**Protocol applies to:**

Development Instance: <https://rcapdev.ouhsc.edu>

BBMC Instance: <https://bbmc.ouhsc.edu/>

**Upgrade file location:** <https://iwg.devguard.com/trac/redcap/wiki/RedcapDownloadArea>

**Frequency of upgrade:** Monthly

**Timing of upgrade:** Friday evening at 9:00

**Backups:**

Request VM snapshots on Monday before upgrade

Verify snapshot request on Thursday before upgrade

**Upgrade Version:**

Use the “Standard Release” upgrade version of REDCap that is two releases prior to the most current release.

**Running the upgrade:**

Before Starting Upgrade:

* Notify users that REDCap will be unavailable
* Take REDCap offline using the REDCap control panel

PHP Tasks:

* New PHP code replaces the old PHP code in the web server’s REDCap directory
* Navigate to the REDCap web site. It should automatically recognize that you’re in the upgrade module and provide SQL code that will modify/update the database schema.
* For more details see the following instructions within download zip file.

SQL Tasks:

* During the upgrade, copy and paste the sql update code into a text document to be archived. It will be saved at the following location on the file server:
* S:\CCAN\CCANResEval\MIECHV\RedCap\UpgradeDocumentationArchive
* Run sql from the MySQL workbench NOT from phpMyAdmin.
* All database messages are saved in a second text document, regardless if errors are present. It will be saved at the following location on the file server:
* S:\CCAN\CCANResEval\MIECHV\RedCap\UpgradeDocumentationArchive
* If any SQL errors occur, record error message, stop upgrade, and request the VM snapshot be reverted to the saved version.
* After successful completion of the upgrade process, go through the upgrade test scripts for REDCap.

**Testing:**

* If there are testing errors detected with REDCap during the testing scripts, request the VM snapshot be reverted to the saved version.
* If NO testing errors are detected:
  + Put REDCap back online using the REDCap control panel
  + Notify users that REDCap is available for use through the REDCap control panel.

# Checklist

**Instance**

\_\_\_\_\_\_\_\_\_\_ Development: <https://rcapdev.ouhsc.edu>

\_\_\_\_\_\_\_\_\_\_ BBMC: <https://bbmc.ouhsc.edu/>

**REDCap Upgrade Version:**

\_\_\_\_\_\_\_\_\_\_ <https://iwg.devguard.com/trac/redcap/wiki/RedcapDownloadArea>

**REDCap Upgrade Script**

\_\_\_\_\_\_\_\_\_\_ Date of Upgrade

\_\_\_\_\_\_\_\_\_\_ Upgrade Start Time

\_\_\_\_\_\_\_\_\_\_ Upgrade End Time

\_\_\_\_\_\_\_\_\_\_ Date that the BBMC requested the VM Snapshot was scheduled

\_\_\_\_\_\_\_\_\_\_ Date that the BBMC verified the VM Snapshot was scheduled

\_\_\_\_\_\_\_\_\_\_ **PHP Version**

\_\_\_\_\_\_\_\_\_\_ **MySQL Version**

**REDCap SQL Upgrade Code (copy the code and paste below):**

-- --- SQL to upgrade REDCap to version 6.2.4 from 6.0.2 --- --

USE ou\_rcap\_dev;

-- SQL for Version 6.1.1 (via SQL) --

-- Add new fields for upcoming voice/sms functionality

ALTER TABLE `redcap\_projects`

ADD `twilio\_enabled` INT( 1 ) NOT NULL DEFAULT '0',

ADD `twilio\_account\_sid` VARCHAR( 64 ) NULL,

ADD `twilio\_auth\_token` VARCHAR( 64 ) NULL,

ADD `twilio\_from\_number` BIGINT( 16 ) NULL;

-- SQL for Version 6.1.2 (via SQL) --

-- Add new attributes for upcoming voice/sms functionality

ALTER TABLE `redcap\_projects` ADD INDEX ( `twilio\_account\_sid` );

