

MEF Standard MEF 168

SLA Reporting Business Requirements and Use Cases

February 2025

Disclaimer

© MEF Forum 2025. All Rights Reserved.

The information in this publication is freely available for reproduction and use by any recipient and is believed to be accurate as of its publication date. Such information is subject to change without notice and MEF Forum (MEF) is not responsible for any errors. MEF does not assume responsibility to update or correct any information in this publication. No representation or warranty, expressed or implied, is made by MEF concerning the completeness, accuracy, or applicability of any information contained herein and no liability of any kind shall be assumed by MEF as a result of reliance upon such information.

The information contained herein is intended to be used without modification by the recipient or user of this document. MEF is not responsible or liable for any modifications to this document made by any other party.

The receipt or any use of this document or its contents does not in any way create, by implication or otherwise:

- a) any express or implied license or right to or under any patent, copyright, trademark or trade secret rights held or claimed by any MEF member which are or may be associated with the ideas, techniques, concepts or expressions contained herein; nor
- b) any warranty or representation that any MEF members will announce any product(s) and/or service(s) related thereto, or if such announcements are made, that such announced product(s) and/or service(s) embody any or all of the ideas, technologies, or concepts contained herein; nor
- c) any form of relationship between any MEF member and the recipient or user of this document.

Implementation or use of specific MEF standards, specifications, or recommendations will be voluntary, and no Member shall be obliged to implement them by virtue of participation in MEF Forum. MEF is a non-profit international organization to enable the development and worldwide adoption of agile, assured and orchestrated network services. MEF does not, expressly or otherwise, endorse or promote any specific products or services.



Table of Contents

| 1 | List of Contributing Members | 1 |
|------------|---|----|
| 2 | Abstract | 1 |
| 3 | Terminology and Abbreviations | 2 |
| 4 | | |
| 2 Abstract | | |
| 6 | Key Concepts and Definitions | 6 |
| 6.1 | Buver and Seller | 6 |
| | · · · · · · · · · · · · · · · · · · · | |
| 6.3 | | |
| 6.4 | | |
| 6.5 | | |
| 6.6 | <u>-</u> | |
| 7 | High-Level Use Cases, Business Requirements and Prerequisites | 9 |
| 7.1 | Introduction | 9 |
| 7.2 | | |
| 7.3 | • | |
| 7 | 7.3.1 Manage SLA Metrics | 11 |
| 7 | 7.3.2 Manage SLA Event | 13 |
| | 8 | |
| | · · · · · · · · · · · · · · · · · · · | |
| | \mathcal{E} | |
| 7 | 7.3.6 Manage SLA Credit Reports | 19 |
| 8 | References | 21 |



List of Figures

| Figure 1 – SLA Event sample 1 | 8 |
|--|---|
| Figure 2 – SLA Event sample 2 | |
| Figure 3 – Use Cases | |
| Figure 4 – Calculate SLA Violation Duration: Example 1 | |
| Figure 5 – Calculate SLA Violation Duration: Example 2 | |



List of Tables

| Table 1 – Terminology and Abbreviations | 3 | |
|---|----|--|
| Table 2 – Use Cases | 11 | |



1 List of Contributing Members

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

- Sparkle
- Sage
- MOBI
- Orchest
- CMC Networks

2 Abstract

Generating SLA credit reports is currently a manual process in most telecoms, very burdensome, and consumes significant amounts of staff resources. Generating SLA credit reports is currently a manual process in most telecoms, very burdensome, and consumes significant amounts of staff resources. The focus is to automate periodic SLA credit report generation to free up valuable telecom staff, minimize dispute management and costs (real-time mutual endorsement), increase productivity, collect hidden credits, and improve customer experience.

This document focuses on a legal Agreement between the Buyer and the Seller and its inclusion of Service Level Agreements (SLAs) with enforcement based on mutually agreed-upon events. These events can originate from any legal agreement party and must contain relevant data. In particular, the document aims to define the requirements and use cases for automated SLA event reconciliation using mutually trusted digital agreements in a trusted execution environment (for example smart contracts).



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 controlling reference to be found in other MEF or external documents.

