

Clarif FileMaker Pro 22.0.1 Release Notes

July 2025

This software updates FileMaker Pro to version 2025 (22.0.1) and addresses issues. If you are unable to successfully update to FileMaker Pro 2025 (22.0.1), search the Knowledge Base for installation information.

New features and enhancements

Artificial intelligence script steps and functions

Using new capabilities like SQL queries and FileMaker finds by natural language, as well as performing agentic operations that can use functionality you define, you now have even more ways to surface real intelligence from your data.

New AI script steps:

- **Perform SQL Query by Natural Language:** Sends a natural language prompt and database schema to a model, which sends back an SQL query to get a result from the database to use in its response. By leaving it to the AI model to create complex SQL statements in response to a user's prompt such as "Show me our top 10 highest-value deals this quarter," developers can provide their users answers from their data more easily and without sending the data itself to a model provider. Includes debug options that show developers the schema sent to and the SQL received from the model.
- **Perform Find by Natural Language:** Sends a natural language prompt and a list of fields on the current layout to a model, which returns a FileMaker find request, and performs a find. Includes options to return the found set, or the find request, as JSON.
- **Generate Response from Model:** Gets a text response from an AI model given a user prompt in natural language. Can perform agentic operations with advanced prompts, conversation memory, and tool calls (to perform SQL queries, retrieve images, and use FileMaker custom functions). Or you can turn off agentic mode and gain precise control over interactions with the model.
- **Configure Prompt Template:** Sets up a prompt template to use by name in other AI script steps, given a model provider and predefined prompts you can customize. Can be used in Perform SQL Query by Natural Language, Perform Find by Natural Language, and Generate Response from Model script steps. Start with the predefined prompts, customize them, or write your own to achieve an optimal response from the model.
- **Configure RAG Account:** Sets up a retrieval-augmented generation (RAG) account to use by name, given an endpoint and an API key. Use with the Perform RAG Action script step to specify the RAG space that you want to use on the AI Model Server (installed with FileMaker Server).
- **Perform RAG Action:** Sends a prompt to, or adds and removes data from, a RAG space on the AI Model Server specified by a named RAG account. Add documents or other data to create a knowledge repository that users can ask questions of, reducing a model's tendency to fabricate responses, and without sending your data to a third-party model provider.

- **Fine-Tune Model:** Fine-tunes a base model on the AI Model Server with your own training data set (either from a table occurrence or a JSONL file) to make the model better at your specific tasks. Uses low-rank adaptation (LoRA) to add a small number of trainable parameters to the model, reducing computation time and memory usage over full fine-tuning.
- **Save Records as JSONL:** Saves records to a specified JSONL file. Each line in the file is a JSON object representing a record. Can be used to output record data for fine-tuning a model.
- **Configure Regression Model:** Trains, saves, loads, and unloads a regression model. Trains a model based on embedding vectors for text data and numeric target data. Use the PredictFromModel function to predict a target value from the embedding vector for a given input.

New AI functions:

- **GetFieldsOnLayout:** Returns a list of the fields on a layout as JSON data. Includes only the fields that are accessible to a find. Useful for debugging what field information is sent by the Perform Find by Natural Language script step.
- **NormalizeEmbedding:** Normalizes an embedding vector to unit length. If specified, the dimension parameter reduces the number of vector dimensions to use before normalizing. Allows you to work with custom vectors or use specific dimensions of existing vectors for semantic search operations.
- **AddEmbeddings:** Adds two embedding vectors and returns the result as a normalized vector. Can be used to combine the semantic meaning of two embeddings.
- **SubtractEmbeddings:** Subtracts embedding vector v2 from v1 and returns the result as a normalized vector. Can be used to isolate or modify semantic concepts in embeddings.
- **PredictFromModel:** Returns the predicted value from a trained regression model for the specified text embedding vector. Use the Configure Regression Model script step to train and load a model first. Example uses: Forecast inventory needs for holiday sales, predict customer behavior, or analyze trends based on your historical data.
- **GetRAGSpaceInfo:** Returns information about the specified RAG space or all RAG spaces, if no space ID is specified. Works with the RAG account created by the Configure RAG Account script step.

