WaveAccess
We Make IT Easy

Relationship Charts

Customer Administrator

Reference Guide

Dynamics 365 Compatible

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4
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SCI-TECH AWARDS
(ACADEMY OF MOTION PICTURE ARTS AND SCIENCES)

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Table of contents

Introduction

This document serves as a reference guide for all Administrators who have installed Relationship Charts.

The Administrator Reference Guide includes information designed to help users customize and configure all aspects of Relationship Charts for Dynamics 365.

Once you understand what's possible, you can proactively consider how each organizational change should be reflected in Relationship Charts, and quickly implement the necessary changes. The tasks described in this section can all be done through the Dynamics 365 user interface, and do not require programming experience.

For help and support with any aspect of customization and configuration, please contact info@waveaccess.com

1 Glossary of terms and abbreviations

The following glossary of terms and definitions serves as a reference to the product, and will help Administrators understand Relationship Charts terminology.

Term	Definition
Actor	Entities that are displayed in Relationship Charts as a box.
Actor Icon	An icon that represents an Actor.
Attribute	Information relevant to an Actor that is displayed as either text or icons within the box. There are two types of Attributes: 1) CRM Based Attributes; 2) Relationship Chart specific Attributes.
Attribute Icon	An icon that represents an Attribute within a Relationship Chart (e.g. a person's role within a business process).
Icons Library	A group of icon sets that represents Attributes.
Ghost Actor	These are people, companies or other entities that you know have a role to play within the opportunity, but for which you have not yet gathered sufficient information to create a record within the CRM system itself.
Tool Bar	A bar of icons at the top of the Canvas to display Relationship Chart function icons.
RC	Relationship Charts.
 **(icon)**	Note

2 Working with Relationship Chart Templates

A chart template serves to define the functionality and design of any relationship chart that can be displayed. This version is shipped with three defined chart templates:

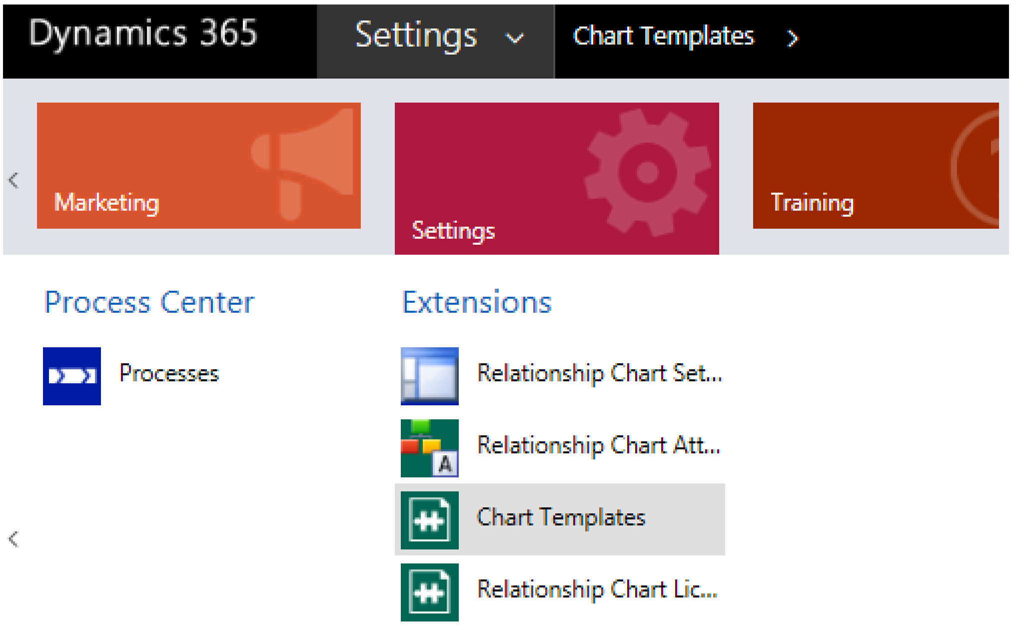
- Opportunity
- Contact
- Account

But you can create as many chart templates as you need (see Section 2.1).

The following changes are all made via the relationship chart template:

- The set of Actors (which can be displayed on the charts)
- Look and feel of Actors
- Attributes displayed on Actors
- Relationships and connections between Actors
- Attributes displayed on relationships/connections

To access the Chart Templates area of Relationship Charts, click **Settings**:



then click the **Chart Templates** link:

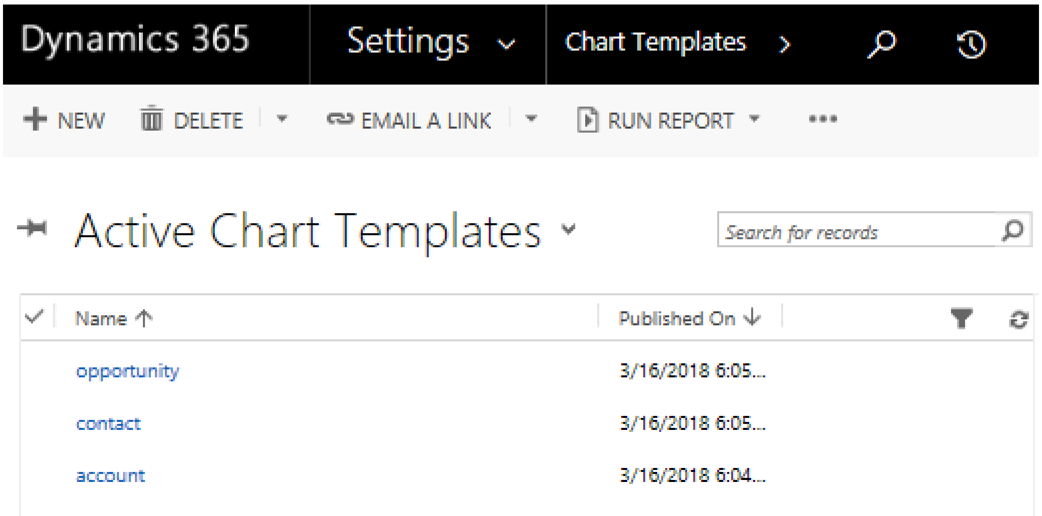


Fig. 2.1 The Chart Templates Form.

2.1 Creating a Chart Template

To create a chart template, click the **New** button in the ribbon (see Figure 2.2).

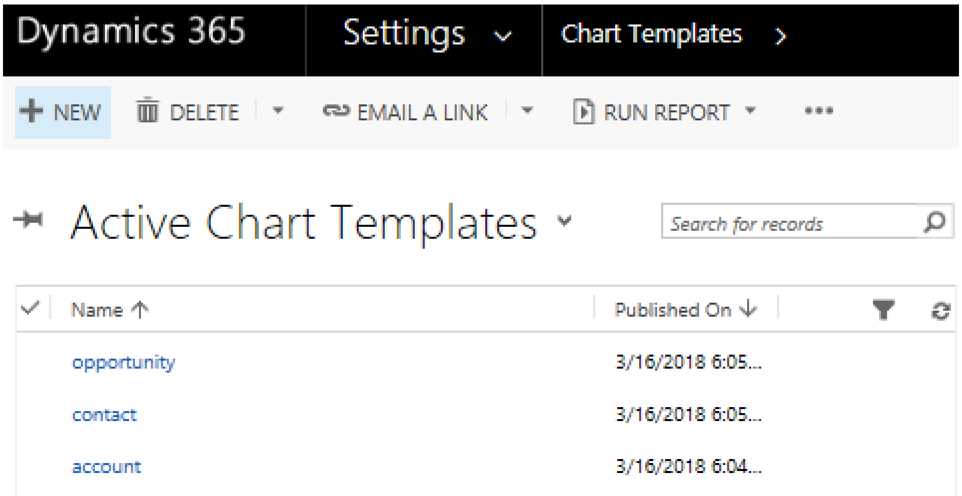
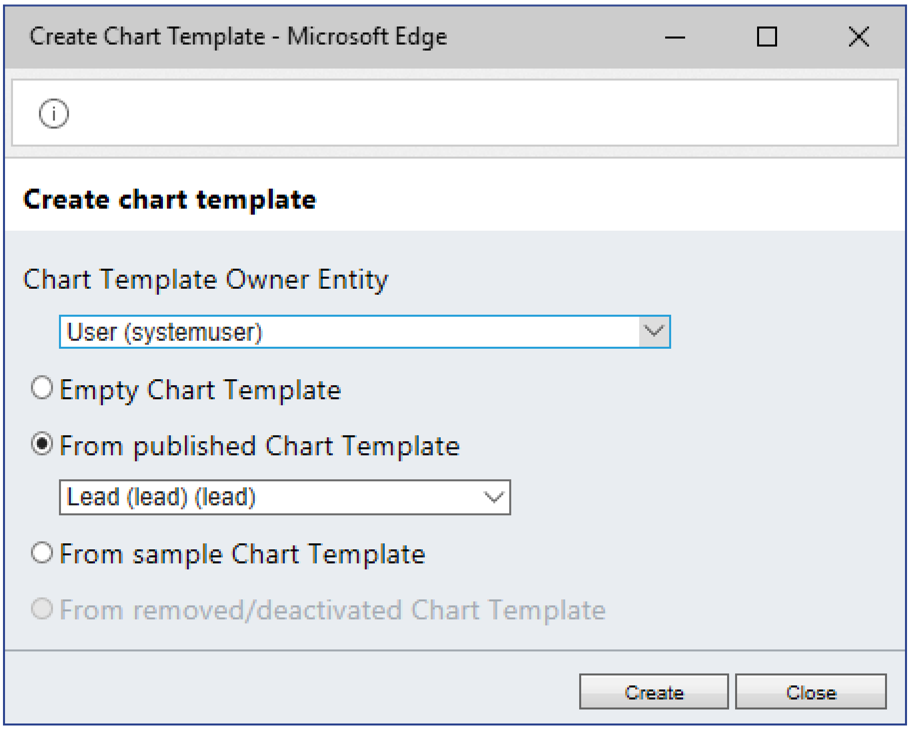


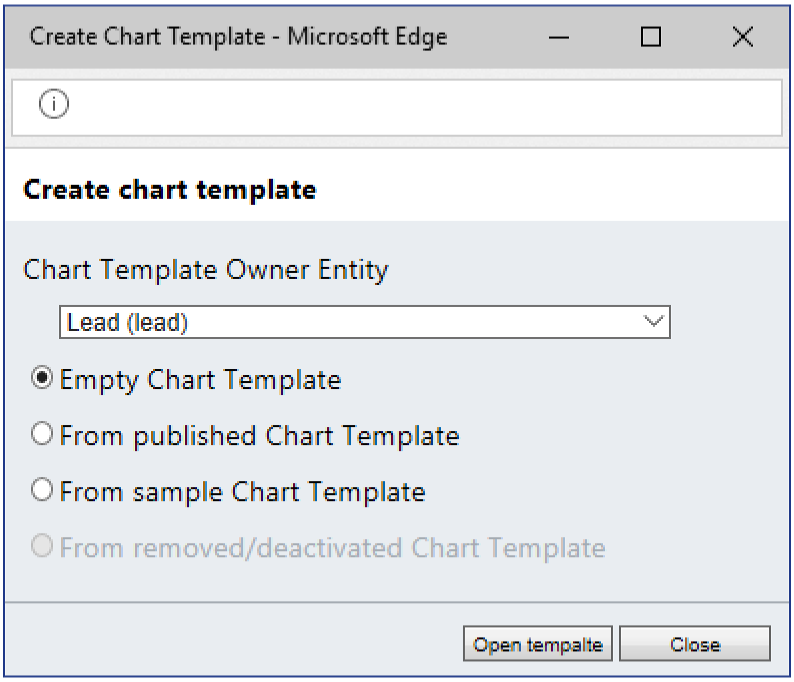
Fig. 2.2 The Chart Templates Form.

It's possible to create an empty Chart Template or to copy from the existing Chart Template.

To copy from the existing template, select the entity (for example, Lead) for which you want to create a new chart template (Chart Template Owner Entity) and published/sample chart template from which you want to copy. Then click Create.



Select **Empty Chart Template** if you don't want to copy from any of the existing templates. Click Create.



Then click Open template.

A new window will open, displaying the New Chart Template Form (see Figure 2.3).

