IBM® Sterling Connect:Express® for UNIX

List of Fixes

Version 1.5.0.1612

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This edition applies to the 1.5.0 Version of IBM® Sterling Connect:Express® for UNIX .

List of the improvements and fixes:

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- **APAR IT44030 – TS012733809 - CXM-3224**
  A small memory leak has been fixed in tom_mon.
  tom_mon updated.

- **APAR IT44031 – TS012763220 - CXM-3225**
  The automatic refresh in the tom_opr (sterm) screen INTERROGATION OF LOG does not delete characters entered in the OPTION field.
  tom_opr updated.

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- **APAR IT43193 – TS011791188 - CXM-3217**
  If the sending of a file fails after some of its data has been sent and the received part of the file is deleted on the server before the retry occurs then the transfer will be restarted from the beginning. Deleting the partially received file before a restart is not a best practice and should be avoided.
  tom_mon updated.
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  APAR IT43194 – TS011385203- CXM-3214
  Stability, speed and navigation in the tom_opr screen displaying the list of the transfer requests (menu 2 - MONITOR / 1 - MONITOR STATUS) have been been improved. It is now possible to use the keys Up Arrow, Down Arrow, Page Up, Page Down, Home and End to navigate through the list. The function key F5 can also be used to refresh the screen when an external deletion has been performed.
  tom_mon and tom_opr updated.

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- **APAR IT42563 – TS009846564 - CXM-3195**
  The variables $NREC$ and $KBYT$ (number of records and size in kilobytes of the physical file) are now properly initialized at the beginning of a transfer. $NREC$ and $KBYT$ can be used for example in a begin of transfer command to deny the transfer of a file if this one exceed a certain limit.
  tom_mon updated.

- **CXM-3193**
  Creation, Read, Update and Delete operations from tom_api are now logged in the LOG file**.**
  tom_mon updated.

- **CXM-3176**

The new commands `p1b8pfil_l` and `p1b8ppar_l` have been added in the `$TOM_DIR/itom/SAMPLES` directory. They enable to respectively list the files and partners definitions while the monitor is running. They are an alternative to the use of CX Java command cxcmd.
p1b8pfil_l and p1b8ppar_l created

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- Integration of OpenSSL 1.1.1.n**.**

- **CXM-3161**
  Display of warning messages for the deprecation of the support of protocols SSL v2.0 , SSL v3.0 et TLS v1.0 et TLS v1.1 planned in Q2 2023.

- **APAR ITxxxxx – TS008957970 – CXM-3169**
  A regression has removed the display in the LOG file of the version of the secured protocol negociated between the 2 partners of a transfer request.
  tom_mon updated.

- **APAR IT40785 - TS006880104 – CXM-3152**
  Chaining stops and starts of the monitor does not corrupt the c-tree database.
  Delivery of the full version.

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- **APAR IT39295 - TS006880104 – CXM-3143**
  The stopping of the monitor has been improved, especially when connections have been established with tom_api.
  tom_mon and tom_apm updated.

- **APAR IT39294 - TS006907318 – CXM-3145**
  The command tom_httpn -status does not crash anymore when the number of notification files in the ntfo directory exceeds 100.
  tom_httpn updated.

- **APAR IT39293 - TS007533514 – CXM-3149**
  The command p1b8pren now displays the value of file label (pi37).
  p1b8pren updated.

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- **Integration of Open SSL 1.1.1l**

- **APAR IT37815 - TS006118359 – CXM-3135**
  When used in an end of transfer user command, the value of the LABEL matches the value of the PI37 set in the FPDUs CREATE or ACK.SELECT, in peculiar when there is no PI37 and the transfer occurs in a session which is reused.
  tom_apm updated.

- **Integration of Open SSL 1.1.1j**

- **APAR IT36240 - TS005000382 – CXM-3119**
  A regression prevented to use the binary format with tom_prm .
  tom_prm updated.

- **APAR IT36239 - TS004620703 – CXM-3115**
  Error logging of tom_apm has been improved to help transfer abortion diagnosis.
  tom_mon updated.

- **APAR IT36238 - TS004243136 – CXM-3103**
  The activation of the option PARAMETER CARDS FILE in a file definition does not overload the number of opened files.
  tom_mon updated.

- **APAR IT36237 - TS004320636 – CXM-3101**
  The end of tom_apm processes does not leave orphan message queues whose accumulation prevent the normal operation of the product.
  tom_apm updated.

- **APAR IT34656 - TS003779630 – CXM-3097**
  The size of network messages in notifications is not limited to 9999.
  tom_mon updated.

- **APAR IT33568 – TS003755807 - CXM-3086**
The ch_conf.sh command to change the trace status is now working as designed.
ch_conf, ch_conf.sh, tom_apm, tom_mon updated.

- **APAR IT33569 – TS003755926 - CXM-3085**
The keywords &USRVAR1 and USRVAR2 are now always correctly resolved when they are used in the DSN of a file received from Connect:Express zOS.
tom_mon updated.

- **APAR IT33044 – TS0030956633 – CXM-3080**
When the INQUIRY flag of a file definition is set to Y and that file is sent following a receiving transfer request, then the value of the transfer ID which is used to set the PI13 of the FPDU ACK.SELECT is now correctly computed.
tom_mon updated.

- **APAR IT31257 – TS003023479 - CXM-3054**
A regression caused environment variables not to be resolved in the physical file name parameter passed to the begin and end of transfer scripts.
tom_mon updated.

- **APAR IT30846 – TS002859192 - CXM-3046**

Before a notification is sent, records in the notifications files are checked for consistency. If a record is corrupted then the tom_httpn process will stop itself and no more notifications will be sent. Every attempt to restart the tom_httpn process will fail until the faulty record is fixed. The status option of the tom_httpn command will show if there are corrupted records in the notifications files.

tom_httpn updated.

- **APAR IT30580 – CXM-3003**

A remote attacker could overflow a buffer and execute arbitrary commands or cause a denial of service because of a vulnerability in the FTP service.
tom_ftp updated.