ALTER TABLE `redcap\_surveys\_participants` ADD `participant\_phone` VARCHAR( 50 ) NULL DEFAULT NULL AFTER `participant\_identifier`;

ALTER TABLE `redcap\_projects` ADD `survey\_phone\_participant\_field` VARCHAR( 255 ) NULL DEFAULT NULL

COMMENT 'Field name that stores participant phone number' AFTER `survey\_email\_participant\_field`;

-- SQL for Version 6.1.3 (via SQL) --

-- Add new attributes for upcoming voice/sms functionality

ALTER TABLE `redcap\_surveys\_emails` ADD `delivery\_type` ENUM( 'EMAIL', 'VOICE', 'SMS' ) NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_scheduler` ADD `delivery\_type` ENUM( 'EMAIL', 'VOICE', 'SMS' ) NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_emails\_recipients` ADD `static\_phone` VARCHAR( 50 )

NULL DEFAULT NULL COMMENT 'Static phone number of recipient (used when participant has no phone number)';

ALTER TABLE `redcap\_surveys\_scheduler\_queue` CHANGE `reason\_not\_sent` `reason\_not\_sent`

ENUM( 'EMAIL ADDRESS NOT FOUND', 'EMAIL ATTEMPT FAILED', 'UNKNOWN', 'SURVEY ALREADY COMPLETED',

'VOICE/SMS SETTING DISABLED', 'ERROR SENDING SMS', 'ERROR MAKING VOICE CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci

NULL DEFAULT NULL COMMENT 'Explanation of why invitation did not send, if applicable';

INSERT INTO redcap\_config (field\_name, value) VALUES ('twilio\_enabled\_global', '0');

ALTER TABLE `redcap\_projects` ADD `twilio\_voice\_gender` ENUM( 'woman', 'man' ) NOT NULL DEFAULT 'man',

ADD `twilio\_voice\_language` ENUM( 'en', 'en-gb', 'es', 'fr', 'de', 'it' ) NOT NULL DEFAULT 'en';

-- SQL for Version 6.1.4 (via SQL) --

-- Add new attributes for upcoming voice/sms functionality

ALTER TABLE `redcap\_projects` DROP `twilio\_voice\_gender`, CHANGE `twilio\_voice\_language`

`twilio\_voice\_language` VARCHAR( 5 ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT 'en';

-- SQL for Version 6.2.0 (via SQL) --

-- Add new attributes for upcoming voice/sms functionality

ALTER TABLE `redcap\_projects`

ADD `twilio\_option\_voice\_initiate` TINYINT( 1 ) NOT NULL DEFAULT '0',

ADD `twilio\_option\_sms\_initiate` TINYINT( 1 ) NOT NULL DEFAULT '0',

ADD `twilio\_option\_sms\_invite` TINYINT( 1 ) NOT NULL DEFAULT '0';

-- New survey scheduler attributes

ALTER TABLE `redcap\_surveys\_scheduler\_queue`

ADD `reminder\_num` INT( 3 ) NOT NULL DEFAULT '0' COMMENT 'Email reminder instance (0 = original invitation)' AFTER `email\_recip\_id`,

DROP INDEX `email\_recip\_id\_record` ,

ADD UNIQUE `email\_recip\_id\_record` ( `email\_recip\_id` , `record` , `reminder\_num` ),

DROP INDEX `ss\_id\_record` ,

ADD UNIQUE `ss\_id\_record` ( `ss\_id` , `record` , `reminder\_num` );

-- Changes for upcoming survey reminder functionality

ALTER TABLE `redcap\_surveys\_scheduler\_queue`

CHANGE `status` `status` ENUM( 'QUEUED', 'SENDING', 'SENT', 'DID NOT SEND', 'DELETED' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci

NOT NULL DEFAULT 'QUEUED' COMMENT 'Survey invitation status (default=QUEUED)';

ALTER TABLE `redcap\_surveys\_scheduler`

ADD `reminder\_type` enum('TIME\_LAG','NEXT\_OCCURRENCE','EXACT\_TIME')

