TOTAL CONTROL™

Network Management Card

Version 4.1

RELEASE NOTES

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What's New in this Release

Release 4.1 supports the following new features:

- **New Auto Response Events**
  Two new events have been added to the Auto Response feature. These events are registered on a channel level and are reported when the appropriate traps are enabled.
- **Accounting Enhancements**
  Where previously there was only an option to enable / disable a trap, many traps now include options so that you may specify enable / disable for both trap and log record generation.
- **VN4 Switch Support**
  A new option, priSwVn4, is now available for the Primary Switch Type Set parameter in the PRI Cards' (E1 and T1) PRI Trunk Settings configuration group.
- **Additional Configurable Parameters**
  Six new NMC, six new Modem, and six new T1 parameters were added to provide more configurable functionality.
- **New Card Management Support**
  Version 4.1 of the NMC supports the Channelized T1 card application running on the current T1 / PRI and E1 / PRI hardware.

For More Information

This Release Notes document is intended to point out new features, as well as revisions and enhancements to existing features. This document should be used in conjunction with the manuals in the Total Control Reference Library. The manuals in the library are updated for major releases only (version 2.0, version 3.0, etc.). Interim releases are documented solely by Release Notes. If you would like to obtain the manuals in the Total Control Reference Library, contact a U.S. Robotics sales representative, or download them in Adobe Portable Data Format from the U.S. Robotics BBS.

The information listed below is available in the Total Control directory (#15) on the U.S. Robotics BBS (847-982-5092) and Internet ftp site (ftp.usr.com / dl15). You may use anonymous ftp to download the files. All the files are available in Adobe Acrobat Portable Data Format (*.PDF).

- Regularly updated MIBs
  This information is provided in ASCII text (*.MIB).
- Application Notes
- Technical Bulletins
- Reference Manuals
- Release Notes

A Note about PDF Files

Files in Adobe Acrobat *.PDF format may be easily downloaded. You will, however, need the Acrobat Reader program to view the Acrobat files. Adobe provides free Reader software (DOS, Windows, Macintosh, and UNIX versions are available) at both an Internet ftp site (under the directory ftp.adobe.com / pub / adobe / Applications / Acrobat) and their World Wide Web Home Page (http: / / www.adobe.com /).

U.S. Robotics also provides Acrobat Reader software on its BBS in the MISC directory. Simply download the Reader software and install it on the computer, launch the program, and open the *.PDF document file.

New Auto Response Events

Two new events have been added to the Auto Response feature. These events are registered on a modem channel level and are reported when the appropriate traps are enabled.

Packet Bus Active

MIB Object: mdmArPacketBusActive

Triggered—when a when a packet bus active event is detected by the modem.

Packet Bus Lost

MIB Object: mdmArPacketBusLost

Triggered—when a packet bus lost event is detected by the modem.

Accounting Enhancements

Where previously there was only an option to enable / disable a trap, many traps now include options so you may specify enable / disable for both trap and log record generation. These additional options have been extended to many T1, T1 / PRI, E1 / PRI, X.25, NETServer, and Packet Bus traps in the 4.1 management release.

NOTE: Use discretion when configuring Traps with the *enableAll* setting. If too much information is sent, the server PC may be overloaded. When you enable a trap *and* a log, information is sent twice from the NMC.

VN4 Switch Support

A new option, priSwVn4, is now available for the uds1CfgPriSwitchType (Primary Switch Type Set parameter in TCM / SNMP), which sets the primary switch type for the PRI ISDN NAC. The setting takes effect after the card has been reset.

Additional Configurable Parameters

The following sections provide descriptions of the parameters configurable via management (using *Total Control Manager/SNMP* or from a MIB browser).

New NMC Parameters

Programmed Settings

By selecting the card from the Device Display on the *TCM* Console window and selecting **Programmed Settings** from the Configure Menu in *TCM*, the following parameters and their current values will be displayed on a Configuration Window.

Card-Level

NMC Identification Parameter Group

Packet Bus Clocking Source

MIB Object: nmcStatPktBusClkSrc

Description: Identifies the source of the backplane packet bus clock. When the backplane clock fails for one NAC, the backplane is still the source. But if the clock fails for more than one NAC, the NMC takes over as the clock source. A value of Not Applicable can mean there is no NMC clocking daughtercard (verified by the hardware revision level) or tha tthe card is installed in a chassis that doesn't have backplane clocking.