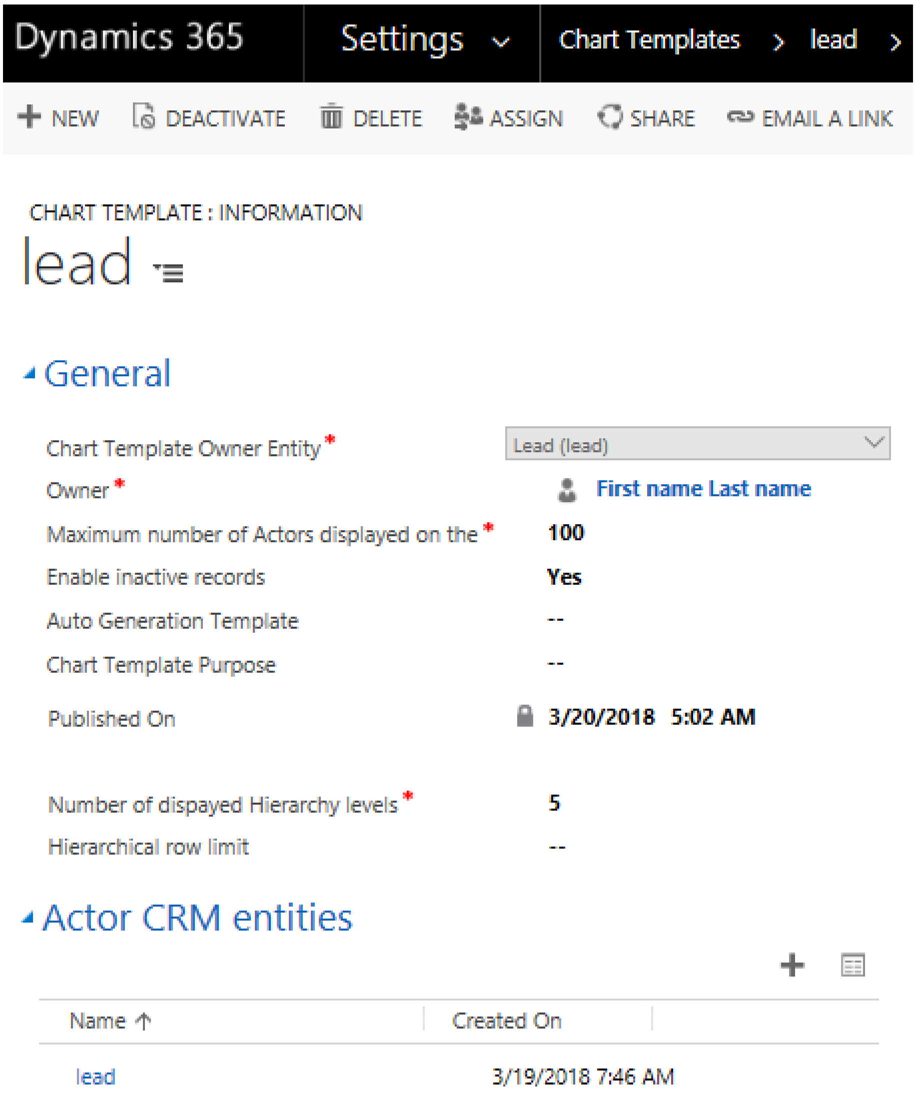


Fig. 2.3 The New Relationship Charts Type Form.

2.2 Editing a Chart Template

You can edit a chart template by double-clicking on the template name in the template list (see Figure 2.1). A new window will open, displaying the Charts Template Form (see Figure 2.4).

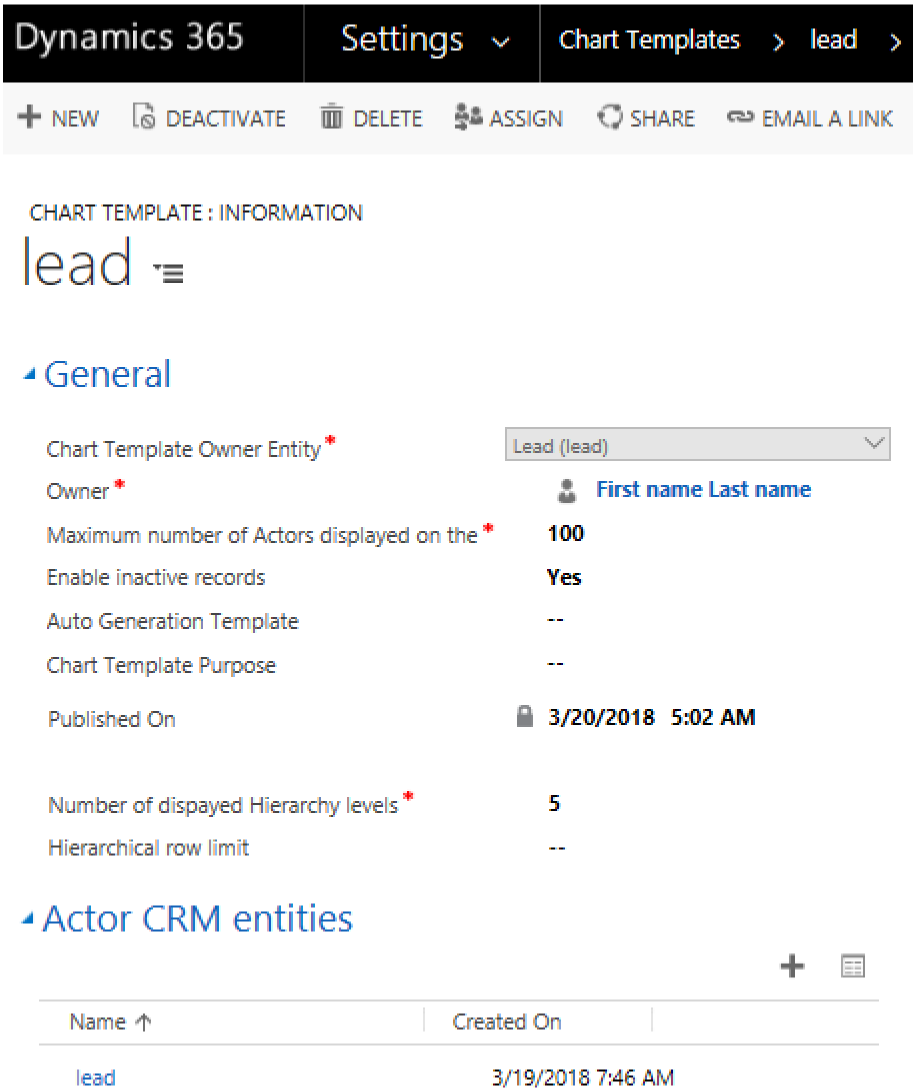


Fig. 2.4 The Relationship Charts Template Form (Information).

There are four fields on this form, and their description is given below:

- **Chart Template Owner Entity**
  Chart Template is named after the entity for which it was created.
  This field is read-only.
- **Owner**
  This field contains the name of the CRM user.
- **Chart Template Purpose**
  The purpose of the chart should be described in this field. You may want to change the information about possible relationships that can be built on this type of the chart.
- **Published on**
  When you make changes to the Chart Template, you have to publish them. This field contains the day and the time when the Chart Template has been published.

To save any changes click **Save** or **Save & Close**. To Publish all customization click Publish in the ribbon.

3 Publishing Template

Once you have completed editing your Chart Template, you need to **Publish** all changes.

1. Go to **Settings** / **Chart Templates**.
2. Choose a Chart Template in the list and double click on it. A new window will open containing the **Chart Template** form.
3. Click **Publish** in the ribbon to publish all the changes.

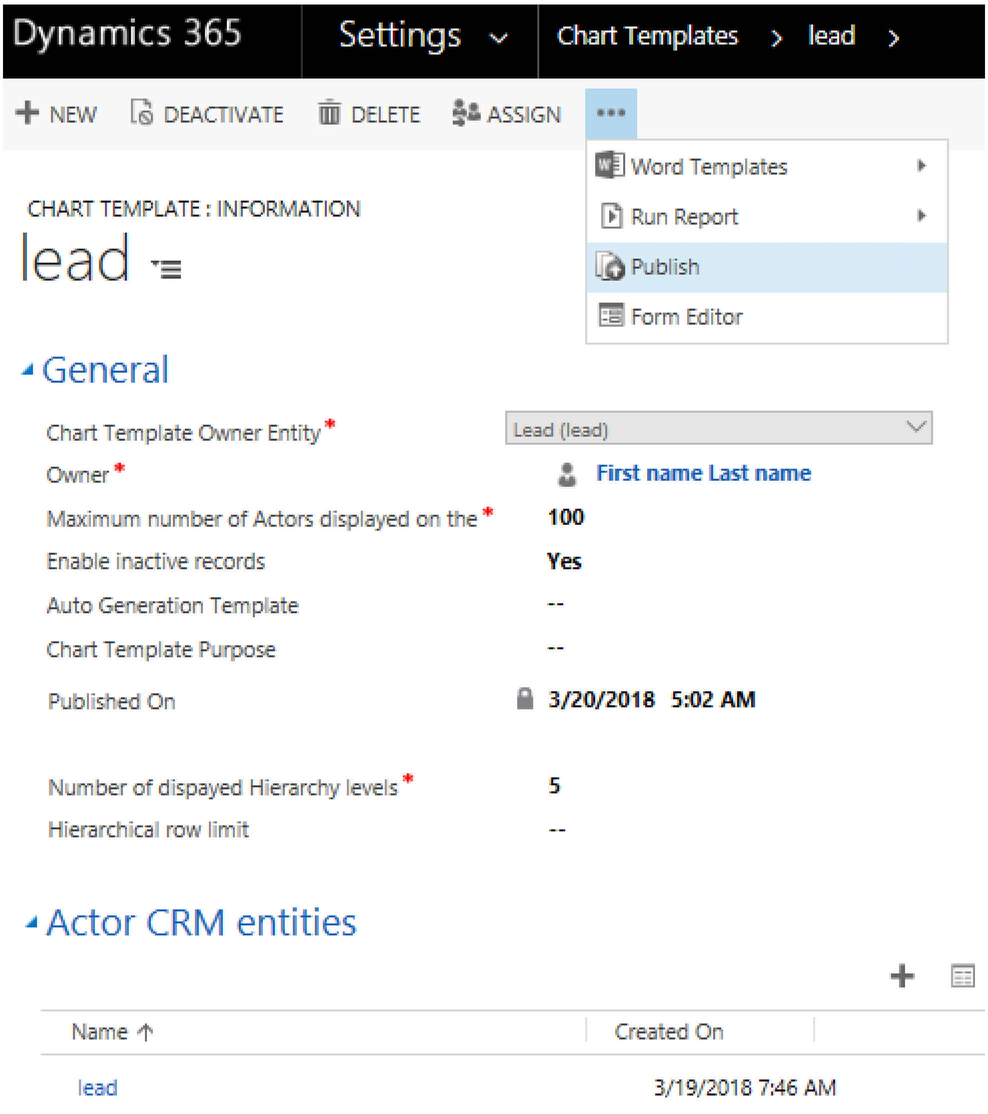


Fig. 3.1 The Lead Chart Template Form.

4. Click **Start Publishing**.

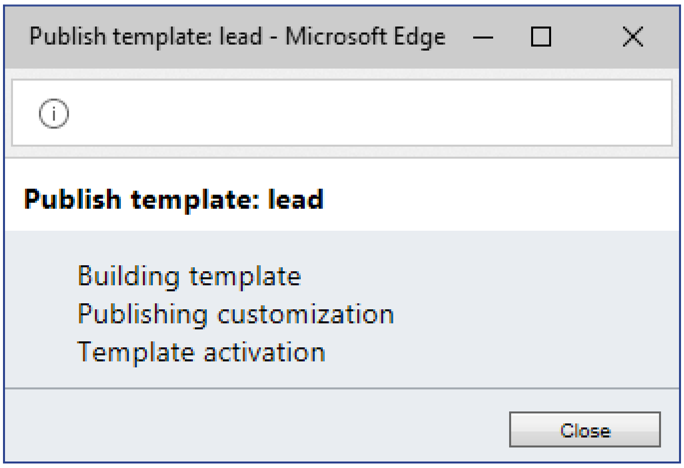


Fig. 3.2 The Publish Template Form.

5. When you see that Chart Template Publishing completed, click **Close**. Now all changes will be displayed on the Chart.

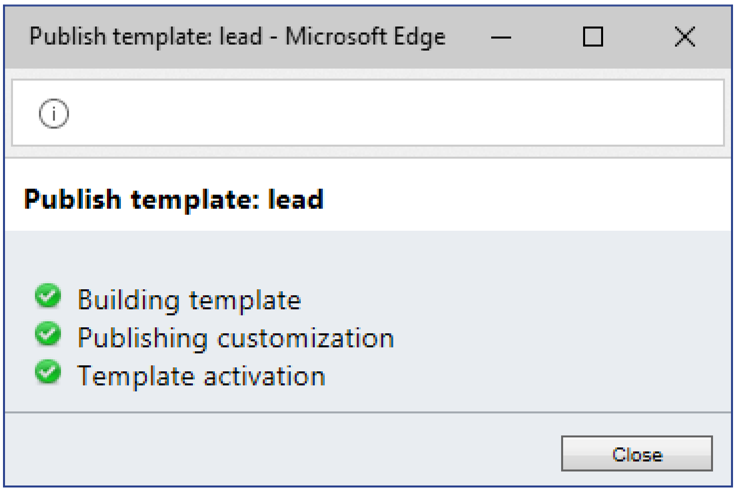


Fig. 3.3 Chart Template Publishing completed.

