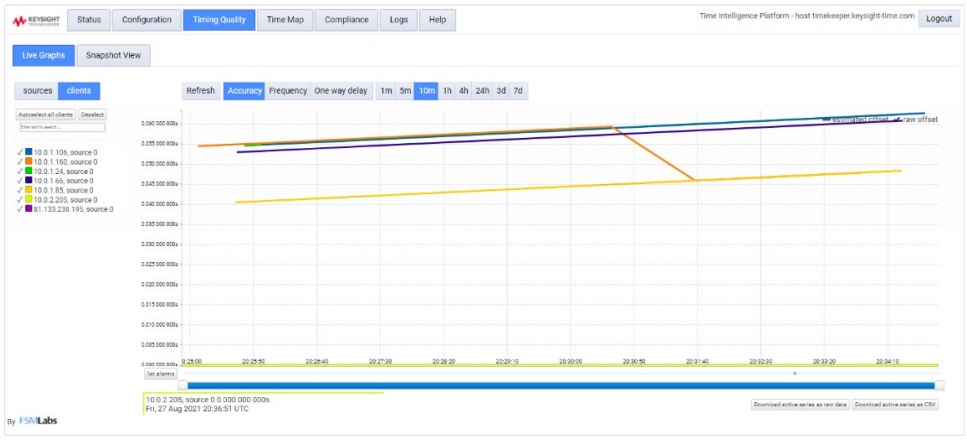
DATA SHEET

TimeKeeper® Server by FSMLabs

Secure Sub-Microsecond Server Grandmaster/Boundary Clock Sync of Critical Enterprise Applications

TimeKeeper Server Clock Sync Software

TimeKeeper Server a software grandmaster that can act as a boundary clock or stratum server while providing real-time monitoring and alerting, fault-tolerance, and clock distribution analysis. TimeKeeper Server receives any time source (GNSS, IRIG, CDMA, NTP, PTP, and others) and serves multiple NTP/PTP feeds over the network. TimeKeeper Server monitors the entire network time sync, visualizes the global network time sync topology, analyzes performance, and archives auditable records. TimeKeeper Server runs on Linux, Windows, and Solaris application servers and virtual machines, seamlessly upgrades legacy NTP infrastructure with leading-edge NTP/PTP precision at the lowest TCO, and automatically exploits available hardware-assisted timestamping for enhanced time precision. TimeKeeper Server performance exceeds many regulatory requirements, such as MiFID II, RTS-25, FINRA, CAT, PSD2, and UTC traceability.



BENEFITS

- Lowest cost to upgrade legacy NTP infrastructure with high-precision NTP/PTP clock sync solution
- Secure, trusted, UTC-traceable enterprise clock sync
- Monitoring with automatic failover and alerting for high-reliability clock sync
- Lowest TCO across multiple Linux, Windows, and Solaris servers
- Scalable in the cloud, on servers, and on VMs, without affecting clock sync

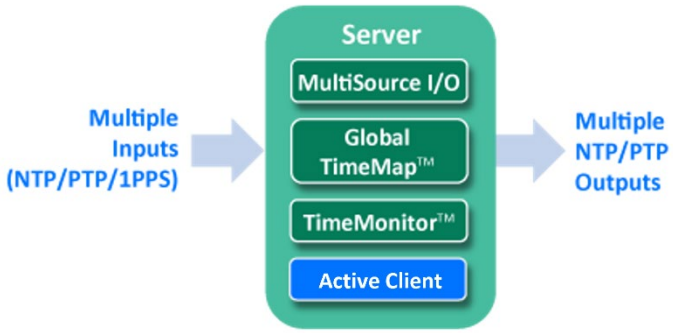
KEYSIGHT TECHNOLOGIES

How TimeKeeper Server Works

TimeKeeper Server integrates the machine learning based TimeKeeper Client product and these innovative, scalable features for resilient, reliable, and UTC-traceable enterprise clock sync:

