

# Release notes v6.0

THIS VERSION IS FOR EVALUATION ONLY. DON'T USE IT IN PRODUCTION.

For a production-ready release, wait until version 6.0.1 becomes available.

**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 **6.0**. 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*

EasyMorph has undergone a series of deep improvements, both in terms of the underlying technology and capabilities (more on that below). Given the broad scale of changes, we're releasing version 6 as a **non-production** version, effectively a public beta intended for evaluation, testing, and collecting feedback. Don't use it in production environments yet. In about 1 month after its release, we will be releasing a production-ready version 6.0.1 that will contain cumulative bugfixes and a few minor new features. Meanwhile, version 6.0 will be updated every few days, so if something in it didn't work or was missing, try updating it later.

If you would like to test and evaluate the new version, we recommend making a separate installation of EasyMorph (not next to your production system) and requesting a trial key by sending the digital signature to [sales@easymorph.com](mailto:sales@easymorph.com) as explained here: <https://easymorph.com/signature.html>

The most fundamental change in EasyMorph is the migration from the .NET 4.8 to the .NET 8 framework (the runtime that runs the application). It makes EasyMorph more secure, approximately 30% faster, and ready for further updates of the .NET framework (including more performance improvements). The migration also narrows the (still existing) gap that separates us from a Linux version.

In terms of features and capabilities, the three most significant changes are:

- EasyMorph Server has been renamed to EasyMorph Hub. The new name reflects better what the Server has become – a central point for data automation, retrieval, and collaboration.
- The new user interface (UI) of EasyMorph Hub – better looking, faster, and more polished.
- Custom actions – the ability to use Catalog assets as workflow steps in EasyMorph projects. Now you can create and share with your colleagues actions that, for instance, import data from exotic or legacy systems, apply advanced statistical and geospatial calculations, integrate AI, or perform organization-specific data validation. The possibilities are limitless!

## Breaking changes

The new version introduces a number of breaking changes. We did our best to reduce their number to a minimum, however many of them are inevitable due the changes in the underlying .NET framework on which EasyMorph is based. Besides that, some of the breaking changes are bugfixes for bugs existed in the older version.

The breaking changes include:

- Timestamps with fractional seconds are no longer rounded to 1 millisecond
- Disabled actions that run arbitrary code no longer fail the workflow when the space settings prohibit running arbitrary code
- The countwords() function and a few other text functions now allow a non-text first argument
- Email messages where the whole body is an attachment are no longer ignored

*The list of breaking changes will be updated with more changes.*

## What's new

### *Improved performance*

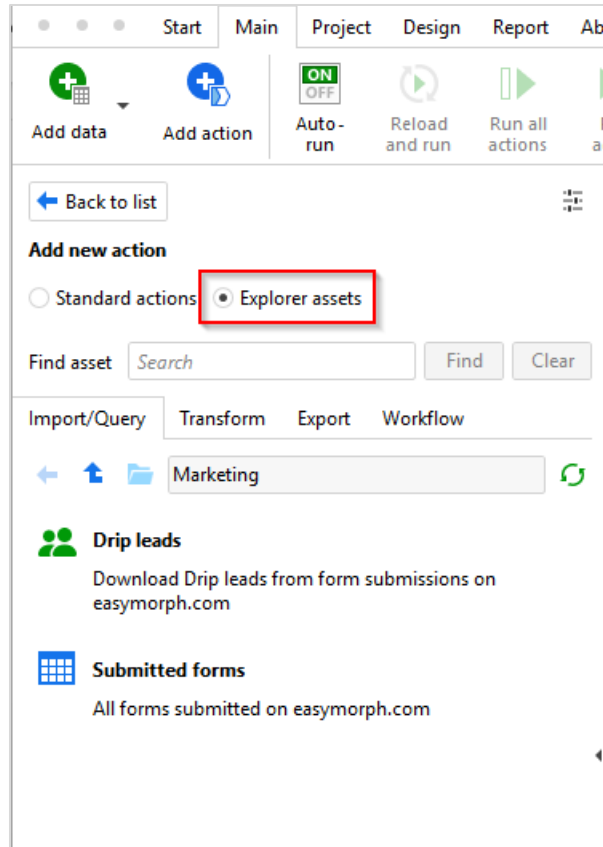
All EasyMorph products now run up to 30% faster. Besides that:

