



Title: Backing up REDCap Projects and Data	Area: REDCap
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1.0 Procedure Description

This Standard Operation Procedure (SOP) highlights options for WE-SPARK REDCap Users to back up their projects and data.

2.0 Persons Affected

Applies to all REDCap Users.

3.0 Procedures

While the technical environment is backed up at the system level by UWindsor Information Technology Services (ITS) for the purpose of disaster recovery, it is incumbent on the REDCap Project Manager to retain a local copy of their project as a precaution against file corruption or user error. There are several ways to back up your REDCap project.

3.1 Data Dictionary Method

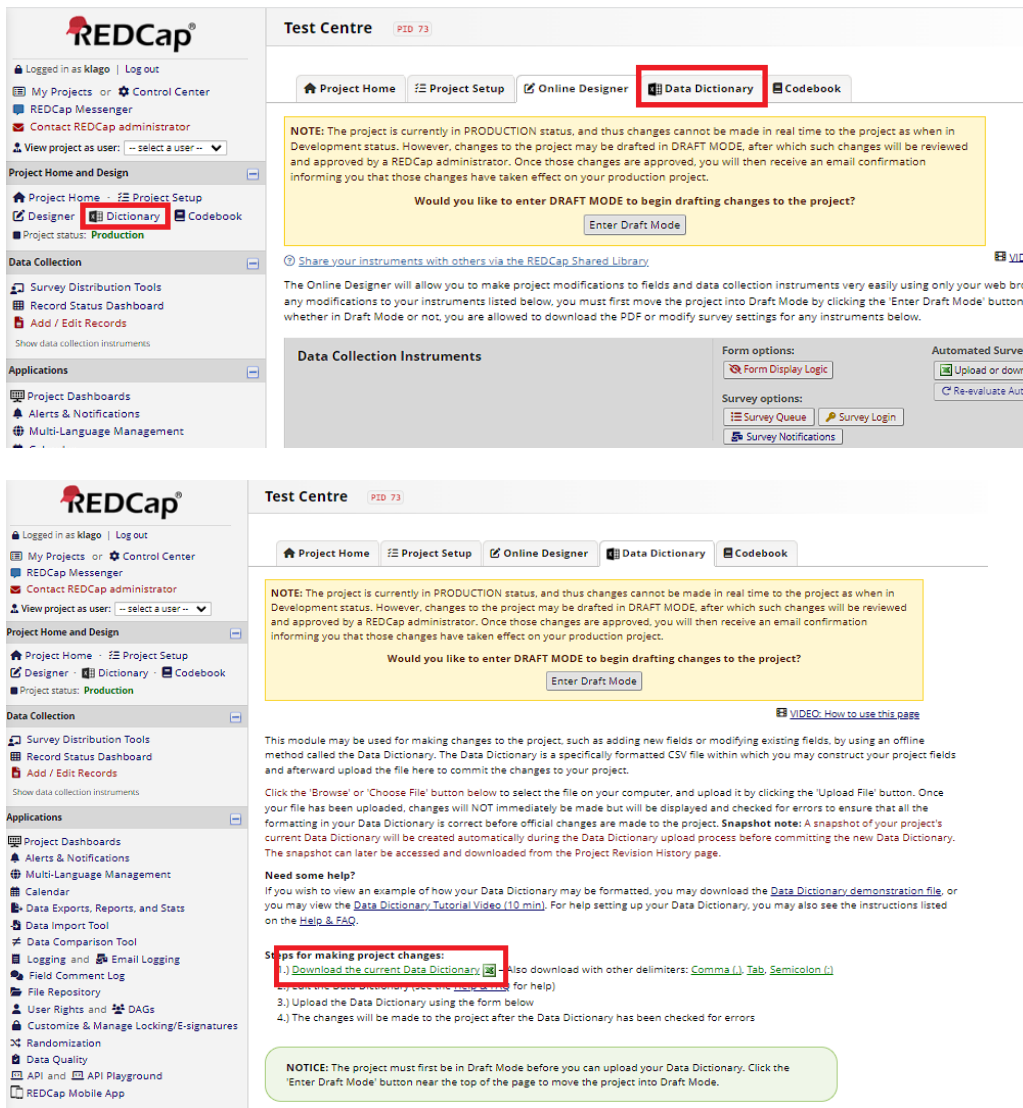
REDCap data dictionaries contain all the **metadata** associated with the data collection instruments in an individual project. **They do not contain record data.** Users can access their data dictionary from the “Dictionary” option under “Project Home and Design” in the left-hand menu. It can also be accessed through the “Data Dictionary Tab” at the top of the “Project Home and Design” menu.

