World Health Organization

WHO OpenMRS – Express HIV Administration Guide

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Prepared by
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1 Purpose of the document

This document describes main IT administration tasks related to OpenMRS ExpressHIV.

Audience :

- System administatror
- OpenMRS administrator
- OpenMRS power user

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2Installation

2.1 Requirements

In order to install and use OpenMRS Express:HIV, you must have the following:

- A computer with a 1GHz Pentium IV processor or better,
- at least 512 Mb of RAM,
- 1Gb of available hard disk space.
- Windows XP SP2 or Windows Vista
- Adobe Acrobat Reader
- FireFox 2.0 or greater
- Microsoft InfoPath 2007
- C drive does exist.

Microsoft Infopath installation is required for OpenMRS formularies management. Due to license issues, its installation is optional.

Acrobat Reader and Firefox are required. Installations are left to the user, without interaction with the OpenMRS installation.

Internet Explorer and Microsoft InfoPath 2003 are compatible with OpenMRS but are not supported.

2.2 Installation context

To install OpenMRS Express, you must have administration privileges.

If a previous version of OpenMRS Express is installed, it has to be uninstalled first (see 3 Uninstall process). The installer script will detect the previous version and pop a warning message.

This reference guide describes administration tasks related to OpenMRS Express:HIV and installer, release 7.

2.2.1 Obtaining OpenMRS

The reference website to download OpenMRS Express package is:

http://www.who.int/kms/initiatives/openmrs_express/en/

Alternatively, OpenMRS CD-ROM does contain:

- OpenMRS installer
- OpenMRS and third party software
  - Apache Tomcat 6.0.16
  - Birt runtime 2.2.2

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  - MySQL 5.0.51a win32
  - Java jre 6u5 windows-i586
  - OpenMRS Lite DB Sep-15-2008
  - OpenMRS compatibility and admin scripts
  - OpenMRS license file
  - Installation tools and SQL scripts
- Optional software:
  - Firefox 3.0
  - Acrobat Reader
- OpenMRS Google Tech talk video by Paul Biondich and Bruke Mamlin, August 23, 2007.
  - http://www.youtube.com/watch?v=tou-Ei_AKAw
- Documentation
  As PDF files:
  - OpenMRS ExpressHIV Reference IT Admin Guide
  - OpenMRS ExpressHIV User Manual

2.2.2 Installed software

This distribution package contains applications and programs from a variety of sources. The package includes the following:

- Java 6, update 5
- Apache Tomcat 6.0.16
- Eclipse BIRT 2.2.2
- MySQL 5.0.51a
- Super-Sed 3.62
- Microsoft sleep utility
- OpenMRS core 1.3
- birt-1.8 module
- clinicalsummary-3.0 module
- formentry-3.2 module
- WHOmod 0.16 module

2.2.3 Directory structure

OpenMRS Express is installed under $ProgramFiles\WHO\OpenMRS ($OPENMRS_HOME) with the following architecture

The installer does select the installation path according to the following preference order:

- $ProgramFiles (Usually C:\Program Files)
- C\Program Files (Hard coded)
- C:\OpenMRS.

The installation path is registered in the OPENMRS_HOME variable.

- $OPENMRS_HOME
  |_ *apache-tomcat-6.0.16*

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|_ *birt-runtime-2_2_2*
|_ *mysql-5.0.51a-win32*
|_ *scripts*
|_ *documentation*
|_ *backup*

The installer does also create an OpenMRS directory containing the file *openmrs.runtime.properties* and place other needed resources in the directory defined by $ALLUSERSPROFILE\OpenMRS (C:\Documents and Settings\All Users on windows XP). The variable OPENMRS_APPDATA will reference this path.

2.2.4 Windows Start Menu

If the user requires it, the installer does create an entry in *Windows Start Menu* > *All Program* > *OpenMRS*, with the following links to:

- Access OpenMRS (`http://127.0.0.1:$tomcat_port/openmrs`)
- OpenMRS ExpressHIV Reference IT Admin Guide
- OpenMRS ExpressHIV User Manual
- Admin
  - Archiving OpenMRS database
  - Stop OpenMRS
  - Start OpenMRS
  -

If Firefox is detected, “access OpenMRS” will start OpenMRS within Firefox. Otherwise, OpenMRS does start using your preferred browser.

Tomcat and MySQL services name must appear as “OpenmrsTomcat” and “OpenmrsMySQL”. OpenMRS start/stop will start/stop Tomcat and MySQL.

2.3 Installing OpenMRS

2.3.1 Installer

The installer will be created using AntInstaller. AntInstaller is an Open Source java software that build an installer using an XML configuration file and Apache Ant. It requires java 1.4 or greater to be executed.

If Java 1.6.0_05 is not installed, the Java 1.6.0_05 installation will be first run silently (no user notification or set up) to allow ant installer to be executed.

2.3.2 Installation diagram

The installation steps are linked as shown bellow:

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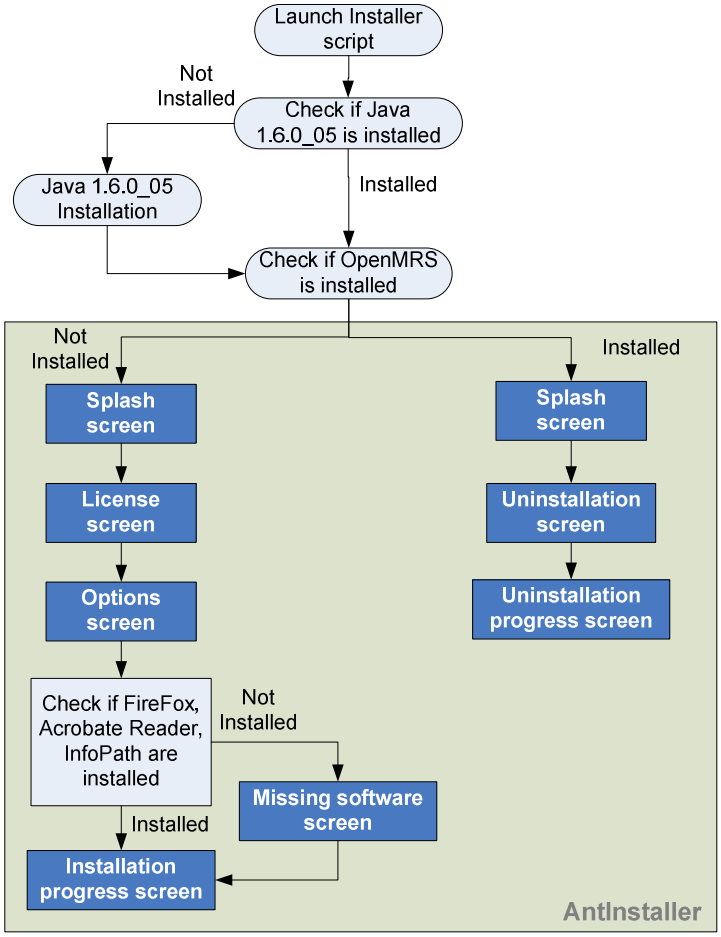

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2.3.3 Installation process

Installer can be started from the CD ROM with the **Install** script

2.3.4 Splash screen

Welcome screen presenting the OpenMRS Logo

2.3.5 License screen

Display the OpenMRS License.