- The maximum number of rows per table has been doubled from 536 million rows to 1.073 billion rows (or 1,073,741,823 rows exactly).
- The "Import from Excel" action now runs 2-3 times faster and consumes less memory

### *Custom actions*

EasyMorph workflows can now include certain Catalog assets as *custom actions*. They can be dragged and dropped into workflows, just like regular actions. Just like regular actions, they can import, transform, and export data, or perform external operations, such as sending notifications, creating tickets, or triggering operations in another system.

A list of such assets becomes available in the "Add action" side panel when Desktop is linked to Hub and the current space has Explorer enabled (see below).



Screenshot 1: Catalog assets as custom actions.

Note that custom actions are space-specific because they are assets from the space's Catalog. If the workflow is executed in another space and that space doesn't have assets with the same names, it will fail.

Using Catalog assets as custom actions brings the power of data preparation and automation in EasyMorph to a whole new level. Here is just a few things that can be wrapped as custom actions and used in workflows by any team member:

- Imports from any system or application that are not natively supported by EasyMorph – legacy applications, internal tools, and cloud apps.
- Organization-specific data validation rules
- Advanced statistical and geospatial calculations
- Application of AI and ML algorithms
- Organization-specific lookups and transformations

To make it more powerful, those custom actions can use Python scripts under the hood, using our excellent [Python integration](#). It means the vast capabilities of the Python ecosystem can be wrapped as user-friendly re-usable custom actions which can be used by non-technical users with zero effort.

Catalog assets that can be used in workflows are grouped into four categories, very similar to the regular actions:

Category	Asset types	Requires input dataset?	Returns a dataset?
<b>Input/query</b>	Computed dataset Pre-computed dataset Dataset from query	No	Yes
<b>Transform</b>	Transformer	Yes	Yes
<b>Export</b>	Exporter	Yes	No
<b>Workflow</b>	Workflow	No	No

Keep in mind, that unlike regular actions, assets are always executed on the Hub, even if the workflow runs in Desktop (or CLW). It means that full datasets can be passed between Desktop and Hub and back during workflow execution if it includes custom actions. In case of large datasets, this can slow down workflow execution.

Custom actions can't have two inputs (like in the "Merge" action).

### *New asset types*

We've added three new asset types. As of version 6.0, they can only be created and configured in Desktop. The new types include:

The **"State"** asset type is like Metric but for text. Can be used for displaying a short text label, e.g. a state of a process, a deadline, or the name of the leading salesperson. The text labels can be colored based on rules. Like Metrics, States are real-time, i.e. they update immediately as soon as the underlying Shared Memory value has changed.

The **"Transformer"** asset type is intended first and foremost for custom actions (transformations). "Transformers" run a workflow that receives a dataset and returns a (transformed) dataset. The workflow in an "Transformer" asset must have the ["Input" action](#) and a result table.

The **"Exporter"** asset type is can be used for custom (export) actions. "Exporters" run a workflow that receives a dataset and presumably exports it into an external system without returning a table. The workflow in an "Exporter" asset must have the ["Input" action](#). A result table is not required and even if it's defined in the workflow, it's ignored.

### *Changes in existing actions*

The **"EasyMorph Hub Command" action** has got a new command – "List connectors".

The **"Concatenate text" action** has got a new mode – "Concatenate columns". In this mode, the action concatenates selected columns.

### *Changes in existing functions*

The **encode()** function has got a new mode – “xml”. In this mode, it does XML escaping.

