



LSO API Onboarding & Interop Test Service

Frequently Asked Questions

Summary

This FAQ addresses key questions about MEF's LSO API Onboarding and Interop Testing (OIT) Service, which is designed to accelerate adoption of LSO Sonata APIs for automation of business functions between communications service providers. The OIT Service entered general availability in October 2021. Two additional FAQs are available on MEF 3.0 LSO Sonata APIs in general and MEF 3.0 LSO Sonata certification, which is also scheduled for general availability in October.

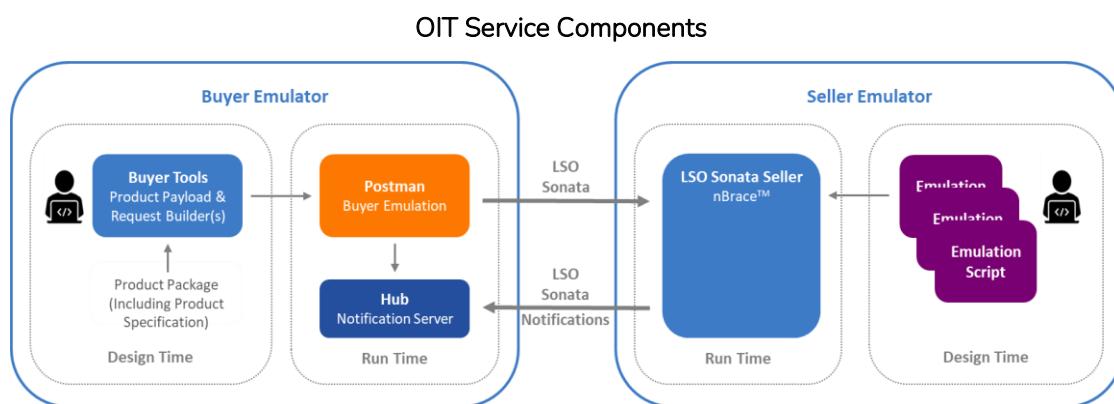
Contents

Summary.....	2
LSO API Onboarding & Interop Test (OIT) Service	4
1. What is the LSO API Onboarding & Interop Test (OIT) Service?	4
2. What roles are performed by the OIT Service in the LSO Sonata adoption lifecycle?....	4
3. When is the OIT Service available?	5
4. What features are available today and in the future for the OIT Service?	5
OIT Service Market Demand & Benefits.....	7
5. What is the market demand for both LSO Sonata APIs and the OIT Service?	7
6. What are the benefits of the OIT Service?.....	7
7. What are the downsides of not using the OIT Service?.....	7
OIT Service Offerings, Subscription Fees & Activation.....	8
8. What are the OIT Service offerings and related subscription fees?	8
9. How do companies subscribe to the OIT Service?.....	8
10. How do companies access the OIT Service as a subscriber?	9
OIT Service Use Scenarios.....	10
11. How will providers use the OIT Service, and what are the main scenarios?	10
OIT Service Relation to MEF 3.0 LSO Sonata Certification	11
12. How does the OIT Service relate to MEF 3.0 LSO Sonata certification?.....	11
13. Do you expect companies to use the OIT Service before starting the certification process or could a company certify before entering production with a specific partner?.....	11
14. How much work is required for certification if a company has successfully used the OIT Service to enter production?.....	12
OIT Service Support & Information	12
15. What support is provided for the OIT Service?.....	12
16. Who should I contact for more information?.....	12

