



Tutorial CiviCRM extension
ContactSegment



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Background

The native CiviCRM extension ContactSegment has been funded by PUM Senior Experts (<https://www.pum.nl>) and developed by CiviCooP (<https://www.civicoop.org/>). It is an open source extension and available for the general public under the AGPL-3.0 license.

The ContactSegment extension has been developed for CiviCRM version 4.4.

The ContactSegment extension adds an additional segmentation for contacts in CiviCRM, with a parent/child relationship. This will also show on the contact summary as an additional tab. The screen prints below are a brief introduction that will be explained in more detail further on in this tutorial.

Sectors and Area of Expertises

The existing Sectors (with linked Area of Expertises) are listed below. You can add, edit or delete them from this screen.

^ New Sector or Area of Expertise

Label	Type	Sector	
Health Care Services	Sector		View Edit Delete
ICT management systems for healthcare	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Laboratory	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Nursing	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Physiotherapy	Area of Expertise	Health Care Services	View Edit Delete
Horticulture: vegetables & fruits	Sector		View Edit Delete
Farm management (Vegetables & fruits)	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Fruits: processing	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Fruits: product	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Vegetables: processing	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Vegetables: product	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Metal: aircraft maintenance & shipbuilding, repair	Sector		View Edit Delete
Ship construction (metal, wood, polyesters)	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Ship design (sea and river going vessels)	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Ship maintenance	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Small aircraft maintenance	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Workshop management	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete

^ New Sector or Area of Expertise

Erik Hommel

Actions ▾ [Edit](#) [Delete Contact](#)

[Summary](#) [Contributions 3](#) [Pledges 0](#) [Memberships 2](#) [Events 1](#) [Activities 3162](#) [Cases 1](#) [Grants 0](#) [Relationships 3](#) [Sector and Area of Expertise 3](#) [Groups 3](#) [Notes 0](#) [Tags 0](#) [Change Log 20](#)

^ Add Sector or Area of Expertise to Contact

Active Sectors and/or Area of Expertises

Label	Type	Role	Start Date	End Date	
Health Care Services	Sector	Expert	1 January 2016		Edit End
- Medical Product development, Train the trainer Nursing	Area of Expertise	Expert	1 January 2016		Edit End
- Medical Product development, Train the trainer Physiotherapy	Area of Expertise	Expert	1 January 2016		Edit End

Original User Story

PUM Senior Experts uses CiviCRM to manage sending voluntary experts to support SME's in development countries. They use segmentation into sectors and areas of expertise. An example of a sector is "*Agriculture: arable farming*" and an example of an area of expertise (that is a subdivision of a sector) is "*Ecological farming*".

PUM Senior Experts uses sectors and areas of expertise to segment different contacts in several situations:

- they are added to individual experts as the stuff they are good at and to match them to specific projects
- they are added to organisations looking for experts to determine what they are looking for and to find experts for them
- each sector has a volunteer who is responsible for the sector (validating new experts, validating requests for assistance, knowing what is going on in the sector etc.) called the Sector Coordinator
- when validating new candidate experts the Sector Coordinator is assisted by one or more contacts who are Recruitment Team Members

Initially this functional requirement was met by using CiviCRM tags, with an extension that allows the tag to be coordinated by a contact. This did not meet the entire requirement though, and was very heavy on performance.

The extension ContactSegment has been developed to meet the basic requirement of PUM Senior Experts, but as a generic extension that can be used by other community member too. If there are any very specific requirements for PUM Senior Experts they will be met with a specific additional extension.

In this tutorial the user stories of PUM Senior Experts will be used to explain the functionality of the extension.

Installing the Extension

You can get the extension from the extension link on the CiviCRM [website](#) or from GitHub:

<https://github.com/CiviCooP/org.civicoop.contactsegment>.

You can install the extension like any other CiviCRM extension (see the relevant CiviCRM documentation section <http://wiki.civicrm.org/confluence/display/CRMDOC/Extensions>).

If you have retrieved the extension and put in the extensions folder on your CiviCRM extensions, you go to the extensions form (Menu Administer/System Settings/Manage extensions) and hit the '*Refresh*' button. You should then see the screen below and hit '*Install*' to install the extension.

