# XroadMedia
# Piloto User Guide

# Table of Contents

# 1 History

| Version | Date | Author | Comments/changes |
|---|---|---|---|
| 0.1 | 2019-04-17 | Adolf Proidl | First draft of Moderated List Editor and Placement Editor chapters |
| 1.3 | 2019-06-18 | Andras Kalmar | First released version for Piloto 1.3.0 |

# 2 References

[1] Ncanto API Specification, downloadable for registered users from https://share.xroadmedia.com/d/6fef856fdd/ .

# 3 Scope

This document describes the usage and the features of XroadMedia's Business Manager Piloto.

# 4 Introduction

XroadMedia Piloto is is a business management frontend to the Content Discovery Suite Ncanto. Piloto connects to the public Ncanto API to offer a simplified configuration and management experience.

Piloto comprises various modules intended for the editorial, operational, and technical expert teams of Ncanto customers. Access to the modules can be restricted on a per user basis.

Piloto is automatically deployed with each instance of Ncanto, but users and access credentials are only configured by XroadMedia personnel on request.

Note that in this document we do not explain the concepts and the usage of Ncanto. We assume that the users of Piloto are familiar with Ncanto and refer to the Ncanto API specification [1].

# 5 Usage

Piloto is deployed automatically with each instance of Ncanto. The default URL to launch Piloto is:
**Error! Hyperlink reference not valid.**
Please log in using the credentials provided to you by XroadMedia.

## 5.1 Home Screen

The Piloto home screen shown in Figure 1 displays icons of the modules the user has permission to operate. In addition, information about the Piloto version is available via the login/logout menu in the top right corner of the screen (cf. Figure 2).

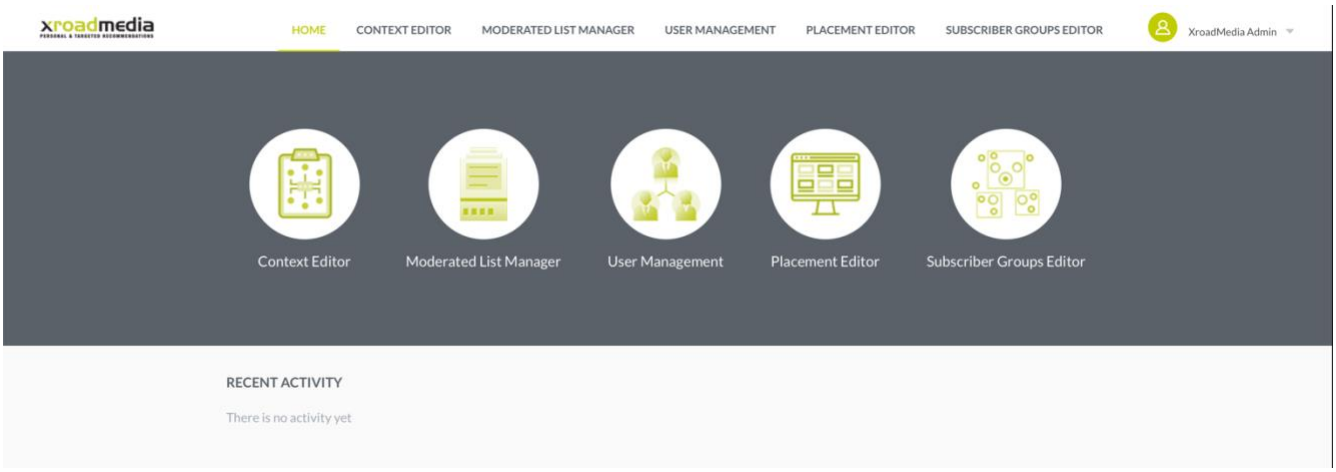



Figure 1: Home screen of Piloto

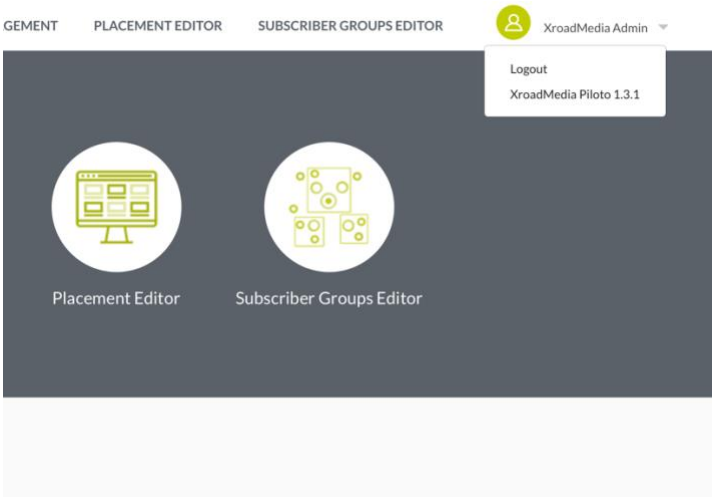



Figure 2: Piloto version number

## 5.2 User and Permission Management

The user management module of Piloto allows to create, manage, and to delete Piloto users. Note that permissions are only enforced in the Piloto user interface. Access control at the Ncanto API is completely independent and has to be configured separately.

Figure 3 shows the interface to create a new user. Besides entering the user's name and credentials, the Piloto components which should be visible to the user are configurable at the bottom of the window. Note that the pre-defined user roles have default permissions attached to them, but those can be overruled individually.

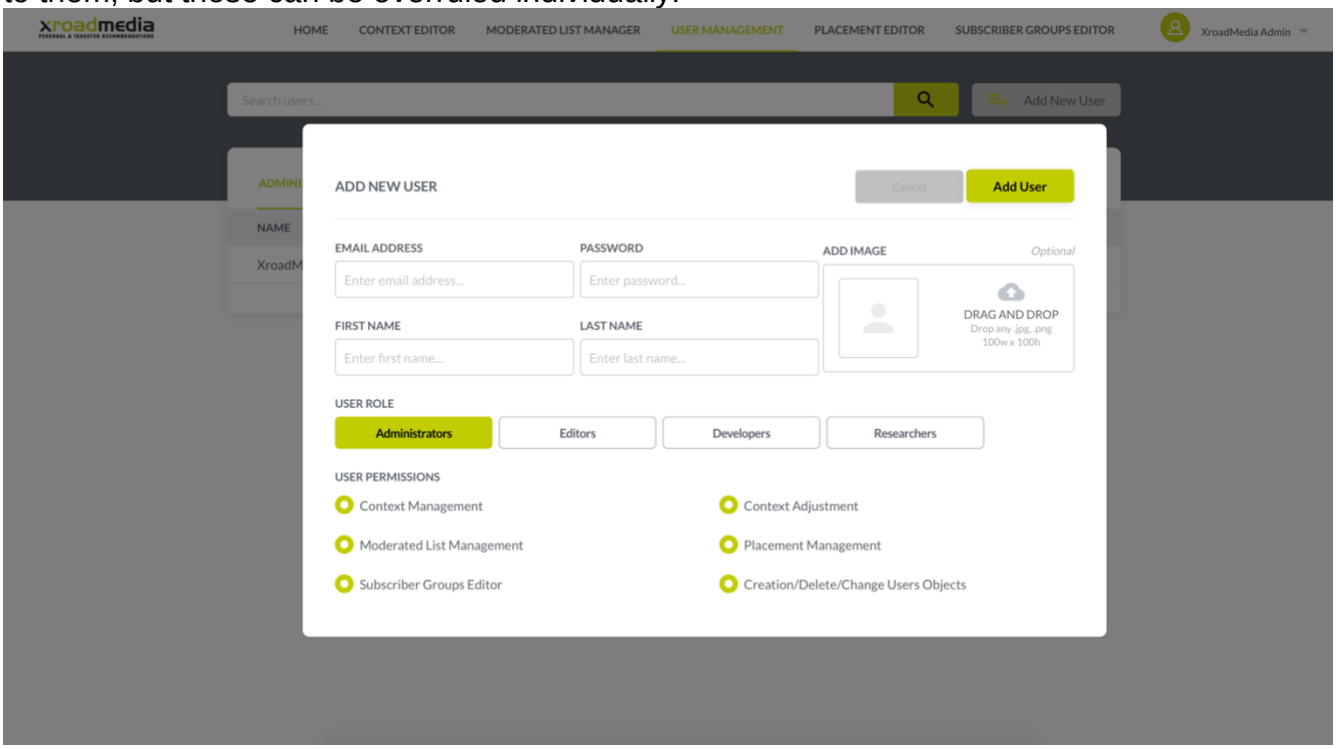



**Figure 3: Creating a new Piloto user**

In order to edit an existing user, select the "edit" option from the "actions" menu.

## 5.3 Moderated List Manager

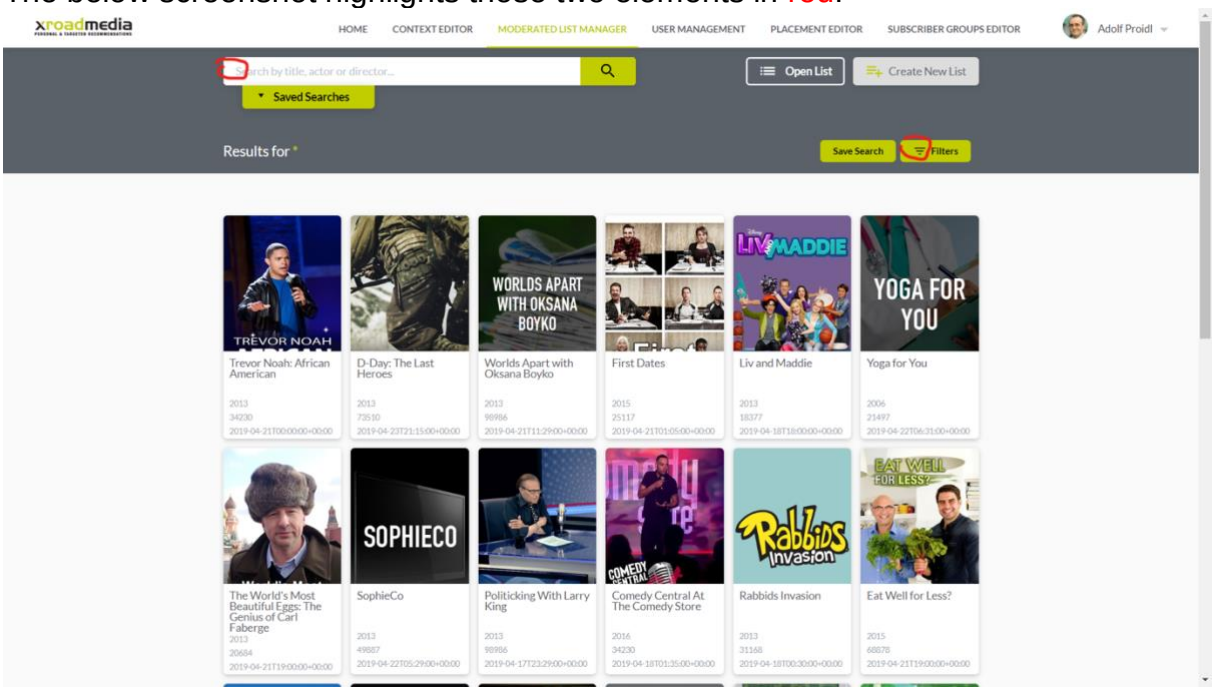
The moderated list manager facilitates the composition and creation of editorially composed lists of content assets.

