



LSO API Certification

Introduction

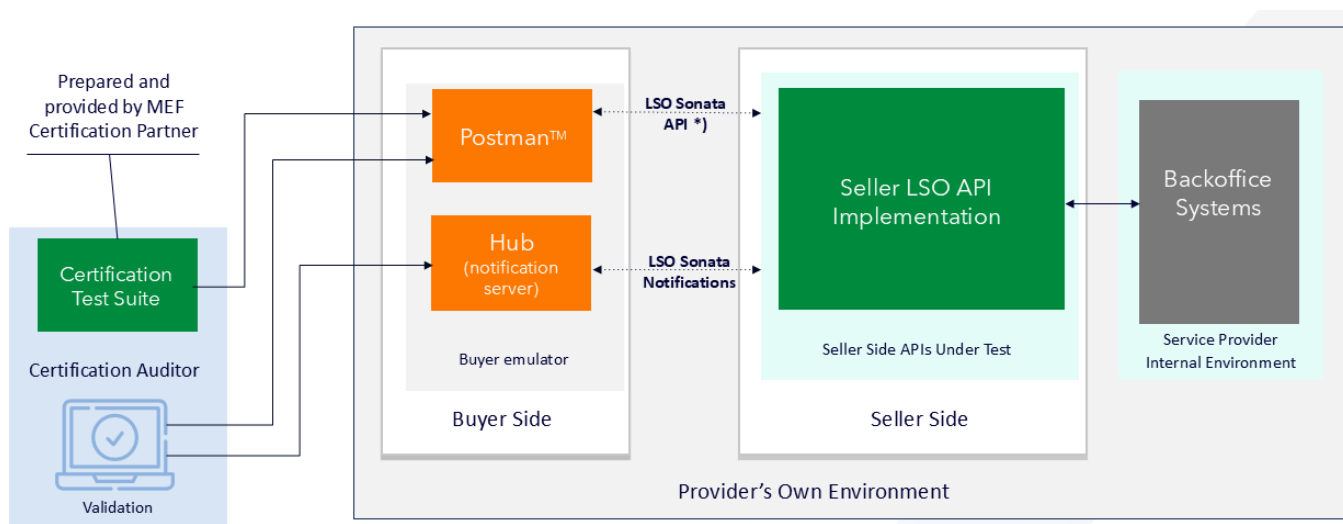
LSO API Certification validates that service providers deliver LSO API enhanced services which enable enterprise customers to automate business processes at scale.

The communications industry is undergoing a multi-year transformation to secure dynamic services across a global ecosystem of automated networks to address enterprise requirements for cloud-like experiences.


Future networks will be fully API-driven and will require standards-based automation between ecosystem players at both business and operational levels.

MEF has developed standards-based Lifecycle Service Orchestration (LSO) business process APIs and operational APIs that uniquely provide the high fidelity (tightly defined context), plug-and-play interoperability, and extensibility required to enable service providers to “invest once” and efficiently scale implementations with many partners and services.

The LSO API Certification validates that the API-enabled service offering LSO Envelopes in the Seller-side API implementations conform to the LSO global automation standards.



* LSO API Seller Envelope Certification only, no validation nor certification of Product Payload



The LSO API Certification program is a subscription-based certification model and process that allows service providers to validate LSO Envelope conformance for Seller-side API implementations against the LSO API standards. The subscription period is 1 year for each certification from the initiation of the first certification; it should be noted that a yearly subscription must be maintained to keep any previous certifications and badges. Recertification is required after 3 years from previous certification.

LSO API Certification is available to Principal Members, Ecosystem Members, and Ecosystem Subscribers in good standing with MEF.

Key Features

- LSO API Seller-side envelope certification
- Based on the MEF W92.1 LSO Sonata / Cantata Test and Certification Requirements
- A Buyer-side test suite for certifying:
 - A set of APIs
 - LSO API Release
 - A compatible API Release
- Example Payload required but not certified
- Release support
 - Dolly, Ella, Fergie, Grace and Haley
 - All future LSO API releases
- List of available APIs for Certification
 - Address Validation
 - Product Offering Qualification
 - Quote
 - Product Ordering
 - Product Inventory

Testing Partner

MEF's authorized Test & Certification Partner since October 2021, Amartus is a recognized leader in MEF LSO standards development, implementation, and testing.

