Workflow configuration reference guide

(Release 2022-12-22)

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Introduction

This guide intends for Pharmadex 2 Supervisors and contains reference data necessary for the creation of on-screen forms.

The Pharmadex 2 application and workflow data forms are configurable by the Supervisor. Any given data form consists of components. Each component provides an atomic functionality, i.e., data input/display field, choices from the pre-defined set of choices, file upload, file download, etc.

To place any data component in an on-screen form the Supervisor should:

- Define a place on the form
- Provide component-specific parameters

Form layout

The basic configuration layout of an electronic form is in two columns. Depending on the room on the screen a form may be represented in two or one column. In the case of the one-column representation, the second column will be placed under the first one.

The numbering of rows and columns starts from zero.

0,0	0,1
1,0	1,1

Figure 1. The two columns' layout

The height of components may be very different. Thus, placing one component in a cell (row, col) is almost unusable

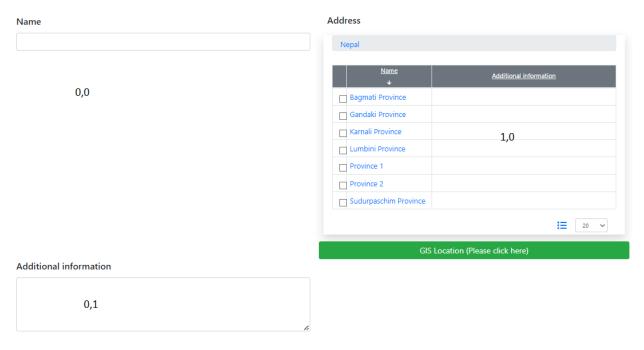


Figure 2. The only cell is not enough

To avoid this, Pharmadex 2 provides the third coordinate – an order inside the cell. The order starts from zero and allows the place of many components in a cell.

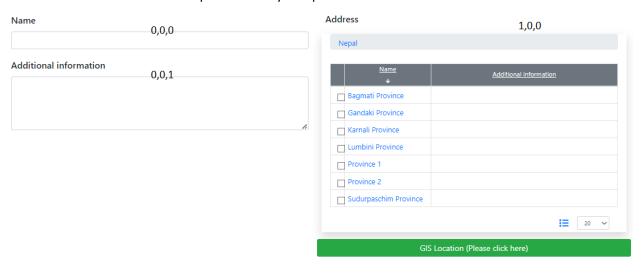


Figure 3. Cell and order inside a cell are acceptable

Pharmadex 2 layout editor allows the define and re-arrange components easily using the following rules:

- Columns number possible only 0 and 1
- Values of rows and orders allowed up to 89. Row number 100 is reserved for "things"

 When the user tries to place a component in a busy position inside a cell, the rest of the components in this cell will be shifted down

Electronic form

Where to find it?

The definitions of all electronic forms are in the feature Administrate-Configuration-Data Configurator.

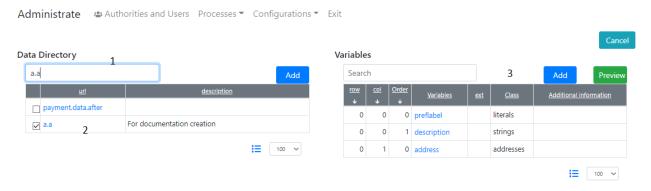
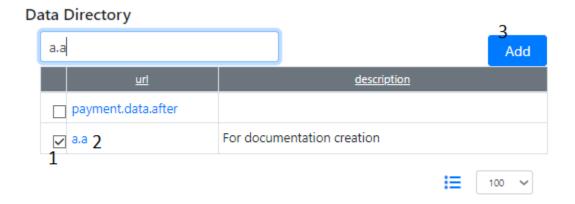


Figure 4. Electronic form configuration feature

- 1. Search for the electronic form definition in the list below
- 2. List of all electronic form definitions
- 3. The definition of a selected electronic form (see Figure 3)

Configuration data form

The data form configuration consists of general data and layout configuration. In its turn, the layout configuration consists of variables.



- 1. Select to access the layout configuration
- 2. Click to edit general data
- 3. Add new form

The general data consists of a URL and description. URL is a unique identifier of the form; the description is a description of the whole form.

