

## EPIC ClearView Synchronizer Product Requirements Matrix

### APPROVALS:

Name	Job Title	Signature	Date
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### REVISION HISTORY

Revision	Revision Date	Reason for Revision/Change Request	Revised By
000	31Jul12	Initial Release	S. Pletzer



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## Software Requirement (SR)

Ref. #	Requirement	Source of Requirement	Design Inputs (Specification)	Verification Methodology	Design Outputs (Verification Results)	Validation Results	Status
SR-005 4.1	A queuing application shall be written that will run as a standalone windows service.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The service is installed as a Windows server. It can be started as a standalone application or started from the Services utility in Windows Administration.	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> <li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.2	The queuing service should produce a log of all activity that contains the time and date of the activity as well as the text that describes the activity.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	A rolling log is created using the log4net API. <a href="http://logging.apache.org/log4net/">http://logging.apache.org/log4net/</a>	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> <li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.3	The service should start when Windows starts and shall appear in the list of windows services.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The service starts automatically when the computer boots via the Windows service manager displayed above.	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> <li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.4	The windows service must have a debug console that can be instantiated.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The debug console can be started by launching the same application displayed in the Path to execute in the dialog above.	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> <li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.4.1	The console must be protected with a User Id and password.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The console requires administrative privileges. If a user does not have administrative privileges they will be prompted to enter them by Windows.	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> <li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.4.2	The console must show the transactions as they	Internally initiated and developed by IT group	All interactions are logged to Console display.	<ul style="list-style-type: none"> <li>• EPIC ClearView Synchronizer Verification Record</li> </ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending



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	are being issued as well as the responses.	to maintain data state between ClearView clients and EPIC's SaaS application.		•ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0			
SR-005 4.4.3	The console must be able to show the log that was created by the service.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	All service transactions are shown in the view above whether the entry was created by the dialog or by the Windows service.	•EPIC ClearView Synchronizer Verification Record •ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.4.4	Historical counts (count of calls made, by date) All calls (functions) should be tracked.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	Historical counts can be viewed on the Services tab.	•EPIC ClearView Synchronizer Verification Record •ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.5	The debug console shall be able to be started and stopped without requiring a reset of the service.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The service dialog can be closed and opened independently of the Windows service by launching the same applications the Windows service runs.	•EPIC ClearView Synchronizer Verification Record •ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.6	The console must show a real-time count of the number of items in the queue by item type.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The counts are shown on the Services tab, this view is updated in real time every time a Services or a Queue call is made, or when the Transaction Manager is executed.	•EPIC ClearView Synchronizer Verification Record •ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending



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SR-005 4.7	Requests shall function in real-time, if a response cannot be received in a prescribed amount of time, the request will be placed into a queue where it will be handled asynchronously.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	Depending on the function, some items are queued for synchronization and some actions return a value immediately.	<ul style="list-style-type: none"><li>•EPIC ClearView Synchronizer Verification Record</li><li>•ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.8	Responses will contain a status reflecting the success or failure of the call, the status values at a minimum will be:	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The three conditions returned by the service are defined below:	<ul style="list-style-type: none"><li>•EPIC ClearView Synchronizer Verification Record</li><li>•ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.8.1	The ability to create, update and search for patients.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	If the function call is a Queuing event, it will always queue and succeed if the Local service can be reached.	<ul style="list-style-type: none"><li>•EPIC ClearView Synchronizer Verification Record</li><li>•ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.8.2	Search for captures using established criteria and display capture search results.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	If the local service cannot be reached an EndpointNotFoundException is thrown.	<ul style="list-style-type: none"><li>•EPIC ClearView Synchronizer Verification Record</li><li>•ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.8.3	Export subject data including calibration images, finger images, energized images, raw data and report data using established folder	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	If the EPIC Central service cannot be reached on a service call that requires immediate feedback, the exception will be thrown to ClearView. And Internal Error will be thrown for all errors not related to EPIC Central and will be logged.	<ul style="list-style-type: none"><li>•EPIC ClearView Synchronizer Verification Record</li><li>•ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending



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	directory structure by EPIC administrators.						
SR-005 4.9	Items in the queue must be retried on a defined frequency until they are properly processed. This frequency should be an adjustable parameter.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The items in the queue will be retried the number of time defined by the Retries setting on the Configuration tab.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.10	The queue must persist to non-volatile storage as to maintain state in the case of a shutdown of the machine.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	All queued items are stored in a database.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.11	Resources used must be localized to allow support of different cultures.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The Language can be selected on the Configuration tab; this controls the language for all events that occur within the synchronization service, as well as the appearance of the management dialog. Languages are loaded dynamically from the Languages directory.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.12	The communication between the synchronizations service and the ClearView application must be through http.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	All communication between ClearView and the synchronization service is done over HTTP, this is the default binding for WFC services.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.13	All adjustable parameters should be able to be modified from an interface tied to the queuing service.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	When the configuration is changed in the service management console the Windows service is updated automatically and the new settings are applied.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending



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		application.					
SR-005 4.14	Service must keep track of no connectivity time.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	Offline time is stored in a local database. It is reset when the service becomes available again.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.15	Service should ping EPIC central regardless of whether or not ClearView is running.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	EPIC Central is pinged at the increment defined on the Configuration tab regardless of work to do.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.16	The service will manage the credentials necessary to connect to the EPIC central service.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	The service stored the authentication information in an encrypted app.config file. If there is no authentication information, the Ping function will throw WebFaultExceptions with the specified status codes.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending
SR-005 4.17	The queuing service must expose all of the web service function calls that are available from EPIC Central.	Internally initiated and developed by IT group to maintain data state between ClearView clients and EPIC's SaaS application.	All service calls from EPIC Central are exposed to ClearView. This can be verified by comparing the Web Service Reference Wizard to the EPIC Central Web Services Specification.	<ul style="list-style-type: none"><li>• EPIC ClearView Synchronizer Verification Record</li><li>• ENG-032, EPIC ClearView Synchronizer Verification &amp; Validation – Version 1.0</li></ul>	ENG-032, EPIC ClearView Synchronizer Verification & Validation – Version 1.0	Pending	Pending