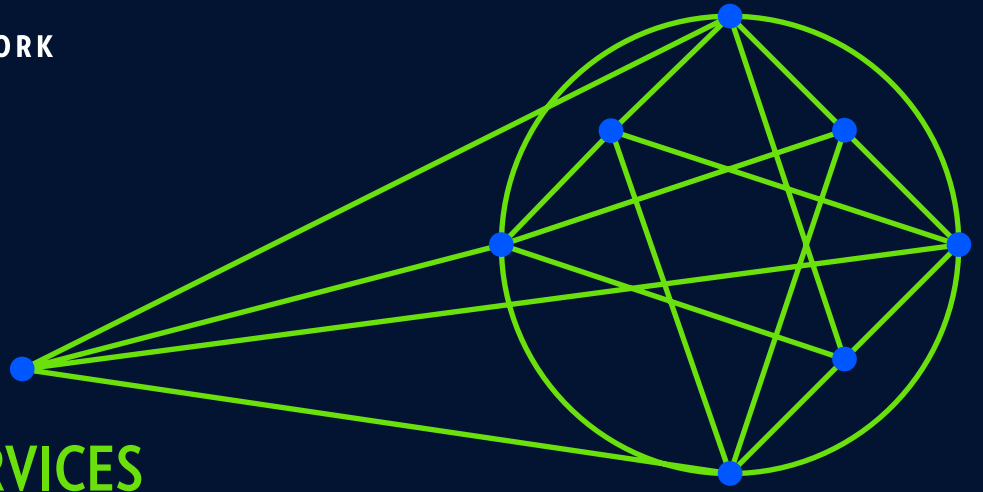


ElastiNET™

FOR BUSINESS SERVICES



ELASTIC REVENUE-GENERATING OFFERINGS

Today's business customers have higher expectations than ever before. More bandwidth. More control. More flexibility. More security. Business customer demands range from simple low-cost Layer 2 VPN services, to more complex Layer 3 services, to high-bandwidth point-to-point optical services. They want their services made available quickly, with reliable connectivity, and at a lower cost.

Service Providers (SPs) need solutions that are easily deployed and managed, and can meet business customer needs as they evolve and change. In addition, SPs are looking for new revenue opportunities that can improve profitability and increase the "stickiness" of their business customers. Software features and management control have become a critical part of the solution along with adaptable hardware.

ECI's solution is the ideal revenue-generating platform for business services. These next-generation solutions are elastic and fully adaptable to the changing needs of today's networks while supporting the SDN revolution.



E2E SOLUTIONS
with products for every business
service need



EASE OF OPERATION
with elastic hardware and
advanced software



VALUE-ADDED SERVICES
with innovative features and
capabilities

Until recently, business services have been relatively-static Layer 0 (optical) to Layer 3 IP connections between two or more business sites. These sites are local (metro) or long distance (metro-core/national). The connections have been simple point-to-point or more complex multipoint-to-multipoint, depending on the business network requirements. Business networks would connect branch offices to head office servers or give remote offices access to shared business information. Today's business services must support many more customer services than ever before, each with unique requirements. This makes SPs seek more flexible and cost-effective solutions to meet increased customer demands.

Drivers for a New Class of Business Services



BUSINESS CUSTOMERS: Internal information transfer applications (like ERP and CRM) are still a crucial requirement for business customers, but now cloud-based services have become critical as well. Also, services traditionally associated with data centers, such as database backup, restoration, and synchronization are now required by many business customers. Video, either as a consumer or a producer, is now occupying a larger portion of business services. Security has become a universal concern and business customers expect much more in this area from their service providers. The proliferation of all these new services result in much higher and irregular bandwidth requirements. To meet these needs, customers want services ranging from Layer 0 (optical, OTN, TDM) to Layer 2 (Carrier Ethernet, MPLS) to Layer 3 (IP), depending on their level of network sophistication and application needs.

SERVICE PROVIDERS: It is no longer sufficient to deploy an E1/T1 access device or Ethernet NID at a customer location and monitor it for performance. Customers want more control, more visibility, stricter service level agreements (SLAs), more security, and more flexibility from their service products. SPs are struggling vigorously to keep their heads above water. With reduced staff and more sophisticated networks, service providers need a better means to cost-effectively deploy, monitor, and manage the networks that their business customers expect. They need elastic hardware and software - and powerful, intuitive, and intelligent management tools. These solutions must be cost-effective and ensure future compatibility with SDN innovation.

