REDCap FAQs

REDCap Accounts and Access

What are the various REDCap servers at the University of Manitoba and how do I use them?
We have three REDCap servers:

1) Training Server: It is used during the “Development” stage of any project, which will ultimately be transferred to a Survey server or the Production server. This server should be used to develop new projects, build the data collection forms and thoroughly test the compatibility of the forms with the data to be captured using dummy or pilot data. Once the testing is completed, and the design is finalized, the project can be moved to the production stage in either the “Survey server” or the “Production server,” depending on the type of project.
Link to training server: https://redcapwebtrn.med.umanitoba.ca/redcap/

2) Survey Server: This server is used to collect online survey responses from study participants. Please note that identifiable information (i.e., survey respondent’s full name, address, etc.) cannot be collected or stored in the survey server.

3) Production Server: Since most of the data collected and stored for clinical research comprise of confidential medical information (although de-identified), data security is of prime importance. Therefore, the University of Manitoba’s REDCap production server is housed within a Secure Research Environment (SRE). An SRE account and security token are required to access the SRE.

Is there a cost to use REDCap?
There is no cost to use the training and the survey REDCap servers.

A security token is required to access the SRE and the Production REDCap server housed within the SRE. There is a fee associated with token acquisition. Please email redcap@umanitoba.ca for additional information.

What is the difference between a hard token and a soft token?
Both hard token and soft token serve the same purpose, i.e. generating a 6-digit passcode for accessing the SRE. The only difference is that the hard security token is a physical device, while soft security token is generating the same passcode using an app on your mobile device. We recommend using the soft token, but users can request a hard token if preferred.
How do I transfer an SRE token/fob to another team member?
You will need to complete a REDCap Surveys & Production Servers and/or SRE Application form (link: https://chimb.ca/pages/34-research-electronic-data-capture-redcap). In the form, Section 3, please specify that the token is to be transferred. Additionally, the new REDCap user is also required to submit a University of Manitoba PHIA agreement and a current copy of REB approval.

Please note that the REDCap account will be suspended for the user from whom the token was transferred from. The account can be unsuspended if the user applies for REDCap access in the future.

My token is expiring soon, what is the process to renew the SRE token?
A renewal form with instructions will be sent out to users a few weeks before token expiration. Once the renewal form is processed, you will be notified that your new token is ready for pick-up or activation. You should return your old hard token, if applicable.

If you no longer need your SRE token, please return the expired token to the reception desk on the 3rd Floor of the Chown building, 753 McDermot Avenue.

How can I request help or report issues using REDCap?
Please send an email to redcap@umanitoba.ca. Please include your REDCap user name, the project name you are currently working on, and a brief description of the issue.

What do I do if I forget my password for any of the REDCap servers?
Send a password reset request to redcap@umanitoba.ca. Once your request gets processed by our REDCap Administrator, you will receive a system-generated email with a link to reset your password.

If the password reset if, for the REDCap production server, the link will not take you directly to its intended destination. Here are a few steps that you will need to follow:
1. Sign in to the SRE using your security token, SRE username and instructions that our colleagues in MedIT provided you.
2. Once the SRE desktop appears, double-click on the REDCap icon, after a few moments taking you to the REDCap welcome screen.
3. Copy the link from the e-mail messages (in Windows, right-click on the link and select copy hyperlink) and paste into the URL/weblink box at the top of the REDCap welcome screen – once copied, hit enter. If you’re using the web interface to our SRE, you’ll need to activate the copy and paste function within the VMware Horizon web tool (via the tab at the left edge of your browser window).
4. This should take you to a REDCap screen where you can enter the password of your choice.

In case of SRE login issues, please contact MedIT by submitting a ticket to servicedesk@umanitoba.ca. Describe the login issues with screenshots, if possible, and make sure the email has the subject line of “For MedIT – SRE access issue.”

Can users share a REDCap account?
No, all REDCap users must have their own unique username and password. However, they can be part of the same project. User rights can be restricted based on user role in the project, which enables/disables access to certain “privileges” in a project.
Should I contact a REDCap administrator to be added to a REDCap project and the associated user rights in the project?
Since only PI has the authority to delegate study responsibilities to staff, it will be the PI or his/her delegate who will be responsible for adding a new user to a project. The user right allocation will also be the responsibility of the PI or his/her delegate.

