## Solution for Redmine #3079 sSv13 conditional

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| **Test ID** | **Test Case** |
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| sSvp13 | Signals that are not measured or calculated shall have the corresponding Quality bit = InvalidCondition: when DUT does measure less then 3 currents and 3 voltages or the DUT supports Quality = invalid |
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Certificate template

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| **IEC 61850 Certificate Level A/B1** | No. << certificate number>> |
| Issued to: | For the server product: |
| <TEST INITIATOR><FULL ADDRESS> | <PRODUCT ID and NAME><IEC 61850 software/firmware version: <VERSION>>[Hardware version: xxxxx][S/N: xxxx, yyyy (in case of multiple samples)] |

Issued by: <<test lab>>

**The server product has not been shown to be non-conforming to:**

IEC 61850 Edition 2 Amendment 1 Parts 6, 7-1, 7-2, 7-3, 7-4, 8-1 [and 9-2

and IEC 61869 First Edition Part 9]

**Communication networks and systems for power utility automation**

The conformance test has been performed according to IEC 61850-10, the UCA International Users Group Edition 2 Server Test Procedures version 1.0 with product’s protocol, model and technical issue implementation conformance statements: “<<PICS>>”, “<<MICS>>”, “<<TICS>>” and product’s extra information for testing: “<<PIXIT>>”.

The following IEC 61850 conformance blocks have been tested with a positive result (number of relevant and executed test cases / total number of test):

|  |  |
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| 1a Basic Exchange (../29)1b Associate with IPv6 (../12)2 Data Sets (../7)2+ Data Set Definition (../24)3 Substitution (../3)4 Setting Group Selection (../4)4+ Setting Group Definition (../13)5 Unbuffered Reporting (../26)6 Buffered Reporting (../36)7 Logging (../14)9a GOOSE Publish (../13)9b GOOSE Subscribe (../26)9c GOOSE Management (../3) | 11a SV publish (,,,,/20)11b SV subscribe (…/20)12a Direct Control (../19)12b SBO Control (../28)12c Enhanced Direct Control (../21)12d Enhanced SBO Control (../29)13a Time Synchronization with SNTP(../8)13b Time Synchronization with PTP (../4)14 File Transfer (../8)15 Service Tracking (../17) |

This certificate includes a summary of the test results as carried out at <<CITY>> in <<COUNTRY>> with <<CLIENT SIMULATOR> <<VERSION>> with test suite <<VERSION>> and <<ANALYZER>> <<VERSION>>. This document has been issued for information purposes only, and the original [paper/archived] copy of the <<TESTLAB>> report: No. <<TESTREPORT NUMBER>> will prevail.

The test has been carried out on the specimen[s] of the product as referred above and submitted to <<TESTLAB>> by <<TEST INITIATOR>>. The manufacturer’s production process has not been assessed. This certificate does not imply that <<TESTLAB>> has certified or approved any product other than the specimen tested.

<<CITY>>, <<DATE>>

<<Manager NAME>> <<Tester NAME>>

<<JOB TITLE>> <<JOB TITLE>>

1 Level A - Independent Test lab with certified [ISO 9001] [ISO/IEC 17025] Quality System

 Level B - Test lab [at least following ISO 9001] [with certified ISO 9001] [with certified ISO/IEC 17025]

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Applicable Server Test Procedures from the UCA International Users

