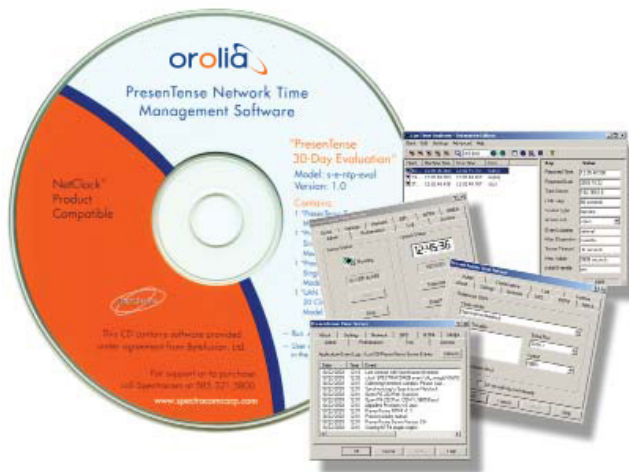


Presentense Network Time Management Software

Complete Management Solution for Network Time Synchronization



NetClock® Product Compatible

Manage, synchronize, and simplify an entire Windows network referenced to a Stratum 1 Orolia NetClock® time server. Improve interoperability, lower network operating costs, and reduce administrative work loads with Presentense network time management software. Orolia ensures all critical operations are synchronized to a millisecond with GPS accuracy. Microsoft states that the W32Time Service is not designed to provide accurate time sync capability. “W32Time meets the requirements specified by the Kerberos authentication protocol to provide clock values that are loosely synchronized across a network. This service is not designed for use by applications that require greater precision.”

—from Microsoft article “Windows Time Service”

Presentense Comparison with W32Time

Presentense	Windows W32Time
Much more frequent, user-selectable time synchronization intervals or significantly improved timing accuracies and overall system interoperability	Windows syncs only at a specific interval, once every eight hours or once per week
Millisecond accuracy to UTC	Synchronizes a PC to within a nominal half of a second
Real-time monitoring and immediate email alert notification if the time standard is changed or lost	Shows limited error logs in Event Viewer
Detailed time synchronization record logs easily accessed for forensics and litigation requirements	Provides only limited alarm entries embedded with all of the other PC alarm indications
GUI driven operation	Command driven
Supports primary, and redundant backup, time sources	Only allows a single time source
No reboot necessary after installation	Requires system reboot
Free technical support via phone or email	Provides limited support
Presentense Server and Client can send messages via Syslog	Supports local Event Viewer

PresenTense Software Programs

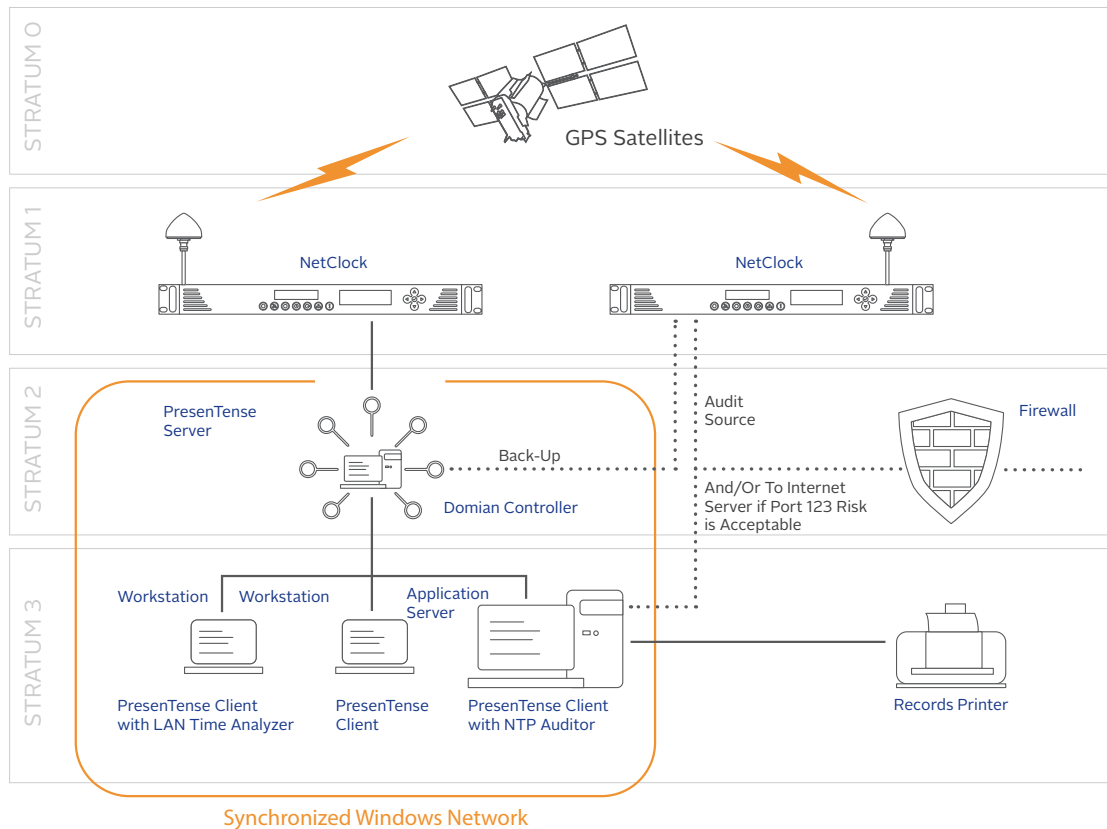
PresenTense Server — Installed on one Server PC per LAN (typically the Domain Controller). This Server/PC can synchronize to a Orolia NetClock® Time Server, one of its integral time servers and/or an Ethernet Time Server, and supports redundant time servers for network time synchronization.

