Reader Configuration Tool

en User manual

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1 About this manual

This manual aims at certified or trained system integrators and describes how to use the Reader Configuration Tool for customizing the access parameters of MIFARE DESFire credentials. These credentials will be then used in the Access Engine (ACE) of the Building Integration System or in the Access Management System (AMS) to configure LECTUS select readers.

The manual contains three main sections:

- The *Introduction, page 5* has information about the Reader Configuration Tool, namely the credentials and readers types compatible with the tool and some considerations on security in the file configuration process. Next, an overview of the Reader Configuration Tool is presented.
- The *Getting started, page 7* section describes how to start using and exit the tool.
- The last section *Configuring reader parameters, page 8* presents the instructions for the configuration of the access parameters and saving them in a file.

2 Introduction

2.1 Reader Configuration Tool overview

This tool allows you to customize the following access parameters of MIFARE DESFire credentials:

– The application ID
– The DESFire file number
– The file read key.

Since these parameters contain security relevant information, they will be stored in a password secured encrypted file. This file, called the parameter file, can be then imported into the access control system and used to configure a reader.

When saving the parameter file for the first time, you must generate a password that will be used to encrypt the file (refer to *Password security, page 6*).

With the Reader Configuration Tool, you can create an unlimited number of parameter files. But only one file can be active in a reader at a time. For more information on the configuration of a reader with a parameter file, refer to *On the configuration of readers, page 10*.

The configuration of the parameter file in the Reader Configuration Tool has three main steps, as shown in the Reader Configuration Tool diagram.

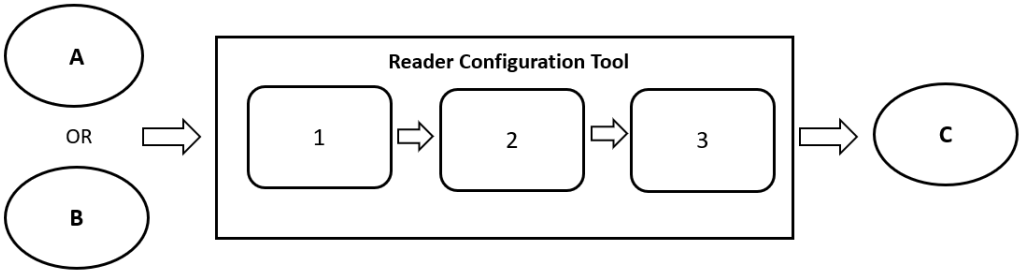

Figure 2.1: Reader Configuration Tool diagram

A	Parameter file
B	Predefined template settings for a particular reader type. This default information is given by the company that provides the cards.
1	Select reader type (to load predefined template settings) or parameter file.
2	Set the reader parameters.
3	Save the configuration.
C	New parameter file

2.2 Readers and credentials compatibility

The Reader Configuration Tool is compatible with:
- LECTUS select readers with and without keypad
- MIFARE DESFire EV1 and EV2 credentials
- Smart MX cards with MIFARE DESFire EV1 applet
- Smart MX cards with MIFARE DESFire EV2 applet.

2.3 Password security

Notice!
The password must contain at least 24 characters, both uppercase and lowercase. Use a unique password and make sure that the password and parameter file are protected from unauthorized access.
This password allows access to the file read key in the parameter file, and its loss would compromise the security of the whole access control system.

3 Getting started

3.1 Getting the tool

Depending on which access control system you have, you can copy *Bosch.ReaderConfigTool.exe* from one of the following folders in the installation medium:

– ACE version 4.9 or later: AddOns\ACE\ReaderConfigTool\
– AMS version 4.0 or later: AddOns\ReaderConfigTool\

3.2 Running the tool

Starting the tool

After downloading the Reader Configuration Tool you can start using it.

To run the tool:

1. Go to the folder where the executable file (*Bosch.ReaderConfigTool.exe*) is stored.
2. Open the file by double-clicking it.

Exiting the tool

To stop the Reader Configuration Tool, on the right upper corner of the window, click the **Close** button.

4 Configuring reader parameters

With the Reader Configuration Tool, you can:

– Create a new parameter file by loading predefined template settings for a specific reader type.
– Change a saved parameter file.

4.1 Creating a new parameter file

To create a new parameter file:

1. Start the Reader Configuration Tool (refer to *Starting the tool, page 7*).
2. In the **Configure** window, select your reader type and click **Continue**.
3. In the **DESFire** window, change all fields according to your requirements and click **Continue**.

Field	Description and Actions
Application id	This is the NXP DESFire Application ID (AID) and contains 6 hexadecimal numbers. Make sure you change the default value to your required AID. **Note**: A number of AIDs are either NXP reserved or Bosch reserved. If you enter one of these IDs, a warning message will show and the tool will prevent you from proceeding.
DESFire file-no	This is the DESFire file number. It is a number between 1 and 31.
File read key	This is the read key of the DESFire file and contains 32 hexadecimal numbers.

4. Check the parameters entered in the previous step and enter the optional fields **Configuration name** and **Comment** with the desired additional information.
5. Enter the password for the parameter file, confirm it and then click **Save**.

Notice!
The password must contain at least 24 characters, both uppercase and lowercase. Use a unique password and make sure that the password and parameter file are protected from unauthorized access.
This password allows access to the file read key in the parameter file, and its loss would compromise the security of the whole access control system.

6. In the **Open** dialog box, select the destination folder, enter the name of the parameter file and click **Save**.
7. Close the Reader Configuration Tool (refer to *Exiting the tool, page 7*).

4.2 Changing a saved parameter file

To load a previously saved configuration file:

1. Start the Reader Configuration Tool (refer to *Starting the tool, page 7*).
2. Open a previously saved parameter file by clicking the **Select a file** button.
3. In the **Open** dialog box, select the file you want to load and click **Open**.
4. Type the password of the parameter file and click **OK**.
5. In the **DESFire** window, check and edit the parameters previously saved and then click **Continue**.
6. In the **Save** window, you can edit the optional fields **Configuration name** and **Comment**. You can also change your password by entering the new one in **Password** and **Retype the password** fields.

Notice!
The password must contain at least 24 characters, both uppercase and lowercase. Use a unique password and make sure that the password and parameter file are protected from unauthorized access.
This password allows access to the file read key in the parameter file, and its loss would compromise the security of the whole access control system.

7. Check the defined parameters and click **Save**.
8. In the **Open** dialog box, select the destination folder, enter the name of the parameter file and click **Save**.
9. Close the Reader Configuration Tool (refer to *Exiting the tool, page 7*).

5 On the configuration of readers

The resulting encrypted reader parameter file is used to configure LECTUS select readers on Bosch access control systems.
For detailed instructions on how to configure a reader with a parameter file, refer to the configuration help file (chapter **Customer reader configurations**) of one of the following access control systems:

– ACE version 4.9 or later
– AMS version 4.0 or later.

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