**Version 13.1.27 (released on 2023-04-27)**

**CHANGES IN THIS VERSION:**

* **Critical security fix:** A PHP Deserialization Remote Code Execution vulnerability was found in which a malicious user who is not logged in could potentially exploit it by manipulating an HTTP request to a survey page while uploading a specially crafted file. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. This vulnerability exists only in the following REDCap versions: LTS 13.1.11 through 13.1.26 and Standard Release 13.3.0 through 13.4.10.
* **Medium security fix:** A Cross-site Scripting (XSS) vulnerability was discovered in a file download process in which a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript in a very specific way into an HTML file that is then uploaded into a File Upload field or as a Descriptive Text field attachment, and then having a logged-in REDCap user attempt to download that file using a specially crafted URL.
* **Major bug fix:**Partially completed one-page surveys might mistakenly behave as if the participant has not started the survey if they return to the partially completed survey after having entered some data. (Ticket #204003)
* **Major bug fix:** When a survey participant opens a public survey under certain conditions, such as when multiple participants are using the same device, the survey page (and/or subsequent pages) might mistakenly get populated with the previous participant's responses, thus allowing participants to see data they should not. This fix reverts functionality from Ticket #142376 (from REDCap 13.4.3 Standard and 13.1.19 LTS) that attempted to gracefully recover a participant's session if they used their browser's BACK button on a survey as a means of returning to a previous survey page. (Ticket #204164)
* Bug fix: When publishing a MyCap configuration in a project, some chart fields might not get stored correctly in the config and thus might affect participants using the MyCap mobile app on iOS.
* Bug fix: When using Multi-Language Management, the @LANGUAGE-FORCE action tag (if being used on a field) would mistakenly not work as expected.
* Bug fix: When using DUO as an option for two-factor authentication, the 2FA process would mistakenly redirect users to the REDCap home page after a successful login rather than redirecting them to the current page they were originally on. (Ticket #203337)
* Bug fix: The “Field Finder” on the Codebook page might mistakenly display some HTML in the search results if the user begins the search with the letter “c”.
* Bug fix: When using Duo two-factor authentication, the REDCap login page might mistakenly be blank when using Mobile Safari on an iOS device. (Ticket #203626)
* Bug fix: When using Multi-Language Management and using the eConsent Framework, the footer of the eConsent PDF, when displayed at the end of a survey, would mistakenly not have its text translated by MLM.
* Bug fix: Fixed issues related to error checking for the Imagick PHP extension check on the Configuration Check page. (Ticket #203313b)
* Bug fix: Requests to the survey end-point that contained "\_\_passthru" and "route" in the URL would mistakenly not get logged in the redcap\_log\_view table.
* Bug fix: When using Multi-Language Management, some browsers might attempt to auto-translate part of the webpage when viewing a page translated via MLM. Such a browser action will now be prevented in order to allow the form or survey to be viewed exactly how the user intended. (Ticket #203925)
* Bug fix: When viewing a Public Project Dashboard on PHP 8, the page might mistakenly crash due to a fatal PHP error. (Ticket #203634)
* Bug fix: Fixed an issue with the setting related to the use of email addresses in a CDIS project, in which it was causing the email addresses not to be fetched from the EHR.
* Bug fix: During the MyCap EM to REDCap migration process, the migration popup was displaying the wrong "number of tasks" if there are any inadequately-enabled tasks on the EM side.
* Bug fix: If the unique group name of a Data Access Group happens to be an integer and also happens to be the same value as the Group ID number of another DAG in the same project, users would mistakenly not be able to utilize the DAG Switcher if they attempt to move in and out of the DAG whose Group ID number matches the unique group name of another DAG. (Ticket #204033)
* Bug fix: When using "&new" in a survey URL of a repeating survey, in which the URL also contains extra URL parameters for the purpose of survey pre-filling, those extra parameters would mistakenly be lost and thus will not be pre-filled after redirecting the participant to a not-yet-created repeating survey instance. (Ticket #204113)
* Bug fix: When using Multi-Language Management, some browsers might attempt to display a popup to ask the user if the page should be auto-translated by the browser. In the previous version, the auto-translate action is now prevented, but this new fix now prevents the translation popup from displaying altogether in order to reduce confusion for users/participants when using MLM. (Ticket #203925b)
* Bug fix: If the dates used together in a datediff() function or in a @CALCDATE action tag do not have the same date format, the resulting error message would mistakenly mention "Since the DATEFORMAT parameter was not provided as the fourth parameter in the equation, 'ymd' format was assumed". The date format parameter is a legacy feature and is no longer used or needed, so that specific part of the error message has been removed in these cases. (Ticket #204213)

**Version 13.1.26 (released on 2023-04-20)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**When copying a project and all its records, any fields that have no action tags (i.e., have nothing in the Field Annotation) would mistakenly have their value converted into a MyCap participant code for all records/events. Additionally, some repeating instance data might get orphaned or not get copied over correctly. (Ticket #203436)
* Bug fix: The MyCap mobile app might mistakenly crash in certain situations on the About page if the About page’s image for the app is stored incorrectly in the project’s MyCap configuration.
* Bug fix: The Control Center's Configuration Check page might mistakenly display an incorrect message that the Imagick PHP extension is not installed correctly when in fact the issue was that Ghostscript was not installed correctly on the server. (Ticket #203313)

**Version 13.1.25 (released on 2023-04-19)**

**CHANGES IN THIS VERSION:**

* **Critical security fix:** Two different Remote Code Execution vulnerabilities were found in the process whereby files are uploaded via File Upload fields and via the Data Import Tool, in which a malicious user could potentially exploit it by manipulating an HTTP request while uploading a specially crafted file on the Data Import Tool page, on a data entry form, or on a survey page. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. These vulnerabilities exist in all versions of REDCap.
* **Critical security fix:**An Insecure Direct Object References (IDOR) vulnerability was found, in which a malicious user could potentially exploit it by manipulating an HTTP request in a specially crafted manner on a survey page. This could allow the attacker to export PDFs containing data of individual survey participants (potentially containing sensitive/private information). Any valid survey link (including a public survey link) could be used and manipulated in order to export a PDF containing data for any record within the project to which the survey link belongs.
* **Major security fix:** A Blind SQL Injection vulnerability was found on the Alerts & Notifications page, in which a malicious user could potentially exploit it by manipulating an HTTP request on that page or indirectly via the survey page.
* **Medium security fix:** A Path Traversal vulnerability was found in a specific endpoint relating to the Clinical Data Pull feature, in which a malicious user could potentially exploit it by manipulating an HTTP request on a specific CDP page.
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered in which a malicious user could potentially exploit it by entering an HTML "iframe" tag in a carefully crafted manner into the value of a text field on a form or survey. Additionally, that text field's value must be piped to another place on that same page in order to exploit it. This bug exists in all versions of REDCap, both LTS and Standard Release.
* Bug fix: The warning popup that is displayed when a user attempts to download a data dictionary when one or more of the instruments in the project have been imported from the REDCap Shared Library, in which the user must first agree to the Shared Library's Terms of Use, was mistakenly not being displayed when users also perform the following other relevant actions: download an instrument zip file, download a Project XML file, or copy the project.
* Bug fix: Long-running CDIS-related cron jobs might mistakenly prevent External Module cron jobs from running at their expected interval.
* Bug fix: When two administrators are viewing the Multi-Language Management page in the Control Center at the same time, the second person to navigate there will not be able to view the page while the first person is still viewing it due to a fatal PHP crash. Bug emerged in the previous version. (Ticket #202782)
* Bug fix: When using the "Compare" feature for data dictionaries and/or snapshots on the Project Revision History page, on certain occasions it would not perform the comparison correctly and thus would display incorrect results.
* Bug fix: Due to various API changes in the third-party web service used by the Field Bank feature, the Field Bank would no longer return any results if a user searched for a field in the Field Bank dialog in the Online Designer. This affects REDCap versions 10.7.0 and higher.
* Bug fix: When copying a MyCap-enabled project that contains records, in which the records are also being copied, the process would fail to copy the records into the MyCap Participant List in the new project. The records would get copied correctly but mistakenly not added to the MyCap Participant List.
* Bug fix: If the two authentication settings "Number of failed login attempts..." and "Amount of time user will be locked out after having failed login attempts..." on the Security & Authentication page somehow have non-integer values, it could cause the REDCap login page to crash with a fatal PHP error when using PHP 8. (Ticket #202976)
* Bug fix: After renaming a record in a longitudinal project and using the Form Display Logic feature, the Record Home Page might mistakenly give a fatal PHP error when using PHP 8. (Ticket #203014)
* Bug fix: When using Multi-Language Management on form or survey, the choice label from radio button fields that are inside a matrix would fail to pipe successfully if on the page. (Ticket #201392)
* Bug fix: CDIS-related bug that could cause issues when refreshing a user’s FHIR access token, in which the format of the date used to check for expiration was wrong.
* Bug fix: When using Twilio telephony services for surveys, U.S. phone numbers having the area code "986" would mistakenly not work for SMS or voice calls unless the number has a "1" prepended to it. (Ticket #203044)
* Bug fix: When clicking any of the table headers for the project list table on the My Projects page, it would mistakenly hide all the projects in the list except for those in the "Unorganized Projects" folder. Additionally, if any project folders were previously open, the user would find that all project folders had been closed after reloading the page. (Ticket #203046)
* Bug fix: The login page for "Shibboleth & Table-based" authentication might mistakenly display both the Shib and Table-based login options under the Shib login tabs when using more than one Shibboleth login option. Bug emerged in REDCap 13.4.0. (Ticket #200919b)
* Bug fix: When using Multi-Language Management, the @LANGUAGE-FORCE action tag might not work as intended under specific conditions. (Ticket #202553)
* Bug fix: When using an [aggregate-X] Smart Variable in a calculation or any kind of conditional logic or branching logic, in which the value returned for the [aggregate-X] Smart Variable is greater than "999", the logic might mistakenly not function as expected. (Ticket #203063)
* Bug fix: When using Multi-Language Management on a data entry form, the MLM language switcher drop-down displayed on the form might mistakenly be obscured and/or not visible while using certain iOS devices. (Ticket #203189)
* Bug fix: The link to the Training Videos on the login page would be incorrect in some situations. (Ticket #203245)
* Bug fix: When an adaptive or auto-scoring survey that has been downloaded from the REDCap Shared Library is not the first instrument in the project and is set to "Redirect to a URL" on the Survey Settings page, the survey participant would mistakenly not be redirected to the defined URL after completing the survey. (Ticket #203316)

**Version 13.1.24 (released on 2023-04-12)**

**CHANGES IN THIS VERSION:**

* Bug fix: Several missing LOINC codes were added to the CDIS mapping features.
* Bug fix: A CDIS-related database query could throw a fatal error when computing information for a DataMart revision.
* Bug fix: When using MyCap, records might not appear in the MyCap Participant List if they were created while the MyCap feature was disabled in the project, after which MyCap was later enabled. (Ticket #202374)
* Bug fix: The "Auto-fill Form" link for administrators to use on forms and surveys would mistakenly insert the wrong value for specific field validations, such as Number (1 decimal place), Number (comma as decimal), and other number types. (Ticket #202401)
* Bug fix: When loading the first page of a multi-page public survey, in which no records exist in the project yet, the survey page might display a "REDCap crashed" error when running PHP 8. (Ticket #202648)
* Bug fix: When downloading a PDF of an instrument that contains a Descriptive Text field with an inline PDF attachment, in certain cases an extra empty page might appear in the resulting PDF right before where the inline PDF is rendered. (Ticket #202598)
* Bug fix: When using the Smart Variable [stats-table] and limiting its data via appending a unique report name, in which the report itself returns zero results, the stats table would mistakenly display statistics for all records in the project. (Ticket #201751)

**Version 13.1.23 (released on 2023-04-07)**

**CHANGES IN THIS VERSION:**

* Bug fix: If the REDCap database table structure has utf8mb4 collation while REDCap’s database connection is configured to use utf8[mb3], both the db\_character\_set and db\_collation values in the redcap\_config database table will be modified to ensure that the character set is aligned. This fix will occur during the upgrade process and will also be added to the Unicode Transformation page.
* Bug fix: When piping a field variable that has an [X-event-name] Smart Variable prepended to it while also having an [X-instance] Smart Variable appended to it, it might mistakenly return a blank value rather than piping the correct value. (Ticket #142932)
* Bug fix: When a @CALCTEXT field contains an if() function that has a plus sign ( ) inside of single quotes or double quotes, the resulting text would mistakenly have the text "\*1 1\*" replacing every plus sign. This would occur when viewing a @CALCTEXT field on a data entry form or survey but not via server-side calculation methods, such as Data Quality rule H. (Ticket #141653)
* Bug fix: If using Multi-Language Management, the @LANGUAGE-CURRENT-FORM action tag was working on (completed) surveys viewed on data entry pages, which should never have been the case.

**Version 13.1.22 (released on 2023-04-03)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**Reverted the bug fix in [Ticket #142759](https://redcap.vanderbilt.edu/community/post.php?id=142759), which sought to provide server-side checking to prevent @READONLY fields from having their data values modified through the client side (e.g. JavaScript). This has been reverted because there appear to be too many scenarios in which this server-side checking was blocking legitimate data entry and thus some data was not getting saved properly. Most of these scenarios occurred when using certain action tags together with @READONLY, as described in [Ticket #202226](https://redcap.vanderbilt.edu/community/post.php?id=202226) (i.e., @CALCTEXT, @CALCDATE, @DEFAULT, @SETVALUE), but other scenarios, such as when performing survey pre-filling (via URL parameters or via POST requests) for @READONLY fields, could not easily be incorporated into the server-side checking. **Therefore, the server-side checking for @READONLY fields (added to REDCap 13.1.20 LTS and 13.4.4 Standard) has been removed/reverted because it was preventing legitimate data entry on forms and surveys in various scenarios.**

**Version 13.1.21 (released on 2023-04-01)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** Opening a data entry form when using PHP 8 would crash the page with a fatal PHP error on certain occasions. Bug emerged in the previous version.

**Version 13.1.20 (released on 2023-03-31)**

**CHANGES IN THIS VERSION:**

* Bug fix: If using MySQL 8 for the REDCap database, admins might see false positives for the database structure check in the Control Center, in which it might mistakenly say “Your Database Structure is Incorrect” when it is actually correct. Bug emerged in the previous version. (Ticket #202144)
* Bug fix: Fields that have a @READONLY action tag could have their data value modified on a survey page or data entry form by manipulating the webpage via JavaScript or via the web browser's developer console. (Ticket #142759)

**Version 13.1.19 (released on 2023-03-31)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** If a user calls the "Export Records" API method and explicitly provides the "fields" API parameter as a comma-delimited text string (instead of an array), the API might mistakenly export the data for all project fields, including data for fields for which the API user does not have data export rights. (Ticket #200812)
* Bug fix: When following the directions on the page "Updating your REDCap Database Tables to support full Unicode", the process might mistakenly fail due to certain MySQL/MariaDB errors occurring when attempting to convert certain characters to utf8mb4 via the UPDATE queries provided on the page. If you have attempted to use this page previously and had to stop due to these errors, then after upgrading, we recommend you try it again using the new SQL provided on that page.
* Bug fix: Small fixes for the page "Updating your REDCap Database Tables to support full Unicode".
* Bug fix: Custom Survey Queue Text might mistakenly have many unnecessary line breaks, thus causing the text to have large, empty gaps. (Ticket #201330)
* Bug fix: When user privileges are edited or when users are added to a project via the CSV file upload on the User Rights page, it would mistakenly not log the individual events of each user being edited or added, respectively. (Ticket #200514)
* Bug fix: When the survey expiration date is saved in YMD date format on the first save of the Survey Settings page, the date format is corrupted and not saved correctly. (Ticket #201743)
* Bug fix: If a participant is taking a multi-page public survey and uses their browser’s Back button to go back to the first survey page, then then afterward continues forward again on the survey, it would mistakenly create a duplicate response/record in the project (Ticket #142376)
* Bug fix: Vertically-aligned checkboxes (and some other elements as well) might not display correctly (or might be invisible) on survey pages while using an RTL (right-to-left) translated language via Multi-Language Management. (Ticket #201476, #200785)
* Bug fix: When taking an adaptive or auto-scoring survey that was imported from the REDCap Shared Library while the Survey Queue is being utilized, the Survey Queue might mistakenly fail to be displayed at the end of the survey or (if using auto-start) the next survey in the queue would fail to begin automatically. (Ticket #201816)
* Bug fix: When taking an adaptive or auto-scoring survey that was imported from the REDCap Shared Library while the Survey Queue is being utilized, clicking the Survey Queue icon at the top right of the survey page might mistakenly not display the Survey Queue.
* Bug fix: If an alert is set to be triggered during a data import, in which it will send an alert for each new repeating instance of a repeating instrument, the alert would mistakenly fail to get triggered if the imported value of the "redcap\_repeat\_instance" field is literally "new" rather than an integer. (Ticket #200445)
* Bug fix: If the record ID field has any kind of field validation, the validation would mistakenly fail to be enforced when renaming the record on the Record Home Page. (Ticket #200101)
* Bug fix: The "Save & Mark Survey as Complete" button on data entry forms might mistakenly be displayed in situations in which it should not. (Ticket #142863)
* Bug fix: The process that checks for errors in the REDCap database structure might have reported false positives if REDCap is running on newer MariaDB versions (10.3.37 , 10.4.27 , 10.5.18 , 10.6.11 , 10.7.7 , 10.8.6 , 10.9.4 , 10.10.2 , 10.11.0 ), in which the “SHOW CREATE TABLE” query in these newer MariaDB versions excludes a column's charset and collation if the column matches the default charset/collation of the table.
* Bug fix: When creating a new project via the MyCap project template, the project creation process would mistakenly update the baseline date setting configuration before updating the project configuration, thus causing some things to be out of sync with regard to MyCap settings in the project in certain cases.
* Bug fix: The user privilege for "Alert & Notifications" was mistakenly not getting copied for project users when using the "Copy Project" feature while electing to copy the current users into the new project. This issue was supposedly fixed in the previous version but mistakenly was not. (Ticket #201585)
* Bug fix: When using an ontology service (e.g., BioPortal) on a Text field, the cron job that sends Alerts and Automated Survey Invitations might mistakenly crash with a fatal PHP error if the field's value is piped into the email body of the Alert or ASI. (Ticket #201928)
* Bug fix: When uploading a CDISC ODM XML file of data on the Data Import Tool page, in certain situations while using PHP 8, the page could crash with a fatal PHP 8 error. (Ticket #200728)
* CDIS-related bug fixes:
	+ Resolved an issue where an error during FHIR authentication prevented the complete log from being displayed.
	+ Fixed a bug where fhir\_identity\_provider, a CDIS setting, was not given proper priority during the FHIR authentication process.
	+ Addressed a bug where the "next" page of a bundle containing too many entries could have no reference to the FHIR resource, resulting in a logging error.
* Bug fix: When composing an invitation for a repeating survey on the Participant List page, the Compose Invitations dialog would mistakenly pre-check the checkbox of participants in the dialog's participant list in which the participant row represents a placeholder for a not-yet-existing repeating instance of the survey. In this case, users might not wish to send an invitation to these placeholders, but they exist there in the participant list just in case they do wish to invite them. So leaving them pre-checked when the Compose dialog opens could cause users to mistakenly send another repeating survey invitation to the participant when the user did not intend to do that.
* Bug fix: When two users are simultaneously on the same data entry form in a project about to create a new record, in which both users have been assigned the same tentative record name prior to the record being created, if the second user to click Submit is also locking the instrument, the second user's record would skip a number in the record creation sequence (e.g., user 1 creates record "101" while user 2 creates "103" instead of "102") while also mistakenly not locking the second user's new record. (Ticket #201814)
	+ Bug fix: When a repeating instrument for a record has an instance 2 but not an instance 1 saved, the left-hand instrument menu might mistakenly display a gray status icon for the repeating instrument (as if no instances exist) when viewing other instruments within the record. (Ticket #202054)