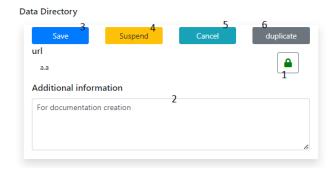


Figure 5. General form data

- 1. Click to edit the URL
- 2. The description of the data
- 3. Press to save the general data
- 4. Press to remove the general data
- 5. Press to do nothing
- 6. Press to copy the general data and the layout configuration

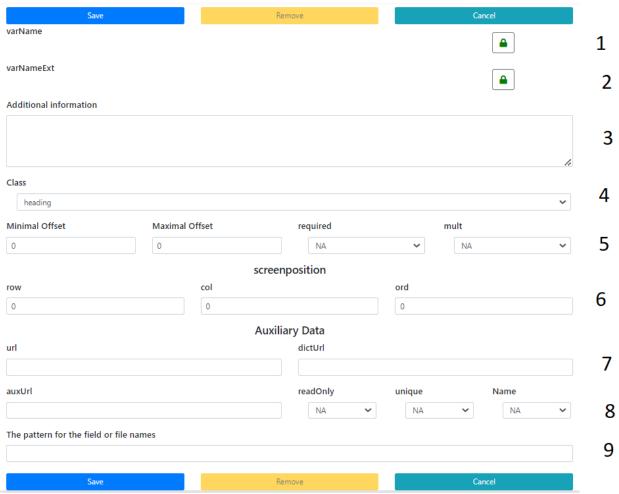
Component configuration form



Figure 6. Layout form data

- 1. Click to edit a component definition (variable)
- 2. Add New component definition
- 3. Preview the electronic form

Component definition



- 1. Click to edit the name of the component
- 2. The experimental feature
- 3. The help texts
- 4. Select a type of component, e.g., text field, or file uploader.
- 5. Validation parameters. The meaning is particular for a component type
- 6. Screen position row, col, order inside a cell (see Figure 3 and rules above)
- 7. For data for this component, see the description for a particular component
 - 7.1. url where to store the user's input for this component
 - 7.2. DictUrl reference to a dictionary
 - 7.3. auxUrl reference for auxiliary data
- 8. Options, see description for a particular component:
 - 8.1. readOnly this component should be placed in the form of a read-only mode
 - 8.2. unique experimental feature, works only for strings and literals
 - 8.3. Name copy some data from this component to literal "prefLabel" and, possibly to other literals.
- 9. Typically, for validation using sizes, regular expressions (https://regex101.com/), etc. Refer to a particular component for the description.

The assignment of a variable name

A variable name in the data configuration should be alphanumerical with possible Latin characters, dots, and underscores. The last underscore or dot should be followed by a number or Latin character. The name should be started with a Latin character. For example:

- min.value.1 right
- минимальное значение wrong
- c1 right
- 1c wrong
- etc

In an on-screen form, the software tries to convert a variable to a field label using the internationalization feature, even if only one language is defined. In case, if for a variable the message is not defined, the variable will display "as is".

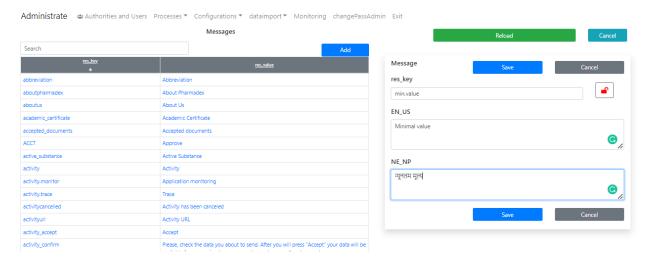


Figure 7 Each variable should be represented in human-readable form using the "messages" feature

Data configuration restrictions

For an electronic form, a data configuration manages data collection and on-screen layout. Following changes in the data configuration may stop collecting the existing data to a form:

- 1. Re-naming a component
- 2. Removing a component
- 3. Changing the type of a component

By default, the data configuration editor disables the possibility to make the changes above in a data configuration if at least one of the conditions below occurs:

- The database already contains data created using the data configuration
- The data configuration is used by other data configuration
- The data configuration is used by activity configuration
- The data configuration is used by resource configuration