Once in the Data Dictionary page, there is an option to download the current data dictionary under “Steps for making project changes”. Click “Download the current Data Dictionary”. This will by default download a .csv file containing all the project fields contained in the data collection instruments. This file can then be used to upload into a new REDCap project to restore it via the “Upload your Data Dictionary file” option on this page.

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Test Centre PID 73

[Project Home](#)
[Project Setup](#)
[Online Designer](#)
[Data Dictionary](#)
[Codebook](#)

NOTE: The project is currently in PRODUCTION status, and thus changes cannot be made in real time to the project as when in Development status. However, changes to the project may be drafted in DRAFT MODE, after which such changes will be reviewed and approved by a REDCap administrator. Once those changes are approved, you will then receive an email confirmation informing you that those changes have taken effect on your production project.

Would you like to enter DRAFT MODE to begin drafting changes to the project?

[Enter Draft Mode](#)

[Share your instruments with others via the REDCap Shared Library](#)

The Online Designer will allow you to make project modifications to fields and data collection instruments very easily using only your web browser. Any modifications to your instruments listed below, you must first move the project into Draft Mode by clicking the 'Enter Draft Mode' button at whether in Draft Mode or not, you are allowed to download the PDF or modify survey settings for any instruments below.

Data Collection Instruments

Form options:

[Form Display Logic](#)

Automated Survey I

[Upload or downlo](#)

[Re-evaluate Auto I](#)

Survey options:

[Survey Queue](#) [Survey Login](#)

[Survey Notifications](#)

NOTE: The project is currently in PRODUCTION status, and thus changes cannot be made in real time to the project as when in Development status. However, changes to the project may be drafted in DRAFT MODE, after which such changes will be reviewed and approved by a REDCap administrator. Once those changes are approved, you will then receive an email confirmation informing you that those changes have taken effect on your production project.

Would you like to enter DRAFT MODE to begin drafting changes to the project?

[Enter Draft Mode](#)

[VIDEO: How to use this page](#)

This module may be used for making changes to the project, such as adding new fields or modifying existing fields, by using an offline method called the Data Dictionary. The Data Dictionary is a specifically formatted CSV file within which you may construct your project fields and afterward upload the file here to commit the changes to your project.

Click the 'Browse' or 'Choose File' button below to select the file on your computer, and upload it by clicking the 'Upload File' button. Once your file has been uploaded, changes will NOT immediately be made but will be displayed and checked for errors to ensure that all the formatting in your Data Dictionary is correct before official changes are made to the project. **Snapshot note:** A snapshot of your project's current Data Dictionary will be created automatically during the Data Dictionary upload process before committing the new Data Dictionary. The snapshot can later be accessed and downloaded from the Project Revision History page.

Need some help?

If you wish to view an example of how your Data Dictionary may be formatted, you may download the [Data Dictionary demonstration file](#), or you may view the [Data Dictionary Tutorial Video \(10 min\)](#). For help setting up your Data Dictionary, you may also see the instructions listed on the [Help & FAQ](#).

Steps for making project changes:

- 1.) [Download the current Data Dictionary](#) [\[a\]](#) - Also download with other delimiters: [Comma \(,\)](#) [Tab](#) [Semicolon \(;\)](#)
- 2.) [Upload the Data Dictionary](#) (see the [help screen](#) for help)
- 3.) Upload the Data Dictionary using the form below
- 4.) The changes will be made to the project after the Data Dictionary has been checked for errors

NOTICE: The project must first be in Draft Mode before you can upload your Data Dictionary. Click the 'Enter Draft Mode' button near the top of the page to move the project into Draft Mode.

