# Report Analyzer - Release Notes

# [1.7.0] - 2023-09-11

# Added

*New import options for all import plugins* - filter by date - remove steps by status (done / passed / failed / error) - keep first failed or error step - remove additional results - remove infotext - add custom header data

*Grouping* - Grouping: Selected tests (use checkbox) can now be added to existing groups via Drag & Drop - Grouping: Selected tests (use checkbox) can now be added to existing groups via new 'Add to Group' button

*Group Statistics* - New module/tab 'Group Statistics' with statistics about FPY, all contained test executions, steps and attributes. Reporting possible via context menu - New context menu "Show statistics" for manual selection of test executions in many views (Import, Grouping, Error Distribution) - New statistics for whole data set on start page

## Changed

- Changed initial size of some dialogs to fit also for smaller displays or higher scaling values
- Changed target framework to .NET 4.8! Note that .NET 4.8 must installed to run this version of report analyzer
- Update used IRS reporting DLL to 1.46.6

## Fixed

- Statistics report settings did not work properly (number of measurements selection)
- Multiple user options (export type, separators etc.) were not correctly evaluated in measurement and statistics table export due to a change of the dialog type
- Zero-values caused a division by zero in certain cases in table export when rounding to significant digits, resulting in a NAN value instead of 0

# [1.6.2] - 2022-12-14

## Fixed

• Fixed an issue where application would hang when grouping by a column which contains colons ":" in its values, while the application setting "use simplified group names" is activated (affects all previous versions)

# Changed

• Updated reporting dll to 1.46.4. Now supports single sided limits and treats PassFail tests as numeric (0/1)

# [1.6.1] - 2022-12-05

# Changed

- New installer type, now offering options to select import plugins. It is recommended to uninstall older versions before! Settings will be kept!
- Startup speed improvement
- Significant speed improvement in group assignments dialog for large data sets
- Significant speed improvements in group management page for large data sets (create groups, delete executions from groups)
- Speed improvement for graph creation in case of very large data sets
- Speed improvement in error distribution calculation
- Speed improvement in all status count calculations
- Limit strip generation significantly improved
- One sided limits can now be displayed
- Non-constant or modified limits are now displayed as a dashed line ingraph

## Added

- Export context menu: Almost any visible table content can now be exported into various formats or to the clipboard using the context menu
- Remove selected executions directly from measurement values table
- Remove selected execution directly from measurement info panel (graph)
- Predefined conditional formatting of Cg,Cgk, Cp and Cpk columns (see documentation how to customize this)
- New "Deviated Limits" column in analysis table to identify and filter rows with inconsistent od modified limits (hidden by default)

• History & Statistics: Group name and measurement ID are now added to graph title

# Fixed

- Fixed disfunctional dialog for column selection when too many attributes were found. Buttons did not work
- Fixed dialog function for measurement group management
- Fixed wrong calculation of alternative limits when limits are inconsistent and new USL would be less than LSL
- fixed wrong display "loading..." when saving a data set
- fixed wrong order of measurements in trend analysis value tables when including failed measurements
- Plugins directory was evaluated wrong when the working directory was different to application directory
- XY and YY comparison graphs could crash when no data was assinged and a group was deleted or updated

# Removed

• Fill Limit Strips: this option is no longer available due to new limit draw method

# [1.5.4] - 2021-11-25

# Fixed

• Fixed a bug where recalculating the measurement lists caused a crash when the number of measurements was reduced after removing existing executions

# [1.5.3] - 2021-11-18

# Fixed

• (Re-)Enabled resizing of fixed size report viewer dialogand support for multiple (non-modal) report viewer dialogs

# [1.5.2] - 2021-11-09

## Fixed

- Can't open multiple instances of report analyzer
- Calling Cleanup in grouping causes an application error
- Fixed dialog handling. Dialogs now stay correctly in front of the application when switching back to ReportAnalyzer
- Only measurements that are available in the respective group are now listed in the groups

## Changed

- Updated Reporting DLL to 1.46.3
- Updated Licensing DLL to 2.1.1
- Updated NLog package to 4.7.11

# [1.5.1] - 2021-03-23

#### Fixed

- Fixed wrong order of measurements in analysis report export and "Group First" view
- Measurement list is now cleaned up from measurements which are no longer part of any execution after deleting executions
- Fixed wrong font in Avg and Unit column of analysis report export

#### Changed

• Huge performance improvement when deleting test executions which are contained in existing groups

# [1.5.0] - 2021-03-01

## Added

## Import

- New import module "NI TestStand" adds ability to directly read standard TestStand XML, ATML5 and ATML6 reports! With auto format detection!
- New import dialog: Report directories are now displayed in a File Explorer like tree structure