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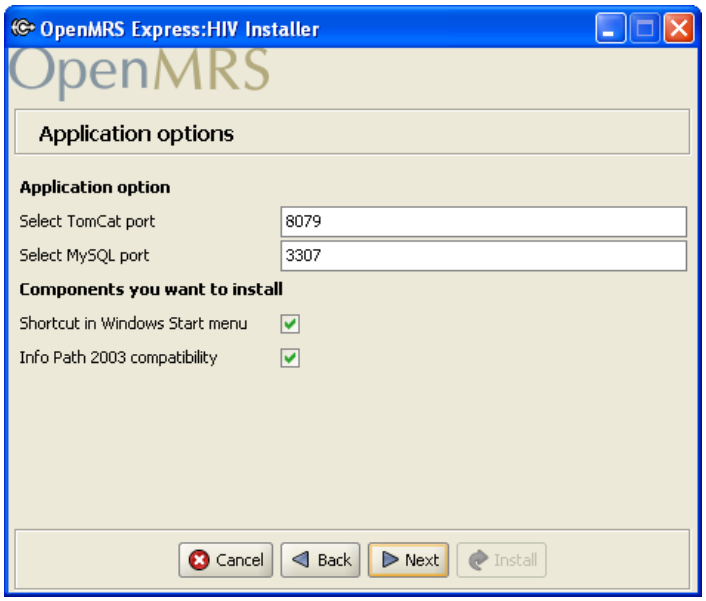
2.3.6 Options screen

Set application options



A check is made when the user clicks Next on Tomcat and MySQL port. These values can only be between 1024 and 65535.

The installer does update the *openmrs.runtime.properties* file with port values.

By default, the compatibility checkbox is checked or unchecked according to the InfoPath version detected. If InfoPath is not installed, the checkbox is not checked.

Warning: the compatibility does start the database, modify database entries and then stop it.

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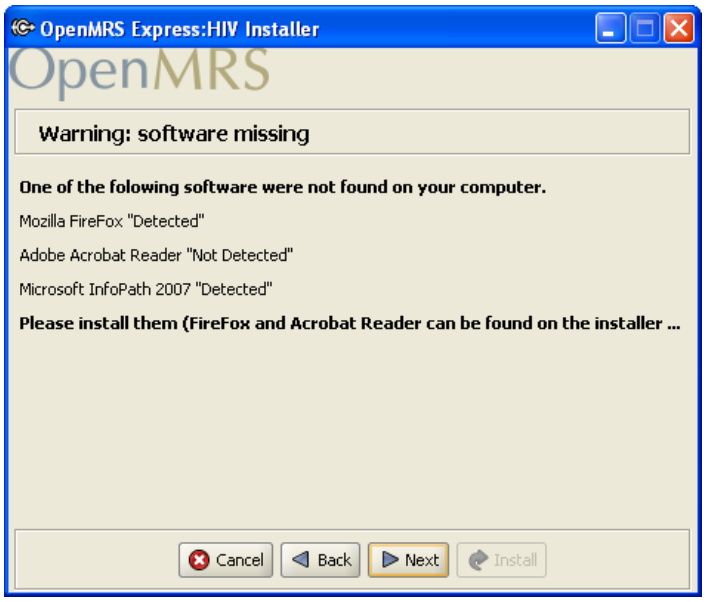
2.3.7 Missing software screen

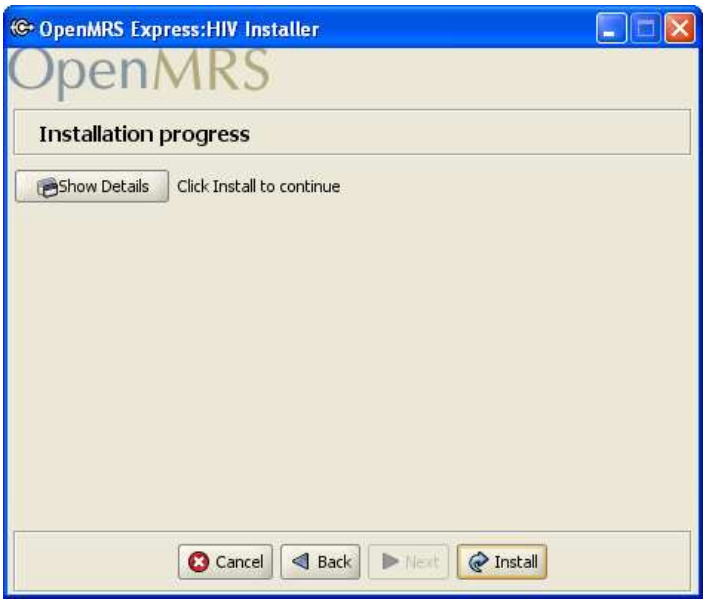


If missing files are detected, the “Not Detected” labels appears

- The user can installed them from OpenMRS CDROM directory “*Optional software*”

2.3.8 Installation progress screen

Screen presenting the installation progression



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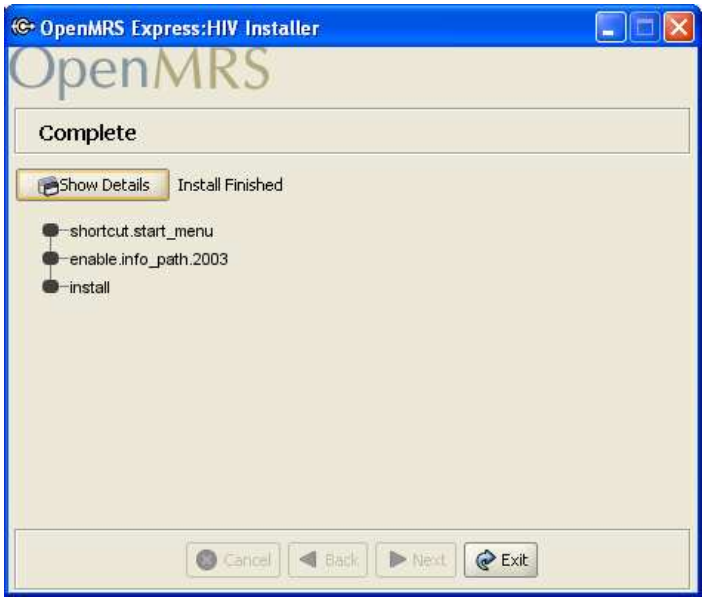
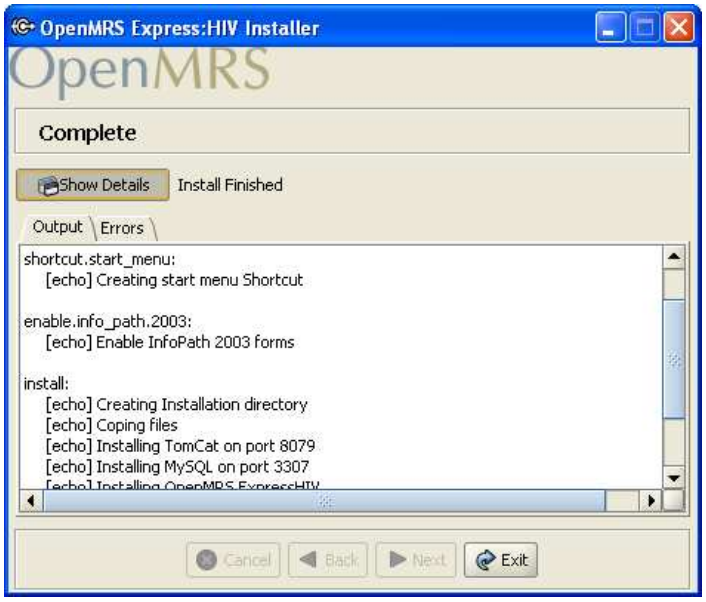
When the user clicks Install button, the installation starts. A popup message indicates when the installation is finished.