LSO API Onboarding & Interop Test (OIT) Service

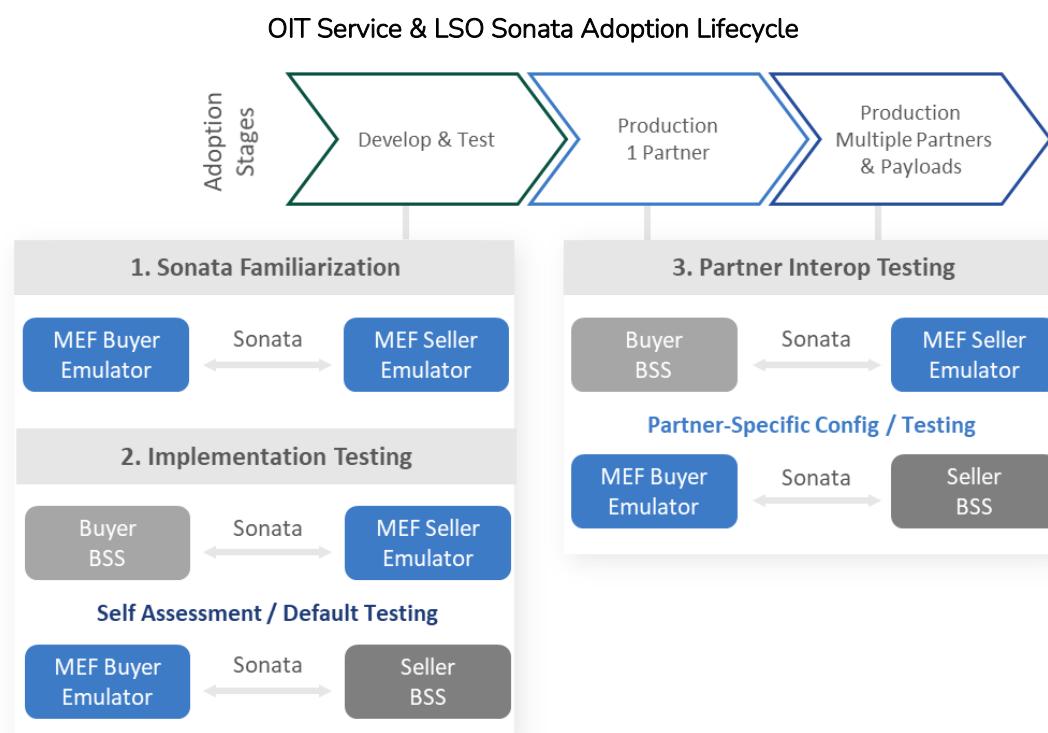
1. What is the LSO API Onboarding & Interop Test (OIT) Service?

MEF's LSO API Onboarding & Interop Test (OIT) Service provides an efficient, predictable, and scalable solution that service providers can use to test their implementation of LSO Sonata APIs and to perform interop testing with partners. It consists of software-based LSO Sonata Buyer & Seller emulators hosted on a dedicated public cloud server for a subscriber.



2. What roles are performed by the OIT Service in the LSO Sonata adoption lifecycle?

The diagram below highlights the stages of the adoption lifecycle that the OIT Service supports.



The OIT Service performs the following roles, with testing aligned to the [MEF 92.1 LSO Cantata/Sonata Test Requirements draft standard](#).

1. **LSO Sonata familiarization.** Run the Buyer and Seller emulators with default configurations (test requests/response and product payloads) to familiarize with LSO Sonata APIs.
2. **Implementation testing.** Perform self-assessment by testing against MEF's reference implementations of LSO Sonata.
3. **Partner interop testing.** (1) Prepare an emulator configuration to match specific scenarios/configurations so this can be shared with partners and (2) Load partner-specific configurations shared by partners for interop testing.

3. When is the OIT Service available?

Offered through Amartus, a MEF-Authorized Test and Certification Partner, the OIT Service entered general availability in October 2021.

4. What features are available today and in the future for the OIT Service?

The purpose of the OIT Service is to help service providers achieve and maintain interoperability for their LSO Sonata implementation with those of their partners. Providers who implement the APIs typically choose a subset of core behaviors defined in MEF W92.1. The service aims to prioritize support for those core behaviors identified in consultation with members on an ongoing basis.

The OIT Service is offered as a subscription-based, one-click public cloud hosted service (AWS) where each member who subscribes to the service will be given their own dedicated server with LSO Sonata Buyer and Seller emulators installed. The subscription will provide set up, support, and maintenance of the service.

Key features in the GA release are summarized below and elaborated upon on the next page. The aim beyond the GA release is to extend support to keep pace with new SDK releases and features based on the LSO roadmap.