### 5.3.1 Finding & Selecting of Content for Moderated Lists

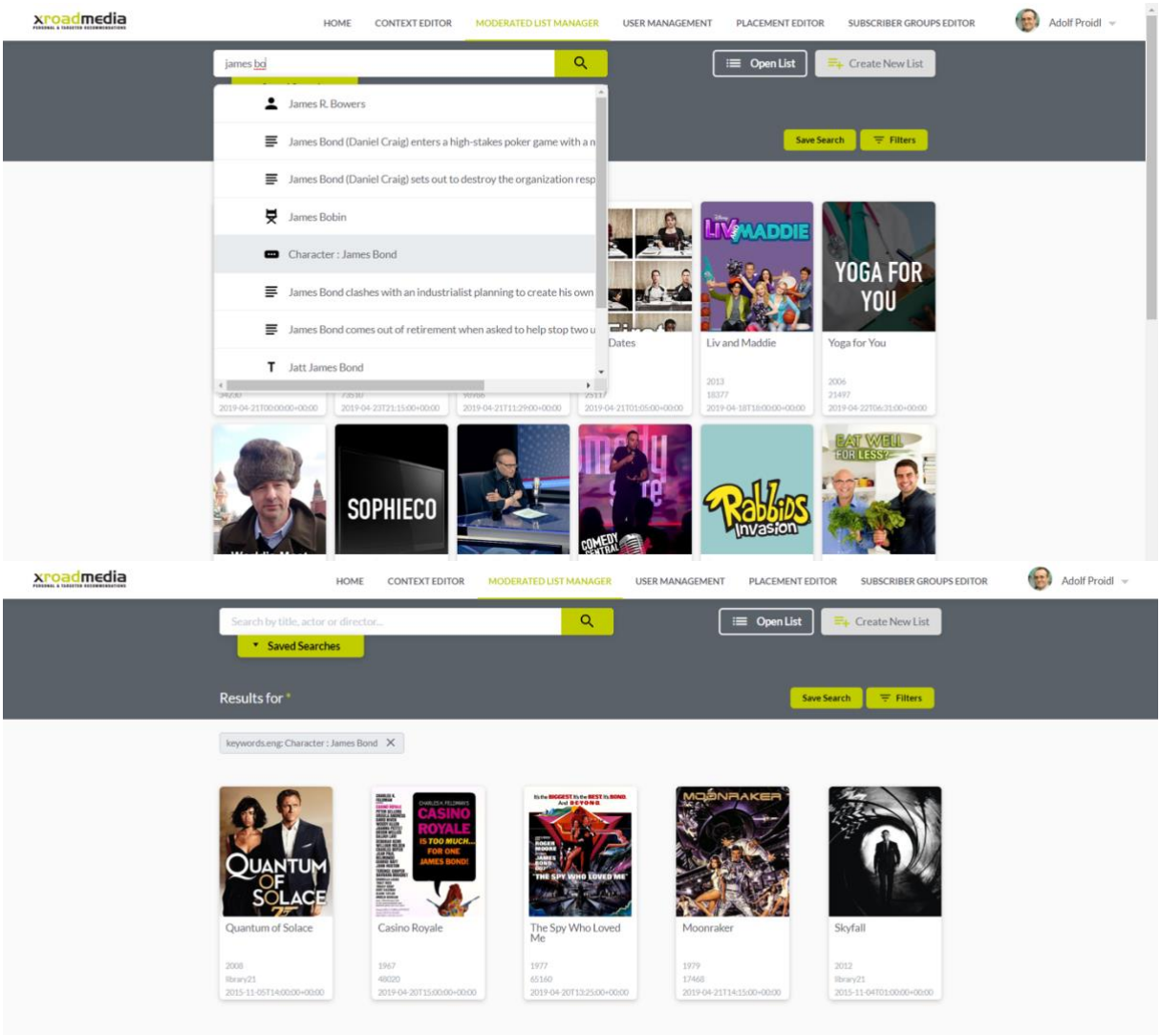
There are two elements that allow you to constrain the content that is surfaced from the entire catalog:

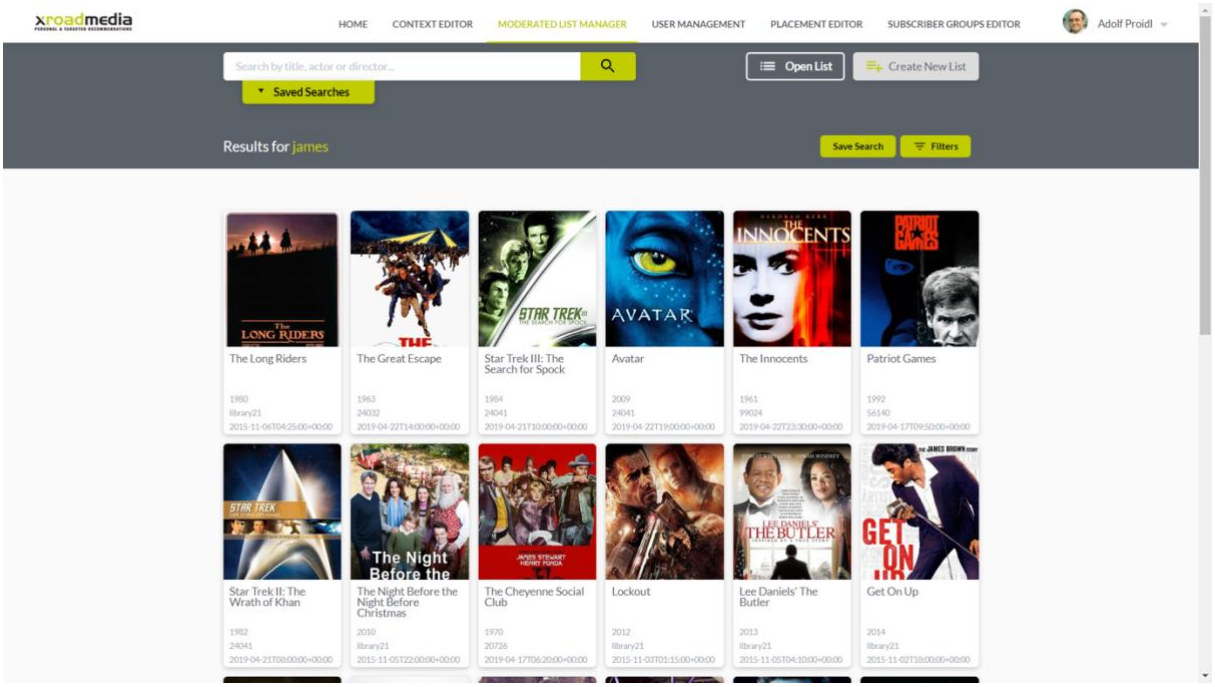
1. the search bar
2. the filter dialog

The below screenshot highlights those two elements in red.

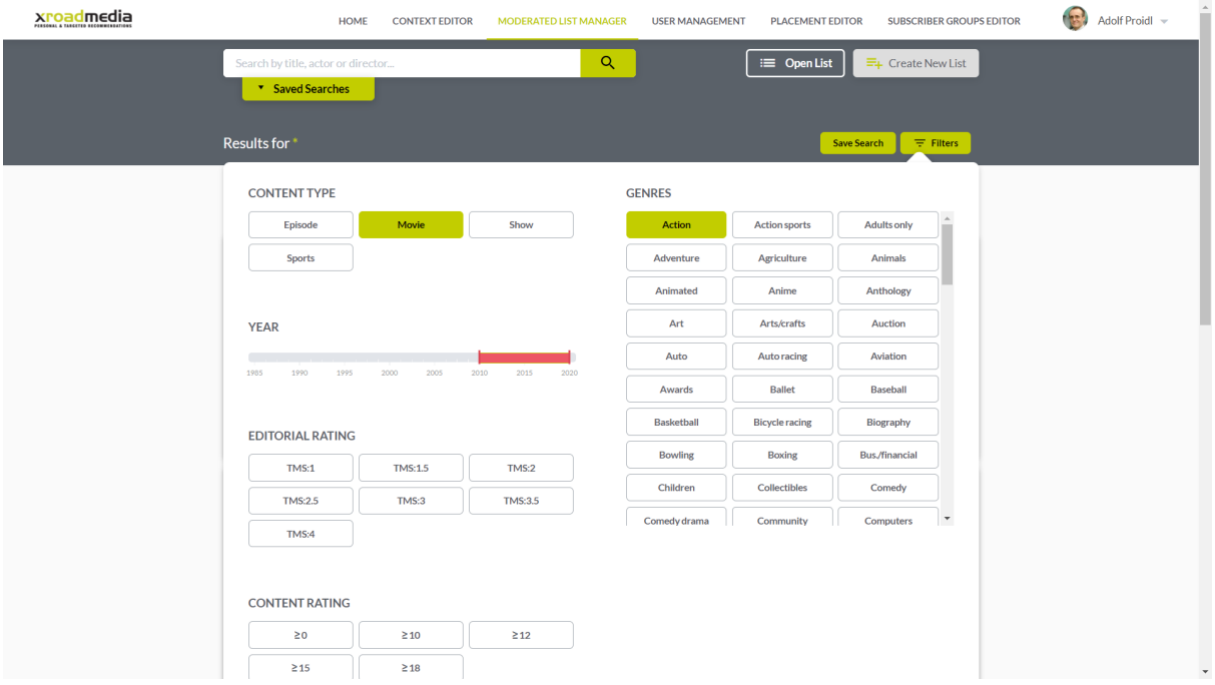



As soon as a text is being entered into the search bar, the intelligent auto complete highlights matching elements from the catalog. Note that the selection of an auto complete element sets a filter on the selected term, which can later be removed, while a free text search creates a new search result-set.
The below pictures show the difference of the two approaches.

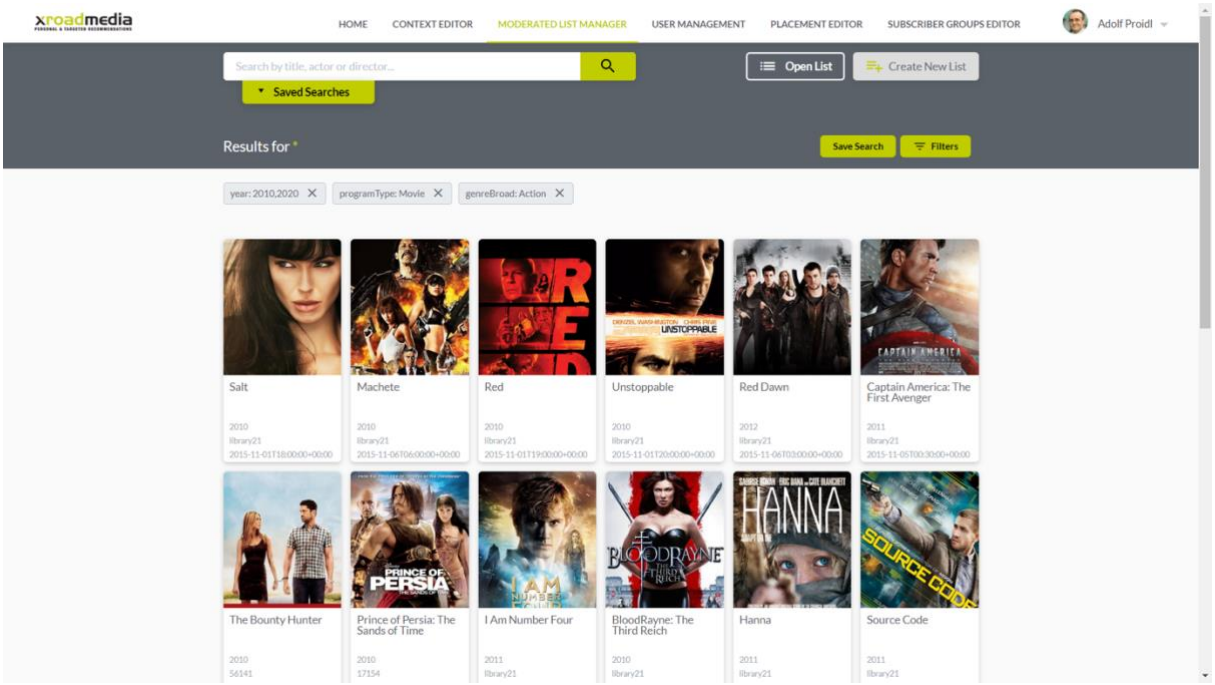

xroadmedia
HOME
CONTEXT EDITOR
MODERATED LIST MANAGER
USER MANAGEMENT
PLACEMENT EDITOR
SUBSCRIBER GROUPS EDITOR
Adolf Proidl
james bo
Open List
Create New List
Save Search
Filters
James R. Bowers
James Bond (Daniel Craig) enters a high-stakes poker game with a n
James Bond (Daniel Craig) sets out to destroy the organization resp
James Bobin
Character : James Bond
James Bond clashes with an industrialist planning to create his own
James Bond comes out of retirement when asked to help stop two u
Jatt James Bond
Dates
Liv and Maddie
Yoga for You
SOPHIECO
Rabbids Invasion
Search by title, actor or director...
Saved Searches
Results for *
keywords.eng: Character : James Bond
Quantum of Solace
Casino Royale
The Spy Who Loved Me
Moonraker
Skyfall




If you constrain the displayed content assets by means of a search then the facets of selectable values inside of the filter dialog are reduced to those contained in the result-set.



