REDCap Solid Upgrade Changelog - June 23, 2020

New Features

- 10 new Smart Variables

[project-id] - The Project ID (i.e., PID) of the current REDCap project.

[user-fullname] -The current user's first and last name (as listed on their My Profile page).

[user-email] - The current user's primary email address (as listed on their My Profile page).

[redcap-base-url] - The base web address for the REDCap installation.

[redcap-version] - The current REDCap version number of the REDCap installation.

[redcap-version-url] - The base web address of the current REDCap version directory for the REDCap installation.

[survey-base-url] - The base web address for surveys for the REDCap installation.

[instrument-name] - The unique instrument name of the current survey or data entry form. It will return a blank value if not in an instrument context.

[instrument-label] - The instrument label of the current survey or data entry form. It will return a blank value if not in an instrument context.

[survey-title] - The survey title of the instrument specified by the 'instrument' parameter (if provided). If the 'instrument' parameter is not provided, the current survey instrument will be used, else it will return a blank value if not in an instrument/survey context.

- 5 new Action Tags

@NOW_SERVER - Loads the REDCap server's date+time into a blank Text field - similar to the @TODAY tag but additionally includes the time portion. If the field has validation, the value will adjust to match the date format. NOTE: The time used will be the REDCap server's local time, which might be different from the user's local time if in another timezone. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.

@TODAY_SERVER - Loads the REDCap server's date into a blank Text field - similar to the @NOW tag but without the time portion. If the field has validation, the value will adjust to match the date format. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.

@NOW_UTC - Loads the current UTC/GMT date+time into a blank Text field - similar to the @TODAY tag but additionally includes the time portion. If the field has validation, the value will adjust to match the date format. NOTE: The time used will be the current UTC/GMT time, which might be different from the user's local time if in another timezone. Also, do not use this tag on fields with

branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.

@TODAY_UTC - Loads the current UTC/GMT date into a blank Text field - similar to the @NOW tag but without the time portion. If the field has validation, the value will adjust to match the date format. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.

@HIDDEN-PDF - Hides the field only in the downloaded PDF of one or more instruments (including blank PDFs, PDFs with data, and compact PDFs with data). Note: Other @HIDDEN action tags will not hide fields inside PDF exports, so @HIDDEN-PDF must be used specifically to hide fields in PDFs.

- File Version History for File Upload fields - This feature allows a new file to be uploaded onto a File Upload field that already has a file uploaded for it. If a file has already been uploaded, the field will have a new link "Upload new version", and after being clicked, it will allow the user to upload another file without having to delete the existing one. The old/existing file will not be deleted but will still be accessible as an older version of that file in the Data History popup (by clicking the "H" icon next to the field). Within the Data History popup, a user may view, download, or delete any existing version of the file that exists, in which all versions of the file will be displayed in a table format and listed in chronological order with regard to being uploaded.

- Missing Data Codes (i.e., "Data Missingness" functionality) - Fields that have a blank/missing value may be marked with a custom 'Missing Data Code' to note why the value is blank. These missing codes may be used to aid in data analysis by specifying why a field lacks a value. Users may enable custom missing data codes at the project-level in the Additional Customizations popup on the Project Setup page. The missing codes should be coded just like the choices of a multiple choice field with code + comma + label, in which the codes can only have letters, numbers, dots, dashes, and underscores (e.g., '-999, Not asked' or 'UNK, Unknown'). If no codes are entered, this feature will remain disabled. After missing data codes have been set up in a project, you will see an 'M' icon next to each field when viewing a data entry form. Click the icon to open your list of missing data codes, and select one. Once selected, it will save the missing code as the literal data value for the field. Missing data codes can be used for any field type (e.g., date, slider, file upload fields).

Bug Fixes / Improvements

Version 9.5.4

- Improvement: In a project with repeating instruments, the Record Home Page now displays a count of total instances of a given repeating instrument next to the instrument name in the tables of instances displayed at the bottom of that page.

- Improvement: The Control Center's left-hand menu now contains a text field for entering a project's PID (project ID), after which it will direct the user to that project. This provides a quick way of navigating to a project when you have the PID.

- Improvement: The Data History Popup for File Upload fields now provides more detailed information, such as the filename of the uploaded file.

- Improvement/change: When an administrator is reviewing the email from a user requesting to have a project deleted (via a button click on the Other Functionality page for production projects), the email subject now includes the project ID (PID) to allow admins to track emails for projects more easily and not get them confused with one another.

- Improvement: The "Cancel" button on data entry forms now displays a confirmation prompt after being clicked to ask the user if they truly wish to cancel and lose all their changes. (Ticket #22360)

- Improvement: On the Survey Settings page, the "Redirect to a URL" option now allows the Smart Variable [survey-url] to be used - e.g., [survey-url:other_survey]. (Ticket #70613)

- Improvement/change: The Codebook now denotes if an instrument is enabled as a survey, in which it is noted immediately to the right of the instrument name.

- Improvement: Performance improvement for large data exports that might have previously taxed the REDCap servers or might have failed to complete altogether for some large projects. An internal auto-batching mechanism is now utilized to limit the performance hit to the servers (both database and web server) when exporting large quantities of data (via API or user interface) in order to improve the user experience and to prevent REDCap processes from using up too many server resources. Note: This does not necessarily mean that data exports will be faster; in fact, some exports might be slightly slower as a means of preserving server resources used by REDCap processes.

- Improvement: Performance improvement for when REDCap is generating the record list cache for a project, especially for projects with Data Access Groups. For each project, REDCap maintains a record list in a database table that is used throughout a project. This record list improves overall performance, especially for large projects. Every few days the record list cache is automatically rebuilt internally. The process of rebuilding the record list is now more efficient, faster, and less error-prone than in previous versions.

- Improvement: Major performance improvement when loading the Participant List page for projects with surveys. For projects with thousands of records or more, this page should be significantly faster.

- Improvement: Performance improvement for record searching on the "Add/Edit Records" page when entering part of a record name in the "Enter a new or existing [Record ID]" text box. For projects with thousands of records or more, this functionality should be much faster.

- Improvement: Performance improvement for projects using record auto-numbering, in which the process of generating the record name of the next potential record is much faster, especially for projects with many records.

- Improvement/change: If a user is viewing a data entry form that has been enabled as a survey and then clicks "Compose survey invitation" in the survey options at the top right of the page, if they compose

and send an invitation that is marked to be sent "Immediately", it will display a popup to inform the user that it is recommended that they leave the page very soon before the respondent has a chance to enter any data on the survey page. This is done because if the respondent begins entering data on the survey immediately after receiving the invitation, and then the user (while still viewing the data entry form) saves the form, the user could unwittingly erase the respondent's data values that were just entered.

- Improvement: A custom email "display name" can be set for the email sender when sending an email for Alerts & Notifications, the Survey Email Confirmation option on the Survey Settings page, and when sending survey invitations via Automated Survey Invitations, via the Participant List, or via the Compose Invitation option on a data entry form.

- Improvement: The email "display name" for most outgoing emails is now automatically populated and thus is able to be displayed in the recipient's email client. Previous versions did not use the display name but left it blank for outgoing emails. For user requests that are triggered by users, such as production change requests, API token requests, etc., the user's first and last name from their My Profile page will be used automatically as the display name in those emails. For emails originating from REDCap administrators that are automated by the system, the email display name will the "Name of REDCap Administrator" setting (from the General Configuration page) or else the "Contact name to display on Home page" (from the Home Page Configuration page), which is dependent upon the type of email being sent.

- Improvement: Line breaks may be preserved in data values in CSV data exports - When creating/editing a report, the section "Additional report options" contains a new setting: "Remove line breaks/carriage returns in all text data values (only applicable for CSV Raw and CSV Label data exports)". This setting will be enabled by default for all existing reports and for any new reports being created. The option will effectively enabled (i.e., will remove line breaks) when exporting Reports A and B in order to be consistent with their current behavior in previous versions. This option is only used for CSV data exports and not for reports or exports to statistical analysis packages. (Ticket #32418)

- Improvement: Added "Copy" and "Paste" options to the [right-click] context menu for all rich text editors.

- Improvement: More rich text editors - The rich text editor is now available when composing survey invitations. This includes composing Automated Survey Invitations or invitations to be sent via the Participant List or via the Survey Options on data entry forms.Improvement: The rich text editor is now available on the Email Users page in the Control Center and also for the Survey Confirmation Email option on the Survey Settings page.