In addition, terms that are defined in MEF 113[1], MEF 114[2], MEF 10.4 [3], MEF 61.1[4], MEF 61.1.1 [5], MEF 12.2 [6], MEF 26.2 [7], MEF 50.1 [8], MEF 51.1 [9], MEF 55.1 [10] and MEF 81[11] are included in this document by reference and are not repeated in the table below.

| Term | Definition | Reference |
|------------------------|---|-----------------------|
| Activated | In the context of this document, denotes a Product as | MEF 114 |
| | Activated when it has been made ready (e.g., | |
| | deployed, provisioned and ready for use by the | |
| n | Buyer). | A 1 4 1 C MEE |
| Buyer | Using MEF 55 terminology, a Buyer may be a | Adapted from MEF 55.1 |
| | customer, or a Service Provider who is buying from a | 33.1 |
| | Partner. For the purposes of this document, a Buyer is the Service Provider who is ordering one or more | |
| | products from a Partner (aka, Seller) and is its own | |
| | legal entity. | |
| Digital Commercial | An agreement between two or more Service | MEF 114 |
| Agreement | Providers that allows for the buying and/or selling of | |
| | Products between them | |
| Incident | An entry within a Seller's tracking system created by | MEF 113 |
| | the Seller, which contains information about a | |
| | Situation in the Seller's network that has a possible | |
| | negative impact on the operability of a Product for | |
| | one or more Buyers. | |
| Issue | In the context of this document, denotes a problem | MEF 113 |
| | with a Product as experienced by the Buyer that is | |
| | not part of normal operation. | 3.577.444 |
| Master Services | A legal contract that defines the general terms and | MEF 114 |
| Agreement (MSA) | conditions governing the entire scope of Products | |
| | commercially exchanged between the parties to the agreement. | |
| Notification | A message sent from the Seller to the Buyer to | MEF 113 |
| Totilication | inform about an event that has occurred in regard to a | IVILI 113 |
| | specific instance of a Ticket, Incident, Appointment | |
| | or Workorder. | |
| Product | An externally facing representation of a Service | |
| | and/or Resource procurable by the Customer. | MEF 55.1 |
| Product Element | Component of a Product. | MEF 114 |
| Reconciliation | The process of reaching agreement in case of a | MEF 114 |
| | dispute. | |
| Scheduled | Maintenance periods that are pre-agreed on, M, has | MEF 61.1.1 |
| Maintenance | an agreed-on start time, M_{start} , and end time, M_{end} . | |



| Term | Definition | Reference |
|--------------------|--|----------------------|
| Seller | Using MEF 55.1 terminology, a Seller may be a | Adapted from MEF |
| | Service Provider or a Partner who is providing | 55.1(to be verified) |
| | service to a Buyer. For the purposes of this | |
| | document, a Seller is the Partner who is providing | |
| | one or more Products to the Buyer, and its own legal | |
| | entity. | |
| Service Provider | An organization that provides services to Subscribers. | MEF 61.1 |
| Service Level | The contract between Buyer and Service Provider (or | Adapted from MEF |
| Agreement (SLA) | Seller) specifying the service level commitments | 10.4 |
| | (SLA Metrics) and related business agreements for a | |
| | Product. | |
| SLA Event | Any event (or An entry within a SSoT's system) | This document |
| | that contains data that could be used for SLA | |
| | management, credit calculation and | |
| | reconciliation (e.g. trouble tickets or other types | |
| | of data exchanges between the MSA parties) | |
| | These events can originate from the Seller, the | |
| | Buyer, or their representatives | |
| SLA Metrics | SLA metrics are a set of key performance indicators | This document |
| | (KPIs) that have been defined in the Service Level | |
| | Agreement (SLA) | |
| Specific Terms and | Legal contract defining the terms and conditions | MEF 114 |
| Conditions | governing a specific Product between the parties. | |
| System of Record | The place where the value of data is definitively established. | MEF 114 |
| Single Source of | Seller's, Buyer's, or 3rd Party's System, which is | This document |
| Truth (SSoT) | considered reliable by the Seller, the Buyer, or their | |
| | representatives and in which the relevant data is | |
| | stored. | |
| Ticket | An entry within a Seller's tracking system created by | MEF 113 |
| | the Buyer (or a third party on behalf of the | |
| | Buyer), which contains information about an Issue | |
| | impacting normal operation of a Product, along with | |
| | support interventions made by technical support staff, or third parties. | |
| Trouble Ticketing | In the context of this document, denotes the | MEF 113 |
| Trouble rickelling | management of both Tickets and Incidents. | IAILI TTA |
| Unavailable Time | A set of time intervals, contained in some longer | MEF 10.4 |
| | time interval, when the service is considered not | |
| | available for use | |
| Workorder | In the context of this document, denotes a set of tasks | MEF 113 |
| vv di kui uci | to be scheduled and performed under the | INITE 119 |
| | responsibility of a Technician at a given location. | |
| | responsibility of a recimician at a given location. | 1 |

