application settings, he does not have the option of selecting a higher security level – »Protect saved credentials«.

He can select the option »Save credentials« and consequently that the username and password from previous login are saved in a non-encrypted form and shown at next login.

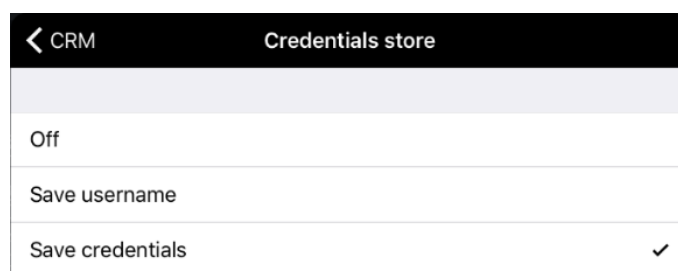


Image 25: Example of selecting »Save credentials« in the IMiS®/mDMS application settings

#### 4.2.3.5 Login into application profile with the passcode

In the mobile device settings, the user sets that login is also enabled with a passcode.

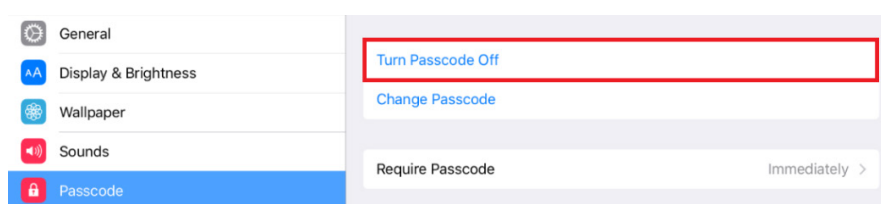


Image 26: Enabling login with a passcode in the mobile device settings

In the next step, the user sets the passcode and confirms it.

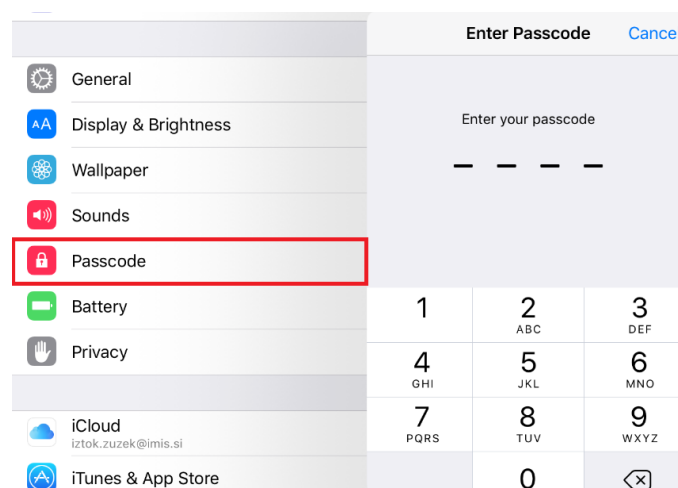


Image 27: Example of setting a passcode on iPad (iOS v9.3.5)

If the user selects »Turn Passcode On« in the mobile device settings, he has the option of selecting a higher security level – »Protect saved credentials« in the IMiS®/mDMS application. The username and password are saved in encrypted form and are protected with a passcode and, if the mobile device supports this functionality, also with a fingerprint (TouchID) or face recognition (FaceID).

For more information see [chapter 4.2.3.6 Login into application profile with the fingerprint](#) and [chapter 4.2.3.7 Login into application profile with the face recognition](#).

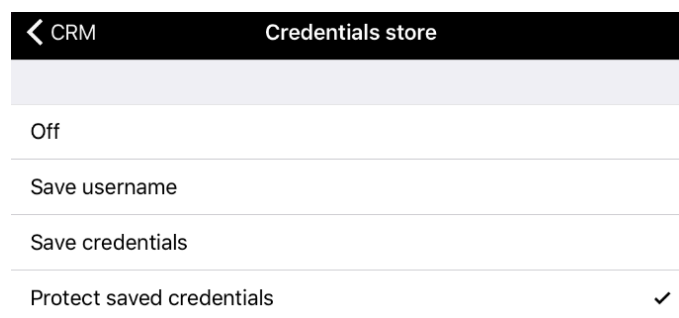


Image 28: Example of selecting »Protect saved credentials« in the IMiS®/mDMS application settings

After selecting »Protect saved credentials« and entering the username and password, the user logs into the IMiS®/mDMS application.

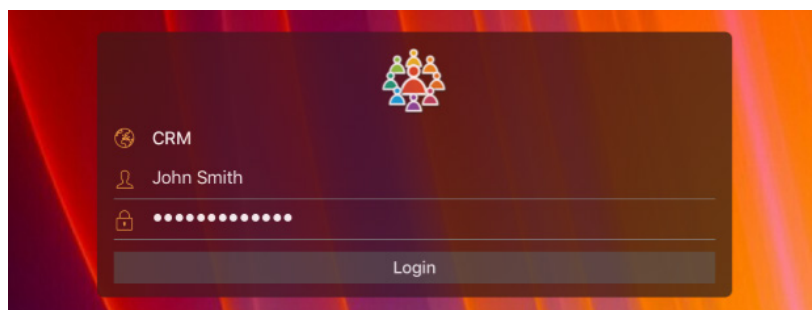


Image 29: Example of login into the IMiS®/mDMS Client application with credentials

Before entering the IMiS®/mDMS application, the user must enter the passcode.

Enter iPad passcode for "IMiS/mDMS"  
Sign in to CRM



Image 30: Example of entering the passcode before entering the IMiS®/mDMS application on iPad (iOS v9.3.5)

*Note: For each subsequent login, the user does not have to enter the username and password; the passcode alone will do.*

#### 4.2.3.6 Login into application profile with the fingerprint

In the mobile device settings, the user sets that login is enabled with a passcode and fingerprint (TouchID).

*Note: The functionality of login with a fingerprint is supported only on certain devices.*

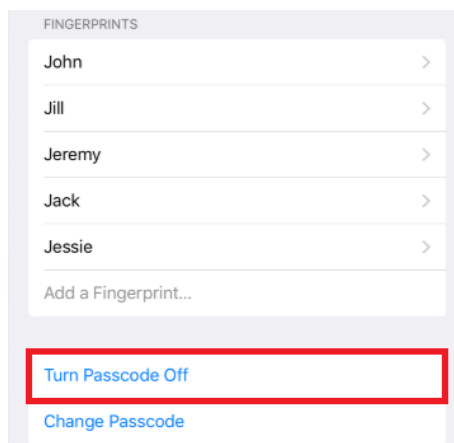


Image 31: Example of enabling a passcode in iPad settings (iOS v11.2.6)

In the next step, the user sets the passcode and confirms it.

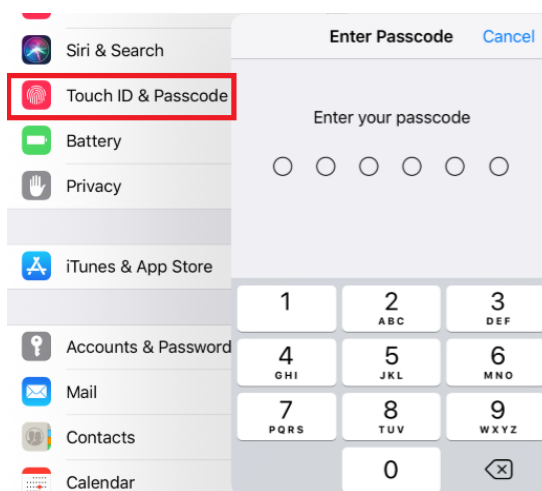


Image 32: Example of setting a passcode on iPad (iOS v11.2.6)

By selecting »Turn Passcode On« on the mobile device, the user has the option of selecting a higher security level - »Protect saved credentials« in the IMiS®/mDMS application settings. The username and password are saved in encrypted form and are protected with a fingerprint (TouchID).

After selecting »Protect saved credentials« and entering the username and password, the user logs into the IMiS®/mDMS application. The mobile device requires that the user also logs in with a fingerprint.

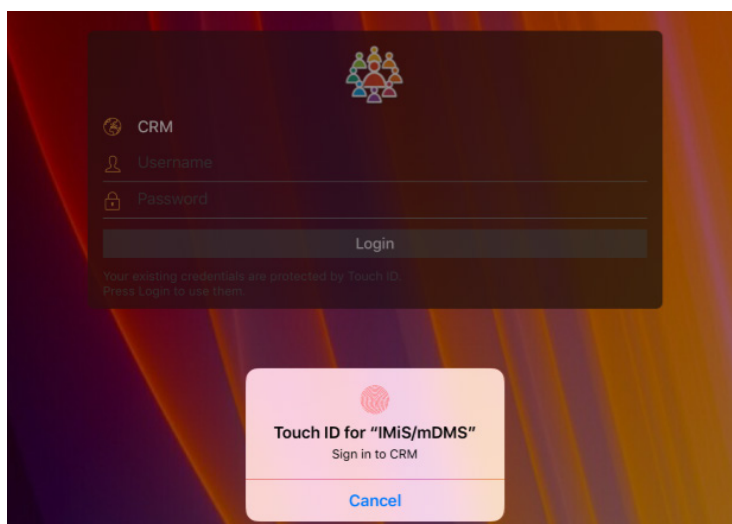


Image 33: Example of login with a fingerprint

After successful login with a fingerprint, the user can use the IMiS®/mDMS application.

Note: This functionality is supported only on certain devices.

#### 4.2.3.7 Login into application profile with the face recognition

In the mobile device settings, the user sets that login is enabled with a passcode and face recognition (FaceID).

*Note: The functionality of login with face recognition is supported only on certain devices.*

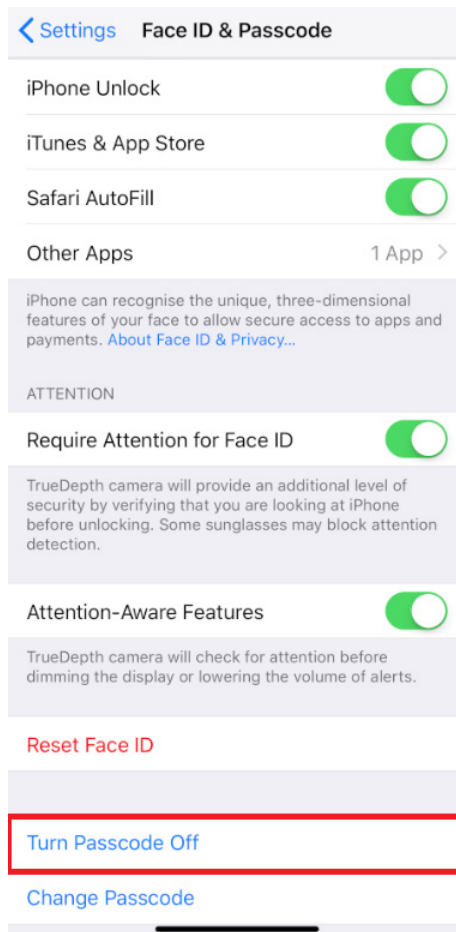


Image 34: Example of enabling a passcode in iPhoneX settings (iOS v11.2.6)

In the next step, the user sets the passcode and confirms it.

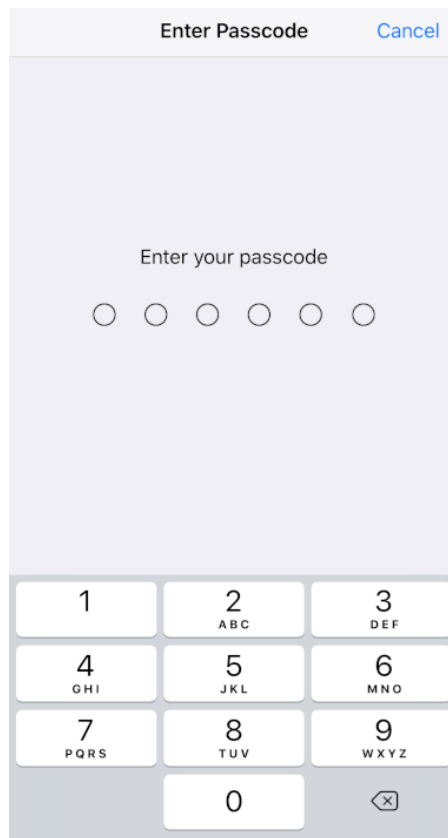


Image 35: Example of setting a passcode on iPhoneX (iOS v11.2.6)

By selecting »Turn Passcode On« on the mobile device, the user has the option of selecting a higher security level - »Protect saved credentials« in the IMiS®/mDMS application settings. The username and password are saved in encrypted form and are protected with face recognition (Face ID).

After selecting »Protect saved credentials« and entering the username and password, the user logs into the IMiS®/mDMS application.

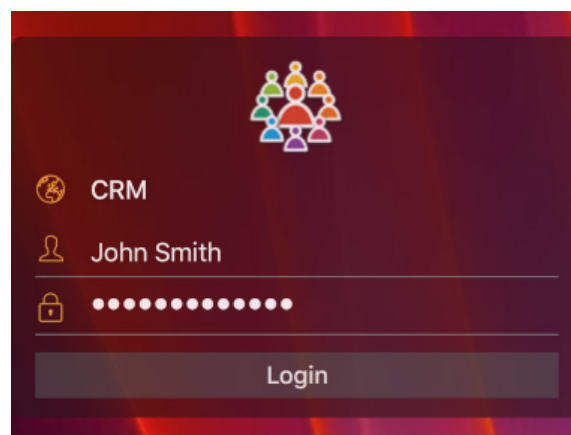


Image 36: Example of login into the application after selecting »Protect saved credentials«



Because the user has selected »Protect saved credentials«, face recognition (Face ID) is also executed. The user can continue only after successful face recognition.

After selecting »Protect saved credentials« and entering the username and password, the user logs into the IMiS®/mDMS application. The mobile device also requires face recognition from the user.

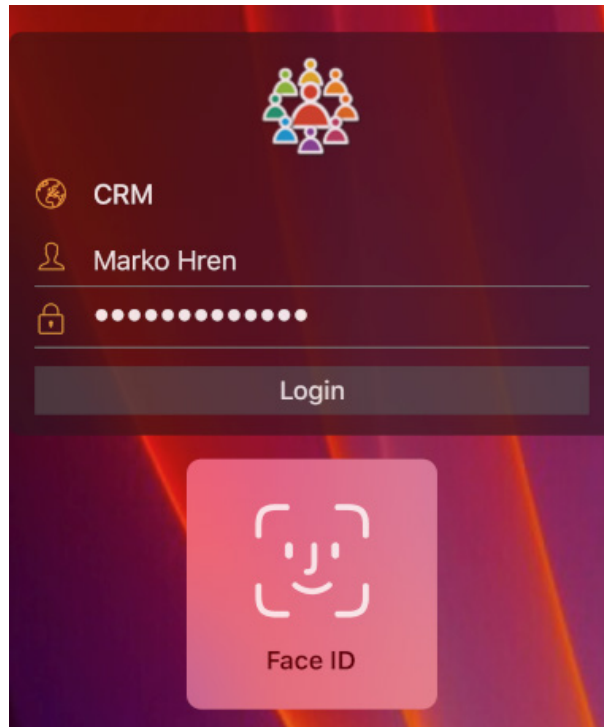


Image 37: Example of login into the application with face recognition

After successful face recognition, the user can use the IMiS®/mDMS application.

*Note: This functionality is supported only on certain devices.*

### 4.3 Setting up operation on the Android mobile device

For an IBM® Notes application operation setup on an Android mobile device, the user takes the following steps at the mobile device:

- Secure and reliable connection between the IMiS®/mDMS Client application and IMiS®/mDMS Service. On the mobile device the user must also install an application that enables a secure infrastructure: Cisco® AnyConnect, MobileIron® Mobile@Work, Citrix® Secure Hub, etc.

Owing to certain special features of the secure infrastructure, the user can choose among three application versions: IMiS®/mDMS Client, IMiS®/mDMS Client for MobileIron® and IMiS®/mDMS Client for Citrix®. The procedure of installing the IMiS®/mDMS Client application and a suitable secure infrastructure (Cisco®, MobileIron®, Citrix®) is described below.

### 4.3.1 Installing IMiS®/mDMS Client Application

The IMiS®/mDMS Client application, which the user installs on a mobile device and which has been adapted for operation on the Cisco® AnyConnect secure infrastructure, is available on Apple Store:

<https://play.google.com/store/apps/details?id=com.imis.idms>.

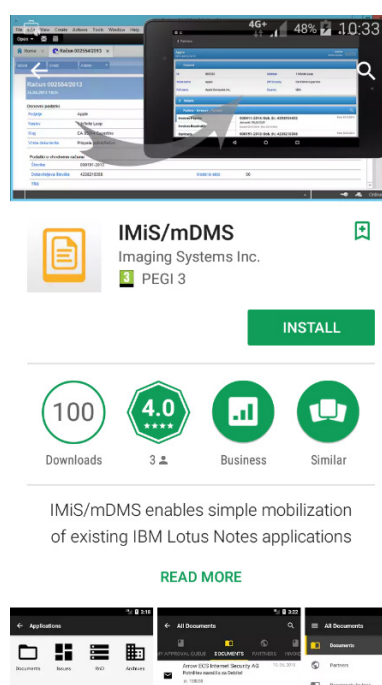


Image 38: View of the page with information about IMiS®/mDMS Client on Google Play

*Example: For the IMiS®/mDMS Client application to work in the secure VPN of Cisco® AnyConnect, the user must enable a Wireless Network Connection. The user sets up a network connection by entering the name of the connection located on the router and the password.*

#### 4.3.1.1 Installing Cisco® AnyConnect Application

If the Cisco® AnyConnect application has not yet been installed, the user downloads it to the mobile device from Google Play:

<https://play.google.com/store/apps/details?id=com.cisco.anyconnect.vpn.android.avf>.



Image 39: View of the page for downloading Cisco® AnyConnect from Google Play

After successful installation the user must configure the Cisco® AnyConnect application. The user begins by choosing the section »Connections«.

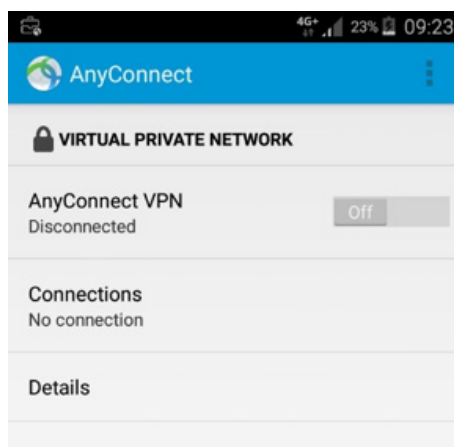


Image 40: View of the page after successful installation

The user continues by selecting »Add New VPN Connection«.

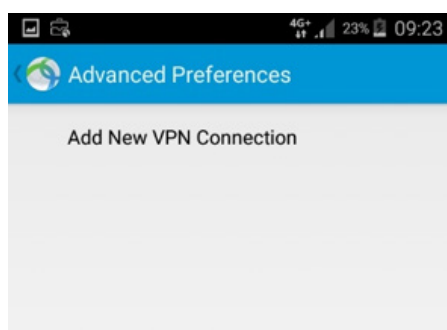


Image 41: Adding a new VPN connection

In the section »Server Address«, the user enters the address. In the next step, the user selects »Advanced Preferences«.

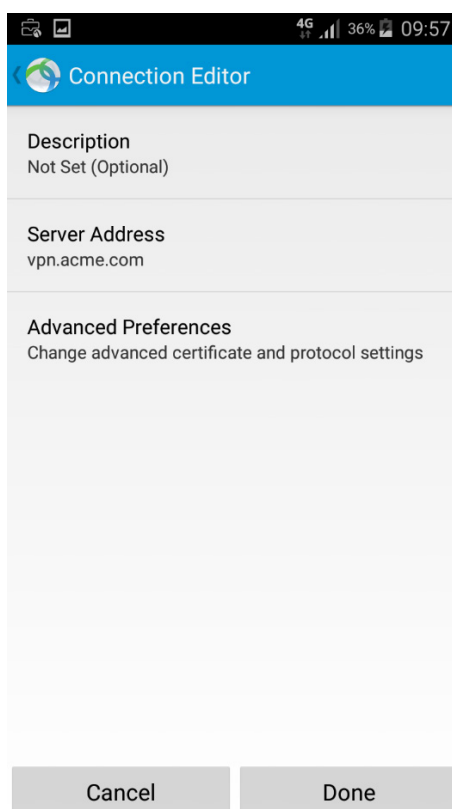


Image 42: Setting the configuration parameters of the Cisco® AnyConnect application

In the section »Advanced Preferences«, the user chooses the contained »Certificates« section. The user confirms the default selection »Automatic« and selects »Import«.

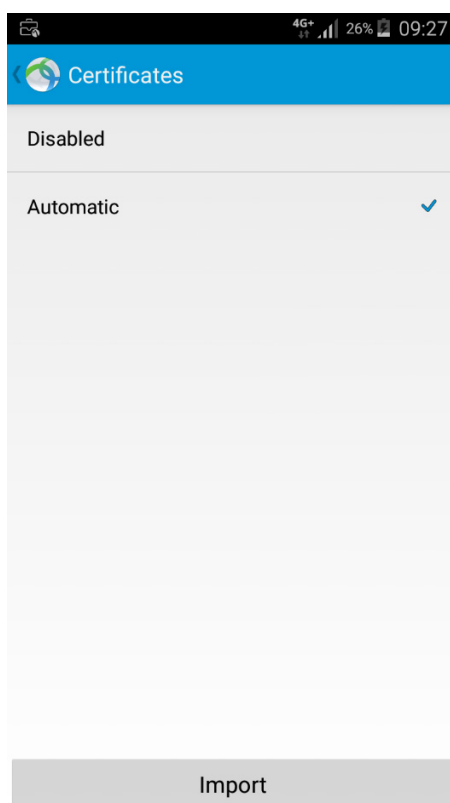


Image 43: Advanced Preferences in the contained »Certificates« section.

Afterwards the user enters the data for accessing the Client Certificate, which the user receives from the administrator. After successfully installing the certificate, the user can log into the Cisco® AnyConnect application.

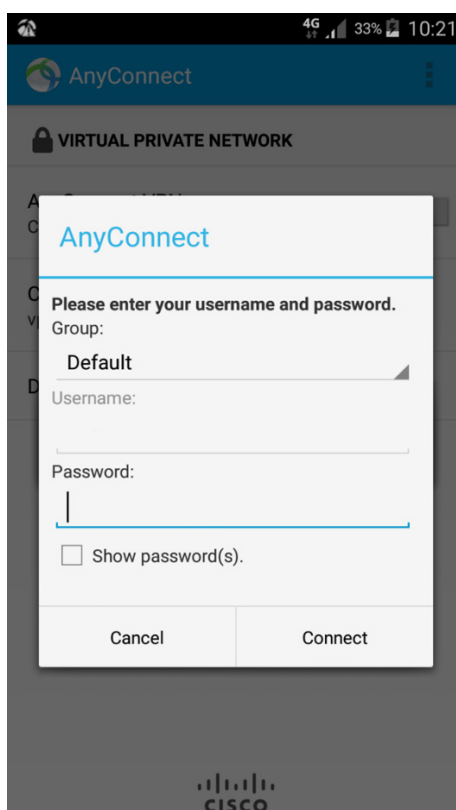


Image 44: User authentication in the Cisco® AnyConnect application

After successful installation of the Cisco® AnyConnect application and authentication, the user can open and log into the IMiS®/mDMS Client application and select a suitable profile.

For information about profile selection see [chapter 4.3.4 Entering and selecting a profile on Android mobile devices](#).

### 4.3.2 Installing IMiS®/mDMS Client for MobileIron® Applications

IMiS®/mDMS Client for MobileIron® enables setting up a secure connection to IMiS®/mDMS Service via the MobileIron® MDM/EMM infrastructure. It uses the AppTunnel functionality with all the protection mechanisms provided by MobileIron® MDM/EMM and IBM® Domino server, including PKI and the latest SSL protocols, e.g. TLS 1.2.

The IMiS®/mDMS Client application, which the user installs on a mobile device and which has been adapted for operation on the MobileIron® Mobile@Work secure infrastructure, is available on Google Play:

<https://play.google.com/store/apps/details?id=forgepond.com.imis.idms>.



Image 45: View of the page for downloading IMiS/mDMS for MobileIron® from Google Play

#### 4.3.2.1 Installing MobileIron® Mobile@Work Application [Optional]

If the MobileIron® Mobile@Work application has not yet been installed, the user downloads it to the mobile device from Google Play:

<https://play.google.com/store/apps/details?id=com.mobileiron>.

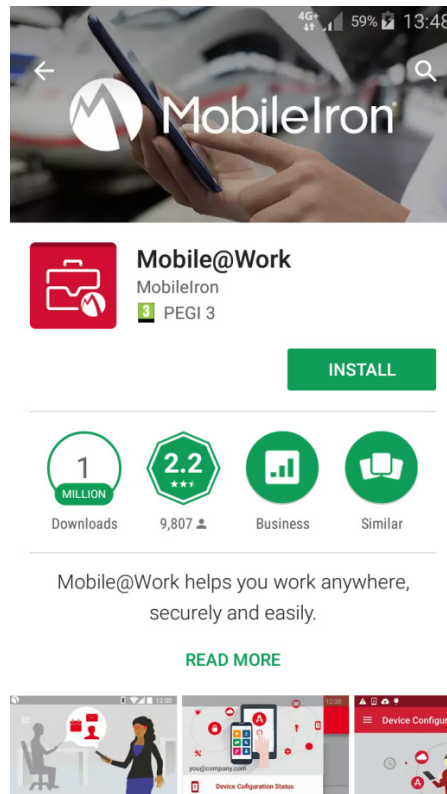


Image 46: View of the page for downloading MobileIron® Mobile@Work from Google Play

After successful installation, the user runs the MobileIron® Mobile@Work application, which has to be configured. The user obtains MobileIron® parameters from the administrator. The user begins by entering the email or URL of the MobileIron® server, followed by the username and password.

Then the user adjusts the settings in a few simple steps:



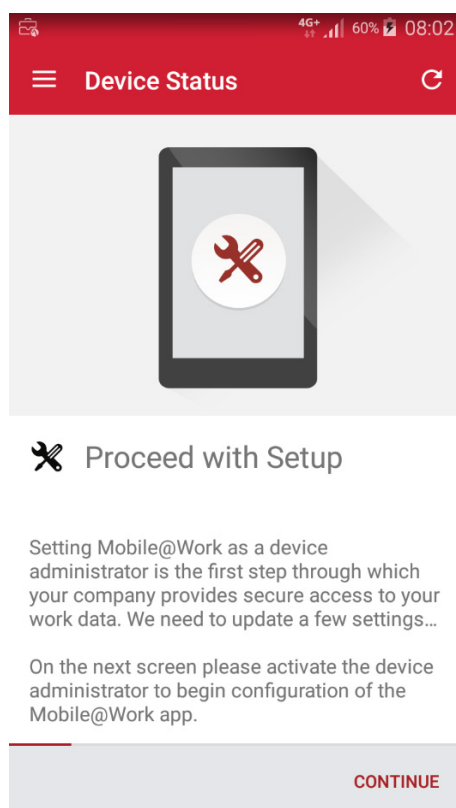


Image 47: View of the start of setting Mobile@Work for the device administrator

For secure management of the mobile device, the device administrator must be activated. By doing so, the Secure Apps Manager application gains control over the device.

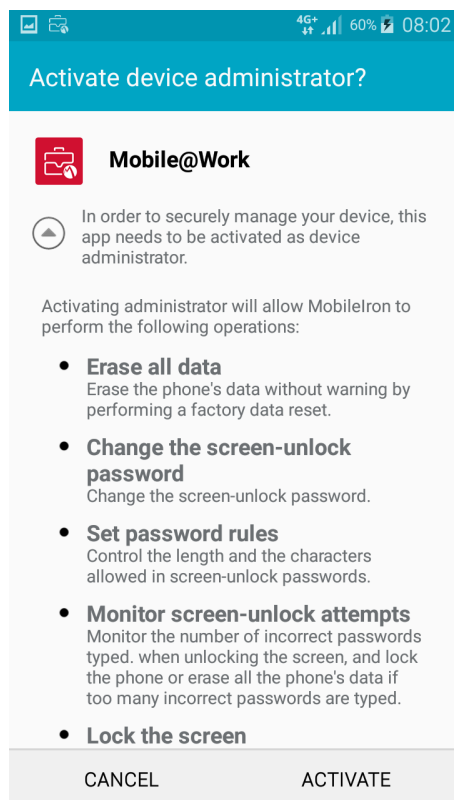


Image 48: Activating the device administrator

After confirming the privacy policy (ELM Agent) during the installation of the MobileIron® Mobile@Work application, the Secure Apps Manager application is also downloaded and installed. It provides an additional level of security of the data of the business applications accessed by the user.

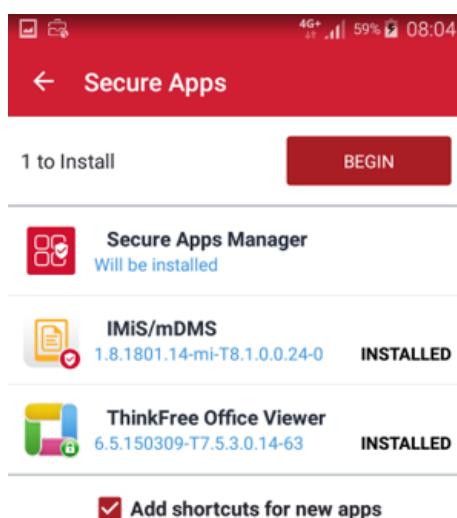
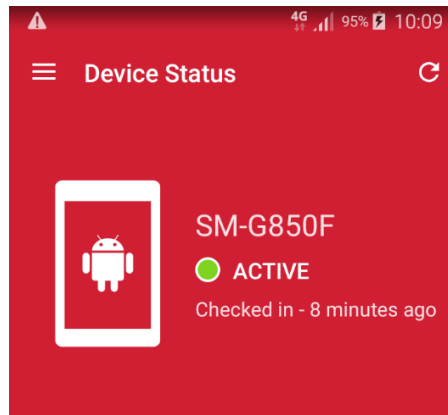


Image 49: Start of installation of the Secure Apps Manager application

When installation is completed, the user also sets a passcode for accessing the Secure Apps Manager application.



✓ You're all set!  
Currently there are no updates needing  
your attention.

Image 50: End of the installation of the MobileIron® secure platform

#### 4.3.2.2 Starting IMiS®/mDMS Client Application

For secure access to the IMiS/mDMS Client application, the user enters the Secure Apps Manager passcode. The user selects IMiS®/mDMS Client from the list of secured applications.

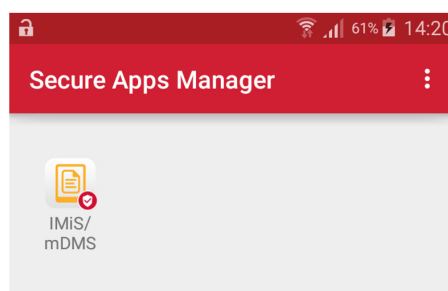


Image 51: View of the selection of the IMiS®/mDMS Client application for MobileIron®

After successful installation of MobileIron® secure infrastructure and the IMiS®/mDMS application, the user selects a suitable profile. For information about profile selection see [chapter 4.3.4 Entering and selecting a profile on Android mobile devices](#).

### 4.3.3 Installing IMiS®/mDMS Client for Citrix® Applications

IMiS®/mDMS Client for Citrix enables setting up a secure connection to IMiS®/mDMS Service via the Citrix XenMobile infrastructure. It uses the MicroVPN functionality with all the protection mechanisms provided by Citrix XenMobile and IBM® Domino server, including PKI and the latest SSL protocols, e.g. TLS 1.2.

The IMiS®/mDMS Client application, which the user installs on a mobile device and which has been adapted for operation on the Citrix® Secure Hub secure infrastructure, is available on Google Play:

<https://play.google.com/store/apps/details?id=com.zenprise>.

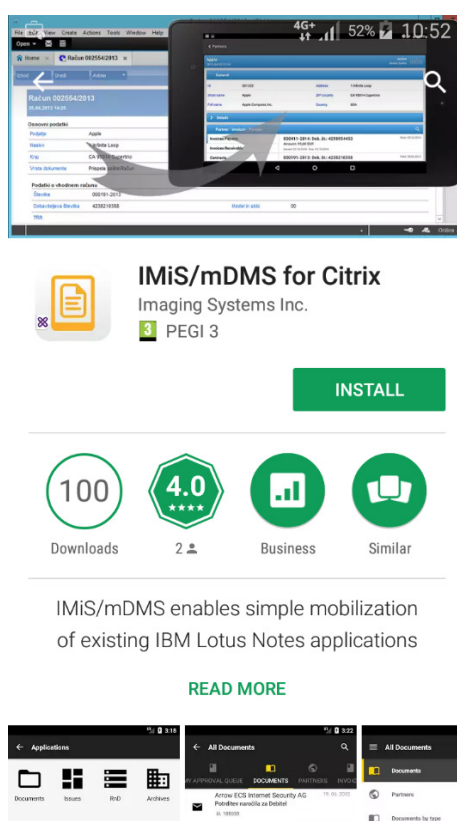


Image 52: View of the page with information about IMiS®/mDMS Client for Citrix® on Google Play

#### 4.3.3.1 Installing Citrix® Secure Hub Application

If the user wants to set up a secure and reliable connection between the IMiS®/mDMS Client application and IMiS®/mDMS Service via the Citrix® Secure Hub secure infrastructure, the user must also install the Citrix® Secure Hub application.

The user downloads it to the mobile device via Google Play:

<https://play.google.com/store/apps/details?id=com.zenprise>.

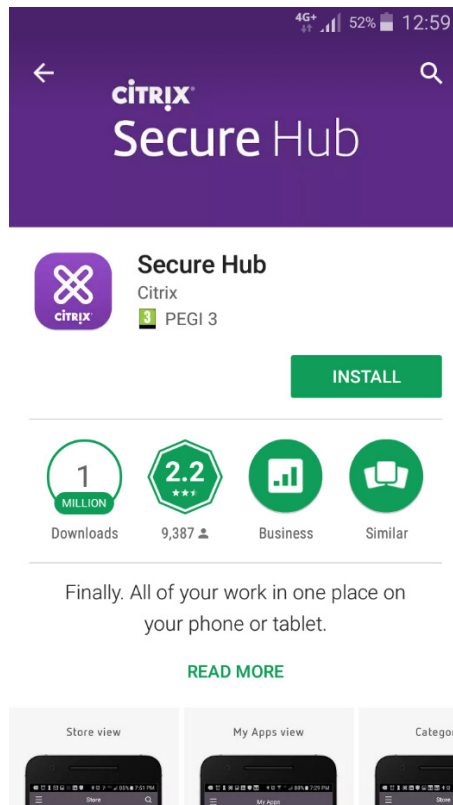


Image 53: View of the page with information about Citrix® Secure Hub on Google Play

After successful installation of Citrix® Secure Hub, the user has to configure the application. The user first enters the UPN, email or server address. After entering the address correctly, the user confirms the entry on a list of devices which are enabled a secure connection.

Afterwards the user logs in with credentials.

