



# LLT Release Notes

Since the LTT software is composed on many individual parts, the changelog specifies in which part the change/fix took place by preceding each entry with a prefix. The used prefix are:

- GUI: change took place in the LTT-GUI part of the LTT software
- MesVis: change took place in the MesVis-GUI or in the measurement recording subsystem part
- TS: change took place in the TestStand / LabVIEW subsystem part of the LTT software
- HistoryConv: change took place in the History Converter Tool
- MDDBS: change took place in the MDDBS database installer

## [3.4.7] - 05.10.2023

### **ADDED**

- GUI: export / import of error configuration (global max. error count only)

### **CHANGED**

- GUI: changed layout of F10 dialog - operation mode parameters

### **Fixed**

- GUI: fixed "GUI freeze" problem related to runtime values update
- TS: updated MT.WKM drivers (fixed error texts)
- HistoryConv: fixed conversion of legacy history files
- MesVis: fixed multi-thread issue while writing CSV measurement files
- TS: fixed ramp function of EA.SCPIDriver (support ramp values < 1)

## [3.4.6] - 11.07.2023

### **ADDED**

- TS: new test execution flag "LTT.Station.IsError" (in Execution.RuntimeVariables)
- TS: new temperature sensor type "Laureate RTD"
- TS: new PS module "ITECH M3900D"
- GUI: new option "fractional seconds separator" in recording config dialog

### **CHANGED**

- TS: updated MesSyII API to CL7-2023.06.07 (TestStand 2014/TestStand 2019/LabVIEW Runtime 2019)
- TS: updated MesSyII.FD API to CL3-2023-06-26 (TestStand 2014/TestStand 2019/LabVIEW Runtime 2019)
- GUI: make config backup before a config import
- GUI: possibility to export/import max error counter settings through config manager

### **Fixed**

- GUI: fixed Excel limit import (skip empty lines)
- GUI: fixed MDF splitting (did not work on month change)
- MesVis: fixed reading of CSV files (did not work when there are also MDF files in same folder)

## [3.4.5] - 22.03.2023

### **ADDED**

- GUI: customer specific backup mechanism
- GUI: new MDF file split option "ByHour" in ltt\_recording\_config.xml
- GUI: new option "AlwaysRecordLimitFails" in recording configuration dialog

### **CHANGED**

- TS: clear error queue for Sorensen power supplies after an error happened
- GUI: new option dialog in project manager (for cleaning up old test orders)

- GUI: changed delimiter of error overview file columns from comma to semicolon

### **Fixed**

- MesVis: fixed voltage column values in CSV files
- MesVis: MDF recording of measurements with different signal names for individual DUT types
- TS: fixed TS driver "Burster" to display neg. temperature correctly

## **[3.4.4] - 20.01.2023**

### **ADDED**

- GUI: option to reset testplan error counter after x cycles without TP error
- GUI: option to configure temporary error counter to be the stop criteria when max. error count is reached
- GUI: button to reset operation mode parameters (to restore TestStand defined order of parameters)
- MesVis: option to export multiple selected test orders / DUTs at once
- MesVis: option to repair damaged database tables
- TS: new temperature sensor driver "Burster 9163"

### **CHANGED**

- GUI: OP mode parameters column layout in F10 dialog
- GUI: error count value in history file for error no. 21 (TESTPLAN ERROR) is "temporary"
- GUI: changed datatype of "max. error count" parameter so it can be > 127
- TS: EA PS driver now sets LAN timeout to 0 on init
- TS: new functions for EA PS driver
- TS: WKM modules error handling
- TS: updated MesSyII API (for TS2014) to CL7-2022-11-30
- TS: updated MesSyII API (for TS2019) to CL7-2022-07-19
- TS: updated MesSyII.FD API (for both TS2014 & TS2019) to CL2-2022-06-20

### **Fixed**

- MesVis: MDF recording of measurements with different signal names for individual DUT types
- TS: loading of limits after OM change
- MesVis: "empty header" issue while writing measurements as CSV
- HistoryConv: MS Access export

