Mplify Standard

Mplify 171

LSO API Agreement Template

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1 List of Contributing Members

The following members of Mplify participated in the development of this document and have requested to be included in this list.

- AT&T
- TI Sparkle

2 Abstract

Lifecycle Service Operation APIs' use cases, and technical specifications are defined through several Mplify technical standards and documents. Their actual use to conduct transactions between the parties using the APIs may be subject to contractual agreements between these parties. In order to facilitate the establishment of those contracts, Mplify has developed a template contractual document offering a uniform, clear and legally balanced basis and encourages companies to use it as the basis for their contractual agreements.

3 Terminology and Abbreviations

This section defines the terms used in this document. In many cases, the normative definitions to terms are found in other documents. In these cases, the third column is used to provide the reference that is controlling, in other Mplify or external documents.

Term	Definition	Reference
Agreement	The contractual arrangement between the parties making use of the APIs and outlining the terms and conditions applicable to the services the API transactions relate to.	
Addendum	The addendum to the Agreement, ideally following the template outlined in this Mplify Alliance document, governing the use of the API between the parties	
API	In the context of LSO, API describes one of the management interface reference points based on the requirements specified in an interface profile, along with a data model, the protocol that defines operations on the data and the encoding format used to encode data according to the data model.	MEF 55.1 [5]
Buyer	A service provider using the LSO Sonata API in the role of purchaser of services	MEF 79 [8]
EVC	Ethernet Virtual Circuit	MEF 10.4 [3]
IP Services	Internet Protocol Services	MEF 61.1 [6]
LSO	Lifecycle Service Orchestration	MEF 55.1 [5]
POQ	Product Offering Qualification	MEF 79 [8]
SD-WAN	An overlay connectivity service that optimizes transport of IP packets over one or more other connectivity services (underlay connectivity services) by recognizing applications (application flows) and determining forwarding behavior (by applying policies).	MEF 70.2 [7]
SLA	Service Level Agreement	
Seller	A service provider using the LSO Sonata API in the role of a seller of services	MEF 79 [8]
Sonata API	The management interface reference point supporting the management and operations interactions (e.g., ordering, billing, trouble management, etc.) between two service providers, e.g., Buyer and Seller)	MEF 55.1 [5]

Table 1 – Terminology and Abbreviations

4 Compliance Levels

The key words "**MUST**", "**MUST NOT**", "**REQUIRED**", "**SHALL**", "**SHALL NOT**", "**SHOULD**", "**SHOULD NOT**", "**RECOMMENDED**", "**NOT RECOMMENDED**", "**MAY**", and "**OPTIONAL**" in this document are to be interpreted as described in BCP 14 (RFC 2119 [1], RFC 8174 [2]) when, and only when, they appear in all capitals, as shown here. All key words must be in bold text.

Items that are **REQUIRED** (contain the words **MUST** or **MUST NOT**) are labeled as **[Rx]** for required. Items that are **RECOMMENDED** (contain the words **SHOULD** or **SHOULD NOT**) are labeled as **[Dx]** for desirable. Items that are **OPTIONAL** (contain the words **MAY** or **OPTIONAL**) are labeled as **[Ox]** for optional**.**

A paragraph preceded by **[CRa]<** specifies a conditional mandatory requirement that **MUST** be followed if the condition(s) following the "<" have been met. For example, "**[CR1]<**[D38]" indicates that Conditional Mandatory Requirement 1 must be followed if Desirable Requirement 38 has been met. A paragraph preceded by **[CDb]<** specifies a Conditional Desirable Requirement that **SHOULD** be followed if the condition(s) following the "<" have been met. A paragraph preceded by **[COc]<** specifies a Conditional Optional Requirement that **MAY** be followed if the condition(s) following the "<" have been met.

5 Numerical Prefix Conventions

This document uses the prefix notation to indicate multiplier values as shown in Table 2.

Decimal		**Binary**	
Symbol	**Value**	**Symbol**	**Value**
k	10^3	Ki	2^{10}
M	10^6	Mi	2^{20}
G	10^9	Gi	2^{30}
T	10^{12}	Ti	2^{40}
P	10^{15}	Pi	2^{50}
E	10^{18}	Ei	2^{60}
Z	10^{21}	Zi	2^{70}
Y	10^{24}	Yi	2^{80}

Table 2 – Numerical Prefix Conventions

6 Introduction

This document provides a contractual template to be used by parties using Lifecycle Service Orchestration ("LSO") Application Programming Interfaces ("API") as outlined in MEF 55.1 [5] in contracts governing the use of such APIs to conduct business transactions between the parties. Appendix A provides the template itself (also available as a separate template document), and Chapter 7 provides explanations for the terms and conditions proposed, so that a reader who is not familiar with the technical and operational aspects of APIs can understand the context of the clauses in the template and the rationale associated with those clauses, as well as the rationale for not addressing some topics.