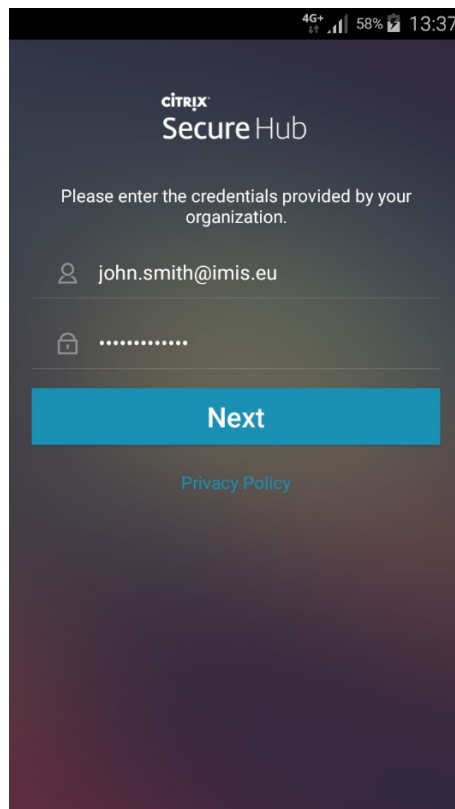


Image 54: Entering username and password

The user adds the IMiS®/mDMS application for Citrix® on the list of applications, thus setting up a connection via the Citrix® Secure Hub secure infrastructure.

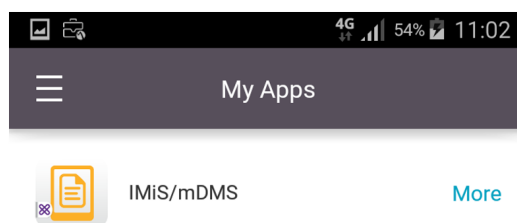


Image 55: View of the selection of the IMiS®/mDMS application for Citrix®

The user receives a notification of starting a secure network. Afterwards the IMiS®/mDMS Client application for Citrix opens. A dialog box for profile selection appears. The procedure of entering and selecting a profile is described below.

#### 4.3.4 Entering and selecting a profile on Android mobile devices

Based on the settings in the configuration, IMiS®/mDMS Service exchanges data with IMiS®/mDMS Client and displays it. Based on the set »Device Profiles«, different configuration packages are created for each device and platform at user login.

After successfully starting the IMiS®/mDMS application on an Android device, the user first chooses a profile.

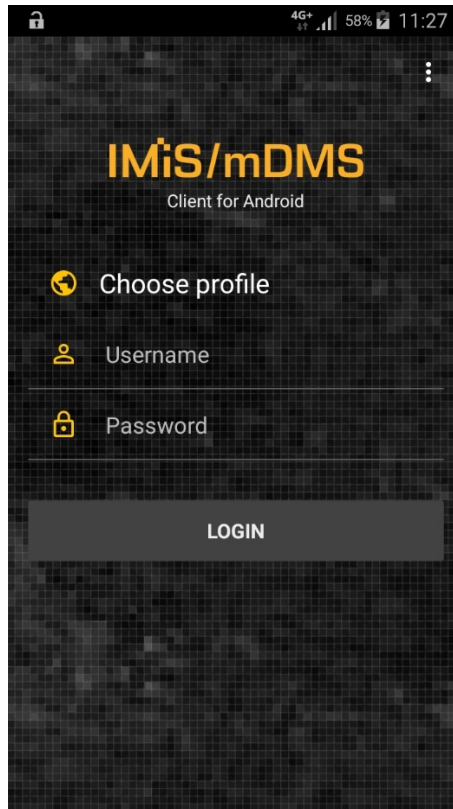


Image 56: Choosing the IMiS®/mDMS Client application profile

The user chooses the profile by clicking »Choose profile«. A list of available profiles opens. Because the list is empty, the user must add a new profile by choosing the »+« sign.



Image 57: Adding a new profile

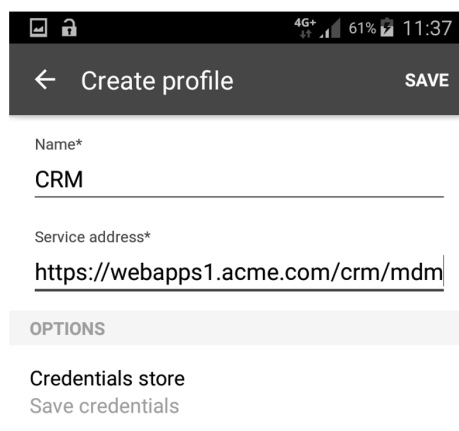
When the profile's dialogue box opens, the user inserts the following data.

- Name: any profile name.
- Service address: address of the web service IMiS®/mDMS Service.
- Option: a possibility to ensure a higher security level.

The following options are available within the »Credentials store«:

- »Off«: username and password from the previous login are not shown at the next login
  - »Save username«: username is saved at login and shown at the next login
  - »Save credentials«: username and password are saved at login in encrypted form ([https://en.wikipedia.org/wiki/Data\\_Encryption\\_Standard](https://en.wikipedia.org/wiki/Data_Encryption_Standard)) and are shown at the next login
  - »Protect saved credentials«: username and password are saved at login in encrypted form, which is protected with a passcode or fingerprint (if the device supports this functionality or if the user has registered fingerprints).
- QR code: A QR code, which the user captures by choosing the »Scan« button.

User confirms entry by choosing the »Save« button.



4G+ 61% 11:37

← Create profile SAVE

Name\*

CRM

Service address\*

<https://webapps1.acme.com/crm/mdm>

OPTIONS

☒ Credentials store

Save credentials

Image 58: Entering data for creating a new profile

In the case of a new profile, it is automatically ticked. If the list contains multiple profiles, the user chooses the desired profile and ticks it. The user changes profile data by choosing »Settings«. The user confirms the entry with the »Back« arrow.



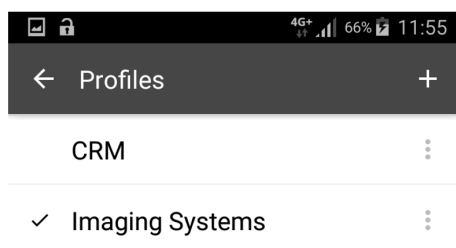


Image 59: Selecting a suitable profile

The user enters the username and password and confirms login with the »Login« button.

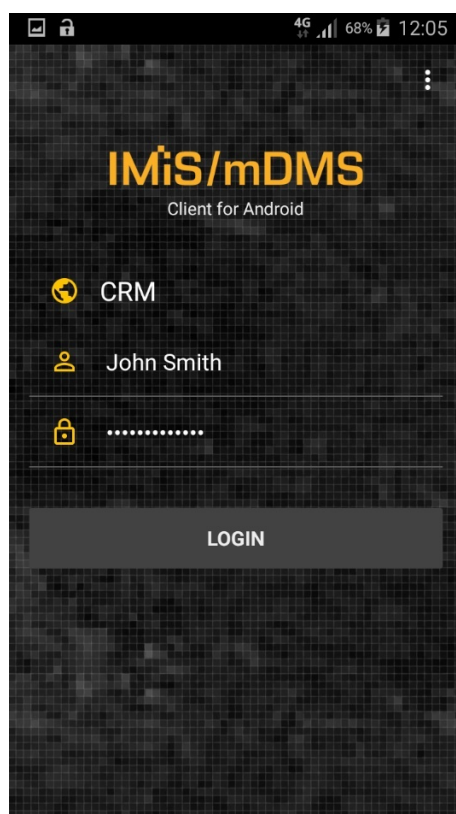


Image 60: Logging into the IMiS®/mDMS Client application

## 4.4 Example of use

Below you will find an example of the adaption of the desktop IBM® Notes application for operation on a mobile device on a simple CRM application.

CRM application is used for simple CRM processes such as tracking sales activities and entering metadata for statistics and CRM decisions.

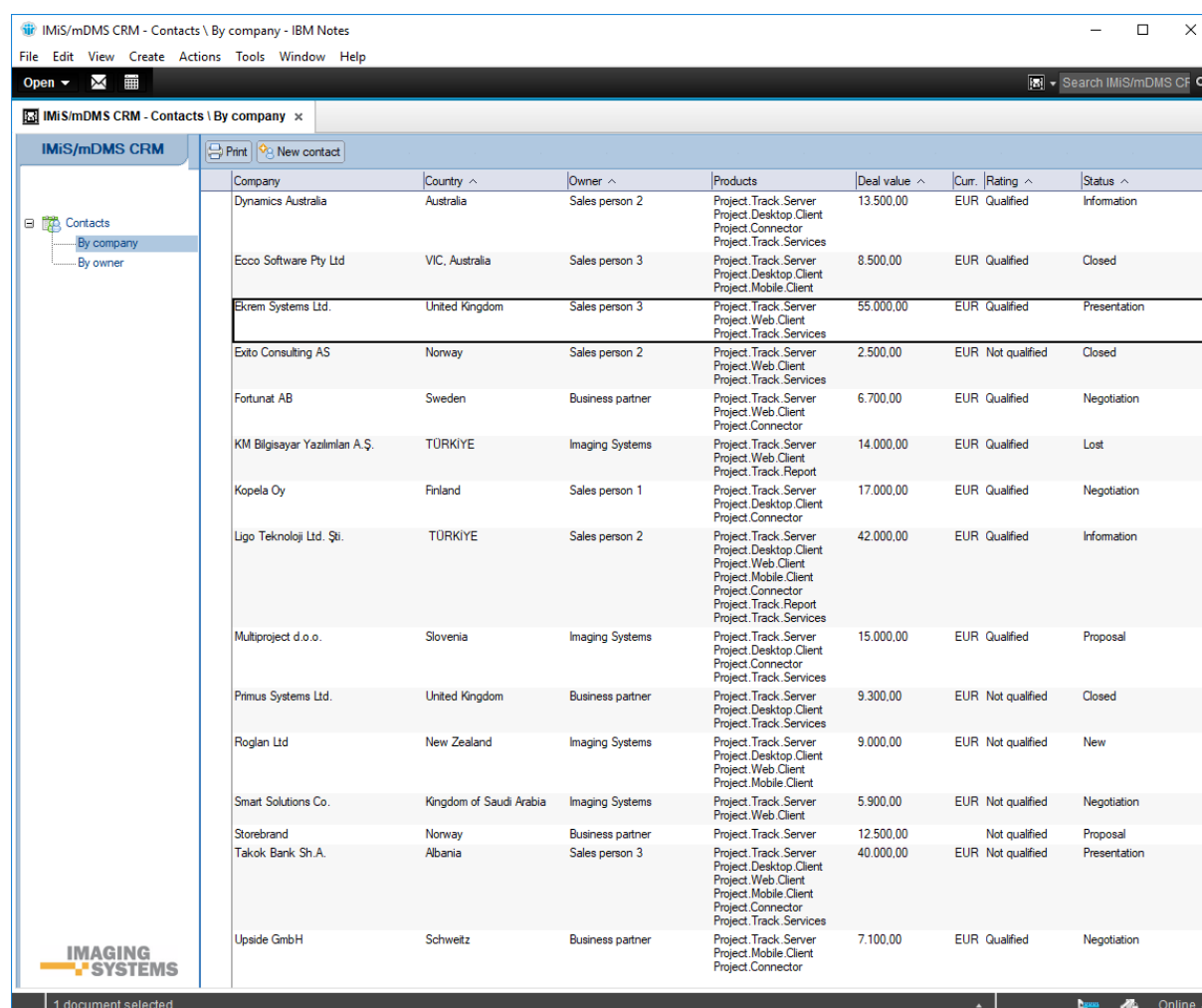
IBM® Notes desktop CRM application user enters data about a lead, source and keeper of the contact and lead specifics. He enters correspondence data in the sales contact document and optionally adds digital content (attachments) such as PDFs, etc. Correspondence can then be accessed contextually via multiple categories. The user can search for data via full text search feature.

Typical mobile user of the simple CRM application can leverage his mobile device to coordinate and supervise the sales team actions and performance.

Due to the nature of its work he can view and also edit certain field values and add comments.

### 4.4.1 Startup and use of the desktop application

At startup, the user of the CRM application displays the list of sales contacts.



Company	Country	Owner	Products	Deal value	Curr.	Rating	Status
Dynamics Australia	Australia	Sales person 2	Project.Track.Server Project.Desktop.Client Project.Connector Project.Track.Services	13.500,00	EUR	Qualified	Information
Ecco Software Pty Ltd	VIC, Australia	Sales person 3	Project.Track.Server Project.Desktop.Client Project.Mobile.Client	8.500,00	EUR	Qualified	Closed
Ekrem Systems Ltd.	United Kingdom	Sales person 3	Project.Track.Server Project.Web.Client Project.Track.Services	55.000,00	EUR	Qualified	Presentation
Exito Consulting AS	Norway	Sales person 2	Project.Track.Server Project.Web.Client Project.Track.Services	2.500,00	EUR	Not qualified	Closed
Fortunat AB	Sweden	Business partner	Project.Track.Server Project.Web.Client Project.Connector	6.700,00	EUR	Qualified	Negotiation
KM Bilgisayar Yazılımları A.Ş.	TÜRKİYE	Imaging Systems	Project.Track.Server Project.Web.Client Project.Track.Report	14.000,00	EUR	Qualified	Lost
Kopela Oy	Finland	Sales person 1	Project.Track.Server Project.Desktop.Client Project.Connector	17.000,00	EUR	Qualified	Negotiation
Ligo Teknoloji Ltd. Şti.	TÜRKİYE	Sales person 2	Project.Track.Server Project.Desktop.Client Project.Web.Client Project.Mobile.Client Project.Connector Project.Track.Report Project.Track.Services	42.000,00	EUR	Qualified	Information
Multiproject d.o.o.	Slovenia	Imaging Systems	Project.Track.Server Project.Desktop.Client Project.Connector Project.Track.Services	15.000,00	EUR	Qualified	Proposal
Primus Systems Ltd.	United Kingdom	Business partner	Project.Track.Server Project.Desktop.Client Project.Track.Services	9.300,00	EUR	Not qualified	Closed
Roglan Ltd	New Zealand	Imaging Systems	Project.Track.Server Project.Desktop.Client Project.Web.Client Project.Mobile.Client	9.000,00	EUR	Not qualified	New
Smart Solutions Co.	Kingdom of Saudi Arabia	Imaging Systems	Project.Track.Server Project.Web.Client	5.900,00	EUR	Not qualified	Negotiation
Storebrand	Norway	Business partner	Project.Track.Server	12.500,00		Not qualified	Proposal
Takok Bank Sh.A.	Albania	Sales person 3	Project.Track.Server Project.Desktop.Client Project.Web.Client Project.Mobile.Client Project.Connector Project.Track.Services	40.000,00	EUR	Not qualified	Presentation
Upside GmbH	Schweitz	Business partner	Project.Track.Server Project.Mobile.Client Project.Connector	7.100,00	EUR	Qualified	Negotiation

Image 61: Overview of business contacts of CRM application

Left navigation enables user to sort the contacts according to certain criteria.

Search bar above contacts can be used to enter a search string. User can add business contacts, print them, etc...

Fortunat AB	Sweden	Business partner	Project.Track.Server Project.Web.Client Project.Connector	6.700,00	EUR	Qualified	Postponed
-------------	--------	------------------	---	----------	-----	-----------	-----------

Image 62: An example of a business contact in the list of the desktop »CRM« application

The user creates a new business contact and specifies field values.

The screenshot shows the 'Contact - IBM Notes' application window. The contact is 'Qualified / Negotiation'. The form includes sections for Lead, Source, Owner, Deal, and Correspondence.

**Lead**

Name / Surname:	Mr. Thomas Grönvik	Position:	CEO
Company:	Fortunat AB	Address:	Brunnegatan 89
Zp / City:	SE-824 26 Hudiksvall	Country:	Sweden
E-mail:	thomas.gronvik@fortunat.se	Web address:	http://www.fortunat.se
No. of employees:	35	Comment:	

**Source**

Source:	Business partner	Detail:	Releye AB
---------	------------------	---------	-----------

**Owner**

Owner:	Business partner	Detail:	
--------	------------------	---------	--

**Deal**

Product(s):	Project.Track.Server Project.Web.Client Project.Connector	Deal value:	6.700,00 EUR
-------------	---	-------------	--------------

**Correspondence**

All | By type | Add

Created	Author	Type	Attachments	Content
22. 01. 2018 11:17:25	Marko Hren	Presentation		Board presentation is on Tuesday, January 30th. I made reservation for meeting room Orange.
22. 01. 2018 11:14:50	Marko Hren	Phone call		Mr. Olsen called today. He'd like a presentation of our software product portfolio.

1 document selected

Image 63: An example of the data of the business contact in a desktop »CRM« application

The user of the desktop application adds new or changes existing correspondence and deletes only that which he created. He can view the entire correspondence or view it contextually depending on the type.

Correspondence				
<div> <div>All</div> <div>By type</div> <div>Add</div> <div>Remove</div> </div>				
Created	Author	Type	Attachments	Content
22. 01. 2018 11:57:59	Marko Hren	Email	IMiS letter_Fortunat_Gronvik.pdf	Dear Thomas, Recently I wrote you a letter about consulting opportunities in the area of project tracking (see attached). What sets the solution apart from other is its integration capabilities with messaging platforms, including Microsoft Outlook, Lotus Notes and Web based messaging systems such as Gmail. The integration provided by our Web based software offers you strategic Project management solution unique workflow opportunities as well as improved communication. Integrating your project management solution with Project Tracker tool brings them following benefits: <ul style="list-style-type: none"> <li>· Leveraging the visibility of projects to regulate more efficiency.</li> <li>· Complete resource allocation to decrease duplication and save time and money.</li> <li>· Structure and control to help stay on schedule.</li> <li>· Retention of best practices to determine methodologies that are successful.</li> <li>· Instant information and</li> </ul>
22. 01. 2018 11:17:25	Marko Hren	Presentation		Board presentation is on Tuesday, January 30th. I made reservation for meeting room Orange.
22. 01. 2018 11:14:50	Marko Hren	Phone call		Mr. Olsen called today. He'd like a presentation of our software product portfolio.

Image 64: Viewing the entire correspondence in a desktop application or view it contextually depending on the type

By clicking the correspondence in the desktop IBM® Notes application, the new document displays the whole text including the attachment.

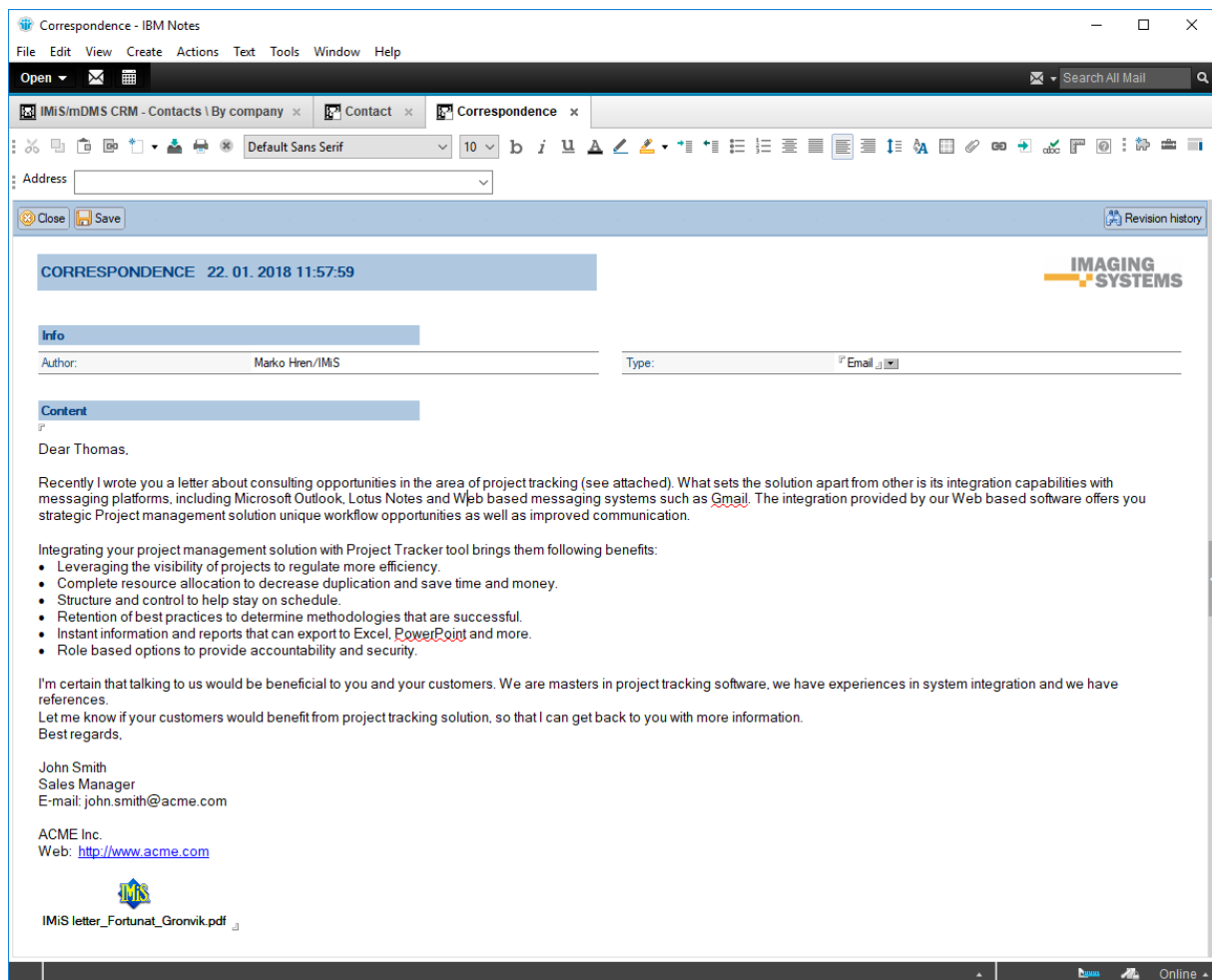


Image 65: Viewing the correspondence with the option to open attachments in the desktop application

The user of the desktop application can search through the full text of the entered data on business contacts.

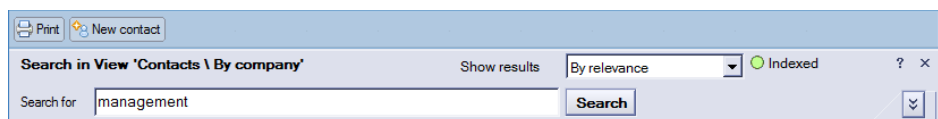


Image 66: Entering a search string in the desktop »CRM« application

In the list in the desktop IBM® Notes application the user is displayed the search results.

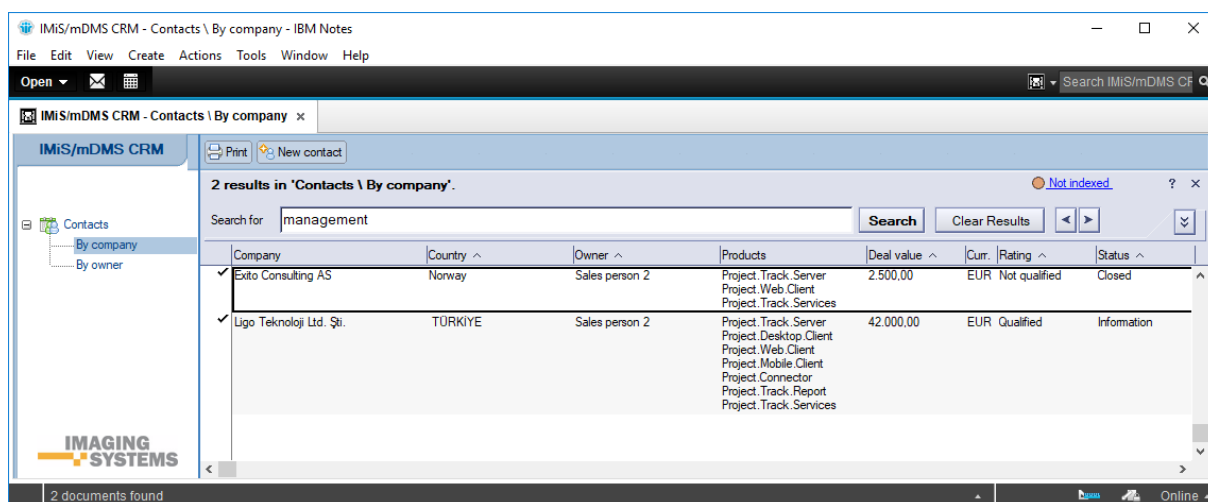


Image 67: The list of search results in the desktop »CRM« application

#### CONTACT Not qualified / Closed



##### Lead

Name / Surname: Mr. Karl Hermansen  
 Company: Exito Consulting AS  
 Zip / City: N-0609 Oslo  
 E-mail: karl@exiticonsulting.no  
 No. of employees: 55

Position: CEO, Projects and Management  
 Address: Postboks 3921 Nydalen  
 Country: Norway  
 Web address: http://www.exiticonsulting.no  
 Comment:

Image 68: The search string in the data on business contact

#### CORRESPONDENCE 18. 11. 2015 10:10:56



##### Info

Author: Marko Hren/IMS

Type: Document

##### Content

Dear Thomas,

recently I wrote you a letter about consulting opportunities in the area of project tracking (see attached). What sets this solution apart from others is its integration capabilities with email platforms, including Microsoft Outlook, Lotus Notes and Web based email systems such as Gmail. The integration provided by our Web based software offers your strategic Project **management** solution unique workflow opportunities as well as improved communication.

Image 69: Search string in correspondence

### 4.4.2 Startup and use of the mobile device application

At startup, the mobile device user is shown the last used profile.

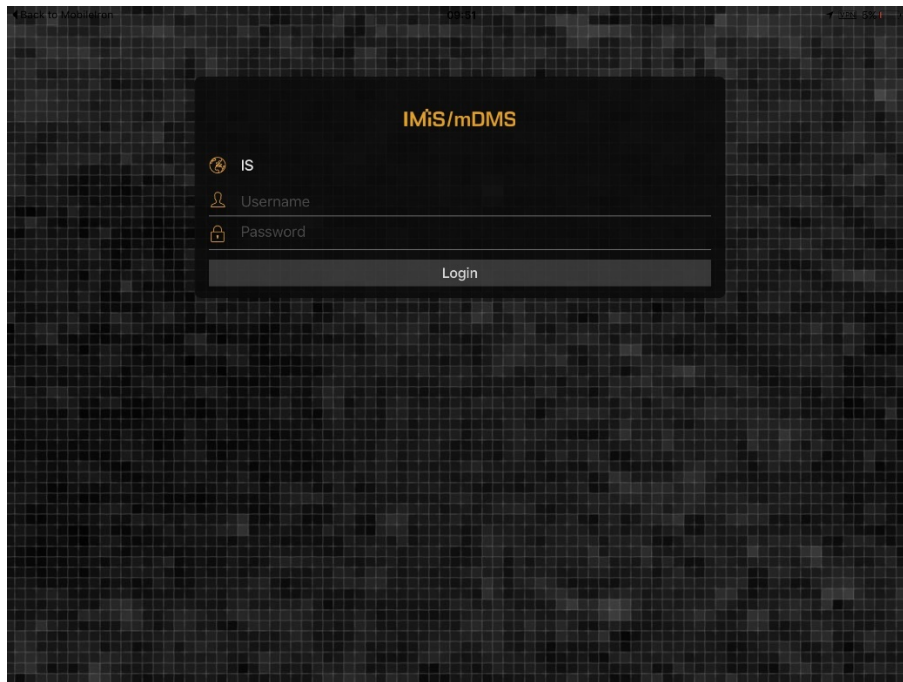


Image 70: View of the login into the last logged in profile

#### 4.4.2.1 Changing a profile

If the user wants to change the profile, he chooses it in the manner described in [chapter 4.2.3.3 Choosing an existing profile](#). Based on the settings in the configuration of the web service IMiS®/mDMS Services, after changing the profile the background of the mDMS application may change too. For more detailed information on the background settings of the application profile see [chapter 6.1.2.2 Structure description of an XML document](#).

To enter the application profile, the user enters the username and password and logs into the »CRM« application.

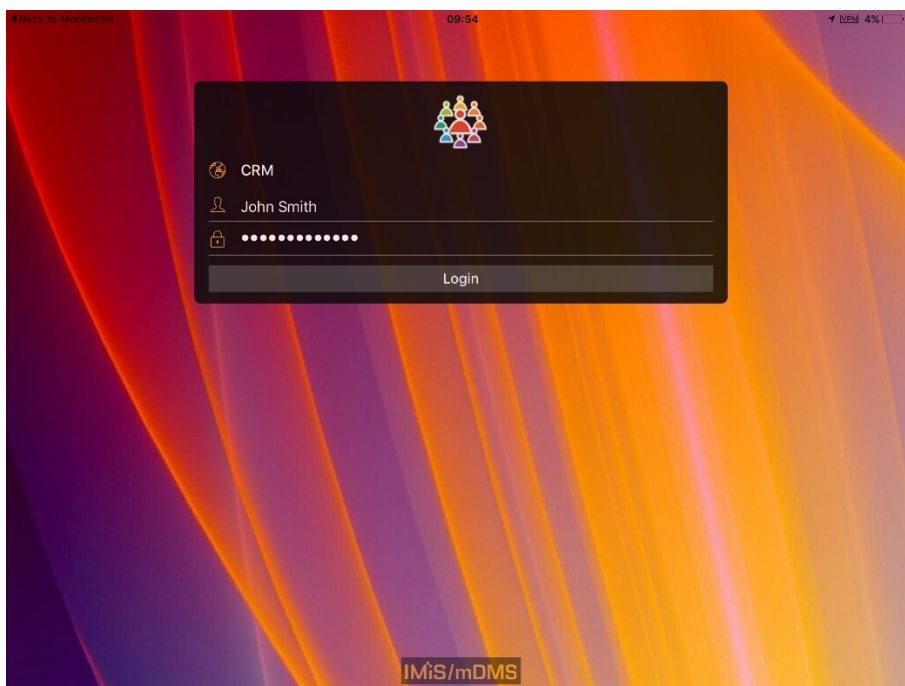


Image 71: View of the login into the »CRM« application via a mobile device

After a successful login, the user chooses the icon of the »CRM« application.

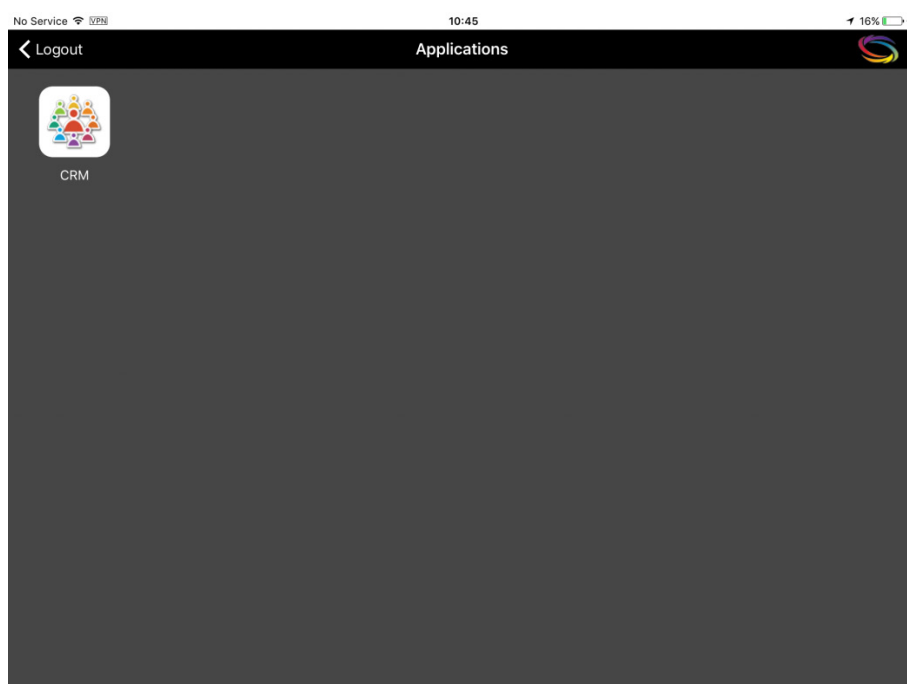


Image 72: Choosing the icon for starting the »CRM« application on a mobile device

In the IMiS®/mDMS Service configuration the user with appropriate rights can modify the appearance of the application for operation on a mobile device. This also determines which fields will be displayed and where.

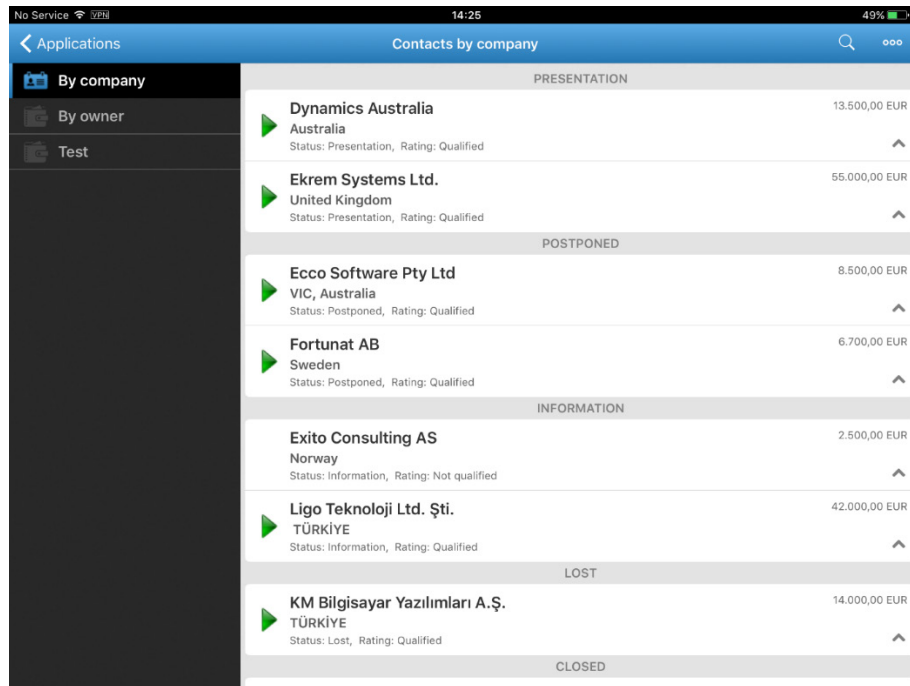


Image 73: Adjusting the display of a document set on a mobile device with sorting into groups

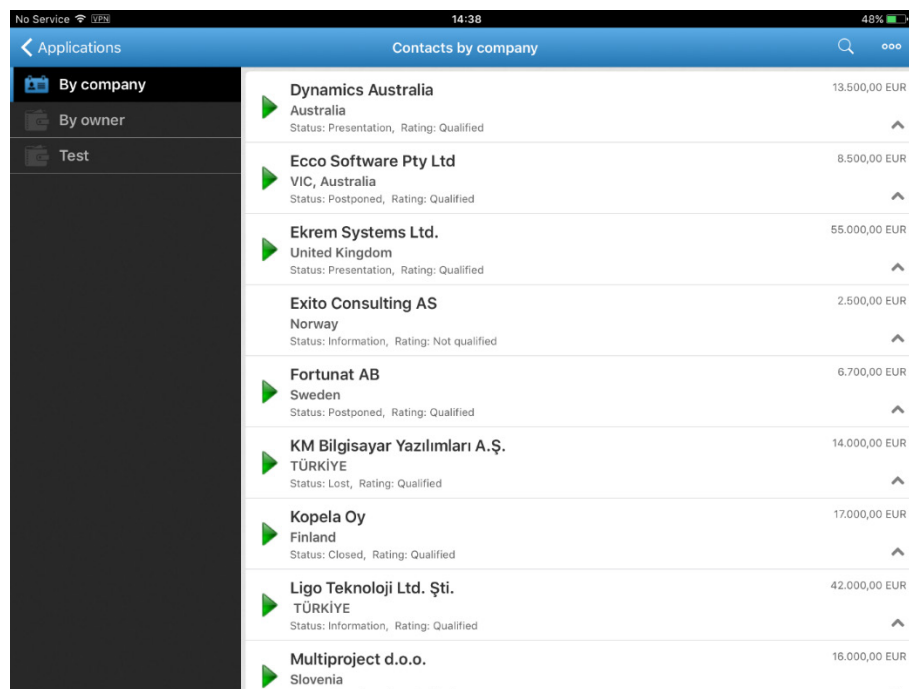


Image 74: Adjusting the display of a document set on a mobile device without sorting into groups



The user can also adjust the display of document data (business contacts) in a list.