In the "sandbox" installations it is possible to bypass this restriction. To do this you must have access to edit the "application.properties" file in the server installation folder

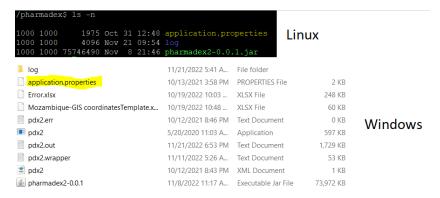


Figure 8 application.properties

Use any text editor to add to this file the configuration parameter variables.properties.edit=true. It allows bypassing the validation above. To stop bypassing the rules, remove this line from the application.properties or set it to false.

variables.properties.edit=false

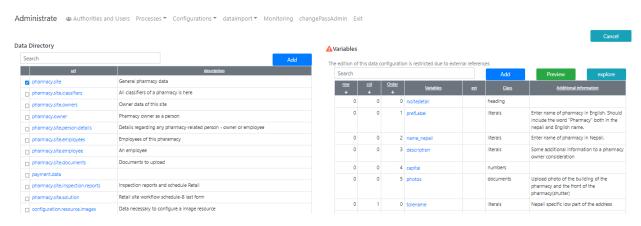


Figure 9 Editions are restricted for pharmacy.site

It is possible to explore which references are in place. The button "explore" will provide both references and structure of the data in the MS Excel format:

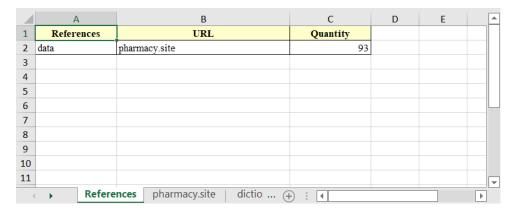


Figure 10 There are 93 data records of this structure in the database. Thus the editions are restricted

To allow restricted editions in a data configuration:

- 1. Duplicate the data configurations
- 2. Change the URL of it
- 3. Make the editions
- 4. Change references if it will be needed

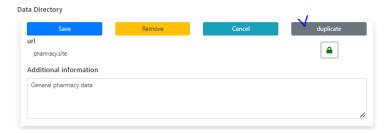


Figure 11 Click on it to duplicate



Figure 12 Find a copy just created

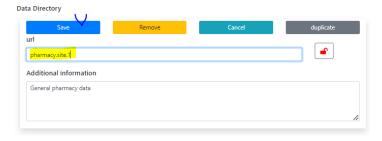


Figure 13 Change the URL and save it

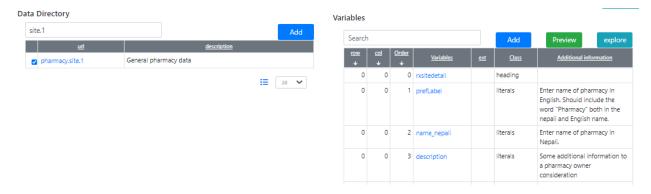


Figure 14 The editions are not restricted to the new data configuration

Preview and explore

The data configuration contains data components and, possibly, other data configurations. It is possible to preview the electronic form and explore the whole configuration.

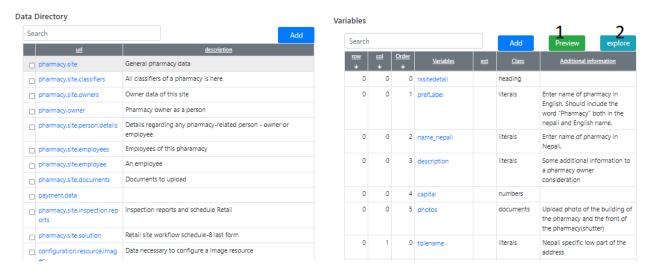


Figure 15 Preview and explore features

The preview allows checking data components' layout and validation rules.