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 Error! Reference source not found., RFC 8174 Error! Reference source not found.) when, an d 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 Introduction

A Master Service Agreement (MSA) can include one or more Service Level Agreements (SLAs). SLA enforcement is based on mutually endorsed SLA events, such as trouble tickets or other types of data exchanges between the MSA parties. Such SLA events can originate from any MSA parties and must include data relevant to the SLA event. SLA event reconciliation between the MSA parties can be achieved manually or automatically.

This document aims to define the requirements and use cases for mutually trusted, automated SLA event reconciliation such as Smart Bilateral operating on or within a Smart Omni-Lateral as defined in MEF 114.

The activities in scope are the definition and specification of:

- 1) Entity & Relationship
 - a. Buyer-Seller
 - b. MSA
 - c. SLA Event
 - d. MSA-SLA
 - e. SLA-SLA Event
- 2) Define Use Cases and Business Requirements for:
 - a. SLA Management
 - b. Credit Management
 - c. Reconciliation Management
 - d. Report Management



6 Key Concepts and Definitions

6.1 Buyer and Seller

A Service Provider that buys one or more products from another Service Provider is the Buyer with respect to the purchased products. The Buyer can also be the end (non-Service-Provider) customer of one or more products.

A Service Provider that sells one or more products to another entity is the Seller with respect to the provided products. The Seller is accountable to the Buyer for all the products it sells to the Buyer, including product service elements sourced externally by the Seller.

The Seller bills the Buyer for the use of its products.

A Buyer may buy from multiple Sellers, and in the context of a product supply chain, a Seller of one product may also play the role of a Buyer of other products.

6.2 Product

A Product is an item which can be commercially offered (as Product Offering) to a Customer(i.e the Buyer). Products can be bundled into Product Bundles and offered in such a way (as a Bundled Product Offering). In the context of this standard, a product is assumed to be a digital service or combination of digital services.

Service providers and MEF standards may use the term 'service' where in this document, it is understood to be equivalent to a product. Examples include but are not limited to:

- Carrier Ethernet services (MEF 6.3 and MEF 51.1)
- IP services (MEF 69)

A product can also include non-MEF standardized services or service bundles.

SLA Event Reconciliation in the context of this document is applied to the use of products delivered by the Seller.



6.3 Master Service Agreement (MSA)

Before establishing a business and operational environment for the trade of Products, the Buyer and the Seller ("the parties") sign a Master Services Agreement (MSA). A MSA is a legal contract that defines the general terms and conditions governing the entire scope of Products commercially exchanged between the parties to the agreement. Specific Terms and Conditions belongs to a legal contract defining the terms and conditions governing a specific Product between the parties.

- [R1] The parties MUST sign an MSA commercially and legally binding documents with each other.
- [R2] The MSA MUST be between at least one Buyer and one Seller or their representatives.
- [R3] There MUST be only one MSA between a Buyer and a Seller covering commercial transactions for a given Product or set of Products to disambiguate which terms cover a commercial Buyer and Seller relationship as to a specific Product or Products.