PREMIUM SERVICES: Beyond connectivity, customers want premium features that offer additional revenue-generating opportunities for service providers. Comprehensive security, hosted applications, and customer portals are among the add-on solutions that service providers can offer their business customers.

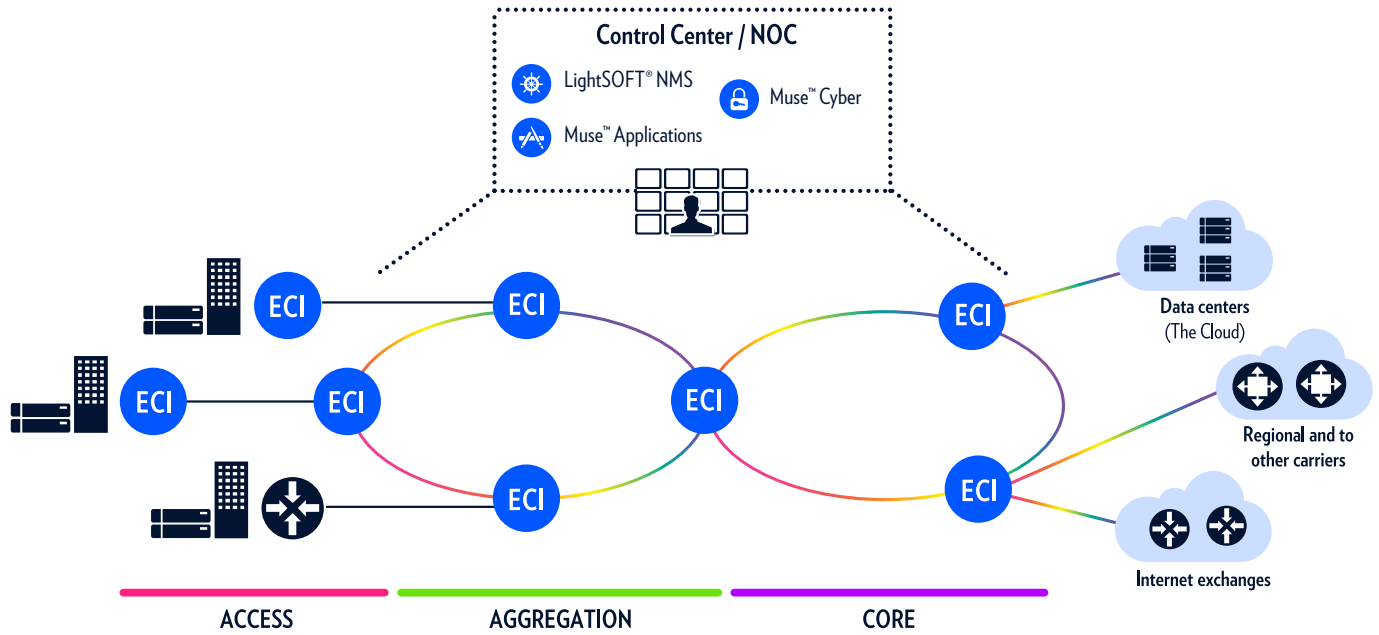
How can both traditional and innovative new business services be deployed while keeping the TCO down to a minimum?

ElastiNET - A NEW CLASS OF BUSINESS SERVICES

ElastiNET is ECI's overall solution for service providers. ElastiNET offers business service solutions, which are elastic enough to handle the dynamic nature of business environments, while enabling SPs to leverage their infrastructure with a competitive edge.

