Solution to redmine xxxx

### sLog6 to sLog9 too many steps in one detailed test procedure

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18 December 2024

The abstract test procedures sLog6-7-8-9 are combined in one detailed test procedure. This has too many steps and also repeat statements. This is unnecessary complex.

Proposal is split/separate sLog8 in a separate detailed test procedure. .

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| sLog6 | Configure and enable logging and check that the following logging trigger options place a correct entry in the log with the correct members of the data set   * on integrity * on update (dupd) * on update with integrity * on data change (dchg) * on quality change (qchg) * on data and quality change * on data and quality change with integrity period |
| sLog7 | Request QueryLogByTime and check response+ |
| sLog8 | Request QueryLogAfter and check response+ |
| sLog9 | Request GetLogStatusValues and check response+, verify that the responded entries indicate the oldest/newest entry ID/time available in the log |

Current test procedure:

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| **sLog6**  **sLog7**  **sLog8**  **sLog9** | **Trigger options for a LCB**  **QueryLogByTime**  **QueryLogAfter**  **GetLogStatusValues** | Passed  Failed  Inconclusive |
| IEC 61850-7-2 Subclause 17.3.5  IEC 61850-8-1 Subclause 17.3.4 | | |
| Expected result   1. DUT sends SetLCBValues response+ 2. DUT sends SetLCBValues response+ and adds an event condition ACTIVE to the log 3. DUT sends SetLCBValues response+ and adds an event condition DISABLED to the log 4. DUT sends SetLCBValues response+ and adds an event condition ACTIVE to the log 5. DUT adds entries to the log according to trigger option, the reason code shall match the trigger option 6. DUT sends GetLogStatusValues response+. The responded entries indicate the oldest/newest entry ID/time available in the log 7. DUT sends QueryLogByTime response+ with a list of the corresponding log entries with matching reason code  * the log time stamp value is UTC and matches the trigger time * the reason for inclusion matches the trigger option * the data-reference(s) match the data set member(s)  1. DUT sends QueryLogAfter response+ with a list of the corresponding log entries with matching reason code 2. DUT sends QueryLogAfter response+ with a list all log entries 3. DUT sends QueryLogAfter response+ with an empty list of entries 4. DUT sends QueryLogAfter response+ with log entries after the specified time 5. DUT sends QueryLogAfter response+ with log entries after those of the specified timestamp 6. DUT sends QueryLogAfter response+ with an empty list of entries 7. DUT sends QueryLogAfter response+ with entries specified at the timestamp but excludes all entries equal and prior to the specified entry value   15. DUT sends GetLogStatusValues response+  17. DUT responses the same log status values as in step 15  19. DUT responses the same log status values as in step 15 | | |
| Test description   1. Configure an available LCB using SetLCBValues with the following trigger options:  * on integrity * on update (dupd) * on data and quality change * on data and quality change with integrity period  1. Client enables the LCB, set LogEna to True 2. Client disables the LCB, set LogEna to False 3. Client enables the LCB, set LogEna to True 4. EQUIPMENT SIMULATOR forces several data changes of one or more data set members in the data set including multiple values of entry identifiers with same timestamp 5. Client sends GetLogStatusValues request 6. Client sends valid QueryLogByTime request 7. Client sends valid QueryLogAfter request 8. Client sends valid QueryLogAfter with invalid entry and RangeStartTime before first Log entry 9. Client sends valid QueryLogAfter with invalid entry and RangeStartTime after last Log entry 10. Client sends valid QueryLogAfter with invalid entry and RangeStartTime between the first Log entry but before the final Log entry but not equal to any log entries 11. Client sends valid QueryLogAfter with invalid entry and RangeStartTime equal to one of the entries after the first timestamp but before the entry with the last timestamp 12. Client sends valid QueryLogAfter with invalid entry and RangeStartTime equal to the entries with the most recent timestamps 13. Client sends valid QueryLogAfter with RangeStartTime equal to that with multiple entry value and with entry equal to the non-first entry at that time 14. Repeat step 1 to 12 for next trigger option combination 15. Client disables the LCB, set LogEna to False 16. Client sends GetLogStatusValues request 17. EQUIPMENT SIMULATOR forces several data changes of one or more data set members in the data set 18. Client sends GetLogStatusValues request | | |
| Comment | | |

Proposal:

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| sLog6 | Configure and enable logging and check that the following logging trigger options place a correct entry in the log with the correct members of the data set   * on integrity * on update (dupd) * on data change (dchg) * on data and quality change * on data and quality change with integrity period |
| sLog7 | Request QueryLogByTime and check response+ |
| sLog8 | Request QueryLogAfter and check response+ |
| sLog9 | Request GetLogStatusValues and check response+, verify that the responded entries indicate the oldest/newest entry ID/time available in the log |

