

Release notes for version 3.8

Important! Create a backup copy of your projects and connector repositories before updating to the new version. Projects saved in version 3.8 can't be opened in earlier versions.

What's new

Transformations are now called actions

From the beginning, EasyMorph has had a number of transformations such as “Run Program” or “Export to Excel” that actually didn't transform anything. As its automation capabilities keep expanding, new transformations “that don't transform anything” keep adding, making the term “transformation” increasingly confusing. Therefore, starting from this release all transformations now called *actions*.

For some time, both terms *action* and *transformation* will be used interchangeably, as we make relevant edits in the documentation, tutorial and other places. Eventually, the term “transformation” will only be used occasionally for actions that actually transform data.

Arbitrary order of actions

Up until the previous release, all actions in EasyMorph were divided into two categories: start action, and regular actions. Start actions must always come first in a table, while regular actions could only come after a start action, or another regular action. With the growth of automation use cases for EasyMorph, such separation introduced unnecessary limitations. For instance, importing a file is frequently done after copying it from another location. In such cases, importing had to be done in a separate project called via the “Call” action. This was inconvenient and cumbersome.

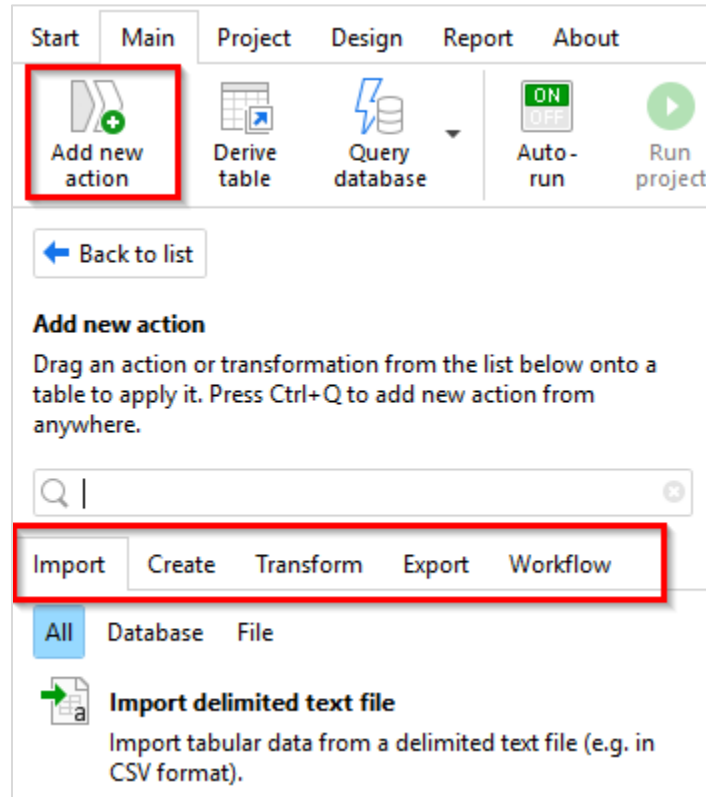
Starting from this release, this division is removed. From now on, any action can be first in a table, and any action can be inserted after any action. As the number of available actions in EasyMorph has become rather big (90+ actions as of this release), they have been separated into 5 categories, to simplify navigation:

- Import – actions that import data (e.g. “Import from Excel”).
- Create – actions that generate a table (e.g. “List of files”).
- Transform – actions that modify input dataset (e.g. “Filter by expression”).
- Export – actions that export data
- Workflow – actions that affect internal workflows (e.g. “Iterate”), or interact with external systems and data (e.g. “Download file” or “Run program”).

If an action doesn't expect any input data (typically actions from categories “Import” and “Create”), then the result of previous action is silently ignored without a warning or indication.

The equalization of actions has caused a few changes in the user interface of EasyMorph of which the most significant are two:

- 1) The button “Insert/create table” used for selecting a start action and creating a table, has been removed. The “Add new action” button has moved to 1st position in the “Main” toolbar.
- 2) The catalog of available actions is now two-tiered (it was one-tiered). Actions are grouped by categories and, optionally, by subcategories.



Screenshot 1: New "Add Action" sidebar.

New Plus licensing

The Plus license has become more expensive, and it now always includes following features:

- Unlimited transformations
- “Input” action
- “Split delimited file” action

See the new pricing at <http://easymorph.com/buy.html>.