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- **APAR IT30291 – TS002278140 – CXM-2953**

A regression introduced in version 150.1510 caused the crash of the tom_mon process if a transfer request was calling a partner with a SSL ID not defined locally.
tom_mon updated.

- **APAR IT30290 – TS002452016 – CXM-2962**

Some traces files were growing in an uncontrolled way when the PeSIT server was targeted by penetration tools.
tom_apm updated.

- **APAR IT30289 - TS002482560 – CXM-2992**

A regression caused the pollution of the LOG file from the load-balancers and monitoring tools connections.
tom_apm updated.

- **APAR IT30288 - TS001410768 – CXM-2997**

Using an old sample binary could cause a crash of the tom_mon process. Since the version 150.1504 the samples binaries have been moved into the $TOM_DIR/itom/SAMPLES directory (instead of $TOM_DIR/itom). Migration from version 150.1504 or earlier now remove all the old samples binaries.

The fix pack 1.5.0.16 of **IBM Sterling Connect:Express for UNIX** fixes a certain number of defects. The list of these defects is given below.

Please note that this fix pack:

- integrates OpenSSL 1.1.1c;

- integrates the new option /PTY for the p1b8preq command; this option enables to force the type of partner to N, O or T; this option is also available in CX Java version 1.4.0.10;

- is not supporting any RedHat Enterprise Linux 5 version.

List of fixes:

- **APAR IT29630 - TS002297287 - CXM-2948**
The physical file name is now correctly initialized in receiving transfers when it uses environment variables or CX keyword.
tom_mon updated.

- **APAR IT27462 – TS001501779 – CXM-2782**
The automatic refresh of the display of LOG file works as documented. The refresh interval must be passed on the command $sterm (or tom_opr).
tom_opr updated.

- **APAR IT27693 – TS001533847 – CXM-2777**
The physical file name received in an end of transfer script matches the name given in the file definition when the latter is coded with an environment variable and when the transfer occurs in a reused session.
tom_mon updated

- **APAR IT27179 – TS001329910 – CXM-1287**
The symbolic file name and the request submitting date are now present in notifications generated by an inquiry request.
tom_mon updated

- **APAR IT26727 – TS001474807 – CXM-1299**
The physical file name is now correctly initialized in notifications sent to the HTTP server when these notifications have been generated by the cxnotif command.
cxnotif and tom_mon updated

- **APAR IT26823 – TS001277888 – CXM-1282**
The wrong initialization of the NRC field of notifications has been fixed. This field could be sometimes initialized with the value 0010 when the transfer status was successful in the journal as well as in the notification.
tom_apm, tom_ftp and tom_mon updated

- **APAR IT25946 – TS001190863 – CXM-1280**
The processing of a sending or receiving request containing a PI42=0 is now performed correctly with or without the use of the THR_PI42 environment variable.
tom_apm updated

- **APAR IT25756 – TS001125223 – CXM-1276**

The size of the LOG file can now be changed dynamically by using the option 6 of the ch_conf.sh command. Dynamically changing the size of the LOG file causes its rotation. The new size will become the current size for rotations and after a monitor restart. If the LOG file is deleted then the size set in the sysin file will be used.
tom_mon, ch_conf and ch_conf.sh updated

- **APAR 25280 – PMR 30736,999,706 – RTC570187**

An INQUIRY transfer request without a HOLD transfer request pending on the server does not generate the error PRC 206 but PRC 205.
tom_mon updated

- **APAR 25291 – RTC 569667**

In the end of transfer notification of an INQUIRY request, the physical file name is the fully qualified name and points to the correct location.
tom_mon and tom_httpn updated

- **APAR IT25203 – TS000936835 – RTC569324**

Exporting the STRF_TRC environment variable is working as designed and does not generate the error « STRF trace file creation Error.: No such file or directory » anymore.
tom_apm upated

- **APAR 24516 – PMR 69691,664,706 – RTC 565092**

The new keyworrd &P99X can be used in the physical name of a file definition. It will be replaced with the value of the received PI99.
tom_apm and tom_mon upated

- **APAR IT24319 - PMR 34314,300,624 – RTC562686**

On AIX platforms, a wrong definition in the file $TOM_DIR/itom/d0b8z20.h could cause a signal 11 to be raised in user exit execution. The reason was due to a corruption of the call stack when the main() function returned using a call to return() instead of exit().
d0b8z20.h updated

- **APAR IT24156 - PMR 05204,664,706 – RTC562780**

The versions of tom_prm used par the installation script better manage the absence of the RENC.dat and RENC.idx files during an upgrade. It is not necessary to manually delete these files before an upgrade as this is done by the installation script.
tom_prm.1501503, tom_prm.150113, tom_prm.150909 et install.sh updated

- **APAR IT24127 - PMR 69387,664,706 – RTC562321**

A regression introduced in version 150.12 could cause a crash of the tom_apm process when the transfer was configure to use the muti-record mode.
Livraison de tom_apm.

- **APAR IT24108 – PMR 05116,664,706 – RTC 561266**
APAR IT24109 – PMR 66455,661,706 – RTC 562385

A regression introduced in version 150.1505 caused the crash of the tom_mon process if the transfer request was calling a partner not defined locally.
tom_mon updated.

- **APAR IT23547 – PMR 69388,664,706 – RTC 553746**

The retry manager has been improved. Connections and transfers retries are performed normally when the tom_mon process is idle.
tom_mon updated.