Why was my REDCap Production server user account suspended?
User accounts that were not active for more than 180 days get automatically suspended and the users are notified via email. However, if you would like to have your account unsuspended, please contact the UofM REDCap administrator at redcap@umanitoba.ca.
REDCAP Project Development

How much training is required to use and design projects in REDCap?
Minimal training is needed to develop simple projects in REDCap. Vanderbilt University offers an extensive collection of REDCap training videos that are an excellent resource for you and your research team members. Link to the training videos: https://redcap.vanderbilt.edu/index.php?action=training (login not required)

Please contact REDCap administrator at redcap@umanitoba.ca for assistance with complex multi-site longitudinal clinical studies.

Do I need to learn any programming languages (i.e., Java, R, etc.) to use REDCap?
No programming experience is required to use REDCap. REDCap has a user-friendly interface to design projects.

What are the various REDCap project statuses?
A new REDCap project will be placed in the Development status by default. While in Development mode, you can design, build, and test your REDCap projects. Any design changes can be made and tested.

Once the design is finalized and tested, the project can be moved to the Production status, and this is done by clicking the ‘Move to Production’ button on the Project Setup page. Changes to the project design are locked in the Production status, although design changes can be made by moving the project back to the Development mode. Once the project is complete, you can move the project into any of the below two statuses:

- **Inactive**: This status is used if data collection is complete. This means that most project functionality will be disabled, but data will remain to be exported. In inactive mode, the project can still be moved back into production status at any time.
- **Archive**: In archive mode, both the project functionalities and data are locked. Archived projects can still be accessed by clicking the “Show Archived Projects” link, which is located at the bottom of the My Projects page. A project can be moved from Archive to Production status if required.

Can I customize the field labels in a REDCap project?
Yes, you can! You can use simple HTML tags in the “Field Label” to customize the field. The codes used are basic, and you do not need prior HTML experience. Here is a list of HTML tags that can be used.

For example, to display bolded text you can use the HTML <b> tag as below:

```html
<b>content goes here…</b>
```

What should I do when a project is complete?
When the REDCap project is complete, the Principal Investigator (PI) or his/her designate should lock the project in REDCap. This will ensure that data can no longer be changed without unlocking the project. With REB approval, data from the REDCap project can be exported for analysis. The PI or designate is responsible for transferring data to a secure device as recommended by MedIT (e.g., hardware encrypted drive).
Personal Health Information (PHI) may only be exported from REDCap if approval has been expressly provided by the University of Manitoba Health Research Ethics Board (REB). The PI is responsible for the transfer and safeguarding of any PHI.

After the project data review and export are complete, the recommendation is to place the REDCap project in the “Archived Status.” Archived projects can be reset to “Production Status” if required. If there is an institutional or regulatory requirement for long-term data retention, PI should discuss options with the REDCap Administrator.

Completed projects will be permanently deleted from the REDCap Production or Survey Server if any of the following apply:

- Written instructions from the PI
- Other system policies dictate project deletion

**Will the test data get exported to the Production/Survey server while transferring a project from the Training server to the Production/Survey server?**

Once you finalize the design and download the data dictionary to move a project to the Production/Survey server, only the project design is transferred. No data will be transferred in this process.

Note: We strongly recommend testing your projects prior to moving the project to the Production/Survey server. Testing can be done by entering dummy/fake data.

**There is an option in the “Project Setup” tab for moving the project into production status. Should I click the button to transfer the project in the Training server from development to production?**

Clicking this button will move the project to production within the Training server and **WILL NOT TRANSFER** the project into the Survey or Production servers. Therefore this is not the method of transferring the project from the development to the production stage. Please follow the directions given in the below link to move the project from Training to Production/Survey server:


You can click this button in the Project Setup tab within the Production/Survey server (after uploading the data dictionary as mentioned in the above link) to move the project to production status.

**I have a survey/CRFs split into separate instruments, which I want to merge. Is it possible to change it without having to create the variables manually again in one of the instruments?**

The transfer of fields from one instrument to another can be done by following these steps:

Step 1: Create a copy of your current project in the training server so that even if there is an error, the original project template is preserved.
Step 2: In the copied project, go to “Project Setup” tab > “Data Dictionary” > Download the current data dictionary

Step 3: Open the data dictionary file (.csv file) and expand the second column so that the “Form Names” in Column B is completely visible. Each form name represents a separate instrument in REDCap.

Step 4: Replace the second “Form name” with the first, so that all the questions that you want on the same instrument will have the same “Form Name”.

Step 5: Save the .csv file

Step 7: Once the new data dictionary is uploaded, select “Commit Changes.”

