ELECTRONIC DISPENSING TOOL IT ADMINISTRATION MANUAL
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About SIAPS

The goal of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is to assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Toward this end, the SIAPS result areas include improving governance, building capacity for pharmaceutical management and services, addressing information needed for decision-making in the pharmaceutical sector, strengthening financing strategies and mechanisms to improve access to medicines, and increasing quality pharmaceutical services.

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Key Words

EDT, ART, EDT Mobile

Contents

Acronyms and Abbreviations

ART	Antiretroviral Therapy
ARV	Antiretroviral medicine
EDT	Electronic Dispensing Tool
EPMS	Electronic Patient Management System
IMAI	Integrated Management of Adults and Adolescents Illnesses
MIS	Management Information Systems
MoHSS	Ministry of Health and Social Services
MTC	Mobile Telecommunications Limited
PC	Personal (desktop) computer
SQL	Structured query language

INTRODUCTION

The Electronic Dispensing Tool (EDT) has been in use in the public sector antiretroviral therapy (ART) pharmacies of Namibia since August 2005. The database application helps pharmacy staff to efficiently manage patients and antiretroviral medicines (ARVs). This includes monitoring of patients' adherence to ART, retention in care, dispensing history, regimen and status changes, and appointments keeping and maintaining a good inventory of ARVs.

The EDT user interface is based on Microsoft Office Access whereas the database structure resides on SQL Server Express. This client-server architecture enables the database application to support multiple user access and the design of complex queries required to retrieve data from the national database for programmatic analyses related to ART.

During the month of November 2013, SAIPS supported the Ministry of Health and Social Services (MoHSS) with the training workshop aimed at empowering the local IT support staff from the Oshana and Kavango regions to do EDT installations and support.

The EDT IT Administration Manual

Brief System overview

The Electronic Dispensing Tool (EDT) is a software tool used in the CDC Pharmacies to dispense medicines to patients, to do patient management and to do stock controlling.

The EDT consists of two parts, a front end (user interface) and a back end (database). The front end is MS Access and the back end is SQL Server 2008.

The database is stored in an encrypted drive. The encryption software used is TrueCrypt. The data drive password protected and is launched upon log on. Once drive is mounted the database is accessible and EDT can be launched.

Backups occur every day during lunchtime, and the backup file is also stored in the encrypted data drive.

Installation guide of the EDT

Create an EDT folder in \\C:\

Create sub-directories in \\C:\EDT\ - Data and Software

Step 1:

The following software needs to be loaded onto the computer before EDT can be installed:

1. 7Zip compression software
2. Antivirus Software – Kaspersky Endpoint Security 10
3. FileZilla FTP software
4. PrimoPDF
5. Microsoft Office 2010 Plus
6. Truecrypt 7.1a encryption software
7. SQL Server Express 2008
8. MTC 3G/4G device installation (Profile name – EDT, dial up nr *99#)

Step 2: Truecrypt software and Encrypted volumes

After software installation steps are completed, the configuration process starts.

1. Run the Setup file - TrueCrypt Setup 7.1a.exe

2. Create an encrypted volume using Truecrypt software.

3. Click on 'Select file' – to create a data file in \\C:\EDT\Data\ name it 'DATA'

Size 50GB, NTFS format. Create Password = fac.code-fac.name123.

4. List volume under Favourites, name volume 'EDT Data' and select mounted upon user logon.

5. Create a 2nd volume; size 20GB and format it NTFS as well; List volume under Favourites and name it 'Software'. This volume is not mounted upon user logon.
    Password = !1Edt1!.

6. Copy the EDT Software folder into the software volume and continue the rest of the installations from there.

Mounting the volumes in Truecrypt:

1. Open the Truecrypt interface from the start menu

2. Select a drive letter on the list ("M" for the data volume and "S" for the software volume) and click 'Select File'.

3. Browse to where the file resides, select the file, and then click 'Open'. Click on 'Mount' in order to mount the selected file/volume and enter the password.

4. Open the favourites menu, and select add the mounted volume to favourites.

5. Enter 'EDT Data' for label of mounted volume

6. Select 'Mount selected volume upon logon

7. Repeat the steps for the software volume, but do not mount the volume upon logon

Step 3: FileZilla

1. Install FileZilla server and select the option 'Start manually' for the FileZilla Server Interface.

2. Create admin login to local server – 127.0.0.1 – Select always connect to this server

Configure the groups and users

1. Click on Edit and select Groups

2. Create an 'edt' group

3. Select shared folder and browse to \\M:\Data

4. Select all the file permissions e.g. Read, Write, Delete etc. and 'Set as home directory.

5. Click on Edit and select Users

6. Create user 'edtuser' and link to 'edt' group.

7. Enable account and enter password 'edtuser'

Step 4: Kaspersky Anti-virus software

1. Install Kaspersky Network Agent first; enter Server IP address – 10.254.104.5 when prompted.

2. Install Kaspersky Endpoint Security and activate with key file provided.

3. After installation, open the user interface and go to \\Settings\Advance Settings\ Interface\

4. Enable password for interface – password = kaspersky

5. Disable Kaspersky Firewall

6. Enable Windows Firewall

   - Click on Start and type – firewall – select Windows Firewall

   - Go to 'Turn Windows Firewall on or off – Turn on Firewall for all connections.