- **APAR IT23427 - RTC 557521**

A regression in CX version 150.15 caused the command cxnotif to generate empty notifications in $TOM_DIR/ntfo/NyyyymmmdddHHHMMSS files.

cxnotif updated

- **APAR IT22024 – PMR 69612,664,70 – RTC556685**

The Connect:Express variables &EXTLAB and &PI99 are now resolved when used in DSN.

tom_mon updated

- **APAR IT23409 – PMR 33449,300,624 – RTC557655**

It is now possible to use libitom.a to build an exit which can address different instances of CX on the same host.

libitom.a updated

- **PMR 65470,661,706 – RTC 554428**

A regression caused pollution of the LOG with load-balancer connections on Connect:Express secured ports.

tom_apm updated

- **APAR IT23035 – PMR 17175,999,706 – RTC 549413**

The use of very close partner names like LOOP and LOOP2 could generate PRC=2203 error.

tom_mon updated

- **APAR IT22778 – PMR 69245,664,706 – RTC 551954**

Sequence of requests performed in the same session does not generate PRC=319 RC=5008 errors anymore.

tom_apm updated

- **APAR IT22486 – PMR 32431,300,624 – RTC550881**

The file $TOM_DIR/itom/d0b8z20.h is not including other header files anymore and must be enough to compile user exits.

d0b8z20.h updated

- **APAR IT22163 – PMR 73148,299,706 – RTC546812**

The Record Format field in the TRANSFER REQUEST menu of tom_opr is not ignored anymore.

tom_opr updated

- **APAR IT22129 – PMR 54554,661,706 – RTC544630**

Receiving a PeSIT ACK SYN message after a tom_apm server sent a DTFEND message does not generate a PRC=311 error (protocol error).

tom_apm updated

- **APAR IT22089 – PMR 73038,299,706 – RTC538860**

The use in physical file name of the Connect:Express variables &DST and &ORG is now working as expected.

tom_apm updated.

- **APAR IT22024 – PMR 85122,660,706 – PMR 69612,664,70 – RTC538584 - RTC556685**

The use in physical file names of UNIX environment variables and Connect:Express variables has been improved.

tom_apm, tom_ftp and tom_apm updated

- **APAR IT21944 – PMR 54670,661,706 – RTC546799**

The command p1b8preq now allows to specify the Windows record formats WT and WV in

the /RFM option.
p1b8preq updated

- **APAR IT21943 – PMR 54553,661,706 – RTC545976**

Upgrading CX does not overwrite by default the translation tables 01 and 02. The installation script provides the new option -o to force the overwriting of the default translation tables.

- **APAR IT20975 – RTC539094**

Subject and Issuer are not transformed to uppercase when a CTRLDN definition is imported with the tom_prm command.
tom_prm updated

- **APAR IT20940 – PMR 85589,660,706 – RTC536001**

Removing the obsolete compress.sh command that is now replaced by compact_base command.
install.sh updated

- **APAR IT20817 – PMR 53849,661,706 – RTC538573**

The installation option -n which skips the backup of the files overridden by an update is now working properly.
install.sh updated.

- **APAR IT20806 – PMR 73016,299,706 – RTC551138 – RTC538360**

Connect:Express is now able to validate incoming connections indifferently with or without receiving the PeSIT pre-connection string. To enable outcoming connections without sending a PeSIT pre-connection string the new partner type N has been added. In addition, Connect:Express can accept or open connections with a blank pre-connection string. To enable this 2 partner names have been reserved: $$ABPS$$ and $$SBPS$$.
tom_apm and tom_mon updated.

- **APAR IT20679 – PMR 53850,661,706 – RTC538568**

Checking the domain names (DN) of a partner's certificate when the trace is disabled do not generate a TRC=2057 error.
tom_apm updated

- **APAR IT20397 – PMR 88393,100,838 – RTC533824**

The tom_prm command does not export unwanted characters like ^M and '?' anymore. Present in a definition these characters could prevent the former to be re-imported.
tom_prm updated

- **APAR IT20176 – PMR 65413,660,706 – RTC533523**

The use of System V messaging has been improved; in case of a sending message failure, which can happen on very rare occasions, the message is resent and the error is logged in the LOG file;
tom_mon updated.

- **APAR IT20071 – PMR 67904,664,706 – RTC528638**

At the end of a PeSIT session, the presence of a PI99 in the RELCONF FPDU does not cause an ABORT FPDU.
tom_apm updated.

- **APAR IT19667 – PMR 53347,661,706 – RTC532500**

Any user who belongs to the same group as the user who started Connect:Express can run itom commands and sterm.
config/ch_conf config/list_ctx config/p1b8padt config/start_trace config/stop_tom
config/stop_trace config/tom_prm gtrf/stop_tom_api gtrf/tom_api gtrf/tom_mon

httpn/cxnotif httpn/tom_httpn itom/getrenc itom/p1b8pcan itom/p1b8pe2e itom/p1b8pfil_c itom/p1b8pfil_d itom/p1b8pfil_dfl itom/p1b8pfil_m itom/p1b8pfil_s itom/p1b8ppar_c itom/p1b8ppar_d itom/p1b8ppar_m itom/p1b8ppar_s itom/p1b8ppur itom/p1b8pren itom/p1b8preq itom/p1b8pret itom/SAMPLES/c_sfn itom/SAMPLES/c_spn notif/archnotlog notif/notcmd notif/tom_notify sterm/tom_opr strf/tom_apm strf/tom_ftp updated

- **APAR IT19704 – PMR 53351,661,706 – RTC532563**

Use of host name in the APPORT parameter of the sysin file is correctly resolved.
tom_api updated.

- **APAR IT19515 – PMR 67648,664,706 – RTC523913**

If a sent file is truncated during its transfer then the transfer is aborted with PRC=319 and TRC=5008.
tom_mon and tom_apm updated

The fix pack 1.5.0.16 of **IBM Sterling Connect:Express for UNIX** integrates OpenSSL version 1.1.1c.
Linux RedHat Enterprise Linux 5 in not supported anymore.

The fix pack 1.5.0.15 of **IBM Sterling Connect:Express** fixes important problems with tom_apm and tom_httpn servers in the previous release. It has been broadly tested under heavy load and should bring more robustness and stability.

In addition of these fixes the fix pack 1.5.0.15 provides the following:

- integration of Open SSL 1.0.2k;

- the cxnotif command can now be used in begin and end of transfer scripts without compromising the integrity of the notifications database files;

- the default value of the time out for the connections with the tom_apm server is now 90 seconds;

- the default value of the time out for the connections between tom_httpn and the HTTP server is now 90 seconds.

