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1 Introduction

1.1 Audience

This document is intended for users who are responsible for running system administration operations. We recommend that only persons with the necessary knowledge and corresponding training perform the system installation. Please read this manual thoroughly and carefully before starting installation of EasyDirect PAM. Make sure you are familiar with all components within the system. It is particularly important that you are familiar with the database tools and hardware components.

1.2 Purpose of this Document

This document provides installation and maintenance information for EasyDirect PAM. We recommend that prior to installation, upgrade or maintenance of the software you read the related chapters in this document.

1.3 Related Documents

- EasyDirect PAM Online Help
- SmartStand User Manual

2 EasyDirect PAM System Overview

The following diagram shows the main architectural components of a EasyDirect PAM system that are subject to become deployed during the installation.
3 Preparing the installation

3.1 System Requirements

3.1.1 Computer
The following tables show the minimal and the optimal hardware requirements for running EasyDirect PAM. However, the hardware requirements depend heavily on the number of connected readers / type of readers and the operating rate of the readers.

If the CPU supports Hyper-Threading, you can double the available cores when calculating the hardware requirements. A Dual Core CPU would therefore be counted as a Quad Core.

<table>
<thead>
<tr>
<th>Computer</th>
<th>Minimum</th>
<th>Optimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>2 GHz Single Core</td>
<td>3 GHz Quad Core</td>
</tr>
<tr>
<td>RAM</td>
<td>4 GB</td>
<td>8 GB</td>
</tr>
<tr>
<td>Display Resolution</td>
<td>1280 x 800</td>
<td>1280 x 1024</td>
</tr>
<tr>
<td>Hard Disk</td>
<td>10 GB free space</td>
<td>10 GB free space</td>
</tr>
</tbody>
</table>

3.1.2 Supported Operating System
The following list shows the supported operating systems of EasyDirect PAM.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Service Pack</th>
<th>Edition</th>
<th>32bit</th>
<th>64bit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 7</td>
<td>SP1</td>
<td>Ultimate, Professional, Enterprise</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Windows 8.1</td>
<td></td>
<td>Standard, Pro, Enterprise</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Windows 10</td>
<td></td>
<td>Pro, Enterprise</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Windows 10</td>
<td></td>
<td>Long Term Service Branch LTSB</td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>

3.1.3 Supported SQL Server
The current version of EasyDirect PAM will install an instance of Microsoft SQL Server 2012 Express Edition to drop its database. It is currently not possible to choose a different SQL Server.

3.1.4 Additional Requirements
You need to disable "Hibernate" and or "Standby" option of your PC, as EasyDirect PAM does not support "Hibernate" and "Standby" mode. You will find more information, on how to deactivate the "Hibernate" and "Standby" mode under: [http://support.microsoft.com/kb/920730/en](http://support.microsoft.com/kb/920730/en)

3.1.5 Additional Software installed
The following third party software is required by EasyDirect PAM to run. The installation will install the necessary components automatically.

<table>
<thead>
<tr>
<th>Additional Software</th>
<th>Version</th>
<th>Installed by EasyDirect PAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>.Net Framework</td>
<td>4.6</td>
<td>●</td>
</tr>
<tr>
<td>SQL Server Express 2012</td>
<td>2012</td>
<td>●</td>
</tr>
</tbody>
</table>

3.1.6 Readers
EasyDirect PAM supports the following RFID Readers with the corresponding configuration. The Readers have to fulfill the requirements to operate with EasyDirect PAM.

<table>
<thead>
<tr>
<th>RFID-Reader Device</th>
<th>Firmware</th>
<th>USB</th>
<th>Serial</th>
<th>Bluetooth</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartStand</td>
<td>0.2.1.0</td>
<td>●</td>
<td>*</td>
<td>●</td>
</tr>
</tbody>
</table>
3.1.7 Virtualized Environments

EasyDirect PAM is not tested in virtualized environments. However, if rules are followed on how to connect / redirect USB/Bluetooth devices in such an environment EasyDirect PAM is supposed to run.

3.1.8 Supported Languages

EasyDirect PAM and SmartStands support their individual list of languages. Mixed languages doesn’t harm the overall system from its intended operation. The following languages are supported:

<table>
<thead>
<tr>
<th>Language</th>
<th>EasyDirect PAM</th>
<th>SmartStand</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>German</td>
<td></td>
<td></td>
</tr>
<tr>
<td>French</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2 Pipettes

EasyDirect PAM supports Rainin RFID pipettes (manual, electronic, single/multichannel) as well as non RFID pipettes (any brand).