- Improvement: When using the Data Resolution Workflow and exporting all data queries in a CSV file, the following attributes are now all exported as their own separate columns in the CSV file: record name, event name, data access group, data quality rule, and field name. In previous versions, some of these attributes existed together in a single column and thus were harder to parse out individually. Additionally, the following columns have been added to the CSV export file: Current Query Status, Time Raised, and Time Resolved. (Ticket #30092)

- Improvement: In Alerts & Notifications when clicking the "Preview Message by Record" option, it now displays the Custom Record Label and/or Secondary Unique Field value in the record drop-down list in the dialog.

- Improvements and changes when exporting data from REDCap into SAS

Full integration of the Missing Data Code functionality in the SAS data export syntax file to prevent issues when loading data containing Missing Data Codes into SAS.

Note: The SAS Pathway Mapper file has been removed and is no longer utilized. Users exporting data to SAS will now need to manually modify the path of the CSV data file in their .SAS syntax file to reflect its locally saved path on the device.

- Improvement: New content was added to the "Help & FAQ" page

Version 9.5.5

N/A

Version 9.5.6

- Bug fix: If the record ID field has min/max validation, it would mistakenly prevent records from being created on the "Add/Edit Records" page and "Record Status Dashboard" if a record ID was entered in the correct format but whose value was out of range. It should allow the creation of the record even when out of range. (Ticket #60352)

- Bug fix: If any Alerts & Notifications get triggered via the Alerts DataDiff cron job (because an alert has conditional logic that contains datediff+today/now), then it might not perform all piping correctly if any field variables are piped into the email subject, email content, or are used for recipients or attachments.

- Bug fix: If an alert is set to be triggered "Using conditional logic during a data import or data entry" and is set to send "Just once", then if the conditional logic has become true when importing or entering data for a repeating instrument, it would mistakenly keep sending a new notification every time the record is saved (assuming the logic is still true). Instead it should only send it once (per repeating instance).

- Bug fix: If any Alerts & Notifications get triggered via the Alerts DataDiff cron job (because an alert has conditional logic that contains datediff+today/now), then they might mistakenly only get scheduled once per record rather than for all events and all repeating instances within a given record. Warning: This fix might inadvertently cause the cron job to schedule/send any alerts that were supposed to have been scheduled/sent in the past but mistakenly were not sent because of this bug. There is unfortunately no way to prevent this.

- Bug fix: When attempting to change the version of an External Module while using Firefox, it would mistakenly fail due to a JavaScript error. (Ticket #76009)

- Bug fix: The act of deleting a custom record status dashboard would mistakenly not get logged on the project's Logging page.

- Bug fix: When exporting data into SAS, it would result in errors upon loading into SAS for multiple choice fields that contain only numerical codings (including True/False, Yes/No, and form complete status fields) and also for number/integer fields, but only if Missing Data Codes are not utilized in the project.

- Bug fix: Some CSS (i.e., affecting "a.btn") was added to REDCap's styling in a recent version that was mistakenly overriding some Bootstrap CSS, which might negatively affect some REDCap plugins, hooks, or modules. (Ticket #75943)

- Bug fix: If the setting "Domain whitelist for user email addresses" is enabled and Table-based authentication is being used, then the "Set Up Password Recovery Question" popup would mistakenly fail to enforce the domain whitelist if a user attempts to modify their primary email address in that popup. (Ticket #75990)

- Bug fix: For users with visual impairments that are using screen reader software on survey pages, there are certain conditions, such as if the Text-To-Speech feature is enabled on that survey, where screen readers might not be able to interpret all the labels on the page correctly.

- Bug fix: When viewing a project's Logging page using Internet Explorer or Edge browser, if the username is long as displayed in the logging table, it might cause some of the columns in the table to overflow onto each other, thus making them nearly unreadable. (Ticket #76109)

- Bug fix: False positives may appear as discrepancies when running Data Quality rule F in a longitudinal project when fields have branching logic that does not have a unique event name explicitly prepended to all field variables in the logic. (Ticket #66789)

- Bug fix: When attempting to add a new user on the User Rights page in a project, if a user being searched for has a first or last name that contains undecipherable/mangled characters, then it would fail to return any users in the auto-suggest list as the user types the user's username. (Ticket #76053)

Version 9.5.7

- Bug fix: External Modules could not be enabled if the user was using Internet Explorer. (Ticket #76276)

- Bug fix: When exporting data into SAS, it would result in errors upon loading into SAS for datetime fields if Missing Data Codes are not utilized in the project.

- Bug fix: When exporting data into SAS, it would mistakenly not apply choice label formats onto multiple choice values when loading into SAS.

- Bug fix: If a REDCap plugin, hook, or external module is calling REDCap::saveData() from outside the scope of the project in which it is saving the data, then if any Automated Survey Invitations in the project have conditional logic, then those ASIs might not get triggered successfully because in most cases the logic will never evaluate to TRUE. (Ticket #75607)

- Bug fix: When clicking the table header for a date or datetime field in a report, in which the dates/datetimes are in either MDY or DMY date format, it would mistakenly not sort the values correctly in the report. (Ticket #76377)

- Bug fix: If the Survey Confirmation Email setting has been enabled at the bottom of the Survey Settings page for a data collection instrument, and then a user disables it by setting its drop-down value to "No" and then saves the page, then even though the setting does get properly disabled upon save, if a user re-opens the Survey Settings page again later, it would mistakenly display the Survey Confirmation Email setting as still being enabled - even though it is not. (Ticket #76354)

- Bug fix: If the User Settings option "Allow normal users to move projects to production?" is set to "No, only Administrators can move projects to production," and email notifications are enabled for administrators to receive these user requests via email, then if a user requests that a project be moved to production but then cancels their own request on the Project Setup page, an administrator could still move the project to production afterward if they click the link received in the email (however, this could not be done via the To-Do List interface). This could cause some projects to have all their data mistakenly deleted if the requesting user clicked the wrong option in the "move to production" dialog and didn't notify the admin immediately afterward so that the admin would not approve their request. From now on, if the admin clicks the link in the email and the user has already cancelled the request, it will display an error to the admin and prevent them from approving the deleted request. (Ticket #76068)

- Bug fix: When executing a custom Data Quality rule in a longitudinal project, in which the rule's logic references fields on multiple events, in certain scenarios it might mistakenly display a false positive discrepancy from another unrelated event that is not referenced in the logic. (Ticket #76090)

- Bug fix: When viewing a project's Calendar page, the Agenda tab might mistakenly display "No calendar events to display" even though one calendar event is being displayed.

- Bug fix: When accessing the "Help & FAQ" page via the top nav bar on the My Projects page and Control Center pages, the search box at the top of the "Help & FAQ" page would be mostly obscured when initially loading the page, thus making it unusable until you scrolled down the page some to reveal it.

- Bug fix: The email Display Name will no longer be utilized for the "REDCap access granted" emails and "Verify your email address" emails that are sent to users from REDCap because the Display Name for these particular emails were causing them to get disproportionately flagged as spam by many institutions' email servers, thus preventing users from receiving them. (Ticket #75941)

- Bug fix: If data had been entered into multiple instances of a repeating instrument or repeating event and then that instrument or event was later set to no longer be repeating (while there still exist other repeating instruments/events in the project), then the orphaned data from the repeating instances might mistakenly get included and displayed in reports or data exports. And in some cases, this orphaned data might cause Data Quality rule H to behave erratically, such as stating that there are some discrepancies to fix, but after clicking the button to auto-fix them, it would say that "0" were fixed.

- Bug fix: For many popup dialogs whose content is obtained from an AJAX call that returns a JSON-encoded payload, there are some cases where the popup might fail to open if there are certain non-Latin/UTF-8 characters in the text that will be displayed in the popup (e.g., Field Comments dialog, Survey Login dialog, Survey Queue Setup dialog, Edit Matrix Fields dialog). A new process has been added to most of these places to ensure that at least some of the content gets displayed in the dialog popup rather than never being able to open the dialog at all. (Ticket #76619)

- Bug fix: If an alert has been created in which its content/message contains one or more Smart Variables that allow you to provide custom text, such as survey-link, form-link, and survey-queue-link (e.g., [survey-link:prescreening:My Custom Text]), then if the Smart Variable's custom text contains a forward slash "/", then it would mistakenly prevent the alert's notification from being sent.