Remember! All the changes you make after you published the template will not be displayed on the Chart until you Publish them!

4 Relationship Charts Settings

To I**mport**/**Export Configuration**, go to **Settings** / **Relationship Charts Settings**. This functionality allows you to export the current configuration and then import it on another system which needs the same configuration of Relationship Charts. This can be useful when needing to transfer the configuration between test and live environments.

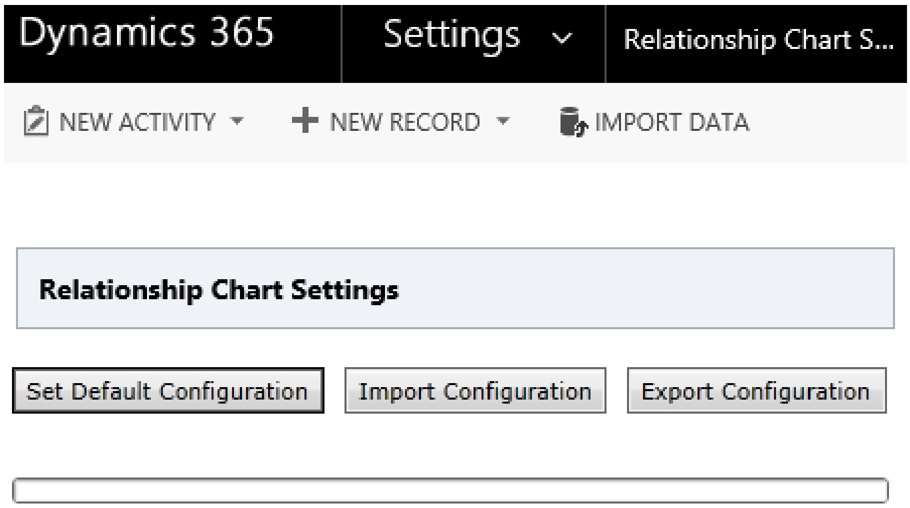


Fig. 4.1 The Relationship Chart Settings.

To see the configuration page it is necessary to install Microsoft Silverlight. This works correctly only in the Internet Explorer browser.

We do not recommend using the export and subsequent import configuration on the same computer.

5 Editing an Actor on a chart

This section allows you to define the look and feel for any Actor displayed on a chart.

1. Go to **Settings** and click **Chart Templates**. This will present you with a list of Chart Templates currently available (see Figure 5.1).

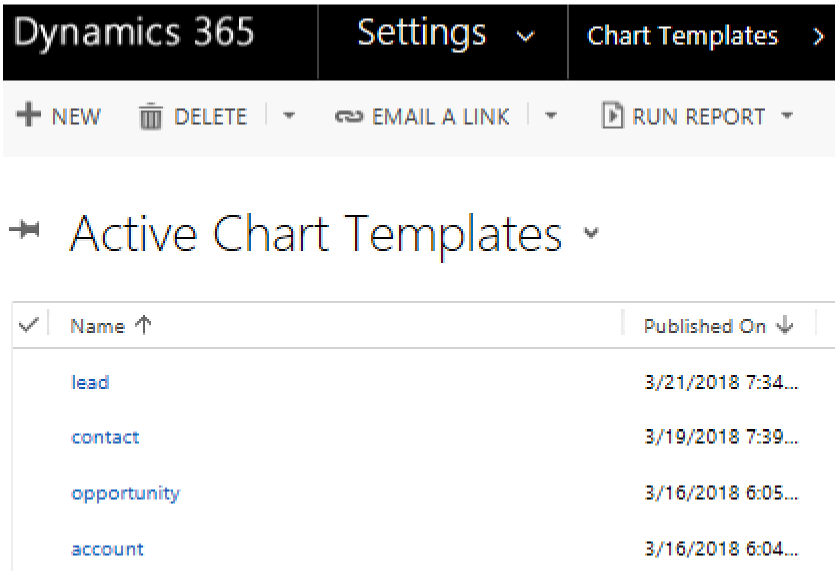


Fig. 5.1 The Chart Templates Form.

2. Double click on a Chart Template from the list. A new window will open containing information about the chart type you have selected. From the list below select **Actor CRM Entities** (see Figure 5.2).

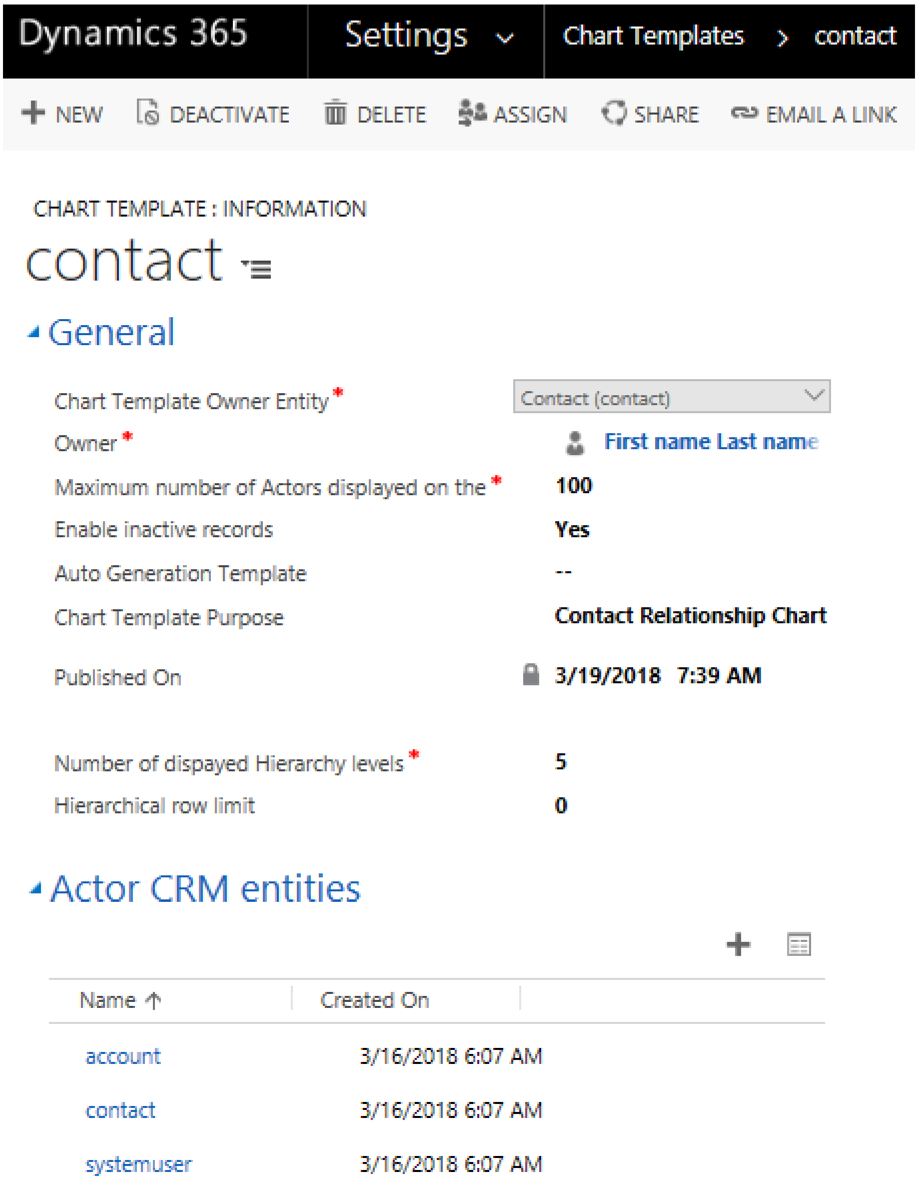


Fig. 5.2 The Relationship Charts Template Form (Actor CRM Entities).

Once you have selected **Actor CRM Entities**, you will be presented with a list of valid actor entities (see Figure 5.2). To open one of these for editing, double click on the row required.

3. A new window will open containing the Actor CRM Entity Form (see Figure 5.3).

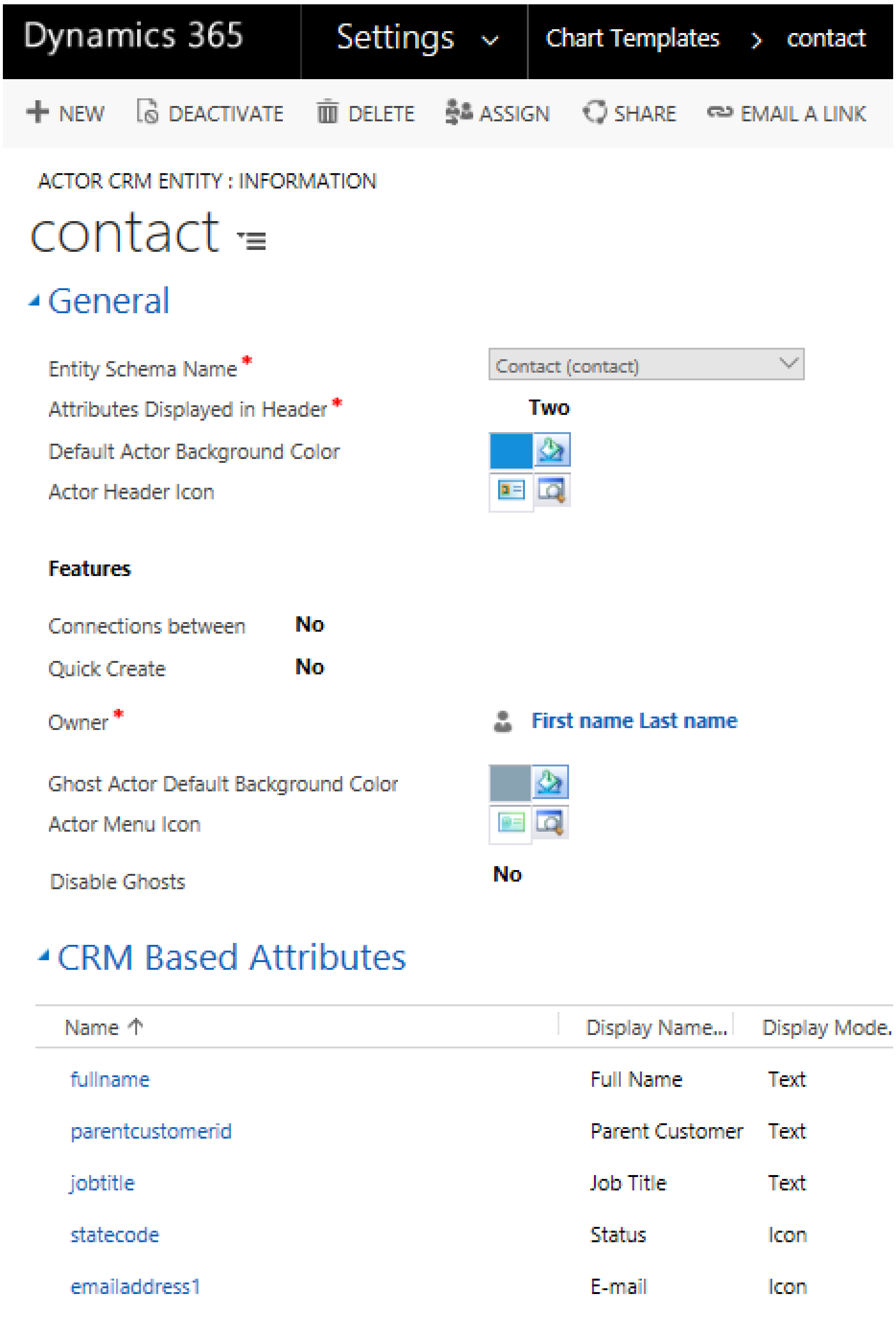


Fig. 5.3 The Actor Entity Form – Displaying information related to how the Contact Actor is displayed.

Table 5.1 Summary of all fields on the Actor Entity Form

Field Name	Purpose	Example
Default Actor Background	Defines the schema name of the Actors' Microsoft CRM entity (read-only).	Contact
Owner	The name of the CRM user.	Firstname Lastname
Actor Title Color	Defines the schema name of the Actors' Microsoft CRM entity (read-only).	
Default Actor Background Color	Defines the background color for the entity Actor.	
Ghost Actor Default Background Color	Defines the background color for the entity ghost Actor.	
Actor Header Icon	Defines the icon that appears in the top-left of the Actor. (see Figure 5.4)	
Ghost Actor Header Icon	Defines the icon that appears in the top-left of the Ghost Actor.	