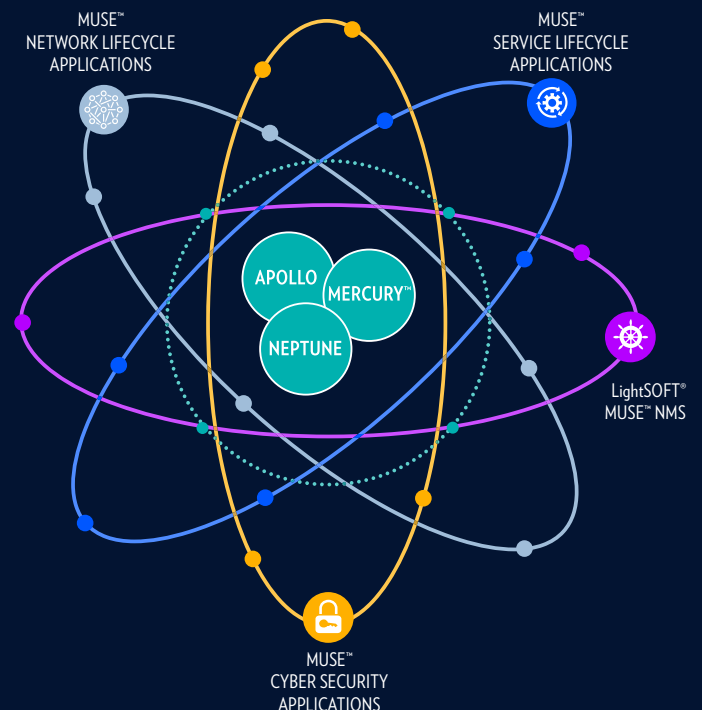
ElastiNET advantages for Business Services include:

- Complete end-to-end solution
- Single management platform across all network layers
- Converged, multilayer hardware
- High-quality service assurance
- Fast deployment of value-added options via virtualization
- Provisioning automation and responsive service management
- Universal CPE NFV platform
- Integrated network-wide security options
- Smart network visibility anticipates network faults
- Comprehensive performance monitoring
- Carrier-class reliability and resiliency
- MEF CE2.0 certified
- Open and SDN-ready
- Expandable and future proof
- Simple to own and operate



Elastic Services Platform

ECI's Elastic Services Platform is a set of interworking hardware and software solutions. Core networking hardware platforms are surrounded and supported by ECI's Muse™ software suite to provide a complete business services solution.





Neptune ECI's NPT Family

ECI's Neptune Packet-Optical Transport System (POTS) platform combines carrier-grade performance and availability with the efficiency of packet networks.

Neptune is a family of carrier-class, MPLS-based, CE2.0 certified, multi-service packet transport platforms, offering best-in-class packet transport solutions for access, metro, and core networks.

Equipped with the industry's broadest mix of Ethernet and TDM interfaces, Neptune offers cost-optimized, multi-service packet and TDM transport for business services. In the metro, the multi-function capabilities of Neptune support transport of both packet- and TDM-based services over a converged packet infrastructure. Layer 2 business services such as E-Line, E-LAN, and MPLS-based Layer 2 VPNs can be efficiently combined with Layer 3 VPN business services, as well as E1/T1 and other TDM-based services, on the same platforms.

Key Neptune benefits for service providers offering business services include:

- Full MEF CE2.0 certification
- MPLS-based transport portfolio, which ensures deterministic performance, resiliency, and E2E visibility
- Elastic MPLS (IP/MPLS and MPLS-TP) for seamless interworking
- Ethernet interfaces from 1GbE to 100GbE
- TDM interfaces, including T1/E1 and more
- Layer 2 and Layer 3 VPNs, including support for Virtual Routing Functionality (VRF)
- Business-grade QoS, resiliency, OAM, and synchronization
- Flexible and scalable architecture to meet future needs on a pay-as-you-grow platform
- Platform sizes supporting customer premises, aggregation, and metro core
- Unrivaled multi-service support for Packet, WDM/OTN, and TDM services
- High availability (sub-50ms), low delay / jitter / packet loss

- Offering SLA to customers, multi-service network, service assurance
- E2E control, visibility, and management
- Future proof.



Apollo ECI's OPT Family

ECI's Apollo optical transport platform provides state-of-the-art transparent and flexible DWDM transport with integrated packet services.

Benefits of using Apollo for business services include:

- Ultra-high-density hardware platforms
- Comprehensive set of service interfaces, including Ethernet, Fibre Channel, and TDM
- OTN switching for transparent and efficient combining of multiple business services
- Integrated Layer 2 transport for a single platform solution
- Multiple automatic protection switching and dynamic (shared resource) restoration options
- Blazing fast connectivity up to 400Gbps today, with demonstrated 1Tbps capability
- Optical layer encryption for added security on high-value business services



Mercury™ ECI's NFV PRODUCTS

ECI's Mercury NFV platform and universal CPE (uCPE) provide best-of-breed service agility, ideal for the requirements of business services.

