TM Forum Open APIs

Conformance Certification

Company Name: Ooredoo Group : For Kuwait OpCo

TM Forum Open API Name: TMF654 – Prepay Balance Management

TM Forum Open API Release Version: 4.0.0

Report Date: 01/02/2024
1. **What Product or Solution does your API support?**

An aggregated and standardized Management & Access to the Prepaid Balances of the subscribers in secured way from Central decoupling/APIGEE layer is enabled to different Domains/Verticals/ISV’s/Hyperscaler’s and Partners of Ooredoo. A step towards becoming a true Techco from Telco by Ooredoo.

Seamless access of Prepaid Entities (Bucket & Balance) of multiple Ooredoo OpCo’s (in this case Kuwait OpCo) from single integration point for the consumers. This enables Ooredoo to tap into adjacent vertical business and at the same time leverage their customer base to tap into new revenue streams to be relevant in the market and at the same time achieve competitive edge against their competitors.

APIs published in line with TMF Open APIs recommendations and Guidelines allows standardized and seamless headless integrations for various Assisted Channels, Unassisted Channels and Applications.

Decoupled APIs also allow Ooredoo to allow vendor upgrades/transformations seamlessly and transparently without impacting the integrations & journeys enabled for its customers.

**APIGEE API GW as Decoupling layer & Secured API based integrations:**
2. **Overview of Certified API**

Prepay Balance Management API manages the following resources:

- **Bucket**: An entity that manages an amount of money or data associated with a product. The usage type of the Bucket indicates whether the Bucket is responsible for managing a monetary amount or a non-monetary amount. Typical values for usageType would be monetary or data or text or voice.

- **TopupBalance**: A task that operates on a Bucket resource. The TopupBalance task charges or recharges a Bucket with an amount. The amount can be charged/recharged one time or recurringly. The TopupBalance resource is of @type TopupBalance and extends the Action resource.

- **AdjustBalance**: A task that operates on Bucket resource. The AdjustBalance task increments or decrements the amount on a Bucket. The AdjustBalance resource is of @type AdjustBalance and extends the Action resource.

- **TransferBalance**: A task that operates on Bucket resource. The TransferBalance transfers amounts from a source Bucket to a target Bucket. The usage type of the source Bucket must match the usage type of the target Bucket. The TransferBalance resource is of @type TransferBalance and extends the Action resource.

- **ReserveBalance**: A task that operates on Bucket resource. The ReserveBalance reserves an amount on a Bucket. The ReserveBalance resource is of @type ReserveBalance and extends the Action resource.

- **BalanceAction**: A resource that allows a consumer to retrieve a history of the tasks listed above that act on a Bucket. The @type attribute specifies the type of the task.

- **AccumulatedBalance**: A resource that allows a consumer to retrieve an aggregation of amounts for many Buckets.

Some of the use cases that are implemented for Ooredoo through Prepay Balance Management API are

- Direct Carrier Billing
- Balance Transfer
- Top-up/e-Recharges
- Voucher based Recharges
- Goodwill Credits
3. **Architectural View**

Below diagram shows the high-level architecture view of the API Decoupling and Routing layer at Ooredoo Central which in turns enables Ooredoo to expose the OpCo level APIs/Capabilities (in this case Kuwait OpCo) in a consistent way to their partners.

**Key Capabilities**
- Secured exposure of APIs to apps, partners & external ecosystem
- Managing APIs as services/products with a well-defined lifecycle
- API protection while exposing to external ecosystem by security / access control.
- Caching for optimal use of systems
- Routing and Orchestration of atomic services to create business capabilities.
- Pre-enabled Application and Data Connectors enabling reuse.
- Seamless Data Mapping & transformations
- Customized APIs for channels enabling personalized experiences.
- API Monetization
3.1 Solution and Integration/API Flow for Kuwait OpCo

In this implementation of De-Coupling layer solution project, TMF654 Prepay Balance Management API implemented in Kuwait OpCo exposed to the OpCo level Channels/Integrations is leveraged which in turn is exposed to the Ooredoo Central APIGEE as well for OTT/Global Partners/Integrations.

Below diagram shows the Integration/API flow for the OTT/Global/Authorized Partners to consume the TMF654 Prepay Balance Management API.
4. Test Results

Full fledged Automation & Manual testing of the APIs has been carried out to test the Functionality, Corresponding Use Cases used for, Security, performance and other Non-Functionality use cases for the deployed API along with relevant extensions in line with TMF guidelines where applicable.

All the operations relevant to use cases have been tested in totality for expected results and functionality before the actual validation against CTK provided by TMF for this API.

Click here to view the test results: [OREDOO-TMF654RW Kuwait-HTMLResults.html](OREDOO-TMF654RW Kuwait-HTMLResults.html)