

TNOS Release Notes - Next Release

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These are the Release Notes for the next public release of TNOS, to be released sometime before the formation of the United Federation of Planets. Hopefully, this list of changes will give you an idea of the scope of work that has occurred since the release of TNOS 2.40. These Release Notes are updated as the work progresses, so it is a dynamically changing document.

Table of Contents

1. Important Notes	3
2. Bug Fixes.....	3
3. Improvements and Enhancements	4
4. Minor Changes	8
5. Remaining Known Bugs.....	9
6. To-Do List	9
7. Known Quirks	10

1. Important Notes

The following are important notes that you *CANNOT* afford to ignore:

- None yet ;-)

2. Bug Fixes

The following bugs have been squashed.

- Fixed typo with BROKE_SPRINTF in build-make.inc
- Changed EWOULDBLOCK in unixasy.c to EAGAIN

Since ALL OS's were aliasing EWOULDBLOCK to EAGAIN (and some, such as early Sun releases, didn't have EWOULDBLOCK), this just cleans up the code and makes it a tad more portable.

- Fixed an obscure incoming X-FWDing buglet

An incoming X-FWDing session to a TNOS that had no outgoing data for that station would end before transferring data. This is now fixed.

- Fixed a small forwarding buglet that always set 'TRY = 1'

If multiple conditional were set to act differently if the first (second, etc) forwarding attempts failed, this was broken. It always returned 'TRY = 1'.

- Fixed browser's help screen for 25 line displays
- Fixed a bug when changing a user's passwd in PBBS as sysop
- Fixed incomplete checking of command line parameters in 'tcp access'
- Fixed bug with AX25 disc not properly being handled in all cases
- Fixed bug where 'ip routesame' value was improperly analyzed
- Changed timer call in tcpout.c to eliminate hanging TCP connections
- Fixed improper parsing of PBBS 'MO' as 'M'
- Fixed the 'ls' command's representation of disk/free sizes for LARGE disks

If you have a file system with more than 4,194,303 blocks (a disk partition greater than 4 GIG), then the 'ls' numbers for disk size and free size would NOT be correct previously. This has been fixed by outputting these sizes as 'K/bytes' instead of 'bytes'. Larger disks have sizes that overflow the capabilities of a 32 bit 'long' integer, if you report the number of bytes. Change that to number if K/bytes, and it is fine.

- Fixed several memory leaks.
- Removed all 'setbuf' and 'setvbuf' calls, to workaround GLIBC bug.

The newest versions of the GLIBC library have a BAD bug with the 'setbuf' and 'setvbuf' methods, if you are making a file unbuffered. The result is writing to random memory. So, the code using those methods was rewritten to eliminate the need for unbuffered output.

- Fix for mailrelay code when adding hosts that TNOS is a mail exchanger for
- Fixed minor bugs with 'SM_CURSES' (the old 'PATCURSES' code) and the status line
These bugs would only pop up if you used the '3' parameter to the 'statmode' command. There were several assumptions that a statline was always 2 lines long.
- Found a LONG-STANDING bug in the DNS code
Nearly all DNS looks called one routine, which passed a NULL to the strdup method. This could cause crashes, memory corruption, etc.
- Found a bug in the base64 code, used by the HTTP server.
This would (at times) not allocate a large enough working buffer, causing memory corruption.
- One of Gareth's 'essential' patches from 2.30 didn't make it into 2.40, the one fixing tcp timers. Now included.
- Fixed a race condition where the timer list would be corrupted
- Fixed many memory leaks in BBS, SMTP and NNTP servers
- Fixed problem in AX25 code where multiple connection blocks would sometimes be allocated for the same connection
- Fixed a bug which caused a crash with 'SR' if user doesn't have SEND permission.
Thanks to Tihomir/9a4gl for this one. GREAT bug report!

3. Improvements and Enhancements

The following optimizations and improvements have occurred.