5.1 Creating a new Actor

1. Go to **Settings** / **Chart Templates**. Select Chart Template you want to work with.
2. From the list below select **Actor CRM Entities** (see Figure 5.4).

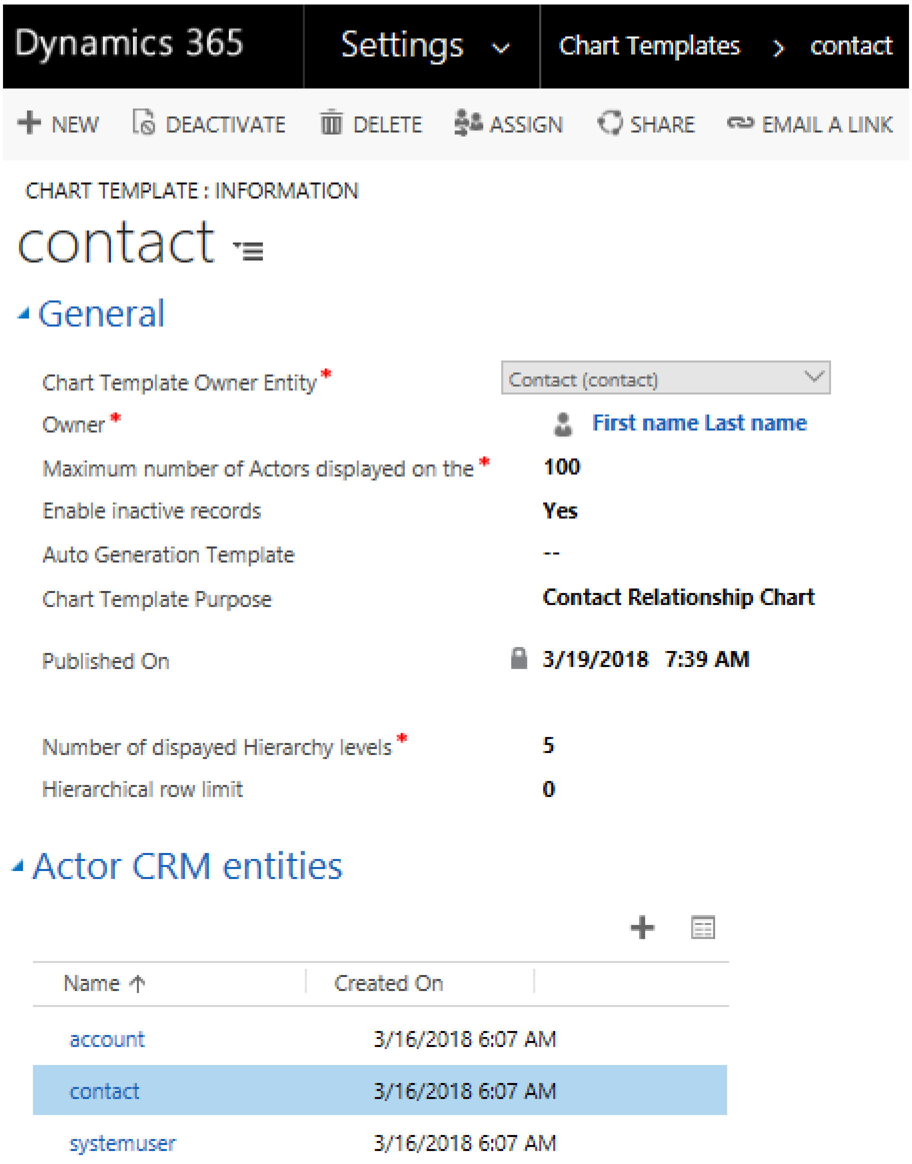


Fig. 5.4 The Relationship Charts Template Form (Actor CRM Entities).

Once you have selected **Actor CRM Entities**, you will be presented with a list of valid Actor entities (see Figure 5.4).

3. To create a new Actor, click + button. A new window will open containing the New Relationship Actor Type Form (see Figure 5.5).

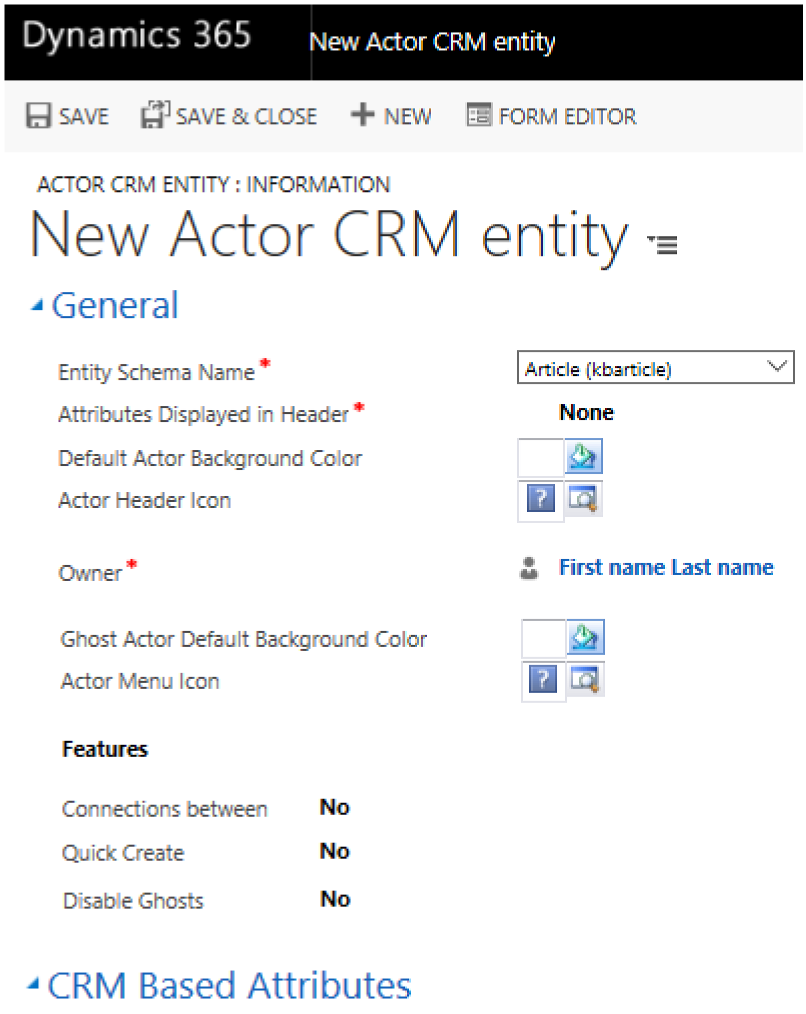
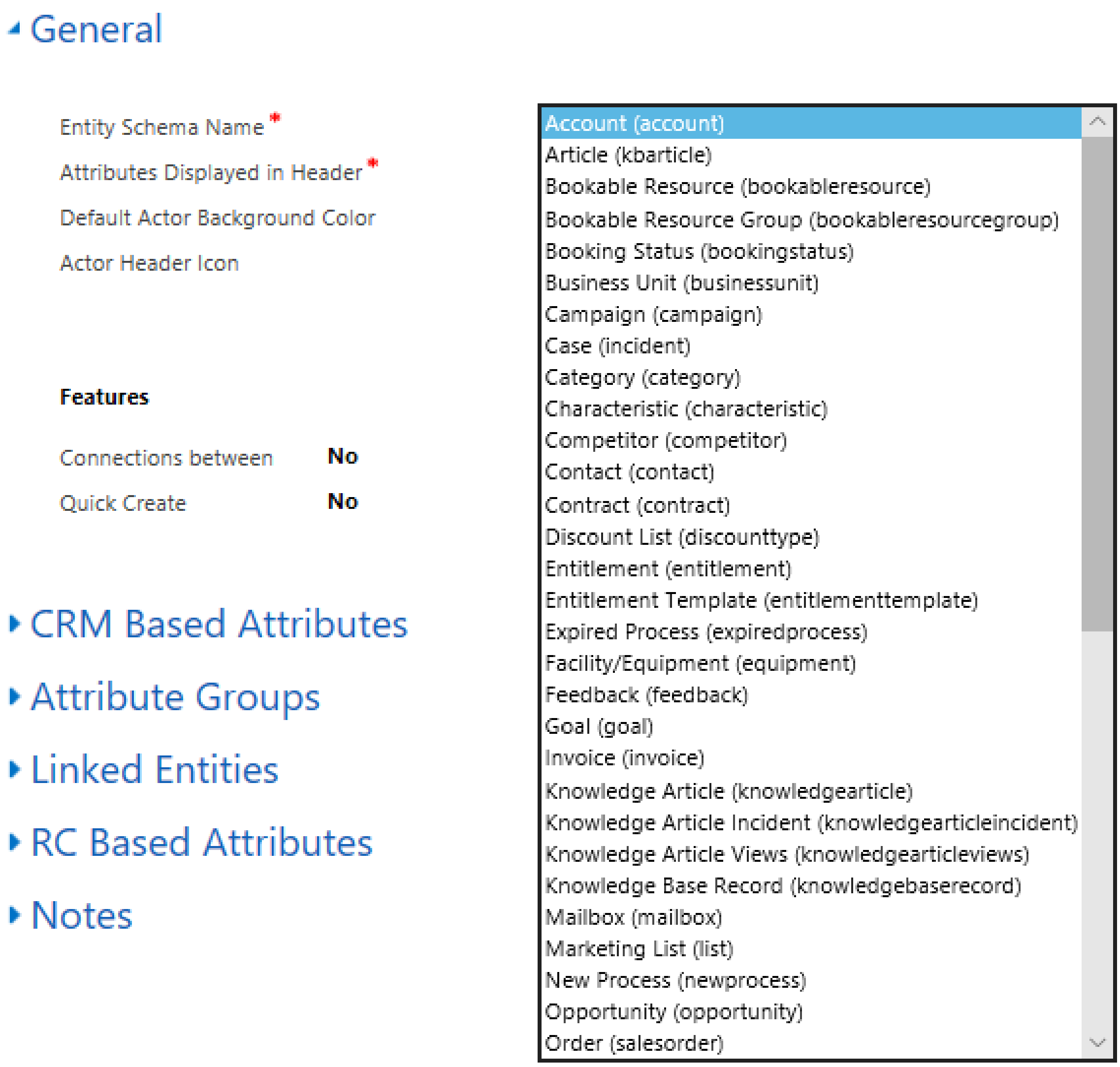


Fig. 5.5 The New Relationship Actor Type Form.

Select **Entity Schema Name** from the drop down list.



This field contains the names of all available CRM entities from which you can create a new Actor Type (See Table 4.1). Click **Save**.

To allow relationships between actors of the newly created Actor Type, and actors of other types, please follow the instructions given in Section 10.3 Creating a Relationship Type Between Entities of Two Specific Types.

6 Display Microsoft CRM based attributes in Relationship Charts

Relationship Charts Actors can be configured to display various Attributes. This section explains how to display Attributes stored within the Contacts and Accounts entities in Microsoft CRM.

1. Go to **Settings** / **Chart Templates**. This will provide you with a list of all the chart types that are currently available.
2. Double click on the **Chart Template** you want to work with. A new window will open containing information about the chart type you have selected. From the list below, select **Actor CRM Entities** (see Figure 6.1).

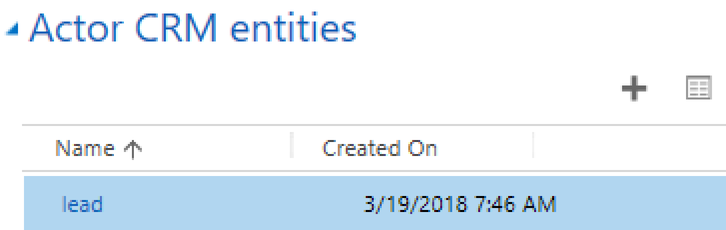


Fig. 6.1 The Relationship Chart Template Form (Actor CRM Entities).

3. Once you have selected **Actor CRM Entities**, you will be presented with a list of valid Actor entities (see Figure 6.1). To open one of these for editing, double click on the row required.
4. A new window will open containing the form for that particular Actor entity. Select **CRM Based Attributes** from the list below (See Figure 5.2).

