Net Optics Taps into Visibility, Access and Security in 4G/LTE Sphere

Solution Brief

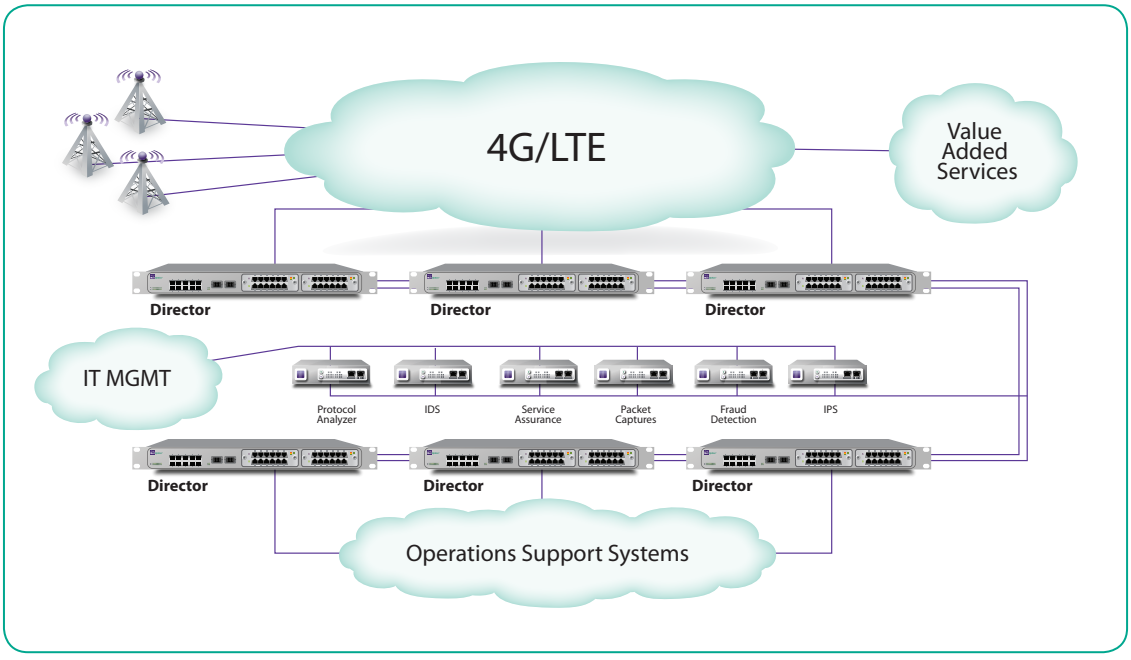
4G/ Long Term Evolution (LTE) is the next big step and great enabler in the transition to all-IP wireless networking. Not only does 4G/LTE open the way for new mobile broadband capabilities, it allows for enhancement of existing services and introduction of rich new multimedia offerings. Consumers benefit from innovative applications for handheld mobile and non-traditional devices, as do healthcare entities, public utilities, and telematics organizations.

Flat Rate Pricing Raises the Stakes

The market momentum enabled by LTE and 4G offerings continues to build, with progress driven by flat-rate pricing models that create a perfect storm of mobile data consumption. As a result of this evolution, Service Providers are coming under increased competitive pressure as well as a growing need to constantly monitor the network for performance, security, and billing.

The competitive edge has been sharpened by the laws of supply and demand, as flat rates intended to stimulate business drive up data traffic without yielding comparable revenue growth. This pattern increases the profit pressure on operators. To remain competitive, they must expand network capacity while lowering the cost per bit for delivering data services. Availability—anywhere and anytime—is vital to attracting customers to 4G network infrastructures and stimulating telecom growth.

Service Providers are now racing to invest tens of billions of dollars in becoming top vendors of next-generation mobile networks and applications. Cost-efficient, reliable monitoring access is vital to providers pulling out all the stops to deliver this new technology. Only through pervasive monitoring can these companies avoid availability issues and the consequent customer churn that causes competitive slippage and revenue loss.



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Bringing Visibility to Telecom Networks

When mobile operators invest in LTE and 4G infrastructure, they demand trouble-free scalability and flexible, intelligent traffic capture for their growing networks. Net Optics Director™ has proven its ability to deliver reliable, nondisruptive access to 3G/4G wireless traffic for QoS monitoring and billing. All solutions in the growing Director family of smart filtering appliances are robust engines for protecting network traffic, relieving tool oversubscription, leveraging tool investment, and centralizing traffic monitoring. Director family appliances can provide both static and dynamic load balancing to optimize tool investment and ensure the integrity of network sessions.

A significant business advantage stems from Director's ability to enable deployment of cost-effective 1G analytical tools to monitor 10G traffic—ensuring total coverage, optimizing tool investment, and postponing CAPEX for new 10G tools. Hardware-based filtering lets users filter traffic at line rates by address and protocol—as well as create custom filters. Director solutions can be intelligently stacked for deployment in a scalable, redundant, low-latency mesh for enhanced visibility.

Net Optics Capabilities in a Major Service Provider's Wireless LTE Network

This Net Optics customer, (the "Service Provider"), is a 4G/LTE pioneer that relies on Net Optics solutions to monitor its major new LTE network. The Service Provider is hoping to avoid the kind of performance problems faced by AT&T with the iPhone, which was available only through AT&T in the U.S. for more than three years.

To that end, the Provider is using Net Optics monitoring solutions to identify the heaviest data users, whose disproportionate consumption diminishes quality for other users. Finding those extreme usage patterns helps the company "throttle back" data speeds on the heaviest 5 percent of users to keep the network running efficiently for all its customers.

The Director Family in the 4G Environment

Net Optics Director is a key solution offering reliable, passive access to 4G wireless traffic for QoS monitoring, security applications, and billing. The Net Optics Monitoring Access Platform (MAP), integrates with the core network infrastructure to create a monitoring access layer in the switching architecture. This layer gives the monitoring tool layer, which includes QoS and billing equipment, total, passive and nondisruptive visibility into the network traffic. Director provides:

- Total, real-time visibility
- Passive, nondisruptive network tapping
- High rack density and small footprint to save operations costs
- Ability to load-balance and optimize monitoring tools
- Drill-down to the packet level for proactive issue resolution
- Smooth scalability and low latency
- Fault tolerance and no single point of failure
- 48VDC power for telecom equipment room compatibility
- Rich-featured GUI-based management

Net Optics' growing family of solutions is engineered for the 4G/LTE environment, enabling customers' IT teams to see deep into large networks, keeping problems from reaching end users, and dramatically reducing time to return on investment for network monitoring and security tools.

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The flagship of the Director family is Net Optics Director xStream Pro™, a network controller switch ideally suited to 4G mobile networks. It provides the total traffic visibility telecoms need to compete in the 4G environment by optimizing access and monitoring for the 10G landscape. Director xStream Pro comes loaded with advanced monitoring features, including dynamic load balancing, Deep Packet Inspection (DPI), true timestamping, real-time graphical analytics, and snapshot packet capture.

Real-time traffic statistics can be pushed to monitoring tools for analysis and instant identification of arising problems, such as performance-degrading microbursts. Flexible port mapping allows deployment of a pool of 10G and 1G tools across a large number of 10G network links. This relieves oversubscription and enables higher traffic visibility from fewer monitoring tools.

4G technology promises to place almost incomprehensible levels of bandwidth into user hands for delivery of studio-quality entertainment, sophisticated business applications and much more. Net Optics leadership and innovation in the 4G/LTE sphere are helping turn ideas into reality, making these advances both possible and practical.

For further information on Tap technology:

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