

OMA LwM2M V1.1 Conglomerated Test Results - Virtual SVE-40, 15 - 21 Nov 2023

Client V1.1 Teams: loTerop, Aetheros, Bulk Tainer, and (1) Client

Server V1.1 Teams: Aetheros, loTerop and three (3) Servers

[OMA-ETS-LightweightM2M-V1_1-20190912-D.pdf](#)

	Pass	Fail	Inconclusive	Not Applicable	Out of Time	Totals
Bootstrap Interface: [0-99]						
LightweightM2M-1.1-int-0 – Client Initiated Bootstrap	6	0	0	4	0	10
LightweightM2M-1.1-int-1 – Client Initiated Bootstrap Full (PSK)	6	0	0	3	1	10
LightweightM2M-1.1-int-2 – Client Initiated Bootstrap Full (Cert)	3	0	0	7	0	10
LightweightM2M-1.1-int-3 – Simple Bootstrap from Smartcard	0	0	0	10	0	10
LightweightM2M-1.1-int-4 – Bootstrap Delete	5	0	0	4	1	10
LightweightM2M-1.1-int-5 – Server Initiated Bootstrap	5	1	0	4	0	10
LightweightM2M-1.1-int-6 – Bootstrap Sequence	4	0	0	6	0	10
LightweightM2M-1.1-int-7 – Fallback to bootstrap	3	0	0	5	2	10
LightweightM2M-1.1-int-8 – Bootstrap Read	3	0	0	6	1	10
LightweightM2M-1.1-int-9 – Bootstrap and Configuration Consistency	1	0	0	9	0	10
LightweightM2M-1.1-int-10 -- Client Initiated Bootstrap Full (EST)	1	0	0	9	0	10
Registration Interface [100-199]						
LightweightM2M-1.1-int-101 – Initial Registration	10	0	0	0	0	10
LightweightM2M-1.1-int-102 – Registration Update	10	0	0	0	0	10
LightweightM2M-1.1-int-103 – Deregistration	8	0	0	2	0	10
LightweightM2M-1.1-int-104 – Registration Update Trigger	10	0	0	0	0	10
LightweightM2M-1.1-int-105 – Discarded Register Update	10	0	0	0	0	10
LightweightM2M-1.1-int-106 – TCP Binding	1	0	1	7	1	10
LightweightM2M-1.1-int-107 – Extending the lifetime of a registration	10	0	0	0	0	10
LightweightM2M-1.1-int-108 – Turn on Queue Mode	7	0	0	2	1	10
LightweightM2M-1.1-int-109 – Behavior in Queue Mode	4	0	0	4	2	10
Device management & Service Enablement Interface [200-299]						
LightweightM2M-1.1-int-201 – Querying basic information in Plain Text format	9	0	0	0	1	10
LightweightM2M-1.1-int-203 – Querying basic information in TLV format	10	0	0	0	0	10
LightweightM2M-1.1-int-204 – Querying basic information in JSON format	4	0	0	6	0	10
LightweightM2M-1.1-int-205 – Setting basic information in Plain Text format	9	0	0	0	0	9
LightweightM2M-1.1-int-211 – Querying basic information in CBOR format	5	0	0	5	0	10
LightweightM2M-1.1-int-212 – Setting basic information in CBOR format	4	1	0	5	0	10
LightweightM2M-1.1-int-215 – Setting basic information in TLV format	9	1	0	0	0	10
LightweightM2M-1.1-int-220 – Setting basic information in JSON format	1	0	0	9	0	10
LightweightM2M-1.1-int-221 – Attempt to perform operations on Security Object (ID: 0)	7	0	0	2	0	9
LightweightM2M-1.1-int-222 – Read on Object	10	0	0	0	0	10
LightweightM2M-1.1-int-223 – Read on Object Instance	10	0	0	0	0	10
LightweightM2M-1.1-int-224 – Read on Resource	10	0	0	0	0	10
LightweightM2M-1.1-int-225 – Read on Resource Instance	6	0	0	4	0	10
LightweightM2M-1.1-int-226 – Write (Partial Update) on Object Instance	6	1	0	1	2	10
LightweightM2M-1.1-int-227 – Write (replace) on Resource	10	0	0	0	0	10
LightweightM2M-1.1-int-228 – Write on Resource Instance	4	0	0	6	0	10
LightweightM2M-1.1-int-229 – Read-Composite Operation	6	0	0	4	0	10
LightweightM2M-1.1-int-230 – Write-Composite Operation	6	0	0	4	0	10
LightweightM2M-1.1-int-231 – Querying basic information in SenML JSON format	3	0	0	6	0	9
LightweightM2M-1.1-int-232 – Querying basic information in SenML CBOR format	6	0	0	4	0	10
LightweightM2M-1.1-int-233 – Setting basic information in SenML CBOR format	6	0	0	4	0	10
LightweightM2M-1.1-int-234 – Setting basic information in SenML JSON format	3	0	0	7	0	10
LightweightM2M-1.1-int-235 – Read-Composite Operation on root path	4	0	0	5	0	9
LightweightM2M-1.1-int-236 – Read-Composite - Partial Presence	5	0	0	4	0	9
LightweightM2M-1.1-int-237 – Read on Object without specifying Content-Type	5	0	0	4	0	9
LightweightM2M-1.1-int-241 – Executable Resource: Rebooting the device	9	0	0	1	0	10
LightweightM2M-1.1-int-256 – Write Operation Failure	7	0	0	2	0	9
LightweightM2M-1.1-int-257 – Write-Composite Operation	5	0	0	4	0	9
LightweightM2M-1.1-int-260 – Discover Command	4	0	0	5	0	9

