# A12 Release 2023.06-ext4-5
March 2024

What is A12?

A12 is an enterprise low code platform for developing enterprise applications in complex IT landscapes. A12's modeling platform provides tools to quickly create and maintain parts of an application over the long term without programming experience.

A12's runtime platform provides the flexibility needed to evolve low code apps with professional individual software development and system integration into fully integrated enterprise applications.

EXPERIMENTAL   CMS

A12 Content Management System:
## First Experimental Version Is Available for Projects
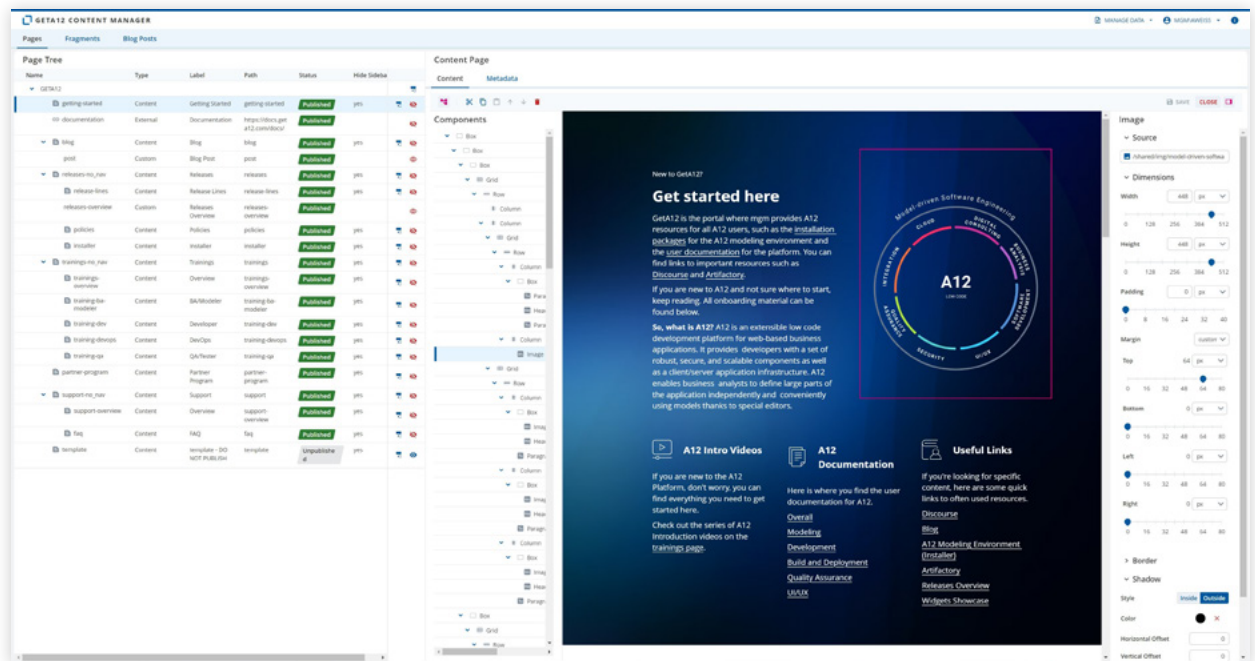
Modern web applications always include textual and visual content - be it in the form of an imprint for publicly accessible websites, a customized start page or a news and blog section. To manage such content, A12 is introducing a new, lightweight content management system (CMS). It offers a lean and integrated solution for A12 applications that contain editorial content. The CMS consists of an editor that can be used to manage and design pages and a content engine as a runtime component which interprets Content Models. It is available in an experimental version for interested A12 projects. The relaunch of GetA12 (https://geta12.com/), which was completed in February 2024, shows what the new CMS can do. The new generation of the platform is based on a full-stack A12 application that contains static content pages and dynamic content such as the release overview. The former were fully implemented with the A12 CMS and have since been maintained using the Content Editor.