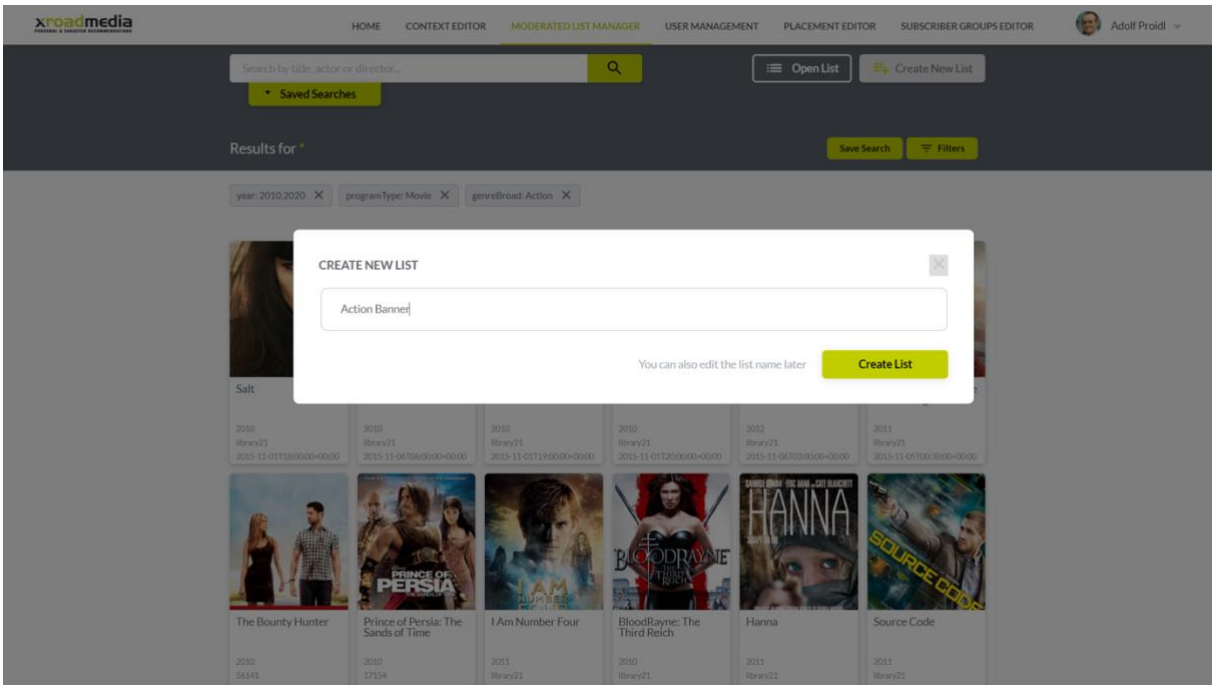

The above figure depicts the selection of desired content characteristics by means of the filter dialog. Please note that piloto allows to freely configure, for which parameters a selectable list of facet values shall be shown.



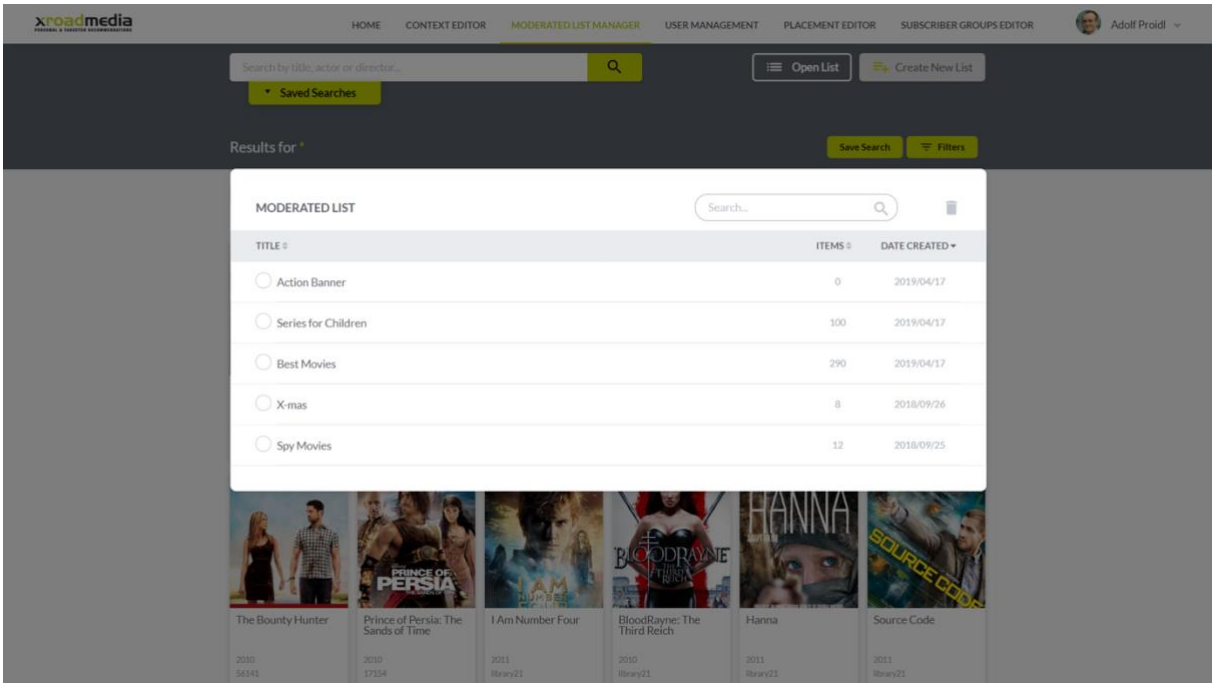

The filter values selected in the dialog are visually persisted on top of the search results and can be directly removed from this view by a click on the “x” icon. Of course, they can also be un-selected inside of the filter dialog. Please note that the combination of search term and filter setting can be saved at any time for later use, it can then be loaded from the corresponding dialog.

### 5.3.2 Creating & Populating a Moderated List

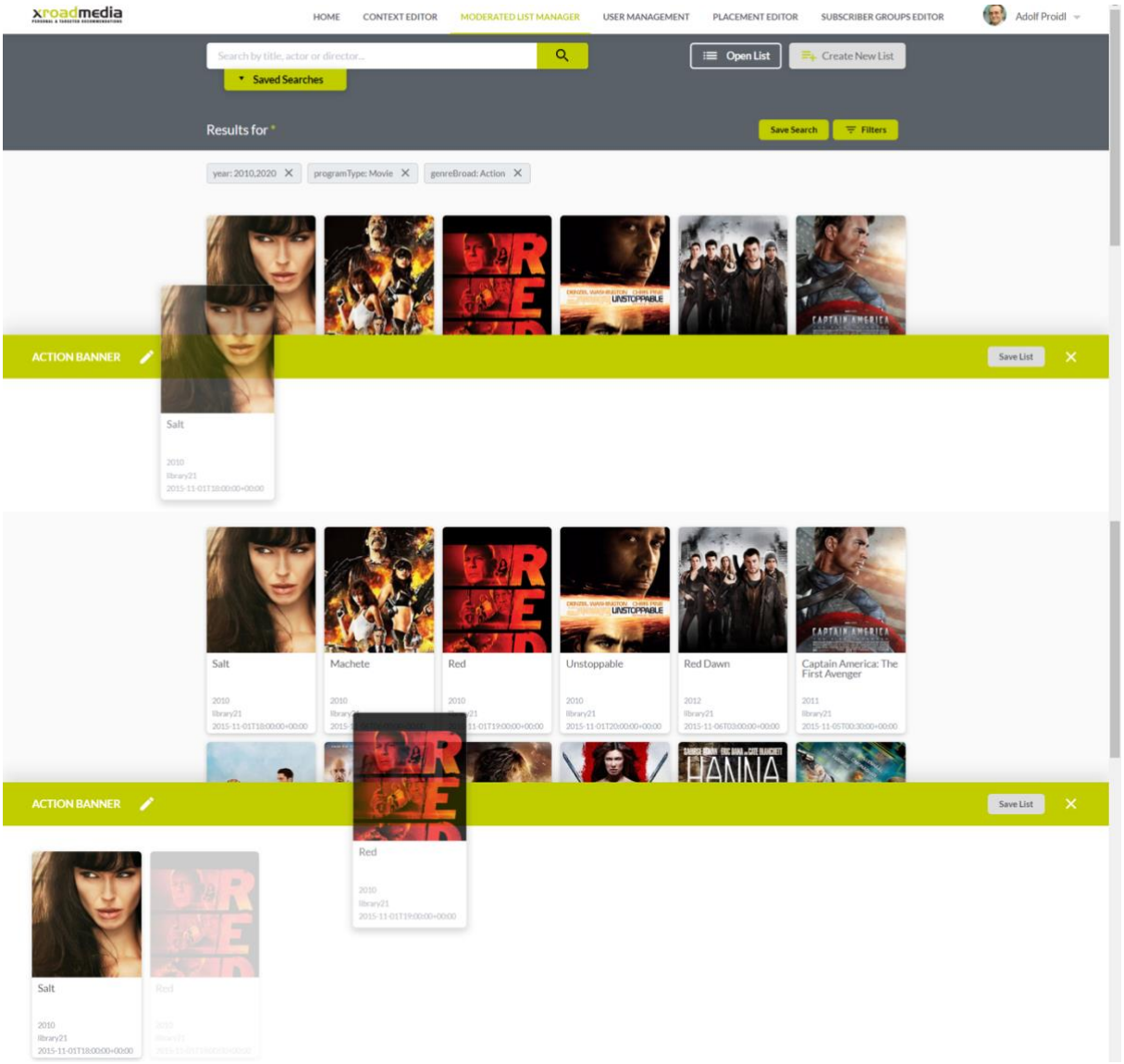
Each moderated list is identified by its unique name, which is initially set in the list creation dialog, but which can be changed later at any time.

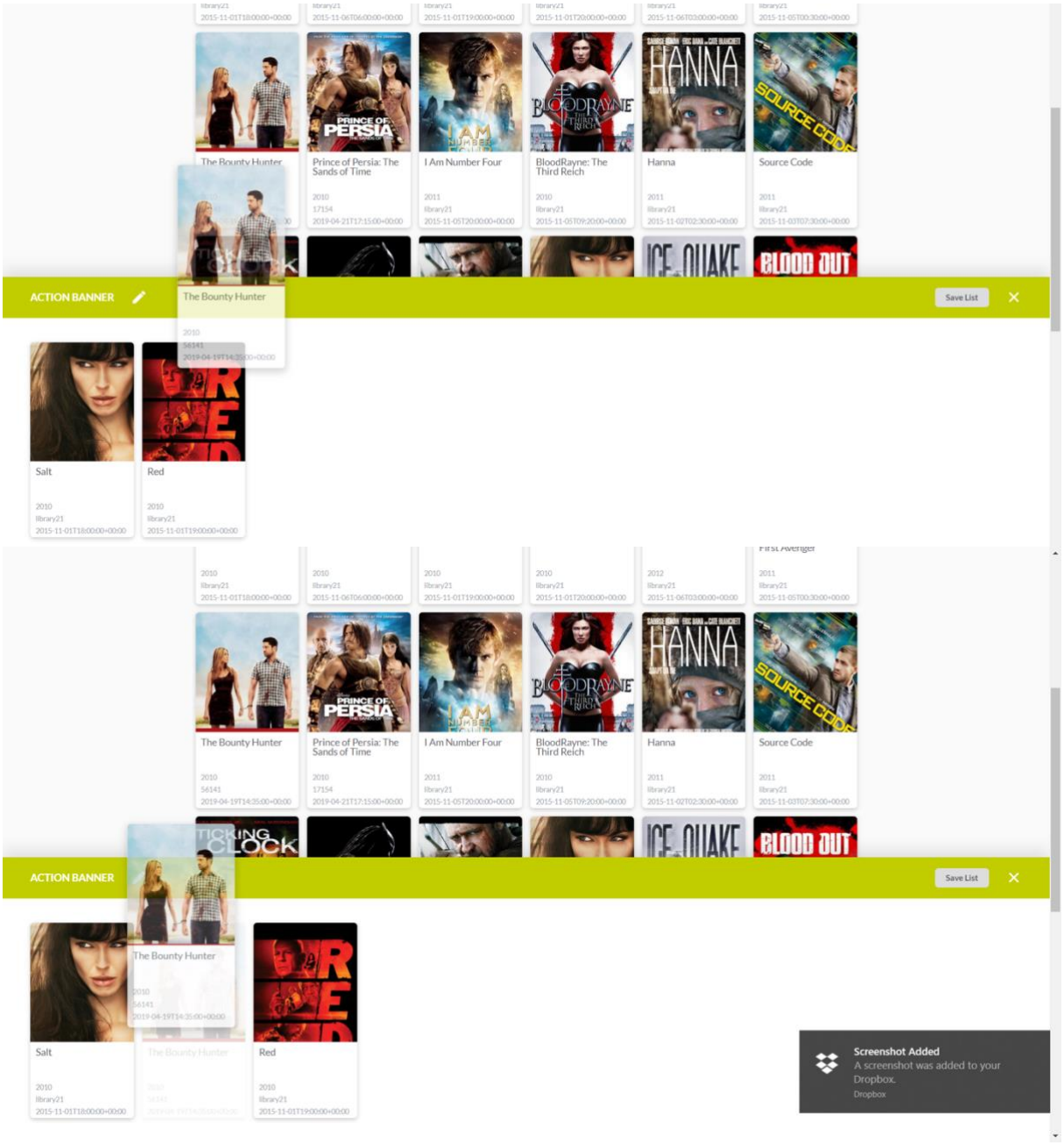



To modify a moderated list, you need first to open its editing swim lane.