Uploading the new Data Dictionary will replace the old project design with the new design and erase any data that were stored previously.

Note: Any errors in the Data Dictionary will be displayed at this step

**What is double data entry, and how can I enable it in REDCap?**

Double data entry is a process in clinical studies where data entry is performed twice for each record by different people. REDCap provides the option for double data entry, but this module can only be activated by a REDCap administrator on a project-by-project basis. Once the REDCap administrator enables this module, the project administrator can allocate data entry users to one of the three data entry groups: Person #1, Person #2 and Reviewer. Users assigned as Person #1 or Person #2 cannot see each other's records, whereas, the reviewer can see both entries and merge them into one after comparison using the REDCap comparison tool.

Please contact us at redcap@umanitoba.ca to get detailed information specific to this module and enabling it in your project.

**Can I perform randomization within REDCap?**

The randomization module in REDCap will help you implement a defined randomization model within your project, allowing you to randomize participants to study groups. Based on the pre-defined variables, the module creates a template allocation table, which you can use to structure the randomization table you will import. The module also monitors the overall allocation progress and assignment of randomized subjects.

The following process can be followed step-by-step to randomize patients recruited to your study:

1) Enable Randomization Module: the randomization module can be enabled in the “Project Setup” tab.

2) Create a randomization field: Randomization field is the variable to which you want to assign the patients randomly (e.g.: case vs control; placebo vs treatment 1 vs treatment 2; group 1 vs group 2 vs… group n etc.). Create the variable as field type: “Multiple Choice-Drop-down List (Single Answer).” Add the randomization arms as choices in the drop-down list.
3) Setting up the randomization module: Select the variables (called stratification variables), based on which you want to randomly assign the study participants to each randomization group. The stratification variables to be used in randomization are multiple-choice (single answer) fields. Stratified randomization ensures that different groups are balanced. If this is a multiple-site study, option B “Randomize by Group/Site?” allows you to stratify the randomization by each group. When this option is checked, you are allowed to select randomization by data access groups or by a REDCap drop-down list of the sites.

4) Download template allocation tables (as Excel/CSV files): The template allocation tables (REDCap will randomize the participants according to this table) will contain all the raw coded values for the fields used in your randomization model.

5) Modify and upload the table: To make the allocation schedule more difficult to predict, a temporary column can be added to the spreadsheet for randomizing the order. The Excel function “RAND()” creates a random value between 0 and 1. This number can be used as an easy way to populate a fourth column in the spreadsheet with a unique random value. Sort the spreadsheet by the “Random Value” column so that the stratification variable and randomization variable are randomized. Then delete the “Random Value” column and save the .csv files. The saved .csv file should be uploaded into the “Upload allocation table (CSV file).”

6) Designating Randomization Use Privileges: Go to the “User Rights application” and click on the name of the user to open “User actions.” In this, click on “Edit user privileges” to change the “Randomization” privileges to users depending on their role in the study and study design (blinded vs unblended). For the user who would be doing the randomization, designate the right “Randomize.” This will allow them to generate a random value according to the randomization allocation table.

7) Test the Randomization Using Dummy Data: Enter dummy data to check if the patient is randomly assigned based on the stratification variables (and “by Group/Site” if multi-centre study). Click on the “Randomize” tab in the randomization filed, which will prompt you to enter the data into stratification variables.
FAQs Production Stage: Survey & Production Server

How do I make design changes after I moving a project from the Training Server to the Production/Survey Server?

It is recommended that you do not make design changes to a project directly in the Production/Survey server. We stress that all testing of the instruments and the overall project be done in the Training Server before moving to the Production/Survey Server.

However, if the data entry process has not started and/or the amendment does not lead to significant data loss, the data entry forms can be edited by users who have their “Project Design and Setup” right enabled. We recommend that only a limited number of users, such as the PI and senior project members who are familiar with REDCap are granted this right.

The user can go to “Online Designer” within the “Project Setup” tab and click on “Enter Draft Mode” to make changes to the data collection instruments. Once you save and submit changes, the draft will either be automatically approved by REDCap if there are no records in the project or if the changes do not lead to data loss. Alternatively, REDCap will NOT permit automatic approval if the project has records and critical issues exist. A change approval request will be sent to the REDCap administrator, who will review the changes and confirm with the PI about data loss before approving the changes. Once the changes are approved, you will then receive an email confirmation informing you that those changes have taken effect on your production project.

We have made several changes to the eCRF design, among which only one change was critical. Will all the other changes, except the one that is critical, be approved by REDCap automatically?