- Bug fix: If Missing Data Codes are enabled in a project, then the Missing Data Codes "M" icon on a data entry form would mistakenly be displayed and would function even when the entire form is disabled due to limited user rights or if viewing an un-editable survey response. Note: Clicking an option in the Missing Data Codes popup would change the value of the associated field, but since there would be no way to save that value, it would never affect any data. (Ticket #76688)

- Bug fix: When a user requests changes in a production project, the display name for the "Review & Approve Project Changes" email sent to the REDCap admin gets set to the project contact name instead of the user's first and last name. (Ticket #76685)

- Bug fix: If exporting a report in JSON format via the REDCap API, in which the report has filter logic defined and contains many thousands of records that will be returned, the beginning of the JSON string returned in the API response might mistakenly get malformed and begin with "[,{" instead of "[{". (Ticket #76602)

- Bug fix: When importing data via the API in "EAV" format for a repeating instrument or repeating event, many of the normal checks that ensure that the fields "redcap_repeat_instrument" and "redcap_repeat_instance" have valid values where mistakenly getting bypassed and thus not performing all the necessary checks to ensure the best data quality during the import. For example, importing a field on a repeating instrument but leaving the "redcap_repeat_instance" field blank would not return an error but would instead assume the value is "1", which should not be assumed. (Ticket #75854)

Version 9.5.8

- Bug fix: The Survey Confirmation Email feature might mistakenly display too many line breaks in the email text when viewing it on the Survey Settings page for an instrument or when viewing the received confirmation email in an email client.

- Bug fix: When importing data via API or Data Import Tool, it would mistakenly output a bunch of seemingly random text (e.g., "redcap_repeat_instrument, $repeat_instrument: ...") that was only meant for debugging purposes.

- Bug fix: If running REDCap on MySQL 8.0, it might mistakenly report an error that the "database structure is incorrect" in the Control Center or on the Configuration Check page when in fact the database structure is correct. This is due to the ZEROFILL attribute for numeric field types that exist in MySQL 8.0. (Ticket #76768)

- Bug fix: If the setting "Auto-suspend users after period of inactivity" is enabled, and some users who are suspended have not had any activity within the designated period of inactivity, then if the user has a sponsor and the user's sponsor puts in a request to have them unsuspended, the user would mistakenly get re-suspended within a day. (Ticket #58909)

- Bug fix: When clicking the "Cancel" button on a data entry form, it would mistakenly display the alert "Are you sure you wish to CANCEL and lose all changes made on this page?" when no values had actually changed on the page, which could be confusing to users. It now only displays the alerts when values have been added or modified. (Ticket #76818)

- Bug fix: When using Missing Data Codes in a project where a field in the project has the same value as a missing data code but has the @NOMISSING action tag, it would mistakenly interpret the field value as a missing data code in the following places: 1) the Data History popup on a data entry form, and 2) in the CSV Labels data export file. (Ticket #76813)

- Bug fix: When using Missing Data Codes in a project, if a file has been uploaded for a File Upload field and then a user clicks the "M" icon next to the field to open the missing data code choices, if they then click "[Clear value]", it would mistakenly hide the filename of the existing uploaded file, even though the user might choose to cancel the operation and not delete the file. This could be confusing to the user since it is hiding the file's filename prematurely in the process of entering a missing data code, thus making it appear as if perhaps the file has been deleted when in fact it has not. (Ticket #76810)

Version 9.5.9

- Bug fix: If running REDCap on MySQL 8.0, it might mistakenly report an error that the "database structure is incorrect" in the Control Center or on the Configuration Check page when in fact the database structure is correct. This is due to the ZEROFILL attribute for numeric field types that exist in MySQL 8.0. Note: This issue was thought to have been fixed in the previous release but was not. (Ticket #76872)

- Bug fix: The project templates created during a fresh install of REDCap contained fields that mistakenly conflated the concepts of sex and gender (e.g., having "Gender" as the field label with "sex" as the variable name) and often did not provide enough inclusive options as choices. These fields in the project templates have thus been modified.

- Bug fix: When viewing a project's Logging page and the text displayed in the last table column is very long with no spaces, it might mistakenly overflow out of the table and sometimes off the page.

- Due to changes in the default cookie settings in the Google Chrome browser (in Chrome v80 and later), any REDCap pages embedded on another website (via iframe) might mistakenly not be able to start an authenticated session successfully when logging in to REDCap. This may also affect surveys' ability to collect some data and behave correctly if the survey page is embedded on another website. REDCap now manually sets the cookie "SameSite" attribute with the value "None" by default in all compatible web browsers for all cookies generated by PHP in REDCap. Note: This is only applicable for REDCap installations using SSL/HTTPS that have the setting "session.cookie_secure" set to "On" in the server's PHP.INI configuration file. If session.cookie_secure is not set to On, then the SameSite cookie attribute will not be added by REDCap.

- Bug fix: The main Notifications page in the Control Center and the Configuration Check page might not load completely if using PHP 5.5 or 5.6. Bug emerged in the previous REDCap version.

- Bug fix: A couple words were mistakenly not translated on Copy Project page. (Ticket #77083)

- Bug fix: If a user has clicked the "Request delete project" button on the "Other Functionality" page in a production project, after which they then click the "Cancel request" button to cancel that project-deletion request, then an administrator who is processing user requests via email notifications (as opposed to via the To-Do List) might not realize that the request was cancelled and thus might process the request and mistakenly delete the user's project unwittingly.

Version 9.5.10

- Bug fix/change: Email Alerts converter has been removed - The Email Alerts external module has diverged from Alerts & Notifications in both its feature set and its back-end storage structure to the point where the option to convert alerts from the Email Alerts module into Alerts & Notifications is no longer a viable or reliable option, and in some cases the converter has caused major issues on some installations by not successfully converting alerts correctly. To prevent further damage, the EA->A&N converter will be removed from the user interface (it exists as a green button at the top right of the "Configure Email Alerts" page, which opens a dialog popup). This change will not in any way affect the functionality of the Email Alerts external module or the Alerts & Notifications feature, and they will both continue to function and exist separately with no conflict to each other. NOTE: This fix/change is only relevant if you have the Email Alerts external module installed on your REDCap system. REVERTING BACK: If for some reason you want to expose the EA->A&N converter feature to use it again, you may execute the following SQL query on the MySQL database, after which the green converter button will appear again in all projects where the Email Alerts module has been enabled: UPDATE redcap_config SET value = '1' WHERE field_name = 'email_alerts_converter_enabled'; WARNING: Please be aware that no guarantee is given regarding the success of the EA->A&N converter if you choose to re-enable it and use it. It is HIGHLY recommended that you leave it disabled.

- Bug fix: Certain types of cookies created by REDCap were not getting stored correctly in a user's browser if the "session.cookie_secure" setting is set to "On" in the server's PHP.INI configuration file while using a version of PHP lower than PHP 7.3.0. For example, this would likely prevent the Google reCAPTCHA feature from working successfully on public surveys, thus preventing survey participants from taking those surveys. This bug emerged in the previous release.

- Bug fix: When a user adds a full REDCap survey link (as opposed to using the [survey-link] smart variable) into the rich text editor when composing a survey invitation (i.e., in the "Compose Survey Invitations" popup or "Automated Survey Invitations" popup), the warning dialog that suggests to remove the hard-coded survey link would mistakenly get displayed multiple times on top of itself, thus making it impossible for the user to actually close them all and forcing the user to refresh the page. (Ticket #77086)

Version 9.5.11

- Bug fix: When putting the cursor in the Variable Name text box in the Edit Field dialog in the Online Designer, if the variable name is longer than 26 characters and the project is currently in production status in Draft Mode, it might mistakenly pile several different dialogs on top of each other and make it

impossible to close them all. This is often exacerbated if clicking the "X" icon or Escape key when attempting to close the dialogs. (Ticket #75072)

- Bug fix: It might mistakenly report an error that the "database structure is incorrect" in the Control Center or on the Configuration Check page when in fact the database structure is correct. And if the "Easy Upgrade" feature is enabled, the "Auto-Fix" option would fail if attempted. This issue is due to a previous fix that was meant to address idiosyncrasies in MySQL 8.0 but did not fully, and in fact the previous fix caused issues with installations that were not running MySQL 8.0. So this should now fix the issue on all versions of MySQL where these errors are occurring. (Ticket #76872)

- Bug fix: When viewing the Project Modification Module for a production project in Draft Mode, it might mistakenly display false positives for field changes as if some fields are being modified when in fact they are not. This can happen if the old field attributes and new field attributes are the same except that one has Windows newline characters (which represent line breaks in text) and the other has Linux newline characters, or vice versa. So the text looks the same on the page, but REDCap thinks they are different and thus flags them as yellow on the page. When comparing them, it no longer pays attention to what type of newline character is being used. (Ticket #76811)

- Bug fix: If a field's branching logic contained the datediff() function with a literal date (e.g., "01-01-2020") as one of the first two parameters in the function, in which the date value was either in MDY or DMY date format, then certain server-side logic-parsing operations (e.g., Data Quality rule A and B, the use of branching logic in downloaded PDFs) would fail to work correctly.