Verify in Windows Firewall in Advanced Settings that the following is allowed access through:

1. Casio LMWIN

2. Casio LMWIN (TCP)

3. FileZilla Server (UDP)

4. FileZilla Server and RDP (TCP)

5. Kaspersky Administration Kit

Step 5: SQL Server Express

1. Run System Configuration Checker

2. Go to Installation - Select New Installation or add features to an existing installation

3. Accept the licence terms

4. Select all features

5. Select Default instance

6. Click on "Use the same account for all SQL Server services" - Select the account 'NT AUTHORITY\SYSTEM - do not enter a password

7. Select windows authentication mode

8. Install the native mode default configuration

9. Wait until setup finishes

10. Launch the SQL Server Configuration Manager and under protocols for network enable both 'Named Pipes' and 'TCP/IP'.

11. Restart SQL Server for changes to take effect.

Note: For re-installation of SQL Server at Reporting Services Configuration, select 'Install, but do not configure the report server - nr.8.

Step 6: **EDT Installation**

1. Run 1-EDT5.0.2-JUN2013_Setup – this file name changes with newer versions

Before finishing the installation, ensure that the latest backup resides in the loading folder:

Copy the backup file *.bak.7z to [\\M:\SPS\Tools\NDB\Data\Loading](\\M:\SPS\Tools\NDB\Data\Loading)

2. Type 'y' for yes at the prompt if backup is in the loading folder.

3. Type 'n' for no to load the corresponding coded database.

4. Browse to [\\M:\SPS\Tools\NDB\Scripts\](\\M:\SPS\Tools\NDB\Scripts\) and run the 03_Reload_EDTdb script

5. Run 2-EDT-FTP2.5_AUG_Setup

6. Run 3-EDT-Report_JUN2013_Setup

7. Run 4-Firewall-RDP_Jun2013_Setup

8. Type 'y' and press enter when prompted to enable password in Kaspersky.

Step 7: **Printer Installation**

1. Connect printer and allow Windows to finish installing the drivers

2. Add a local printer

3. Select USB port

4. Select Generic Text Only printer

Create paper size for labels

1. Click on Print Server Settings

2. Select create form

3. Form Name = MSH

4. Width = 9.5cm; Height = 5.15cm

5. Click 'Save form'

Printer Properties

1. Change the paper size in to the following settings for the Generic Text Only printer

\\Preferneces\Advanced\Paper Size\ = MSH

\\Device Settings\Cont. Feed\ =MSH

\\Device Settings\Cut Sheet\ = Not Available

\\Device Settings\Cont. with break\ = Not Available

\\Device Settings\Advance\Printing Default\Advanced\ = MSH

Known errors in EDT:

1. Form 00 could not be found or is misspelled.

o   Ask the user to run the restore EDT shortcut on the desktop. This will replace the EDT front end, and the report front end.

2. Access to the selected database is denied or server does not exist

o   First ask if the user can see the M Drive.

o   Confirm that they have entered the password for 'Data' drive upon logon.

o   Tell user to log off and then back on again

3. M drive is mounted but EDT still does not work

o   Ask the user to run the restore EDT shortcut on the desktop.

4. If the error continues

Connect with RDP to the remote computer

4.1 Check if MS SQL Server is running

4.2 Check that the EDT database exist in SQL Server Management Studio

4.3 If it exists and it is marked as suspect, delete the EDT database from SQL.

5. Solving issues with the database

5.1 Look for the latest EDT backup in \\M:\Data\

5.2 Copy the *.7z file to the loading folder \\M:\SPS\Tools\NDB\Data\Loading\

5.3 Clean the loading folder before copying the backup file.

5.4 Run the script - 03_Reload_EDTdb in \\M:\SPS\Tools\NDB\Scripts\

5.5 Check if the database now exist in SQL Management Studio

5.6 Test the EDT to see if it is working

Note: Always say 'no' in command window for loading of corresponding code named EDT database.