AI enhancements:

- Anthropic is now supported as a model provider that you can specify in the **Configure AI Account** script step. See [Clarifai FileMaker 2025 Technical Specifications](#) for the supported models.
- The **Insert Embedding in Found Set** script step includes these new options (off by default):
 - **Continue on error** continues getting embedding vectors for the found set even after errors are encountered in some records. With empty target fields, you can more easily find records that encountered errors.

- **Show summary** displays a summary dialog at the end of the operation, showing the number of records successfully processed and any errors encountered.
- The **Perform Semantic Find** script step includes these improvements:
 - You can directly specify an image to query by. Previously, to find images similar to a given image, you had to query by vector data and supply the image's embedding vector. Now, set the **Query by** option to the new **Image** value, then for the **Image** option, specify an expression whose result is the image as container data (usually a container field or a variable). The script step now obtains the image's embedding vector itself using the specified model.
 - Performance is improved, particularly in hosted files when text or image data is in one table and the embedding vectors are in another table or another file.

Access FileMaker data via Claris Studio

- Starting with FileMaker 2025, you can now easily display and update FileMaker data via Claris Studio views, extending your FileMaker Pro custom app to external stakeholders on the web. For example, use Claris Studio views to present project status, a product catalog, or a dashboard of quarterly results from your FileMaker data, or to update your FileMaker data by capturing text and images directly from customers or adding comments to project tickets.
- To set up Claris Studio to access FileMaker data, host your custom app with FileMaker Server 2025, then in Claris Studio, add tables from the hosted app as FileMaker data sources in Claris Studio. For details, see [Work with data sources](#) in Claris Studio Help.

Note With the availability of FileMaker data sources in Claris Studio, the ability to add Claris Studio tables in a FileMaker Pro file has been removed in FileMaker Pro 2025. Claris Studio tables that you added to a file in earlier versions of FileMaker Pro continue to work when you open them with a FileMaker 2025 client or host; only the ability to add Claris Studio tables has been removed.

Improved user experience in macOS

Home window:

- When you start FileMaker Pro, you're greeted with the new Home window. It opens to the Favorites or Recent tab to give you quick access to your FileMaker Pro custom apps, depending on which tab you last used. The Create and Open buttons are positioned to make these common actions easy to find.
- For FileMaker Cloud users, the My Apps window is now the FileMaker Cloud window. Rather than always opening when you start FileMaker Pro, the FileMaker Cloud window is only one click away on the Home window.
- Tips:
 - To delete a favorite, select it, then press the Delete or Backspace key.
 - To add a recent app as a favorite or delete a recent app, right-click the app, then choose **Add to Favorites** or **Remove**.

Status toolbar:

- In Browse, Find, and Preview modes, new icons bring familiar functionality a fresh look.

Layout mode:

- In addition to new icons, the status toolbar gives you more customization options. The layout tools are now separated into individual items you can add, delete, or rearrange as you prefer. The tools that were previously available only after you click-and-hold are now available either together in a drop-down list or as individual tools you can place on the status toolbar.
- The objects pane (left) and the Inspector (right) have also been given a fresh look with new icons and colors, as well as better spacing and typography.

Table View:

- System-wide light and dark appearances are now supported, including the system text, background, accent, and highlight colors. To enable, in Table View, right-click a column heading, choose **Table View > Properties**, then select **System appearance**.
- The enhanced user experience includes a new **Comfortable formatting** option in the Table View Properties dialog that provides improved readability with scaled fonts, better cell padding, system focus ring in a selected cell, and refreshed icons.
- Additional options in the Table View Properties dialog let you use alternating row colors and add row numbers on the left side.