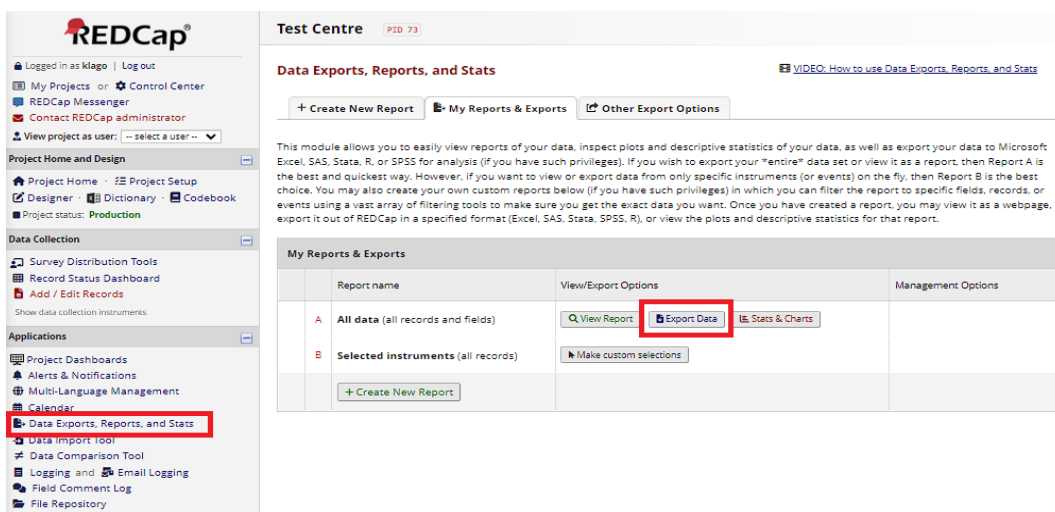
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3.2 Data Export Method

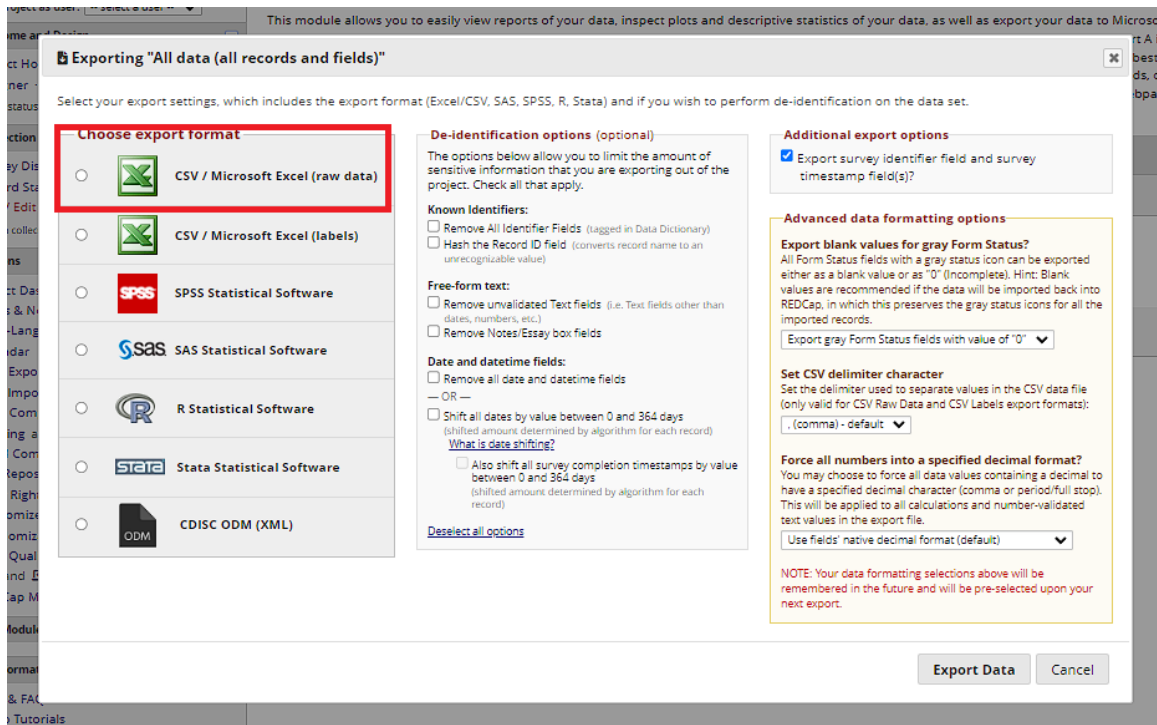
The Data Export Module allows users to export project data into Microsoft Excel, SAS, Stata, R, or SPSS. Users can specify which data they pull from the project as well. Users must have the appropriate user data export rights within a project to pull data from each data collection instrument. If you are unable to export data, consult the owner of your project.

