



MAX TNT[®]

True Access[™] Operating System (TAOS) 8.0 Cumulative
Release Notes


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- Software and hardware options
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- Type of computer you are using
- Description of the problem

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Notices and known issues

The following sections list the notices and known issues in TAOS 8.0.5. Read the following notices and known issues carefully before upgrading to TAOS 8.0.5 software.

Notice of TAOS 8.0.5 software upgrade and release note availability

TAOS 8.0.5 software upgrades and release notes might not be immediately available in the eSightSM Service Center at <http://www.esight.com>. To obtain TAOS 8.0.5 software upgrades and release notes for this product immediately after its release, go to <ftp.ascend.com>.

Notice of nonsupport for Voice over IP (VoIP) in TAOS 8.0.5

TAOS 8.0.5 does not include support for MultiVoice® (VoIP) on MAX TNT units.

Notice of a tunneling configuration requirement

If you are configuring Ascend Tunnel Management Protocol (ATMP), Layer 2 Tunneling Protocol (L2TP), or Point-to-Point Tunneling Protocol (PPTP) on a TAOS unit, you must set the `system-ip-address` parameter of the `ip-global` profile to specify a system IP address.

Notice of memory requirement in future TAOS releases

To upgrade to MAX TNT TAOS 9.0.x, your MAX TNT unit must be equipped with the 32MB flash card. Contact your Lucent sales representative to purchase the 32MB flash card.

Notice of support for new shelf controller

TAOS 8.0.3 introduced support for a new shelf-controller hardware implementation (model number TNT-SP-SC-SS). The backplane of the new shelf controller does not include multishelf components, so it does not support the physical connection of multiple chassis to operate as one virtual unit. All other functionality is identical with the older shelf controller (model number TNT-SP-SC).

To use the new shelf controller, the unit must be running TAOS 8.0.5 or later.



Caution: The new shelf controller does not power up if it is installed in a unit running an earlier version of TAOS. When the new shelf controller has been installed, you cannot downgrade the unit to software earlier than TAOS 8.0.5.

Notice of modified RADIUS port and ID space defaults

Caution: This modification could cause authentication failures with RADIUS servers that do not support distinct support distinct UDP source ports. If your RADIUS server does not support authentication User Datagram Protocol (UDP) source ports. If your RADIUS server does not support authentication requests from multiple source ports, you must reset the modified parameters to their previous values.

The default settings for UDP source ports and ID spaces for communication with a RADIUS server have been changed from single to multiple. Following are the relevant parameters, shown with the new default settings:

```
[EXTERNAL-AUTH]
rad-id-space = distinct
rad-id-source-unique = port-unique
```

MAX TNT units can use either a single global source UDP port for all slot cards, or a unique port for each card. Similarly, a unit can use one ID space for both authentication and accounting requests, or a distinct space for each type of request.

Previous TAOS versions recommended the use of multiple source ports and ID spaces for performance reasons, and because use of a single source port and ID space reduces the number of simultaneous requests that the unit can generate. However, the default settings configured a single global source port and ID space to ensure compatibility with all RADIUS servers.

In this release, the default settings have been changed to the recommended values.

If the system was already using the recommended settings, this change has no effect.

Systems that used the previous default settings respond as follows:

- If the RADIUS server supports distinct source ports, the system will experience a slight improvement in performance.
- If the RADIUS server does not support distinct source ports, the system will experience problems with RADIUS authentication and accounting.

To communicate with RADIUS servers that do not support distinct source ports, you must modify the External-Auth profile as follows to restore the parameters to their previous values:

```
admin> read external-auth
EXTERNAL-AUTH read

admin> set rad-id-space = unified

admin> set rad-id-source-unique = system-unique

admin> write
EXTERNAL-AUTH written
```

Notice of modified behavior during IPCP negotiation

In previous releases, the MAX TNT unit's system address was used during IP Control Protocol (IPCP) negotiation. In previous releases, if the System-IP-Addr parameter was null, the shelf controller IP address was used.

For TAOS 8.0.1 and later, the MAX TNT unit requires a valid System-IP-Addr setting to complete IPCP negotiation. For example, the following commands explicitly set the system address to the shelf controller IP address:

```
admin> get ip-int { {1 c 1} 0} ip-address
ip-address = 10.2.3.4

admin> read ip-global
IP-GLOBAL read

admin> set system-ip-addr = 10.2.3.4

admin> write
IP-GLOBAL written
```

Note: If the System-IP-Addr setting is null, the system terminates PPP connections during the IPCP negotiation phase.

Notice of discontinuance of software support

Software support has been discontinued for the MAX TNT Ethernet-0 slot card (TNT-SL-E10), the Fast (100MB) Ethernet-1 slot card (TNT-SL-E100), and the older MAX TNT Hybrid Access slot cards (TNT-SL-HA128 and TNT-SL-HA192).

Notice of discontinuance of MAX TNT support for DSL

Support for digital subscriber line (DSL) functionality is discontinued in MAX TNT units as of TAOS 8.0.1. The DSLTNT™ platform supports existing DSL products and will introduce additional DSL functionality in future releases.

Notice of deprecated management features

Use of the `if-admin` diagnostic command is deprecated. The functionality that was provided by the `-d` (down) and `-u` (up) options of the command is now provided by `read`, `set`, and `write` operations on one of the following profiles:

- The Admin-State-Perm-If profile for permanent interfaces such as a nailed interface
- The Admin-State-Phys-If profile for physical interfaces such as a T1 line

The other options of the `if-admin` command are not supported.

Use of the `call-log-radius-compat` parameter in the Call-Logging profile is deprecated in this software version.

The `callActiveIfIndex` and `callStatusIfIndex` objects in the call management information base (MIB) are not supported in this software version.

This following objects are supported in this software version, but will not be supported in future software versions:

- The `lmodem.mib`
- The `resetStat` group in `ascend.mib`
- The `consoleTable`, `doTable`, and `hostStatusTable` in `ascend.mib`

Notice about upgrading slot cards

If you replace a Fast (100MB) Ethernet-1 slot card (TNT-SL-E100) with a newer Ethernet card (TNT-SL-E10-100 or TNT-SL-E100-V-C), you must write new Ethernet profiles for the new card. The old Ethernet profiles do not carry forward.

If you replace an older Hybrid Access slot card (TNT-SL-HA128 or TNT-SL-HA192) with a newer Hybrid Access card (TNT-SL-HDLC2 or TNT-SL-HDLC2-EC-C), and if you replace a Series56™ modem card (TNT-SL-48MOD-S56) with a newer Series56™ card (TNT-SL-48MOD-S-C or TNT-SL-48MODV3-S-C), you must write new profiles for the new cards.

If you replace a Series56™ modem card (TNT-SL-48MOD-S56, TNT-SL-48MOD-SGL, TNT-SL-48MOD-S-C or TNT-SL-48MODV3-S-C) with a MultiDSP card (TNTP-SL-ADI-C, TNTV-SL-ADI-C, or APX8-SL-96DSP), you must write new profiles for the new cards.

For any slot whose card type is being changed, you enter a `slot -r` command after deactivating (`slot -d`) or removing the existing card, to remove the slot's configuration before you insert a new type of card.