COLLATE utf8\_unicode\_ci DEFAULT NULL COMMENT 'When to send reminders after original invite is sent',

ADD `reminder\_timelag\_days` int(3) DEFAULT NULL COMMENT 'Wait X days to send reminders',

ADD `reminder\_timelag\_hours` int(2) DEFAULT NULL COMMENT 'Wait X hours to send reminders',

ADD `reminder\_timelag\_minutes` int(2) DEFAULT NULL COMMENT 'Wait X seconds to send reminders',

ADD `reminder\_nextday\_type` enum('DAY','WEEKDAY','WEEKENDDAY','SUNDAY','MONDAY','TUESDAY','WEDNESDAY','THURSDAY','FRIDAY','SATURDAY')

COLLATE utf8\_unicode\_ci DEFAULT NULL COMMENT 'Wait till specific day/time to send reminders',

ADD `reminder\_nexttime` time DEFAULT NULL COMMENT 'Wait till specific day/time to send reminders',

ADD `reminder\_exact\_time` datetime DEFAULT NULL COMMENT 'Wait till exact date/time to send reminders',

ADD `reminder\_num` INT( 3 ) NOT NULL DEFAULT '0' COMMENT 'Reminder recurrence';

-- SQL for Version 6.2.1 (via SQL) --

-- Add new survey features

ALTER TABLE `redcap\_surveys`

ADD `hide\_back\_button` TINYINT( 1 ) NOT NULL DEFAULT '0',

ADD `show\_required\_field\_text` TINYINT( 1 ) NOT NULL DEFAULT '1',

ADD `confirmation\_email\_subject` TEXT NULL DEFAULT NULL ,

ADD `confirmation\_email\_content` TEXT NULL DEFAULT NULL ,

ADD `confirmation\_email\_from` VARCHAR( 255 ) NULL DEFAULT NULL,

ADD `confirmation\_email\_attachment` INT( 10 ) NULL DEFAULT NULL COMMENT 'FK for redcap\_edocs\_metadata',

ADD INDEX ( `confirmation\_email\_attachment` ),

ADD FOREIGN KEY ( `confirmation\_email\_attachment` ) REFERENCES `redcap\_edocs\_metadata` (`doc\_id`) ON DELETE SET NULL ON UPDATE CASCADE;

-- Add placeholder for upcoming mobile app

ALTER TABLE `redcap\_user\_rights` ADD `mobile\_app` INT( 1 ) NOT NULL DEFAULT '0' AFTER `api\_import`;

ALTER TABLE `redcap\_user\_roles` ADD `mobile\_app` INT( 1 ) NOT NULL DEFAULT '0' AFTER `api\_import`;

-- Change Twilio presets

ALTER TABLE `redcap\_surveys\_emails` CHANGE `delivery\_type` `delivery\_type`

ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE', 'SMS\_INVITE', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_scheduler` CHANGE `delivery\_type` `delivery\_type`

ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE', 'SMS\_INVITE', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_participants` ADD `delivery\_preference` ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE', 'SMS\_INVITE' ) NULL DEFAULT NULL;

-- SQL for Version 6.2.2 (via SQL) --

-- Change index and add new fields

ALTER TABLE `redcap\_surveys\_participants`

DROP INDEX `participant\_email` ,

ADD INDEX `participant\_email\_phone` ( `participant\_email` , `participant\_phone` ),

ADD `access\_code\_numeral` varchar(10) COLLATE utf8\_unicode\_ci DEFAULT NULL AFTER `access\_code`,

ADD UNIQUE (`access\_code\_numeral`),

CHANGE `delivery\_preference` `delivery\_preference` ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE',

'SMS\_INVITE\_MAKE\_CALL', 'SMS\_INVITE\_RECEIVE\_CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NULL DEFAULT NULL;

ALTER TABLE `redcap\_surveys\_emails\_recipients` ADD `delivery\_type` ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE' ,

