



# Complex Data Types in LwM2M

Approved Version: 1.0 - 2022-10-05

Open Mobile Alliance

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# 1. Work Item Details

Concept	Value
Work Item Title:	Complex Data Types in LwM2M
Short Name:	Complex Data Types in LwM2M
Version:	1.0

## 2. Impacts, Relationships and Dependencies

Concept	Value
Existing Specifications Affected:	OMA-TS-LightweightM2M_Core
External Organizations Affected:	None
Any Other Impact	None

### 3. Proposed Timeline

Document	Timeframe
Initial version of TS	Q4 2022
TS for final review	Q1 2023
TS for board approval	Q2 2023

## 4. Supporting Companies

Company Name	Membership Type
Itron	Full
Kishor/Uttam	Supporter
IoTerop	Full
Arm	Full
Ericsson	Full



## 5. Proposed Resources

Deliverable/Role	Volunteer
Enabler Editor	

## 6. Problem Statement

LwM2M offers a number of basic data types and defines a data model on how to use those data types in resources and, at a higher level, in objects. This works well to describe many real-world objects. Sometimes, however, more complex structures need to be described where information retrieval requires combining information from multiple resources in an object or to even combine information scattered over multiple objects.

For example, consider the LwM2M Device Object, which has resources like Available Power Sources and Power Source Voltage. To learn about the voltage of different power sources an application needs to retrieve the resource instances from these two resources and to associate them. While this is possible to do, the question is whether there are alternative approaches that are less complex or offer other benefits.

The group will classify different cases and offer guidance for how to address the different categories with pros and cons.

## Appendix A. Change History (Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-WID-LwM2M_Complex_Data_Types-V1_0-20221005-A	05 Oct 2022	Status changed to Approved by DMSE WG

Table: A.1-1 Approved Version History