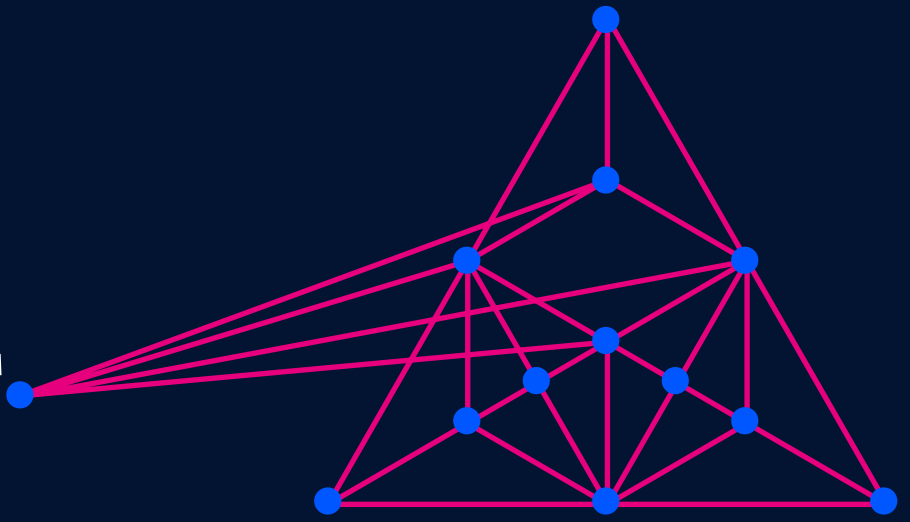




THE ELASTIC NETWORK

ElastiCLOUD™ FOR DATA CENTERS



SECURED TRANSPARENT CONNECTIVITY

Cloud networking has gone mainstream. Driven by IT outsourcing, increased mobility and the need for access “at any time, from anywhere”, hosted services applications are exploding from the confines of individual data centers to a virtualized network of data centers. No longer is the cloud a possibility; it is a reality.

As data exceeds the boundaries of space and time, cloud service providers and data center operators are vying to develop data center networks that provide their end customers with fast response times at the most economical cost. No small challenge, considering the exponential growth and constantly increasing demands of the market.

ElastiCLOUD™ is ECI’s holistic solution for cloud networking. Whether you are looking for a data center interconnect backbone, a network to access private or public cloud services, or SAN connectivity, ElastiCLOUD is the solution for you. **ElastiCLOUD offers:**

Guaranteed Performance

with top speeds and feeds, E2E management, and SDN applications

Secured Services

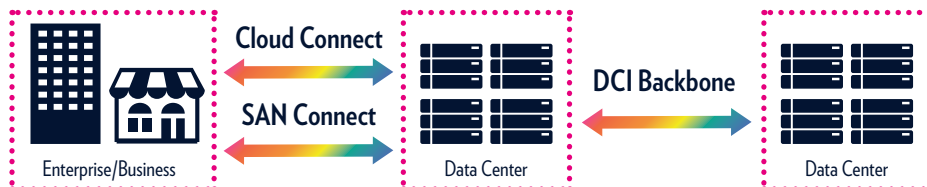
with our multi-layer, comprehensive security suite

Minimized OPEX

with lowest \$/bit, super-low power consumption and extremely high density

Multiple Cloud Connectivity Applications

An efficient cloud connectivity solution must serve multiple applications.