- Optimized FBB/XFWD forwarding proposals - removed area restrictions
Previously a proposal for FBB or X-FWD forwarding was restricted in TNOS to not spanning an area. That is, if (using FBB as the example) there were five or more messages in a USA area, then a full negotiation of five messages could be sent in a proposal. If, though, the USA area only had 2 messages, then only 2 messages would be sent in that proposal, regardless of whether or not there were other messages in other areas.
This 'area' restriction is now removed. A proposal is no longer 'flushed' at the end of an area.
- Added ability to get 'forward summary' on a single PBBS
Added an optional parameter (a PBBS name) to the 'forward summary' Command Session command and the PBBS 'if' command. If this parameter is NOT given, then the command lists

all PBBSs in the forward.bbs file, as it previously did. If the PBBS name parameter IS given, then only that PBBS will be listed, with no output if that PBBS is NOT in the forward.bbs file.

- Removed error messages generated by smtp duplication of 'bid's

Now, if 'smtp bidcheck' is on, it will prevent (silently) any 'duplicates' from being processed, but without a reject error message to the smtp remote station, or a bounced message. Those duplicates WILL be dropped, though. Unless there is a need, the 'smtp bidcheck' command should be left 'off', the default value.

- Added a new command, 'profile userremovepasswd'

This command (which defaults to 'off') can be used to restrict whether or not a user can remove their own password or not. If this command is set to on, then a user can remove password protection from their own login name.

- Added code to the 'passwd' command to allow removing passwords

If both of the password prompts in the passwd command are answered with only a <CR>, then the password will be removed for that user. If this is not being done by a sysop, then the above mentioned 'profile userremovepasswd' command can deny the removal of the password.

- Added code to allow passwords to be changed in 'included' security files.

The 'etc/security' file has (for some time) allowed you to include other security files within it, using '#include <filename>'. With the recent additions of code to allow setting of passwords from the PBBS, I noticed that this code DIDN'T allow setting (or even finding) users that were in 'included' security files. I added the code to allow users to be found and modified in any security file included from the main one.

One note: the 'profile add' command will ALWAYS add to the main security file. If you add a user that you would PREFER to have in an included security file, you must MANUALLY move them, sometime later.

- Added a 'security sysoponlyauth' command

This command (if on, which is the default value) removes sysop permissions during a session, if the connection was made without the benefit of a password authentication. If this command is on and a user normally with sysop permissions is connecting via ax25 or netrom, then their sysop benefits will be removed for that session, unless you have either one of these commands on; 'security mbsecure' or 'security sysopmustauth', which is described next.

- Added a 'security sysopmustauth' command

This command (if on, which is the default value) forces all users with sysop permissions to authenticate with a password, if connecting via ax25 or netrom. This is a separate command from the 'security mbsecure' command, which requires ALL users to authenticate.

- Compiling for Cygwin

In addition to MSDOS support (with DJGPP) and Unix support (with GCC), this release supports compiling executables to run on Win32 machines (Win95, Win98, WinME, WinNT,

Win2000) with the GCC compiler (and tools) supplied with Cygwin. To compile with Cygwin, read the README file. Works like a Unix compile.

This is NOT complete yet! It compiles fine, but there is still one (or more) problems to work out to complete the port.

- Added separate Unix malloc library

This malloc library (used by default) replaces the system memory functions. It can be used to debug memory problems, also.

This was added due to the memory problems found with Glibc-2, where there SEEMS to be bugs. Now TNOS can blame NO ONE else for memory issues ;-)

- The 'build-make.inc' script should now properly configure for older systems.
- Thomas Lucaw's color patches (previously only included with the 'PATCURSES' flag, are now in the baseline code.

The 'PATCURSES' flag has disappeared.

- Enhanced the 'color' command to allow changing colors of the status line and the split screen sessions.

The color command now takes an additional parameter to specify if the color change is for the 'main', 'stat', or 'split' colorset.

- Added intelligence to the Converse Server in regards to idle links

One item on the 'To-Do' list for a long time was this, the idea being that if there are no incoming links, and no local users, that the remote outgoing link would be brought down until either a user connects or an incoming link connects.

