# Release notes v5.9.5

**Important!** Create a backup copy of your projects and connector repositories before updating to the new version. Projects saved in the new version can't be opened in versions earlier than **5.9**. Also, if your organization uses EasyMorph Server, please make sure that the Server is upgraded to the new version *before* Desktops, not after.

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

This release introduces two major new features of EasyMorph Server: task triggers and SFTP Server. Besides that, boards in Explorer get a new section type – Server tasks, and Desktop gets a few minor but very useful improvements.

# What's new

#### Changes in actions

The "Ask AI" action now allows attaching images to prompts. Image attachments are also supported for OpenAI-compatible connectors.

The "Pivot" action has got two new options which will make the action easier to use, especially for new users:

- No-aggregation pivoting mode
- No enforced column sorting

The "Catalog command" action has got a new command: Increment metric.

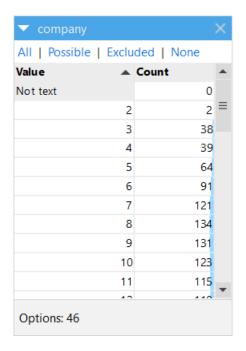
### Changes in functions

The <u>workdays()</u> function has got two optional arguments – mandatory exclusions, and mandatory inclusions. These arguments allow excluding specific dates, such as national and provincial holidays.

# What's new in Desktop

## New facet "Text lengths"

The Analysis View has got another new facet – "Text lengths". The facet displays a list of the text lengths (in characters) of all text values in the specified column.



Screenshot 1: Facet "Text lengths".

The facet is a convenient tool to detect outliers – too long or too short values, and also ensure that text values aren't too long when exporting to a database table.

#### Miscellaneous

Module names now can be up to 30 characters (previously, only up to 20)

# What's new in Server

# Task triggers

As you can immediately notice, the page with Server tasks now looks different and displays *triggers* next to each task where applicable. The task triggers are a explicit mechanism of EasyMorph Server that triggers a task when a certain event occurs.

Note that all task schedules are converted into the trigger "Schedule".

Another trigger available in the new version is "Email received". This trigger fires when an email message that satisfies pre-configured conditions is received by an email service specified by a connector.

In future releases, more task triggers will be added, including triggers on events in cloud applications (e.g. "File uploaded to Dropbox").

#### Real-time updates of metrics in boards

Now Explorer boards update metrics if they are changed, without needing to reload the whole page. For the real-time updates to work, use the "Catalog command" action to change or increment metric values.

#### Section "Tasks" in boards

Boards in Explorer now can have a section with Server tasks. You can choose whether to display all tasks without a group, or a specific group of tasks.

The section makes it possible to create boards dedicated to specific ETL processes. It works well with real-time updates for metrics. For instance, you design a board to have a list of tasks for loading files into a data warehouse, and also add metrics that will display in real time the number of files successfully loaded today. Add a section with a text description to provide more explanation on the ETL process.

#### SFTP Server

Starting with this release, EasyMorph Server comes with a built-in SFTP server. The SFTP server operates on a separate port and makes it possible to transfer files to and from EasyMorph Server using any SFTP client (application).

To enable the built-in SFTP server:

- Configure general SFTP settings in Server settings
- Enable the "SFTP server" feature in the space settings and specify a local folder that will be exposed via the SFTP service

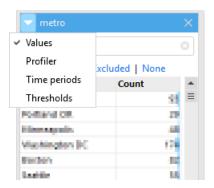
# Release notes v5.9.1

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

This release continues major improvements to EasyMorph, both Desktop and Server, started in previous release (version 5.9). The headline feature of the new release is the introduction of multi-modal filters (aka *facets*) in the Analysis View in EasyMorph Desktop. This version adds three more facets besides the regular filter:

- Profiler (data types)
- Time periods (automatic grouping by time periods year, quarter, month, week, day)
- Thresholds (automatic grouping by value ranges, e.g. 0 to 100, 100 to 500, above 500)



**Screenshot 2: Facet selector.** 

Facets are a powerful feature that simplifies technical data analysis (such as detecting data quality issues) as well as business analysis (such as segmentation).

