#	BR Type	Internal Reference Section	ID	Event Data Retrieval Requirements	MoSCoW Prioritization	Yes/ No	If Yes, Please Explain
1	**BFR-01**	Function	1	The Automatic Event Retrieval System (AERS) will automatically **retrieve event records** from **digital relays**.	Must have	Yes	openMIC can retrieve event and transient records from relays, and DFRs.
2	**BFR-02**	Function	2	The AERS will automatically **retrieve event records** from **fault recorders**.	Must have	Yes	openMIC can retrieve event and transient records from relays, and DFRs.
3	**BFR-03**	Function	3	The AERS will automatically **retrieve transient records** from **digital relays**.	Must have	Yes	openMIC can retrieve event and transient records from relays, and DFRs.
4	**BFR-04**	Function	4	The AERS will automatically **retrieve transient records** from **fault recorders**.	Must have	Yes	openMIC can retrieve event and transient records from relays, and DFRs.
5	**BFR-05**	Function	5	The AERS will pull **event data** from **devices** from a variety of **manufacturers**.	Must have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
6	**BFR-06**	Function	6	The AERS will automatically **store event records** from **digital relays**.	Must have	Yes	Record storage location is configurable to any location the service has been granted access.
7	**BFR-07**	Function	7	The AERS will automatically **store event records** from **fault recorders**.	Must have	Yes	Record storage location is configurable to any location the service has been granted access.
8	**BFR-08**	Function	8	The AERS will automatically **store transient records** from **digital relays**.	Must have	Yes	Record storage location is configurable to any location the service has been granted access.
9	**BFR-09**	Function	9	The AERS will automatically **store transient records** from **fault recorders**.	Must have	Yes	Record storage location is configurable to any location the service has been granted access.
10	**BFR-10**	Function	10	The AERS will automatically push **email notifications** of **event records** from **digital relays** to **System Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
11	**BFR-11**	Function	11	The AERS will automatically push **email notifications** of **event records** from **fault recorders** to **System Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
12	**BFR-12**	Function	12	The AERS will automatically push **email notifications** of **transient records** from **digital relays** to **System Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
13	**BFR-13**	Function	13	The AERS will automatically push **email notifications** of transient records from fault recorders to System Operators.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
14	**BFR-14**	Function	14	The AERS will automatically push **text notifications** of event records from digital relays to System Operators.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
15	**BFR-15**	Function	15	The AERS will automatically push **text notifications** of **event records** from **fault recorders** to **System Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
16	**BFR-16**	Function	16	The AERS will automatically push **text notifications** of transient records from digital relays to System Operators.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
17	**BFR-17**	Function	17	The AERS will automatically push **text notifications** of transient records from fault recorders to System Operators.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
18	**BFR-18**	Function	18	The AERS will automatically push **email notifications** of **event data** to a defined set of **On-call Duty System Protection Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
19	**BFR-19**	Function	19	The AERS will automatically push **email notifications** of **fault location data** to a defined set of **On-call Duty System Protection Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
20	**BFR-20**	Function	20	The AERS will automatically push **text notifications** of **event data** to a defined set of **On-call Duty System Protection Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
21	**BFR-21**	Function	21	The AERS will automatically push **text notifications** of **fault location data** to a defined set of **On-call Duty System Protection Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
22	**BFR-22**	Function	22	The AERS will automatically push **email notifications** of **event data** to a defined set **On-call Duty ECC Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
23	**BFR-23**	Function	23	The AERS will automatically push email notifications of fault location data to a defined set of On-call Duty ECC Operators.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
24	**BFR-24**	Function	24	The AERS will automatically push **text notifications** of **event data** to a defined set of **On-call Duty ECC Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
25	**BFR-25**	Function	25	The AERS will automatically push **text notifications** of fault **location data** to a defined set of **On-call Duty ECC Operators**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
26	**BFR-26**	Function	26	The AERS will automatically push **email notifications** of **event data** to a defined set of **On-call Duty DOC Personnel**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
27	**BFR-27**	Function	27	The AERS will automatically push **email notifications** of **fault location data** to a defined set of **On-call Duty DOC Personnel**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).