The objective for Mplify in proposing a contractual template is to facilitate the adoption of the LSO API technology by companies. It aims at creating a balanced set of terms and conditions for all parties, enabling the rapid conclusion of the contractual discussions.

The template is intended for use between a Buyer and a Seller implementing the LSO Sonata API, and therefore presumes the existence of an agreement, such as a master services agreement or other form, that is governing the purchase and use of Seller services by Buyer in a typical wholesale, provider to provider contractual relationship. The terms and conditions applicable to those services are typically not contemplating the use of API services to conduct transactions relative to those services, hence the need to have an additional document focused explicitly on that aspect.

7 Template Explanations

This section provides explanations of the template articles.

The LSO API Agreement Template is included as an Appendix to this document, and also as a editable Word document with this document. Parties using the template will fill in the blanks in the Preamble section, and the Effective Date section.

7.1 Preamble

Buyer and Seller companies listed here are those parties to the main agreement. The Agreement should include participating affiliates and subsidiaries, if this is relevant.

It is assumed that the Agreement is comprehensive enough, and includes terms and conditions relative to liability, to data handling and security, confidentiality, privacy, governing law, and other general aspects that are inherited by the Addendum and therefore do not need to be repeated in the Addendum. If something however is more specific to the use case of the API Services, then it should be described in the Addendum.

7.2 1 Definitions

We are defining the terms for use within the Addendum, and the definitions for use in this present Mplify document are defined in section 3.

7.2.1 Clause 1.1 API

The Addendum template does not mention, on purpose, software or application programming so that there is no confusion with property rights associated with those, and only references logic and data models that are implemented by such software and programming.

7.2.2 Clause 1.2 Access Credentials

The definition leaves the list of security technologies open for future compatibility.

7.2.3 Clause 1.3 Service

Mplify API use cases define usually a business process and the how API transactions are supporting such a process (see MEF 50.1[4]). For example, the ordering process starts with a POQ request by the Buyer, and response from the Seller; then on the basis of that POQ, the Buyer will place the Order; the Seller will provide Status updates or respond to status enquiries, and eventually the Seller will notify completion of the Order. Those are the individual transactions that are using the API Services and are performed through API Operations. The object of the business process is ordering a particular service instance, like an Ethernet EVC, or an IP Service or an SD-WAN Service.

7.3 Clause 3 Terms and Conditions

7.3.1 Clause 3.1

The Addendum is not listing all the possible Mplify standards on purpose. There are too many to reference them and will regularly change as new payloads or use cases are introduced and standardized.

7.4 Clause 3.5

No SLAs or timelines to respond to or fix incidents are provided as typically, if an API does not work, transactions, like orders, are not flowing, and Seller has a natural incentive to restore order flow as soon as possible. Note however that there is a Service Levels section (Section 4) that sets expectation on the performance and availability to be expected under normal operations.

7.5 Clause 3.6

In a reciprocal manner, Buyer needs to provide support to Seller relative to the use of the API, and provide a mechanism for Seller to report challenges and inappropriate use.

7.6 Clause 3.9

Data handling language is most likely already addressed in the Agreement. The API is only mechanizing information exchanges that would take place in a different form and therefore should be addressed already in the Agreement.

7.7 Clause 3.12

It may happen that an error occurs in the automation of the API responses on the seller side, such as incorrect pricing provided in response to a quote request, or an incorrect qualification of service eligibility. If the Buyer is relying on that incorrect response to formulate its bid to the end customer, the Buyer may find itself in the position of having offered to its customer an impossible configuration or offered it at an incorrect price (like too low a price). The Buyer would in that situation suffer a consequential damage due to the error that found its way in the Seller system.

In the context of automated delivery, as enabled by the API Services, such an error may find its way into production despite quality checks and testing and only be detected after API responses have been issued. The purpose of the clause is to commit the parties to sit down to resolve those consequences without prejudging the nature of the error or the consequences that it has, as those could vary very much from case to case.

7.8 Clause 4 Service Levels

The Service Levels defined here set an expectation for performance purposes only. They are not mean to be tied to financial credits. If the API is not working as required, the Seller is likely going to be penalized by not receiving an order; adding a financial penalty on top of not making a sale is excessive.

