# OpenADE Data Model Documentation

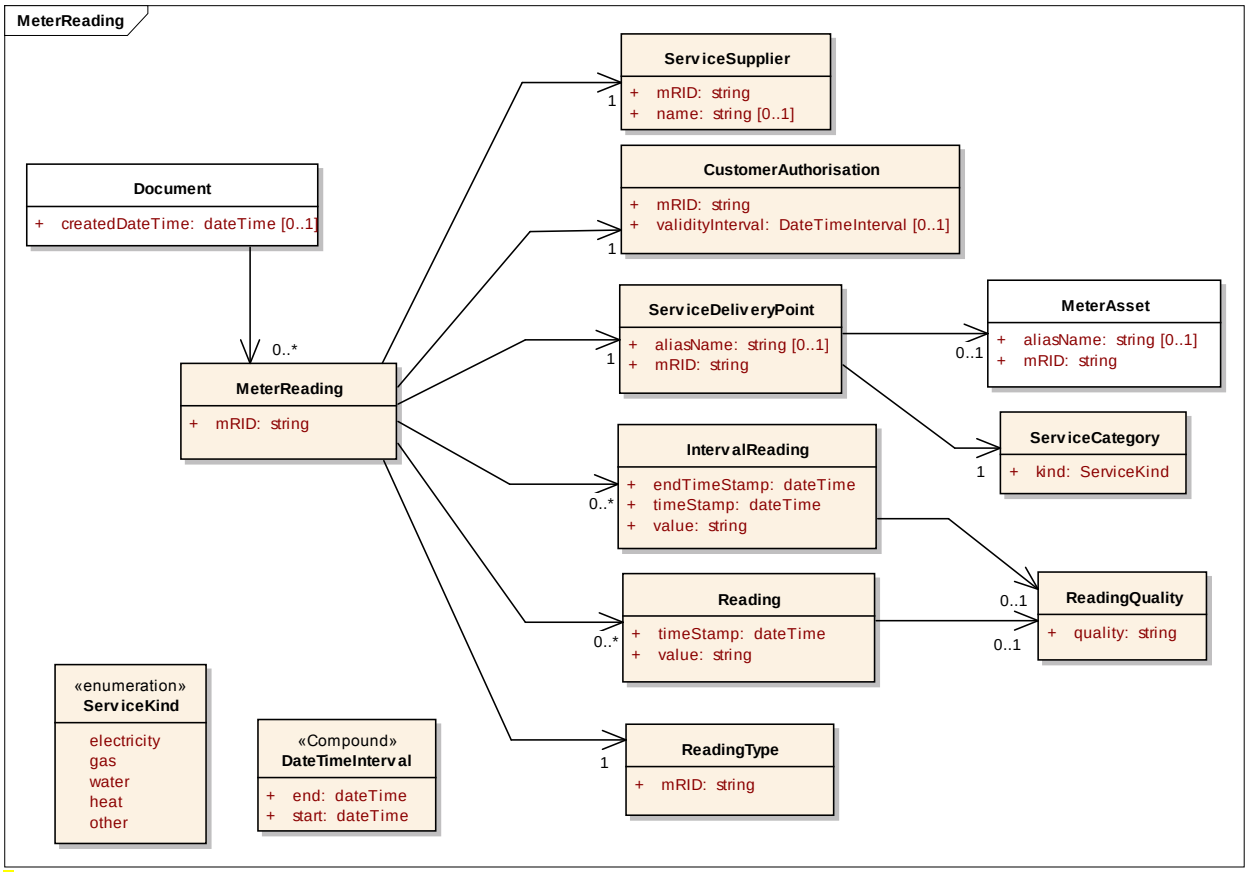
## OpenADE Data Model Detail

This document provides an overview of the data model to be used for the OpenADE schemas.

## Consumption

*Type:* **Package**

*Notes:*




## CustomerAuthorisation

*Notes:* Holds an authorisation for access to specific user-private data granted to a 3rd Party service provider. [OpenADE Extension - Specialization of "Agreement"]

| Name | Type | Notes |
|---|---|---|
| mRID | string | Unique identifier shared with the 3rd Party |
| validityInterval | DateTimeInterval | Date and time interval this agreement is valid (from going into effect to termination). |

## IntervalReading

*Notes:* Data captured at regular intervals of time. Interval data could be captured as incremental data, absolute data, or relative data. The source for the data is usually a tariff quantity or an engineering quantity. Data is typically captured in time-tagged, uniform, fixed-length intervals of 5, 10, 15, 30, or 60 minutes.

