

OMA Lwm2M V1.1 Test Results - SVE-41, 10 - 13 June 2024, Raleigh, NC, USA

Client V1.1 Teams: AVSystem, One (1) Client implementations

Server V1.1 Teams: **Cumulocity (SoftwareAG)**

[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 | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-1 – Client Initiated Bootstrap Full (PSK) | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-2 – Client Initiated Bootstrap Full (Cert) | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-3 – Simple Bootstrap from Smartcard | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-4 - Bootstrap Delete | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-5 - Server Initiated Bootstrap | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-6 - Bootstrap Sequence | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-7 - Fallback to bootstrap | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-8 - Bootstrap Read | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-9 - Bootstrap and Configuration Consistency | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-10 -- Client Initiated Bootstrap Full (EST) | 1 | 0 | 0 | 0 | 0 | 1 |
| Registration Interface [100-199] | | | | | | |
| LightweightM2M-1.1-int-101 – Initial Registration | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-102 – Registration Update | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-103 – Deregistration | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-104 – Registration Update Trigger | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-105 - Discarded Register Update | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-106 – TCP Binding | 0 | 0 | 0 | 2 | 0 | 2 |
| LightweightM2M-1.1-int-107 – Extending the lifetime of a registration | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-108 – Turn on Queue Mode | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-109 – Behavior in Queue Mode | 1 | 0 | 0 | 1 | 0 | 2 |
| Device management & Service Enablement Interface [200-299] | | | | | | |
| LightweightM2M-1.1-int-201 – Querying basic information in Plain Text format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-203 – Querying basic information in TLV format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-204 – Querying basic information in JSON format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-205 – Setting basic information in Plain Text format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-211 – Querying basic information in CBOR format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-212 – Setting basic information in CBOR format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-215 – Setting basic information in TLV format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-220 – Setting basic information in JSON format | 0 | 1 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-221 – Attempt to perform operations on Security Object (ID: 0) | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-222 – Read on Object | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-223 – Read on Object Instance | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-224 – Read on Resource | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-225 – Read on Resource Instance | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-226 – Write (Partial Update) on Object Instance | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-227 – Write (replace) on Resource | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-228 – Write on Resource Instance | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-229 – Read-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-230 – Write-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-231 – Querying basic information in SenML JSON format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-232 – Querying basic information in SenML CBOR format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-233 – Setting basic information in SenML CBOR format | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-234 – Setting basic information in SenML JSON format | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-235 – Read-Composite Operation on root path | 1 | 0 | 0 | 1 | 0 | 2 |

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|-------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| LightweightM2M-1.1-int-236 – Read-Composite - Partial Presence | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-237 – Read on Object without specifying Content-Type | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-241 – Executable Resource: Rebooting the device | 1 | 1 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-256 – Write Operation Failure | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-257 – Write-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-260 – Discover Command | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-261 – Write-Attribute Operation on a multiple resource | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-280 – Successful Read-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-281 – Partially Successful Read-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| Information Reporting Interface [300-399] | | | | | | |
| LightweightM2M-1.1-int-301 – Observation and Notification of parameter values | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-302 – Cancel Observations using Reset Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-303 – Cancel observations using Observe with Cancel parameter | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-304 – Observe-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-305 – Cancel Observation-Composite Operation | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-306 – Send Operation | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-307 – Muting Send | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-308 – Observe-Composite and Creating Object Instance | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-309 – Observe-Composite and Deleting Object Instance | 1 | 0 | 0 | 1 | 0 | 2 |
| LightweightM2M-1.1-int-310 – Observe-Composite and modification of parameter values | 2 | 0 | 0 | 0 | 0 | 2 |
| LightweightM2M-1.1-int-311 – Send command | 1 | 0 | 0 | 1 | 0 | 2 |
| Security [400-499] | | | | | | |
| LightweightM2M-1.1-int-401 – UDP Channel Security – Pre-shared Key Mode | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-402 – UDP Channel Security – Certificate Mode | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-403 – UDP Channel Security – Certified Mode (Server Identify Verification Failure) | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-404 – TCP Channel Security – Certificate Mode | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-405 – OSCORE Security | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-406 -- TCP Channel Security -- Pre-shared Key Mode | 0 | 0 | 0 | 1 | 0 | 1 |
| LwM2M Device Object (ID 3) [650-699] | | | | | | |
| LightweightM2M-1.1-int-651 – Check Access to the Resources | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-652 – Querying the firmware version from the client | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-680 – Create Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-685 – Delete Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| LwM2M Connectivity Monitoring (ID:4) [700-749]. | | | | | | |
| LightweightM2M-1.1-int-701 – Querying the readable resources of object | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-710 – Basic Observation and notification on Connectivity Monitoring Object Resources | 1 | 0 | 0 | 0 | 0 | 1 |
| Firmware Update Object (ID 5) [750-799] | | | | | | |
| LightweightM2M-1.1-int-751 – Querying the readable resources | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-755 – Setting the writable Resource Package | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-756 – Setting the writable Resource Package URI | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-760 –Basic Observation and notification on Firmware Update Object Resources | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-770 – Successful Firmware update (via COAP) | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-771 – Successful Firmware update (via alternative mechanism) | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-772 – Error Case 1: firmware installation without downloaded package | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-773 – Error Case 2: shortage of storage memory | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-774 – Error Case 3: out of memory | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-775 – Error Case 4: Connection lost during download (package URI) | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-776 – Error Case 5: Package Integrity check failure | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-777 – Error Case 6: unsupported package type | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-778 – Error Case 7: invalid URI (package URI) | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-779 – Error Case 8: Unsuccessful Firmware Update | 1 | 0 | 0 | 0 | 0 | 1 |
| LwM2M Location Object (ID:6) [800-849] | | | | | | |
| LightweightM2M-1.1-int-801 – Querying the readable resources of object | 0 | 0 | 0 | 1 | 0 | 1 |