6.4 SLA Event

An SLA event is any event that contains data that could be relevant for SLA management, credit calculation and reconciliation (e.g., trouble tickets or other types of data exchanges between the MSA parties)

- [R1] A SLA Event tracking systems (such as Ticketing System, Performances Monitoring System, etc.) MUST be pre-agreed between the Parties together with the standardized SLA Event format.
- [R2] An SLA Event MUST originate from the Seller, the Buyer, or their representatives.
- [R3] SLA Event elements related to different parameters, for example, quality parameters, network performance parameters, provisioning time parameters, etc (e.g., timestamp, time, event frequency, amount) MUST be stored in the Single Source of Truth (SSoT)
- [R4] Only the Buyer, the Seller, or their representatives MUST be allowed to record an SLA Event in the SSoT.



In the figure below, we can see some examples of SLA Events.

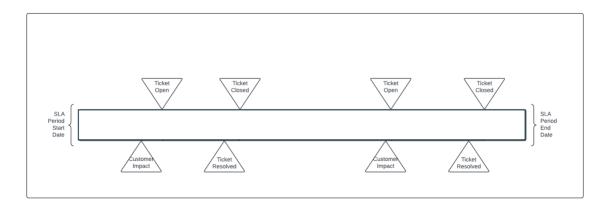


Figure 1 – SLA Event sample 1

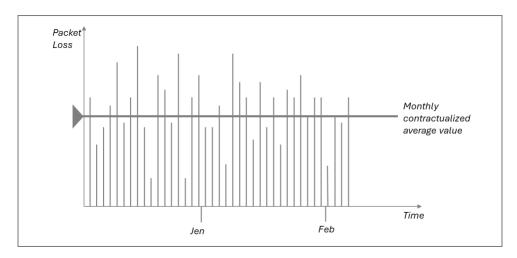


Figure 2 – SLA Event sample 2

6.5 MSA - SLA relationship

SLAs are the parameters and KPI agreed the Buyer and the Seller specifying the service level commitments and related commercial agreements for a Product. (MEF 10.4)

[R5] MSAs CAN have one or more Service Level Agreements (SLAs).

6.6 SLA – SLA Event relationship

[R6] SLAs CAN have one or more related SLA Events in a given time period.



7 High-Level Use Cases, Business Requirements and Prerequisites

This section provides detailed processes, actions, and requirements.

7.1 Introduction

To comply with existing standards,

- [R7] SLA Event MUST have a Single Source of Truth (SSoT).
- [R8] The Single Source of Truth (SSoT) for SLA Events **MUST** be the Seller unless differently specified into a legal agreement between the Buyer and The Seller, such as MSA.
- [R9] The digital recording of an SLA Event MUST have a unique identifier in the context of the MSA between the Buyer and the Seller

7.2 General Prerequisites/Pre-conditions

The general pre-conditions to the Use Cases are the following ones:

- [R10] A legal Agreement, such as MSA, MUST be signed between the parties: Seller and the Buyer or their representatives.
- [R11] The legal Agreement MUST contain the reference to the Single Source of Truth (SSoT) agreed upon by the parties.
- [R12] Digital mutually endorsed SLA metrics MUST be pre-agreed between Seller and Buyer or their representatives.
- [R13] A Digital Commercial Agreement specifying the conditions on which the SLA metrics can be applied to one or more identified SLA events MUST be mutually endorsed between Seller and Buyer
- [R14] A SLA violation Calculation Period MUST be digitally mutually endorsed between the Buyer and the Seller or their representatives, such as MSA.
- [R15] The maximum acceptable thresholds related to each SLA metric for a specific SLA Violation Calculation Period [R14] (e.g. the maximum acceptable variation in time, event frequency, value amount) MUST be digitally mutually endorsed between the Seller and the Buyer.
- [R16] A maximum expiration time for automatic mutual endorsement MUST be digitally mutually endorsed between the Seller and the Buyer or their representatives.



7.3 High Level Use Cases

This section provides the complete list of Uses that this document would like to cover at the present stage.