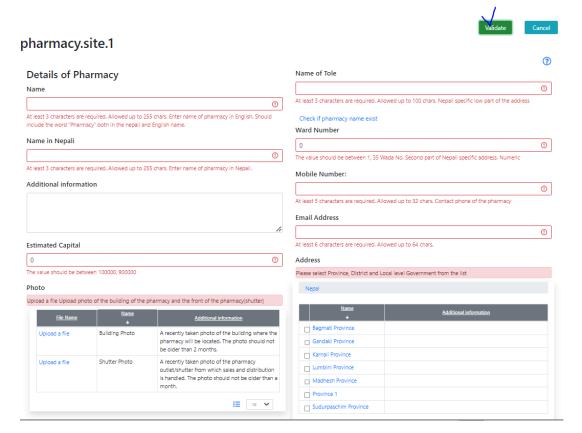


Figure 16 The layout. Press "Validate" to check the validation rules

If the component contains "things" the preview will not check them. The "explore" feature allows checking data structures included and getting a list of references to the data structure.

	А	В	С	D	Е	F	G		
1	References	URL	Quantity						H
2	data	pharmacy.site	93						I
3									
4									
5									
6									
7								-	٦
	References pharmacy.site dictionary.pharm +								

Figure 17 There are 93 records created using this data configuration

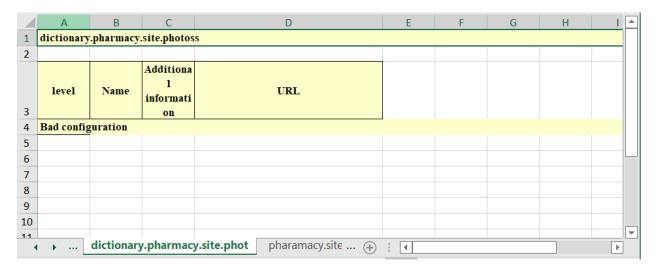


Figure 18 Wrong URL for the dictionary

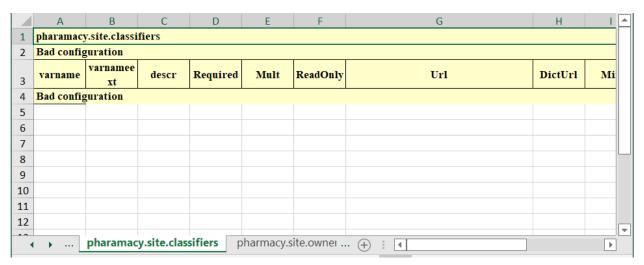


Figure 19 Wrong URL for a thing

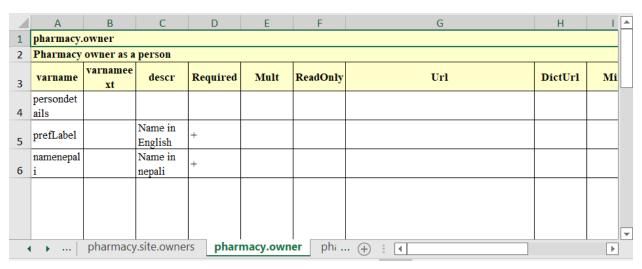


Figure 20 It's OK

The component's configuration reference headings

Headers or links to external resources

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required		
mult		
	Auxiliary Data	
url	Link to external resource. Not mandatory	https://google.com
dictUrl		
auxURL		
readOnly		
unique		
Name		
The pattern for the		
field or file names		

strings

Text input field

Parameter	Usage	Example
Minimal Offset	min length in characters	3
Maximal Offset	max length in characters	1024
required	value is required	
mult		
	Auxiliary Data	
url		
dictUrl		
auxURL		
readOnly	value is read-only	
unique	the value should be unique	
Name		
The pattern for the	Java Regular expression pattern ¹	[a-zA-Z]{3}
field or file names		

literals

The	multi-	language	test	innut	fields
1110	IIIuiti-	ialiguage	ıcsı	IIIDUL	HEIUS

See "strings" above

1

13

dates

Date input control

Parameter	Usage	Example
Minimal Offset	months from the current date	-3
Maximal Offset	months after the current date	3
required	value is required	
mult		
	Auxiliary Data	
url		
dictUrl		
auxURL		
readOnly	value is read-only	true
unique		
Name		
The pattern for the		
field or file names		

numbers

Number input field

Parameter	Usage	Example
Minimal Offset	min value	0
Maximal Offset	max value	1000000
required	value is required	
mult		
	Auxiliary Data	
url		
dictUrl		
auxURL		
readOnly	value is read-only	
unique		
Name		
The pattern for the		
field or file names		

logical

Yes/No/NA logical field

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required		
mult		
Auxiliary Data		