Note: Interval Data is sometimes also called "Interval Data Readings" (IDR).

| Name | Type | Notes |
|---|---|---|
| endTimeStamp | dateTime | The ending date and time of an interval reading [OpenADE Extension] |
| timeStamp | dateTime | The beginning date and time of an interval reading |
| value | string | Value in type of string |

## MeterReading

*Notes:* Set of values obtained from the meter.

| Name | Type | Notes |
|---|---|---|
| mRID | string | Meter reading identifier |

## Reading

*Notes:* Specific value measured by a meter or other asset. Each Reading is associated with a specific ReadingType.

| Name | Type | Notes |
|---|---|---|
| timeStamp | dateTime | The date and time of a reading |
| value | string | Value in type of string |

## ReadingType

*Notes:* Type of data conveyed by a specific Reading.

| Name | Type | Notes |
|---|---|---|
| mRID | string | From IEC TC57 61968-9 Annex C.3.1<br>==========<br><ReadingTypeID mRID> := <attribute 1>.<attribute 2>.<attribute 3>.<attribute 4>.<attribute 5>.<attribute 6>.<attribute 7>.<attribute 8>.<attribute 9><br>It should be noted that two of the attributes themselves are compound fields. This result is to have a Name with 11 fields:<br>(sample values for Instantaneous demand)<br>1. TimeAttribute (=12 instantaneous)<br>2. DataQualifier (=0 n/a)<br>3. AccumlationBehaviour (=6 indicating)<br>4. FlowDirection (=1 forward)<br>5. UomCategorySubclass (=0 n/a)<br>6. UomCategoryIndex (=8 demand)<br>7. MeasurementCategory (=0.0 n/a)<br>8. Enumeration<br>9. Phase (=0 n/a to all phases) |

10. Multiplier (=3 kilo)
11. UnitOfMeasure (=38 w)

## ServiceCategory

*Notes:* Category of service provided to the customer.

| Name | Type | Notes |
|---|---|---|
| kind | ServiceKind | |

## ServiceDeliveryPoint

*Notes:* Logical point on the network where the ownership of the service changes hands. It is one of potentially many service points within a ServiceLocation, delivering service in accordance with a CustomerAgreement. Used at the place where a meter may be installed.

| Name | Type | Notes |
|---|---|---|
| aliasName | string | Name to be shared for the service point. |
| mRID | string | An identifier for this service delivery point unique within the context. |

## ServiceSupplier

*Notes:* Organisation that provides services to Customers.

| Name | Type | Notes |
|---|---|---|
| mRID | string | Unique identifier for the service supplier. |
| name | string | The name of the Service Supplier. |

## DateTimeInterval

*Notes:* Interval of date and time.

| Name | Type | Notes |
|---|---|---|
| end | dateTime | Date and time that this interval ended. |
| start | dateTime | Date and time that this interval started. |

## ServiceKind

*Notes:* Kind of service.

| Name | Type | Notes |
|---|---|---|
| electricity | | |
| gas | | |
| water | | |
| heat | | |
| other | | |

## Document

*Notes:* Parent class for different groupings of information collected and managed as a part of a business process. It will frequently contain references to other objects, such as assets, people and power system resources.

| Name | Type | Notes |
|---|---|---|
| createdDateTime | dateTime | Date and time that this document was created. |

## MeterAsset

*Notes:* Physical asset that performs the metering role, could be an end-use measurement device. Used for measuring consumption and detection of events.

| Name | Type | Notes |
|---|---|---|
| aliasName | string | A name the customer has approved to share for this MeterAsset. |
| mRID | string | An identifier unique to this measurement point within this context. |

## ReadingQuality

*Notes:* Quality of a specific reading value or interval reading value. Note that more than one Quality may be applicable to a given Reading. Typically not unsed unless problems or unusual conditions occur (i.e., quality for each Reading is assumed to be 'Good' unless stated otherwise in associated ReadingQuality).

| Name | Type | Notes |
|---|---|---|
| quality | string | Quality, to be specified if different than 'Good'. |