REDCap e-Docs Module Requirements Traceability Matrix

Document Version: 1.0 Document Date: 31-Mar-2020



Prepared by: **Prepared by:**

I have prepared the contents of this document and agree that the provisions contained herein are appropriate and consistent with current regulatory expectation for computer validation, internal policies and procedures and available FDA industry Guidance and I tender it for approval.

Signature: Gaurav Kumar aurav Kumar (Mar 31, 2020)

Email: gkumar@jafconsulting.com Title: Validation Lead **Company:** JAF Consulting, Inc.

Gaurav Kumar

Validation Lead, JAF Consulting, Inc

Reviewed and Approved by:

I have reviewed the contents of this document and accept and approve of the provisions as stated herein are appropriate and consistent with current regulatory expectation for computer validation, internal policies and procedures and available FDA industry Guidance and I tender it for approval.

Signature	Colleen E. Lawrence (Mar 31, 2020)
Signature	Colleen E. Lawrence (Mar 31, 2020)
Email:	colleen.lawrence@vumc.org
Title:	Manager, Translational Research

Company: Vanderbilt University Medical Center

Signature: Joseph a Journal of

Email: jfranchetti@jafconsulting.com Title: President **Company:** JAF Consulting Inc

Colleen Lawrence, System Owner

Signature: Rob Taylor

Email: rob.taylor@vumc.org

Title: Manager of App Development

Company: VUMC

Rob Taylor, Technical Owner, VUMC

Joseph Franchetti, Quality Assurance Representative, JAF Consulting, Inc

Signature: Paul A. Harris

Email: paul.a.harris@vumc.org

Title: Director, Office of Research Informatics **Company:** Vanderbilt University Medical Center

Paul Harris, Management, VUMC

Revision History

Date	Version	Description
31-Mar-2020	1.0	Original Release, New Document



1. Purpose

The purpose of this Requirements Traceability Matrix (RTM) is to ensure that all the requirements defined for eDocs Module within REDCap system are verified (tested) in the system qualification activities. The RTM is a document to map and trace user requirements with the qualification test cases to ensure adequate level of testing is being achieved. This requirements traceability refers to the ability to follow the life of a requirement, in both forwards and backwards direction, i.e., from its origins, through its development and specification, to its subsequent deployment and use, and through periods of ongoing refinement and iteration.

2. Scope

The scope of this document is limited to the association of the user requirements to the test cases executed in the validation activities of REDCap system. The traceability Matrix provides bi-directional traceability from the high-level user requirements to the functional specifications, configuration/design specifications to the test scripts executed during the system qualification activities.

3. References

The following reference documents were utilized to generate the Requirements Traceability Matrix.

Document/Deliverable	Version	Completion
REDCap eDocs Module User Requirements Specification	1.0	16 Feb 2020
REDCap eDocs IQ Test Protocol	1.0	17 Feb 2020
REDCap eDocs PQ Test Protocol	1.0	17 Feb 2020
SOPs/Release Training	1.0	31-Mar-2020

4. Acronyms and Definitions

TERM	DEFINITION
RTM	Requirement Traceability Matrix
URS	User Requirement Specification
FS	Functional Specification
CSDS	Configuration Specification / Design Specification

5. Requirements

Each requirement will include a proposed verification mechanism. This will be identified in the 'Verification' column below. Verification methods include:

• P - Procedural controls will be verified to satisfy these requirements.

- T Formal testing will be executed to document that these requirements are satisfied.
- V Verification will be performed and documented that these requirements are satisfied.
- N/A Requirement may not be verified in the scope of this project.
- Some requirements may have multiple verification methods.

This section shall state the requirements: installation, system, security, regulatory, user/functional, instrument interface and risk mitigation (if necessary). The contents of this section shall define the environment in which the system must operate, the interface, data and reporting, as applicable.

A set of criteria will also be applied resulting in a prioritization of each user requirement on a scale from 1-3.

