Preparing FHIM Models for ISAAC

This document describes the steps necessary to acquire FHIM model files and convert them into a format that ISAAC can use to perform import/export, and which enables non-technical users to perform acceptance testing.

# Acquire raw FHIM files

Follow these high-level steps to acquire the FHIM model files:

1. Sign up to join the Open Health Tools (OHT) project at <https://www.projects.openhealthtools.org/sf/sfmain/do/createUser/>.
2. Request membership in the FHIMS by coordinating with Jay Lyle or Galen Mulrooney.
3. When access granted, navigate to the "Source Code" tab of the FHIMS project TeamForge site at <https://www.projects.openhealthtools.org/sf/scm/do/listRepositories/projects.fhims/scm>.
4. Follow the steps to check the files out of Subversion.
5. When checkout is done, the FHIM model files will appear in the "trunk/models/gov.us.fhim" folder. Copy all files ending in ".efx" to a new folder for the next step.

# Rename file extensions

For ISAAC to handle FHIM model files successfully, and to view them in Eclipse for acceptance testing, they must have an ".uml" extension. Take all the".efx" files you copied in the previous step and give them an ".uml" extension instead. For example, in a Linux/Unix/Cygwin shell, you could use this command:

for file in \*.efx; do mv "$file" "`basename $file .efx`.uml"; done

Alternatively, you could rename them all by hand.

# Update internal references

Although the FHIM model files now end in ".uml", they still internally contain references to ".efx" files. Update all these to say ".uml" instead. For example, you could use this command:

sed -i 's/efx/uml/g' \*

Alternatively, you could open each file in a text editor and update them by hand.

# Update UML version to 4.0.0

As they are downloaded from OHT, the FHIM model files are structured with UML version 3.0.0. However, for ISAAC to handle them successfully, and to view them in Eclipse for acceptance testing, they must be updated to UML version 4.0.0.

Fortunately, you may use Eclipse to perform the conversion. Download and install the UML2 plugins as described in the MDT/UML2 web site:

* <http://wiki.eclipse.org/MDT/UML2/Getting_Started_with_UML2#Prerequisites>

Once the UML2 plugins are installed, create an Eclipse project and import the ".uml" files from above. Then, follow these steps to convert the "Vital Signs" FHIM model from UML 3.0.0 to UML 4.0.0.:

1. Locate the "VitalSigns.uml" file in your Eclipse project.
2. Right-click and select **Open With > UML Model Editor**.
3. Expand the top-level "platform:/resource/…/VitalSigns.uml" node.
4. Right-click the "<Package> Vital Signs" node and select **Show Properties View**.
5. In the **Properties** panel, double-click in the **Value** column of the **Name** row and rename the package to "VitalSignz".
6. Again, double-click in the **Value** column of the **Name** row and rename the package back to "VitalSigns".
7. Notice that there is an asterisk (\*) besides the name of the "VitalSigns.uml" tab:



This means Eclipse recognizes that the file has been edited.

1. Save the file, and notice that the asterisk (\*) goes away.

Now the "Vital Signs" FHIM model should be structured with UML 4.0.0. Repeat these steps for the "Datatypes.uml" file, as the "VitalSigns" model depends on it.

Tip: To see which version of UML a model file is using, look inside for the **xmlns:uml** tag. Models using UML version 3.0.0 will look like this:

xmlns:uml="http://www.eclipse.org/uml2/3.0.0/UML"

Models using UML version 4.0.0 will look like this:

xmlns:uml="http://www.eclipse.org/uml2/4.0.0/UML"

# Conclusion

Now the "VitalSigns" model is ready to be imported into ISAAC and viewed in Eclipse for acceptance testing. For convenience, the converted FHIM model files are checked into GitHub inside the "fhim" folder of the "import-export" project.