Script steps

New script steps:

- **Go to List of Records**: Goes to a layout and returns the found set specified by a list of record IDs. You can provide the record IDs as a list of values separated by carriage returns, a JSON array of record IDs as strings or numbers, or a JSON array of objects with `recordId` keys and values. Record IDs can be obtained using the new `GetRecordIDsFromFoundSet` function.

Script step enhancements:

- The **Replace Field Contents** script step now has a **Perform auto-enter options for fields** option, giving you control over whether other fields with auto-enter options are updated as this script step updates records.
- The **Add Account**, **Delete Account**, and **Enable Account** script steps support OAuth and external server account types in addition to FileMaker file accounts, making it easier to automate the creation and management of accounts that use external identity providers.
- The length limitation for the **Insert Text** script step has been increased from 30,000 to 250,000,000 characters.

Functions

New functions:

- **GetTextFromPDF**: Returns the text found in a PDF file in the specified container field. Can be used to include PDF text in finds, add PDF text to a RAG space with the Perform RAG Action script step, or otherwise make it available to AI models.
- **GetRecordIDsFromFoundSet**: Returns record IDs from the current found set as a list or a JSON array. The record IDs can optionally be returned as values and ranges of values. The output can be used with the new Go to List of Records script step.
- **JSONParse**: Parses text as JSON data and keeps the parsed JSON representation in memory for you to reuse with other JSON functions. You can significantly improve performance of JSON calculations that reuse the same JSON data many times by using this function first, for example, to store the result in a variable:

```
Set Variable [ $json ; Value: JSONParse ( "[3]" ) ]
```

- **JSONParsedState**: Examines the input passed into it to determine whether it has parsed JSON data as part of it (that is, JSON data previously parsed by the JSONParse function). The function returns 0 if JSON is not parsed, -1 if parsed but invalid, or a positive number representing the JSON type if parsed and valid.

Script Workspace

- The Script Workspace now lets you collapse and expand blocks of control script steps (for example, If, Loop, and Open Transaction) to provide a better overview of complex scripts. Hold the pointer over the area between the line numbers and the script, then click the triangle to collapse or expand the steps. Or you can select a step, choose **Edit > Expand/Collapse Steps**, then choose to expand or collapse the selected step, the selected step and all of its substeps, or all steps in the script. For keyboard shortcuts, see [Script Workspace keyboard shortcuts \(Windows\)](#) or [Script Workspace keyboard shortcuts \(macOS\)](#).

Database design and management

- In the Settings dialog on the Layout tab, the new **Update layouts when the schema changes** option (unselected by default) lets you control whether FileMaker Pro updates layouts to match changes made in the Manage Databases dialog. For example, when selected, deleting a field in Manage Databases deletes all field objects using that field from all layouts. The existing **Add newly defined fields to current layout** setting is still available to select separately.
- Table comments can be added in the Manage Database dialog, similar to field comments, making it easier to document table structure and purpose.
- In the Manage Database dialog, the field list displays in the Type column the data type for the results in calculation fields, making it easier to identify the data type without opening the Specify Calculation dialog for each field.
- To help you organize your custom functions, you can work with them in folders. In the Manage Custom Functions dialog, you can create, rename, and delete folders as well

as arrange custom functions in them, nesting folders as needed. You can also use the Search box to filter the list of custom functions. In the Import Custom Functions dialog, you can select a folder to conveniently import all the custom functions in the folder.

Layouts

- In Layout mode, you can now add objects to existing groups by selecting both the group and the object to be added without needing to ungroup first, streamlining the process of organizing layout objects. Similarly, you can remove objects from existing groups. Use the **Arrange > Add to Group** or **Remove from Group** menu commands or the equivalent in the Position tab in the Inspector.