## [3.3.4] - 16.08.2022

### **Changed**

- GUI: remember the folder of the last loaded history file

### **Fixed**

- GUI: fixed problems with MDF file splitting
- GUI: fixed entering of decimal values as operation mode parameters in F10 dialog

## [3.3.3] - 21.07.2022

### **Added**

- MesVis: "external data source" feature (experimental)

### **Changed**

- GUI: "TESTPLAN ERROR" (SYS-21) is now entered into history, DB and CSV files
- GUI: removed auto. column fit in history data dialog (slow and annoying)
- MesVis: improved write speed for DB data
- MesVis: preserve measurement selection when switching DUT's
- MesVis: always show DUT type in DUT list
- TS: updated MesSyII API (for TS2014) to CL5-2022-06-23
- TS: updated MesSyII.FD API (for both TS2014 & TS2019) to CL2-2022-06-20

### **Fixed**

- GUI: MDF data recording timestamps + date split option

- GUI: entering double values in F10 dialog did not work anymore
- MesVis: measurements are not drawn under certain conditions
- fixed IRS.LTT.Update.x.x.x.x\_2014.exe / IRS.LTT.Update.x.x.x.x\_2019.exe
- fixed IRS.LTT.TS.Tool "Apply LTT Config"

## [3.2.0] - 20.05.2022

### **Added**

- GUI: MDF Streaming file split options

### **Fixed**

- TS: fixed Keysight PS driver issues
- TS: fixed Kniel PS driver for TS2014
- TS: fixed PS problems with COM port daisy chain
- GUI: fixed F6 dialog error when closing while stations are running

## [3.1.1] - 27.04.2022

### **Added**

- TS: PS reconnect mechanism for process model watchdog sequence

### **Changed**

- TS: added support for "bypass" in process cooling system driver interface
- GUI: changed auto row jump behaviour in F11 dialog
- GUI: opmode parameters in F10 dialog are no longer sorted alphabetically

### **Fixed**

- GUI: fixed step time calculation

## [3.1.0] - 21.03.2022

### **Added**

- GUI: new tool *MDF.Sorter* can be found in *66\_LTT\_Tools*

- GUI: new Excel export for LTT limits (F5 dialog)
- GUI: automatic backup of *ltt\_main\_config.xml* and automatic restore in case the file gets destroyed
- GUI: indication if simulation drivers are used
- TS: new process cooling system drivers for WKM/Autotherm

### **Changed**

- GUI: improved history data scrolling / column adjustment
- TS: new MesSyII.FD release *IRS.MesSyIIFD.CL2-2022-03-04*
- TS: added ramp function to power supply interface, implemented for *EA power supplies*
- TS: *Omega iThx* driver now ignores all errors (as requested by customer)
- TS: Switching OpModes now takes *TCC debouncing time* into account
- MesVis: file selection dialog for saving graph screenshots
- MesVis: improved read speed for CSV measurement data (only with default column layout)
- MesVis: DUT's with same name but different type are now listed properly
- MDBS: new installer searches for free port instead of refusing to install if port 80 or 8080 is already used

### **Fixed**

- GUI: module configuration dialog no longer overwrites your unchanged config sections
- GUI: GUI no longer refuses to start in case of a *duplicate DUT assignment* error in database, but instead fix this error itself
- GUI: sporadic DB write operation failures are now retried and do not lead to a testplan error
- TS: using *MesSyII.FD* did not work properly out of the box

[3.0.0] - 28.10.2021

**This release is a new milestone because we upgraded to TestStand/  
LabVIEW 2019!**

**Running LV2014 code is no longer supported in TS2019!**

**Release 3.0.0 is still available for TS/LV2014!**

For migrating your existing TS/LV2014 projects to TS/LV2019 read the separate **migration guide**.