The fix pack 1.5.0. 15 fixes the following defects:

- **APAR IT18851 - PMR 67613,664,706 – RTC523970**

The use of a multi-thread architecture in tom_api has been identified as the cause of the problem described. The implementation of this architecture was potentially inefficient, could raise data races and also was causing memory leaks. Implementation of tom_api is now using a multi-process architecture which gives more robustness and stability under heavy load.
tom_api updated

- **APAR IT18864 - PMR 67650,664,706 – RTC526557**

Sending of notifications to the HTTP server in tom_httpn is made by a thread. Improvements in the source code have been made to remove potential data races and dead locks which could explain the blocking of the sending of notifications.
tom_httpn updated

- **APAR IT17703 – PMR 52759,661,706 – RTC 526128**

During an update, the installation script now backups only the files which will be overwritten by the update. No backup will be taken if the option -n is given on the command line.

The fix pack 1.5.0.14 of **IBM Sterling Connect:Express** provides the new following features:

- integration of Open SSL 1.0.2j;

- the SSL server definition example is disabled by default.

The fix pack 1.5.0. 14 fixes the following defects:

- **APAR IT17938 - PMR 51896,661,706 – RTC520927**
Load balancer connections to secured tom_apm servers do not generate error messages in the LOG file.
tom_apm updated

- **APAR IT17703 - PMR 51892,661,706 – RTC517970**
During the update of Connect:Express, the installation procedure manages symbolic links in a better way.
install.sh updated.

- **APAR IT17702 - PMR 51710,661,706 – RTC517971**
Transfer of Windows text file (WF format) with a record length of 599 does not generate signal 6 error.
top_apm updated

- **APAR IT17455 - PMR 51715,661,706 – RTC516081**
    An error in treating an alarm coming together with an error in calculation dates after the 30th of September caused intermittent errors preventing big files to be fully transferred.

- **APAR IT16883 - PMR 51438,661,706 – RTC512914**
During the update of Connect:Express, the backup of the current installation ignores files which are not owned by the user ('lost+found' directory for example).
install.sh updated.

- **APAR IT16695 - PMR 66887,664,706 – Can't stop CX - RTC510262**
    With AIX, when CX is stopped, the stop of the tom_api process is correctly done when connections are opened with Sterling Control Center .
    Mise à jour de tom_api.

- **APAR IT16418 - PMR 66871,664,706 – RTC506685**
The output option of the extract parameter of the tom_prm command enables to dump the output in a file.
tom_prm updated.

- **APAR IT16051 - APAR IT15729 - PMR 62097,660,706 - RTC 504390**

The lack of SSL partner definition does not unexpectedly stop tom_mon when a file transfer is requested.

tom_mon updated.

- **APAR IT15223 – PMR 61558,660,706 - PMR 65820,664,706 PMR - 66239,664,706-RTC 500884 – RTC 503206**

A memory leak caused an unexpected end of tom_api during load-balancers connections and statistics collections.

tom_api and stop_tom_api updated.

- **APAR IT15174 - PMR 66350,664,706 - HTTPN process - RTC500886**

A regression in version 1.5.0.13 caused a corruption of the notification file names.

tom_mon updated.

- **APAR IT14662 – PMR 18645,664,706 - PMR 19613,664,706 - RTC 492635 – RTC 497976**

The message queues life cycle management has been improved. There should not be any "ERROR CREATING QUEUE" messages in the LOG. This implies that the user ID of the itom commands and tom_opr (sterm) must be in the same group as the owner of the CX instance.

start_trace, stop_tom, stop_tom_api, stop_trace, tom_api, tom_apm, tom_ftp, tom_httpn, tom_mon and tom_notify updated.

- **PMR 62097,660,706 - RTC 504390**

The lack of the SLL partner definition does not crash tom_mon when a transfer is made to this partner.

tom_mon updated

The fix pack 1.5.0.13 of **IBM Sterling Connect:Express** provides the new following features :

- the installer has been improved; it is now possible to silently install or upgrade the product (option -s) and to specify an absolute or relative installation directory on the command line (option -d); during an interactive installation the responses are preselected; during a first installation, sample definitions are installed which enable to validate the installation by performing simple request transfers;
- the management of the edition used has been improved to be compatible with the last releases of **IBM License Metric Tool** (ILMT); during a first installation or an update it is asked which edition is going to be used (*Premium*, *Standard*, *Premium for Non-Production Environment* ou *Standard for Non-Production Environment*); the command `changeEdition` can be used to change the current edition at any time;
- the rotation and compression of the `LOG` file are now possible; the configuration of the number of previous log files to keep and the file compressor is done through the `sysin` file;
- the percentage of transferred bytes is now displayed in the `MONITOR STATUS` screen of `sterm` as well as in the output of the command `p1b8pren`;
- the new command `compact_base` can be used to manually compact the **Connect:Express** database files;
- **OpenSSL** is now dynamically linked with **Connect:Express**; users can decide to either use the libraries delivered with the product (this is the default) or use the libraries installed with the operating system; this will facilitate the update of **OpenSSL** libraries in case of a security alert;
- when Connect:Express opens an inbound or outbound secured connection the SSL protocol version is displayed in the LOG file;
- the `tom_httpn` command is now sending errors to the standard error stream instead of the file `RDIND.txt`; it is the responsibility of the user to redirect the error stream in a file if the user does not want this error messages to be printed on the screen;
- to help support teams with problem determination the command `CX_Data_Collector` has been made available; it enables to collect informations about a **Connect:Express** instance and to automatically send this data to IBM ECuREP site;
- all the binaries for the Linux operating system are now compiled in 64 bits; this removes the 2 gigabytes file limit size for trace files.

The fix pack 1.5.0.13 also fixes the following defects:

- **APAR IT08263 – PMR 18767,664,706 - RTC 461741**
  A regression in version 1.5.0.12 caused a garbaged password to be sent when the DPCPSW was empty.
  tom_mon updated.