Clicking on the show detail button will display more information about the installation

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3 Uninstall process

3.1 Uninstallation process

OpenMRS removal can be started from:

- $OPENMRS_HOME /script/uninstall
- If OpenMRS is already installed, start the installer

NB: Control Panel > Add/Remove Programs doesn't show OpenMRS entry due to the installation requirements (no registry entry). MySQL and Tomcat don't appear because they are just copied and not installed using their respective installers.

3.1.1 Splash screen

Same splash screen as the installer

3.1.2 Uninstallation screen

If an OpenMRS Express application is found on the system, the installer asks the user if he wants to uninstall it.

By default, the database is archived; a check box does propose to not make the copy.

The uninstaller detects an existing installation or remaining data according to the existence or content of the following directories:

- ProgramFiles (Usually C:\Program Files)
- C\Program Files (Hard coded)

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- C:\OpenMRS.

Optional software are left unchanged:

- Firefox 3.0
- Acrobat Reader
- InfoPath 2007

JAVA is also left unchanged due to potential dependency with other applications. A warning message does inform the user.

- Java jre 6u5 windows-i586

If database must be deleted, the uninstaller does:

- Delete $OPENMRS_HOME and $OPENMRS_APPDATA directories
- Clear the start menu shortcuts

If database is kept, the uninstaller does:

- Create a database archive into $OPENMRS_HOME\backup
- Delete $OPENMRS_HOME and $OPENMRS_APPDATA directories, **EXCEPT $OPENMRS_HOME/backup**
- Clear the start menu shortcut

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4Troubleshooting the install/uninstall process

4.1.1 Java install problems

Windows may display a Security Warning when running the install. If it does so, please UNCHECK the "Always ask before opening this file" option, then, click on Run. This will allow the installation script to complete its task.

4.1.2 Previous copy of OpenMRS detected

If a previous copy of OpenMRS is detected, the user is required to uninstall the copy and re-launch the installer.

4.1.3 Running OpenMRS Express:HIV

- If you are using a firewall, when starting OpenMRS Express:HIV, you may be notified that a process is trying to connect or listen to the network. If this occurs, allow the connection to go through.
- If you get an error when attempting to connect to OpenMRS Express with your browser for the first time, wait a few moments for the server to startup then refresh the page.

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5 Default settings

5.1 MySQL Server

Server port	3307
Root password	not set
OpenMRS Express:HIV application username	test
OpenMRS Express:HIV application password	test

5.2 Tomcat Application Server

Server port	8079
Administrative username	Admin
Administrative password	system

5.3 OpenMRS Express:HIV

Default user	Default
Default user password	abc123
Administrative user	admin
Administrative user password	test

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6 Starting / Stopping OpenMRS Express

6.1 Starting OpenMRS

Open the Windows “Start” Menu

- OpenMRS
  - Admin
    - Start OpenMRS

This action will start each application related to OpenMRS such as Tomcat and MySQL

6.2 Stopping OpenMRS

Open the Windows “Start” Menu

- OpenMRS
  - Admin
    - Stop OpenMRS

This action will stop each application related to OpenMRS

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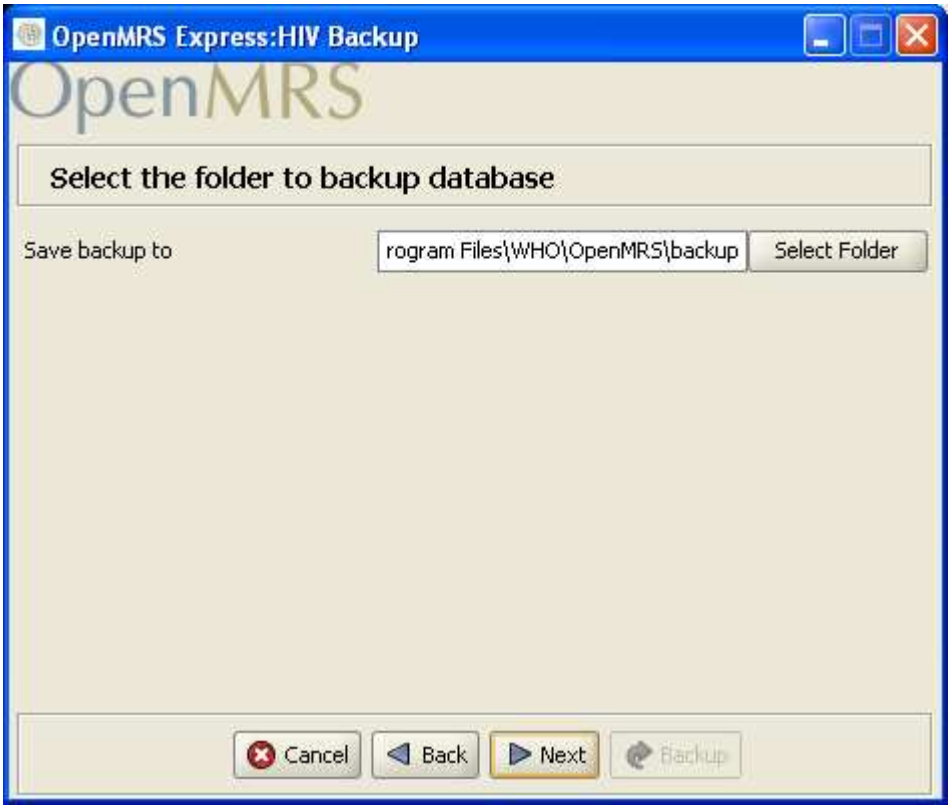
7 Database Management

7.1 Database backup

To create an OpenMRS database backup

1. Open the Windows “Start” Menu
   - OpenMRS
     - Admin
       - Backup OpenMRS Database
2. If OpenMRS is running, it will be stopped.
3. The backup script will generate an encrypted openmrs_express_db_VERSION_TIMESTAMP.sql file, where VERSION is the release version number of the OpenMRS Express distribution and TIMESTAMP is the moment of execution of the backup.
4. User is asked for a location to save a copy of the backup file



