



MEF LSO Sonata APIs – Frequently Asked Questions

1. What is the Big Picture relevance of LSO Sonata APIs for the industry?

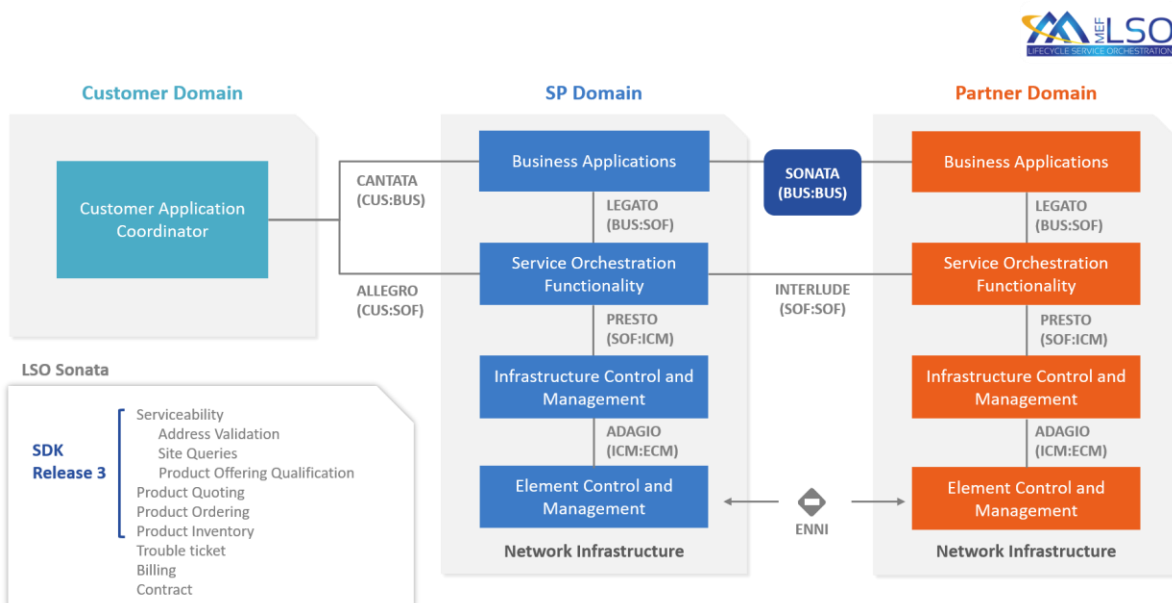
The communications industry is in the midst of a multi-year transformation to dynamic and assured services across a global ecosystem of automated networks, as envisioned in the [MEF 3.0 framework](#). With each day, consensus builds that service providers must become more cloud-like and automated to deliver more powerful networking solutions with unprecedented user- and application-directed control over network resources and service capabilities.

It will not be enough for providers to offer dynamic connectivity and virtualized services over just their own networks. Providers must transition from operating as independent islands of excellence to being integral players in a worldwide business federation of cloud-like networks that support standardized dynamic services across multiple operators. This opinion of MEF is based on direct engagement with top decision-makers and influencers employed by the biggest service providers in the world, along with many of their wholesale buy and sell partners.

To realize this vision, MEF has advanced initiatives related to a full family of standardized MEF 3.0 services – including Carrier Ethernet, SD-WAN, Optical Transport, and IP – as well as standardized [MEF 3.0 LSO \(Lifecycle Service Orchestration\) Sonata APIs](#) that are foundational to orchestrating these services across federated networks.

2. What are LSO Sonata APIs?

MEF is standardizing LSO Sonata APIs as part of a comprehensive effort to standardize multiple sets of LSO APIs enabling service automation across providers and over multiple network technology domains. LSO Sonata APIs relate to the interface reference point within the [LSO Reference Architecture](#) that supports business-to-business interactions between service providers. LSO Sonata APIs combine service-agnostic TM Forum Open APIs with MEF 3.0 service definitions. The collaboration secures a service provider’s investment in both MEF and TM Forum while delivering an accelerated time-to-market and time-to-revenue. The full suite of planned LSO Sonata APIs deals with serviceability (address validation, site queries, product offering qualification), product inventory, quoting, ordering, trouble ticketing, contracts, and billing.



3. What service provider challenges do the LSO Sonata APIs address?

Looking at the figure above, consider the case of a large enterprise customer with data centers and branch offices located around the world. This customer is looking for a service provider to provide connectivity to all their locations. No single service provider has facilities to reach all customer locations. Typically, a service provider can reach some of the locations (on-net locations) but must work with a set of partners to reach the other locations (off-net locations).

The interaction between service providers and partners to deliver services to a single customer is predominantly manual involving people, emails, negotiations, etc., resulting in long time periods and costs to set up required connectivity. Accelerating these processes through automation provides cost savings and greater business value to the end customer. It also removes much of the error potential inherent in manual processes.

With hundreds of service providers and hundreds of partners in the world, it would be prohibitively expensive to implement custom automation for each service provider – partner pair. MEF's LSO Sonata APIs provide an industry standard so that a service provider (buyer) may implement these APIs and automatically work with all partners. Similarly, a partner (seller) may implement these APIs, enabling automation with all their partner service providers.

4. What LSO Sonata APIs are available today, and what others are planned?

In June 2019, MEF announced the availability of LSO Sonata SDK Release 3 that includes a set of deliverables that enable market adoption of LSO Sonata APIs for serviceability (address validation, site queries, and product offering qualification), product inventory, quoting, and ordering. The SDK includes published and draft standards listed below covering business requirements, use cases, and attributes that serve as the basis for the associated APIs and data models. Available on the [MEF public GitHub](#), the SDK also includes Swagger data models, product payload specifications composed of MEF 3.0 services, and other artifacts that enable a developer to rapidly build out these Sonata LSO APIs within their business systems.