CiviCRM Extensions

Refresh

CiviCRM extensions allow you to install additional features for your site. This page will automatically list the available "native" extensions from the [CiviCRM.org extensions directory](#) which are compatible with this version of CiviCRM. If you install Custom Searches, Reports or Payment Processor extensions - these will automatically be available on the corresponding menus and screens.

You may also want to check the directory for [native Drupal modules](#) that may be useful for you (CMS-specific modules are not listed here).

Extensions

Add New

Extension name (key)	Status	Version	Type	
<div>Display the groups in the contact summary</div> <div>(eu.http.group2summary)</div>	Enabled	1.0	Module	Disable
<div>Erik Hommel autocomplete test</div> <div>(hommel.erik.autocomplete)</div>		1.0	Module	Install
<div>Related Permissions Module</div> <div>(nz.co.fuzion.relatedpermissions)</div>	Enabled	1.1	Module	Disable
<div>Additional Contact Segment</div> <div>(org.civicoop.contactsegment)</div>		1.0	Module	Install
<div>API for country</div> <div>(org.civicoop.general.api.country)</div>	Enabled	1.0	Module	Disable
<div>org.civicoop.streetformatnl</div> <div>(org.civicoop.streetformatnl)</div>	Enabled	1	Module	Disable
<div>SEPA Direct Debit</div> <div>(org.project60.sepa)</div>	Enabled	1.2.1	Module	Disable

Refresh

Database Tables

The extension will add the following tables to your CiviCRM database (and remove them again if you uninstall):

- *civicrm_segment* holding the basic segment data
- *civicrm_segment_tree* with the id's in tree sequence (parent with its children) for performance purposes
- *civicrm_contact_segment* to link contacts to the segments with a date range and a role

Option Group for Roles

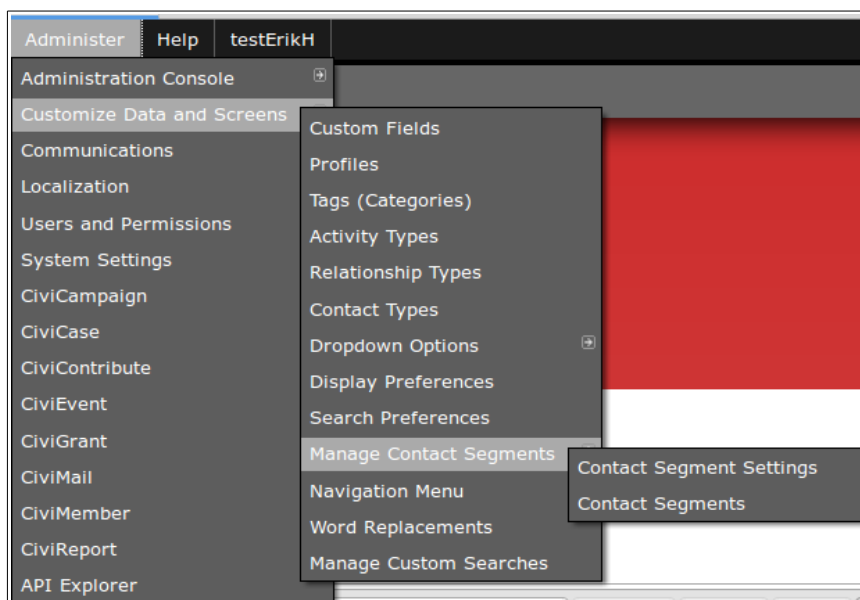
The extension will also create a CiviCRM option group with the roles you can set up for contact segments. This option group will be added and pre-populated when you install the extension. It will be removed when you uninstall. The option groups in CiviCRM can be accessed with the menu option Administer/System Settings/Option Groups. You can use this to change the pre-populated data, add roles or remove them.