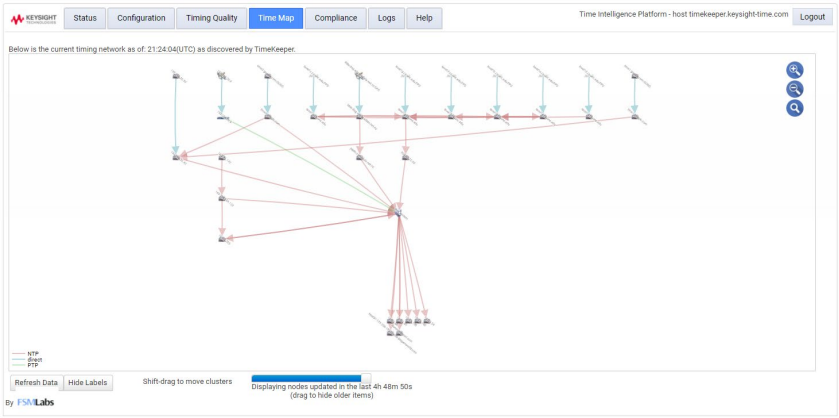
MultiSource for Security and Accuracy

This feature receives multiple NTP/PTP feeds over the network, accepts a 1PPS signal or uses a bus-level GNSS device, and serves multiple NTP/PTP feeds with a near infinite mix of NTP/PTP profiles. TimeKeeper Server can be configured as a boundary clock as well, receiving and serving multiple NTP/PTP feeds.



Global TimeMap

This powerful planning tool visually displays the global enterprise-wide clock sync network topology of multivendor clients and time servers, as well as TimeKeeper Client and the TimeKeeper Server. Critical UTC-traceable direct and indirect paths of primary reference time sources, such as GNSS, terrestrial TaaS (Time-as-a-Service) feeds, IRIG, CDMA, and any other source that serves time, are tracked and displayed in real time. Users can view or diagnose the time source profile of each TimeMap node (IP hostname, MAC, accuracy, and more).



FEATURES

- Uses patented machine learning technology to transform any server into a high-precision time server appliance
- Provides TimeMonitor™ tool to monitor the performance of the entire enterprise clock sync
- Displays Global TimeMap™ of the enterprise clock sync chain topology as a planning and management tool
- Provides clock sync performance analytics and archives audit records
- Comes with an intuitive web management dashboard for configuration, monitoring, performance analytics, UTC traceability, alerts, audit logs, admin, and more