- Executions can now be added and removed from Import page without causing the deletion of all groups. Measurements are recalculated, groups and graphs are kept where possible
- Allow grouping on import page
- Added "# Steps" column
- Improved performance when deleting executions
- New PDF export of loaded executions.Multiple executions can now be exported as a single report file with preview and various export formats

## Grouping

- Grouping is now possible with almost any field in grouping view
- Now supports selective adding of current view by checkboxes. Groups or even executions can be selected individually. It is no longer required to add the whole view (but still possible)
- Added "# Steps" column
- Executions can now be removed from a group, measurements are automatically recalculated. Graphs are kept where possible
- New user comment feature for groups. The comment is also optionally added (default:true) to PDF export as a group description
- Removed groups now correctly trigger updates in all analysis pages
- Removing groups no longer deletes all graphs

#### Analysis Engine

- Restructured and optimized MeasurementAnalysis Engine
- Improved calculation performance
- Added support for almost all existing TestStand comparison operators including all EQT types (except inverted style limits)
- Allowed more data types in report than just "Numeric"

## History and Statistics

- Analysis tab pages are now initially disabled until a valid grouping exists
- Support for inconsistent limits in measurements. In this case now the most narrow of all valid measurement limits (LSL.max ... USL.min) are used as a "worst case surrogate" instead of displaying "NaN"
- Highlighting of values calculated from modified limits in views and PDF report (due to manual modifications or usage of surrogate values)
- MeasurementValues: Added "Status" column and color formatting

- MeasurementValues: Added "Unit" property to MeasurementValue
- New "CountValid" column in MeasurementAnalysis table
- Added missing formulas to report appendix
- Changed header names in history and analysis group data table (%EV, %K, %RE)
- Renamed limit columns to USL and LSL
- Changed report default measurement count from All to First100
- Improved default layouts and default displayed columns

#### History & Statistics: Histogram

- New logic now creates a valid histogram in almost any situation
- Now each bar also displays status count (pass/fail) for each group
- Improved display of axis labels, crosshair label, value labels
- $\bullet$  Number of history bars now supports auto calculation when set to 0
- Changed default bar range to Mean +/- 6 Sigma
- Added special bars for "out-of-range" values capturing everything beyond mean +/- 7\*sigma range
- Added support for inconsistent limits using vertical strips in histogram
- Overall performance improvements

#### History & Statistics: Graph

- New resampling logic to support larger number of points (tested with  $\sim$ 80.000 executions)
- Enabled zooming history graph even when in stacked view
- Enabled scrollbars for history graph
- Enabled checkboxes in legend for all multi-chart modes to enable/disable individual graphs
- Keep graph checkbox selection in legend when changing measurement
- Now contains PartNumber information in tooltip display
- Now displays scrollbars with zooming capabilities
- Limits display is automatically switched off for series with more than 5.000 points for performance reasons

#### Watchlist

• A notifier is shown as feedback when a new entry is added

- Allowed checkboxes for multiple charts modes to disable single series
- Added index property to TestExecutionGroup (allows explicit filtering of single groups)

#### Error Distribution

- Selected group now stays in visible area
- Immediate recalculation when changing test execution collection or groups
- Fixed and error in export

#### Graph Comparison

- Graphs are updated automatically when executions of used groups are deleted
- Series use dynamic resampling for large numbers of measurements to improve performance

#### Similarity Analysis

- Improved performance
- changed single color and fixed threshold formatting to a 2-color scale, honoring also negative correlations in red color
- Disabled sorting in similarity analysis correlation matrix

#### General

- Improved startup speed
- Improved logging
- Added local documentation as pdf instead of zipped html page
- Improved documentation, added missing chapters and many screenshots
- PDF help file now available in german and english language
- Added FilterPanel to many tables
- Added sample sequence files and reports to demonstrate how to optimize reports for IRS Report Analyzer
- Loading and saving data sets no longer uses a temp file which dramatically can improve performance in certain situations
- PDF properties for current view exports are now preconfigured
- Removed ExecOffset column from all views (internal field, not relevant for user)
- Added ExecTime column in all test execution related tables
- Added OrderId column

#### Fixed

- Fixed handling of invalid or missing export paths
- NaN values are now ignored for %RE calculation
- Histogram: Fixed view range of histogram and allowed zooming
- Histogram: fixed bar width calculation
- Fixed several redundant refresh issues which could have performance impacts
- Fixed a bug where additional columns dialog would appear in an endless loop
- Added missing reprocessing of existing group data after loading of data set (.gz)
- Fixed wrong calculation of Bi (inverted sign)
- Fixed potential performance issue with NLog (target was not async)
- Fixed various table update/refreshing issues
- Warning dialog when loading a saved dataset now only appears if any execution exists in analysis group
- Fixed performance issues in similarity analysis when correlation value was NaN (now uses 0)