Settings: notApplicable
backplaneActive
backplaneActive1ClkFail
nmcActive

Hub Security Parameter Group

Security Server Unavailable

MIB Objects: nmcHsServerUnavailable

Description: This option specifies whether to deny or allow a call when a dial security server is unreachable.

Settings: denyCall
allowCall

Default: denyCall

Faults

By selecting the card from the Device Display on the *TCM* Console window and selecting **Trap Settings** from the Fault Menu in *TCM*, the following parameters and their current values will be displayed on a Configuration Window.

Card-Level

Hub Security Traps

Security Server Lost

MIB Objects: nmcTeSecSrvrLoss

Description: Enable / disable the trap generated when communication is lost with the Security Server.

Settings: enable
disable

Default: disable

Packet Bus Traps Group

Single Packet Bus Clock Fail

MIB Object: nmcTeSinglePbClockFail

Description: Enable / disable the trap generated when the NMC detects a packet bus clock failure in a single slot.

Settings: enable
disable

Default: enable

Packet Bus Clock Switch

MIB Object: nmcStatPktBusClkSrc

Description: Enable / disable the trap generated when the NMC detects a packet bus clock failure in multiple slots and the NMC has assumed the role of clock master.

Settings: enable
disable

Default: enable

Packet Bus Clock Fail

MIB Object: nmcTePbClockFail

Description: Enable / disable the trap generated when the NMC detects that the packet bus clock on the NMC daughter board has failed. Check status of the Packet Bus Clocking Source (nmcStatPktBusClkSrc) in the NMC Identification group to determine if the NMC was acting as clock master.

Settings: enable
disable

Default: enable

New Modem Parameters

Programmed Settings

By selecting the card or LED (channel) from the Device Display on the *TCM* Console window and selecting **Programmed Settings** from the Configure Menu in *TCM*, the following new parameters and their current values will be displayed on a Configuration Window.

Channel-Level

Signal Converter Settings Parameter Group

V.42 Selective Reject

MIB Objects: mdmScSelectiveReject

Command Setting Equivalent: ATS51.6

Description: Selective Reject works under V.42 error control and offers significant throughput improvements over noisy lines. The number of retransmitted blocks due to block errors (blers) is reduced because a specific data packet will be NAKed, rather than all packets received since the last ACKed packet.

Settings: Enable
Disable

Default: Enable

Call Control Options Parameter Group

T1 Idle/Disconnect Pattern

MIB Objects: mdmCcIdleDiscPatt

AT Command Equivalent: ATS71

Description: Allows you to change the idle / disconnect pattern used over the chassis TDM bus between the modem and a T1 card during call setup and teardown. Change this setting ONLY in situations where stray in-band characters from T1 DS0s are frequently misinterpreted by the modem as the idle / disconnect pattern, causing unexpected modem disconnects.

Reserved Patterns: 0, 2, 3, 4, 5, 6, 121, 128, 129, 130, 133, 134, and 255

WARNING: The T1 card must be set for the same value. Do not change this value without also setting the T1 card for the same value. Requires a T1 card compatible with this feature.

Settings: 0..255

Default: 1

Originate MNP10

MIB Objects: mdmCcMnp10

AT Command Equivalent: ATS61.4

Description: Originates using MNP10.

NOTE: Originate MNP10EC (S61.5) must be set to disabled, otherwise the modem originates MNP10EC.

Settings: Enable
Disable

Default: Disable

Originate MNP10EC

MIB Objects: mdmCcMnp10Ec

AT Command Equivalent: ATS61.5

Description: Originates using MNP10EC. Falls back to MNP10 if answering modem does not support MNP10EC. MNP10 *Enhanced Cellular* (MNP10EC) provides more robust data transmission over adverse cellular conditions than MNP10. MNP10EC is automatically negotiated when MNP10 Negotiation is enabled (S60.0=1) and the modem receives an MNP10EC call.

Settings: Enable
Disable

Default: Disable

ATZ Handling over Packet Bus

MIB Objects: mdmCcAtzPbHandling

Command Setting Equivalent: ATS72

Description: This setting allows you to determine how the modem will respond to an ATZ (reset) command sent via gateway cards over the packet bus.