Parameter	Usage	Example
url		
dictUrl		
auxURL		
readOnly	value is read-only	
unique		
Name		
The pattern for the		
field or file names		

dictionaries

Allows selection from the pre-defined choices. For example

System of Medicine

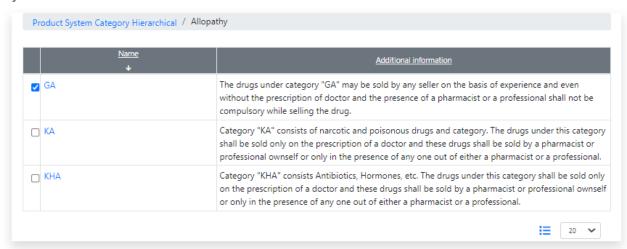


Figure 21. The dictionary

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required	at least one choice is required	
mult		
	Auxiliary Data	
url	url of the dictionary	dictionary.guest.deregistration
dictUrl		
auxURL		
readOnly	value is read-only	
unique		
Name	For single-choice dictionaries copy values from the selected prefLabel and description to form's literal prefLabel and description if ones are existing	

Parameter	Usage	Example
The pattern for the		
field or file names		

addresses

Address dictionary with the possibility to select geographical coordinates

Address

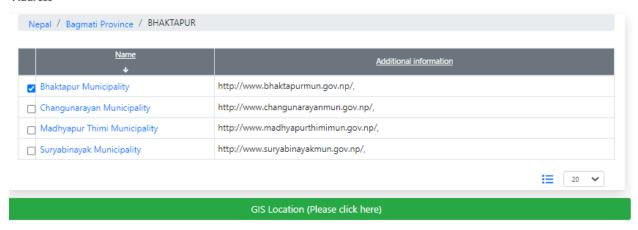


Figure 22. The address control

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required	selection and coordinates are required	
mult		
	Auxiliary Data	
url	where to store and find	nepal.address
dictUrl		
auxURL		
readOnly	value is read-only	
unique		
Name		
The pattern for the		
field or file names		

documents

Upload documents

Photo of Pharmacy

<u>File Name</u>	<u>Name</u>	Additional information
ma.txt	Building Photo	A recently taken photo of the building where the pharmacy will be located. The photo should not be older than 2 months.
Upload a file	Shutter Photo	A recently taken photo of the pharmacy outlet/shutter from which sales and distribution is handled. The photo should not be older than a month
		≡ 10 ∨

Figure 23. The file uploader component

Parameter	Usage	Example
Minimal Offset	wide of the image ² in pixels.Not mandatory	300
Maximal Offset	height of the image in pixels. Not mandatory	300
required	at least one file should be uploaded	
mult		
	Auxiliary Data	
url	where to store and find	pharmacy.documents
dictUrl	dictionary with the list of files to upload	dictionary.pharmacy.site.photos
	descriptions	
auxURL		
readOnly	value is read-only	
unique		
Name		
The pattern for the	file types allowed ³	.jpg,.png,.tiff
field or file names		

resources

Download documents, pictures, and templates.

Invoice

<u>File Name</u>	<u>Name</u>	Additional information
owner_image.docx	1) If capital is up to 100,000	
Receipt for Capital of 1,00,001 to 5,00,000.docx	2) If capital is 100,001 to 500,000	
Receipt for Capital above 5,00,001.docx	3) if capital is above 500,000	
		≔ 10 ∨

Figure 24. The file resource component

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		

 $^{^{2}}$ In case if jpg, jpeg or png file will be uploaded. For other types of uploaded files will be ignored

³ https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input/file - see attribute "accept"

