

TM Forum Open APIs Conformance Certification



Company Name:

China Telecom Corporation Limited.

Product Name and Release Version:

China Telecom CNOS-BSS

TM Forum Open API Name and Release Version:
TMF921 – Intent Management V4.0.0

Date: 02/09/2026

1. What Product or Solution does your API support?

China Telecom CNOS (New-Generation Cloud Network Operation System) is an enterprise-level operation system that integrates and upgrades the existing OSS (for network operation), BSS (for business operation), and MSS. It is one of the main carriers for China Telecom's digital, automated, and intelligent operation management, and an important component of China Telecom digital platform.

The capabilities provided by various capability centers and applied in various application scenario in the CNOS are uniformly aggregated and encapsulated through the atomic capability platform to achieve capability sharing. CNOS and the data middleware enable the interconnection and sharing of production data, and empower production operation through the big data and AI capabilities of the data middleware. Meanwhile based on the unified technology platform of PaaS components, IaaS, and general capabilities of the business centers, cloud deployment and development operation are integrated.

The Intent Management API (TMF921) is a core component of the CNOS intent-driven autonomous network module in With intelligent center. It implements full-lifecycle management of intent resources, supports intent creation, query, partial update and deletion, and provides IntentReport for feedback of intent execution status. It follows TM Forum Intent Ontology(TIO) specification, supports multiple expression serialization formats including JSON-LD、Turtle、RDF/XML. It also provides intent negotiation capabilities via ProbelIntent、JudgeIntent、BestIntent sub-resources. A total of six categories of event notifications are provided for intent and intent report lifecycle changes. CNOS leverages this API to realize intent-based network service orchestration, cross-domain requirement delivery, status feedback, and interconnection with autonomous network execution engines.

2. Overview of Certified API

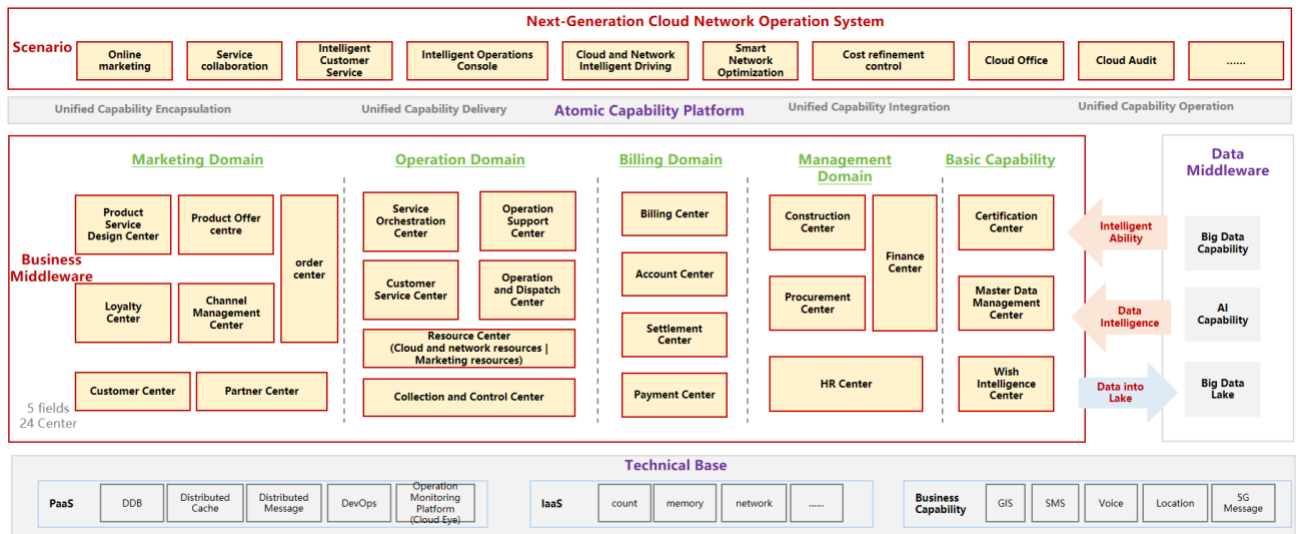
- TMF921 Intent Management API

The Intent Management API REST specification realizes full-lifecycle management for intent resources in intent-driven network scenarios. It provides CRUD operations for Intent main resource and IntentReport sub-resource. It defines three intent negotiation sub-types:

ProbeIntent, JudgeIntent, BestIntent. The intent content is described by expression objects complying with TM Forum Intent Ontology(TIO), supporting JSON-LD, Turtle, RDF/XML serialization formats. It uses meta-attributes (@type, @baseType, @schemaLocation, @referredType) to implement polymorphism and schema extension. Six notification events are defined covering intent create/change/delete and intentReport create/change/delete. The API supports intent requirement issuing, execution result reporting, and multi-party intent negotiation scenarios for autonomous network.

3. Architectural View

The following Diagram shows the technical architecture of China Telecom CNOS(Next-Generation Cloud Network Operations System) :



4. Test Results

Click here to view the test results: <CHINATELECOM-TMF921-v4.0.0-HTMLReport.html>