Known issues in this release

Be aware of the following limitations that are known to exist in TAOS 8.0.5

- Before changing an ATM connection's VPI-VCI assignment, you must disable the connection on a MAX TNT OC3-ATM copper slot card (TNT-SL-OC3-C) or MAX TNT OC3-ATM fiber slot card (TNT-SL-OC3-F).
- Multilink Protocol (MP) bonding of analog calls is supported, but some client modems and software might have compatibility problems.
- Configurable receive and transmit data rate limits are not supported on the MAX TNT unchannelized DS3-ATM slot card (TNT-SL-UDS3A). Configurable receive and transmit data rate limits *are* supported on the unchannelized DS3 frame relay slot card (TNT-SL-UDS3).
- LAN-Modem profiles contain entries for 96 devices. For the 96-port MultiDSP card, all 96 entries in the profile are used. For 48-port modem cards (Series56™ modem card (TNT-SL-48MOD-S56), Series56™ II (TNT-SL-48MOD-S-C), and Series56™ III (TNT-SL-48MODV3-S-C) cards), only the first 48 entries are used. For the 48-port MultiDSP card (TNTP-SL-ADI-C or TNTV-SL-ADI-C), every other entry in a LAN-Modem profile is used (odd ports only, from 1 to 95).
- Performing software license upgrades following a TAOS release downgrade: If you downgrade from TAOS 8.0.x to TAOS 7.x.x on a unit with an 8-digit serial number, do not use the `revision` command to perform software license upgrades. Use the `update` command only.

The following known issue applies to the MultiVoice® extension feature of TAOS 8.0.3:

- For transparent fax operations, if the G.711 mu-law audio codec (`g711-ulaw`) is selected for the Packet-Audio-Mode parameter, the value assigned the Frames-Per-Packet parameter must be 2, as illustrated by the following example :

```
admin> read voip { 0 0 }  
VOIP/{ 0 0 } read
```

```
admin> list
[in VOIP/{ 0 0 }]
....
packet-audio-mode = g711-ulaw
frames-per-packet = 2
....
```

Using a higher value for Frames-Per-Packet can result in transmission errors, lost data, and failed fax modem transmission.

Upgrade and downgrade procedures

This section shows how to upgrade or downgrade the TAOS software of a MAX TNT unit.

Requirements and recommendations

Before you upgrade the TAOS software a MAX TNT unit, read these general recommendations that apply to all MAX TNT units. Following these recommendations helps ensure a smooth upgrade procedure. If you must downgrade to an earlier software version, see “Downgrade instructions” on page 11.

Note: Under certain conditions, the `load tar` command might recognize no slot cards and load only the shelf controller image during the upgrade procedure. If this occurs, reset the system and load the tar file again. The second `load tar` command will load the appropriate slot-card images for the system.

Obtaining the TAOS 8.0.5 software

The TAOS 8.0.5 software consists of the following files:

Filename	Descriptions
<code>tntsr.b.bin</code>	The boot loader. Both T1 and E1 loads use the same boot loader software. You must always install a new boot loader when upgrading or downgrading.
<code>tntrel.tar</code>	Tar file (T1 load) that contains images for the shelf controller and all T1-compatible slot cards.
<code>tntrele.tar</code>	Tar file (E1 load) that contains images for the shelf controller and all E1-compatible slot cards.
<code>tntbase.tar</code>	Tar file (T1 load) that contains all basic images required by a North American ISP and that is less than 8MB in size. The file contains images for only the following modules: Shelf controller (T1), channelized T1 (8T1), T1 FrameLine (UT1), T3, Ethernet-2, Ethernet-3, Hybrid Access HDLC2, Series56™ Digital Modem (56K), and Series56™ II Digital Modem cards.
<code>tntbasee.tar</code>	Tar file (E1 load) that contains all basic images required by a European ISP and that is less than 8MB in size. The file contains images for only the following modules: Shelf controller (E1), channelized E1 (8E1), E1 FrameLine (UE1), Ethernet-2, Ethernet-3, Hybrid Access HDLC2, Series56™ Digital Modem (56K), and Series56™ II Digital Modem cards.

You can obtain the files you need from the anonymous FTP server `ftp.ascend.com`. If you need technical assistance, see “Customer Service,” on page iii.

Local access to the unit recommended

Whenever you install system software, Lucent recommends that you access the unit through the shelf controller serial or LAN port rather than a slot card port.

32-MB JEDEC DRAM card required for this release

For this release, the MAX TNT requires a 32-MB JEDEC DRAM card (model number TNT-SP-DRAM-32). New MAX TNT units now ship standard with the 32-MB DRAM card.

Note: For multishelf systems, the master shelf and each slave shelf must have a 32-MB JEDEC DRAM card (model number TNT-SP-DRAM-32).

The 32-MB JEDEC DRAM card is *not* hot swappable. To install the card, you must turn off power to the MAX TNT, insert the card and then power on the MAX TNT. For additional information about the card, contact your service representative.

Flash size limitations for this upgrade

Because the MAX TNT supports many different slot card types, the tar files containing slot-card code images can be too large to load on an 8MB flash card. MAX TNT includes a Load-Select profile type that prevents loading the entire set of slot-card images. The profile causes the system to determine which card types are present and load only those images. For details about the Load-Select profile, see the *APX8000™/MAX TNT Reference*.

In this release, the `tntbase.tar` and `tntbasee.tar` files are less than 8MB in size and are guaranteed to fit on an 8MB flash card.

If neither of the small tar files are appropriate for your systems, to load this release to 8MB flash, make sure that all parameters in the Load-Select profile are set to `auto` and that the combined binaries required to run the system and its cards do not exceed 8MB. Following are the approximate sizes of each binary in the tar file:

Table 1. Approximate sizes of shelf controller and card binaries

System component	Binary filename	Approx. size (KB)
Shelf controller (T1)	<code>tntsr/tntsr.ffs</code>	1800
Shelf controller (E1)	<code>tntsre/tntsre.ffs</code>	1800
Channelized T1 (8T1)	<code>tnt8t1/tnt8t1.ffs</code>	275
T1 FrameLine (UT1)	<code>tntut1/tntut1.ffs</code>	825
Channelized E1 (8E1)	<code>tnt8e1/tnt8e1.ffs</code>	260
E1 FrameLine (UE1)	<code>tntue1/tntue1.ffs</code>	810
T3	<code>tntt3/tntt3.ffs</code>	310
Ethernet-2	<code>tntenet2/tntenet2.ffs</code>	240
Ethernet-3	<code>tntenet3/tntenet3.ffs</code>	355
Hybrid Access II (HDLC2)	<code>tnthdlc2/tnthdlc2.ffs</code>	1005
Hybrid Access III (HDLC2-EC)	<code>tnthdlc2ec/tnthdlc2ec.ffs</code>	1000
Serial WAN (SWAN)	<code>tntswan/tntswan.ffs</code>	725
Unchannelized DS3 (UDS3)	<code>tntuds3/tntuds3.ffs</code>	730
DS3-ATM	<code>tntds3atm/tntds3atm.ffs</code>	735
DS3-ATM2	<code>tntds3atm2/tntds3atm2.ffs</code>	930
OC3-ATM	<code>tntoc3atm/tntoc3atm.ffs</code>	730
Analog modem	<code>tntamdm/tntamdm.ffs</code>	700