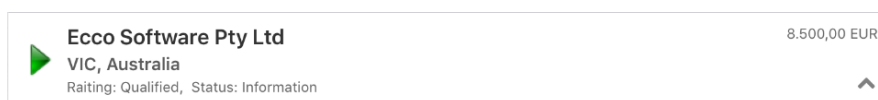


Image 75: Adjusting the display of business contact data

#### 4.4.2.2 Executing actions on individual documents

By choosing the icon (circumflex) in the bottom right corner, the user has the option of executing an action on a document without opening it.

The examples below show a set of options for choosing actions on a document from a document list. The user can choose between adding correspondence (Add correspondence) and modifying data (Edit).

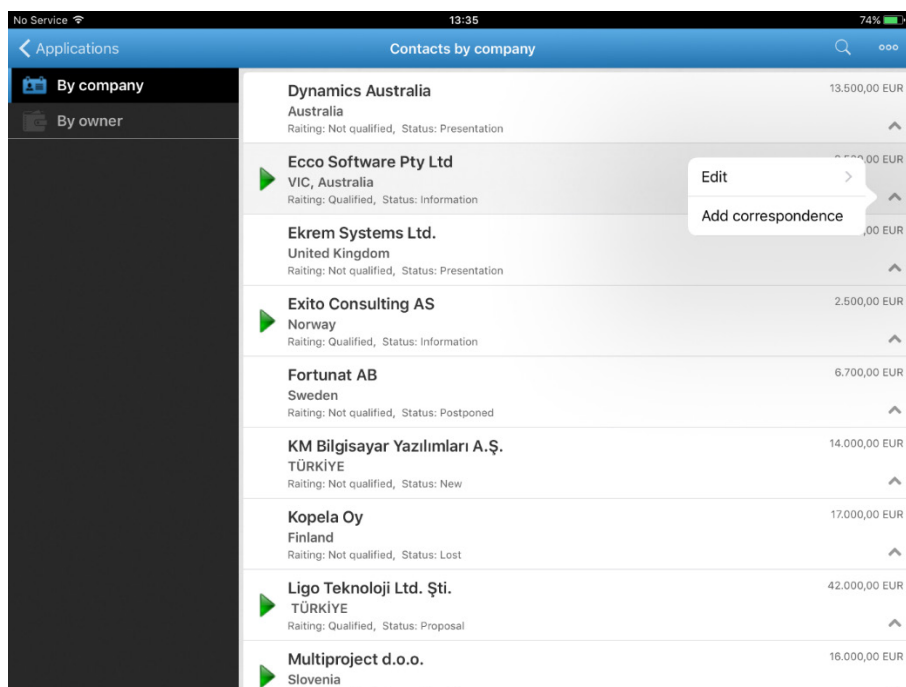


Image 76: Example of selecting to add correspondence on a document from a document list

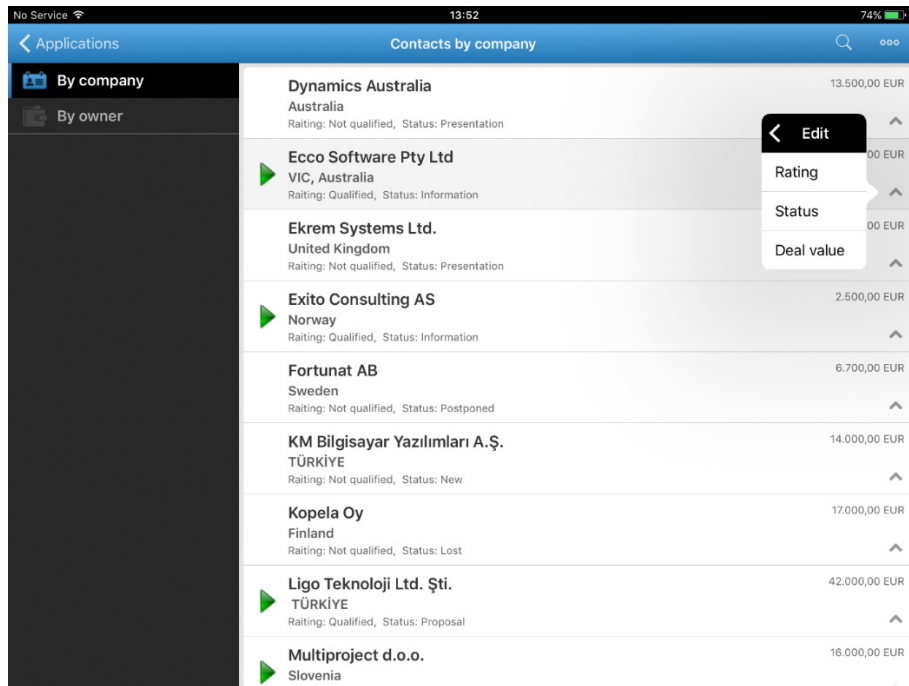


Image 77: Example of selecting to modify the data of a document from a document list

A user with configuration rights can specify how the sections and fields are displayed. Specific sections can basically remain hidden to the user.

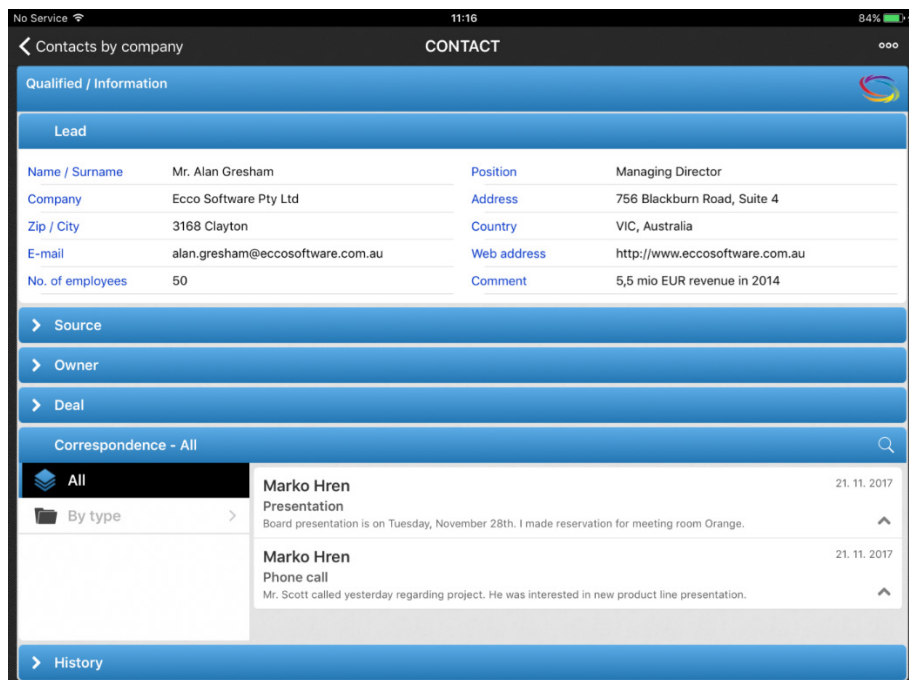


Image 78: Example of a view of document data

The user also has the option of setting the sorting of embedded documents into groups.

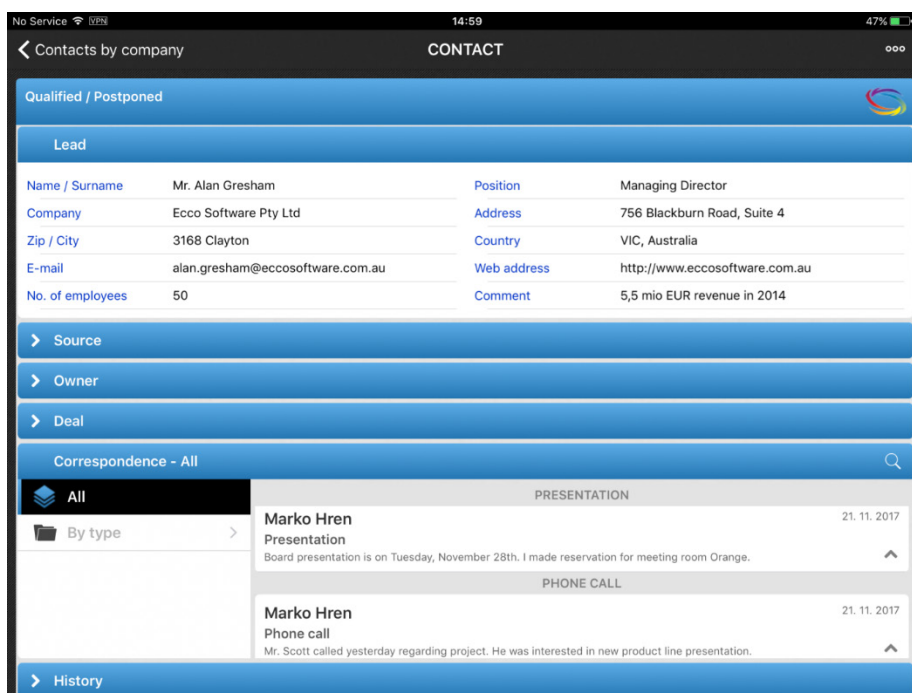


Image 79: Example of sorting documents into groups in a contextual view

By choosing the icon (circumflex) in the bottom right corner of a contained document, the user has the option of executing an action on the embedded document without opening it.

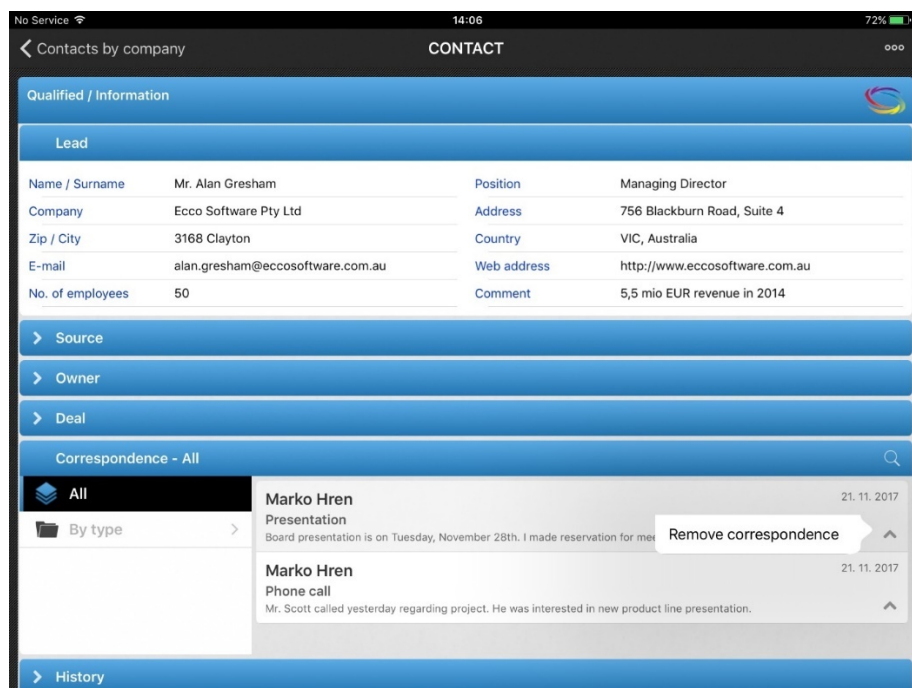


Image 80: Example of executing an action on a embedded document

Based on the configuration of the IMiS®/mDMS Service application, a user with appropriate rights can specify which actions can be chosen and which data can be modified on a document (business contact). More information about the settings are available in [chapter 6.1.2 Configuration](#).

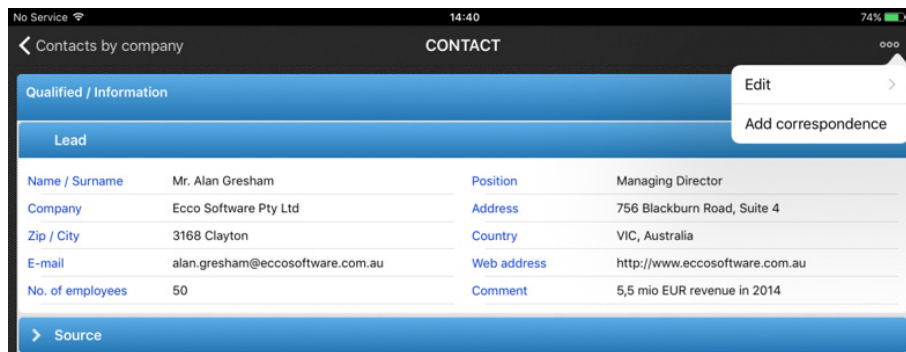


Image 81: An example of selecting an action on a document

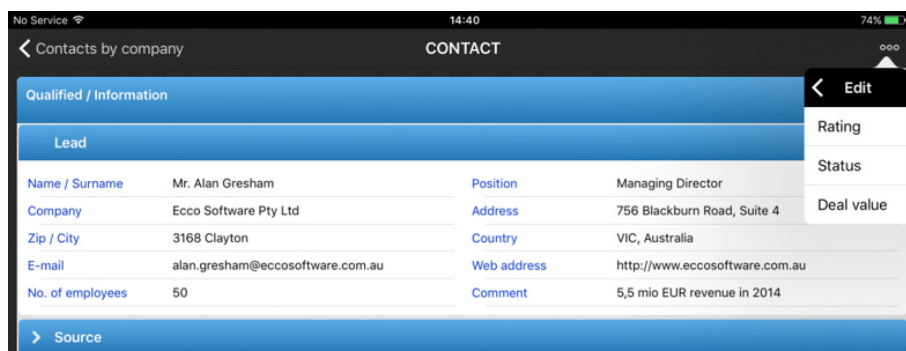


Image 82: An example of selecting to modify data on a document

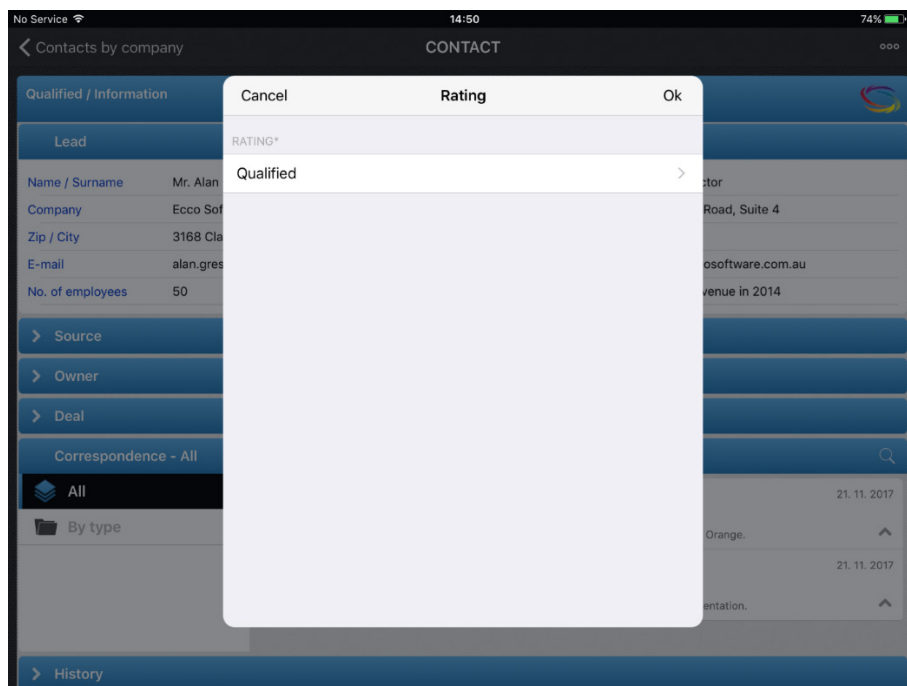


Image 83: An example of a selection of predetermined modifiable data

#### 4.4.2.3 Executing actions on multiple documents simultaneously

If the user wants to execute an action on multiple documents simultaneously, he must first select the documents.

The user selects the documents by holding the chosen document until a checkbox appears in front of each document in the list. By ticking the checkboxes in front of the documents, the user ticks the documents on which the same action will be executed.

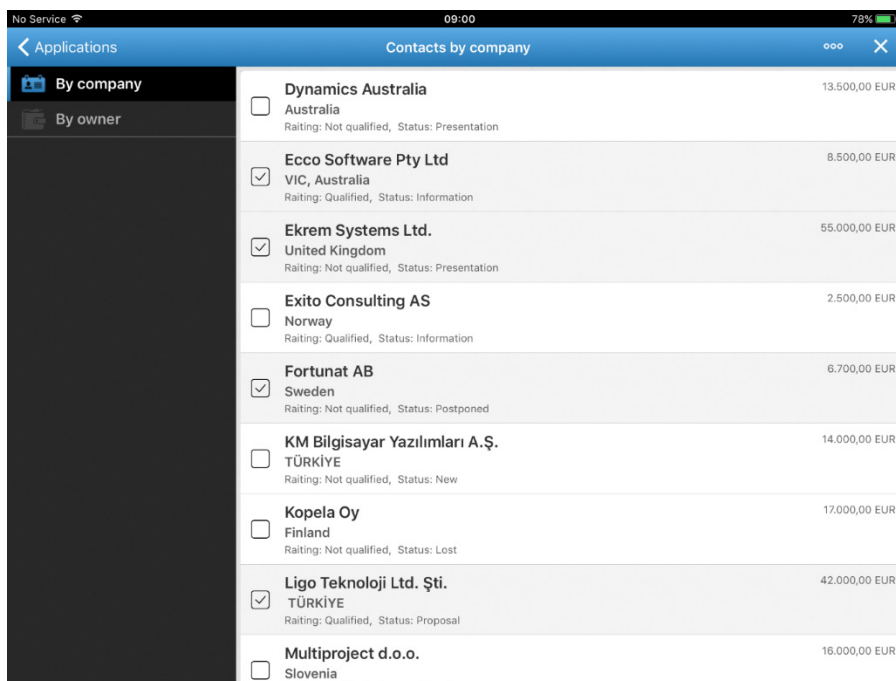


Image 84: Example of ticking documents for executing the same action

View of the set of options for choosing actions on multiple documents simultaneously from a document list.

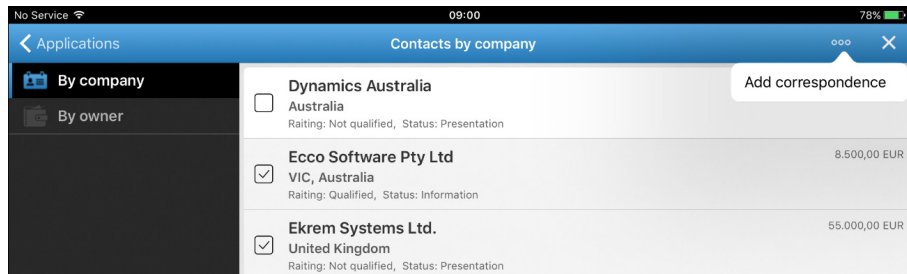


Image 85: Example of selecting to add correspondence on multiple documents simultaneously

Similar to desktop application, a user is displayed the entire correspondence. He can also select a contextual view based on type of correspondence.

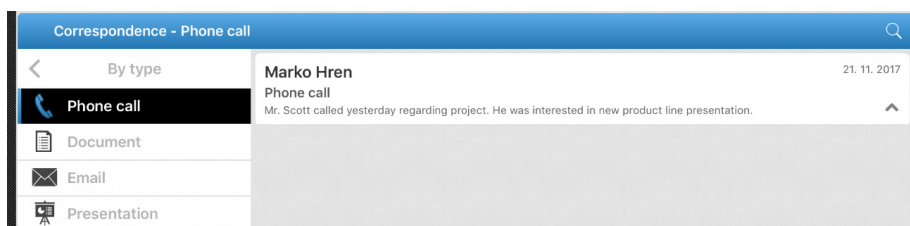


Image 86: Contextual view of sales correspondence

In a contextual view the user selects the documents by holding the chosen document until a checkbox appears in front of each document in the list. By ticking the checkboxes in front of the documents, the user ticks the documents on which the same action will be executed.



Image 87: Example of ticking documents in a contextual view for executing the same action

Under administration, the user also has the option of setting the sorting of documents into groups in a contextual view.

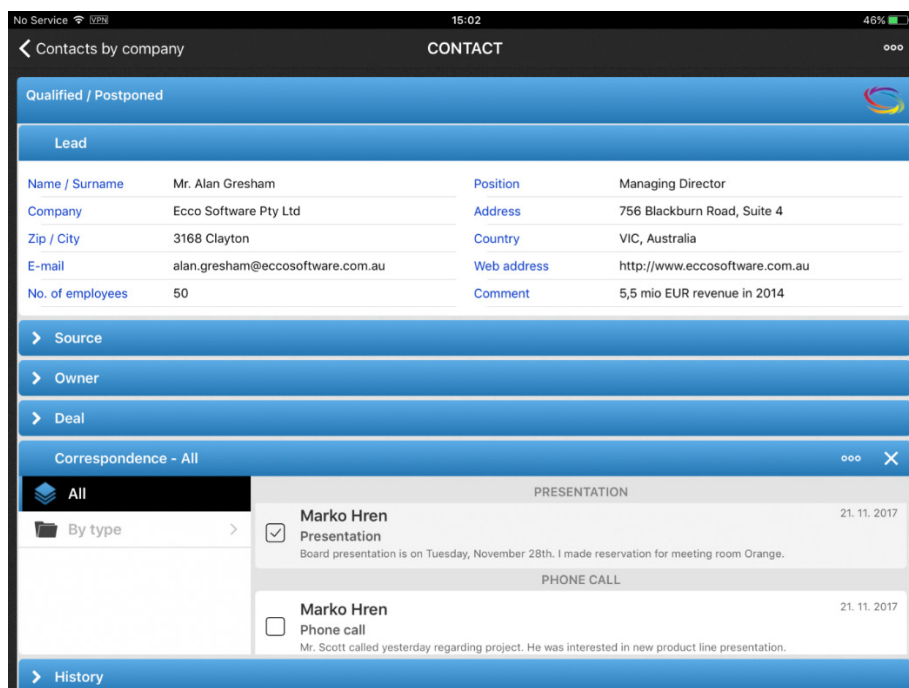


Image 88: Example of sorting embedded documents into groups

Depending on the settings in the IMiS®/mDMS Service application configuration, a user is enabled to remove the correspondence.



Image 89: Example of selecting an action in a contextual view on multiple documents simultaneously

In the event that the application configuration enables the adding of correspondence, by selecting certain correspondence, a user moves to the next view with a more detailed description. If attachments are available, the user can open them in the default application.

Shown below are examples of executing actions on a document. They apply to the execution of actions on individual documents and on multiple documents simultaneously.

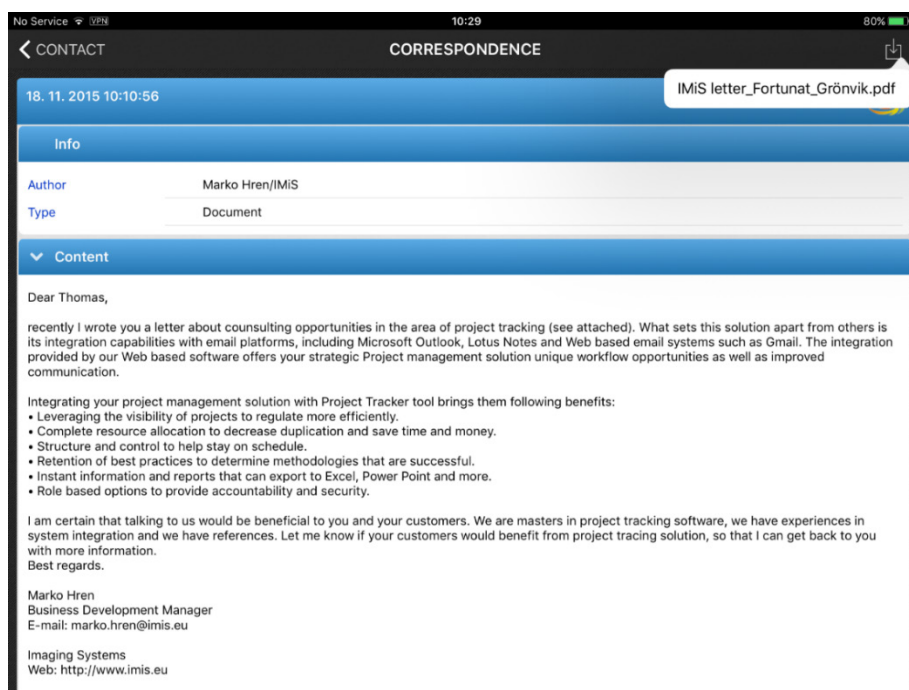


Image 90: Correspondence review with the option of opening attached content

Similar to the desktop application, a mobile user can search through full text index for data using the Search icon.



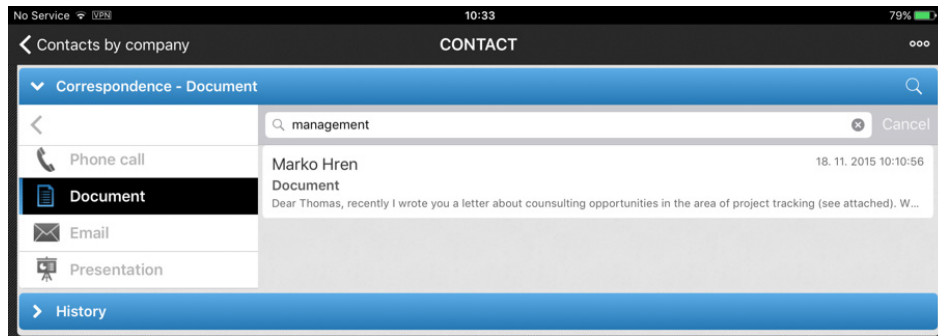


Image 91: Searching for data using full text index on mobile device

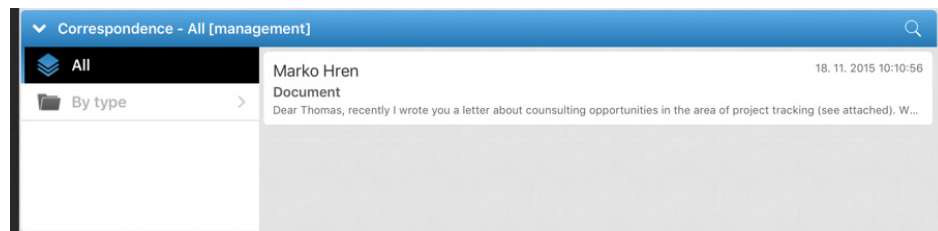


Image 92: Full-text search results display on mobile device

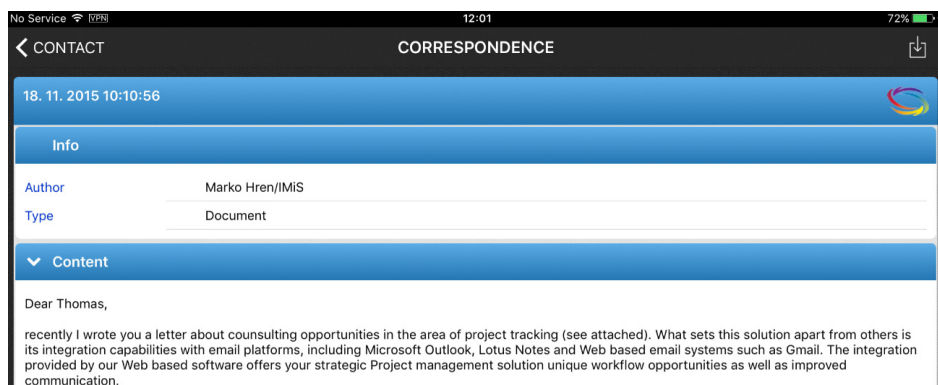


Image 93: A search query on a mobile device

## 5 Administration interface

### 5.1 General

The administration interface IMiS®/mDMS Service is intended for IMiS®/mDMS Client configuration for mobile device operation.

This chapter covers the following topics:

- Administration interface generation.
- Administration interface view.
- Administration interface access rights.
- Administration interface document actions.

### Connecting configuration documents

Configuration documents are connected. For document identification, the »id« field is used. It is written in every document and defined when created. The content of the field is a result of the »@DocumentUniqueID« function. Keep in mind that when copying documents from one database to another through clipboard, the document »id« changes, but the value of the »id« field remains the same as it is the base for connecting.

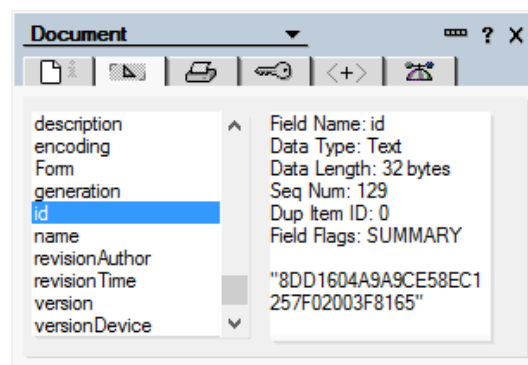


Image 94: Display of the value of »id« field

## 5.2 Administration interface generation

The IMiS®/mDMS Service database is generated from the sample IMiS®/mDMS Service database.

The database is generated on an IBM® Domino server, where administrator can access application databases referenced in the administration interface.

Usually, administrators choose a server and a folder with application databases.

It is advisable to include the version of the administration interface or the application the administration interface references, in the title.

Database access rights are described in detailed in [chapter 5.4 Administration interface access rights](#).

## 5.3 Administration interface view

Place a »IMiS®/mDMS Service« icon representing administration interface, on a worksheet.

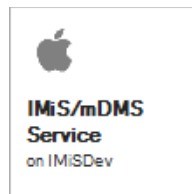


Image 95: IMiS®/mDMS Service icon

The basic administration interface appears on the screen.

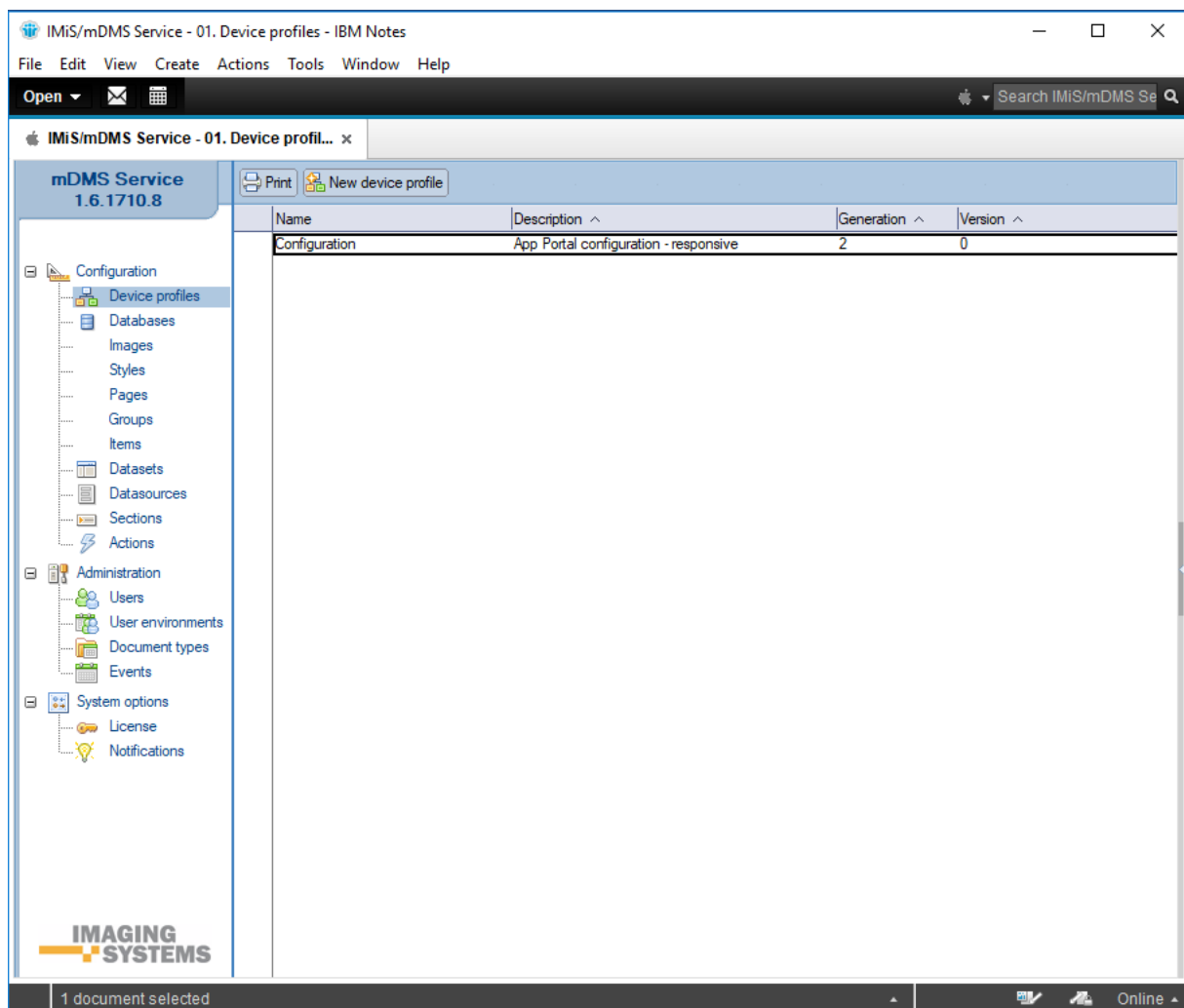


Image 96: Administration interface view

The navigator allows you to select index.

**[Configurations]** Configuration documents that specify appearance of an application on a mobile device.

The following options are available to the user:

**[Device profiles]** Mobile device profile settings.

**[Databases]** A list of NSF databases.

**[Datasets]** Configuration documents that specify document lists.

**[Datasources]** Configuration documents that specify the content of a document.

**[Sections]** Sections you reference in various configuration documents.

**[Actions]** Specifying document actions.

**[Administration]** Application administration.

The following options are available to the user:

**[Users]** Users administration.

**[User environments]** User environment administration.

**[Document types]** A list of supported file types (attachments and IMiS® objects).

**[Events]** Event logging.

**[System options]** System settings for application management.

The following options are available to the user:

**[License]** License key information.

**[Notification]** Notification data for users.

## 5.4 Administration interface access rights

The application recognizes three user types:

- Settings viewers.
- Settings editors.
- Administrators.

### Settings viewers

Read rights are sufficient. They require the right to write public documents, so they can create bookmarks about errors and warnings which are public documents.

### Settings editors

They require at least IMiS®/mDMS Service database editing rights. The concept of author fields is not supported, so copyrights do not suffice.

### Administrators

They require IMiS®/mDMS Service database operating rights.

The database has to be available online. In terms of web functionality, functionality does not predict document creating or editing. Hence, it is advisable that when determining an Access Control List, the database is »Maximum Internet name and password« on »Reader«.

