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.

- What's New?
- Library upgrades
- Bug fixes
- New features with bundled modules
- Database Changes
- Community Input
- Bundled Modules
- Bundled OWAs
- Download

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, Achile</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
Upgrade Core to Compile and run on OpenJDK 8, 9, 10, 11, 12, 13, 14

**Bug fixes**

- **TRUNK-5496** - Upgrade Core to Compile and run on OpenJDK 8, 9, 10, 11, 12, 13, 14

**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 Mamlain, 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
- Release Notes 1.9.4
- Release Notes 1.9.3
- Release Notes 1.9.2
- Release Notes 1.9.1
- Release Notes 1.9.0
- Platform Release Notes 2.3.1
- Platform Release Notes 2.3.0
- Platform Release Notes 2.2.0
- Platform Release Notes 2.1.4
- Platform Release Notes 2.1.3
- Platform Release Notes 2.1.2
- Platform Release Notes 2.0.7
- Platform Release Notes 2.0.6
- Platform Release Notes 2.0.5
- Platform Release Notes 2.0.4.1
- Platform Release Notes 2.0.3
- Platform Release Notes 2.0.2
- Platform Release Notes 2.0.1
- Platform Release Notes 2.0.0
- Platform Release Notes 1.9.9
- Platform Release Notes 1.9.10
- Platform Release Notes 1.12.1
- Platform Release Notes 1.12.0
- Platform Release Notes 1.11.9
- Platform Release Notes 1.11.8
- Platform Release Notes 1.11.7
- Platform Release Notes 1.11.6
- Platform Release Notes 1.11.5
- Platform Release Notes 1.11.4
- Platform Release Notes 1.11.3
- Platform Release Notes 1.11.2
- Platform Release Notes 1.11.1
- Platform Release Notes 1.11.0
- Platform Release Notes 1.10.6
- Platform Release Notes 1.10.5
- Platform Release Notes 1.10.4
- Platform Release Notes 1.10.3
- Platform Release Notes 1.10.2
- Platform Release Notes 1.10.1
- Platform Release Notes 1.10.0
- Core Release Notes 2.1.1
- Core Release Notes 2.1.0
- Core Release Notes 1.9.12