- Bug fix: Data Quality rule F would use a bit too much web server memory while processing. (Ticket #77606)

- Bug fix: If exporting a report to a stats package (SAS, SPSS, R, Stata) in which the first instrument in the project is enabled as a survey and the record ID field is the only field from the first instrument that is included in the report, then the resulting syntax file for the stats package would mistakenly reference the survey timestamp field of the first instrument, and since that timestamp field would not be included in the CSV data file in the export, it would cause errors to occur when loading the exported data into the stats package. (Ticket #77574)

Version 9.5.12

- Bug fix: There is a small chance that a cron job might have multiple simultaneous instances running of the job when there should only ever be one instance of it running. This mostly applies to External Module cron jobs since most internal cron jobs in REDCap have built-in ways of preventing issues with this.

- Bug fix: When using the operators "&&" and "||" in place of "and" and "or", respectively, in report filtering logic, it would mistakenly fail to filter the report correctly. Bug emerged in the previous version. (Ticket #77738)

- Bug fix: Reports were loading unexpectedly slowly in certain cases where report logic was being used when data from repeating instruments/events were being displayed in the report.

- Bug fix: Reports that contained the record ID field and also contained fields from repeating instruments/events were mistakenly displaying blank rows in the report (i.e., all fields in the row were blank *except* for the record ID field) if the report contained filtering logic that evaluated as TRUE on the first repeating instance. If the filtering logic did not evaluate as TRUE on the first repeating instance (but perhaps on other repeating instances), the blank row would not be displayed, as expected.

- Bug fix: When creating a new project using a super API token via the Create Project API method using a Project XML file, it would mistakenly output some junk code in the API response that was only meant for debugging purposes. (Ticket #77798)

- Bug fix: When using a logic tester to validate if logic has correct syntax (e.g., when creating a Data Quality Rule, adding report filter logic), if the logic contained certain Smart Variables, it would mistakenly say that the logic is not correct syntax when it actually is correct. (Ticket #77741)

- Bug fix: When using certain Smart Variables inside the the Custom Label for Repeating Instruments, it might mistakenly replace the Smart Variable with a blank value rather than the correct value when displaying the custom label in the repeating instrument tables on the Record Home Page and in the drop-down of repeating instances at the top of data entry forms. (Ticket #77575)

- Bug fix: If any Automated Survey Invitations get triggered via the ASI DataDiff cron job (because an ASI has conditional logic that contains datediff+today/now) in a longitudinal project, then invitations might not get successfully scheduled if the conditional logic refers to a field on an event for which its instrument has not been designated. For example, if we have logic such as "[event1][field1] = '2'", and field1's instrument is not designated for event1, then invitations would never get scheduled by the ASI datediff cron job when attempting to process this logic. (Ticket #77812)

Version 9.5.13

- Bug fix: The logic parsing algorithms in REDCap might mistakenly fail and not return accurate results when the logic contains an empty/blank value (represented as two quotes/apostrophes) on either side of an "=" operator or an "<>" operator, such as ' ""<>"" ' or ' ""=1 '. While such logic is less likely to be entered in this form by a user, some logic could end up in this form prior to parsing after certain Smart Variables in the logic are replaced by literal values during the logic-processing phase. This means that logic used in certain Data Quality rules or report filter logic, among other places, might not behave accurately. Bug emerged in REDCap 9.5.11 (LTS) and 9.7.0 (Standard).

- Bug fix: Users could mistakenly access the Online Designer and Data Dictionary pages in an Inactive project and thus could make field changes, which should only be allowed while in Development or Production status. (Ticket #66286)

- Bug fix: If an administrator is processing a "Delete Project" user request for a production project, then it might mistakenly not display the "Delete Project" prompt when loading the project's Other Functionality page while processing the request.

- Bug fix: If a field on a form or survey has the @DEFAULT action tag, and that same field has its value being piped into somewhere else on the same page, then when the form/survey is initially loaded with

no data saved for it yet (i.e., has gray status icon), the piping of the default value would mistakenly not occur when the page is initially loaded but only after the field's value is modified while on that page.

- Bug fix: If using Table-based authentication, and a user was somehow added to a project even though the user has not yet had a REDCap user account created for them, then when attempting to delete the user from the project or modify their user rights, it would always return an erroneous error message, which prevents the user from being modified or deleted from the project.

Version 9.5.14

- Bug fix: When copy-and-pasting text from Microsoft Word (or similar products) into the rich text editor used throughout REDCap, the underlying HTML that is added to the rich text editor after the paste would be extremely bloated and superfluous. Additionally, for field labels on instruments, it could cause the text to become so long (although appearing to be normal length) that it might cause some text to be truncated when downloading->uploading the Data Dictionary. To prevent this issue, it now automatically removes a lot of the extra, hidden styling and unnecessary HTML when copy-and-pasting text into the rich text editor. (Ticket #77555)

- Bug fix: When running Data Quality rule A, B, or F for projects that are longitudinal and/or have repeating instruments/event, it might mistakenly run out of memory and return an error message to the user, even when the project doesn't appear to have a large amount of records.

- Bug fix: If the Secondary Unique Field (SUF) is used in a longitudinal project in which the value of the SUF is currently blank and then a data entry form or survey containing the field is saved where the field's value still remains blank, then if the SUF exists in events that currently do not have data (i.e., it has gray status icons for all forms in the event), then it would mistakenly save a blank value for the SUF in those empty events, thus causing their form status icon to be red instead of gray, which could be confusing to users.

- Bug fix: If a custom Data Quality rule has logic that contains a field from a repeating instrument in a non-longitudinal project, then it might mistakenly not find valid discrepancies that exist for that DQ rule in reference to data from repeating instruments.

- Bug fix: When uploading a file or signature for a File Upload field on a repeating instrument or repeating event, in which record auto-numbering is enabled in the project, then the project's Logging page would mistakenly add an unnecessary "Created Record" event immediately before the "Uploaded Document" event in the logging history.

- Bug fix: If REDCap has two-factor authentication enabled and it is set to enforce 2FA only for certain IP addresses, it would mistakenly only support IPv4 changes and would not support IPv6. It now supports IPv6 ranges/subnet masks. (Ticket #77195)

- Bug fix: If users were using Internet Explorer 11 with Compatibility View enabled, it would get logged mistakenly as Internet Explorer 7 in the redcap_log_view database table.

- Bug fix: If a project has the Data Resolution Workflow enabled, and a user clicks the "Export" button on the Resolve Issues page in the project, the resulting CSV file would mistakenly have the text comments

truncated in the First Update and Last Update columns. Those should be truncated on the webpage view but not in the CSV export file.

- Bug fix: If logic or calculations contain a checkbox field whose variable name ends with "min", "max", or "log", then it might cause the logic/calculation to be considered invalid or syntactically incorrect while being parsed, thus resulting in an error message in many places. (Ticket #78083)

- Bug fix: In the API Playground, the "csvDelimiter" parameter was mistakenly missing as a drop-down in the user interface for the API methods "Export Records" and "Export Reports". (Ticket #77754)

- Bug fix: When viewing the "Stats & Charts" page for a user-defined report (i.e., not report A or B) that has filter logic defined, the "missing" count displayed in the descriptive stats table for a given field might mistakenly be incorrect if the report is displaying fields from a repeating instrument or repeating event. (Ticket #77050)

Version 9.5.15

- Major bug fix: A user with "No Access" Data Export privileges in a project would [correctly] neither be able to perform data exports nor access the Data Export Files tab in the File Repository, but if that user had been given the direct URL to download a specific archived data export file from the File Repository (i.e., exported by another user in the project at a previous time) or if they were simply guessing URLs through trial and error by modifying the "id" URL parameter for the "FileRepository/file_download.php" end-point, they would be able to successfully download that data file even though they have no data export privileges. Note: The user must have access to the project in order to do this. (Ticket #72652)

- Bug fix: If a user is piping a field that uses the BioPortal Ontology Service, and they're wanting to pipe the field's coded value and not the choice value, then adding ":value" to the variable name (e.g., [icd10:value]) would mistakenly return the choice label and not the coded value.

- Bug fix: If a user is suspended, the page displaying the notice that they are suspended when the user attempts to log in would mistakenly throw an invisible JavaScript error in the browser console. (Ticket #78850)

- Bug fix: In completed survey responses on a repeating survey, if there is somehow no Form Status value (in the back-end database) for the survey instrument or if its value was somehow set to "Incomplete" mistakenly (e.g., through direct database interaction via an external module), then if the current repeating instance of the survey that is being viewed is not the first instance, it would mistakenly set the value of the first instance of the survey to "Completed" whenever someone views the instrument/survey page.

