ECI’s Mercury Network Function Virtualization (NFV) family empowers your network to respond quickly to new customer service opportunities. Mercury lets you mix and match a rich library of certified ECI and third-party virtualized network functions (VNFs) to create differentiable service value. This drives new revenues for fixed and mobile networks and streamlines operations, reducing OPEX.

Providing end-users with the best low-latency service experience, Mercury excels at deploying VNFs at the network edge, in the access, or at the customer premises. Mercury can also deploy VNFs more centrally in metro POPs, the network core, or in a data center.

Mercury is fully-compliant with ETSI Management and Orchestration (MANO). NFV infrastructure platforms are available as thin or thick appliances. For an integrated transport solution, a Mercury NFVi blade is available within the Neptune packet-optical transport system.

**New profitable services**
with shorter TTM

**High performance**
close to the end customer

**Best-of-breed**
virtualized network functions

**Future-proof**
open, modular, standards-compliant

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Agile differentiable services

Mercury MANO

Dynamic VNF configuration

Mercury VNF Library

Mercury NFVi

Aggregation

SP core or data center
DELIVERING VIRTUALIZATION VALUE TO THE NETWORK EDGE

Dedicated appliances using customized hardware have been the major means for supporting services. When deployed close to the end-user, these deliver high performance. The downside is that they are numerous (a dedicated appliance per network function), expensive, and require long cycles and truck rolls to provision, maintain, and update.

The shift to virtualization, whereby network functions run as software on commercial computing platforms, provides significant benefits. These include lower costs, rapid service turn-up, and easy updates. However, the current approach of running VNFs in data centers adds significant latency, based on longer distances and unnecessary tromboning of interactions between end-users and the VNFs. This frequently degrades service performance. In addition, data center VNFs means that security functions are remote from critical points of access, and that there is no geographic awareness.

Mercury overcomes this limitation by a system design that enables optimal deployment of VNFs at the network edge or customer premises. This provides the best of both worlds to you as a service provider. You obtain all the core benefits of virtualization, plus you can deliver the highest level of service performance, security, and geo-awareness to your end customers. This sharply differentiates your offering from OTT providers. In cases where it makes more sense to use a core network or data center deployment, Mercury can do that too.

It All Starts with Best-of-breed VNFs

The starting point for Mercury’s value is its library of certified, best-of-breed ECI and third-party VNFs. These include edge routing (vRouter), session border control (vE-SBC), next generation firewalls (vFW), deduplication (vCaching), and more.

Mercury is highly versatile and can run multiple VNFs on the same platform simultaneously, and sequence the VNFs per service-chaining rules. This minimizes infrastructure costs and enables creation of custom-tailored service packages.
BUILD A BROAD RANGE OF MODULAR APPLICATIONS

Mercury embraces a modular building block approach. Its strength is that it can mix and match best-of-breed VNFs on the same platform, and can deploy platforms efficiently in multiple locations as the situation dictates. They can be located at the end-customer, the network edge, or within the core network. This capability delivers added differentiable value to a broad variety of service domains in fixed and mobile networks.

A wide-ranging list of applications includes:

- Transparent caching and deduplication
- SLA assurance
- WAN optimization
- LAN monitoring
- Small business voice & data services
- Enterprise managed security
- Critical infrastructure threat mitigation

OPEN INDUSTRY STANDARD ARCHITECTURE

Mercury optimizes for network edge deployments through a family of run-time NFVi devices based on hyper-converged computing. This approach combines processing, storage, and networking in a manner expressly designed to bring the value of data center virtualization close to the end-user when high performance is demanded. The NFVi layer is available as “thin” and “thick” appliances for different VNF loads. For tight coupling with the communications layer, an NFVi blade is available within the Neptune packet-optical transport system.

Best of all, the entire Mercury family, including MANO, VNFs, and NFVi, is totally ETSI-compliant, and has a strong commitment to openness, leveraging software like OpenStack. This enables easy operational integration, end-to-end orchestration, and incorporating third-party software.
## DIFFERENTIABLE SERVICE AGILITY

Mercury's dexterity enables service providers to deliver innovative services rapidly and flexibly with differentiable performance. This provides SPs with a powerful weapon to overcome the growing competition from cloud-based OTT offerings.

### SERVICE AGILITY CHALLENGES | MERCURY SOLUTION
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**Time-to-market** | • Dramatically reduces the time to evaluate, fine tune, and deliver new services.
 | • Decouples service delivery from underlying hardware, leveling the playing field for service providers to compete against cloud-based services.
 | • Enables easy upgrading and elastic scalability for growth.

**Customized services** | • Enables mixing and matching multiple functions on the same platform, to create innovative services without VNF vendor lock-in.
 | • Can be applied to multiple fixed or mobile applications, such as Universal CPE for modernized business services, and mobile backhaul with smart distributed caching.
 | • Uses dynamic service chaining to adjust chain of execution for peak operation.

**Differentiable network functionality** | • Maintains a library of best-of-breed VNFs from ECI or third-parties with industry-leading features and value.
 | • Supports an agile certification process for on-boarding new VNF vendors.

**Lowered operations costs** | • Streamlines service creation using software-driven processes.
 | • Eliminates truck rolls to provision, maintain, and update NFVI run-time platforms.

**Support for the network edge, virtual CPE, and mobile edge computing** | • Optimized for small footprint deployments using hyper-converged platforms that integrate processing, storage, and networking, to allow low-latency response deployment close to the end users.
 | • Focus on VNFs and applications that provide value close to the customer, like modernized business services, traffic optimization, critical infrastructure, and fixed and mobile networks.
 | • Can couple tightly with network transport to implement communication policy management.

**Network and services security** | • Consolidates connectivity with a broad suite of cyber security applications, such as NextGen firewalls, DPI, and anomaly detection.
 | • Can be deployed at various choke points within the network and be tailored to specific service provider and end-customer needs.

**Evolvable future-proof solutions** | • Open architecture with open interfaces for easy incorporation of third-party software and interfacing with OSS/BSS and E2E orchestration systems.
 | • Fully compliant with ETSI MANO standards for NFV MANO, VNF manager and VIM.

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Contact us to find out how Mercury delivers service agility to your network edge

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### 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 tailored 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](http://www.ecitele.com)