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SME   **MODEL GRAPH DIAGRAM**

## Simpler Setup for Visual Data Modeling
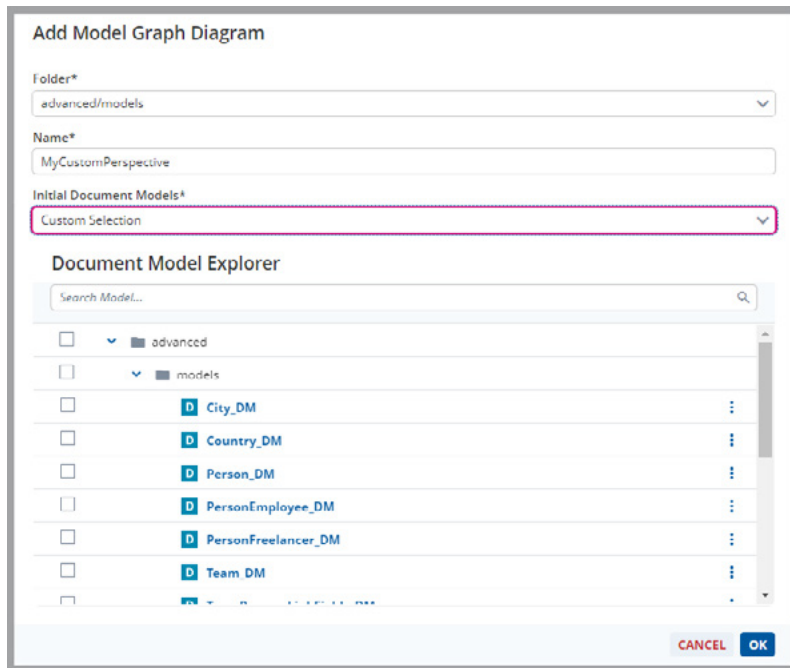
Model graph diagrams allow SME users to visually display and edit modeled domain-specific contents of A12 applications. You can set up as many perspectives as you like, which is now even easier and faster. The dialog for adding new diagrams now contains three options for pre-filling: „None" generates an empty canvas. „All related document models" generates a diagram that contains all document models that are referenced in at least one relationship model. „Custom Selection" generates a diagram based on an individual selection of the models to be included.

SME

## SME Introduces Global Search and Other Convenience Features

Which rules reference a specific field? In which forms is the field with a given ID used? Modelers can now use the new global search in the Simple Model Editor (SME) to answer such questions. It enables a full-text search across the entire model inventory of a workspace and can be restricted to specific model types and folders. The results tree clearly shows which model constituents in which path contain the searched term and in which rules it is used. In addition to the search, the SME now supports a zoom function (via Ctrl + mouse wheel), which makes the tool even more user-friendly. After launch, a list of „Recent Workspaces" opens, which makes it much easier to work with several projects in parallel.

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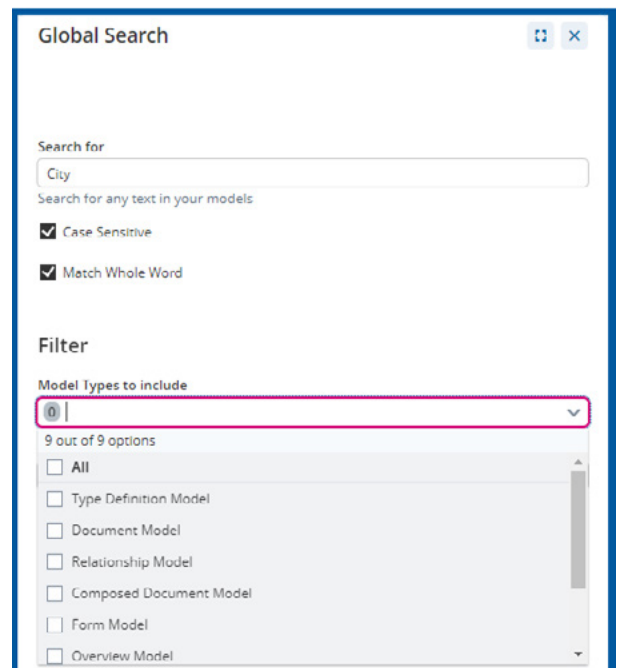
## Notification Center: Version 1.0.0 Features a Streamlined Architecture