### **Added**

- GUI: new dialog *hardware>module configuration* offers easy configuration of all hardware drivers & parameters
- GUI: new file *lvt\_module\_config\_template.xml* contains configuration for all supported hardware drivers
- GUI: new measurement recording output format *MDF*
- GUI: start / stop buttons for test groups
- TS: new hardware drivers for various process cooling systems (Lauda, WKM)
- TS: LabVIEW functions for reading INI files (in *IRS.LTT.UserLib*)

### **Changed**

- GUI: improved *simulated TCC* panel (programmable sequences can be saved/loaded)
- GUI: added possibility to have groups with no TCC assigned > fixed OM
- GUI: *StationGlobals* are now included in configuration export
- GUI: F10 dialog now offers checkboxes and comboboxes for operation mode parameter input
- GUI: F11 test parameters can be changed for non-running stations while other stations are running
- GUI: new version of IRS licensing mechanism (2.1.0)
- TS: enums support for operation mode parameters (only in TS2019)
- MesSy: 2019 comes with *MesSyII CL7-2021.09.29*, *MesSyII.FD CL2-2021-07-30*
- MesSy: 2014 comes with *MesSyII CL5-2021-03-31*, *MesSyII.FD CL2-2021-07-30*
- MesSy: no support for MesSyI with TS2019!
- MesVis: support for wildcard search in measurements
- MDBS: updated MDBS to version v3.6.0 (db admin website now runs at port 8081)

### **Fixed**

- HistoryConv: date conversion error
- TS: sporadic error during hardware module initialization



- TS: EA PS driver was not able to set sink current
- GUI: error when trying to open error log
- GUI: fixed several minor issues

## [2.9.3] - 28.06.2021

### **Added**

- GUI: error counter reset gets logged to action log

### **Changed**

- GUI: do not save error counters after testplan load

### **Fixed**

- GUI: rare error related to runtime values
- GUI: improved security feature
- GUI: action log dialog date filter
- MesVis: improved write performance for database

## [2.9.1] - 12.05.2021

### **Added**

- GUI: security feature (only enabled upon request)

### **Fixed**

- TestStand: wrong logpath
- MesVis: error during startup if some data is corrupt

## [2.8.4] - 08.04.2021

### **Changed**

- GUI: new version of IRS licensing
- MesVis: removed unused options

## Fixed

- GUI: *UseGlobalLock* attribute in *ltt\_module\_config.xml* gets removed after a certain action
- GUI: GUI freezes when F6 dialog is open (happens only when there are a lot of (>1k) DUT error entries in database)

## [2.8.3] - 11.12.2020

### Added

- MesSy: added *MesSyII.FD API* (pre-release)
- TestStand: new step type "LTT Limit Test (no config)"
- MesVis: new column *ElectricRuntime* for CSV + DB measurement logs
- GUI: possibility to load/save the F11 configuration from/to file
- HistoryConverter: additional *date&time* column
- HistoryConverter: new option *show runtime in seconds*

### Changed

- GUI: F11 project/test order management can delete multiple test orders at once

### Fixed

- MesVis: CSV files do not have a header or have a header in 2nd line
- MesVis: DB import only imports last DUT
- MesVis: measurements stored in database have no floating point precision

## [2.7.0] - 07.10.2020

### Added

- GUI: limit Excel import
- GUI: new *ltt\_main\_config.xml* parameter *MaxRuntimeStopBehaviour*
- GUI: new *ltt\_main\_config.xml* parameter *MaxErrorStopBehaviour*
- GUI: *delete logs* now also deletes measurement database data
- GUI: new history column *Step Time*

- TestStand: ability to configure opmodes per group
- TestStand: driver for Autotherm medium control

### **Changed**

- GUI: upgrade to *DevExpress 20.1.7*
- GUI: delete old project/testorder data
- GUI: F4 "Save Overview" now saves both global + temporary at once
- GUI: improved runtime values display
- TestStand: added "Timeout" parameter to EA.SCPI driver
- MesVis: improved DB export

### **Fixed**

- MesVis: reading CSV files
- MesVis: fixed Excel export

## [2.6.0] - 20.07.2020

### **Added**

- GUI: DUT type parameters
- GUI: Option to change the decimal separator for CSV log files
- TestStand: driver for Lauda SUK350 **Attention:** due to this there is a change in the `IRS.LTT.Mod.Loader.lvlibp:Load Module.vi` If you use this functionality in your testplan you need to update the function calls.
- HistoryConverter: new Excelsheet for error overview per DUT

