Real TTY drivers for Linux 5.x.x Release Notes

Applicable Products
NPort 5100A Series, NPort 5100 Series, NPort P5150A Series, NPort 5200A Series, NPort 5200 Series, NPort 5400 Series, NPort 5600 Series, NPort 5600-DT Series, NPort 5600-DTL Series, NPort Express Series, NPort IA5000A-I/O Series, NPort IAW5000A-I/O Series, NPort S8000 Series, NPort S9450i Series, NPort S9650i Series, NPort W2150A/W2250A Series, NPort IA5000A Series, NPort IA5000 Series, NPort 5000AI-M12 Series, NPort 6100/6200 Series, NPort 6400/6600 Series, CN2510 Series, CN2600 Series, MiiNePort E1 Series, MiiNePort E2 Series, MiiNePort E3 Series, MiiNePort W1 Series, NE-4100 Series

Supported Operating Systems
Linux Kernel 5.x

New Features
- Support the systemd process to load the Real TTY driver on the Linux platform.

Enhancements
- The connections of the opened TTY ports will not be disconnected and reconnected when adding or removing servers. The related descriptions are also removed in README.txt due to this change.
- Supports Virtual Machine. The virtual machine ESXi v6.7.0 is tested with guest OS Ubuntu 18.10 x64 and Ubuntu 19.04 x64.
- Supports ARM-based Linux. The Raspbian operating system with Raspberry Pi 2 and 3 are tested.

Bugs Fixed
- The driver may not set the nonstandard baudrate correctly.
- The driver may have a compiling error with message "malloc.c2401: sysmalloc: Assertion" on the distribution Fedora release 28.
- On the distribution Fedora release 24/26, the service daemon may not start NPort service properly after restarting OS.
- Fixing the driver may not determine the init process correctly when deleting the NPort server.

Changes
- Divided an independent driver version 4.0 to support only Linux kernel 4.x.

Notes
N/A
### Supported Operating Systems

Linux 3.x, Linux 4.x

### New Features

- Supports Raspbian Jessie and later for Raspberry Pi 2/3.
- Added driver background polling feature to eliminate the waiting time when an NPort is not present in Slackware 14.0.

### Enhancements

- Supports kernel 4.13.
- Compiling errors with error message “error: expected expression before '{' token” in specific platforms.
- When using a domain name as the mapping address for NPort, it will be translated every time when Real TTY is opening the port.
- Compiling errors when using secured Real COM mode.
- Shutdown hanging might happen in Red Hat Enterprise Linux 7.2 (3.10.0-123.el7).

### Bugs Fixed

- Real TTY can’t start up TTY ports with the domain name mapped after the system is rebooted.
- Kernel panic with error message "unable to handle kernel paging request" on specific platforms.
- Driver doesn't load properly after system reboot on Ubuntu 16.04.
- Driver may cause a kernel crash with the error message "soft lockup" with specific network interface cards.
- The command stty may output an error if there is no loopback connector on NPort in Redundant mode.
- Network reconnection problems when using redundant mode.
- The Real TTY service may not start automatically in Debian 6.0 and later versions.
- There may be communication loss when using IPv6.
- Data can't be read due to abnormal flow control in Linux kernel 3.8 and later.
- When security mode is enabled, the driver may crash if it connects to an offline NPort.
- Port mapping is incorrect after rebooting in Kernel 3.2.48.
- When NPort is offline, the current serial parameters are not saved for reconnection.
- While executing mxsetsec, the configuration of the driver will be cleared.
- When opening node /dev/ttyr10, port 16 should be opened, but port 10 is opened instead.
- The driver reference count becomes negative after a port open fails.

### Changes

- No longer supports kernel 2.x.
- Log file increasing without limit causes a file system crash.

### Notes

N/A