

New! 10 GbE Support!

Data Sheet

HIGHLIGHTS

- ClearSight's highest performing rack-mountable network data recorders
- Complete visibility into your network in real time and over an extended period of time
- Continuous collection of network statistics with reporting capabilities
- Unique and powerful Atlas "drill-down" analysis facility provides access across all seven OSI network layers
- Includes 1 free year of software updates so you can benefit from all the fixes and enhancements that ClearSight provides to its customers on a regular basis

BENEFITS

- Fully turnkey solutions. No complicated setup or installation procedures
- Capture, store, index, categorize, archive and recall up to 1.6 TBs (Standard) or 4.2 TBs (Premium) of network data. Higher storage capabilities are available including 13 TB¹ and 44 TB¹ versions of the NTM Premium
- Multi-user and remote access capable with support for to 4 concurrent remote users
- Show network statistics and information with trending graphs. Easily identify throughput problems and anomalies
- Show packet decodes and perform packet analysis for nearly 1,000 protocols. Perform packet analysis and decode on the fly
- Reconstruct and replay both video and voice data in real time and under post-capture scenarios

Introduction

The Network Time Machine® (NTM) Standard (see Figure 1) and Premium (see Figure 2) are the highest performing data recorders offered by ClearSight. These fully turn-key solutions can be used to effectively manage and diagnose problems affecting enterprise networks. Their powerful capabilities maximize the network administrator's ability to proactively monitor and analyze their networks to maintain network uptime and stave off unexpected outages which can adversely affect mission critical applications and ultimately enterprise business.



Figure 1: NTM Standard



Figure 2: NTM Premium

Users can ensure the health and reliability of their networks by pinpointing problems and performance bottlenecks that other network monitoring and analysis solutions cannot even detect. Fully protocol analysis functionality is supported through the ClearSight Analyzer product (CSA) which has been integrated into every NTM solution. The Standard and the Premium differ only in how much storage capacity is offered by each solution.

NTM Atlas

A key feature of Atlas and the NTM platform is the ability to capture, index, and classify complex network information. This data is then used to create unique views that are critically valuable to assisting network engineers and administrators to manage and service their networks. These views are shown in the Atlas workspace, and are easily accessible by a few mouse clicks.

¹ Special order item; please check with ClearSight Networks

Atlas is currently designed to support four main upper layer application types: HTTP, H.323, SIP, and RTP. Future revisions of the software will support additional applications and functionality. Atlas is new to release 6.5 of the NTM product line.

Multi-User, Remote Access

An NTM can be managed through an Agent Manager which can be located locally on the NTM or on any Windows based PC. The client can access and control an NTM from anywhere in the world through an IP network. Each NTM can support up to four con-current users. The Agent Manager can in turn manage multiple numbers of NTMs.

Performance Analysis and Verification

The NTM is also an ideal design and test tool to help verify the performance of high-speed Gigabit routers, switches, gateways and firewalls. Engineers can observe abnormal behavior at high throughput and verify packet loss, throughput, jitter and latency problems. The CSA functions then assist with root-cause analysis.

The example that follows demonstrates how the NTM and the Spirent Test Center¹ (STC) and NTM create an ideal environment for performance verification of firewalls. STC provides the traffic to emulate both server and client for firewall stress testing. The objective is to understand firewall behavior as it reaches its performance limit, while gradually increasing the volume of traffic and number of users. NTM is connected in the test network to capture and store 100% of the traffic during the test.

STC is configured to increase server load linearly. The server starts to behave abnormally 40 minutes into the test at approximately 2,200 transactions per second. Since the NTM has a capacity of multiple TBs, every packet is captured, stored and time stamped for analysis.

NTM’s analysis function clearly reveals that TCP retransmissions take place as the firewall reaches its performance limit, preventing the firewall from processing traffic within allowable time constraints and causing server malfunction.

Whether used for network monitoring or router performance troubleshooting, the NTM solutions meet the challenges found in both enterprise and R&D environments.

¹ The Spirent Test Center is a wire-rate traffic generation tool

FEATURES

Product Name	Standard2	Premium2
Model Number	CSR-4430-2	10/100/1000 Mb/s version: CSR-4431-2 10 Gb/s version: CSR-4431-2-10G
Capture Filter	Yes	Yes
Save Filter	Yes	Yes
Display Filter	Yes	Yes
Payload Slicing	Yes	Yes
Realtime Alert	Yes	Yes
Realtime Statistics (RMON1)	Yes	Yes
Realtime Flow Analysis	Yes	Yes
Post Analysis	Yes	Yes
Realtime Report	Yes	Yes
History Report	Yes	Yes
Trace File Report	Yes	Yes
Atlas Option Support	Yes	Yes
Multi-user, Remote Access	Yes	Yes
Storage Capacity	1.6 TBs	4.2 TBs / 13 TBs ² / 44 TBs ²
Storage Array Support	No	Yes
Redundant Power Supply	Yes	Yes
RAID Level	RAID 0	RAID 5
² Special order items; please check with ClearSight Networks		

HARDWARE SPECIFICATIONS

Product Name	Standard2	Premium2
CPU	Two Quad Core Xeon X5450 Processor2x6 MB Cache, 3.0 GHz, 1333 MHz FSB	
OS	Microsoft Windows 2003 Server	
Memory	4 GB 667 MHz Dual Ranked Fully Buffered DIMMs Memory	
Drives	Storage Capacity: 1.6 TBs OS & Packet Store: 6x400 GB 10K 3G SAS	Storage Capacity: 4.2 TBs OS: 6x400 GB 10K 3G SAS Packet Store: 15x300 GB 15K 3G SAS
Monitor/Capture Ports	4 GbE Ports (Copper & Optical)	Model CSR-4431-2: 4 GbE Ports (Copper & Optical) Model CSR-4431-2-10G: 2 10 GbE Ports (XFP -- supports CX4 copper & Optical)
Power Supply	2U: Redundant 750W hot-plug auto-switching 110/220V AC	2U: Redundant 750W hot-plug auto-switching 110/220V AC 3U: Redundant 550W hot-plug auto-switching 100/240V AC
Physical Dimensions	29.3in (D)x17.5in (W)x3.4in (H) 74.4cm (D)x44.4cm (W)x8.6cm (H)	2U: 29.3in (D)x17.5in (W)x3.4in (H) 74.4cm (D)x44.4cm (W)x8.6cm (H) 3U: 18.9in (D)x17.5in (W)x5.2in (H) 48cm (D)x44.4cm (W)x13.2cm (H)
Weight	2U: 51 lbs (23 kgs)	2U: 51 lbs (23 kgs) 3U: 78 lbs (35.5 kgs)
Temperature	Operating: 10° to 35°C (50° to 95°F) Non-Operating: -40° to 65°C (-40° to 149°F)	
1 year warranty parts and labor included; additional years can be purchased		



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