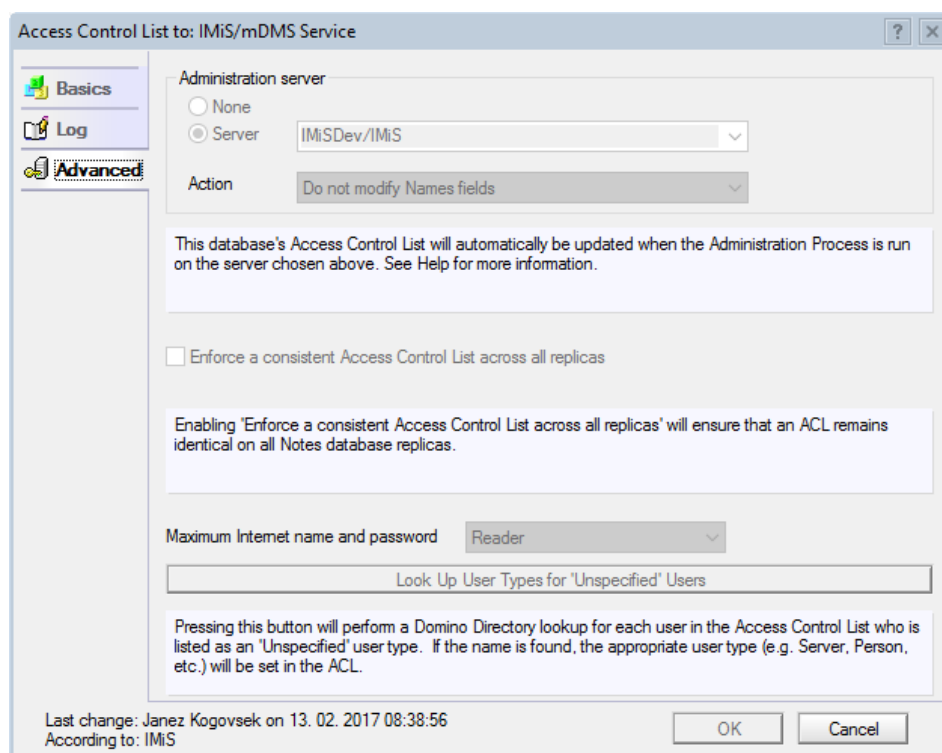


Image 97: Establishing access level in »Maximum Internet name and password«

Besides creating configuration documents, IMiS®/mDMS Service database is intended for request execution as forwarded from a mobile device. Requests are implemented by the web service provider »Service«. Its default option is »Run as a web user« in order to have traceable request execution. Consequently, appropriate access rights to application databases the users will access (indirectly through the administration database), need to be provided for all possible service users.

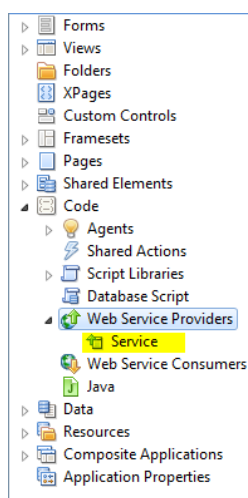


Image 98: Web service provider »Service«

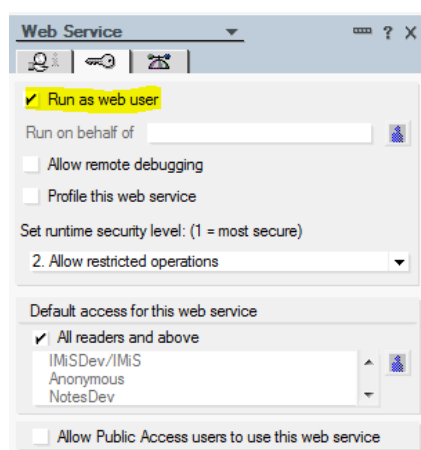


Image 99: Specifying user context

## 5.5 Administration interface actions

Index actions and Document actions are available.

### Index actions

**[Print]** Printing one or more selected documents.

**[New <document type>]** Generating a new configuration document.

<document type> = [configuration|dataset|datasource|section|action]

The action is available if the user has full editing rights in the database.

### Document actions

**[Edit]** Enabling editing of individual field values in a document.

The action is available in view mode if the user has full editing rights in the database.

**[Save]** Saving the settings of the current document.

The action is available in editing mode.

**[Close]** Closing the current document.

## 6 CONFIGURATION

The »**Configurations**« section deals with configurations that define the appearance of an application on a mobile device.

Configuration structure is as follows:

- Image (base64 format, URL)
- String (localized string of characters)
- Bundle (localization of images and strings)
- Transport (response time)
- Session (allowed time)
- Style (global, class)
- Page (portal, page, item)
- View (view, navigation view, table view)
- Document (section, document)
- Section (column, row, content).

### 6.1 Device profiles

In the section »**Device profiles**« the user sets profiles. A profile refers to the application version and data on the mobile device that is using the application.

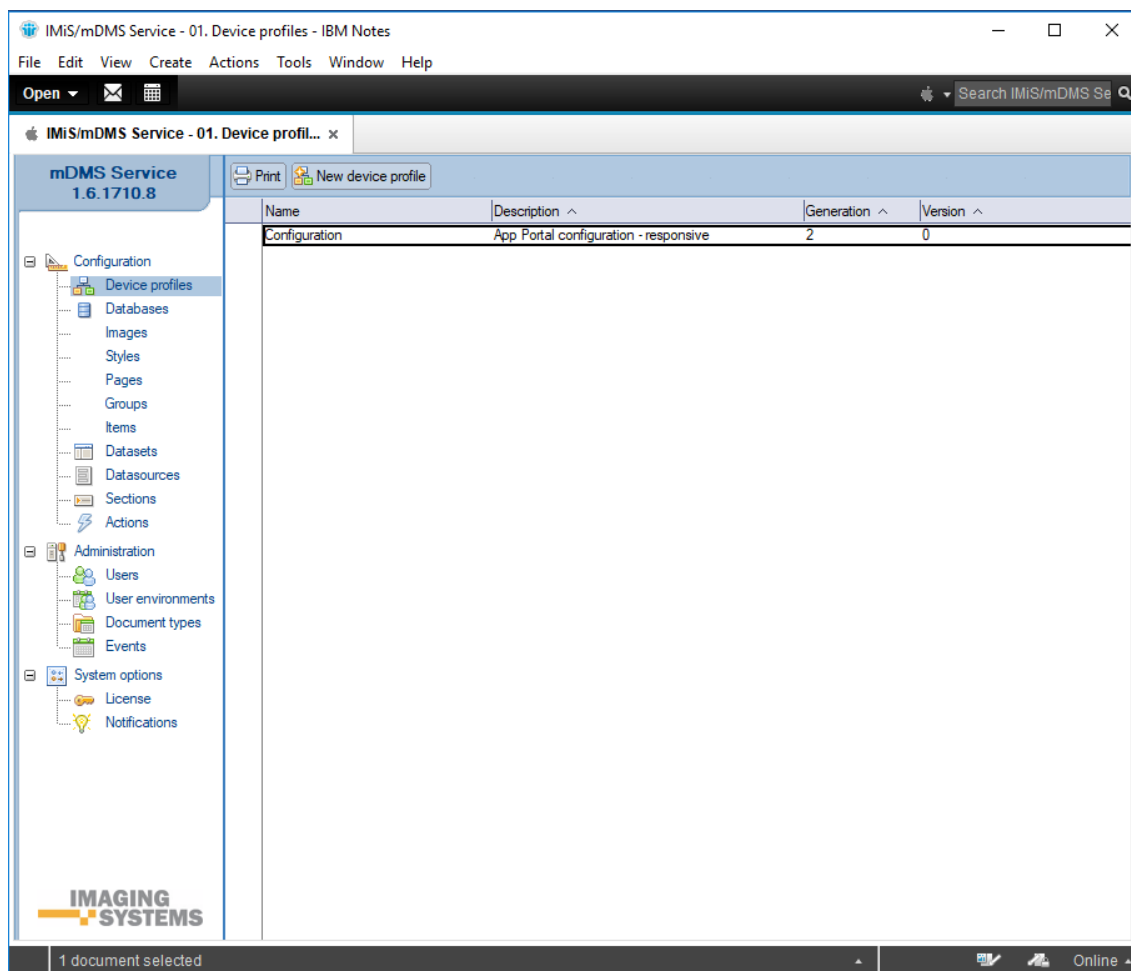


Image 100: View of the »Device profiles« section

The document fields are divided into the following headers:

- »Basic information«.
- »Configuration«.

### 6.1.1 Basic information

The »Basic information« header, the user specifies the name of configuration to access the mobile device.

Basic information			
Name:	Configuration	Description:	App Portal configuration - responsive
Generation:	2	Version:	0
Condition: <@>		Traffic disposition:	Normal

Image 101: View of settings in the »Basic information« header



**[Name]** Name of configuration. Data is required.

**[Generation]** Configuration generation. If the configuration scheme changes to such an extent that it is not compliant with the previous one, then configuration generation enhancement is advised. The field is required and it must be a non-negative integer.

**[Condition <@>]** The formula with which the user specifies a condition under which a user can access the current profile. The result of the formula is true or false. Data is required.

The following virtual variables can be used:

- \$application.version
- \$application.locale
- \$application.mode
- \$device.os
- \$device.manufacturer
- \$device.model
- \$device.processor
- \$device.screen.x.resolution
- \$device.screen.x.dpi
- \$device.screen.y.resolution
- \$device.screen.y.dpi

Image 102: The available virtual variables in the »Condition« field

Virtual variable	Description	Example
\$application.version	Application version	1.5.1611.26
\$application.locale	Application locale	en-US
\$application.mode	Application mode	TABLET
\$device.os	Device operating system	iPhone OS 9.3.5
\$device.manufacturer	Device manufacturer	Apple
\$device.model	Device model	iPad 3.3
\$device.processor	Device processor	ARM
\$device.screen.x.resolution	Device screen X resolution	2048
\$device.screen.x.dpi	Device screen X dpi	264
\$device.screen.y.resolution	Device screen Y resolution	1536
\$device.screen.y.dpi	Device screen Y dpi	264

Image 103: The translation table between virtual variables and descriptions

**[Description]** Description of configuration. Data is not required.

**[Version]** Configuration version. If there is a slight change in configuration, then configuration version enhancement is advised. The field is required and must be a non-negative integer.

**[Traffic disposition]** Mode of data forwarding to a mobile device.

The following options are available to the user:

- The »Normal« option is typically used in a development and testing phase, when a developer is testing whether a mobile device's reaction is expected.
- The »GZip compression« option is used in production, as it is vital that the reaction is as fast as possible because of compressed data. Data is required.

»GZip compression« is used in data sharing.

### 6.1.2 Configuration

The »**Configuration**« header, the user specifies application appearance on a mobile device.

[illegible]

Image 104: View of application appearance in XML format in the »Configuration« header

**[Configuration]** Application appearance is written in XML. When saved, the content is compressed so it is ready for forwarding to a mobile device. Data is required.

#### 6.1.2.1 The definition of the of the appearance of the application in XML format

```
<config>
  <transport timeout="60"/>
  <session timeout="3600"/>
  <resbundle locale="en-US">
    <image id="LOGO-PORTAL">
      <body>base64 representation of the image</body>
    </image>
    <image id="PORTAL-ICON-DOCS">
      <body>base64 representation of the image</body>
    </image>
    <image id="ICON-CRM">
      <body>base64 representation of the image</body>
    </image>
    <image id="NAVICON-BRIEFCASE">
      <body>base64 representation of the image</body>
    </image>
    <image id="NAVICON-ENVELOPE">
      <body>base64 representation of the image</body>
    </image>
  </resbundle>
</config>
```

```

</resbundle>
<page id="portal" root="true" icon="LOGO-PORTAL" titleLabel="Applications" ...>
  <item id="PORTAL_CRM" icon="PORTAL-ICON-DOCS" target="VIEW_CRM" context="">CRM</item>
</page>
<view id="VIEW_CRM" initial="true" navigator="NAV_CRM"... />
<view id="NAV_CRM_EV_contact" navigator="NAV_CRM_EV_contact"/>
<viewNav id="NAV_CRM" ...>
  <item icon="NAVICON-BRIEFCASE" caption="Contacts by company"
target="TABLE_CRM_contactsByCompany" context="" />
  <item icon="NAVICON-ENVELOPE" caption="Contacts by owner"
target="TABLE_CRM_contactsByOwner" context="" />
</viewNav>
<viewNav id="NAV_CRM_EV_contact" ...>
  <item icon="" caption="All" target="TABLE_CRM_EV_CorrespondenceAll" context="" />
</viewNav>
<viewTable id="TABLE_CRM_contactsByCompany" source="DATASET_CRM_contactsByCompany"
tableTitle="Contacts by company" ...>
</viewTable>
<viewTable id="TABLE_CRM_contactsByOwner" source="DATASET_CRM_contactsByOwner"
tableTitle="Contacts by owner" ...>
</viewTable>
<viewTable id="TABLE_CRM_EV_CorrespondenceAll" source="DATASET_CRM_EV_CorrespondenceAll"
tableTitle="Correspondence - All" ...>
</viewTable>
<doc id="DATASOURCE_CRM_contact" titleField="title" idField="idField"
createdField="created" statusField="status" authorField="author" icon="LOGO-DOCHDR-CRM" ...>
  <section id="SECTION_CRM_contact_Lead" title="Lead".../>
  <section id="SECTION_CRM_contact_Source" title="Source" .../>
  <section id="SECTION_CRM_contact_Owner" title="Owner" .../>
  <section id="EVContact" title="Correspondence" .../>
</doc>
<section id="SECTION_CRM_contact_Lead" type="T" rowOffset="7" contentOffset="1%">
  <col labelWidth="16%" valueWidth="84%">
    <field id="name" type="S" label="Name / Surname" orientation="H"/>
    <field id="company" type="S" label="Company" orientation="H"/>
    <field id="zipCity" type="S" label="Zip / City" orientation="H"/>
    <field id="email" type="S" label="E-mail" orientation="H"/>
  </col>
</section>
<section id="SECTION_CRM_contact_Source" type="T" rowOffset="7" contentOffset="2%">
  <col labelWidth="16%" valueWidth="84%">
    <field id="source" type="D" label="Source" orientation="H"/>
    <field id="sourceInfo" type="S" label="Detail" orientation="H"/>
  </col>
</section>
<section id="SECTION_CRM_contact_Owner" type="T" rowOffset="7" contentOffset="1%">
  <col labelWidth="16%" valueWidth="84%">
    <field id="owner" type="S" label="Owner" orientation="H"/>
    <field id="ownerInfo" type="S" label="Detail" orientation="H"/>
  </col>
</section>
<section id="EVContact" type="W" columnOffset="2%" rowOffset="7">
  <col labelWidth="0%" valueWidth="100%">
    <wrapper id="VIEW_CRM_EV_contact" target="VIEW_CRM_EV_contact"/>
  </col>
</section>
</config>

```

Image 105: An example of the appearance of the application in XML format

### 6.1.2.2 Structure description of an XML document

### 6.1.2.2.1 Image

Locally defined binary graphical resource encoded in base64 format.

```
<image id="image Id">
  <body>Format: Base64"</body>
</image>
```

Image 106: Structure description of »Image encoded in base64« in XML format

Example:

Image of a profile background encoded in Base64 is saved locally.

[illegible]

Image 107: Example of a structure description of an image of a profile background encoded in Base64

Remote binary graphical resource accessible through its URL.

```
<image id="image Id">
  <url>URL"</url>
</image>
```

Image 108: Structure description of »Image accessible through URL« in XML format

Example:

Image of a profile background is captured online (URL link).

```
<config>
<session timeout="3600"/>
<resbundle locale="en-US">

  <image id="LOGIN-BACKGROUND">
    <url>https://i.imgur.com/kZPEccB.jpg</url>
  </image>

```

Image 109: Example of a structure description of an added image of a profile background from a URL link

#### 6.1.2.2.2 String

Localized string of characters.

```
<string id="stringId">All</string>
```

Image 110: Structure description of »string« in XML format

#### 6.1.2.2.3 Bundle

It is used for localization of images and strings. If the used localization is not specified in the config markup, Locale="en-US" is used.

```
<resbundle locale="sl-SI">
  <image id= "image ID">
    <body>Format: Base64</body>
  </image>
  <string id="string ID" >All</string >
</resbundle>
```

Image 111: Structure description of »resbundle« in XML format

#### 6.1.2.2.4 Transport

```
<transport timeOut="number of seconds"/>
```

Image 112: Structure description of »transport« in XML format

Attribute description:

- timeOut [unsignedInt]: (default = "60"); the longest time allowed (in seconds) between a server request and a server response.

#### 6.1.2.2.5 Session

```
<session timeOut="number of seconds"/>
```

Image 113: Structure description of »session« in XML format

Attribute description:

- timeOut [unsignedInt]: (default = "1800"); the longest time allowed (in seconds) between two server requests. Otherwise the application logs out.

### 6.1.2.2.6 Style

Global style names:

- LOGIN : login page
- PAGE : portal
- VIEW : view
- VNAV : navigation menu
- VTBL : table view
- DOC : document
- SEC : document section
- FLD : section field

Global style:

```
<style ctx="DOC" minWidth="481" maxWidth="840" mode="PHONE">
  <item id="titleFontColor">0,0,0</item>
</style>
```

Image 114: Structure description of global »style« in XML format

Class style : (begins with character '.')

```
<style ctx=".className">
  <item id="labelFontStyle">B</item>
</style>
```

Image 115: Structure description of class »style« in XML format

Attribute description of the »style«:

- ctx [string]: a list of elements that the style belongs to. The values can be global or class names. More styles are separated with » . «.

Example: ctx="DOC SEC .myStyle1 .myStyle2"

- minWidth (option) [int]: minimum allowed screen width of a mobile device in pixels.
- maxWidth (option) [int]: maximum allowed screen width of a mobile device in pixels.
- mode (option): »TABLET« or »PHONE«. If not present, the style applies for both mobile device types.

Attribute description of the »item«:

- id [string]: style identifier.
- Value [string]: style value.

The validity order of the styles:

1. Styles set for a class at the service.
2. Inline in the element.
3. Styles set for a class.
4. Global style.
5. Default style.

*Example of use:*

```
<element class="myStyle1"/>
```

element: page, view, viewNav, viewTable, doc, sec, col, field

<https://www.google.com/design/spec/layout/responsive-ui.html#responsive-ui-breakpoints>

### 6.1.2.2.7 Login page

At the login page user chooses a profile and logs in with a username and password.

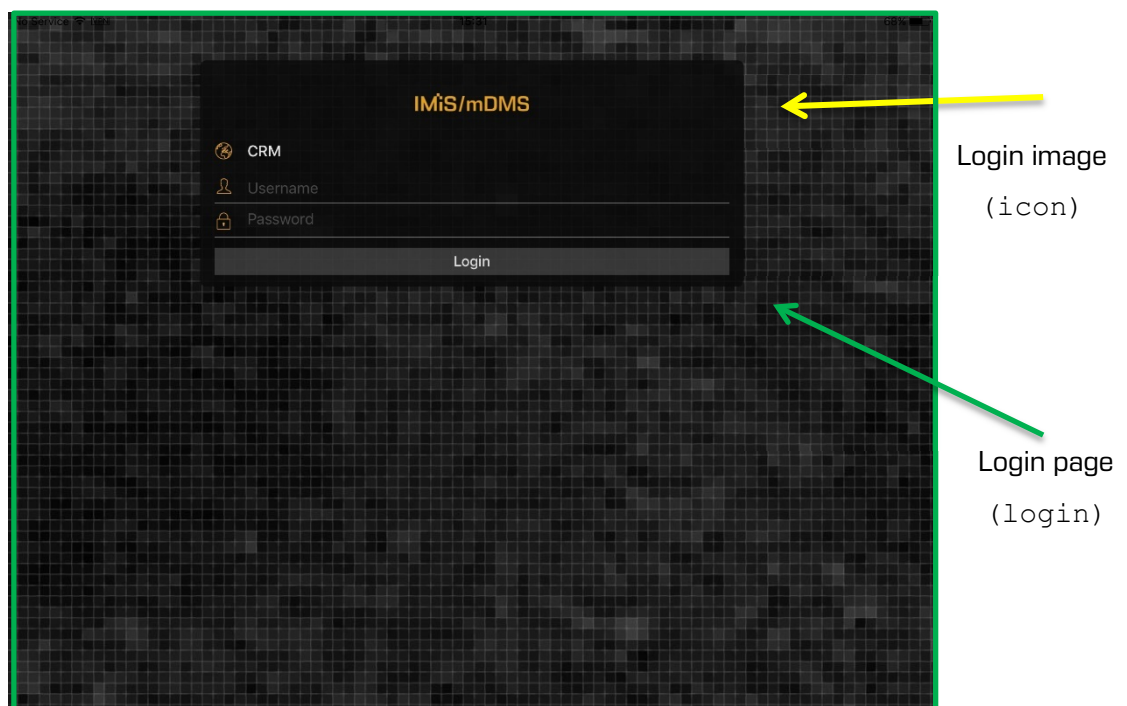


Image 116: Reviewing a login into the »CRM« application via a mobile device

```
<login icon="" background="" backgroundColorBottom="" backgroundColorTop=""  
backgroundModel=""/>
```

### Description of „login“ attributes

- The login element can be attributefree, because it contains only stylistic elements; it can be defined only with styles.

#### 6.1.2.2.7.1 The »Login« element style

Global name: LOGIN.

- backgroundColorBottom [string: 0,0,0] [default: 0,0,0] bottom background color
- backgroundColorTop [string: 0,0,0] [default: 0,0,0] top background color
- background [string] id background image
- backgroundMode [string] : (default: none) background creation mode
  - none : Background image is centered. Image size does not change.

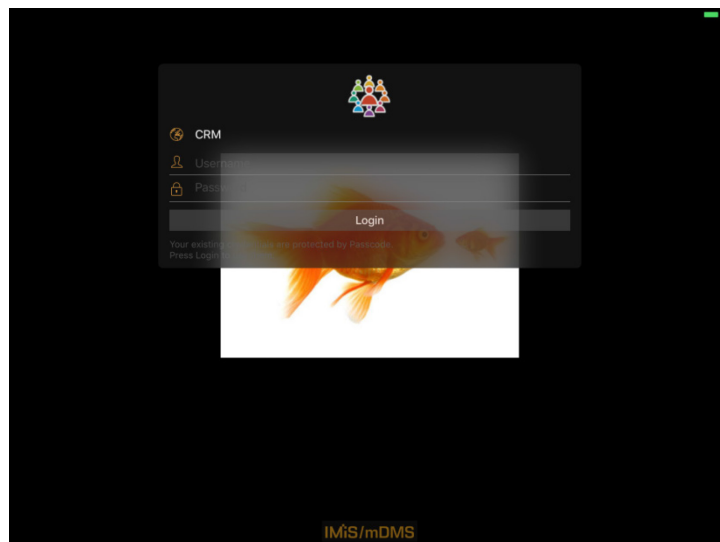


Image 117: Example of a centered background image



- tile : Image is duplicated in the x- and y-direction.

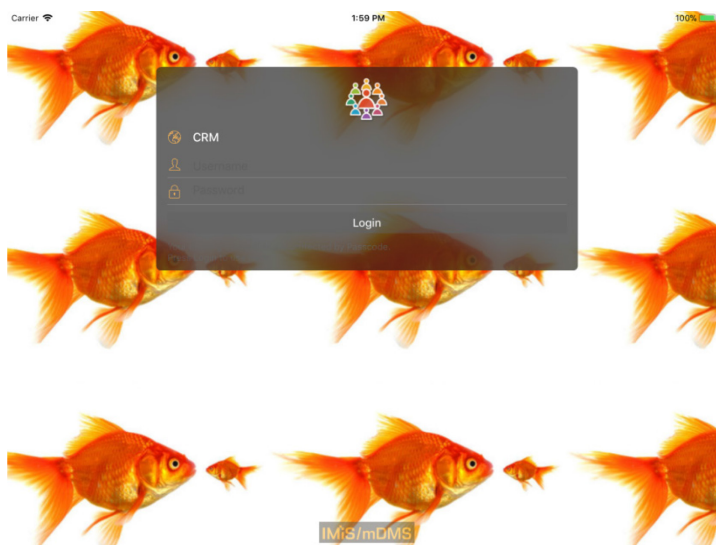


Image 118: Example of a background image duplicated in the x- and y-direction

- tileX : Image is duplicated in the x-direction.

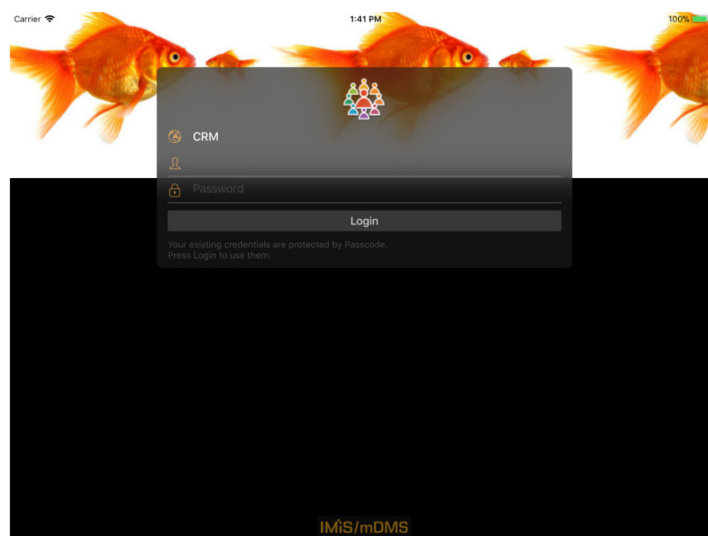


Image 119: Example of a background image duplicated in the x-direction

- tileY : Image is duplicated in the y-direction.

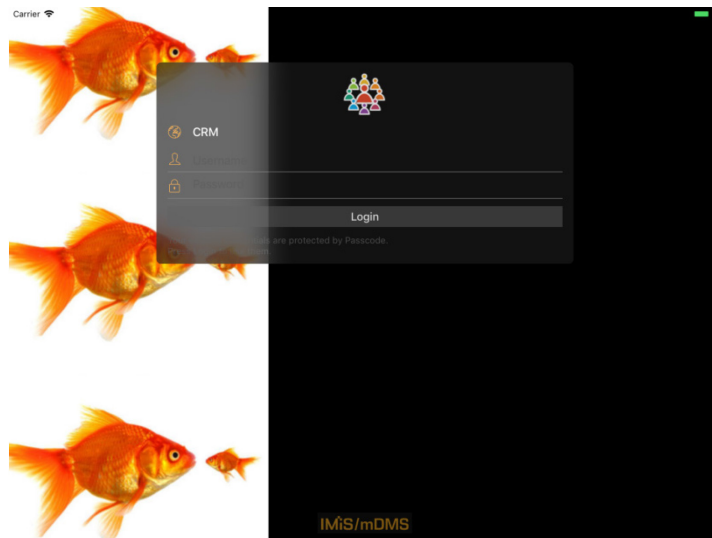


Image 120: Example of a background image duplicated in the y-direction

- fit : Image is adjusted to screen size by being stretched evenly. What moves off screen is cut off.

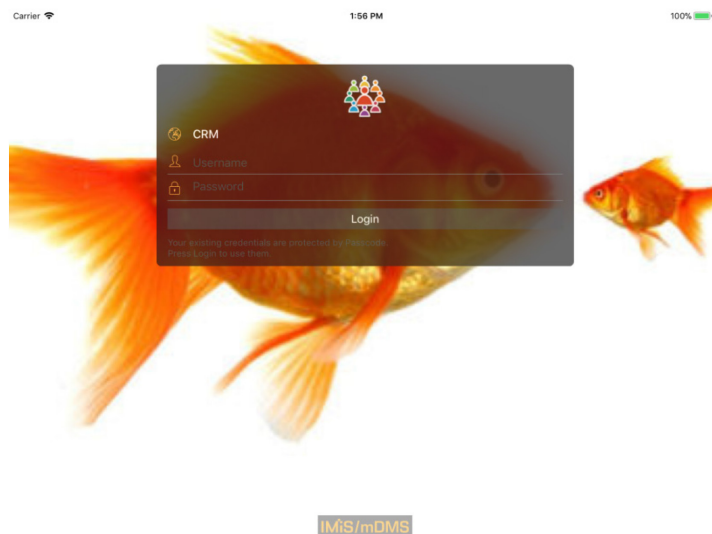


Image 121: Example of adjusting an image to screen size

- icon [string]: (default:"") image id that is shown in the login dialog. If empty, the IMiS®/mDMS logo from the top image is shown.

### 6.1.2.2.8 Page

Page or portal is the starting point of navigation, which leads us through the elements of the portal to subordinated views.

The following elements are used for specifying:

- Page
- Group
- Page item.

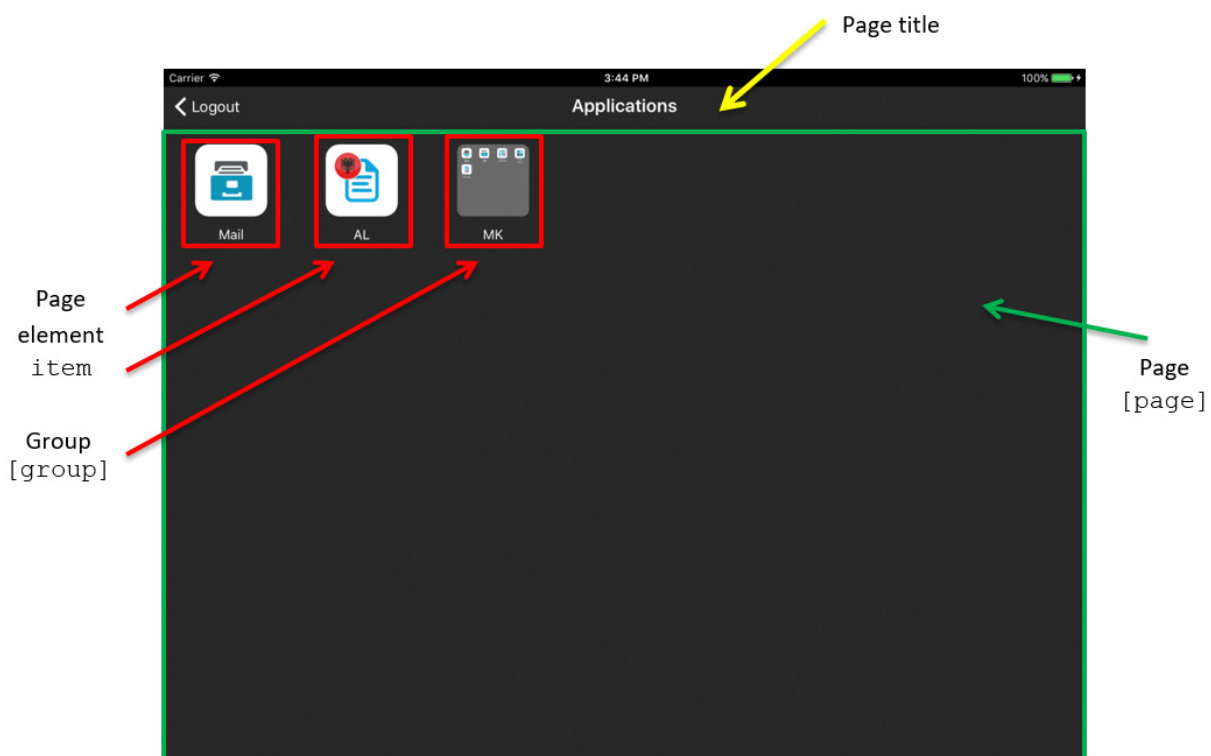


Image 122: View of »page«, »group« and »item«

```
<page id="PORTAL_RO" initial="true" titleLabel="Applications" icon="">
  <group id="GROUP_MK" caption="MK" seq="3"/>
    <item id="PORTAL_RO_mail" icon="PORTAL-MAIL" target="VIEW_RO_PELIKAN_mail" context=""
seq="1">Mail</item>
    <item id="PORTAL_AL_group" icon="PORTAL-AL" target="PORTAL_ME" context=""
seq="2">AL</item>
    <item id="PORTAL_MK_mail" icon="PORTAL-MAIL" target="VIEW_MK_PELIKAN_mail" context=""
group="GROUP_MK">Mail</item>
    <item id="PORTAL_MK_contracts" icon="PORTAL-CONTRACTS" target="VIEW_MK_POSEL_contracts"
context="" group="GROUP_MK">Contracts</item>
    <item id="PORTAL_MK_CostInvoices" icon="PORTAL-COSTINV"
target="VIEW_MK_NABAVA_CostInvoices" context="" group="GROUP_MK">Cost invoices</item>
    <item id="PORTAL_MK_tasks" icon="PORTAL-TASKS" target="VIEW_MK_NALOGUE_tasks" context=""
group="GROUP_MK" seq="1">Tasks</item>
    <item id="PORTAL_MK_localApplication" icon="PORTAL-EANTRAG"
target="VIEW_MK_ANTRAGS_localApplication" context="" group="GROUP_MK">e-Antrag</item>
  </group>
</page>
<page id="PORTAL_PFGAL" initial="false" titleLabel="Applications - AL">
```

```

<item id="PORTAL_AL_mail" icon="PORTAL-MAIL" target="VIEW_AL_PELIKAN_mail"
context="">Mail</item>
<item id="PORTAL_AL_contracts" icon="PORTAL-CONTRACTS" target="VIEW_AL_POSEL_contracts"
context="">Contracts</item>
<item id="PORTAL_AL_tasks" icon="PORTAL-TASKS" target="VIEW_AL_NALOGUE_tasks"
context="">Tasks</item>
<item id="PORTAL_AL_localApplication" icon="PORTAL-EANTRAG"
target="VIEW_AL_ANTRAGS_localApplication" context="">e-Antrag</item>
</page>

```

Image 123: Structure description of element »page« in XML format

#### 6.1.2.2.8.1 The »page« element

Global name: PAGE.

Attribute description of the »page« element:

- backgroundColorBottom [string: 0,0,0]: (default: 0,0,0) bottom background color.
- backgroundColorTop [string: 0,0,0]: (default: 0,0,0) top background color.
- background [string]: background image id.
- backgroundMode [string] : (default: none) background creation mode
  - none : Background image is centered. Image size does not change.

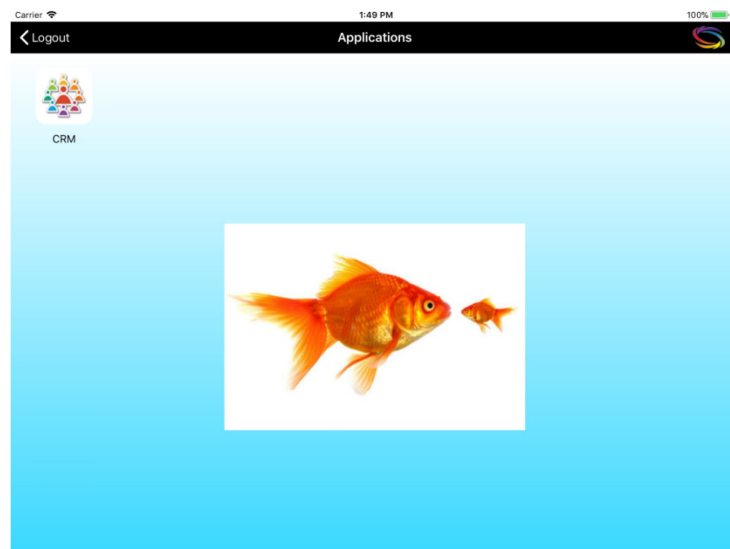


Image 124: Example of a centered background image

- tile : Image is duplicated in the x- and y-direction.