**Version 13.1.18 (released on 2023-03-24)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**When appending "&new" to the end of a survey URL for a repeating survey, it would mistakenly not redirect to the next not-yet-created repeating instance of the survey but would instead display the message that the survey had been completed.
* Bug fix: When using Duo two-factor authentication, REDCap would mistakenly not honor when a user checked the checkbox to not prompt for the MFA login again for 7 days. (Ticket #201444)
* Bug fix: When clicking the Check All button on the Email Users page in the Control Center, if some text had been entered into the Search filter beforehand, every user would mistakenly be selected rather than just the visible users in the table. This could cause the email to go to all users instead of just specific ones.
* Bug fix: When the REDCap API has been disabled at the system level, the Tableau Export option on the "Other Export Options" page would mistakenly still appear. (Ticket #200248)
* Bug fix: When ~~copying a project or~~ creating a project from a template, the creator of the project would mistakenly not have "Alerts & Notifications" privileges. (Ticket #201585)

**Version 13.1.17 (released on 2023-03-24)**

**CHANGES IN THIS VERSION:**

* **Medium security fix:**A Cross-site Scripting (XSS) vulnerability was discovered on survey pages in which a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript in a very specific way into the survey URL in order to pre-fill a Text field on the page, in which the field must have the @DEFAULT action tag and must also be piped somewhere on the current page. (Ticket #201503)
* **Medium security fix:** A Cross-site Scripting (XSS) vulnerability was discovered in the File Repository in which a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript in a very specific way inside the “comment” text of an uploaded file. (Ticket #200457)
* Bug fix: The survey auto-continue feature might mistakenly not work with PROMIS computer adaptive test (CAT) surveys but instead would just display the text "Thank you for your interest, but you have already completed this survey". (Ticket #200757, #200621)
* Bug fix: When using Multi-Language Management, the proper language would not get used for the e-Consent PDF in certain situations (Ticket #200944).
* Bug fix: When using Multi-Language Management, the survey acknowledgement page might not show the appropriate language.
* Bug fix: When a PDF file is attached to a Descriptive Text field and is set to display inline, it might not always get positioned in the correct place in the resulting PDF that is generated.
* Bug fix: When a PDF file is attached to a Descriptive Text field and is set to display inline, the inline PDF might be displayed with too low a resolution inside the resulting PDF that is generated. Its resolution has been increased from 120 DPI to 200 DPI to make it more readable. (Ticket #200582)
* Bug fix: When a PDF file is attached to a Descriptive Text field and is set to display inline, the inline PDF might mistakenly be too large for the page and might run off the page if more than one or two lines of text exist for the Descriptive Text field's field label. The resulting PDF that is generated will instead begin the inline PDF on a new page by itself in this scenario. (Ticket #200582b)
* Bug fix: Small tweaks and fixes for the page "Updating your REDCap Database Tables to support full Unicode".
* Bug fix: Piping in a survey's Survey Completion Text would always fail to work. (Ticket #200909)
* Bug fix: In some situations, a required field that is embedded inside another required field hidden by branching logic might mistakenly not be able to have its value removed when a user deletes the value and then clicks Save on a survey or data entry form. The value would reappear again if the page was reloaded.
* Bug fix: In some rare scenarios when a participant submits the first page of a public survey, the page might result in a "too many redirects" error, thus preventing the user from completing the survey. (Ticket #200351)
* Bug fix: When composing a survey invitation, in which the Smart Variable [survey-link:instrument] or [survey-url:instrument] is used (i.e., with an instrument name) inside the body of the invitation, the dialog titled "Invitation text is missing [survey-link] variable" would mistakenly appear when it should not. (Ticket #200914)
* Bug fix: When submitting the first page of a public survey, in which an MDY or DMY formatted date/datetime field was submitted, the survey might mistakenly display the "invalid values entered!" dialog saying that the field's submitted value was incorrect, which is not true.
* Bug fix: Several missing LOINC codes were added to the CDIS mapping features.
* Bug fix: Fixed typo in Multi-Language Management logEvent() method. This does not seem to affect anything though.
* Bug fix: When embedding a matrix field and using the ":icons" notation, the balloon and history icons would mistakenly not be displayed for the embedded matrix field.
* Bug fix: If a horizontally-aligned checkbox is embedded inside the choice label of another checkbox that is vertically-aligned, the first checkbox of the embedded field might mistakenly not be visible. (Ticket #201393)

**Version 13.1.16 (released on 2023-03-10)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** If the Automatic Upgrade (blue button on the Upgrade page), Easy Upgrade, and/or Auto-Fix options are available in your REDCap installation (regardless of whether you have actually used those options or not), it could be possible for someone that is not logged in to REDCap to directly access the upgrade page of an older version sitting on the web server (e.g., https://.../redcap\_v11.1.0/upgrade.php) and click the blue Upgrade button for the Automatic Upgrade, which would mistakenly revert the system back to that version. Note: Doing this would not run any other SQL but only the few queries that change the "redcap\_version" in the redcap\_config database table (and a couple of other minor things). If either the Automatic Upgrade or Easy Upgrade option is available on your system, then it is recommended that you additionally go and remove EVERY ugprade.php file that exists inside all previous REDCap version folders. This is just a one time thing, and is not necessary to do in the future. (Ticket #200338)
* Change: Replaced all hard-coded links to REDCap Community pages to point to the new REDCap Community website hosted on the Vanderbilt REDCap server. Previous links pointed to the old AnswerHub site.
* Bug fix/change: Inline PDF attachments on Description Text fields were mistakenly not being rendered as inline in PDF exports.
	+ Last year when the inline PDF feature was added for attachments on Description Text fields, in which in previous REDCap versions only images could be displayed as an inline attachment on the web page and in the exported PDF file, the feature was mistakenly not fully implemented because the PDF attachment was not rendered inline inside the resulting exported PDF file for a form or survey. To fix this, any PDF attachments that are set to be displayed as inline on a Descriptive Text field will now correctly be rendered as inline in the PDF of the form/survey in order to be consistent with how inline images have always been treated in PDFs.
	+ Additionally, the ImageMagick PHP extension is required for this fix to work. It is a common but not universal PHP extension. A new check has been added to the Configuration Check page to detect if this extension has been enabled on the REDCap web server, and if not, the page will provide a link with instructions for installing it, if desired.
	+ NOTE: If administrators wish to disable this setting so that inline PDF attachments are not rendered as inline inside the PDF files, they may disable this functionality at the system level on the Modules/Services Configuration page in the Control Center.
* Bug fix: When the min or max validation range of a date- or number-formatted Text field contains certain Smart Variables, the min/max range check might mistakenly not work on a form or survey due to a JavaScript error. (Ticket #143298)
* Bug fix: When a user deletes all the data in a single event for a record (in the UI or via the API), the resulting logged event seen on the Logging page would mistakenly note that it happened to the first event instead of to the specified event.
* Bug fix: When the Record ID field has the @HIDDEN-PDF action tag, the field would mistakenly not get hidden in the downloaded PDF when clicking the PDF option "This data entry from with saved data (via browser's Save as PDF)" while on a data entry form. (Ticket #111718b)
* Bug fix: While the ability of individual projects to have their own authentication method was removed in REDCap 13.1.2, this setting was mistakenly not removed from the Edit Project Settings page (in which changing its value on that page does nothing to affect anything). (Ticket #200379)
* Bug fix: When copying a MyCap-enabled project, it would mistakenly copy the MyCap tasks into the new project, even when the MyCap copy option is not checked.
* Bug fix: When migrating a project using the MyCap external module to begin using the native MyCap feature, the migration process might mistakenly not process certain MyCap tasks correctly that were not adequately enabled in the MyCap EM.
* Bug fix: The Smart Variables [survey-time-started], [survey-date-started], [survey-time-completed], [survey-date-completed], [survey-duration], [survey-duration-completed] might mistakenly return the value for record "1" in a project (if record "1" exists) when these Smart Variables are used in a calculated field, @CALCTEXT field, or branching logic on the first page of a public survey. These would, however, work correctly if used in a field label, choice label, etc., if used on a non-public survey, or if used on survey page 2 or higher of a public survey.

**Version 13.1.15 (released on 2023-03-03)**

**CHANGES IN THIS VERSION:**

* **Medium security fix:**A Cross-site Scripting (XSS) vulnerability was discovered in the @CALCTEXT action tag in which a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript in a very specific way inside the text of the @CALCTEXT action tag.
* **Minor security fix:** An SQL Injection vulnerability was found on the Database Activity Monitor page, in which a malicious user could potentially exploit it by manipulating an HTTP request on another page while an administrator views the Database Activity Monitor page.
* Bug fix: Several missing LOINC codes were added to the CDIS mapping features.
* Bug fix: When REDCap is sending a confirmation email to a survey participant after completing a survey, it might mistakenly cause a fatal PHP error on the page. (Ticket #143145)
* Bug fix: When piping a File Upload field with “:link” or “:inline” in the body of outgoing emails (e.g., alerts, ASIs), the piping would mistakenly not be successful under certain circumstances. (Ticket #143158)
* Bug fix: The Stats & Charts page might mistakenly crash in certain situations due to a fatal PHP error when using PHP 8. (Ticket #143019b)
* Bug fix: When using Multi-Language Management, in which an Automated Survey Invitation has been translated, the ASI might mistakenly not be sent in the desired language when there are conflicting things (or none) dictating what the language should be for the ASI. To prevent this issue regarding language ambiguity in ASIs, a new MLM setting had to be added to allow users to define the language source of a given ASI at the survey level (but not at the survey-event level), in which users may choose the “Language preference field” or “User's or survey respondent's active language” as the ASI Language Source on the MLM setup page. (Ticket #143119)
* Bug fix: When using Multi-Language Management, in which an Automated Survey Invitation has been translated, the ASI might mistakenly be sent out in the fallback language in some cases. (Ticket #143119b)
* Bug fix: Any HTML tags used inside the equation of a @CALTEXT field would mistakenly not display correctly in the View Equation popup on data entry forms. (Ticket #143228)
* Bug fix: An issue specific to PHP 8.1 might cause some features of the Clinical Data Mart to crash with a fatal PHP error.
* Bug fix: Large configurations for Multi-Language Management might mistakenly get truncated in the database when saved. The configuration columns in the MLM database tables were increased to handle this. (Ticket #143355)
* Bug fix: The embedded PDF on the e-Consent certification page of a survey with the e-Consent Framework enabled would mistakenly look squished (have incorrect dimensions) when taking the survey on an iPad. (Ticket #143212)
* Bug fix: In some cases after a participant has completed a survey, if they return to the survey using a private survey link (i.e., not a public survey link) while the survey has "Save & Return Later" disabled, the participant might mistakenly be allowed to modify the existing survey response. (Ticket #143400)

**Version 13.1.14 (released on 2023-02-24)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**On public surveys where the participant fails to enter a value for a required field on the first page of the survey, in which the survey page has dozens or hundreds of fields, the survey page might mistakenly crash with an HTTP 414 error (URL Too Long) after being submitted, thus preventing the participant from completing the survey. Bug emerged in REDCap 13.1.11 (LTS) and 13.3.0 (Standard). (Ticket #142829)
* Bug fix: The Azure AD (V1) authentication was mistakenly displaying “samAccountName” as an option to use for “AD attribute to use for REDCap username” when instead it should have been using “onPremisesSamAccountName”. (Ticket #134789)
* Bug fix: When re-evaluating an Automated Survey Invitation for a repeating survey that has been set up with a repeating ASI, the re-evaluation process might report that some invitations were scheduled when they were not.
* Bug fix: In some cases, images that were added via the rich text editor to a project dashboard, to custom text on a report, or to survey components (instructions, questions, etc.) would mistakenly not display on the public version of the dashboard, on a public report, or on the survey, respectively, unless the person viewing it was currently logged in as a REDCap user. (Ticket #142302)
* Bug fix: If Automated Survey Invitations have been set up for a survey, in which some invitations have already been scheduled for a record, if the survey instrument gets marked as "Complete" via normal save operations on the data entry form (with the exception of clicking the "Save & Mark Survey as Complete" button), the scheduled invitations would mistakenly get automatically deleted. They should only get deleted if the survey has been completed via the survey page or by a user clicking the "Save & Mark Survey as Complete" button on the data entry form. Bug emerged in REDCap 9.3.7. (Ticket #142989)
* Bug fix: When creating a Table-based authentication user or when adding a user to a project, if the username that was entered contained illegal characters, the error message would fail to note that the @ symbol is allowed in usernames. (Ticket #142999)
* Bug fix: The Stats & Charts page might mistakenly crash in certain situations due to a fatal PHP error when using PHP 8. (Ticket #143019)
* Bug fix: When using Duo two-factor authentication, if the system is set to "Offline", it would mistakenly prevent administrators from successfully logging in via Duo 2FA. (Ticket #143003)
* Bug fix: When piping instance-related Smart Variables into the email text of a survey's Confirmation Email, the resulting piped text might mistakenly not be formed correctly. For example, appending [new-instance] to the [survey-link] Smart Variable, in which survey-link contains custom display text, would output the survey URL instead of the survey link with the custom text. (Ticket #143059)

**Version 13.1.13 (released on 2023-02-17)**

**CHANGES IN THIS VERSION:**

* Bug fix: When a record is correctly assigned to a Data Access Group, it might not appear to be assigned to its DAG while viewing the Record Status Dashboard, the Add/Edit Records page, and reports if data values for the record somehow got stored incorrectly in the backend redcap\_data table in multiple/mixed cases (e.g., "101a" vs "101A"). Un-assigning and then re-assigning the record back to its original DAG might fix this issue temporarily, but the bug would arise again whenever the project's internal "Record List Cache" was cleared/rebuilt. (Ticket #141329, #142544) NOTE: If the issue still exists after the upgrade, click the “Clear the Record List Cache” button on the Project Setup->Other Functionality page.
* Bug fix: When exporting CSV files in various places throughout REDCap, the process might mistakenly fail for PHP 8 under specific unexpected conditions.
* Bug fix: The cron job used for the Clinical Data Mart or Clinical Data Pull might mistakenly fail due to the user ID being used instead of the username when creating a new instance of the job.
* Bug fix: Over 20 missing LOINC codes were added to the CDIS mapping features.
* Bug fix: When performing certain actions in the File Repository, such as uploading files, an error message would mistakenly be displayed afterward saying that there is a DataTables warning. Bug emerged in REDCap 13.3.0 (Standard). (Ticket #140624)
* Bug fix: The "resources" link in the MyCap informational dialog on the Project Setup page mistakenly pointed to the wrong URL. (Ticket #142514)
* Bug fix: The CSV file upload for importing Automated Survey Invitations (ASIs) in the Online Designer would mistakenly fail with an error if the user's preferred CSV delimiter was not set to "comma" via their user profile. (Ticket #142555)

**Version 13.1.12 (released on 2023-02-10)**

**CHANGES IN THIS VERSION:**

* Bug fix: The "System Statistics" page in the Control Center did not display the label correctly for the count of projects utilizing the Clinical Data Pull feature.
* Bug fix: Data values imported for a patient’s “birth-sex” via FHIR using the Clinical Data Operability Services might mistakenly get converted into an incorrect value (“UNK”) in some specific cases. (Ticket #141976)
* Bug fix: If using the e-Consent Framework with the setting "Allow e-Consent responses to be edited by users?" enabled, users with edit privileges would mistakenly be prevented from modifying the data on the consent form via a data import. (Ticket #140846)
* Bug fix: The Survey Queue page might crash due to a fatal PHP error when using PHP 8. (Ticket #142125)
* Bug fix: When using the @RICHTEXT action tag on a Notes field, changing the text in the editor (i.e., the field's value) might mistakenly not trigger calculations or branching logic accordingly. (Ticket #142127)
* Bug fix: When using the rich text editor to translate a survey's survey instructions on the Multi-Language Management setup page, any images uploaded via the rich text editor would mistakenly not load when viewing the translations on a survey page (that is, unless the person viewing the survey is a REDCap user and is currently logged in to REDCap). (Ticket #141658b)
* Bug fix: If a user that has "read-only" user privileges for a specific instrument is viewing the Data History of a File Upload field on that instrument, the "Delete" link next to each file/revision would mistakenly be displayed in the Data History popup. Users with read-only instrument-level privileges should not be able to delete older revisions of a File Upload field. (Ticket #141709)
* Bug fix: If a repeating instrument has been enabled as a survey, but the survey setting "(Optional) Repeat the survey" has not been enabled on the Survey Settings page, then when viewing the participant list, a placeholder instance might mistakenly not be displayed in the participant list to represent a not-yet-taken instance of the repeating survey. There should always be at least one untaken placeholder instance displayed for each record in the participant list for repeating surveys because this allows users to open a new instance of the survey or email the participant a link to that new survey instance. (Ticket #141545)
* Bug fix: When creating/editing a report, the explanatory dialog for Step 3's "Show data for all events for each record returned" checkbox was outdated and mistakenly did not mention anything about the setting's usage in projects containing repeating instruments/events. (Ticket #141953)
* Bug fix: When the "Text-To-Speech" feature is enabled on a survey, the speaker buttons would mistakenly not appear next to the field labels of fields in a matrix, thus preventing participants from utilizing the feature there. (Ticket #141787)
* Bug fix: In very specific situations where a field is a required field and is embedded in another field, in which the container field is hidden by an @HIDDEN action tag while the field embedded inside it also has an @HIDDEN action tag, the user would mistakenly get prompted by the Required Field dialog for a hidden embedded field if the container and/or embedded fields have @HIDDEN-SURVEY while on a data entry form \*or\* if they have @HIDDEN-FORM while on a survey page. (Ticket #142212)
* Bug fix: If a whole record has been locked or if a data entry form has been locked for a given record, any survey participant who happened to have opened their survey prior to the record/instrument being locked would mistakenly still be able to submit and save their survey response, and as a result, possibly overwrite any existing data on the locked record/form. (Ticket #139555)
* Bug fix: When downloading a data dictionary or an instrument zip file, any Dynamic Query (SQL) fields that contain "\\n" in their SQL query would mistakenly have the text "\\n" replaced with "|" in the resulting downloaded file. (Ticket #141734)

