Scripts in Visual Mode

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Script rules can be used in Visual Mode when the standard mapping rules are not sufficient to cover the use case.
Creating a script rule is straightforward.

- Edit your visual connection
- Select the rules
- Select the 'Add script'

How does it work?

The scripts are groovy-based, meaning that all groovy structures can be used to define the behavior of the mapping. For instance, if a mapping is needed between the assignees of one side with the instance name 'left' and another side with the instance name 'right', the following code snippet implements the mapping:

```
// define the mapping

def leftToRightAssignee = [
   // left Assignee ---> right Assignee
   "peter@acme.com" : "peter.pan@acme.com",
   "cinderella@acme.com" : "cinderalla.white@acme.com",
]


// look up the corresponding email, default to team@acme.com
def targetUserEmail = leftToRightAssignee[left.issue.assignee?.email] ?: "team@acme.com"

// assign to right issue

right.issue.assignee = nodeHelper.getUserByEmail(targetUserEmail)
```

Examples

Labels

`your_instance_shortname.issue.labels = remote_instance_shortname.issue.labels`

Components

```
your_instance_shortname.issue.components = remote_instance_shortname.issue.components.collect { component ->
def remoteComponentLeadEmail = component.lead?.email
def localComponentLeadName = nodeHelper.getUserByEmail(remoteComponentLeadEmail)
nodeHelper.createComponent(
    issue,
    component.name,
    component.description, // can also be null
    localComponentLeadName?.key, // can also be null
    component.assigneeType?.name() // can also be null
    )
}
```

Resolution

Set the local resolution same as on the remote side, if there's no such resolution on your side don't set anything

```
if(nodeHelper.getResolution(remote_instance_shortname.issue.resolution?.name)) {
     your_instance_shortname.issue.resolution = remote_instance_shortname.issue.resolution
}
```

Versions

```
// assign fix versions from JIRA A to JIRA B
your_instance_shortname.issue.fixVersions = remote_instance_shortname.
  .fixVersions
  // ensure that all the fixVersions are available on B
  .collect { v -> nodeHelper.createVersion(issue, v.name, v.description) }
// assign affected versions from JIRA A to JIRA B
your_instance_shortname.issue.affectedVersions = remote_instance_shortname
  .affectedVersions
  .collect { v -> nodeHelper.createVersion(issue, v.name, v.description) }
```

User fields

Assignee

```
your_instance_shortname.issue.assignee = nodeHelper.getUser(remote_instance_shortname.issue.assignee?.key)
```

Reporter

```
your_instance_shortname.issue.reporter = nodeHelper.getUser(remote_instance_shortname.issue.reporter?.key)
```

Custom fields

Text/String custom fields

Sync value from "remote side select list custom field" to the local "select list custom field"

```
your_instance_shortname.issue.customFields."text custom field".value = remote_instance_shortname.issue.customFie
lds."remote side text custom field".value
```

Set a fixed value in the local custom field

Single select list/radio button

Sync value from "remote side select list custom field" to the local "select list custom field"

```
your_instance_shortname.issue.customFields."select list custom field".value = remote_instance_shortname.issue.cust
omFields."remote side select list custom field".value
```

Set a fixed value in the local custom fields "My select list"

```
your_instance_shortname.issue.customFields."My Select list".value = "Red"
```

Multi-select list/Checkbox

```
// sync value from "remote multi-select list custom field" to the local "select list multiple choice"
your_instance_shortname.issue.customFields."select list multiple choice".value = remote_instance_shortname.issue.c
ustomFields."remote multi-select list custom field".value?.value
// Add "Red" as a value in the custom fields "My multi-select list"
your_instance_shortname.issue.customFields."My multi-select list".value += nodeHelper.getOption("Red")
```

Multi-cascade custom fields

Sync only existing option values

```
def sourceRegion = remote_instance_shortname.issue.customFields."Source Region/Country"?.value?.parent?.value
def sourceCountry = remote_instance_shortname.issue.customFields."Source Region/Country"?.value?.child?.value

def region = nodeHelper.getOption(
  issue,
  "Destination Region/Country",
  sourceRegion
)
def country = region.childOptions.find{it.value == sourceCountry}
if ( region != null && (sourceCountry == null || country != null)) {
  your_instance_shortname.issue.customFields."Destination Region/Country"?.value = nodeHelper.getCascadingSelect
(
              region,
              country
  )
} else if (sourceRegion == null) {
  your_instance_shortname.issue.customFields."Destination Region/Country"?.value = null
}
```

Date/DateTime custom fields

```
// if you have a custom field called "My Date" (of type Date Picker or Date Time Picker)
// on your Side and you'd like to populate it from
// "Their Date" of remote Side (of type Date Picker or Date Time Picker)
your_instance_shortname.issue.customFields."My Date".value = remote_instance_shortname.issue.customFields."The
ir Date".value
// or if you'd like to assign a fixed moment in time:
your_instance_shortname.issue.customFields."My Date".value = new java.text.SimpleDateFormat("yyyy-MM-dd HH:m
m:ss z")
    .parse("2019-10-24 13:30:59 EET")
```