OIT Service – Summary of Features Available in October 2021

Entity	Business Functions
Buyer, Seller	
LSO Sonata SDK Release Support	Address validation Site query Product offering qualification
Billie, R4	Quote
Product Payload	Product Order Product Inventory
CE Access E-Line	

OIT Service – Detailed Features Available in October 2021

Buyer Emulator	Seller Emulator
LSO Sonata SDK Release Support (Billie, R4)	
Address validation – fielded address format	
Site query – site inventory imported into emulator	
Product offering qualification – mode: synchronous & asynchronous with state change notifications	
Quote – mode: synchronous & asynchronous with state change notifications	
Product Order – mode: synchronous & asynchronous with state change notifications <ul style="list-style-type: none"> - Create Product Order (add, modify, delete) <ul style="list-style-type: none"> - Cancel in-flight Product Order - Initiate charge (Billie only) - Respond to charge (Billie only) <ul style="list-style-type: none"> - Register for notifications - Send notifications - Get Product Orders' list (R4 only) - Get Product Order by ID (R4 only) 	
Product inventory	
Product Payload Support	
Run-time onboarding & config of Product Packages (Product Schema + Validation logic) to be exposed as products over LSO Sonata APIs	
MEF CE Access E-Line product reference example	
Product Payload Builder	External Address Service Integration Support
Guided UI wizards for step-by-step building of product payloads for use in LSO Sonata test requests for both positive and negative tests	Plug-and-play support for external address validation/normalization services, including mocks
Request Template Builder	Test Data Management
Guided UI wizards for wrapping user defined product payloads into LSO Sonata Request Envelope (POQ, Quote, Order) and generation of JSON document, which can be incorporated into Postman test scripts	Ability to import and manage an inventory of test data including addresses, sites and ENNIs
Test Data Management	Action Rules & Workflow Customization
Ability to manage inventory & relationships for Product, Site, Address, PQA, Quote and Order	Easy means to introduce Provider specific behaviors (emulation scripts) for processing and responding to incoming API requests
MEF W92.1 Test Case Support	Set of matching, pre-defined emulator scripts for processing and responding to the default suite of test request supported in the Buyer emulator
Ability to generate test case requests using Product Payload/Request builders	
Example suite of tests – subset of MEF W92.1 test requirements test cases	API Security
Postman™ Test Tool Execution Environment	Support for OAuth 2.0, Basic HTTP
For executing test requests and managing results	

OIT Service Market Demand & Benefits

5. What is the market demand for both LSO Sonata APIs and the OIT Service?

New research from MEF indicates a growing number of service providers are embracing LSO Sonata APIs for automation of inter-provider business functions that will enable them to accelerate service delivery, speed time to revenue, and improve customer experience. The pace of the transition to LSO Sonata APIs has picked up significantly with the latest “Billie” LSO SDK Release in June 2021.

At least 29 companies are either in production with LSO Sonata or intend to be by the end of 2023, including 23 companies by the end of June 2022.

25 service providers have said they will at least consider subscribing to the OIT Service, with 64% of survey respondents call it a “must have.”

6. What are the benefits of the OIT Service?

MEF research indicates a strong majority of surveyed respondents see high value across multiple OIT Service benefits. Key benefits include:

1. More easily test against MEF’s reference implementations of LSO Sonata
2. Test partner-specific configurations
3. Test with emulators – including partner-specific configs – at any time (not limited by time zone differences)
4. Develop and test against new LSO releases
5. Significantly reduce the cost and effort of onboarding a partner (estimated 80% - 90% savings)
6. Scale the number of partners that can be onboarded in parallel (estimated 10x improvement)
 - More quickly build a network of automated partners
 - More easily predict, plan, and schedule partner onboarding
 - Engage with a broader range of partners – including a larger number of smaller providers – than would be otherwise possible

7. What are the downsides of not using the OIT Service?

Service providers without the OIT Service need to work from MEF’s standard specification documents, API definitions, and developer guides, which can lead to different interpretations and basic coding errors. This makes it time intensive for both partners who end up with prolonged cycles to resolve differences and issues. The OIT Service allows each partner to work independently to get their respective implementations in good shape before engaging in interop.

OIT Service Offerings, Subscription Fees & Activation

8. What are the OIT Service offerings and related subscription fees?

Below is a summary of the OIT Service offerings. Contact LSOOIT@mef.net for additional pricing information and to order the service.