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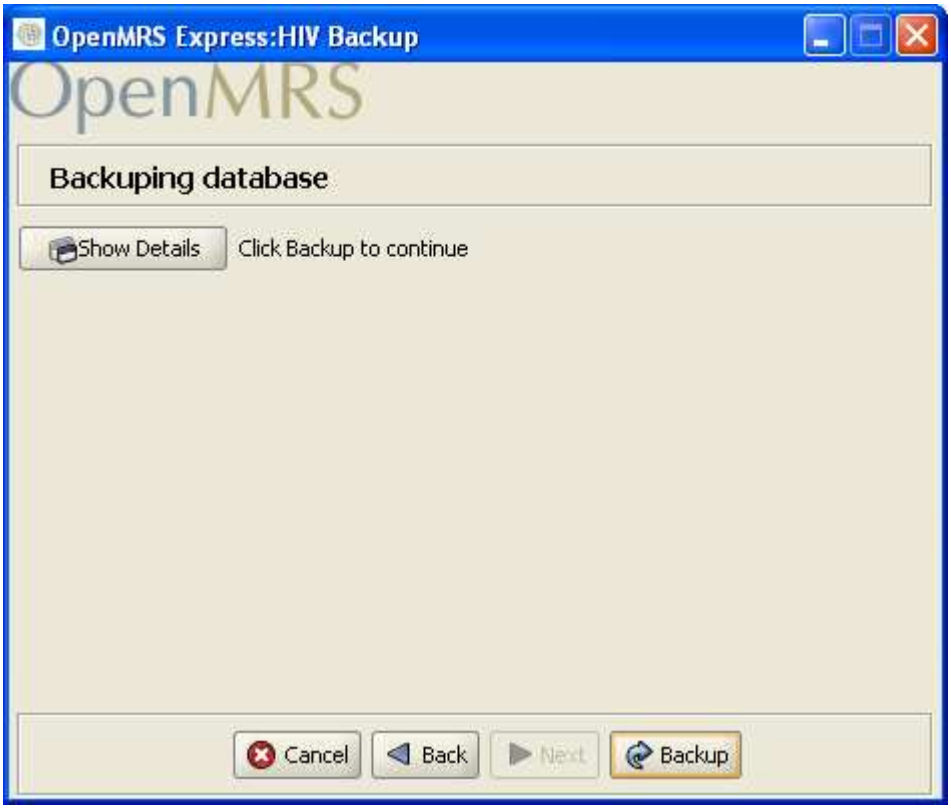

7.2 Database recovery

To recover the database from a backup,

1. Launch the **recover** script located in the OPENMRS_HOME/script folder. (Usually: C:\Program Files\WHO\OpenMRS\script)
2. If OpenMRS is running, it will be stopped.
3. The backup file location will be prompted. Choose the file to recover.

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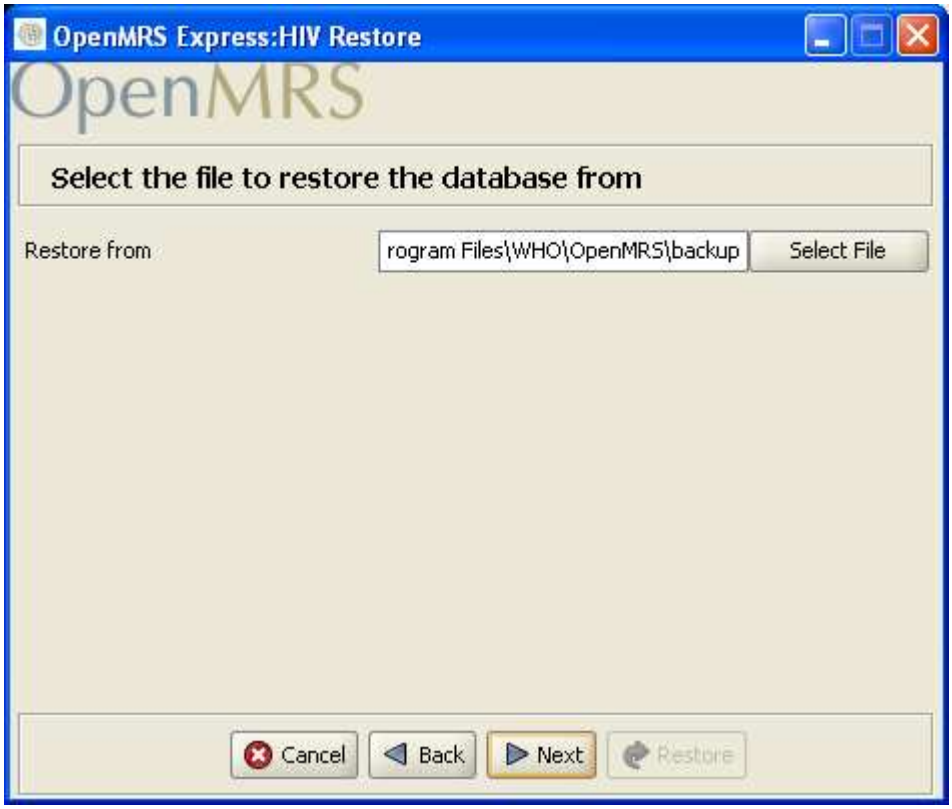
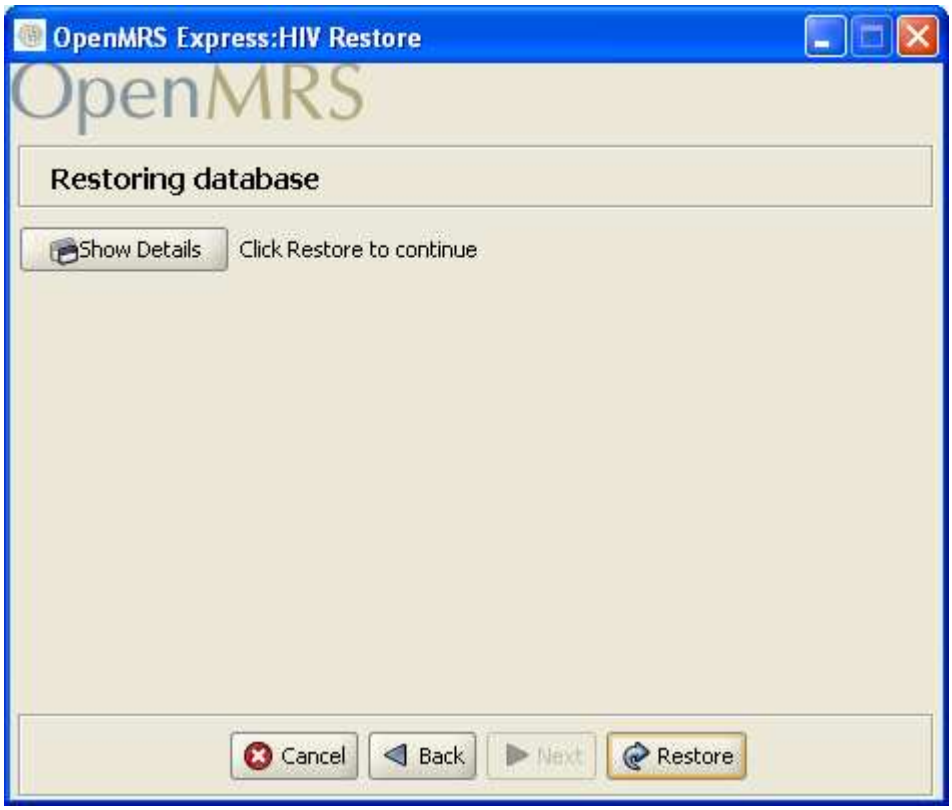
4. 