**Version 13.1.11 (released on 2023-02-02)**

**CHANGES IN THIS VERSION:**

* Bug fix: Fixed PHP 8 related error when an administrator tries to hide the blue Easy Upgrade box in the Control Center. (Ticket #141539)
* Bug fix: When using "now" as the min/max for a date field or using "today" as the min/max for a datetime field, the validation range check would mistakenly not detect an out-of-range value. (Ticket #141646)
* Bug fix: When using the rich text editor to translate a label on the Multi-Language Management setup page, the image icon was mistakenly missing from the editor's toolbar interface, thus preventing users from uploading alternative images into the translated text.
* Bug fix: When using the rich text editor to translate a label on the Multi-Language Management setup page, any images uploaded via the rich text editor would mistakenly not load when viewing the translations on a survey page (that is, unless the person viewing the survey is a REDCap user and is currently logged in to REDCap). (Ticket #141658)
* Bug fix: When a survey participant enters data on a public survey, in which some required fields are left blank, it is possible for the participant to re-submit the page in the browser (via the browser Back/Reload button) and thus cause duplicate records to be created. This can especially happen for certain browsers, such as Mobile Safari on iOS devices, when minimizing the browser and then re-opening the browser later. (Ticket #141012)

**Version 13.1.10 (released on 2023-01-27)**

**CHANGES IN THIS VERSION:**

* Bug fix: In some cases, images that were added via the rich text editor to a project dashboard would mistakenly not display on the public version of the dashboard unless the person viewing it was currently logged in as a REDCap user.
* Bug fix: When creating a project using the MyCap project template included in REDCap, in some cases the resulting project might result in errors when a participant loads the project on their MyCap mobile app.
* Bug fix: A fatal PHP error might occur for PHP 8 on a project using the Clinical Data Pull feature, in which a user clicks the "Delete data for THIS FORM only" button at the bottom of a data entry form. (Ticket #141230)
* Bug fix: When using Clinical Data Pull and launching the CDP REDCap page embedded inside of Epic Hyperspace (this does not affect other EHRs but only Epic), the embedded page would not function correctly due to incompatibilities with Internet Explorer, which is the embedded browser utilized by Hyperspace. This bug emerged in the previous REDCap version.
* Bug fix: When exporting a project’s data to SAS, in which the project is using Missing Data Codes and also the exported data set contains Text or Notes fields, the resulting SAS syntax file might mistakenly be missing an underscore at the end of the variable name for the “format” attribute for the Text and Notes fields. (Ticket #103142)
* Bug fix: The replacement function utf8\_encode\_rc() for PHP's utf8\_encode() might prevent certain users from logging in successfully, in which this ultimately is caused by certain unknown web server configurations. (Ticket #140393)
* Bug fix: When using the Randomization page while a project is in production status, a REDCap administrator is unintentionally able to erase the randomization model of the project, which should only be allowed while in development status (even for admins). The "Erase randomization model" button will now stay disabled for everyone when a project is in production. (Ticket #141286)
* Bug fix: If a required field's field label contains a lot of HTML, in which the field value is left empty when submitting a survey page or data entry form, the "Some fields are required" dialog that is displayed would mistakenly not look correctly on some occasions due to the HTML in the label. To prevent this issue and to make the field label more readable, the required field dialog will now strip all HTML from the field label when displaying it. (Ticket #141262)
* Bug fix: Bug fix: When MyCap is enabled in a project, on some rare occasions when migrating a project using the MyCap external module, the process might fail due to an SQL error. (Ticket #138168b)
* Bug fix: Importing data for a patient’s race via Clinical Data Interoperability Services (CDIS) might mistakenly fail in cases where the patient has more than one race listed in the EHR.
* Bug fix: When a user is viewing the field drop-down for the Data Search feature on the Add/Edit Records page in a project that has more than 20K records, the note text in the first option of the field drop-down would mistakenly be truncated, thus preventing the user from being able to read it. (Ticket #141317)
* Bug fix: When uploading a CSV file of user privileges on the User Rights page, the "lock\_records" privilege would mistakenly return an error if its value is set to "2", which is a valid value. (Ticket #141141)
* Bug fix: When changing an existing alert from sending "immediately" and "every time" to sending not immediately (e.g., "Send on next X at time Y") without explicitly clicking the "Just once" radio option in Step 2B after doing so, these changes made to Step 2 would mistakenly not get saved when saving the alert. (Ticket #140491)

**Version 13.1.9 (released on 2023-01-20)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** In certain situations where survey invitations get scheduled for a repeating Automated Survey Invitation, in which the record's data is later modified, the repeating invitations that were scheduled might mistakenly get unscheduled. (Ticket #140851)
* **Major bug fix:** If a user is creating a new record on a data entry form, in which record auto-numbering is enabled in the project and the form is submitted by the user with a required field that has no value, if the project's internal Record List Cache (a secondary list of records in the database for improving performance) had not been built yet or was recently cleared (which is done automatically by REDCap internally), the user submitting the form might trigger the Record List Cache building process, which might inadvertently create multiple identical records instead of just creating the one record.
* Bug fix: If a checkbox field has a large amount of choices, thus causing the checkbox options to become a scrollable box, the overall height of the scrollable box would mistakenly be too short on surveys that have the "Enhanced radio buttons and checkboxes" feature enabled. Since the enhanced radios/checkboxes are much larger than regular radios/checkboxes, the scrollable area has been made twice as tall in these cases in order to provide a less confusing user experience to survey participants.
* Bug fix: The Multi-Language Management page in the Control Center might incorrectly denote a translated language as being 100% complete when it is only 99.9% complete. (Ticket #140724)
* Bug fix: Various issues related to checkbox fields with many options, such as displaying a horizontally-aligned checkbox field as too wide in Firefox. Also, the new feature added in the previous version that would cause a long list of checkbox options to become scrollable has now been completely removed since so many users complained about it being problematic for them. (Ticket #140759)
* Bug fix: When piping a Notes field that has the @RICHTEXT action tag, the HTML formatting in the field's value might mistakenly not render correctly on the page, especially if the value contains HTML tables. (Ticket #140910)
* Bug fix: When a datetime field is using "now" as the min or max validation range, and the user clicks the "Now" button next to the field after having been on the page for more than one minute, the "out of range" popup would mistakenly display.
* Bug fix: When using Multi-Language Management, if some slider fields do not have their slider label values translated, it could cause some parts of the survey page or data entry form not to display all its translated text successfully. (Ticket #140871)
* Bug fix: Some LH-aligned radio buttons might mistakenly cause the page to be too wide if a radio choice label is very long. Unfortunately, the only way to fix this issue fully is to revert a change in the previous version that improved the text wrapping of the choice labels of horizontally-aligned checkbox fields.
* Bug fix: If a survey participant clicks the "Save & Return Later" button on a survey, which has no survey title (i.e., it was left blank), the email sent to the participant might be slightly confusing because it displays only two double quotes where the survey title should be. It now displays slightly different text if the survey title has not been defined.
* Bug fix: If a project title contains some UTF-8 encoded characters, the project title would mistakenly display as garbled when viewing it on the My Projects page on a mobile device. (Ticket #140814)
* Bug fix: If a repeating Automated Survey Invitation has reminders enabled, the Survey Invitation Log might mistakenly display a bell icon and number (representing a reminder) next to a recurring invitation that is not actually a reminder.
* Bug fix: When using the Randomization page and downloading an example allocation table in Step 2, for certain randomization models, the CSV file produced may become too large to be processed, which might throw an error, and/or it might take an abnormally large amount of time to output the CSV file. To prevent these situations, the example allocation tables now will only output a maximum of 50,000 rows regardless of the randomization model set up in the project. (Ticket #140909)

**Version 13.1.8 (released on 2023-01-13)**

**CHANGES IN THIS VERSION:**

* Bug fix: If a Project Template has Form Display Logic, new projects created from that Project Template would mistakenly not have the Form Display Logic settings copied over. (Ticket #140489)
* Bug fix: If REDCap is using an external file storage method (e.g., AWS S3, Azure Blob Storage) for storing all files in the system, the Project Revision History's version comparison feature would mistakenly fail, and it would result in a fatal PHP error when using PHP 8. (Ticket #140551)
* Bug fix: If a participant email address contains one or more capital letters and is added manually to the Participant List multiple times, the Participant List would mistakenly fail to display a number and parentheses immediately before the email address on each row (e.g., "1) rob@aaa.com") to help differentiate the multiple instances of the same email address. (Ticket #140466)
* Bug fix: When using Duo two-factor authentication, some important debugging information would mistakenly not get output to the page when an error occurred, in which it prevented admins from effectively troubleshooting certain network-based configuration issues that could cause Duo not to work dependably for users.
* Bug fix: If a checkbox field has a large amount of choices, it could cause the field to mistakenly take up a disproportionate amount of the survey page or data entry form, thus resulting in a bad user experience. In this case now, the whole list of checkbox options will instead become scrollable so that the checkbox field does not become too unwieldy while still allowing the user to see all the choices.
* Bug fix: Checkbox fields that are horizontally-aligned might mistakenly have a choice’s checkbox and its label appear on two different lines due to text wrapping. Instead, an individual choice’s checkbox and label now no longer wrap to the next line but instead stay together on the same line.(Note: This fix does not apply when viewing a form/survey on a mobile device.)
* Bug fix: In very specific situations where a field is a required field and is embedded in another field, in which the container field is hidden by an @HIDDEN action tag while the field embedded inside it does not have an @HIDDEN action tag but does have a @DEFAULT action tag, the default value added to the embedded field via the @DEFAULT action tag would mistakenly not get saved when saving the page.
* Bug fix: Various fixes related to issues with using Duo two-factor authentication, including issues caused by the use of a proxy with the REDCap web server. (Ticket #140186, #137099)
* Bug fix: Clicking the "View Equation" link for a @CALCTEXT field on a data entry form or survey page while the project is in production status but not in draft mode would mistakenly display an error message instead of displaying the calculation. (Ticket #140645)
* Bug fix: When downloading a CSV file of either users or user roles on the User Rights page, the form-level viewing rights and form-level export rights in the CSV file might mistakenly contain instruments that have been deleted from the project. (Ticket #140668)
* Bug fix: If PDF files had been stored in the File Repository's "PDF Survey Archive" folder, after which the Auto-Archiver and/or e-Consent Framework had been disabled for all surveys in the project, the "PDF Survey Archive" folder would mistakenly no longer be visible in the File Repository, thus preventing users from accessing previously-saved files. That folder will now be displayed if the Auto-Archiver and/or e-Consent Framework is enabled or if any files already exist in the folder. (Ticket #140435)

**Version 13.1.7 (released on 2023-01-06)**

**CHANGES IN THIS VERSION:**

* Bug fix: Certain Font Awesome icons might mistakenly not display correctly on survey pages.
* Bug fix: In certain situations in which REDCap or an External Module executes a specific parameterized query to the database, the query might mistakenly fail due to an "illegal mix of collations".
* Bug fix: Unless using the latest version of the REDCap Mobile App, a @CALCTEXT field might mistakenly not function correctly in the Mobile App if its calculation contains multiple nested IF() statements.
* Bug fix: When a participant is viewing their survey queue, if they click the "Get link to my survey queue" button and then click "Send" to email the survey queue link to themselves, the Email Logging page would mistakenly not associate the email with a record in a project when searching for emails on that page. This can make it very difficult to find this email via the Email Logging page. In the future, this action will associate the email with a specific record on the Email Logging page.
* Bug fix: A SQL query might mistakenly not get formatted correctly and thus might fail when CDIS is sending a notification to a user via REDCap Messenger regarding the completion of an asynchronous CDIS task.
* Bug fix: The "How do I format the equation?" link in the "Edit Field" dialog in the Online Designer would mistakenly open the wrong question on the "Help & FAQ" page.
* Bug fix: If a user assigned to a Data Access Group views a report that has DAG filtering imposed via "Step 3: Additional Filters" in the report settings, in which the user's DAG is not one of the selected DAGs of the Additional Filters, the report might mistakenly display some records from the user's DAG when instead it should not return any records in the report. A similar behavior might also occur for a user that is not assigned to a DAG when viewing the same report, but instead occurring when using the DAG Live Filter to select a DAG that is not one of the selected DAGs of the Additional Filters. (Ticket #140302)

**Version 13.1.6 (released on 2022-12-29)**

**CHANGES IN THIS VERSION:**

* Bug fix: The user privilege for "Alert & Notifications" was mistakenly not getting copied for project users when using the "Copy Project" feature while electing to copy the current users into the new project. (Ticket #140023)
* Bug fix: The Cron Jobs page in the Control Center might crash with a fatal PHP error for certain versions of PHP if the "exec" function is disabled in PHP as a "dangerous" function on the REDCap web server. (Ticket #140034)

**Version 13.1.5 (released on 2022-12-28)**

**CHANGES IN THIS VERSION:**

* New LTS branch based off of REDCap 13.1.4 (Standard)
* Note: Please see the Standard Release ChangeLog from v12.5.0 to v13.1.4 to see the full list of new features and bug fixes released with this new LTS branch.

**Version 13.1.4 (released on 2022-12-28)**

**CHANGES IN THIS VERSION:**

* **Improvement:**The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).
* Bug fix: When the system-level setting "Allow reports to be made 'public'?" has been set to "No", administrators are still allowed to make reports public, which is expected; however, when anyone attempts to view the report using the public link, it displays an error saying that it cannot be displayed. Anyone with the public link should be able to view the report. (Ticket #132901b)
* Bug fix: When testing a calculation using the "Test calculation with a record" drop-down for a calculated field in the "Edit Field" popup on the Online Designer, there are certain situations where the process might mistakenly crash with a fatal PHP error when using PHP 8. (Ticket #139955)
* Bug fix: If the value of a Text or Notes field contains an email address that is immediately followed by a line break/carriage return, the email address would mistakenly not get converted into a "mailto" link properly when displayed on a report. (Ticket #139960)
* Bug fix: The user privilege for "Alert & Notifications" was mistakenly not getting copied for project users when using the "Copy Project" feature while electing to copy the current users into the new project. (Ticket #140023)
* Bug fix: Text describing that piping can now be used in the URL of a Data Entry Trigger and the URL of an external video for a Descriptive Text field was mistakenly not added in the previous version. It has now been added in order to inform users that piping can be used in these places now.

**Version 13.1.3 (released on 2022-12-22)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** An error would occur when enabling External Modules on PHP 7, thus preventing modules from being successfully enabled. Bug emerged in REDCap 13.1.2 (Standard).

**Version 13.1.2 (released on 2022-12-22)**

**CHANGES IN THIS VERSION:**

* **Improvement:**Users may now pipe Smart Variables or field variables into the Data Entry Trigger URL.
* **Improvement:**Users may now pipe Smart Variables or field variables into the External Video URL for Descriptive Text fields.
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered on the User Rights page where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way inside a CSV file when importing user privileges or user roles on that page.
* **Change:** PHP 8.2 is now supported in REDCap. Note: The release notes of REDCap 13.1.0 (Standard) mistakenly noted that PHP 8.2 was supported in REDCap 13.1.0, which was only partially true because PHP 8.2 was not yet supported by the External Module Framework, which is a part of REDCap.
* **Change:**REDCap no longer supports individual projects having their own authentication method that is different from the system-level authentication method. Going forward, every project will automatically assume the same authentication method of the system as defined on the "Security & Authentication" page in the Control Center. (Note: The "auth\_meth" column name in the "redcap\_projects" database table has not been removed in order to be backward compatible with any custom scripts that might be specifically querying that column in an SQL query.)
* **Improvement:** When setting up an alert, Step 2's sub-section “When to send the alert?” now contains the new drop-down choice "the day (beginning at midnight) that the alert was triggered" in the sub-option “Send the alert X days Y hours Z minutes before/after [drop-down]”. This new choice in the drop-down allows users to schedule the notification based on the day the alert was triggered and provides greater control and precision with regard to when exactly the notification will be sent. For example, if this new drop-down option is selected along with setting it to “send the alert 1 day 8 hours after…”, this will cause the notification to be scheduled to be sent at exactly 8:00am the next morning. In previous versions, it was not possible to get this level of precision for the notification send-time based upon the alert trigger-time unless you used a date field’s value as a reference. (Note: This new option is very similar to the one added for Automated Survey Invitations in REDCap 12.5.0.)
* **Improvement:** When exporting the project logging via CSV file or via API, the record name is now included as a separate column/attribute "record" in the resulting output if the logged event is record-centric (and if not, the record value will be left blank). (Ticket #132246)
* **Improvement:** The on/off switches on the Multi-Language Management setup page now have green/red coloring to more clearly denote their on/off state. (Ticket #139703)
* Various changes and improvements for the External Module Framework:
	+ PHP 8.2 is now supported.
	+ Added the methods $module->disableModule(), $module->isSuperUser(), and $module->escape().
	+ Added the allow-project-overrides and project-name setting options.
	+ New feature to hide external modules from non-admins in the list of enabled modules in a project.
	+ Made the scan script warn when system hooks are used.
	+ Miscellaneous scan script improvements.
	+ Fixed a bug where escaped HTML displays in field list values.
* Change/improvement: The Database Activity Monitor page now specifies if a specific request is an instance of the REDCap cron job.
* Change/improvement: When a user creates, edits, copies, or deletes a report, the logged event of this specific action now contains the list of all fields in the report. This improves the granularity of the audit trail for reports. (Ticket #139193)
* Bug fix: In very specific cases when a report is set to only display the record ID field, in which the report has filter logic that contains fields on a repeating instrument/event, the resulting report might mistakenly include grayed out columns that correspond to the fields (or to the form status fields of the fields' instrument) that are used in the filter logic. (Ticket #139584)
* Bug fix: Users with instrument-level locking privileges could inadvertently bypass locking controls and modify data on a locked data entry form if they have another browser tab open of that same data entry form before it was locked, and then saved that form within 30 seconds of locking the form in the other tab. (Ticket #139555)
* Bug fix: If Two-Factor Authentication is enabled in REDCap, and a user is using Clinical Data Pull, in which they are viewing a REDCap window specifically inside Epic Hyperspace, a JavaScript error might be displayed on the page. Bug was introduced in REDCap 12.5.7. (Ticket #139775)
* Bug fix: If a project is created using a Project XML file, in which the XML file contains public reports, the unique public report link/hash of any public reports in the original project would mistakenly get duplicated and attributed to the newly created project. This would not cause any noticeable problems for the user because the public report link would always point to the original project and not to the new project created.
* Bug fix: When using the Clinical Data Mart, a patient’s Medical Record Number (MRN) might get stored as an empty string in the FHIR logs table, thus causing the Data Mart to crash.
* Bug fix: REDCap might fail with a fatal PHP error on various pages when using PHP 8 under very specific conditions. (Ticket #139416)
* Bug fix: If a user shared a public link to a file in the File Repository, that public link would still be functional and active even after an administrator has disabled the "File Repository: Users are able to share files via public links" setting in the Control Center. (Ticket #139899)
* Bug fix: The @IF action tag would mistakenly not function correctly for fields in PDF exports. For example, @IF([field]="", @HIDDEN-PDF, "") would not function correctly to show/hide the field in the resulting PDF export.