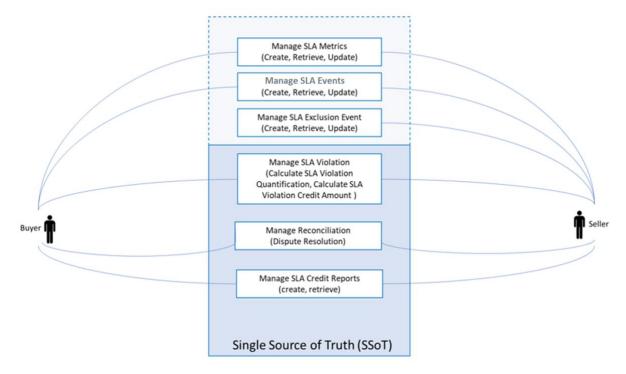


Figure 3 – Use Cases

Figure 1 shows the Use Cases defined in this document and indicates whether the Use Case is initiated by the Buyer or the Seller.

| Use Case # | Use Case name | Use Case Description |
|------------|---------------------------|--|
| 1 | Manage SLA metrics | |
| 1.1 | Create SLA | A new SLA metric can be created by the Seller or the Seller representative |
| 1.2 | Retrive SLA | The Buyer, the Seller or their representatives can retrieve an SLA or an SLA list from the SSoT. |
| 1.4 | Update SLA | The Seller or their representatives can update an SLA metrics. |
| 2 | Manage SLA Events | |
| 2.1 | Create a SLA Event | A new SLA Event can be created by the Seller, the Buyer or their representatives |
| 2.2 | Retrieve a SLA Event list | The Buyer, the Seller or their representatives can retrieve a SLA Event or a SLA Event list from the SSoT. |
| 2.3 | Update a SLA Event | The Seller and the Buyer or their representatives can update a SLA Event from the SSoT. |



| 3 | Manage SLA Exclusion Events | | |
|-----|--|---|--|
| 3.1 | Create SLA Exclusion Event | A new SLA Exclusion Event can be created by the Seller or the Seller representative. | |
| 3.2 | Retrieve SLA Exclusion Event list | The Buyer, the Seller or their representatives can retrieve a SLA Exclusion Event or a SLA Exclusion Event list from the SSoT. | |
| 3.3 | Update SLA Exclusion Event | The Seller or their representatives can update a SLA Exclusion Event from the SSoT. | |
| 4 | Manage SLA Violation | | |
| 4.1 | Calculate SLA Violation Quantification | The Buyer, the Seller or their representatives MUST be able to calculate SLA Violation Quantification for the relevant calculation period and to verify each other's SLA Violation Quantifications. | |
| 4.2 | Calculate SLA Violation Credit Amount | The Buyer, the Seller or their representatives MUST be able to calculate SLA Violation Credit Amount for the relevant calculation period retrieving information from the SSoT and based on the mutually endorsed SLA Violation Quantification | |
| 5 | Manage Reconciliation | | |
| 5.1 | Dispute Resolution | When a discrepancy is above a dispute threshold, the Buyer or the Seller can trigger an automatic dispute resolution process. | |
| 6 | Manage SLA Credit Reports | | |
| 6.1 | Create SLA Credit Report | A new SLA credit report related to the specific period can be created only by authorized entities | |
| 6.2 | Retrieve SLA Credit Report | The Buyer, the Seller or their representatives can retrieve a SLA Credit Report or an SLA Credit Report list from the SSoT | |

Table 2 – Use Cases

7.3.1 Manage SLA Metrics

The following Use Cases are described in this section:

- Create SLA Metric
- Retrieve SLA Metric
- Update SLA Metric

7.3.1.1 Create SLA Metric



This section lists the requirements for Use Case 1.1.

The following are the requirements on the Seller for the create an SLA Metric.

- [R17] A new SLA metric MUST be created by the Seller or the Seller representative.
- [R18] An SLA metrics MUST include the following attributes SLA Attributes:
 - SLA Type: Type of SLA defined in the MSA (e.g. Service Availability, MTTR, Packet loss, Packet delay).
 - o Product: Type of service defined in the MSA.
 - o Product ID: Unique identifier for the service.
 - Geography ID: Geographical region covered by the SLA (e.g. Area A, Area B, Global,....)
 - One or more SLA matrices. Each SLA matrix entry MUST contain the following elements:
 - SLA Values (e.g. Percentage, time duration, frequency,...).
 - SLA credit (e.g. percentage, amount,..)
 - SLA Credit Rule (i.g. x% of monthly invoice for each 0,y% below the SLA value)

7.3.1.2 Retrieve SLA Metric

This section lists the requirements for Use Case 1.2.