Table 1. Approximate sizes of shelf controller and card binaries (continued)

System component	Binary filename	Approx. size (KB)
Series56™ Digital Modem	tntmdm56k/tntmdm56k.ffi	850
Series56™ I/ Series56™ II Digital Modem	tntcsmx/tntcsmx.ffi	990
Series56™ III Digital Modem	tntcs3v/tntcs3v.ffi	980
MultiDSP	tntmadd/tntmadd.ffi	1300
STM-0	tntstm0/tntstm0.ffi	300

Saving the system configuration

As a general practice, always save the system configuration before upgrading or downgrading system software. You can then restore the configuration along with the system software that was in use prior to the upgrade or downgrade procedure. If you use TFTP to save the system configuration, the target file must exist on the TFTP server and you must have permission to write it. For example, the following commands executed on a TFTP server create a target file and set its permissions:

```
$ touch /tftpboot/config/testcfg.1
$ chmod a=rw /tftpboot/config/testcfg.1
```

Before you save the system configuration, you must enable the Allow-Password permission in the MAX TNT User profile to save the configured passwords. If you do not have Allow-Password permission enabled, you will be prompted to confirm that you wish to save the configuration without passwords. If you do so and then restore the saved configuration, all passwords in the configuration are wiped out. The following commands executed on the MAX TNT save the system's configuration to the target file on the TFTP server and then restore the saved configuration:

```
admin> save -a network 10.10.10.10 config/testcfg.1
admin> load config network 10.10.10.10 config/testcfg.1
```

Upgrade instructions

These instructions show how to upgrade to TAOS 8.0.5 from TAOS version 8.0.1 or later. If you are not sure which version the system is running, enter the `version` command. For example:

```
admin> version
Software version 8.0.1
```

Note: If the system is running a software version earlier than TAOS 8.0.1, you must follow the upgrade instructions in the MAX TNT *TAOS 8.0.1 Release Note* to upgrade to this release. See the MAX TNT *TAOS 8.0.1 Release Note* at <http://www.lucent.com/ins/doclibrary>.

Note: Under certain conditions, the `load tar` command might recognize no slot cards and load only the shelf controller image during the upgrade procedure. If this occurs, reset the system and load the tar file again. The second `load tar` command will load the appropriate slot-card images for the system.

Before you begin upgrading

Before upgrading a standalone or multishelf unit, follow these preliminary steps:

- 1 Log into the system and save its configuration to a TFTP server. This step is optional but strongly recommended. For details, see “Saving the system configuration” on page 9.
- 2 Verify that the combined binaries required to run the system and its cards do not exceed 8MB. See “Approximate sizes of shelf controller and card binaries” on page 8.
- 3 Verify that the Load-Select profile is configured to automatically load only required binaries. All parameters in the profile must be set to `auto`.

Upgrading a standalone MAX TNT unit



Note: The following steps are order-sensitive. To help ensure a smooth upgrade, first perform the preliminary upgrade steps described in the preceding section, and then perform the following steps in the order in which they are shown.

To upgrade a standalone unit with 8MB flash, proceed as follows:

- 1 Format the flash card. For example:

```
admin> format flash-card-1
```
- 2 Load the boot loader. For example:

```
admin> load boot-sr network 10.10.10.10 tntsrbin.bin
```
- 3 Load the tar file. For example:

```
admin> load tar network 10.10.10.10 tntrel.tar
```
- 4 Load the system configuration. This step is optional, but recommended. For example:

```
admin> load config network 10.10.10.10 config/tntconfig
```
- 5 Reset the system. This step is required. For example:

```
admin> reset
```

Upgrading a multishelf MAX TNT unit

Note: For multishelf systems, the master shelf and each slave shelf must have a 32-MB JEDEC DRAM card (model number TNT-SP-DRAM-32).

If you are upgrading a multishelf system, you must propagate the new boot loader to the slave shelves by using the Loadslave command. (The version of the `tntsrbin.bin` file on the master shelf must match the `tntsrbin.bin` version on the slave shelves. Otherwise, the slave shelves cannot load code from the master shelf.) In addition, you must propagate a link to a redundant image of the tar file located in onboard flash.



Note: The following steps are order-sensitive. To help ensure a smooth upgrade, first perform the preliminary steps described in “Before you begin upgrading” on page 10, and then perform the following steps in the order in which they are shown.

To upgrade a multishelf unit with 8MB flash, proceed as follows:

- 1 Format the flash card. For example:

```
admin> format flash-card-1
```
- 2 Load the boot loader. For example:

```
admin> load boot-sr network 10.10.10.10 tntsrbin.bin
```


- 3 Propagate the new boot loader to the slave shelves. For example, the following command propagates the boot loader to a slave shelf with a rotary-switch setting of 2:

```
admin> loadslave 2 boot-sr
```
- 4 Load the tar file. For example:

```
admin> load tar network 10.10.10.10 tntrel.tar
```
- 5 Use the Loadslave command to propagate a link to the image2 file, which is a redundant image of the tar file created in onboard flash. For example, the following command propagates the image to a slave shelf with a rotary-switch setting of 2:

```
admin> loadslave 2 image2
```
- 6 Load the system configuration. This step is optional, but recommended. For example:

```
admin> load config network 10.10.10.10 config/tntconfig
```
- 7 Reset the system. This step is required. For example:

```
admin> reset -a
```

Downgrade instructions

Because releases are not necessarily backward compatible, Lucent recommends that you always restore a backup configuration made under the previous version or one of its predecessors.

Note: If you must downgrade to a version earlier than TAOS 8.0.1, serial access to the MAX TNT unit is required. See the MAX TNT *TAOS 8.0.1 Release Note* at <http://www.lucent.com/ins/doclibrary>.

Downgrading a standalone MAX TNT unit

To restore the previous software version (TAOS 8.0.1 or earlier), proceed as follows:

- 1 Log into the MAX TNT and save the current configuration to a TFTP server. This step is optional, but recommended.
- 2 Format the flash card. For example:

```
admin> format flash-card-1
```
- 3 Load the previous version of the boot loader. For example:

```
admin> load boot-sr network 10.10.10.10 tntsr.b.bin
```
- 4 Load the previous version of the tar file. For example, to load via TFTP from a local host:

```
admin> load tar network 10.10.10.10 tntrel.tar
```
- 5 Load a backup configuration made under the restored software version or one of its predecessors. For example:

```
admin> load config network 10.10.10.10 config/801-config
```
- 6 Reset the system. This step is required. For example:

```
admin> reset
```

Downgrading a multishelf MAX TNT unit

If you are downgrading a multishelf system, you must propagate the restored boot loader to the slave shelves by using the Loadslave command. (The version of the `tntsrbin` file on the master shelf must match the `tntsrbin` version on the slave shelves. Otherwise, the slave shelves cannot load code from the master shelf.) In addition, you must propagate a link to a redundant image of the restored tar file. To restore an earlier system software version, proceed as follows:

- 1** Log into the master shelf and save the current configuration to a TFTP server. This step is optional, but recommended.
- 2** Format the flash card. For example:

```
admin> format flash-card-1
```
- 3** Load the previous version of the boot loader. For example:

```
admin> load boot-sr network 10.10.10.10 tntsrbin
```
- 4** Propagate the boot loader to the slave shelves. For example, the following command propagates the boot loader to a slave shelf with a rotary-switch setting of 2:

```
admin> loadslave 2 boot-sr
```
- 5** Load the previous version of the tar file. For example, to load via TFTP from a local host:

```
admin> load tar network 10.10.10.10 tntrel.tar
```
- 6** Use the Loadslave command to propagate a link to the `image2` file, which is a redundant image of the tar file created in onboard flash. For example, the following command propagates the image to a slave shelf with a rotary-switch setting of 2:

```
admin> loadslave 2 image2
```
- 7** Load a backup configuration made under the restored software version or one of its predecessors. For example:

```
admin> load config network 10.10.10.10 config/801-config
```
- 8** Reset the system. This step is optional, but recommended. For example:

```
admin> reset -a
```

MAX TNT TAOS 8.0.5

The following sections describe the software enhancements introduced and problems corrected in this release.

Enhancements in TAOS 8.0.5

Modem and DSP firmware versions

The Mindspeed firmware versions for MAX TNT digital modem cards include support for V.90, K56flex, K56plus, and all slower, standard modem speeds. This release upgrades the Series56™ II and Series Digital Modem slot cards to V5.8177 firmware and the MultiDSP slot cards to Lucent V0.1.46 firmware.

TAOS 8.0.5 includes the following firmware:

- Series56™ Digital Modem slot cards (also called CSM/1 or TNT-SL-48MOD-S56) support V2.0982-K56_2M_DLP_CSM firmware.
- Series56™ II Digital Modem slot cards (also called CSM/3, TNT-SL-48MOD-SGL, and TNT-SL-48MOD-S-C) support V5.8177 firmware.
- Series56™ III Digital Modem slot cards (also called CSMV/3 or TNT-SL-48MODV3-S-C) support V5.8177 firmware.

TAOS 8.0.5 includes the following Lucent firmware versions for MultiDSP cards:

- 48-port MultiDSP cards (TNTP-SL-ADI-C or TNTV-SL-ADI-C) support Lucent V0.1.46 firmware.
- 96-port MultiDSP cards (APX8-SL-96DSP) support Lucent V0.1.46 firmware.

Corrections in TAOS 8.0.5

Table 2 lists trouble reports (TRs) that have been corrected in this release.

Table 2. Trouble reports (TRs) corrected in this release

TR ID	Description
1000211	Previously, if you disabled an E1 line using the command-line interface, the MAX TNT unit continued to process interrupts. The far-end device then failed to recognize that the E1 line was disabled. In this release, the MAX TNT unit now generates an Alarm Indication Signal (AIS) when an E1 line is disabled using the command-line interface.

Table 2. Trouble reports (TRs) corrected in this release (continued)

TR ID	Description
6000154	You can now use 3.1kHz audio as the bearer service to establish an outdial store and forward fax call instead of speech. To enable this capability, set the the connection > any connection > telco-options > data-service parameter to the new setting modem-3-1khz-audio. [in CONNECTION/congo:telco-options] set data-service = modem-3-1khz-audio
6001020	Previously, failed digital calls were treated as bad modem calls.
6001036	The MAX TNT unit generated two address-free requests when a session timed out for a PPP call.
6001059	The MAX TNT unit sometimes stopped accepting calls on its R2 trunk.
6001084	This release upgrades the Mindspeed firmware on the Series56™ II Digital Modem (CSM/3) slot cards from V5.817 to V5.8177 and Series56™ III Digital Modem (CSM/3V) slot cards from V5.8175 to V5.8177. This upgrade corrects the following problems with Ambient modem devices: <ul style="list-style-type: none"> • The modem devices disconnected calls minutes after connecting. • The modem devices dropped to V.34 rates after connecting.
6001167	A user dialing in to a MAX TNT unit using an AM36 modem device was unable to establish a connection. The modem was then stuck in the terminal server session, even though the remote end had already hung up.
6001168	In TAOS 8.0.2 through TAOS 8.0.4, the callback feature did not work properly between a MAX TNT unit and the ASG 3.x (IPDC). The MAX TNT unit dialed out, the call was connected, and a DSP resource was allocated, but the DSP did not perform PPP or modem negotiation.

Table 2. Trouble reports (TRs) corrected in this release (continued)

TR ID	Description
6001267	<p>The MAX TNT unit generated inconsistent disconnect cause and progress codes in Stop, Call, and LAN session information</p> <p>If you set the <code>log > call-info</code> parameter to <code>end-of-call</code> and the <code>syslog-format</code> parameter to <code>tnt</code>, the MAX TNT unit generates a <code>LAN session info</code> record and a Stop record information on the command-line interface (CLI) and in Syslog. If you set the <code>syslog-format</code> parameter to <code>max</code>, the MAX TNT unit generates a Call record and a <code>LAN session info</code> record on the command-line interface and Syslog.</p> <p>This release corrects the following problems associated with the disconnect cause and progress codes at the end of a call:</p> <ul style="list-style-type: none"> • Disconnect cause and progress codes displayed in the Stop or Call record differed from those in <code>LAN session info</code> records. • Some records displayed disconnect cause code 1, which should not be reported for any calls. • The disconnect cause and progress codes displayed in the RADIUS accounting Stop packets differed from those reported in the Stop record or Call record.
6001330	<p>The mandatory bit of the Rx Connect Speed attribute-value pair (AVP) type 38 sent in L2TP Incoming and Outgoing Call Connected control messages did not comply with RFC 2661. In this release the mandatory bit for the Rx Conn Speed AVP is now set to 0.</p>
6001444	<p>Previously, Syslog End-of-Call records truncated the username associated with a RADIUS-authenticated dial-in session to 31 characters. Syslog end-of-call records now display up to 253 characters of the username.</p>
6001485	<p>When a frame relay session was terminated and an accounting Stop packet was sent over the WAN, the Hybrid Access III (HDLC-EC) slot card reset with a fatal error FE36.</p>
6001521, 6001795, 6001927, 6002106	<p>This release upgrades the MultiDSP (MADD) modem firmware from V0.1.35 to version 1.4.6.</p> <p>This upgrade resolves the following problems associated with some client modems connecting to MAX TNT units with MultiDSP2 (MADD2) cards:</p> <ul style="list-style-type: none"> • High rates of disconnects with Landel Mailbug (PDA) modem devices (185/31) • Failure to connect PPP with SciScan modem devices • Ungraceful disconnects with PCTEL client modem devices • Some modems were unable to connect to MultiDSP cards card at rates of 2400bps or 1200bps • V.23 calls that were disabled for the automode feature failed to connect to MultiDSP cards

Table 2. Trouble reports (TRs) corrected in this release (continued)