### *Temporarily enabling/disabling actions*

To meet a longtime feature demand, we’ve added the ability to *temporarily* enable/disable actions. A temporarily disabled (enabled) action remains disabled (enabled) until the project is closed. The temporary state isn’t saved in the project.

Now when debugging workflows and exploring data, you can temporarily disable/enable actions without risking to forget to enable/disable them back before saving and closing the project.

### *Downloading Power BI reports as PDF*

Power BI reports (regular and paginated) can now be downloaded as files in different formats, including PDF. This is done with the help of the respective new command of the “Power BI command” action.

## What’s new in Desktop

### *Support for custom actions*

When Desktop is linked to Hub and the current space has Explorer enabled, it becomes possible to browse Catalog assets right from the “Add data” sidebar and add them as custom workflow actions. Only the assets that can be added as workflow steps are shown. Other asset types (e.g. Metrics) are not displayed.

### *Miscellaneous*

- EasyMorph Desktop has got a new installer with a slightly different look and icons
- Hub Link (previously, Server Link) now allows authenticating using Entra ID
- In action settings, lists of columns and lists of cell values have got more controls – e.g. it’s now possible filter only selected values and paste values to select
- EasyMorph Desktop has got a splash screen that is shown on application start
- In Analysis View, context menus for table columns, cells, series, columns in cross tables have got various new commands for convenience. Also, double-clicking a metric now brings up its settings.
- The action context menu has got a new command – “Clone” that clones the action.

## What’s new in Hub

## *EasyMorph Server renamed to EasyMorph Hub*

EasyMorph Hub is the new name of EasyMorph Server. The name Hub is used in the UI. Technical names, such as process names or error messages may still use the name Server.

## *Limited compatibility with older Desktops*

EasyMorph Desktop in versions below 6.0 can still work with EasyMorph Hub v6.0 for most operations, such as opening workflows and running them. However this compatibility is limited and temporary. Here is list of what doesn't work in older Desktops when they are linked to Hub v6.0:

- Creating, editing, deleting connectors is not possible (using connectors is still possible)
- Getting real-time workflow statuses from the Hub is not possible (e.g. getting statuses of running asset computations)

Note that this capability is also time-limited and is intended to allow our customers time to update their old Desktops without interrupting daily workflows. This limited backward compatibility will be removed in EasyMorph versions released after March 2027, so you have time until then to update old Desktops.

## *New user interface (UI)*

The UI of the Hub remains functionally unchanged except for a few minor improvements. The UI is still work in progress and will get minor updates throughout the application.

## *New Task triggers*

Three new Task triggers have been added:

- The "SharePoint folder changed" trigger fires when a file is added, modified, or deleted in the specified SharePoint Online folder. This trigger requires a Gateway connection.
- The "SharePoint list changed" trigger fires when a row is added, modified, or deleted in the specified SharePoint Online list. This trigger requires a Gateway connection.
- The "Web response changed" is a versatile trigger that periodically sends HTTP requests to the specified URL and fires when a response changes or was not received at all.

## *Internal IDP configuration*

The built-in identity provider (Hub accounts) has got a few configurable settings and is now shown in the list together with external IDPs. It is now possible to prevent password re-use and limit the number of unsuccessful login attempts.

# Identity provider "Built-in"

↓ Save changes    ↶ Revert

🔵 Enabled    📅 Last authenticated 9 hours ago    👤 User sessions 25 active    [Terminate all](#)