The following are the requirements on the Buyer and the Seller for retrieve an SLA Metric.

- [R19] The Buyer, the Seller or their representatives MUST be able to retrieve an SLA or an SLA list from the SSoT.
- [R20] Only the Buyer, the Seller or their representatives MUST be allowed to retrieve an SLA or an SLA list from the SSoT.

7.3.1.3 Update SLA Metric

This section lists the requirements for Use Case 1.3.



The following are the requirements on the Seller for the update a SLA Metric.

- [R21] the Seller or their representatives MUST be able to update an SLA metrics.
- [R22] Only the Seller or their representatives MUST be allowed to update an SLA metrics.
- [R23] Any SLA update must be conformant to the pre-agreed requirements [R18]

7.3.2 Manage SLA Event

The following Use Cases are described in this section:

- Create SLA Event
- Retrieve SLA Event
- Update SLA Event

7.3.2.1 Create SLA Event

This section lists the requirements for Use Case 2.1.

The following are the requirements on the Seller and on the Buyer for the create an SLA Event.

- [R24] A new SLA Event MUST be created by the Seller, the Buyer or their representatives.
- [R25] An SLA Event MUST include the following attributes SLA Event Attributes:
 - o SLA event ID: Unique identifier for the ticket (e.g. Ticket ID)
 - SLA Event Type: Type of ticket, must match SLA type. (e.g. Ticket Type see Mef113-7.2.1.11)
 - SLA Event Creator ID: ticket creator unique identifier (e.g. Ticket Creator ID)
 - o Product ID: Unique identifier for the service.



- o Geography ID: Geographical region of the violation.
- o SLA Event Start Time Date: Start date of the event
- SLA Event End Time Date: End date of the event
- SLA Event Creation Time Date: Date and time the SLA Event was created (e.g. Ticket Creation Time)

7.3.2.2 Retrieve SLA Event

This section lists the requirements for Use Case 2.2.

The following are the requirements on the Buyer and the Seller for retrieve an SLA Event.

- [R26] The Buyer, the Seller or their representatives MUST be able to retrieve a SLA Event or a SLA Event list from the SSoT.
- [R27] Only the Buyer, the Seller or their representatives MUST be allowed to retrieve a SLA Event or a SLA Event list from the SSoT.

7.3.2.3 Update SLA Event

This section lists the requirements for Use Case 2.3.

The following are the requirements on the Seller and on the Buyer for the update a SLA Event.

- [R28] The Seller and the Buyer or their representatives MUST be able to update a SLA Event from the SSoT.
- [R29] Only the Seller, the Buyer or their representatives MUST be allowed to update a SLA Event from the SSoT.
- [R30] Any SLA Event update must be conformed to the pre-agreed requirements [R25]

7.3.3 Manage SLA Exclusion Event

The following Use Cases are described in this section:

- Create SLA Exclusion Event
- Retrieve SLA Exclusion Event



• Update SLA Exclusion Event

7.3.3.1 Create SLA Exclusion Event

This section lists the requirements for Use Case 3.1.

The following are the requirements on the Seller for the create an SLA Exclusion Event.

- [R31] A new SLA Exclusion Event MUST be created by the Seller or the Seller representative.
- [R32] An SLA Exclusion Event MUST include the following attributes SLA Event Attributes:
 - Exclusion Event Type: Type of exclusion event (i.e Force Majeure, Planned Maintenance).
 - o Exclusion Event Start Date Time: Start date and time of the exclusion event
 - Exclusion Event End Date Time: End date and time of the exclusion event

7.3.3.2 Retrieve SLA Exclusion Event

This section lists the requirements for Use Case 3.2.

The following are the requirements on the Buyer and the Seller for retrieve an SLA Exclusion Event.

[R33] The Buyer, the Seller or their representatives MUST be able to retrieve a SLA Exclusion Event or a SLA Exclusion Event from the SSoT.

7.3.3.3 Update SLA Exclusion Event

This section lists the requirements for Use Case 3.3.