- **APAR IT09646 – PMR 11502,661,706 - RTC 463201**
  A memory leak was the root cause of an unexpected stop of `tom_api` during statistics collection.
  tom_api updated.

- **APAR IT09819 – PMR 66469,082,000 – RTC 468571**
  In certain conditions `tom_apm` server stopped while handling Nessus scanner connections.
  tom_apm updated.

- **APAR IT10469 – PMR 82626,082,000 – RTC 473020**
  When the Connect:Express database has been corrupted, its automatic rebuild when the monitor starts has been improved.
  tom_mon updated.

- **APAR IT11204 – PMR 19406,664,706 – RTC 470866**
  The NRC field in notifications could have a value different of zero in case of successful transfer.
  tom_mon updated.

- **RTC 463086**
  A regression in version 1.5.0.12 caused syntax errors in the `sysin` file when tab characters were present between TCPORT, FTPORT or APPORT parameters and their value.
  tom_mon updated.

- **RTC 466415**
  An old regression prevented the correct execution of the `build_tbl` command.
  build_tbl updated.

- **RTC 464761**
  A regression in version 1.5.0.12 caused the display of a `@` instead of a `9` character in the transfer identifier value returned by `tom_api`.
  tom_api updated.

- **APAR IT11448 – PMR 12863,661,706 – RTC 477271**
  It is now checked in the `cxnotif` command that HTTPNF parameter in the `sysin` file is not set to 1. Using `cxnotif` and the HTTPN notifications at the same time can corrupt the notification files. The source code has also be improved to prevent potential bugs.
  tom_mon and cxnotif updated.

- **APAR IT12181 – PMR 12860,661,706 – RTC 480064**
  In some cases with a deficient server, connection requests could stay in a state that left the transfer requests in the C state. A timeout is now forcing connections to be closed close if they do not complete in a 60 seconds delay.
  tom_apm updated.

- **APAR IT12432 – PMR 34249,660,706 – RTC 479082**
  This APAR completes APAR IT05776 which did not address the problem of the pollution of the LOG file by load balancers connections to the secured tom_apm servers.
  tom_apm updated.

- **APAR IT12503 – PMR 19613,664,706 - RTC476479**
  The socket close phase is now subordinated to a timeout. Closing of a blocked socket will be forced in order to let the waiting requests to be processed.
  tom_apm updated.

- **APAR 13780- PMR 65323,664,706 - RTC 489482**
  The memory violation at the start of the `tom_apm` process when the trace is enabled in the `sysin` file has been fixed.
  tom_apm updated

- **RTC 492758**

In the French screens PRESENTION and PARAMETRES_DE SESSIONS SSL of tom_opr, the value of O/N fields stay at O when they are edited.

tom_opr updated

- **RTC 495058**

Import of CTRLDN definition with tom_prm when mode is set to REPLACE is now working.

End of **Connect:Express** support for the following Operating System versions :

Operating System	Dropped Version	Supported Versions
SUN Solaris	5.9	5.10 et supérieures
IBM AIX	5.3	6.1 et supérieures

02/13/2014: **APAR IC99172 – RTC 411153**
Additional variables have been added in the statistics for event 11 (NodeError).
tom_mon updated

02/28/14: **APAR IC99710 - RTC 410300**
The API server is managing inbound connections in a more robust way. The server does not terminate when network error occurs during accept nor during memory contention.
tom_api updated

03/09/14: Extension of the length of the physical name to 128 characters.

03/14/2014: **APAR IT00262 - RTC 415244**
Pi22 set to 01 (reception)
tom_mon, and tom_apm updated

03/14/2014: **RFE 413163 (DW 45498)**
Transfer identification displayed both decimal and hexadecimal format.
tom_opr updated

03/14/2014: Origin and destination fields received in pi3 and pi4 respectively are 24 characters long, made of 8 characters segments: take the first non blank..
tom_apm updated

03/18/2014: PPDFLT (default presentation table) and PPFRST (First presentation table) added in the sysin file.
tom_mon updated

03/18/2014: Presentation table no longer required in the file definition.
tom_opr and tom_prm updated

03/18/2014: The presentation table can be specified in the sysin, in the partner definition or in the file definition.
The PPFRST parameter indicates in which order the information is processed:
  • 'PPFRST=P' indicates that the order is Partner/File/Sysin (Partner has priority);
  • 'PPFRST=F' indicates that the order is File/Partner/Sysin (File has priority).
If the table is specified in neither the partner or the file definition, the sysin value is used.
As no field is required, if none is provided, all presentation parameters are set to null: no compression, no multi-record, no transcoding.
tom_mon updated

03/20/2014: **APAR IT00449 – RTC 415782**
The statistics purge process is performed, by default, at 00:30:00 am, or based on the environment variable $PURGE_STATS_TIME. The automatic daily process has been reviewed, and it is no longer required to stop-start the monitor for this purge to occur.
tom_mon updated

03/26/2014: **APAR IT00623 – RTC 417688**
tom_prm DATABASE MODE=(CREATE|DELETE) is working again.
tom_prm updated

03/27/2014: **APAR IT00644 – RTC 417472**

The SSL return code (SSLRC) variable has been added into the statistics records of some events.
tom_mon updated

04/02/2014: **APAR IT00717 - RTC 418477**
It is now possible to start the tom_api server when the environment variable TOM_QUEUE is used.
The 64 bits version of tom_api for AIX is now starting when an IP address is specified for listening the incoming connections.
tom_api updated

04/28/2014: **APAR IT01356 - RTC 421338**
In transfer errors when the parameter /UDF is used with the p1b8preq command, the value of the field UserDataSent (USDS) is correctly initialized in the statistics.
tom_mon updated

04/28/2014: **APAR IT01343 - RTC 421503**
Due to a regression introduced with the interim fix 150.11.01, on AIX platform, some variables were missing during extraction of files and partners with the tom_prm command.
tom_prm updated