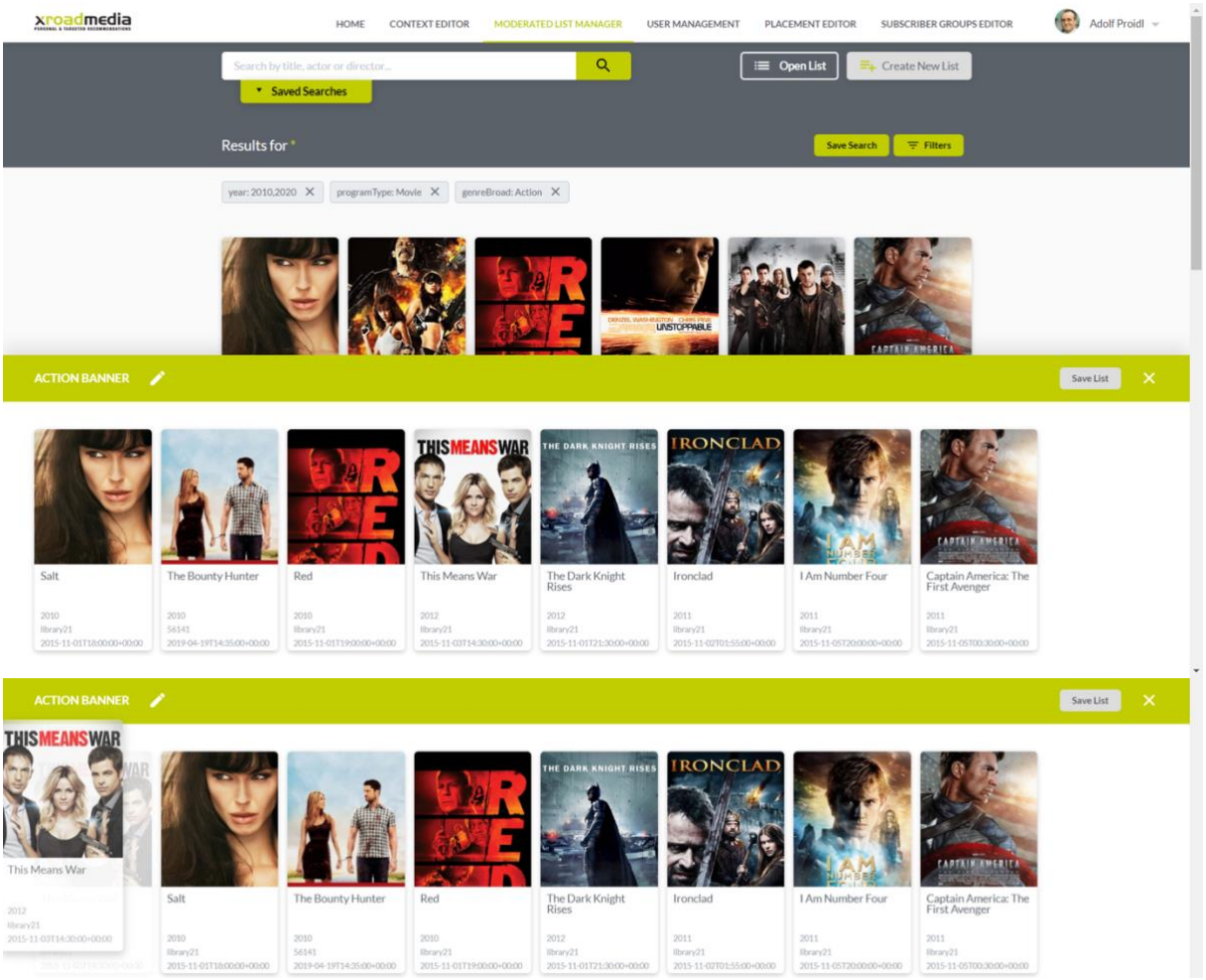



In the top of the swim lane you can edit its name, while the content of the list itself is editable by drag and drop as shown by the following sequence of screenshots.


xroadmedia
HOME
CONTEXT EDITOR
MODERATED LIST MANAGER
USER MANAGEMENT
PLACEMENT EDITOR
SUBSCRIBER GROUPS EDITOR
Adolf Proidl
Search by title, actor or director...
Saved Searches
Open List
Create New List
Results for *
Save Search
Filters
year: 2010,2020
programType: Movie
genreBroad: Action
ACTION BANNER
Save List
Salt
Machete
Red
Unstoppable
Red Dawn
Captain America: The First Avenger
ACTION BANNER
Save List
Red
Salt




The items can be freely positioned inside of the list, as much as their sequence can be adjusted anytime.


xroadmedia
HOME
CONTEXT EDITOR
MODERATED LIST MANAGER
USER MANAGEMENT
PLACEMENT EDITOR
SUBSCRIBER GROUPS EDITOR
Adolf Proidl
Search by title, actor or director...
Saved Searches
Open List
Create New List
Results for *
Save Search
Filters
year: 2010,2020
programType: Movie
genreBroad: Action
ACTION BANNER
Save List
Salt
The Bounty Hunter
Red
This Means War
The Dark Knight Rises
Ironclad
I Am Number Four
Captain America: The First Avenger
ACTION BANNER
Save List
This Means War
Salt
The Bounty Hunter
Red
The Dark Knight Rises
Ironclad
I Am Number Four
Captain America: The First Avenger

## 5.4 Context Editor

The purpose of the context editor is to provide an editable graphical representation of the context object of Ncanto. The elements and parameters of the context JSON are shown as an interconnected tree of context components, see Figure 4.

Figure 5 depicts the generic controls of the Context Editor. Menu (1) comprises the following buttons:

- Open a context existing in Ncanto
- Save the context in the active tab to Ncanto
- Save the context in the active tab to Ncanto under a different contextId
- Open the context in the active tab in the JSON editor

Menu (2) includes buttons to tune the layout of the context:

- Show / hide description of the context components and parameters
- Align top
- Align centered
- Show / hide unused context parameters

The size of the context components can be adjusted with the help of the zoom level adjuster (3).

The context editor allows to manipulate multiple contexts at the same time. Open contexts are shown as separate tabs (4). The + button opens a new empty tab, the x button closes the tab. A warning / request for confirmation is shown if there are unsaved changes in the context. All supported context components are shown in the area (5). The viewport (6) provides quick navigation within a large context which does not fit into the drawing area completely.

