Functional Description
d.velop process studio

1 Summary

Below is a description of the functions and services of d.velop process studio. For d.velop cloud customers, the information in the "Service Description d.velop cloud platform" also applies. The support, availability and updating of d.velop process studio are described in the "Service Level Agreement".

d.velop process studio provides tools for the automation and customization of processes. Depending on the pricing model selected, the tools can be used to design customer-specific processes in a Business Process Model and Notation (BPMN) modeler, arrange components in a form, and connect third-party systems using customer-specific JavaScript programming or via the Microsoft Power Platform connector. Once created, processes can also be monitored and administered with d.velop process studio.

2 Definitions

2.1 Application Programming Interfaces (hereinafter referred to as "API")

The API are provided by systems with certain functions to allow other programs to connect with the respective system and to use given functions.

2.2 Representational State Transfer (hereinafter referred to as "REST")

REST is a software architectural mode for provisioning of standards between various computer systems to enable communication between the systems.

2.3 Business Process Model and Notation (hereinafter referred to as "BPMN")

BPMN stands for Business Process Model and Notation, a process modeling standard managed by the Object Management Group which has also been known as ISO 19510 since 2013.

2.4 Decision Model and Notation (hereinafter referred to as "DMN")

Decision Model and Notation (DMN for short) is an official notation standard for decision rules in business process management, which is defined by the Object Management Group (OMG). This standard is used to describe and model repeatable decisions in organizations.

3 Architecture

d.velop process studio contains various tools that can be used to digitally map business processes. The tools can be used on their own, as well as in combination with other d.velop process studio tools. For example, a modeled form can be used to display information, while also being sent within the process context as part of a task. A form can also be filled with datasets from a third-party system by means of a script from the scripting engine. All tools have a powerful REST API, which allows for optimal integration into your environment.

d.velop process studio always contains the following tools. The exact range of functions available depends on the licensed edition:

Form designer

The customer can design forms with the integrated form designer in d.velop process studio. The modeled web-based forms can be accessed via a link and used in tasks, as a dossier cover, as a context action or a stand-alone forms. Within the forms, information and datasets from d.velop platform or third-party systems can be displayed, processes can be started, or interfaces to third-party systems can be called. The form can be designed using drag & drop. The form editor can be used to create an accessible user interface.

Process modeling tool

With d.velop process studio, the customer can model and visualize processes in the standardized BPMN 2.0 notation. The intuitive web interface makes it possible to insert process items at the appropriate location using drag & drop or just a few clicks. The process modeling tool is linked to the d.velop platform. This allows internal users to be defined as recipients of tasks, processes to be started automatically after a certain document type has been imported, or forms to be created for user tasks. The customer receives a complete overview of their executable processes, based on the BPMN 2.0 notation. Processes can be modeled as stand-alone, document-based or with a connection to other systems.

Business rules (decision tables)

With the d.velop process studio, the customer can create decision tables (DMN), which can be used to model and automate decision processes and present complex decision rules in a clear and structured manner. In the decision tables, the customer can specify which input variables are required for a decision and which output variables represent the result.

Scripting engine

Using the scripting engine, the customer can execute native JavaScript code on the runtime NodeJS. This allows third-party systems to be integrated into processes, forms or the d.velop platform in general. Third-party clients can be used based on the available JavaScript libraries.

Process engine

The process engine enables the customer to execute their business processes automatically.

Process monitoring

With process monitoring, the customer can view their processes from a central location and check the status of a process and make adjustments if necessary. An optional process log can be made available after execution of a process.

Task management

With task management, the customer can create tasks within their business processes by defining user tasks, e.g. to collect information or prompt decisions. Task management includes process-specific delegation rules, allowing one delegate to be entered per process context. In addition, responsibility rules can be entered so that process owners can view the processing status of process-specific tasks.

Microsoft Power Platform connector

With the help of the Microsoft Power Platform connector, the customer can execute a process or an action from the available connectors on the d.velop platform, or react to an event on the d.velop platform. An additional Microsoft Power Automate license is required, independent of the use of d.velop process studio.

4 Scope of functions

In addition to the tools already described in Section 3, d.velop process studio offers the following range of functions. The exact range of functions available depends on the licensed edition – basic or business.

4.1 Template library

The template library enables the customer to use predefined templates from d.velop. These templates demonstrate to the customer how certain business processes can be mapped. They also enable the customer to import and build on a finished process.

The templates and instructions for use can be found in the service portal at https://portal.d-velop.de/processstudio/latest/en/template-library.

4.2 Reporting and analysis options

When designing the process, the customer can provide information to a reporting system of their choosing. They can also set up a process execution log, which can be optionally archived in d.velop documents. Web interfaces

for process monitoring and process administration are provided to enable the customer to view ongoing and completed processes. The corresponding REST APIs are also available for custom reporting and analysis.

4.3 Managing user rights

The customer can centrally manage which users are allowed to model and execute processes, forms and scripts.

4.4 Web front end

All administrative and user interfaces can be operated via a current web browser (Chrome, Safari, Edge).

4.5 Authentication

The authentication options of the d.velop platform are available for authenticating the user. The authentication requirements are defined in the d.velop cloud platform service description.

4.6 Import/Export

All processes, forms and scripts can be exported and imported into other environments of the d.velop process studio instance. Environment variables in scripts can be used to enter environment-specific information.

5 Deployment

The d.velop process studio is available in all deployment forms (cloud, hybrid, on premises). The Microsoft Power Platform connector is the exception; its range of functions is only available for cloud or hybrid systems.

6 Technical requirements

For on premises operation, the following system requirements apply: https://portal.d-velop.de/documentation/rmdd/latest/en/systemvoraussetzungen

7 Limits

7.1 Data type limits

Title	Limit	Remark
String-type process variable	500 characters	/
Object-type process variable	50 kB	/
Number-type process variable	32 bit	/
URL-type process variable	2000 characters	/

7.2 Storage limits

Title	Limit	Remark
Tasks per mailbox	10.000	/
Conditions per context rule	10	/
Number of context rules	100	/
Number of delegation rules	50	/
Quantity of metadata on a task	100	/
Number of recipients of a task	50	/
Storage duration for completed tasks	365 days	/
Number of forms per user	200	The list becomes unwieldy and disorganized when more than 200 forms are displayed
Maximum form size	32 MB	
Number of scripts per user	200	The list becomes unwieldy and disorganized when more than 200 scripts are displayed

Maximum script size	64 MB	Script code & ext. libraries
Number of processes per user	200	The list becomes unwieldy and disorganized when more than 200 processes are displayed
Number of decision tables per user	200	The list becomes unwieldy and disorganized when more than 200 decision tables are displayed
Script log size	1 MB	The remainder is overwritten
Script log storage duration	7d	/

7.3 Query limits

Title	Limit	Remark
New tasks per minute	1.000	/
Number of synchronous scripts executed simultaneously	10	/
Script executions per day	100.000	/
Duration of synchronous script execution	55 s	/
Duration of asynchronous script execution	14 minutes	/
Script execution payload	100 MB	/
Changes to context rules via API	10 per second	/
Maximum number of steps executed per process cycle	10.000	/