PresenTense Client NT — Installed on all Windows OS workstations and servers. These PCs can synchronize to one of three possible IP addresses (NTP-mode) and two IP addresses (SNTP-mode) to allow for redundant Time Servers (typically the IP address of the PC running PresenTense Server and the IP address of a slave Ethernet Time Server).

LAN Time Analyzer — Management software that resides on any one PC on the network. Used to monitor the synchronization of all the PCs on the network. Also provides remote configuration and diagnostics for all PCs running PresenTense software.

PresenTense NTP Auditor — Independent verification software that runs on any Windows PC on the network. Compares PC clock to separate time source such as a local NTP server or internet time servers.

Don't Compromise, Synchronize



System Requirements

- Personal computer with 486/33MHz CPU or higher
- Microsoft Windows OS (>NT 4.0, 32 and 64-bit versions)
- Mouse-over compatible pointing device
- 800KB of hard disk space
- TCP/IP networking
- Administrator privileges on each workstation

Ordering Information

Model	Product	Description
s-ntp-pts-01	PresenTense Time Server	PresenTense Server (P/N s-ntp-pts-01) offers a network time synchronization architecture whereby all clients sync to a network computer server running this application, which in turn is synchronized to the NetClock Time Server/master clock. In this way, redundancy and consistent time are maximized — should the time server become unavailable for any reason, all clients/workstations stay consistent and in lock-step with time. One license copy is needed per LAN in the same postal address. CD. All current Microsoft Windows OS (>NT 4.0, 32 and 64-bit versions).
s-ntp-ptc-01	PresenTense Time Client NT Single Client	PresenTense Time Client NT supports All current Windows OS (>NT 4.0, 32 and 64-bit versions). One license copy is needed per workstation or server, except for on the server running PresenTense Time Server. CD.
s-ntp-ptc-02	PresenTense Time Client NT 20 client pack	20 license pack of PresenTense Time Client NT. Supports up to 20 servers or workstation. CD. All current Microsoft Windows OS (>NT 4.0, 32 and 64-bit versions).
s-ntp-ptc-10	PresenTense Time Client NT site license	Site license of PresenTense Time Client NT. Supports unlimited servers or workstations in the same postal address. CD. All current Microsoft Windows OS (>NT 4.0, 32 and 64-bit versions).
s-ntp-pta-01	PresenTense NTP Auditor Single Client	PresenTense NTP Auditor monitors your computer's built-in clock and compares its time to the real time. One license copy is needed per LAN. CD.
s-ntp-pta-02	PresenTense NTP Auditor 20 Client Pack	20 license pack of PresenTense NTP Auditor. Supports up to 20 servers or workstations. CD.
s-ntp-lta-01	Lan Time Analyzer Standard 20 clients	(1) Lan Time Analyzer enables real-time monitoring and administration of up to (20) PresenTense network time clients centrally. One license copy is needed per LAN. CD.
s-ntp-lta-02	Lan Time Analyzer Professional unlimited clients	(1) Lan Time Analyzer enables real-time monitoring and administration of all PresenTense network time clients centrally. One license copy is needed per LAN. CD.
Software Packages		
s-ntp-20s-1LAN	PresenTense Package for (20) Seats in (1) LAN	This package combines the following products for organizations on one LAN up to 20 seats: (1) s-ntp-ptc-02 PresenTense Time Client NT 20 client pack, (1) s-ntp-pta-01 PresenTense NTP Auditor Single Client, (1) s-ntp-lta-01 Lan Time Analyzer Standard (20) clients, and (1) s-ntp-pts-01 PresenTense Time Server. • One license copy is needed per LAN in the same postal address. CD. • Add line item Server license for each additional separate LAN at same location.
s-ntp-UNLs-1LAN	PresenTense Package for Unlimited Seats in (1) LAN	This package combines the following products for organizations on one LAN and “unlimited” seats: (1) s-ntp-ptc-10 PresenTense Time Client NT site license, (1) s-ntp-lta-02 Lan Time Analyzer Standard professional unlimited clients, and (1) s-ntp-pts-01 PresenTense Time Servers. • One license copy is needed per LAN in the same postal address. CD. • Add line item Server license for each additional separate LAN at same location.
s-ntp-UNLs-2LAN	PresenTense Package for Unlimited Seats in (2) LANs	This package combines the following products for organizations on two LANs and “unlimited” seats: (1) s-ntp-ptc-10 PresenTense Time Client NT site license, (3) s-ntp-pta-01 PresenTense NTP Auditor Single Clients, (1) s-ntp-lta-02 Lan Time Analyzer Standard professional unlimited clients, and (2) s-ntp-pts-01 PresenTense Time Servers. • One license copy is needed per LAN in the same postal address. CD. • Add line item Server license for each additional separate LAN at same location
NetClock® Time Server/Master Clock Systems with Presentense Software		
GP952-94	NetClock/GPS 9483 with OCXO Oscillator Backup; Command Center Package with PresenTense	This package combines a GPS Master Clock system with PresenTense on one LAN up to 20 seats: (1) NetClock/GPS Master Clock; Model 9483 with OCXO, (1) GPS Outdoor Antenna; Model 8225, (1) GPS Antenna Surge Protector; Model 8226, (2) TimeView® 400 Display Clock; Model TV400W, (1) Outdoor GPS Antenna Cable; CAL7100, 100 ft., (1) RS-485 Station Cable; CWO4100, 100 ft., and (1) s-ntp-20s-1LAN PresenTense Package. • One license copy is needed per LAN. CD. • Add line item Server license for each additional separate LAN at same location.