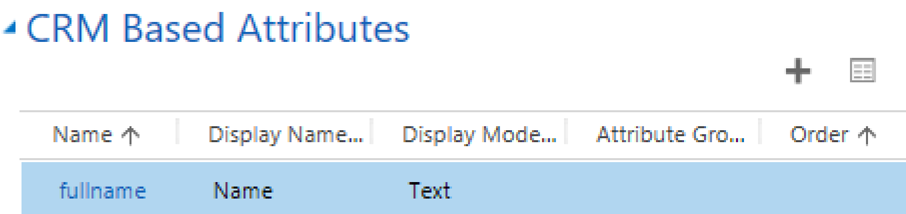
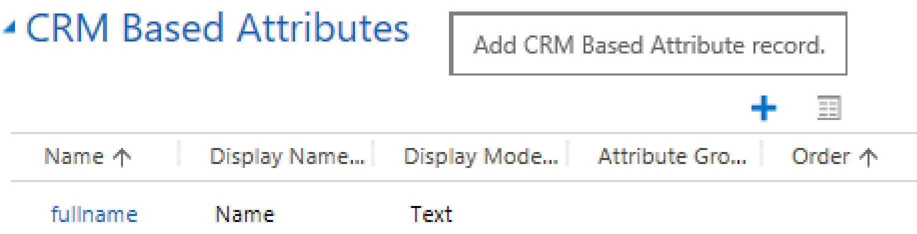


Fig. 6.2 The Actor Form – showing the list of Microsoft CRM based Attributes.

5. Click **Add New CRM Based Attribute**.



6. A new window will open containing the form to add a new Microsoft CRM based Attribute to the Actor you have selected (see Figure 6.3).
Select an existing Attribute from the Actor drop-down list. A breakdown of all fields on this form is given in Table 6.1.

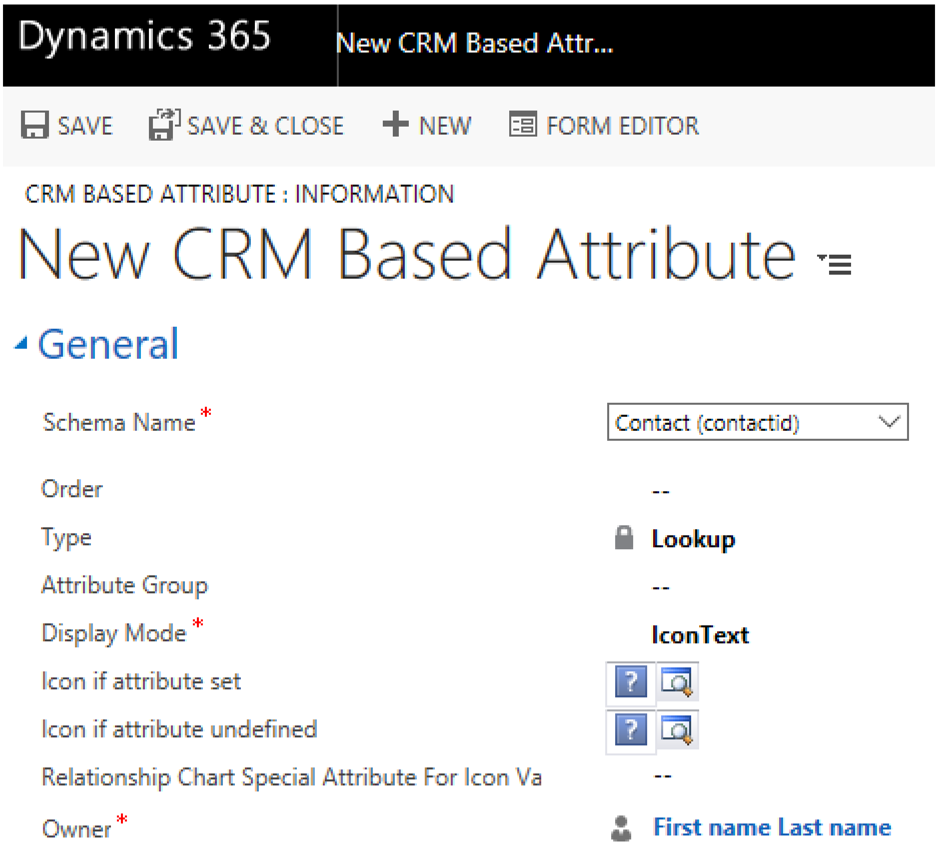


Fig. 6.3 The Add CRM Based Attribute Form (Information).

Click the button to select the Icon if Attribute set and Icon if Attribute undefined from the list:

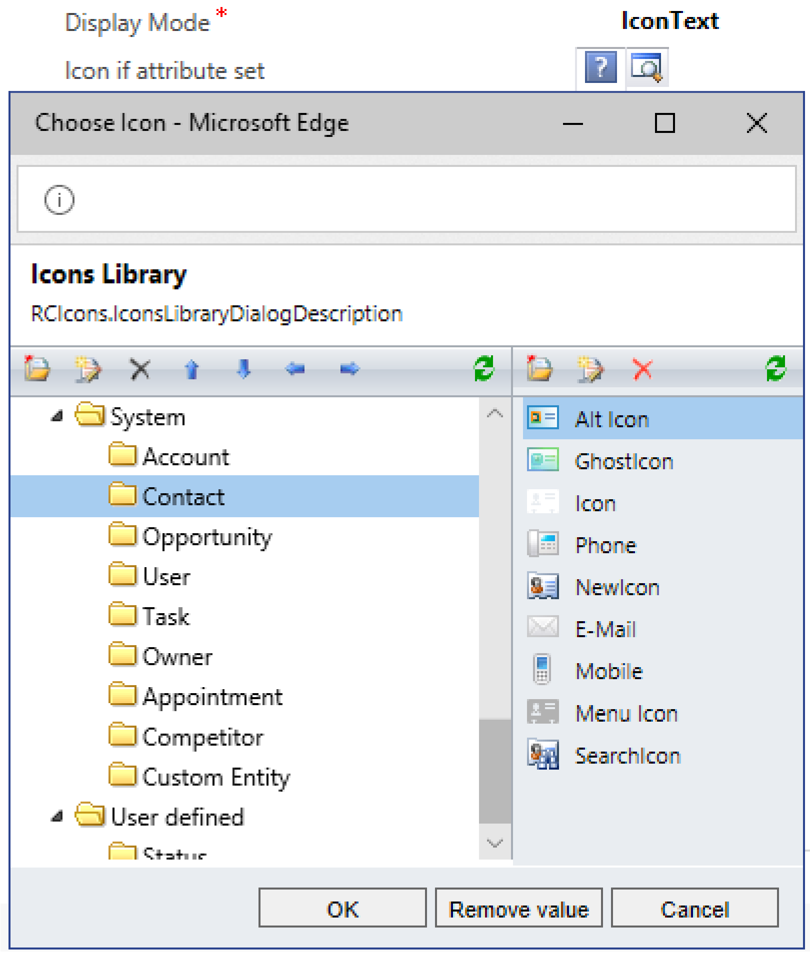
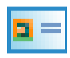


Table 6.1. Summary of all fields on the CRM Based Attribute Form

Field Name	Purpose	Example
Schema Name	Defines the schema name of the Attribute to be displayed on the Actor.	Job Title
Order	Defines the order of attributes on the Actor.	22
Type	Defines the data type of the Attribute to be displayed on the Actor.	String
Attribute Group	Defines the Attribute Group in which this CRM Based Attribute will be displayed. If Attribute Group is not defined then this Attribute will be displayed on the first group tab.	Professional
Display Mode	Defines how Attribute will be displayed on the Actor (Text, Icon, IconText).	IconText
Icon if Attribute set	Defines the icon to be displayed against the Attribute if the value is set. (It will be applied if the Display Mode is set to Icon or IconText).	
Icon if Attribute undefined	Defines the icon to be displayed against the Attribute if the value is undefined. (It will be applied if the Display Mode is set to Icon or IconText).	
Relationship Chart Special Attribute for Icon Values Mapping	It is important that the CRM based attributes are mapped to the exact same Relationship Charts attribute (i.e. the attribute values need to be identical to the CRM based attribute values). Use this lookup to select the Relationship Charts attribute; in order that the icons associated with the mapped values are displayed. Select the icon Attribute name from the list by clicking on the Lookup  button.	

7. Click **Save and Close**. The selected Attribute should now appear in the CRM Based Attributes list on the Actor Entity Form.

Relationship Charts Special Attribute for Icon Values Mapping functionality is not used in the standard Relationship Charts configuration (since there is no way the system can know what attributes and attribute values have been set up in CRM). However, given that it adds significant value by adding more graphically displayed information to Relationship Charts, please find a short instruction below on how to use it:

1. **Create the Relationship Charts Specific attribute (see Section 7).**
2. **Create the Relationship Charts Specific attribute values matched to the values of the CRM attribute.**
3. **Select this attribute in the "Relationship Charts Special Attribute for Icon Values Mapping" field.**

7 Create a Relationship Charts specific attribute

This section details how to create and define Relationship Charts specific Attribute. For example, the 'Met' Attribute is defined to represent when a user has met with a particular Contact. In this section, you define the list of all Attributes available for Actors and chart templates. Attributes must be created in accordance with this section before the Administrator is able to associate them with a specific Actor/Relationship and Chart Template.

1. Go to **Settings** / **Relationship Chart Attributes**. You will see a list of all active Relationship Charts Attributes (see Figure 7.1).

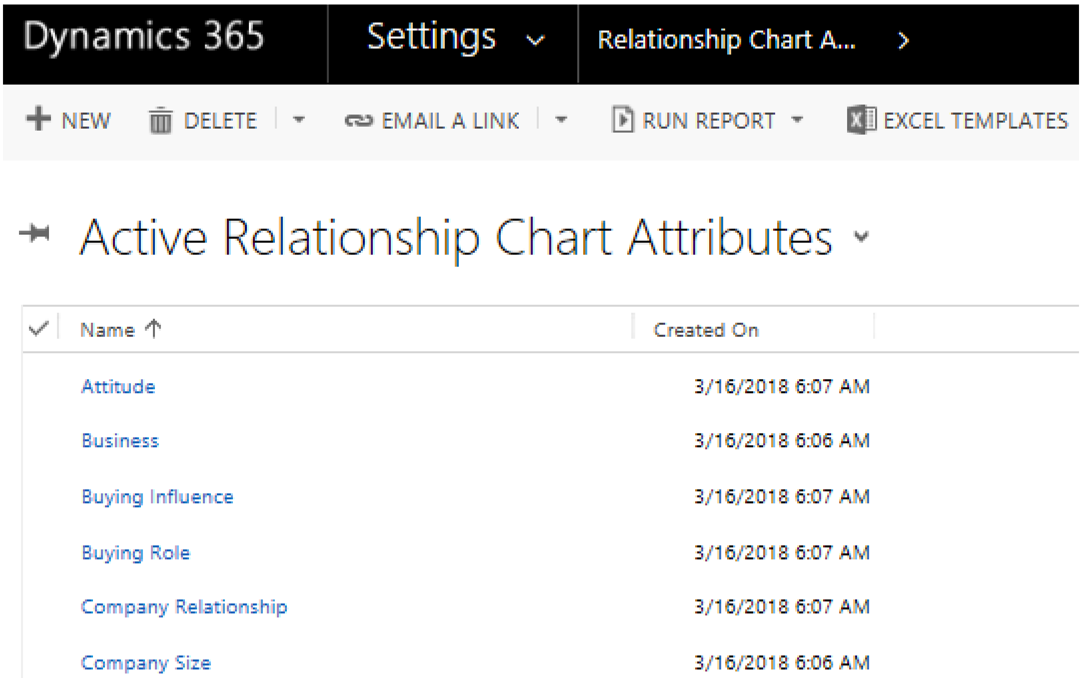


Fig. 7.1 Listing of all Relationship Charts Attributes.

2. Click the **New** button in the ribbon.
3. A new window will open, presenting you with the Relationship Charts Attribute Form (see Figure 7.2). Table 7.1 gives a breakdown of all fields on this form. When finished, click **Save and Close**.

