

NTP Protocol stack development and Implementation

The customer is a leading Japanese company.

Objective

To implement a NTP protocol stack and NTP client on nucleus OS.

Special features

- A clock is implemented on the software level.
- Time information is collected by polling some remote NTP server through the Internet and compared with the internal clock periodically and is corrected in case of any discrepancy
- It can be easily ported to other embedded operating systems such as Embedded Linux.

Methodology and process involved

- Conversion from Unix time format to NTP time stamp format.
- Implementation of RFC 1305
- Integrating with other networking modules and interface module of Nucleus OS

Advantages to the customer

- Present implementation is a client that polls a single server, which could be extended to a system with client polling multiple servers and comparing the different time indications to get the most accurate time.
- This technology could be implemented as a server that runs on the network to provide time information to the nodes connected to it, within the internal network.