Changes to existing actions

While this release doesn't introduce new actions, there are many improvements to existing ones:

Action	New feature(s).
Call	Capturing errors of the called project. This makes it possible to arrange an error handling workflow in case of failure of the called project. For instance, send an email if the called project failed. The ability to handle project errors was frequently requested by EasyMorph users.
Status	Using a cell value for the status message.
PowerShell	Option for passing entire table to a PowerShell script. The table is passed as a jagged array (array of arrays).
Export to Qlik	Specifying the QVD table name (up to 32 characters). If no table name is specified, the EasyMorph table name is used as the QVD table name.
Regular expression	Capturing groups.
Iterate and Iterate table	Assigning parameters besides column values.
Import from database	Specifying an external file as custom SQL query.
Export to database	Custom SQL script section. The script is executed in the same database connection session which allows, for instance, suppressing field constraints temporarily.
Export to delimited text file	Options for quoting now include: No quoting, Auto, Quote everything.

New functions

system("tempdir") – returns the path to temp directory of the current user. Example:

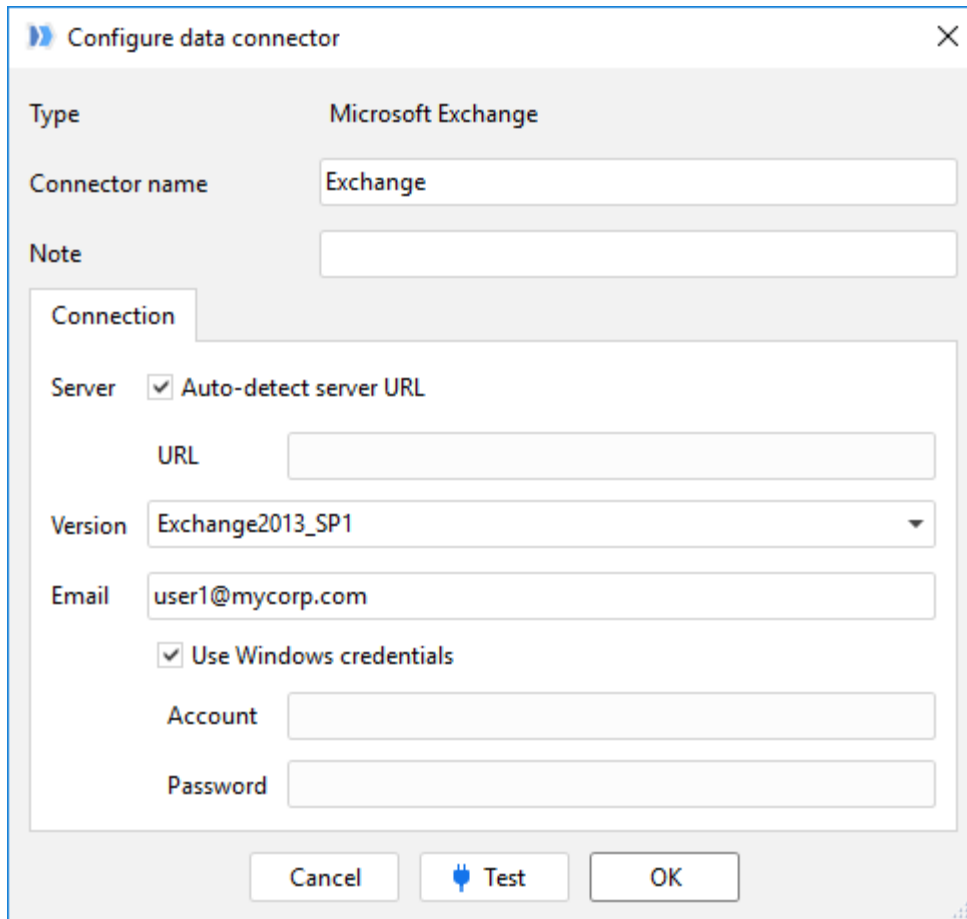
`system('tempdir')` returns C:\Users\User1\AppData\Local\Temp\.

Connector for Apache Hive SQL (experimental)

The Apache Hive SQL dialect is now supported for ODBC connections. This support is limited at this point and only allows importing data from Apache Hive, but not exporting to it. Table operations (creation, deletion, etc.) are not supported either.

Email connector for MS Exchange

In addition to the generic SMTP email service connector, a dedicated MS Exchange connector has been added. The connector employs the native Exchange Web Service API and is seamlessly supported in the "Send email" action.



Screenshot 2: MS Exchange connector.