REDCap evaluates all the submitted changes together as a batch. If there are issues with any of the changes, the entire batch WILL NOT BE AUTOMATICALLY APPROVED. The changes will have to be reviewed by the REDCap administrator. As soon as the changes are approved by REDCap Administrator (after consulting with the PI regarding the potential data loss and obtaining his consent), the new eCRF will replace the old.

In addition, the REDCap Administrator can only approve or reject the entire batch of requested changes; REDCap doesn’t allow a specific change to be approved or rejected by the administrator. When a change gets rejected by the REDCap admin, the changes still remain in the ‘Draft mode’ and do not get published to the production project. Once the issues of the changes are fixed, you can resubmit the changes for approval.

Can I setup the form auto-numbering to start at a particular number or generate a unique value?

You can disable the auto-numbering feature and can enable auto-numbering customization.

Can a survey participant complete the survey later?

Yes. The participants can click the “Save & Return Later” button at the bottom of the survey at any point in time. Clicking the ‘Save & Return Later’ button displays a validation code that the user must use when they decide to continue the survey. If the survey was sent originally via an email invitation, another email with a survey continuation link will be sent to the participant. If the participant accessed the survey from a public link, then they will be prompted to enter an email address before closing the survey. If the respondent loses or does not know their validation code you can retrieve it for them. All the survey response data, including the validation code, can be downloaded using the Data Export Tool in the
REDCap left-hand panel. However, it is not easy and sometimes even possible to determine which code belongs to the survey participant.

Note: Remind your survey participants that if they decided to complete the survey at a later time, they will need the validation code that gets generated when the save & exit the survey.

**Does REDCap have in-built statistical analysis software?**
No, but data can be easily exported as formats compatible with SPSS, SAS, R or Stata. REDCap can generate simple descriptive statistics for your project, but not sophisticated analysis like SPSS, SAS, R, or Stata can perform.

Note: The SRE where the production server is housed has statistical analysis software like R, SAS and SPSS. The recommendation is for the data to be exported from REDCap and analyzed within the SRE.

**How can I enable a data collection instrument within my REDCap project as a survey?**
Enable survey instruments in the project settings as below:

Once the survey instrument is enabled in a project, any data collection instrument can be utilized as a survey as below:
Should I create my survey as a single instrument survey with separate sections or use separate data collection instruments and link them together as a single continuous survey?
The decision depends on your project design and how you want the survey to be sent out. A brief discussion of each of them are given below:

**Single Instrument Survey:** If your project involves only one single survey which you want to send out to participants together, and the survey is not too long, you can use this method. All questions are placed in a single instrument either continuously or grouped into multiple sections within an instrument.

![Screenshot of a survey creation interface with options to add new section and settings for display]

While sections improve the aesthetical appeal of the survey, it also enables you to use another feature: each section can be displayed on a separate page to the participant. This can be useful in lengthy surveys (e.g., >50 questions) or if there are sections that are different in terms of context (e.g., separate sections for questions regarding diet practices and medical history).

Survey settings allow you to choose the display of sections, as shown in the screenshot below:

![Screenshot of survey settings options with options to customize question numbering and display format]

**Multiple Instrument Survey:** Used if the project involves surveys, which are to be sent out at specific time points. Each survey is created as a separate instrument, and they can be either send out as a single survey (one instrument followed by the other) or longitudinal surveys with invitations send out at separate time points.
In the “Survey Termination Options” within survey settings, you can choose if you want the respondent to go into the next survey instrument directly. This feature allows you to have separate survey instruments strung together to appear as a single survey to a participant.

I have multiple survey instruments in my project. However, I want participants to go into the next survey based on their responses to questions in the initial survey. How can I implement it in my REDCap project?

If you want control over which survey is to be displayed after completing the first, you can use the “Survey Queue” feature to activate this option. If “autostart” is checked, the respondent will be directed to a new instrument (depending on the logic entered) automatically. The survey queue displays a list of all of your surveys to a participant on one page. The queue acts as a to-do list and lets the participant know which surveys have been completed and which are left to take. To activate your survey queue, navigate to Online Designer and click the Survey Queue icon located above your data collection instruments. A “Set
up Survey Queue” box will appear. If you would like, you may add your custom text to display at the top of the survey queue.