The roles that are pre-populated are the ones that are used by PUM Senior Experts:

Roles for Contact Segments Options						
The existing option choices for Roles for Contact Segments group are listed below. You can add, edit or delete them from this screen.						
Add Roles for Contact Segments						
Label	Value	Description	Order	Reserved	Enabled?	
Expert	Expert		↓ ↑	No	Yes	Edit Disable Delete
Customer	Customer		↕ ↑ ↓	No	Yes	Edit Disable Delete
Country	Country		↕ ↑ ↓	No	Yes	Edit Disable Delete
Other	Other		↕ ↑ ↓	No	Yes	Edit Disable Delete
Recruitment Team Member	Recruitment Team Member		↕ ↑ ↓	No	Yes	Edit Disable Delete
Sector Coordinator	Sector Coordinator		↕ ↑	No	Yes	Edit Disable Delete
Add Roles for Contact Segments Done						

Menu options

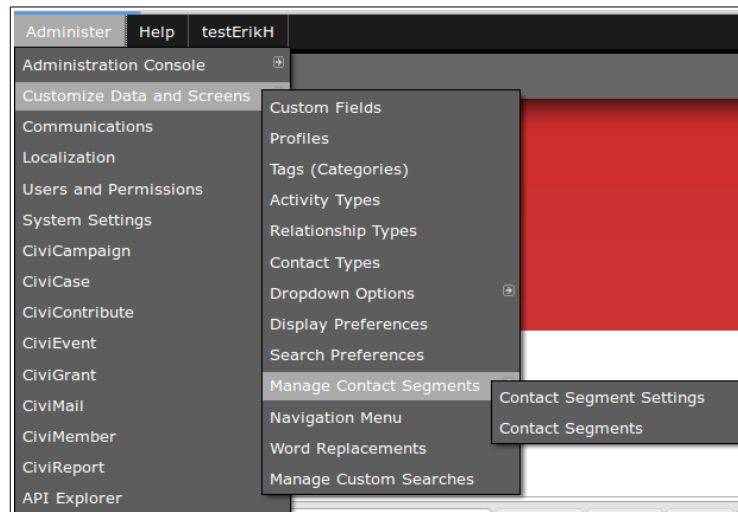
When installing the extension the menu options shown below should be added to your installation of CiviCRM:



Contact Segment Settings

The original settings are loaded from a configuration file in the extension (for the interested techie: */resources/segment_config.json*). If you have the expertise you can change this JSON file before you install the extension.

When you install the extension you will get a menu option to set the ContactSegment settings:



There are several types of settings you can change:

- the **labels** for the segment parent and child
- the **roles** that can be added for parent and child
- which of the roles should be validated as **unique**, meaning there can only be one active at the same time

Labels

PUM Senior Experts use the extension for Sectors and their Areas of Expertise. When installing the parent segment will be labelled as *Sector* and the child segment as *Area of Expertise*. You can change these labels if you want to use the extension for other purposes.

Roles

On the same form you can select which if the roles that are in the Option Group Roles for Contact Segment can be used for parent and/or child. (see section [#3.2.Option Group for Roles](#)).

Segment Settings

Edit Segment Settings for Parent and Child

✓ Save ✕ Cancel

Parent

Label *

Roles

Use for parent >> << Not used for parent

Child

Label *

Roles

Use for child >> << Not used for child

Expert
Other

✓ Save ✕ Cancel

Unique Roles per Segment

On the next form (after you hit Save on the form above) you can specify if any of the roles has to be considered as unique. This means that only one contact with that role will be allowed in the same time period. For example: for PUM Senior Experts, only one Sector Coordinator per Sector is allowed to be active).

