Platform Release Notes 2.4.0

Release date: 22/December/2020

Theme: Upgrading our Tech Stack

Note: This platform release requires at least a minimum of Java/OpenJDK 1.8 and MySQL 5.6 to run properly.

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What's New?

This release is OpenMRS Platform 2.4.0 and is a major release version of the OpenMRS API that follows 2.3.2. It contains many under-the-hood updates to have a more modern tech stack. A number of libraries have been upgraded in this release and new features have been added such as support for OpenMRS to run on PostgreSQL, replacing the original FHIR module with the new and improved FHIR2 module which includes support for FHIR R4, upgrading other libraries e.g Log4j 2, JUnit 5, etc, switching domains from hibernate xml mappings to annotations, upgrading of the major core libraries like spring, hibernate and liquibase, adding support for MySQL 5.6 - 8.0, plus Java 8 - 15 support.

Release Manager: CLIFF GITA, with mentorship from Kaweesi Joseph and Nathan Ruhanga, and support from Herbert Yiga

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
<th>Status</th>
<th>Point of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade FHIR</td>
<td>Replace original fhir module with the FHIR2 module, which includes support for FHIR R4</td>
<td>DONE</td>
<td>Ian Bacher</td>
</tr>
<tr>
<td>Upgrade Spring</td>
<td>Upgrade to Spring 5.2.9</td>
<td>DONE</td>
<td>Daniel Kayiwa</td>
</tr>
<tr>
<td>Upgrade Hibernate</td>
<td>Upgrade to Hibernate 5.4.21</td>
<td>DONE</td>
<td>Daniel Kayiwa</td>
</tr>
<tr>
<td>Support Java 8 - 15</td>
<td>Add support for Java 9, 10, 11, 12, 13, 14, 15 while not losing support for Java 8</td>
<td>DONE</td>
<td>Daniel Kayiwa</td>
</tr>
<tr>
<td>Upgrade Liquibase</td>
<td>Upgrade to Liquibase 3.10.2 and Avoid running legacy liquibase changesets. This greatly improves the startup speed by approximately 50%</td>
<td>DONE</td>
<td>Wolf Schlegel</td>
</tr>
<tr>
<td>Upgrade Other Libraries</td>
<td>Upgrade a number of other underlying libraries. e.g Log4j 2, JUnit 5, etc</td>
<td>DONE</td>
<td>Pahonsi Bebeto</td>
</tr>
<tr>
<td>Support PostgreSQL</td>
<td>Add support for PostgreSQL versions 8.2 up to the latest 12</td>
<td>DONE</td>
<td>Aman Mishra</td>
</tr>
<tr>
<td>Support MySQL 5.6 - 8.0</td>
<td>Add support for all MySQL versions from 5.6 to the latest 8.0</td>
<td>DONE</td>
<td>Daniel Kayiwa</td>
</tr>
<tr>
<td>Improvements to Condition and bug-fixes around Orders</td>
<td>Substantial improvements to Condition (were also included in 2.3.2), including: Linking a Condition to an Encounter and Making Conditions Form Recordable (obs). Ongoing discussion for other improvements needed is here on Talk.</td>
<td>DONE</td>
<td>CLIFF GITA</td>
</tr>
</tbody>
</table>

Library upgrades

- **TRUNK-5498** - Upgrade Spring to 5 and Hibernate to 5 [CLOSED] Upgrade Spring and Hibernate

- **TRUNK-4830** - Avoid running legacy liquibase changesets [CLOSED] Upgrade to Liquibase

**Bug fixes**

- **TRUNK-5406** - Upgrade Core to Compile and run on OpenJDK 8, 9, 10, 11, 12, 13, 14  
  
- **TRUNK-5746** - Fix Unparseable date on java 11  
  
- **TRUNK-5740** -Cached concepts should fully load lazily loaded properties  
  
- **TRUNK-5795** - FHIR2 module breaks OpenMRS when datafilter module is loaded  
  
- **TRUNK-5962** - Unable to store order templates greater than 255 characters in unit tests  
  
- **TRUNK-5967** - Person Attributes are not displayed on patient dashboard  
  
- **TRUNK-5403** - Add and fix config xml did file 1.6  

**New features with bundled modules**

- **RESTWS-773** - Add Support for log4j2 based server log  
  
- **RESTWS-777** - Add causeOfDeathNonCoded as the updatable Property in REST  
  
- **RESTWS-776** - Enhance fulfiller details sub resource to allow updating accession number of an order  

**Database Changes**

- **TRUNK-4830** - Avoid running legacy liquibase changesets  

**Community Input**

Tremendous thanks go to all the great contributors that have greatly gathered their efforts towards this release, Moses Mutesasira, Juliet Wamalwa, Sharif Magembe, Reagan patrick Makoba, Irene Nyakata, tendo kiza Martyn, Herbert Yiga, CLIFF GITA, Daniel Kayiwa, Burke Mamlín, Dimitri R, Wyclif Luyima Aman Mishra Wolf Schlegel Pahonsi Bebeto Achile Samuel Male among many other great contributors.

**Bundled Modules**

- REST Web Services v2.29.0
- OWA v1.12.0
- FHIR2 v1.1.0

**Bundled OWAs**

- Add-on Manager

**Download**

OpeMRS Platform 2.4.0 download link([https://sourceforge.net/projects/openmrs/files/releases/OpenMRS_Platform_2.4.0/](https://sourceforge.net/projects/openmrs/files/releases/OpenMRS_Platform_2.4.0/))

**Other Supported Releases**

- Release Notes 1.9.8
- Release Notes 1.9.7
- Release Notes 1.9.5