5. 

6. The current database will be saved first.

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7. The selected backup file will be decrypted
8. The selected backup will then be restored.

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8 User management

Roles and Privileges are controlled through the administration screen, under the Manage Users section.

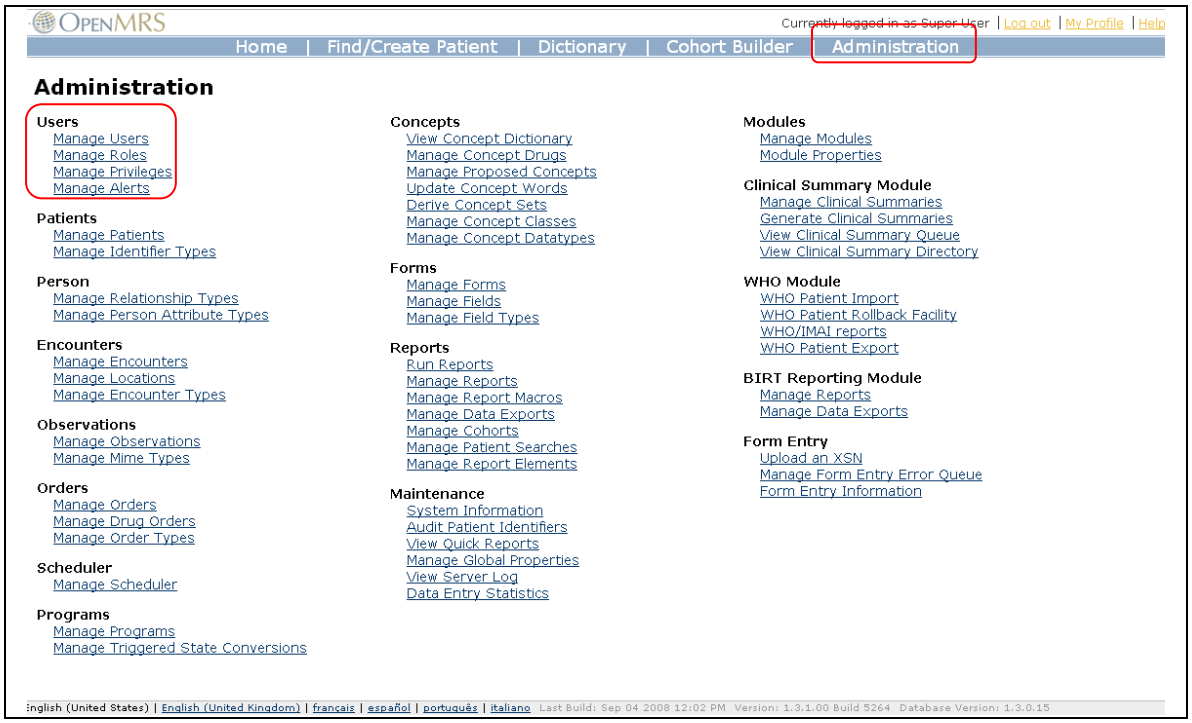

Figure 1 Administration panel

OpenMRS uses privileges and roles to control access to data within the system. Privileges define what can or cannot be done in the system (e.g., Edit People or Add User) while Roles are used to group privileges into more manageable grouping. To make the system easier to manage, roles can contain other roles as well as privileges. Parent roles inherit all privileges that exist within the child roles.

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8.1 Manage Users

Users can be listed / created using the *Manage Users* function.

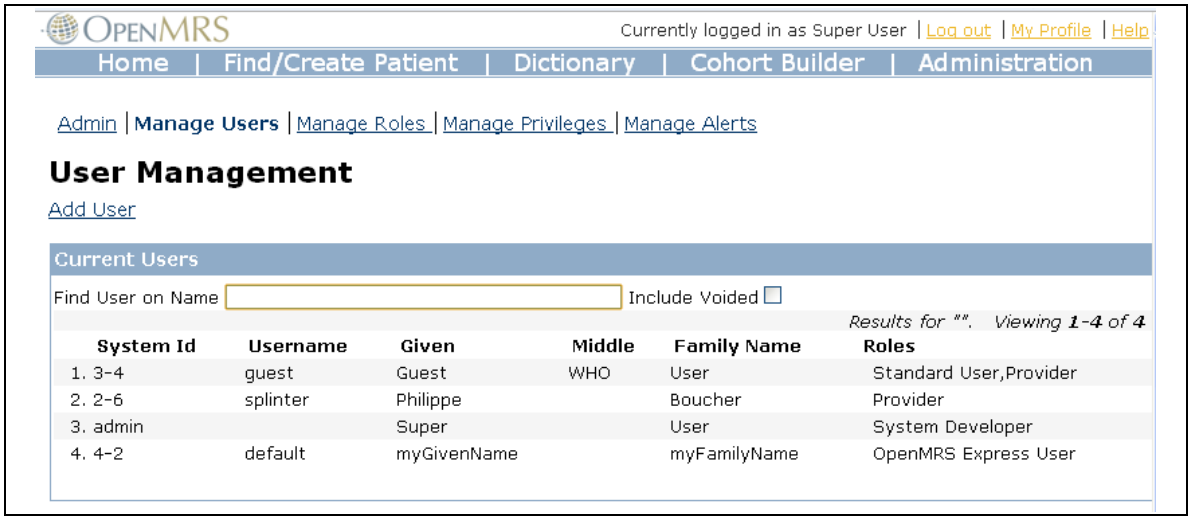

Figure 2 User Management

To create a new user, click on the Add User link. The first step is to set the required information.