If your project contains identifier fields, for the purposes of backing up your data, you should export the full data set. Once project data with identifying information is exported from REDCap, it is on the user to ensure that data is stored appropriately in a secure location.

Users can complete a full data export by accessing the “Data Exports, Reports and Stats” module in the left-hand applications menu. They can then download all project data by selecting “Export Data”. Users will then specify the file format that they would like to store the data in. If users are exporting data to protect against corrupted files or user error, it is recommended to export in Excel CSV format. This file can be used with the data import template in the “Data Import Tool” module to restore project data.



The screenshot displays the REDCap interface for a project named 'Test Centre' (PID 73). The left-hand navigation menu is visible, with 'Data Exports, Reports, and Stats' highlighted. The main content area is titled 'Data Exports, Reports, and Stats' and includes a 'VIDEO: How to use Data Exports, Reports, and Stats' link. Below this, there are tabs for 'Create New Report', 'My Reports & Exports', and 'Other Export Options'. The 'My Reports & Exports' tab is active, showing a table of reports. The table has columns for 'Report name', 'View/Export Options', and 'Management Options'. Two reports are listed: 'A All data (all records and fields)' and 'B Selected instruments (all records)'. For report A, the 'Export Data' option is highlighted with a red box. Below the table, there is a '+ Create New Report' button.



This module allows you to easily view reports of your data, inspect plots and descriptive statistics of your data, as well as export your data to Microsoft Excel, SPSS, SAS, R, Stata, or CDISC ODM (XML).

Exporting "All data (all records and fields)"

Select your export settings, which includes the export format (Excel/CSV, SAS, SPSS, R, Stata) and if you wish to perform de-identification on the data set.

Choose export format

- ☒ CSV / Microsoft Excel (raw data)
- ☐ CSV / Microsoft Excel (labels)
- ☐ SPSS Statistical Software
- ☐ SAS Statistical Software
- ☐ R Statistical Software
- ☐ Stata Statistical Software
- ☐ CDISC ODM (XML)

De-identification options (optional)

The options below allow you to limit the amount of sensitive information that you are exporting out of the project. Check all that apply.

Known Identifiers:

- ☐ Remove All Identifier Fields (tagged in Data Dictionary)
- ☐ Hash the Record ID field (converts record name to an unrecognizable value)

Free-form text:

- ☐ Remove unvalidated Text fields (i.e. Text fields other than dates, numbers, etc.)
- ☐ Remove Notes/Essay box fields

Date and datetime fields:

- ☐ Remove all date and datetime fields
- ☐ OR —
- ☐ Shift all dates by value between 0 and 364 days (shifted amount determined by algorithm for each record)
- ☐ What is date shifting?
- ☐ Also shift all survey completion timestamps by value between 0 and 364 days (shifted amount determined by algorithm for each record)

[Deselect all options](#)

Additional export options

- ☒ Export survey identifier field and survey timestamp field(s)?

Advanced data formatting options

Export blank values for gray Form Status?

All Form Status fields with a gray status icon can be exported either as a blank value or as "0" (Incomplete). Hint: Blank values are recommended if the data will be imported back into REDCap, in which this preserves the gray status icons for all the imported records.

Export gray Form Status fields with value of "0" ▼

Set CSV delimiter character

Set the delimiter used to separate values in the CSV data file (only valid for CSV Raw Data and CSV Labels export formats):

.(comma) - default ▼

Force all numbers into a specified decimal format?

You may choose to force all data values containing a decimal to have a specified decimal character (comma or period/full stop). This will be applied to all calculations and number-validated text values in the export file.

Use fields' native decimal format (default) ▼

NOTE: Your data formatting selections above will be remembered in the future and will be pre-selected upon your next export.

Export Data **Cancel**

3.3 XML Backup Method (Metadata AND Data Backup - Recommended)

The simplest method to backup both project metadata and data is via the REDCap XML backup method. An eXtensible Markup Language (XML) file is a markup language and file format for storing, transmitting, and constructing arbitrary data. REDCap XML backups will store an entire project and its settings within one .xml file.