# [1.4.3] - 2020-06-19

## Fixed

• grouping was ignoring the filtering of columns

# [1.4.2] - 2020-06-09

## Fixed

• The XSL import plugin was missing from the previous release

# [1.4.1] - 2020-05-25

## Fixed

- File import dialog did not load when recently used directory doesn't exist anymore
- Inconsistent third party reference led to a crash on application start

# [1.4.0] - 2020-05-20

# Added

- Execution View: added a button to open a preview window where a specific execution can be exported to a PDF file
- Import View: added a button to bulk export all selected test executions to a PDF file
- Added unit to measurement list view and the default report overview page

## Fixed

• Minor bugfix for the new group by user-defined header feature

# Changed

• Graph Comparison: Only the selected graph can be exported to PDF

# [1.3.0] - 2020-04-17

# Changed

- The splash screen can be minimized
- Updated irs licensing
- Set properties by default on Export as PDF

## Added

- It is now also possible to filter and group data by user-defined header fields
- Added support for multiple folders and subfolders when doing drag & drop import

# [1.2.5] - 2019-06-11

## Added

- Files can be added to the import dialog via drag&drop
- Added a new setting to allow a more compact default group naming
- Added a new setting to use the group name for the default graph title

## Fixed

• Deleting a group could occasionally crash the application

- Reset measurement search string after each new analysis to fix binding issues (history & statistics)
- Improved selection mechanism for history diagram steps
- Fixed the "Show report"- and "Add to Watchlist"-button with the history & statistics step view

#### Changed

• Show "missing groups"-alert only once for each view

#### Removed

• Removed "Prefer 32-bit"

# [1.2.4] - 2019-04-29

#### Added

- Added plugins to start view
- Added execution time to grouping view

#### Changed

- Updated irs licensing
- Updated reporting dll

# [1.2.3] - 2019-04-09

#### Changed

- Updated irs licensing
- Set result to "unknown" for executions where the result is null
- Max visual group value can be configured at the settings

#### Fixed

- Fixed filtering for several views (select first visible item when a filter changed)
- Refresh measurements grid control when a group changed (trend analysis)

#### Added

- Error distributions now has a column for "Done"
- Added execution time to history & statistics

- Added appendix to default history & statistics export
- Added product ids to default history & statistics export

# [1.2.2] - 2018-12-09

#### Changed

• Enhanced selection for data grids

# [1.2.1] - 2018-10-25

#### Changed

- Changed "WinUI" message box to "DX" message box
- Trend analysis: reselect previously selected measurement after calculation
- Updated IRS licensing

#### Fixed

• Floating mean did not filter according to test step selection

#### Removed

• License key from startup view

# [1.2.0] - 2018-09-21

#### Added

- Import XML data with XSL transformation
- Import LLT data from csv files or from database
- Refresh file import dialog with F5

#### Fixed

• Minor bugfixes

#### Changed

• Minor UI enhancements

# [1.1.1] - 2018-06-11

# Added

• Similarity analysis export

# Changed

• Minor UI enhancements

# [1.1.0] - 2018-05-14

# Added

- New export: error distribution default export
- New export: error distribution group comparison
- New analysis value: % RE
- Separate dialog for export settings
- History & statistics default export: show/hide IDs
- $\bullet$  History & statistics default export: new parameter to add additional custom information
- Measurement filter can now already be applied during import

## Changed

- Moved significant digits from view settings to app settings
- Optimizations for chart coloring
- Better visibility of the import status at file import view

## Removed

• Export path and logo path from history & statistics default export (can only be set at export settings now)

# [1.0.1] - 2018-04-19

# Changed

• Updated licensing DLL

## Fixed

• Installer

# [1.0.0] - 2018-04-19

# Added

- Load recently used datasets from home screen
- App settings: separate default path for each export
- History and statistics default export can be generated via command line
- Graph comparison default export

## Changed

• Using significant digits from settings at the reports

#### Fixed

• Several fixes

# [0.3.0] - 2018-03-07

## Added

- Table headers to every report page in case a table spreads over multiple pages
- Save button to app settings and app view settings
- History & Statistics: Export Table

#### Changed

- Restructured grouping layout
- Grouping: moved save and load filter-set buttons to toolbar

#### Fixed

- Wrong axis color at graph comparison when limits are shown
- Opening a new analysis dataset didn't work properly when there was already loaded another dataset before
- Ignoring NaN measurements at graph comparison

#### Removed

• Navigation buttons from graph comparison charts

# [0.2.0] - 2018-02-22

# Added

- Light theme
- Custom window for unhandled exceptions which allows the user to save an error log
- Translations for enums
- Saving and loading of analysis datasets
- History & Statistics: Export Current

# Changed

- Overworked navigation and toolbar
- Overworked start screen
- Resetting custom layout when the application was updated
- Several icons

# Fixed

• Several fixes and improvements

## Removed

• Unused references

# [0.1.0] - 2018-02-01

Initial Release

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