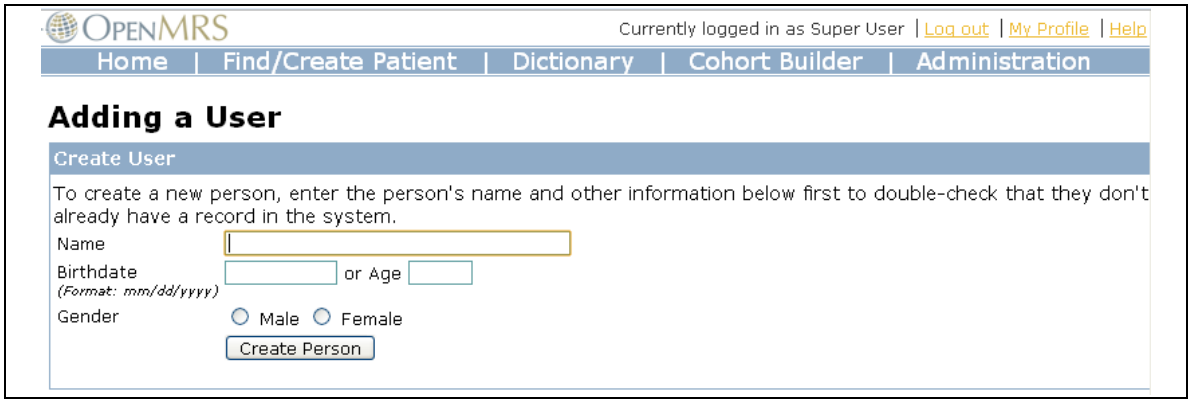

Figure 3 Add new user function

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All the user data can then be set. Only the password is required to complete the user creation.

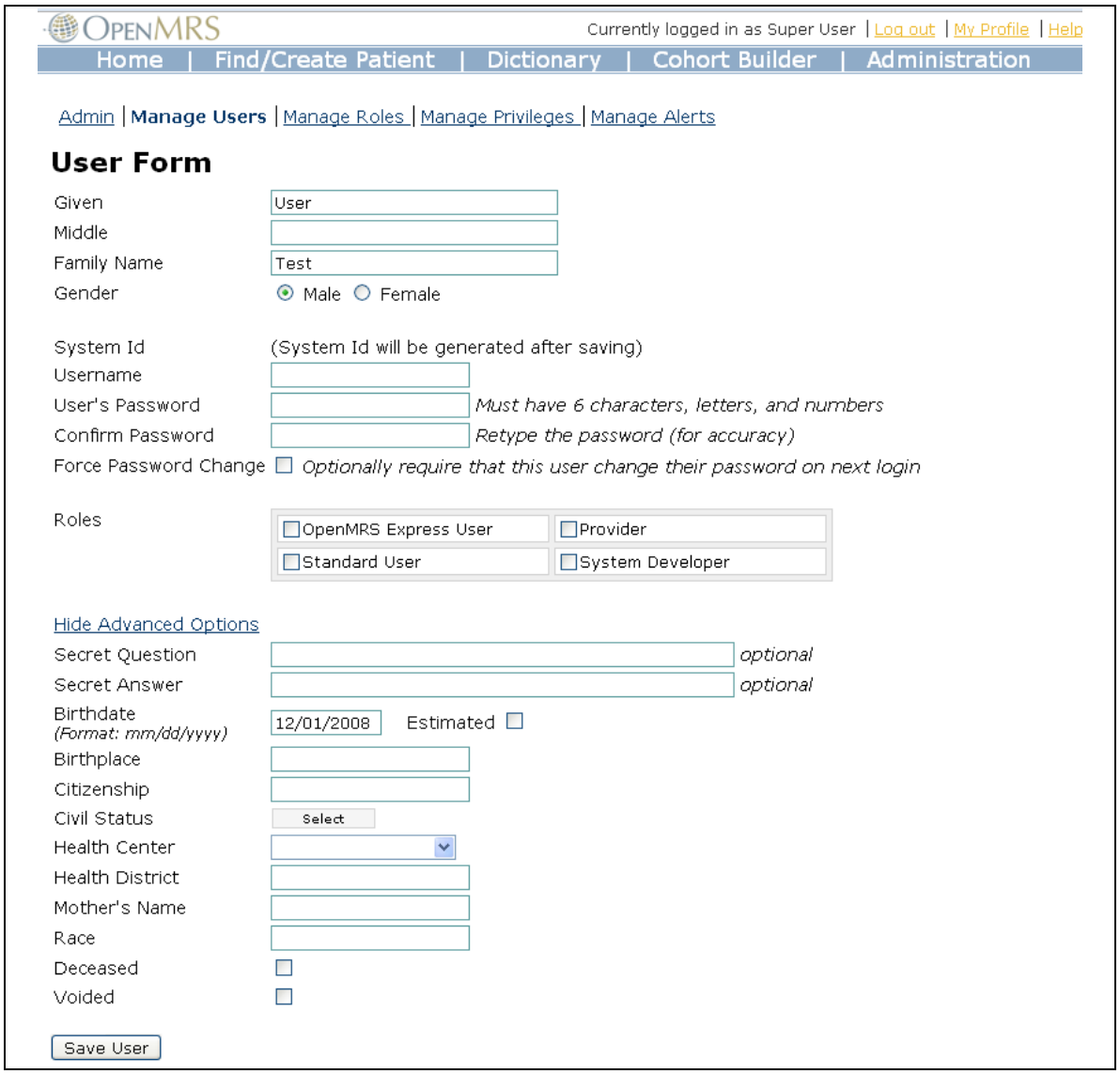

Figure 4 User creation

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8.2 Manage Roles

For a more convenient user management, privileges are grouped into roles.