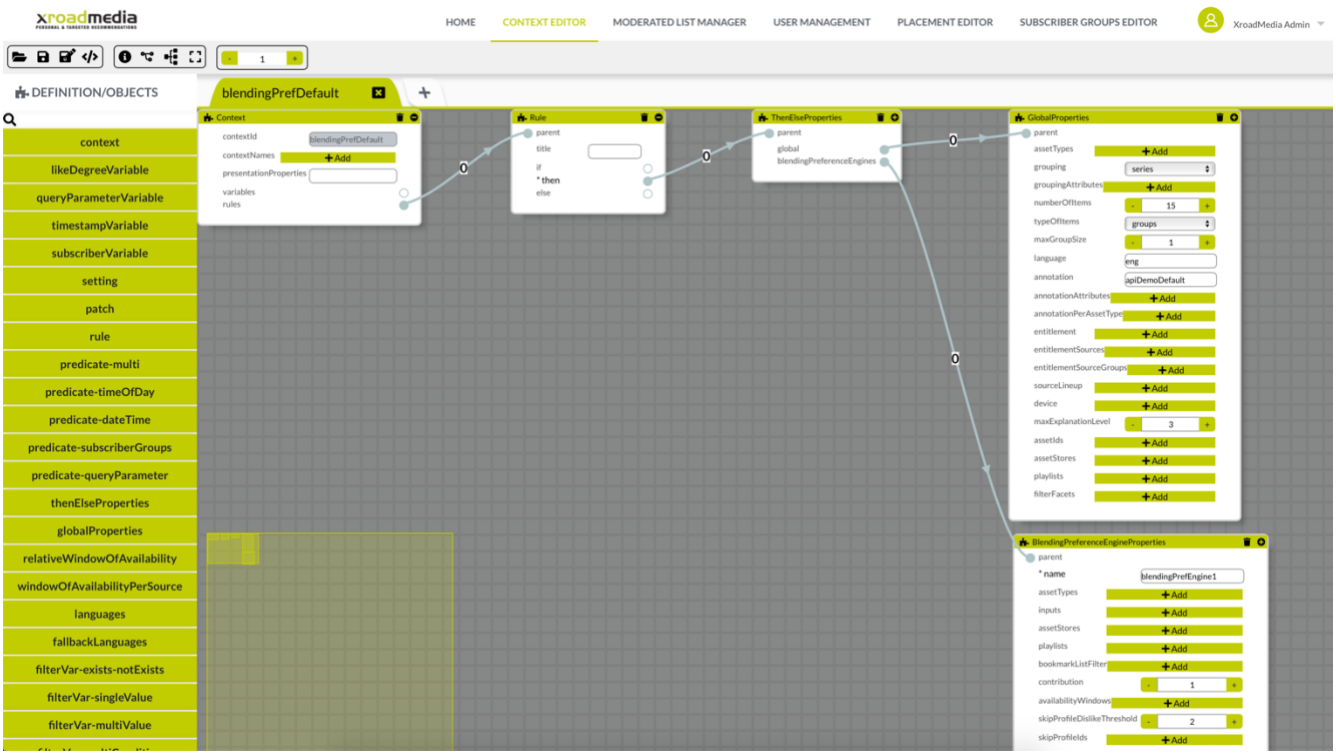



Figure 4: Context Editor example

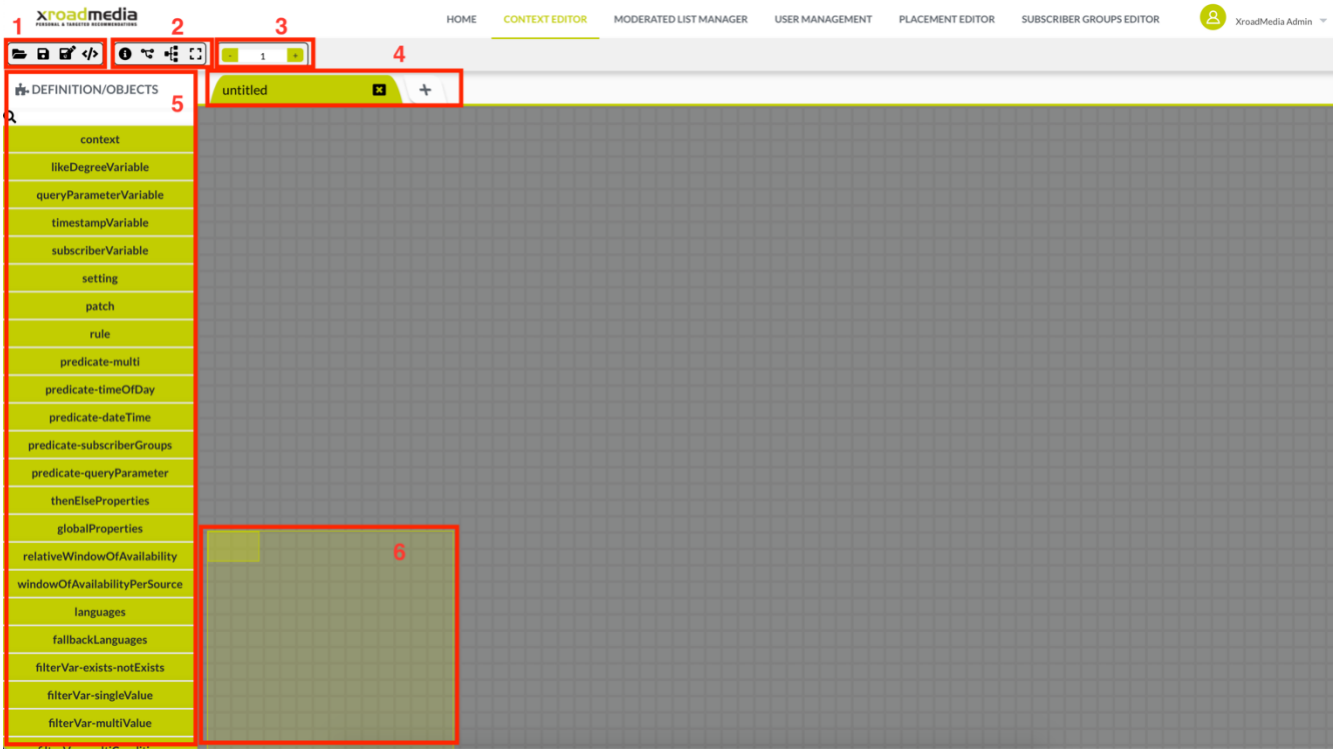



Figure 5: Context Editor, main view

### 5.4.1 Creating a new context

To create a new context select a new tab (or create one with the help of the + button) and click on the context component in the list. Note that the ID of the context cannot be edited directly, it is set when the context is saved for the first time.

To add a component to the context, click on it in the left hand side list of available components. Please note that the new component is placed in the top left corner of the drawing area and has to be linked to its parent manually by connecting the parent's and the new component's connection points. Connections can be changed by clicking and dragging any of the endpoints.

To connect a new componentto its parent automatically, select the parent by clicking on it before adding the new component. If a parent is selected, the list of available components is reduced to those applicable to the selected parent. For example in Figure 6 context/rules was clicked on, hence only the one component applicable there, rule, is shown in the list.

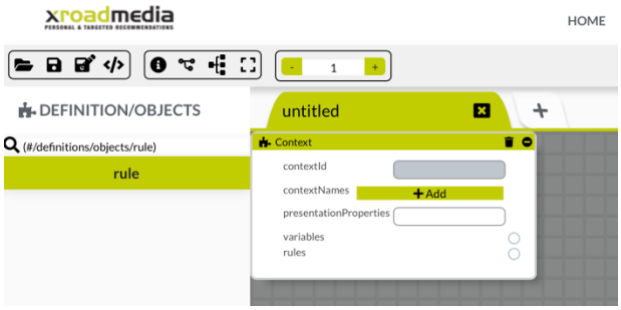



Figure 6: Attributes are filtered to those applicable to the selected parent

In case of lists multiple components can be added by repeatedly selecting it from the component menu. The sequence of the list elements is indicated by index numbers above the connections. Note that the sequence is not changed by rearranging the list elements, that is only possible by removing and readding in a different sequence.

Piloto will automatically arrange the components according to the hierarchical structure of the context. There are three possibilities to influence the arrangement:

- Drag & drop any of the components
- Use the "top align" button (cf. Figure 5, (2))
- Use the "center align" button (cf. Figure 5, (2))

To complete the context, add all the components required and set the parameters to the desired values. As shown in Figure 7, Piloto displays a short description of the parameters when the pointer is moved over the name of the parameter.

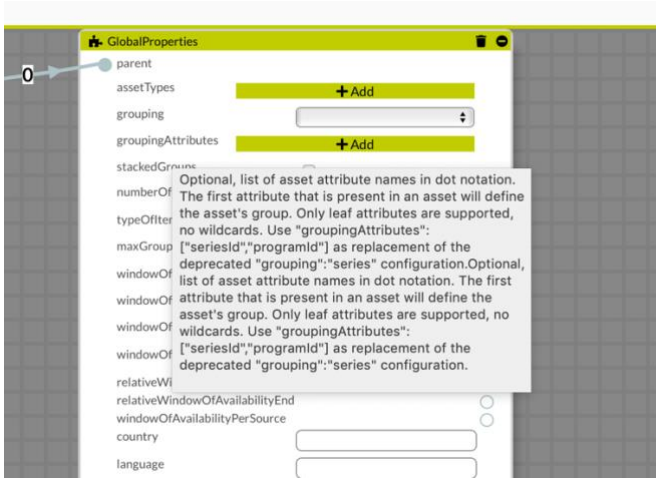



Figure 7: Parameter descriptions triggered by mouseover

Removing of individual components is supported via the delete (trash bin) icon in the top right corner of each attribute. The expand/compress (plus/minus) icon next to it hides / displays the not yet used parameters.

### Single string parameters

String parameters are edited by clicking into the input box and typing/editing the value directly. See Figure 8.

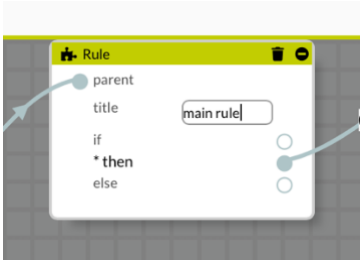



Figure 8: Single string parameter

### List of strings parameters

In case of list of sting parameters each value is entered into a separate input box. An additonal input box is opened by clicking on the "+add" button. See Figure 9. To remove a value, use the – button next to each input box.

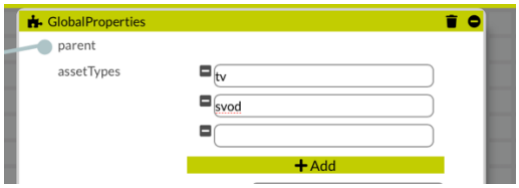



Figure 9: List of strings parameter

### Numerical parameters

Figure 10 depicts the controls to manage interger parameters. Those are either typed in directly into the input box, or adjusted using the +/- buttons.


Figure 10: Integer parameter

In case of decimal parameters the +/- buttons change the value in 0.1 increments, but arbitrary values are supported if entered manually.

### Enum parameters

Figure 11 shows the drop-down list of all available values of an enumeration. Please note the empty "null" value resulting in the enum parameter not being written into the context on saving.


Figure 11: Enum parameters

### Free form JSON parameters

Figure 12 shows the JSON editor which is opened whenever a JSON parameter is edited. The editor checks that the entered object is valid JSON.

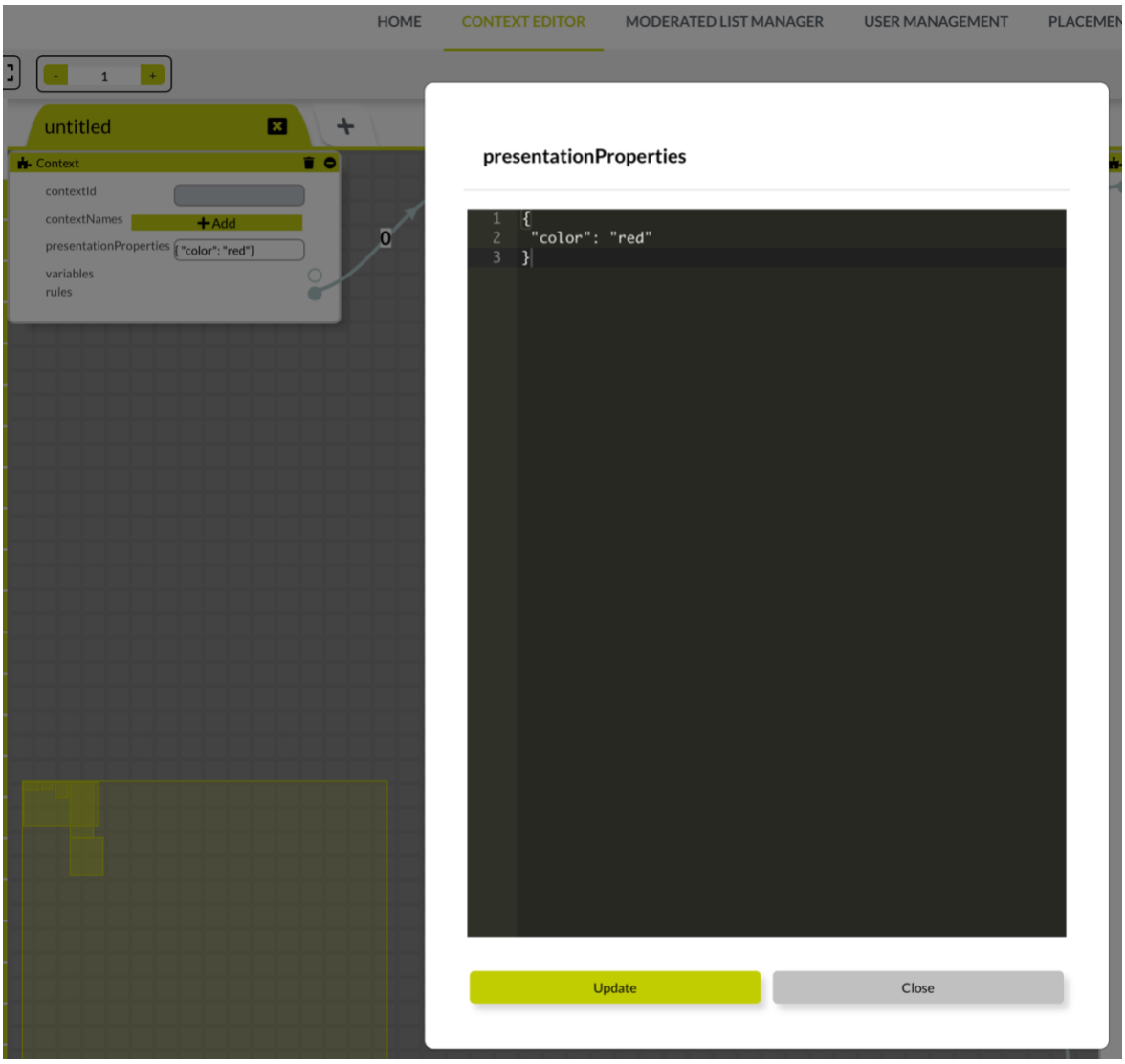



Figure 12: Editor for JSON parameters

## List of key/value pairs parameters

The input box for lists of key/value pairs is similar to that for list of strings. Each key/value pair is added in a separate row, created by the "+add" button. Figure 13 shows an example of a key-value pair list.

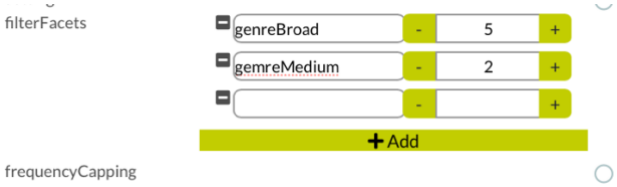



Figure 13: List of key/value pairs parameter

## Timestamp parameters

Combined date+time parameters are adjusted using the date/timepicker launched by clicking on the calendar icon next to the parameter name. See Figure 14. Alternatively, the value can be entered directly into the text box.