08/21/2014: **APAR IT03910 - RTC 437903**
The function to update the file used to manage the synchronization has been improved. On very rare occasions it could cause tom_apm to crash.
tom_apm updated

09/06/2014: **APAR IT04176 - RTC 434183**
The serial number in the request number (QQQNNNNN) as well as the transfer identifier are now in hexadecimal format. The potential number of transfer requests can now be more than 16 millions per day.
tom_mon updated

09/30/2014: **APAR IT04176 - RTC 434183**
The transfer ID (pi13) is now independent of the request number and evolves from 1 to 0xFFFFFF.
tom_mon updated

10/01/2014: APAR IT04619 – RTC 442120
The notification service I snow able to send a notification when the sent or received physical file is more than 2GB in size.
tom_http updated

11/17/2014: **APAR IT05622 – RTC 448569**
Dynamic activation of the trace (ch_conf command) when the trace was initially deactivated does not raise crash during transfers anymore.
tom_apm updated

11/26/2014: **APAR IT05776 – RTC 449366**
The reply to load balancers connection requests has been improved. It is now possible for a load balancer to test the activity of tom_apm (secured and non secured) and tom_fp server processes without displaying polluting messages in the LOG file.
tom_apm and tom_ftp updated

11/27/2014: **APAR IT05814 – RTC 449857**
The request number field in the monitor status screen of sterm can be entered in hexadecimal.
tom_opr

12/06/2014: **RTC 450315**
Article length up to 65529 are now supported and do not crash tom_apm anymore.
tom_apm, tom_opr, tom_prm, p1b8preq and p1b8pe2e updated

01/19/2015: **APAR IT06825 - RTC 453277**
If Origin and/or Destination are not specified in a transfer request then PI3 and PI4 will not be sent in CREATE or SELECT and ACK SELECT FPDUs.
tom_apm updated

02/20/2015: **APAR IT07287 – RTC 454049**
Character EOF (0x14 in hexadecimal) at the end of a text file is now correctly processed for WF and WV file types.
tom_mon updated

02/24/2015: **APAR IT07281 – RTC 456965**
Input characters in the 'PHYSICAL NAME' field of tom_pr (sterm) application is not mandatory anymore.
tom_opr updated

03/27/2015: **APAR IT07692 – RTC 456382**
In some cases (loop mode) and when synchronization was enabled transferred files could be corrupted.
tom_apm updated

03/27/2015: **RTC 460605**
To limit the number of running instances of tom_apm after a first installation of CX, the sysin parameter STRFRN is fixed to 10.
sysin updated

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10/22/2013: **APAR IC96964 - RTC 397101**, tom_apm and tom_ftp servers better handle errors during connection requests
tom_mon, tom_ftp and tom_apm updated

01/16/2014: **APAR IC98687 - RTC 406566**, when an instance of tom_apm is re-used to transfer a file with a partner defined with type 'T' the PI99 field was not re-initialized correctly **tom_apm updated**

01/23/2014: **RTC 406254**, the STONER parameter has been added to the SYSIN file; when set to 1 Connect:Express is forced to stop if one of its child servers (TCPIP, FTP, SSL or API) dies unexpectedly; this can be used to prevent to use CX if it is mis-configured;
tom_mon, tom_ftp and tom_apm and tom_api updated

01/27/2014: **RTC 408087**, Upgrade OpenSSL including security fixes.

01/31/2014: **RFE 398702 (DW 39699) - RTC 408363**
Enhanced CFT compatibility:
- environment variables added '*partner*'_ IMSG and '*partner*'_OMSG, to enable specific functionalities;
- existing variables still exist as defaults: CNX_MSG applies to the monitor, '*partner*'_MSG applies to '*partner*', in requestor and server modes. '*partner*'_OMSG applies to requestor mode, '*partner*'_IMSG applies to server mode. Specifying '*partner*'_IMSG=&PI99 , means that Connect:Express must send back the PI99 received;
- when a CFT profile is used, compression is disabled, because CFT implements proprietary algorithms.

01/31/2014: **RFE 407855 (DW 43372) - RTC 408840**
User exits and user commands processing is displayed in log messages .

01/31/2014: Added ANY option in the partner definition, replaces environment variable '*partner*'_PRF. This option enables communications with a CFT configured with a proprietary profile.
The environment variable CNX_PRF, that applies to the monitor, has priority. If it is active, all partners have profile ANY, whatever their own definition.
The environment variable '*partner*'_PRF is no longer required, but it is considered if the ANY option is 'N' in the partner definition.

01/31/2014: Added INQUIRY option in the file definition. This option indicates if a remote partner can read the file although no hold transmission request has been prepared.

01/31/2014: tom_api trace fixed: the name of the Client session trace was constant, equal to "C".

08/28/2013: **APAR IC94887 - RTC 392407**, improving installation script install.sh
install.sh updated

06/09/2013: **APAR IC94592 – RTC 386170**, Windows text format (fixed and variable) added to file definition
tom_apm, tom_opr, sterm et cxcmd updated

09/18/2013: **APAR IC96043 - RTC 397101**, tom_apm server better handles repeated test connections without data sent like load balancers do; these connections are managed without error messages written in the LOG file
tom_apm updated

09/23/13: **APAR IC96145 – RTC 396664**, substitution of different values of Pi37 in consecutive transfers in a same session is now correct
tom_apm updated

09/23/2013: **RTC 382879**, the execution of Connect:Express with a user name which is more than 8 characters in length prevents some fields to be correctly updated with sterm et tom_prm
tom_apm, tom_ftp, tom_mon, tom_opr, tom_prm et itom utilities updated

10/22/2013: **APAR IC96964 - RTC 397101**, tom_apm and tom_ftp servers better handle errors during connection requests
tom_mon, tom_ftp and tom_apm updated

Version 1.5.0.9

04/23/2013: **RTC 373780**, the record length passed with the p1p8preq command is sometimes misused.
p1p8preq updated.