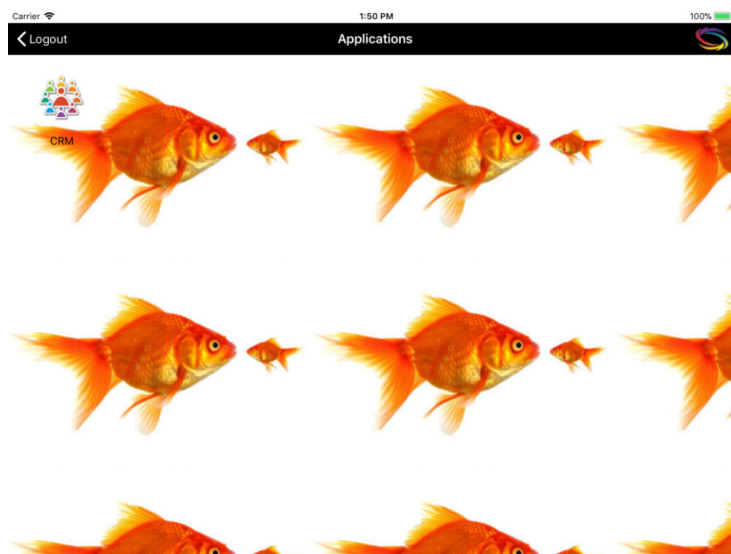


Image 125: Example of a background image duplicated in the x- and y-direction

- tileX : Image is duplicated in the x-direction.

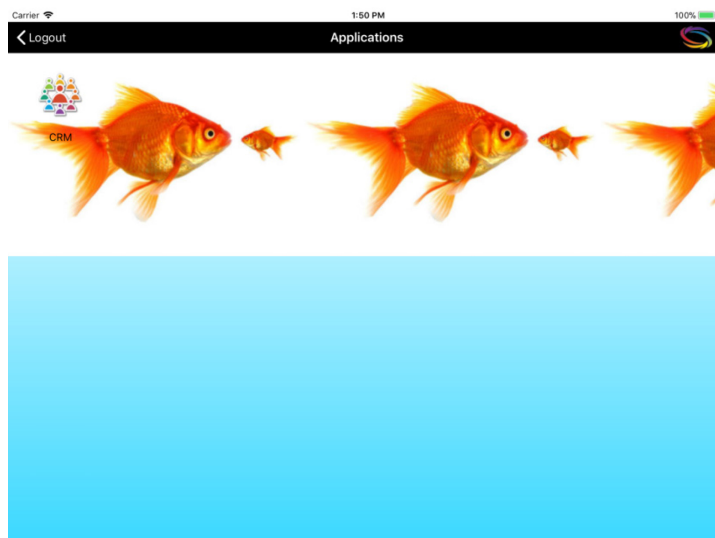


Image 126: Example of a background image duplicated in the x-direction

- tileY : Image is duplicated in the y-direction.

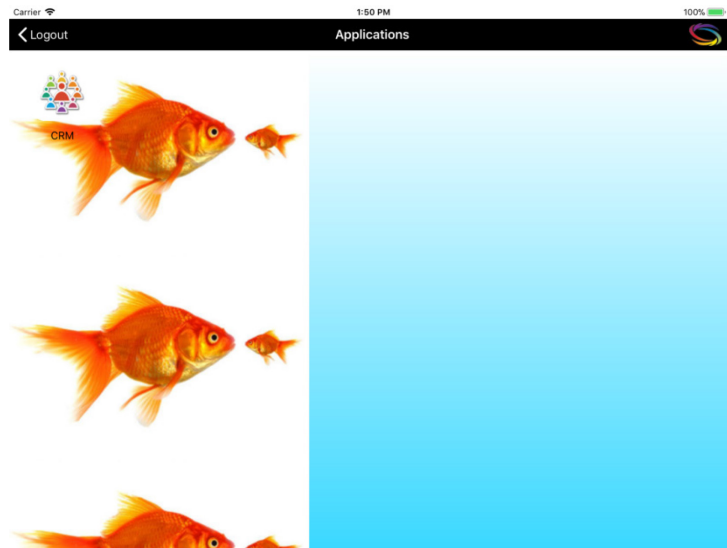


Image 127: Example of a background image duplicated in the y-direction

- fit : Image is adjusted to screen size by being stretched evenly. What moves off screen is cut off.

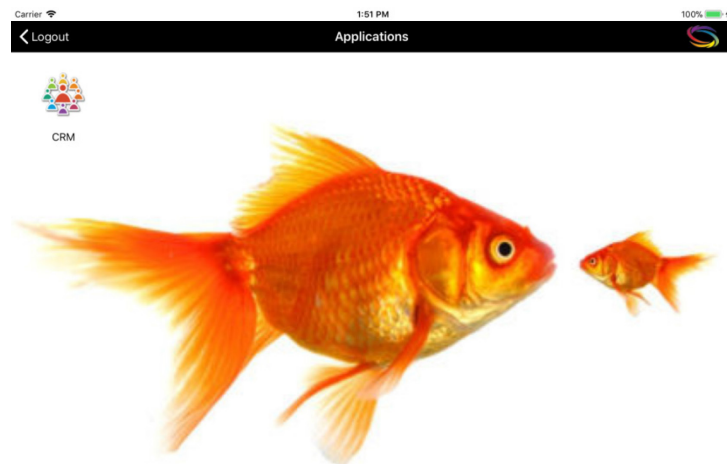


Image 128: Example of adjusting an image to screen size

- icon [string]: (default: "") image id in the upper right of the page.
- titleLabel [string]: (default: "") page title in the upper centre of the page.
- itemFontColor [string: 0,0,0]: (default: 255,255,255) font color of the element.

- titleFontColor [string: 0,0,0]: (default: 255,255,255) font color of the title (also specifies the icon colors in the toolbar).
- titleFontSize [Int]: (default: 20) title font size in pixels.
- titleFontStyle [char]: (default: N) font style
  - N: regular
  - B: bold
  - I: italics.
- titleFontColor [string]: (default: 0,0,0) font color in RGB (e.g.: 250, 244, 23).
- titleBackgroundColorBottom [string: 0,0,0]: [default: 0,0,0] bottom color of the toolbar background.
- titleBackgroundColorTop [string: 0,0,0]: [default: 0,0,0] top color of the toolbar background.
- titleBackground [string]: identifier of the background image of the toolbar.

#### 6.1.2.2.8.2 The »group« element

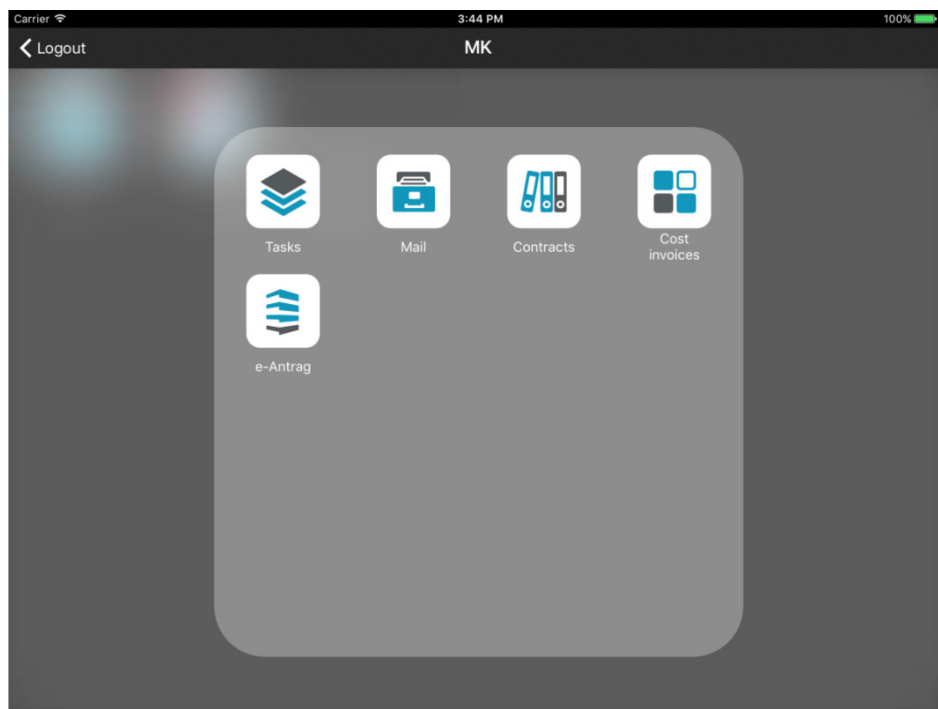


Image 129: View of »group« element

```

<page id="PORTAL_RO" initial="true" titleLabel="Applications" icon="">
  <group id="GROUP_MK" caption="MK" seq="3"/>
    <item id="PORTAL_MK_mail" icon="PORTAL-MAIL" target="VIEW_MK_PELIKAN_mail" context=""
group="GROUP_MK">Mail</item>
    <item id="PORTAL_MK_contracts" icon="PORTAL-CONTRACTS" target="VIEW_MK_POSEL_contracts"
context="" group="GROUP_MK">Contracts</item>
    <item id="PORTAL_MK_CostInvoices" icon="PORTAL-COSTINV"
target="VIEW_MK_NABAVA_CostInvoices" context="" group="GROUP_MK">Cost invoices</item>
    <item id="PORTAL_MK_tasks" icon="PORTAL-TASKS" target="VIEW_MK_NALOGGE_tasks" context=""
group="GROUP_MK" seq="1" >Tasks</item>
    <item id="PORTAL_MK_localApplication" icon="PORTAL-EANTRAG"
target="VIEW_MK_ANTRAGS_localApplication" context="" group="GROUP_MK">e-Antrag</item>
</page>

```

Image 130: Structure description of element »group« in XML format

### 6.1.2.2.8.3 The »item« element

»Item« element of the page. One page can contain N »item« elements.

Attribute description of the »item« element (\* marks required attributes):

- id\* [string]: element id.
- icon [string]: (default: "") image id that is shown in the element.
- target\* [string]: id of the following page, which will be displayed upon selection. It can also be new portal.
- context [string]: (default: "") context that is sent unchanged at target data request.
- group [string]: id of the group the element belongs to.
- seq [int]: position index in the portal list. If the attribute „group“ is selected, the position index in the list belongs to the defined group.
- title of the »item« element [string]: localized string or string identifier that is displayed as the subtitle of the element (text under the »item« element).

A description of the „group“ element attributes:

- id\* [string]: id of the group.
- caption\* [string]: id of a localized string or string that is displayed as the subtitle of the element.
- seq [int]: position index in the portal list.



#### 6.1.2.2.8.4 The »Page« element style

Global name: PAGE.

- backgroundColorBottom [string: 0,0,0] [default: 0,0,0]: bottom background color.
- backgroundColorTop [string: 0,0,0]: (default: 0,0,0) top background color.
- background [string] background image id.
- icon [string] : (default:"") image id in the upper right of the page.
- itemFontColor [string: 0,0,0] (default: 255,255,255) font color of the element.
- titleFontColor [string: 0,0,0]: (default: 255,255,255) font color of the title (also specifies the icon colors in the toolbar).
- titleFontSize [int]: (default: 20) title font size in pixels.
- titleFontStyle [char]: (default:N) font style
  - N: regular
  - B: bold
  - I: italics.
- titleFontColor [string]: (default:0,0,0) font color in RGB (e.g.: 250, 244, 23).
- titleBackgroundColorBottom [string: 0,0,0]: (default: 0,0,0) bottom color of the toolbar background.
- titleBackgroundColorTop [string: 0,0,0] [default: 0,0,0]: top color of the toolbar background.
- titleBackground [string]: identifier of the background image of the toolbar.

#### 6.1.2.2.9 View

View consists of the following elements:

- view (basic information).
- viewNav (navigation menu).
- viewTable (content).

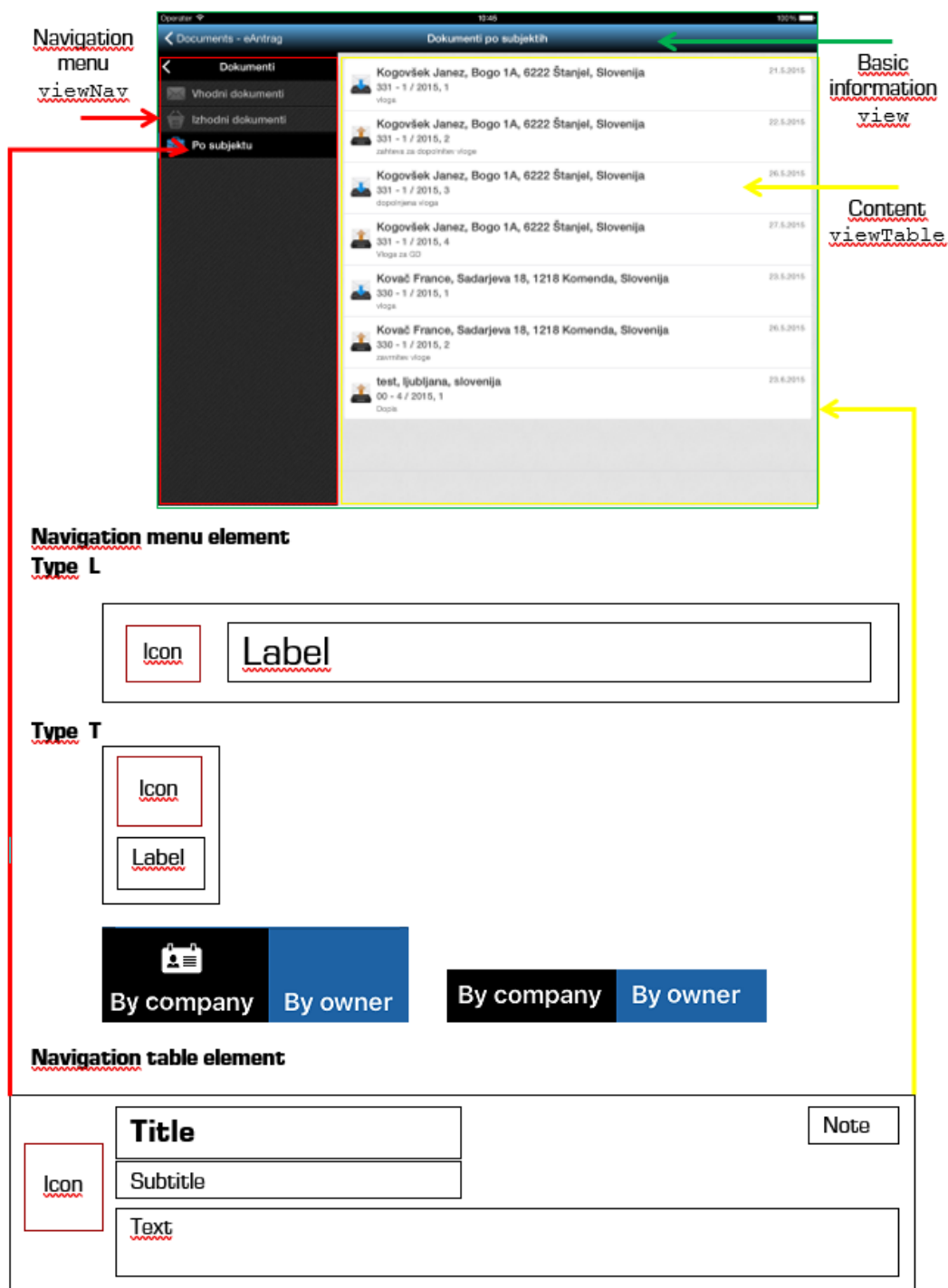


Image 131: View of »view«, »navigation menu«, »navigation table«, »content« and »content table«

### 6.1.2.2.9.1 The »view« element

Enables navigation through different databases of basic information on documents (document stub). It is used for menu navigation and selection of data display table. It can have several levels.

```
<view id="SingleView ID" root="true/false" initial="true/false" context="String"
navigator="navigation ID" table="table ID" class="className"/>
```

Image 132: Structure description of element »view« in XML format

Attribute description of the »view« element (\* marks required attributes):

- id\* [string]: element id.
- root [boolean]: (default: false) whether it is in root of navigation menu.
- initial [boolean]: (default: false) whether it is the first page after login window.
- context [string]: (default: "") context that is sent to the service unchanged in order to select appropriate data from the table (e.g.: "@Name[CN]; @UserName" ).
- navigator\* [string]: navigation menu id.
- table [string]: content table id.
- class [string]: style class.

*Note: »Navigator ID« or »table ID« are obligatory. »Navigator ID« is prioritized. If it does not exist, »table ID« and context are taken into account.*

#### 6.1.2.2.9.1.1 The »view« element style

Global name: VIEW

Attribute description of the »view« element style:

- titleFontColor [string: 0,0,0]: (default: 255,255,255) title font color (also specifies the icon colors in the toolbar).
- titleFontSize [int]: [default: 20] title font size.
- titleFontStyle [char: N/B/I]: [default: N]: title font style.
- titleBackgroundColorTop [string: 0,0,0]: (default: 0,0,0) top color of the toolbar gradient.
- titleBackgroundColorBottom [string: 0,0,0]: (default: 0,0,0) bottom color of the toolbar gradient
- titleBackground [string]: identifier of the background image of the toolbar.

### 6.1.2.2.9.2 The »viewNav« element

It is used for menu navigation and selection of data display table. It can have several levels.

```
<viewNav id="navigation ID" enabled="true/false" collapse="true/false" class="className">
  <item icon="icon id" caption="text" target="table Id" context="" default="true/false" />
  <item icon="" caption="item2">
    <item icon="icon id" caption="item2.1" default="true">
      <item icon="icon id" caption="item2.1.1" target="table ID" context="@Username" />
    </item>
  </item>
</viewNav>
```

Image 133: Structure description of element »viewNav« in XML format

Attribute description of the »viewNav« element (\* marks required attributes):

- id\* [string]: navigation menu id.
- enabled [boolean]: (default: true) possibility of influence on the menu elements
  - true: enabled menu element
  - false: disabled menu element (static, choice is not calibrated).
- class [string]: style class.

Attribute description of the navigation menu »item« element (cell) (\* marks required attributes):

- icon [string]: (default: "") image id next to label.
- highlightIcon [string]: (default: icon) image id next to label when a cell is selected;
- caption [string]: (default: "") label content.
- target\* [string]: table view id that is shown when selected.
- context [string]: (default: "") context that is sent unchanged to service in order to choose contextually appropriate table data (e.g. "@Name([CN];@UserName)").
- default [boolean]: (default: false) whether the cell represents the first selected element on the navigation menu. In case of several default="true" attributes, choose the first one.

#### 6.1.2.2.9.2.1 The »viewNav« element style

Global name: VNAV

Attribute description of the »viewNav« element style:

- background [string]: identifier of the background image of the toolbar.
- backgroundColorBottom: (default: 0,0,0) bottom color of the toolbar gradient.

- `backgroundColorTop`: (default: 0,0,0) top color of the toolbar gradient.
- `cellHeight`: (default: 40) height of the menu item in pixels.
- `collapse`: (default: true) »true« navigation is hidden; otherwise visible.  
Valid when `minWidth` = 0.
- `highlighted` [boolean]: (default: true) highlight selected cells.
- `highlightIconColorTop`: (default: 0,0,0) top color of the highlighted cell gradient.
- `highlightIconColorBottom`: (default: 0,0,0) bottom color of the highlighted cell gradient.
- `highlightIndicator` [boolean]: (default: true) show left line by the selected element.
- `highlightBackground` [string]: identifier of the background image.
- `highlightBackgroundColorBottom` [string: 0,0,0]: (default: 0,0,0) bottom color of the selected cell gradient.
- `highlightBackgroundColorTop` [string: 0,0,0]: (default: 0,0,0) top color of the selected cell gradient.
- `iconOffsetLeft`: (default: 0) left offset of the image in pixels.
- `iconColorBottom` [default: icon color does not change] bottom color of \*unselected\* icon in navigation.
- `iconColorTop` [default: icon color does not change] top color of \*unselected\* icon in navigation.
- `labelFontSize`: (default: 20) label font size in pixels.
- `labelFontStyle`: (default: N) label font style.
  - N: regular
  - B: bold
  - I: italics.
- `labelFontColor`: (default: 255,255,255) label font color of the menu element.
- `labelHighlightFontColor`: (default: 255,255,255) label font color when highlighting.
- `labelJust`: (default: L ) text position in the label
  - L: left alignment
  - C: center alignment
  - R: right alignment.
- `labelLines`: (default: 0) number of lines to display the text of the label element.
- `labelOffsetLeft`: (default: 0) left offset of the label element in pixels.
- `minWidth` [unsignedInt]: (default: 0) minimum navigation width.
- `width` [unsignedInt]: (default: system default width) menu width in pixels.

### 6.1.2.2.9.3 The »viewTable« element

It represents a set of »document stub« elements.

```
<viewTable id="table id" source="dataset ID" tableTitle="text" class="Class name"/>
```

Image 134: Structure description of element »viewTable« in XML format

Attribute description of the »viewTable« element (\* marks required attributes):

- id\* [string]: table identifier.
- source\* [string]: dataset identifier as registered in service.
- tableTitle [string]: (default: "") the table title is shown in the middle of the title bar/section when the table is shown.
- class [string]: style class.

#### 6.1.2.2.9.3.1 The »viewTable« element style

Global name: VTBL

Attribute description of the »viewTable« element style:

- marginLeft [unsignedInt]: (default: 0) left offset of the »view« table in pixels.
- marginBottom [unsignedInt]: (default: 0) bottom offset of the »view« table in pixels.
- marginRight [unsignedInt]: (default: 0) right offset of the »view« table in pixels.
- marginTop [unsignedInt]: (default: 0) top offset of the »view« table in pixels.
- cellHeight [unsignedInt]: (default: auto) cell height in pixels.
- highlighted [boolean]: (default: true) cell highlighting when selected.
- highlightedTextColor [string]: (default: true) highlighted cell text color when selected.
- dataOffsetLeft [unsignedInt]: (default: 0) left offset of cell content in pixels.
- dataOffsetRight [unsignedInt]: (default: 0) right offset of cell content in pixels.
- iconOffsetLeft [unsignedInt]: (default: 0) left offset of image in pixels.
- titleLines: (default: 0) number of lines for the title of the »document stub« in a cell.
- titleHeight [unsignedInt]: (default: auto) title height of the cell in pixels.
- titleJust [char]: (default: L) text position of cell title
  - L : left alignment
  - C: center alignment
  - R: right alignment.

- titleFontSize [unsignedInt]: (default: 20) title font size of the cell in pixels.
- titleFontStyle [char]: (default: N) title font style
  - N: regular
  - B: bold
  - I: italics.
- titleFontColor [string]: (default: 0,0,0) font color in RGB (e.g. 250, 244, 23).
- subTitleLines [unsignedInt]: (default: 0) number of lines for the subtitle of the »document stub« in a cell.
- subTitleFontColor [string]: (default: 0,0,0) font color in RGB (e.g. 250, 244, 23).
- subTitleFontSize [unsignedInt]: (default: 20) subtitle font size in pixels.
- subTitleFontStyle [char]: (default: N) subtitle font style
  - N: regular
  - B: bold
  - I: italics.
- subTitleHeight: (default: auto) subtitle height in a cell in pixels.
- subTitleJust [char]: (default: L) text position in a cell subtitle
  - L: left alignment
  - C: center alignment
  - R: right alignment.
- noteWidth [string]: (default: 0) »document stub« label width
  - pt (e.g. "20"): fixed offset in pixels
  - % (e.g. "15%"): offset in the percentage of cell width.
- noteLines [unsignedInt]: (default: 0) number of lines for the »document stub« label text.
- noteHeight [unsignedInt]: (default: auto) label height of the cell in pixels.
- noteJust [char]: (default: L) text position of a label in a cell
  - L: left alignment
  - C: center alignment
  - R: right alignment.
- noteFontSize [unsignedInt]: (default: 20) label font size in a cell in pixels.
- noteFontStyle [char]: (default: N) label font style
  - N: regular
  - B: bold
  - I: italics.

- **noteFontColor** [string]: (default: 0,0,0) label font color in RGB (e.g. 250, 244, 23).
- **textLines** [unsignedInt]: (default: 0) number of lines for the »document stub« context text in a cell.
- **textHeight** [unsignedInt]: content area height in a cell in pixels.
- **textJust** [char]: (default: L) text position in a cell
  - L (default): left alignment
  - C : center alignment
  - R : right alignment.
- **textFontSize** [unsignedInt]: (default: 20) content font size in a cell in pixels.
- **textFontStyle** [char]: (default: N) content font style
  - N (default): regular
  - B : bold
  - I : italics.
- **textFontColor** [string]: (default: 0,0,0) Content font color in RGB (e.g.: 250, 244, 23).

#### 6.1.2.2.10 Document

The document shows content in detail, where the content is divided into sections.



Image 135: View of document with content



```
<section id="section Id" type="T/W" class="className"/>
<section/>
```

Image 136: Structure description of »section« in XML format

#### 6.1.2.2.10.1 The »doc« section

Attribute description of the »doc« section (\* marks required attributes):

- id\* [string]: document identifier.
- titleField\* [string]: field identifier of document title.
- subTitleField [string]: (optional: not displayed if not specified) unique »created« field identifier (time of creation of the document).
- noteField [string]: (optional: not displayed if not specified) unique »status« field identifier (current document status).
- textField [string]: (optional: not displayed if not specified) unique »text« field identifier.
- class [string]: style class.

##### 6.1.2.2.10.1.1 The »doc« element style

Global name: DOC

Attribute description of the »doc« element style:

- borderOffset [unsignedInt]: (default: 0) border offset in pixels.
- subTitleHeight [unsignedInt]: (default: auto) height in a field »subTitle« in pixels.
- subTitleJust [chair]: (default: L ) text position in a field »subTitle«
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- subTitleFontSize [unsignedInt]: (default: 20) font size in a field »subTitle« in pixels.
- subTitleFontStyle [chair]: (default: N) font style in a field »subTitle«
  - N : regular
  - B : bold
  - I: italics.
- subTitleFontColor [string]: (default: 255,255,255) font color in a field »subtitle«.
- headerBackground [string]: background image identifier.

- headerBackgroundColorTop [string]: (default: 0,0,0) top gradient color of document header.
- headerBackgroundColorBottom [string]: (default: 0,0,0) bottom gradient color of document header.
- headerHeight [unsignedInt]: (default: auto) document header height in pixels.
- headerMargin [unsignedInt]: (default: 2) »subTitle«, »note«, »icon« and »text« offset.
- headerPadding [unsignedInt]: (default: 2) internal offset of the header field.
- icon [string]: unique »icon« field identifier (document logo).
- sectionsOffset [unsignedInt]: (default: 0) spacing between sections in pixels.
- noteHeight [unsignedInt]: (default: auto) height of the »note« field in pixels.
- noteJust [char]: (default: L) text position in the »note« field
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- noteFontSize [unsignedInt]: (default: 20): font size in the »note« field.
- noteFontStyle [char] (default: N) font style in the »note« field
  - N : regular
  - B : bold
  - I: italics.
- noteFontColor [string]: (default: 255,255,255) font color.
- noteLines [unsignedInt]: (default: auto) number of lines in the »note« field.
- noteWidth [unsignedInt]: (default: auto) width of the »note« field.
- titleFontSize [unsignedInt]: (default: 20) font size of the document's title in pixels.
- titleFontStyle [char]: (default: N) font style of the document's title
  - N : regular
  - B : bold
  - I: italics.
- titleFontColor [string]: (default: 255,255,255) font color of the document's title (also specifies the icon colors in the toolbar).
- titleBackground [string]: identifier of the background image of the toolbar.
- titleBackgroundColorBottom [string: 0,0,0]: bottom color of the toolbar gradient.
- titleBackgroundColorTop [string: 0,0,0]: top color of the toolbar gradient.

- textHeight [unsignedInt]: (default: auto) height of the »text« field in pixels.
- textJust [char]: (default: L ) text position in the »text« field
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- textFontSize [unsignedInt]: (default: 20) font size in the »text« field.
- textFontStyle [char]: (default: N) font style in the »text« field
  - N : regular
  - B : bold
  - I: italics.
- textFontColor [string]: (default: 255,255,255) font color in the »text« field.
- textLines [unsignedInt]: (default: auto) number of lines in the »text« field.

#### **6.1.2.2.10.2 The »section« element [config / doc / section]**

Attribute description of the »section« element (\* marks required attributes):

- id\* [string]: section identifier.
- title [string]: (default) section title.
- class [string]: style class.

##### **6.1.2.2.10.2.1 The »section« element style**

Global name: SEC

Attribute description of the »section« element style:

- visible [boolean]: (default: true) is the section visible; this element is used in connection with classes.
- headerBackground [string]: identifier of the background image of the section header.
- headerBackgroundColorTop [string]: (default: 0,0,0) top color of the section header gradient.
- headerBackgroundColorBottom [string]: (default: 0,0,0) bottom color of the section header gradient.
- headerHeight [unsignedInt]: (default: 40) section header height. For sections without headers, the value of the attribute is 0.

- height [unsignedInt]: (default: 200) section height. For »wrappers«, this value is used for the height of the »wrapper«.
- state [char]: (default: F ) initial section status
  - C - collapse: closed section, possible to expand/close
  - E - expanded: open section, possible to expand/close
  - F - fix: open section, not possible to expand/close
  - S - standalone: standalone section, section opens on a new page, only the header is visible, there is an arrow on the right side of the header.
- titleJust [char]: (default: L ) text position in the title of the section.
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- titleFontSize [unsignedInt]: (default: 20) font size in the title of the section.
- titleFontStyle [char]: [default: N] font style in the title of the section
  - N : regular
  - B : bold
  - I: italics.
- titleFontColor: (default: 255,255,255) font color in the title of the section (also specifies the icon colors in the section header).

#### 6.1.2.2.11 Section [config / section]

Represents the structure of individual sections in a document. A section is divided into columns with tables.



Lead			
Name / Surname	Mr. Thomas Grönvik	Position	CEO
Company	Fortunat AB	Address	Brunnsgatan 89
Zip / City	SE-824 26 Hudiksvall	Country	Sweden
E-mail	thomas.gronvik@fortunat.se	Web address	http://www.fortunat.se
No. of employees	35	Comment	

Image 137: View of section in the document

```
<section id="section Id" type="T/W" class="className"/>
</section>
```

Image 138: Structure description for specifying individual sections in XML format

Attribute description (\* marks required attributes):

- id\* [string]: section identifier If the string is empty, this is a subtitle of the section.
- type\* [char]: section type (mandatory when »id« is not an empty string)
  - T – table : section that consists of tables
  - W – wrapper : section that includes form.
- class [string]: style class.

Table is valid in section type »T«.

```
<col>
  <field id="field1 id" type="B/C/D/T/DT/DBL/INT/RT/S" label="text" />
  <field id="" type="S" label="Section subtitle" />
  <field id="field2 id" type="D" label="Entry date" />
</col>
```

Wrapper is valid in section type »W«.

```
<col>
  <wrapper id="wrapper Id" target="navigation id/id" />
</col>
```

Attribute description (\* marks required attributes):

- id\* [string]: wrapper id
- target\* [string]: identifier of a contained form.

#### 6.1.2.2.11.1 The »section« element

If shares are used, it is advisable that the sum of all shares (columnOffset, labelWidth, valueWidth) is equal to 100%.

The validity order of the section styles in a document:

1. Inline [config/doc/section]
2. Class [config/doc/section]
3. Class [config/section]
4. Global Section
5. Hardcoded.

#### 6.1.2.2.11.1.1 The »section« element style

Attribute description (\* marks required attributes):

- contentOffset (Section Type="T") [unsignedInt/string]: (default: 0) top, bottom, left and right offset of content from section margins
  - pt (e.g. "20"): fixed offset in pixels
  - % (e.g. "15%"): offset in percentage of section width.
- columnOffset (sectionType="T") [unsignedInt/string]: (default: 0) column offset in section
  - pt (e.g. "20"): fixed offset in pixels
  - % (e.g. "15%"): offset in percentage of content area width.
- rowOffset (sectionType="T") [unsignedInt/string]: (default: 7) offset of cells in a table (top and bottom margins)
  - pt (e.g. "20") (default: 7): fixed offset in pixels.

#### 6.1.2.2.11.2 The »col« element [config/section/col]

The validity order of the section styles in a document:

1. Inline [config/doc/section]
2. Class [config/doc/section]
3. Hardcoded.

#### 6.1.2.2.11.2.1 The »col« element style

Attribute description (\* marks required attributes):

- valueWidth [unsignedInt/string]: (default: 50%) value width in section
  - pt (e.g. "20"): fixed offset in pixels
  - % (e.g. "15%"): offset in percentage of section width.
- labelWidth [unsignedInt/string]: (default: 50%) label width in section:
  - pt (e.g. "20"): fixed width in pixels
  - % (e.g. "15%"): width in percentage of content area width.
- width [unsignedInt/string]: (optional) specifies column width; »valueWidth« and »labelWidth« depends on the new parameter if it is present.

### 6.1.2.2.11.3 The »field« element [config/section/field]

Valid for sectionType "T". Represents a field in a section table (which is multivalued).

```
<field id="field1 id" type="B/C/D/T/DT/DBL/INT/RT/S" label="text" orientation="H/V"
class="className" />
```

Image 139: Structure description of element »field« in XML format

Attribute description (\* marks required attributes):

- id\* [string]: unique field identifier.
- type\* [string]: type of field value
  - B – boolean (e.g.: T/F)
  - C – currency: currency in ISO currency format (e.g. CurrencyCode = "EUR" )
  - D – date (e.g. 2017-01-26)
  - T – time (e.g. 11:31:04)
  - DT – date time (e.g. 2017-01-26T09:31:20+02:00)
  - DBL – double (e.g. 3.43E+2)
  - INT – integer (e.g. 56)
  - RT - rich Text (only a fixed size text view where we navigate is supported)
  - S – string
  - IMG – image (image with image ID from configuration).
- label [string]: (default: "") field label (it can be defined through »Datasource« section with the » displayName « attribute).
- orientation\* [char]: field orientation
  - H – horizontal: the positions of label and value are in the same line
    - column width = labelWidth + valueWidth
  - V – vertical: the positions of label and value are in separate lines
    - column width = Max (labelWidth, valueWidth).
- class [string]: style class.

The validity order of the »field« element styles:

1. Inline [config/section/col/field]
2. Class [config/section/col/field]
3. Global Field
4. Inline [config/doc/section]
5. Class [config/doc/section]
6. Global Section
7. Hardcoded.

#### 6.1.2.2.11.3.1 The »field« element style

Global name: FLD

Attribute description (\* marks required attributes):

- labelJust [char]: (default: L ) label text position
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- labelFontSize [unsignedInt]: (default: 15) label font size.
- labelFontStyle [char]: (default: N) label font style
  - N : normal
  - B : bold
  - I : italic.
- labelFontColor [string]: (default: 0,0,0) label font color.
- orientation [char: H/V]: (default: H) field orientation
  - H – horizontal: label position and value are in the same row
    - column width = »LabelWidth« + »ValueWidth«
  - V – vertical: label position and value are in a separate row
    - column width = »Max(LabelWidth«, »ValueWidth«).
- valueJust [char: L/C/R]: (default: L ) value text position
  - L : left alignment
  - C : center alignment
  - R : right alignment.
- valueFontSize [unsignedInt]: (default: 15) value font size.



- valueFontStyle [char]: (default: N) value font style
  - N : normal
  - B : bold
  - I : italic;
- valueFontColor [string]: (default: 0,0,0) value font color.

## 6.2 »DATABASES«

In the section »Databases«, the user defines database location.