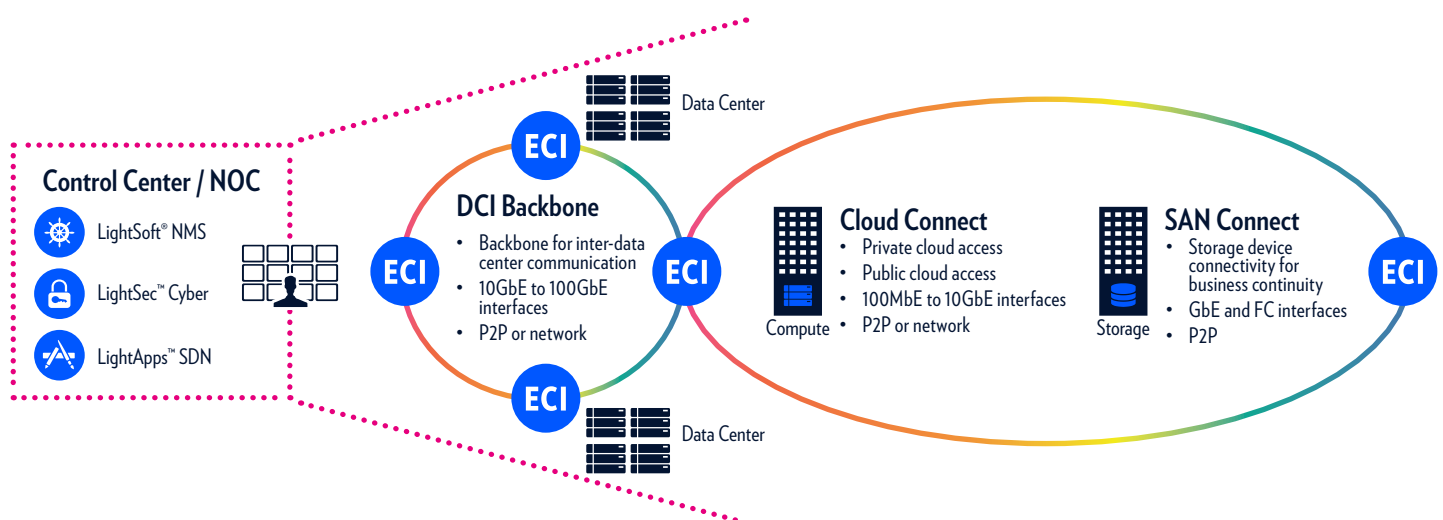


APPLICATION	DESCRIPTION	NEEDS
Cloud Connect	<p>Enterprise access to cloud-hosted applications, including:</p> <ul style="list-style-type: none"> • Private cloud access (e.g. from HQ to remote VMs) • Public cloud access (e.g. from business to Amazon Web Services) • Hybrid cloud access (mixture of above) 	<ul style="list-style-type: none"> • User Transparency (high speed with low latency) • Scalability as communication needs grow • High availability • Typically 100MbE to 10GbE interfaces (which may span several DCs) • P2P or network implementations
SAN Connect	<p>Backup and synchronization between distributed storage systems for business continuity</p>	<ul style="list-style-type: none"> • All FC and GbE interfaces • High bandwidth with low latency for active synchronization • High availability with automatic switchover • High security for sensitive data • P2P implementations
DCI Backbone	<p>Service distribution between data centers, as if within a data center, and other inter-data center communication functions</p>	<ul style="list-style-type: none"> • Low cost bandwidth • Scalability – ease of growth based on demand • High availability • 10GbE to 100GbE interfaces • P2P or network

The question is then: How to serve any one or combination of these cloud connectivity applications most efficiently?

ECI's ElastiCLOUD Solution - Main Benefits

ElastiCLOUD is ECI's holistic solution for cloud networking. ElastiCLOUD utilizes ECI's SmartLight™ portfolio's scalable, modular architecture and flexible support of 'any technology mix' to address the needs of all cloud connectivity applications with high performance, flexibility, operational efficiency and high security.



COMMON APPLICATION NEEDS

ElastiCLOUD SOLUTION

Performance to provide a transparent , low latency, and always-on end-user experience

Blazing fast 400G, plus:

- Multiple high-speed low latency transport options
- Multiple service protection schemes

Flexibility to support all data center connectivity applications, high growth and fast changing needs

ESDN applications like bandwidth-on-demand, plus:

- All client interfaces for all applications
- Integrated L1 and L2
- Software-based interface upgrades

Efficiency to minimize operational costs

Lowest cost per bit per fiber, plus:

- Pay as you grow
- Plug-and-play installation
- E2E network management
- SDN applications – dynamic resources usage
- Lowest power
- High density

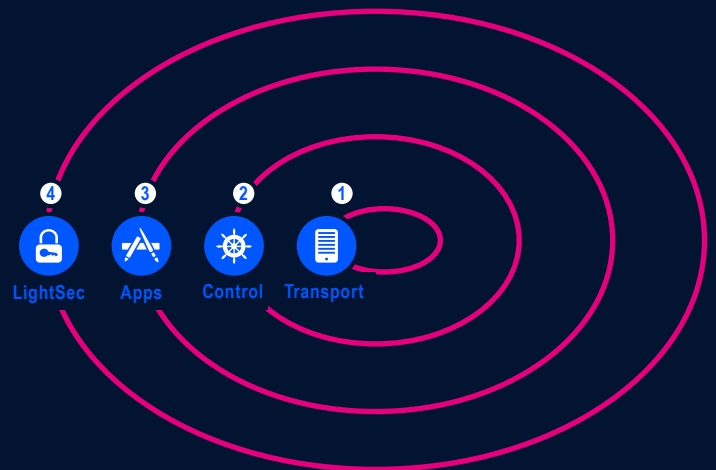
Security as if all customer applications and data were local

Encrypted links, plus:

- Secure administration
- LightSec Cyber Security suite

SmartLight™

SmartLight is ECI's portfolio framework for realizing and delivering the elastic network vision. It is implemented through various product lines that interwork with each other through open interfaces.



