

# Release notes v4.3

**Important!** Create a backup copy of your projects and connector repositories before updating to the new version. Projects saved in version 4.3 can't be opened in earlier versions.

## *A few words from the creators of EasyMorph*

With this release we took a break in developing new big features. Instead, we spent the last couple months making small improvements here and there – something that we wanted to do but were occupied with more large-scale tasks. Overall, in this release we've made more than 30 changes to EasyMorph actions and connectors, as well as to Desktop, Launcher, and Server. Many of the changes were suggested by our users. As a result we're expecting a smoother, better user experience.

The new version is also notable because we're introducing *super-compression*, albeit in experimental status. We've made deep and very sophisticated optimizations to the EasyMorph's in-memory engine which resulted in sharply reduced memory consumption without introducing significant performance penalty. Now EasyMorph can consume 30% to 70% less memory, which means that you can work with 1.5-3 times larger datasets on the same computer. The super-compression works reliably and has been thoroughly tested. However since it's a rather deep change, we've decided to roll it out slowly, just in case. The super-compression is optional at this point. Eventually it won't be optional and will become permanent.

Other notable novelties:

- Tableau Hyper add-on
- The "eval" function that allows defining EasyMorph expressions externally, e.g. via a parameter
- Workspace panning
- Sorting for lists of column names in actions
- Finally, a convenient Server Link (at least we think so 😊)

## Breaking changes

The text of XML parsing error has changed from "Path not found" to "XML path not found: <XML path>" in order to make it more descriptive. The change can affect projects that expected particular error message.

## What's new

### *Super-compression*

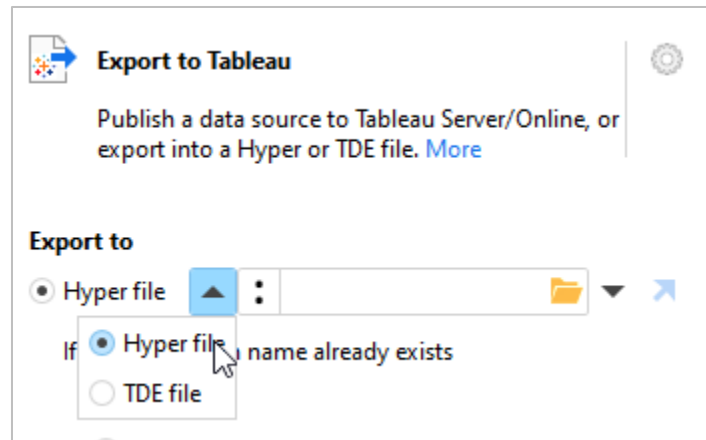
The super-compression is an experimental, pre-production feature that reduces memory footprint of EasyMorph projects. All EasyMorph products, namely Desktop, Launcher, and Server now have temporary switches that enable/disable super-compression. The switches are located as follows:

- Desktop – in the menu About of the main toolbar (by default OFF)
- Launcher – in the Preferences dialog (by default ON)
- Server – in the Server settings page (by default OFF)

Note that enabling/disabling super-compression does NOT require application restart.

### *Tableau Hyper Add-on*

EasyMorph installers now allow optional installation of the Tableau Hyper add-on. When the add-on is installed, the “Export to Tableau” action gets the ability to export data into the Tableau Hyper file format (.hyper) and publish Hyper extracts to Tableau Server/Online.



Screenshot 1: Export to Tableau Hyper.

When the add-on is not installed, the action can only export/publish in the TDE format. For off-line installation download the add-on from [this page](#).

The add-on comes with a command-line utility that converts .dset files into .hyper files. The utility can be used by 3<sup>rd</sup> party applications independently from EasyMorph, if required.

### *Support for Server Link in Import/Export dataset*

To enable quick 1-click importing/exporting datasets from Desktop to Server and back, the “Import dataset” and “Export dataset” actions now support Server Link (the default connection to the current Server).