Segment Settings - Unique Roles

Edit Unique Roles for Parent and Child

✓ Save ✕ Cancel

Parent

Roles

Unique >> << Not unique

Child

Roles

Unique >> << Not unique

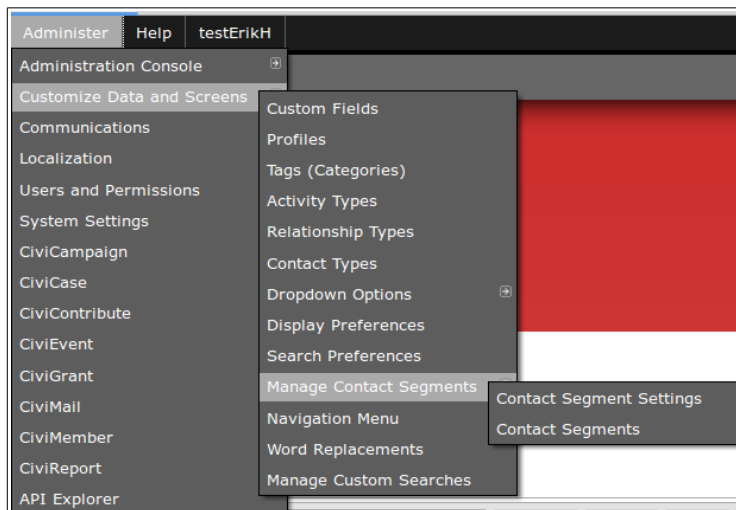
✓ Save ✕ Cancel

Write Permissions

Note that the user has to have permission to write to file `/resources/segment_config.json` to be able to change the settings!

Managing Contact Segments

There is a menu option *Contact Segments* which you can use to manage the segment in your installation:



When you select this option you will get a list of segments (obviously when you hit it for the first time the list will be empty):

Sectors and Area of Expertises

The existing Sectors (with linked Area of Expertises) are listed below. You can add, edit or delete them from this screen.

^ New Sector or Area of Expertise

Label	Type	Sector	
Health Care Services	Sector		View Edit Delete
ICT management systems for healthcare	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Laboratory	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Nursing	Area of Expertise	Health Care Services	View Edit Delete
Medical Product development, Train the trainer Physiotherapy	Area of Expertise	Health Care Services	View Edit Delete
Horticulture: vegetables & fruits	Sector		View Edit Delete
Farm management (Vegetables & fruits)	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Fruits: processing	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Fruits: product	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Vegetables: processing	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Vegetables: product	Area of Expertise	Horticulture: vegetables & fruits	View Edit Delete
Metal: aircraft maintenance & shipbuilding, repair	Sector		View Edit Delete
Ship construction (metal, wood, polyesters)	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Ship design (sea and river going vessels)	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Ship maintenance	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Small aircraft maintenance	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete
Workshop management	Area of Expertise	Metal: aircraft maintenance & shipbuilding, repair	View Edit Delete

^ New Sector or Area of Expertise

From this form you can add, edit or delete segments. Be careful with deleting: if you delete a segment all the links to that segment for a contact will be deleted too!

Adding or editing a segment will be on this form:

Sector or Area of Expertise

Add Sector or Area of Expertise

✓ Save ✕ Cancel

Type ☐ Sector ☒ Area of Expertise

Label *

Parent

- select -

✓ Save ✕ Cancel

The Parent select box will only appear if you set the type to the child segment (Area of Expertise in the form above).

Link Contact Segments to Contacts

Contact Segments on Contact Summary

Linking segments to contacts can be done from the contact summary. There will be a tab for contact segment (using the parent and child labels that are in the settings). Obviously the tab will show empty if there are no links yet, as is the case in the example below:

John Doe

Actions ▾ Edit Delete Contact

Summary Contributions o Pledges o Memberships o Events o Activities o Cases o Grants o Relationships o Sector and Area of Expertise o Groups o Notes o Tags o [Change Log 1](#)

This contact is currently not linked to a Sector or Area of Expertise

^ Add Sector or Area of Expertise to Contact

If there are contact links you will see a list of all active sectors with their areas of expertise. Active means the end date is empty or later than today.

Below that you will get a list of past sectors with their areas of expertise, and below that all areas of expertise that are past while their sector is still active.