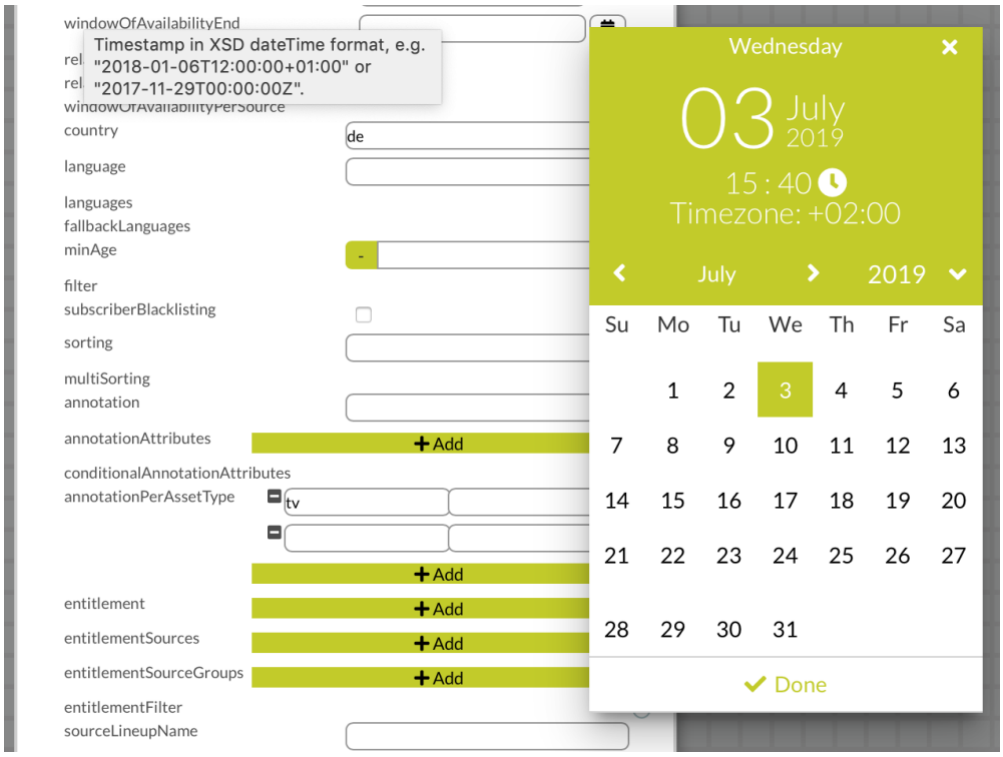



Figure 14: Date and time picker for timestamp parameters

## Duration parameters

Figure 15 depicts the duration picker allowing to adjust the delta years/months/days/hours/minutes and seconds. Negative durations are entered by clicking on the sign after entering the duration.

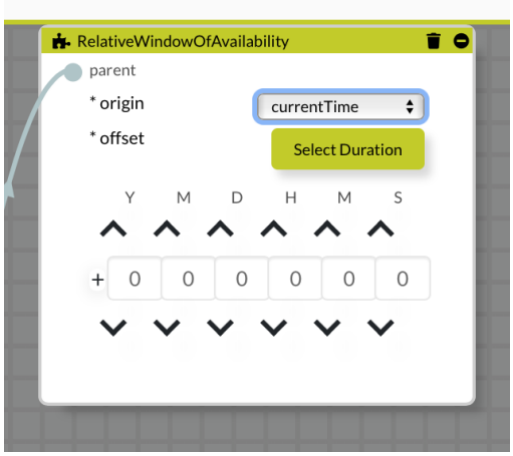



Figure 15: Duration parameter

## Weight functions

Ncanto supports two types of weight functions: continuous weight functions where the trigger value is e.g. the time elapsed since an asset has become available, and discrete weight functions to push e.g. single sources or content types.
As soon as the trigger of the weight function is entered, Piloto understands which type of weight function is required, and opens the corresponding editor.
Figure 16 shows the example of a discrete weight function based on genre broad values. The weights of the selected genres can be adjusted by moving the slider or by adding the weight value directly into the text box.
To delete an individual value, use the delete icon next to the row. Adding new values as well as deleting multiple values in one step are supported if the edit button is clicked.


Figure 16: Discrete weight function editor

In edit mode the complete list of values available in the catalog are shown. Values can be selected / removed individually using the radio buttons. To add a value which is not present in the asset store, scroll down to the end of the list and add the value manually. See Figure 17.

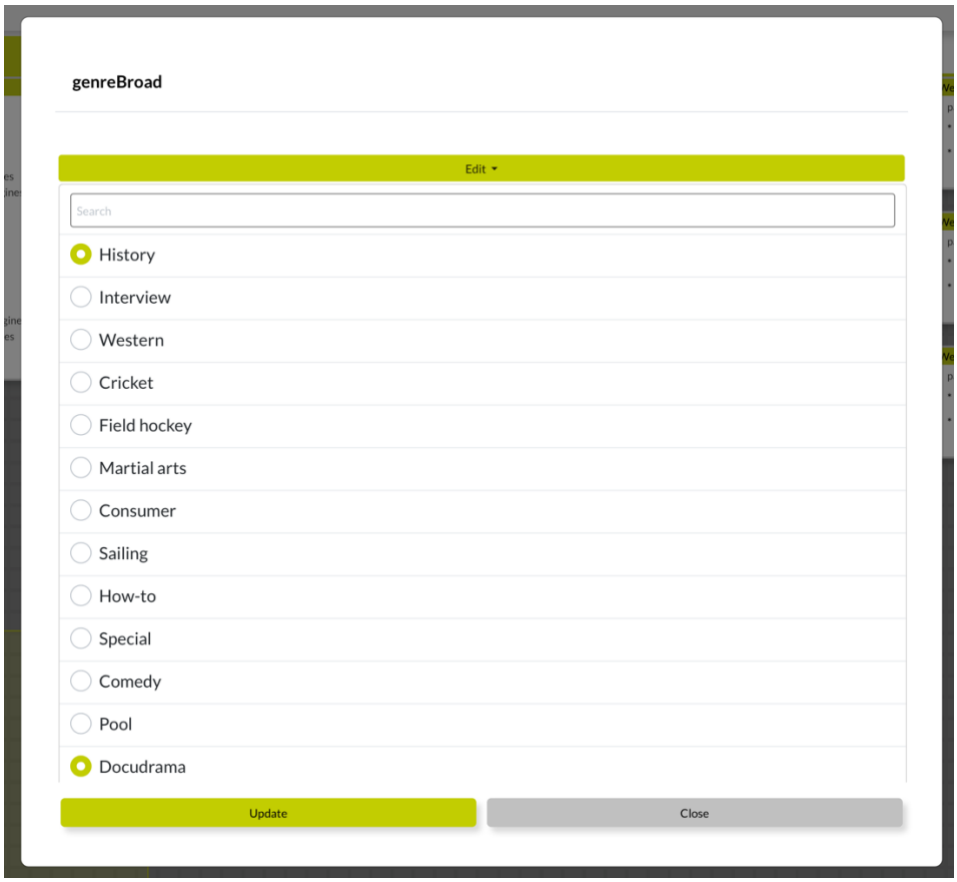



Figure 17: editing of weight function trigger values

To launch the continuous weight function editor, enter one of the matching triggers (e.g. elapsedAvailability), and click on the arrow icon. This will open the continuous weight function editor as shown in Figure 18. To add new nodes of the weight function, click into the chart at the desired position. You can also drag & drop existing nodes to the desired position. Piloto will scale the chart if you move a node outside of the visible range. Note that Piloto automatically connects the nodes of the weight function. Exact coordinated can be entered by clicking on a node while holding the ctrl/cmd key. Note that for better readability the time unit in the weight function editor is one day. Time periods are converted into seconds every time the weight function is updated.


Figure 18: Continuous weight function editor

### 5.4.2 Editing an existing context

To edit an existing context use the load button (see Figure 5, (1)) to open it in a new tab and then the controls described in Section 5.4.1 to modify it. Invalid parameter values are indicared by a red border around the input box, as shown in Figure 19. To see the JSON version of the context use the JSON editor button (see Figure 5, (1)).

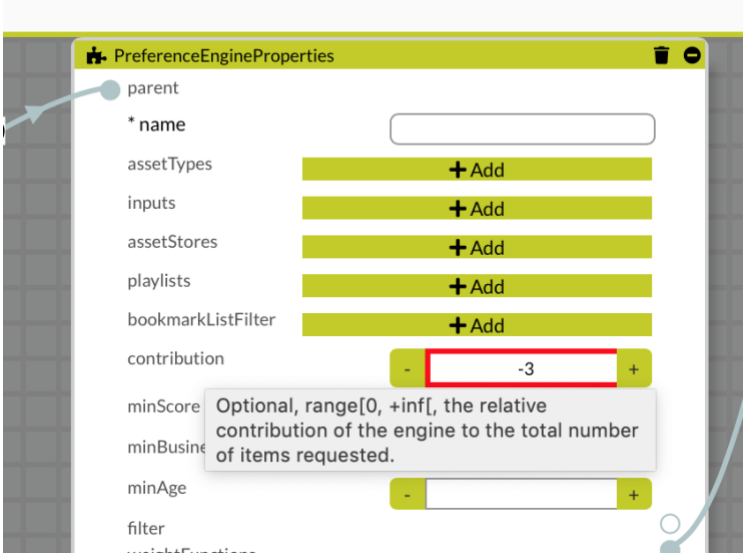


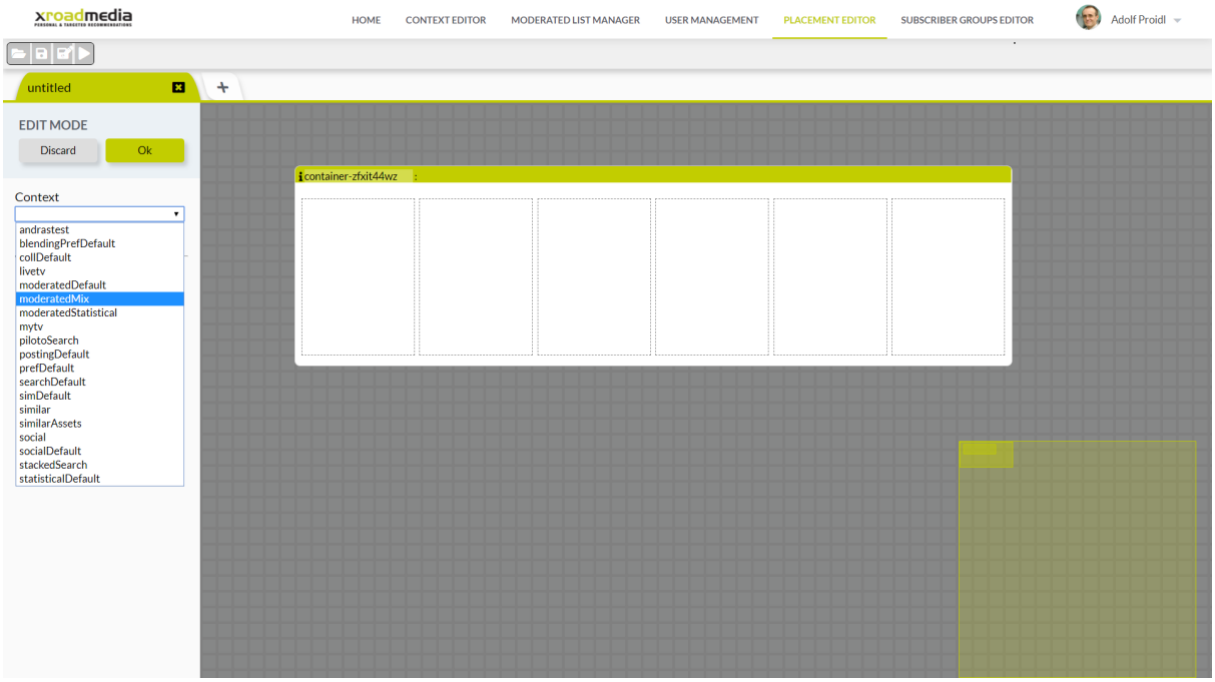

Figure 19: Validation of parameter values

## 5.5 Placement Editor

The placement editor allows to control the position of results from different recommendation engines (including those based purely on moderated lists) inside of one list of recommended content asset.