When the actions are executed in Desktop/Launcher, they work with the current Server selected in the Server Link. When they are executed in Server, they work with the Server they are running on.

The Server Link solves the problem of storing data in EasyMorph projects. Instead of keeping data embedded in a project (as in Excel workbooks), data can be kept on EasyMorph Server and loaded into the project on the fly when the project is opened in Desktop (or executed on Server). It's also more secure, because the data can't be accessed by an unauthorized person even if they obtain the project.

In order to use Server Links in a team of users, they must be configured in all users' Desktops.

### *Changes to existing actions*

The **Import XML** and **Parse XML** actions now allow using a parameter to specify the XML root path. Also both actions can now import all XML values always as text (i.e. without automatic parsing) to provide the ability for custom parsing using EasyMorph actions and functions, if necessary.

The **Send email** action now has the CC field.

The actions **Web Request** and **Iterate Web Request** now can perform (multi-part) file uploads.

Disabling/enabling EasyMorph Server tasks is now possible with the **EasyMorph Server Command** action.

The **Export to Excel** action now automatically formats columns in the target spreadsheet as dates if they are formatted as dates in EasyMorph.

The **Halt on condition** action has got a new mode "Halt if condition is true for EVERY row".

The **Derive table** action has got a new conditional derivation mode "If condition is true for ANY row"

### *Changes in connectors*

The **Exchange** connector can now work with shared mailboxes.

The **Google Drive** connector now allows using a custom OAuth client for authentication.

The **Web Location** connector has got settings for query throttling (e.g. 10 requests in 5 minutes).

### *New functions*

**eval(text)** – Evaluates the text argument as an EasyMorph expression. The argument itself must not be obtained using a column reference. Example:

`eval(' [Count]+1')` is evaluated as `[Count]+1`.

`eval({Param1})` where `Param1 = "[Count]+1"` is evaluated as `[Count]+1`.

**isregexmatch(text, regex\_text)** – returns TRUE if the text argument matches the regular expression pattern . Example:

```
isregexmatch(' 1234', '^\\d{4}$') returns TRUE.
```

**regexmatch(text, regex\_text)** – returns the first substring that matches the regular expression pattern. Example:

```
regexmatch(' 12345678', '^\\d{4}') returns "1234".
```

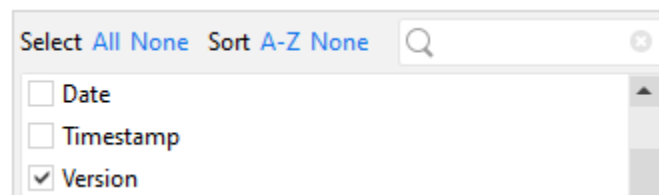
**regexreplace(text, regex\_text)** – returns the first substring that matches the regular expression pattern. Example:

```
regexreplace(' 12345678', 'ABCD', '^\\d{4}') returns "ABCD5678".
```

## What's new in Desktop

### *Sorting/filtering in the column selector*

In many actions it is now more convenient to deal with datasets with many columns thanks to the new column selector with sorting and filtering built in.



Screenshot 2: Sorting/filtering in the column selector.

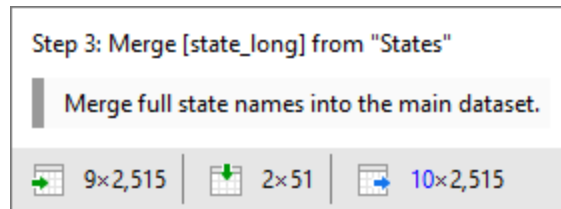
### *Workspace panning*

Now it is possible to pan the workspace when workspace objects don't fit into the visible area. To pan the workspace, click and depress the left mouse button and move.