TR ID	Description
6001544	While establishing a Multilink PPP connection, the MAX TNT unit incorrectly bundled clients configured for the Callback Control Protocol (CBCP) with those clients configured with a different connection profile.
6001561	<p>The MAX TNT unit did not generate log messages when a Layer 2 Tunneling Protocol (L2TP) control channel or data channel was established, or when a tunnel was cleared between the LAC (the MAX TNT unit) and the LNS.</p> <p>The MAX TNT unit now logs the following informational display level messages to the console, Syslog, or both, depending on the settings in the User profile:</p> <ul style="list-style-type: none"> When the control channel is established: LOG info, Shelf 1, Slot 4, Time: 19:36:31-- TUNNEL-1, L2TP Control Channel up with pjmax2 When the data channel is established: LOG info, Shelf 1, Slot 4, Time: 19:36:31-- TUNNEL-1, L2TP Data Channel up with pjmax2 [MBID 1] When the L2TP tunnel is cleared: LOG info, Shelf 1, Slot 4, Time: 19:38:33-- TUNNEL-1, L2TP Tunnel Cleared: result code 0, error code 0
6001582	The shelf controller sometimes reset with a fatal error FE40 several times per day.
6001708	In a Non-Facility Associated Signaling (NFAS) group, if the switch-type parameter for a secondary D channel was set to nti-pri, changing the setting of the T1 > {any-shelf any slot port} > line-interface parameter from no to yes caused the unit to restart all interfaces. The result was a service change status message (In Service) for every B channel in the NFAS group and all calls were dropped. The state of the NFAS primary D channel was unchanged.
6001738	RIP updates did not work properly in MAX TNT units configured with VRouters.
6001760	If four nailed PPP connections were made through a serial WAN (SWAN) slot card and one or more of connections was disconnected, the system failed to establish the connection for a fifth PPP call.
6001762	Previously, to update all permanent connections that were modified in the RADIUS user profile, you had to issue the refresh -n a command twice.
6001881	The SWAN2 slot card in a MAX TNT unit that was configured for ATMP and IPX sometimes reset with a fatal error FE36.

Table 2. Trouble reports (TRs) corrected in this release (continued)

TR ID	Description
6001889	If two WAN connections were terminated on the same digital modem card and traffic flowed in both directions, enabling <code>wandisplay</code> caused the MAX TNT unit to generate warning W179 message. The warning message did not affect service.
6001901	Previously, you could set the <code>frame-relay > mru</code> parameter to 1600 to specify the frame relay minimum receive unit (MRU), even if the system supported a maximum MRU value that was less than 1600. Now, you can only set the MRU to a value that is supported by the unit.
6001935	The L2TP mandatory bit was incorrectly set to a value of 1 instead of 0 for attribute-value pair (AVP) type 29 in ICCN control messages.
6001975	MAX TNT units installed with Series56™ III Digital Modem (CSM/3V) slot cards issued Warning 179 messages.
6002016	If a call that was enabled for call logging or RADIUS accounting failed authentication, the MAX TNT unit logged an inaccurate session time for that call.
6002052	MAX TNT units incorrectly released calls when the channels associated with those calls were unblocked.
6002137	RADIUS accounting and End-Of-Call Syslog records inaccurately reported the octet and packet counts for TCP-Clear calls. The records excluded octets generated by TCP traffic after authentication and setup of the TCP session.
6002170	The MAX TNT unit ignored the Phone-Number-Sub-Address information in a BACP callback to add Multilink PPP (MP) channels. The switch was unable to complete the connection.
6002220	Removing one of the Ethernet cables from a MAX TNT unit that was configured with two different default routes across two different Ethernet links corrupted the routing table, resulting in packet loss.

MAX TNT TAOS 8.0.4

New features in TAOS 8.0.4

Modem and DSP firmware versions

The Conexant firmware versions for Series56™ Digital Modem cards include support for V.90, K56flex, K56plus, and all slower, standard modem speeds. This release includes the following Conexant firmware:

- Series56™ Digital Modem cards (also called CSM/1 or TNT-SL-48MOD-S56) support V2.0982-K56_2M_DLP_CSM firmware.
- Series56™ II Digital Modem cards (also called CSM/3, TNT-SL-48MOD-SGL, or TNT-SL-48MOD-S-C) support V5.817 firmware.
- Series56™ III Digital Modem cards (also called CSM/3V or TNT-SL-48MODV3-S-C) support V5.8175 firmware.

This release includes the following Lucent firmware versions for MultiDSP cards:

- 48-port MultiDSP cards (TNTP-SL-ADI-C or TNTV-SL-ADI-C) support Lucent V0.1.35 firmware.
- 96-port MultiDSP cards (APX8-SL-96DSP) support Lucent V0.1.35 firmware.

Corrections in TAOS 8.0.4

Table 3 lists trouble reports (TRs) that have been corrected in this release. The table also includes several MultiVoice® fixes that do not have assigned TR numbers.

Table 3. Trouble reports corrected in this release

TR ID	Description
NA	VoIP did not send meaningful progress codes and cause codes in Syslog messages.
NA	The gateway sent an incorrect ARQ (automatic repeat request) handle in an ARQ to the gatekeeper, causing call failures.
NA	The MAX TNT did not notify the Ascend SS7 Gateway when a channel was disabled on the MAX TNT.
5452	In the fatal log, the MAX TNT reported W104 warnings that were related to AppleTalk.

Table 3. Trouble reports corrected in this release (continued)

TR ID	Description
258930 6000343	<p>RADIUS: After reboot, the MAX TNT unit sent only three requests to the RADIUS IP address daemon (RADIPAD) to release addresses allocated for that MAX TNT unit.</p> <p>When a unit that is configured with a RADIUS server comes up after a reboot, it sends a message to the server indicating that any addresses allocated from RADIPAD to that unit must be freed. In cases where the unit halted unexpectedly, this method ensures that RADIPAD does not erroneously mark that the addresses are still in use.</p> <p>Before TAOS 8.0.4, the MAX TNT sent this message to RADIPAD only three times. If the RADIPAD server was at the other end of a link that took a while to become established (such as a Frame Relay link), then all messages were sometimes lost.</p>
6000576	The MAX TNT incorrectly allocated IP addresses from the IP pool when the Answer-Defaults > Clid-Auth-Mode parameter was set to <code>clid-require</code> or when the External-Auth > Rad-Auth-Client > Auth-Pool parameter was set to <code>yes</code> .
6000624	RADIUS: Filters applied by the Filter-ID attribute in the RADIUS users profile were not applied to dial-out calls.
6000657	The MAX TNT incorrectly sent Start records with Acct-Authentic set to <code>local</code> for callback sessions that were authenticated by RADIUS.
6000669	The MAX TNT experienced fatal error FE1 results when the transmit and receive links were on the same Series56™ III Digital Modem (CSM/3V) and when only the receive or transmit link used compression.
6000688	When the signaling link was taken down between the ASG and MAX TNT (for maintenance on the IP backbone), the MAX TNT was unable to reestablish the IP Device Control (IPDC) connection with the ASG and went into a loop condition.
6000694	MultiVoice®: In network termination (NT) mode, E1 and T1 lines were unable to take VoIP calls when trunk groups were enabled.
6000712	MAX TNT units configured with a client Domain Name System (DNS) server replied with a Configure-Reject message when a PC sent a Configure-Request with a DNS server address (other than 0.0.0.0) during IPDC negotiation.
6000715	RedHat Linux 5.1 clients running PPP-2.3.3 sometimes failed to establish an asynchronous modem connection over a Layer 2 Tunneling Protocol (L2TP) tunnel to a Cisco L2TP network server (LNS).
6000726	The shelf controller issued a warning W179 when a slot was deactivated.