Parameter	Usage	Example
required		
mult		
	Auxiliary Data	
url	Where are the files stored?	pharmacy.new.invoices
dictUrl		
auxURL		
readOnly	value is read-only	
unique		
Name		
The pattern for the		
field or file names		

things

Sub-forms or forms that placed at the right of the main form

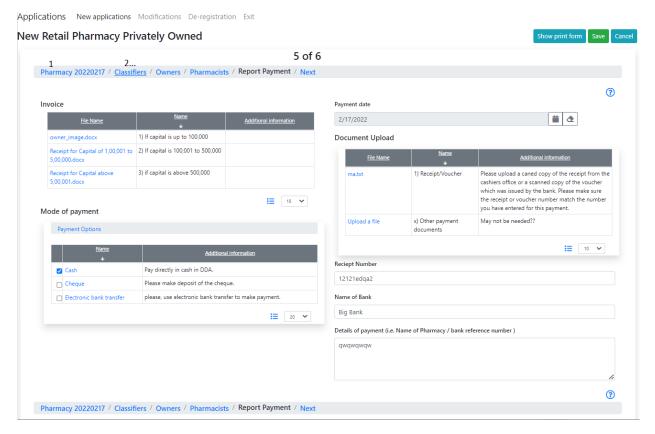


Figure 25. The main form and sub-forms

- 1. The main form. This form must contain a literal with the name prefLabel.
- 2. Additional forms that should be included using the "thing" class

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required		
mult		
	Auxiliary Data	
url	URL of an electronic form configuration. This	retail.pharmacy.classifiers
	form should not contain "things", however,	
	may contain any other component	
dictUrl		
auxURL		
readOnly		
unique		
Name		
The pattern for the		
field or file names		

persons

Allows adding detailed records to the main data. Examples are pharmacy owners to a pharmacy or warehouses the wholesaler.

Owners



Figure 26. The "persons" component - detail records

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required	at least one detailed record is required	
mult		
	Auxiliary Data	
url	Where to store detail records	site.owners.persons
dictUrl		
auxURL	The configuration of the detail record	site.owner.person
	electronic form. This configuration can contain	
	subforms, i.e. "things"	
readOnly		
unique		
Name		
The pattern for the		
field or file names		

schedulers

Allows to run another follow-up application after the application will be approved. Examples are "scheduled renewal payment", "scheduled inspection", etc.

Figure 27. The scheduler component

Parameter	Usage	Example
Minimal Offset	Offset in months from the current date to the	
	minimal possible date to run the follow-up	
	application	
Maximal Offset	Offset in months from the current date to the	
	maximal possible date to run the follow-up	
	application	
required	the scheduled date should fit the Minimal	
	offset – Maximal offset criteria	
mult		
	Auxiliary Data	
url	Where to store the scheduler?	pharmacy.site.renew
dictUrl		
auxURL	Which application should be scheduled?	application.pharmacy.renew
readOnly	Display date only	
unique		
Name		
The pattern for the		
field or file names		

registers

Provides assigning numbers, registration dates, and expiration dates like a typical filing system register does.



Figure 28. The register component

Parameter	Usage	Example
Minimal Offset	Offset in months from the current date to the	-1
	minimal possible registration date	
Maximal Offset	Offset in months from the current date to the	
	maximal possible expiration date	
required	the dates should fit the Minimal offset –	
	Maximal offset criteria	
mult	If true, the dates will be available. Otherwise,	
	the registration is only.	
	Auxiliary Data	
url	Where to store the register?	pharmacy.site.renew
dictUrl		
auxURL		
readOnly	Display date only	
unique		
Name		
The pattern for the	The registration number prefix. For most filing	MR/
field or file names	systems – the code of cases	

atc

ATC codes for medicines

ATC Code

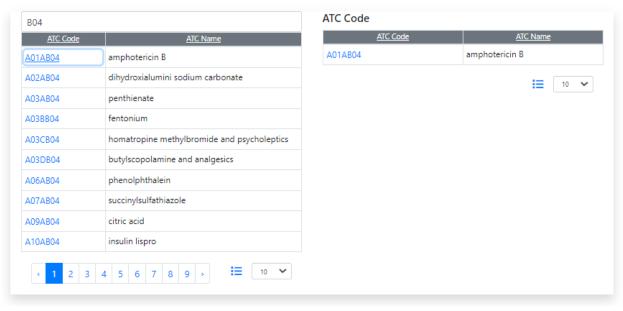


Figure 29. The ATC codes component

Parameter	Usage	Example
Minimal Offset		
Maximal Offset		
required	Require at least one code selected	