The following are the requirements on the Seller for the update a SLA Exclusion Event

[R34] The Seller or their representatives MUST be able to update a SLA Exclusion Event from the SSoT.



- [R35] Only the Seller or their representatives MUST be allowed to update an SLA Exclusion Event A from the SSoT.
- [R36] Any SLA Exclusion Event update MUST be conformed to the requirement [R32]

7.3.4 **Manage SLA Violation**

The following Use Cases are described in this section:

- Calculate SLA Violation Quantification
- Calculate SLA Violation Credit Amount

7.3.4.1 Calculate SLA Violation Quantification

This section lists the requirements for Use Case 4.1.

The following are the requirements on the Seller and on the Buyer or their representatives to calculate SLA violation Quantification.

- [R37] The Buyer, the Seller or their representatives **MUST** be able to calculate SLA Violation Quantification for the relevant calculation period [R14] retrieving SLA list (to recover SLA Type, SLA Values,... attributes [R18]), SLA Event list and SLA Exclusion Event list from the SSoT.
- Rules that define what kind of SLA Events have to be considered for the [R38] calculation of the SLA Violation Quantification MUST be pre-agreed between the Buyer and the Seller or their representatives.
- [R39] A maximum acceptable threshold MUST be pre-agreed between the Buyer and the Seller or their representatives.

Here are two examples of how the SLA Violation Quantification could be calculated based on pre-agreed rules. Those examples refer to the Service Availability calculation using Trouble Ticket System SLA Events.

EXAMPLE 1:

SLA Violation quantification measured from time when Ticket is opened in Seller trouble ticket system until the time Ticket is resolved (meaning service has been restored).

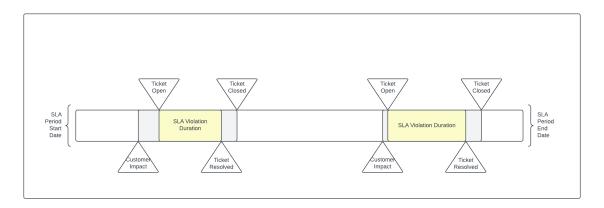


Figure 4 – Calculate SLA Violation Duration: Example 1

EXAMPLE 2:

SLA Violation duration measured from the time when Buyer's Customer experiences a loss of service until time Ticket is Resolved (meaning service has been restored).

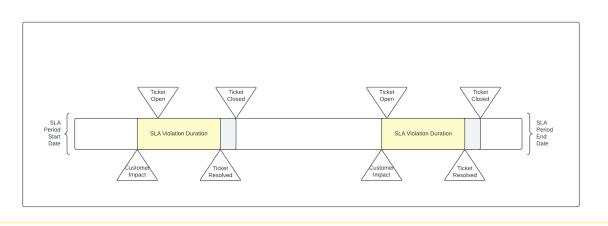


Figure 5 – Calculate SLA Violation Duration: Example 2

[R40] The Buyer, the Seller or their representatives MUST be able to verify each other's SLA Violation Quantifications.

Note, if Buyer and Seller do not agree on each other's SLA Violation Quantifications, a dispute resolution process is initiated (see section 7.3.5). The result of the dispute resolution process will be a mutually endorsed SLA Violation Quantification, which will be used to calculate the SLA Violation Credit Amount, if it is higher than the pre-agreed maximum acceptable threshold [R39].

7.3.4.2 Calculate SLA Violation Credit Amount

This section lists the requirements for Use Case 4.2.



The following are the requirements on the Seller and on the Buyer to calculate SLA Violation Credit Amount.

[R41] The Buyer, the Seller or their representatives MUST be able to calculate SLA Violation Credit Amount for the relevant calculation period [R14] retrieving SLA list (to recover SLA Credit, SLA Credit Rules,.. attributes [R18]) from the SSoT and based on the mutually endorsed SLA Violation Quantification results [R40].

7.3.5 Manage Reconciliation

Reconciliation is defined for the purposes of this document as the process of reaching agreement on SLA Violation Quantification (7.3.4.1).