Table 3. Trouble reports corrected in this release (continued)

TR ID	Description
6000862	<p>The MAX TNT sent an invalid Service-Type value with a RADIUS request for an Admin-User.</p> <p>A customer was unable to do the following with a proxy RADIUS server:</p> <ul style="list-style-type: none"> Authenticate a dial-up user with RADIUS-A Authenticate a command line interface (CLI) user with RADIUS-B: <p>MAX TNT <-> proxy RADIUS server <-> RADIUS-A <-> RADIUS-B</p> <p>The proxy RADIUS server relied on the MAX TNT to send the correct User-Service and Service-Type attribute so that User-Service = Framed-Protocol for RADIUS-A or User-Service = Admin-User (Shell-User) for the RADIUS-B server.</p> <p>But because User-Service is set to Framed-Protocol by default, the MAX TNT unit was unable to reach RADIUS-B to authenticate the user profiles.</p> <p>In previous releases, when the MAX TNT user accessed the RADIUS user profile by telnetting to the MAX TNT or accessing the console with the Auth command, the MAX TNT sent the RADIUS request with User-Service=Framed-Protocol.</p> <p>In TAOS 8.0.4, the value of the Service-Type attribute in the Access-Request packet has been set to 6, Administrative-User.</p>
6000866	<p>The MAX TNT restarted OSPF every time a Connection profile was enabled or disabled.</p>
6000684	<p>Fatal error FE179 occurred on host cards.</p>
6000942	<p>RADIUS: Filters in the Answer-Defaults profile were not overridden by the Filter-Id attribute in RADIUS.</p> <p>With TAOS 8.0.4, the Filter-Id attribute in RADIUS now overrides the filters set in the Answer-Defaults > Session-Info profile.</p> <p>In addition, you can now apply a Filter-Id explicitly as a call, data, or type of service (TOS) filter.</p>

Table 3. Trouble reports corrected in this release (continued)

TR ID	Description
6001004 6001067	<p>The MultiDSP modem firmware has been upgraded from V0.1.33 to V0.1.35 (see “Modem and DSP firmware versions” on page 19). TAOS 8.0.4 also releases RAS firmware V0_1622_0.</p> <p>These upgrades improve the performance of Fax V.17 and V.29 modulations and correct the following problems:</p> <ul style="list-style-type: none"> • Failure to synchronize with the Ganet Modem in Korea (TR 6001004). • Failure to synchronize with Lucent Soft Modem in IBM iSeries Thinkpad when spectral shaping was not requested by the client. (TR 6001067). • Failure to synchronize when the compander setting (A-Law and U-Law) on client and server differed.
6001023	The MAX TNT sometimes issued warning W179 after receiving a Multiprotocol PPP (MP) call.
6001030	The MAX TNT rejected empty Compression Control Protocol (CCP) Configure-Request packets from Windows Client peers.
6001040	The DS3-ATM card sometimes reset with a fatal error FE36 when when it received IP packets that were blocked with a data filter.
6001048	The MAX TNT failed to disconnect the call when authentication failed because of an incorrect password.
6001089	The Point-to-Point Tunneling Protocol (PPTP) control connection failed to disconnect even after all sessions between a MAX TNT unit and a Novell BorderManager ended.
60001205	The secondary L2TP server function failed when using the Series56™ II Digital Modem (CSM/3), MultiDSP, and MultiDSP2 cards.
6001265	The MAX TNT issued warning W109 on the Series56™ III Digital Modem (CSM/3V) card and MultiDSP card for analog calls.
6001313	A customer reported a significant drop in the performance of the frame relay ping response on the MAX TNT after upgrading from TAOS 7.2.4 to TAOS 8.0.3.
6001346	The MAX TNT E1 slot card occasionally reset with a fatal error FE2 when running under IPDC control.
6001443	The MAX TNT did not report the username in Syslog records when a tunnel failed to establish.

MAX TNT TAOS 8.0.3

New features in TAOS 8.0.3

The feature request ID in Table 4 is included in this release.

Table 4. Feature Request IDs in this release

Feature ID	Description
510379	End point discriminator for multilink PPP calls (T-Online only)

Modem and DSP firmware versions

The Conexant firmware versions for Digital Modem cards include support for V.90, K56flex, K56plus, and all slower, standard modem speeds. This release includes the following Conexant firmware:

- Series56™ Digital Modem cards (also called CSM/1 or TNT-SL-48MOD-S56) support V2.0982-K56_2M_DLP_CSM firmware.
- Series56™ II Digital Modem cards (also called CSM/3, TNT-SL-48MOD-SGL, or TNT-SL-48MOD-S-C) support V5.817 firmware.
- Series56™ III Digital Modem cards (also called CSM/3V or TNT-SL-48MODV3-S-C) support V5.8174 firmware.

This release includes the following Lucent firmware versions for MultiDSP cards:

- 48-port MultiDSP cards (TNTP-SL-ADI-C or TNTV-SL-ADI-C) support Lucent V0.1.30 firmware.
- 96-port MultiDSP cards (APX8-SL-96DSP) support Lucent V0.1.30 firmware.

Multilink PPP end point discriminator for T-Online calls

With TAOS 8.0.3, RADIUS access requests for multilink PPP calls (MP or MP+) supply the peer end point discriminator as received during LCP negotiations. The presence or absence of the discriminator enables RADIUS to distinguish between multichannel or single channel PPP calls. Currently, this feature is supported only if the unit is enabled for T-Online service. In later releases, it will be generally available.

Following is the relevant RADIUS attribute:

Attribute	Value
Ascend-Endpoint-Disc (109)	LCP end point discriminator for the connection. When an authentication request comes in, the unit verifies whether the call uses multilink PPP and if so, it fetches the peer end point discriminator from the PPP stack and attaches the attribute-value pair to the access request. If the peer did not provide an end point discriminator, the system sends a null class discriminator as defined in RFC 1990, <i>The PPP Multilink Protocol (MP)</i> , to allow the RADIUS server to identify the session as a multilink PPP call.

SS7 IPDC RTE for congestion control (Lucent Softswitch only)

With TAOS 8.0.3, units with the SS7 IPDC license perform congestion control functions using Request Test Echo (RTE) messages with a congestion indicator and Acknowledge RTE (ARTE) response from the signaling gateway. If the signaling gateway is a Lucent Softswitch, it can respond to the congestion indication by slowing down the rate at which it is forwarding calls. For any other type of signaling gateway, the RTE messages are used as a signaling heartbeat.