6. Printer is printing one label and skipping 4 labels then print again.

o The default printer is removed and the Epson printer is now set as default. If Generic Text Only is present, set it as default.

o If the Generic Text Only printer is not present - install Generic Text Only printer and set the following device settings – see printer installation

7. Restore EDT database

How to change or install the EDT database

1. Manually Clean-up the Loading folder: \\M:\SPS\Tools\NDB\Data\Loading\

2. If the update is being done on the EDT PC:

   a. Create a backup by running the backup script file - \\M:\EDT\Scripts\bak.cmd

   b. Or locate the latest db backup and copy it from \\M:\data\

3. Paste the backup file in the Loading folder: \\M:\SPS\Tools\NDB\Data\Loading\

4. Finally, to load the updated database structure, run the script **03_Reload_EDTdb.cmd** in the same folder.

5. Now you can open the EDT.

EDT mobile installation and troubleshooting guide at Main sites

Step 1: Installing USB cradle software and drivers

CASIO LMWIN installation guide for Windows 7 (64bit). This is the current setup in the field.

1. Follow these steps to install the required software.

2. Please DO NOT connect the HA-E60 cradle until all software and drivers have been installed.

3. Insert the CD in the CD drive.

4. Open the 'LMWIN' folder on the CD.

5. Run the setup.exe file. Wait until finished.

6. Open COMMON folder on the CD.

7. Copy all files from COMMON folder to C:\Program Files (x86)\CASIO\LMWIN folder.

8. Open C:\Program Files (x86)\CASIO\LMWIN folder.

9. Create a shortcut for lmwin32.exe and place it on the desktop.

10. Open 'C:\Program Files (x86)\CASIO\LMWIN\IRXpress64' folder.

11. Run the 'SetupUSBIrDA(x64).exe' file. Reboot the PC when requested.

Please also create the following folder for future scanner software updates.

C:\CASIO\SENDDATA\EDT930

Data transfer process from and to mobile device

- Data transfer to the mobile device takes place in the following steps:

Step 1

o   Create files on the EDT computer (Step 1). Always start with this step when updating devices from the computer.

Step 2

o   Link computer by clicking on Step 2 in EDT software

Step 3

o   Update device using the load data function on the mobile device, wait until data is transferred, files are converted on the device.

Data transfer to the computer takes place in the following steps:

Step 1

- o Start at Step 3 – 'Send Files Back to PC' on the EDT software Import/Export Data Menu under Mobile.
- o This will open communication windows, and the import window.
- o Continue on the device with menu 2 – 'Send Files'.
- o Once files are transferred the import step is followed
- o After import session is complete, the verification process is started and database is updated.

Cannot import files, import session still open:

- o This means that the previous import process did not complete and the session is not closed.
- o The session is closed by the clicking on Step 6 – 'Close Mobile Session'. The import file is renamed while the database is not updated, rename the file *.imp back to *.txt and start the import process again.
- o Update and create files again for export to mobile device.

- o Connection issues and basic maintenance of mobile devices

Device gives a TX error when load data process is started. This means that there is a connection problem between the device and the computer. It might be software related or hardware.

First check the physical connections of the cables at both ends.

On the device check the type of connection it is set to use;

- o Serial devices connect using DT-964
- o Bluetooth device use 'Bluetooth'
- o USB device use HA-E60 USB

Select the appropriate connection for the device and start the process again. Press 'CLR' or 'F1' to return to the previous or main menu.

Exclamation mark on main menu items:

- o Nr 1 – Clock – this means that the clock is wrong or reset and need to be adjusted
- o Nr 4 – Load Files – this means that the device does not contain any data files, and you need to upload the files to the device

Preparing the device after not being used for a long time

- o When device is switched off for a long time, upon switching it on, a system setup screen appears and asks for formatting A drive. Proceed as follows:

- o Press "1" and the "ENT" to confirm formatting of A Drive

- o After formatting is complete, select "(1) Install AP" on the device and confirm through 'ENT'

- o When installation is complete, Press "1" to launch application

- o The device will now be ready for use/dispensing

Charging the device:

- o Connect cradle power supply to power socket

- o Switch on the cradle and seat the device on the cradle.

- o When finished charging, switch off the cradle

- o Recommendation – Do not charge the mobile device for more than 1 hour at a time, preferred charge time is lunch hour.

When batteries fail:

- o The devices are shipped with rechargeable AA Casio batteries

- o You may procure AA batteries and replace the ones in the device

- o Do not replace batteries unless they do not work anymore

- o When batteries are replaced with AA batteries, DO NOT use cradle to charge.

- o Rechargeable batteries should be recharged with their own charger.

Device not charging

- o Check that the device is properly seated on the cradle.

- o Remove the battery and put it second charge to see if battery still can charge

- o If battery is charging in 2nd charge, put it back and do the steps as when preparing after long time of latency. Device should continue to charge on default charge option.

Annex A: IT Team

The compilation of the EDT IT Administration manual document and the facilitating at the training workshop was done by the following individuals:

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