LSO (Lifecycle Service Orchestration) is the set of MEF-defined specifications enabling standardized service orchestration based on standardized lifecycles of end-to-end connectivity services across one or more network service domains. LSO, in combination with SDN and NFV, is designed to enable MEF 3.0.

LSO is an agile approach to streamlining and automating the service lifecycle in a sustainable fashion for coordinated management and control across all network domains responsible for delivering an end-to-end Connectivity Service (e.g., Carrier Ethernet, IP VPN, MPLS, etc.). MEF 55 describes a Reference Architecture and Framework for orchestrating the service lifecycle. It includes a set of functional management entities that enable cooperative service lifecycle orchestration for MEF 3.0 Connectivity Services. The framework also provides high level functional requirements and outlines high level operational threads describing orchestrated Connectivity Service behavior as well as interactions among management and control entities. The Management Interface Reference Points that characterize interactions between LSO functional management entities are identified in the reference architecture. These Management Interface Reference Points are described such that they can be realized by Interface Profiles and further by APIs, which can be used to enable automated and orchestrated Connectivity Services.

**LSO Capabilities**

The following are the principal capabilities of Lifecycle Service Orchestration:

- **LSO Analytics**
- **LSO Assurance**
- **LSO Control**
- **LSO Fulfillment**
- **LSO Performance**
- **LSO Policy**
- **LSO Security**
- **LSO Usage**

**Analytics**

Analytics capabilities in LSO support the fusion and analysis of information among management and control functionality across management domains in order to assemble a relevant and complete operational picture of the end to end services, service components, and the supporting network infrastructure, both physical and virtual.

More...

**Assurance**

Assurance, in the context of LSO (Lifecycle Service Orchestration), refers to the set of capabilities that provide service providers and subscribers with trouble-related information so that they may track service impact and status of trouble resolution.

More...

**Control**

Control, in the context of LSO (Lifecycle Service Orchestration), allows service subscribers to actively make changes to their service(s) within the constraints specified by the Service Level Agreement in place for that service. In order for the subscriber to understand the controls they have available at their fingertips, LSO provides for the discovery of subscriber specific service control capabilities.

More...

**Fulfillment**

Fulfillment, in the context of LSO (Lifecycle Service Orchestration), refers to the set of service provider or operator activities and assets used to fulfill an order for a service provider from a customer.

More...

**Performance**

Performance, in the context of LSO (Lifecycle Service Orchestration), is the collection of service performance information across all providers supporting service components and gathering customer provided quality feedback. Performance information is used by both the service provider and the subscriber to assess service quality through comparison of the collected performance metrics with the service quality objectives described in the Service Level Specification (SLS).

More...
Policy

LSO policy capabilities provide rules-based coordination and automation of management processes across administrative domains supporting effective configuration, assurance, and control of services and their supporting resources.

More...

Security

LSO Security provides for the safeguarding of management and control mechanisms, access to the network, and service-related traffic that flows across the network.

More...

Usage

Usage capabilities in LSO enable operators to gather and provide usage measurements, traffic measurements, and service related usage events (e.g., changes in service bandwidth, etc.) describing the usage of service components and associated resources.

More...

Specifications

The first LSO specification is the LSO Reference Architecture.

Example(s)

Related and Further Reading

MEF LSO |
---

- LSO Sonata SDK
- LSO SDKs
- MEF 62 - Managed Access E-Line
- MEF 78 - MEF Core Model (MCM)
- MEF 59 - Network Resources Model - Connectivity (Carrier Ethernet)
- MEF 80 - LSO Product Quotation Requirements and Use Cases
- MEF 74 - Commercial Affecting Attributes
- MEF 55 - LSO Reference Architecture
- MEF 82 - MEF Services Common Model
- MEF 61 - IP Service Attributes
- LSO API Service
- LSO Presto SDK
- LSO (Lifecycle Service Orchestration)
- MEF 56 - Interface Profile Specification
- MEF 57 - Business Requirements and Use Cases
- MEF 58 - YANG
<table>
<thead>
<tr>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSO</td>
</tr>
</tbody>
</table>