

NTP – Time and Date in an IT Network



NTP function and advantages

■ Synchronising time in a network by NTP

Network Time Protocol (NTP) is a server/client protocol used to provide time and date synchronisation in IT networks. Local networks (LAN) in industry or public administration may use it as well as wide-ranging networks, e.g. the Internet. NTP is universally compatible. Originally developed for the UNIX Operating System, today it is synchronising all relevant Operating Systems, like Windows, Mac OS, Linux ...

Only in a time-synchronised network it is possible to correctly document data files at different states of processing and derive useful information from protocol entries. Nowadays, a precise time-base is absolutely essential in almost all applications and services.

■ NTP Time Server

The PEWETA NTP Time Server (see page 191) offers this precise time-base, which provides time derived from a high level time standard (DCF77 or GPS receiver) to the IT infrastructure. This enables all so-called »clients« installed in the network, e.g. PCs, telephone systems, printers or clocks to be synchronised with this time-base.

PEWETA NTP Time Servers offer pinpoint accuracy even if DCF77 or GPS reception is down. Several NTP Time Servers can be clustered for redundancy to ensure accessibility within the network. Status messages or network and safety settings can easily be configured within a web based user interface.

■ NTP slave clocks

PEWETA NTP slave clocks (SNTP clients) may receive the NTP protocol from a variety of NTP servers (provided by PEWETA or already installed) and adjust themselves, accurate to the second. Every NTP slave clock can be adjusted to access any other freely accessible NTP server on the internet instead of its home network's NTP server. If the network includes a DHCP server (protocol for automatic client configuration by a server) configured accordingly, setup will be carried out in a "plug-and-play" fashion. A web-based user interface makes changes in the setup a comfortable task to be carried out in an internet browser. PEWETA NTP slave clocks receive their power supply by PoE (Power over Ethernet), thus a single cable is sufficient for connection. If PoE is not available, an external source of power can be utilised. NTP provides UTC time (Universal Time Co-ordinated). Since every PEWETA NTP slave clock may be adjusted to the local time zone or any other time zone desired by the user, these clocks may be used world-wide or may be assembled into a World Time Display. PEWETA NTP slave clocks are easy to install and operate, and generally maintenance-free as well as energy efficient.