- Bug fix: The word "Page" used to display the page number in PDFs of exported instruments was mistakenly hardcoded instead of coming from the language translation file. (Ticket #78771)

- Bug fix: If the @DEFAULT action tag is used on a field, then users would always receive the "save changes?" prompt when attempting to leave the form without clicking a Save button, even when no field values had been changed. Instead it should only display this prompt when the form has no data

(i.e., has gray form status icon) and leaving the form. It should not display the prompt every time afterward. (Ticket #78807)

- Bug fix: When attempting to add a user via the User Rights page to a project that currently has no users, it would mistakenly return no user suggestions when typing the username in the text field. (Ticket #78929)

- Bug fix: When performing a data export of a report to a stats package, in which the first instrument in the project is a survey and the report is set to output all survey-related fields (e.g., completion timestamp), then if the record ID field is the first field in the report, the resulting syntax file for the stats package would mistakenly be missing the survey completion timestamp for the first instrument, thus causing the data not to load properly into the stats package.

- Bug fix: When using the dateRangeBegin parameter for the "Export Records" API method, if the dateRangeEnd was left blank or not included as a parameter in the API request, then the API would not function correctly and would mistakenly return no data in the API response.

- Bug fix: A third-party PHP library was using code that is deprecated in PHP 7.4. (Ticket #79001)

- Bug fix: If a field on a data entry form or survey has an @HIDDEN action tag and also has branching logic, then in certain cases the field might flicker (i.e., appear then disappear momentarily) when the page initially loads. (Ticket #78697)

Version 9.5.16

- Major bug fix: Surveys and data entry forms were mistakenly displaying the "errors exist" popup relating to branching logic errors in many situations.

Version 9.5.17

- Bug fix: If a text field that has min/max validation is changed to another field type, such as a drop-down, in the Online Designer, it would mistakenly not nullify the min/max validation values for the field when saving it as a new field type, which would cause an error to be displayed when downloading the data dictionary and then re-uploading it. (Ticket #29422)

- Bug fix: When using Live Filters in a report, if any of the Live Filter fields have choices whose label contains HTML tags, it would mistakenly display the HTML tags inside the Live Filter drop-downs at the top of the report.

- Bug fix: The PHP function for validating URLs for certain outgoing HTTP calls from REDCap might mistakenly allow certain invalid URLs to pass the validation test.

- Bug fix: If a longitudinal project with repeating instruments or repeating events contains reports with report filter logic that references fields on both repeating and non-repeating instruments/events, in which the fields on repeating instruments/events do not have anything appended to them, such as a numeral instance designation or instance Smart Variable, then the report might return incorrect results *if a field in the logic exists on both repeating and non-repeating events in the project*. This appears

only to occur if the report setting "Show data for all events or repeating instruments for each record returned" is left unchecked. (Ticket #79058)

- Bug fix: If using the Missing Data Codes feature in a project that also has Randomization enabled, it would mistakenly allow the missing data codes icon to appear next the randomization field on the data entry form. The missing data codes icon should never appear for the randomization field because it is not applicable there. (Ticket #79057)

- Bug fix: If the "Import Records" API method was called or if a user was saving a survey or data entry form that triggered the calculation of calc fields on other instruments/events, then the internal record list cache in the project would mistakenly get reset in the back-end database, thus forcing the cache to be rebuilt the next time a report, record dashboard, or record list was viewed in the project. This could cause unnecessary slowness for the project and possibly affect performance of the entire REDCap server in some cases.

- Bug fix: If a new data collection instrument is added to a production project that is currently in draft mode, in which the user has submitted some field/form changes to an administrator and is awaiting approval, it is mistakenly possible for the user to enable that instrument as a survey. Instead it should display a notice on the Survey Settings page that the instrument cannot be enabled as a survey until the project is no longer in draft mode (i.e., after the submitted changes have been approved). (Ticket #79192)

- Bug fix: When using iOS and entering data on a survey or data entry form, "number"-validated text fields would not enforce the client-side validation and would mistakenly allow non-numerical values to be entered. This has been fixed so that it will now display the number pad keyboard to allow only numbers and a dot decimal as an option. Note: If the field has "number (comma as decimal)" validation, then it will instead use the full QWERTY keyboard (this is a limitation of iOS) instead of the number pad keyboard. (Ticket #79317)

- Bug fix: In a longitudinal project, if an alert that has a field that is piped into the alert's message or subject, in which the field variable is not prepended with the unique event name, then when that alert gets triggered by saving a form/survey, it would mistakenly not pipe the field's value correctly unless the field's event's unique event name had been explicitly referenced by another field in the message text, subject text, or conditional logic.

Version 9.5.18

- Bug fix: If a longitudinal project with repeating instruments or repeating events contains a report that has simple filters (i.e., fields selected via drop-down options) where a field is selected along with the "All events" option, OR if the report has advanced filter logic that references fields that exist on both repeating and non-repeating instruments/events, in which the fields on repeating instruments/events do not have anything appended to them, such as a numeral instance designation or instance Smart Variable and those fields also do not have a unique event name explicitly prepended to them, then the report might return incorrect results *if a field in the logic exists on both repeating and non-repeating events in the project*. This appears only to occur if the report setting "Show data for all events or repeating instruments for each record returned" is left unchecked. (Ticket #79058)

- Bug fix: When clicking the "Use advanced logic" link when building a report that has simple filters (i.e., fields selected via drop-down options), in which a filter field is selected with the "All events" option, when creating the advanced filter logic, it would mistakenly fail to prepend the field with "[event-name]" and thus would throw an error that says the logic is invalid when attempting to save the report.

- Bug fix: When sending emails, REDCap was mistakenly attempting to employ DKIM in all outgoing emails, which might cause emails to no longer be received if hosting REDCap on certain platforms, such as AWS. To ensure emails keep sending as expected, the usage of DKIM is no longer attempted when sending emails.

- Bug fix: When sending survey invitations via the Participant List, if some invitations are sent first and then the user clicks the Compose Survey Invitations button to send another batch without leaving the page, the survey invitation message text would appear to still be the same for the new batch as with the previous batch but instead it would actually send the default invitation text that gets loaded in the text editor when opened the first time. This could cause users to mistakenly send the wrong text in the invitation when sending multiple batches on that page at a time. (Ticket #79507)

- Bug fix: When using Missing Data Codes in a project, and a missing data code is saved for a checkbox field on a record, then that field would mistakenly be returned as a discrepancy in Data Quality rule G. (Ticket #79553)

- Bug fix: If a slider field has the "Display number value?" option checked for it, then when entering data on a survey or form, if the slider has focus put on it (either by tabbing through the survey/form, or if an instrument is opened in which the slider is the first field on the instrument), then a value of "50" would get initially displayed in the slider's associated text box even though the slider value is actually blank/null and will remain so until the slider is clicked or if the user uses their keyboard's left/right arrow keys. So seeing the value of "50" when the slider gets focus might give the impression that its value has been set when in fact it has not been set yet. This has been changed so that the text box value only changes when the slider value itself has been changed by the user, thus eliminating this ambiguity regarding the slider's current value. (Ticket #79430)

- Bug fix: While REDCap prevents users from viewing all pages of a given report at the same time if it estimates that the report contains more than 500k data points, it would mistakenly calculate the number of total data points incorrectly while determining this. (Ticket #79657)

Version 9.5.19

- Major bug fix: If a participant is taking a public survey (via the public survey link) that allows them to "Save & Return Later", in which the survey requires Return Codes to be used in order to return to the survey, then if the participant returns to the survey using the private/unique survey link (rather than the public survey link), it would mistakenly allow the participant to view their responses without having entered the return code first. However, if they clicked the "Save & Return Later" button again on the survey after returning, then the next time they return to the survey, it would correctly require that they enter a return code. This does not occur for follow-up surveys but only for public surveys with "Save & Return Later" enabled using return codes.

- Bug fix: If the feature "File Upload field enhancement: Password verification & automatic external file storage" is enabled for the system and for a given project, a file uploaded into a File Upload field in the project would be stored on the external server mistakenly using the user's filename of the file rather than the filename of the file as it is stored in the backend of REDCap. This could potentially cause naming conflicts and prevent the file from being stored successfully on the external server. It will now store the file on the external file server using REDCap's backend "stored_name" filename for the file.

- Bug fix: When using a rich text editor that exists inside a modal dialog (e.g., the "Create new alert" dialog, the "Automated Survey Invitation" setup dialog), the rich text editor's "Link" menu option would not function correctly and would prevent users from adding a URL value to a link in their rich text.

