



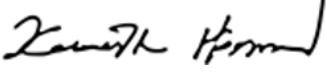

Standard Operating Procedure: REDCap Software Upgrade and Patching

SOP Number:	115
Version Number:	3.0
Approved Date:	May 20, 2024
Department/System:	Digital Solutions – Data Management /REDCap

DOCUMENT HISTORY

Version Number:	Summary of Changes Made:	Effective Date
1	New Document	December 16, 2020
2	Revision- update Security patches 6.1.3	March 8, 2021
3	<ul style="list-style-type: none"> Branding Updated and restructured procedures for clarity 	May 20, 2024

APPROVALS

Approver Name	Approver Signature	Date
Kenny Hammond Manager, Research Data Services UBC Faculty of Medicine		May 20, 2024
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1. PURPOSE

- 1.1. To define the procedure used for upgrading the UBC Faculty of Medicine (FoM) REDCap application.



2. SCOPE

- 2.1. This procedure applies to the FoM Data Management (DM) Team and the Digital Solutions (DS) Systems Team responsible for the upgrade of FoM REDCap software.
- 2.2. The FoM REDCap instance uses the long-term support (LTS) release, which is a major release supported with patches only (i.e. new features are not added) for an extended period of 6 months.
- 2.3. REDCap Consortium maintains an active development cycle, releasing patches and bug fixes according to a weekly cycle, which is minor release.
- 2.4. The FoM DM team performs REDCap software upgrades by applying patches as necessary.

3. RESPONSIBILITIES

- 3.1. FoM DM Team is responsible for overseeing the upgrade of the FoM REDCap application.
- 3.2. FoM DM Team is responsible for notifying active users through communication channels (email and/or banner post on the REDCap Home page).
- 3.3. FoM DM Team are responsible to submit a change Log in ServiceNow for minor releases (includes bug/security fixes only).
- 3.4. FoM DM Team are responsible to submit for CAB (Change Approval Board) approval in ServiceNow for major releases (includes new features).

4. RELATED SOPS/DOCUMENTS

- 4.1. MDITSYS SOP0023 IT Change Management Plan
- 4.2. FoM REDCap Core Features Checklist
- 4.3. FoM DM SOP 113 REDCap Validation
- 4.4. FoM REDCap Upgrade Decision Tool

5. DEFINITIONS

- 5.1. **Research/Project Team:** Research/project assistants, nurses, data entry and other personnel involved with and granted access to the REDCap project. The Team members report to the PI/Project Lead but are generally directly supervised by the PA.



- 5.2. **FoM Data Management (DM) Team:** Team Lead, Scientific Analyst and other FoM DM individuals responsible for managing projects in REDCap and assisting Research/Project Teams in conducting research studies or projects.
- 5.3. **Digital Solutions (DS) Systems Team:** Team responsible for the configuration, operation and maintenance of the FoM servers and underlying platforms.
- 5.4. **REDCap Long Term Support (LTS) Branch:** Long Term Support is a major release by the REDCap consortium and is supported with patches only (i.e. new features are not added) for an extended period of 6 months.
- 5.5. **Digital Solutions Change Approval Board (CAB):** A fixed group of managers to oversee and approve/deny changes on the software application.
- 5.6. **FoM REDCap Development (Dev) Instance:** REDCap installation/server used for testing, virtually identical to the production or live installation/server.
- 5.7. **FoM REDCap Production (Prod) Instance:** REDCap installation/server used for live projects.

6. PROCEDURE

- 6.1. Major upgrade: New branch of Long Term Support (LTS) every 6 months, includes New Features and Improvements per the FoM REDCap Upgrade Decision Tool.
 - 6.1.1. FoM DM Team discusses with Manager, Research Data Services the upgrade plan whenever there is a new release in the REDCap Consortium LTS version, including new features and improvements.
 - 6.1.1.1. FoM Scientific Analyst completes the upgrade the development/Test Instance to check the functionality of the application. This instance is used for validation of new features and existing features that have been designated as core (see FoM DM SOP 113 REDCap Validation_).
 - 6.1.1.2. FoM DM Team along with DS Systems Team and UBC Information Technology (IT) Database Administration Services (DBA) Team decides on date and time for the scheduled maintenance of the FoM REDCap Production instance.
 - 6.1.1.3. FoM Scientific Analyst submits a change Log in ServiceNow, which is auto-approved.
 - 6.1.1.4. The FoM DM Team notifies active users through communication channels. Notification emails are sent to active users for Major LTS upgrades 1 month prior to upgrade to provide Research Teams with the opportunity to conduct project-level validation on the new LTS branch in



the Development instance. A banner with relevant information is also posted to the REDCap Login page on the Production instance 1 week before the upgrade on the Production instance.

- 6.2. Regularly scheduled upgrade: upgrade of current LTS branch, includes major/medium/minor security patches, and bug fixes per the FoM REDCap Upgrade Decision Tool.
 - 6.2.1. FoM DM Team along with DS Systems Team and UBC Information Technology (IT) Database Administration Services (DBA) Team decides on date and time for the scheduled maintenance of the FoM REDCap application.
 - 6.2.1.1. FoM Scientific Analyst completes the upgrade the development/Test Instance to check the functionality of the application.
 - 6.2.1.2. FoM DM Team along with DS Systems Team and UBC Information Technology (IT) Database Administration Services (DBA) Team decides on date and time for the scheduled maintenance of the FoM REDCap Production instance.
 - 6.2.1.3. FoM Scientific Analyst submits a change Log in ServiceNow, which is auto-approved.
 - 6.2.1.4. The FoM DM Team notifies active users through a banner with relevant information posted to the REDCap Login page on the Production instance 2 days prior to upgrade.
 - 6.2.2. The FoM DM Team performs the upgrade action with DS Systems Team/UBC IT DBA Team on scheduled maintenance day. During the upgrade, the system is taken offline and a message with upgrade information is provided to users during this time-frame. The software is upgraded following REDCap Consortium Upgrade Guidelines.
 - 6.2.3. Configuration and Core Functionality are tested after the upgrade to confirm that various functions of REDCap are working as expected (*See FoM REDCap Core Features Checklist*).
 - 6.2.4. After the successful completion of the upgrade on FoM REDCap, the FoM DM Team notifies all necessary team members and documents results internally and/or on the Research Technology Website.
 - 6.2.5. After successful completion of the upgrade, the system is made available to users.

7. REFERENCES



7.1. REDCap Software Installation & Technical Requirements -
<https://projectredcap.org/software/requirements/>