- Providers of network automation solutions and expertise
- Founded in 2003. Headquartered in Ireland. R&D in Krakow, Poland
- Global customer base of Tier 1-3 providers and vendors
- MEF LSO Solution Provider of the Year 2023 & 2024

LSO API Certification Model

LSO API Certification validates that the LSO API Envelopes in the Seller-Side API implementation conform to the LSO API Standards as per MEF W92.1 LSO Sonata / Cantata Test and Certification Requirements. LSO API Certification is composed of a set of LSO APIs to be certified using a specific compatible LSO API Release. An example LSO Product payload is used in Certification but not validated.

APIs

LSO API Certification is available on LSO API releases Dolly to Fergie and upon request for API Releases Grace and Haley. All future LSO API releases supported.

Address Validation (A/V)

Allows the Buyer to retrieve address information from the Seller, including exact formats, for addresses known to the Seller.

Address Validation API is tested for:

- Synchronous (the only mode possible in the standard)
- Subset of MEF W 92.1 positive and negative test cases
- Test coverage scope for:
 - 'Fielded Address' format only
 - Best-Match (with and without the alternatives that are returned by the Seller)
 - Partial-Match
 - No-Match (fail)
 - Retrieving address by its ID
 - Rainy day scenarios (check for missing mandatory attributes, check non-existing Address ID)

Product Offering Qualification (POQ)

Allows the Buyer to check whether the Seller can deliver a product or set of products from among their product offerings at the geographic address or a service site specified by the Buyer; or modify a previously purchased product.

Product Offering Qualification API is tested for:

- Synchronous & asynchronous with state change notifications
- Subset of MEF W 92.1 positive and negative test cases
- Test coverage for:
 - Synchronous mode and Asynchronous mode (final state is reached, without testing the intermediate statuses)
 - Product relationship and POQ item relationships
 - With and without references to places
 - With and without Alternate Product Offerings Proposals
 - Access E-Line and Basic Internet Access payloads
 - `Install`, `change`, and `disconnect` product actions
 - `Green`, `yellow`, and `red` business scenarios
 - Query Interface
 - Notifications
 - Rainy day scenarios

Quote (Q)

Allows the Buyer to submit a request to find out how much the installation of an instance of a Product Offering, an update to an existing Product, or a disconnect of an existing Product will cost.

Quote API is tested for:

- Synchronous & asynchronous with state change notifications
- Subset of MEF W 92.1 positive and negative test cases
- Test coverage for:
 - Synchronous mode
 - Asynchronous mode
 - Product relationship and Quote item relationships
 - With and without references to places
 - Access E-Line and Basic Internet Access payloads
 - `Install`, `change`, and `disconnect` product actions
 - For both modes testing ends when the Quote reaches the state allowing placing a Product Order, or the Quote is unable to be provided

- Query Interface
- Notifications
- Rainy day scenarios

Product Order (PO)

Allows the Buyer to request the Seller to initiate and complete the fulfillment process of an installation of a Product Offering, an update to an existing Product, or a disconnect of an existing Product at the address defined by the Buyer.

Product Order API is tested for:

- Asynchronous (the only mode possible in standard)
- Subset of MEF W 92.1 positive and negative test cases
- Test coverage for:
 - Product relationship and Product Order item relationships
 - With and without references to places
 - Access E-Line and Basic Internet Access payloads
 - Create new Product Order for `install`, `change`, and `disconnect` product actions
 - Cancel existing Product Order
 - Inflight modifications
 - Query Interface
 - Notifications
 - Milestones
 - Rainy day scenarios

Product Inventory (PI)

Allows the Buyer to retrieve the information about existing Product instances from Seller's Product Inventory.

Product Inventory API is tested for:

- Synchronous (the only mode possible in standard)
- Test coverage scope for:
 - Retrieving the Product by its ID,
 - Retrieving Products by attributes (e.g. `status`)
 - Rainy day scenarios (non-existing Product ID, incorrect query attributes)

Badges and Reports

For each certified API, Badges with attributes will appear in the [MEF LSO API Certification Registry](#) with additional details, including:

- LSO Certified
- Sell Side API
- API Name
- Service Provider Name (full legal name, if applicable)
- Date Tested



For each service provider LSO API Certification, MEF associates the certification report to the certified LSO API. The report contains the summary results, pass/fail for MEF certification, and the results in each sub-category of the testing. The service provider LSO API Certification report summary details are displayed on the [MEF LSO API Certification Registry](#) next to the badge.