The priority levels are defined as:

- Priority (3): the user requirement is mandatory and must be implemented in the scope of the • project. Essential to business operations; a mandatory function or requirement.
- Priority (2): the user requirement is strongly expected and may be implemented after this project or highly desirable to business operations; would provide significantly enhanced benefit but is not critical.
- Priority (1): the user requirement is "Optional" and may not be implemented nor tested in the scope of the project ("Nice to have" requirement) or for future business operations; nice to have feature or requirement.

Priority 3 requirement is mandatory, and a functional solution must satisfy the requirement. Priority 2 or 1 requirements are optional and do not need to be tested or satisfied in this retrospective validation effort.

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0

6. Traceability Matrix Table

Req#	Requirement	Verification	Priority	Traceability	Test Result		
1	Data Requirements						
1.1	System shall allow a file upload size up to a maximum of 50 mb	Т	3	PQ-eDocs]		
	The file upload will generally have a size requirement of 10-100kb			Steps 4 and	🔀 Pass		
	but can be as large as 50 mb.			5	🗌 Fail		
					□ N/A		
					Deviation		
2	eDocs Core Functionality	<u> </u>					
2.1	Basic Demographic form Development						
2.1.1	<i>System shall permit inclusion of eDoc file upload process in any data collection instrument.</i>	Т	3	PQ-eDocs Step 5	Pass		
	<i>System will allow for the inclusion of the eDocs file upload process in any data collection instrument created within the system</i>				🗌 Fail		
	framework.				□ N/A		
					Deviation		
2.2	eDocs File Versioning	1		1			



Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.1	System shall maintain version history of a file upload field or a form on the survey. File version history shall maintain previous version(s) of a file upload field or a form on the survey.	т	3	PQ-eDocs step 40	Pass Fail N/A Deviation
2.2.2	System shall allow a user to delete file from the data collection field. NOTE: This is an administrative function. The file will be deleted on REDCap instance but retained in the 'Vault'.	Т	3	PQ-eDocs step 42	Pass Fail N/A Deviation
2.2.3	System shall allow a user to overwrite and upload a new version of the current file while maintaining the current version in the file upload field.	Т	3	PQ-eDocs step 40	Pass Fail N/A Deviation

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.4	System shall provide an ability to download files from previous versions of an uploaded file.	Т	3	PQ-eDocs step 41	Pass
					🗌 Fail
					□ N/A
					Deviation
2.2.5	System shall create a version of a file only when the file is saved.	Т	3	PQ eDocs step 26	Pass
					🗌 Fail
					□ N/A
					Deviation
2.2.6	System shall maintain version history for files that will be Uploaded.	Т	3	PQ-eDocs step 40	Pass
					🗌 Fail
					□ N/A
					Deviation



REDCap eDocs Module Requirements Traceability Matrix

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.7	System shall maintain a version history which shall include the following:	Т	3	PQ-eDocs step 40	Pass
	Date/Time of Upload				🗌 Fail
	UserFile Uploaded				□ N/A
	File VersionInformation / Action				Deviation
	NOTE: Information / Action includes information about deleted files				
2.2.8	Logging history shall include the following:Date and time of the activity	Т	3	PQ eDocs step 21	Pass
	Username performing the actionFile information and action block			PQ-eDocs step 47	Fail N/A
				PQ-eDocs step 48	Deviation
2.2.9	System shall allow a user to download a file from the file history in the Information / action field.	т	3	PQ-eDocs step 41	Pass
					🗌 Fail
					□ N/A
					Deviation

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
--------	---	-----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.10	System shall allow a user to delete a file from the file history in the Information / action field.	т	3	PQ-eDocs step 41	 Pass Fail N/A Deviation
2.2.11	System shall retain deleted eDocs from REDCap database into the vault storage,	Т	3	PQ eDocs step 14 PQ-eDocs step 44	 Pass Fail N/A Deviation (eDocs - I/PQ - 004)
2.2.12	System shall enforce a mechanism to provide a reason for deletion prior to deletion of file.	Т	3	PQ eDocs step 21 PQ-eDocs step 41	 Pass Fail N/A Deviation