- [Ethernet Ordering Technical Standard: Business Requirements and Use Cases \(MEF 57.1\)](#).
- [Address, Service Site, and Product Offering Qualification Management: Requirements and Use Cases \(MEF 79 Draft Standard\)](#)
- [Quote Management: Requirements and Use Cases \(MEF 80 Draft Standard\)](#)
- [Product Inventory Management: Requirements and Use Cases \(MEF 81 Draft Standard\)](#)

MEF intends to continually enhance standards related to LSO Sonata APIs for serviceability, product inventory, quoting, and ordering while also advancing standards work related to LSO Sonata APIs for trouble ticketing, contracts, and billing.

5. Can LSO Sonata APIs be used to orchestrate all MEF 3.0 services?

While initial LSO Sonata API work relates to orchestration of MEF 3.0 Carrier Ethernet services, further advancements will support the full range of MEF 3.0 services – also including Optical Transport, IP, SD-WAN, Security-as-a-Service, etc. – without changing the basic API structure itself thanks to the polymorphic approach used in collaboration with TM Forum.

6. How would you characterize industry support for LSO Sonata APIs?

More than 50 service providers around the world – including AT&T, Colt, Orange, PCCW Global, Sparkle, Tata, Verizon, CenturyLink, and others – have voiced support for development and adoption of LSO Sonata APIs to realize time-to-revenue and profit goals. A core group is

lining up to participate in the LSO Sonata pilot certification program, leading the industry shift from manual inter-provider processes to dynamic service automation.

A number of companies that are involved in both MEF and in the ITW Global Leaders' Forum have supported LSO Sonata API development in order to advance frictionless commerce across communications providers worldwide. MEF looks forward to closer collaboration with GLF members in the months ahead to advance our common goals.

MEF's LSO Sonata press release from October 2018 lists more than 40 service and technology provider companies who have publicly supported LSO Sonata, and representatives from dozens of more companies have informed MEF of their support.

7. Has anybody implemented LSO Sonata APIs?

Yes. MEF congratulates AT&T and Colt for their pioneering efforts to implement LSO Sonata APIs in production environments as announced in June 2019. This is a major milestone for these companies, MEF, and the broader industry.

We anticipate more companies will begin production implementations of LSO Sonata APIs in 2H 2019 and 2020.

8. What is MEF 3.0 LSO Sonata certification, and why is it important?

MEF 3.0 LSO Sonata certification enables buyers and sellers of wholesale MEF 3.0 services to validate that the full suite of their APIs used for inter-provider business transactions comply with MEF standards. The certification program will help companies develop, test, and certify all LSO Sonata APIs as they are released. This new certification builds upon the widely recognized MEF certification program that has delivered hundreds of certifications to Carrier Ethernet service and technology providers and fueled creation of today's \$80+ billion global CE market.

9. What is the process for MEF 3.0 LSO Sonata certification?

The MEF 3.0 LSO Sonata certification program – conducted in concert with MEF testing partner Iometrix – starts with a pilot to generate industry momentum worldwide. The pilot involves three major steps associated with published MEF 3.0 CE and LSO Sonata standards:

1. **Certify MEF 3.0 CE Access E-Line Service.** Service providers validate compliance with MEF 3.0 CE Access E-Line service standards as described in the [MEF 3.0 CE Certification Blueprint](#).
2. **Develop MEF 3.0 LSO Sonata Ordering API.** The API test platform helps companies optimize development of the LSO Sonata Ordering API based on [Ethernet Ordering Technical Standard: Business Requirements and Use Cases \(MEF 57.1\)](#) and LSO Sonata SDK Release 3. The platform provides a structure within which API developers can develop code covering various use cases in an optimal manner and pre-validate their code at every step of development.
3. **Certify MEF 3.0 LSO Sonata Ordering API.** The final stage of certification validates conformity of the LSO Sonata Ordering API to the [MEF LSO Sonata Certification Test Requirements \(MEF 92\) working draft](#) on the MEF wiki, which together with the MEF 3.0 CE Access E-Line service certification provides a fully compliant orchestrated service ready to interact with partners across the globe.

For more information on MEF 3.0 LSO Sonata certification, contact Alysia Bennett, Alysia@mef.net.

MEF member companies interested in pilot certification should register no later than 15 September 2019.

10. Has anyone signed up for MEF 3.0 LSO Sonata certification pilot yet?

Multiple companies already have committed to being involved in the MEF 3.0 LSO Sonata certification pilot, and we encourage others to join as well.

11. How can I learn more about LSO Sonata APIs in action – like Proof of Concept demonstrations?

Many MEF member service provider and technology companies showcased LSO Sonata APIs in Proof of Concept demonstrations at MEF18 in October 2018. We expect to see even more sophisticated demonstrations involving LSO Sonata and other LSO APIs in the upcoming MEF 3.0 PoC Showcase at [MEF19](#), held 18-22 November 2019 at the JW Marriott LA LIVE in Los Angeles, California.

12. What is the relationship between the MEF LSO Sonata APIs and the TM Forum Open API Framework?

As noted above, LSO Sonata APIs combine service-agnostic TM Forum Open APIs with MEF 3.0 service definitions. The collaboration effectively secures a service provider's investment in both MEF and TM Forum while delivering an accelerated time-to-market and time-to-revenue.

13. How can I contribute to LSO Sonata API work?

Contribution to the LSO Sonata work is welcomed. Participation is restricted to active MEF member companies and their staff. Send an inquiry to LSO-Sonata@mef.net for more details.