- Bug fix: If entering a value on a data entry form for a field that is designated as a Secondary Unique Field, in which a value is entered that duplicates a value in another record in the project, if the user clicks the Enter key on their keyboard after typing the value (instead of clicking outside the field or clicking the Tab button), it would correctly display the error dialog popup about the duplicate value, but the dialog would mistakenly not be able to be closed, thus forcing the user to reload the page and potentially lose any data entered thus far on the page. (Ticket #79910)

- Bug fix: When importing data via the API or Data Import Tool, an alert might not get sent/scheduled for any records that are being created during the data import if the data being imported is expected to trigger an alert. This does not affect existing records but only records that did not exist prior to the data import.

- Bug fix: The Configuration Check page in the Control Center was mistakenly noting that the PHP cURL extension was "recommended" when it should instead state that it is "required". This is because so many major features in REDCap rely on cURL specifically. The warning for cURL on the Config Check page has now been modified accordingly to accurately reflect this. (Ticket #80121)

- Bug fix: When a calculated field exists on a repeating event and its calculation references fields on the same event, in which one or more of those fields exist on instruments that are not designated for that event, then while the calculation would work correctly when viewing the calc field on a survey or data entry form, it would mistakenly return a ""/blank value for the calc field when performing a data import or running Data Quality rule H. (Ticket #79874)

- Bug fix: The text for the confirmation email set at the bottom of the Survey Settings page for an instrument in the Online Designer would mistakenly have extra line breaks added between all the text if the email text was saved and then the page was re-opened later and saved again, thus adding more extra space each time. (Ticket #79836)

- Bug fix: If a custom Data Quality rule has logic that contains a field that is utilized in both a repeating and non-repeating context, especially for a longitudinal project, then it might not return all the correct discrepancies. (Ticket #80102)

- Bug fix: When viewing the "Stats & Charts" page for a user-defined report (i.e., not report A or B) that has filter logic defined, the "missing" count displayed in the descriptive stats table for a given field might mistakenly be a negative number. (Ticket #79994)

- Bug fix: If using "LDAP" or "LDAP & Table-based" authentication, any user containing an apostrophe in their LDAP username would mistakenly not be able to be added as a user on a project, in which it would display a popup error message when attempting such. (Ticket #79647)

- Bug fix: If a user has "No access" data entry form level privileges for the first instrument in a project, the Data Search feature on the "Add/Edit Records" page would mistakenly not include the record ID field in the search. (Ticket #80282)

Version 9.5.20

- Bug fix: If a checkbox field exists on a repeating event or repeating instrument and is utilized in a calculation or branching logic, in which the field is referenced on another repeating instance than the current repeating instance, then while the checkbox's checked value will save correctly, if a field choice is unchecked later, it might mistakenly not clear/delete the checked value successfully. (Ticket #78956)

- Bug fix: If using "LDAP" or "LDAP & Table-based" authentication, any user containing an apostrophe in their LDAP username would mistakenly not be able to be added to a user role in a project, in which it would fail silently when attempting to add a user to a role. (Ticket #79647)

- Bug fix: If a user attempts to add a field comment to a field on a data entry form prior to creating the record (via Save button), when the user clicks the "Save and then open Field Comment Log" button to reload the page, the cursor's focus might mistakenly be on a field on the form underneath the dialog rather than inside the dialog, possibly causing the user to get stuck and not be able to enter a field comment successfully. (Ticket #80511)

- Bug fix: When clicking the Compose Survey Invitations the first time on the Participant List page in a project, it might mistakenly not load the list of participants to email inside the popup, but it would load it successfully if the popup was closed and then reopened. (Ticket #80584)

- Bug fix: A database query would fail invisibly but do no harm whenever a record is renamed in a project. (Ticket #80895)

- Bug fix: A database query would fail invisibly but do no harm whenever previewing a survey theme in the Online Designer. (Ticket #80940)

- Bug fix: A database query would fail invisibly but do no harm whenever viewing a survey response on a data entry form. (Ticket #80901)

- Bug fix: In a multi-arm longitudinal project that has record auto-numbering disabled, if the record names contain non-Latin/multi-byte characters, then the record names would mistakenly get scrambled whenever rebuilding the record list. (Ticket #74092)

- Bug fix: A database query would fail invisibly in certain scenarios surrounding the piping of repeating instances, which might cause the piping not to work correctly. (Ticket #80901)

- Bug fix: When performing a data import (via API or Data Import Tool) for a multi-arm project, in which a record is being imported into multiple arms during the import, the record might not initially appear as if it has been created in the subsequent arms when viewing the Record Status Dashboard (even though

it had been created in the arm correctly). Note: This issue would automatically resolve itself within five days of the import. (Ticket #55039)

- Bug fix: When using the randomization module in a project, the act of randomizing a record does not trigger any Alert & Notifications if an alert was set to be triggered based on the randomization field or strata fields having their values changed. (Ticket #80985)

- Bug fix: When using the randomization module in a project, the act of randomizing a record does not trigger the REDCap hook "redcap_save_record".

- Bug fix: If survey notifications have been enabled on a survey that is a repeating instrument or is on a repeating event, then the link back to the survey response on the data entry form would mistakenly always point back to the first instance of that instrument rather than to the correct instance. (Ticket #81009)

- Bug fix: A database query would fail invisibly in certain API methods being called. (Ticket #81041)

- Bug fix: A database query would fail invisibly in very specific occasions when using the Online Designer to add/edit fields. (Ticket #81020)

- Bug fix: A database query would fail invisibly to the redcap_log_view_requests table when a user is logging in to REDCap. (Ticket #81056)

Version 9.5.21

- Bug fix: When calling the API method "Export Metadata (Data Dictionary)" and providing values for the "fields" parameter, it would mistakenly ignore that parameter unless the "forms" parameter was also provided with a value. Bug emerged in the previous release.

- Bug fix: The plain text section of outgoing emails (which is not ever displayed by most email clients unless they do not support HTML email) would mistakenly have links converted into text and might have unnecessary tabs or line breaks. Most extra tabs and line breaks have been removed from the plain text section of emails, and all links in the email body will have their URL extracted and placed in parentheses directly following the link text so as not to lose that information. (Ticket #80878)

- Bug fix: The redcap_connect.php file was mistakenly not returning an HTTP 500 status error in the incident that the database connection fails. Following the upgrade to this version, REDCap will prompt administrators to replace their redcap_connect.php file.

- Bug fix: If still using the old bit.ly (j.mp) URL shortener service for public surveys (instead of the newer https://redcap.link URL shortener), then when fetching a short survey link on the Public Survey Link page, it would appear to spin forever and never return the shortened URL. This is due to BITLY changing how their API web service works.

- Bug fix: Some reports and data quality rules in longitudinal projects might run 2x-10x slower than expected in certain situations, such as if a field in the report filter logic or DQ logic does not have a prepended event name or if the report filter has "all events" selected for a filter field drop-down. The

slowness is especially pronounced in projects having large numbers of events defined and/or a large amount of records in the project. (Ticket #79830)

- Bug fix: When viewing the participant list of a longitudinal project containing multiple arms, the paging drop-down list for the participant list would mistakenly provide an incorrect number of participants for the given survey/event and might not be able to display subsequent pages in the participant list after changing the paging drop-down list to select another page to view. (Ticket #81118)

- Bug fix: If a project does not have record auto-numbering enabled, and the record ID field has min/max validation, then the min/max validation would mistakenly not be applied when a user is entering a new record name via the Record Status Dashboard or Add/Edit Record page. (Ticket #81117)

Version 9.5.22

- Critical bug fix: When collecting data using a public survey where multiple participants are entering data near-simultaneously (i.e., submitting the survey within the same fraction of a second), some scenarios may arise in which those multiple responses could get mistakenly merged together as a single record rather than as separate new records. When this occurs, it appears in the logging that one participant has created the record while another participant modified the record afterward, in which it should instead log the events as two separate "create response" events. It is difficult to know when this kind of incident has occurred, and if discovered, might take some work (using the Logging page as a reference) to split the record back into separate proper records and resave them. While this issue occurs very seldom, the worst-case scenario can be if the survey allows the participant to download their responses as a PDF or have their responses emailed to them after completing the survey, in which it might possibly result in a privacy leak if private and/or identifying information (e.g., PHI) has been entered on the survey. (Ticket #81104, #81559)

- Bug fix: A database query would fail invisibly but do little harm when importing data to a project via the REDCap Mobile App. (Ticket #81815)

- Bug fix: If the e-Consent Framework is enabled on a survey that is a repeating instrument, in which the first name, last name, and/or date of birth fields (designated in the e-Consent Framework options) also exist on that same survey/instrument, then those name/DOB values would mistakenly not pipe correctly when REDCap adds them to the footer of the e-Consent PDF and also to the Identifier column in the PDF Archive table in the File Repository. Unfortunately, it is not possible to fix the missing piped values for survey responses that have already gone through the e-Consent process prior to this bug fix. (Ticket #81790)

- Bug fix: The IE-specific Conditional Comments to detect Internet Explorer 9 (e.g., <!--[if IE 9]>) were mistakenly not formatted correctly and might cause some users using Internet Explorer to have issues loading pages.