Upgrade to major releases using Check for Updates

- FileMaker Pro 2025 is the first major release that you can upgrade to from the latest version of the previous major release (FileMaker Pro 2024) by clicking **Help > Check for Updates** or when the Software Update dialog opens when you start FileMaker Pro, if you have an eligible license.
- Windows: Previously, major FileMaker Pro releases were installed alongside any previous versions you had installed. Starting with FileMaker Pro 2025, installing the latest major version of FileMaker Pro replaces the previous version.

Save a Copy as XML

- When a FileMaker Pro file is saved using **Save a Copy as XML**, the root FMSaveAsXML element of the XML file now includes a Has_DDR_INFO attribute that's set to True when the **Include details for analysis tools** option is selected. This attribute allows analysis tools to quickly determine whether the file includes the DDR_INFO element containing additional information without parsing the entire file.

Application

- References to "Microsoft Azure AD" have been updated to "Microsoft Entra ID" throughout FileMaker Pro, reflecting Microsoft's renaming of their identity and access management services.
- Theme recovery has been improved to handle cases where a theme becomes corrupted or is missing. If the catalog data is corrupted and the index list is lost, the theme data is now used to rebuild the index list, preserving layout design even when themes are damaged.

Security

- Use of the OpenSSL library is now optimized with additional compiler flags, improving performance for cryptographic operations and reducing the loading of deprecated components.

Updated libraries and packages

The following third-party libraries have been updated to the indicated versions:

- Antlr 4.13.1
- date 3.0.3
- International Components for Unicode (ICU) 76.1
- iODBC 3.52.16
- JSON Web Token C++ library (jwtcpp) 0.7.0
- libxml2 2.13.5 and libxslt 1.1.42
- OpenCV 4.11.0
- PDF-Writer 4.6.6
- PDFium 6957
- Skia 126
- speller v22
- ZBar 0.23.93

Addressed issues

Layouts

- After a card window was closed, some objects on the layout lost their background color.
- Drop-down list and calendar icons did not appear for fields that were not initially visible when loading a layout, only becoming visible when hovering over the field or clicking it.
- Windows: In Layout mode, a portal would shrink to zero height after changing options in the Portal Setup dialog, making the portal apparently disappear from the layout.
- Layout calculations didn't follow conditional formatting rules for numbers with negative values, displaying them without the expected formatting.
- Layout calculations didn't respond to **Hide object when** conditions. For example, when a layout calculation was set to hide when Self = 1, it remained visible regardless of the condition.
- In List View, layout objects that spanned parts were drawn outside the parts when scrolling or resizing the window, causing graphic defects.
- The background image specified for a layout part was not trimmed to the part boundary, causing elements like navigation bars in adjacent layout parts to disappear when they should remain visible.
- macOS: After typing in a pop-up menu that's inside a card window, pressing Command-W to close the card caused FileMaker Pro to quit unexpectedly.
- When **Slide up based on** was selected for a vertical line object, the line moved to the left by 0.5 px in Preview mode compared to its original position.
- Windows: When switching to List View, if a record was partially displayed at the bottom of the window, scrolling the window sometimes caused field data not to be displayed in a subsequent record until after you clicked in a field in that record.
- macOS: In Layout mode, after switching between layouts, clicking layout objects failed to select them under some circumstances.

- Deleting a field in the Manage Database dialog removed the field object and label from the current layout and every second layout thereafter. Now, deleting a field deletes the objects and labels from all layouts.
- Windows: In web viewers, the Edit menu commands Cut, Copy, Paste, Clear, and Select All didn't work.

Script Workspace

- The script editing pane lost focus after dragging steps to rearrange them, causing keyboard input to be ignored until the script editing pane was clicked again.
- In the script editing pane, the Paste script step showed **No style** when **Paste without style** was unselected and showed nothing when it was selected, which is the opposite of what should appear in this script step.