04/24/2013: **RTC 371607**, requests stay in 'J' state and number of retries is reset to zero
tom_mon updated.

06/07/2013: **RTC 380504**, tom_prm accepts mandatory parameter with no value
tom_prm updated

06/14/2013: **RTC 381587**, fixes a tom_prm import problem
tom_prm updated

07/04/2013: **RTC 384163**, fixes a problem of translation not done when sequential file transfers were done in a same instance of tom_apm
tom_apm updated

Version 1.5.0.8

01/29/2013: **RTC 363036**, start and stop of the tom_apm processes (TCPIP and SSL) are now logged in the LOG file

tom_apm and tom_mon updated.

02/14/2013: **RTC 365460**, an additional option enables to extend the supported character set to all printable characters for tom_opr, tom_prm and the itom utilities; by default, the supported characters set remains unchanged
tom_mon, tom_opr, tom_prm, p1b8pfil_d , p1b8pfil_dfl , p1b8pfil_s , p1b8ppar_d, p1b8ppar_s , p1b8ppur and p1b8preq updated.

03/07/2013: **RTC 366030**, crash of tom_apm and tom_mon during transfers if the session used defines a size of 0 for the message length
tom_apm updated.

03/05/2013: Upgrade OpenSSL including security fixes.

Version 1.5.0.7

10/15/2012: **RTC 352448**, the TCPIP HEADER field of the SSLPARM structure is now exported/imported with the tom_prm command
tom_prm updated.

29/10/2012: connection acceptance of an inbound partner with Connect:Express Unix is now done regarding the name specified int the PeSIT pre-logon string excepted if:
  - the name is not specified or is empty;
  - the name is different than the value of the Pi3 field of the PeSIT CONNECT, in which case the Pi3 value is used
tom_apm updated.

11/06/2012: **RTC 351239**, control characters are not shown anymore in statistics display
tom_api updated.

11/19/2012: **RTC 355832**, the environment variable TOM_API_TCP_TIMEOUT is now accepted to change the connection time out to the tom_api process; the default time out is now 60 seconds
tom_api updated.

12/28/2012: **RTC 361032**, when the last character of the XFERID field is a '9' it is not transformed in a '@'
tom_mon updated.

01/07/2013: **RTC 362214**, SHA256 is now supported for hashing integrity control messages in SSL
tom_apm updated.

Version 1.5.0.6

09/10/2012: **RTC 320826** (duplicated: 346287, related: 320813), PMR 42327.660.706, tom_mon crashes.
Modification: strf/security.c, /strf/sndfpdu.c, /tom_ftp/tom_ftp.c, /commun/r_fonc.c, /itom/l0b8z20.c, /itom/r_msgq.c, /include/strf/declc.h, /include/strf/recfpdu2.h, /include/strf/decl.h, /include/api/proto.h, /include/ftp/ftp.fonctions.h, /include/ftp/ftp.decl.h, /include/ftp/ftp.const.h, /gtrf/r_differ.c, /gtrf/oto1.c, /gtrf/r_cont.c, /gtrf/r_log.c, /gtrf/oto0.c, /gtrf/r_msgq.c, /tom_mon/tom_mon.c, /sterm/r_msgq.c, /tom_api/tom_api.c and /tom_apm/tom_apm.c

tom_apm, tom_ftp and tom_mon updated.

06/18/2012: **RTC 327845**, PMR 40639.660.706, requests from a client to a server generates RENC read error.
Modification: gtrf/oto1.c
tom_mon updated.

09/13/2012: **RTC 348956**, when the number fo message queues reaches the maximum defined by the kernel parameter kernel.msgmni, any new tom_apm process crashes with a SIGSEGV.
Modification: commun/r_fonc.c
tom_apm updated.

09/13/2012: **RTC 348972**, PRC code 8000 (syslog message STRF Process Abnormally Ended) is never sent to tom_mon when tom_apm crashes.
Modification: tom_apm.c
tom_apm updated.

09/13/2012: **RTC 348977**, in case of segment violation, tom_mon can kill all user processes instead of killing only those it launched.
Modification: oto0.c and oto1.c
tom_mon updated.

09/13/2012: **RTC 348986**: like tom_mon, tom_apm and tom_ftp now generate a core dump in case of a segment violation or abort signal.
Modification: tom_apm.c and ftp.fonctions.c
tom_apm and tom_ftp updated.

10/05/2012: **RTC 352448**, tom_prm doesn't export/import the value of the TCPIP Header field of the SSLPARM structure.
Modification: tom_prm.c
tom_prm updated.

Version 1.5.0.5

03/07/2012: **RTC 334958,** PMR 32527,661,706, APAR IC85060 - File is removed when an error occurs after end of transfer.
Modification: tom_apm.c
tom_apm updated.

26/07/2012: **RTC 342397,** PMR 41964,660,706, APAR IC85544 - Incoming calls fail with signal 11 (trace enabled).
Modification: include/strf/recfpdu2.h
tom_apm updated.

26/07/2012: **RTC 339320,** PMR 46114,660,706, APAR IC85552 - request failed with PRC 203 after received request with PRC 200
Modification: tom_apm.c
tom_apm updated.

27/04/2012: When the monitor catches a signal (SIGSEGV for ex.), tom_mon activates the trace if it is not enabled. Also, if it exists and can be executed, tom_mon invokes the command `$TOM_DIR/exit/UEXSUG` before the monitor dies.
Change tom_mon/tom_mon.c
tom_mon and UEXSIG updated.

02/05/2012: **RTC 319820:** Corruption of the value of parameters `NOTBEFORE`, `NOTAFTER`, `VERSION`, `DH_PARAM`, `CA_LIST`, `SERIAL_NO`, `ISSUER_DN`, `SUBJECT_DN`, `CLIENT_SUBJECT`, `CLIENT_ISSUER`, `SERVER_SUBJECT` and `SERVER_ISSUER` when exported with the tom_prm command.
Modification: tom_prm.c

22/05/2012: **RTC 319850,** PMR 26954,300,624, APAR IC83583 . Transfer failed ERROR DURING SELECTION TRC=4991.
Modification: tom_apm.c

22/05/2012: **RTC 327845,** PMR 40639,660,706, APAR IC83612 . Transfer inquiry rejected TRC=2152 PRC=2205.
Modification: tom_apm.c, tom_mon.c,oto01.c
tom_mon and tom_apm updated.