On the other hand, “Automated Invitations” can be used to enable a longitudinal survey, whereby the developer can decide when a respondent to the initial survey will receive notification for the next survey. It can be either sent immediately, on a specific day of the week at a pre-set time, after a number of days & hours or sent on an exact date & time. Logic can be used to determine when notifications will be sent for a specific survey. The subject and content of the email can be customized using the responses provided in the initial survey (e.g. participant name).
Can REDCap send automatic reminder emails to participants who have started a survey, but have responded only to a few questions so far?
The automated survey invitations can also be tweaked so that it can be used to send reminder emails to participants who are yet to complete most questions in the survey.

You can create a calculated field within the survey instrument, which automatically calculates the number of questions answered by the participant. This can be done using SUM and IF-THEN functions. Remember to make the field hidden to the participants on the survey form by using the action tag “@HIDDEN-SURVEY.”

**Calculation Equation**

IF-THEN FUNCTION (for each question in survey): if the field is not left blank (“<>””), then assign 1, else assign 0.

SUM function: Include the IF-THEN functions of all questions on the survey, separated by comma and enclose them in parentheses so that sum function calculates the aggregate of responses received.

Since the total number of questions on a survey form is known to the developer, he/she can determine how many responses within a specific date might possibly result in the respondent answering all questions within the last date of survey (e.g. a response rate of 10 responses after 20 days for a 100 question survey is too low).
Since the total number of questions on a survey form is known to the developer, he/she can determine how many responses within a specific date might possibly result in the respondent answering all questions within the last date of survey (e.g. a response rate of 10 responses after 20 days for a 100 question survey is too low). This logic can be used to fill in the “Specify conditions for sending invitations” section of automated invitations.

Similar to automated surveys for other survey instruments, the invitation can be resent with a message directing the respondent to go back to the survey and complete it. A specific date can be included in “When to send invitations AFTER conditions are met” section to choose the date and time when the first reminder email will be sent.

The “Enable Reminders” section can be used to determine how many reminders will be sent to the respondent and the interval between each reminder.

Remember to check the “Ensure logic is still true before sending invitation?”, so that before each reminder, REDCap will check if the respondent has not filled out the survey or not. If they moved beyond the predetermined number of responses, they won’t be receiving further reminders for survey completion.
I have a project in the REDCap production server. I am unable to export my data onto a USB. How can I export my data?

Although the SRE does not support internet access, you can use a USB memory stick to export your REDCap production server data. By default, USB device recognition is disabled within the SRE. However, you can enable USB recognition by selecting the “Connect USB Device” on top of the screen and then checking both “Automatically Connect at Startup” and “Automatically Connect when Inserted.” Sometimes you might need to plug in your USB drive before signing into the SRE.

We strongly recommend using a hardware-encrypted drive for securely storing any data taken outside of the SRE, especially if there are any personal identifiers.

How can I enable data quality and resolution module in REDCap?

The Data Resolution Workflow allows users to utilize standard workflows to document the process used to resolve data issues in a project (i.e. opening, responding to, and closing data queries). This data resolution workflow, often called 'data queries' in clinical studies, can be utilized either on a data entry form (clicking the balloon icon next to the field) or on the Data Quality page when finding data discrepancies.

Before utilizing the Data Resolution Workflow, proper user privileges must be assigned to the project members. Navigate to the User Rights page where you will see a new section of privileges specifically for the Data Resolution Workflow. You may give users one of the following privileges: no access, view only, respond only, and open/close/respond to queries.
The data resolution workflow module can be turned on in the Project Setup tab > Enable optional modules and customizations > Additional Customizations

Ensure that this box is checked

None: Do not allow comments to be made beside data fields

Field Comment Log: This will enable the users to include comments to be included for any data field.

Data Resolution Workflow: This needs to be activated so that the PI/data coordinator/monitor can run the data quality rules and open queries directly, for a specific field within an event.
When I am exporting REDCap data into one of the export formats, why are the dates in the exported files different from the one shown in the REDCap report?

It might be because the PI/designee has not granted you full data export access as part of your assigned "user rights." You will have to request your PI/designee to grant you the full dataset export right in his/her study.

Only those study team members who have “User Rights” access enabled will be able to add/remove team members and change their user rights. We recommend that only a limited number of users, such as the PI and senior project members who are familiar with REDCap, are granted this right for any given project.

By default, when you are added into a study, you will only have access to de-identified data. Any study team member with “User Rights” privilege enabled for this study can grant you the right to export de-identified data. They can enable the “Full Data Set” option in “Data Exports” and thereby permit the user to export de-identified dataset.

Also, once you have the full data export access, remember to deselect all these de-identification options before exporting the study data.