



# ClearSight Networks Newsletter

ClearSight External Newsletter  
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## What Is Fibre Channel over Ethernet (FCoE)?

One of the emerging 10 Gb/s standards that is supported on the new ClearSight 10 Gb/s Ethernet Network Time Machine product is Fibre Channel over Ethernet or FCoE. Fibre Channel technology is the most common storage standard used in today's Storage Area Networks (SANs). It is an expensive technology to deploy and maintain, but it has been data center proven for over a decade, offering unmatched levels of performance and reliability.

As the name suggests, FCoE encapsulates a Fibre Channel frame within an Ethernet frame, so that both storage and network traffic can coexist on one network. Changes were made in the specification to support a lossless Ethernet, a requirement for FCoE. Driven by the T11 standards group, FCoE offers the promise of driving the convergence of LAN and SAN in the data center and pushing down cost, while preserving investments already made in Fibre Channel and Ethernet infrastructure.

ClearSight's 10 Gb/s NTM supports this important standard, offering companies working on products today the ability to accelerate and perfect their designs, and enterprises deploying this technology tomorrow a monitoring and analysis solution for both FCoE and native Ethernet in one package.

Want to learn more? Contact [swong@clearsightnet.com](mailto:swong@clearsightnet.com).

## Network Time Protocol Support for the Network Time Machine



The clocks on computer systems can deviate and drift. Sometimes this drift can be considerable, varying by as much as 10-20 seconds per day. If left unchecked, these drifts can accumulate and result in significant errors in the computer system clock. Fundamental to all network monitoring and analysis solutions is the notion that frames and packets that are observed and captured are accurately time-stamped. Synchronization with NTP Servers can correct for these deviations and drifts, and provide system clocks with precision clocking capabilities for monitoring tools and other applications that have such a requirement.

Read the press release regarding this new capability at [http://www.clearsightnet.com/press\\_detail.php?infoID=361](http://www.clearsightnet.com/press_detail.php?infoID=361)

## ClearSight Expands into 10 Gb/s Ethernet Arena

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ClearSight Networks has extended the capabilities of Network Time Machine (NTM), its network capture appliance. The enhancement expands NTM's feature set into the 10 Gb/s Ethernet arena, and the product now supports all deployed Ethernet data rates as well as emerging 10 Gb/s standards such as Fibre Channel over Ethernet (FCoE).

Read our press release announcing this new product at <http://www.clearsightnet.com/press.php>.

Read the full TMCNET article at <http://internetcommunications.tmcnet.com/topics/enterprise/articles/45048-clearsight-expands-into-10-gbs-ethernet-arena.htm>.



**Beyond 10 Gb/s Ethernet?**

Did you know that there are about 50 countries in the world that have cellular telephone penetration rates that are higher than that of the population? For example, Luxembourg has one of the highest rates at 158%; this means there are 1.58 active cellular telephone accounts for each person in that country. By comparison, the United States have one of the lowest rates in the industrial world at 85%.

The reason we mention this fact is because mobile applications are key drivers pushing the demand for higher data rates, particularly with service providers. The success of the iPhone, Blackberry and G1 all point to a time where more and more people will be getting multimedia and bandwidth intense web content through their mobile telephones, taxing the infrastructure of providers.

The current thinking is that 100 Gb/s Ethernet is at least 4 years away and 40 Gb/s Ethernet is seen as a bridge from 10 Gb/s to 100 Gb/s.

Still there is no "official" standard for 40 Gb/s Ethernet. Some implementations are based on four 10 Gb/s mixed optical signals carried over a single strand of fiber. A number of transceiver manufacturers have already announced SFP+ transceivers that are designed around this concept. And there are other implementations that are designed around parallel optics using fiber ribbon cables.

What is ClearSight doing to investigate and support data rates beyond 10 Gb/s? Contact [swong@clearsightnet.com](mailto:swong@clearsightnet.com) to find out.

**White Paper: Using the ClearSight Packet Generator to Perform VoIP Pre-deployment Testing**

One of the most asked questions in the world of Voice over IP is "how is my network going to impact the quality of the voice traffic?" There are two ways to answer this question. The first method is to deploy a VoIP application over the existing network and see what happens. While this method will provide an accurate means of determining the impact of the network on the voice quality, it does not allow for

potential issues to be resolved prior to the implementation of the VoIP system. The second method of assessing the network's ability to transport VoIP traffic is to generate traffic on one side of the network and capture it on the other. This method allows a controlled flow of traffic to be used to isolate those areas of the network that may impede VoIP traffic. In this paper, we will discuss the use of the ClearSight Packet Generator and the ClearSight Analyzer to assess the readiness of a network for Voice over IP traffic.