LightweightM2M-1.1-int-261 – Write-Attribute Operation on a multiple resource	4	0	0	5	0	9
LightweightM2M-1.1-int-280 – Successful Read-Composite Operation	5	0	0	4	0	9
LightweightM2M-1.1-int-281 – Partially Successful Read-Composite Operation	5	0	0	4	0	9
Information Reporting Interface [300-399]						
LightweightM2M-1.1-int-301 – Observation and Notification of parameter values	9	1	0	0	0	10
LightweightM2M-1.1-int-302 – Cancel Observations using Reset Operation	6	0	0	4	0	10
LightweightM2M-1.1-int-303 – Cancel observations using Observe with Cancel parameter	9	0	0	1	0	10
LightweightM2M-1.1-int-304 – Observe-Composite Operation	5	0	0	4	1	10
LightweightM2M-1.1-int-305 – Cancel Observation-Composite Operation	4	1	0	4	1	10
LightweightM2M-1.1-int-306 – Send Operation	6	0	0	4	0	10
LightweightM2M-1.1-int-307 – Muting Send	5	0	0	5	0	10
LightweightM2M-1.1-int-308 – Observe-Composite and Creating Object Instance	4	1	0	4	1	10
LightweightM2M-1.1-int-309 – Observe-Composite and Deleting Object Instance	4	0	0	5	1	10
LightweightM2M-1.1-int-310 – Observe-Composite and modification of parameter values	4	0	0	4	2	10
LightweightM2M-1.1-int-311 – Send command	5	0	0	4	1	10
Security [400-499]						
LightweightM2M-1.1-int-401 – UDP Channel Security – Pre-shared Key Mode	8	1	0	0	1	10
LightweightM2M-1.1-int-402 – UDP Channel Security – Certificate Mode	3	1	1	4	1	10
LightweightM2M-1.1-int-403 – UDP Channel Security – Certified Mode (Server Identify Verification Failure)	3	1	1	4	1	10
LightweightM2M-1.1-int-404 – TCP Channel Security – Certificate Mode	1	0	2	7	0	10
LightweightM2M-1.1-int-405 – OSCORE Security	1	0	1	8	0	10
LightweightM2M-1.1-int-406 -- TCP Channel Security -- Pre-shared Key Mode	1	0	2	6	1	10
LwM2M Device Object (ID 3) [650-699]						
LightweightM2M-1.1-int-651 – Check Access to the Resources	8	2	0	0	0	10
LightweightM2M-1.1-int-652 – Querying the firmware version from the client	10	0	0	0	0	10
LightweightM2M-1.1-int-680 – Create Object Instance	8	0	0	1	1	10
LightweightM2M-1.1-int-685 – Delete Object Instance	7	0	0	2	1	10
LwM2M Connectivity Monitoring (ID:4) [700-749].						
LightweightM2M-1.1-int-701 – Querying the readable resources of object	8	0	1	0	1	10
LightweightM2M-1.1-int-710 – Basic Observation and notification on Connectivity Monitoring Object Resources	8	0	1	0	1	10
Firmware Update Object (ID 5) [750-799]						
LightweightM2M-1.1-int-751 – Querying the readable resources	8	0	0	1	1	10
LightweightM2M-1.1-int-755 – Setting the writable Resource Package	3	0	1	5	1	10
LightweightM2M-1.1-int-756 – Setting the writable Resource Package URI	5	0	0	4	1	10
LightweightM2M-1.1-int-760 –Basic Observation and notification on Firmware Update Object Resources	7	0	0	2	1	10
LightweightM2M-1.1-int-770 – Successful Firmware update (via COAP)	5	0	0	4	1	10
LightweightM2M-1.1-int-771 – Successful Firmware update (via alternative mechanism)	3	0	0	4	3	10
LightweightM2M-1.1-int-772 – Error Case 1: firmware installation without downloaded package	3	0	0	4	3	10
LightweightM2M-1.1-int-773 – Error Case 2: shortage of storage memory	2	0	0	5	3	10
LightweightM2M-1.1-int-774 – Error Case 3: out of memory	2	0	0	5	3	10
LightweightM2M-1.1-int-775 – Error Case 4: Connection lost during download (package URI)	2	0	0	5	3	10
LightweightM2M-1.1-int-776 – Error Case 5: Package Integrity check failure	2	1	0	4	3	10
LightweightM2M-1.1-int-777 – Error Case 6: unsupported package type	2	1	0	4	3	10
LightweightM2M-1.1-int-778 – Error Case 7: invalid URI (package URI)	2	1	0	4	3	10
LightweightM2M-1.1-int-779 – Error Case 8: Unsuccessful Firmware Update	2	1	0	4	3	10
LwM2M Location Object (ID:6) [800-849]						
LightweightM2M-1.1-int-801 – Querying the readable resources of object	9	0	0	0	1	10
LightweightM2M-1.1-int-810 – Basic Observation and notification on Location Object Instance	9	0	0	0	1	10
Connectivity Statistics (ID 7) [900-949]						
LightweightM2M-1.1-int-901 – Querying a Data Collection from Connectivity Object Instance	8	0	0	1	1	10
LightweightM2M-1.1-int-905 – Setting the writable resources	8	0	0	1	1	10
LightweightM2M-1.1-int-910 – Basic Observation and notification on Connectivity Monitoring Object Instance	8	0	0	1	1	10
MULTI-SERVERS CONTEXT [950-999]						
LightweightM2M-1.1-int-950 – Multi-Servers Registration	4	0	0	5	1	10
LightweightM2M-1.1-int-951 – Multi-Servers & Attributes	4	0	0	5	1	10
Cellular Network Connectivity ID:10 [1200-1249]						
LightweightM2M-1.1-int-1200 – Querying the readable resources of Object ID:10	5	0	0	4	1	10