**Version 13.1.1 (released on 2022-12-16)**

**CHANGES IN THIS VERSION:**

* **Improvement:** Descriptive Text fields can now have inline PDF attachments that display as an embedded PDF on the page (rather than just displaying a download link).
* Change: HTML tags are no longer stripped out of Project Dashboard titles as displayed in the "My Project Dashboards" list on the left-hand menu or on the Project Dashboards page. Additionally, the title of Project Dashboards are no longer limited to 150 characters.
* Bug fix: The "Data Collection Strategies for Repeating Surveys" informational dialog would mistakenly not open.
* Bug fix: A fatal PHP error would occur when using DDP Custom in a project for PHP 8. (Ticket #138771b)
* Bug fix: When using MyCap in a project and with a Custom Participant Label that utilizes the piping of fields (rather than selecting a single field from the field drop-down list), the Custom Participant Label would mistakenly not be displayed on the MyCap Participant List page.
* Bug fix: If a user is adding an external video URL to a Descriptive Text field, in which they mistakenly paste some Embed HTML or an invalid URL into the field's video URL attribute, if REDCap doesn't recognize it as a Vimeo or YouTube link, REDCap might mistakenly try to output the text directly onto the page as-is without verifying that it is a valid URL. (Ticket #139291)
* Bug fix: When using the date/time picker widget to select a value for a date or datetime field on a survey page or data entry form, and then later on the same page the user uses the time picker on a "Time (HH:MM)" or "Time (HH:MM:SS)" validated field, after selecting the value for the Time field, the page would mistakenly scroll back to the last date/time field on that page where the date/time picker was used, which could be very confusing and disorienting to the user. (Ticket #139201)
* Bug fix: The Standalone Launch process for Clinical Data Interoperability Services might mistakenly fail for some server configurations due to a duplicate slash (“/”) in the link to the page.
* Bug fix: When a user performs a data export containing fields from an instrument for which they have "De-identified" data export rights, and the user selects the de-id option to "Shift all dates" (rather than "Remove all date and datetime fields") in the export dialog, the date fields would not be date shifted but would mistakenly be completed removed from the resulting exported data set. Bug emerged in REDCap 12.2.0. (Ticket #139392)
* Bug fix: When a user creates a new project, either as an empty project or using a Project XML file, the project creator's user rights would mistakenly be missing the "Alerts & Notifications" privilege.
* Bug fix: When using Clinical Data Pull, in which a user is accessing an embedded REDCap page inside of Epic Hyperspace, some parts of the page might mistakenly not work due to JavaScript errors.
* Bug fix: A field with the @CALCTEXT action tag, in which the calculation contains text strings with line breaks, might mistakenly cause calculation errors to appear on the page and prevent the @CALCTEXT from working.
* Bug fix: Some calculations or branching logic might mistakenly fail to work and would display an error if they are substantially long. Bug emerged in the previous version. (Ticket #127140)
* Bug fix: Surveys that are set to use Comic Sans as the font for the survey text would mistakenly not display correctly when viewing the survey on iOS devices. (Ticket #95086)
* Bug fix: In very specific situations where a field is a required field and is embedded in another field, in which both fields have branching logic, if the container field is hidden by branching logic while the field embedded inside it has branching logic that evaluates to True (meaning that the embedded field would otherwise be visible if the container field itself were visible), REDCap would mistakenly display an error saying that the embedded field is required and thus needs a value, which is incorrect since the embedded field is not even visible on the page. (Ticket #139582)
* Bug fix: When piping a field value for a field on a repeating instrument/event, in which the piped value originates from another repeating instance (e.g., [field][previous-instance]), the current instance's value might mistakenly be piped instead of the value from the desired instance. (Ticket #139581)
* Bug fix: When an image is embedded (via the rich text editor) in an email for a survey invitation or alert, in which the Protected Email Mode is enabled in the project, the page where the recipient would view their email in REDCap might mistakenly not display the embedded image on the page but would show a broken image placeholder. (Ticket #139648)
* Bug fix: If a user uploaded a Project XML file for a Clinical Data Mart project, it would mistakenly enable the Data Mart feature in the newly created project even when the CDM feature is disabled at the system level. This would cause some errors to occur in the project. (Ticket #139577)

**Version 13.1.0 (released on 2022-12-09)**

**CHANGES IN THIS VERSION:**

* **New feature: Redesign of the File Repository**
	+ **Overview:** The File Repository page has been redesigned to make it easier to store, organize, and share the files in your projects.Users now have the ability to create folders and sub-folders to help organize their files more effectively. If using Data Access Groups or user roles, users may optionally limit access to a new folder so that it is DAG-restricted and/or role-restricted. Uploading multiple files is much faster with a new drag-n-drop feature that allows for uploading dozens of files at a time. Sharing files is better too, in which users may obtain a public link to conveniently share a file with someone. New API methods also exist that allow users to upload, download, and delete files programmatically using the API. Additionally, the File Repository has a new built-in Recycle Bin folder that makes it easy to restore files that have been deleted. Users can upload as many files as they wish. There is no limit. Additionally, there is no limit to how many folders and sub-folders that can be created (or how deep that they can be nested within other folders).
	+ **Sharing:**Files can be shared via Send-It or using a public link. If you do not want users to be able to share files using the public link functionality, this may be disabled on the File Upload Settings page in the Control Center. Once disabled, users will only be able to share files using Send-It.
	+ **File storage limit:**Admins may optionally set a file storage limit that applies to all projects so that users cannot upload too many files in an abusive fashion. The value can be set in MB on the File Upload Settings page in the Control Center. There is also a project-level override for the file storage limit on the Edit Project Settings page for any given project. Note: Files in the starred folders (e.g. Data Export Files, e-Consent PDFs, Recycle Bin) do not count toward the overall file space usage of the project.
	+ **Recycle Bin:**Files that are deleted from the File Repository will be put in the Recycle Bin folder where they will be kept for up to 30 days before being permanently deleted. Any file in the Recycle Bin can be restored back to its original location (so long as doing so does not surpass the project’s file storage limit, if enabled). Administrators can “force delete” any file in the Recycle Bin, which deletes it immediately and permanently.
	+ **New API methods for the File Repository:** 1) Create a New Folder in the File Repository, 2) Export a List of Files/Folders from the File Repository, 3) Export a File from the File Repository, 4) Import a File into the File Repository, and 5) Delete a File from the File Repository.
* **Security improvement: Restricted file types for uploaded files** - At the bottom of the “Security & Authentication” page in the Control Center, administrators may now provide a list of all disallowed file types/extensions (e.g., exe) in order to prevent users from uploading files of these types into REDCap (often for security purposes). When set, this setting will be applied to all places throughout REDCap where users are allowed to upload files.
* **Improvement:**The “Alerts & Notifications” page now has its own separate user privilege. Previously, only users with “Project Design and Setup” privileges could access the Alerts & Notifications page. Now, users must explicitly be given “Alerts & Notifications” privileges in order to access the Alerts & Notifications page. Note: During the upgrade to REDCap 13.1.0 or higher, any users with "Project Design and Setup" rights will automatically be given "Alerts & Notifications" rights in order to keep continuity with their current access to the Alerts & Notifications page.
* **Improvement:**For OpenID Connect authentication, the Response Mode (response\_mode) authorization parameter can now be explicitly set in the OIDC authentication settings on the "Security & Authentication" page in the Control Center. This will allow admins to choose between "query (default)" and "form\_post" for the response\_mode OIDC setting.
* **New method for plugins/hooks/modules: REDCap::getFile** - Returns an array containing the file contents, original file name, and mime-type of a file stored in the REDCap system by providing the file's doc\_id number (the primary key from the redcap\_edocs\_metadata database table).
* **New method for plugins/hooks/modules: REDCap::addFileToField** - Attaches a file to a File Upload field for a specified record when provided with the doc\_id of an existing file from the REDCap system.
* **Improvement:**New setting added to the User Settings page in the Control Center: "Notify the REDCap admin via email when a new account is created (excluding Table-based user accounts)?" When enabled, this setting can be used to notify admins whenever new users enter the system. Table-based users are not included because their accounts are created by an administrator. (Ticket #133382)
* **Improvement:**New setting added to the User Settings page in the Control Center: "Send a "welcome" email to new users when they create a REDCap account (excluding Table-based user accounts) - i.e., when they log in the first time using an external authentication method?". The "welcome" email will consist of the following stock text: "You have successfully created an account in REDCap at [https://your-redcap-server.edu](https://your-redcap-server.edu/)/. Your REDCap username is "USERNAME". Please note that REDCap does not manage your password. If you have difficulty logging in, you should contact your local IT department. Welcome to REDCap!".
* **Improvement:**When importing User Role assignments via CSV file uploads on the User Rights page or via the API, if the project contains Data Access Groups, users can now be assigned to a DAG during the User Role assignment import process by providing an extra parameter named "data\_access\_group" with a valid unique DAG name. This will allow users to be added to the project, assigned to a role, and assigned to a DAG all at the same time. Additionally, when exporting User Role assignments via CSV file or via the API, the "data\_access\_group" attribute will be exported for each user if the project contains DAGs (to be consistent with the Import User-Role Assignment format). (Ticket #119192)
* **Change:**PHP 8.2 is now supported in REDCap.
* **Change/improvement:**When importing User Role assignments via CSV file uploads on the User Rights page or via the API, users can now be assigned to a role if they do not currently have access to the project. In previous versions, only existing project users could not be assigned to a role via CSV file or via API. (Ticket #119192)
* **Major bug fix:** A malicious user could potentially delete a file uploaded into a project to which they do not have access by manipulating an HTTP request on the Alerts & Notifications page in another project. (Ticket #138873)
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered on the Project Modifications page (where an admin would view a user's Draft Mode changes) where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way in a field's Field Label, Choice Labels, or Field Notes. (Ticket #139108)
* **Change/improvement:** When setting the designated email field on the Project Setup page or when setting the survey-level designated email field on the Survey Settings page, if the selected field is utilized in more than one event and/or is utilized on a repeating instrument or repeating event, a warning message will be displayed in a yellow box immediately below the email field drop-down to inform the user that any update to the field on any event or repeating instance will change the value of the field in ALL events and repeating instances. This should help provide more transparency to users who might get confused by the fact that the field's value gets updated in all places if the designated email field is located in more than one context in the project. (Ticket #131999)
* Bug fix: When both randomization and MyCap are enabled on a project, users would be unable to enable any instrument as a MyCap task in the Online Designer (excluding active tasks that were imported).
* Bug fix: A fatal PHP error would occur when using DDP Custom in a project for PHP 8. (Ticket #138771)
* Bug fix: A fatal PHP error would occur when certain Data Quality rules when using PHP 8. (Ticket #131294b)
* Bug fix: The REDCap Mobile App page mistakenly noted that the mobile app does not support Field Embedding, which is no longer true. That warning message has been removed.
* Bug fix: If one or more fields in a project utilize the @IF action tag, the REDCap Mobile App page would mistakenly fail to display a warning at the top of page to explain that the @IF action tag is not supported by the mobile app and thus fields with @IF might not function in the mobile app the same as they do on survey pages and data entry forms.
* Bug fix: A couple REDCap pages that are served as AJAX requests via JavaScript mistakenly had their "Content-Type" header set as "text/html" when instead it should have been "application/json", which was causing these requests not to be loaded successfully in the REDCap user interface in certain server/network environments.
* Bug fix: If a user on a data entry form clicks the PDF download option called "This survey with saved data (via browser's Save as PDF)", if some fields on the page have been modified but not yet saved, REDCap will display a confirmation to the user to ensure that they understand that the resulting PDF will not contain only saved data values but instead may contain both saved and yet-to-be-saved values. (Ticket #138777)
* Bug fix: Language ID and display names on the MLM "Usage" page in the Control Center could mistakenly be mismatched in some cases. (Ticket #138808)
* Bug fix: The MLM “Usage” page in the Control Center would mistakenly fail to render HTML special characters in project titles. (Ticket #138887)
* Bug fix: If an external module calls a randomization-related method in a project that does not have randomization enabled, it might throw a fatal PHP error for PHP 8. (Ticket #138756)
* Bug fix: Multi-line text used inside single quotes or double quotes in the @CALCTEXT action tag might mistakenly have some words mistakenly replaced in the resulting text if they look like JavaScript or PHP operators (e.g., "or", "and"). (Ticket #138785)
* Bug fix: When using certain text or HTML inside the text of the @CALCTEXT action tag, the output value of the field might mistakenly be missing some spaces if text elements in the @CALCTEXT contained leading or trailing spaces. Additionally, text used in @CALCTEXT that contains HTML or single/double quotes might mistakenly get mangled and not display correctly on the page for the @CALCTEXT field. (Ticket #138396)
* Bug fix: When using the Survey Auto-Continue feature, in which a participant clicks a survey link of an already-completed survey and is redirected 20 times through a bunch of subsequent already-completed completed surveys, some browsers might mistakenly display a “too many redirects” error to the participant instead of properly redirecting them to the next unfinished survey. (Ticket #138914)
* Bug fix: A malicious user could potentially view a deleted message in REDCap Messenger by manipulating the parameters and/or query string of an HTTP request performed by Messenger. Only administrators should be allowed to view deleted messages in the Messenger interface. (Ticket #138873)
* Bug fix: A malicious user could potentially delete or edit a REDCap Messenger message, even when the user did not create the message and is not an administrator, by manipulating the parameters and/or query string of an HTTP request performed by Messenger. (Ticket #138859)
* Change: Added full support for parameterized queries in REDCap’s db\_query() function.
* Change/improvement: Added a new option $project\_id parameter for the developer method REDCap::getSurveyReturnCode().
* Bug fix: When using the AAF authentication method, the PHP method User::updateUsernameForAaf() mistakenly would not update all the database tables that contain a "user" or "username" column. Four tables were missing from the list. Thus, some database tables would not get updated when the method is called. (Ticket #138396)
* Bug fix: When creating a new project via a Project XML file, if the project is longitudinal and utilizes the Survey Queue and/or Automated Survey Invitations, the Survey Queue and ASI settings might mistakenly not get added from the XML file when the project is created. (Ticket #139035)

**Version 13.0.2 (released on 2022-12-02)**

**CHANGES IN THIS VERSION:**

* **Improvement:** MLM Usage Page - A new “Usage” tab will be displayed on the Multi-Language Management page in the Control Center that will display a list of all projects using MLM and in what ways they are utilizing MLM, such as the number of languages in the project (and how many are active) and whether the following MLM options apply to the given project: Deactivated by user, Enabled by admin, Deactivated by admin, and Debug mode turned on.
* **Major bug fix:** Several PHP 8 related issues for MyCap would sometimes prevent data from syncing correctly back to the REDCap server from the MyCap mobile app.
* **Major bug fix:** When using certain external authentication methods, survey pages might sometimes mistakenly time out if the project's internal Record List Cache (a secondary list of records in the database for improving performance) had not been built yet, which is done automatically by REDCap internally. This would cause an internal API call to fail when it is made inline while loading survey pages, thus causing the survey page not to load. This was supposedly fixed in version 12.4.13 LTS and 12.5.6 Standard Release, but mistakenly was not. (Ticket #104761b)
* Change/improvement: The path to the web server's PHP error log file is now listed at the bottom of the main Control Center page. This information will be useful to help admins locate their web server's error log, which can sometimes be difficult to find.
* Bug fix: The calendar feed might mistakenly provide incorrect times of calendar events for certain geographical regions that do not observe Daylight Saving Time. (Ticket #130176)
* Bug fix: When using the Clinical Data Pull, temporal fields were mistakenly not displayed in the CDP mapping table because REDCap metadata was incorrectly removed from the settings payload.
* Bug fix: When using Clinical Data Pull, when launching from the EHR context, the button "Show record in project" would mistakenly not work if the record name was non-numeric.
* Bug fix: Typo on OpenID Connect's login screen. (Ticket #138381)
* Bug fix: When exporting a project as a Project XML file, the export process might mistakenly fail with a fatal PHP error for PHP 8. (Ticket #138389)
* Bug fix: When creating a new project where a user selects a project template but then chooses to upload a Project XML file, REDCap might get confused about which option was selected and behave unexpectedly, such as creating the project without granting access to the initial user. (Ticket #138361)
* Bug fix: When a calculated field uses the datediff() function, in which the first parameter is literally "today" while the second parameter is a datetime field, the calculation might mistakenly return a blank value. (Ticket #138033)
* Bug fix: In some specific circumstances, the Data Import Tool might mistakenly crash due to a fatal PHP error for PHP 8. (Ticket #138527)
* Change: The “Break the Glass” feature for Epic in CDIS has been updated to automatically refresh any expired BTG token. Previously, BTG tokens were short-lived and did not refresh, thus causing some issues with users.
* Bug fix: Dozens of REDCap pages that are served as AJAX requests via JavaScript mistakenly had their "Content-Type" header set as "text/html" when instead it should have been "application/json", which was causing these requests not to be loaded successfully in the REDCap user interface in certain server/network environments.
* Change: Added an MLM-related note at the top of the survey page where participants enter their survey access code. The note mentions that the language choices seen on that particular page might not necessarily be available on the survey that they are able to enter after entering their access code.