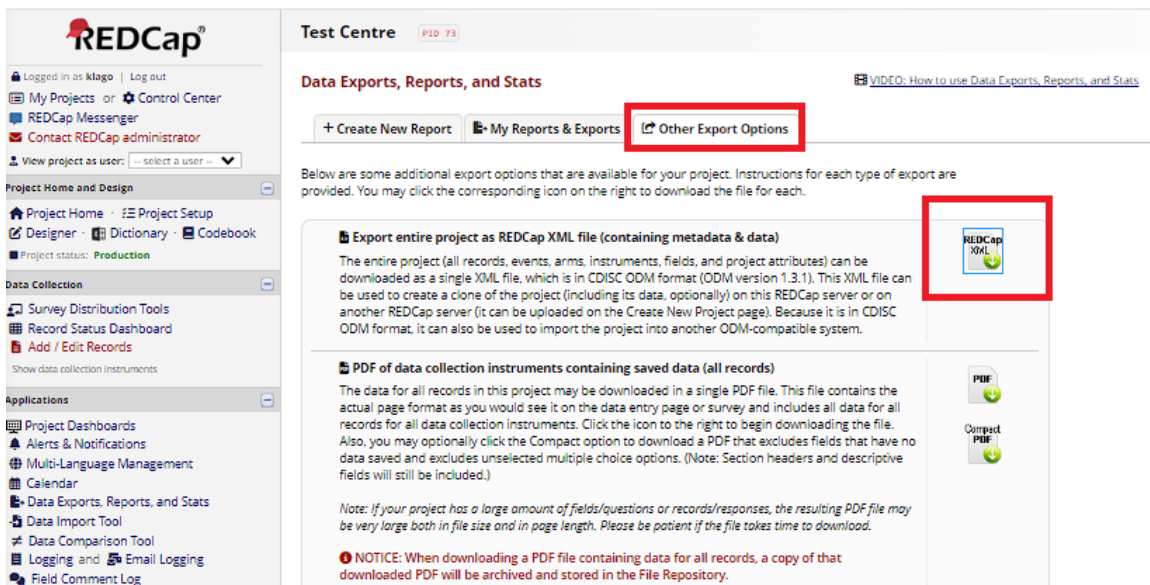
However, the .xml file is not utilizable in the same way that excel files are. This method is only recommended if you want to restore your project specifically in REDCap.

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Users can download their REDCap XML backup via the “Other Export Options” in the “Data Exports, Reports and Stats” module. Users can then select the “REDCap XML” button. This will bring up a menu to specify their XML backup. This can also be accessed through the “Other Functionality Tab” in the “Project Home and Design Menu”. There is an option to download metadata only or both metadata & data on this page.



The screenshot shows the REDCap Test Centre interface. On the left is a sidebar with navigation links. The main content area is titled 'Data Exports, Reports, and Stats'. At the top of this section are three buttons: '+ Create New Report', 'My Reports & Exports', and 'Other Export Options'. The 'Other Export Options' button is highlighted with a red box. Below these buttons, there is a section titled 'Export entire project as REDCap XML file (containing metadata & data)'. This section contains a description of the export process and a button labeled 'REDCap XML', which is also highlighted with a red box. To the right of this section are buttons for 'PDF' and 'Compact PDF'.

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REDCap

Test Centre PID 73

Project Home | Project Setup | **Other Functionality** | Project Revision History | [Full project settings](#)

Project Status Management

Development → Production (current) → Analysis/Cleanup

Move to Analysis/Cleanup status → Move the project to Analysis/Cleanup status if data collection is complete. This will disable most project functionality, although all collected data will remain intact. Once in Analysis/Cleanup status, the project can be moved back to production status at any time.

