Centauri Application Note 21
Network Time Protocol (NTP)

1   Introduction

The Network Time Protocol (NTP) is used to synchronize the time of a computer client or server to another server or reference time source, such as a radio or satellite receiver or modem. It provides accuracies typically within a millisecond on LANs and up to a few tens of milliseconds on WANs relative to Coordinated Universal Time (UTC) via a Global Positioning Service (GPS) receiver, for example. Typical NTP configurations utilize multiple redundant servers and diverse network paths in order to achieve high accuracy and reliability.

The standard timescale used by most nations of the world is Coordinated UniversalTime (UTC), which is based on the Earth's rotation about its axis, and the Gregorian Calendar, which is based on the Earth's rotation about the Sun. The UTC timescale is disciplined with respect to International Atomic Time (TAI) by inserting leap seconds at intervals of about 18 months. UTC time is disseminated by various means, including radio and satellite navigation systems, telephone modems and portable clocks.

2   NTP on Centauri

The Centauri uses the Simple NTP (SNTP) Version 4 which is described in RFC 2030. The currently implemented default-timescale is the Coordinated UniversalTime (UTC), described above.

NTP is available for Centauri as an optional functionality. It can be activated with a key code delivered by Mayah Communications. After activating NTP an editable file named **NTP.INI** is created within the folder **d:\cfg** on the Centauri's flashcard. This file includes the following information:

```
Interval=3600              //interval in seconds for timeleveling
Server1=ptbtime1.ptb.de           //server address of the NTP-Server 1
Server2=0.0.0.0
Server3=0.0.0.0
Server4=0.0.0.0
Server5=0.0.0.0
```

After modifying this ini-file, the changings will be accepted with the next interval. For activating the changings immediately, the Centauri has to be restarted.

Note that for using names (e.g. ptbtime1.ptb.de), Gateway and DNS-server have to be adjusted accordingly.

For more information see http://www.ntp.org/