Group Edition 2 Amendment 1 Server Test Procedures version 1.0

| **Conformance Block** | **Mandatory** | **Conditional**  |
| --- | --- | --- |
| 1a: Basic Exchange | sAss1, sAss2, sAss3, sAss4, sAssN2, sAssN3, sAssN4, sAssN5, sSrv1, sSrv2, sSrv3, sSrv4, sSrv5, sSrv8, sSrvN1abcdf, sSrvN4 | sAss5, sAssN6, sAssN7, sSrv6, sSrv9, sSrv10, sSrv11, sSrv12, sSrv13, sSrv15 sSrvN1e, sSrvN2, sSrvN3  |
| 1b: Associate with IPv6 | sAss61, sAss62, sAss63, sAss64, sAss66, sAss6N2, sAss6N3, sAss6N4, sAss6N5 | sAss65, sAss6N6, sAss6N7 |
| 2: Data Sets | sDs1, sDs10a, sDsN1ae | sDs10b, sDs15, sDsN1b, sDsN13 |
| 2+: Data Set Definition  | sDs2, sDs3, sDs4, sDs5, sDs6, sDs7, sDs8, sDs9, sDs13, sDs14, sDsN1cd, sDsN2, sDsN3, sDsN4, sDsN5, sDsN6, sDsN7, sDsN8, sDsN9, sDsN10 | sDs11, sDs12, sDsN11, sDsN12 |
| 3: Substitution | sSub1, sSub2, sSub3 |  |
| 4: Setting Group Selection | sSg1, sSg3, sSgN1 | sSg11 |
| 4+: Setting Group Definition  | sSg2, sSg4, sSg6, sSg7, sSg8, sSg10, sSg12, sSgN2, sSgN3, sSgN4, sSgN5 | sSg5, sSg9 |
| 5: Unbuffered Reporting | sRp1, sRp2, sRp3, sRp4, sRp5, sRp9, sRp14, sRp16, sRp23, sRpN1, sRpN2, sRpN3, sRpN4, sRpN5, sRpN7, sRpN8, sRpN9 | sRp6, sRp7, sRp8, sRp10, sRp11, sRp12, sRp13, sRp15, sRp17 |
| 6: Buffered Reporting | sBr1, sBr2, sBr3, sBr4, sBr5, sBr9, sBr14, sBr16, sBr20, sBr21, sBr22, sBr23, sBr24, sBr25, sBr26, sBr27, sBr28, sBr29, sBrN1, sBrN2, sBrN3, sBrN4, sBrN5, sBrN7, sBrN8, sBrN9, sBrN10 | sBr6, sBr7, sBr8, sBr10, sBr11, sBr12, sBr13, sBr15, sBr17  |
| 7: Logging | sLog2, sLog3, sLog4, sLog5, sLog6, sLog7, sLog8, sLog9, sLog11, sLog12, sLog13, sLogN1, sLogN2 | sLog10 |
| 9a: GOOSE publish | sGop2a, sGop3, sGop4, sGop9, sGop10, sGop11, sGop12 | sGop1, sGop2b, sGop5, sGop6, sGopN1, sGopN2 |
| 9b: GOOSE subscribe | sGos1, sGos2, sGos3, sGos5, sGos6a, sGos7, sGos8, sGos9, sGos10, sGos11, sGos12, sGos14, sGos15, sGos20, sGos21, sGos22, sGosN1, sGosN2, sGosN3, sGosN4, sGosN5, sGosN6, sGosN7 | sGos4, sGos6b, sGos13 |
| 9c: GOOSE mngt  | sGom1, sGom2, sGomN1 |  |
| 11a SV Publish | sSvp1, sSvp2, sSvp3, sSvp4, sSvp5, sSvp6, sSvp7, sSvp8, sSvp9, sSvp10, sSvp12, sSvp14, sSvp15 | sSvp11, sSvp13, sSvp16, sSvp17, sSvp20, sSvp21, sSvp22 |
| 11b SV Subscribe | sSvs1, sSvs2, sSvs3, sSvs4, sSvs5, sSvs6, sSvs7, sSvs8, sSvs9, sSvs10, sSvs11, sSvs14, sSvsN1, sSvsN2, sSvsN3, sSvsN4, sSvsN5, sSvsN6 | sSvs12, sSvs13 |
| 12a Direct control | sCtl5, sCtl10, sDOns1, sDOns2 | sCtl2, sCtl3, sCtl7, sCtl13, sCtl15, sCtl16, sCtl17, sCtl18, sCtl21, sCtl23, sCtl24, sCtl28, sCtl29, sDOns4, sDOns5 |
| 12b SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOns1, sSBOns2, sSBOns6 | sCtl2, sCtl3, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl18, sCtl20, sCtl21, sCtl23, sCtl24, sCtl27, sCtl28, sCtl29, sSBOns4, SBOns5, sSBOns7 |
| 12c Enhanced Direct Control | sCtl5, sCtl10, sDOes1, sDOes2 | sCtl2, sCtl3, sCtl7, sCtl13, sCtl14, sCtl15, sCtl16, sCtl17, sCtl18, sCtl21, sCtl23, sCtl24, sCtl26, sCtl28, sCtl29, sDOes4, sDOes5 |
| 12d Enhanced SBO control | sCtl5, sCtl8, sCtl9, sCtl10, sCtl11, sCtl25, sSBOes1, sSBOes2, sSBOes6, sSBOes8 | sCtl2, sCtl3, sCtl4, sCtl6, sCtl7, sCtl15, sCtl16, sCtl17, sCtl18, sCtl20, sCtl21, sCtl23, sCtl24, sCtl26, sCtl28, sCtl29, sSBOes4, sSBOes5, sSBOes7 |
| 13a Time sync SNTP | sTm1, sTm2, sTmN1 | sTm3, sTm4, sTm5, sTm7, sTmN2 |
| 13b Time sync PTP | sTmP1, sTmP2, sTmPN1 | sTmP5 |
| 14 File transfer | sFt1, sFt2ab, sFt4, sFt5, sFtN1ab | sFt2c, sFt3, sFtN1c |
| 15 Service tracking |  | sTrk1, sTrk2, sTrk3, sTrk4, sTrk5, sTrk6, sTrk7, sTrk8, sTrk9, sTrk10, sTrk11, sTrk12, sTrk13, sTrk14, sTrk15, sTrk16, sTrk17 |

Changes to table A4.2:

| 11a: SV publish | sSvp1, sSvp2, sSvp3, sSvp4, sSvp5, sSvp6, sSvp7, sSvp8, sSvp12, , sSvp14 | PICS/PIXIT-Svp6 PTP: sSvp9PIXIT-Svp6 PPS: sSvp10PIXIT-As9 Not test equipment: sSvp11PIXIT-Svp9 quality invalid: sSvp13SCL-SyncSourceID: sSvp15PIXIT-Svp2 Test mode: sSvp16PIXIT-Svp13 SAMU: sSvp17PICS-GetMSVCBValues: sSvp20PICS-SetMSVCBValues: sSvp21 SCL-DynAssociation max>0: sSvp22 |
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