LightweightM2M-1.1-int-1201 – Querying the readable resources of Object ID:10 in version 1.1	5	0	0	4	1	10
LightweightM2M-1.1-int-1202 – Setting the Power Saving Mode Resources of Object ID:10	4	0	0	5	1	10
LightweightM2M-1.1-int-1203 – Observation and notification on Object ID:10 related to Power Saving Mode Resources (version 1.1 only)	4	0	0	5	1	10
LightweightM2M-1.1-int-1204 – Observation and notification on Object ID: 10 related to timers	5	0	0	4	1	10
APN connection profile ID:11 [1250-1299]						
LightweightM2M-CONMGMT-1.1-int-1250 – APN configuration	3	0	1	5	1	10
Bearer Selection ID:13 [1350-1399]						
LightweightM2M-CONMGMT-1.1-int-1350 — Bearer Selection	1	0	0	9	0	10
Portfolio Object (ID 16) [1600-1699]						
LightweightM2M-1.1-int-1630 — Create Portfolio Object Instance	3	1	0	5	1	10
LightweightM2M-1.1-int-1635 — Delete Portfolio Object Instance	3	1	0	5	1	10
BinaryAppDataContainer Object (ID 19) [1900-1999]						
LightweightM2M-1.1-int-1900 — Observation and notification on Object ID: 19	3	0	0	6	1	10
LightweightM2M-1.1-int-1901 — Setting the writable Resource Data	2	1	0	6	1	10
Event Log Object (ID 20) [2000-2099]						
LightweightM2M-1.1-int-2000 — Control the Log Function	1	0	1	7	1	10
LightweightM2M-1.1-int-2001 — Querying the readable resources	2	0	0	7	1	10
Totals:	570	19	13	398	78	1078

Comments collected from Test Sessions participants:

2 - Certificate Usage mismatch, cannot be easily addressed 3 - not supported by client 8-10 - not supported by server
3: No smartcard available 9: not supported by server 10: not supported by server
215, 226: device failed to parse POST from server 225: N/A for device
test 204, 225, 228,231,234,235,237, 260, : not supported by server test 212: server sends incorrect path to resource test 220: not supported by both client and sever
220 - not supported by either side 221 - not supported by server 226 - out of time, need to re-test later 256 - not supported by server
220: not supported by client 261: not supported by server
device: no composite support
test 302: not supported by server test 305: server failed to send cancel observation-composite message test 309: not supported by server, can't delete the instance, need to delete the whole object
Test 301 : Resource 3/0/6 3/0/7 3/0/8 are not exposed to the server.
investigate on device to manage the certificate payload credentials
device: just psk/udp support
incompatible dtls ciphers
come back check to update resource 3/0/13
651: device issue parsing POST tlv
test 685: not allowed by server
resource /4/0/9: actual smnc range cannot be represented as an integer.
- device seem not reply correctly when write 1 bit on resource 0 (to investigate) - device seem to manage fwu error (with wrong package type, same than integrity test case, wrong URI pack)
Server doesnt manage Firmware Update
optional resource 13 14 seem to no be provide on device
1350 - not supported by client
Device doesnt haveBinaryAppDataContainer object implemented
Device doesnt have Event Log Object implemented
2000: Test procedure is not in line with Object definition

Explanation of Test Cases Results

PASS: Both teams agree that they Pass – Criteria has been met
FAIL: Both teams agree that they Fail – Criteria has not been met
INCONCLUSIVE: Teams are not in agreement of the Test result
NOT APPLICABLE: Test cannot be performed due to lack of support by either of the implementations
OUT OF TIME: There was not enough time to test the Test Case