Settings: normalAtz (Packet Bus link will break)
atzPbIgnored (Reset command will be ignored)
atzPbNvram (Modem will load settings from its NVRAM)

Default: normalAtz

DTE Interface Settings Parameter Group

DTR Recognition Time

MIB Objects: mdmDiDtrRecognitionTime

Command Setting Equivalent: S25

Description: When DTR makes a transition from off to on, this setting determines how quickly the modem reacts (in 100ths of a second). A value of 0 means the modem will react immediately.

Settings: 0..255

Default: 20

New T1 Parameters

Programmed Settings

By selecting the card from the Device Display on the *TCM* Console window and selecting **Programmed Settings** from the Configure Menu in *TCM*, the following new parameters and their current values will be displayed on a Configuration Window.

Card-Level

Dual T1 Programmed Settings Parameter Group

T1 Presence in Chassis

MIB Objects: dt1CfgNumT1TypeNacs

Description: Indicates the number of T1 and/orT1/E1 PRI NACs in the chassis.

Settings: notSupported
single
multiple

Default: multiple

T1 Idle Disconnect Pattern

MIB Objects: dt1CfgIdleDiscPatt

Description: Allows you to change the idle/disconnect pattern used over the chassis TDM bus between the modem and a T1 card during call setup and teardown. Change this setting ONLY in situations where stray in-band characters from T1 DS0s are frequently misinterpreted by the modem as the idle/disconnect pattern, causing unexpected modem disconnects.

Reserved Patterns: 0, 2, 3, 4, 5, 6, 121, 128, 129, 130, 133, 134, and 255

WARNING: The Modem card must be set for the same value. Do not change this value without also setting the Modem card for the same value. Requires a T1 card compatible with this feature.

Settings: 0..255

Default: 1

Faults

By selecting the span (LED) from the Device Display on the *TCM* Console window and selecting **Trap Settings** from the Fault Menu in *TCM*, the following new parameters and their current values will be displayed on a Configuration Window.

Span-Level

Trap Enables Group

Trap On Yellow Alarm Cleared

MIB Object: yellowAlarmClear

Description: This indicates that an OOF (Out of Frame) condition—also known as a Remote Frame Alarm (RFA)—has cleared at the remote end.

Settings: enableTrap
disableAll
enableLog
enableAll

Default: disableAll

Trap On Red Alarm Cleared

MIB Object: redAlarmClear

Description: This indicates that an Out of Frame (OOF) condition has been cleared.

Settings: enableTrap
disableAll
enableLog
enableAll

Default: disableAll

Trap On Loss of Signal Cleared

MIB Object: lossOfSignalClear

Description: This indicates that the signal is recovered and the density of 1's has reached 12.5%; that is, four 1's were received within a 32-bit period.

Settings: enableTrap
disableAll
enableLog
enableAll

Default: disableAll

Trap On AIS Cleared

MIB Object: alarmIndicationSignalClear

Description: This indicates that an Alarm Indicate Signal has been cleared and the remote end has been notified that the signal is being received.

Settings: enableTrap
disableAll
enableLog
enableAll

Default: disableAll

Command Line Software Download (PCDSL) and New Card Support

Additional .SDL and .NAC files have been developed for easy software download on new cards. Listed below are the .SDL and .NAC files available.

Supported prefixes are listed below:

SDL Prefix	NAC Prefix	Card
NM	NM	Network Management Card
QF	QF	Quad V.34 Modem (Analog, Digital, Analog/Digital)
QM	QM	Quad V.32*bis* Digital Modem
QT	QT	Quad V.32*terbo* Modem (Analog, Digital, Analog/Digital)
QR	QR	Single-Sided Quad Modem
T1	ST	Single T1 Card
T1	T1	Dual T1 Card
CT	CT	Channelized T1 Card
EN	EN	Ethernet TCP/IP Gateway Card
TR	TR	Token Ring TCP/IP Gateway Card
XP	XP	X.25 PAD Gateway Card
TR	LE	NETServer Ethernet Card
TR	LT	NETServer Token Ring Card
TR	LF	NETServer Frame Relay Card
PM	PM	MP/16 Management Module
PF	PF	MP/16 V.34 Modem Module
DP	DP	T1 Primary Rate ISDN Card
LI	LI	NETServer ISDN Card
EP	EP	E1 Primary Rate ISDN Card
WG	WG	Wireless Access Gateway

Refer to the *Software Download Installation Summary* that accompanies your new software for specific instructions on performing software downloads.