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TempService SD		**SD**
Date		Version
2025-10-20		**1.0.0**
Author		Status
Abdalrahman Nasser		**RELEASE**
Contact		Page
abdnas-2@student.ltu.se		**1 (7)**

TempService SD

Service Description

Abstract

TempService provides ambient temperature measurements within an Arrowhead Local Cloud for training and monitoring use cases.

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1   Overview

TempService provides ambient temperature measurements to consumer systems (e.g., AITrainerSys, EnergyMonitorSys) produced by ClimateSensorSys. This SD is abstract and technology-independent; bindings are left to an IDD if created later.

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1.1   Significant Prior Art

Omitted for beginner scope.

1.2   How This Service Is Meant to Be Used

Consumers periodically obtain recent measurements after discovery and authorization, for training or dashboards.

1.3   Important Delimitations and Dependencies

No protocol/encoding here; **Authorization in Local Cloud is required.**

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2   Service Interface

getTemp(TempQuery) : TempResponse
Returns one or more temperature samples matching the query window.

echo() : StatusCodeKind
Optional health check.

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3 Information Model

3.1 Information Model

TempQuery

- windowStart : `DateTime`

- windowEnd : `DateTime`

- maxSamples : `Integer` (optional)
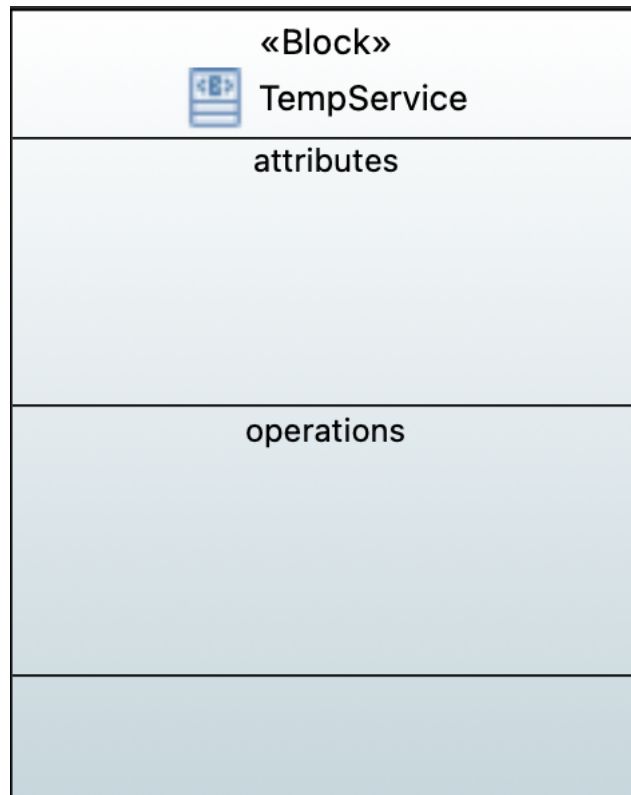
TempResponse

- samples : `List<TempSample>`

TempSample

- value : `Real`

- meta : `MeasurementMeta`

MeasurementMeta

- timestamp : `DateTime`

- location : `Name`

- deviceID : `Name`

- unit : `Name`

- eventMarker : `Name`

Primitive types used: `Real, DateTime, Integer, Name, List<A>`.

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4   Revision History

4.1   Amendments

No.	Date	Version	Subject of Amendments	Author
1	2025-10-20	1.0.0	Initial SD (abstract contract)	Abdalrahman Nasser