### *Rich action tooltips*

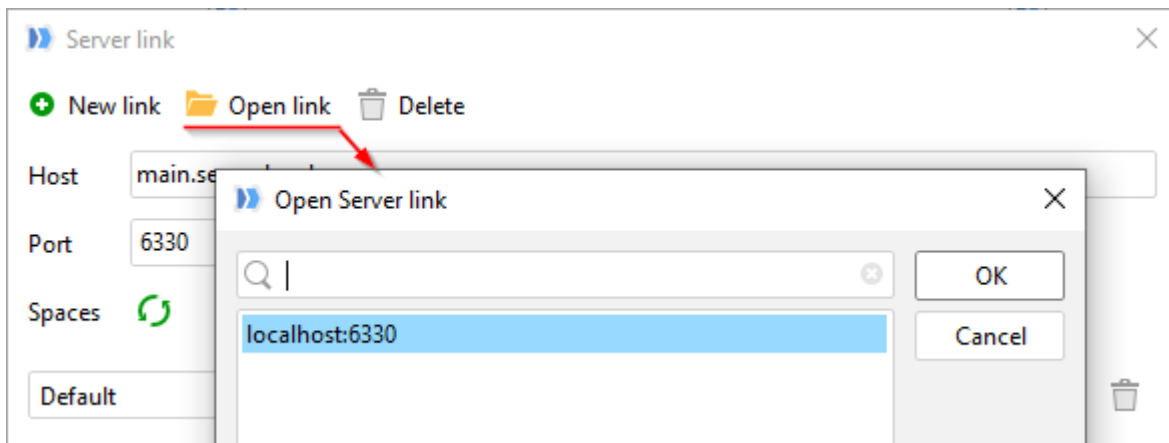
Tooltips for actions now display an action description, annotation, the dimensions of the input and output dataset(s), as well as the number of parameters used in the action.



Screenshot 3: New action tooltip.

### Multiple Sever Links

The Server Link now supports configuring links to multiple EasyMorph Servers. It makes it easier to switch between different environments (e.g. test and production).

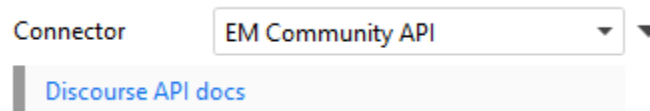


Screenshot 4: Multiple Server Links.

### Documentation link in connectors

To simplify access to documentation for the system a connector is configured to connect to, all connectors now have the ability to provide a documentation URL. For instance, the Web Location connector can be configured to provide a link to a REST API's documentation.

When configured, the documentation link appears in the connector annotation.



Screenshot 5: Documentation link in connector.

## Miscellaneous

- The “Input” action now has the button “Populate automatically” for automatic retrieval of an input dataset
- The status-bar now indicates the location of the current repository
- The Parameter Editor now has buttons for copy/pasting parameters
- The “Edit parameters” button has been moved to the “Main” ribbon toolbar from the “Project” toolbar
- The “Connector Manager” button has been removed from the “Project” toolbar as it duplicates the “Add/Edit connectors” button on the Start screen
- The buttons “Add module” and “Import module” has been moved to the “Project” toolbar from the “Design” toolbar
- Actions unavailable in the free edition are now clearly marked with an overlay icon
- Zero-input actions are now indicated in tables with a vertical separation line in front of them, which indicates that the previous action’s result is discarded
- Faster expression evaluation
- Faster column auto-profiling
- It is now possible to always use a particular Server space repository in Launcher, regardless of repository selection in Desktop

## What’s new in Server

### *Repository encryption and locking*

Since EasyMorph connectors may allow accessing highly sensitive data the connector security has been tightened in order to avoid unauthorized use of a connector. Now a space repository can be encrypted on creation and locked to the Server it was created in. This means that even in an unfortunate event of leaking the repository file it won’t be possible to open it in Desktop or another Server.

### *Task timeout*

Task execution duration can now be limited using the task timeout setting. The setting also prescribes if a task timeout should lead to a task failure or just cancellation.

## Previous release notes

Link: [Release notes for v4.2.1.](#)