With version 1.0.0, the Notification Center in A12 release 2023.06-ext5 has reached an important milestone. The maturing A12 component for bundling and managing notifications in business applications has received several improvements and a redesigned architecture. The improvements include a new, robust scheduler for checking and marking reminders as well as new configuration options for theming. The new architecture provides a clear decoupling from the A12 Data Services component and simplifies the handling of reminders. There are plans to open up the Notification Center to other external channels in the future. In addition to sending notifications to the browser, it will then also be possible to deliver notifications to mobile applications and instant messaging protocols.
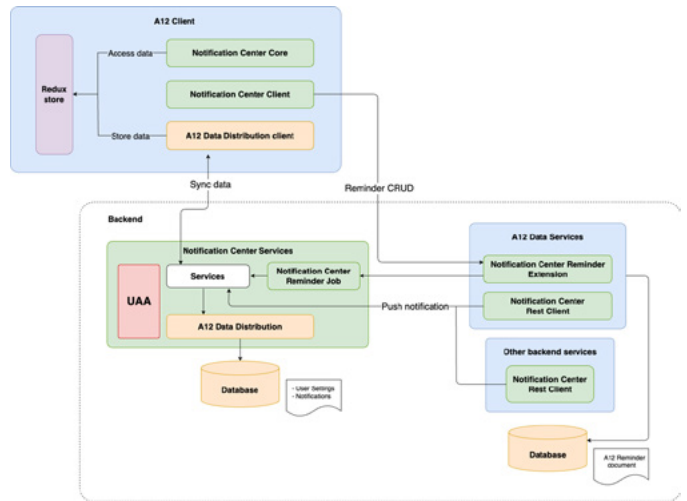

WORKFLOWS   TEMPLATES

Extensions for Camunda Modeler Simplify the Modeling of A12 Workflows

The Camunda Modeler delivered with the A12 Modeling Environment now contains A12-specific extensions that make modeling A12 Workflows easier and more convenient. The new features have been implemented with the help of so-called "element templates" - an extension mechanism of the Camunda tool. When modelers create a new user or service task, for example, a selection dialog for the available templates opens. After the selection, fields for the required information appear in the properties panel of the editor. A description of the fields and input validation help to ensure that the correct information is entered. Previously, modelers had to remember a bunch of names. Now they
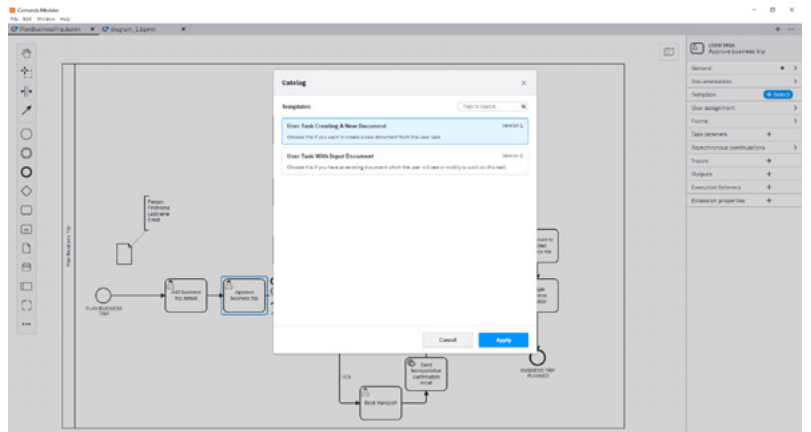
are actively supported by the templates. Potential errors due to incorrect entries are prevented.

TEMPLATES   USER MANAGEMENT
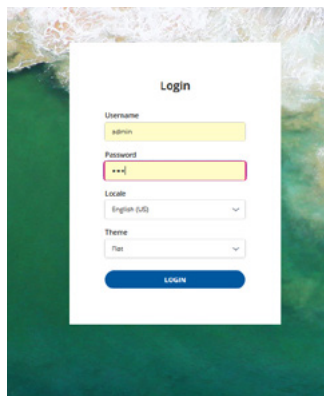
A12 Project Template:
New User Setup Takes Roles and Rights Into Account

With the help of the project template, development teams can set up new A12 projects quickly and in a standardized way. Previously, two users were defined out-of-the-box: „guest" and „admin". The new version of the template now includes an extended rights and role configuration as standard. The „guest" user has been removed. Instead, there is now the „user" role. All users with this role only have access to the data sets ("documents" in A12 terminology) they have created. Users with the „admin" role, on the other hand, have access to all data sets. A setup of this type can be found in many use cases and is therefore a good starting point for the project-specific configuration of the user management of an A12 application.