The following SmartLight components are recommended for the ElastiCLOUD solution:

- 1. Transport Layer** - Apollo for high-speed, flexible and secure DWDM transport, particularly for DCI Backbone and SAN Connect applications; and Neptune (NPT) MPLS-TP transport for a super-efficient Layer 2 Cloud Connect implementation.
- 2. Control Layer** - LightSoft® unified multi-layer NMS, and evolution path to real-time multi-layer SDN applications through the LightControl™ SDN controller.

- 3. Applications Layer** – LightApps™ SDN applications today on the current infrastructure featuring LightConnect™ and LightTime™ for bandwidth-on-demand and bandwidth scheduling.
- 4. Security Layer** – Layers 1-3 encryption to protect links to and within the cloud from data snooping, and a holistic cyber security suite for full IT protection wherever resources reside.



Apollo™ ECI's OPT Family

Apollo's modular architecture enables super-efficient DWDM transport solutions that extend from the customer premises to data centers, and around the metro ring and to regional long haul for data center interconnection. Apollo is equally at home with point-to-point, ring, and mesh networking architectures. Apollo combines software selectable high-performance low-latency OTN transport and optional OTN switching, with software configurable optical routing, for maximum efficiency of all cloud networking applications. Benefits of using Apollo for cloud networking include:

- Highest capacity on a single fiber, up to 25.6Tbps
- Blazing fast connectivity up to 400G today, with demonstrated 1Tbps
- All Ethernet and Fibre Channel client interfaces, including 16GFC
- Industry leading lowest power at 85W per 100Gbps
- Ultra-high density, for example 30*10GbE or 3*100GbE in a 2U chassis
- Multiple automatic protection switching and dynamic (shared resource) restoration options
- Integrated MPLS-TP transport for a single platform solution for L1 and L2 services
- Ease of configuration and use, with intuitive easy-to-use management interfaces



Neptune™ ECI's NPT Family

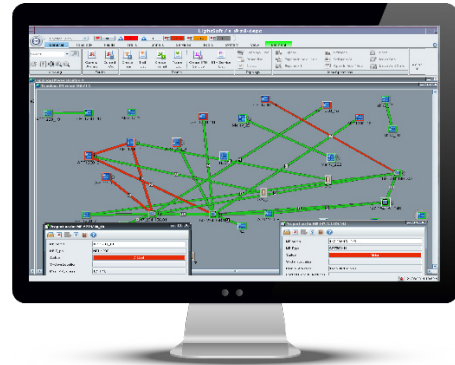
Neptune (NPT) is a family of carrier-class, MPLS-based, multiservice packet transport platforms, offering best-in-class packet transport solutions for the metro. NPT combines transport network reliability and ease of management with packet efficiency. It is the ideal platform for rich Carrier Ethernet transport from customer premises to the cloud. In particular, NPT ensures:

- Deterministic packet performance across the WAN, with resiliency and E2E visibility
- Mission critical service availability via full redundancy, multiple protection schemes and full RDR support



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 optical, OTN transport, and service layers at the click of a mouse.



LightSoft's broad coverage is particularly beneficial for effortless, end-to-end service creation, as it eliminates the requirement to set up a service segment by segment depending on the underlying technologies. Additional benefits include:

- **Comprehensive and integrated network management:** Multiservice, multi-layer and multi-vendor
- **High scalability:** Manages tens of thousands of elements
- **Simple, intuitive interface**
- **Maximized network uptime:** advanced alarm correlation automatically performs root cause analysis reducing mean time to repair (MTTR), in addition to fail-safe database backup and disk mirroring for uninterrupted operation and data integrity.



LightApps™

LightApps is a suite of SDN applications that increase network efficiency and facilitate a wide range of revenue-generating services.

LightApps have been proven to:

1. Reduce new service launch time from months to weeks, even days
2. Improve network utilization by up to 60%, and
3. Reduce time spent on routine tasks by up to 20%.