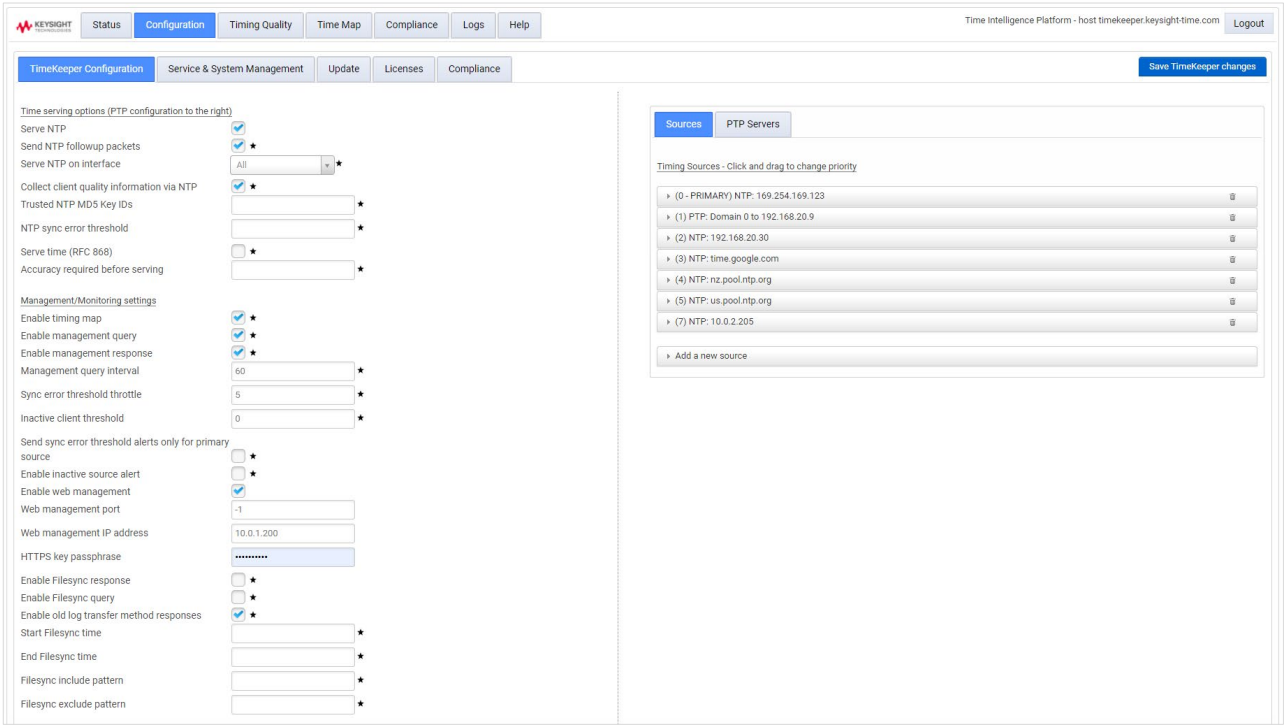
TimeMonitor

This innovative monitoring technology self-discovers the network topology of the enterprise clock sync chain by using a variety of network time protocols and profiles (PTP, PTP hybrid, PTP unicast, NTP, and more). TimeMonitor also aggregates timing data on the network, including time sync performance, UTC-traceability and other time-affecting data, to provide these unique real-time features:

- Monitoring of network clock sync of clients and of time distribution
- Alerting on time source and client errors via SNMP, email, and syslog (also accessible through any text-based log management system)
- Sending and receiving time management messages to/from multivendor clients and time servers, including the intelligent TimeKeeper Client
- Compiling a master audit log of clock sources and clients for TimeKeeper Compliance (TimeKeeper Compliance) and other analytics tools
- Automating the discovery of clients and clock sources for monitoring, logging, and configuration

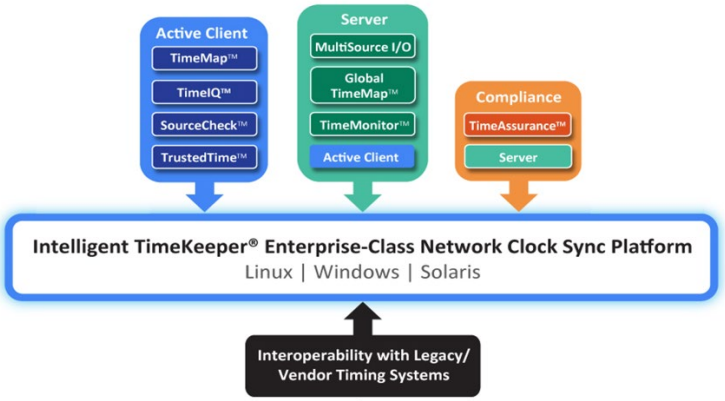
Web Management Dashboard

TimeKeeper Server is designed with an intuitive web management dashboard providing comprehensive user control features such as installation, configuration, performance monitoring/analytics, UTC-traceability, alert notification, fault logs, CLI, support, administration, and more. TimeKeeper Server settings can be changed without affecting the clock sync operation.



TimeKeeper Platform

TimeKeeper Server is a component of the intelligent, patented TimeKeeper enterprise-class network clock sync platform. TimeKeeper has the flexibility to operate with any legacy NTP/PTP infrastructure and to be configured with failover capability. TimeKeeper Server is vendor-agnostic, connects to multisource NTP/PTP feeds over the network, is compatible with a mix of timing vendors, and is fault-tolerant by design.