### **Changed**

- `litt_module_config.xml` modules no longer need to be in order or count continuously
- TestStand: additional configuration parameters for PMA280 modules
- GUI: improved display of "runtime values" in test stations display of main window

### **Fixed**

- GUI: "Data Transfer" dialog
- GUI: duplicate limits during limit import

- MesVis: export to MDF for legacy database measurements
- MesVis: reconnect after long idle time
- MesVis: open error if last opened container does no longer exist

## [2.5.0] - 11.05.2020

### **Added**

- GUI: "delete log files" feature
- GUI: "finish test" feature
- GUI: FTP / network backup feature (Alt-F11)
- HistConv: selection for decimal separator
- GUI: button to reset "TESTPLAN ERROR" counter (for autom. restart)
- TestStand: TCC driver software debounce
- TestStand: EA.SCPi driver
- TestStand: TDK.GensysPlus driver update (support for voltage / current slew)

### **Changed**

- TestStand: new TCC driver sim. panel

### **Fixed**

- TestStand: LTT Module Framework memory leak
- GUI: "electric test time" timer did not work correctly
- HistConv: some fixes

## [2.4.1] - 15.02.2020

### **Fixed**

- GUI: updating old testplans (<2.x) led to problems
- MesVis: could not load old legacy databases
- MesVis: Excel export caused problem when there are multiple measurements with same name
- TestStand: fixed EA PS driver (all models) because it interfered with PMA280 temperature sensor

- TestStand: LTT model will now wait until ProcessSetup is finished before PreUUTLoop continues!
- GUI: automatic restart can be stopped with F8

## [2.4.0] - 10.01.2020

### **Added**

- GUI: configurable automatic station restart on testplan error!
- TestStand: new PS driver for Delta Elektronika (PSC-ETH)
- TestStand: new PS driver for EA PSB 9000

### **Changed**

- MesVis: show measurement on double click
- GUI: removed DUT type selection from recording configuration dialog
- GUI: changed some paths:
  - "45 LTT Action logs" > "60 LTT Action logs"
  - "60 SW-Tools" > "66 SW-Tools"
  - "70 LTT Documentation" > "77 LTT Documentation"

### **Fixed**

- GUI: a rare situation led to an error related to runtime values while adding a new history entry
- GUI: problems during testplan load (HandleEndExecution)
- GUI: hardware limits in F10 dialog got not updated when immediately switching to another group tab afterwards
- GUI: F4 dialog caused exception when loading certain saved overviews while some stations are running
- GUI: configuration import caused troubles when loading a config with lesser groups
- GUI: wrong error status color on station start
- GUI: wrong TCC<>OM mapping behaviour when using a TCC bitmask
- MesVis: MDF export failed when selected measurements were empty
- TestStand: wrong DateDetails version in "LTT Model.seq"

## [2.3.4] - 31.10.2019

### **Added**

- TestStand: new TS driver for Omega iThx-SD

### **Changed**

- GUI: data recording "once per cycle" now works also with "every X minutes" option
- GUI: configuration manager overwork

### **Fixed**

- GUI: configuration hash was wrong
- GUI: configuration manager "compare" function was not working correctly

## [2.3.3] - 22.10.2019

### **Fixed**

- GUI: error during testplan load in some cases (caused by TestStand defined limits)

## [2.3.2] - 15.10.2019

### **Added**

- TestStand: TCP driver for TDK Genesys power supplies

### **Fixed**

- GUI: station runtime menu works again
- GUI: LTT reporting crashes if at least one station is disabled

## [2.3.1] - 30.09.2019

### **Added**

- TestStand: new TS driver for Omega iBThx

## **Changed**

- MesSy: updated to IRS.MesSy.CL4-2019-07-19
- GUI: new licensing DLL 1.2.1

## **Fixed**

- GUI: runtime values sent per SendValue.vi from TestStand are not shown in GUI
- MesVis: loading/showing CSV files does not work properly