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| LightweightM2M-1.1-int-810 – Basic Observation and notification on Location Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| Connectivity Statistics (ID 7) [900-949] | | | | | | |
| LightweightM2M-1.1-int-901 – Querying a Data Collection from Connectivity Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-905 – Setting the writable resources | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-910 – Basic Observation and notification on Connectivity Monitoring Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| MULTI-SERVERS CONTEXT [950-999] | | | | | | |
| LightweightM2M-1.1-int-950 – Multi-Servers Registration | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-951 – Multi-Servers & Attributes | 0 | 0 | 0 | 1 | 0 | 1 |
| Cellular Network Connectivity ID:10 [1200-1249] | | | | | | |
| LightweightM2M-1.1-int-1200 – Querying the readable resources of Object ID:10 | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-1201 – Querying the readable resources of Object ID:10 in version 1.1 | 1 | 0 | 0 | 0 | 0 | 1 |
| LightweightM2M-1.1-int-1202 – Setting the Power Saving Mode Resources of Object ID:10 | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-1203 – Observation and notification on Object ID:10 related to Power Saving Mode Resources (version 1.1 only) | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-1204 – Observation and notification on Object ID: 10 related to timers | 1 | 0 | 0 | 0 | 0 | 1 |
| APN connection profile ID:11 [1250-1299] | | | | | | |
| LightweightM2M-CONMGMT-1.1-int-1250 – APN configuration | 0 | 0 | 0 | 1 | 0 | 1 |
| Bearer Selection ID:13 [1350-1399] | | | | | | |
| LightweightM2M-CONMGMT-1.1-int-1350 – Bearer Selection | 0 | 0 | 0 | 1 | 0 | 1 |
| Portfolio Object (ID 16) [1600-1699] | | | | | | |
| LightweightM2M-1.1-int-1630 – Create Portfolio Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-1635 – Delete Portfolio Object Instance | 0 | 0 | 0 | 1 | 0 | 1 |
| BinaryAppDataContainer Object (ID 19) [1900-1999] | | | | | | |
| LightweightM2M-1.1-int-1900 – Observation and notification on Object ID: 19 | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-1901 – Setting the writable Resource Data | 0 | 0 | 0 | 1 | 0 | 1 |
| Event Log Object (ID 20) [2000-2099] | | | | | | |
| LightweightM2M-1.1-int-2000 – Control the Log Function | 0 | 0 | 0 | 1 | 0 | 1 |
| LightweightM2M-1.1-int-2001 – Querying the readable resources | 0 | 0 | 0 | 1 | 0 | 1 |
| Totals: | 115 | 2 | 0 | 43 | 0 | 160 |
| Comments collected from Test Sessions participants: | | | | | | |

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