Net.Time software / firmware release notes

1. Software 1.4.X

Date	1/02/2023
Software version	1.4.1
Firmware versions	NTi-0066

Improvements included in this software / firmware release are listed in the following table:

#	Description	Remarks
1	ITU-T G.8265.1 PTP profile for frequency distribution in packet-switched networks (master mode).	• Requires the PTP telecom profiles software option.
2	ITU-T G.8275.1 PTP profile for time distribution with full support from the network (master and slave modes).	• Requires the PTP telecom profiles software option.
3	ITU-T G.8275.2 PTP profile fir time distribution with partial support from the network (master and slave modes).	• Requires the PTP telecom profiles software option.
4	SNMPv2c agent with the “community”-based security model and the SNMPv3 agent with support of *User Security Mode*.	
5	*Trap* and *Inform* generation for SNMPv2c and SNMPv3 agents.	
6	Implements miscellaneous SNMP MIBs, including MIBs to retrieve port information, generate log messages and manage the PTP and PRP services.	
7	Synchronous Ethernet inputs and outputs including ESMC generation and decoding and holdover to Synchronous Ethernet from time interfaces.	• Requires the SyncE software option.
8	Miscellaneous Web GUI improvements including editable fields for most configuration parameters.	
9	UTC time zone, which becomes the default time zone for Net.Time units.	
10	New CLI commands to show and manage unicast PTP leases.	
11	New ePRTC, ePRC and eEEC clock classes.	

Date	21/02/2023
Software version	1.4.3
Firmware versions	NTi-0066

Improvements included in this software / firmware release are listed in the following table:

#	Description	Remarks
1	Adds software support for LCD screens	• This improvement is relevant for Net.Time models equipped with LCD screen (Net.Time Phi and Net.Time Omega)

Date	01/03/2023
Software version	1.4.4
Firmware versions	NTi-0066

Bug corrections included in this software / firmware release are listed in the following table:

#	Description	Remarks
1	Fixes the issue related with LCD panel information reported when the clock reference is different from GNSS.	• This improvement is relevant for Net.Time models equipped with LCD screen (Net.Time Phi and Net.Time Omega)

2. Software 1.2.X

Date	14/03/2022
Software version	1.2.1
Firmware versions	NTi-0061

Improvements included in this software / firmware release are listed in the following table:

#	Description	Remarks
1	New PRP packet service to enable users to enable users to work with the Parallel Redundancy Protocol (PRP) defined in IEC 62439-3.	• Requires *PRP IEC 62439-3* software option.
2	Support of NTP timing distribution over PRP interfaces.	• Requires *PRP IEC 62439-3* and NTP software options.
3	PRP frame statistics including transmitted and received PRP frames with or without RCT trailer and miscellaneous error conditions.	• Requires *PRP IEC 62439-3* software option.
4	Dual PTP master / NTP server mode with the ability to enable one independent master / server instance in each of the available Ethernet ports when Net.Time is configured with the Packet Grandmaster packet service.	• Requires at least one of the available PTP or NTP software options.
5	New *Protocol Translator* packet service to enable users to configure PTP clock reference inputs and translate them into NTP outputs, PTP outputs with custom profiles or to any other clock reference output supported by Net.Time.	• Requires the *Boundary clock* software option.
6	Miscellaneous improvements in performance reporting in PTP, NTP and other interfaces through the *ClockClass*, *Accuracy*, *SSM* and other protocol fields.	
7	Compatibility with Replaceable Interface Cards (RICs). Users can use RICs to extend the functionality offered in the mainframe. Compatibility with five different RICs is implemented: RIC-50, RIC-52, RIC-54, RIC-82 and RIC-84.	• Requires any of the RIC-50, RIC-52, RIC-54, RIC-82 or RIC-84 modules.
8	Configuration of the pulse generation period in 1PPS outputs. This function enables users to set PPS periods other than 1 second.	
9	Support of alert interfaces that report any alarm generated in the system trough electronic or electro-mechanic relay contacts.	• Requires RIC-54, RIC-82 or RIC-84 modules.
10	Compatibility with DCF77 and Meinberg time codes.	• Requires any of the RIC-50, RIC-52, RIC-54, RIC-82 or RIC-84 modules.
11	Support of ASCII communication outputs supporting transmission of custom time codes in RS-232 or RS-422 / RS-485 communication interfaces without requiring 1PPS generation.	• Requires any of the RIC-50, RIC-52, RIC-54, RIC-82 or RIC-84 modules.
12	Configuration of NMEA messages in ASCII or ToD outputs. Three different options are supported: ZDA, GGA and RMC.	
13	Ability to configure local or UTC time zones in IRIG-B outputs or to decode the correct time zone from an IRIG-B input.	• Requires the IRIG-B software option
14	New port provisioning model to enable users to set the port in provisioned, maintenance or disabled modes.	

#	Description	Remarks
15	New port mapping model which provides a more scalable and clear mechanism to associate clock references to ports.	
16	Miscellaneous improvements and bug corrections in the file manager: listing and deletion of log files, startup configuration saving and improvements in configuration file listing	
17	Automatic log file rotation with configuration of the maximum log file size.	
18	Ability to operate in “time holdover” mode when all time references are lost and at least one frequency reference is still available. This mode can keep accurate time in the unit for a much longer time than in ordinary (frequency) holdover mode.	• Requires the “Frequency references” software option
19	Ability to work with time zones. Definition of custom time zones or configuration of predefined time-zones.	
20	Compatibility with Daylight Saving Time (DST) events. Configuration of DST events the custom time-zone. DST notifications in clock reference outputs. DST event decoding in clock reference inputs.	
21	Support of leap second events including notification to clock reference outputs supporting this function. Leap second decoding in clock reference inputs. Support of custom, user configurable leap second events.	
22	Support of HTTPS protocol in the web management interface. Users are now allowed to choose between HTTP or HTTPS.	
23	Mainframe and RIC module management from the web management interface for all the currently available RICs.	
24	Admin-status configuration, port mapping setting and connector selection from the web management interface.	
25	Support of administrator, controller and viewer accounts from the web management interface	