OIT Service Offerings & Subscription Fees

Offerings	Description	Fees & Options
Access to Default Emulators – Buyer & Seller Pair	<p>Right to use default emulator(s) for LSO Sonata implementation testing</p> <p>Right to use emulators to prepare specific scenarios/configurations so this can be shared with partners for interop testing</p>	\$12,000 for 12 months or \$4,000 for 3 months
Use of Emulators for Partner-Specific Emulator Configuration(s)	<p>Right to share or use partner-specific emulator configurations for interoperability testing with partners</p>	<p>\$5,000 for a single partner emulator config access for 12 months</p> <p>\$21,250 for pack of 5 partner emulator configs for 12 months each</p> <p>\$35,000 for pack of 10 partner emulator configs for 12 months each</p>

- Fees do not include AWS server hosting cost (estimated \$1,200 per year), MEF fee of 7.5%, and applicable taxes.
- Each partner config must be registered within 12 months of purchase and can be used for 12 months starting from the time of first registration, provided that the subscriber remains a MEF Member in good standing for that period.
- Partner config right to use allows for use of all upgrades and updates to the config a partner may provide within the 12-month period.
- Use of emulators for partner-specific configs requires an active default emulator subscription.

9. How do companies subscribe to the OIT Service?

The following describes the steps for subscribers to register for and purchase the OIT Service.

- Subscribe online via a secure dedicated page in a customer portal. Additionally, the Amartus sales team will be available to support the process and answer questions.
- Subscriber will be asked to provide details, such as contact details, as well as information required for billing, including name, address, tax ID, and authorized signatory.
- Subscribers will be presented with the Terms & Conditions of the service in a “Click to Agree” form, a legal agreement between Amartus and the subscriber company. This agreement covers all standard terms for accessing a hosted service of this nature.
- After checking the box to accept the T&Cs, subscribers will be able to select the specific offering they wish to subscribe to (see answer to previous question).
- Each subscriber purchase will be recorded.
- The invoicing and billing process will be initiated.

10. How do companies access the OIT Service as a subscriber?

Below are the steps to activate the subscription and start using the OIT Service. Subscribers will request activation of the service offerings on-line via a dedicated page within a customer portal. Once the purchase is confirmed, the subscriber will be able to activate the purchased service and the 12-month subscription period will begin (i.e., 12 months begins when the service is activated, not when it is ordered). Activation steps will be different depending on the service offering.

Access to Default Emulators (Initial)

The following are the steps for subscribers who have purchased access to the default emulators and do not already have a hosted instance:

- On the Ordered Services page of the portal, the subscriber will see all the services that they have ordered.
- Once the purchase has been confirmed by the OIT Service, the subscriber will see a button to “activate” the service.
- This will trigger a request to deploy a dedicated, hosted OIT Service instance for the subscriber.
- Once deployment is complete:
 - Instructions will be sent via e-mail to the subscriber with details for how to access and configure their instance (set password, etc.).
 - Activation of the instance will be registered with Amartus to track the period of use.
- Subscriber will be entitled to use the service.

Access to Default Emulators (Renewal)

The following are the steps for subscribers who have purchased access to the default emulators and already have a hosted instance (renewal):

- On the Ordered Services page of the portal, the subscriber will see all the services that they have ordered.
- Once the purchase has been confirmed by the OIT Service, the subscriber will see a button to “activate” the service.
- Activation of the instance will be registered with Amartus to track the period of use.
- Subscriber will be entitled to use the service.

Access to Partner-Specific Emulator Configurations

The following are the steps for subscribers who have purchased access to partner-specific emulator configurations:

- On the Ordered Services page of the portal, the subscriber will see all the services that they have ordered.
- Once the purchase has been confirmed by the OIT Service, the subscriber will see a button to “activate” the service.
- Subscriber will separately register each partner’s details and activate their right to use a config for each partner, which gives them 12 months from time of activation to use a partner’s config. Where a provider has purchased a pack of 5 or 10 partner

- configs they must activate their right to use for each of those partners within 12 months of the purchase date of the pack.
- Subscriber will be entitled to use the partner-specific configuration and any updates or upgrades to the partner configs for a period of 12 months from the date of activation, as long as they maintain their subscription to the OIT Service and remain a MEF Member in good standing.

Subscription offering durations will be tracked, and subscribers will be notified via e-mail at 90, 60, and 30 days in advance before expiry.

OIT Service Use Scenarios

11. How will providers use the OIT Service, and what are the main scenarios?

Once registration and activation are complete, a subscriber can begin using the OIT Service.

LSO Sonata Familiarization

The Buyer & Seller emulators are initially configured with the following:

- A default Buyer test suite (subset of MEF W92.1 test cases, CE Access E-Line MEF W106 Product Definition, and mock test data) for generating LSO Sonata requests
- Matching default Seller emulation scripts that provide responses.

This allows the subscriber to run emulated requests to become familiar with the workings of LSO Sonata and the emulators.