'SMS\_INVITE\_MAKE\_CALL', 'SMS\_INVITE\_RECEIVE\_CALL') NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_scheduler\_queue` CHANGE `reason\_not\_sent` `reason\_not\_sent` ENUM( 'EMAIL ADDRESS NOT FOUND',

'PHONE NUMBER NOT FOUND', 'EMAIL ATTEMPT FAILED', 'UNKNOWN', 'SURVEY ALREADY COMPLETED', 'VOICE/SMS SETTING DISABLED',

'ERROR SENDING SMS', 'ERROR MAKING VOICE CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NULL DEFAULT NULL

COMMENT 'Explanation of why invitation did not send, if applicable';

ALTER TABLE `redcap\_projects`

CHANGE `twilio\_option\_sms\_invite` `twilio\_option\_sms\_invite\_make\_call` TINYINT( 1 ) NOT NULL DEFAULT '0',

ADD `twilio\_option\_sms\_invite\_receive\_call` TINYINT( 1 ) NOT NULL DEFAULT '0';

ALTER TABLE `redcap\_surveys\_emails` CHANGE `delivery\_type` `delivery\_type` ENUM( 'PARTICIPANT\_PREF', 'EMAIL', 'VOICE\_INITIATE',

'SMS\_INITIATE', 'SMS\_INVITE\_MAKE\_CALL', 'SMS\_INVITE\_RECEIVE\_CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT 'EMAIL';

ALTER TABLE `redcap\_surveys\_scheduler` CHANGE `delivery\_type` `delivery\_type` ENUM( 'EMAIL', 'VOICE\_INITIATE', 'SMS\_INITIATE',

'SMS\_INVITE\_MAKE\_CALL', 'SMS\_INVITE\_RECEIVE\_CALL', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT 'EMAIL';

-- SQL for Version 6.2.3 (via SQL) --

-- Add extra Twilio system option

INSERT INTO redcap\_config VALUES ('twilio\_display\_info\_project\_setup', '0');

-- Enable global setting for upcoming mobile app

INSERT INTO redcap\_config VALUES ('mobile\_app\_enabled', '1');

-- Add new table for upcoming mobile app

CREATE TABLE `redcap\_mobile\_app\_files` (

`af\_id` int(10) NOT NULL AUTO\_INCREMENT,

`doc\_id` int(10) NOT NULL,

`type` enum('ESCAPE\_HATCH','LOGGING') COLLATE utf8\_unicode\_ci DEFAULT NULL,

`user\_id` int(10) DEFAULT NULL,

PRIMARY KEY (`af\_id`),

KEY `doc\_id` (`doc\_id`),

KEY `user\_id` (`user\_id`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8\_unicode\_ci;

ALTER TABLE `redcap\_mobile\_app\_files`

ADD FOREIGN KEY (`doc\_id`) REFERENCES `redcap\_edocs\_metadata` (`doc\_id`) ON DELETE CASCADE ON UPDATE CASCADE,

ADD FOREIGN KEY (`user\_id`) REFERENCES `redcap\_user\_information` (`ui\_id`) ON DELETE SET NULL ON UPDATE CASCADE;

-- Set date of upgrade --

UPDATE redcap\_config SET value = '2014-12-15' WHERE field\_name = 'redcap\_last\_install\_date' LIMIT 1;

-- Set new version number --

UPDATE redcap\_config SET value = '6.2.4' WHERE field\_name = 'redcap\_version' LIMIT 1;