Mercury NFV platforms ensure that your network is always alert to respond quickly to new customer service opportunities. Available as a plug-in for Neptune or as a standalone device operating as a uCPE, Mercury runs a rich library of ECI and third-party virtualized network functions and comes with full Management and Orchestration (MANO) support. With Mercury, you are no longer dependent on diverse dedicated appliances.

Mercury uCPE streamlines the deployment of multiple CPE networking functions in a single appliance, directly reducing entry costs.

With Mercury uCPE, network functions can be combined flexibly in innovative ways to create unique value-added service mixes and new revenue streams.

Key benefits of the Mercury platform for business services include:

- Greatly reduced time-to-market for value added services
- Freedom to customize solutions for specific customer needs
- Ability to offer new service combination types
- Ability to combine best-of-breed solutions via virtualization
- Improved and integrated network and service security options
- Content caching capabilities intelligently reduce network congestion at the edge
- Reduced or eliminated truck rolls
- Significantly lower equipment costs.



ECI's comprehensive software suite for service, network, security, and element management.

The Muse suite is ECI's holistic software offering, leveraging the best of industry-leading management systems and SDN/NFV applications. Based on a carrier-grade platform and in conjunction with a library of homegrown and 3rd party applications, Muse ensures true vendor-agnostic, real-time control of the network. Muse provides a variety of service and network management applications, addressing the complete operations lifecycle. These capabilities make Muse ideal for supporting flexible and powerful business solutions.

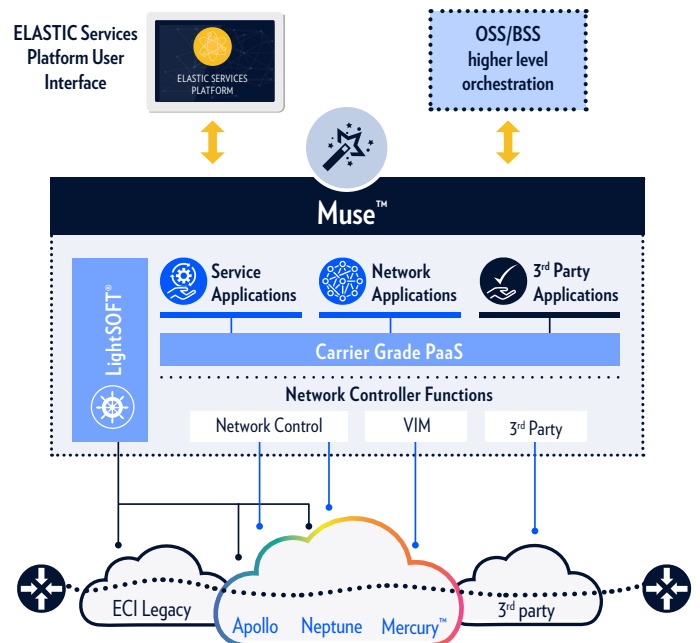
LightSOFT®: ECI's LightSOFT network management system (NMS) features a multi-dimensional, multi-layered approach to managing converged networks. Easy-to-learn and easy-to-use, it delivers full management control of all packet, optical, OTN transport, and service layers at the click

of a mouse, allowing business services to be provisioned and maintained easily and intelligently.

Service Manager: A comprehensive set of SDN-enabled applications designed to enhance the deployment and management of services over their complete lifecycle. Service Manager applications make building, editing, moving, scheduling, and retiring business services simple, automated, and intelligent.

Network Manager: A suite of SDN-enabled applications focused on improving the operations and ongoing management of complete networks. With Network Manager applications, business service network optimization, fault analysis, and automated maintenance are easy to develop and deploy.

Security Manager: Based on a combination of ECI's network security expertise and best-of-breed third party solutions, ECI's cyber security suite provides holistic protection for the ELASTIC network. As security becomes an increasingly important part of business services, ECI has a solution to meet any need.