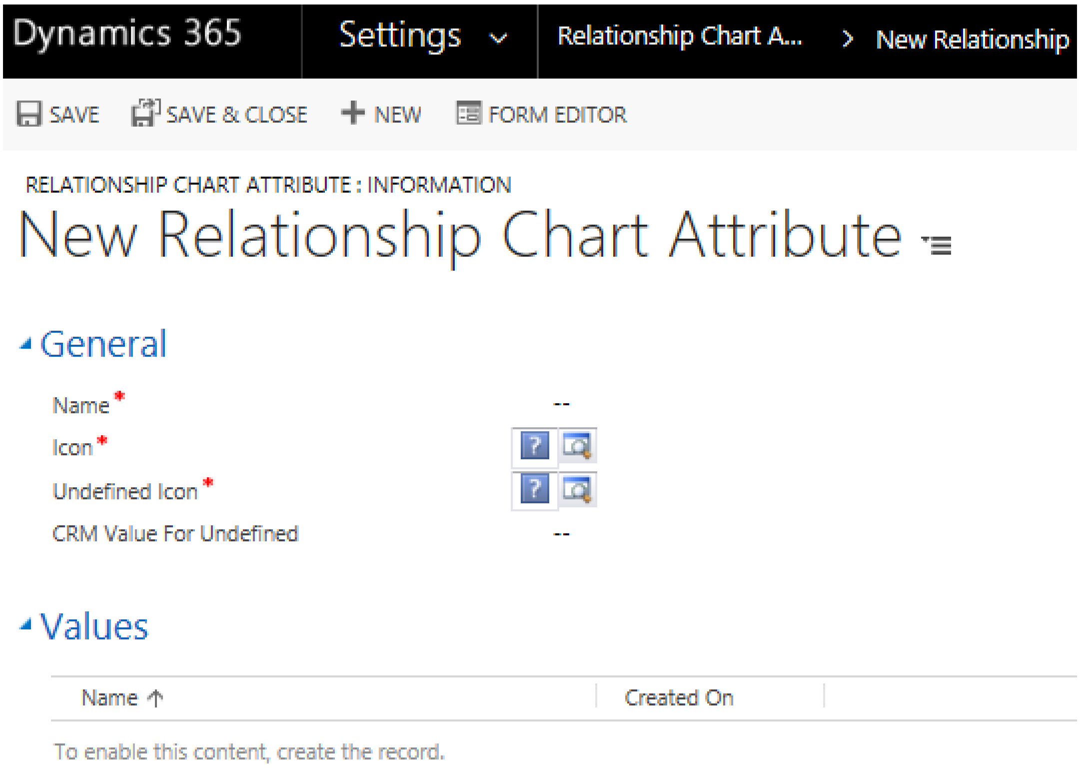


Fig. 7.2 The Relationship Charts Attribute form.

Table 7.1. Summary of all fields on the CRM Based Attribute Form

Field Name	Purpose	Example
Name	Defines the display name of the new Attribute.	Company Relationship
Icon	Defines the icon to be displayed against the Attribute if the value is set.	
Undefined Icon	Defines the icon to be displayed against the Attribute if the value is undefined.	
CRM Value for undefined.*	Connection role that will be created between two Actors, if this Attribute is used in a relationship, and is undefined on a chart.	No Company Relationship Defined

* This value will not be used if the Attribute is displayed on an Actor, and will only be used when the Attribute is used in a relationship between two Actors.

4. Click **Save**. Now when you have added your Relationship Charts Attribute, you must add the values that will be associated with it. To do this, click the **Relationship Chart Attribute Values** option from the left-hand menu. This will present you with a list of all values for that particular Attribute (see Figure 7.3).

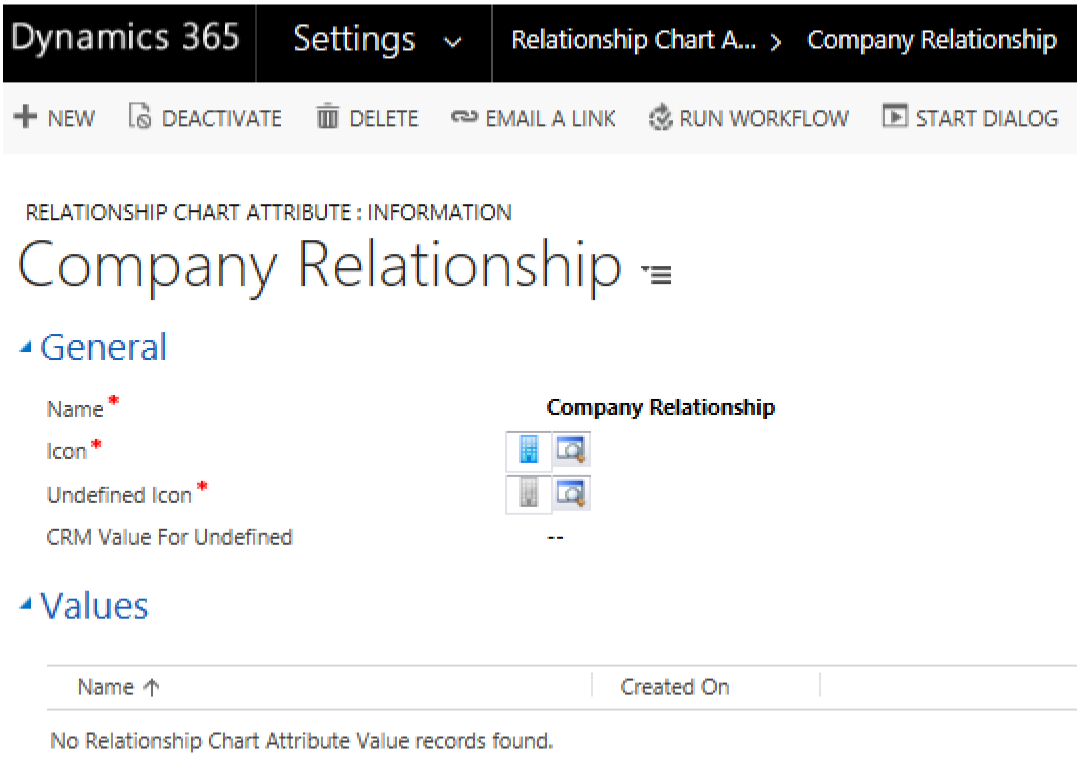


Fig. 7.3 The list of Relationship Charts Attribute Values for the 'Company Relationship' Attribute.

To create a new Attribute Value click **New Relationship Chart Attribute Value**.

5. A new window will open, presenting you with the Relationship Charts Attribute Value Form (see Figure 7.4). Table 7.2 gives a breakdown of all fields on this form. When finished, click **Save and Close**.

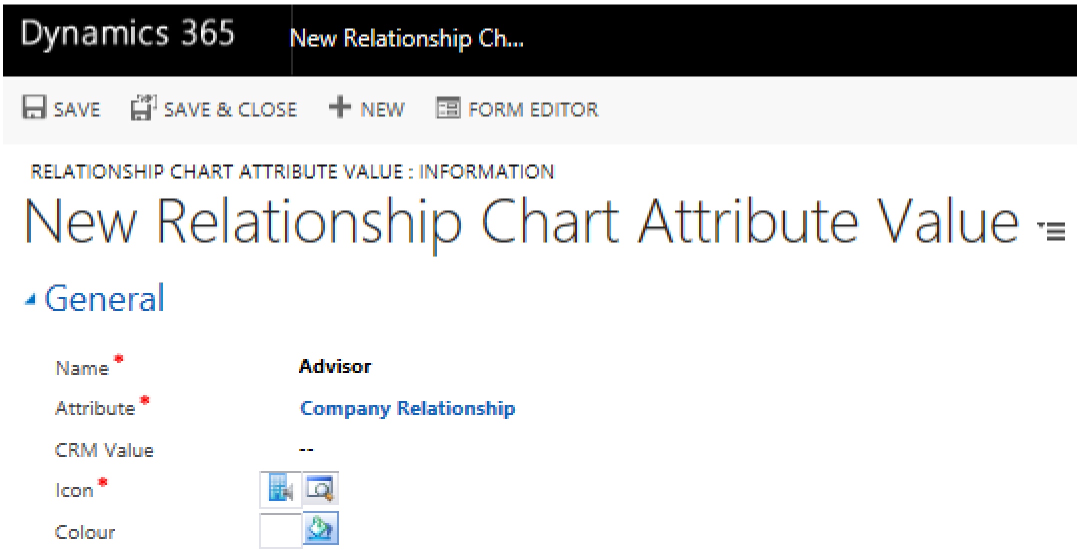


Fig. 7.4 The Relationship Charts Attribute Value Form.

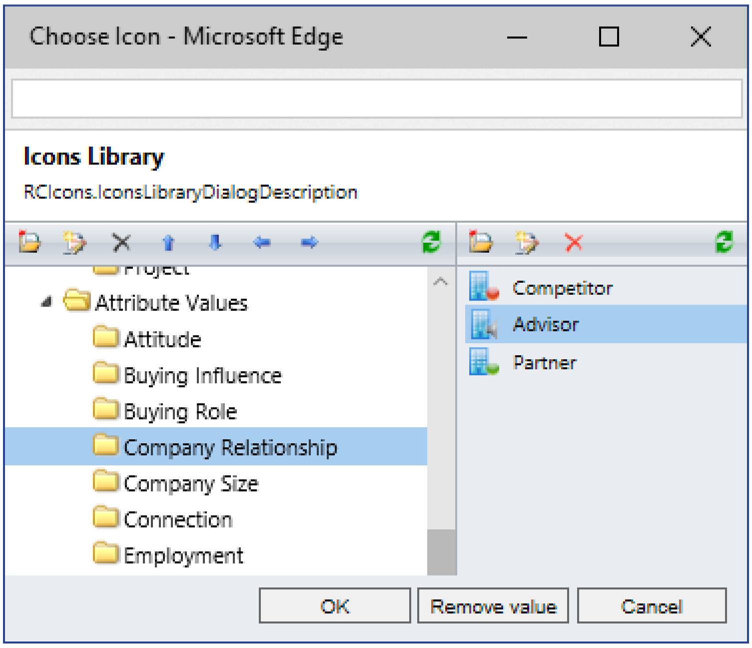


Table 7.2. Summary of all fields on the CRM Based Attribute Form

Field Name	Purpose	Example
Name	Defines the display name of the new Attribute value.	Advisor
Attribute	Defines the attribute to which this value refers.	Company Relationship
CRM Value	The connection role that will be created between two Actors, if this Attribute value is used in a relation and is defined on a chart. It is extremely important to select CRM value here if you want to save this created connection in the Connection/ Relationship entity.	Advisor
Icon	Defines the icon that will appear on the Actor and/or relation when this value is selected.	
Color	Defines the background color of the Actor section containing the Attribute when this value is selected.	

6. Add more Attribute values using steps 3 – 5.
7. Created Attribute values are now listed in the **Relationship Charts Attribute Values** section (see Figure 7.3).

8 Display a Relationship Chart specific attribute on an Actor

The previous section explained how to create a list of Attributes to be used for any Actor or relationship. This section explains how to associate any of those Attributes with specific Actors.

1. Go to **Settings** / **Chart Templates**.
2. Choose a Chart Template in the list and double click on it. A new window will open containing the **Relationship Charts Template** form (see Figure 8.1). Select the entity from the **Actor CRM Entities** list.

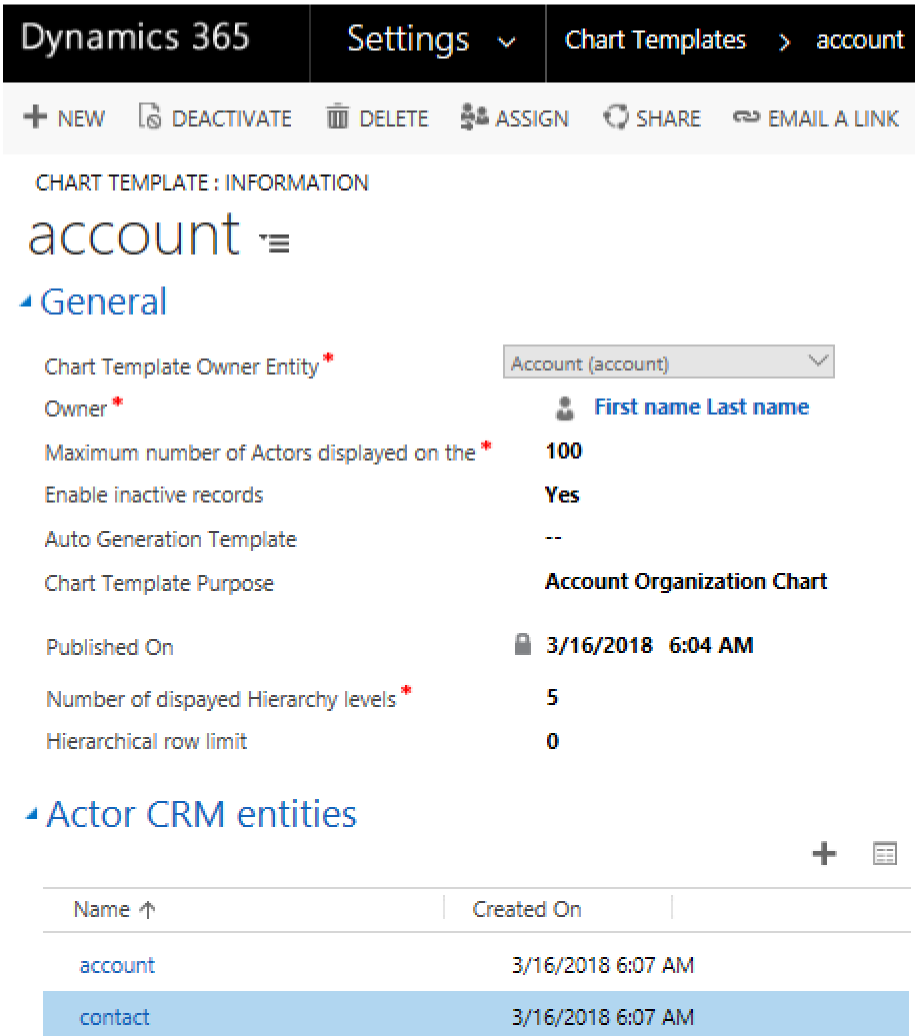


Fig. 8.1 The Relationship Charts Template Form.