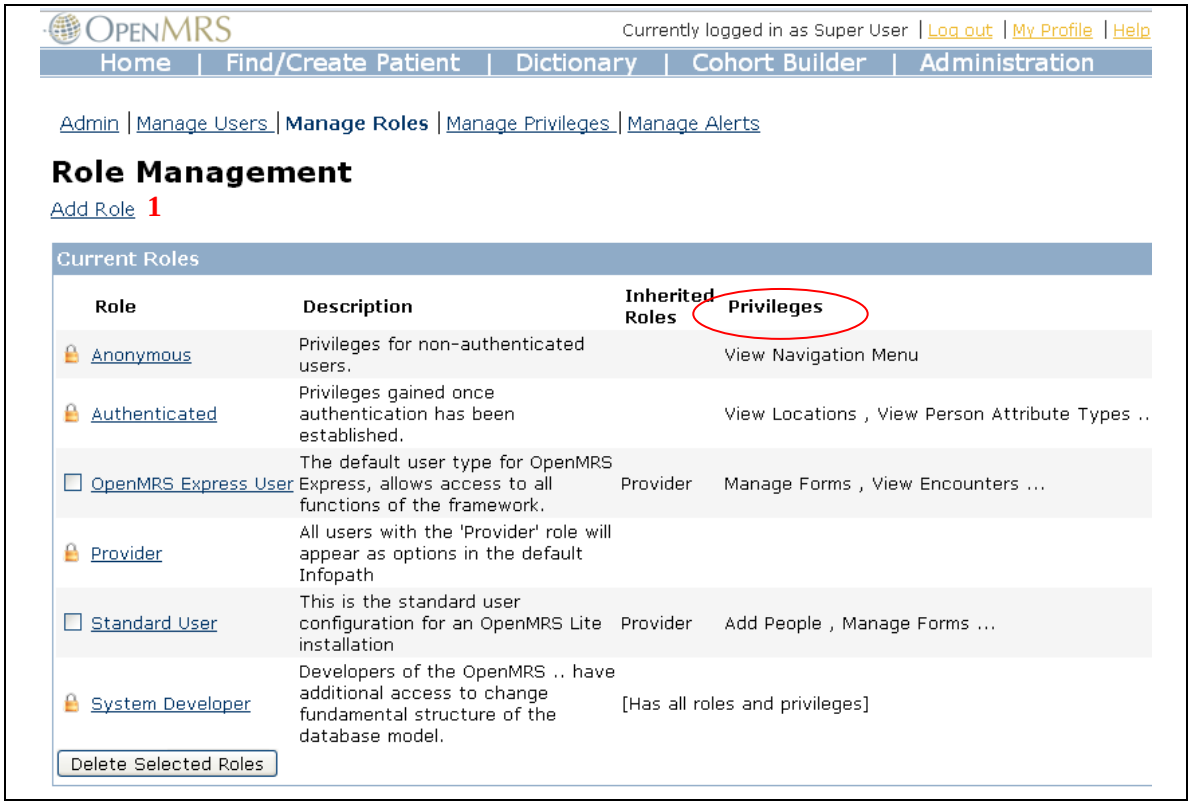

Figure 5 Role Management

The complete privileges list is shown when the mouse pointer is over the *Privileges* column of the *Role* table.

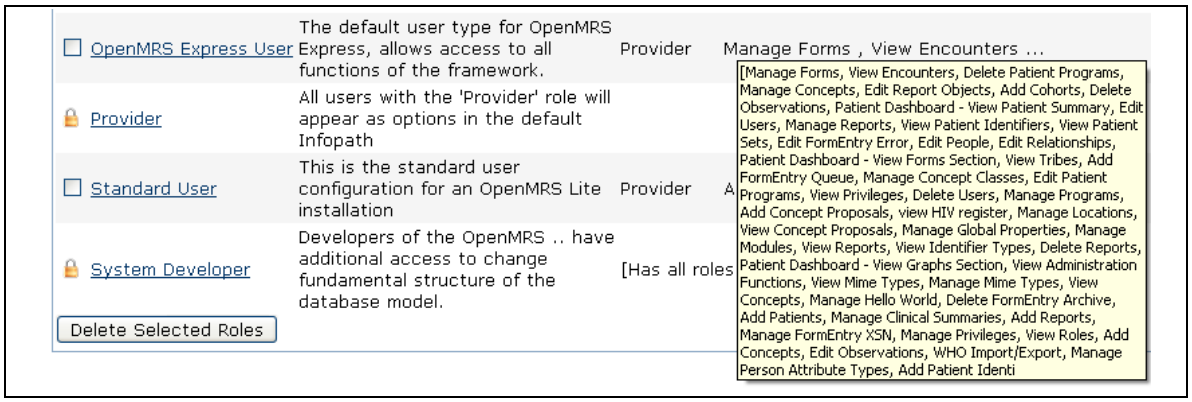

Figure 6 Role Management, privileges display

1. To create a new role, click on *Add Role*

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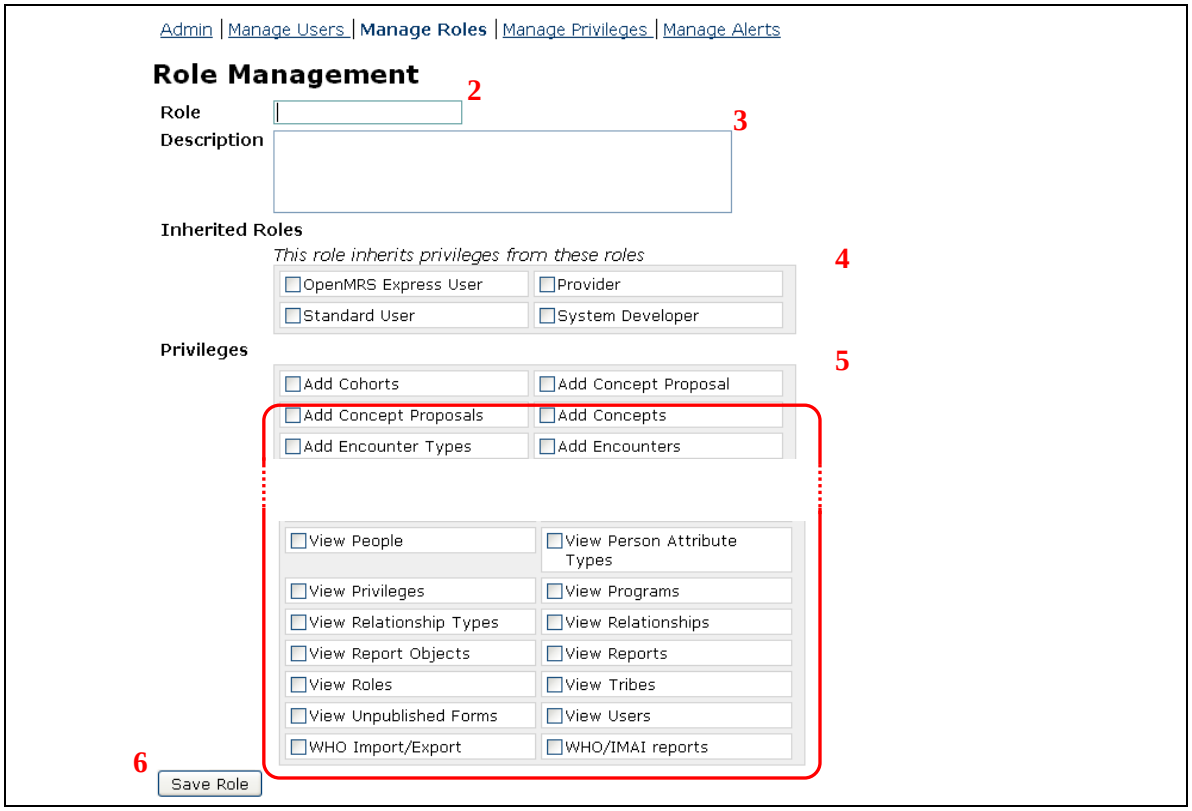

Figure 7 Creating a new role

2. Set the role Name
3. Set the role description
4. Role can inherit from an other, that is to say have the same privileges than the inherited role, plus privileges set in the Privileges section
5. Check the privileges for this role
6. To finish the role creation, click the *Save Role* button

8.3 Modify a Role / Manage privileges

It is strongly recommended to keep privilege allocation and roles as they are defined during system setup.

Modifying roles or privilege may prevent OpenMRS Express from running, accessing data or reports.

Such tasks are reserved to expert users. Their description is out-of-scope of the present document.

8.4 Alert Management

Alerts can be sent to a specific user, or to users having a certain role, using the *Administration → Users → Manage Alert* function. Alerts are a way to distribute messages among your OpenMRS community. It does not automatically monitor application values.