**REDCap SQL Error Log (copy and paste any SQL error messages that occur during the upgrade process):**

|  |  | **Time** | **Action** | **Message** | **Duration / Fetch** |
| --- | --- | --- | --- | --- | --- |
| 3 | 1 | 07:28:50 | USE ou\_rcap\_dev | 0 row(s) affected | 0.000 sec |
| 3 | 2 | 07:28:51 | ALTER TABLE  `redcap\_projects` ADD  `twilio\_enabled` INT( 1 ) NOT NULL DEFAULT  '0', ADD  `twilio\_account\_sid` VARCHAR( 64 ) NULL, ADD  `twilio\_auth\_token` VARCHAR( 64 ) NULL, ADD  `twilio\_from\_number` BIGINT( 16 ) NULL | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.468 sec |
| 3 | 3 | 07:28:51 | ALTER TABLE  `redcap\_projects` ADD INDEX (  `twilio\_account\_sid` ) | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.031 sec |
| 3 | 4 | 07:28:51 | ALTER TABLE  `redcap\_surveys\_participants` ADD  `participant\_phone` VARCHAR( 50 ) NULL DEFAULT NULL AFTER  `participant\_identifier` | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.250 sec |
| 3 | 5 | 07:28:51 | ALTER TABLE  `redcap\_projects` ADD  `survey\_phone\_participant\_field` VARCHAR( 255 ) NULL DEFAULT NULL COMMENT  'Field name that stores participant phone number' AFTER  `survey\_email\_participant\_field` | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.140 sec |
| 1 | 6 | 07:28:51 | ALTER TABLE  `redcap\_surveys\_emails` ADD  `delivery\_type` ENUM(  'EMAIL',  'VOICE',  'SMS' ) NOT NULL DEFAULT  'EMAIL' | 2 row(s) affected, 1 warning(s): 1880 TIME/TIMESTAMP/DATETIME columns of old format have been upgraded to the new format. Records: 2  Duplicates: 0  Warnings: 1 | 0.156 sec |
| 1 | 7 | 07:28:52 | ALTER TABLE  `redcap\_surveys\_scheduler` ADD  `delivery\_type` ENUM(  'EMAIL',  'VOICE',  'SMS' ) NOT NULL DEFAULT  'EMAIL' | 0 row(s) affected, 1 warning(s): 1880 TIME/TIMESTAMP/DATETIME columns of old format have been upgraded to the new format. Records: 0  Duplicates: 0  Warnings: 1 | 0.156 sec |
| 3 | 8 | 07:28:52 | ALTER TABLE  `redcap\_surveys\_emails\_recipients` ADD  `static\_phone` VARCHAR( 50 ) NULL DEFAULT NULL COMMENT  'Static phone number of recipient (used when participant has no phone number)' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.109 sec |
| 1 | 9 | 07:28:52 | ALTER TABLE  `redcap\_surveys\_scheduler\_queue` CHANGE  `reason\_not\_sent`  `reason\_not\_sent` ENUM(  'EMAIL ADDRESS NOT FOUND',  'EMAIL ATTEMPT FAILED',  'UNKNOWN',  'SURVEY ALREADY COMPLETED',   'VOICE/SMS SETTING DISABLED',  'ERROR SENDING SMS', 'ERROR MAKING VOICE CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NULL DEFAULT NULL COMMENT  'Explanation of why invitation did not send, if applicable' | 0 row(s) affected, 1 warning(s): 1880 TIME/TIMESTAMP/DATETIME columns of old format have been upgraded to the new format. Records: 0  Duplicates: 0  Warnings: 1 | 0.141 sec |
| 3 | 10 | 07:28:52 | INSERT INTO redcap\_config (field\_name, value) VALUES ('twilio\_enabled\_global', '0') | 1 row(s) affected | 0.000 sec |
| 3 | 11 | 07:28:52 | ALTER TABLE  `redcap\_projects` ADD  `twilio\_voice\_gender` ENUM(  'woman',  'man' ) NOT NULL DEFAULT  'man', ADD  `twilio\_voice\_language` ENUM(  'en',  'en-gb',  'es',  'fr',  'de',  'it' ) NOT NULL DEFAULT  'en' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.156 sec |