← Move back to Development status Moved to production too soon? You may move the project back to development status, if needed. **(Administrators Only)**

Mark project as Completed If you are finished with a project and wish to make it completely inaccessible, you may mark the project as 'Completed'. Doing so will take it off the and remove it from everyone's project list, after which it can only be seen again by clicking the Show Completed Projects link at the bottom of the My Projects page. [Read more](#)

Data Management

Delete the project You may completely remove this project, in which all its data will be permanently deleted also. **(Administrators Only)**

Erase all data You may erase all currently collected data in the project (including any survey responses), calendar events, documents uploaded onto forms/surveys, and all archived data export files stored in the File Repository, and any logged events that pertain to data collection. **(Administrators Only)**

Clear the Record List Cache (Administrators only) If there appear to be records missing from the project (in reports, record status dashboards, or elsewhere), then the Record List Cache (a secondary list of all record names) might be out of sync and thus might need to be cleared. Clearing the cache will cause the Record List Cache to regenerate and bring back records that appear to be orphaned/missing in the project. (NOTE: This is normally not needed.)

Copy or Back Up the Project

Copy the Project Make an exact duplicate of this project. All project fields will be copied over, and you will be prompted to set the title and info for the new project. You may choose to copy or not copy the existing data in the current project to the new one.

Download metadata only (XML) **Download a backup of this project.** The entire project (all records, instruments, fields, and project attributes) can be downloaded as a single XML file (CDISC ODM format). This XML file can be used to create a clone of the project (including its data, optionally) on the REDCap server or on another REDCap server (it can be uploaded on the Create New Project page). Because it is in CDISC ODM format, it can also be used to import the project into another ODM-compatible system.

Download metadata & data (XML)

Include the following in the XML file:

☒ Surveys and survey settings.

NOTE: The reported XML file does "not" contain the project's logging history (audit trail), but if you wish to obtain it, you can use the [Download Audit Trail](#) link at the bottom of the Log page.

What is the REDCap API?

The REDCap API is an interface that allows external applications to connect to REDCap remotely, and is used for programmatically retrieving or modifying data or settings within REDCap, such as performing automated data imports/exports from a specified REDCap project. For details on the capabilities of the REDCap API and how to use it, please see the [REDCap API documentation](#).

NOTE: If you wish to obtain an API token, which will allow you to make API requests, then someone must first grant you API user privileges on the User Rights page, after which you will then see a link called API on the left hand menu. That API page will provide instructions on how to request an API token.

Current number of tokens: 0

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Users can then use the XML file to restore a project and it's data by creating a new project in the main menu. Select "New Project" and for "Project creation options" select "Upload a REDCap project XML file". Upload the XML file and your project will now appear restored with all of your data and data collection instruments in REDCap.

+ Create a new REDCap Project

You may begin the creation of a new REDCap project on your own by completing the form below and clicking the Create Project button at the bottom.

Project title:

Project's purpose:

How will it be used?

Assign project to a Project Folder? ☐

Project notes (optional):

Description of the project's use or purpose (displayed on the My Projects page)

Project creation option:

- ☐ Empty project (blank slate)
- ☒ Upload a REDCap project XML file (CDISC ODM format)
- ☐ Select XML file: No file chosen
- ☐ Use a template (choose one below)

★ Choose a project template

select template	Template title (sorted by title)	Template description
<input type="radio"/>	Basic Demography	Single data collection instrument to capture basic demographic information.
<input type="radio"/>	Classic Database	Six data entry forms, including forms for demography and baseline data, three monthly data forms, and concludes with a completion data form.
<input type="radio"/>	Field Embedding Example Project	Example of the Field Embedding feature.
<input type="radio"/>	Human Cancer Tissue Biobank	Five data entry forms for collecting and tracking information for cancer tissue.
<input type="radio"/>	Longitudinal Database (1 arm)	Nine data entry forms (beginning with a demography form) for collecting data longitudinally over eight different events.
<input type="radio"/>	Longitudinal Database (2 arms)	Nine data entry forms (beginning with a demography form) for collecting data on two different arms (Drug A and Drug B) with each arm containing eight different events.

REDCap 12.5.4 - © 2022 Vanderbilt University

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4. When to Backup your Project and Data

It is up to the discretion of the project team to decide when to back up project data. It is recommended that users backup their projects and data atleast once per week during the data collection phase. This helps prevent data loss in the event of a disaster or user error.

5. Production Status Snapshots

For the WE-SPARK Health Instance of REDCap, [“Production Status”](#) signifies that a project has been completed, thoroughly tested and is ready for the collection of real participant data.