3.3 Method Cards

EasyDirect PAM supports Rainin Method Cards for the usage in conjunction with non-RFID pipettes to store Quick Check method parameters.

4 Installation

4.1 Using the Installation Wizard (setup.exe)

You need to run the EasyDirect PAM installation "EasyDirectPAMsetup.exe" as an administrator.
After accepting the license agreement, it is shown which SQL Server instance is used to create the database (if a SQL Server is already present in the PC). For PCs where the SQL Server is not present the installation happens automatically.

You can start the installation now. The setup will install EasyDirect PAM in a program folder \METTLERTOLEDO\EasyDirect PAM.

Note: In case the required .NET framework is not found on the PC, it will be installed as well and the user is asked to perform a reboot prior proceeding the installation.

Associated data and log files will be created and updated in C:\Users\Public\METTLERTOLEDO\EasyDirect PAM.

After successful installation please restart your PC (only when prompted).

4.2 Updating an existing EasyDirect PAM Installation

EasyDirect PAM comes with an integrated “Check for updates” functionality. (see User manual) If connected to the internet, the user can also manually check if a newer version of EasyDirect PAM is available from the About Window.
In addition, this functionality also allows to check if a newer version of the SmartStand firmware is available. EasyDirect PAM is capable to update the SmartStands firmware once a newer firmware version is available. Note that the firmware is copied locally and the you have to install the new firmware to the SmartStands connected through USB.

When installing a new version of Easydirect PAM, the existing database is automatically upgraded (if necessary) and hence you need not perform any special action to take backup.

5 Separate Driver Installations

5.1 USB Drivers

5.1.1 SmartStand

Connecting the SmartStand via USB cable to the PC will automatically install the required device driver on Windows 7, 8.1 and 10.

However, if for any reason the automatic driver installation doesn’t work you may download and install the driver from here: [http://www.ftdichip.com/Drivers/VCP.htm](http://www.ftdichip.com/Drivers/VCP.htm)

Please download the driver from the site, run the driver installation and then connect the SmartStand. A reboot might be required after the driver installation.

Also, note that you need to wait until the drivers are installed successfully. You will get a notification on the status of the driver installation. Once the drivers are installed successfully, you need to plug-out and plug-in again the USB cable for the EasyDirect PAM to detect the Smart Stand.

5.1.2 FlexScan Reader

Using the FlexScan Reader via its serial interface using a serial cable to the PC doesn’t require any driver installation.

If you are using a USB-Serial cable, ensure that a null-modem/gender changer adapter is used and that the drivers of the USB-Serial cable are installed before plugging in the cable the first time.

After successful driver installation, you will see an additional (virtual) COM Port in your windows system. A reboot might be required after the driver installation.

Please note that in some PCs after recovering from Sleep/Hibernate, the port does not work properly though the port is still available. You have to unplug and plug-in the cable for the communication to resume.

5.1.3 BT Dongle

To communicate with SmartStands either the built-in Bluetooth from your laptop can be used or an USB-BT dongle. As dongle we recommend to use the LM506 on the PC side.

Dongles tested with EasyDirect PAM:
- LM506 (Broadcom stack)
- ASUS USB-BT400 (Broadcom stack)
- Trendnet TBW-106UB (CSR with Win stack)
- Startech USBBT1EDR4 (CSR with Win stack)
- Laird ST820 (TDK with Win stack)
Driver for the USB-BT dongles come with the dongles. However, if you need to download and install separately you can find the driver for the LM506 USB-BT dongle here:

http://www.lm-technologies.com/downloads/software/

After successful driver installation you will see an additional (virtual) COM Port in your windows system.

A reboot might be required after the driver installation.

6 Starting EasyDirect PAM the First Time

6.1 License

After first time installation you can use EasyDirect PAM 45days with full functionality in trial mode.

In order to unlock your EasyDirect PAM version for timely unlimited use you need to obtain a License Key from your Mettler-Toledo / Rainin representative or retailer.

7 Known behavior

7.1 RFID Reader not detected

Typically, when both LabX direct Pipette-Scan and EasyDirect PAM are used simultaneously. As LabX direct Pipette-Scan tries to force close the RFID Reader.

Please close the LabX direct Pipette-Scan and Unplug the RFID reader and wait for 10 Sec and Plug the RFID reader to PC. Now EasyDirect PAM will be able to communicate with the RFID reader.

This is true any other applications which may attempt to communicate with the RFID Readers.

7.2 FlexScan Reader not detected

If using the serial COM Port on a docking-station, EasyDirect PAM might not be able to establish a communication via its COM Port (Typically COM1).

Please try to avoid using a docking station or use a USB-Serial Cable instead which creates a virtual COM on the computer.
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