Script steps

- After running the Perform Script script step with a script folder, rather than a script, specified by name, Get(LastError) returned error code 0 ("No error"). Now, it returns error code 104 ("Script is missing").
- After running the Insert Embedding script step with any of the required options empty, Get(LastError) returned error code 0 ("No error"). Now, it returns error code 10 ("Requested data is missing").
- When a Close Window script step was performed within a transaction, the transaction was properly reverted, but the Get(TransactionOpenState) function incorrectly returned 1 instead of 0, indicating the transaction was still open.
- After Perform Script on Server with Callback ran the callback script and the callback script then used Perform Script to run another script, Get(ScriptResult) incorrectly returned the result from the original Perform Script on Server with Callback script step instead of the result from the Perform Script script step.
- In FileMaker Go, Tab keyboard shortcuts and Go To Object script steps didn't work with buttons, preventing keyboard navigation to buttons and programmatic focus control.
- When using the Insert from URL script step to insert a .zip file into a container field, the file was inserted but with incorrect metadata. The file size showed as "?", the filename was empty, and the MD5 value couldn't be calculated.
- Windows: When the system default email client was a MAPI email application (such as Mozilla Thunderbird) but Microsoft Outlook wasn't installed, the Send Mail script step, when set to send via an email client, displayed an error message that a supported email client wasn't found. Now, the error displays only when no MAPI email application is found as the system default.
- macOS: When using the Send Mail script step to send via Microsoft Outlook as the email client, FileMaker Pro failed to open Outlook if the record set included a record with an empty To, CC, or BCC field.
- When the Open URL script step was run with an fmp:// URL that included an account and password, the Open "Filename" dialog opened, requiring the user to enter credentials instead of opening the file directly.

- The ExecuteSQL function with a SQL statement that included an IN operator returned no results, even though the same query without the IN operator returned results correctly.
- When using the Save a Copy as Add-on Package script step, container data wasn't included in the record XML. The resulting add-on didn't have data in the container when added to other FileMaker Pro files.

Functions and calculations

- Carriage return (Char(13)) characters in variables were changed to linefeed (Char(10)) characters when the variables were used in a chart object, causing unexpected behavior in code that relied on specific character values.
- The EvaluationError function returned 0 when used with ExecuteSQL, even when the SQL statement failed, instead of returning the expected error code.
- SQL queries returned "?" for 4-byte UTF-8 characters, causing issues with emojis and certain Asian language characters.
- FileMaker Pro quit unexpectedly when evaluating calculations in a Show Custom Dialog script step under some circumstances.
- When a layout was refreshed, hidden merge fields based on calculation fields were evaluated even though hidden calculation fields weren't, causing unexpected calculation behavior.
- The ConvertToFileMakerPath function added the root drive or volume when converting a file path, even if the root drive or volume was already present in the path.
- The JSON functions returned an error when brackets were used in keys.
- The JSONDeleteElement function returned an error instead of deleting an element when given an array of null values.
- The Timestamp function didn't correctly interpret 24-hour format time data in stored calculation fields when the system's region was set to Korea and 24-hour format was enabled.

Application

- Error handling for dictionary loading has been improved to prevent the "Cannot load main spelling dictionary" error from interrupting your work, especially when spell checking is disabled.
- Custom menus were not properly removed when pasted into the Manage Custom Menus dialog and then canceled, leaving behind blank custom menus.
- macOS: After resizing the Edit Custom Function dialog, the first column of characters in the calculation were cropped by the left edge of the calculation area and were no longer viewable in certain situations.
- Windows: In a field that uses a value list and has the **Allow editing of value list** option selected, clicking the field in Browse mode, choosing **Edit**, selecting text in the Edit Value List dialog, right-clicking the text, and choosing Copy didn't copy the selected text to the clipboard.
- In Preview mode, moving the slider in the status toolbar all the way to the right did not immediately go to the final page as expected. Instead, the preview only moved forward a few pages at a time.