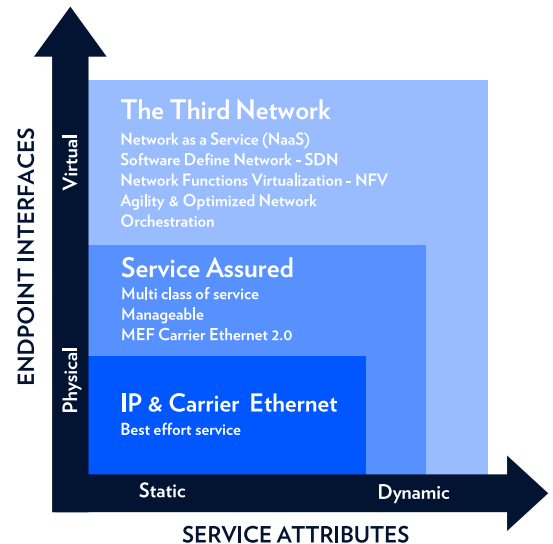
BUSINESS SERVICES



SERVICE TRANSITION





Business services are transitioning from simple static connectivity to more advanced, flexible services. Solutions deployed today must be able to migrate to the service requirements of the future in a few ways:

- Originally, business services were static, based on physical connections. These were usually point-to-point IP, optical, or Ethernet services providing best-effort connectivity.
- More recently, customers have required service assurance with verifiable guarantees of single and multilevel Quality of Service (QoS), depending on the applications served. MEF CE2.0 (NG Carrier Ethernet) was developed particularly for such rigorous requirements. These types of services are now the standard operator offering.
- The MEF has defined *The Third Network* to describe the next evolution of business services, where endpoints can be virtualized, SDN and NFV are critical technologies, and customer services are more agile and optimized for the applications offered. These technologies are emerging, and the infrastructure deployed today must be engineered to support The Third Network evolution.



SERVICE TYPES

The most common business services fall into three distinct categories: connection services, access services, and private network services. These categories are served by connections operating at Layer 0 (optical), Layer 2 (Ethernet/MPLS), or Layer 3 (IP) depending on the service requirements. In addition, value added services such as security and network optimization can be added to any business service type.

CATEGORY	DESCRIPTION	SERVICE EXAMPLE
 Connection Services	Allow a business to communicate with one or more locations.	VoIP, Video, Conferencing, IM, Leased Lines LAN Extension
 Access Services	Allow a business to connect to a remote application or network.	High Speed Internet, Cloud, Storage, IPbroadcast, Webinars
 Private Network Services	An extension of a customer network in the form of VPN or VLANs.	L2VPN, L3VPN
 Value-Added Services	Additional revenue-generating features added to any type of business service.	Security, Firewall, De-Duplication, DDoS Protection, Virtual Routing, and more

LAYER 2 BUSINESS SERVICES

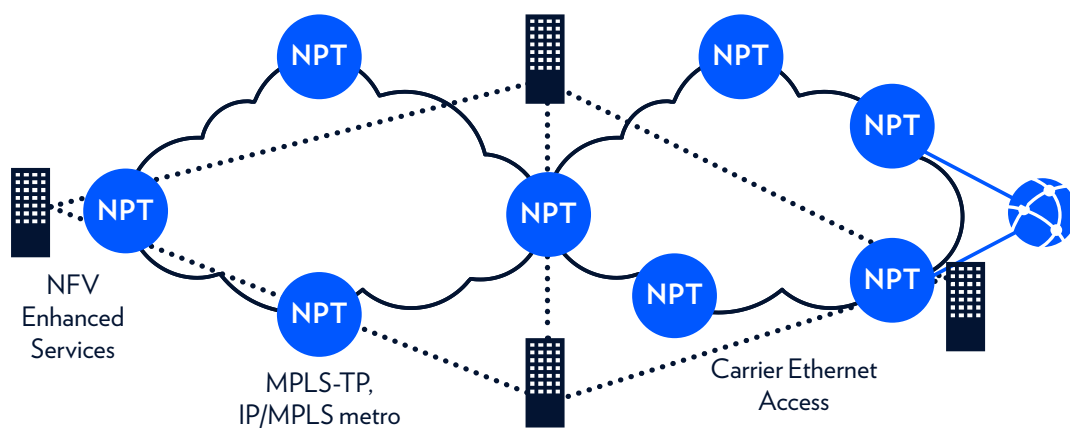
Layer 2 business services are currently the most popular service types. Layer 2 services are typically based on Carrier Ethernet or MPLS technologies and can be used for simple connectivity or private connections. Popular Layer 2 business service types include E-LAN, E-LINE, E-Tree, E-Access, and MPLS-based Layer 2 services.

ECI's Neptune product line is designed to support the needs of Layer 2 business services with a comprehensive set of Carrier Ethernet and MPLS features, a suite of interfaces for any client technology, and a range of hardware supporting the end-to-end networks from access to the metro core.