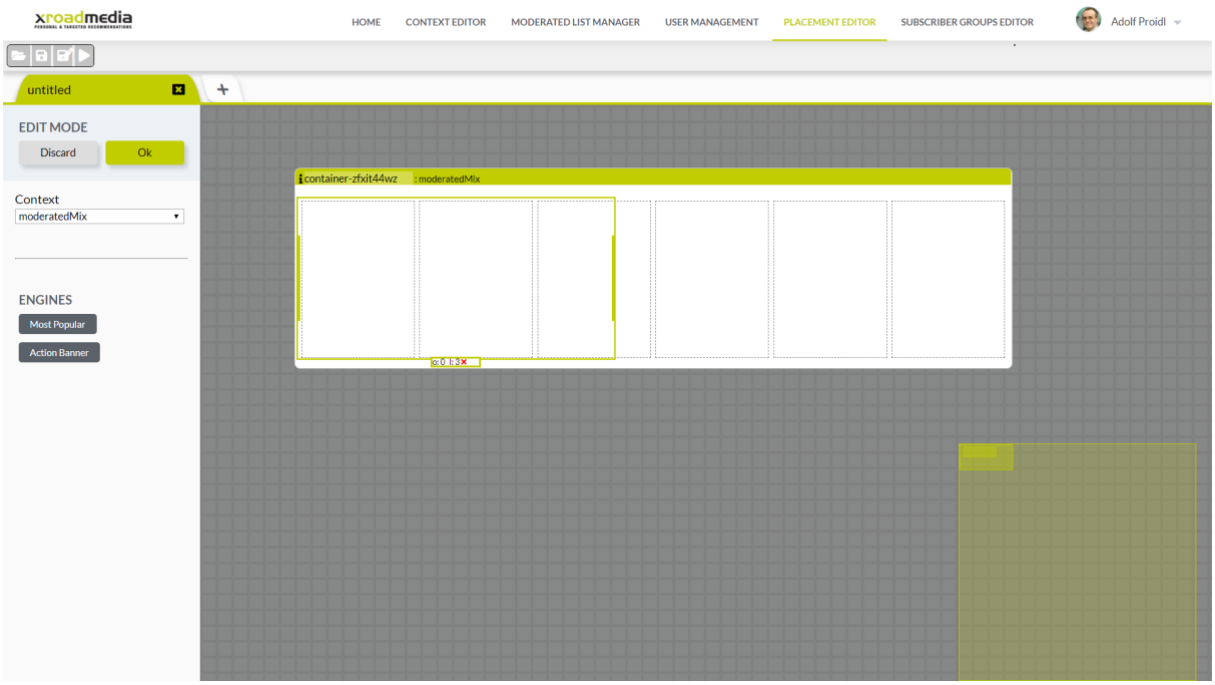
### 5.5.1 Creation of a New Panel

While the containers that constitute a new panel can be freely drawn on the right hand side of the placement editor, the left hand side allows to select the desired context. Once a context is selected the recommendation engines defined in the context are listed.

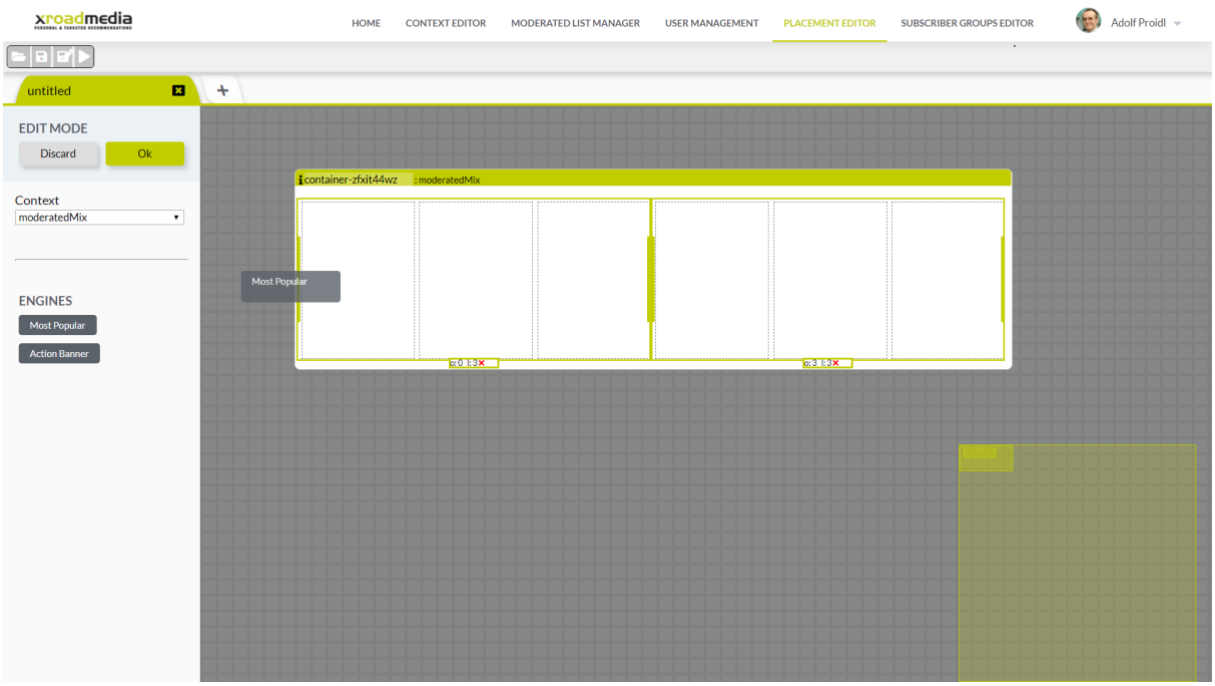


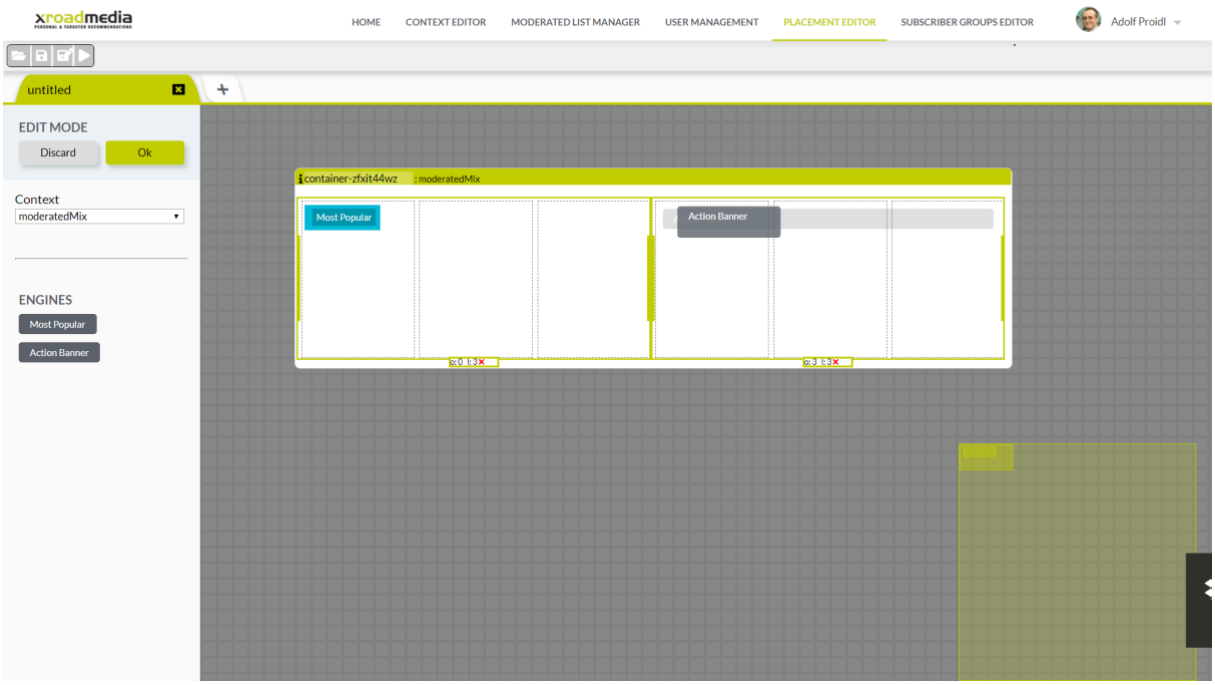

If the container is not split into slots, all positions of it will be populated using the whole context.

Alternatively, the container can be subdivided into multiple slots. To define a slot, select the recommendation positions which should belong to the slot. The slot boundaries can later be adjusted by moving the edges of the slot.

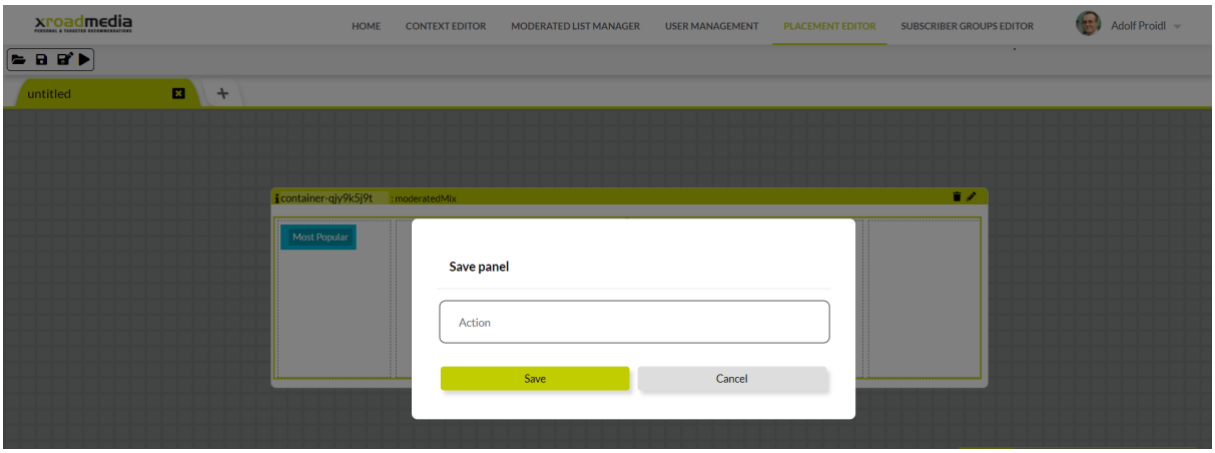



The next step is to assign the recommendation engines to each slot by dragging & dropping of one of the engines available in the selected context into the slot.