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| **sLog6**  **sLog7**  **sLog9** | **Trigger options for a LCB**  **QueryLogByTime**  **GetLogStatusValues** | Passed  Failed  Inconclusive |
| IEC 61850-7-2 Subclause 17.3.5  IEC 61850-8-1 Subclause 17.3.4 | | |
| Expected result   1. DUT sends SetLCBValues response+ 2. DUT sends SetLCBValues response+ 3. DUT adds entries to the log according to trigger option, the reason code shall match the trigger option 4. DUT sends GetLogStatusValues response+. The responded entries indicate the oldest/newest entry ID/time available in the log 5. DUT sends QueryLogByTime response+ with a list of the corresponding log entries with matching reason code  * the log time stamp value is UTC and matches the trigger time * the reason for inclusion matches the trigger option * the data-reference(s) match the data set member(s)  1. DUT sends SetLCBValues response+ 2. DUT sends GetLogStatusValues response+ 3. DUT responses the same log status values as in step 7 | | |
| Test description   1. Configure an available LCB using SetLCBValues with one of the following trigger options:  * on integrity * on update (dupd) * on data change (dchg) * on data and quality change * on data and quality change with integrity period  1. Client enables the LCB, set LogEna to True 2. EQUIPMENT SIMULATOR forces several data changes of one or more data set members in the data set 3. Client sends GetLogStatusValues request 4. Client sends valid QueryLogByTime request 5. Client disables the LCB, set LogEna to False 6. Client sends GetLogStatusValues request 7. EQUIPMENT SIMULATOR forces several data changes of one or more data set members in the data set 8. Client sends GetLogStatusValues request and valid QueryLogByTime request 9. Repeat step 1 to 9 for next trigger option combination | | |
| Comment | | |

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| **sLog8** | **QueryLogAfter** | Passed  Failed  Inconclusive |
| IEC 61850-7-2 Subclause 17.3.5  IEC 61850-8-1 Subclause 17.3.4 | | |
| Expected result   1. DUT sends SetLCBValues response+ 2. DUT sends SetLCBValues response+ and adds an event condition ACTIVE to the log 3. DUT sends SetLCBValues response+ and adds an event condition DISABLED to the log 4. DUT sends SetLCBValues response+ and adds an event condition ACTIVE to the log 5. DUT adds entries to the log according to trigger option, the reason code shall match the trigger option 6. DUT sends GetLogStatusValues response+. The responded entries indicate the oldest/newest entry ID/time available in the log 7. DUT sends QueryLogAfter response+ with a list of the corresponding log entries with matching reason code  * the log time stamp values is UTC and matches the trigger time * the reason for inclusion matches the trigger option * the data-reference(s) match the data set member(s)  1. DUT sends QueryLogAfter response+ with a list all log entries 2. DUT sends QueryLogAfter response+ with an empty list of entries 3. DUT sends QueryLogAfter response+ with log entries after the specified time 4. DUT sends QueryLogAfter response+ with log entries after those of the specified timestamp 5. DUT sends QueryLogAfter response+ with an empty list of entries 6. DUT sends QueryLogAfter response+ with entries specified at the timestamp but excludes all entries equal and prior to the specified entry value | | |
| Test description   1. Configure an available LCB using SetLCBValues with trigger option on data and quality change 2. Client enables the LCB, set LogEna to True 3. Client disables the LCB, set LogEna to False 4. Client enables the LCB, set LogEna to True 5. EQUIPMENT SIMULATOR forces several data changes of one or more data set members in the data set including multiple values of entry identifiers with same timestamp 6. Client sends GetLogStatusValues request 7. Client sends valid QueryLogAfter request 8. Client sends valid QueryLogAfter with invalid entry and RangeStartTime before first Log entry 9. Client sends valid QueryLogAfter with invalid entry and RangeStartTime after last Log entry 10. Client sends valid QueryLogAfter with invalid entry and RangeStartTime between the first Log entry but before the final Log entry but not equal to any log entries 11. Client sends valid QueryLogAfter with invalid entry and RangeStartTime equal to one of the entries after the first timestamp but before the entry with the last timestamp 12. Client sends valid QueryLogAfter with invalid entry and RangeStartTime equal to the entries with the most recent timestamps 13. Client sends valid QueryLogAfter with RangeStartTime equal to that with multiple entry value and with entry equal to the non-first entry at that time | | |
| Comment | | |