EasyMorph Server has got two major improvements as well:

- Support for Microsoft Entra ID for user authentication
- Web Tasks now support uploading files

File uploads in Web Tasks, enable automated and secure data and file collection through <u>EasyMorph</u> <u>Gateway</u> from people outside of your organization – customers, suppliers, partners, etc. It's a more scalable and secure replacement for shared Google Drive (or OneDrive) folders, and more user-friendly than exposed SFTP servers.

#### What's new

#### New connector

The new **OpenAI-compatible** connector allows working other LLM services than OpenAI's ChatGPT as long as their API is compatible with ChatGPT. It includes both cloud-based and local LLMs. The connector can be used with the "Ask AI" action (formerly, "Ask ChatGPT).

#### New actions



The **Board/issue command** action allows automating certain operations with issues in workflows and has three commands (more to come):

- List boards
- List issues in a board
- Archive issue

#### Changes in existing actions

The "Shared Memory" action has got a new command: **Increment value**. The command is intended for use in concurrent workflows and allows correct, atomic value increments (and decrements).

The **Ask ChatGPT** action has been renamed to **Ask AI**. It now supports the Open-AI compatible connectors (described above).

#### New functions

**yearquarter(number\_date)** – returns a text string with the year and quarter of the specified date. Examples:

```
yearquarter(#2025-03-16) //returns "2025-Q1"
```

**yearweek(number\_date)** – returns a text string with the year and ISO week of the specified date. Examples:

```
yearquarter(#2025-03-16) //returns "2025-W11"
```

**replacebetweenmany(text, string1, contents, string2[,N])** – replaces in *text* the first N occurrences (or the last N, if N is negative) of any text between *string1* and *string2* with *contents*. When omitted, N is 1 Examples:

```
replacebetweenmany("<a><b>", "<", "c", ">",2) //returns "<c><c>"
```

# Changes in existing functions

The **replacebetween()** function has got the optional 5<sup>th</sup> argument that allows specifying which occurrence to replace (by default, first). Example:

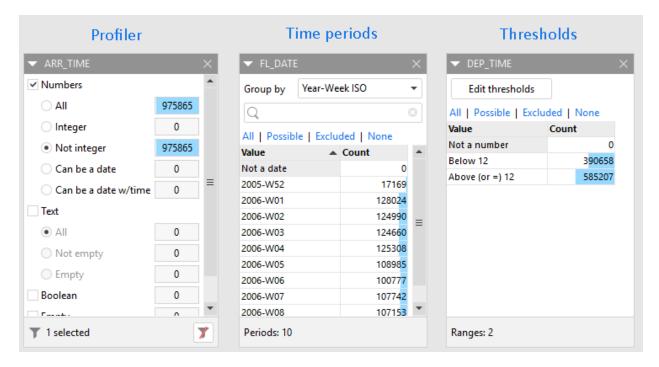
replacebetween("<a><b>", "<", "c", ">",2) //returns "<a><c>"

# What's new in Desktop

#### Facets in Analysis View

The Analysis View (both in Workflow Editor and in Explorer) has got new filter types:

- Profiler
- Time periods
- Thresholds



Screenshot 3: New facets in v5.9.1.

Changing the filter type (facet) can be done in the filter's title bar.

The "Profiler" facet displays a breakdown by data types and can be used for selecting values of wrong types. It's a tool for analyzing data quality.

The "Time periods" facet is intended for use on fields with number dates and automatically aggregates numeric date values into time periods of the selected granularity: year, quarter, month, week (ISO), and

date. The periods are selectable. Note that selections are reset when facet granularity is changed. The facet can be used for business analysis. For instance, in a list of orders, you can quickly select a customer in one filter, and then see and select the customer's orders grouped by month in another filter.