ECI's Mercury NFV platform can enable value-added capabilities, such as security features for premium service offerings. The Mercury uCPE is particularly well suited to Layer 2 services, with the ability to act as a CPE, local switch, firewall, and other value-added appliances simultaneously.

Muse™ management options make deployments and management of Layer 2 business services simple and cost-effective.

Benefits of a Layer 2 service	ECI Layer 2 solution benefits	
<ul style="list-style-type: none"> Simple and easy to implement Network mirrors a customer LAN environment Customers control their own routing domain 	<ul style="list-style-type: none"> End to-end solution CE2.0 certified Integrated TDM capabilities Comprehensive management Expandable and future proof Value-added capabilities 	<ul style="list-style-type: none"> Easy to use Security solutions Carrier-class equipment Low cost and high density Detailed network visibility



LAYER 3 BUSINESS SERVICES

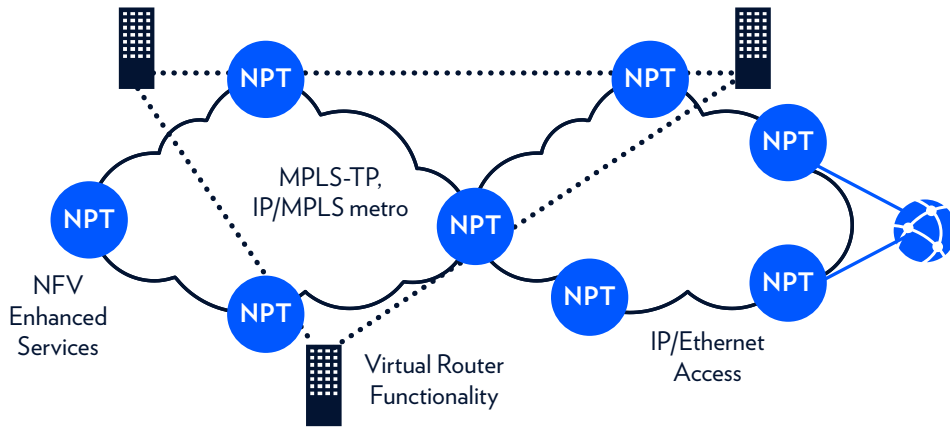
Layer 3 business services are gaining in popularity, especially among more sophisticated customers with more complex interconnection requirements. In a Layer 3 service, the carrier manages routing tables and the customer network only needs to know the address of the CPE device provided by the carrier.

ECI's Neptune product line has a feature set that is optimized for providing Layer 3 services. Without requiring an expensive full-blown router, a Neptune element provides a set of IP and IP/MPLS Layer 3 functionality designed specifically for Layer 3 business services, including VRF. This allows multiple services to be supported from one device.

As with Layer 3 services, ECI's Mercury NFV platform can enable value-added capabilities, such as security features for premium service offerings. The Mercury uCPE can have router functionality enabled, along with the features available for Layer 2 services.

Muse management options make deployment and management simple and cost-effective. In addition, carriers considering transition to an SDN architecture may find gradual transition to SDN particularly attractive.

Benefits of a Layer 3 service	ECI Layer 3 solution benefits	
<ul style="list-style-type: none"> Carrier manages routing tables Mirrors the actual services offered More scalable than Layer 2 services 	<ul style="list-style-type: none"> End to-end solution Virtual routing capability Comprehensive management Expandable and future proof Virtual CPE/router functionality Easy to use 	<ul style="list-style-type: none"> Integrated TDM capabilities Security solutions Carrier-class equipment Low cost and high density Detailed network visibility

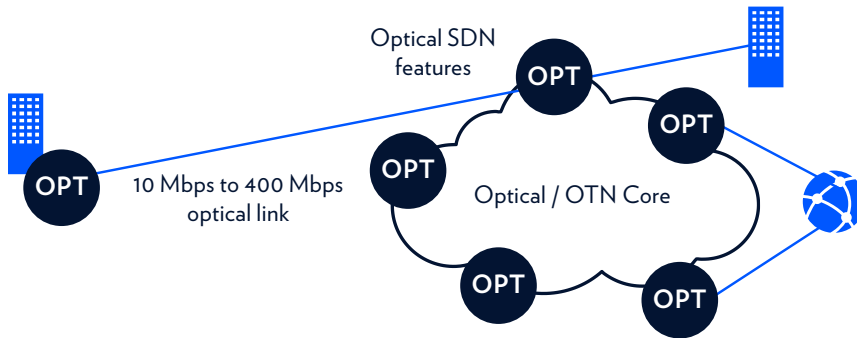


LAYER 0 BUSINESS SERVICES

Layer 0 business services are used for high-bandwidth connectivity between locations, where the customer controls all aspects of the network. These are generally higher-revenue services requested by larger companies with their own networking infrastructure.