- Bug fix: When exporting a Project XML file for a project via the API, the resulting XML file would mistakenly be missing a lot of the project settings, such as surveys, Alerts & Notifications, Data Quality rules, reports, etc. (Ticket #81879)

- Bug fix: When using the Clinical Data Pull (CDP) feature, the new line separator for storing repeated values (labs, vitals, medications...) was changed slightly. Those repeated values in CDP are stored in a single field using a string separator containing line breaks. The previous new line separator was mistakenly causing false positives in the CDP adjudication table when checking for new values to adjudicate.

- Bug fix: A link in the "Piping" section of the "Help & FAQ" page would point to a non-existent page on the Vanderbilt REDCap server.

- Bug fix: When editing an alert and changing Step 1A from the second option (form save + conditional logic) to the third option (only conditional logic), it would mistakenly not save the alert correctly and might cause the dialog not to reload properly when editing that same alert again later.

Version 9.5.23

- Bug fix: When using the [previous-event-name] and [next-event-name] Smart Variables when prepended to field variables in piping, calculations, or logic, they might mistakenly point to the previous/next designated event of the current instrument rather than the previous/next designated event of the field to which the Smart Variable is prepended. Note: This does not affect [previous-event-name] and [next-event-name] when they are used as standalone without being prepended to a field. (Ticket #81976)

- Bug fix: When viewing Report B for a project that contains repeating instruments, the "total number of records queried" in the report might mistakenly be incorrect and not match the "number of results returned".

- Bug fix: When exporting data to SAS, it might throw an error when loading the CSV data into SAS in some cases if a field variable name ends in a number. Additionally, if the project is utilizing Missing Data Codes, it might throw an error on a numerical field if some of the Missing Data Codes are non-numerical.

- Bug fix: Custom Record Status Dashboards that are set to sort by a field's value would mistakenly sort in a case sensitive manner when instead it should be sorting in a case insensitive manner. (Ticket #82092)

- Bug fix: When clicking the "All Status Types" link on the Record Status Dashboard, it would mistakenly hide the [+] buttons next to the status icons of repeating instruments. Instead they should remain displayed. (Ticket #82092)

- Bug fix: If custom "Help & FAQ" text has been defined, then the navigation bar would mistakenly obscure the custom text on the "Help & FAQ" page. (Ticket #82192)

- Bug fix: When a production project is in draft mode and a user deletes an entire instrument in draft mode, it would mistakenly delete any Descriptive field attachments that belong to fields on that instrument from the live version of the instrument in production, thus permanently losing the attachments. (Ticket #82322)

- Bug fix: When a survey participant is viewing their Survey Queue, in which it contains a repeating survey, the "Take this survey again" button next to the repeating survey would mistakenly not be visible in the survey queue when viewing the page on a mobile device with a narrow screen. (Ticket #82335)

Version 9.5.24

- Major bug fix: If a multi-arm longitudinal project is collecting data via public surveys across multiple arms at a time, in which each public survey has its own URL that corresponds to a distinct arm, then if survey participants are submitting a survey at near the same time but for a different arm, then it is possible that those two responses might mistakenly get saved with the same record name, even though the records exist in different arms. This is easily remedied by renaming the record in one of the arms afterward, but it may be hard to detect when it occurs and might be confusing for users when it does.

- Major bug fix: If a user in a longitudinal project clicks the "Delete data for this form only" button at the bottom of a data entry form, in which multiple instruments on the current event contain data for the current record, if all the data on that event had been imported via data import *and* no values for form status fields were imported during the data import process *and* no user ever clicked a Save button on an instrument in that event after the import was performed, then all the data on all instruments in that event would mistakenly get deleted, when instead it should only delete the data from the current instrument.

- Bug fix: When entering conditional logic for Automated Survey Invitations or adding branching logic via the Online Designer, if the logic contained certain Smart Variables (.e.g., [survey-date-completed]), the logic check status displayed immediately below the logic text box would mistakenly state "Error in syntax" even when the logic's syntax is correct.

- Bug fix: If a large amount of HEAD requests hit a survey page, it might cause a disproportionate amount of load to be put on the web server and database server. (Ticket #82501)

- Bug fix: The advanced function isblankormissingcode() would mistakenly not work correctly when used in the equation of a calculated field. (Ticket #82653)

- Bug fix: When a survey participant attempts to close their browser window by clicking the "Close survey" button on the page after completing the survey, if their browser prevents the tab/window from being closed, then the text displayed on the page afterward would mistakenly always be in the language of the system-level language setting rather than the project-level language. (Ticket #82631)

- Bug fix: The generic "Alert" jQuery UI dialog would often have its title and/or buttons displayed in hard-coded English rather than using the language file's text for that particular project in which it is being displayed. (Ticket #81638)

- Bug fix: Dots/periods were mistakenly allowed to be used in the raw coded values for Missing Data Codes. Dots/periods are not compatible to be used in checkbox codings and thus cannot be used as Missing Data Codes. (Ticket #82476)

- Bug fix: When using a field from a repeating instrument in the logic of a Data Quality rule, in which the logic is trying to find instances of the field where its value is blank (e.g., [field] = ""), it might mistakenly not return the expected results in the discrepancy list. (Ticket #82201)

- Bug fix: When using Data Quality rule I to find Missing Data Codes, the rule would mistakenly ignore checkbox fields and not include them in the results. (Ticket #82636)

- Bug fix: When setting up Randomization in a project that is not longitudinal and then later the project is converted to a longitudinal project, it would cause issues and might prevent the randomization process from working properly. (Ticket #82757)

Version 9.5.25

- Bug fix: The Missing Data Codes in the Additional Customizations popup on the Project Setup page could mistakenly be modified or removed while collecting data in production, which could cause issues with the saved data during analysis and in reports. It now displays a warning prompt to the user beforehand to inform them that re-labeling or removing Missing Data Codes after data collection has begun could cause data issues, but they will still be allowed to make modifications to the codes if they wish. (Ticket #82977)

- Bug fix: When using Missing Data Codes in a project and selecting a missing data code for a radio button field on a data entry form, the missing data codes popup would mistakenly not close after the code had been clicked. (Ticket #82977)

- Bug fix: When exporting data to Stata, it would mistakenly output the incorrect syntax in the .do file for text fields with datetime_seconds validation. (Ticket #83001)

- Bug fix: If upgrading to 9.5.24 LTS or higher or upgrading to 9.8.5 Standard or higher, the upgrade SQL script might throw a MySQL error during the upgrade process due to a foreign key constraint on a database table. (Ticket #83098)

- Bug fix: Slider fields that are vertically aligned and have the "Display number value (0-100)?" option enabled will mistakenly display the number value field too narrowly and thus will not display the full value if its value is "100". (Ticket #83234)

- Bug fix: If running REDCap on the Google App Engine platform and the email quota has been exceeded when sending outgoing emails, it would mistakenly crash with a fatal PHP error. It now continues to run and finish the script instead of halting the script with an error.

Version 9.5.26

- Bug fix: Certain menu toggles, such as the "hamburger menu" at the top right of the My Projects page when using a mobile device, were not working correctly due to a breaking change in jQuery 3.5.0 in REDCap 9.9.0 Standard and 9.5.25 LTS. A makeshift patch has been applied to fix this in lieu of a proper fix from jQuery. (Ticket #83490)

- Bug fix: When creating a new record via the Schedule module in a project, especially if the user creating the record belongs to a Data Access Group, the record would mistakenly not appear in record lists, record status dashboards, or reports for up to several days due to a record list caching issue, in which the cache was not getting updated appropriately when creating the record via the Scheduling module. (Ticket #83478)

- Bug fix: If some Alerts & Notifications had been created in a longitudinal project, in which recurring alerts had been scheduled for some records, it might prevent a user from deleting an event on the Define My Events page due to foreign key restrictions in the back-end database. (Ticket #83438)

- Bug fix: When moving a project to production and selecting the option to "delete all data", if the Survey Queue is enabled in the project and some existing records had had a survey queue link generated for them, then even though the records would correctly get deleted when moving to production, the survey queue links for those deleted records would mistakenly not get cleared out of the back-end database and thus could mistakenly get reused by new records. (Ticket #83341)

- Bug fix: When using a Missing Data Code value of "0", "1", or "2" in a project, the Missing Data Code would mistakenly get used on the Form Status Complete field on any given instrument and thus cause issues with being able to set that field's value correctly. (Ticket #83423)

- Bug fix: When branching logic or a calc field references a checkbox choice that has been hidden by the @HIDECHOICE action tag, it would mistakenly display a branching logic/calculation error alert on the survey page or data entry form. (Ticket #83376)

- Bug fix: If an Automated Survey Invitation has conditional logic using the datediff() function with "today" or "now" as a parameter, in which "today" or "now" are not in lowercase form, the ASI Datediff cron job would mistakenly not run for these ASIs, thus causing invitations not to get scheduled at the appropriate time.