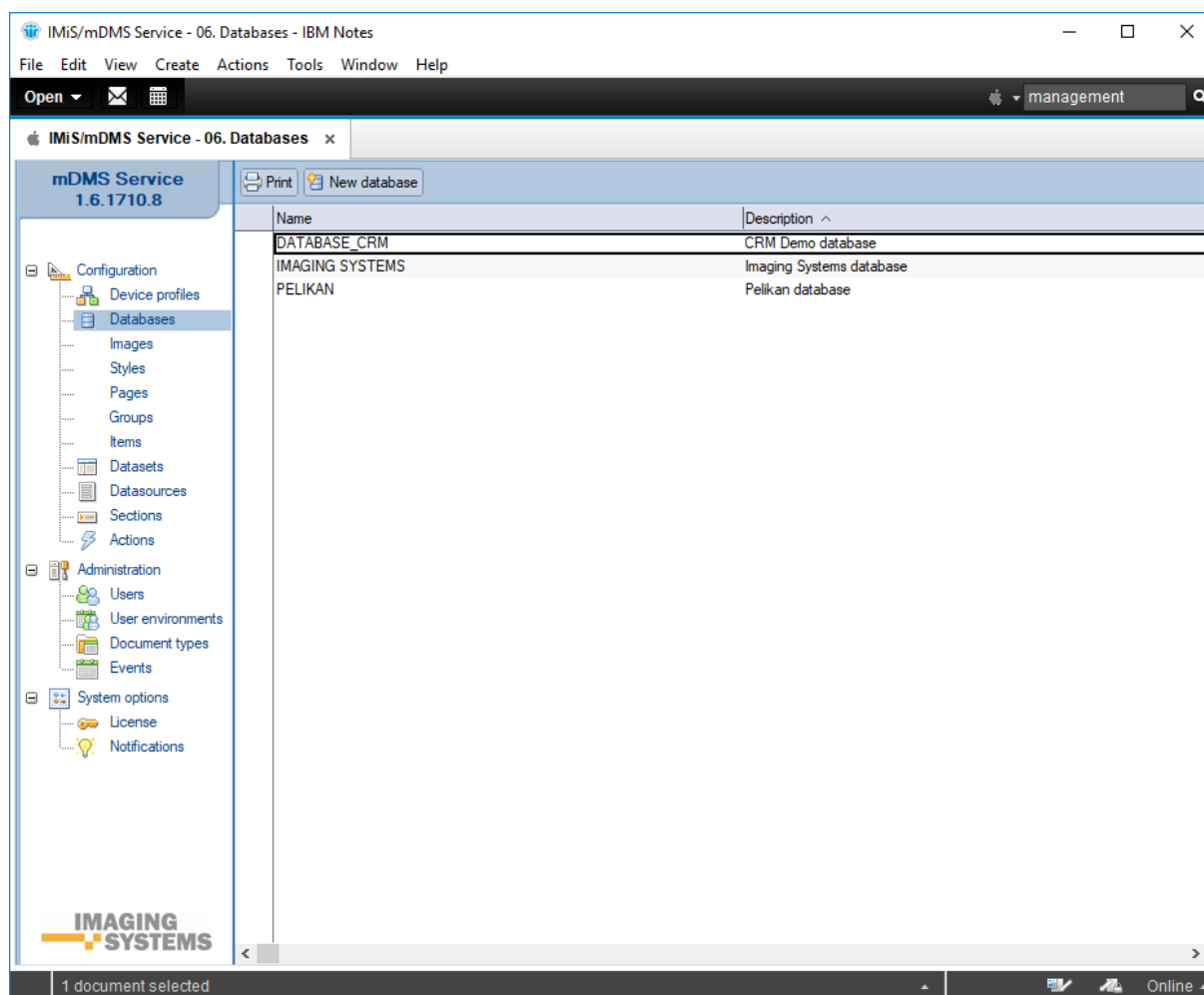


Image 140: View of the »Databases« section

The fields in the document are divided into following sections:

- Basic information
- Source.

### 6.2.1 Basic information

In the »Basic information« header, the user defines the name and description of the database.

Basic information	
Name:	DATABASE_CRM
Description:	CRM Demo database

Image 141: View of settings in the »Basic information« header

[Name] Database name. Data is required.

[Description] Short database description. Data is required.

### 6.2.2 Source

In the »Source« header, the user defines the database location and database id.

Source	
Database:	IMiSDev/IMiS dev\imis\mdmscrm.nsf
Replica ID:	C1257EFF003C002E

Image 142: View of settings in the »Source« header

[Database] Link to the database. Data is required.

[Replica ID] Database identifier. Data is required.

*Note: When entering manually, the user must pay attention to the correct format.*

## 6.3 »DATASETS«

In the »Datasets« section, the user defines the configurations that specify document sets.

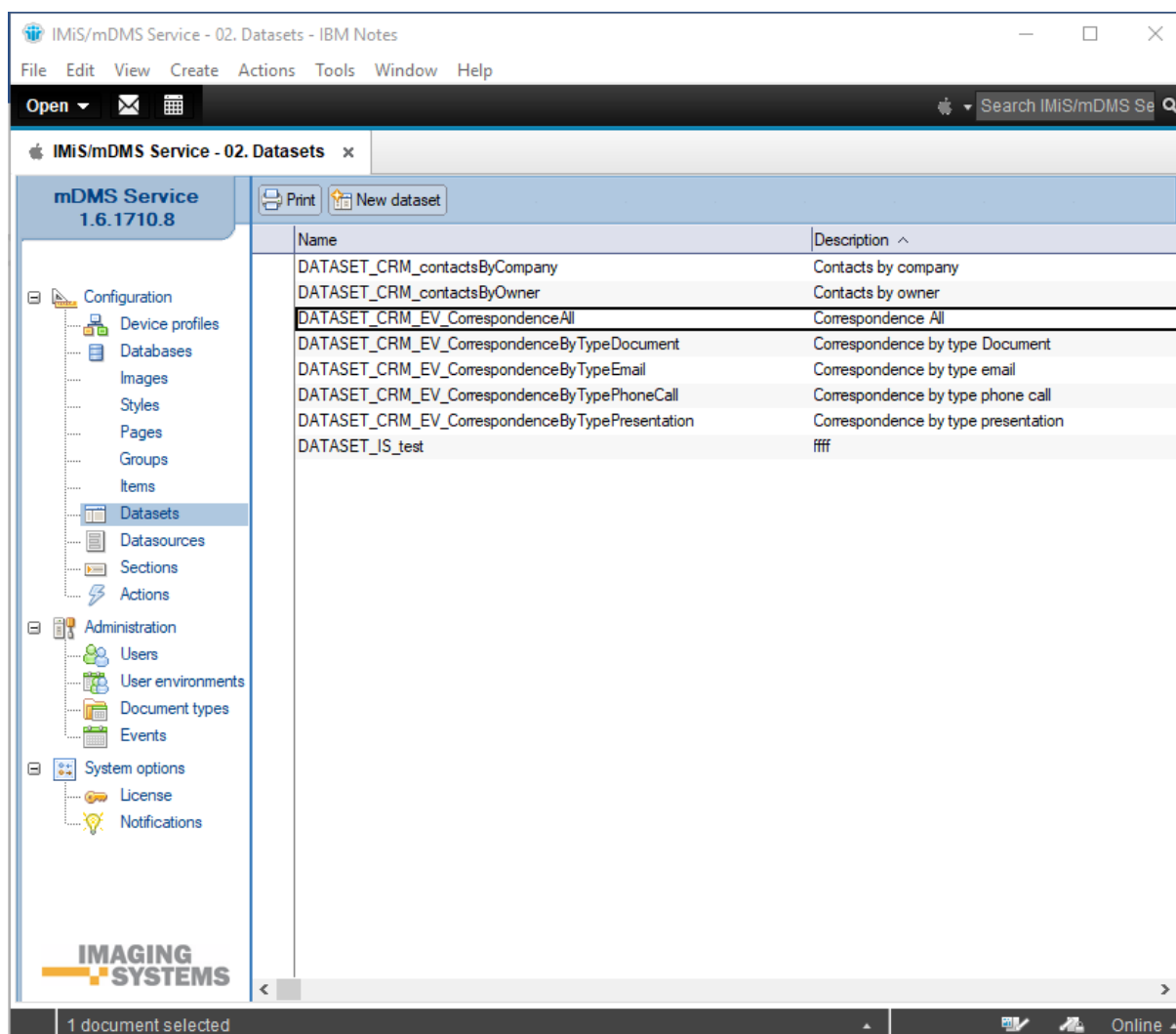


Image 143: View of the »Datasets« section

Document fields are divided into the following sets:

- Basic information.
- Source.
- Datasource.
- Source options.
- Data.
- Sections.

### 6.3.1 Basic information

In the »Basic information« header, the user defines a name for a document set and profiles for the current document selection.

Basic information			
Name:	DATASET_CRM_contactsByCompany	Description:	Contacts by company
Assigned device profiles:	Configuration - 2/0		

Image 144: View of settings in the »Basic information« header

[Name] Name of a document set. Data is required.

[Assigned device profiles] Assigned profiles of mobile devices. More than one can be selected. Data is not required.

[Description] Description of a document set. Data is not required.

### 6.3.2 Source

In the »Source« header, the user defines the source of a document set.

Source			
Source type:	View	Max collection size	100
Database:	DATABASE_CRM	View name:	ContactsByCompany

Image 145: View of settings in »Source« header

[Source type] Source type of a document set. The options available: »View«, »Database search«, »Custom« and »Aggregated dataset«.

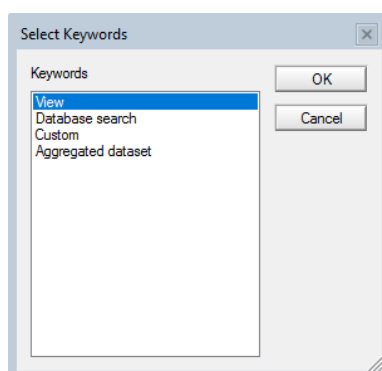


Image 146: View of dataset source type settings the »Source« header

The user can select between the following source types:

- The »View« option when an index of selected documents available.  
Efficiency-wise, this option is the best as there is no need for document search.  
The IMiS®/mDMS Service uses the existing index.
- »Database search« when an index is not available or if there is some other dynamic condition. (e.g., using the »@Today« function). Just as with the »View« option, the user is limited to documents from one database. Efficiency-wise, this option is disputable if a set contains a high number of documents.
- The »Custom« option allows the developer to implement his/her own logic for document search. The main advantage of this option is that documents can be stored in various databases. Efficiency-wise, this option depends on how it is implemented.
- The »Aggregated dataset« when he wants to combine data from multiple sources in a single document selection. This is usually to display documents from different collections in the IBM® Notes environment, which otherwise is not possible.

The possibilities of setting up the source of document selection, which differs by type, are described below.

#### 6.3.2.1 »View«

Source	
Source type:	View
Database:	DATABASE_CRM
Max collection size	100
View name:	(embedCorrespondenceAll)

Image 147: View of settings in the »Source« header for »View« source type

#### 6.3.2.2 Database search

Source	
Source type:	Database search
Database:	DATABASE_CRM
Max collection size	100
Selection:	<@>

Image 148: View of settings in the »Source« header for »Database search« source type

### 6.3.2.3 Custom

Source	
Source type:	Custom
Max collection size	100

Image 149: View of settings in the »Source« header for »Custom« source type

### 6.3.2.4 Aggregated dataset

Source	
Source type:	Aggregated dataset
Dataset names:	DATASET_CRM_contactsByCompany DATASET_CRM_EV_CorrespondenceAll DATASET_CRM_EV_CorrespondenceByTypeEmail
Max collection size	100

Image 150: View of settings in the »Source« header for »Aggregated dataset« source type

Select Keywords

Keywords

- ☒ DATASET\_CRM\_contactsByCompany
- ☐ DATASET\_CRM\_contactsByOwner
- ☒ DATASET\_CRM\_EV\_CorrespondenceAll
- ☐ DATASET\_CRM\_EV\_CorrespondenceByTypeDocument
- ☒ DATASET\_CRM\_EV\_CorrespondenceByTypeEmail
- ☐ DATASET\_CRM\_EV\_CorrespondenceByTypePhoneCall
- ☐ DATASET\_CRM\_EV\_CorrespondenceByTypePresentation

OK Cancel

Image 151: View of settings in the »Source« header for »Dataset names« field

**[Database]** Database that represents the source of a document set. It is available only in the »View« or »Database search« types of document source. Data is required.

**[Max collection size]** The highest number of documents in a set. For efficiency reasons, the number should not be more than 5000. Data is required.

**[View name]** Name of index that represents the source of document set. It is available, if the document source type is »View«. Data is required.

**[Selection <@>]** Selection formula that represents the source of a document set. It is available if the document source type is »Database search«. Data is required.

**[Dataset names]** Names that represent a document set. It is available if the document source type is »Aggregated dataset«. Data is required.

### 6.3.3 Execute

An additional »Execute« section is opened for the user if he selects »Custom« as a source of document set. In this section, user specifies the database where the agent and his name will be executed.



Image 152: View of settings in the »Execute« header

**[Database]** A database, where the agen is executed. It is available, if the document source type is »Custom«. Data is required.

**[Agent name]** The name of the agent that the user executed in the database. It is available for the »Custom« document source. Data is required.

### 6.3.4 Search options

In the »Search options« header, the user defines search options.



Image 153: View of settings in the »Search options« header

**[Allow search types]** Search types. »Full text search« and »Result set search« options are available. The user selects the settings option »Full text search« when he wants to search the full text. The user enters the search condition on a mobile device.

***Note:** For greater efficiency, it is recommendable to already have a built index when searching the full text.*

The user selects the option »Result set search« when he wants to allow the search by query results directly on a mobile device. Data is not required.

**[Relevance score]** Hit frequency display. The option »Show relevance« is available when a user wants to display hit frequency in a graphical form. It is relevant only when a document was found with full text search. Data is not required.

### 6.3.5 Data

In the »Data« header, the user defines document data in the document set view on a mobile device. A document record consists of: title, subtitle, content, note, icon and group.

Data	
Title: <@>	company
Subtitle: <@>	country
Content: <@>	"Rating: " + rating + ", Status: " + status
Note: <@>	@Text (dealValue; "F.2") + " " + currency
Icon: <@>	@If(rating = "Qualified" ; "VIEWICO-GREEN-ARROW-RIGHT" ; "")

Image 154: View of settings in the »Data« header

[Title <@>] Formula for title specification. Data is required.

[Subtitle <@>] Formula for subtitle specification. Data is required.

[Content <@>] Formula for content specification. Data is required.

[Note <@>] Formula for note specification. Data is required.

[Icon <@>] Formula for icon specification. It should be calculated on the name of an existing icon specified in a »Configuration« document. If an icon does not come into consideration, string remains blank. Data is required.

[Group <@>] Formula for specifying a document set view in groups. Data is not required.

#### Example of use:

*In the »Dataset« the value of the Group attribute remains: <@> empty.*

*On the mobile device the user can view a set of documents that are not sorted into groups.*

Exito Consulting AS		2.500,00 EUR
Norway		⬆
Status: Information, Rating: Not qualified		
Fortunat AB		6.700,00 EUR
Sweden		⬆
Status: Negotiation, Rating: Qualified		
KM Bilgisayar Yazılımları A.Ş.		14.000,00 EUR
TÜRKİYE		⬆
Status: Lost, Rating: Qualified		

Image 155: Example of use: View of a dataset that is not sorted into groups



In the »Data« set the user sets the value of the Group attribute: <@> = Status.

Note: <@>	@Text (dealValue; "F,2") + " " + currency
Icon: <@>	@If(rating = "Qualified" ; "VIEWICO-GREEN-ARROW-RIGHT" ; "")
Group: <@>	Status

Image 156: Example of use: Setting the values of the attribute »Group: <@>«

On the mobile device the user executes the action »Edit / Status« on a document with the company name »Exito Consulting AS«. From a set of available settings, the user selects »Information«.

Back	Status
New	
Information	✓
Presentation	
Proposal	
Negotiation	
Closed	
Lost	
Postponed	

Image 157: Example of use: Set of available values of the »Status« attribute

The document with the company name »Exito Consulting AS« is now shown in the group »Information«.



INFORMATION	
<b>Exito Consulting AS</b> Norway Status: Information, Rating: Not qualified	2.500,00 EUR
 <b>Ligo Teknoloji Ltd. Şti.</b> TÜRKİYE Status: Information, Rating: Qualified	42.000,00 EUR
NEGOTIATION	
 <b>Fortunat AB</b> Sweden Status: Negotiation, Rating: Qualified	6.700,00 EUR

Image 158: Example of use: View of the document set in groups based on values of the »Status« attribute

### 6.3.6 Sections

In the »Sections« header, the user selects sections connected to a document set.

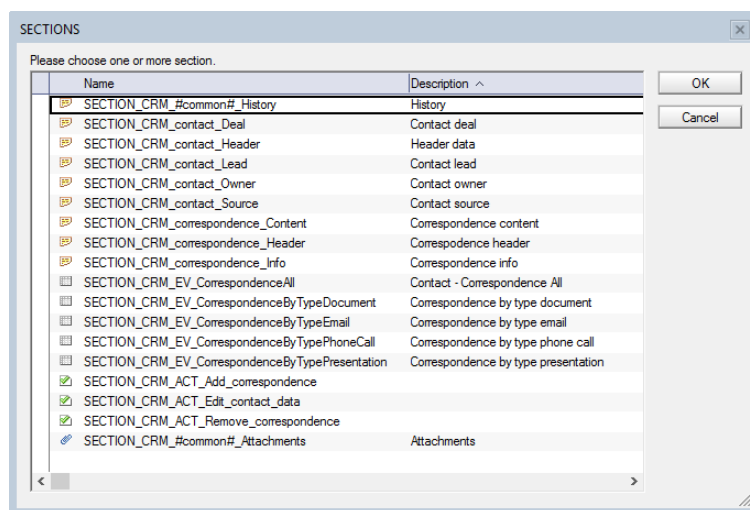


Image 159: Adding sections in the »Sections« header



Image 160: View of settings in the »Sections« header

Actions available: »Add« and »Remove«. Only section types »Actions« and »Dynamic actions« apply.

### 6.3.7 Logic implementation for document search

If the user chooses »Custom« as a document set source type, he needs to take care of logic implementation for returning the document set.

In the »Execute« header, the user first specifies a database and agent that is contacted in such case.

IMiS®/mDMS Service calls the agent and forwards a context document with the following fields:

**[sourceName]** Name of document set source.

**[sourceDbContext]** Context for document set extraction if available.

It is calculated based on the **[Get collection database context <@>]** field content in a »Dataset« document. The content of the field converts to a string if necessary.

If the calculation results are multivalued, only the first value applies.

**[sourceContext]** Context for the section if available.

It is calculated based on the **[Context <@>]** field content in a »Section« document.

Content of the field converts to a string if necessary. If the evaluation results are multivalued, only the first value applies.

**[sourceFilter]** Filter for full-text search if available. It should present a valid condition for full-text search. The user enters it on a mobile device.

IMiS®/mDMS Service as result of a call expects the agent to present document set data in fields **[docInfo1]**, **[docInfo2]**, ... **[docInfo<N>]**.

Each field can have any number of records in the following format:

*<Database server>#<Database file path>#<Document NoteID>#<Document full-text search score>.*

**[Database server]** Server where the document is stored. Data is required.

**[Database file path]** Path and name of the database where the document is stored.

Data is required.

**[Document NoteID]** Document NoteID. Data is required.

**[Document full-text search score]** Result frequency as returned by

*NotesDocument.FTSearchScore*. Data is optional and available to the user, in case the condition for full-document search is set.

## 6.4 Datasources

In the »**Datasources**« section, the user defines the configurations that specify document content.

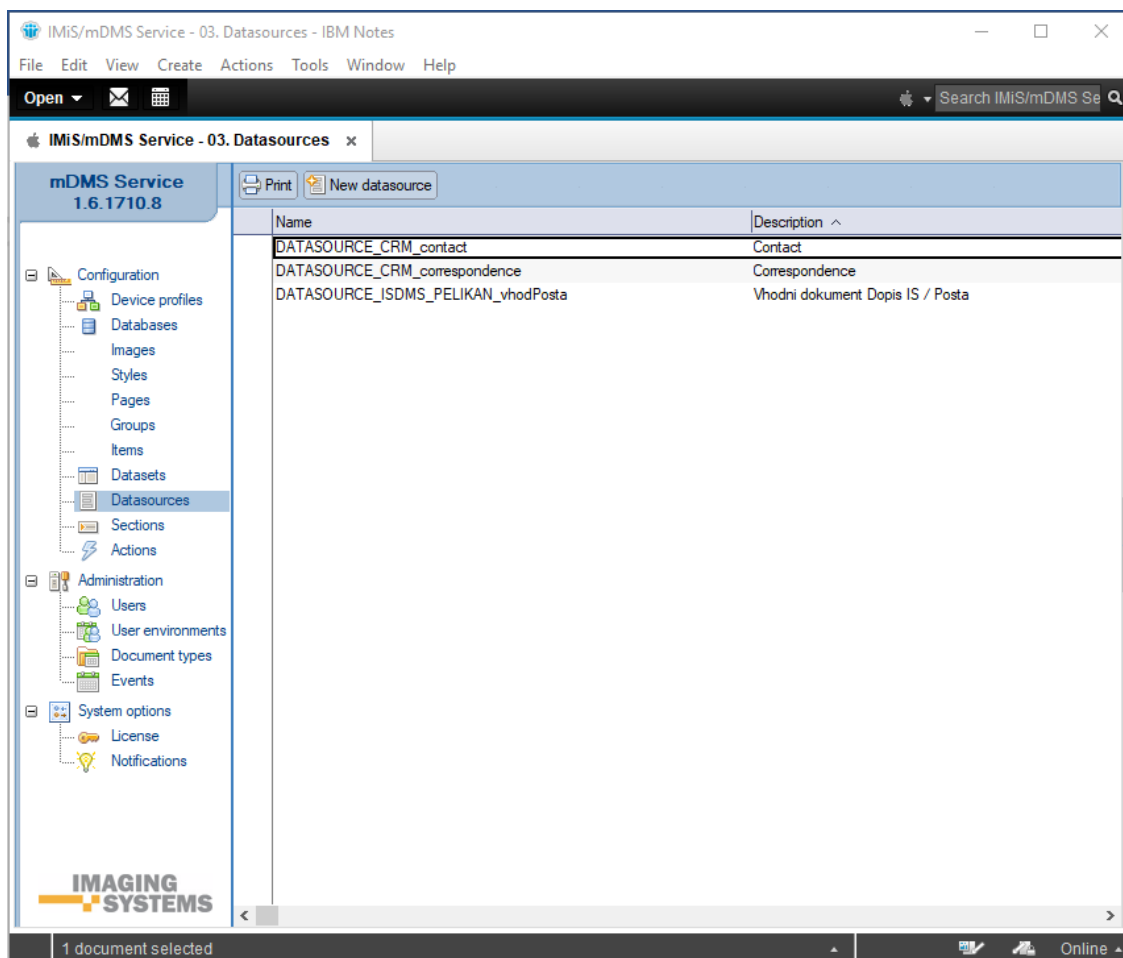


Image 161: View of the »**Datasources**« section

Document fields are divided into the following headers:

- Basic information.
- Source.
- Selection.
- Sections.

### 6.4.1 Basic information

The »**Basic information**« header specifies a name of document content and connects to a configuration.

Basic information	
Name:	DATASOURCE_CRM_contact
Assigned device profiles:	Configuration - 2/0

Image 162: View of settings in the »Basic information« header

[Name] Name of document content. Data is required.

[Assigned configurations] Assigned configurations. All configurations are available.

More than one can be chosen. Data is not required.

[Description] Description of document content. Data is not required.

### 6.4.2 Source

In the »Source« header, the user defines the source of document content.

Source	
Source type:	Document
Database:	DATABASE_CRM

Image 163: View of settings in the »Source« header

[Source type] The source of document content. The user chooses between »Document« and »Custom« options. He selects »Custom« when he wants to obtain data using special application logic and not service database settings.

[Database] A database that represents the source of document content. Data is required.

### 6.4.3 Execute

An additional »Execute« section is opened for the user if he selects »Custom« as a source of document set. In this section, he specifies the database where the agent and his name will be executed.

Execute	
Database:	DATABASE_CRM
Agent name:	

Image 164: View of settings in the »Execute« header

[Database] A database, where the agent id executed. It is available, if the document source type is »Custom«. Data is required.

[Agent name] The name of the agent that is executed in the database. It is available, if the document source type is »Custom«. Data is required.

#### 6.4.4 Selection

In the »Source« header, the user defines the selection formula, when the document opens with the given document definition.



Image 165: View of settings in the »Selection« header

[Definition <@>] Selection formula. Data is required.

#### 6.4.5 Sections

In the »Sections« header, the user selects sections connected to document content.

Actions available: »Add« (add section) and »Remove« (remove section).

Sections of all types are applicable.

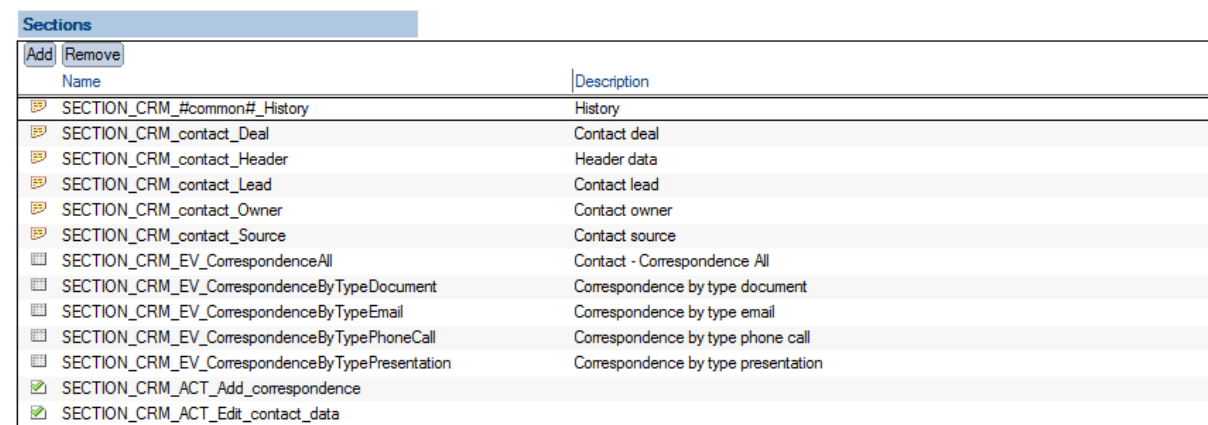


Image 166: View of settings in the »Sections« header

### 6.5 Sections

In the »Sections« section, the user defines configurations that specify sections intended for multiple use.

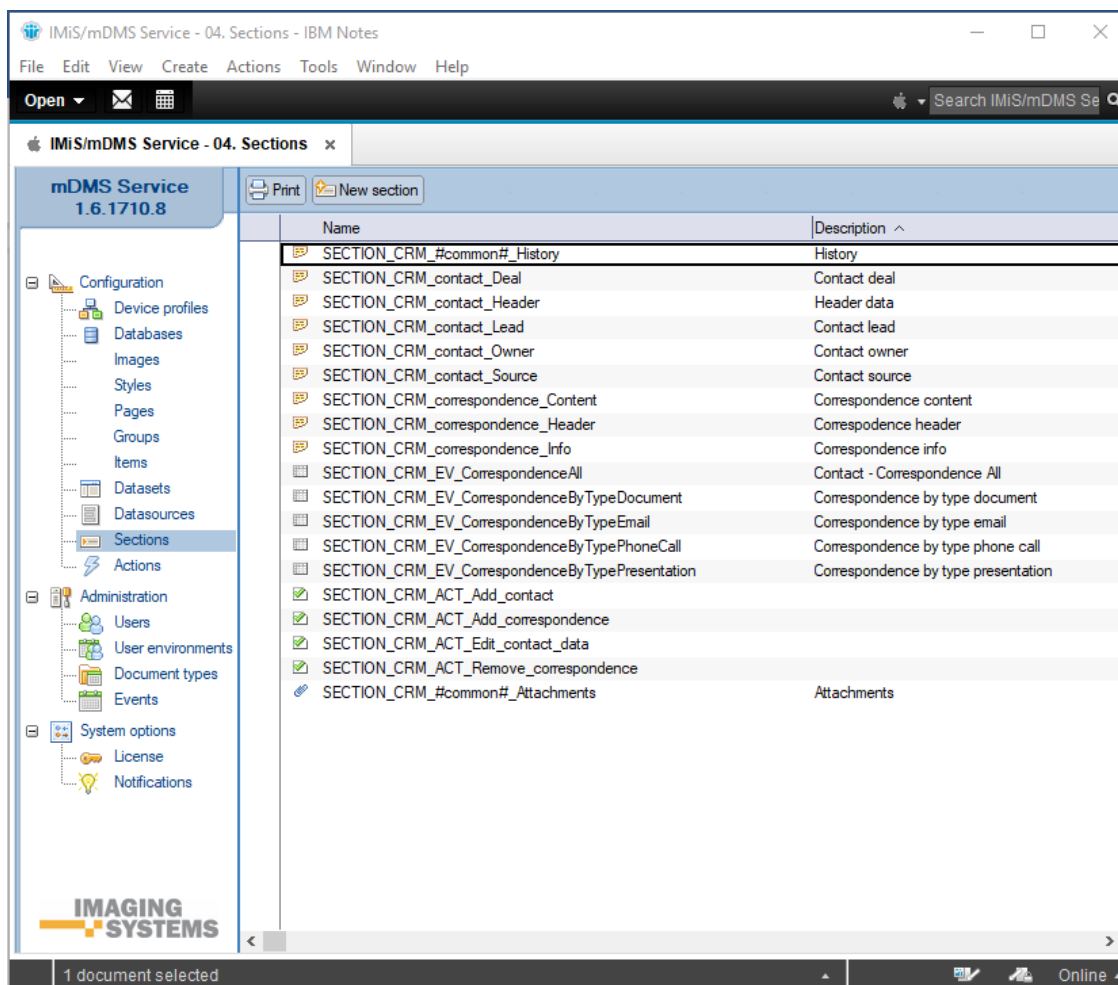


Image 167: View of the »Sections« section

Document fields are divided into the following headers:

- Basic information.
- Display.
- Data.
- Dataset.
- General.
- Actions.
- Interface agents.
- Content.

### 6.5.1 Basic information

In the »Basic information« header, the user specifies a name and type of section.

Basic information			
Name:	SECTION_CRM_#common#_History	Description:	History
Data type:	Data		

Image 168: View of settings in the »Basic information« header

[Name] Name of the section. Data is required.

[Data type] Type of section.

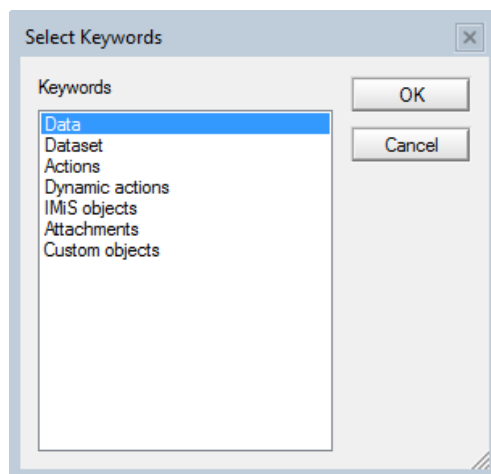


Image 169: View of settings of the »Data type« field in the »Basic information« header

The user can choose the following options:

- »Data« is intended for document data display.
- »Dataset« is intended for document set display, which is usually linked to the document context.
- »Actions« is used for display of predefined action sets.
- »Dynamic actions« is used for display of actions sets within the document and is specified dynamically based on the context of a document.
- »IMiS objects« is intended for display of IMiS® objects on a document.
- »Attachments« is intended for display of document attachments.
- »Custom objects« enables the display of any objects of the applicative nature (files) that are not IMiS® objects or attachments.

[Description] Description of section. Data is not required.



## 6.5.2 Display

In the »Display« header, the user defines condition under which the section will be displayed.

Display	
Condition: <@>	Class: <@>

Image 170: View of settings in the »Display« header

[Condition @] A formula that determines the condition under which the field is visible. Data is not required.

[Class <@>] A formula to determine the class display. Data is not required.

## 6.5.3 Data

In the »Data« header, the user specifies a set of display fields if »Data« as a type of section is selected.

Data						
No	Field name	Type	Display name <@>	Condition <@>	Class <@>	Value <@>
1.	History	String				@Text(revisionTime;"D0T0") + " - " + @Name([Abbreviate];revisionAuthor)

Image 171: View of settings in the »Data«, »Currency options« and »Keywords options« headers

For each field, the user specifies:

[Field name] Field name. Data is required.

[Field type] Field type. Data is required.

The following options are available to the user:

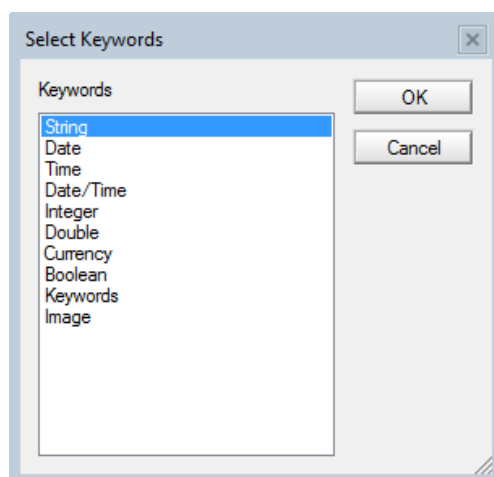


Image 172: View of settings of the field »Type

[Display name <@>] Displayed name of field. Data is not required.

[Condition <@>] The condition under which the field is visible. Data is not required.

If the condition is not given, the field is visible.

[Class <@>] A formula to determine the class display. Data is not required.

[Value <@>] Field value. If field value is not of the appropriate type, the field is not forwarded to a mobile device. Data is required.

[Curreny code <@>] Currency label. Valid only for the field type »Currency« in the »Data« section. A new section »Currency options« is opened for the user. Data is required.

Data						
No	Field name	Type	Display name <@>	Condition <@>	Class <@>	Value <@>
1.	dealValue	Currency			"red-label"	@Text (dealValue; "F,2") + " " + currency
Currency options						
No	Name	Currency code <@>				
1.	dealValue					

Image 173: View of settings in the »Data« and »Currency options« for »Currency« field type

[Choices <@>] A set of possible values. Valid only for the field type »Keywords« in the »Data« section. A new section »Keywords options« is opened for the user. Synonyms are supported. For example, if »Person|1« is specified as possible value set and the reference field value is »1«, »Person« is sent to the mobile device. In other cases, the reference field value is sent to the mobile device. Data is required.

Field is multivalued. All values are forwarded to a mobile device which takes care of an appropriate display.

Data						
No	Field name	Type	Display name <@>	Condition <@>	Class <@>	Value <@>
1.	product	Keyword				product
Keywords options						
No	Name	Choices <@>				
1.	product					

Image 174: View of settings in the »Data« and »Keyword options« for »Keywords« field type

## 6.5.4 Dataset

In the »Dataset« header, the user defines a source of a document set if »Dataset« is the selected section type.

Dataset			
Dataset name:	DATASET_CRM_EV_CorrespondenceAll	Context: <@>	id

Image 175: View of settings in the »Dataset« header

[Dataset name] Name of document set. All document sets are available.

Data is required.

[Context <@>] Document context for document set. Data is not required.

### 6.5.5 General

In the »General« header, the user defines basic data on section and the position of the executed action in the frame of a section, if »Actions« or »Dynamic actions« are the selected section type.

General		
Display name:	Remove correspondence	Action weight: <@> 1

Image 176: View of settings in the »General« header

[Display name] Display name of the section. Data is required.