If the Buyer and the Seller do not agree on each other's SLA Violation Quantifications, a dispute resolution process is initiated. The result of the dispute resolution process will be a mutually endorsed SLA Violation Quantification, which will be used to calculate the SLA Violation Credit Amount, if the mutually endorsed SLA Violation Quantification is higher than the pre-agreed maximum acceptable threshold [R39].

7.3.5.1 Dispute resolution

This section lists the requirements for Use Case 5.1.

The following are the requirements on the Seller, the Buyer or their representatives.

The reconciliation and dispute resolution processes may vary depending on the commercial agreement between each pair of Buyer and Seller

- [R42] A Dispute Threshold MUST be pre-agreed between Buyer, Seller or their representative.
- [R43] Rules to manage the calculation of SLA Violation Credit Amount when the discrepancy between the Buyer and Seller's SLA Violation Quantification is under the pre-agreed Dispute Threshold MUST to be pre-agreed between Buyer, Seller or their representative.
- [R44] When the discrepancy is above the Dispute Threshold, the Buyer or the Seller WILL trigger a dispute resolution process.
- [R45] Automatic dispute resolution rules MUST be pre-agreed and implemented between Buyer and Seller or their representatives.
- [R46] The methods and algorithms of resolving a dispute MUST be pre-agreed and implemented between Buyer and Seller or their representatives.



[R47] The result of the reconciliation process MUST be considered final and binding to both parties.

7.3.6 Manage SLA Credit Reports

The following Use Cases are described in this section:

- Create SLA Credit Reports
- Retrieve SLA Credit Reports

7.3.6.1 Create SLA Credit Report

This section lists the requirements for Use Case 6.1.

The following are the requirements on the Seller for the creation of a SLA Credit Report.

- [R48] The Reconciliation process (if needed) MUST precede the SLA Credit Report Creation
- [R49] A new SLA Credit Report related to the specific period MUST be created only by authorized entities (e.g. from the SSoT)
- [R50] If a Seller's invoice to a Buyer contains one or more credit lines, the invoice MUST be accompanied by the SLA Credit Reports upon which the credit(s) are based.
- [R51] An SLA credit report MUST include the following attributes SLA credit report attributes:
 - O SLA Type: Type of SLA defined in the MSA (e.g. Service Availability, MTTR, Packet loss, Packet delay)
 - Service Type: Type of service defined in the MSA
 - Product ID: Unique identifier for the service
 - Geography ID: Geographical region covered by the SLA (e.g. Area A, Area B, Global,....)
 - SLA Values (e.g. Percentage, time duration, frequency,...).
 - o SLA credit (e.g. percentage, amount,..)



7.3.6.2 Retrieve SLA Credit Report

This section lists the requirements for Use Case 6.2.

The following are the requirements on the Buyer and the Seller for retrieve an SLA.

- [R52] The Buyer, the Seller or their representatives MUST be able to retrieve a SLA Credit Report or an SLA Credit Report list from the SSoT.
- [R53] Only the Buyer, the Seller or their representatives MUST be allowed to retrieve an SLA Credit Report or an SLA Credit Report list from the SSoT.



8 References

- [1] MEF 113, Trouble Ticketing Requirements and Use Cases; October 2022
- [2] MEF 114, DLT-Based Commercial and Operational Services Framework Billing; November 2021
- [3] MEF 10.4, Subscriber Ethernet Services Attributes; December 2018
- [4] MEF 61.1, IP Service Attributes; May 2019
- [5] MEF 61.1.1 Amendment to MEF 61.1: UNI Access Link Trunks, IP Addresses, and Mean Time to Repair Performance Metric; July 2022
- [6] MEF 12.2, MEF 12.2 Carrier Ethernet Network Architecture Framework Part 2: Ethernet Services Layer; May 2014
- [7] MEF 26.2, MEF 26.2 External Network Network Interface (ENNI) and Operator Service Attributes; August 2016
- [8] MEF 50.1, MEF Services Lifecycle Process Flows; August 2017
- [9] MEF 51.1, Operator Ethernet Service Definitions; December 2018
- [10] MEF 55.1, Lifecycle Service Orchestration (LSO): Reference Architecture and Framework; February 2021
- [11] MEF 81, Product Inventory Management Requirements and Use Cases, November 2019