REDCap REDCap eDocs Module Requirements Document Version: 1.0 Traceability Matrix Document Version: 1.0

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.13	System shall store date and time of the deleted file.	Т	3	PQ eDocs step 21	Pass
				PQ-eDocs	🗌 Fail
				step 42	□ N/A
					Deviation
2.2.14	System shall retain reason of deletion of the deleted file.	Т	3	PQ eDocs step 21	Pass
				PQ-eDocs	🗌 Fail
				step 48	□ N/A
					Deviation
2.2.15	System shall be able to export entire data collection instrument into a CSV file format.	Т	2	PQ eDocs step 27	Pass
					🗌 Fail
					□ N/A
					Deviation

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
--------	---	-----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.2.16	System shall provide a capability to download documents from eDocs module from Data Exports, Reports, and Stats.	Т	2	PQ-eDocs step 49	Pass
				PQ-eDocs step 50	🗌 Fail
				PQ-eDocs step 51	Deviation
2.2.17	System shall provide a capability to upload documents into eDocs module from Data Exports, Reports, and Stats.	Т	2	PQ-eDocs step 52	Pass
					🗌 Fail
					□ N/A
					Deviation
2.2.18	System shall be capable of performing the following: • Upload New File	т	3	PQ eDocs step 4	Pass
	Remove FileSend file as an email			PQ eDocs	🗌 Fail
				step 7	□ N/A
				PQ eDocs step 9	Deviation
2.3	Password verification & automatic external file storage				



Req#	Requirement	Verification	Priority	Traceability	Test Result
2.3.1	The system will allow any given project to utilize extra functionality regarding the use of file upload fields in the project.	Т	3	PQ eDocs step 4	Pass
					Fail
					Deviation
2.3.2	The system will ask to confirm that the file is correct while uploading and additionally ask the user to enter the REDCap password for the verification process	Т	3	PQ eDocs step 5	Pass
					Fail
					│
					Deviation
4.3.4	The system will notify to save the changes or leave without saving the changes or stay on the page if the user proceeds without saving the	Т	3	PQ eDocs step 28	Pass
	record.				🗌 Fail
					□ N/A
					Deviation
2.4 4.4.	Post Signature Form Updates and Versioning				

REDCap eDocs Module Requirements Document Version: 1.0 Traceability Matrix Document Version: 1.0	DCap [®]	ocument Version: 1.0
--	--------------------------	----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.4.1	All versions of the files will be maintained within the project "vault."	Т	3	PQ eDocs step 14	Pass
					🗌 Fail
					□ N/A
					Deviation
2.4.2	System shall maintain all versions of the files on REDCap servers	Т	3	PQ-eDocs step 53	Pass
					🗌 Fail
					□ N/A
					Deviation
2.5	Executed eDocs Storage				
2.5.1	An appropriate "vault" will be set-up for each project.	Т	3	IQ-eDocs Step 8	Pass
				PQ eDocs step 14	🗌 Fail
					□ N/A
					Deviation

REDCapREDCap eDocs Module Requirements Traceability MatrixDocument Version: 1.0
--

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.5.2	The Vault will have limited access only to administrators of the Local Network.	Т	3	IQ-eDocs Step 11	Pass
					🗌 Fail
					□ N/A
					Deviation
2.5.3	The Vault will have write once read many configurations.	Т	3	IQ-eDocs Step 11	Pass
					🗌 Fail
					□ N/A
					Deviation
2.5.4	The Vault environment will be backed up daily.	Т	3	IQ-eDocs Step 12	Pass
					🗌 Fail
					□ N/A
					Deviation

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
•	······································	