Particularly useful for cloud networking are the **LightConnect™** bandwidth-on-demand application that provides dynamic connectivity for bursty, unplanned bandwidth needs, and the **LightTime™** bandwidth scheduling application that can be very useful for regular high-bandwidth database backups. Both these applications can be deployed now on the current installed base.



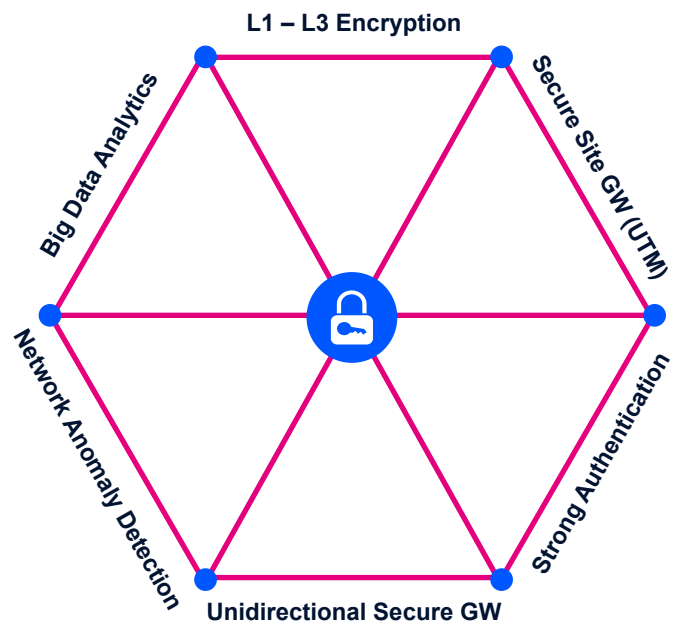
LightSec™

The **LightSec cyber security suite** provides an increasingly important countermeasure to cyber security threats which increasingly plague open and programmable networks. Based on a combination of ECI's network security expertise and best-of-breed third party solutions, LightSec provides holistic protection for the elastic network.

Key elements include:

1. Layers 1-3 encryption - makes optical fibers impregnable to tapping.
2. A secured site gateway - provides multiple security engines for unified threat management (UTM).
3. Strong authentication - guarantees user identity. This can be supplemented with session monitoring and recording.
4. A unidirectional secure gateway - ensures that data flows in the correct direction.
5. Anomaly detection - detects abnormal behavior that usually precedes major attacks.
6. Big data analytics - analyze all data to identify malicious users and trends in advance

Wrapping all of the above into one nice package is LightSec-V™ (LightSec Viewer), a web-based, threat management system for managing and visualizing cyber solutions.



Guaranteed Performance

YOUR CHALLENGES

OUR SOLUTIONS

Supreme Performance

- State of the art **packet-optical transport portfolio** provides:
- Rate-adaptive 400G that transports data at blazing speeds
 - Incredible 25T max transport capacity per fiber
 - Multiple high-speed, low latency transport options

Future-Proof Flexibility

- Flexible platforms scale from 2U and up with any mix of client-network interfaces
- Software upgradeable 10GbE/40GbE/100GbE client interfaces
- **LightApps™** SDN applications, like bandwidth-on-demand, service scheduling and network analytics
- End-to-end, point-and-click service provisioning and network management

End-To-End Visibility And Control

LightSoft® unified multi-layer NMS, utilizes intuitive point-and-click GUI for end-to-end network management and control.
LightApps™ provide SDN intelligence and control

Ultimate Security

YOUR CHALLENGES

OUR SOLUTIONS

Secured Services

- **Layer 1 AES-256 GCM** encryption protects entire payload at wire speed
- **LightSec™** multi-layer cyber security defends against data center intrusion, and includes gateways, network anomaly detection and Big Data analytics

Minimized OPEX

YOUR CHALLENGES

OUR SOLUTIONS

Reduced Power Consumption

- Less than 85W per 100G leads industry for low power
- Unique ability to run hot at 55°C saves on cooling

Maximized Real-Estate

- Ultra-high density, 30*10GbE or 3*100GbE in 2U
- Multi-solution mix in single platform saves hardware, space and power
- Maximum capacity per fiber
- SDN applications like bandwidth-on-demand saves capacity

Increased Operational Efficiency

- Plug-and-play installation
- End-to-end network management
- Software reconfigurability from card to network level

Contact us to discover how **ECI's ElastiCLOUD** goes beyond cloud connectivity

ABOUT ECI TELECOM



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