In most organizations, auto-detection of server URL would work. If you need to specify the server URL explicitly, it usually has the following format:

`https://<exchange-host>/EWS/Exchange.asmx`

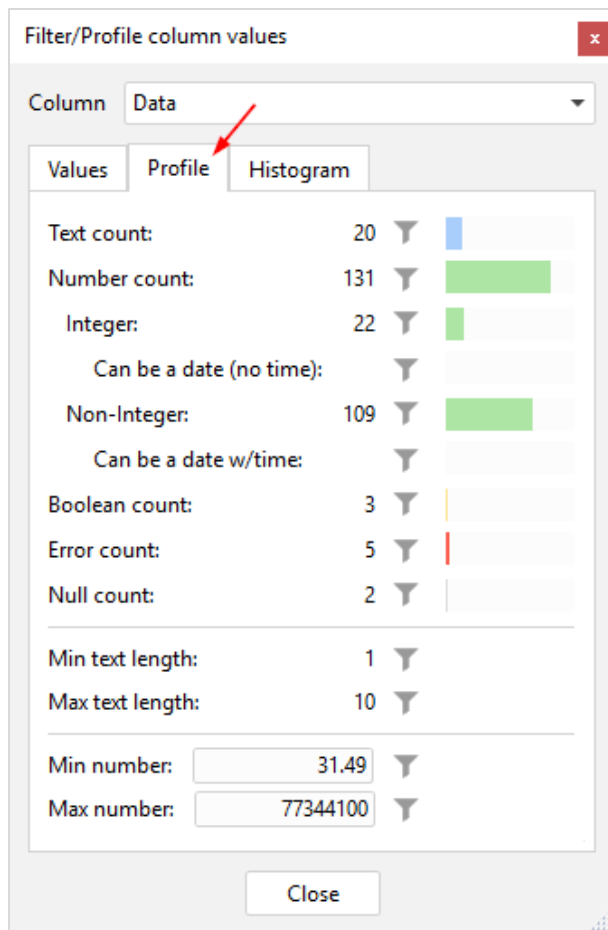
Column profiler

To simplify detection of data quality issues, the “Filter/Profile” dialog (invoked by double-clicking a column header) now implements a column profiler.

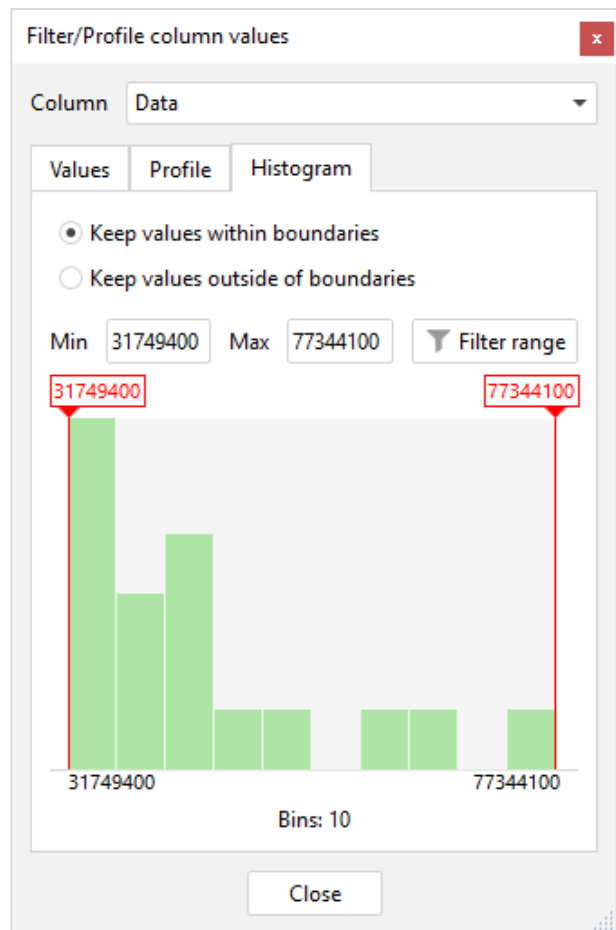
The profiler automatically calculates various counts. Each count has according “Filter” button to keep only rows with counted values.

The profiler also builds a histogram with distribution of numeric values in the column. The histogram allows filtering a range of values visually.

The profiler dialog window is floating meaning that you can click different columns in different tables without closing the profiler window.



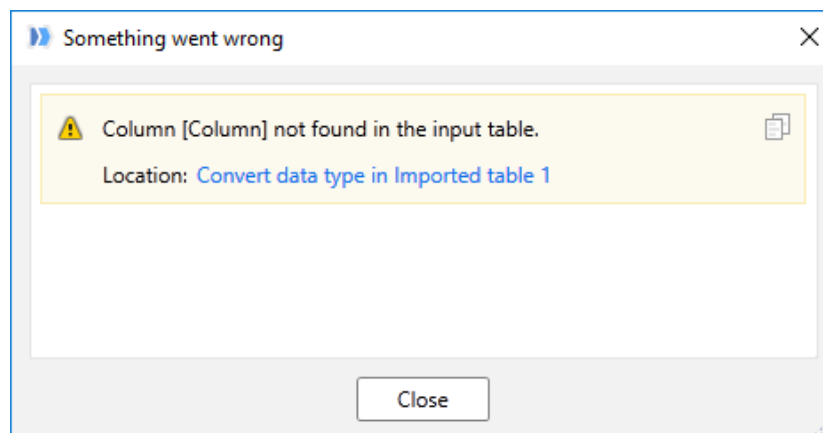
Screenshot 3: Column profiler.



