

Adding data to activities

<https://documentation.dcr.design/documentation/adding-data-to-activities/>

Table of Contents



- [Datatypes](#)
- [A simple example of data in DCR](#)
- [Using guards in business rules](#)
- [Grouping data events into a DCR Form](#)

Data was introduced in [DCR Forms](#) in 2016. It has been possible to associate data with [activities](#) for a long time, but it has not been possible to specify data types or simulate processes that contains data types, e.g. in order to make decisions.

Datatypes

It is possible to associate a datatype with an activity. In the options panel under Advanced select Data Type:

⚙️

Options

X

⏏️

Advanced ^

Id

Withdraw_the_expense report
🔗

Computations

📊

Costs

0

Data Type

Select Data Type

▼

✎

Grouping Type

Default

▼

✎

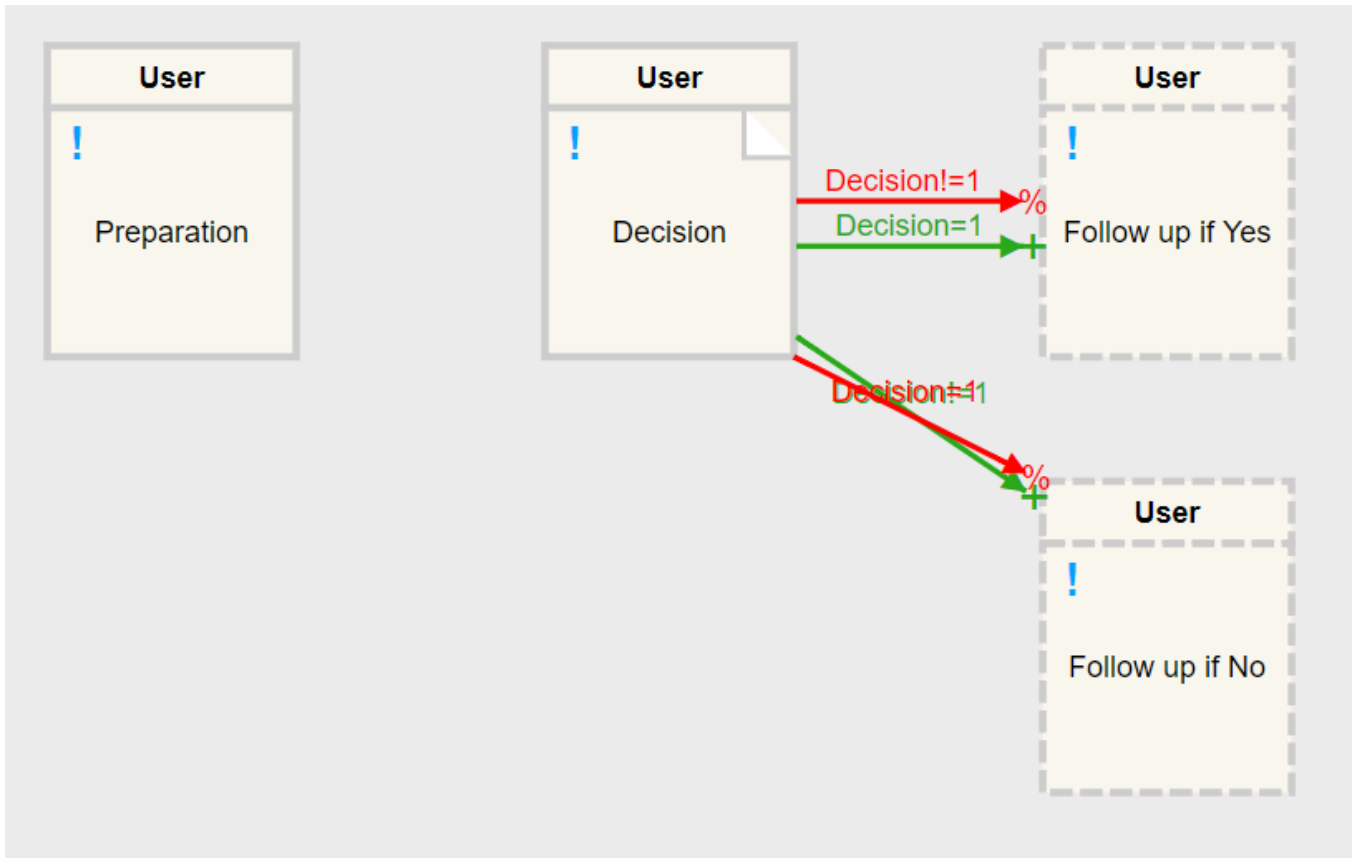
Valid datatypes are:

- | Name | Code |
|---------------|-------------|
| Button | |
| Checkbox | |
| Choice | |
| Date | |
| Datetime | |
| Duration | |
| Email address | |
| File | |
| Float | |
| HTML | |
| Image file | |
| Integer | |
| Label | |
| Money | |
| Password | |

- Text
- Textbox
- Weblink

A simple example of data in DCR

Please look at this [process](#) for a simple example of making a decision in a process illustrated below:



DCR Process with data

Notice the event “Decision”. It is a data event illustrated by the box in the upper right corner of the event. The data type is selected in the Option panel under Advanced

The screenshot shows the 'Advanced' option panel in a software interface. It contains three sections: 'Id' with a text input field containing 'Decision'; 'Computations' with an empty text input field; and 'Data Type' with a dropdown menu showing 'Choice'. There are also small navigation icons (up arrow and edit icon) next to the 'Choice' dropdown.

Setting the data type

The Decision event has two values, 1 as “Yes” and 0 as “No” as illustrated below. Note that the datatype of choice is integers, unless you select it to be a string using the "Data Type" field below the choice field. If you use strings as the datatype remember to quote string values in guards.

Choice Options ×

General Validations

The Key Value Pair For The Choice Can Be Entered As An Example Below:

Yes #1

No #0

Multiselect Data Type int ▼

Dataset Presets Select ▼

Display Size Small ▼

Placeholder Enter Placeholder text for the field

Hint Text Enter Hint text for the field to guide user

DONE

Setting the data type

When simulating an event with a data type cannot be executed directly as the user has to enter a value. Instead, the simulator will present the user for the value to be filled out using a DCR Form.

Tasks (2/2) Reset Filters + Filters

Filters:
 Group by roles Render

▼ User

! Decision	Open
! Preparation	Execute

Data event in task list

Clicking "Open" will launch a DCR Form where the decision can be made.

DCR ×

Decision ▼

Afbryd

Yes
No

Send

Data event filled out in DCR Form

The log shows the value of data activities once executed.

Simulation Log ●

Decision
Value: Yes
 by Morten Marquard at 17:28:22

Preparation
 by Morten Marquard at 17:28:13

Once data is filled out and form is submitted pressing Send button the guards on the include/exclude rules will use Decision=1 (Yes) to show the next step.

Tasks (3/3) Reset Filters + Filters

Filters:
 Group by roles Render

▼ User

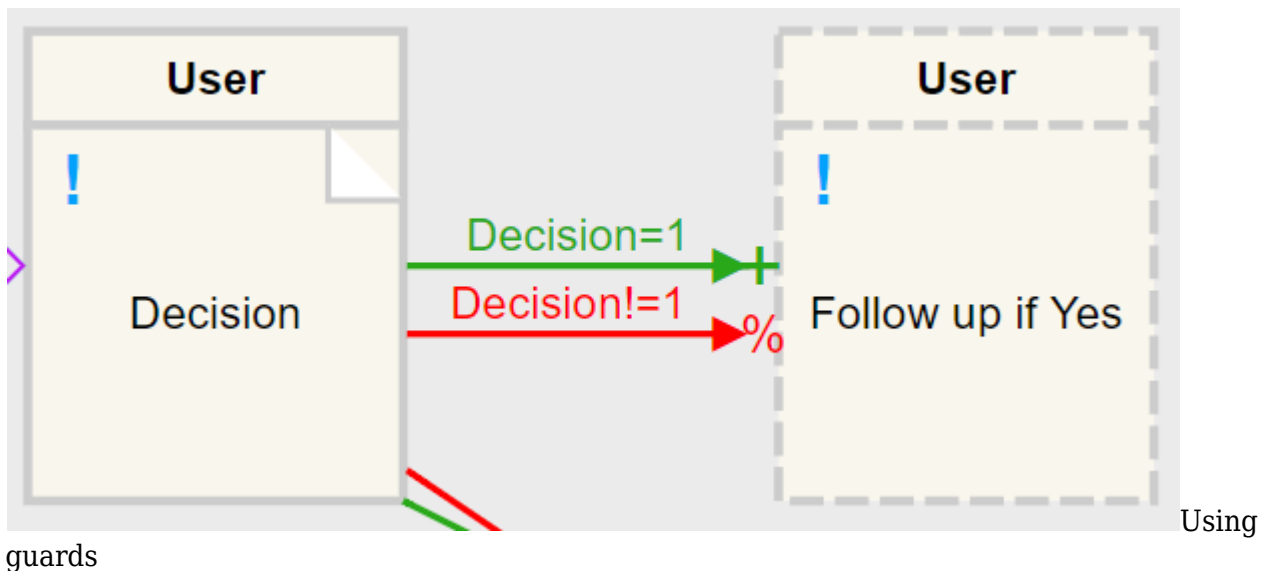
! Follow up if Yes	Execute
! Preparation	Execute
✓ Decision	Open