PRINT-MODELL **PDF** **WASSERZEICHEN**

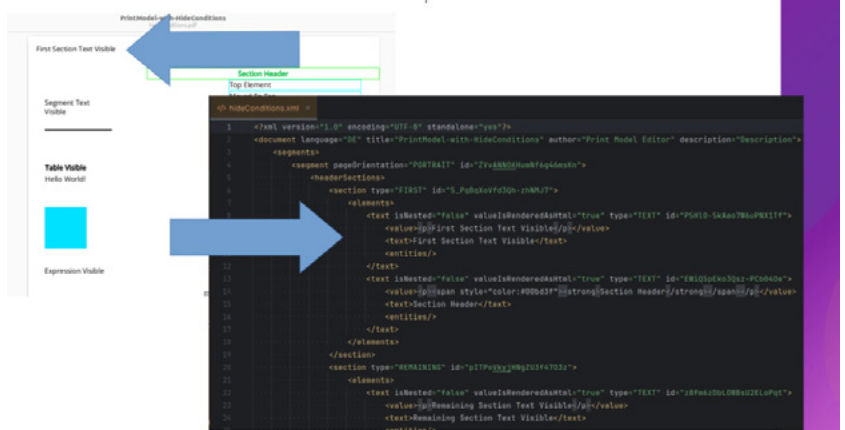## Print Model Editor Supports Watermarks and Custom Fonts
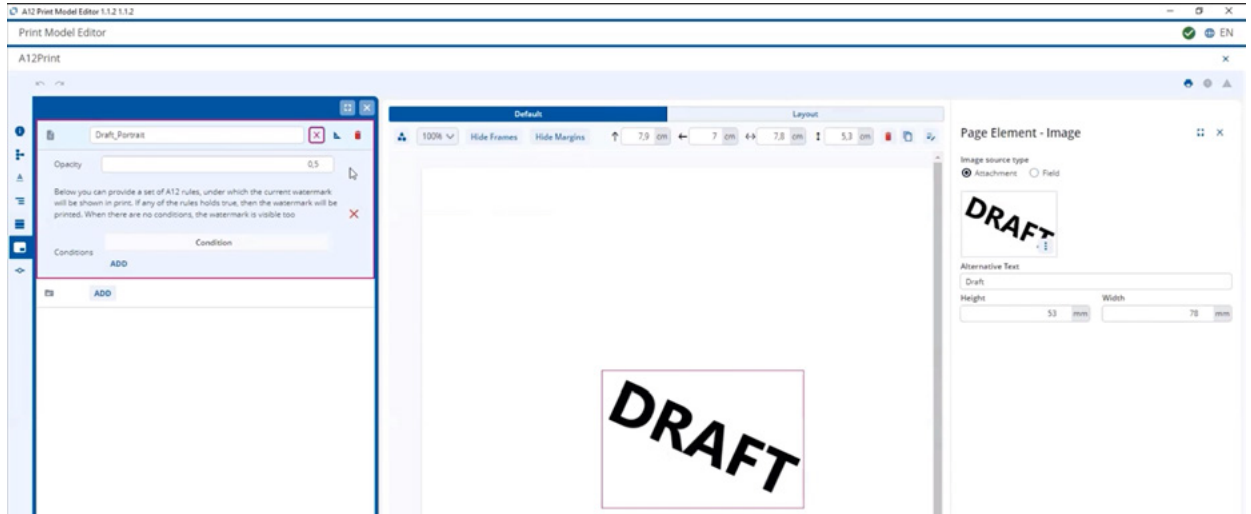
With the help of A12's Print Model Editor, business analysts can design templates for accessible PDF documents. The resulting Print Models are interpreted by the Print Engine and filled with data at runtime. The editor now also supports the embedding of watermarks in portrait or landscape format. In addition to the watermark and its opacity, conditions can be specified in which situations it should be used. Even more design options are available thanks to the new support for custom fonts. Modelers can use a configuration file to import new fonts, which are then available for use in the editor.