Enterprise-class TimeCare services

Our industry-leading TimeCare line of services helps our customers keep their network clocks time-synced 24/7 to run their server applications reliably and in compliance with regulatory requirements.

Why use TimeKeeper to Time-sync your critical enterprise applications?

The TimeKeeper Platform provides secure, resilient, state-of-the-art enterprise clock sync at higher accuracy than competing products, while providing the lowest TCO. Get a TimeAudit and see the difference.

TimeKeeper is the gold standard in secure enterprise clock sync, used by hundreds of large organizations including banks, financial institutions, government agencies, and more.

TimeKeeper consists of integrated products for secure clock sourcing, distribution, synchronization, monitoring, management, and administration. Products include:

- TimeKeeper Client
- TimeKeeper Server
- TimeKeeper

TimeKeeper Enterprise-class applications

- Financial
- Data center
- 5G
- IoT
- Cybersecurity
- Automation
- Cloud
- Gaming
- Broadcast

Key specifications	Options
Time sources	• NTP, PTP, GNSS, CDMA, RS232, IRIG, 1PPS
Time protocols	• PTP, NTP • PTP profiles: Default, Telecom, Hybrid, Enterprise and Others
Fault tolerance	• Multi-time sources over NTP/PTP • Failover design • Fault alerting • Network TimeMonitor • Global TimeMap topology
Monitoring	• Timing quality graphs • Time & frequency accuracy
Web management dashboard	• Performance monitoring • Visual network clock sync topology • Clock sync chain traceability to UTC • Multi-time source settings • NTP/PTP settings • Alert settings • Configuration settings
Multi-OS Servers/VMs supported	
Linux	• All major distributions (RHEL6 and newer) • Most in-house custom distributions
Windows	• Windows 8.1/10, Windows Server 2012/2016/2019-ready
Solaris	• Solaris 10/11, 64-bit x86, SPARC

*For optional features, or more information on Keysight Technologies' products, applications, or services, contact us at www.keysight.com/find/contactus

Schedule a Demo

Contact us at timekeeper@keysight.com to get a live demo today.

Ordering Information

Contact us at timekeeper@keysight.com to order these product part numbers directly from us or through our global value-added resellers.

Part number	Description
SUB-TK-1-1Y	TimeKeeper – One year subscription for 1 multi-time source client (937-3000)
SUB-TK-1-3Y	TimeKeeper – Three year subscription for 1 multi-time source client (937-3008)
SUB-TK-100-1Y	TimeKeeper – One year subscription for 100 multi-time source clients (937-3002)
SUB-TK-100-3Y	TimeKeeper – Three year subscription for 100 multi-time source clients (937-3010)
SUB-TK-1000-1Y	TimeKeeper – One year subscription for 1000 multi-time source clients (937-3004)
SUB-TK-1000-3Y	TimeKeeper – Three year subscription for 1000 multi-time source clients (937-3012)
SUB-TK-20-1Y	TimeKeeper – One year subscription for 20 multi-time source clients (937-3001)
SUB-TK-20-3Y	TimeKeeper – Three year subscription for 20 multi-time source clients (937-3009)
SUB-TK-500-1Y	TimeKeeper – One year subscription for 500 multi-time source clients (937-3003)
SUB-TK-500-3Y	TimeKeeper – Three year subscription for 500 multi-time source clients (937-3011)
SUB-TK-COM-ENT-1Y	TimeKeeper – Compliance (Enterprise), One year subscription, unlimited clients (937-3005)
SUB-TK-COM-ENT-3Y	TimeKeeper – Compliance (Enterprise), Three year subscription, unlimited clients (937-3013)
SUB-TK-COM-LITE-1Y	TimeKeeper – Compliance (Lite), One year subscription, unlimited clients (937-3006)
SUB-TK-COM-LITE-3Y	TimeKeeper – Compliance (Lite), Three year subscription, unlimited clients (937-3014)

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