

TM Forum Open APIs

Conformance

Certification



Company Name:

6D Technologies

Product Name and Release Version:

Service Order Management – v12.0

TM Forum Open API Name and Release Version:

TMF652 – Resource Order Management v4.0.0

Date: 11/09/2026

1. What Product or Solution does your API support?

6D's Service Order Management (SOM) platform is an agile and converged solution that helps Digital Service Providers (DSPs) manage the complexities of service ordering. The platform is aligned with TM Forum's Open Digital Architecture (ODA) and its Product, Service, and Resource (PSR) model, streamlining operations and enabling rapid service creation.

Implementation of the Resource Order Management API

The resource-order capture and lifecycle-tracking layer within SOM's Order Manager module, responsible for translating a decomposed Resource-Facing Service into one or more discrete Resource Orders, validating resource availability, and tracking each order through to completion ahead of activation.

TMF652 aligns with the Resource Order Management component of TM Forum's ODA (TMFC011), which manages the end-to-end lifecycle of a resource order request — order capture, availability validation, decomposition and tracking — before handing off to Resource Activation and Configuration (TMF702). Within SOM, it is exposed by the Order Manager module (Order Definition, Order Prioritization, Order Management), working alongside the Resource Catalog and Service Inventory (PRS/LRS instances) to determine what needs to be ordered, from whom, and by when.

2. Overview of Certified API

Resource Order Management API REST Specification

The TMF652 – Resource Order Management API provides a standardised mechanism to create, retrieve, track and cancel a ResourceOrder — a request to add, modify or delete one or more resources in support of a Resource-Facing Service. Each ResourceOrder is composed of one or more ResourceOrderItem entries, each carrying an explicit action (add / modify / no_change / delete) against a target resource, and a dedicated CancelResourceOrder resource handles in-flight cancellation requests.

The Resource Order resource carries orderDate, requestedCompletionDate, expectedCompletionDate and completionDate, along with orderType, priority (0–4), relatedParty and externalReference attributes for traceability back to the originating Service or Product Order. The order — and each order item — progresses through the standard TM Forum order state machine (acknowledged, pending, held, inProgress, cancelled, completed, failed and partial), the same pattern used by TMF622 (Product Order) and TMF641 (Service Order), giving consistent order visibility across the fulfilment stack.

TMF652 supports synchronous CRUD-style operations alongside asynchronous event notifications — ResourceOrder and CancelResourceOrder create, attribute-value change, state change and information-required events — and integrates with TMF702 (Resource Activation and Configuration), TMF634 (Resource Catalog), TMF639 (Resource Inventory) and TMF664 (Resource Function Activation), enabling straight-through processing from service decomposition (TMF641) to resource-level fulfilment.

Key Functions:

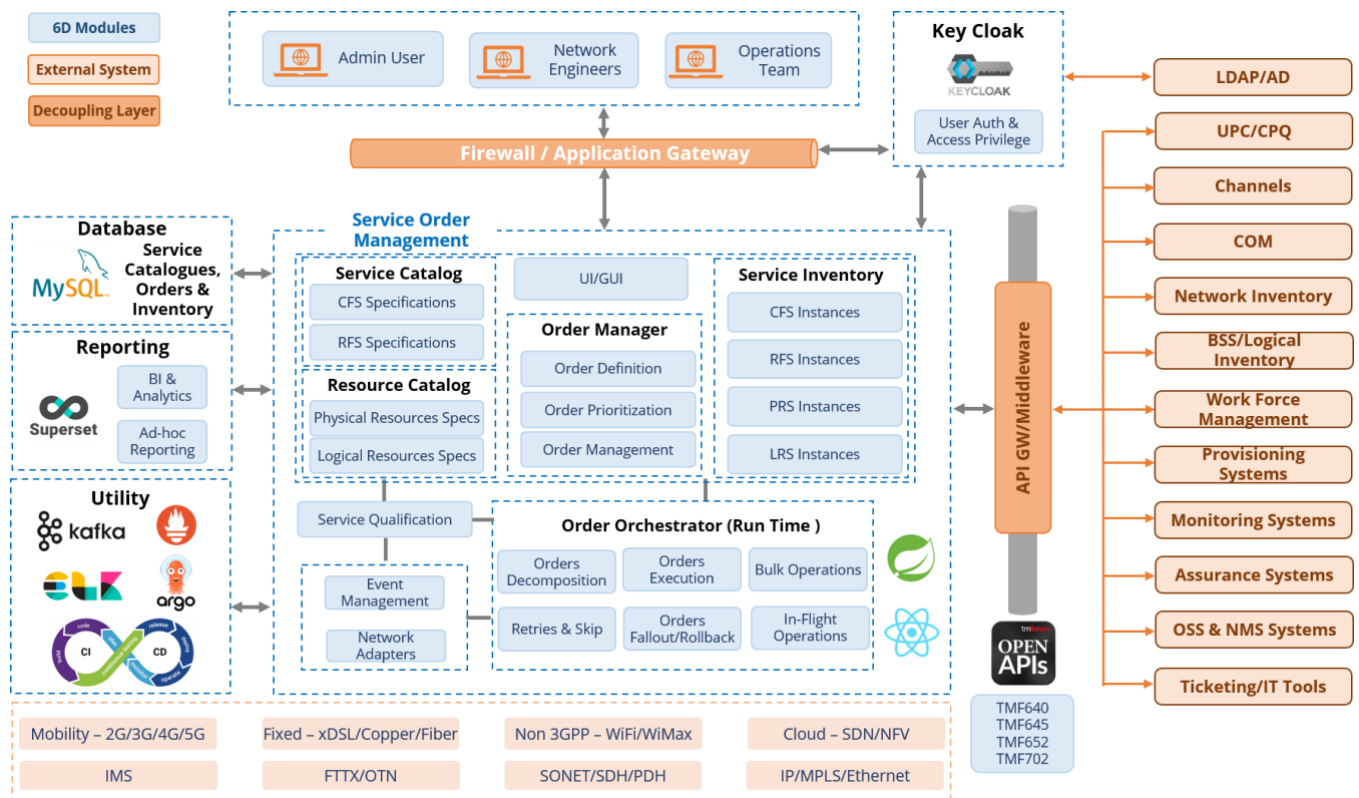
- Create, retrieve, and track ResourceOrder requests, each comprising one or more ResourceOrderItem entries with add, modify, no_change or delete actions.
- Validate resource availability and decompose resource orders ahead of activation and configuration.
- Manage the full order lifecycle — acknowledged, pending, held, inProgress, cancelled, completed, failed and partial — with

dedicated CancelResourceOrder handling for in-flight cancellations.

- Track order and order-item progress against requested and expected completion dates, with priority-based sequencing.
- Raise event notifications for ResourceOrder and CancelResourceOrder creation, attribute-value change, state change and information-required events — feeding downstream resource activation and inventory reconciliation.

By implementing TMF652, the solution ensures consistent, auditable capture and tracking of resource orders ahead of activation, reduces fallout and rework in the fulfilment chain, and strengthens automation and interoperability across the BSS/OSS resource-order ecosystem.

3. Architectural View



The above diagram gives a functional view of Service Order Management that exposes the Resource Order Management API (TMF652) — via the Order Manager module — to validate, decompose and track resource orders ahead of activation by TMF640/TMF702 across the network and OSS/NMS estate.

4. Test Results

This API has been tested as part of end-to-end journeys/Business Processes as well as at API level in terms of Authentication & Authorization, Functionalities & Operations that are supported through this API.

Click here to view the test results: [6D-SOM-TMF652-HTMLReport.html](#)