**Version 13.0.1 (released on 2022-11-23)**

**CHANGES IN THIS VERSION:**

* **Improvement:**When setting up repeating Automated Survey Invitations, users can now set the repeating interval value as a number with a decimal (in previous versions, the value could only be an integer). This will allow users to approximate the interval of a monthly repeating ASI as 30.44 days since it is currently not possible for repeating ASIs to be scheduled on exactly the same day and time each month. To help users, a note has been added in the repeating survey section of the ASI setup dialog to inform them how to approximate a month as 30.44 days. (Ticket #136957)
* **Major bug fix:** Regarding Multi-Language Management, if the system-level setting "Require admin activation of multi-language support in projects" is disabled, the "Multi-Language Management" left-hand menu link would mistakenly not be visible to normal users unless one or more MLM languages had already been created in the project. Bug emerged in REDCap 13.0.0.
* **Improvements for CDIS**
	+ Expiration indicator for the “Break the Glass” feature: The new Break the Glass workflow uses tokens that expire in an hour from their creation. The interface will now show if a token is expired.
	+ Delete button for the “Break the Glass” feature: Users can remove entries from the list of Break the Glass protected patients using a button.
* **Improvement:** A link to the Codebook page was added inside the Add/Edit Field dialog on the Online Designer. This will allow the user to open the Codebook in a new tab without having to close the dialog to do so. (Ticket #138300)
* Bug fix: When using repeating Automated Survey Invitations, a record's Record Home Page might mistakenly say that there are upcoming scheduled invitations that will be sent in the next 7 days despite the fact that they are actually scheduled to be sent more than 7 days later. This only involves repeating ASIs that have been scheduled.
* Bug fix: When entering a value for the "Domain allowlist for user email addresses'' setting on the User Settings page in the Control Center, it would mistakenly not allow top-level domains to be entered if they contain more than 4 characters (e.g., vanderbilt.health). It now appropriately allows top-level domains up to the maximum 63 characters. (Ticket #104291)
* Bug fix: Using the “Break the Glass” feature in CDIS might mistakenly fail if the user has no access token.
* Bug fix: The “Mapping Helper” feature in CDIS might mistakenly not appear or be usable in Data Mart projects.
* Bug fix: When using the “Mapping Helper” feature or CDP Mapper for CDIS, some things might not load correctly because of some HTML needing to be escaped first in the resulting JSON.
* Bug fix: If the RemoveTempAndDeletedFiles cron job happens to be running at the same time as the Easy Upgrade process is extracting a new REDCap version, on certain server configurations the cron job might mistakenly delete some of the REDCap files being deployed in the new version, thus leaving the new REDCap version directory missing some critical files. (Ticket #137910)
* Bug fix: Bar charts and pie charts might mistakenly be displayed on Public Dashboards despite having an insufficient amount of data to display (based on the setting "Minimum number of data points required to display Smart Charts, Smart Tables, or Smart Functions on a \*public\* Project Dashboard..."). (Ticket #137411)
* Bug fix: When performing field embedding on a survey page or data entry form, the page might crash due to a fatal PHP error if the project has a very large amount of fields.
* Change: Slight tweak in the SQL queries used on the project Logging page to make the page load faster for older projects. (Ticket #138200)
* Bug fix: When MyCap is enabled in a project, clicking the [?] link to the right of the green Publish button at the top of the Online Designer would mistakenly display an empty dialog when viewing/editing the fields in an instrument (but it looks correct when viewing the instrument list in the Online Designer). (Ticket #138146)
* Bug fix: When MyCap is enabled in a project, on some rare occasions when migrating a project using the MyCap external module, the process might fail due to an SQL error. (Ticket #138168)
* Bug fix: When viewing the MyCap Participant List, in which a baseline date is being used, the baseline date value seen in the table for each participant would mistakenly be displayed in the wrong date format or would appear mangled. (Ticket #138166)
* Bug fix: When renaming an instrument in the Online Designer and then immediately creating a new instrument right after the renamed instrument, the new instrument might mistakenly get relocated to the first-instrument position after being created, and the record ID field might mistakenly get relocated to another position. Bug emerged in REDCap 13.0.0.
* Bug fix: For a repeating Automated Survey Invitation that has conditional logic and has the "Ensure logic is still true" checkbox checked, if a record has invitations scheduled for the repeating ASI, and the ASI's conditional logic no longer evaluates as True for the record, the repeating invites will stop sending (as expected), but the repeating invites would mistakenly still be displayed on the Survey Invitation Log. This would give the false impression to the user that those invitations will be sent when, in fact, they will not. (Ticket #134780)

**Version 13.0.0 (released on 2022-11-17)**

**CHANGES IN THIS VERSION:**

* **New feature: Integration of the MyCap External Module**
	+ **Introduction:**MyCap is a participant-facing mobile application (on iOS and Android) used for data collection and the automated administration of active tasks (activities performed by participants using mobile device sensors under semi-controlled conditions). All data collected in the MyCap app is automatically sent back to the REDCap server as soon as internet connection is available (i.e., it can also be used for offline participant data collection). MyCap is a no-code solution for research teams conducting longitudinally-designed projects or projects with frequent participant contact. MyCap also facilitates participant engagement and retention by providing quick access to project staff and two-way communications (e.g., messaging and announcements) within the app. MyCap is available on any iOS device (iOS v11.0 ) and any Android device (Android v8.0 ). For more information about MyCap, check out the [MyCap website](https://projectmycap.org/), [publication](https://academic.oup.com/jamiaopen/article/5/2/ooac047/6601324), [resources](https://projectmycap.org/resources/), and a list of [MyCap use cases](https://projectmycap.org/mycap-use-cases/).
	+ **System-level settings:**The MyCap feature will be enabled globally by default after upgrading or installing REDCap, but it can be disabled (so that no users see the option in their projects) on the Modules/Services Configuration page in the Control Center. That page also contains a setting where, assuming MyCap is enabled globally, an admin can set it so that 1) users can enable MyCap in their projects on their own, or 2) users will need to click a button in their project to send a request requiring admin approval to enable MyCap in the project.
	+ **Project-level settings:**The ability to enable or request to enable MyCap in a project will be in the Main Project Settings section at the top of the Project Setup page. There is an informational dialog there that can be opened that contains helpful links to many resources, including the MyCap website, the MyCap Help document (a detailed 16-page instruction manual on setup and usage), and three videos.
	+ **Project Utilization:**Utilizing MyCap in a project consists of two main parts: 1) design, and 2) managing participants. The design portion is where users can enable instruments as MyCap tasks, import active tasks, and design the look and feel of the MyCap app (as the participant sees it). **These things pertaining to design are performed in the Online Designer and thus require “Project Design and Setup” rights. The participant portion requires a new user right “Manage MyCap Participants” that appears on the User Rights page after MyCap has been enabled in a project.**Having this privilege, a user will have access to the “MyCap Participant Management” page on the left-hand menu. This page will allow users to view, invite, and message their MyCap participants. In many ways, it is very similar to the “Survey Distribution Tools” page when using surveys.
	+ **External Module Migration:** If users have been using the MyCap external module, there is an upgrade path to import all the MyCap EM settings into the built-in MyCap feature. In projects with the MyCap EM enabled, users will see a “Migrate to REDCap” button on the left-hand menu, which opens a dialog with plenty of information about the new built-in MyCap feature. As the dialog will note, users themselves cannot perform the migration, but a REDCap admin must do so for them. The migration is fast and only requires a couple button clicks, after which it will disable the MyCap EM in the project. Note: Currently, the MyCap EM is planned to be supported only until June 2023, so it is recommended that users using the EM attempt to fully migrate well before that time.
	+ **Smart Variables and Action Tags:**Several new Smart Variables and Action Tags can be used with MyCap, some of which are a required, integral part of how users invite participants and also how MyCap imports data into a project. See the documentation for Smart Variables containing the prefix “mycap-” and Action Tags containing the prefix “@MC-”.
	+ **Stats:**System-level MyCap statistics can be seen on the System Statistics page in the Control Center.
* **Improvement:**New Multi-Language Management option to require admin activation of multi-language support in projects
	+ Administrators may now change the behavior of the Multi-Language Management feature so that project users cannot view or use MLM in a project until a REDCap administrator has first enabled it explicitly in that project.
	+ This behavior can be changed on the Settings tab on the Multi-Language Management page in the Control Center where it says “Require admin activation of multi-language support in projects”. Note: Enabling that system-level setting will not affect any projects where multi-language support is already enabled (either because it had previously been enabled explicitly by an admin or there is at least one language already set up).
	+ Additionally, the following new admin-only options have been added to the Settings tab on the MLM setup page in each project, in which these options only appear to admins and only when the system-level setting has been set where only admins may enable MLM:
		1. “Enable multi-language support for this project” - Allows users with Project Setup and Design rights to see the MLM menu link and to use the MLM setup page.
		2. “Disable and hide multi-language support for this project” - Turning on this option will hide the MLM menu link and prevent access to Multi-Language Management for users even when there are languages defined. This overrides the Enable option above.
* **Improvement for the External Modules Framework:** New "Developer Tools" section & "Module Security Scanning" link on the Control Center -> External Modules -> Manage page.
* Change/improvement: New and improved workflow and user interface for the “Break the Glass” feature when using Clinical Data Interoperability Services (CDIS) with Epic.
* Change: As a convenience, when deleting a conversation in REDCap Messenger, the user is no longer prompted to enter the word "delete".
* Change/improvement: A new check was added to the Configuration Check page to detect if the Zlib PHP extension has been installed on the REDCap web server. (Ticket #137725)
* Change/improvement: The path to the web server's PHP.INI configuration file is now listed at the bottom of the main Control Center page (below the date of the last REDCap upgrade). This information will be useful to help admins locate their web server's config file, which can sometimes be difficult to find.
* Change/improvement: On the Alerts & Notifications page, users are now able to copy deactivated alerts. In previous versions, alerts could not be copied until they were first reactivated.
* Bug fix: Certain versions of MariaDB do not output the "COLLATE" portion of a database table's column definition in the results of a "SHOW CREATE TABLE" query, thus causing false positives to display in the Control Center that say that the "database structure is incorrect". (Ticket #137551, #137575, #137321)
* Bug fix: For some web server configurations, the server's session "garbage collection" might mistakenly not run or might not run very often, thus causing the redcap\_sessions database table to become overly bloated. The garbage collection process is now run manually via a cron job to ensure this task gets performed regardless of server configuration. (Ticket #137675)
* Bug fix: When more than ten completed surveys are displayed in a participant's Survey Queue, the "all surveys completed" row might appear in the wrong place in the table. (Ticket #137550)
* Bug fix: An error message would be seen by a REDCap admin attempting to approve an External Module Activation Request for a user. (Ticket #137672)
* Bug fix: For some users, the My Projects page might be unusually slow to load due to a change in REDCap 12.5.17 (Standard) that removed the usage of AJAX requests on the page. To fix this performance issue, the change from 12.5.17 has been reverted back to the old behavior.
* Bug fix: When a user not assigned to a Data Access Group filters the results on the Logging page by DAG, the page might crash with an error if no users are currently assigned to that DAG in the project. (Ticket #137764)
* Bug fix: When viewing the REDCap Mobile App's "App Data Dumps" page, in which a data dump file could not be found on the server for unknown reasons, it would mistakenly throw a fatal PHP error on the page for PHP 8. (Ticket #137777)
* Bug fix: When using REDCap::saveData() in a plugin, hook, or external module, in which the "dataLogging" parameter is passed to the method as FALSE, the record list cache (i.e., the back-end secondary list of records) would mistakenly fail to get updated during this process. This means that if new records are being created via REDCap::saveData() with dataLogging=FALSE, those records would appear not to have been created until an admin clicked the "Clear the Record List Cache" button, after which the records would finally appear in the project, such as on the Record Status Dashboard, reports, and the Add/Edit Records page. (Ticket #137836)

**Version 12.5.17 (released on 2022-11-11)**

**CHANGES IN THIS VERSION:**

* Change/improvement: If the monthly User Access Dashboard reminder emails are enabled, which are used to remind project users to keep their role-based access rights up to date, the emails will now be sent only during business hours. This is intended to help increase their visibility and thus improve response rates to these reminders.
* Change/improvement: The "My Projects" page (and also the "Browse Projects" page in the Control Center) no longer loads the projects' count of records and fields via AJAX after the page has loaded but instead now loads the counts more efficiently in real time while rendering the page, which requires less HTTP requests.
* Bug fix: When attempting to upgrade an external module from the main Control Center Notifications page, the process would mistakenly fail due to a JavaScript error. However, this process does successfully complete if performed on the External Modules Module Manager page in the Control Center. (Ticket #137243)
* Bug fix: The Duo Universal Prompt utilized in the Duo two-factor authentication in REDCap might mistakenly not work for certain username conventions. REDCap now uses an updated algorithm to match the "simple" username normalization in Duo, in which "DOMAIN\username", "username@example.com", and "username" are treated as the same user. It will also consider aliases when matching the username. Bug emerged in REDCap 12.5.5 Standard. (Ticket #137039)
* Bug fix: When using Multi-Language Management, the section header above a matrix of fields would mistakenly not display the translated text. (Ticket #137255)
* Bug fix: When using CDIS/FHIR services to extract medications from the EHR, the values for the RxNorm code and RxNorm label were mistakenly switched.
* Bug fix: Longitudinal projects might fail to load on the "Setting up Project" screen in the REDCap Mobile App. Bug emerged in REDCap 12.5.15 (Standard). (Ticket #137314)
* Bug fix: CDIS related cron jobs were mistakenly running for projects in Analysis/Cleanup mode or marked as Completed.
* Bug fix: When certain Smart Variables (specifically form-url, form-link, survey-date-completed, survey-time-completed, survey-date-started, survey-time-started, survey-duration, and survey-duration-completed) have [first-event-name] or [last-event-name] appended to them, an incorrect value might be returned from the Smart Variable.
* Bug fix: When performing randomization on a record while on the first instrument, in which the user locks the instrument immediately after randomization has occurred, the record would get mistakenly duplicated after clicking the Save button on the page. (Ticket #137260)
* Bug fix: The BioPortal API token stored in the redcap\_config database table was mistakenly not encrypted at rest as other third-party tokens/keys are. (Ticket #137403)
* Bug fix: When using Multi-Language Management, the language drop-down list was mistakenly being displayed on data entry forms even when only one language has been defined on the MLM setup page. It should only display the language choice list if there is another language to choose.
* Bug fix: If a field is used in cross-form or cross-event branching logic, in which the value of the field contains double quotes, the branching logic may not function correctly on the page. (Ticket #136926)
* Bug fix: A fatal PHP error might be thrown in some specific cases where the method Records::deleteEventInstanceByProject() is called in certain contexts. (Ticket #137376)
* Bug fix: If a project is using record auto-numbering, and the highest-numbered record gets renamed so that it is no longer the highest-numbered record, after which a participant completes a public survey in the project, the new record created by the participant would mistakenly skip the appropriate record number and be assigned to one number higher than expected. (Ticket #125567)

**Version 12.5.16 (released on 2022-11-04)**

**CHANGES IN THIS VERSION:**

* Bug fix: If the text in a Text field or Notes field contains an email address, it should display the email address as a clickable mailto link when viewing the data on a report. However, it would only do that if the field value contained only an email address and no other text. (Ticket #136735)
* Change: Improved compatibility of Clinical Data Pull with Epic Hyperspace, which uses Internet Explorer.
* Bug fix: When an Automated Survey Invitation has been set up in a longitudinal project, in which the ASI's conditional logic includes datediff() today/now and has the "Ensure logic is still true" checkbox checked while additionally one or more of the variables in the logic are missing a prepended unique event name, the DateDiff Today/Now cron job might mistakenly schedule a survey invitation that should not be scheduled, even though REDCap will ultimately unschedule the invitation right before trying to send it. This bug was supposedly fixed in REDCap 12.4.7 LTS and 12.5.0 Standard, but mistakenly it was not. (Ticket #136960)
* Bug fix: The Multi-Language Management settings "Export or import general settings" were mistakenly being displayed on the MLM Control Center page when they should only be displayed in a project. (Ticket #136968)

**Version 12.5.15 (released on 2022-10-27)**

**CHANGES IN THIS VERSION:**

* **Minor security fix:** An SQL Injection vulnerability was found in the Copy Field action on the Online Designer, in which a malicious user could potentially exploit it by manipulating an HTTP request on that page.
* **Minor security fix:** An SQL Injection vulnerability was found in the "Import from Field Bank" action on the Online Designer, in which a malicious user could potentially exploit it by manipulating an HTTP request on that page.
* **Major bug fix:**When a user clicks the "Generate API Token" button on the API page in a project, it would mistakenly return a vague/unhelpful error message saying that the token could not be created (or it would simply reload the page with no warning in some cases). This would happen if the user has API Import and/or API Export privileges but does not have Mobile App privileges. The only user permission that should be required to request an API token on this page are API Import or API Export privileges. Bug emerged in REDCap 12.4.20 LTS and 12.5.13 Standard Release.
* **Major bug fix:**When renaming or deleting an instrument via the Online Designer while in development status, the instrument-level data viewing rights and instrument-level data export rights would mistakenly not always get updated to reflect the new instrument name for all the users and roles in the project. Note: While this fix will prevent the issue going forward, users will need to manually update a user's/role's permissions to fix any already affected users/roles. (Ticket #136038)
* **Major bug fix:** When a field is embedded on a multi-page survey, in which the embedded field's container field is hidden by branching logic on a different page on which the container field is itself located, the embedded field's value might mistakenly get erased when the later survey page is submitted if the embedded field is a Required field.
* Change/improvement: If the URL for a request on the To-Do List page contains an outdated REDCap version number (i.e., the request was made prior to the latest REDCap upgrade), the URL will now be auto-updated in the To-Do List to replace the old REDCap version number in the URL with the current REDCap version number. This will prevent 404 "Not Found" errors when processing To-Do List items in the case where the previous REDCap version directories have been removed from the web server after the latest REDCap upgrade.
* Change/improvement: The "Export Events" API method now also returns the "event\_id" for each event. (Ticket #135602)
* Change: If a user cancels their own request to an admin that requests to move a project to production or to delete a project, the request no longer gets permanently deleted but gets marked as archived instead. This effectively has the same effect but preserves any comments or info associated with the original request, whereas deleting the whole request causes the comments/info to be permanently erased, which might not be ideal. (Ticket #136506)
* Bug fix: When using Multi-Language Management, the Survey Login page text might mistakenly not get translated. (Ticket #136358)
* Bug fix: When using Multi-Language Management, the choices for multiple choice fields would mistakenly not get imported when performing a CSV file import on the MLM setup page. (Ticket #136415)
* Bug fix: When the authentication method is set to "OpenID Connect" or "OpenID Connect & Table-based", admins may define which OIDC attribute will serve as the REDCap user's username. However, the "preferred\_username" attribute was mistakenly missing from the "Attribute to use for REDCap username" drop-down on the Security & Authentication page. (Ticket #132200)
* Bug fix: If a user clicks the "Re-send Email" button for an email displayed on the Email Logging page in a project that has the "Protected Email Mode" feature enabled, that re-sent email would mistakenly not be sent using the Protected Email Mode but would be sent to the recipient as-is. (Ticket #120500)
* Bug fix: The Duo Universal Prompt utilized in the Duo two-factor authentication in REDCap might mistakenly not work and would throw an error if the REDCap username is not all lower case. (Ticket #133020b)
* Bug fix: If a text field on a data entry form or survey page is a required field and already has a saved value, if the field's value is manually removed (via backspacing) on the page and then the field is hidden by branching logic, upon saving the page, the "Some fields are required!" prompt might mistakenly get displayed for the field, which should not occur due to the fact that the field is hidden on the page. (Ticket #136520)
* Bug fix: When using Multi-Language Management, the text in the title of the “Invalid values entered” popup on data entry forms and survey pages would mistakenly not be available for translation on the MLM setup page. (Ticket #136541)

**Version 12.5.14 (released on 2022-10-22)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**When attempting to upgrade to REDCap 12.5.13 (Standard), the REDCap upgrade page would mistakenly redirect the user back to the REDCap home page, thus preventing them from actually completing the upgrade process. (Ticket #136337)
* **Major bug fix:** When performing a data import (via API, Mobile App, Data Import Tool, or REDCap::saveData) that contains not-yet-created records, in which the import process will trigger Automated Survey Invitations immediately after creating the new records, the ASI invitations might mistakenly not get scheduled/sent. In this case, the ASIs would only get triggered when someone modified a record after the import or ran the "Re-evaluate Auto Invitations" process.
* Bug fix: When exporting a Project XML file and creating a new project using it, if the project is not longitudinal but was longitudinal at some point in the past, in which the first event (while longitudinal) was named something other than "Event 1" on Arm 1, then any Automated Survey Invitation settings from the XML file might mistakenly fail to import correct into the newly created project. (Ticket #136254b)