Below you see an example of the complete set:

Summary Documents o Contributions o Events o Mailings o Activities 3 Cases o Relationships 68 Sector and Area of Expertise 5 Groups 2 Tags 2 Workhistory 1 Languages o Expert Data 1

Education 1

+ Add Sector or Area of Expertise to Contact

Active Sectors and/or Area of Expertises

Label	Type	Role	Start Date	End Date	
Business Consultancy: ICT	Sector	Expert	1 January 2016		Edit End
- ICT (strategy, sourcing, software, technical infrastructure)	Area of Expertise	Expert	1 January 2016		Edit End
- Marketing & sales (CRM, market analysis)	Area of Expertise	Expert	1 January 2016		Edit End
- Purchasing (CRM, purchasing management)	Area of Expertise	Expert	1 January 2016		Edit End
- General & office communications (Email, social media, doc mgt)	Area of Expertise	Expert	1 January 2016		Edit End

Past Sectors and/or Area of Expertises

Label	Type	Role	Start Date	End Date	
Business Consultancy: ICT	Sector	Other	1 December 2015	24 December 2015	Edit
- Fin & Acct (ERP/Account, control systems)	Area of Expertise	Other	1 December 2015	24 December 2015	Edit
Business Consultancy: ICT	Sector	Sector Coordinator	1 January 2016	2 January 2016	Edit

Past Area of Expertises with still active Sectors

Label	Type	Role	Start Date	End Date	
- HRM (payroll, HRM mgt systems)	Area of Expertise	Expert	1 January 2016	11 January 2016	Edit

From this list you can add contact segments to the contact, edit existing ones or end a link to a contact segment (will set the end date to today).

Adding a Contact Segment to a Contact

You can hit the *Add Sector or Area of Expertise to Contact* button to add a segment to the contact, and you will be presented with the form below:

Add Sector or Area of Expertise

Add Sector or Area of Expertise for Contact

✓ Save ✕ Cancel

Role * Expert

Sector * Health Care Services

Area of Expertise - select -

Start Date * 11-01-2016

End Date

✓ Save ✕ Cancel

On this form you see:

- a select box with the roles that are in the Option Group
- the sector (default the first one will be presented)
- the areas of expertise within the sector. This list will change if you select another sector
- the start and end date for the role

If you have entered data the following rules will be validated:

- the role must be allowed for the type of segment selected
- the end date must be later than the start date
- if the role is set as unique for the sector or area of expertise, there can not be another contact linked with the same role at the start date of your period

Once you have hit *Save*:

- the link is saved
- if you are linking to an area of expertise:
 - if there is no link yet to the sector, the sector will automatically also be linked for the same period
 - if there is a link to the sector (and possibly other areas of expertise within the same sector) the end date you have set for the area of expertise will be applied to the sector and all other areas of expertise within the same sector

Editing a Contact Segment Linked to a Contacts

When you select to edit a contact segment link you will get a form like this one:

Edit Sector or Area of Expertise

Edit Sector or Area of Expertise for Contact

✓ Save ✕ Cancel

Role * Expert

Sector * Health Care Services

Area of Expertise Medical Product development, Train the trainer Nursing

Start Date * 01-01-2016 ✕

End Date

✓ Save ✕ Cancel

You can change the role, the sector, the area of expertise, the start date and the end date.

Once you have hit *Save*:

- the link is saved
- if you are editing to an area of expertise:
 - if there is a link to the sector (and possibly other areas of expertise within the same sector) the end date you have set for the area of expertise will be applied to the sector and all other areas of expertise within the same sector
- if you are editing to a sector:
 - the end date of all existing links to underlying areas of expertise are set to the same end date

Ending a Contact Segment Link

If you end a contact the end date will be set to today.

If you are ending an area of expertise and the end date of the sector (and possibly other areas of expertise within the same sector) will also be set to today for them

If you are linking to a sector the end date of all existing links to underlying areas of expertise will also be set to today.

Report Template Contact Segment

With the extension comes a report template ContactSegment:

ContactSegment - Template

Columns

Filters

<input checked="" type="checkbox"/> Role	<input checked="" type="checkbox"/> Start Date	<input checked="" type="checkbox"/> End Date
<input type="checkbox"/> Segment		
<input type="checkbox"/> Contact Name	<input type="checkbox"/> Gender	<input type="checkbox"/> Birth Date
<input checked="" type="checkbox"/> Phone		
<input checked="" type="checkbox"/> Email		
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Post Code	<input checked="" type="checkbox"/> City
		<input checked="" type="checkbox"/> Country

Preview Report

ContactSegment - Template

Columns

Filters

Roles	Is one of	- select -
Start Date	- any -	
End Date	- any -	
Active?	Is equal to	Yes

Preview Report