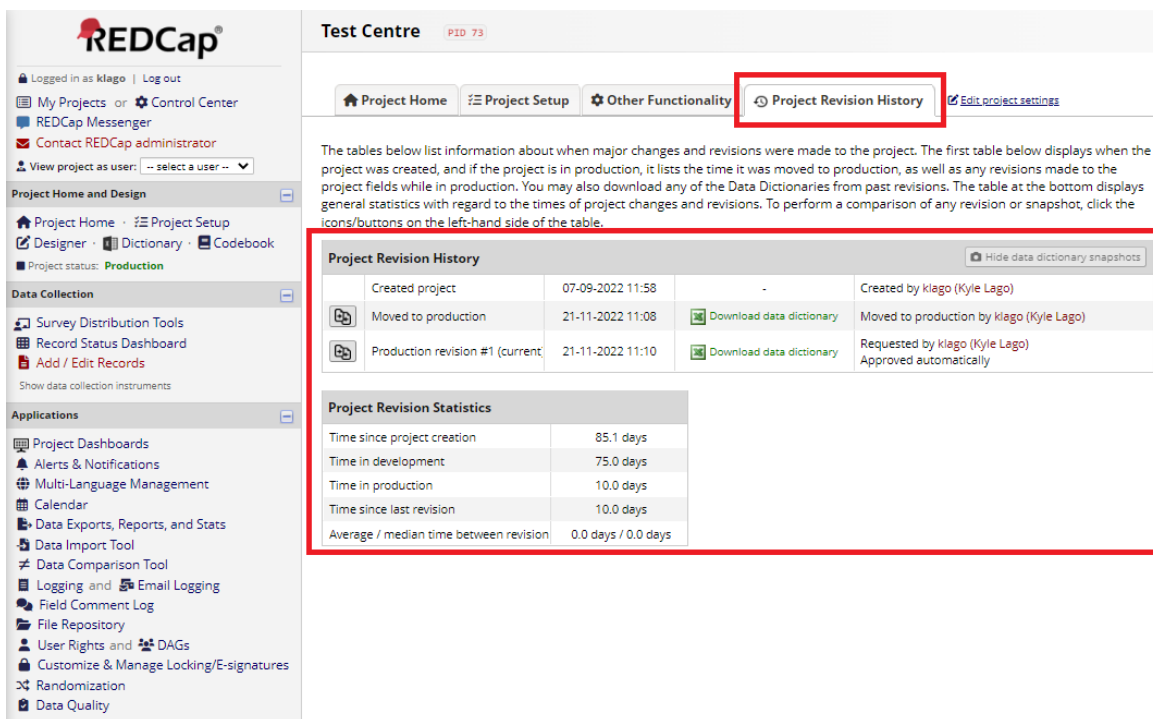
When a project is approved to move into production status, a snapshot is created of the current data dictionary and saved to the project. Subsequent changes can be made to the project in “Draft Mode” and then submitted for approval by an administrator. If approved, this will create a new snapshot of the data dictionary including those changes. This allows users to download previous data dictionaries if they wish to revert their projects back to a previous version, and may be useful for users. **This does not save participant data, rather only data dictionaries.**

These snapshots can be found under the “Project Revision History” tab in the “Project Home and Design” menu when a project is in production status.

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The screenshot shows the REDCap Test Centre interface. The left sidebar contains navigation links for Project Home and Design, Data Collection, and Applications. The main content area is titled 'Test Centre' and includes a 'Project Revision History' section. This section contains a table with three rows of project history data and a 'Project Revision Statistics' table below it. The 'Project Revision History' table is highlighted with a red box, and the 'Project Revision Statistics' table is also highlighted with a red box.

Project Revision History

Created project	07-09-2022 11:58	-	Created by klag0 (Kyle Lago)
Moved to production	21-11-2022 11:08	Download data dictionary	Moved to production by klag0 (Kyle Lago)
Production revision #1 (current)	21-11-2022 11:10	Download data dictionary	Requested by klag0 (Kyle Lago) Approved automatically

Project Revision Statistics

Time since project creation	85.1 days
Time in development	75.0 days
Time in production	10.0 days
Time since last revision	10.0 days
Average / median time between revision	0.0 days / 0.0 days

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5.0 Review/Revision History

Date	Revision No.	Revision Type (Minor edit, moderate revision, complete revision)	Reference Section(s)
2022-Nov-29	1.0	New SOP	

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