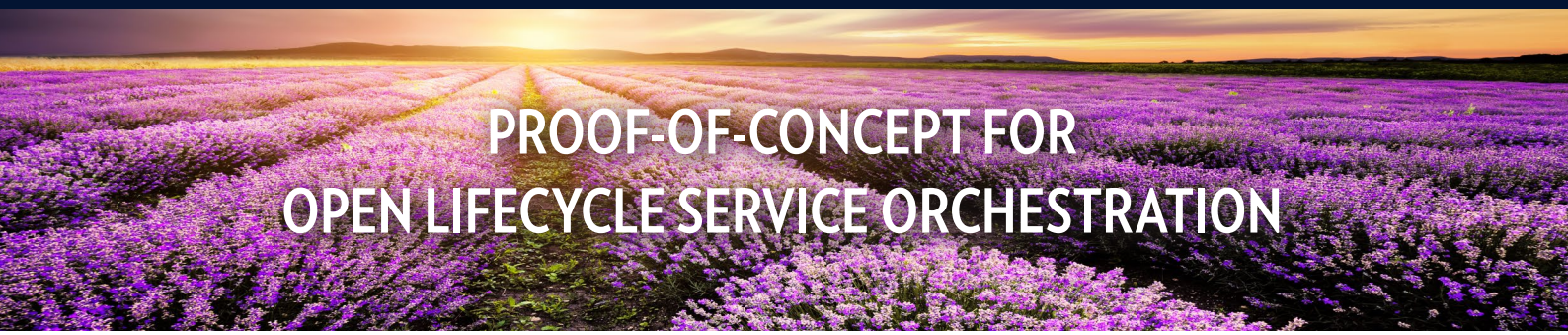
ECI THE ELASTIC NETWORK

AUTOMATED ORCHESTRATION OF NETWORK SERVICES ACROSS MULTIPLE OPERATOR DOMAINS



PROOF-OF-CONCEPT FOR OPEN LIFECYCLE SERVICE ORCHESTRATION

Businesses value connectivity services that feature guaranteed throughput and latency, especially when accessing cloud-based applications. These have a performance advantage over broadband services that operate only on a best-effort basis. But businesses that operate across multiple geographies and countries are frustrated by the many weeks spent by Service Providers (SPs) to set up services over multiple domains.

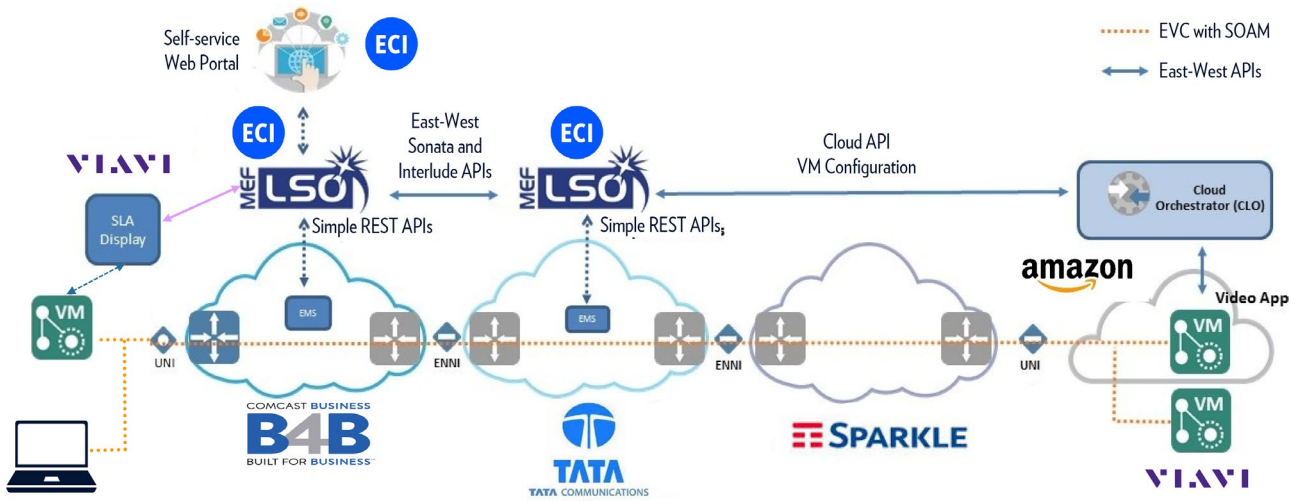
This POC demonstrates a solution to this challenge. It shows how an international Carrier Ethernet E-line service from Baltimore to Frankfurt spanning three independent carriers, can be turned up in minutes, and then transport a cloud-sourced video stream with verified performance. The POC performs this by implementing the emerging LSO standards for orchestrating end-to-end services across multiple network service provider domains. It shows that global connectivity with guaranteed SLAs can be setup dynamically, to access cloud-based services or other applications, and align with end-user expectations for on-demand agility.