This is done with a new 'convers idlemode <on|off>' command. When the last user (or incoming link) disconnect it will wait a certain amount of time before bringing the outgoing link down. This delay time is set with the 'convers idletimer <val>' command. The default delay time 10 seconds. You might want to make this longer if your outgoing link is over a slow bandwidth connection.

This functionality ONLY works with setups that have one outgoing link. If more that one outgoing link exists, the link will never be brought down.

So, in summary, the 'convers idlemode' command allows you to have a 'idle mode' for your convers server. For it to go into 'idle mode', there has to be only one outgoing link, no incoming links, and no local users. If this criteria is met, then a timer will be set (using the value of the 'convers idletimer' command) which (if it expires before the 'idle mode' is cleared) will bring down the sole outgoing link.

This allows you to minimize bandwidth used by convers 'chatter' to only when it will benefit your users (or incoming links). If there is any other outgoing links (or any incoming links) then we cannot know WHEN the link is really idle, so 'idle mode' cannot be set.

If 'idle mode' is set and a user connects (or an incoming link connects) then the configured outgoing link immediately starts a re-connect.

- Now export a complete set of CGI environment variables when 'exec cmd' and 'exec cgi' are used

You previously could execute a program and pass in explicit parameters (which could be dynamically assigned using server-side includes), but it was not (previously) a complete CGI-compatible interface. Now it is.

- A 'NON-FEATURE' - to allow a TIP socket type, for use with LL Modems

This is a NON-FEATURE, since it can be handled by an Open Source external solution, called 'termpkg'. This package can allow serial ports on any machine to be accessed via a TCP port, and TCP ports to be accessed via serial ports. While this is NOT a part of TNOS and NOT supported by me, you can find a copy of it on my web site at:

<http://www.lantz.com/tnos/misc/termpkg-3.1.tar.gz>

- Replaced old 'shell' capability (for Unix) with new code, based on the old PIPECMD code.

The old PIPECMD flag has been removed. The code that used to be associated with this flag is now the new version of the 'shell' (and '!') command. Now there is the ability to see all of the shell'ed command's output. You can also (now) call executables that take interaction, and run them correctly (such as telnet, etc.).

If you don't give a command then a 'TNOS Shell' is started. Each line you input in that shell is passed (one at a time) to '/bin/sh' (or if you have the 'SHELL' environment variable set, that shell is used). To exit the TNOS Shell, type 'exit' (or 'ex').

One note: The new sessions that are created for shell interactions have the 'statline' on, whether or not the Command session does. There was an screen updating problem without the statline on, and I took the quicker way out, and just made sure it was on ;-)

- Added diagnostic info in the 'timers' listing

When trying to debug problems in the timers code, I added diagnostic info which tells the source file that the timer was started in, and the line number in the source file. This info is remaining in the code. This is in addition to the process' name, which was already available.

- Completed support for HTML over PBBS.

The PBBS 'http' command is complete! While there is NOT (at this time) an application already in place available to use this, the basic functionality is here, and someone CAN now write a browsing application to use TNOS (via AX25) as a proxy HTTP engine.

The basic info on doing this is simple. First, connect to TNOS. Then send a properly configured SID, including the 'W' letter in the SID. After this you will NOT receive any prompt or output. Then you can do PBBS commands, and SOME of them (not all, though) will precede their output with a <PRE> tag.

You will also, now, be able to use the 'http' command. The command takes a complete URL (like 'http://www.lantz.com:80/index.html'). You can include a port number, or use the default port of '80'. The output from the remote HTTP server is sent back to you, unmodified.

You end an HTTPPBBS session the same way you do a normal PBBS session, with the 'bye', 'exit' or 'quit' commands.

Note, there is no support, yet, for POSTing forms, or for accessing any URL that requires authentication, but these may be added later.

If anyone starts using this functionality, please send a message to the Tnos-Topics@lantz.com mailing list.

4. Minor Changes

The following minor changes have occurred.

- Added 5 finger 'pseudo' users for HTTP statistics

Like the other statistics information, the HTTP general, daily, weekly, monthly, and yearly statistics are available via finger. The pseudo user names are `daily_http`, `general_http`, `monthly_http`, `weekly_http`, and `yearly_http`.