Implementation Testing / Self-Assessment

The subscriber can use the same default emulations for testing their own LSO Sonata implementation, using the Buyer emulator Postman scripts to test their Seller implementation or the Seller emulator for testing their Buyer implementation. Subscribers can run the test cases in the default test suite or develop new test cases for their specific scenarios using the emulators' tooling.

In terms of the Buyer emulator, the user can configure their specific product offerings, test data, mode of operations (sync, async), LSO Sonata releases, security settings, etc. They can then use the Buyer emulator's guided product payload and request builder wizards that are part of the Buyer design time UI. These guide the user in generating LSO Sonata request payloads needed to test their implementation. This includes support for building positive test requests (validated LSO Sonata requests) as well as negative testing (invalid LSO Sonata requests). These request payloads are then incorporated into Postman test scripts for execution.

In terms of the Seller emulator, the user can configure their specific product offerings, test data, mode of operations (sync, async), LSO Sonata releases, security settings, etc. The Seller emulator offers the ability to develop emulation scripts that are the primary means for the Seller emulator to respond to Buyer requests; these are developed using Groovy scripting language via a standard development IDE and are registered with the Seller emulator against the matching request handler.

Partner Interop Testing

It is expected that providers will have a common and consistent approach for dealing with all partners. Therefore, subscribers will develop their own default suite of Buyer test request scripts and matching Seller response emulation scripts for each of their test cases over time that can be reused for all partners.

When a partner requests the subscriber to provide an emulator configuration, the subscriber will create a partner-specific configuration by selecting the appropriate test case configurations from their default test suite and optionally will develop any additional ones they may need for that partner. The subscriber would then package up that set to share with the partner.

The partner in turn can import the test suite package into their own emulator instance for their independent testing. The packaging of the partner-specific test suite config will differ for Buyer and Seller emulators.

OIT Service Relation to MEF 3.0 LSO Sonata Certification

12. How does the OIT Service relate to MEF 3.0 LSO Sonata certification?

The OIT Service is a tool that supports the establishment and operation of standard LSO Sonata APIs between partners.

The goal of MEF 3.0 LSO Sonata certification is to provide MEF member service providers with a structured way to validate that their APIs strictly conform to the same well-defined standards implemented by their certified partner providers. Certification aims to build a community of certified providers based on the same official MEF standards.

The OIT Service and LSO Sonata certification differ in that they address different stages of the LSO Sonata adoption lifecycle, and they complement each other in that they both support the same test requirements in the [MEF 92.1 draft standard](#).

13. Do you expect companies to use the OIT Service before starting the certification process or could a company certify before entering production with a specific partner?

Some service providers may use the OIT Service prior to certification, while other providers may pursue certification before using the OIT Service and/or entering production with a partner.

A provider could use the OIT Service to test their implementation against the default configurations that ship with the service as well as partner-specific configurations. This ensures a high degree of confidence in aligning to MEF standards before embarking on certification.

On the other hand, LSO Sonata certification could be used first to validate a service provider's API implementation based on MEF standards before using the OIT Service and engaging with specific partners.

Regardless of the path, MEF's intention is to provide options to help service providers achieve their implementation and marketing goals.

14. How much work is required for certification if a company has successfully used the OIT Service to enter production?

Providers typically only implement a subset of functionalities defined by the MEF 92.1 draft standard (e.g., specific LSO Sonata features/APIs, specific sub-features, specific product offerings). This subset is determined based on what is needed to support pairwise negotiation with partners. The OIT Service aims to support significant coverage for this same subset of functionalities for pairwise interop testing. Therefore, testing carried out using the OIT Service should provide significant coverage for the same test cases a provider needs to pass to achieve certification. Additional effort should only be needed for test cases not tested using OIT, but which are supported in a provider's implementation.

OIT Service Support & Information

15. What support is provided for the OIT Service?

Subscribers will have access to Amartus OIT online support via email or a web portal (based on JIRA Service Manager & Confluence). Both e-mail and the portal can be used to log issues, and the portal is used to track status. In addition, a subscriber can look for related issues and fixes and access support documentation, videos, etc. for configuring and using the OIT Service. Maintenance windows for updates/upgrade of the service will be coordinated with the subscriber to take place at an appropriate time.

16. Who should I contact for more information?

Contact LSOOIT@mef.net for more information on the OIT Service.



LSO API Onboarding & Interop Test
Service FAQ
November 2021, V2