28	**BFR-28**	Function	28	The AERS will automatically push **text notifications** of **event data** to a defined set of **On-call Duty DOC Personnel**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
29	**BFR-29**	Function	29	The AERS will automatically push **text notifications** of fault **location data** to a defined set of **On-call Duty DOC Personnel**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
30	**BFR-30**	Function	30	The AERS will automatically push **email notifications** of **event data** to a defined set of **On-call Duty System Health Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
31	**BFR-31**	Function	31	The AERS will automatically push **email notifications** of **fault location data** to a defined set of **On-call Duty System Health Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
32	**BFR-32**	Function	32	The AERS will automatically push **text notifications** of **event data** to a defined set of **On-call Duty System Health Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
33	**BFR-33**	Function	33	The AERS will automatically push **text notifications** of **fault location** data to a defined set of **On-call Duty System Health Engineers**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
34	**BFR-34**	Function	34	The AERS will monitor connectivity between the AERS, relays, and Digital Fault Recorder (DFRs) in the field.	Must have	Yes	Connectivity is reported each polling cycle.
35	**BFR-35**	Function	35	The AERS will **alarm** when there is **no connectivity** between the **AERS, relays and DFRs** in the field.	Must have	Yes	Alarms can be configured for a variety of conditions, including connectivity, configuration changes, and diagnostics.
36	**BFR-36**	Function	36	The AERS will enable push **notification** for any **loss of connectivity alarming** within the **AERS to relays via emai**l.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
37	**BFR-37**	Function	37	The AERS will enable push **notification** for any **loss of connectivity** alarming within the **AERS to relays via text**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
38	**BFR-38**	Function	38	The AERS will enable push **notification** for any **loss of connectivity** alarming within the **AERS to DFRs via email**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
39	**BFR-39**	Function	39	The AERS will enable push **notification** for any **loss of connectivity** alarming within the **AERS to DFRs via text**.	Must have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
40	**BFR-40**	Function	40	The AERS will have the ability to **organize** data into **folders** based on a **descending hierarchy of substation > asset > device**.	Must have	Yes	Folder heirarchy is configurable.
41	**BFR-41**	Function	41	The AERS will enable a **support link** to be accessed by **specific applications** that grant **access to the system directly**.	Must have	Yes	Access management is done through Azure/Microsoft AD, hosted and controlled by APS.
42	**BFR-42**	Function	42	The AERS will enable **search** of **past events** based on any of the **available data**.	Must have	Yes	PQ Browser allows a search/browse of events based on filters of available event data.
43	**BFR-43**	Function	43	The AERS will **filter past events** based on any of the **available data**.	Must have	Yes	PQ Browser allows a search/browse of events based on filters of available event data.
44	**BFR-44**	Function	44	The AERS will **generate** a **report** with specified information.	Must have	Yes	Various reports can be exported, and the Notification platform can be configured to generate scheduled reports that are either sent as emails or saved as files to a designated file share.
45	**BFR-45**	Function	45	The AERS will enable **mutliple users** to **connect concurrently**.	Must have	Yes	There is no systematic limit on the number of concurrent users.
46	**BNFR-01**	Non-Functional	46	The AERS will allow a **server** to **retain event data** for 5-10 years.	Must have	Yes	There is no default storage limit or expiration.
47	**BFR-46**	Function	47	The AERS will **retrieve Sequence of Events (SOE)** data **SER.txt file or equivalent file**.	Must have	Yes	openMIC can be configured to retrieve SOE, Fault report, and Oscillography files
48	**BFR-47**	Function	48	The AERS will **retrieve Fault reports HIS.txt file or equivalent file**.	Must have	Yes	openMIC can be configured to retrieve SOE, Fault report, and Oscillography files
49	**BFR-48**	Function	49	The AERS will **retrieve Oscillography files .eve (SEL Syncrowave) file or equivalent file**.	Must have	Yes	openMIC can be configured to retrieve SOE, Fault report, and Oscillography files
50	**BFR-49**	Function	50	The AERS will enable **remote access** to **microprocessor relays** via **"Conventional Access Type"**.	Must have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
51	**BFR-50**	Function	51	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 6"**.	Must have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
52	**BFR-51**	Function	52	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 7"**.	Must have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
53	**BFR-52**	Function	53	The AERS will allow a **server** to have **access** to all **"SPNET network"** connected event recording devices.	Must have	Yes	Applications are self-hosted so server and network access is managed by applicable policy enforcement.