Tasks list after choosing Yes

Using guards in business rules

Business rules can be *guarded*, i.e. controlled by an *expression*. If the expression evaluates to true the rule is included in the calculation of semantics, whereas if the expression evaluates to false it is the same as the rule does not exist at all.

The include and exclude rules below are both guarded by an expression, i.e. "Decision=1" and "Decision!=1". If Decision=1 include is then only relevant rule as the guard "Decision!=1" evaluates to false and therefore is not relevant for the process.



We're planning to define a new meta-rule called a *logical include* which will act as an include if it evaluates to true and as an exclude if it evaluates to false.

DCR use an expression language which is [defined on git](#).

Grouping data events into a DCR Form

Several data events can be grouped together and the grouping marked as a [DCR Form](#)

Advanced

Id
FormOfEvents

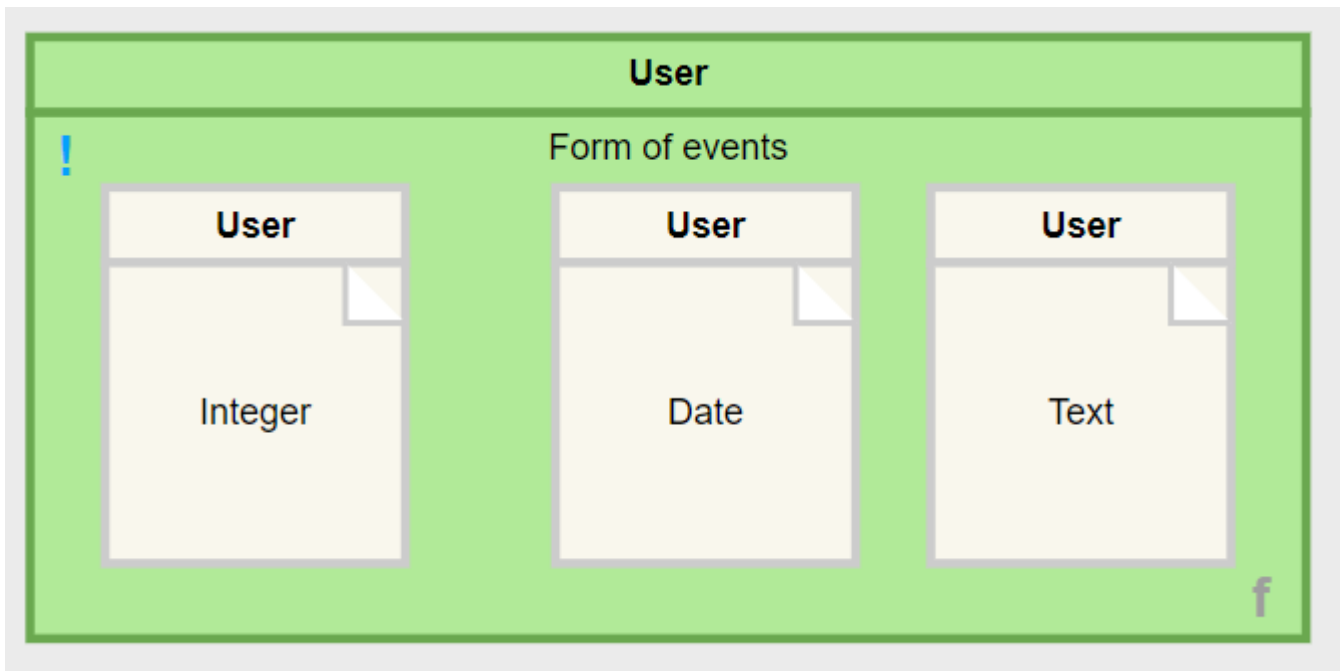
Computations

Data Type
Select Data Type

Type
Form

Setting Type to Form

Once events as grouped into the form object it will display green with the events inside.



Grouping events into a DCR Form

When the user click Open the following form is shown

DCR ×

Date

Integer

Text

Afbryd Send

Events grouped into a DCR Form

Type: User guide

Audience: Modelers