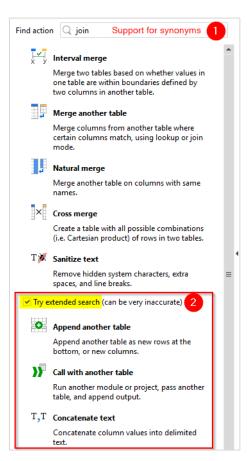
Finally, the "Thresholds" facet allows specified thresholds that group number values into ranges. The facet can be used for business analysis. For instance, in a list of orders, you can quickly group them into small, medium, and large orders by specifying meaningful thresholds for the order amounts.

Facet settings, such as time period granularity or thresholds, are saved in Analysis View, so you won't need to configure them again when re-opening a project or a dataset.

Note that new facets are currently only supported in EasyMorph Desktop, but not in Server. Also, older versions open new facets in Analysis View as regular filters.

#### Improved action search

We've improved the search algorithm in the action catalog. The search index has expanded to include the wiki help and synonyms.



Screenshot 4: Improved action search with the extended search option.

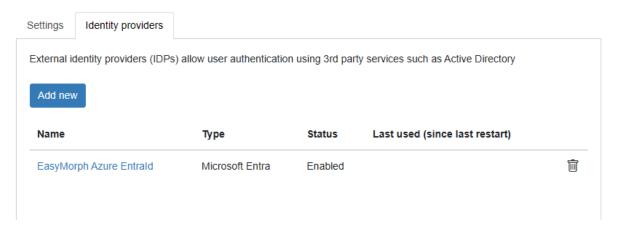
Besides that, as an experiment, we've added the optional extended search that tries to find actions using semantic similarity. Note that the extended search can return highly irrelevant results due to its fuzzy logic, but once in a while it can be of help. In the future, the extended search may leverage LLM-based semantic algorithms provided by a cloud-based service.

## What's new in Server

### Support for Microsoft Entra ID

In the new version, we're adding support a new external identity provider – Microsoft Entra ID. The Server settings page has now a new tab to manage external identity providers which, as if this version, include Active Directory and Microsoft Entra ID. More identity providers will be supported in future versions.

# Server settings



Screenshot 5: External identity providers in Server.

Note that you can work with multiple domains in Microsoft Entra. Just configure in EasyMorph Server a separate provider per each domain.

EasyMorph Server also supports authentication via user groups in Microsoft Entra.

When authentication via Entra is configured, users must select Microsoft Entra from the list of available options on the login screen to get authorized via Entra.

#### Real-time metrics in boards

Metric sections in Explorer boards are now updated immediately if their values are changed using the "Set metric" command of the "Explorer command" action. Real-time metrics add convenience to boards and make them useful for monitoring real-time processes, such as ETL jobs or online sales. To remind

you, with EasyMorph Server, you can also collect real-time metrics from external applications using <u>custom API endpoints</u> or webhooks on <u>EasyMorph Gateway</u>.



Screenshot 6: Sample metrics section in an Explorer board.

Note that real-time updating only works when a metric's value is changed using the "Set metric" command. It doesn't work when the corresponding Shared Memory value is updated directly.

In future versions, we will keep making board sections more real-time and interactive.

#### Miscellaneous

- The space settings page has been redesigned
- The space features page has got a more polished look

# Release notes v5.9

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

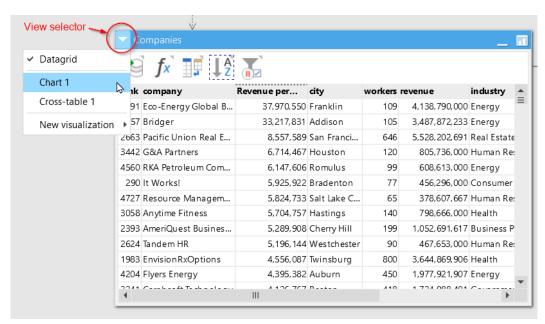
This release contains the first part of major improvements to EasyMorph, both Desktop and Server. The second part will come in v.5.9.1 and will introduce even more changes.