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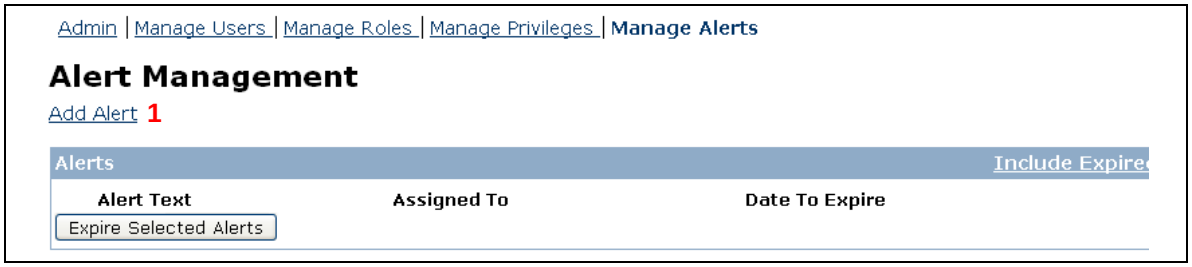

Figure 8 Alert Management

1. To create an alert, click on *Add Alert*. The form alert will be displayed.

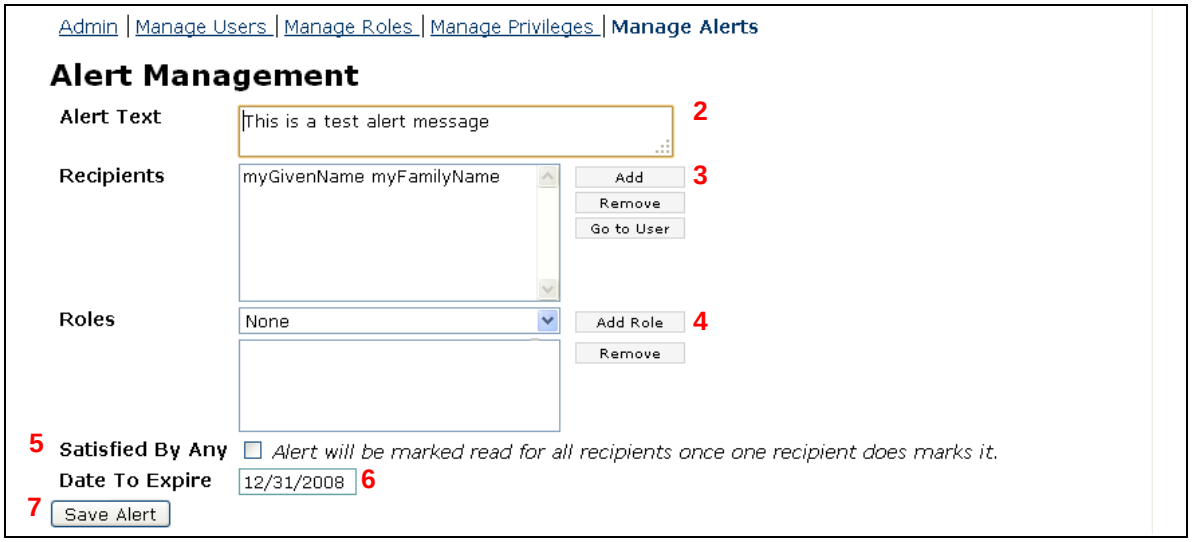

Figure 9 Alert creation

2. Fill in the Alert text
3. Click Add to select the alert destination user. A window will popup to allow the user selection. Click on the user row to select it. More than one user can be picked.

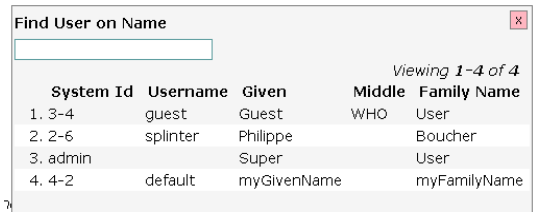

Figure 10 Alert management, user picker pop up window

4. Choose a Role in the *Roles* list and click *add Role* to alert the users having this role.
5. Choose whether the alert will be marked for everyone, once one recipient marks it by checking the *Satisfied By Any* checkbox
6. Choose the Expire date
7. Save the alert by clicking *Save Alert*. A confirmation message will appear and the alert will be listed in the *Alerts* area

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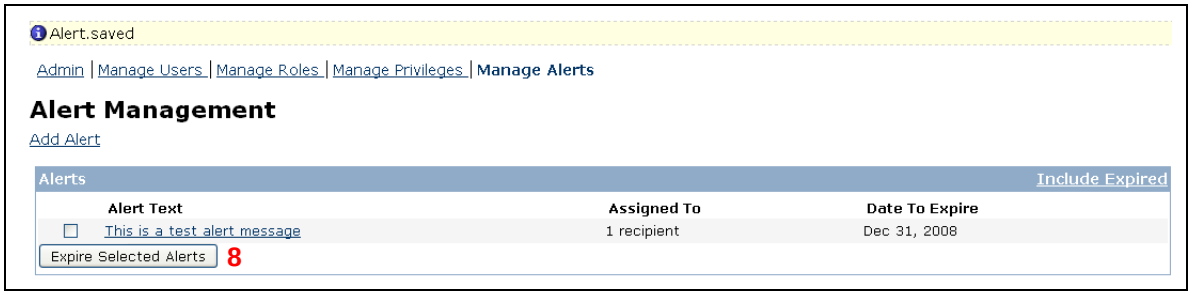

Figure 11 Alert list

This alert message will be displayed until the date set by the administrator in the field *Date To Expire*.

Alerts can be expired (not displayed) by selecting one and clicking the *Expire Selected Alerts button* (8)

Figure 12 Alert display

The recipient marks the alert by clicking on the *Mark this Alert as Read* button on the right of the message.

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9 Limitations

9.1 OpenMRSExpress Without Infopath

Due to licence issues, Microsoft Infopath installation is optional.

This software is required to create and modify OpenMRS fomulars.

If Infopath is not installed, OpenMRS will allow the user to manage patients and access most of the application functions EXCEPT filling forms and creating new ones.

9.2 Infopath 2003

Microsoft Infopath 2007 is the only supported version.

If you intend to use Microsoft InfoPath 2003, a compatibility script is delivered AS IS during OpenMRS the installation.

If the enable_infopath_2003_forms.cmd script, located in the OpenMRS_Install directory, was launched, the 2003 form version will also be available.

9.3 OpenMRS upgrade

OpenMRS Installer version 1.0 do not manage database migration from former installation (beta 6 and previous), located in C:\OpenMRS.

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10 External links

OpenMRS Express online documentation and release notes
http://groups.google.com/group/openmrs-express/web/openmrs-express-hiv

OpenMRS Express page at www.who.int
http://www.who.int/kms/initiatives/openmrs_express/en/index.html

OpenMRS Google Tech talk video by Paul Biondich and Bruke Mamlin, August 23, 2007.
http://www.youtube.com/watch?v=tou-Ei_AKAw

Online support can be submitted to
http://.....discussion forum sur le groupe

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