Trans-Atlantic BoD
spanning three carriers

Bursting to cloud
video-on-demand service

Dynamic
SLA monitoring and QoS assurance

Delivered on
LSO innovation platform



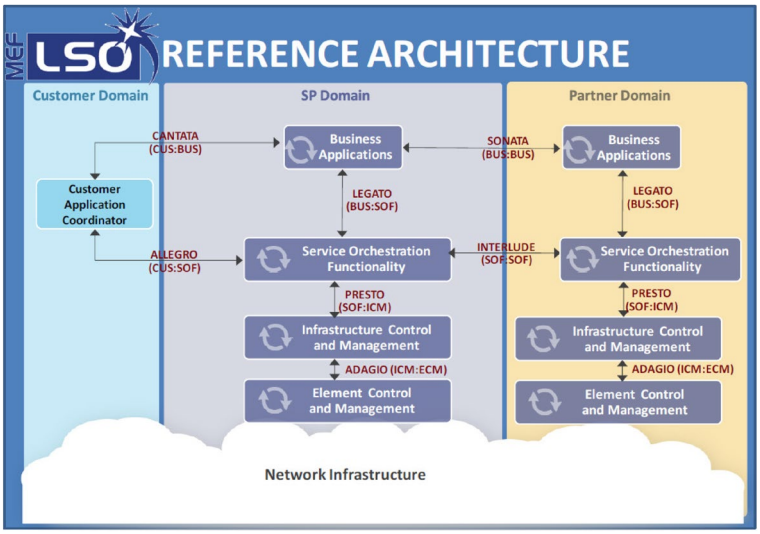
THE PROBLEM

Service Providers invest in network infrastructure to provide enterprises with connectivity services like Carrier Ethernet (CE) that guarantee throughput rates and maximum latency. These provide a performance competitive advantage over broadband services operating on a best-effort basis.

However, SPs squander this advantage when enterprises request services spanning different SP domains – which enterprises operating over multiple geographies often want to do – because it can take weeks to set this up, using burdensome manual processes. This problem is compounded by expectations of instant gratification created by the cloud model, whereby businesses can order cloud-based services and have them delivered almost immediately.

MEF LSO SOLUTION

MEF, the organization that standardized CE services, is addressing this problem by promoting LSO (Lifecycle Service Orchestration). These are a set of specifications, enabling standardized orchestration of end-to-end services across one or more network service domains. In a larger context, LSO, in combination with SDN and NFV, is designed to enable the Third Network vision. This vision combines on-demand agility and ubiquity of the Internet with the performance and security assurances of CE services.



WHAT THE POC DEMONSTRATED

The POC demonstrated that guaranteed SLA bandwidth services can be set up dynamically and automatically across multiple Service Provider domains, extending their value over best-effort broadband services. The key points of the POC were:

- From a customer portal located in Baltimore, access was requested to a video server located in a data center in Frankfurt. The portal was then used to investigate carrier pricing options on connectivity and on cloud providers, to access the server. A route was selected involving three carriers, with Amazon as the cloud service provider.
- An end-to-end 10Mb/s E-Line service was turned up in real time. Originating with Comcast in Baltimore using an MPLS service, this was handed off to Tata Communications for trans-Atlantic transport on a PBB link, with a final handoff to Telecom Italia in Italy for transport to Frankfurt and connection to AWS over an IP VPN.
- The connection performance was verified using a Viavi monitoring solution, employing virtualized applications (VNFs) at each end.
- The portal interface and orchestration of the above was performed using applications and business logic written by ECI on top of an LSO innovation platform. These: ❶ Requested the cloud service, checked several options, and let the user decide based on price. ❷ Emulated the LSO Presto interface to configure each SP's NMS/controller. ❸ Emulated the LSO Interlude and Sonata interfaces for inter-SP setup of the end-to-end connection. ❹ Activated the SLA testing in the Viavi controllers. ❺ Activated the cloud video streaming service.

Contact us to discover how ECI facilitates global Lifecycle Service Orchestration

ABOUT ECI

ECI is a global provider of ELASTIC network solutions to CSPs, utilities as well as data center operators. Along with its long-standing, industry-proven packet-optical transport, ECI offers a variety of SDN/NFV applications, end-to-end network management, a comprehensive cyber security solution, and a range of professional services. ECI's ELASTIC solutions ensure open, future-proof, and secure communications. With ECI, customers have the luxury of choosing a network that can be tailor-made to their needs today – while being flexible enough to evolve with the changing needs of tomorrow. For more information, visit us at www.ecitele.com

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