- References to scripts in custom menu items were lost when copying custom menu items to another file. The result was "Script missing" errors even when scripts with matching names existed in the target file.
- Japanese table and field names in the ExecuteSQL function appeared as garbled characters when checking execution results in the Data Viewer.
- When specifying a field, the field list was sorted in an order that didn't always match the order set in the Manage Database dialog.
- When updating web viewers with JavaScript charts, FileMaker Pro consumed increasing amounts of memory over time.
- Windows: When uploading a file to FileMaker Server, creating a new folder in the upload destination and double-clicking to rename it with multibyte characters resulted in garbled text.
- When opening an FMP12 file using an fmp:// URL that included an account and password, FileMaker Pro on macOS and FileMaker Go failed to authenticate with the included account or password if they contained Unicode characters such as those with diacritical marks.
- In the relationships graph, pressing Ctrl+A (Windows) or Command-A (macOS) under certain conditions caused FileMaker Pro to quit unexpectedly.
- Windows: In the Manage Security dialog, the Description column was missing.
- In the Set Variable script step, when editing formulas in Japanese, text disappeared when inserting or erasing line breaks in specific positions within the formula.

Data handling and validation



- Performing a find on timestamp fields (using the >= operator) in a large, local file could corrupt the file, causing it to become inaccessible after closing.
- The Specify Calculation dialog for the **Display custom message if validation fails** option incorrectly showed the data type of the field being validated instead of always showing "Calculation result must be Text."
- When importing data from an Excel file, a cell with the text value "nan" was imported as 0.
- For a field in a related table that was validated by a calculation that used the Self function and had a custom validation message that also used the Self function, the validation message was blank when validation failed.

Save a Copy as XML

When a FileMaker Pro file was saved using [Save a Copy as XML](#):

- When copying and pasting a button with a script step, the pasted button's script step had a blank UUID in the XML file. Additionally, when duplicating a button by pressing Command and dragging, the duplicated button's script step retained the same UUID as the original instead of generating a new one.
- Field access rules weren't reflected in the XML for fields that weren't explicitly modified in the Custom Field Privileges dialog, causing incomplete representation of security settings in exported XML.
- Icon images specified in the File Options dialog weren't referenced correctly in the XML.

- Function name text was changed, causing differences in text case for functions and operators in calculations even when no actual changes were made.
- For a style that was not saved to a theme, the expected style information was missing from the LocalCSS element.
- When layout objects that contain other objects (for example, grouped objects, portals, tab controls) are duplicated by pressing Alt (Windows) or Option (macOS) as you drag them, the UUID values of the inner objects were duplicated rather than assigned new values.
- Objects inside a group of objects that was inside a portal were represented twice in the XML.
- The CalcsForCustomFunctions element in the XML for each custom function was missing a DDRREF key.
- The DDRREF values in the XML changed with each save, causing analysis tools to incorrectly detect changes when comparing files. Now, rather than generate a new value on each save, many elements now use the existing UUID of the catalog member (or its parent node) as the basis of the DDRREF value.
- Popovers weren't represented as LayoutObject elements in the XML, making it inconsistent with other object types and causing issues for database analysis tools.
- The access attribute of the top-level Fields element's in the XML had a generic value like "ReadOnly" even when fields had mixed access levels. Now, this attribute has the value "Custom" to indicate custom privileges.

Platform	Product	Updates Version	Download	Languages
Windows	FileMaker Pro 2025	22.0.1	FileMaker Pro 22.0.1 Updater (setup.exe) 	English French Arab Hebrew Indian Thai
macOS	FileMaker Pro 2025	22.0.1	FileMaker Pro 22.0.1 Updater 	

APIs, technologies, or features to be deprecated

As FileMaker Pro evolves, the list of supported technologies, APIs, and features will change. As part of this evolution, certain operating systems versions, hardware, and features may be deprecated in favor of newer ones. Although deprecation does not mean the immediate deletion of an item, you should migrate your solution away from deprecated technologies, because these technologies may be removed in a future version of the product.

For the latest information about deprecated APIs, technologies, and features, search the Knowledge Base.