2.6 SFTP storage	Req#	Requirement	Verification	Priority	Traceability	Test Result		
2.6 SFTP storage - - - N/A 2.6.1 eDocs will interface with an SFTP storage location. T 3 IQ-eDocs Step 10 > Pass 2.6.1 eDocs will interface with an SFTP storage location. T 3 IQ-eDocs Step 10 > Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 > Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 > Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 > Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 > Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs the storage SFTP or "vault." Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." <td< td=""><td>2.5.5</td><td>The Vault will have data encryption enabled.</td><td>Т</td><td>3</td><td></td><td></td></td<>	2.5.5	The Vault will have data encryption enabled.	Т	3				
2.6 SFTP storage								
2.6 SFTP storage Image: Constraint of the storage location. T 3 IQ-eDocs Step 10 Pass 2.6.1 eDocs will interface with an SFTP storage location. T 3 IQ-eDocs Step 10 Fail 2.6.1 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 10 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass Pass Image: Constraint of the storage SFTP or "vault." Image: Constraint of the storage SFTP or Storage STOR Storage SFTP or Storage SFTP or Sto								
2.6.1 eDocs will interface with an SFTP storage location. T 3 IQ-eDocs Step 10 Pass 2.6.1 eDocs will interface with an SFTP storage location. T 3 IQ-eDocs Step 10 Fail 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." Deviation Deviation Von-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						Deviation		
2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." I Doc value I Doc value 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." <td>2.6</td> <td>SFTP storage</td> <td></td> <td></td> <td></td> <td></td>	2.6	SFTP storage						
2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." Pass Image: Step 9 Pass 2.6.2 eDocs will not interface with any other systems directly other than the step step step step step step step ste	2.6.1	eDocs will interface with an SFTP storage location.	Т	3		Pass		
2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass Pass IQ-eDocs Fail IQ-eDocs Pass IQ-eDocs Pass Non-Functional Requirements IQ-eDocs Deviation IQ-eDocs IQ-eDocs IQ-eDocs IQ-eDocs Non-Functional Requirements IQ-eDocs IQ-eDocs IQ-eDocs IQ-eDocs IQ-eDocs IQ-eDocs III IQ-eDocs IIII IQ-eDocs IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII						🗌 Fail		
2.6.2 eDocs will not interface with any other systems directly other than the storage SFTP or "vault." T 3 IQ-eDocs Step 9 Pass Image:						□ N/A		
the storage SFTP or "vault." the storage SFTP or "vault." Step 9 Fail N/A Deviation Non-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						Deviation		
N/A Deviation Non-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.	2.6.2		т	3		Pass		
Non-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						🗌 Fail		
Non-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						□ N/A		
All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						Deviation		
		Non-Functional Requirements All non-functional requirements not specified in this document are defined by data and application architectures and SOPs.						

REDCapREDCap eDocs Module Requirements Traceability MatrixDocument Version: 1.0	
--	--

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.6.3	This system is subject to FDA 21 CFR Part 11, Electronic Records; Electronic Signatures and other global system regulations.	Т / Р	3	PQ-eDocs Step 3 & 6 Operation SOP Section 1 step 7	 Pass Fail N/A Deviation
2.7	Special Remote Use				
2.7.1	eDocs does not allow for off-line usage.	Т	3	PQ-eDocs Step 34	 Pass Fail N/A Deviation
2.8	Documentation and Training		<u>.</u>		
2.8.1	The eDocs validation documentation will be maintained by Stride program at Vanderbilt University.	V	3	Validation Plan	Pass Fail N/A Deviation



Req#	Requirement	Verification	Priority	Traceability	Test Result
2.8.2	The eDocs validation package will provide the basic design and associated functionality and testing to demonstrate that the application performs in an accurate and reliable manner.		3	Validation Plan	 Pass Fail N/A Deviation
2.8.3	Training for eventual users of the eDocs module will be provided in association with the REDCap training modules.	V	3	PQ-eDocs Step 36	Pass Fail N/A Deviation
2.8.4	There WILL BE training on regulated use of the eDocs and configuration considerations necessary for compliant use and control of the product.		3	PQ-eDocs Step 36	 Pass Fail N/A Deviation
2.9	Availability and Recoverability	1		1	1