**Version 12.5.13 (released on 2022-10-21)**

**CHANGES IN THIS VERSION:**

* **Change:**The Configuration Check page now provides a suggestion for modifying any REDCap database tables that do not have the InnoDB attribute ROW\_FORMAT set to DYNAMIC. For the greatest compatibility with future REDCap upgrades, all database tables are recommended to have Dynamic row format. If any do not, the Configuration Check page will output the necessary SQL queries for fixing these tables. Note: This is not a requirement but a suggestion to prevent possible issues with future upgrades.
* **Major bug fix:** If a user is currently logged into REDCap and then opens and completes a survey in another browser tab, their non-survey user session would mistakenly get destroyed, thus causing the user to need to log in again when reverting back to the original tab after completing the survey.
* Bug fixes and improvements to CDIS/FHIR launch workflows (EHR and Standalone launch)
	+ Fixed compatibility with Cerner system where auto-login was not working when launching from EHR.
	+ Fixed compatibility with certain external REDCap authentication systems.
	+ Workflow diagram and better logs added in case of error to help identify issues.
* Bug fix: Reports that have filter logic might mistakenly display some records as being in multiple arms despite the fact that they only exist in a single arm (or exit in less arms than depicted in the report). If this occurs, the report will show the record with default values in the other arm. (Ticket #135620)
* Bug fix: When exporting user roles via the API, the "unique\_role\_name" attribute of some roles might mistakenly be blank if the role had been recently created but not yet viewed in the user interface on the User Rights page. (Ticket #125602)
* Bug fix: When upgrading REDCap to v12.1.0 or higher, some queries in the upgrade SQL script might mistakenly fail when specifically using MySQL 8 as the database. (Ticket #131519b)
* Bug fix: When performing a fresh install of REDCap, the install page might output a 500 server error and might provide confusing error messages when valid database credentials have not been successfully added to the [database.php](http://database.php/%22%20%5Ct%20%22_blank) file yet. (Ticket #128344)
* Bug fix: The Duo Universal Prompt utilized in the Duo two-factor authentication in REDCap might mistakenly be preventing some users from successfully logging in to REDCap in certain situations. (Ticket #134514)
* Bug fix: When a user/participant accesses a page utilizing Multi-Language Management for the first time, the auto language selection (via browser settings) might mistakenly not work correctly in certain cases, thus only displaying the correct language for some of the things on the page that were translated on the MLM setup page. (Ticket #135984)
* Bug fix: When performing a data dictionary export in a project that is using "Japanese (Shift JIS)" for the "character encoding for exported files", the process might fail with a fatal PHP error for PHP 8.0 . (Ticket #136046)
* Bug fix: Utilizing a forward slash "/" anywhere inside the @IF action tag would mistakenly cause the action tag not to function. (Ticket #135803)
* Bug fix: The EHR Launch process for Clinical Data Pull might mistakenly result in a JavaScript error, specifically when using Epic, when a user attempts to add a patient to a project inside the REDCap embedded window in Hyperspace.
* Bug fix: CDIS-related issue with FHIR version DSTU2 where date filters were mistakenly not applied to Observations data.
* Bug fix: On the Other Functionality page when exporting the Project XML file ("metadata & data"), it would mistakenly always include all available project attributes in the resulting XML file despite the fact that some or all of the checkbox options for those project attributes were left unchecked on the page. This does not affect the "metadata only" XML file but only the "metadata & data" XML file.
* Bug fix: Important documentation was missing from the Special Functions dialog and FAQ regarding the usage of date/datetime fields with MDY and DMY date formatting when used in text string functions in branching logic and calculations.
* Bug fix: Fields in a project might randomly get out of order, which can be caused by a user on the Online Designer reordering the instruments in conjunction with some other action, such as copying an instrument immediately before the reordering and/or viewing an instrument immediately after the reordering. (Ticket #109041)
* Bug fix: When using Multi-Language Management, the Automated Survey Invitation tab on the MLM setup page might mistakenly display as blank and prevent any translation of ASIs in certain cases, such as when some ASIs have been orphaned in the backend database and are not associated with a valid event in the project. (Ticket #136254)
* Bug fix: The "Conditional logic for Survey Auto-Continue" would mistakenly not get copied into a new project's survey(s) when using the Copy Project feature on the Other Functionality page. (Ticket #136281)
* Bug fix: When REDCap is using WebDAV for file storage, in which the WebDAV connection settings have not yet been defined, a fatal PHP error may occur on certain pages when using PHP 8. (Ticket #136289)
* Bug fix: When a user clicks the "Request API Token" button on the REDCap Mobile App page in a project, it would mistakenly return a vague/unhelpful error message saying that the token could not be created (or it would simply reload the page with no warning in some cases). This would happen if the user did not have API Import or API Export privileges. The only user permission that should be required to request an API token specifically for the Mobile App is "Mobile App" user privileges. Bug emerged in REDCap 12.4.13 LTS and 12.5.6 Standard Release. (Ticket #135788)

**Version 12.5.12 (released on 2022-10-07)**

**CHANGES IN THIS VERSION:**

* Bug fix: The Record Status Dashboard might load unnecessary slowly for projects that are not using Form Display Logic and have 1000 records.
* Bug fix: On some rare occasions in longitudinal projects, a report with filter logic might mistakenly not display its report headers on the page. Bug emerged in the previous version.
* Updates and fixes for the External Module Framework, including a fix that prevents out of memory errors if a record is not specified for the getChoiceLabel() method.
* Bug fix: When using Twilio telephony services for surveys, U.S. phone numbers having the area code "656" would mistakenly not work for SMS or voice calls unless the number has a "1" prepended to it.
* Bug fix: Some pages might mistakenly not function correctly due to a JavaScript error when using Internet Explorer. For example, this can cause branching logic and calculations to fail to function on survey pages and data entry forms when using IE.
* Bug fix: When performing a Data Search specifically on a project's record ID field on the "Add/Edit Records" page in a longitudinal project, some record names might mistakenly not be returned from the search, especially if no data has been saved in the first event for some of the records. (Ticket #135313)
* Bug fix: The "Phone (North America)" field validation might not correctly recognize some valid 10-digit North American phone numbers, especially if the fourth digit is a "3". (Ticket #135444)
* Bug fix: When using the Text-to-Speech survey feature, any fields initially hidden by branching logic on the survey would mistakenly not have the speaker icon displayed for it to allow participants to hear the question text audibly. (Ticket #135010)
* Bug fix: If a project is using Missing Data Codes and is also using the Secondary Unique Field, setting a missing data code for the Secondary Unique Field on a survey or data entry form might mistakenly result in the "Duplicate Value" error dialog. The uniqueness check should instead be ignoring any missing data codes for the Secondary Unique Field. (Ticket #132779)
* Bug fix: If a user is exporting data in EAV format for the Export Records API Method, and some of the data being exported exists on a repeating instrument or a repeating event, the record ID field might mistakenly get exported multiple times as identical rows, despite the fact that the first instrument is not a repeating instrument and does not exist on a repeating event. (Ticket #135154)

**Version 12.5.11 (released on 2022-09-30)**

**CHANGES IN THIS VERSION:**

* **New feature:** Download all files on a report - When viewing a report (including public reports) that contains one or more File Upload fields or Signature fields, a “Download Files (zip)” button will appear on the page to allow users to easily download all the report’s uploaded files into a single zip file for those fields for the records in the report.
* **Improvement/change:**The project API page now displays the user's API token in a text box with a button next to it that, when clicked, copies the API token to the user's clipboard. (Ticket #134577)
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way when uploading a CSV file of alerts on the "Alerts & Notifications" page. (Ticket #134640)
* **Major bug fix:** If using certain versions of PHP 7, especially PHP 7.2, REDCap might result in only an unusable white page due to fatal PHP errors after upgrading to REDCap 12.5.9 or 12.5.10. (Ticket #134397)
* Bug fix: The title of the "None of the Above" dialog on data entry forms and survey pages would mistakenly not display correctly. (Ticket #134326)
* Bug fix: The dialog for the @NONEOFTHEABOVE action tag might mistakenly not display at all.
* Bug fix: Uploading Automated Survey Invitations settings via CSV file might mistakenly mangle some of the timestamps in the file (e.g., "Send at exact date/time:") if they are in YMD date format when the user has an MDY or DMY date format preference set for their user account on the Profile page. The CSV import will now accept dates/times in either YMD date format or the user's preferred date format. (Ticket #133727)
* Bug fix: When importing or exporting the user rights for users or roles (whether via the user interface or API), certain privileges would mistakenly be ignored, such as those pertaining to Randomization, Double Data Entry, and the Data Resolution Workflow. (Ticket #133179)
* Bug fix: When assigning projects to a Project Folder on the "My Projects" page, the project list in Step 2 of the dialog would mistakenly list projects to which the user no longer has access. This would only happen if the projects had been assigned to that particular Project Folder sometime in the past. (Ticket #134503)
* Bug fix: In the Online Designer, when saving a Text field that was previously a Calculated field, the calculation might mistakenly not get removed from the field after being changed to a Text field, thus possibly causing issues when rendering the field on a data entry form or survey. (Ticket #134303)
* Bug fix: A calculation error might occur on a data entry form or survey page whenever a calculated field utilizes one of the [aggregate-X] Smart Variables while also utilizing other Smart Variables that result in a text string (as opposed to a number - e.g., [record-dag-label]). (Ticket #134589)
* Bug fix: When exporting a Project XML file and creating a new project using it, if the project is not longitudinal but was longitudinal at some point in the past, in which the first event (while longitudinal) was named something other than "Event 1" on Arm 1, then any Survey Queue settings from the XML file might mistakenly fail to import into the newly created project. (Ticket #134837)
* Bug fix: The "Advanced Link" option for Project Bookmarks might mistakenly return data from the API even though the user's REDCap session is no longer active. If the session has ended, the API should instead return only a value of "0".
* Bug fix: When viewing a Custom Record Status Dashboard in a longitudinal project, in which the filter logic references fields that might exist on events that contain no data for certain records, those records with no data for the event might mistakenly not get displayed on the dashboard. (Ticket #134055)
* Bug fix: When editing an alert on the Alerts & Notifications page and clicking the keyboard Enter button right after entering an invalid email address into the "manually enter emails" text boxes for the Email To, CC, or BCC settings, the error dialog would mistakenly never close but would keep popping up endlessly. This would prevent the user from fixing the email address entered and ultimately could only be resolved by refreshing the page. (Ticket #135021)

**Version 12.5.10 (released on 2022-09-16)**

**CHANGES IN THIS VERSION:**

* Bug fix: The "Add Participants" dialog on the Participant List page would mistakenly be missing some text that displays the name of the currently selected arm (only for longitudinal projects that have multiple arms). (Ticket #134086)
* Various fixes and updates for the External Module Framework, including:
	+ The enable-email-hook-in-system-contexts flag must now be set to true in config.json for the redcap\_email hook to run in system contexts (when a project ID is not specified).
	+ External Module Framework unit tests have been refactored to significantly improve performance.
* Bug fix: When new records are being created via a data import that will trigger the scheduling of an Automated Survey Invitation that contains the Smart Variable [survey-queue-url] or [survey-queue-link] in the ASI email body, the Smart Variable would mistakenly be blank in the resulting email that gets scheduled. This does not affect existing records but only those created via data import. (Ticket #101536)
* Bug fix: Appending the Smart Variable [aggregate-count:record\_id] with a parameter to filter the results by one or more specific Data Access Groups (using the either unique DAG names or "user-dag-name") would mistakenly have no effect on the result. (Ticket #132676)
* Bug fix: When opening a Calendar event, the popup might crash due to a fatal PHP error in PHP 8.0 . (Ticket #134180)

**Version 12.5.9 (released on 2022-09-09)**

**CHANGES IN THIS VERSION:**

* **Medium security fix:**A Cross-site Scripting (XSS) vulnerability was discovered where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way for calculated fields on data entry forms and survey pages. (Ticket #132986)
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way for certain features of REDCap Messenger.
* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way for a certain feature on the Project Setup page and Copy Project page.
* **Improvement:** Various changes and improvements for the External Module Framework, including a new module AJAX request feature (thanks to Günther Rezniczek and Mark McEver). While it has always been possible to make AJAX requests via module code, using this new framework method makes it easier and more secure. Note that for framework version 11 , logging in non-authenticated contexts must be explicitly allowed by setting the “enable-no-auth-logging” flag in “config.json”.
* Bug fix: When renaming records, the record name would mistakenly get double-decoded during the process, which is not necessary and might cause issues depending on the specific characters inside the record's record name. (Ticket #133650)
* Bug fix: Using "now" or "today" as the first parameter in the @CALCDATE action tag might mistakenly not work while viewing a data entry form or survey page if the @CALCDATE field has DMY or YMD date format. (Ticket #133677)
* Bug fix: When using the Randomization feature and randomizing a record in a project that has record auto-numbering enabled, in which the record is being randomized before the record has first been created, right after the record has been randomized, the left-hand menu link to the record's Record Home Page might mistakenly point to a new not-yet-created record instead of the record that was just randomized. (Ticket #133678)
* Bug fix: When using the biomedical ontology searching mechanism on a data entry form or survey, results in certain ontologies might not return the expected "notation" or "cui" attribute (because they do not have those attributes), thus defaulting to the using the label itself for the data value of the field. It should instead attempt to use the "@id" attribute (if available) as a tertiary measure before defaulting to using the label. (Ticket #133550)
* Bug fix: When using "OpenID Connect" or "OpenID Connect & Table-based" authentication and logging in to the server at a specific URL outside the main REDCap Home page, the user would always mistakenly be redirected back to the Home page instead of the original URL. This could cause issues in certain cases, such as when clicking the email address validation link from an email. (Ticket #133729)
* Bug fix: When using WebDAV for file storage in REDCap, very large files might be able to be uploaded into File Upload fields, but attempting to download the same large files might mistakenly result in a fatal PHP error due to memory constraints. (Ticket #133638)
* Bug fix: When viewing the dialog of Upcoming Scheduled Survey Invitations for a record on the Record Home Page, the survey title (if long) might mistakenly be truncated inside the dialog. (Ticket #133813)
* Bug fix: The "Other Export Options" page was mistakenly displaying the Tableau Export dialog contents near the top of the page instead of only displaying it inside the dialog after clicking the blue "View export instructions" button. (Ticket #133813)
* Bug fix: When using Multi-Language Management, in which a survey’s text is translated, the survey might crash with a fatal PHP error in specific scenarios when using PHP 8. (Ticket #133892)
* Bug fix: When using the Data Resolution Workflow and either opening/responding to/closing a data query or verifying/de-verifying a value via the results of a Data Quality rule on the Data Quality page, that specific result's button in the Data Quality dialog might not correctly get updated with the new status icon/number of comments if the project is longitudinal but instead would incorrectly display the icon/comment count for another event's result for the same record. (Ticket #131878)

**Version 12.5.8 (released on 2022-09-02)**

**CHANGES IN THIS VERSION:**

* **Minor security fix:** The third-party JavaScript libraries Handlebars and Moment.js were updated to the latest version because they contained some security vulnerabilities.
* **Major bug fix:** When using Multi-Language Management on a survey with the e-Consent Framework enabled, the PDF displayed inline on the page to the participant at the end of the survey would mistakenly not be in the participant's chosen language but instead would be in the default language. Note: This does not affect the e-Consent PDF being stored in the File Repository, which is correctly stored in the participant's language.
* Bug fix: Fix for fatal PHP 8 error when viewing the Participant List page in specific circumstances. (Ticket #132555)
* Bug fix: The Email Logging page would mistakenly not return any logged emails if the search filter was set to return emails of type "Alerts & Notifications". This was due to emails not getting stored in the email logging database table with the correct category attribute. Thus, when using the type filter "Alerts & Notifications" going forward, it will only return results of emails sent after upgrading to this version of REDCap. (Ticket #133222)
* Bug fix: When creating a report and adding a date, datetime, or number field as a report filter in Step 3, if the field has a min or max range validation set and the user enters a value for the filter field that was outside of the field's min/max range, it would mistakenly display the out-of-range warning. This out-of-range warning is not necessary when building reports but only when entering data. The out-of-range check has been removed for report filter fields. (Ticket #133203)
* Bug fix: When a user in a Data Access Group is viewing the Logging page or calling the API Export Logging method, if the "Filter by event" filter (or "logtype" parameter in the API) was set to a record-oriented value (e.g., Record created only), certain logged events might mistakenly not be returned if the logged events were not performed by a user that explicitly belongs to the current user's DAG (e.g., a non-DAG user or a survey participant). (Ticket #133203)
* Bug fix: While reordering an event on the Define My Events page of a longitudinal project, the black popup that appears temporarily would mistakenly be located in the wrong place on the page. (Ticket #133296)
* Various updates and fixes for the External Module Framework, including:
	+ Logged a stack trace instead of displaying it to avoid exposure of file paths
	+ Prevented redcap\_module\_link\_check\_display() from running on surveys
	+ Miscellaneous documentation updates
	+ Miscellaneous Psalm scanning improvements
	+ Fixed miscellaneous PHP 8 warnings
* Bug fix: A space was mistakenly missing before the URL in the "Super API Token has been deleted" email sent to the user. (Ticket #133345)
* Bug fix: When adding a new instrument to a project in development status, all users in the project would mistakenly not automatically be given "Full Data Set" data export rights to the new instrument. In certain circumstances when a new instrument is added, users would receive De-Identified export rights mistakenly, and in other situations, they would not appear to have any export rights at all for the new form until they logged in to REDCap and entered the project. This could additionally cause confusion where it might appear that the user's form-level export rights had changed if the user had not accessed the project during the time in which the new instrument was created and then the project was moved to production. (Ticket #133306)
* Bug fix: When using Multi-Language Management, the MLM setup page might mistakenly crash with a fatal PHP error in specific circumstances due to UTF-8 characters being present in some text. (Ticket #133305)
* Bug fix: When creating/editing an alert on the Alerts & Notifications page, the "Show Advanced SendGrid Settings" link inside the alert dialog would mistakenly be displayed when the SendGrid Template option is not selected and also when the SendGrid Template setting is not even enabled in the project or whole REDCap system. Bug emerged in REDCap 12.5.6 (Standard).
* Bug fix: The Duo Universal Prompt utilized in the Duo two-factor authentication in REDCap might mistakenly crash with a fatal PHP error in certain situations. (Ticket #133318)
* Bug fix: Added 11 missing LOINC codes for Clinical Data Interoperability Services (CDIS) mapping.
* Bug fix: Clicking the "Project Owners" button on the Email Users page in the Control Center might mistakenly select some users that should not be selected, especially if the users had been project owners on projects that had been marked as completed or were recently deleted.
* Bug fix: When using Azure AD authentication, specifically V1 of Azure AD, the username or email address for a B2B collaboration user object might contain an "#EXT#" identifier as text inside it in certain cases. This is problematic to have the character "#" in a user's username and email. If this occurs, the text "#EXT#" will be automatically removed. (Ticket #121605c)
* Bug fix: When a user has User Rights privileges in a project and has also been assigned to a Data Access Group, if the user goes to edit their own rights on the User Rights page and clicks "Save", it would mistakenly remove them from their current DAG without warning. (Ticket #133313)
* Bug fix: When using Twilio for sending SMS messages for survey-related activities, in some cases the Survey Invitation Log might not correctly report that the participant had opted out of receiving SMS messages. In these cases, in which the Twilio API returns the specific error message "Attempt to send to unsubscribed recipient", the invitation log now correctly notes that the invitation did not send because the participant opted out. (Ticket #105253)
* Bug fix: When a user clicks the "Delete data for THIS FORM only" button at the bottom of a data entry form, in which the form exists on a repeating event where no other forms have data (i.e., all other form status icons are a gray color), the repeating event would mistakenly still appear in reports when in fact it should no longer appear in reports. (Ticket #131790)