Parameter	Usage	Example
mult		
	Auxiliary Data	
url	Where to store the selected codes?	medicinalproduct.productclassification
dictUrl	Where to find ATC codes	who.atc.human
auxURL		
readOnly	Display date only	
unique		
Name		
The pattern for		
the field or file		
names		

legacy

Allows select objects uploaded from the legacy data. Applicable for manual legacy data export, usage of the legacy data for new applications, etc.

legacy Search Name altLabel Register Number Registration Date Expiry Date □ Lion and Pan Pharmacy Аптека Лев и Кастрюля 12345/2015 Jan 12, 2015 Feb 12, 2021 □ Moon and Eggs Pharmacy Аптека Луна и Яичница 43211/2016 Jun 1, 2016 Jul 1, 2022

Figure 30. The legacy data component

Parameter	Usage	Example	
Minimal Offset			
Maximal Offset			
required	Require the selection		
mult			
Auxiliary Data			
url	Where to store the selected codes?	pharmacies.registered.legacy	
dictUrl	The kind of legacy data, e.g., pharmacies,	legacy.pharmacies	
	medicines, etc.		
auxURL			
readOnly	Display date only		
unique			
Name	See notes below		
The pattern for the			
field or file names			

Regardless of the configuration field "Name" value, such data will be copied to the form components:

1. "Name" to the literal "prefLabel", if defined on the form

- 2. "altLabel" to the literal "altLabel", if defined on the form
- 3. Registration date, expiration date, and register number to the register "legacyRegister", if defined on the form

intervals

The interval between two dates.

Certificate validity dates



Figure 31. The interval component

Parameter	Usage	Example
Minimal Offset	The length of the interval in months	
Maximal Offset	The max in the interval, zero means no	
	restrictions	
required	Minimal Offset and Maximal offset constraints	
	should be applied	
mult		
	Auxiliary Data	
url		
dictUrl		
auxURL		
readOnly		
unique		
The pattern for the		
field or file names		

links

This component allows the usage of data from other applications. For example:

- Manufacturer's data in a medicinal product application
- Medicinal product data in an import permit application
- Facility data in a wholesaler applications
- etc.

The only restriction is that the other application should be approved, but not de-registered yet.

Search

20220217 Private Limited Pharmacy
/ Main unit, Pharmacy role in the cooperative

Pharmacy 20220310-1
/ Reserve warehouse, Pharmacy role in the cooperative

Additional information

20220217 Private Limited Pharmacy
Bhaktapur Municipality, BHAKTAPUR, Bagmati Province, Nepal#, C) Community, Private, Pharmacy
Service categories#, Cash, Payment Options#, GA, Allopathy, Product System Category Hierarchical#

Pharmacy 20220310-1

A) Lower level Health facility, Government, Pharmacy Service categories#, Bhaktapur
Municipality, BHAKTAPUR, Bagmati Province, Nepal#, Cash, Payment Options#, GA, Allopathy, Product
System Category Hierarchical#

Figure 32 The data of existing facilities are used in the application

Sometimes it will be necessary to identify the data from other applications. For example, a manufacturer may be identified by the role in the manufacturer process, i.e. finished product manufacturer, packager, etc.

The component "links" allows making the identification using a single-level dictionary

facilities

	17 Private Limited Ph	arringey
Thurmacy fole in the cooperative		
	<u>Name</u>	<u>Additional information</u>
Main uni	t	
☐ Point of s	sale	
Reserve v	warehouse	
		: ■ 20 ∨

Figure 33 The dictionary allows making the identification

By default, the component "links" allows the usage of data only from applications that belong to the applicant. For example, the import permit application allows only medicinal products registered by the applicant.

It is possible to override this behavior by adding the prefix "all." to the "url" field in the data configuration:

Parameter	Usage	Example
Additional	Help message that will be available permanently on	Figure 34 The additional
Information	the top. The usage of this parameter is necessary for a	information will improve
	good usability	the usability
Minimal Offset	Not used	
Maximal	Not used	
Offset		
required	At least one link should be selected	True
mult	Many links may be selected	True
	Auxiliary Data	
url	Unique URL to distinct links. Mandatory. In addition, it	Figure 35 The scope will be
	controls the selection scope.	by default - only the
		applicant`s data
		Figure 36 The default scope
		is overridden
dictUrl	Dictionary to identify the selected objects. Not	dictionary.cooperative.pha
	mandatory	rmacy.role
		See also:
		Error! Reference source
		not found.
auxURL	URL under which stored registered objects. It is	retail.site.owned.persons,p
	possible to comma separated a list of URLs. This field	harmacy.retail.registered
	is mandatory	
readOnly	Will display only selected links along with the	False
	classifiers, if one	
unique	Not used	
Name	Copy selected value to prefLabel and description	See_Table 1 How selected
		value will be copied to
		literals if corresponding
		literals are defined in the
		form
The pattern	Not used	
for the field or		
file names		