Read the full white paper at <http://www.clearsightnet.com/upload/files/12124746901347874572.pdf>

**White Paper: Time-based Troubleshooting Techniques**

Due to the complexity of today's networks it is often difficult to pinpoint where problems occur. These problems may be caused by one or more network elements: network device (router, switch, firewall, etc.) client, server, or application. In addition, these elements may reside in different network segments. Viewing data from one segment provides only a local perspective. Viewing data from multiple segments becomes a challenge, since correlation often proves too tedious and time consuming.

With the ClearSight Networks Time Machine (NTM), this challenge is overcome by its records function, which has the ability to store many terabytes of data. Also, with the NTM Atlas Navigation System, IT Professionals are able to visualize data in proper perspective, taking into account the order of frames as they are generated, forwarded, received, processed, and replied to by the different network elements.

Want to read more? Get the white paper by emailing a request to [abustos@clearsightnet.com](mailto:abustos@clearsightnet.com).

## Quality Assurance at ClearSight

The mission of the Quality Assurance team at ClearSight Networks is to ensure the quality of all our products, including the ClearSight Analyzer, ClearSight Distributed, Network Time Machine, Network Time Machine Distributed, and many other ClearSight Network products.

Our QA team continually provides the complete set of QA functions, and also contributes actively to design improvements to ClearSight products. They play an extremely important role for releasing the highest quality of ClearSight products in the current competitive market.

Want to learn more? Contact [qa@clearsightnet.com](mailto:qa@clearsightnet.com).

## News Flash

This section is aimed at keeping you informed with the most recent ClearSight news and articles.

### ClearSight Expands into 10 Gb/s Ethernet Arena

(TMCnet - November 11, 2008) ClearSight Networks has extended the capabilities of Network Time Machine (NTM), its network capture appliance. According to the company, the enhancement expands NTM's feature set into the 10 Gb/s Ethernet arena, and the product now supports all deployed Ethernet data rates as well as the emerging 10 Gb/s

standards such as Fibre Channel over Ethernet (FCoE). Read the full article at <http://internetcommunications.tmcnet.com/topics/enterprise/articles/45048-clearsight-expands-into-10-gbs-ethernet-arena.htm>.

### ClearSight Unveils 10 Gb/s Ethernet

(TelecomWeb - November 3, 2008) ClearSight Networks has added 10 Gb/s support to its "Network Time Machine" (NTM) network-capture appliance, a device that records traffic for network administrators so they can take a look at what their networks have been doing. Read the full article at <http://www.telecomweb.com/news/broadband/261848.html>.

### ClearSight Ramps Up with Network Time Protocol Support for the Network Time Machine

(Wireless News "C" October 31, 2008) ClearSight Networks, a provider of application and analysis tools for networks, announced support for the Network Time Protocol (NTP) on its network capture and stream to disk appliance, the Network Time Machine (NTM). Read the full article at <http://4g-wirelessevolution.tmcnet.com/news/2008/10/31/3752096.htm>.

### Network Monitoring Specialist ClearSight Eyes Low Latency Monitoring Space

(Low-Latency.com - October 02, 2008) Fremont, California-based ClearSight Networks, a specialist in the area of network monitoring and analysis, plans this month to introduce a new product for the financial markets focused on latency monitoring and identifying packet loss. To date, the company has introduced solutions for monitoring and long term storage and analysis for IPTV, VoIP and data mining applications. Read the full article at <http://www.a-teamgroup.com/article/network-monitoring-specialist-clearsight-eyes-low-latency-monitoring-space/>.

ClearSight Networks | 46401 Landing Parkway | Fremont, CA | 94538-6496  
Telephone (US Toll Free): 1-800-825-7563 | (International): +1-510-824-6000 | Fax: 1-510-824-6100  
Email: [marketing@clearsightnet.com](mailto:marketing@clearsightnet.com) | Web: [www.clearsightnet.com](http://www.clearsightnet.com)  
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