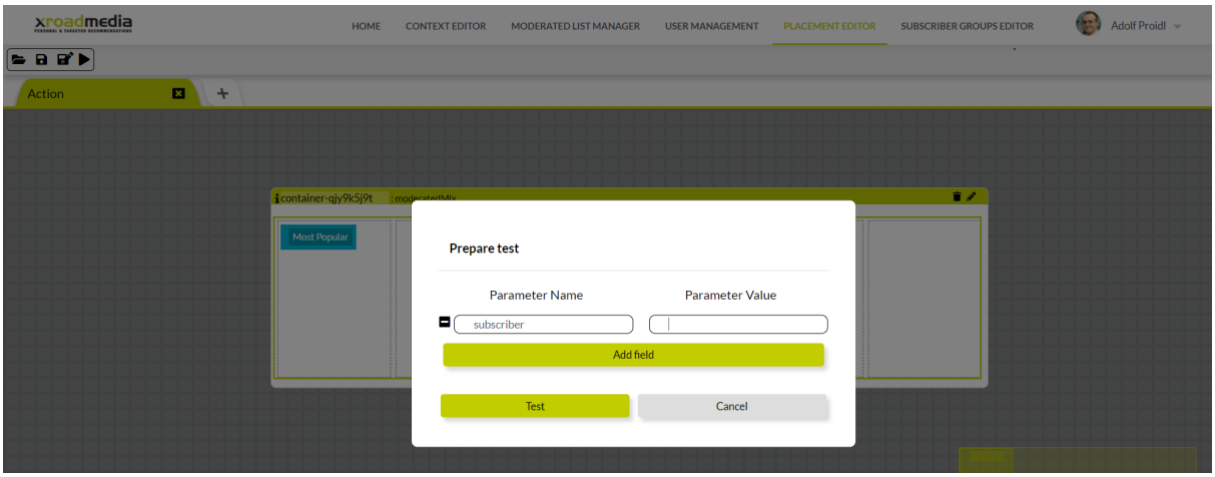




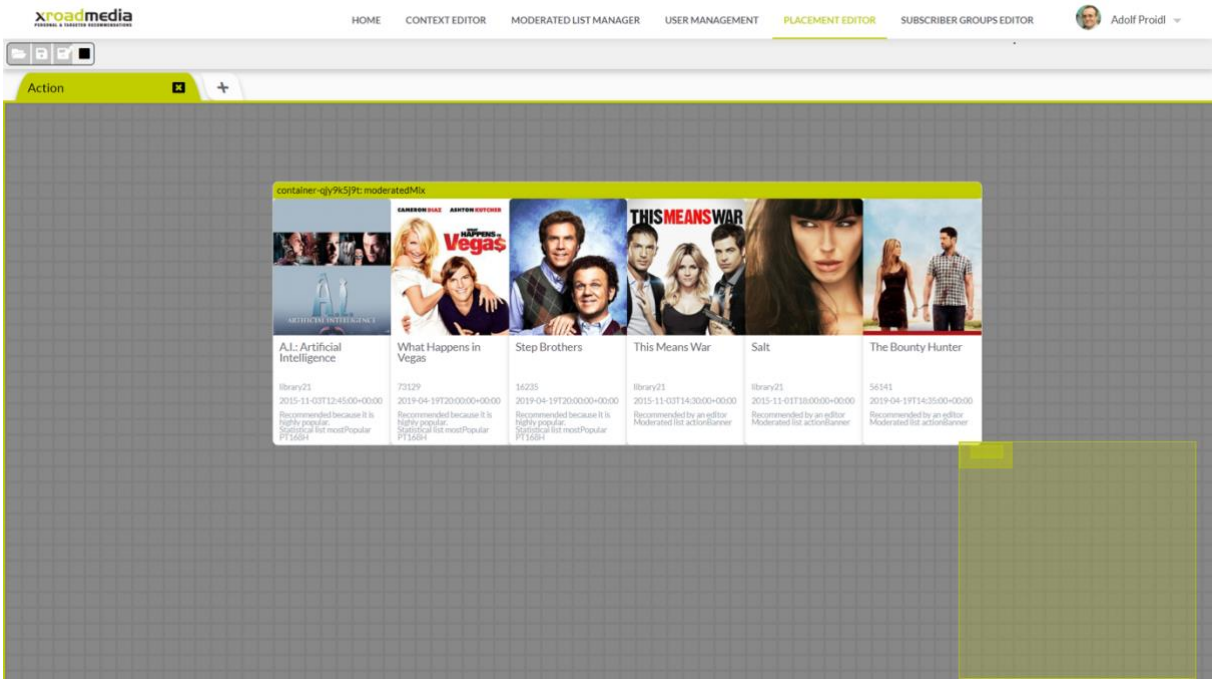

Once the assignment is completed, the panel is saved under a unique name and can subsequently be tested for a particular subscriber of the service.




To test the panel, click on the test button (the arrow/triangle pointing to the right) next to the save/save as buttons. A window asking for the query parameters of the test request pops up. In order to test the panel, all query parameters required by the contexts have to be defined.




Clicking on the test button execute the panel recommendation request to Ncanto and populates the panel with thumbnails and titles of the recommendations returned.




Note that typical panels comprise multiple containers. For the sake of simplicity only a single container was used in the figures of this chapter.

## 5.6 Subscriber Groups Editor

Dynamic subscriber groups are a feature of Ncanto typically used for A/B testing of different configurations. Instead of having to assign subscribers to groups manually, dynamic subscriber groups allow to specify the rules according to which Ncanto will automatically assign the subscribers to the different groups.

There are three different criteria which define a dynamic subscriber group, all three have to be matched:

1. subscriberId is one of the IDs in the list. This feature is typically used to confine the subscriber group to a special subset of the whole subscriber base, e.g. to the most active subscribers.
2. The subscriber matches a generic filter, i.e. a filter which can consider any subscriber property
3. A modulo filter used to split the remaining subscribers into a number of random groups. A modulo filter randomly assigns the selected percentage of the subscribers remaining after ID and generic filtering to the subscriber group.

Figure 20 shows one example of a dynamic subscriber group specification and highlights the main controls. Menu (1) comprises the following buttons:

- Open a group specification existing in Ncanto
- Save the group specification in the active tab to Ncanto
- Save the group specification in the active tab to Ncanto under a different ID
- Open the group specification in the active tab in the JSON editor

Note that several group specifications may be present in one Ncanto instance at the same time, but only one of them can be active. If the "activate on save" switch in the top right corner of the Subscriber Group Editor (3) is active, this group specification will be activated whenever it is saved to Ncanto. A previously active group specificationis deactivated automatically. The ID of the currently active group specification is identified with the help of the "update" button (2).

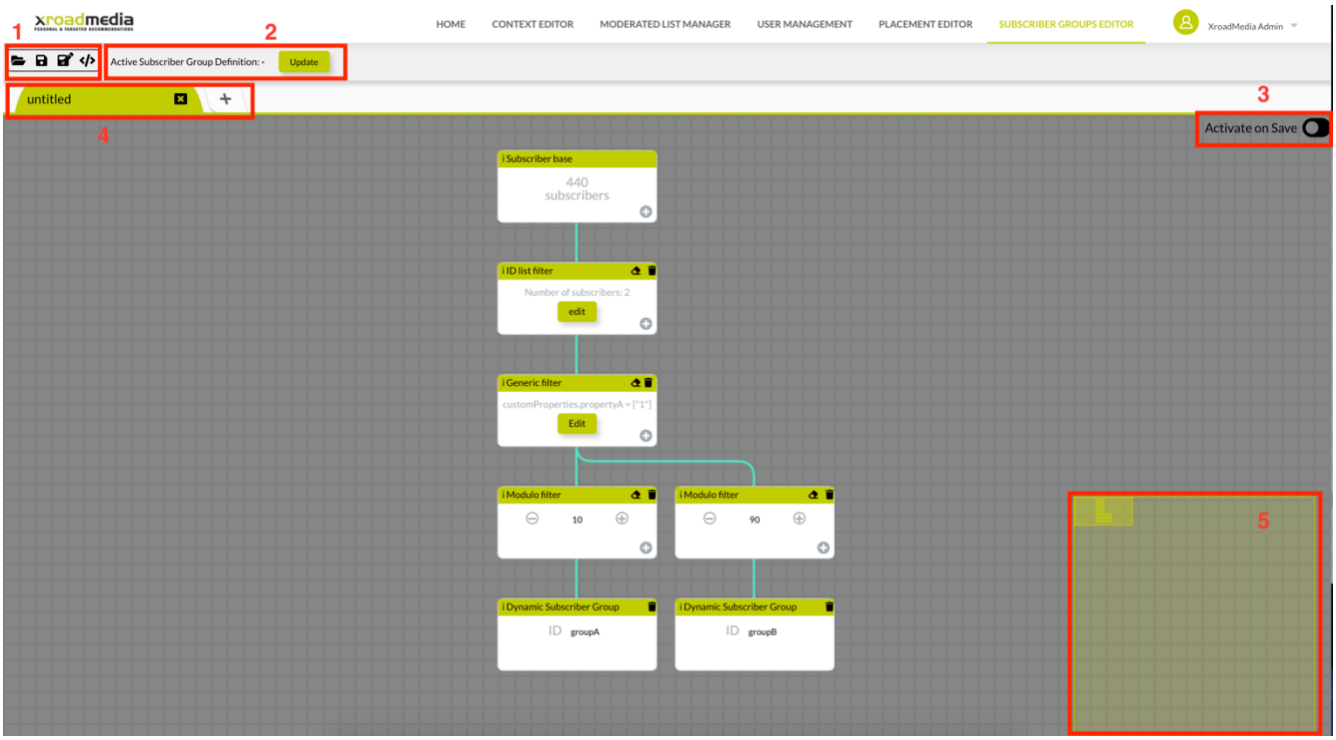



Figure 20: Dynamic subscriber group editor

### 5.6.1 Creating a new group specifcation

Each tab of the subscriber groups editor shows the whole subscriber base, including the number of subscribers, as a default component. Additional filters are configured using the + button in the lower right corner of the component. Note that all filters are optional, but the subscriber group ID has to be configured.

The ID list filters allow to confine the candidates for a subscriber group to a list of subscriber IDs. The subscriber IDs are either entered manually (only feasible if the number of IDs is very low) or are imported from a file. In both cases the format required is a JSON list of strings (cf. Figure 21)


Figure 21: ID list filter editor

The generic filter component allows to add filters of the type parameter1 in list of values AND parameter2 in list of values AND.... See Figure 22 for an example.
The parameter name (customProperties.propertyA) and the list of values (["1"]) are entered into separate rows of the generic filter editor, new rows can be added using the "add" button. All rows are intersected (logican AND operation). Note that the list of values has to be entered in JSON list of strings syntax.

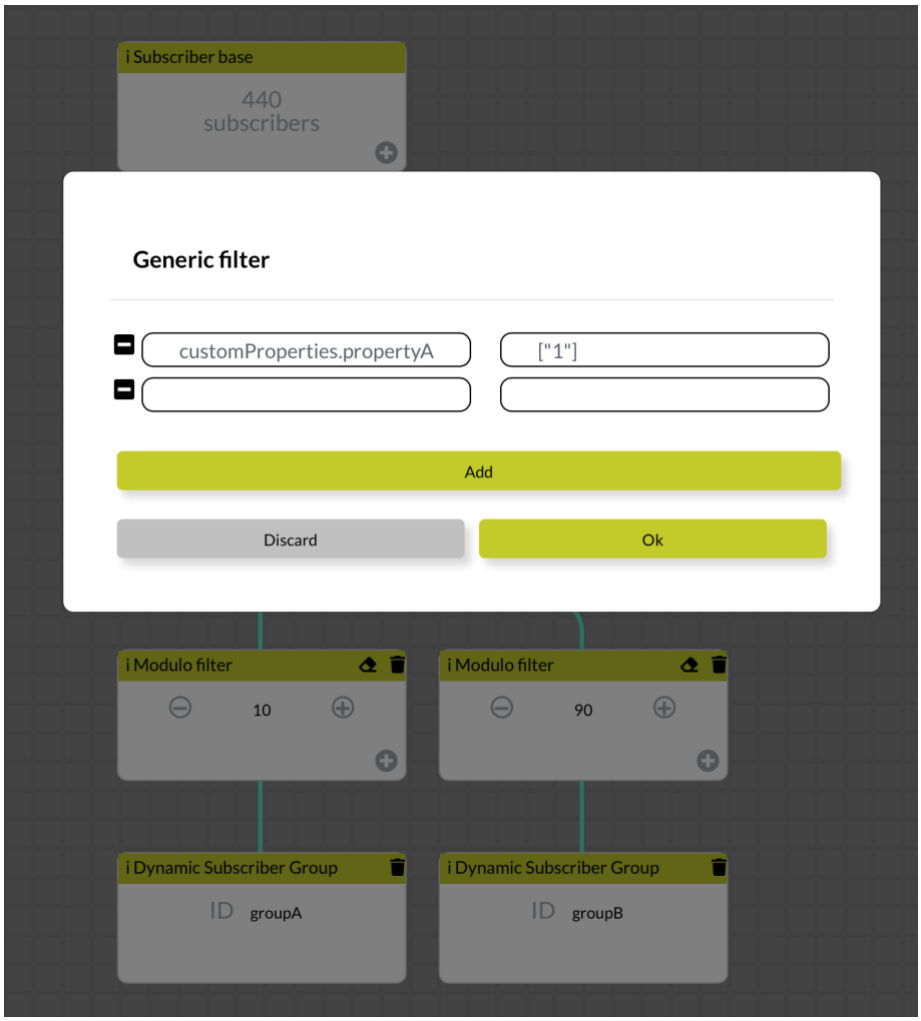



Figure 22: Generic filter

The modulo filter component allows to select a random percentage of the remaining candidate subscribers to be part of a subscriber group. All modulo filters attached to the same upstream generate non-intersecting random subsets, i.e. in the example of Figure 20 10% of the subscribers will be part of groupA, and the remaining 90% will be part of groupB.

### 5.6.2 Editing a group specification

In order to edit a group specification, load it into a new tab of the subscriber group editor. Note that the JSON syntax in Ncanto supports more complex generic filters as well as more complex modulo filters. If a group specification is opened in Piloto which cannot be edited/visualized in the graphical editor, the JSON editor is launched automatically.

You can add new filters and groups using the features described in Section 5.6.1.
To remove an existing component there are two possibilities:

- The delete component (eraser) icon in the upper right corner of the component removes the component only from the tree and connects the components above and below to each other.

- In contrast the delete subtree (trash bin) icon removes the component and the whole underlying subtree.

To add a new component you can use the + buttons of any component or right click on the connection between two components. Please note that only one instance of any filter type is allowed in the definition of one group, i.e. only one ID list filter or one generic filter is possible.

To activate a group specification, use the switch in the upper right corner of the Subscriber Group Editor before saving the specification.