| 3 | 12 | 07:28:52 | ALTER TABLE  `redcap\_projects` DROP  `twilio\_voice\_gender`, CHANGE  `twilio\_voice\_language`   `twilio\_voice\_language` VARCHAR( 5 ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'en' | 30 row(s) affected Records: 30  Duplicates: 0  Warnings: 0 | 0.140 sec |
| 3 | 13 | 07:28:52 | ALTER TABLE  `redcap\_projects` ADD  `twilio\_option\_voice\_initiate` TINYINT( 1 ) NOT NULL DEFAULT  '0', ADD  `twilio\_option\_sms\_initiate` TINYINT( 1 ) NOT NULL DEFAULT  '0', ADD  `twilio\_option\_sms\_invite` TINYINT( 1 ) NOT NULL DEFAULT  '0' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.140 sec |
| 3 | 14 | 07:28:52 | ALTER TABLE  `redcap\_surveys\_scheduler\_queue` ADD  `reminder\_num` INT( 3 ) NOT NULL DEFAULT  '0' COMMENT  'Email reminder instance (0 = original invitation)' AFTER  `email\_recip\_id`, DROP INDEX  `email\_recip\_id\_record` , ADD UNIQUE  `email\_recip\_id\_record` (  `email\_recip\_id` ,  `record` ,  `reminder\_num` ), DROP INDEX  `ss\_id\_record` , ADD UNIQUE  `ss\_id\_record` (  `ss\_id` ,  `record` ,  `reminder\_num` ) | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.125 sec |
| 3 | 15 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_scheduler\_queue` CHANGE  `status`  `status` ENUM(  'QUEUED',  'SENDING',  'SENT',  'DID NOT SEND',  'DELETED' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'QUEUED' COMMENT  'Survey invitation status (default=QUEUED)' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.000 sec |
| 3 | 16 | 07:28:53 | ALTER TABLE `redcap\_surveys\_scheduler` ADD `reminder\_type` enum('TIME\_LAG','NEXT\_OCCURRENCE','EXACT\_TIME') COLLATE utf8\_unicode\_ci DEFAULT NULL COMMENT 'When to send reminders after original invite is sent', ADD `reminder\_timelag\_days` int(3) DEFAULT NULL COMMENT 'Wait X days to send reminders', ADD `reminder\_timelag\_hours` int(2) DEFAULT NULL COMMENT 'Wait X hours to send reminders', ADD `reminder\_timelag\_minutes` int(2) DEFAULT NULL COMMENT 'Wait X seconds to send reminders', ADD `reminder\_nextday\_type` enum('DAY','WEEKDAY','WEEKENDDAY','SUNDAY','MONDAY','TUESDAY','WEDNESDAY','THURSDAY','FRIDAY','SATURDAY') COLLATE utf8\_unicode\_ci DEFAULT NULL COMMENT 'Wait till specific day/time to send reminders', ADD `reminder\_nexttime` time DEFAULT NULL COMMENT 'Wait till specific day/time to send reminders', ADD `reminder\_exact\_time` datetime DEFAULT NULL COMMENT 'Wait till exact date/time to send reminders', ADD `reminder\_num` INT( 3 ) NOT NULL DEFAULT  '0' COMMENT 'Reminder recurrence' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.125 sec |
| 3 | 17 | 07:28:53 | ALTER TABLE  `redcap\_surveys` ADD  `hide\_back\_button` TINYINT( 1 ) NOT NULL DEFAULT  '0', ADD  `show\_required\_field\_text` TINYINT( 1 ) NOT NULL DEFAULT  '1', ADD  `confirmation\_email\_subject` TEXT NULL DEFAULT NULL , ADD  `confirmation\_email\_content` TEXT NULL DEFAULT NULL , ADD  `confirmation\_email\_from` VARCHAR( 255 ) NULL DEFAULT NULL, ADD  `confirmation\_email\_attachment` INT( 10 ) NULL DEFAULT NULL COMMENT 'FK for redcap\_edocs\_metadata', ADD INDEX (  `confirmation\_email\_attachment` ), ADD FOREIGN KEY (  `confirmation\_email\_attachment` ) REFERENCES `redcap\_edocs\_metadata` (`doc\_id`) ON DELETE SET NULL ON UPDATE CASCADE | 17 row(s) affected Records: 17  Duplicates: 0  Warnings: 0 | 0.124 sec |