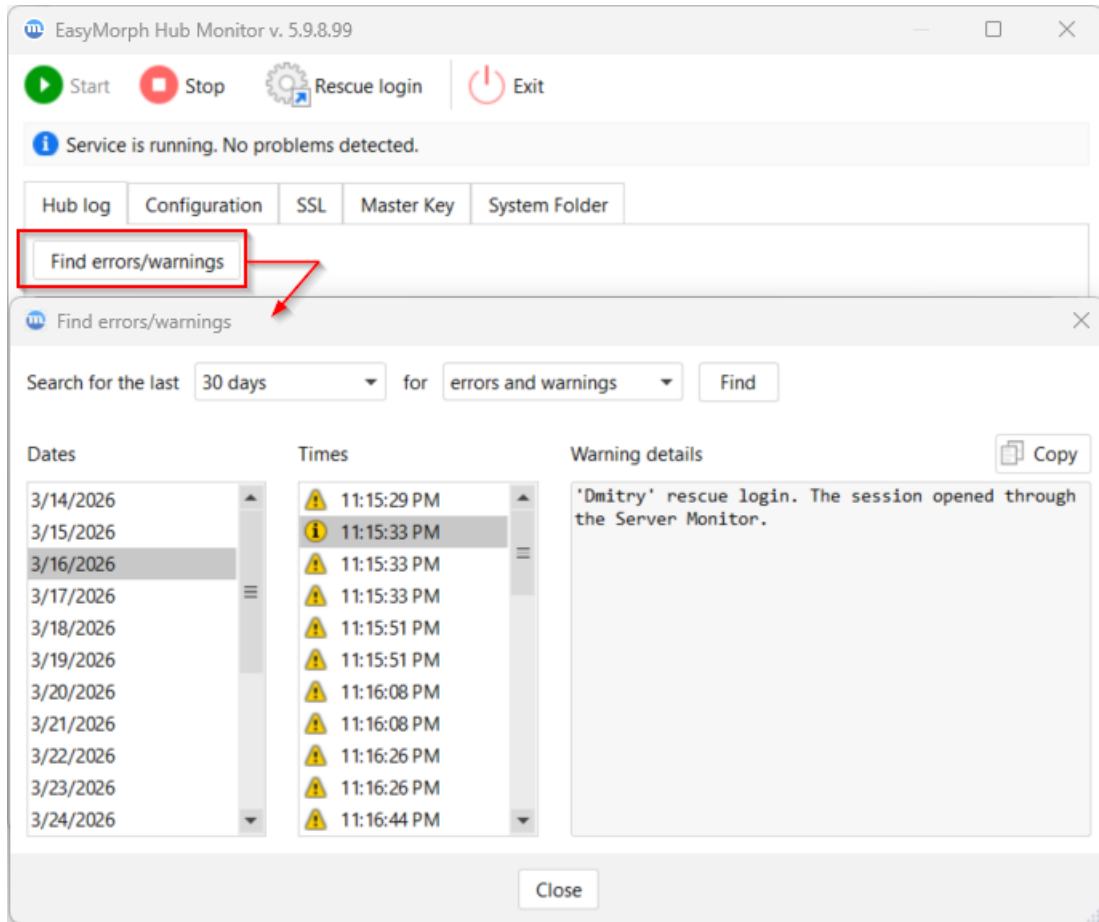
### Authentication via EasyMorph Hub

- Forbid reusing recent passwords  
Last passwords
- Max failed login attempts for regular users  
Attempts
- Max failed login attempts for Hub administrators  
Attempts

Screenshot 2: Settings of the built-in IDP.

## *Hub Monitor: Log search*

To simplify finding errors and warnings in logs, we've added a dedicated search function in the Hub Monitor utility.



Screenshot 3: Search for errors and warnings in Hub logs.

## Miscellaneous

- EasyMorph Hub has got a new installer with a slightly different look and icons
- Catalog directories are now called *collections*.
- The System directory setting has moved to the Hub Monitor utility (previously, Server Monitor)
- Custom themes are deprecated. Instead, it will be possible to customize the page header (logo and text) and the homepage in the Hub settings in v6.0.1.
- The Tasks list has got (back) the compact view mode.
- The "File uploads" parameters are now supported in computed Catalog assets.
- If an issue was assigned to a user, the Hub now sends an email notification to the user.
- Using JavaScript is no longer allowed in the auto-generated documentation.

## Previous release notes

Link: [Release notes for v5.9.8](#)