- Default for 'smtp bidcheck' turned to off - Read this!

Unless you have a DARN GOOD reason (debugging, etc), DO NOT turn the 'smtp bidcheck' on! There will be false bounce messages generated, when you have two PBBBs sending you traffic at the same time, and the same message gets queued twice before it/they are processed. Leave this OFF... Don't make me disable it ;-)

- Added 'ax25 maxwait' checking to `ackours()`

This prevents the potential for some retries to exceed the setting of the 'ax25 maxwait' setting on an interface.

- Added 5 finger 'pseudo' users for Forwarding statistics

Like the other statistics information, the Forwarding general, daily, weekly, monthly, and yearly statistics are available via finger. Also, the list of available forwarding sites can be retrieved. The pseudo user names are `daily_fwd`, `general_fwd`, `list_fwd`, `monthly_fwd`, `weekly_fwd`, and `yearly_fwd`.

- Added 5 finger 'pseudo' users for Area statistics

Like the other statistics information, the Area general, daily, weekly, monthly, and yearly statistics are available via finger. Also, the list of available areas can be retrieved. The pseudo user names are `daily_area`, `general_area`, `list_area`, `monthly_area`, `weekly_area`, and `yearly_area`.

- Modified 'build-make.inc' script to preserve old 'make.inc' and 'system.h' files

If you already have either of these files when you run this script (run from the 'configure' script), it will now first rename the original 'make.inc' to 'make.inc.orig' and the original 'system.h' to 'system.h.orig'. This allows you to retain previous customizations, if needed.

Note: these files are NOT preserved for MSDOS compiles with the 'configure.bat' script.

- Modified the default colors for the main screen to make compatible with previous releases of TNOS

If you wish some other colors for the background or foreground of the main screen, you can use the '-k' and '-g' command line options, respectively.

- Modified the default colors for the statline to make compatible with previous releases of TNOS

If you wish some other colors for the background or foreground of the statline, you can use the '-w' and '-x' command line options, respectively.

- The proc updating (if the 'SETPSINFO' flag is set) is now updated every second.

Initially I made this only update about every 5 seconds, but there is no reason not to have the accurate uptime.

- Changed initial delay at startup before convers link connects.

Checks for connections are still made every 15 seconds, but the initial delay before trying the first time is now 5 seconds.

- Fixed default hostname for 'conference' command.

This command erroneously assumed that all hostnames of TNOS boxes were like ko4ks.ampr.org, and NOT like dev.ko4ks.ampr.org. The routine would connect to 'ko4ks' and 'dev' respectively, which was not correct. Now the entire hostname is used.

5. Remaining Known Bugs

The following are known bugs that will be addressed in the near future. These may or may not be fixed before the next release is made available.

1. The proxy server scripts do not seem to work properly

There is a problem, that is being looked into, which seems to be related to calling scripts from within scripts (which proxy.scr DOES).

2. Browser bug exists with dropping successive NBSP characters
3. None other at this time.... ;-)

6. To-Do List

The following are things on the author's 'to-do' list that are being considered for this or a future release of TNOS. These *may eventually* be done, but not necessarily by the next release.

1. Complete the spec and coding of the non-IP HTTP PBBS interface
2. Consider adding to the browser support for the 'select' and 'textarea' tags
3. Consider adding to the browser better rendering of tables within tables
4. Consider added to browser ability to handle IMG tags in table cells
5. Consider adding better support for PBBS<->Internet mail address translation

The 'translate' file and improved handling of aliases is a START, but more work needs to be done here. Maybe a 'translate.out' file...

6. Tweek the WPages code a bit

Need to improve the code that insures that the wpagebbs entries are correct, of the proper length, and actually look like hier addresses. Also, make the expiring of WPages files less fragile if the file has become corrupted.

7. Check into duplicate entries in the WP files

While not harmful, the WPages routines **SHOULD** be overwriting existing entries, **NOT** creating new ones.

7. Known Quirks

The following are known minor quirks that have no workaround...

1. None other at this time.... ;-)