ECI's Apollo product line is ideal for Layer 0 optical service. Apollo supports flexible optics options to reduce network complexity, along with a programmable optical layer. This enables prompt service establishment response times and faster time-to-revenue. Additionally, Apollo has unique optical-layer intelligent features to allow enhanced network visibility. For additional security, Apollo offers encryption at the optical layer with low-latency, full payload encryption.

The benefits of Muse management tools apply equally to Layer 0 business services and to Layer 2 and Layer 3 services. LightINSIGHT™ in particular offers unique insights into an optical layer deployed for Layer 0 business services.



Benefits of a Layer 0 service

- Customer controls all aspects of the network
- Very high bandwidth
- Very low latency

ECI Layer 0 solution benefits

- End to-end solution
- Programmable optical layer
- Integrated multilayer capability
- Optical encryption
- Comprehensive management
- Expandable/future proof
- Easy to use
- Detailed network visibility
- Carrier-class equipment
- Low cost and high density

CONCLUSIONS

Enterprise and SMB customers seek increasingly sophisticated business services from carriers. As business service connections move from simple connectivity to advanced, flexible, secure, and dynamic connections, service providers must adjust accordingly. Whether as a Layer 0, Layer 2, or Layer 3 business service, carrier-class performance is necessary and the bar is constantly being raised.

With increased pressure to generate more revenue while reducing operation and capital costs, service providers need network infrastructure solutions that are easy to use, multi-functional, intelligent, and powerful. A comprehensive solution for the entire span of the network must be able to meet the demands of today's business customers as well as those that will emerge as more business moves to the cloud, to remote locations, and toward an increasingly global scale.

ECI's ElastiNET solution is the ideal revenue-generating platform for business services. The core of ECI's business services offering is based on the Neptune packet-optical platform, with notable support from the Mercury uCPE platform and Apollo optical series. Simple and powerful management is available with LightSOFT network management and ECI's innovative Muse SDN applications.

CUSTOMER SERVICE ECI SOLUTION

END-TO-END SOLUTIONS

Layer 3 VPNs	Complete: Neptune E2E solution from access to core Elastic: Multiple customer management with Virtual Router Functionality (VRF) at the edge
Layer 2 VPNs: E-LAN, E-LINE, MPLS	Complete: Neptune E2E solution from access to core Powerful: CE2.0 certified platforms with full Layer 2 capabilities
Layer 1 Transparent Transport	Complete: Apollo E2E solution from access to core Multi-rate: from below 1Gbps to 400Gbps with efficient sub-rate packing

OPERATIONAL EFFICIENCY

E2E Visibility and Control	LightSOFT® - ECI's industry-leading unified, multi-layer GUI-based NMS LightINSIGHT™ - Consolidated network intelligence view for inventory, SLA, network status and security
Rapid Service Deployment	Mercury™ uCPE NFV capabilities allow multiple appliance functionality to be deployed on demand
In-field Expandability	Modular architecture from access to core Upgradeable packet and TDM switching fabrics Software-defined client rates In-service expansion units
Guaranteed Performance	SLA attributes support (bandwidth, latency, jitter) Zero performance impact from new service activation Multi-layer uninterrupted service assurance: <ul style="list-style-type: none">• Equipment – Fully redundant• Network – Extensive set of protection and resiliency schemes• Management – Automatic Remote Data Replication (RDR)

VALUE-ADDED SERVICES

Secure Services	Muse™ cyber security suite - network-wide, comprehensive solutions for service provider networks
Bandwidth on Demand (BWoD)	Muse™ Applications – enable BWoD and scheduled service initiation on existing and future SDN networks
Innovative Service Combinations	Mercury NFV platform allows additional revenue-generating features to be in innovative combinations, including best-of-breed component selection

Contact us to find out how our ELASTIC networks can help you grow

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