The headline feature of this release is the unification of workflow tables and charts described earlier on the <u>Community forum</u>.

### What's new

# Unification of tables and charts in workflows

In the new version, tables and charts in workflows are unified. Charts are converted to tables and tables can now have alternative views in the form of charts, besides the datagrid with actions which is the default view. The view selector is located in the table title bar in front of the table name (see screenshot below).



Screenshot 7: View selector in tables.

If a table has Analysis View, then the charts configured in Analysis View also become alternative table views in the table. Now there is no distinction between charts in Analysis View and in workflow – they are now the same charts. As a result, each table now has two lists – a list of actions, and a list of charts.

Note that a chart view in a table displays the table output, i.e. the output of the last action in the table.

The change simplifies EasyMorph projects and makes data analysis more convenient. All existing projects continue to work as previously, without any changes in their calculation logic. However, projects saved in the new version can't be opened in earlier versions.

#### New parameter type "File upload"

"File upload" parameters can be added in any workflow and are intended for Server use. Parameters of the "File upload" type allow users select local files even when the workflow runs on EasyMorph Server. The selected files are automatically uploaded to Server and stored in the designated folder configured in the space settings.

#### New connector

The new "Microsoft Graph OData" connector can be used in the "Import OData" action also introduced in this release.

### Changes in existing connectors

The "Amazon Redshift" connector now has an option for enforcing SSL.

#### New actions



The **Import OData** action allows importing data any OData provider (OData versions 3 or 4 are supported). The action works with "Web location" connectors as well as with new "Microsoft Graph OData" connectors introduced in this release.



The **Uploaded files** action lists all files uploaded by the use of the "File upload" parameters in the current workflow.



The **Modify column names** action is a simple action that allows adding suffixes or prefixes to column names. The action can be used, for instance, to distinguish columns merged from another table.

#### Changes in existing actions

The "Recalculate workbook" command in the **Excel command** action now has an option to rebuild all relationships in the workbook.

The **Concatenate text** action now has an option to ignore empty values.

# What's new in Desktop

#### Miscellaneous

- Favorite actions can now be re-ordered by dragging
- The Connector Manager now has a search function

# What's new in Server

### The "File upload" parameters

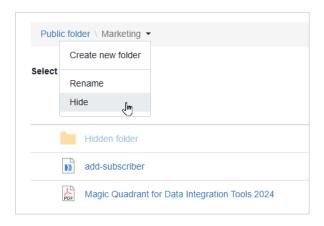
EasyMorph Server fully supports the "File upload" parameter type in Server task. The parameter type allows users to pick local files (i.e. files from the user's machine) that are then automatically uploaded to EasyMorph Server, quarantined, checked for malware with Windows Defender, and finally placed into the designated folder configured in the space settings.

While the parameters of the "File upload" type can be used on their own, for convenience, you can use them in combination with the "Uploaded files" action.

# Hiding/unhiding folders

EasyMorph Server now fully supports hidden folders:

- User roles can now be configured to display or hide hidden folders. User that can see hidden folders, can also hide and unhide folders.
- Hidden folders are indicated by semi-transparent icons in File Manager and file pickers.
- The folder menu in File Manager now has menu commands for hiding/unhiding the current folder (subject to role permissions).



Screenshot 8: The "Hide" command and a hidden folder in File Manager.

#### Miscellaneous

- In space settings, there is now indication that the space shares its repository with other spaces
- The Server now automatically sends an email reminder 3 days before license expiration (requires configured email notifications in the tab "Notifications")
- In Explorer, assets of the "Remote folder" type now can open automatically in File Manager
- Catalog directories now have a context menu (similarly to File Manager) for creating, renaming, moving, and deleting Catalog directories.

# Previous release notes

Link: Release notes for v5.8.2