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.9.1	Disaster recovery and business continuity planning along with testing evidence will be developed and executed for the eDocs system and environment, effectively demonstrating the ability to recover and not lose data in the event of an outage or issues with the system or hosting environment.	т	2	IQ and PQ REDCap Database backup and restore procedure	 Pass Fail N/A Deviation
2.10	Performance				
2.10.1	There are no known performance risks or limitations with the eDocs module within the REDCap application. The system supports concurrent users.	V	3	Administra tion SOP Section 5	 Pass Fail N/A Deviation
2.11	Capacity				
2.11.1	eDocs storage and performance, because it is leveraging REDCap system and functionality, will be based on the REDCap system performance. The system will allow for concurrent users within the system without degradation of system performance.	V	3	Administra tion SOP Section 5	 Pass Fail N/A Deviation
2.12	Installation Considerations				

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
--------	---	-----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.12.1	For all supporting infrastructure or hardware (both for test and production implementation), a formal Installation Qualification including any noted configuration points will be executed to document the infrastructure and associated components necessary to run the application.	Т	3	IQ Test Protocol	 Pass Fail N/A Deviation
FDA 21 CFR P	art 11 and Associated Global Regulatory Requirements				
2.13	Security				
2.13.1	21 CFR Part 11 (g) The system should have effectively defined roles and access controls. Access should be granted to the system via appropriate entry of an acceptable User ID and password combination.		3	PQ eDocs Step 31 PQ eDocs Step 32 PQ eDocs Step 33 Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation



Req#	Requirement	Verification	Priority	Traceability	Test Result
2.13.2	21 CFR Part 11 (g) (d) The system will enforce role-based authorization to various parts of the system. Refer to the matrix below for a list of roles supported by the system and the activities that each role is authorized to perform. Roles will have effective checks and balances on use, as well as, a process for granting access with appropriate authorization (may be non-testable, but confirmed with procedures).	Т/Р	3	PQ eDocs Step 31 PQ eDocs Step 32 PQ eDocs Step 33 Administra tion SOP	 Pass Fail N/A Deviation
				section 1 and 2	
2.13.3	User Roles and Permissions: eDocs User Roles are based on Data entry so every user regardless of the roles and permission can view and edit the records.	Т / Р	3	Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation
2.14	Audit Trail	I	I		
2.14.1	21 CFR Part 11 (g) (e) Actions performed within the system should be recorded within the audit trail and the role/user performing the action is included within the audit trail record.	Т / Р	3	PQ-eDocs step 40 PQ-eDocs step 46 Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation



Req#	Requirement	Verification	Priority	Traceability	Test Result
2.14.2	eDocs will leverage the Logging, history and audit trail capabilities of the REDCap application framework.	Т	3	PQ-eDocs step 21	Pass
				PQ-eDocs step 40	Fail
				PQ-eDocs step 46	Deviation
2.14.3	21 CFR Part 11 (e) The system will provide secure, computer- generated audit trails to independently record all changes made to electronic records. The audit trail must contain the date and time of operator entries, the action performed (create, update, delete), the username of the operator performing the action, and the data elements affected. Record changes will not obscure previously recorded information.	т	3	PQ-eDocs step 21 PQ-eDocs step 48	 Pass Fail N/A Deviation
2.14.4	An audit trail record will be created for every data process entry in the system.	Т	3	PQ-eDocs step 21 PQ-eDocs step 40 PQ-eDocs step 46 PQ-eDocs step 48	 Pass Fail N/A Deviation

REDCapREDCap eDocs Module Requirements Traceability MatrixDocument Versit
--

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.14.5	Audit trail documentation will be retained and will be available for review and export.	Т	3	PQ-eDocs step 21	Pass
					🗌 Fail
					□ N/A
					Deviation
2.14.6	Audit trail can be maintained with the data records for the length of the data retention requirements.	т	3	PQ-eDocs step 21	Pass
					🗌 Fail
					□ N/A
					Deviation
2.15	Process or Procedural Control				
2.15.1	All user interactions with the system will occur over an encrypted channel.	Т	3	IQ-eDocs Step 14	Pass
					🗌 Fail
					□ N/A
					Deviation