**Version 12.5.7 (released on 2022-08-26)**

**CHANGES IN THIS VERSION:**

* **Minor security fix:** Several Cross-site Scripting (XSS) vulnerabilities were discovered where a malicious user could potentially exploit them on specific pages by inserting HTML tags and JavaScript event attributes or by manipulating parameters in the URL, specifically when editing Project Dashboards, when uploading and viewing inline images files on forms/surveys, and when entering Missing Data Codes of the Project Setup page.
* Change: When performing a data export, the dialog now mentions more REDCap publications that might need to be cited in published manuscripts relating to the current REDCap project. Such publications would include those for MyCap, the REDCap Mobile App, the e-Consent Framework, and CDIS.
* Change: The Configuration Check page now suggests that the MySQL setting "max\_allowed\_packet" be increased to 128 MB or higher (preferably to 1 GB) if it is currently less than 128 MB. In previous REDCap versions, it only made this recommendation if its value was less than 16 MB, which proved to be too small for certain very large projects to function normally.
* Bug fix: When the system-level setting "Allow reports to be made 'public'?" has been set to "No", administrators would mistakenly not be allowed to make reports public. Regardless of this setting, admins should always be able to make any report public. (Ticket #132901)
* Bug fix: Clicking the "View export instructions" for the Tableau Export option on the "Other Export Options" page might mistakenly fail to open the dialog, thus resulting in a JavaScript error.
* Bug fix: When changing the system-level language on the General Configuration page in the Control Center, the page would mistakenly not change over to the new language immediately after submitting the page but only when the page was refreshed afterward.
* Bug fix: The new Duo Universal Prompt utilized in the Duo two-factor authentication in REDCap might mistakenly not work for certain devices/OSs, such as iPhones and iPads. Bug emerged in REDCap 12.5.5 Standard. (Ticket #133020)
* Bug fix: When using Multi-Language Management, single-instrument PDF downloads would mistakenly not occur in the user's preferred language but would always be rendered in the default language. Bug emerged in REDCap 12.5.2 Standard. (Ticket #133121)
* Bug fix: If a user knows specific paths for the PHPQRCODE third-party library in REDCap, they could call it many times at a specific URL, which might cause the web server's storage to fill up with lots of temporary files. (Ticket #132432)
* Bug fix: When using Form Display Logic in a longitudinal project, in which the logic references one or more fields on an event that currently has no data for a given record, the Form Display Logic would mistakenly fail to work correctly.
* Bug fix: When piping a date or datetime field into the max validation range check for another date/datetime field, if the field being used as the max exists on a different instrument or survey page, it would mistakenly not throw an out-of-range warning if the value was above the maximum. Note: This does not affect the min range check but only the max. (Ticket #124222b)

**Version 12.5.6 (released on 2022-08-19)**

**CHANGES IN THIS VERSION:**

* **New Feature: SendGrid Template Advanced Settings for Alerts & Notifications**
	+ Introduction - A new “advanced settings” section was added to the Alerts & Notifications interface when building an alert using the relatively new SendGrid Template alert type that gives users more control over the underlying SendGrid API call being made when REDCap triggers a SendGrid Template alert. Note that all of the advanced settings are optional, and they are all disabled by default. If “SendGrid Template email services for Alerts & Notifications” are enabled for a project on the Project Setup page, then these advanced settings will appear in the alert creation dialog after selecting “SendGrid Template” as the alert type. The new advanced settings are all listed in detail below.
	+ SendGrid Unsubscribe Groups - SendGrid can allow recipients of its emails to unsubscribe from all emails being sent from a sendgrid account, or from emails associated with specific unsubscribe groups in a sendgrid account. To take advantage of custom unsubscribe groups, you can create unsubscribe groups in your sendgrid account then associate them with alerts in your REDCap project. When a recipient unsubscribes from an email that has been associated with a specific unsubscribe group, they get added to that unsubscribe group's list and any future emails that are associated with that unsubscribe group will not be delivered to them. An alert can be associated with at most one unsubscribe group. Here is SendGrid's documentation on unsubscribe groups: <https://docs.sendgrid.com/ui/sending-email/unsubscribe-groups>.
	+ SendGrid Categories - SendGrid allows you to associate arbitrary categories to each email you send from your account, effectively giving you the ability to tag each individual email sent with different metadata about the email like the email type. Unlike unsubscribe groups, categories don't have to be made in your sendgrid account before associating them with an alert in REDCap. You can define your categories in REDCap as you create your REDCap alert, and your sendgrid account will automatically detect new categories as emails get sent with them. In your SendGrid account's Category Stats page, you'll be able to see data about your emails by category. You can associate up to 10 unique categories per email, and a category name cannot be longer than 255 characters.
	+ SendGrid Mail Settings - Full documentation for the SendGrid bypass settings can be found at <https://docs.sendgrid.com/ui/sending-email/index-suppressions#bypass-suppressions>.
		1. Bypass List Management- When enabled, your email will be delivered regardless of any other existing suppression management control in your account. For example, if a recipient is in an unsubscribe group or the global unsubscribe group, they will still receive the email if bypass list management is enabled. Bypass List Management can't be combined with any other bypass option.
		2. Bypass Spam Management - Allows you to bypass the spam report list to ensure that the email is delivered to recipients. Some email services allow recipients to mark emails as spam. In some cases, sendgrid will be notified when a recipient marks an email as spam and will maintain a spam report list.
		3. Bypass Bounce Management - Allows you to bypass the bounce list to ensure that the email is delivered to recipients. A bounce occurs when a receiving mail server rejects an incoming email. This can happen if the recipient address is bad, for example. If sendgrid sees too many bounces happening, it will add that recipient to a bounce list and it will stop trying to send mail to that recipient. Enabling this will bypass that bounce list and force sendgrid to retry delivery.
		4. Bypass Global Unsubscribe Management - When enabled, your email will be delivered even if the recipient is on your account's global unsubscribe list.
		5. Sandbox Mode - Sandbox mode lets you check for errors in the SendGrid API call used to send an email without the potential of delivering the email. If you're unsure about your sendgrid configuration, you can run a test by enabling sandbox mode for an alert and triggering it. If your project's logs state that the alert was sent successfully and you don't see any errors, then your configuration is good to go. However, since sandbox mode was enabled for that alert, an email was not actually sent. After you're satisfied with your tests, you can disable sandbox mode and start sending real emails with your alert.
	+ SendGrid Tracking Settings
		1. Click Tracking - SendGrid has the ability to detect when a recipient clicks on links in an email. The count of clicks for a given email can be seen in the email activity section of your sendgrid account.
		2. Open Tracking - SendGrid has the ability to detect when a recipient opens an email by embedding a single pixel image in an email. Enabling this setting will make sendgrid include this tracking pixel in your emails. You can view the count of opens for a specific email in the email activity section of your sendgrid account.
		3. Subscription Tracking - If subscription tracking is enabled and configured on your sendgrid account, this setting lets you choose whether or not you want to include the global unsubscribe link associated with the subscription tracking feature in your emails. Note that you can utilize unsubscribe groups without using the more general subscription tracking feature. I believe subscription tracking is disabled by default on a sendgrid account. Here is some documentation from sendgrid about unsubscribe methods: <https://support.sendgrid.com/hc/en-us/articles/1260806604209-Unsubscribe-Methods>
	+ Miscellaneous Additions
		1. Added an External Service Check for <https://api.sendgrid.com/v3> in the Control Center's Configuration Check page.
		2. Added a line in the Modules utilized section of the Systems Statistics page to keep track of how many non-practice projects are utilizing sendgrid for Alerts & Notifications.
	+ Additional SendGrid API Token Requirements - To fully support SendGrid Advanced Settings, the SendGrid API token used in the project's setup needs the permission for getting an account's unsubscribe groups through the API. This permission is mapped to the asm.groups.read scope. You can add this permission to your existing API token by editing its permissions in your SendGrid account and giving it Read Access to Unsubscribe Groups in the Suppression section.
* **Improvement:** When utilizing Multi-Language Management in a project, the Field Finder on the Codebook page now supports searching in translated field labels.
* **Improvement:**The date of the most recent REDCap upgrade for the system is now displayed near the bottom of the main Control Center page. (Ticket #69036)
* **Improvement:** "Project 5 (COVID-19)" was added as a new classification that is selectable under the NIH CDE Repository catalog for the Field Bank feature in the Online Designer. Project 5 (COVID-19) is a classification of NIH-Endorsed CDEs (Common Data Elements).
* **Major bug fix:** When exporting a PDF that contains a multiple choice field that has been flagged as an Identifier field, if the user has De-Identified data export rights for the field's instrument, the data for the field would mistakenly not be removed from the resulting PDF. (Ticket #132190)
* **Major bug fix:** When clicking the “Forgot your password?” link on the login page and then entering the username of a valid REDCap user, the password of the username entered would mistakenly be reset immediately after being entered, which could lock out the user if a malicious user is randomly entering usernames to try and discover a valid username. It now only resets the user’s password after they click the password reset link in the email that they receive. Additionally, in order to prevent malicious users from discovering valid usernames, the password reset page now returns the exact same message in all situations, whether the username entered is a real username or not. In the case when using one of the “X & Table-based” authentication methods, if the user entered is an external user (i.e., not a Table-based user), they will also receive an email that will inform them that they must reset their password using an external resource outside of REDCap (or it will instead display the custom password reset text that has been defined in the Control Center). (Ticket #132595)
* **Major bug fix:**When using certain external authentication methods, survey pages might sometimes mistakenly time out if the project's internal Record List Cache (a secondary list of records in the database for improving performance) had not been built yet, which is done automatically by REDCap internally. This would cause an internal API call to fail when it is made inline while loading survey pages, thus causing the survey page not to load. (Ticket #104761)
* Bug fix: The Codebook page can become very slow in certain situations when lots of fields exist in the project, especially when utilizing languages for Multi-Language Management. (Ticket #132349)
* Bug fix: When using Multi-Language Management in a project, some translations might get mistakenly overwritten when importing a CSV/JSON translation file due to an issue with case sensitivity with the language ID (e.g., “es” vs “ES”). (Ticket #132443)
* Bug fix: Some of the text inside the dialog displayed to an administrator when a project has been marked as Completed was changed in order to be less confusing about the project's status after the admin has restored it. (Ticket #132499)
* Bug fix: When using Azure AD authentication, users might mistakenly not have their first/last name and email auto-populated into their user profile after initially logging in to REDCap. This bug was supposedly fixed in the previous version but mistakenly was not. (Ticket #130664b)
* Bug fix: When using the Data Resolution Workflow feature and creating data queries based on the results of Data Quality rules, the results of the Data Quality rules might not display the correct number of comments for a given discrepancy unless it belongs to a repeating instrument. (Ticket #131878)
* Bug fix: When a user's date/time format user preference on the Profile page is set specifically to "YYYY-MM-DD and 24-hour time", some timestamps displayed in the REDCap user interface (e.g., Most recent activity on Project Home, Email Logging sent time) would mistakenly display the "seconds" component of the datetime when it should only display hours and minutes. (Ticket #132678)
* Bug fix: When using Azure AD authentication, the username for a B2B collaboration user object might contain an "#EXT#" identifier as text inside it in certain cases. This is problematic to have the character "#" in a user's username. If this occurs, the text "#EXT#" will be automatically removed from the user's username. (Ticket #121605b)
* Bug fix: By manipulating URLs and/or JavaScript variables on a REDCap project page, a user might be able to request an API token for a project in which they do not explicitly have API rights (although they would have to have access to the other project in order to do this). Even if the administrator approved the token request via the To-Do List or via the email request, the user would not be able to obtain the API token that was created for them, nor would they be able to use the token even if they could somehow obtain it. So no real harm or privacy issues could result from this. (Ticket #132778)
* Bug fix: When using Multi-Language Management and importing translations for survey settings via a CSV file, some survey settings would mistakenly fail to import successfully. (Ticket #132828)
* Bug fix: When using Multi-Language Management, the “[Reminder]” text for Automated Survey Invitation reminders was mistakenly not translatable. It can now be translated on the User Interface > Survey > Survey Emails section on the MLM setup page. (Ticket #132868)

**Version 12.5.5 (released on 2022-08-05)**

**CHANGES IN THIS VERSION:**

* **Improvement:**Admins can now provide an alternate URL that will be used for the "Contact REDCap Administrator" links on each project's left-hand menu. If admins are using a ticket system, for example, to collect questions/issues from users, they may enter the URL of the ticket system's page where new tickets can be submitted. The alternate URL can be entered on the General Configuration page of the Control Center. If left blank (its default value), the "Contact REDCap Administrator" links will function as they have in previous versions, in which clicking them will open a pre-formatted email in the user's native email client.
* **Improvement:**The Duo two-factor authentication process has been upgraded to use the new Duo Universal Prompt. This will provide a better and more reliable user experience for those institutions using Duo for two-factor authentication in REDCap. (Ticket #130859)
* **Improvement:**Two more fields (general\_practitioner and managing\_organization) were added to the Patient FHIR resource when using the Clinical Data Mart service for CDIS.
* **Major bug fix:** When viewing and downloading files under the "Data Export Files" tab of the File Repository, users that do not have Full Data Set data export rights to every field contained within a given export file on that page would mistakenly be able to download the export file(s). REDCap will now check to ensure that the user has Full Data Set access to every field contained within the export file, and if they do not, the user will not be able to download the data export file(s), in which it will instead display the following message on the page: "NOTICE: You are not able to download the export files here because you have either none or partial data export rights to one or more fields contained within the data export file." This bug was introduced in REDCap 12.2.0 with the advent of instrument-level data export rights.
* Bug fix: When a user attempts to submit an instrument to the REDCap Shared Library via the Online Designer, the descriptive text regarding this process mistakenly includes a dead hyperlink to a page that no longer exists. The hyperlink has been replaced with a modal dialog containing the same information. (Ticket #131617)
* Bug fix: PHP compatibility issue in some circumstances might cause the PDF export to fail with a fatal error when using PHP 8. (Ticket #131673)
* Bug fix: When using Multi-Language Management, some HTML and JavaScript might be inserted into the webpage source code too early when viewing the Survey Access Code page. (Ticket #131704)
* Bug fix: The Codebook would mistakenly not display the min/max values of slider fields on the page if the min/max range values were never explicitly set (i.e., as 0 and 100, respectively). (Ticket #131065b)
* Bug fix: When using Multi-Language Management, there might be an issue when attempting to import a system language (from the Control Center) into a project and also with exporting a language. (Ticket #131811)
* Bug fix: A user creating a new project would mistakenly not receive "Full Data Set" data export privileges on all instruments in the new project.
* Bug fix: When using the Survey Setting to provide custom text for the survey’s Submit button, in which a field variable is piped into the Submit button text, it might mistakenly cause the Previous page button not to function on the survey page. (Ticket #131937)
* Change: When deleting a project via the Other Functionality page, it now displays the total number of project records inside the Delete Project dialog to give the user more context prior to deleting the project.
* Bug fix: Viewing a report might cause the page to mistakenly crash with a fatal PHP error in certain situations when running PHP 8. (Ticket #132041)
* Bug fix: If a participant is attempting to take an Adaptive or Auto-Scoring survey (i.e., downloaded from the REDCap Shared Library), in which the survey has the Survey Login feature enabled, after the participant has successfully logged in, the survey would mistakenly not display correctly because the first question and submit button would not be visible on the page, thus making it impossible to complete the survey (unless the participant refreshed the page in their browser, after which it would work correctly).
* Bug fix: When using Multi-Language Management, if a user exports a CSV language file on the MLM setup page, edits it, and then imports it back again, in certain circumstances the uploaded changes might not take effect.
* Bug fix: When using Azure AD authentication, users might mistakenly not have their first/last name and email auto-populated into their user profile after initially logging in to REDCap. (Ticket #130664)
* Change: In the Action Tag documentation, a note was added about how to escape text returned from the @CALCTEXT action tag.
* Bug fix: When using Multi-Language Management, if the survey setting checkbox “Store the translated version of the PDF” is not checked for the “Save a PDF of completed survey response to a File Upload field” setting on the Survey Settings page, the saved PDF of the response would mistakenly be stored in the language that the participant had chosen on the survey page instead of storing the PDF using the default language. (Ticket #131879)

**Version 12.5.4 (released on 2022-07-27)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**When the Protected Email Mode is enabled in a project, and a recipient clicks the link in their email to view the original email content within REDCap, they would never receive the follow-up email containing the one-time code, thus preventing them from accessing the content of their email. (Ticket #131414)
* **Major bug fix:**When an Automated Survey Invitation utilizes conditional logic with the "Ensure logic is still true" checkbox checked, and a survey invitation gets scheduled, after which the record's data is modified, thus invalidating the ASI conditional logic, the scheduled invitation would mistakenly fail to get automatically deleted. Bug emerged in REDCap 12.5.0 (Standard). (Ticket #131358)
* **Major bug fix:** When using Google OAuth2 authentication with the User Allowlist enabled, the User Allowlist would mistakenly not prevent users from logging in who were not on the allowlist. (Ticket #131346)
* **Major bug fix:** When simultaneous users are viewing the same data entry form for a record that has not yet been created, in which the same tentative record name is displayed at the top of the form for both users, if the second user attempts to lock the form after the first user has already saved the form and created the record, the second user will end up creating a record with another record name (as expected); however, instead of the second record's form getting locked, the first user's record would mistakenly be the one that gets locked. (Ticket #131431)
* Bug fix: Various PHP errors specific to PHP 8 were fixed on the Data Quality page. (Ticket #131294)
* Bug fix: Attempting to copy an instrument in the Online Designer when the instrument contains no fields (excluding the form status complete field) often results in the instrument not actually being copied or causes it to be half-copied (i.e., almost copying it but leaving some parts orphaned in the database backend). To fix this, users will no longer be able to copy an instrument if the instrument has no fields. If a user attempts to copy an instrument with no fields, a dialog will be displayed letting them know that they cannot copy the instrument until at least one field exists in the instrument. (Ticket #131273)
* Bug fix: When using the Multi-Language Management feature, selecting a language as the Fallback language in the MLM setup might prevent the user/participant from switching to the Default language on a form/survey and would instead mistakenly display the Fallback language text on the page.
* Bug fix: A fatal PHP error might occur when using a CDIS service. (Ticket #130928)
* Bug fix: When using biomedical ontology searching for a Text field, certain specific codes for very specific ontologies (e.g., SNOMEDCT) might mistakenly return a slightly incorrect code/value (typically off by a value of "1"). This appears to be extremely rare and seems to be due to a limitation with regard to how JavaScript handles large numbers. (Ticket #131406)
* Bug fix: If survey instructions or survey completion text is indented in specific ways (e.g., when the HTML <p> tag has a padding style added to it), the indention would not appear on the survey page but only on the Survey Settings page. (Ticket #131479)
* Bug fix: When two records are about to be created on a data entry form with the same tentative record name (as is displayed at the top of the form) by two simultaneous users, and the second record being created is created via the randomization process, then the project Logging page would mistakenly list the second record's record name with an incorrect value in the "List of Data Changes" column, although the real record name in the "Action" column would be correct for the record.
* Bug fix: The “json-array” data format that was recently added to REDCap::getData might mistakenly not return the full data expected but might only return partial data when using REDCap::getData with “json-array” data format for large sets of data.
* Bug fix: When using the Data Resolution Workflow feature and creating data queries based on the results of Data Quality rules, the results of the Data Quality rules might not display the correct number of comments for a given discrepancy if it belongs to a repeating instrument or repeating event. (Ticket #130207)
* Bug fix: When upgrading to REDCap 12.1.0 or higher, in certain situations the resulting upgrade SQL script might contain some malformed "drop foreign key" queries in which the foreign key name is mistakenly blank, thus resulting in an SQL error during the upgrade. (Ticket #131519)
* Bug fix: Fixed typo on the Publication Matching page in the Control Center. (Ticket #131581)
* Bug fix: When the text of the survey Submit buttons have been translated (either via a language INI file or via the Multi-Language Management feature), the button text might mistakenly spill out of the button and not display correctly if the button text ends up being wider than 140 pixels. (Ticket #131545)