Examples of the information displayed:

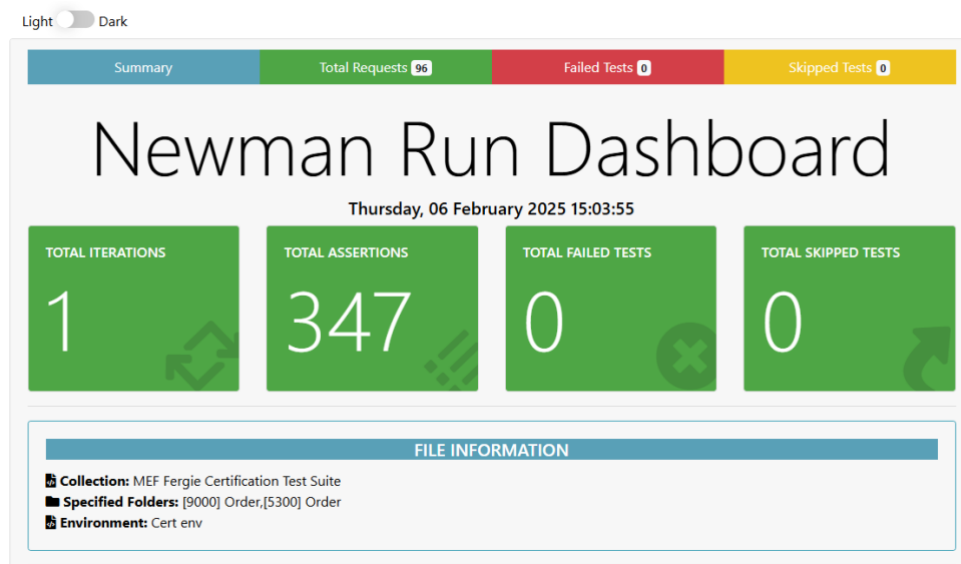


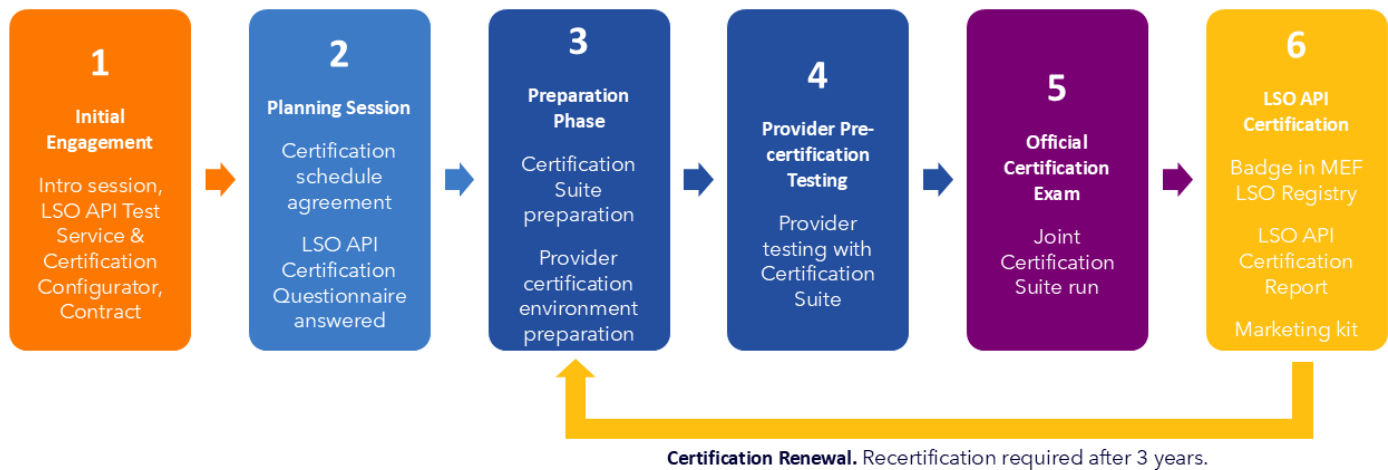
Figure 1 – Example of LSO API Certification Information

Deliverables

Items provided to the service provider upon certification include:

- Certification badge for each certified LSO API
- LSO API Certification report
- Listing of the certification in the [MEF LSO API Certification Registry](#)
- LSO API Certification marketing kit

Engagement Process



- Service provider becomes a MEF member
- Complete the LSO API Certification contract and payment
- Complete the LSO API Test and Certification Configurator
- Complete the Planning Session
- LSO Testing Partner prepares the Certification Suite and provides to Service Provider
- Service Provider runs the Certification suite
- Service Provider schedules Certification Date
- LSO Certification Partner validates the Certification Test
- LSO Certification Partner prepares Certification Test Report
- Certification is awarded to Service Provider and published in the [MEF LSO API Certification Registry](#)

For More Information

Contact: lsocert@mef.net

Website: [MEF.net](https://mef.net): [LSO API Certification](#)