| 3 | 18 | 07:28:53 | ALTER TABLE  `redcap\_user\_rights` ADD  `mobile\_app` INT( 1 ) NOT NULL DEFAULT  '0' AFTER  `api\_import` | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.172 sec |
| 3 | 19 | 07:28:53 | ALTER TABLE  `redcap\_user\_roles` ADD  `mobile\_app` INT( 1 ) NOT NULL DEFAULT  '0' AFTER  `api\_import` | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.078 sec |
| 3 | 20 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_emails` CHANGE  `delivery\_type`  `delivery\_type` ENUM(  'EMAIL',  'VOICE\_INITIATE',  'SMS\_INITIATE',  'SMS\_INVITE', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'EMAIL' | 2 row(s) affected Records: 2  Duplicates: 0  Warnings: 0 | 0.078 sec |
| 3 | 21 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_scheduler` CHANGE  `delivery\_type`  `delivery\_type` ENUM(  'EMAIL',  'VOICE\_INITIATE',  'SMS\_INITIATE',  'SMS\_INVITE', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'EMAIL' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.078 sec |
| 3 | 22 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_participants` ADD  `delivery\_preference` ENUM(  'EMAIL',  'VOICE\_INITIATE',  'SMS\_INITIATE',  'SMS\_INVITE' ) NULL DEFAULT NULL | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.125 sec |
| 3 | 23 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_participants` DROP INDEX  `participant\_email` , ADD INDEX  `participant\_email\_phone` (  `participant\_email` ,  `participant\_phone` ), ADD  `access\_code\_numeral` varchar(10) COLLATE utf8\_unicode\_ci DEFAULT NULL AFTER  `access\_code`, ADD UNIQUE (`access\_code\_numeral`), CHANGE  `delivery\_preference`  `delivery\_preference` ENUM(  'EMAIL',  'VOICE\_INITIATE',  'SMS\_INITIATE',   'SMS\_INVITE\_MAKE\_CALL',  'SMS\_INVITE\_RECEIVE\_CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NULL DEFAULT NULL | 8 row(s) affected Records: 8  Duplicates: 0  Warnings: 0 | 0.109 sec |
| 3 | 24 | 07:28:53 | ALTER TABLE  `redcap\_surveys\_emails\_recipients` ADD  `delivery\_type` ENUM(  'EMAIL',  'VOICE\_INITIATE', 'SMS\_INITIATE' , 'SMS\_INVITE\_MAKE\_CALL', 'SMS\_INVITE\_RECEIVE\_CALL') NOT NULL DEFAULT  'EMAIL' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.094 sec |
| 3 | 25 | 07:28:54 | ALTER TABLE  `redcap\_surveys\_scheduler\_queue` CHANGE  `reason\_not\_sent`  `reason\_not\_sent` ENUM(  'EMAIL ADDRESS NOT FOUND',   'PHONE NUMBER NOT FOUND',  'EMAIL ATTEMPT FAILED',  'UNKNOWN',  'SURVEY ALREADY COMPLETED', 'VOICE/SMS SETTING DISABLED',   'ERROR SENDING SMS',  'ERROR MAKING VOICE CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NULL DEFAULT NULL COMMENT  'Explanation of why invitation did not send, if applicable' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.093 sec |