If the Buyer is relying exclusively on automation, it would be out of a thought-through business decision that should consider that the API may not always be available and therefore the automation will break. It would be unfair to hold the Seller liable for the internal business decision of the Buyer relative to the dependency of its operation on automation.

7.9 Clause 5 Upgrades

There is no clause that forces a version, or version currency (like the parties would need to remain current to a N-x version) for the reason that such a clause would require one of the party to commit to funding for staying current, while this might beyond their control (like future funding commitment or budget shortage, or whatever). There is already language around Backward Compatibility and the ability for either party to suspend the API services in case of API version change which would be protecting both parties adequately.

7.10 Clause 6.3

If the Seller has issues with the API and cannot fix them in a timely manner, the Buyer may not want to continue transacting with the API, nor could the Seller force the Buyer to continue using the API as it is not working in acceptable manner. Giving the option to the Seller to withdraw the API with a 30 days' notice is a reasonable resolution of the issue.

8 References

[1] IETF RFC 2119, *Key words for use in RFCs to Indicate Requirement Levels*, March 1997

[2] IETF RFC 8174, *Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words*, May 2017

[3] MEF 10.4, *Subscriber Ethernet Service Attributes*, December 2018

[4] MEF 50.1, *MEF Services Lifecycle Process Flows*, August 2017

[5] MEF 55.1, *Lifecycle Service Orchestration (LSO): Reference Architecture and Framework*, January 2021

[6] MEF 61.1, *IP Services Attributes*, May 2019

[7] MEF 70.2, *SD-WAN Service Attributes and Service Framework*, October 2023

[8] MEF 79, *Address, Service Site, and Product Offering Qualification Management – Requirements and Use Cases*, November 2019

[9] MEF 128, *LSO API Security Profile*, October 2021

Appendix A LSO API Agreement Template

1 Preamble

THIS ADDENDUM is made as of [Date] (the "Addendum")

BETWEEN

(1) **[Seller]**, a company incorporated in _____, whose registered office is at _____ ("Seller")

AND

(2) **[Buyer]** a company incorporated in _____, whose business address is at _____ ("Buyer").

WHEREAS:

A. Seller and Buyer are parties to a [Name of Agreement] entered as of _____ ("Agreement"); and

B. Seller and Buyer wish to amend certain provisions of the Agreement in relation for provisioning, ordering and supply by using Seller Mplify Lifecycle Orchestration Services Application Programming Interface Service ("API Service") under the Agreement.

C. Seller may offer the API Service to Buyer.

D. Unless the context requires otherwise, words and expressions defined in the Agreement shall have the same meaning when used herein.

This Addendum is supplemental to the Agreement and, save as expressly provided herein, all provisions in the Agreement shall remain in full force and effect. Notwithstanding the foregoing, the Parties agree that in the event of a conflict between the terms of this Addendum and the Agreement, the terms of this Addendum shall supersede and replace any inconsistent term in the Agreement.

2 Definition(s)

2.1 "Agreement" means the contractual arrangement between the parties making use of the APIs and outlining the terms and conditions applicable to the services the API transactions relate to

2.2 "API(s)" or "API Service(s)" or "Application Programming Interface" means all interfaces and associated data models, including but without limitation, all associated features, functionality, application flows and data elements, which enables Buyer's system to access, connect to and communicate with the Seller's system, and to carry out automated transactions between the Parties.

2.3 "Access Credentials" mean the necessary security keys like username, or user ID and password, token, keys or any other authentication tools which are made available by the Seller to the Buyer, or the Buyer to the Seller, to securely access and use the API Services.

2.4 "Addendum" means this document.

2.5 "Backward Compatible" means all features, outputs or functions previously performed and/or supported by the API (prior to any change), including all features, outputs or functions available through interoperating, inter-working and/or inter-managing with third party equipment/software/products or services, that will remain available in the same way and with the same outputs and fully accessible in the same way and through the same inputs with a replacement or updated version.

2.6 "Best Effort" is as defined in article 4.3

2.7 "Buyer" means the party buying services from the other party, the Seller, through the use of the API Services

2.8 "Effective Date" is the date this Addendum is executed by the parties

2.9 "Malware" means a malicious piece of code or data payload transmitted between the parties, willfully or negligently, which may cause a disruption of the systems of either party. Malware typically consists of programming designed to disrupt or deny operation, gather information that leads to loss of privacy or exploitation, gain unauthorized access to system resources, and other abusive behavior.