54	**BFR-53**	Function	54	The AERS will allow a **server** to have **access** to all **"NGN network"** connected event recording devices.	Must have	Yes	Applications are self-hosted so server and network access is managed by applicable policy enforcement.
55	**BFR-54**	Function	55	The AERS will allow a **server** to have **access** to all **"CIMZ network"** connected event recording devices.	Must have	Yes	Applications are self-hosted so server and network access is managed by applicable policy enforcement.
56	**BFR-55**	Function	56	The AERS will **parse data** and display **date of the event**.	Should have	Yes	openXDA parses the data retrieved from the event record, including the date and time of the event, which are displayed in all of the suite's visualization tools.
57	**BFR-56**	Function	57	The **event data retrieved** by the AERS includes the **time of an event**.	Should have	Yes	openXDA parses the data retrieved from the event record, including the date and time of the event, which are displayed in all of the suite's visualization tools.

58	**BFR-57**	Function	58	The AERS will have the ability to be **configured to "polling" mode**.	Should have	Yes	openMIC "polls" a device and retrieves records *when new records are available.*
59	**BFR-58**	Function	59	When AERS is configured to "polling" mode **polling interval** will be **programmable**.	Should have	Yes	Polling setting schemas are configurable and able to be applied to devices en masse.
60	**BFR-59**	Function	60	The AERS will be capable of performing **transmission fault location analytics**.	Should have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
61	**BFR-60**	Function	61	The AERS will enable **support of the API Interface**.	Should have	Yes	
62	**BFR-61**	Function	62	The AERS will enable **two terminal fault location methodology**.	Should have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
63	**BFR-62**	Function	63	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 4"**.	Should have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
64	**BFR-63**	Function	64	The AERS will allow a **server** to have **access** to all **"PWAN network"** connected event recording devices.	Should have	Yes	Applications are self-hosted so server and network access is managed by applicable policy enforcement.
65	**BFR-64**	Function	65	The AERS will automatically **analyze event records** from **digital relay** (Fault Location from Two Terminal Line).	Could have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
66	**BFR-65**	Function	66	The AERS will automatically **analyze event records** from **fault recorders** (Fault Location from Two Terminal Line).	Could have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
67	**BFR-66**	Function	67	The AERS will automatically **analyze transient records** from **digital relays** (Fault Location from Two Terminal Line).	Could have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
68	**BFR-67**	Function	68	The AERS will automatically **analyze transient records** from **fault recorders**.	Could have	Yes	openXDA performs a variety of analytics on retrieved event data, including fault location and two terminal fault location.
69	**BFR-68**	Function	69	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 1"**.	Could have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
70	**BFR-69**	Function	70	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 2"**.	Could have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
71	**BFR-70**	Function	71	The AERS will enable **remote access** to **microprocessor relays** via" **Access Type 3"**.	Could have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
72	**BFR-71**	Function	72	The AERS will enable **remote access** to **microprocessor relays** via **"Access Type 5"**.	Could have	Yes	openMIC supports polling over a variety of connection types, including a number of proprietary protocols.
73	**BFR-72**	Function	73	The AERS will enable **"listen" mode configuration** when collecting **event records**.	Could have	Yes	openMIC "polls" a device and retrieves records *when new records are available.*
74	**BNFR-02**	Non-Functional	74	The AERS will send a **report** of **captured event data** by the **following day at 9 am AZ Time** when an event has occurred.	Could have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
75	**BNFR-03**	Non-Functional	75	The AERS will **support role based user access**.	Could have	Yes	Support for database, Windows, and Azure AD authentication.
76	**BNFR-04**	Non-Functional	76	The AERS will enable **support of the REST Interface**.	Could have	Yes	
77	**BNFR-05**	Non-Functional	77	The AERS will send **notifications** within a **maximum 10 mins**.	Could have	Yes	Notifications (email and text, scheduled and triggered) can be configured and subscribed to (both assigned by admins and via self-subscription).
78	**BNFR-06**	Non-Functional	78	The AERS will enable **export of event data**.	Must have	Yes	Event data can be exported in CSV, PQDIF, or PQDS format.