Note: In this release, congestion control applies only to units that communicate with the Lucent Softswitch signaling gateway using IPDC. The ICD for softswitch signaling gateway will support congestion control in an upcoming softswitch release. This feature does not apply to units using the SS7 ASGCP license.

Using RTE messages as a signaling heartbeat

With TAOS 8.0.3, the default settings in the SS7-Gateway profile cause the unit to transmit RTE messages to the signaling gateway every 3 seconds. If congestion control is disabled, or if the signaling gateway does not support congestion control, the packets are used as a signaling heartbeat.

Format of RTE messages without congestion indicator

Following is the format of the RTE message without the congestion indicator:

```
Protocol ID: 0x4B
Transaction ID: 0x8xxxxxxx
Message: 0x007D
```

For example:

```
Protocol=0x4b, Correlator (4): 80024b13
Message: 0x007d
End of NMI message.
```

Overview of SS7-Gateway settings

The following parameters (shown with default settings) control transmission of RTE messages:

Following are the relevant parameters, shown with default settings:

```
[in SS7-GATEWAY:signaling-heartbeat]
enabled = yes
interval = 3
```

Parameter	Specifies
Enabled	Enable/disable signaling layer heartbeat to the signaling gateway. If set to yes (the default), the unit sends a signaling heartbeat to the gateway at the interval specified in the Interval parameter.
Interval	Number of seconds between signaling heartbeat messages. The valid range is from 0 to 86400 (default 3).

Example of changing the heartbeat interval

The following commands configure the unit to send RTE messages to the signaling gateway every second:

```
admin> read ss7-gateway
SS7-GATEWAY read

admin> set signaling-heartbeat interval = 1

admin> write
SS7-GATEWAY written
```

Example of disabling transmission of RTE messages

The following commands disable transmission of RTE messages altogether:

```
admin> read ss7-gateway
SS7-GATEWAY read

admin> set signaling-heartbeat enable = no

admin> write
SS7-GATEWAY written
```

Using RTE messages for congestion control

When congestion control is enabled (as it is by default), MAX TNT units monitor the depth of the layer-3 queue as a measure of call congestion. The queue contains messages for the IPDC layer, including call control and other network messages, as well as messages from IPDC itself.

When the number of messages in the queue exceeds congestion level 1, the unit can either ignore the congestion level or send an RTE message with a congestion level indicator that level 1 has been exceeded (the default). When the number of messages drops below the specified congestion level 1, the unit sends an RTE message indicating congestion level 0 (no congestion).

When the number of messages in the queue exceeds congestion level 2, the unit can either ignore the congestion, send an RTE message to the signaling gateway indicating that congestion level 2 has been exceeded, or send the message and reject new calls (the default).

Format of RTE messages with congestion indicator

Following is the format of the RTE message with the congestion indicator:

```
Protocol ID: 0x4B
Transaction ID: 0x8xxxxxxx
Message code: 0x007D
Tag ID = 0xa6, <congestion-level>
```

For example:

The 0xa6 tag specifies the congestion level, which can be

```
Protocol=0x4b, Correlator (4): 80024b13
Message: 0x007d
Tag ID = 0xa6, Data (1): 01
End of NMI message.
```

Tag 0xA6 can specify the following values:

Size	Type	Description	Value	Meaning	Usage
1	UINT	Congestion level indicator	0x00	Not congested	RTE/ARTE
			0x01	Congestion level 1	
			0x02	Congestion level 2	

Overview of SS7-Gateway settings

In addition to the signaling heartbeat parameters described in “Using RTE messages as a signaling heartbeat” on page 24, which control transmission of RTE messages, the following parameters (shown with default settings) are used for configuring congestion control:

```
[in SS7-GATEWAY:congestion-control]
congestion-control-type = l3-queue-depth
cl1-level = 60
cl1-action = send-info-to-mgc
cl2-level = 120
cl2-action = reject-new-call
```

Parameter	Specifies
Congestion-Control-Type	Congestion control algorithm to use. If set to <code>l3-queue-depth</code> (the default), the unit measures the depth of the layer-3 queue as the criterion of congestion. If set to <code>none</code> , congestion control is disabled.
CL1-Level	Number of messages in the queue (from 0 to 1000) at which the unit will inform the signaling gateway that congestion level 1 has been exceeded. By default, congestion level 1 occurs when the queue contains 60 messages.
CL1-Action	Action to perform when congestion level 1 (defined by the value of the CL1-Level parameter) has been exceeded. Valid values are <code>send-info-to-mgc</code> (the default) and <code>ignore</code> . If set to <code>send-info-to-mgc</code> , the unit sends an RTE message to the signaling gateway with the appropriate congestion level indicator. If set to <code>none</code> , the unit takes no action at congestion level 1.
CL2-Level	Number of messages in the queue (from 0 to 1000) at which the unit will inform the signaling gateway that congestion level 2 has been exceeded. By default, congestion level 2 occurs when the queue contains 120 messages.

Parameter	Specifies
CL2-Action	<p>Action to perform when congestion level 2 (defined by the value of the CL2-Level parameter) has been exceeded. Valid values are <code>reject-new-call</code> (the default), <code>send-info-to-mgc</code>, and <code>ignore</code>.</p> <p>If set to <code>reject-new-call</code>, the unit rejects new calls and sends an RTE message to the signaling gateway with the appropriate congestion level indicator. If set to <code>send-info-to-mgc</code>, the unit sends an RTE message to the signaling gateway with the appropriate congestion level indicator. If set to <code>ignore</code>, the unit takes no action at congestion level 2.</p> <p>If you set CL1-Level and CL2-Level to a low value and set CL2-Action to <code>reject-new-calls</code>, the unit will begin rejecting calls before it reaches its maximum call-processing capacity. If you set CL1-Level and CL2-Level to a high value and set CL2-Action to <code>reject-new-calls</code>, the unit attempts to use all of its call-processing capacity, even though the calls might time out at the signaling gateway. (The Lucent Softswitch timeout is configurable with a default of 3 seconds.)</p>

Example of configuring congestion indication

The commands in the following example configure the MAX TNT unit to send a level-1 congestion indicator to the signaling gateway when the layer-3 queue contains 100 messages, and to reject new calls and send a level-2 congestion indicator when the queue contains 250 messages. In addition, the commands specify that the RTE exchange should occur every 10 seconds.

```
admin> read ss7-gateway
SS7-GATEWAY read

admin> set congestion-control c11-level = 100
admin> set congestion-control c12-level = 250
admin> set signaling-heartbeat interval = 10
admin> write
SS7-GATEWAY written
```

Corrections in TAOS 8.0.3

Table 5 lists customer-reported TRs that have been corrected in this release. The table also includes several MultiVoice fixes that do not have assigned TR numbers.

Table 5. Trouble reports corrected in this release

TR ID	Description
3844	W175 warning (memory leak) occurred when AppleTalk routing was enabled.
58885	Route filters required interface that an interface be disabled and enabled to start working.