PRINT ENGINE **XML**

A12 Print Engine Supports XML-Export

In business applications, there are numerous use cases in which users can retrieve documents. Sometimes a provided PDF is sufficient. In many cases, however, a machine-readable format such as XML also offers decisive advantages, as the data it contains can be processed much more easily. For example, banks have been allowing their customers to download account statements as XML files for years. A12's Print Engine now offers extended output options for such use cases. It introduces the new PrintModelDocument, which corresponds to the structure of a Print Model without layout information. Based on this, corresponding XML files and PDFs with integrated XML information can be generated.

PERFORMANCE **ENGINES**

Performance boost for A12 applications

Thanks to numerous performance improvements, A12 applications now offer an improved user experience. For example, forms are called up faster the first time they are opened, as a new implementation of the model loader now loads models and data in parallel. Overview tables offer smoother infinite scrolling; loading bars are a thing of the past thanks to an increased buffer size in the Overview Engine. In addition, the download of thumbnails has been optimized by reducing the necessary client-server communication to a minimum.

Backend

`KERNEL` `SERVER`

Static Server-Side Validation and Computation Speeds up Applications With Many Models

Full-blown A12 applications can contain hundreds, if not thousands, of A12 models. In some cases, this can lead to performance restrictions on the server side, as the validations and computations included are executed dynamically by default. „Dynamic" here means that all steps take place during runtime: the generation of Groovy code from the Document Models, the subsequent compilation and the actual execution of the valida-

tion/computation. With the newly improved static server-side validation and computation, however, the generation and compilation are already carried out during the build. Only the validation and computation are done during runtime. This brings significant performance advantages for applications with many Document Models that do not change during runtime.

`DATA SERVICES` `PERFORMANCE` `EXTENSION`

Data Services Enables Custom Naming of Technical User and Improves Performance

Until now, the server-side A12 component Data Services had a predefined user for backend tasks. Now A12 projects can freely customize the name of this technical user via a configuration key. This enables better control of the users in the system. As the technical user also appears in logs, the individual naming allows a better distinction from the actual users. The component also received a number of performance improvements - particularly in respect of the use of Composed Document Models (CDMs). In addition, the examples for individual extensions to the Data Services component have been reorganized and an implementation example for scanning attachments for viruses has been added.
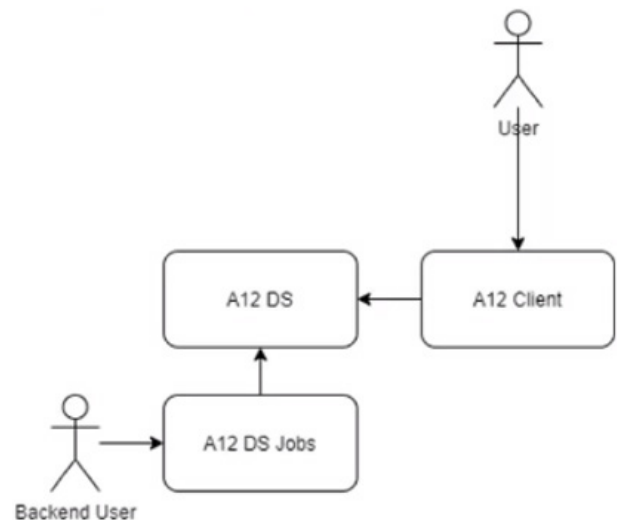
More News in a Nutshell

- **Three new variants** of the **A12 Project Template** (CDM, Notification Center & Tree Engine) facilitate the setup of A12 applications with additional functionalities.

- The **character length** of the **data fields of A12 Document Models** has been **increased** from 99 **to 200**. This allows for more comprehensive descriptive field names.

- The **A12 Installer**, which provides the A12 Modeling Environment locally, now installs the **Print Model Editor by default.**

mgm

Frontend

KERNEL   SERVER

Numbers and units can now be combined in summary lists - thanks to dynamic suffixes.

Some records just belong together - numbers and units, for example. Now, dynamic suffixes in the Overview Engine within A12 applications can combine content from two fields in one column. For example, amounts and currencies can be displayed in a single column, simplifying the display of related data structures. To use this feature, simply check the „Use dynamic suffix" box when modelling the the overview's column model. The suffix must be of the Enumeration data type, i.e. it contains a list of pre-defined values. The combined column is sortable and filterable within the application.

The A12-Widget-Showcase
https://www.mgm-tp.com/a12.htmlshowcase/#/