facilities

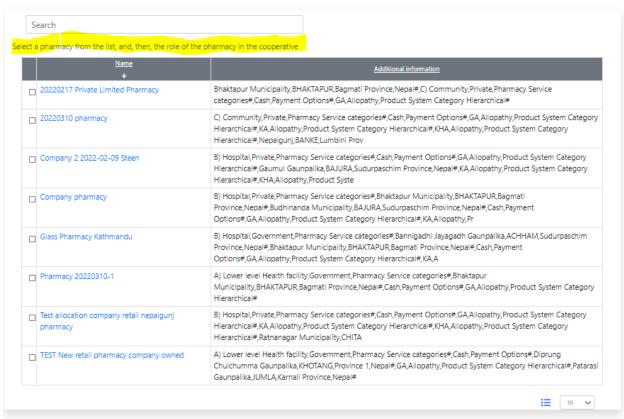


Figure 34 The additional information will improve the usability

Figure 35 The scope will be by default - only the applicant's data



Figure 36 The default scope is overridden

In case, of such configuration:

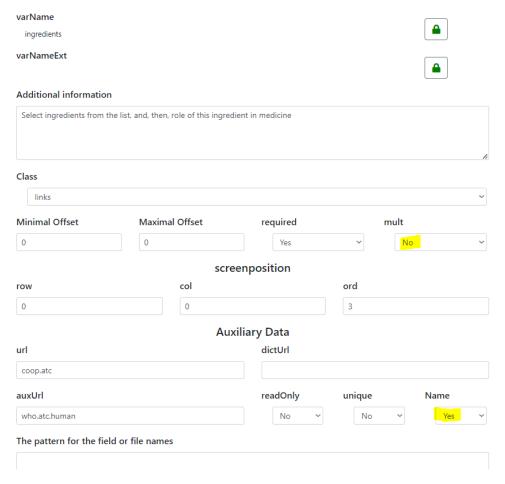


Figure 37 How to allow copy selected value to literals?

Table 1 How selected value will be copied to literals if corresponding literals are defined in the form

	Other references
prefLabel	prefLabel of the linked object
description	Description of the linked object

droplist

The droplist is a simplified representation of a one-level, single-choice dictionary. For example, the dictionary business agreements can be represented as a droplist

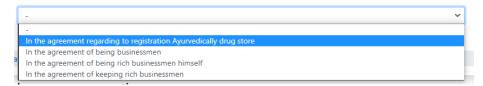


Figure 38 A droplist looks like a general-purpose dropbox used by many Internet sites

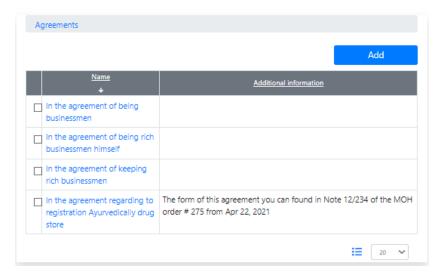
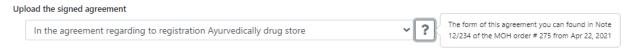


Figure 39 dictionary.business.agreements

Unlike a general-purpose dropbox, the droplist allows additional information defined by the dictionary.



Parameter	Usage	Example	
Additional	Not used		
Information			
Minimal Offset	Not used		
Maximal	Not used		
Offset			
required	A value should be selected	True	
mult	Not used		
Auxiliary Data			
url	Dictionary URL		
dictUrl	Not used		
auxURL	Not used	retail.site.owned.persons,p	
		harmacy.retail.registered	
readOnly	Display only selected value	true	
unique	Not used		
Name	Allow copy selected value to prefLabel and additional	true	
	information, if one, to the description		
The pattern	Not used		
for the field or			
file names			