Add Conditional Actions for Tracker Fields

Description
Add a new panel to Tracker Fields settings for "actions". These will be (to start off with):

- Conditions
  - Field Value is/is not/contains : empty or value
  - A Mathematical Calculation (should cover everything else)
- Actions
  - Show or hide other fields (some mechanism of determining the parent element will be needed to cover tracker edit, legacy edit, wiki plugin tracker and plugin with template)
  - Change validation:
    - Add Required (mandatory)
    - Remove all
    - Other rules?

A visualisation (early work)
### Field Behaviours

**Conditions**

| Field value | is 42 |

**Actions**

<table>
<thead>
<tr>
<th>Name</th>
<th>Show</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Required</td>
</tr>
<tr>
<td>Description</td>
<td>Hide</td>
</tr>
<tr>
<td>Description</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

### Solution

Done and added to 21.x

### Importance

7

### Easy to solve?

4

### Priority

28

### Demonstrate Bug (Tiki 19+)

**Please demonstrate your bug on show2.tikiwiki.org**

**Version:** trunk

**Create show2.tikiwiki.org instance**

**Ticket ID**

7207

**Created**

Friday 08 November, 2019 12:07:43 GMT-0000 by Jonny Bradley

**LastModif**

Wednesday 16 December, 2020 16:02:37 GMT-0000

### Comments

**Nelson Ko** 08 Nov 19 13:52 GMT-0000

Just fyi when you do this, one of the hacks I've done to make validation work like "if a field is hidden, it is not validated", is to do the following. The reason why I can't just add :hidden is because there are tracker fields in Tiki that use hidden fields to store it's information (such as the Files field, Relations field as it uses the object selector, etc...). For those fields, I manually add the .ignore class as needed using jQuery when I hide them to disable validation.
Jonny Bradley 09 Nov 19 11:13 GMT-0000

Interesting, I've usually added and removed the rules "manually" for each extra field, e.g.

```
// defer until validator is set up (why isn't there an event triggered?)
setTimeout(function () {
  // optional name
  $("select[name=ins_123]").change(function () {
    var $dependency = $("select[name=ins_321]");
    if ($(this).val() === "y") {
      $dependency.parents("tr").show();
      $dependency.rules("add", {required: true});
    } else {
      $dependency.parents("tr").hide();
      $dependency.rules("remove", "required");
    }
  }).change();
}, 500);
```

Will try your way next time! Thanks 😊

Nelson Ko 08 Nov 19 14:13 GMT-0000

The other "gotcha" I ran into is that even if the form passes client-side validation it won't pass server-side validation, even if no new value is provided in the form that is being submitted. I think the issue is in validate_item() in lib/core/Services/Tracker/Utilities.php and also check_field_values() in
lib/trackerlib.php and I've hacked both rather crudely but didn't go further as this opens up some questions and depending on the use case the answer might be different.

1. Should there be a pref(s) to disable server-side validation completely (or partially) and just depend on client-side validation? and if there is some form of server side validation...
2. If a form excludes a mandatory field altogether in the data that it is sending, should the saving still succeed or not? (for our use case this is necessary)
3. If the form submits a hidden field with a blank value, should it mean that the input wants to save a blank value, or that it should not be saved? Does the answer depend on whether the field is mandatory or not? (for our use case it is fine for hidden blank fields to be saved as a general rule, but I can see that it might matter in other use cases as it might unintentionally clobber existing data)

Jonny Bradley 09 Nov 19 11:21 GMT-0000

My plan/hope is that this will work both client and server side, so we need a way of dynamically assessing these action rules in PHP when the form is posted - my current custom code version don't do this at all, so optionally mandatory fields need to be set to non-mandatory in the field settings - not great (but don't tell anyone! ;) )

To answer your specific points:

1. I don't think so, but not sure how to achieve it
2. Good question, I think not but this is the way plugin tracker currently works and leads to "bad" data
3. Yes, blank values should be stored in the tracker

Just my 2c 🤔

Torsten Fabricius 09 Nov 19 12:48 GMT-0000

I have use cases where a conditional field would be useful, but I think there is more needed:

Trackers items are quite static when it comes to the number of fields in respect of the following:

For example

- the use case/s has/have to do with case management
- a Tracker collects personal data of customers in a special situation
it is important to add subcontacts, like number and names of children, number, type and names of subcontacts, of professions like lawyers or experts related to the customer or number, type, id and description of insurances

The subdata can have an arbitrary number of elements, like a customer can have 0 or 1 or 10 children, be related with 0, 1 or several lawyers, can have X insurances etcetera.

I can imagine that one Tracker for the customer and one Tracker for all metadata or subdata can be feasible.

Conditions:

- whilst editing Tracker 1 customer data there must be an option "add subdata" and then inside the Tracker 1 dialogue there must open the add item modal (or something similar) to add data to Tracker 2
- display of customer data must be on one page and printable to PDF together as one combined data sheet
- for all items of both trackers it must be solidly possible to limit the display to the owner (the customer is not necessarily the initial creator, but maybe always the owner) plus a team (group) that is responsible to maintain the customer’s contract
- perfect would be to list email communication with the respective case or customer

=> CRM

Jonny Bradley 09 Nov 19 16:14 GMT-0000
Would this one help?

Nelson Ko 09 Nov 19 16:21 GMT-0000
One more thing would be useful would be to be able to specify that at least one of the fields in a group of fields are mandatory (but not all). I have attached a requiredfromgroup.diff that Mani did for me, but on reviewing it I realized there is already a "required_in_group" rule in validators/validator_tiki.js so the plan is to somehow merge the two if possible... The way it works is that you specify a class name in the Validation Parameter in the tracker field settings and manually put that class name in the parent divs of all the fields that are part of the group.
I've thought of a new requirement which sort changes things a bit...

It's not uncommon to need a set of rules in one place (usually a \{tracker\} plugin in a
wiki page) and different ones elsewhere, but on the same tracker. So i think this funky
rules component thing will be needed in plugin tracker too somehow... and that place
is scary! 😅

Or maybe the place where the rules need to work can be part of the field or tracker
rules... hmmm (thinking out loud)

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### Attachments

<table>
<thead>
<tr>
<th>filename</th>
<th>created</th>
<th>hits</th>
<th>comment</th>
<th>version</th>
<th>filetype</th>
</tr>
</thead>
<tbody>
<tr>
<td>requiredfromgroup.diff</td>
<td>09 Nov 19 16:45 GMT-0000</td>
<td>0</td>
<td>Diff referenced in comment. Please see comment. #threadId7376</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The original document is available at
[https://dev.tiki.org/item7207-Add-Conditional-Actions-for-Tracker-Fields](https://dev.tiki.org/item7207-Add-Conditional-Actions-for-Tracker-Fields)