URL custom fields

```
// sync value from "remote side url custom field" to the local "url custom field"
your_instance_shortname.issue.customFields."url custom field".value = remote_instance_shortname.issue.customFiel
ds."remote side url custom field".value

// Set a fixed value "https://exalate.com" in the custom field with name  "My url custom field"
your_instance_shortname.issue.customFields."My url custom field".value = "https://exalate.com"
```

Label custom fields

```
// sync value from "remote side labels" to the local "My labels"
your_instance_shortname.issue.customFields."My labels".value = remote_instance_shortname.issue.customFields."re
mote side labels".value
// add "attention" to the custom field "My labels"
your_instance_shortname.issue.customFields."My labels".value += nodeHelper.getLabel("attention")
```

User picker custom fields

```
// sync value from "remote side user picker custom field" to the local "user picker custom field"
your_instance_shortname.issue.customFields."user picker custom field".value = nodeHelper.getUser(remote_instance
_shortname.issue.customFields."remote side user picker custom field".value)
// Set a fixed value "557358:bda57a72g56a9-4219-9c29-7d666481388f" (id for a user in your system) in the custom fi
eld with name  "My user picker"
your_instance_shortname.issue.customFields."My user picker".value = "557358:bda57a72g56a9-4219-9c29-7d66648
1388f"
```

Number custom fields

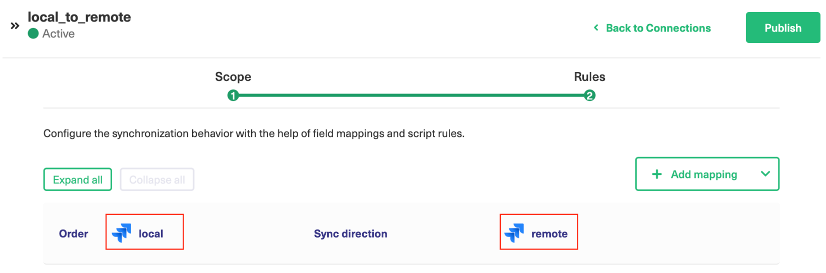
```
your_instance_shortname.issue.customFields."numeric custom field".value = remote_instance_shortname.issue.custo
mFields."remote side numeric custom field".value
```

Advanced Scripts

Set a custom field with the issue key of the remote twin in the Visual mode

How to set a custom field like 'Remote Key' with the key of the twin issue. This example shows how to implement it on a Jira Cloud to Jira Cloud, but the approach can also be used on other permutations.

Assume you have set up a connection using the visual configuration mode between 'local' and 'remote'.



Configure the synchronization behavior with the help of field mappings and script rules.

You have the requirement that a text field 'Remote Key' on the local issue must contain the issue key of the remote twin.

Approach

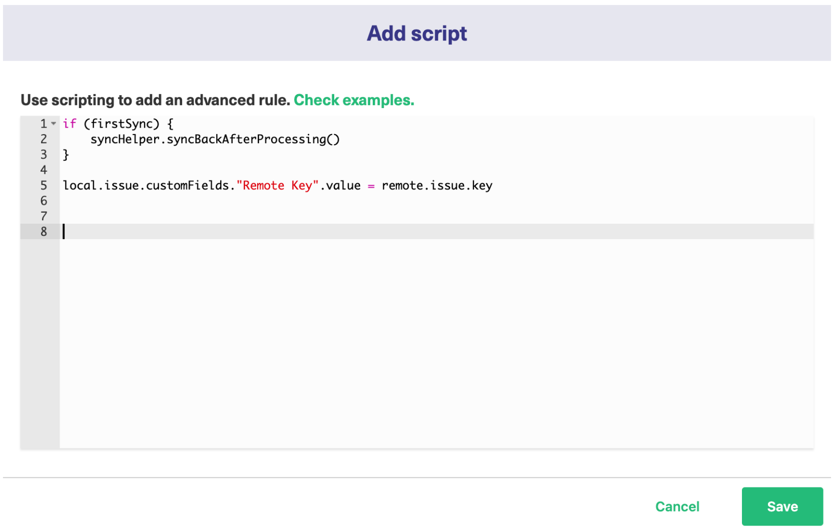
What needs to happen is that

- once the remote issue is created, a message is sent back from the remote to the local, containing the issue key of the remote.
- this incoming message on the local can then be used to populate the local custom field.

Triggering a message back can be done using the syncBackAfterProcessing function.

Implementation

Add the following script rule to the connection.



Use scripting to add an advanced rule. Check examples.

```
1 if (firstSync) {
2     syncHelper.syncBackAfterProcessing()
3 }
4
5 local.issue.customFields."Remote Key".value = remote.issue.key
6
7
8
```

- Line 1 - limit the sync back to the first sync transaction.

  Warning: This must be done, otherwise it creates a loop that sends messages back and forth continuously.

- Line 2 - trigger the sync back transaction using the syncHelper.syncBackAfterProcessing.
- Line 5 - assign the value of the remote key to the local customfield 'Remote Key'.