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0	
--------	---	-----------------------	--

Req#	Requirement	Verification	Priority	Traceability	Test Result
2.15.2	21 CFR Part 11.30 For open systems, the application will demonstrate that an appropriate encryption standard is employed.	Т	3	IQ-eDocs step 14	Pass
					Deviation
2.15.3	CFR Part 11.30 Systems should demonstrate that encryption is in effect for data in transit and while at rest.	Т	3	IQ-eDocs step 14	Pass
					🗌 Fail
					□ N/A
					Deviation
2.15.4	Encryption Keys are maintained by VUMC	Т	3	Administra tion SOP	Pass
					🗌 Fail
					□ N/A
					Deviation
3	Hardware and Software Requirements				



Req#		Requiren	nent				Verification	Priority	Traceability	Test Result
3.1	A standard installation of the software, the add (i.e. PDF rendering soft system to work, will be	ditional softw tware, etc.)	vare and ha	ardware o ns levera	compone ged for t	nts	V	1	IQ and PQ	 Pass Fail N/A Deviation
4	User Groups					1			I	
4.1.1	User Groups and account utilize functionality asso The associated screen Rights module, which w up:	ciated with t shots include	he REDCap ed here is	application of the R	on. EDCap U	ser	Т / Р	N/A	Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation
4.1.2	User Roles and Permissi	ons Matrix fo	or e-Docs:				Т	3	PQ e-Docs Step 31	Pass
	Activity	Administrator	Principle Investigato r	Site Coordina tor	Monitor / Auditor	Dat Ent Ana st			PQ e-Docs Step 32 PQ e-Docs	Fail
	Development of e-Docs Form	х	Х	х					Step 33	
	e-Docs Form Execution Vaulting of Executed e- Consent Form	x x	x x	x x		x				Deviation
	Read Only access to review e- Docs forms				x					



REDCap eDocs Module Requirements

Document Version: 1.0

Traceability Matrix

Req#	Req	uirement	Verification	Priority	Traceability	Test Result
4.1.3	Participanti and Construction Participanti and Construction Pa		T/P	3	PQ e-Docs Step 31 PQ e-Docs Step 32 PQ e-Docs Step 33 Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation



REDCap eDocs Module Requirements

Document Version: 1.0

Traceability Matrix

Req#	Requirement	Verification	Priority	Traceability	Test Result
4.1.4	Editing existing user "jafvaltester (0gmail.com" You may set the rights for the user below by checking the boxes neet to the application tools to which you wish to grant them access. You may also grant them or dery them access to individual data collection instruments, if so desired. To save your selection, dick the "Save Change" button at the bottom of the page. Deta Edging existing user "jafvaltester (0gmail.com" India Etgipte Deta Edging and Satup Project Design and Satup Data Crouge: Add Edit/Ogrante Reports Add Edit/Ogrante Reports Add Edit/Ogrante Reports Statis & Charts Statis & Charts Statis & Charts Extended to the statistical accession of the statistical ac	Т / Р	3	Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation



REDCap eDocs Module Requirements

Document Version: 1.0

Traceability Matrix

rs within a project. In the box below you may add/assign users or create new	T/P			Test Result
India Image: Editing existing user "jafvaltester1@gmail.com" Image: Deletion forms that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be indiced means that all the form of fields will be		3	Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation

Traceability Matrix Document Version: 1.0	REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
---	--------	---	-----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
4.1.6	Image: Setting existing user "jafvaltester1@gmail.com" Warks Data Owlig? Execute rules API API Execute rules Marks Une SECICe API API Export API Export Settings pertaining to project record: Settings pertaining to project record: Settings pertaining to project record: Execond Looking Internet Records Delete Records Internet Records Customization Execute Coding User with Iodes project Internet Records Delete Records Internet Records Evente Notes project record: Internet Records Delete Records Internet Records Api Unicode Record: Internet Records Apatitions Records Internet Records Apatitions Records Internet Records Apatitions Records Internet Records Apatitis an Expontence Internet Reco	Т / Р	3	Administra tion SOP section 1 and 2	 Pass Fail N/A Deviation
5	Other Requirements				
5.1	There shall be an operation and administration procedure	V	1	Operation and Administra tion SOP	Pass Fail N/A Deviation
5.2	Computing Environment				