2.10 "Seller" means the party selling to the Buyers services through the use of the API Services

2.11 "Service" means the Seller services, as detailed in a transaction between the Buyer and the Seller.

3 Effective Date

3.1 This Addendum takes effect on _____ (the "Effective Date").

4 Terms and Conditions

4.1 Seller and Buyer agree to abide by the relevant technical standards as published by Mplify.

4.2 Seller shall provide Buyer Access Credentials supporting authentication-based access to Seller's API service in accordance with MEF 128, or its successor technical standards. The Access Credentials provide Buyer with ability to view and utilize the Seller's available APIs that are authorized for use by Buyer.

4.3 The API is offered as a Best Effort service to enable digital access to certain information. For the purpose of this addendum, "Best Effort" means reasonable effort and/or endeavor to provide a platform for the purposes of conducting key business transactions; but, without any uptime guarantees or rebates or consequences of any kind due to the platform or any of its associated functionalities not being available for any period of time, or any malfunctioning.

4.4 Both Parties will:

(a) be responsible for the security of their own systems;
(b) not knowingly transmit any Malware through the use of the APIs or introduce Malware into any data or message sent to the other Party or into the other Party's system;
(c) make reasonable efforts to scan ingress and egress API flows for Malware in line with good industry practice and eliminate detected Malware from the flows.

4.5 Seller will provide a mechanism to Buyer whereby incidents can be reported and trouble tickets created to track the incident and its resolution. Seller will work on reported issues in a timely manner and escalate when necessary to the appropriate support team. Seller will communicate any planned and unplanned outages in a timely manner.

4.6 Buyer will provide a mechanism to Seller whereby incidents can be reported proactively by Seller, or where Seller can report incidents on its API Services caused by transactions and associated payloads initiated by Buyer. Buyer will work on reported issues with its transactions in a timely manner and escalate when necessary to the appropriate support team. Buyer will communicate appropriately to Seller any planned or unplanned outages in a timely manner.

4.7 Both parties will communicate to each other in a timely manner any planned or emergency maintenance activity affecting the API Services. For planned maintenance, a 15 days upfront notice is desirable.

4.8 Buyer shall be responsible for all activities carried out via the APIs by its authorized users, including subcontracted third parties of the Buyer.

4.9 Data protection, data security and confidential information handling is governed by the relevant terms and conditions of the Agreement.

4.10 If the Buyer purchases any Service through the Seller API, or carries any transaction (such as raising a trouble ticket) the terms and conditions of the underlying Seller Service shall apply to such purchases or transactions

4.11 Buyer will not use the API Service in an abusive manner, including but not limited to, flooding the API Service with excessive requests that would render the Seller API Service inoperant (denial of service type of attack), or in a systematic manner, attempting to syphon information from Seller Services offerings (like reverse-engineer the footprint and price book logic of Seller).

4.12 If Seller detects that the API Services has provided inaccurate responses to transactions, Seller should notify the Buyer as soon as possible of such incident. The parties will discuss in good faith how to resolve the consequences of such inaccurate responses.

5 Service Levels

5.1 Seller will use commercially reasonable effort to make the API Services available with a monthly uptime percentage of at least 99.95% during any calendar month. Monthly uptime percentage is calculated as maximum available minutes less downtime divided by maximum available minutes multiplied by 100.

5.2 Seller will not provide API Service credits in case the monthly uptime percentage is not met. Seller will not be liable for consequential damages incurred by Buyer resulting from missing the monthly uptime percentage objective.

5.3 The Service commitment does not apply to unavailability or performance issues caused by factors outside of Seller's reasonable control, voluntary actions or inactions by Buyer or its users.

6 Upgrades

6.1 If either party plans to modify or upgrade the API Service, any material change needs to be introduced in a coordinated manner to be mutually agreed and successfully tested by the parties before moving to production. Both parties are entitled to make minor unilateral changes to their respective implementations of the API Services, as long as they remain Backward Compatible with the version that was mutually agreed upon by the parties when moved to production.

7 Termination and Suspension

7.1 Either party shall have the right to discontinue the use of the API related Services if the other party replaces the version in use by a new version that is not acceptable to the other party.

7.2 Seller may at any point in time suspend or restrict the availability of all or any part of an API for operational reasons, giving Buyer at least fifteen (15) days' notice in advance of any such suspension or restriction.

7.3 Seller is entitled to terminate this service upon at least thirty (30) days advance notice of termination.

Appendix B Acknowledgement (Informative)

The following contributors participated in the development of this document and have requested to be included in this list.

- Bertrand **BUCLIN**
- Stefanie **KUGELMANN**