## **[2.3.0] - 12.09.2019**

### **Added**

- TestStand: new TS driver for Omega iThx
- TestStand: new TCC driver for ADDI Data APCI2200 PCI relais card
- TestStand: new TS driver for Janiza UMG604-E-PRO
- GUI: default history column "Humidity" (filled only when Omega iThx TS sensor is used)
- GUI: default CSV measurement data column "Humidity" (filled only when Omega iThx TS sensor is used)
- GUI: display humidity in test group panel of GUI main window (only when Omega iThx TS sensor is used)

### **Changed**

- TestStand: overworked PS driver for EA. Now works also with PSI8040-3403U (Ethernet)

### **Fixed**

- TestStand: send HW errors to GUI did not work correctly

## **[2.2.0] - 12.08.2019**

### **Added**

- TestStand: TCP based Sorensen PS driver IRS.Mod.PS.Sorensen.SG.TCP.lvlibp (only for SG series!)

- GUI: new recording option "once per cycle"
- GUI: option to autom. save station overview on every stop
- GUI: save global and temporary error overview in different files
- GUI: autom. save temporary error overview before a temporary error reset
- MesVis: "save as PNG"

### **Fixed**

- TestStand: PS driver for Delta Elektronika (PSC232)
- GUI: LTT Reporting saves report always, not only when stations are running
- GUI: error overview does not contain '0' counters but empty string instead
- GUI: loaded error overview does not show up
- GUI: "swap DUT" swaps also vibration axis
- MesVis: fixed various issues

### **Changed**

- TestStand: VISA-based Sorensen PS driver (for both SG and UG series)
- TestStand: renamed EA.PSI800R driver to just "EA"
- TestStand: updated IRS.MesSyII.Types.ini
- Tools: new IRS.LTT.HistoryConverter.exe tool (with export to MS Access & Excel)
- GUI: changed ltt\_main\_config.xml format (!!!)
- GUI: different history file start messages, depending if user start or autom. start after power fail
- MesVis: improved overall user experience
- MesVis: changed measurement table indices (!!!)

## **[2.1.0] - 22.05.2019**

### **Added**

- MesVis: "auto show" option
- MesVis: "show only last N samples" option
- TestStand: new PS driver for TDK Lambda GenSys+
- TestStand: new PS driver for Delta Elektronika (PSC232)



## Changed

- MesVis: improved read performance
- MesVis: overworked zooming
- MesSy: updated to IRS.MesSy.CL4-2019-04-29

## [2.0.1] - 25.03.2019

### Fixed

- GUI: 'Value' & 'Unit' columns display wrong values in history dialog window

### Changed

- GUI: disabled autom. seq. file update because of problems

## [2.0.0] - 22.03.2019

### Added

- GUI: barcode scanner support for F11 dialog
- GUI: configuration management
- GUI: LTT reporting
- GUI: autom. restart after power fail
- GUI: autom. testplan loading
- GUI: F11 dialog items management (cables, DUT's, test order, etc.)
- GUI: new history column **Category**
- GUI: automatic testplan / configuration update for new GUI versions
- MesVis: database import
- MesVis: legend position can be changed / legend can be hidden
- MesVis: voltage and temperature ambient values can be shown for the selected measurements
- TestStand: new step type **LTT Process Result (ignore config)**
- TestStand: batch per group or global batch

### Fixed

- GUI: disabled errors are not incremented

- GUI: testplan loading errors are not properly displayed in GUI

### **Changed**

- GUI: history data dialog (Alt+F10) improvements (usability + performance)
- GUI: new layout of error configuration dialog (F6)
- GUI: history column "voltage" shows current PS values unless the step "LTT Send Voltage" is executed in TestStand
- GUI: test time format can be changed from **hours:minutes:seconds** to **hours (fractional)**
- GUI: disabled errors are now logged to history file with error number **and** text
- GUI: history data dialog (Alt-F10) will open in a filtered view, which shows only: start/stop info, TCC info, test results & errors. There is a button **Show All** to show all history entries
- GUI: clicking on an error number in test station overview (F4) will open the history data dialog with a filtered view on that error number

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