**Version 12.5.3 (released on 2022-07-21)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:**The "Export Logging" API method would mistakenly allow users to export a project's logging when they do not explicitly have "Logging" privileges in the project. Note: The method would still require API Export privileges to work. The method now requires both API Export privileges and Logging privileges. (Ticket #131089)
* **Minor security fix:** The jQuery UI library was updated from v1.13.1 to v1.13.2 due to a Cross-site Scripting (XSS) bug.
* Bug fix: When using Multi-Language Management and translating the alternative Stop Action text that appears when a survey ends via Stop Action, the alternative Stop Action text would mistakenly not appear in its translated form when displayed on the survey page. (Ticket #130689)
* Various fixes and updates to the External Module Framework, including:
	+ Clarified that the button to delete modules applies only to the selected version, not all versions.
	+ Fixed issue with choice labels that have commas in them getting cut off.
	+ Expanded log() method docs.
* Bug fix: When using Multi-Language Management, certain items would not be translated when only one language (which differs from what is set as the project language) is used. (Ticket #130688)
* Bug fix: When an Automated Survey Invitations option "Send the invitation X before/after Y" in Step 3 is set to "the same day (beginning at midnight)...", the invitation would mistakenly not get scheduled in longitudinal projects if the survey of the invitation being scheduled exists on a different event from the event where the ASI is being triggered (e.g., if a pre-screening survey on the first event is supposed to trigger an ASI for a follow-up survey on a subsequent event). Note: There is no way for REDCap to automatically schedule any invitations that missed getting scheduled as a result of this bug, so the only way to get the invitation(s) scheduled appropriately is to run the "Re-evaluate ASIs'' option in the Online Designer or instead open each record and click the "Save" button on any data entry form (or wait for the datediff today cron job to trigger it - this only happens if datediff today/now is used in the ASI conditional logic). Most importantly, users may need to adjust the send-time of any new invitations that get scheduled that initially missed getting scheduled due to this bug (because their scheduled date might differ from what their scheduled date should have been originally). (Ticket #131024)
* Bug fix: When using the "Save & Return Later" feature on a multi-page survey, in which the survey contains a non-hidden @CALCTEXT field whose value gets populated early in the survey, when a participant returns to the survey later, REDCap would mistakenly advance the participant to the page with the @CALCTEXT field, even if it occurs on a later page than where the participant left off. (Ticket #131056)
* Bug fix: Any embedded images (added via the rich text editor) displayed on a public report or public project dashboard would mistakenly not display successfully on the page. (Ticket #130897)
* Bug fix: Regarding the Text-To-Speech functionality for surveys, the "Arabic (Male)" voice was deprecated in the IBM Watson TTS service that is utilized by REDCap. That voice has now been removed as an option on the Survey Settings page, and any surveys using the "Arabic (Male)" voice will automatically have the Text-To-Speech functionality disabled.
* Bug fix: The Codebook would mistakenly not display the min/max values of slider fields on the page if the "Display number value?" slider setting is not checked/enabled. (Ticket #131065)
* Bug fix: When using one of the "X & Table-based" authentication methods, various processes (e.g., cron job for user auto-suspension due to inactivity) might not work correctly for some users in certain situations, and various user interfaces (e.g., Sponsor Dashboard) might not display all correct options or page elements for some users in certain situations.

**Version 12.5.2 (released on 2022-07-15)**

**CHANGES IN THIS VERSION:**

* **Major bug fix:** If survey invitations are scheduled via the Participant List or via the Survey Options on a data entry form (i.e., not using an ASI), in which one or more invitation reminders are scheduled to be sent, the reminders would mistakenly not get automatically removed from the Survey Invitation Log after the survey had been completed. This would cause the reminders to be sent to the participant even after they had completed the survey. Bug emerged in REDCap 12.5.0 (Standard).
* **Improvement:** Added “json-array” as a new option to the data formats for REDCap::getData and REDCap::saveData. It provides a way around the json data format, for the sake of computer cycles as well as for the sake of being able to pass large data structures. The “json-array” option represents the same flat data structure as decoded JSON data when using the “json” data format for these methods, but it avoids the encode/decode steps.
* Change/improvement: All the language displayed in the CDIS popup dialog “Key differences between Clinical Data Pull (CDP) and Clinical Data Mart (CDM)” has been abstracted and is now translatable.
* Bug fix: When a survey is set to use "Large" or "Very large" survey text size while some SPAN tags are located inside some H1, H2, etc. tags in the survey instructions, survey completion text, or in any other text displayed on the survey page, the text inside the SPAN tags would mistakenly appear as much smaller than they should on the page. (Ticket #130326)
* Bug fix: When using Azure AD authentication, the user principal name for a B2B collaboration user object might contain an "#EXT#" identifier as text inside the user's email address. This is problematic to have the character "#" in a user's email and also (if using their email address as the user's username) to have it in the username. If this occurs, the text "#EXT#" will be automatically removed from the user's email address. (Ticket #121605)
* Various fixes and changes for the External Module Framework, including…
	+ Made the "required" flag work for rich text modules settings.
	+ Hid the button to enable modules when config.json is missing (preventing a confusing error).
	+ Clarified the error when modules do not extend AbstractExternalModule.
* Bug fix: When using the Multi-Language Management feature and translating the titles of surveys in a project, if a survey participant navigates to the survey queue page directly, the survey titles for the surveys listed in the survey queue would be correctly translated; however, when viewing the survey queue immediately after completing a survey, the survey titles would mistakenly not be translated into the participant’s selected display language. (Ticket #130429)
* Bug fix: Outgoing emails would mistakenly get logged in the "redcap\_outgoing\_email\_sms\_log" database table even when the emails themselves failed to send successfully. This could cause the table to fill with emails that never actually sent, many of which might have a missing sender or recipient address in the table. (Ticket #130546)
* Bug fix: If data is being imported (via API, Data Import Tool, Mobile App, or REDCap::saveData) for a slider field, an erroneous message might be returned in some situations regarding the slider field's min/max specific range settings.
* Bug fix: If a user has instrument-level locking privileges but only has read-only data viewing privileges for an instrument when viewing the instrument that has been fully or partially completed as a survey response, the "Lock this instrument?" checkbox would mistakenly not be displayed at the bottom of the page, thus preventing the user from locking or unlocking the form. Users with locking privileges should always be able to lock or unlock a form despite whether they have edit privileges or read-only privileges for that instrument. (Ticket #130667)
* Bug fix: A fatal PHP error might occur for longitudinal projects with no instrument-event designations when navigating to the Survey Distribution Tools page when using PHP 8. (Ticket #130743)
* Bug fix: When an administrator attempts to use the Project Revision History link for a given project on the Browse Projects page in the Control Center, it would mistakenly not load and thus would not be usable.
* Bug fix: When modifying Descriptive Text fields in the Online Designer, in which a field contains an inline image attachment, the image might mistakenly not display anymore in certain cases until the page is reloaded. (Ticket #130817)
* Bug fix: When using Multi-Language Management, if a user removed the default text of an item (e.g., sets the text as blank for a field label, survey instructions, etc.) after having translated the item, the MLM setup page would mistakenly no longer display the item anymore, thus making it impossible to edit the existing translated text.
* Bug fix: User input text (e.g., field labels, survey instructions) that is rendered in downloaded PDFs might get mistakenly truncated if the text contains the less-than character "<" immediately followed by certain special characters, such as " ", "-", "".", or "\*". (Ticket #130761)
* Bug fix: Embedding an image via the rich text editor into the text value of a field with the @RICHTEXT action tag on a private survey would mistakenly fail with a 404 error. (Ticket #130673)

**Version 12.5.1 (released on 2022-07-08)**

**CHANGES IN THIS VERSION:**

* **Improvement:**When using the Multi-Language Management in a project where the languages created on the MLM setup page have Language IDs that correspond to language ISO codes, if a user or participant has not yet selected their display language via the MLM language-switching choices, REDCap will use their current browser settings to auto-detect and then auto-select their preferred display language. This is meant to be an added convenience to the user/participant. Note: This only occurs if project users have set up their MLM Language IDs as ISO codes.
* **Improvement/change:** Updated the Font Awesome library from v5.15.4 to v6.1.1.
* **Improvement:** Stop Actions (for multiple choice fields) and Video Display Format settings (for Descriptive Text fields with videos) are now included in Instrument Zip files when downloading or uploading them for an instrument in the Online Designer. In previous versions, stop actions were not included, and while the video URL was included, the setting that defines if the video is displayed inline or not was not included. (Ticket #124377)
* Bug fix: When a field's action tags are displayed below it in the Online Designer, sometimes an apostrophe might mistakenly get displayed in the action tag name.
* Bug fix: Fixed issue with example HTML not displaying correctly for an item on the "Help & FAQ" page.
* Bug fix: When using the Multi-Language Management setup page, translation changes might mistakenly not get saved successfully (although they might appear to be saved) if the current user is an administrator that has “Access to all projects and data” system privileges but has not been explicitly given Project Design privileges within the project. (Ticket #130248)
* Various fixes and changes to the External Module Framework, including…
	+ Improved the error message when firewalls prevent module downloads.
	+ Allow deleting old versions of enabled modules.
	+ Fixed a bug preventing modules containing symlinks from being deleted.
* Bug fix: A fatal PHP error might occur when accessing the Data Quality page with PHP 8.0 . (Ticket #130364)

**Version 12.5.0 (released on 2022-07-01)**

**CHANGES IN THIS VERSION:**

* **New feature: Repeating Automated Survey Invitations (ASIs)**
	+ Users can now set ASIs to send multiple times on a recurring basis for any repeating survey in a project. If the survey is a repeating instrument or if it exists on a repeating event, then users will see a new section "How many times to send it" in the ASI setup popup in the Online Designer. There users may set the ASI to send survey invitations repeatedly at a regular interval, in which it can repeat forever or a set number of times. This new repeating ASI feature works similarly to how recurring alerts have always worked for Alerts & Notifications.
	+ Note: If an instrument is not a repeating survey, then this new section will not appear for that survey in the ASI setup dialog.
	+ When an ASI is set up to recur for a repeating survey, the [survey-link] Smart Variable in the invitation text will always point to a different repeating instance of the survey for each time the invitation is sent. For example, if the ASI is set to recur daily, then the first day’s invitation will have a link pointing to instance #1 of the survey, the next day’s invitation will point to instance #2, then the next to #3, and so on.
* **New Smart Variable: [new-instance]**
	+ This new Smart Variable [new-instance] can be appended to [survey-link], [survey-url], [form-link], and [form-url] to create a URL that points to a new, not-yet-created repeating instance for the current record. In this way, [new-instance] functions essentially as [last-instance] 1. This new Smart Variable works for repeating instruments and also for instruments on repeating events.
	+ [new-instance] can also be used as stand-alone, in which it will return an integer. But it will only work when used within the context of a repeating instrument or repeating event, in which it will essentially return [last-instance] 1 for the current repeating context.
	+ [new-instance] will auto-append “&new” to the end of the form link or survey link (when used with [form-link/url] or [survey-link/url]) and thus will cause the user/participant to be redirected to the next repeating instance if the current repeating instance (i.e., the instance number in the URL) already exists for the record. Thus, using [form-link] or [survey-link] appended with [new-instance] will ensure that you always end up on a new, not-yet-created instance. And if two participants arrive at the same repeating survey instance with both using the exact same link created by [survey-link][new-instance], then the second participant to submit the survey page will not override the first participant’s response. Instead, it will add the second participant’s response as another repeating instance that does not exist yet.
	+ TIP: One of the main intended usages of [new-instance] is to utilize it as [survey-link:instrument][new-instance] inside the text of a recurring alert to allow users/participants to enter data easily into a repeating survey. In this way, it works very similarly to a repeating ASI. However, repeating ASIs do not need their survey link appended with [new-instance] because it is already implied from the ASI setup.
* **New feature: Embedding images in text & emails**
	+ Users may now embed one or more inline images into the text of a survey invitation, an alert, or a field label on a form/survey, among other things, by clicking the image icon in the rich text editor and then by uploading an image from their local device. Anywhere that the rich text editor is used, users may embed an image into its text (with one exception: the @RICHTEXT action tag on public surveys).
	+ If you wish to disable the ability to embed images in text via the rich text editor, you may disable this functionality at the system level on the Modules/Services Configuration page in the Control Center.
* **New method for plugins/hooks/modules: REDCap::storeFile** - Stores a file in REDCap when provided with the full path of a file on the local REDCap web server. Returns the doc\_id from the redcap\_edocs\_metadata database table for the stored file. The file will be automatically stored using the defined file storage method in the system (e.g., WebDAV, S3, local). Note: The original file on the server will \*not\* be deleted by this process.
* **New method for plugins/hooks/modules: REDCap::copyFile** - Creates a new file in REDCap by copying a file already stored in the system when provided with the doc\_id of the original file from the redcap\_edocs\_metadata database table in the REDCap system. Returns the doc\_id for the newly created file. The new file will be automatically stored using the defined file storage method in the system (e.g., WebDAV, S3, local). Note: The original file whose doc\_id is provided as a parameter will \*not\* be deleted by this process.
* **New method for plugins/hooks/modules: REDCap::addFileToRepository** - Adds a file to a project's File Repository when provided with the doc\_id of an existing file from the REDCap system. Warning: This method should not be used for files already stored for File Upload fields or as various attachments in the system because deleting the file from the File Repository will delete it in all places where the file is utilized. Ideally, this method is meant to be paired with the method REDCap::storeFile(). If you wish to add a file to the File Repository that is already being utilized elsewhere in REDCap (e.g., as an attachment or uploaded to a File Upload field), it is recommended that you first call REDCap::copyFile() to copy the original file, and then call REDCap::addFileToRepository() afterward.
* **Improvement:** When setting up an ASI, the sub-section “When to send invitations AFTER conditions are met” now contains the new drop-down choice "the same day (beginning at midnight) that the automated invitation was triggered" in the sub-option “Send the invitation X days Y hours Z minutes before/after [drop-down]”. This new choice in the drop-down allows users to schedule the invitation based on the day the ASI was triggered and provides greater control and precision with regard to when exactly the invitation will be sent. For example, if this new drop-down option is selected along with setting it to “send the invitation 1 day 8 hours after…”, this will cause the invitation to be scheduled to be sent at exactly 8:00am the next morning. In previous versions, it was not possible to get this level of precision for the invitation send-time based upon ASI trigger-time unless you used a date field’s value as a reference.
* Change/improvement: When setting up an Automated Survey Invitation, the setting to make the ASI “Active” or “Not Active” has been moved to the top right of the ASI setup dialog.
* Various fixes and changes for the External Module Framework, including…
	+ Prevented return value warnings on external module hooks that shouldn't return values.
	+ Added tags to improve Psalm scanning.
* Bug fix: The REDCap Cron Job might mistakenly output some SQL queries when running the QueueRecordsDatediffCheckerCrons job.
* Bug fix: When an Automated Survey Invitation has been set up in a longitudinal project, in which the ASI's conditional logic includes datediff() today/now and has the "Ensure logic is still true" checkbox checked while additionally one or more of the variables in the logic are missing a prepended unique event name, the DateDiff Today/Now cron job might mistakenly schedule a survey invitation that should not be scheduled, even though REDCap will ultimately unschedule the invitation right before trying to send it. (Ticket #129893)
* Bug fix: When a Vimeo video link is provided for the embedded video URL for a Descriptive Text field, the video would mistakenly not to be playable on the page if the URL contained extra alphanumeric characters that appear after the first set of numbers and slash in the video URL (e.g., <https://vimeo.com/637116791/709509f375>). (Ticket #118309)
* Bug fix: Missing Data Codes could mistakenly not be saved to a File Upload field during a data import (e.g., API, Data Import Tool, REDCap::saveData) despite the fact that Missing Data Codes could be saved for File Upload fields via the web interface. (Ticket #82602)
* Bug fix: If an administrator has "Manage user accounts" privileges but does not have "Access to all projects and data..." privileges, the Browse Users page might malfunction when they attempt to perform certain actions, such as suspending users, where it would mistakenly send an email to the user themselves as if they had made a request from the Sponsor Dashboard page (which they didn't). (Ticket #129830)
* Bug fix: Fixed typo in Double Data Entry error message. (Ticket #130093)
* Bug fix: If a project is using randomization with strata fields, in which the strata fields exist on the first instrument, and then a participant loads the first instrument as a survey via the public survey link, if the strata fields appear on the first page of the survey, the strata fields will mistakenly be rendered as disabled/read-only on the public survey page if the highest-numbered record in the project has already been randomized. (Ticket #130107)

**Version 12.4.31 (released on 2022-12-28)**

**CHANGES IN THIS VERSION:**

* Bug fix: When the system-level setting "Allow reports to be made 'public'?" has been set to "No", administrators are still allowed to make reports public, which is expected; however, when anyone attempts to view the report using the public link, it displays an error saying that it cannot be displayed. Anyone with the public link should be able to view the report. (Ticket #132901b)
* Bug fix: When testing a calculation using the "Test calculation with a record" drop-down for a calculated field in the "Edit Field" popup on the Online Designer, there are certain situations where the process might mistakenly crash with a fatal PHP error when using PHP 8. (Ticket #139955)
* Bug fix: If the value of a Text or Notes field contains an email address that is immediately followed by a line break/carriage return, the email address would mistakenly not get converted into a "mailto" link properly when displayed on a report. (Ticket #139960)

**Version 12.4.30 (released on 2022-12-22)**

**CHANGES IN THIS VERSION:**

* **Minor security fix:** A Cross-site Scripting (XSS) vulnerability was discovered on the User Rights page where a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript event attributes in a very specific way inside a CSV file when importing user privileges or user roles on that page.
* Bug fix: In very specific cases when a report is set to only display the record ID field, in which the report has filter logic that contains fields on a repeating instrument/event, the resulting report might mistakenly include grayed out columns that correspond to the fields (or to the form status fields of the fields' instrument) that are used in the filter logic. (Ticket #139584)
* Bug fix: Users with instrument-level locking privileges could inadvertently bypass locking controls and modify data on a locked data entry form if they have another browser tab open of that same data entry form before it was locked, and then saved that form within 30 seconds of locking the form in the other tab. (Ticket #139555)
* Bug fix: If a project is created using a Project XML file, in which the XML file contains public reports, the unique public report link/hash of any public reports in the original project would mistakenly get duplicated and attributed to the newly created project. This would not cause any noticeable problems for the user because the public report link would always point to the original project and not to the new project created.
* Bug fix: When using the Clinical Data Mart, a patient’s Medical Record Number (MRN) might get stored as an empty string in the FHIR logs table, thus causing the Data Mart to crash.
* Bug fix: When using Clinical Data Pull, in which a user is accessing an embedded REDCap page inside of Epic Hyperspace, some parts of the page might mistakenly not work due to JavaScript errors. (Ticket #139896)
* Bug fix: REDCap might fail with a fatal PHP error on various pages when using PHP 8 under very specific conditions. (Ticket #139416)
* Bug fix: The @IF action tag would mistakenly not function correctly for fields in PDF exports. For example, @IF([field]="", @HIDDEN-PDF, "") would not function correctly to show/hide the field in the resulting PDF export.