- Bug fix: The cron job for scheduling Automated Survey Invitations that contain datediff+today/now in their conditional logic and are set to send "Immediately" would mistakenly send invitations immediately in real time by that cron, which can be a slow process and delay the scheduling of other invitations in some situations. Instead, the cron job should have been only scheduling the invitations and then letting the email-sending cron job actually send those scheduled invitations. (Ticket #83596)

- Bug fix: When entering an X-event-name Smart Variable into conditional logic for an ASI, report filter, etc., when validating the logic, it might mistakenly return a confusing error saying that the syntax is not valid even when it is.

- Bug fix: When upgrading to REDCap 9.5.24 or 9.5.25, it might mistakenly not create the redcap_new_record_cache database table correctly and/or result in a MySQL error when running the upgrade SQL script. This release will fix that table if it did not get created correctly.

- Bug fix: If one or more External Modules have been enabled in a project and have a link displayed for a module page in the "External Modules" section on the project's left-hand menu, then if Report Folders have been created in the project and a user toggles a Report Folder to open or close the folder, it would mistakenly cause the reports section on the left-hand menu to be moved below the "External Modules" section when it should instead remain above it.

- Bug fix: For a project where Missing Data Codes are defined, when exporting data to a stats package (R, Stata, SAS, SPSS) when the export file contains checkbox fields and the report being exported is set to include the Missing Data Codes, the extra fields/columns for the Missing Data Codes for the checkbox would mistakenly not get added to the stats package syntax file, even though they get added to the CSV data file, thus causing the data not to load properly into the stats package because of the column number mismatch. (Ticket #83329)

- Bug fix: If running Data Quality rule A or B in a project, in which a blank field has branching logic based off of another blank field, then in certain cases it might not return discrepancies correctly for all the fields with blank values. (Ticket #82655)

- Bug fix: When downloading a PDF of an instrument, sometimes rich text might mistakenly not display well in the PDF, such as paragraphs and tables being too far spaced out.

Version 9.5.27

- Bug fix: If the foreign key of a database table is not defined correctly in the REDCap database, the SQL provided by the Control Center warning "Your REDCap database structure is incorrect" would mistakenly fail to fix the issue and would keep appearing after being run. It now provides the correct SQL to run in order to fix the database structure issues. (Ticket #83951, #84054)

- Bug fix: The "redcap_survey_complete" hook would mistakenly get called when a survey participant loads their survey queue when navigating directly to their queue as opposed to navigating there after completing a survey.

- Bug fix: The REDCap installation page would mistakenly crash with a fatal PHP error and would prevent anyone from going through the full installation process. Bug emerged in the previous version. (Ticket #84111)

- Bug fix: If an alert on the Alerts & Notifications page contains attachment files in which two or more attachments have the exact same file name, then it would mistakenly not attach all the files to the email but only the last one listed. (Ticket #83903)

- Bug fix: The sum() function would mistakenly not work as expected and would return a blank value for a calculated field if one or more of the fields used inside sum() have a blank value. (Ticket #84284)

- Bug fix: In certain cases, if new records are being created in a project while the project's Record List Cache is being built, it might mistakenly cause new records to appear orphaned (as if they were never created) and not appear in reports, dashboards, etc. in the project for a few days (or until the cache is rebuilt). (Ticket #84159)

- Bug fix: When performing a data import into a repeating instrument, in which all the fields in the row in the data import file have blank values (excluding the record id field, redcap_repeat_instance field, and redcap_repeat_instrument field), it would return a confusing error message and prevent the import from completing. (Ticket #84359)

- Bug fix: When exporting a Project XML for a longitudinal project, in which the project contains reports with report filters that have the "in All Events" drop-down option selected for a given filter field, the

resulting XML file would contain advanced filter logic that would work successfully in a new project created from the XML file, but if a user went to modify that report afterward in the newly created project, REDCap would note that the logic was not syntactically correct (even though the filter logic would work correctly when displaying the report). This is due to the fact that in the XML file it was mistakenly not prepending "[event-name]" to all fields in the advanced logic that did not already have a prepended unique event name. For longitudinal projects with advanced filter logic, all fields must have a prepended event name or else must have [event-name] prepended to the field.

- Bug fix: If the setting "Email to send email-failure errors" has been defined for an alert in Alerts & Notifications, the email received after an error occurs would mistakenly not contain the real error message of why the alert did not send and also would not contain the alert number of the alert being triggered. (Ticket #84004)

- Bug fix: When running Data Quality rule D ("Field validation errors (out of range)"), it would mistakenly return discrepancies for valid number values if a field had "Number (comma as decimal)" validation. (Ticket #84004)

Version 9.5.28

- Major bug fix: When submitting a one-page public survey, in some specific scenarios after completing the survey, a participant could incidentally cause the survey to get resubmitted (minutes, hours, or even days later), thus creating a duplicate record in the project. This appears to occur mostly for certain mobile devices, in which returning to a tab containing the completed survey might mistakenly cause the survey to get resubmitted somehow. (Ticket #75626)

- Bug fix: When uploading an MP3 audio file to be embedded in a Descriptive field on a survey page or data entry form, it might mistakenly not play in Internet Explorer.

- Bug fix: If a project is longitudinal and has either repeating instruments or repeating events, in which a field exists on both a non-repeating event/instrument and on a repeating event/instrument, then if that field is used as a report filter, the report might mistakenly return partially incorrect results. Part of this issue was caused by another fix in REDCap 9.9.1 Standard and 9.5.26 LTS, and the other part is a longer-standing issue caused by difficulty in parsing logic referencing different repeating and non-repeating contexts. (Ticket #84330)

- Bug fix: For longitudinal projects, the project Logging page would mistakenly display the name of the first event next to the record name for logged events related to Data Access Group assignments for records. It should not display the event name because assigning DAGs is performed at the record level and not at the event level, so displaying the event name for the logged event is misleading.

- Bug fix: The cron job to routinely reset the record list cache for all active projects was mistakenly not resetting the cache as often as it should.

- Bug fix: If a calculated field's equation contains certain Smart Variables (e.g., [project-id]), when saving the calc field in the Online Designer, it would note that it is syntactically incorrect, which is untrue. (Ticket #84524)

- Bug fix: When importing an instrument from the REDCap Shared Library, in which the instrument contains a checkbox field that is used in branching logic or in calculations in the imported instrument, and also that checkbox field's variable name already exists in the project as an existing variable, then when the variable is being automatically renamed during the instrument import process to prevent a conflict with the existing variable, it would mistakenly fail to perform the renaming successfully for checkbox fields, which require a slightly different syntax when being referenced in calc fields and branching logic.

- Bug fix: In the Required Fields dialog on data entry forms and surveys, one of the buttons mistakenly did not have its language abstracted for translation. (Ticket #81638)

- Bug fix: When exporting data to SAS while using Missing Data Codes in a project, if any fields contain the @NOMISSING action tag, such fields would mistakenly not be made exempt from the Missing Data Codes when importing the data into SAS. (Ticket #83910)

- Change: When exporting data to SAS, the line "OPTIONS nofmterr;" is now added to the SAS script to prevent any formatting issues from throwing fatal errors.

- Bug fix: When rendering a report or performing a data export in which the report contains some report filters, some extra processing was being done unnecessarily that was making the report slower than it should have been. This unnecessary code was removed, which now makes reports load faster (up to 2x faster in some cases) for reports with report filters.

- Bug fix: When a project that has record auto-numbering enabled exceeds 25,000 records in the project, then the text input field that is displayed (in lieu of a drop-down list) on the Add/Edit Records page would mistakenly allow users to free-form type a new record name that might not comply with the record auto-numbering scheme. To prevent this issue, it now checks to ensure the record being typed already exists.