3. Choose an Actor type in the grid and double click on it.
4. A new window will open containing the Relationship Charts Actor form. Select **RC Based Attribute** from the list of **RC Based Attributes** (see Figure 8.2).

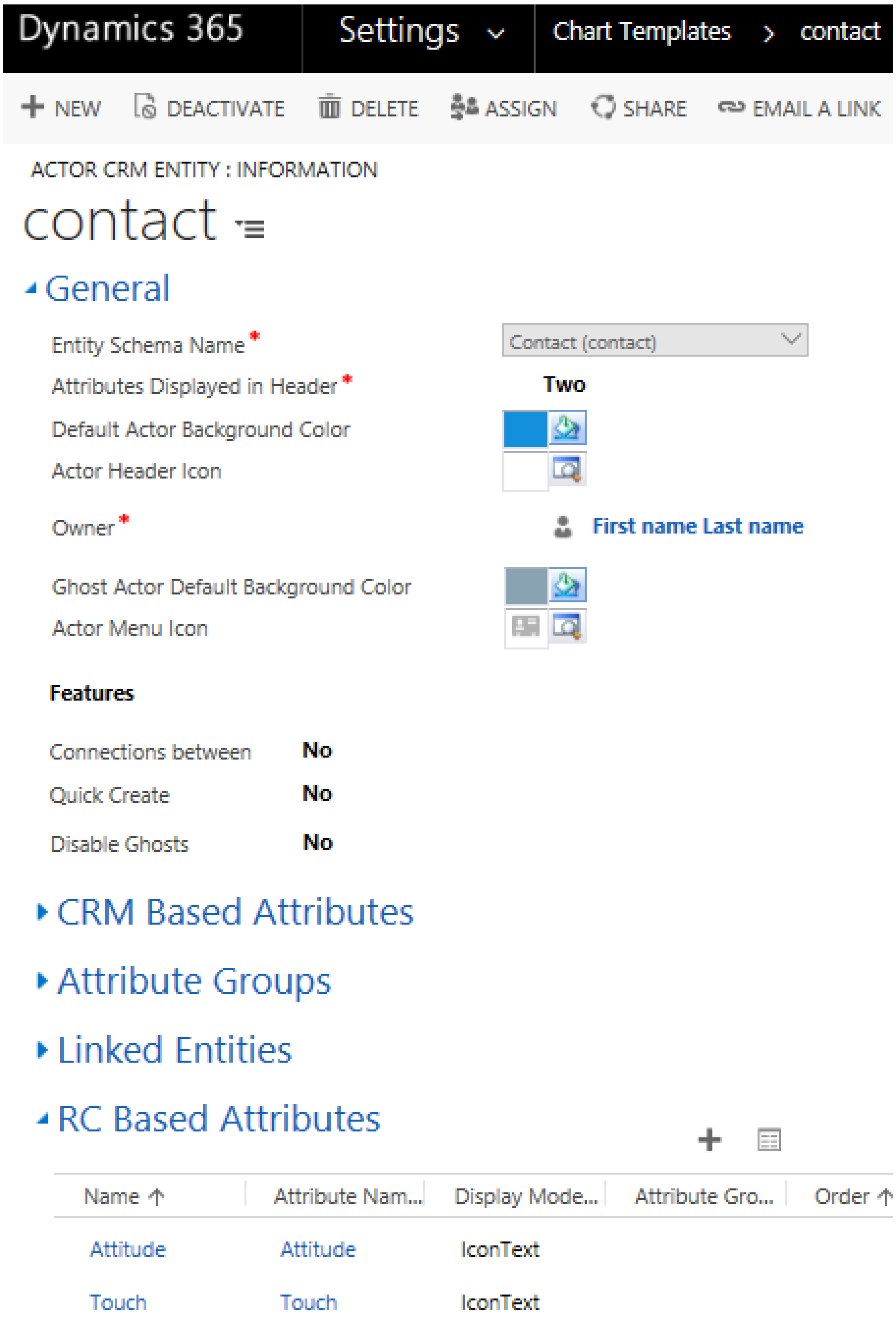


Fig. 8.2 The Actor form, displaying a list of all RC Based Attributes for the Contact entity.

5. Click + NEW to add new **RC Based Attribute**. A new window will open containing the Add Relationship Charts Attribute form (see Figure 8.3). Use the look up ( ) to choose Attribute Name (see Figure 8.4). A breakdown of all the fields on the form is given in Table 8.1.

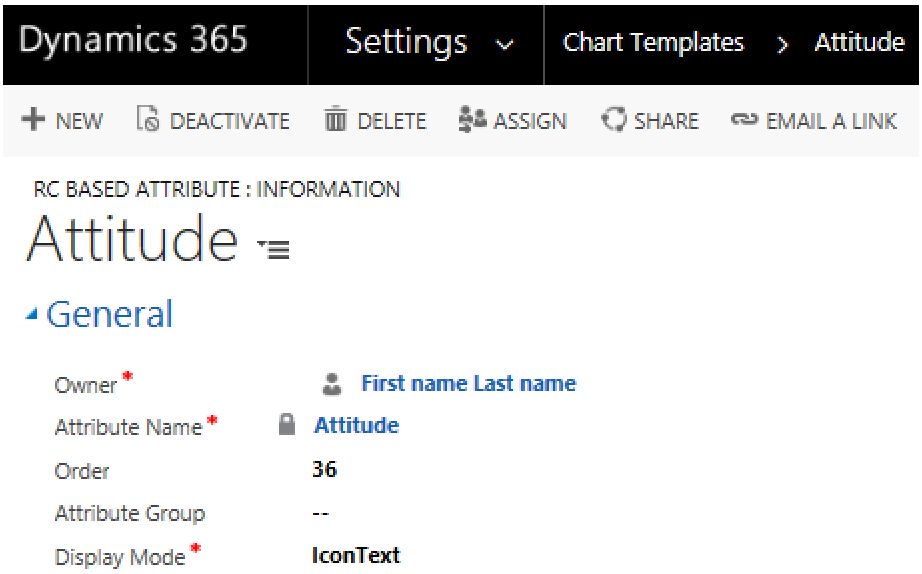


Fig. 8.3 The Add New RC Based Attribute Form.

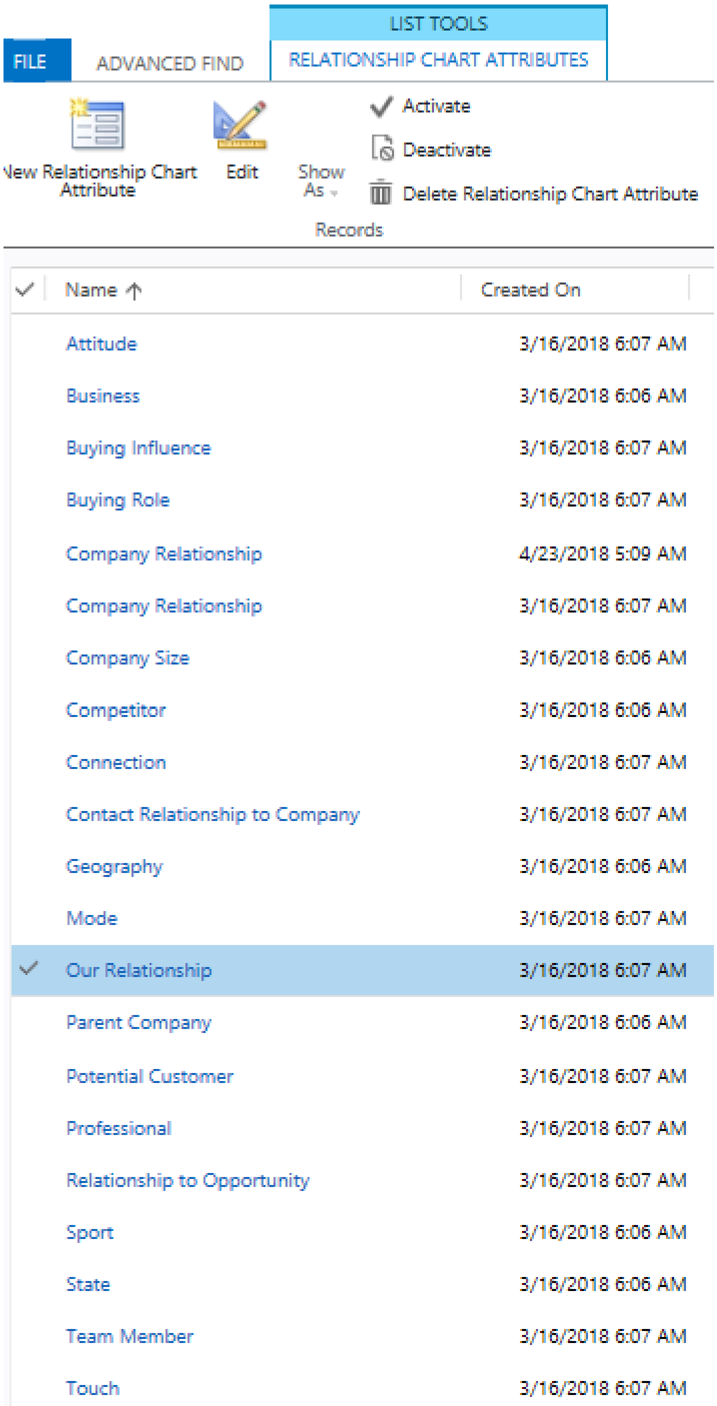


Fig. 8.4 A list of all Relationship Charts Attributes.

Table 8.1. Summary of all fields on the Add Relationship Charts Attribute Form

Field Name	Purpose	Example
Owner	Defines the CRM user name.	Arnold Johnson
Attribute Name	Defines the display name of the new Attribute value.	Our Relationship
Order	Defines the order of attributes on the Actor.	37
Attribute Group	Defines the Attribute Group in which this Relationship Chart Attribute will be displayed. If Attribute Group is not defined then this RC Based Attributed will be displayed on the first page.	Not defined
DisplayMode	Defines how Attribute will be displayed on the Actor. Figure 8.5 shows how each of the display types is represented on an icon.	Icon

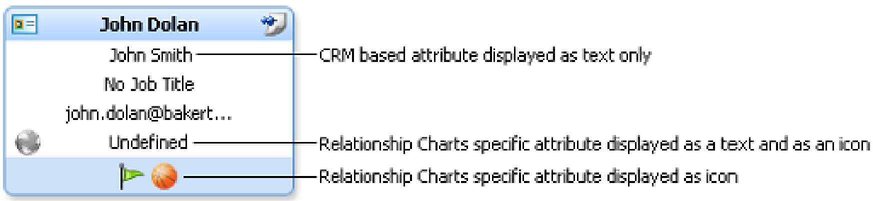


Fig. 8.5 A Contact Actor showing the different Attribute display types.

6. Click **Save and Close**. Now the new Attribute will appear in the Attributes list for that particular Actor.
7. Publish the template to see the changes on Relationship Chart.

9 Display a Linked entity attributes in Relationship Charts

This section details how to add linked entity and linked entity attributes to Relationship Charts.

Linked entity usage strongly depends upon the relationship between the Relationship Chart Actor entity and the Linked Entity, there are two different options:

- The Relationship Chart Actor only has a relationship with one Linked Entity.
- The Relationship Chart Actor may be in a relationship with many Linked Entities.

Linked Entity attributes will be shown on the Relationship Chart Actor, but it is strongly recommended to use the first option (the Relationship Chart Actor has a relationship only with one Linked Entity) to ensure the Chart has a predictable look and behaviour. Below are the steps to set up this option for an Account Linked Entity on a Contact Relationship Chart Actor:

1. Go to **Settings** / **Chart Templates**. This will provide you with a list of all the chart types that are currently available (see Figure 9.1).