| 3 | 26 | 07:28:54 | ALTER TABLE  `redcap\_projects` CHANGE  `twilio\_option\_sms\_invite`  `twilio\_option\_sms\_invite\_make\_call` TINYINT( 1 ) NOT NULL DEFAULT  '0', ADD  `twilio\_option\_sms\_invite\_receive\_call` TINYINT( 1 ) NOT NULL DEFAULT  '0' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.141 sec |
| 3 | 27 | 07:28:54 | ALTER TABLE  `redcap\_surveys\_emails` CHANGE  `delivery\_type`  `delivery\_type` ENUM(  'PARTICIPANT\_PREF',  'EMAIL',  'VOICE\_INITIATE',   'SMS\_INITIATE',  'SMS\_INVITE\_MAKE\_CALL',  'SMS\_INVITE\_RECEIVE\_CALL' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'EMAIL' | 2 row(s) affected Records: 2  Duplicates: 0  Warnings: 0 | 0.078 sec |
| 3 | 28 | 07:28:54 | ALTER TABLE  `redcap\_surveys\_scheduler` CHANGE  `delivery\_type`  `delivery\_type` ENUM(  'EMAIL',  'VOICE\_INITIATE',  'SMS\_INITIATE',   'SMS\_INVITE\_MAKE\_CALL',  'SMS\_INVITE\_RECEIVE\_CALL', 'PARTICIPANT\_PREF' ) CHARACTER SET utf8 COLLATE utf8\_unicode\_ci NOT NULL DEFAULT  'EMAIL' | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.094 sec |
| 3 | 29 | 07:28:54 | INSERT INTO redcap\_config VALUES ('twilio\_display\_info\_project\_setup', '0') | 1 row(s) affected | 0.000 sec |
| 3 | 30 | 07:28:54 | INSERT INTO redcap\_config VALUES ('mobile\_app\_enabled', '1') | 1 row(s) affected | 0.015 sec |
| 3 | 31 | 07:28:54 | CREATE TABLE `redcap\_mobile\_app\_files` ( `af\_id` int(10) NOT NULL AUTO\_INCREMENT, `doc\_id` int(10) NOT NULL, `type` enum('ESCAPE\_HATCH','LOGGING') COLLATE utf8\_unicode\_ci DEFAULT NULL, `user\_id` int(10) DEFAULT NULL, PRIMARY KEY (`af\_id`), KEY `doc\_id` (`doc\_id`), KEY `user\_id` (`user\_id`) ) ENGINE=InnoDB DEFAULT CHARSET=utf8 COLLATE=utf8\_unicode\_ci | 0 row(s) affected | 0.032 sec |
| 3 | 32 | 07:28:54 | ALTER TABLE `redcap\_mobile\_app\_files` ADD FOREIGN KEY (`doc\_id`) REFERENCES `redcap\_edocs\_metadata` (`doc\_id`) ON DELETE CASCADE ON UPDATE CASCADE, ADD FOREIGN KEY (`user\_id`) REFERENCES `redcap\_user\_information` (`ui\_id`) ON DELETE SET NULL ON UPDATE CASCADE | 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0 | 0.093 sec |
| 1 | 33 | 07:28:54 | UPDATE redcap\_config SET value = '2014-12-15' WHERE field\_name = 'redcap\_last\_install\_date' LIMIT 1 | 1 row(s) affected, 1 warning(s): 1592 Unsafe statement written to the binary log using statement format since BINLOG\_FORMAT = STATEMENT. The statement is unsafe because it uses a LIMIT clause. This is unsafe because the set of rows included cannot be predicted. Rows matched: 1  Changed: 1  Warnings: 1 | 0.016 sec |
| 1 | 34 | 07:28:54 | UPDATE redcap\_config SET value = '6.2.4' WHERE field\_name = 'redcap\_version' LIMIT 1 | 1 row(s) affected, 1 warning(s): 1592 Unsafe statement written to the binary log using statement format since BINLOG\_FORMAT = STATEMENT. The statement is unsafe because it uses a LIMIT clause. This is unsafe because the set of rows included cannot be predicted. Rows matched: 1  Changed: 1  Warnings: 1 | 0.015 sec |

**REDCap Testing Scripts:**

\_\_\_\_\_\_\_\_\_\_ Baseline Test Script

\_\_\_\_\_\_\_\_\_\_ Basic Functionality Script

\_\_\_\_\_\_\_\_\_\_ Control Panel System Configuration Script

\_\_\_\_\_\_\_\_\_\_ User Acceptance Testing Script