TM Forum Open APIs

Conformance Certification

Company Name: Mavenir

TM Forum Open API Name: TMF676 - Payment Management

TM Forum Open API Release Version: 4.0.0

Report Date: 12/09/2023
1. **What Product or Solution does your API support?**

The API supports Mavenir Digital Enablement (MDE) platform which helps CSPs break free of legacy BSS systems and single-vendor solutions so they can innovate freely. Today, CSPs must respond to market demands quickly, strengthen and build customer relationships, and fully monetize new 5G business models without restrictions from monolithic BSS. Built cloud-native from the ground up with microservices and open APIs, MDE is fully composable. Whether starting a greenfield operation, transforming to digital service provide, launching 5G business cases, MDE helps customers evolve. This architecture makes it easy to build new telecom and non-telecom product offerings & services, deploy MDE into any operator network, coexist with current CSPs’ BSS, or support launching new business cases with overlay solution integrating with existing CSP BSS stack.

The following are key product value proposition and differentiation:

- **MDE supports mission-critical revenue management functions**-Convergent Charging & Mediation for 2G-5G network services with a cloud-native BSS running on any cloud-private, hybrid or public. MDE composable, headless and microservices architecture enables CSP to achieve agile go-to-market (GTM) and launch of new products and services offerings. Thus, empowering CSPs to unlock business opportunities and accelerate monetization using open architecture, all-APIs approach to develop revenue-generating partner ecosystems. Hence, it supports service monetization for traditional connectivity bundles and new technology such as IoT uses cases, edge deployments, network slicing, and any type of network charging event.

- **MDE CI/CD approach support** CSPs embrace the dynamic nature of Telecom business and rapidly changing technology to innovate continuously and offer to end customers increased added value thru bundling of new products/services and enriched overall customer experience.

- **Greenfield, MVNOs, digital brands or 2nd brand operators use MDE BSS in a box to implement an end-to-end BSS stack and launch operations quickly with new market offerings.** Usually, these operators target more focused audiences or specific customer segments. MDE has all the features needed to deliver innovative and relevant offers quickly, gain new customers, and reap benefits faster.

- **MDE B2B/Marketplace empowers CSPs to establish a partner ecosystem and Marketplace to innovate new business models (B2X), everything as a service (XaaS) and the self-onboarding of customer & partner with full automation of business processes.** Hence, empowering CSPs to generate new revenue streams and grow market share. It provides the customers & partners with unique buying & selling digital
experience & journey. The marketplace provides consumers and enterprises with a rich product offering covering all the connectivity/mobile services with associated gadgets and devices as well as IT/digital services, NaaS & IoT product and services. It ensures seamless operations and order fulfilments with billing, invoicing, and settlements capability.

2. **Overview of Certified API**

TMF676 Payment Management is responsible of the full management of payments and refunds, including creating the payment, updating the transaction status, refunding the payment, and querying the payments.

3. **Architectural View**

The following figure shows the MDE architecture.

![MDE Portfolio across network planes](image)

This figure provides a good visibility into MDE portfolio spanning across the different planes and layers in the CSP network and IT ecosystems.

MDE Portfolio starts from the control plane with a converged charging system (CCS). If offers convergence of service monetization across network technologies (4G and 5G), subscription models (prepaid, postpaid, hybrid), business models (B2C, B2B, B2B2X) as
well as the standard 3GPP defined convergence of Offline & Online charging from Release 15 onwards.

Mediation (CGF) solution falls in between the Control and the Data Management layers. In addition to providing the traditional Mediation functionality, it also offers data transformation and event processing framework as per TMF ODA design. It works hand in hand with CCS to support the CGF functionality as per 3GPP standards and provides additional layer of charging enablement function that helps to convert non-usage events into a chargeable event for the purpose of monetization of network slice, IoT, NaaS and other non-traditional services.

Data Management and Service Management layers includes the core BSS microservices available in the MDE portfolio. MDE platform is a library of reusable microservices that can be packaged together to build a composable BSS that exactly meets the specific requirement of any line of business. It also comes with out of box support for TMF Open APIs and an API Gateway and IAM system to take care of secured and controlled exposure of BSS capabilities to the outside world.

Engagement layer includes frontend channels for customers and partners including web portals, mobile apps, digital assistants, social network channels as well as traditional channels like USSD, IVR, SMS, Emails, and others. It also includes the digital storefronts that are the face of our Digital marketplace that includes portals and apps for Buyers and Sellers.

Entire MDE portfolio is built using MACH design principles that helps us to provide the capabilities like Composable, Cloud Native, Containerized, Distributed, High Resilience.

MDE platform is built on top of Mavenir’s very own, Telco Cloud Integration Layer that provides common services like Logging, Tracing, Fault Management, Observability, Scalability and automation for cloud native deployments. This layer also provides CSPs with the required abstraction layer to enable deploying MDE applications on any private or public cloud infrastructure including Redhat, VMWare, AWS, GCP, Azure and others.
4. **Test Results**

Click here to see the test results: [MAVENIR-TMF676 API-HTML Results](#)