[Action weight <@>] Position of action that reflects in the position of action sets in the list, if there are more than one action sets on the document. Data is required.

### 6.5.6 Actions

In the »Actions« header, the user defines actions and conditions under which they will be performed in the frame of a particular section, if »Actions« is the selected section type.

Actions		
No	Name	Condition <@>
1.	ACTION_CRM_Remove_Cor respondence	author = @UserName

Image 177: View of settings in the »Actions« header

For each action, the user specifies:

[Name] Name of the action. All actions are available. Data is required.

[Condition <@>] A condition under which the action is visible. If condition is not stated, the action is visible. Data is not required.

### 6.5.7 Interface agents

In the »Interface agents« header, the user defines an interface for action set retrieval, if second type is »Dynamic actions« or »Custom objects«.

For more information see [chapter 6.6.5.1 Extraction of dynamic action sets](#).

Basic information	
Name:	SECTION_CRM_#common#_Attachments
Data type:	Dynamic actions

Description:	Attachments
--------------	-------------

Interface agents	
Database:	DATABASE_CRM
Agent name [Execute action]:	ExecuteProcessAction

Agent name [Get actions]:	GetProcessActions
Agent name [Get action parameters]:	

Image 178: View of settings in the »Interface agents« for »Dynamic actions« section type

Basic information	
Name:	SECTION_CRM_#common#_Attachments
Data type:	Custom objects

Description:	Attachments
--------------	-------------

Interface agents	
Database:	DATABASE_CRM
Agent name [Get custom object content]:	

Agent name [Get custom object list]:	
--------------------------------------	--

Image 179: View of settings in the »Interface agents« for »Custom objects« section type

[Database] Database with the agent for action set retrieval. Data is required.

[Agent name [Execute action]] Name of agent for action execution. Data is required.

[Agent name [Get actions]] Name of agent for action set retrieval. Data is required.

[Agent name [Get action parameters]] The name of the agent to obtain action set parameters. Data is required.

[Agent name [Get custom object content]] The name of the agent to obtain the content of a custom object (application). Data is required.

[Agent name [Get custom object list]] The name of the agent to obtain the list of custom objects for a given document. Data is required.

## 6.5.8 Content

In the »Content« header, the user defines data on document content view, if »Custom objects«, »IMiS objects« or »Attachments« is the selected section type.

Basic information	
Name:	SECTION_CRM_#common#_Attachments
Data type:	Custom objects

Description:	Attachments
--------------	-------------

Basic information	
Name:	SECTION_CRM_#common#_Attachments
Data type:	IMiS objects

Content	
Name filter: <@> \$OBJDESC represents object description	

Image 180: View of settings in the »Content« for »Custom objects« and »IMiS objects« section type

Basic information	
Name:	SECTION_CRM_#common#_Attachments
Data type:	Attachments

Content	
Name filter: <@> \$ATTNAME represents attachment name	item filter: <@> \$ITEMNAME represents richtext item name

Image 181: View of settings in the »Content« for »Attachments « section type

**[Name filter <@>]** The condition under which an IMiS® object or attachment is available based on the IMiS® object description or name of the attachment. The reserved word for description of an IMiS® object reference is \$OBJDESC and \$ATTNAME for attachment. If the condition is not stated, the IMiS® object or attachment is available. Data is not required.

**[Item filter <@>]** The condition under which an attachment is available based on the rich-text item that contains the attachment. The reserved word for field name reference is \$ITEMNAME. It is available if »Attachments« is the section type. If the condition is not stated, the IMiS® object or attachment is available. Data is not required.

## 6.6 Actions

In the »Actions« section, the user defines configurations that specify pre-selected actions.

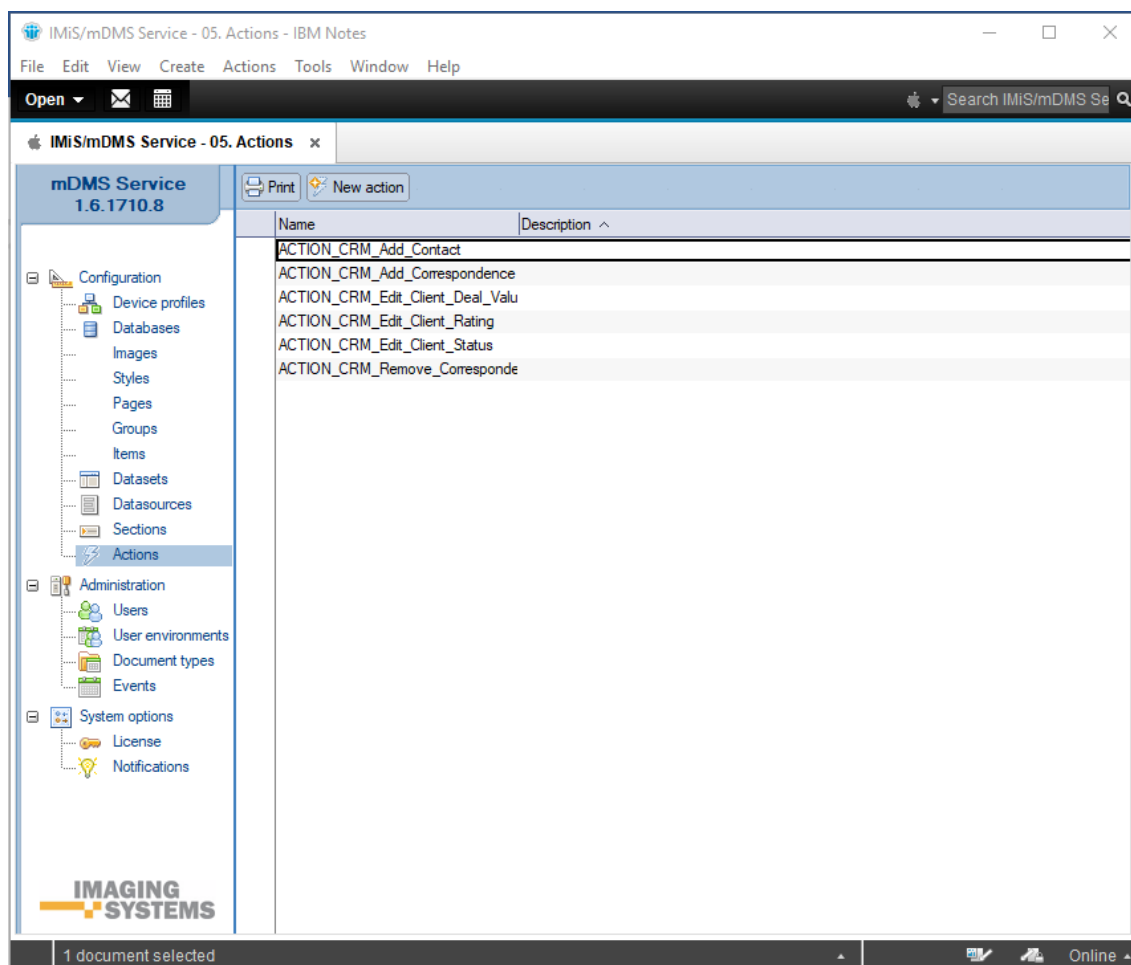


Image 182: View of the »Actions« section

Document fields are divided into the following headers:

- Basic information.
- Additional information.
- Execute.
- Parameters.
- Keywords options.
- Currency options.

### 6.6.1 Basic information

In the »Basic information« header, the user defines the name of action.

Basic information	
Name:	ACTION_CRM_Edit_Client_Deal_Value
Display name:	Deal value

Image 183: View of settings in the »Basic information« header

[Name] Name of action. Data is required.

[Display name] Displayed action name. Data is required.

[Description] Action description. Data is not required.

### 6.6.2 Additional information

In the »Additional information« header, the user defines additional information for action.

Additional information	
Confirmation message:	Options: <input checked="" type="checkbox"/> Don't close document after action

Image 184: View of settings in the »Additional information« header

[Confirmation message] A confirmation message on action execution. Data is not required.

[Options] Additional options. Data is not required.

Option set:

- the document remains open after action execution.

### 6.6.3 Execute

In the »Execute« header, the user defines parameters for action execution.

For more information see [chapter 6.5.5.2 Action execution](#).

Execute	
Database:	Agent name:
DATABASE_CRM	mDMSAction

Image 185: View of settings in the »Execute« header

[Database] A database where agent for action execution is located. Data is required.

[Agent name] Name of agent for action execution. Data is required.



## 6.6.4 Parameters

In the »Parameters« header, the user defines a field set for action parameters.

Parameters						
No	Name	Display name	Type	Options	Condition <@>	Default value <@>
1.	value	Deal value	Double	Required		dealValue

Image 186: View of settings in the »Parameters« header

[Name] Name of parameter. Data is required.

[Display name] Display name of parameter. Data is required.

[Type] Type of parameter. Data is required.

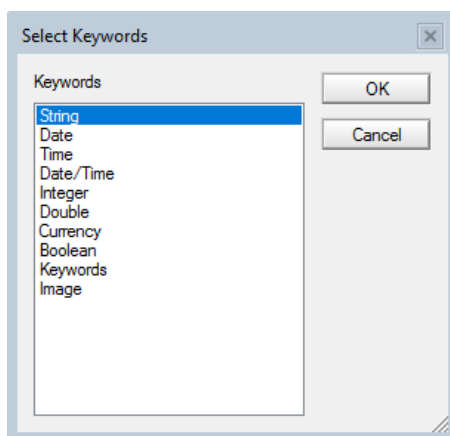


Image 187: View of settings of the field »Type in the »Parameters« header

If selecting the »Currency« parameter type in the »Parameters« header, the user opens a new »Currency options« section with [Currency code] field.

[Currency code] Currency code (e.g. 978 for Euro or 840 for US Dollar). Data is required.

Parameters						
No	Name	Display name	Type	Options	Condition <@>	Default value <@>
1.	value	Deal value	Currency	Required		dealValue

Currency options		
No	Name	Currency code
1.	value	

Image 188: View of settings in the »Parameters« header for »Currency« parameter type

If selecting the »Keywords« parameter type in the »Parameters« header, the user opens a new »Keywords options« section with [Choices <@>] field.

[Choices <@>] A set of possible values. Synonyms are supported. For example, if »Person|1« is specified as possible value set and the reference field value is »1«, »Person« is sent to the mobile device. In other cases, the reference field value is sent to the mobile device. Data is required.

Field is multivalued. All values are forwarded to a mobile device which takes care of an appropriate display.

Parameters						
No	Name	Display name	Type	Options	Condition <@>	Default value <@>
1.	value	Deal value	Keywords	Required		dealValue
Keywords options						
No	Name	Choices <@>				
1.	value					

Image 189: View of settings in the »Parameters« header for »Keywords« parameter type

[Options] Additional options. Data is not required. Option set:

- »Required«: Parameter entry is required.
- »Read only«: Parameter is intended for reading only - e.g., advisable for the »image« type.

[Condition <@>] Condition under which the parameter is available. Data is not required.

If the condition is not stated, the parameter is available.

[Default value <@>] Default parameter value. If it is specified, it should be calculated for the assigned type of parameter. Data is not required.

### 6.6.5 Action logic implementation

The user can choose between predetermined and dynamic actions.

Predetermined actions are selected by the user then the action set is predetermined.

This option is recommended due to the simplicity of its implementation.

Dynamic actions are selected by the user when an action set cannot be anticipated in advance or if the condition on action availability is too complex or undeterminable.

Usually, that is when the action set is requested by complex business logic.

In that case the user can help himself by letting the business logic take care of action set.

If an application is demanding, it is advisable to create an intermediate database (provider) for requests that specify action sets.

This intermediate database ensures the request is forwarded to an appropriate application database with the required application logic.

Action execution is in the domain of business logic application, no matter whether it is a predetermined or dynamic action. In this case, it is also worth considering creating an intermediate database (provider) for action execution requests that are then forwarded to an appropriate application database for processing.

#### 6.6.5.1 Extraction of dynamic action sets

In the »Interface agents« header, the user defines database in [Database] field and an agent that is contacted in such case in [Agent name [Get actions]] field.

IMiS®/mDMS Service calls the agent and forwards a context document with the following fields:

[sourceDbServer] Server containing the document.

[sourceDbFilePath] Path and name of database containing the document.

[sourceDocUNID] Universal document ID.

[sourceUserName] Name of the user, which executes a web service. If the »Run as a web user« option is selected for service, the user is logged in a mobile application otherwise it is a code signer. The first option is advisable due to traceability and the fact that an action set can depend on the user or the user's access rights.

After receiving a IMiS®/mDMS Service all from the agent, the service first checks content in the [errorMessage] field.

[errorMessage] A description of a possible error when specifying action set.

In that case, the service stops the process of specifying an action set and forwards an error description to a mobile device.

If there is no error when specifying an action set, the IMiS®/mDMS Service expects that the number of actions is given in the `[actCount]` field, and action data in the `[name_<i>]`, `[displayName_<i>]`, `[confirmMessage_<i>]`, `[options_<i>]` and `[parCount_<i>]` fields where `<i>=1` is `<number of actions>`.

`[actCount]` Number of actions (numeric type). Data is required.

`[name_<i>]` Unique name of action. Data is required.

`[displayName_<i>]` Unique displayed name of action. Data is required.

`[confirmMessage_<i>]` Confirmation message of action execution. Data is not required.

`[options_<i>]` Additional options. Data is not required.

Option set:

- »1« - the document remains open after action execution.

`[parCount_<i>]` Number of parameters for action (numeric type). Data is required.

If parameters are anticipated for action, the IMiS®/mDMS Service expects data on parameters in the `[parName_<jj>_<i>]`, `[parDisplayName_<jj>_<i>]`, `[parType_<jj>_<i>]`, `[parOptions_<jj>_<i>]`, `[parConditionFrm_<jj>_<i>]`, `[parDefaultValueFrm_<jj>_<i>]`, `[parCurrCode_<jj>_<i>]` and `[parChoicesFrm_<jj>_<i>]` fields, where `<i>` is action sequence number, and `<jj>=01...<number of action parameters>`.

`[parName_<jj>_<i>]` Unique name of parameter. Data is required.

`[parDisplayName_<jj>_<i>]` Unique displayed name of parameter. Data is required.

`[parType_<jj>_<i>]` Type of parameter. Data is required.

Option set:

- »1« - String
- »2« - Date
- »3« - Time
- »4« - Date/Time
- »5« - Integer
- »6« - Double
- »7« - Currency
- »8« - Boolean
- »9« - Keywords
- »10« - Image.

[parOptions\_<jj>\_<i>] Additional options. Data is not required.

Option set:

- »1« - parameter entry is required.
- »2« - parameter is intended for reading only (for example, advisable with the »image« type).

[parConditionFrm\_<jj>\_<i>] Condition under which the parameter is available.

Parameter is available if no condition is stated. Data is not required.

[parDefaultValueFrm\_<jj>\_<i>] Default value of parameter. If it is specified, it has to be calculated for the assigned type of parameter. Data is not required.

[parCurrCode\_<jj>\_<i>] Currency label. Applicable only with the »currency« type of parameter. Data is not required.

[parChoicesFrm\_<jj>\_<i>] A set of possible values. Synonyms are supported. It is applicable only with the »keywords« type of parameter. Data is required.

### 6.6.5.2 Action execution

In the »Execute action« header, the user defines database in [Database] field and an agent that is contacted in such case in [Agent name] field.

IMiS®/mDMS Service calls the agent and forwards a context document with the following fields:

[sourceDbServer] Server containing the document.

[sourceDbFilePath] Path and name of database containing the document.

[sourceDocUNID] Universal ID of document.

[sourceDocLastModified] Date and time of last document modification at the time of opening the document on a mobile device. It is advisable for the business logic to check whether the document has been modified during that time. In that case, action execution is not advisable as it could lead to a conflict when saving the document.

[sourceUserName] Name of effective user. If the »Run as a web user« option is selected for service, the user is logged in a mobile application otherwise it is a code signer. The first option is advisable due to traceability and the fact that an action set can depend on the user or the user's access rights.

[sourceAction] Name of selected action. If parameters are anticipated for action, the service expects data on parameters in the [parName\_<jj>], [parType\_<jj>] and [parValue\_<jj>] fields, where <jj>=01 is <number of action parameters>.

[parName\_<jj>] Name of parameter.

[parType\_<jj>] Type of parameter. The option set is identical as when obtaining action set.

[parValue\_<jj>] Value of parameter.

## 7 Administration

In the »Administration« section, the administration of users, environment, types of (supported) files and events is examined.

### 7.1 Users

In the »Users« section, the user adds individual users and assigns them profiles.

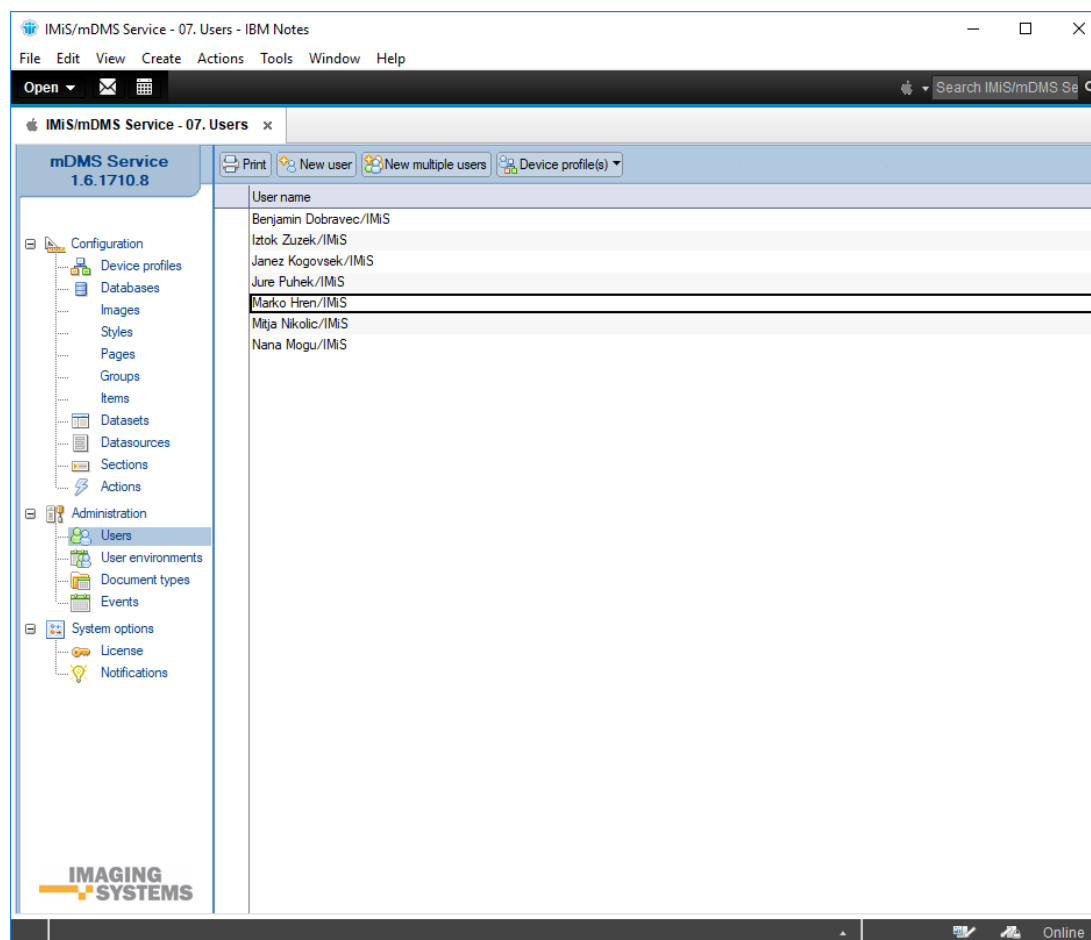


Image 190: View of the »Users« section

Document fields are specified in the following header:

- Basic information.

### 7.1.1 Basic information

In the »Basic information« header, the user defines username and assigns the profile of the device.

Basic information	
User name:	Benjamin Dobravec/IMiS
Assigned device profiles:	Configuration - 2/0

Image 191: View of settings in the »Basic information« header

[User name] Name of the user. Data is required.

[Assigned device profiles] Profiles assigned to the user. Data is not required.

## 7.2 User environments

In the »User environments« section, the user has an overview of the activities of individual device users.

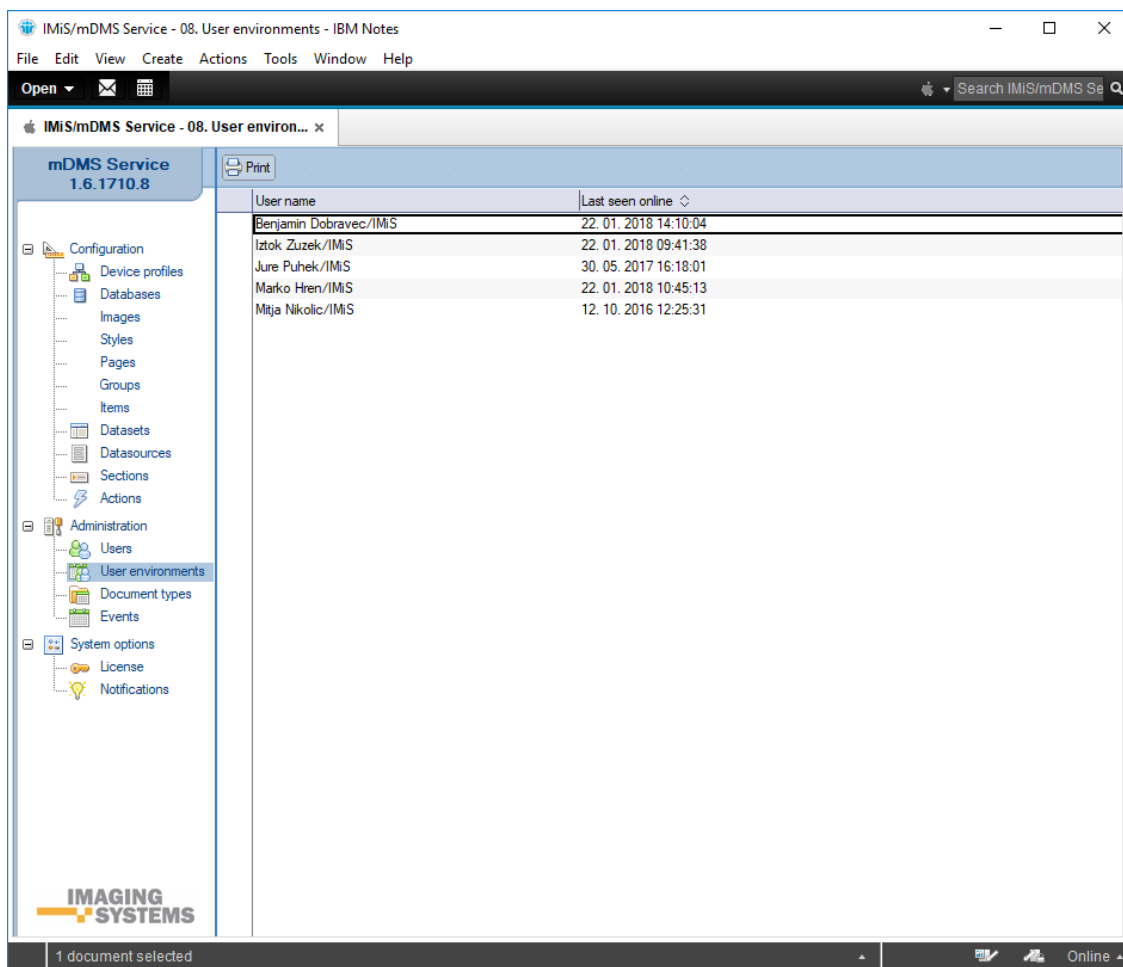


Image 192: View of the »User environments« section

Document fields are divided into the following headers:

- Basic information
- Data.

### 7.2.1 Basic information

In the »Basic information« header, the user defines username and assigns the profile of the device.



Image 193: View of settings in the »Basic information« header

[Last seen online] Date and time of last user activity. Data is read-only.



## 7.2.2 Notification

In the »Notification« header, all notifications are listed. All field values except »Enabled« are read-only. The user can delete notification identifiers by selecting **X** behind the sequence number of a notification.

Notification						
No	Notify token	Profile id	Protocol	Edition	Locale	Enabled
1	<b>X</b> 1202819b5294b9901835b6aa0dedb0d15b4e22b9cbc9a8e61e0da3e33501f6a4	86b27f8094ac2817b114e43ef09323ce69b13d08	iOS	Plain	en-SI	<input checked="" type="checkbox"/>
2	<b>X</b> ert9FJRk6LM:APA91bG8FFvrKogV1Q-7etRzSzY9PJY3db-SBO5BkJy-vbeCXKJymde4LW2Cv3uvD1rGARaS0KtKGZe9utVni5YH9oPR6e12OgFLBrLv5y2S-io_dUQWpcTSzyjhb5EiHiFM1PuNG5t4	C12580C2002BA62B	FCM	Plain	sl-SI	<input checked="" type="checkbox"/>
3	<b>X</b> 6bef1fdf3db664f1efc84a20a323f3fbac44c798e27876103cec6794f1d7730e	C12580C2002BA62B	iOS	MobileIron	en-SI	<input checked="" type="checkbox"/>
4	<b>X</b> d7c3404c7446b955f522c0762bfc5643fad96ceb3a6c664adfe9ac892c0c20	C12580C2002BA62B	iOS	Plain	en-US	<input checked="" type="checkbox"/>
5	<b>X</b> a602d02fb8b0efee3bc7a240d86299cece2603b4d0537db5ef73de65c96fa300	C12580C2002BA62B	iOS	Plain	en-US	<input checked="" type="checkbox"/>
6	<b>X</b> ee6da6b8d5976a18e31fc37bf212151b6baacc51b096a5c9f5b7ba5880ba7205	C12580C2002BA62B	iOS	MobileIron	en-SI	<input checked="" type="checkbox"/>
7	<b>X</b> 90823503bac2af4e15fd79688c704c6c24a6c25f1c8f2b5aaf9ff6b727db54b1	C12580C2002BA62B	iOS	Citrix XenMobile	en-SI	<input checked="" type="checkbox"/>
8	<b>X</b> 20931426dbc9a0f0dad3da9accb8e961fce9108faca913211851ac5239da0cd	C12580C2002BA62B	iOS	MobileIron	en-GB	<input checked="" type="checkbox"/>
9	<b>X</b> d84666422381a60e4ad99bd40d7120a1c34825fc408935ab120ed601def68c0d	C12580C2002BA62B	iOS	Citrix XenMobile	en-SI	<input checked="" type="checkbox"/>
10	<b>X</b> f9Z7P1sPXpk:APA91bHhidaXzNEtyefmBgiCRWDUJ0S22mW84ul18xvBNnmMmpzCbURizjKYiaQVirimhlAwzjiC8M8pUb0TdPILfbOqHGSOsk83VONYPeUk7_vJNkpn1BKoTCRoWNEWk7WZyAkgtCs	C12580C2002BA62B	FCM	Plain	en-US	<input checked="" type="checkbox"/>

Image 194: View of the »Notifications « header

[Notify token] Notification identifier.

[Profile id] Unique profile identifier.

[Protocol] Mobile device protocol denotation.

[Edition] Tag of the application installation edition (Plain / Citrix XenMobile / MobileIron).

[Locale] Content notification localization.

[Enabled] Notification status (enabled / disabled).

For more information see [chapter 8.2 Notifications](#).

## 7.2.3 Device environments

In the »Device environments« header, an overview of user activity data on the mobile device and device, application and configuration information are available. All field values are read-only.

Device environments						
No	Created	Updated	Application version	Device	Configuration	More info
1	03.01.2017 13:19:52	03.01.2017 13:19:52	1.5.1610.10-debug	Android 6.0.1 on samsung SM-T700	Configuration	<a href="#">Details</a>
2	14.02.2017 10:28:45	16.02.2017 08:49:23	1.6.dev.26	iPhone OS 9.3.5 on Apple iPad3,3	Configuration	<a href="#">Details</a>
3	13.06.2017 13:47:24	13.06.2017 14:38:04	1.7.1705.13	Android 5.0.2 on samsung SM-G850F	Configuration	<a href="#">Details</a>
4	03.07.2017 12:05:48	28.07.2017 16:01:18	1.7.dev.28	iPhone OS 9.3.5 on Apple iPad3,3	Configuration	<a href="#">Details</a>
5	11.07.2017 09:18:35	12.07.2017 13:37:39	1.7.dev.28	iOS 10.3.1 on Apple iPad5,1	Configuration	<a href="#">Details</a>
6	19.07.2017 09:08:25	08.01.2018 08:27:49	1.7.1707.13	Android 5.0.2 on samsung SM-G850F	Configuration	<a href="#">Details</a>
7	28.07.2017 11:21:36	28.07.2017 11:21:36	1.7.dev.28	iPhone OS 9.3.5 on Apple iPad3,3	Configuration	<a href="#">Details</a>
8	28.07.2017 15:42:15	28.07.2017 15:44:04	1.7.dev.28	iPhone OS 9.3.5 on Apple iPad3,3	Configuration	<a href="#">Details</a>
9	24.08.2017 09:26:15	29.08.2017 10:11:05	1.7.1707.30	iOS 11.0 on Apple iPad5,1	Configuration	<a href="#">Details</a>

Image 195: Overview of user activity data in the »Device environments« header

[Created] Date and time of user environment creation.

[Updated] Date and time of last user environment modification.

[Application version] Application version.

[Device] Name of device.

[Configuration] Configuration type.

DETAILS

User environment

Configuration name	Configuration
Application API version	3
Application configuration version	0
Application version (*)	1.7.1707.30
Application edition	Plain
Application generation	2
Application locale (*)	en-US
Application mode (*)	TABLET
Device operating system (*)	iOS 11.0
Device manufacturer (*)	Apple
Device model (*)	iPad5,1
Device processor (*)	ARM_64
Device screen X resolution (*)	2048
Device screen X dpi (*)	326
Device screen Y resolution (*)	1536
Device screen Y dpi (*)	326

Fields marked with (\*) can be used as virtual variables in the context of configuration document's condition @formula.  
Please see configuration document for the list of all virtual variables.

OK

Image 196: A more detailed view of device, application and configuration data in the »Device environments« header

## 7.3 Document types

In the »Document types« section, the user defines the types of documents (files) that will be enabled on a mobile device.

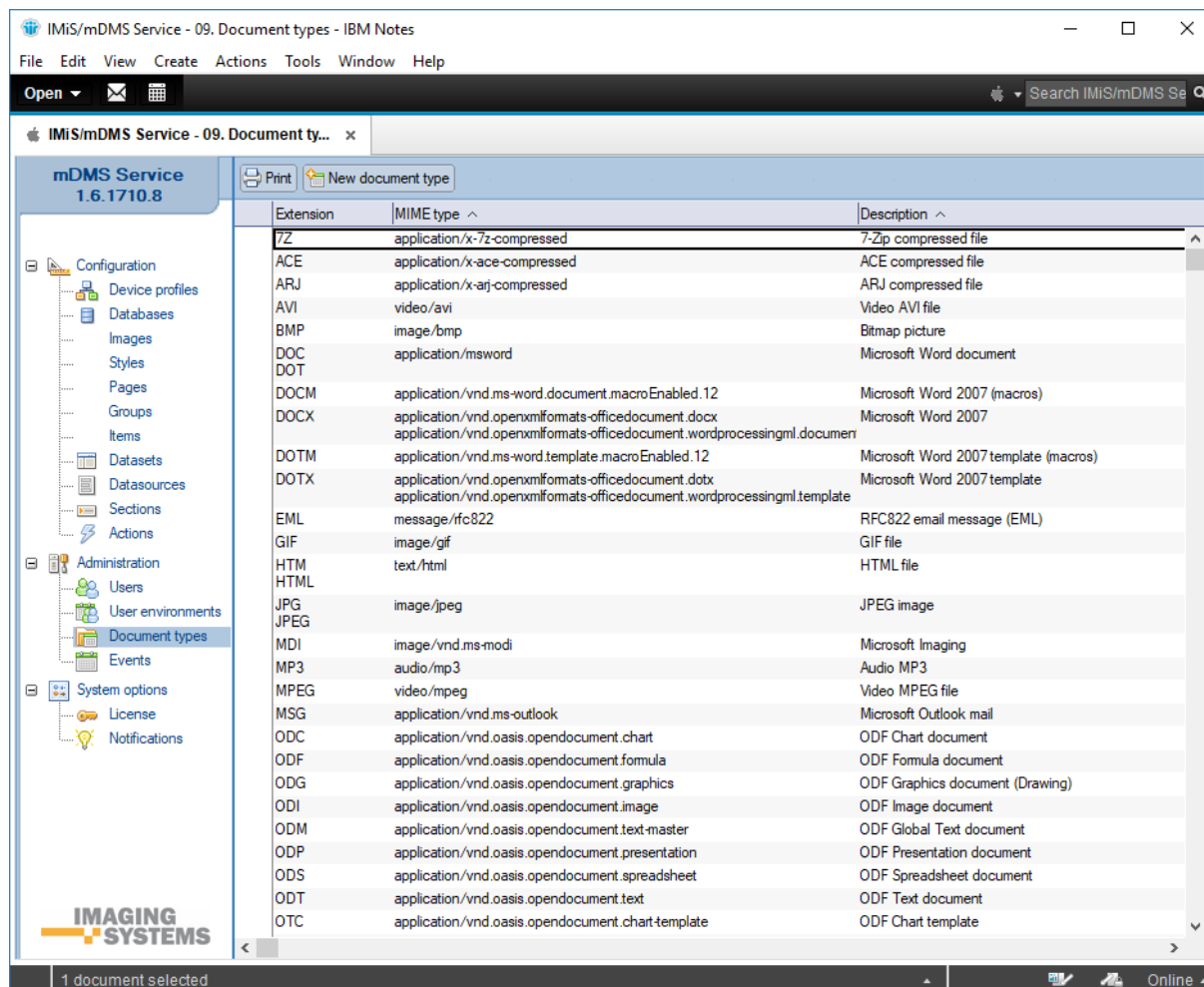


Image 197: View of the »Document types« section

Document fields are divided into the following headers:

- Basic information
- Data.

### 7.3.1 Basic information

In the »Basic information« header, descriptions of a document type (file), extension and MIME type are noted.

Basic information			
Description:	JPEG image		
Extension(s):	JPG JPEG	MIME type(s):	image/peg

Image 198: View of settings in the »Basic information« header

[Description] Description of document type. Data is required.

[Extension(s)] Document type extension. Field is multivalued. Data is required.

[MIME type(s)] MIME type of document. Field is multivalued. Data is required.

## 7.4 Events

In the »Events« section, user events on a mobile device are recorded.

All field values are read-only.

Event time	User name	Database server	Database file path	Event information
11. 01. 2018 13:48:24	Marko Hren/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
11. 01. 2018 13:57:54	Marko Hren/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
08. 01. 2018 08:30:20	Marko Hren/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
08. 01. 2018 10:30:08	Marko Hren/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 12:33:29	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 12:41:38	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:09:12	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:09:15	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:09:20	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:09:23	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:13:33	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:13:40	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:13:43	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:17:02	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:17:06	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:17:11	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:17:36	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 13:36:27	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:04:43	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:08:31	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:08:49	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:09:16	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:16:56	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:19:06	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
04. 01. 2018 15:26:04	Benjamin Dobravec/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
27. 12. 2017 16:08:53	Iztok Zuzek/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet
13. 12. 2017 09:14:57	Marko Hren/IMS	IMSDDev/IMS	dev\imis\mndmssvc.nsf	4063 - Database CN=IMS_N1/O=IMS/IS/pelikan/pelikan.nsf has not been opened yet

Image 199: View of the »Events« section

[Event time] Date and time of the event.