Screenshot 4: Column profile histogram.

New Run Errors dialog

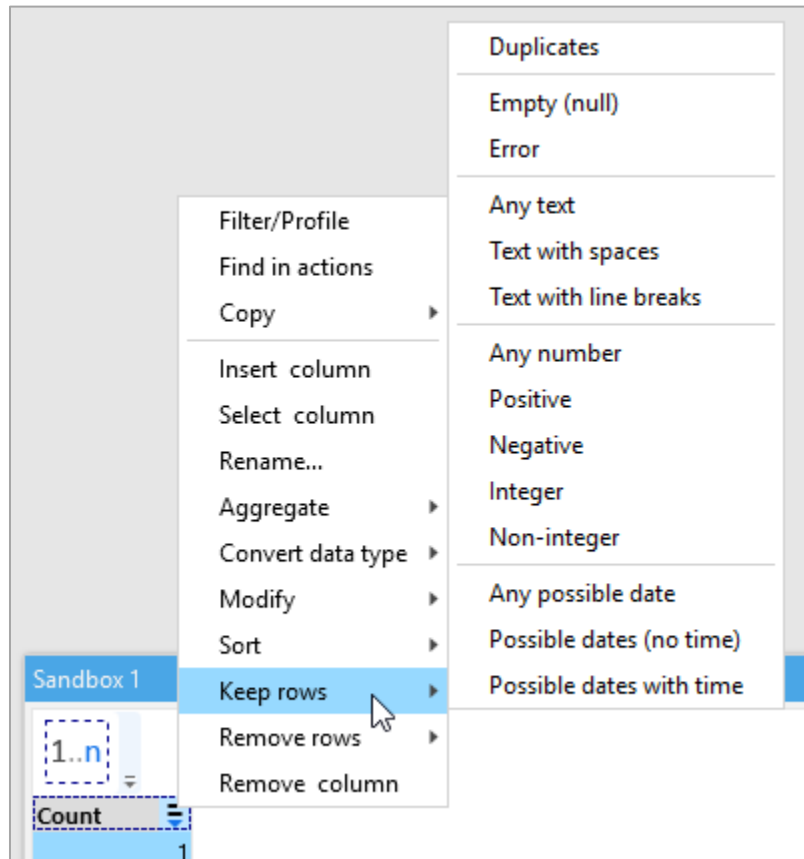
The window with project execution errors has a new look. Now multi-line and long messages are displayed entirely. Also the new look enables adding in the future error-dependent actions for easier debugging or problem fixing.



Screenshot 5: The new Run Errors dialog.

New Keep/Remove commands in the column context menu

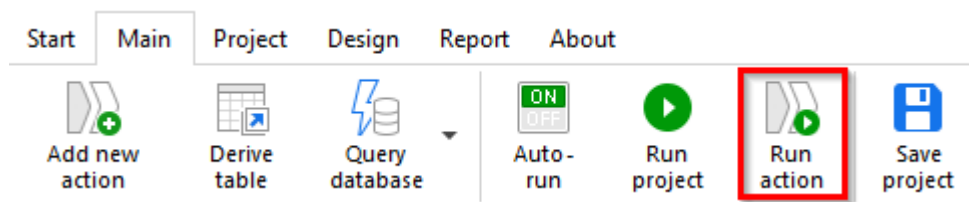
Column Keep/Remove commands have expanded and include a number of new options for filtering rows, such as negative/positive numbers, values with spaces or line breaks, etc:



Screenshot 6: New Keep/Remove commands.

Run Action button

The Main toolbar now has a dedicated button “Run action” for calculating currently selected action, and all preceding actions that are required for the calculation. Its action is equivalent to Ctrl + clicking an action. It re-runs the action if it’s already calculated.



Screenshot 7: Run Action button.

Miscellaneous

- The Email Server connector now has presets for Gmail, Hotmail and Outlook.com.
- The Connector Manager now has a list of previously selected repositories for easier switching between repositories.
- The table right-click menu now includes “Derive from...” command to make a table derived, or re-link a derived table to another table.