REDCap	REDCap eDocs Module Requirements Traceability Matrix	Document Version: 1.0
--------	---	-----------------------

Req#	Requirement	Verification	Priority	Traceability	Test Result
5.2.1	System shall be developed and validated in test environment	V	1	PQ-eDocs step 36	Pass
					🗌 Fail
					□ N/A
					Deviation

REDCap eDocs Requirements Traceability Matrix - Final v01

Final Audit Report

2020-03-31

Created:	2020-03-31
By:	Joseph Franchetti (jfranchetti@jafconsulting.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA-IHdOS_VrzoEt-LUJuK5GXFhiKrHEh0n

"REDCap eDocs Requirements Traceability Matrix - Final v01" H istory

- Document created by Joseph Franchetti (jfranchetti@jafconsulting.com) 2020-03-31 - 4:01:24 PM GMT- IP address: 73.196.185.110
- Document emailed to Paul A. Harris (paul.a.harris@vumc.org) for signature 2020-03-31 - 4:02:38 PM GMT
- Document emailed to Colleen E. Lawrence (colleen.lawrence@vumc.org) for signature 2020-03-31 4:02:38 PM GMT
- Document emailed to Rob Taylor (rob.taylor@vumc.org) for signature 2020-03-31 - 4:02:39 PM GMT
- Document emailed to Gaurav Kumar (gkumar@jafconsulting.com) for signature 2020-03-31 4:02:39 PM GMT
- Document emailed to Joseph Franchetti (jfranchetti@jafconsulting.com) for signature 2020-03-31 4:02:39 PM GMT
- Document e-signed by Joseph Franchetti (jfranchetti@jafconsulting.com) Signature Date: 2020-03-31 - 4:02:47 PM GMT - Time Source: server- IP address: 73.196.185.110
- Email viewed by Paul A. Harris (paul.a.harris@vumc.org) 2020-03-31 - 4:03:11 PM GMT- IP address: 68.53.113.176
- Document e-signed by Paul A. Harris (paul.a.harris@vumc.org) Signature Date: 2020-03-31 - 4:03:50 PM GMT - Time Source: server- IP address: 68.53.113.176
- Email viewed by Rob Taylor (rob.taylor@vumc.org) 2020-03-31 - 4:04:13 PM GMT- IP address: 160.129.251.128

Email viewed by Colleen E. Lawrence (colleen.lawrence@vumc.org) 2020-03-31 - 4:04:27 PM GMT- IP address: 160.129.251.127
Document e-signed by Rob Taylor (rob.taylor@vumc.org) Signature Date: 2020-03-31 - 4:04:39 PM GMT - Time Source: server- IP address: 160.129.251.128
Document e-signed by Colleen E. Lawrence (colleen.lawrence@vumc.org) Signature Date: 2020-03-31 - 4:06:06 PM GMT - Time Source: server- IP address: 160.129.251.127
Email viewed by Gaurav Kumar (gkumar@jafconsulting.com) 2020-03-31 - 4:33:34 PM GMT- IP address: 103.106.28.250
Document e-signed by Gaurav Kumar (gkumar@jafconsulting.com) Signature Date: 2020-03-31 - 4:34:28 PM GMT - Time Source: server- IP address: 103.106.28.250
Signed document emailed to Joseph Franchetti (jfranchetti@jafconsulting.com), Paul A. Harris (paul.a.harris@vumc.org), Gaurav Kumar (gkumar@jafconsulting.com), Rob Taylor (rob.taylor@vumc.org), and 1 more

2020-03-31 - 4:34:28 PM GMT