Table 5. Trouble reports corrected in this release (continued)

TR ID	Description
258875	DPNSS implementation did not recognize the *50* CLI Supplementary code.
1000219	FTP get data transfer rate was slower than FTP put rate if the session was over an ATMP tunnel with Force Fragmentation set to yes in the Home Agent.
6000466	Dial-in calls on a VRouter interface were advertised via OSPF on the global VRouter interface.
6000542	PPP sessions did not work on T1 Frameline cards. The problem was caused by high network latency over PPP links on nailed T1 connections, which also resulted in QoS problems for VoIP calls.
6000448	If the current RADIUS server was changed using SNMP, the change was not used and the radiusServerChange trap (Type 18) was not generated.
6000550	Number of concurrent Telnet sessions was limited to 32.
6000567	System did not generate wanLineStateChange trap (Type 40) when T1 or E1 line state changed from Trunk to Disabled or vice-versa.
6000568	System could reset with fatal error FE29 if an incorrect flash-card operation (such as overwriting a directory with a file) was attempted.
6000588	MultiDSP card reset while attempting to establish a PPTP connection.
6000626	W179 warning occurred on the MAX TNT shelf controller when it was writing the IP-Global profile if Finger was set to yes.
6000634	Fatal error FE2 occurred on Series56™ II Digital Modem modules related to command-line interface terminal-server process.
6000706	Problems were observed when the count of available transmission buffers was inaccurate, causing the SAR drive to either fail to reserve buffers for control when the count was too high, or fail to allocate buffers for data when the count was too low. The problems have been corrected.
6000723	Poor audio quality voice announcements occurred when using E1 trunks for IPDC voice and signal processing from a SoftSwitch. The problem was caused by an incompatibility between the audio codec selected by default for voice announcement playback and the audio mode supported by the trunk. The MultiDSP card now invokes an audio codec for voice announcement playback that is compatible with the trunk audio mode.
N/A	FoIP: Polling Time (interval between transmission of DCS and TCF from the originating fax) had to be no longer than 80ms, or ringing of the destination fax would fail. This correction makes the delay between receipt of the digital command signal (DCS) and training check frame (TCF) for real-time fax operations platform dependent for MultiVoice® gateways.

Table 5. Trouble reports corrected in this release (continued)

TR ID	Description
N/A	A set of corrections has resulted in enhanced call setup operations for MultiVoice® VoIP calls, raising the call setup rate to somewhere between 5 and 6 calls/sec. Previously, the current sustainable call setup rate for MultiVoice was approximately 2 calls/sec (with 500-600 active calls, 2 calls are torn down and 2 new calls originate each second).
N/A	Warning W179 message was sometimes generated by the MultiDSP card when the system experienced a high call arrival rate.
N/A	<p>Output of the <code>ss7nmi -m</code> command now properly identifies RMCP, AMCP, and NTN message statistics. For example:</p> <pre>admin> ss7nmi -m IPDC message processing statistics: Message code Received Sent RCR (0x0011): 1 0 ACR (0x0012): 0 1 RCCP (0x0013): 1 0 ACCP (0x0014): 0 1 RMCP (0x0015): 1 0 AMCP (0x0016): 0 1 RMS (0x0041): 1 0 NMS (0x0042): 0 17 RLS (0x0043): 1 0 NLS (0x0044): 0 1 NSUP (0x0081): 0 1 ASUP (0x0082): 1 0 NTN (0x00f0): 0 1 Data collection was started: [06/26/2000 15:40:47]</pre>
N/A	To maximize VoIP call throughput to process higher volumes of calls, changes were made to the method of port caching for VoIP calls and to H.225 and H.245 call setup and processing.

MAX TNT TAOS 8.0.2

New features in TAOS 8.0.2

Modem and DSP firmware versions

The Conexant firmware versions for MAX TNT Digital Modem cards include support for V.90, K56flex, K56plus, and all slower, standard modem speeds. This release includes the following Conexant firmware:

- Series56™ Digital Modem cards (also called CSM/1 and TNT-SL-48MOD-S56) support V2.0982-K56_2M_DLP_CSM firmware.
- Series56™ II Digital Modem cards (also called CSM/3, TNT-SL-48MOD-SGL, and TNT-SL-48MOD-S-C) support V5.817 firmware.
- Series56™ III Digital Modem cards (also called CSM/3V, TNT-SL-48MODV3-S-C) support V5.8174 firmware.

This release includes the following Lucent firmware versions for MultiDSP cards:

- 48-port MultiDSP cards (TNTP-SL-ADI-C or TNTV-SL-ADI-C) support Lucent V0.1617.0 firmware.
- 96-port MultiDSP cards (APX8-SL-96DSP) support Lucent V0.1617.0 firmware.

Support for DS3-ATM2 slot card

TAOS 8.0.2 includes support for the DS3-ATM2 card (TNT-SL-UDS3A2-C). The card uses the same profiles as the earlier DS3-ATM card (TNT-SL-UDS3A), but provides increased packet-processing performance. You can download the DS3-ATM2 slot card guide from the same location as this release note on the FTP server.

Corrections in TAOS 8.0.2

Table 5 lists trouble reports (TRs) that were corrected in this release.

Table 6. Table 5. Trouble reports (TRs) Trouble reports (TRs) corrected in this release

TR	Problem corrected
4047	MAX TNT was not reporting correct service type for V.120.
4427	When a Connection profile was assigned from a VRouter to the global VRouter, the local-route entry was not released from the VRouter's routing table.
5483	E1/R2 intermittently failed to send expected signaling to the central office switch.
5505	Connections with the same interface address or Ascend-PPP-Address RADIUS attribute value did not work properly after the first connection terminated.
5659	Proxy ARP problem occurred when system was configured with two different Ethernet interfaces on the same segment and proxy-mode was set to active on both interfaces.
5682	V42bis compression for PHS calls was disabled.
5698	Radstat command and SNMP object radAuthCurrentServerFlag.N could show the incorrect value for the current RADIUS authentication server.
258937	Terminal-server Ping command was enabled when user's permission level should have disabled it.
6000044	A data filter applied to an Ethernet interface on a slot card did not take effect after the port's link state was bounced.
6000060	Filters were sometimes applied improperly to subsequent channels of Multilink PPP connections.
6000125	RADIUS accounting Acct-Session-Id record included a trailing 0x00 even when EXTERNAL-AUTH > rad-acct-client > acct-radius-compat was set to vendor-specific.
6000152	When operating as L2TP access concentrator (LAC), the MAX TNT reported incorrect Acct-Input-Octets, Acct-Output-Octets, Acct-Input-Packets, and Acct-Output-Packets values for incoming PPP calls authenticated via CLID or DNIS.
6000158	RADIUS accounting packets were not sent when user accounting was configured.
6000199	MBID and CLID/DNIS information was missing from some Syslog events in TAOS 8.0.1.
6000201	Connection profiles could become corrupted, saving factory default values.
6000354	If a call failed CLID authentication via RADIUS on the same modem four times in a row, the modem was placed on the suspect list.
6000366	Under certain conditions, PPP IP-Address negotiation did not work properly.

Table 6. Table 5. Trouble reports (TRs) Trouble reports (TRs) corrected in this release

TR	Problem corrected
6000371	T3 card reset with fatal error FE1.
6000395	Ethernet-3 card reset when running TCP-Clear traffic.
6000463	Cannot use system IP address for a multicast stacking IP address.