PresenTense Software Specifications

	PresenTense Server	PresenTense Client NT	Lan Time Analyzer	NTP Auditor
Models	s-ntp-pts-01 (single)	s-ntp-ptc-01 (single) s-ntp-ptc-02 (20) s-ntp-ptc-10 (site)	s-ntp-lta-01 (single to manage 20) s-ntp-lta-02 (single to manage unlimited)	s-ntp-pta-01 (single) s-ntp-pta-02 (20)
Configuration				
Number installed per LAN for production operations	1 minimum	No logical limit. 1 per Workstation or Server machine	1 typical on a Workstation or Server machine, manages multiple clients on the LAN.	1 per critical server or workstation. Requires PresenTense Client
Operating Systems	Microsoft Windows (>=NT 4.0, 32 and 64-bit versions)	Microsoft Windows (>=NT 4.0, 32 and 64-bit versions)	Microsoft Windows (>=NT 4.0, 32 and 64-bit versions)	Microsoft Windows (>=NT 4.0, 32 and 64-bit versions)
On 30-day Evaluation Download or CD	Yes	Yes	Yes	Yes
Synchronization Capabilities				
Stratum Level	Typically Stratum 2	Typically Stratum 3 or >		
SNTP - RFC 2030 - Port 123 - for network timing	Yes	Yes		
SNTP - Gets time sync from a Primary source and a Backup source (setup choice)	Yes	Yes		
NTP v3, v4 - RFC 1305 - Port 123 - for network timing • With MD5 Authentication • With NTP v4 query command too	Yes	Yes		
NTP v3, v4 - RFC 1305 - Port 123 - Gets time from 1-3 time sources (NTP filtering) redundant network timing	Yes	Yes		
UDP/TIME - RFC 868 - Port 37	Yes	Yes		
TCP/TIME - RFC 868 - Port 37	Yes	Yes		
Reference clock is measured against standard deviation so that unexpected time jumps are discarded (generates an email alarm).	Yes	Yes		
NTP server scanner to find NTP sources on LAN	Yes	Yes		
Email (SMTP) notification if time sync is not working.	Yes	Yes		
Management Capabilities				
Syslog notification if time sync is not working.	Yes	Yes		
Allows centralized administrator to set when servers and clients are synchronized—without visiting each PC or server.			Yes	
Provides real-time analysis (dash board) of variance between the designated NTP server (a Windows server) and 1 time source such as NetClock. (Root dispersion.)			Yes	
Posts alarms to Alarm Screen and optionally launches .exe programs			Yes	
Verification Capabilities				
Compares time of local CPU clock with that of 1-3 time sources like NetClock or Internet time servers.				Yes
Real-time printout of the logs of results of comparisons for a paper trail. NASD OATS compliance.				Yes
Provides graphs of standard deviation of local CPU clock from 1-3 time sources.				Yes
Email (SMTP) notification if local CPU clock drifts outside user-defined limit (e.g. 100 ms).				Yes

NOTE: Orolia will replace the CD due to manufacturing defects only. Software purchase is non-refundable.