[User name] Name of the user.

[Database server] Name of the server that the user has accessed.

[Database file path] Path o the database.

[Event information] Information about the event.

## 8 System options

In the »System options« section, mobile device management options are examined.

### 8.1 License

In the »License« section, the user has an overview of the license key data.

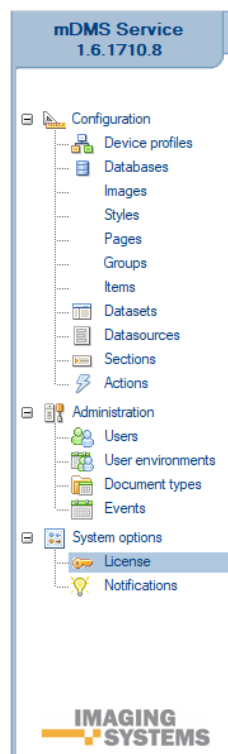
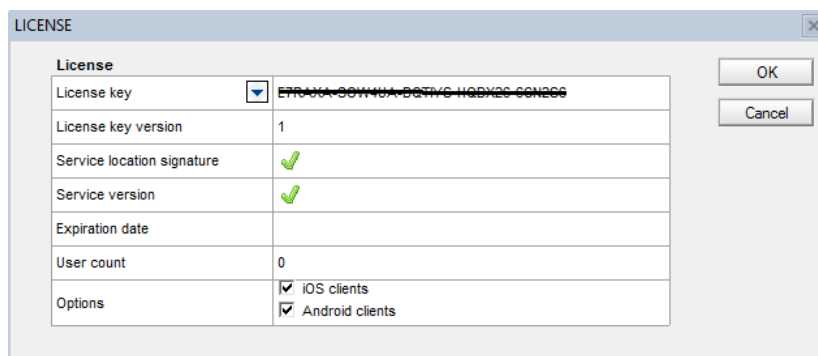


Image 200: Selection of »License« section

The user opens a dialog box showing information on the license key.



The screenshot shows a dialog box titled "LICENSE" with a close button (X) in the top right corner. Inside the dialog, there is a table with the following data:

License	
License key	ETP-001-00000000-00000000-00000000
License key version	1
Service location signature	✓
Service version	✓
Expiration date	
User count	0
Options	<input checked="" type="checkbox"/> iOS clients <input checked="" type="checkbox"/> Android clients

On the right side of the dialog, there are two buttons: "OK" and "Cancel".

Image 201: View of data in »License« section

[License key] License key.

[License key version] License key version.

[Service location signature] Relevance of the license key for IMiS®/mDMS Service database location.

[Service version] Relevance of the license key for IMiS®/mDMS Service database version.

[Expiration date] License key expiration date.

[User count] Numer of users.

[Options] Client platform.

The following options are available to the user:

- iOS clients.
- Android clients.

## 8.2 Notifications

In the »Notifications« section, the user defines the users and groups that can request the execution of notifications.

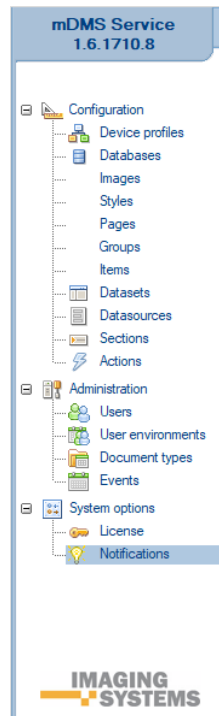


Image 202: View of the »Notifications« section

Notifications are used to notify the application users.

Examples of notifications:

- received new documents for confirmation
- received documents as content, i.e. new received e-mail.

In the »**Notification**« section, the user defines notification settings.

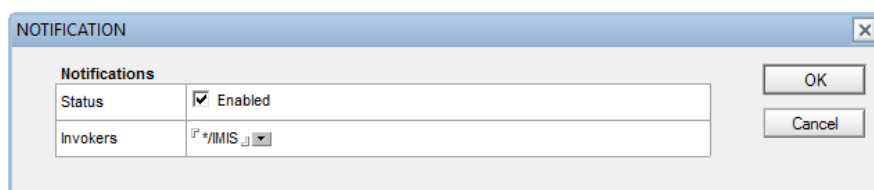


Image 203: View of the »Notification« section settings

**[Status]** Status of notifications (enabled/disabled).

**[Invokers]** Notes users or groups that can request the execution of notifications.

## 8.2.1 Application response when receiving a notification

When a notification arrives to the mobile device, the application responds differently depending on whether the IMiS®/mDMS Client application is open, closed or open in the background.

### 8.2.1.1 Closed application

Below are described the events after receiving a notification when the application is closed (inactive):

1. The notification is added to the list of received notifications on the mobile device.
2. The message about the received notification is displayed in the form of:
  - a notification bar in the upper part of the screen (iOS)

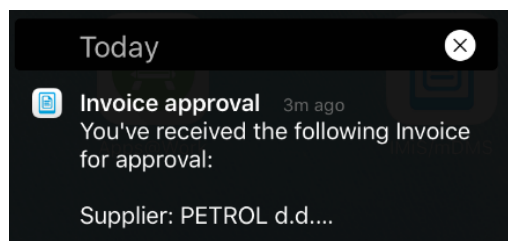


Image 204: Example of a message about a received notification

- an icon in the upper left part of the screen and a message if a sliding menu is selected (Android).



Image 205: Example of a view of the received notification icon

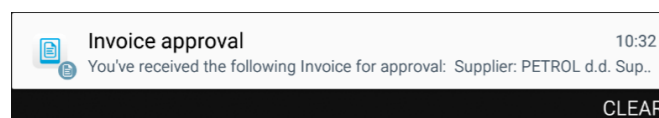


Image 206: Example of a view of the received notification message

3. When choosing a notification, the application displays a login window to the user.
4. Based on the »profile« attribute, the application selects the appropriate profile in the login window. ([see chapter 8.2.2 Notification structure](#)).
5. After a successful login the user is displayed a notification document. This is the document, for which the notification was sent.



### 8.2.1.2 Application open in the background

Below are described the events after receiving a notification when the application is open (active)

in the background:

1. The notification is added to the list of received notifications on the mobile device.
2. The message about the received notification is displayed in the form of:
  - a notification bar in the upper part of the screen (iOS)
  - an icon in the upper left part of the screen and a message if a sliding menu is selected (Android).
3. When choosing a notification, the application is displayed in the foreground.
4. The user is displayed the notification document based on the »profile« attribute and the session as follows ([see chapter 8.2.2 Notification structure](#)).
  - If the user is currently not logged in and his session has expired or there is already an application running at the login dialog, the application does as follows:
    - Based on the »profile« attribute, the application selects an appropriate profile in the login window.
    - After a successful login the user is displayed a notification document.
  - If the notification profile is the one the user is currently using, and his session is still valid, the next notification document is opened.

### 8.2.1.3 Application opens in the foreground

Below are described the events after receiving a notification when the application is open (active) in the foreground:

1. The notification is added to the application. The notification is displayed to the user as a dialog only if the user does not have an open notification document. Otherwise, the notification is added to the notification list, which is triggered in a dialog when the user closes the notification document.
2. If the user does not choose to display a notification document, he can simply delete the notification. Otherwise, he can skip step 2.

3. Based on the »profile« attribute, the application responds as follows ([chapter 8.2.2 Notification structure](#)).

- If the user is currently not logged in and his session has expired or there is already an application running at the login dialog, the application does as follows:
  - Based on the »profile« attribute, the application selects an appropriate profile in the login window.
  - After a successful login the user is displayed a notification document.
- If the notification profile is the one the user is currently using, and his session is still valid, the next notification document is opened.

## 8.2.2 Notification structure

### 8.2.2.1 Notification structure on iOS mobile device

```
{
  "aps":{
    "alert":{
      "title" : "Novi dokument",
      "body" : "Dobili ste novi dokument."
    },
    "sound":"default"
  },
  "data_v1" :{
    "profile" : "df38cb18fcff6a2ec787f789d44e4c23e19e1613",
    "datasource" : "DATASOURCE_CRM_contact",
    "ctx" : "D#B910683818E4EBA8C1257F01003C4205"
  }
}
```

Image 207: Example of the notification structure on iOS mobile device

Description of the parameters of the »aps« system list:

- alert\*: Alert notification content.
  - title [string]: Notification title.
  - body [string]: Notification description.
- sound [string]: name of the sound when displaying a notification.

Description of the parameters of a customized »data« list (\_v1 means the content relates to version 1):

- profile\* [string]: id of the application profile obtained from server
  - datasource\* [string]: Datasource of a document or dataset view.
  - ctx [string]: Document context.

### 8.2.2.2 Notification structure on Android mobile device

```
{
  "to": "token...",
  "data": {
    "title": "IMiS/mDMS",
    "body": "...",
    "data_v1": {
      "profile": "...",
      "datasource": "...",
      "ctx": "..."
    }
  }
}
```

Image 208: Example of the notification structure on Android mobile device

Description of the parameters of the »to« system list:

- to [string]: Token.

Description of the parameters of the »data« system list:

- title [string]: Notification title.
- body [string]: Notification description.
- data\_v1 [string]: Notification content.

Description of the parameters of a customized »data« list (\_v1 means the content relates to version 1):

- profile\*[string]: id of the application profile coded with SHA-1.
- datasource\*[string]: Document content.
- ctx [string]: Document context.

### 8.2.3 Content notification localization settings

In the IMiS®/mDMS Provider database you can change the content notification localization settings. The user chooses "Notifications/ By module" in the navigation menu. He selects the notification by pressing the "Sync from Settings" button and selecting it from the list of all notifications, and then transferring it to the notification list for a specific application module. The notification becomes active in the list by pressing the » Enable« button or inactive by pressing the »Disable« button.

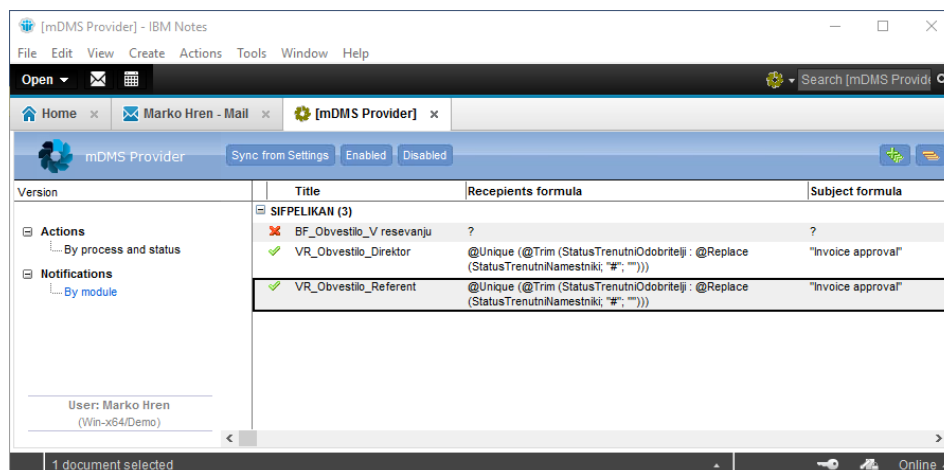


Image 209: View of the notification settings in IMiS®/mDMS Provider database

### Actions on indexes

**[Sync from Settings]** Synchronize from the list of all notification in the IMIS®/mDMS Provider collection.

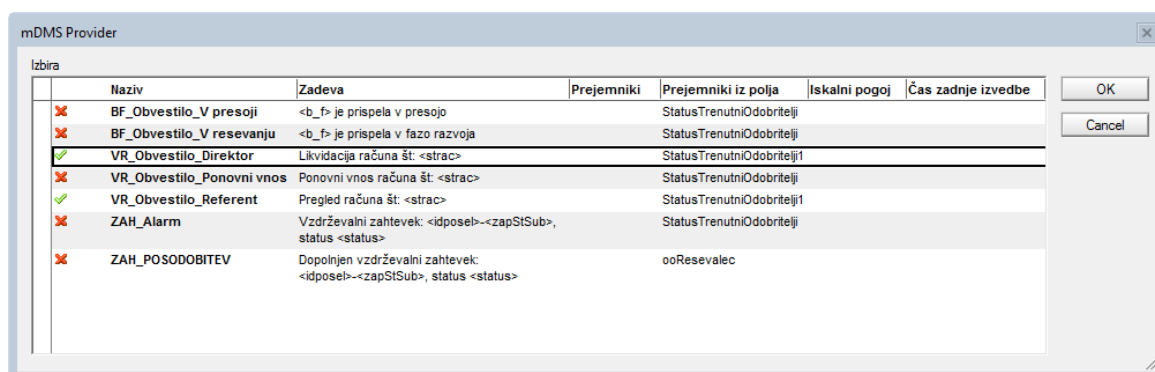


Image 210: View of notifications available for synchronization

**[Enabled]** Notification is enabled.

**[Disabled]** Notification is disabled.

By selecting a notification in the list, the user opens the notification settings.

Notification

<b>Alarm</b>		<input checked="" type="checkbox"/> Enabled
<b>Module</b>	SIFPELIKAN	<b>Title</b> VR_Obvestilo_Direktor

<b>Notification</b>			
<b>Recipients formula</b>	@Unique (@Trim (StatusTrenutniOdobritelji : @Replace (StatusTrenutniNamestniki; "#"; "")))		

No.	Locale	Subject formula	Content formula
	Default locale	"Invoice approval"	{You've received the following Invoice for approval: Supplier: } + podjetje + { Supplier Invoice no.: } + strac {Prejeli ste račun v likvidacijo:
1.	sl-SI	"Likvidacija računa"	Dobavitelj: } + podjetje + { Dobaviteljava številka računa: } + strac

Image 211: Content notification localization settings in the IMiS®/mDMS Provider database

**[Module]** Name of the application module, in which the notification is executed.

**[Title]** Notification title.

**[Recipients formula]** Notification receivers. The formula is calculated in the context of the contextual document.

**[Default locale]** Default content notification localization.

**[<locale>]** Additional content notification localization. The user chooses one or more localization parameters from the list.

The localization parameter is linked to a notification token, which is specified in the user environments under administration in the IMiS®/mDMS Service database.

**[Subject formula]** Formula to specify the notification object. Data is required.

**[Content formula]** Formula to specify the notification content. Data is required.

## 8.3 Hotlinks

Hotlinks are used to link to a specific application document.

The user receives a notification by email, which contains a hotlink to the relevant document.

By selecting the notification, the hotlink is triggered and the application responds.

### 8.3.1 Hotlink structure

A hotlink has the following structure:

`mdms://dataV/profile/datasource/ctx`

*Example of a hotlink:*

`mdms://1/df38cb18fcff6a2ec787f789d44e4c23e19e1613/DATASOURCE_CRM_contact/D#B910683818E4EBA8C1257F01003C4205`

Parameter description:

- `dataV*[string]`: content version (same as with `data_v1` notifications)
- `profile*[string]`: profile identifier in the application obtained from server
- `datasource* [string]`: datasource of a document or dataset view
- `ctx *[string]`: document context.

### 8.3.2 Application's response on triggering a hotlink

#### 8.3.2.1 Closed application

Below is a description of events on triggering a hotlink when the application is closed:

1. By selecting the hotlink, the application starts.
2. Based on the »profile« attribute, an appropriate profile is selected in the login window.
3. After successful login the user is shown the relevant notification page/document.

A root page is added in front of it. If an initial page or first displayed page exists in the configuration, it is also added.

#### 8.3.2.2 Active application in the background

Below is a description of events on triggering a hotlink when the application is open in the background:

1. By selecting the hotlink, the application is shown or moves to the foreground.
2. Based on the »profile« attribute and session, it responds in the following way:
  - a. If the user is not currently logged into the appropriate profile, or the session has expired, or the user is already located on the login page, the application is executed in the following steps:
    - i. Based on the »profile« attribute, an appropriate profile is selected in the login window.

- ii. After successful login, the relevant notification page/document is shown.  
A root page is added in front of it. If an initial page or first displayed page exists in the configuration, it is also added.
- b. In the event that the notification profile is the one currently being used by the user and the session is still valid, the following notification page/document opens.

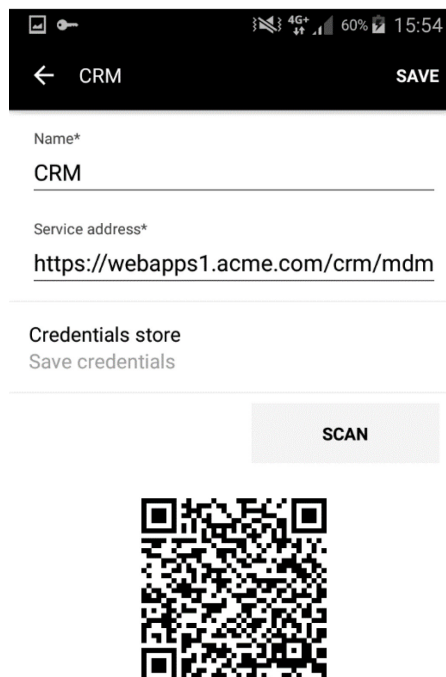
## 8.4 QR code

A QR code is used to create profiles in the event that ...

- It is already located on a profile.
- The user receives it via email.
- It is already printed on paper.

The user captures the QR code ...

- With the Camera application using the »Scan« button.



The screenshot shows a mobile application interface for creating a profile. At the top, there is a status bar with icons for signal, 4G+, 60% battery, and the time 15:54. Below the status bar is a header with a back arrow, the text "CRM", and a "SAVE" button. The main form has three sections: "Name\*" with the value "CRM", "Service address\*" with the value "https://webapps1.acme.com/crm/mdm", and "Credentials store" with the option "Save credentials". Below the form is a "SCAN" button, and at the bottom is a QR code.

Image 212: View of the capture of profile data using a QR code

- from other applications that support the reading of QR codes.

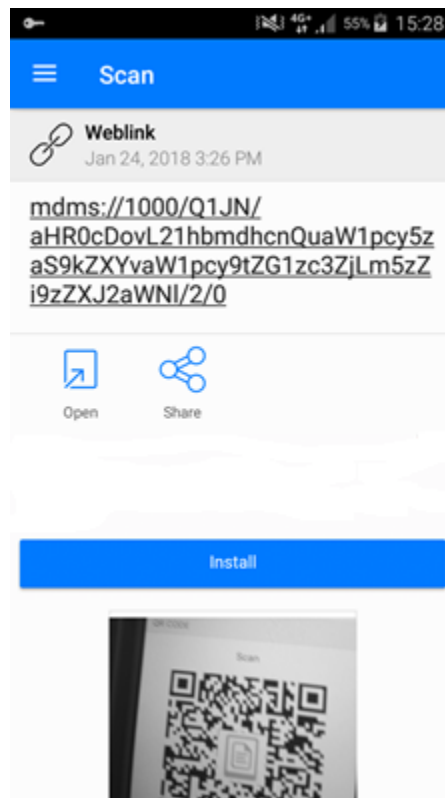


Image 213: Example of capturing profile data via the »QR Code Reader« application

### 8.4.1 Structure

`mdms://dataVersion/profileName/profileAddress/profileCredentials/autoSave`

#### *Example*

`mdms://1000/XYuaW1pcy5zaS/aHR0cDovL3RyaWdsYXlvaW1pcy5zaS9JUy9pZG1zc3ZjLm5zZi9tZXJ2aWNI/2/1`

Parameter description:

- `dataVersion*` [unsignedInt]: content version (version 1000 for profiles)
- `profileName *`[string]: profile name encoded in Base64 (so that the user can use spaces)
- `profileAddress *`[string]: URL address encoded in Base64
- `profileCredentials *`[unsignedInt]: type of credentials
  - 0: no data is saved
  - 1: only the profile username is saved
  - 2: the profile username and password are saved
  - 3: the profile username and password are saved, additionally protected by a touch ID/fingerprint or passcode.



If the device does not provide protection, the user can save the username and password as part of a list of the type of saving sensitive profile data.

- autoSave \*[unsignedInt]: profile saving settings
  - 0: profile is not saved. Content of the read profile is shown in a dialog box for creating a new profile, where the administrator modifies the read profile data if need be.
  - 1: profile is saved automatically.

## **8.4.2 Application's response on triggering a QR code**

### **8.4.2.1 Scanning a QR code from an external application**

#### **8.4.2.1.1 Closed application**

1. By scanning a QR code, the application starts.
2. Based on the »autoSave« attribute, the following action is executed:
  - a. autoSave = 0: In the login window a dialog box opens with the content of the new profile, which the user modifies, if need be, and creates.
  - b. autosave = 1: A new scanned profile is automatically created and moves directly to the login window with the selected new profile.

#### **8.4.2.1.2 Active application in the background**

1. By scanning a QR code, the application is shown in the foreground.
2. Based on the »autoSave« attribute, the following action is executed:
  - a. If the user is currently logged into a profile, the application is executed in the following steps:
    - i. autoSave = 0: The application opens a login window, in which a dialog box opens with the content of the new profile, which the user modifies, if need be, and creates by saving it.
    - ii. autosave = 1: The application opens a login window, in which a new scanned profile is automatically created and selected.
  - b. If the user is already located in the login window, the application is executed in the following steps:
    - i. autoSave = 0: In the login window a dialog box opens with the content of the new profile, which the user modifies, if need be, and creates by saving it.
    - ii. autosave = 1: A new scanned profile is automatically created and selected.

### 8.4.2.2 Scanning within the mDMS application profile

#### 8.4.2.2.1 Application in the foreground

1. In the profile the user has the option of creating a profile anew or again via the »Scan« button. After selecting the button, the following is executed:
  - a. The camera is activated and the user reads the QR code.
  - b. In the event of a successful read and a correct format, the profile data is written out.
  - c. In the event of an unsuccessful read or a wrong QR code format, the application notifies that the format was wrong. The user can repeat the scanning of another QR code.

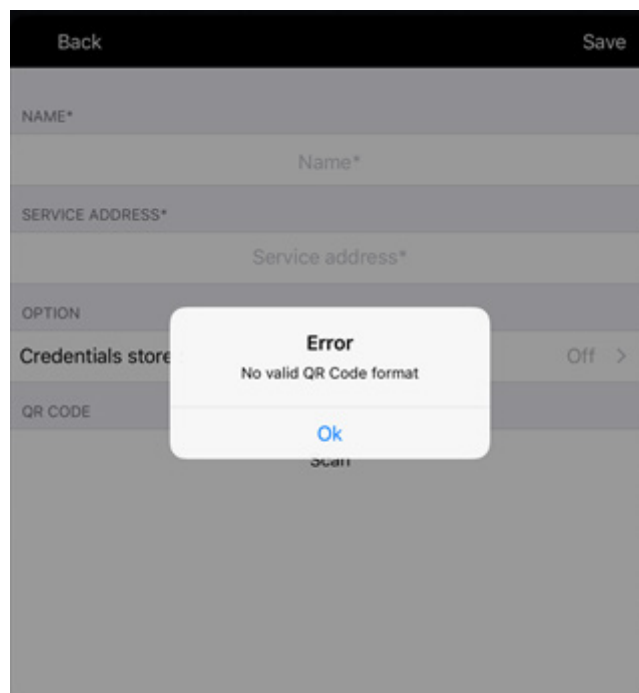


Image 214: Error notification »QR code format invalid«

- d. After a new profile is written out, the user can edit it and create it by saving the profile.

### 8.4.3 Viewing a QR code in profiles in MAM mode

A QR code is shown in profiles when the parameter in the MAM configuration

IDMS\_CONFIG\_PROFILE\_USERDEFINED is set to true. This parameter prevents the copying of profiles via QR codes if set to false.

The button for scanning QR codes (Scan) is not visible on MobileIron®/Citrix® profiles, or the profile cannot be modified using the button for scanning QR codes.

For more information about enabling/disabling MAM mode see [chapter 4.2.1 Installing IMiS/mDMS Client application](#).

## 9 TROUBLESHOOTING

### 9.1 Problems using IMiS®/mDMS

Below is a list of common problems with using the IMiS®/mDMS application, a description of problems, and instructions for resolving problems.

#### 9.1.1 MobileIron® configuration has not been not installed properly

##### Cause of problem

The configuration with profile parameters, which the user received from a MobileIron® administrator and installed on the device, has not been installed properly or the user does not have the appropriate configuration.

##### Solution for problem

User opens the MobileIron® configuration and selects the »Settings« tab.

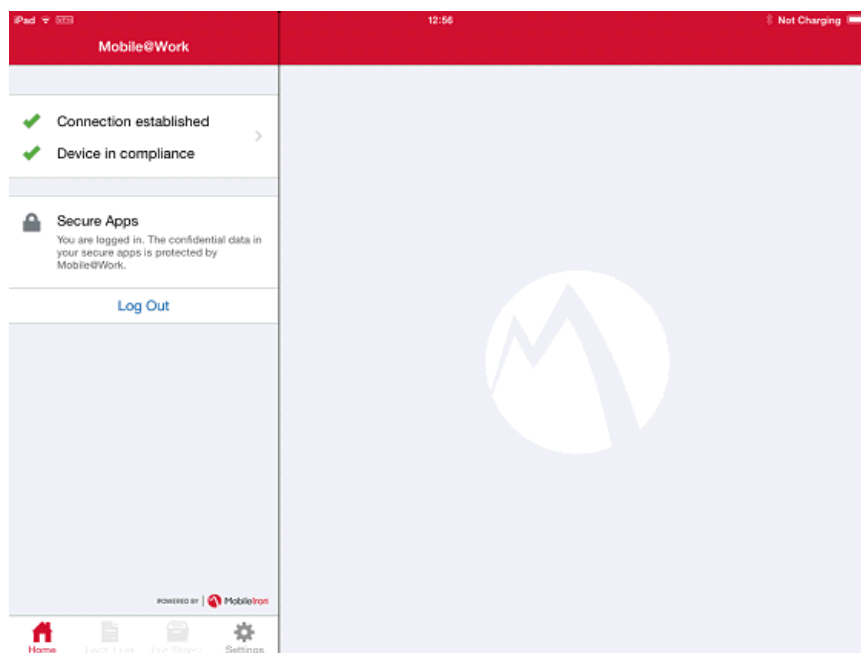


Image 215: Selection of settings in the »Settings« tab in the MobileIron® configuration

User checks the settings in the MobileIron® configuration. In the »Settings« tab the user chooses the section »Secure Apps« and checks if the IMiS®/mDMS application is on the list and marked with a green tick.

If the IMiS®/mDMS application is not on the list, the user does not have the appropriate configuration.

In the section »Check for updates«, the user selects »Re-Enroll Device«. The device reconnects to the MobileIron® server and updates the configuration profile.

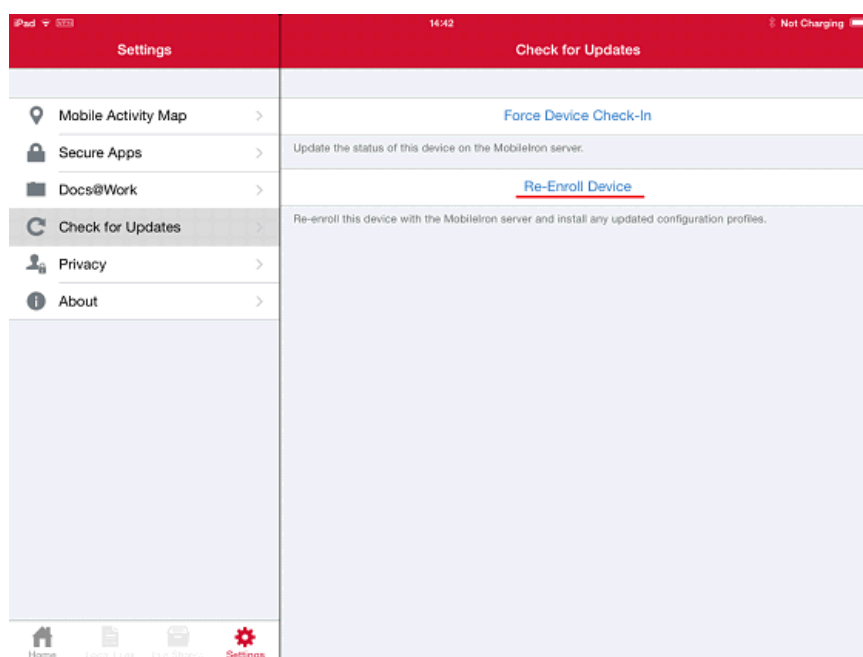


Image 216: Updating the configuration profile (Re-Enroll Device)

If the IMiS®/mDMS application is on the list but not marked with a green tick, it means that the configuration has not been installed properly. The user selects the setting »Re-Enroll Device« and waits for the configuration profile to be updated.

If the green tick still does not appear, the user should talk to the MobileIron® administrator.

If the IMiS®/mDMS application is on the list and marked with a green tick, the user can select the application.

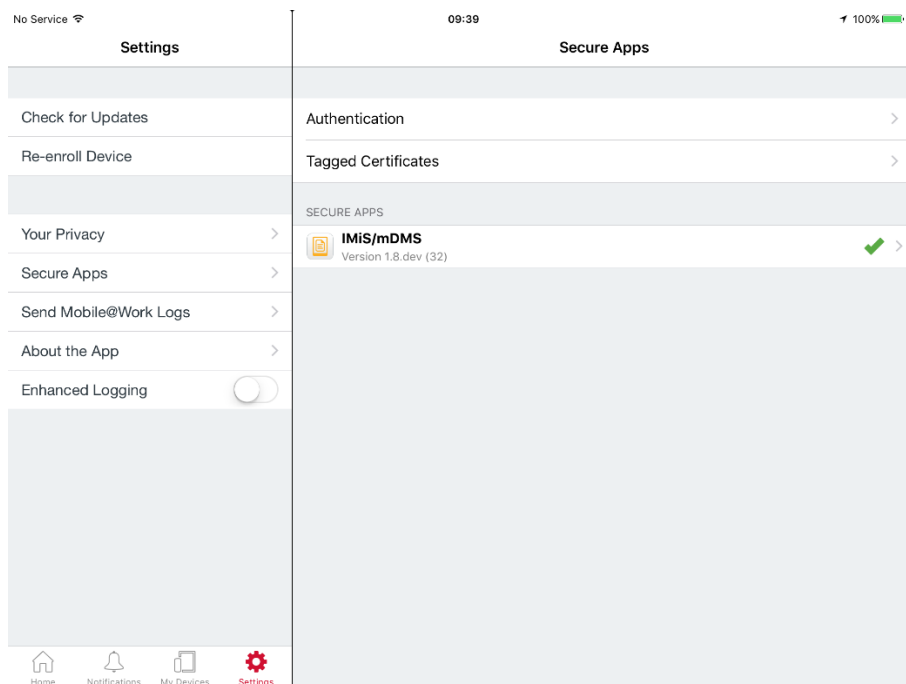


Image 217: Checking application status in the »Secure Apps« section of the configuration profile

User checks the settings under »Authorization status« in the »Secure Apps« section in the MobileIron® configuration. If the »Authorization status« has not been set to »Authorized«, the user should dismiss the IMiS®/mDMS application and reopen it.

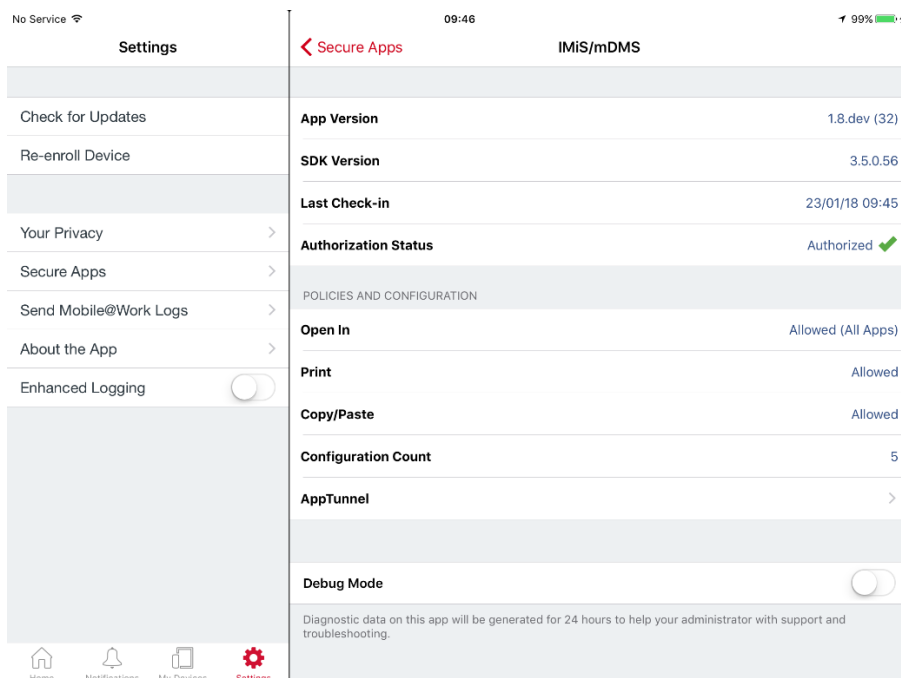


Image 218: Checking authorization status in the »Secure Apps« section of the configuration profile

The user should also check if the value of »Configuration Count« is higher than 0.

If it is NOT higher than 0, the profile parameters on the device have not been installed properly. In that case, the user should select »Force Device Check-In« in the »Check for updates« section of the configuration profile.

This selection updates the device status on the MobileIron® server.

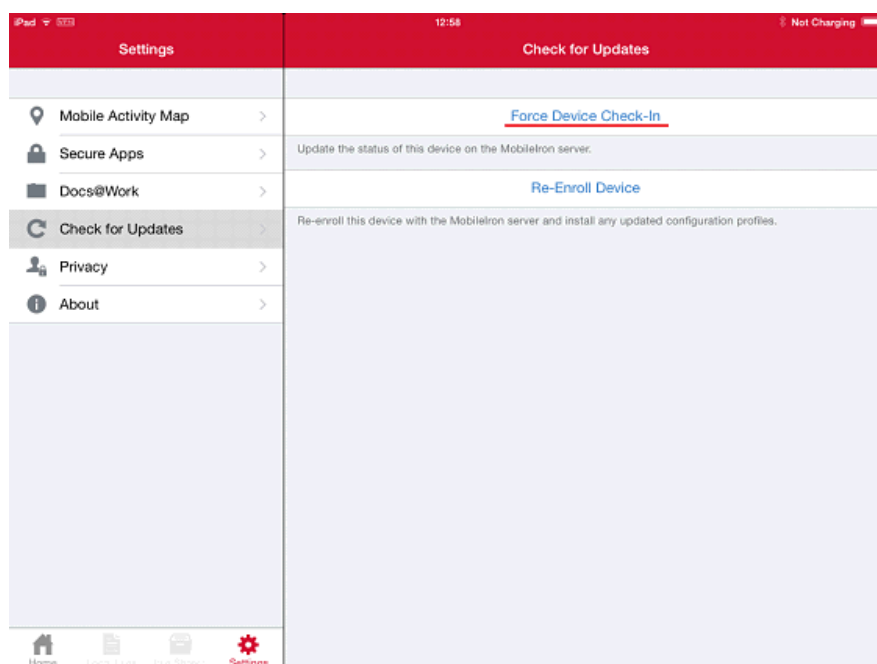


Image 219: Selection of »Force Device Check-In« in »Check for updates« of the configuration profile

After installation, the user should recheck if the value of »Configuration Count« is higher than 0. If the value is still 0, the user should reselect »Re-Enroll Device« and wait for the configuration profile to be updated.

If the update fails, the user should notify the MobileIron® administrator of the problem.

If the »Authorization status« has been set to »Authorized« and the value of »Configuration Count« is higher than 0, the user can return to the application.