22/05/2012: **RTC 328860,** PMR 40723,660,706, APAR IC83581 . File, fix record, with no LF at end of file, TRC=5010.
Modification: r_file.include.h
tom_apm updated.

Version 1.5.0.3

15/02/2012: **case 124615** and **case 124624**: Garbage in RTAB file.
Change gtrf/oto0.c
tom_mon updated.

21/02/2012: **defects 130160 and 145300**: Segmentation of long run purges.
Change itom/l0b8z20.c, include/gtrf/const.h, include/gtrf/proto.h, gtrf/r_oper.c, gtrf/r_msgq.c, tom_mon/tom_mon.c, sterm/r_purge.c and docs/doc/CXUX15_UserGuide

28/02/2012: **RTC 313123**: tom_apm doesn't start.
Change gtrf/r_fonc.,c gtrf/oto0.c and tom_mon/tom_mon.c
tom_mon updated.

28/02/2012: New parameters MAXSES et MAXFTP in the SYSIN file.
Change include/gtrf/const.h, include/gtrf/decl.h, gtrf/decl.c, gtrf/r_log.c, gtrf/oto0.c, tom_mon/tom_mon.c and doc/CXUX15_UserGuide

28/02/2012: **RTCs 303798** and **124624**: Fix of tom_api which stopped suddenly and randomly.
Change: include/api/proto.h, tom_api/tom_api.c and tom_api/tools.c

08/03/2012: **RTC 315340**: Improvement with the use of the SYSTCP file. TCPBYPASS can be put wherever and alternate TCP/IP addresses are correctly used

13/09/2011: fields initialized to fix propagation code trc=2010 from message to file in the same session.
Change tom_mon.c, tom_apm.c and oto0.c.
tom_mon and tom_apm updated.

28/10/2011: Pi99 field initialized to fix propagation when chaining transfer in the same session.
Change tom_apm.c.
tom_apm updated.

08/11/2011: Environment variables added, 'partner'_PRF and 'partner'_MSG, to support, for one partner, profile ANY and connection pi99.
Change tom_apm.c, recfpdu2.h.c and sndfpduc.c.
tom_apm updated.

29/11/2011: **case 363990** tom_apm doesn't stop, waiting for end of session
Change tom_apm.c.
Tom_apm updated.

06/12/2011: **case 371026:** trc=2011 request rejected when SFN= is omitted
Change tom_mon.c and gtrf/oto1.c.
Tom_mon updated.

06/12/2011: **case 373411:** p1b8ppur /qqq= fails trc=2042 (Linux)
Change p1b8ppur.c.
p1b8ppur updated.

19/12/2011: **case 371063:** Connection fails trc=1000: end of transfer command is launched
Change tom_apm.c.
Tom_apm updated.

07/03/2011: **case 281210**: Fix: return code trc=1962 in place of trc=2054 when C:X rejects an inquiry request.
Change in sndfpduc.c (tom/strf).
tom_apm updated.

22/04/2011: **case 288576**: increase l0b8z20 timer from 15 to 30 seconds.
Change l0b8z20 (tom/itom).
Itom updated.

22/04/2011: **case 289802:** send return code PRC=2205 linked to TRC=2054, when an inquiry request is rejected.
Change in oto1.c (tom/gtrf).
tom_mon updated.

22/04/2011: default partner definition made available ($$PART$$), and disable password control through keyword $$NONE$$

Change in oto1.c, oto0.c, tom_mon.c (tom/gtrf).
tom_mon updated.

22/04/2011: Caller's password added to the list of fields of the http notification.
Change in rfonc.c (tom/gtrf).
tom_mon updated.

22/04/2011: **case 282627:** support of characters «-« and «_» in symbolic names
Change in r_screen.c (tom/sterm).
tom_opr updated.

22/04/2011: Default file process.
The partner default file process is extended to PeSIT, and $$FILE$$ profile is added. When receiving a request for a file that is unknown, the tranfer is processed using the partners default file (if one is declared), or the $$FILE$$ profile is used, if defined in the directory. For the FTP protocol the sysin default file has priority on the $$FILE$$ profile. All default files must be defined in the directory. If no default profile is found, the file transfer is rejected.
Change in oto1.c, tom_mon.c (tom/gtrf), tom_apm (tom/strf) make_msg.c (tom/sterm).
tom_mon, tom_apm updated.

22/04/2011: If the monitor is stopped (stop or kill), current transfers are interrupted.
Change in tom_mon.c (tom/gtrf), tom_apm (tom/strf).
tom_mon, tom_apm updated.

22/04/2011: Notification option 0 in the transfer request parameters disables the file option.
Change in oto1.c (tom/gtrf).
tom_mon updated.

05/05/2011: transfer interrupted with multi-article option set, fixed.
Change in tom_apm.c (tom/strf).
tom_apm updated.

25/05/2011: **case 309087**: signal 11 with CFT partner, PeSIT-E, INCOMING REJECTED UNKNOWN, fixed.
Change in recfpdu2.h (tom/strf).
tom_apm updated.

27/05/2011: **case 309087**: SYSTCP et SYSX25 disabled, fixed.
SYSTCP and SYSX25 updated.

15/08/2011: lookup long names and passwords in FTP server mode.
Change tom_ftp.c and included modules (tom/strf and /include).
tom_ftp updated.

15/08/2011: <skipnofile> option added in httpnotcfg.xml: skip notification if the physical file is not found. <PhysicalStatus> field added in the http notification
Change tom_httpn.c, specif.c and toolx.c.
tom_httpn updated.