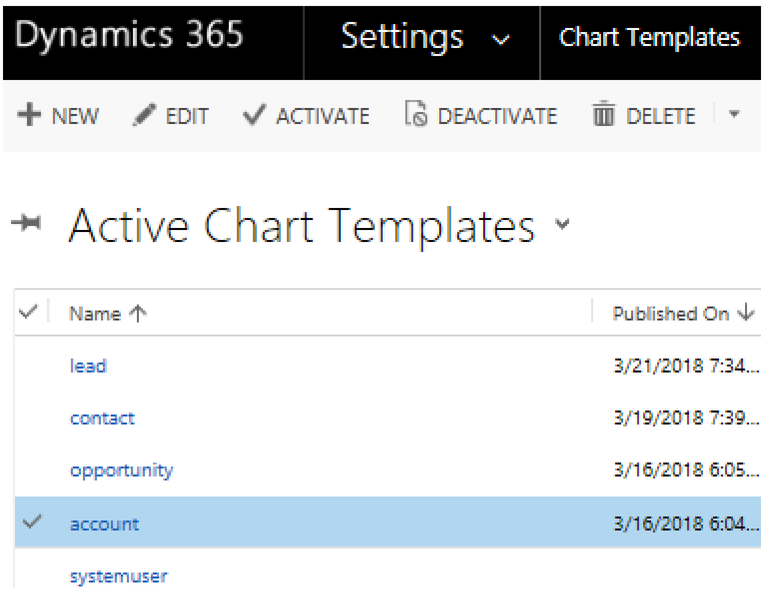


Fig. 9.1 The Chart Templates Form.

2. Double click on the Chart Template you want to work with. A new window will open containing information about the chart type you have selected. From the list, select **Actor CRM Entities** (see Figure 9.2).

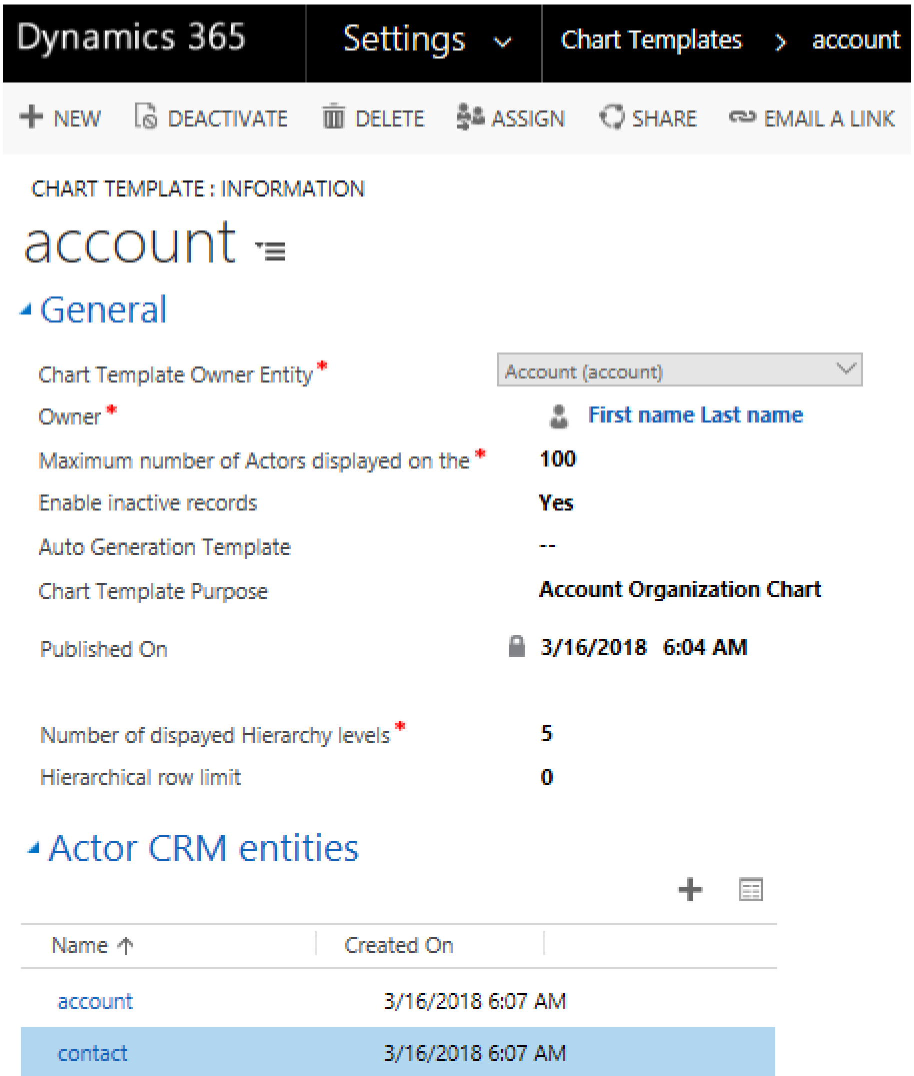


Fig. 9.2 The Relationship Chart Template Form (Actor CRM Entities).

3. To open one of these for editing, double click on the row required.
4. A new window will open containing the form for that particular Actor entity. Select **Linked Entities** from the list (See Figure 9.3).

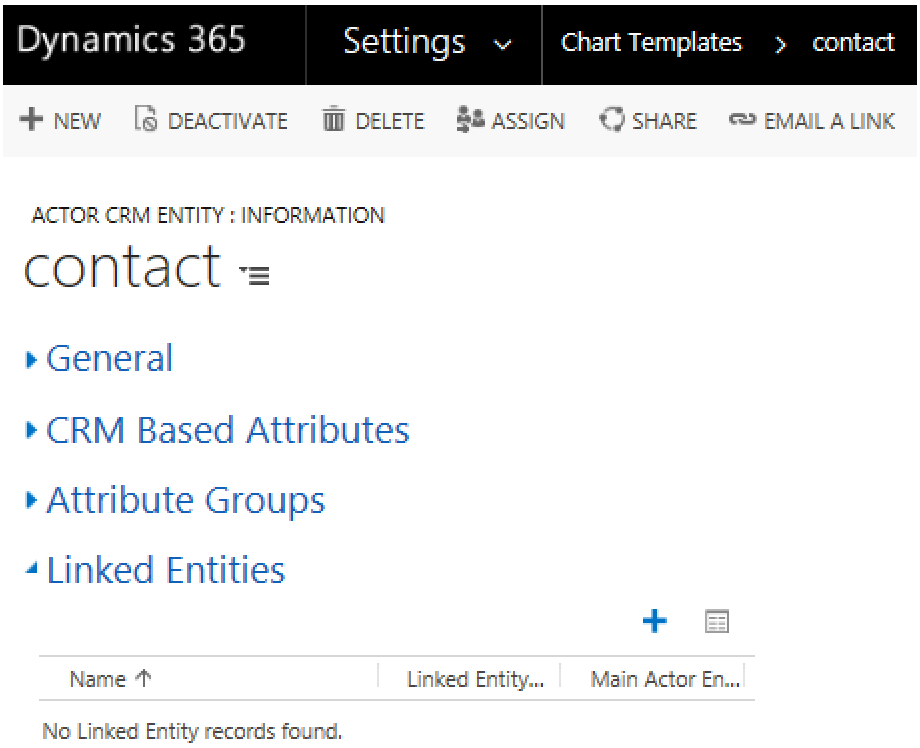


Fig. 9.3 The Actor Form – showing the list of Linked Entities.

5. Click the + button to create **New Linked Entity**.
6. A new window will open containing the form to add a new Linked Entity to the Actor you have selected. Select the Linked Entity Name and Main Actor Attribute For Relationship from the drop down list (see Figure 9.4).

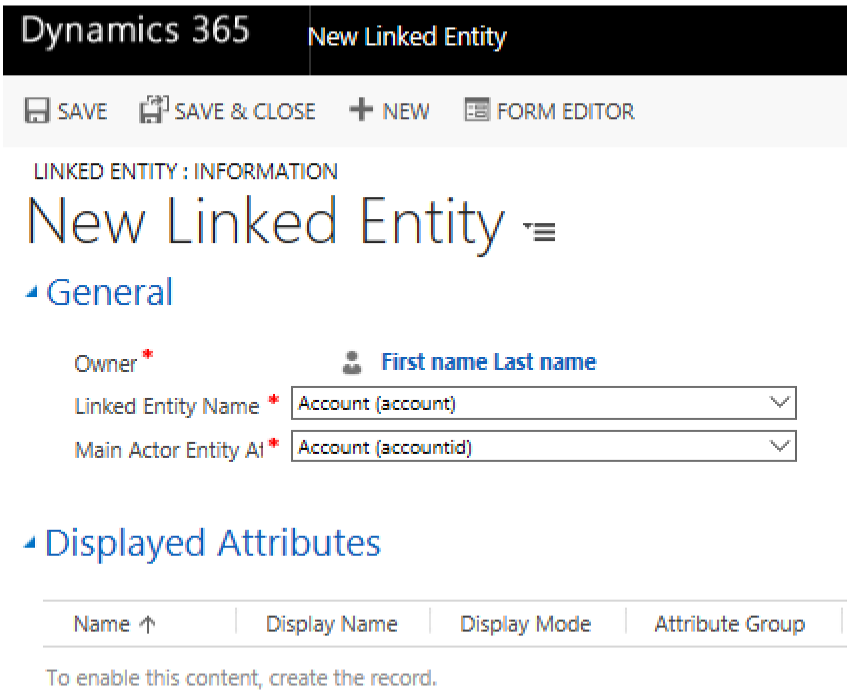


Fig. 9.4 The Add Linked Entity name Form.

7. To add Linked Entity attributes go to Displayed Attributes.

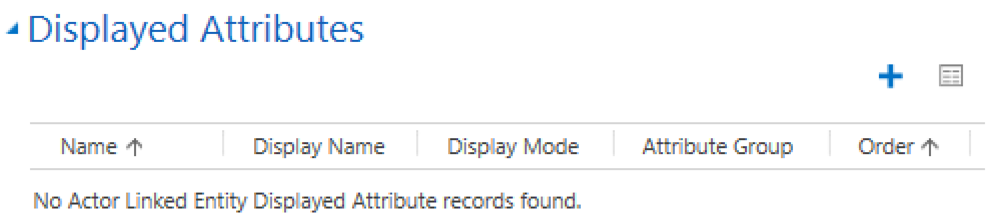
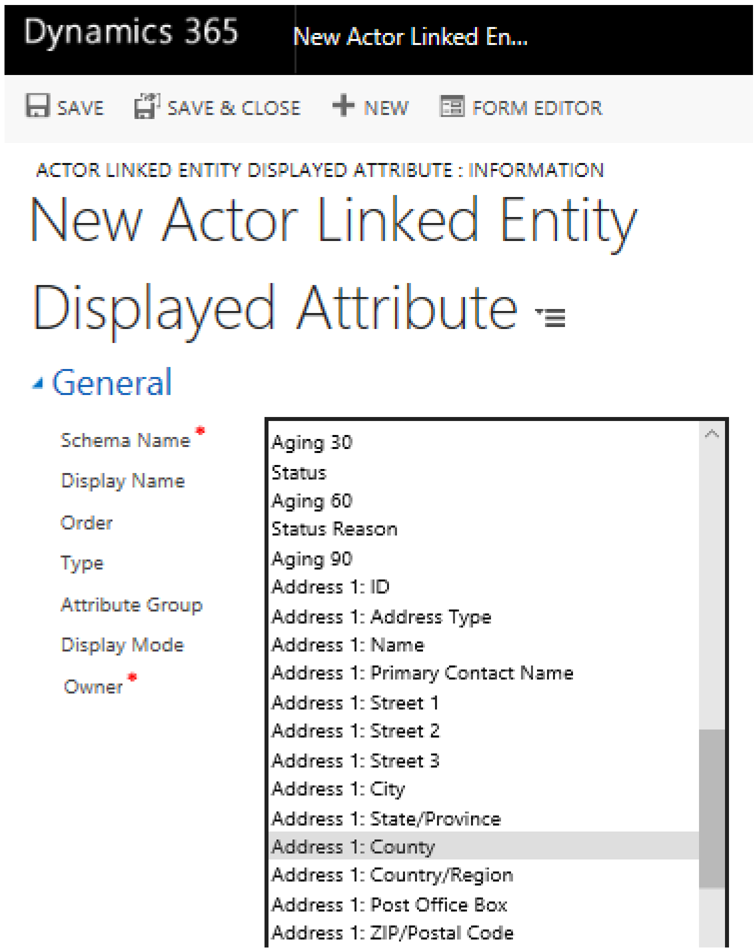


Fig. 9.5 The Linked Entity Displayed Attributes View.

8. To add a new attribute click + .
9. Select a Linked Entity Attribute from the drop-down list.



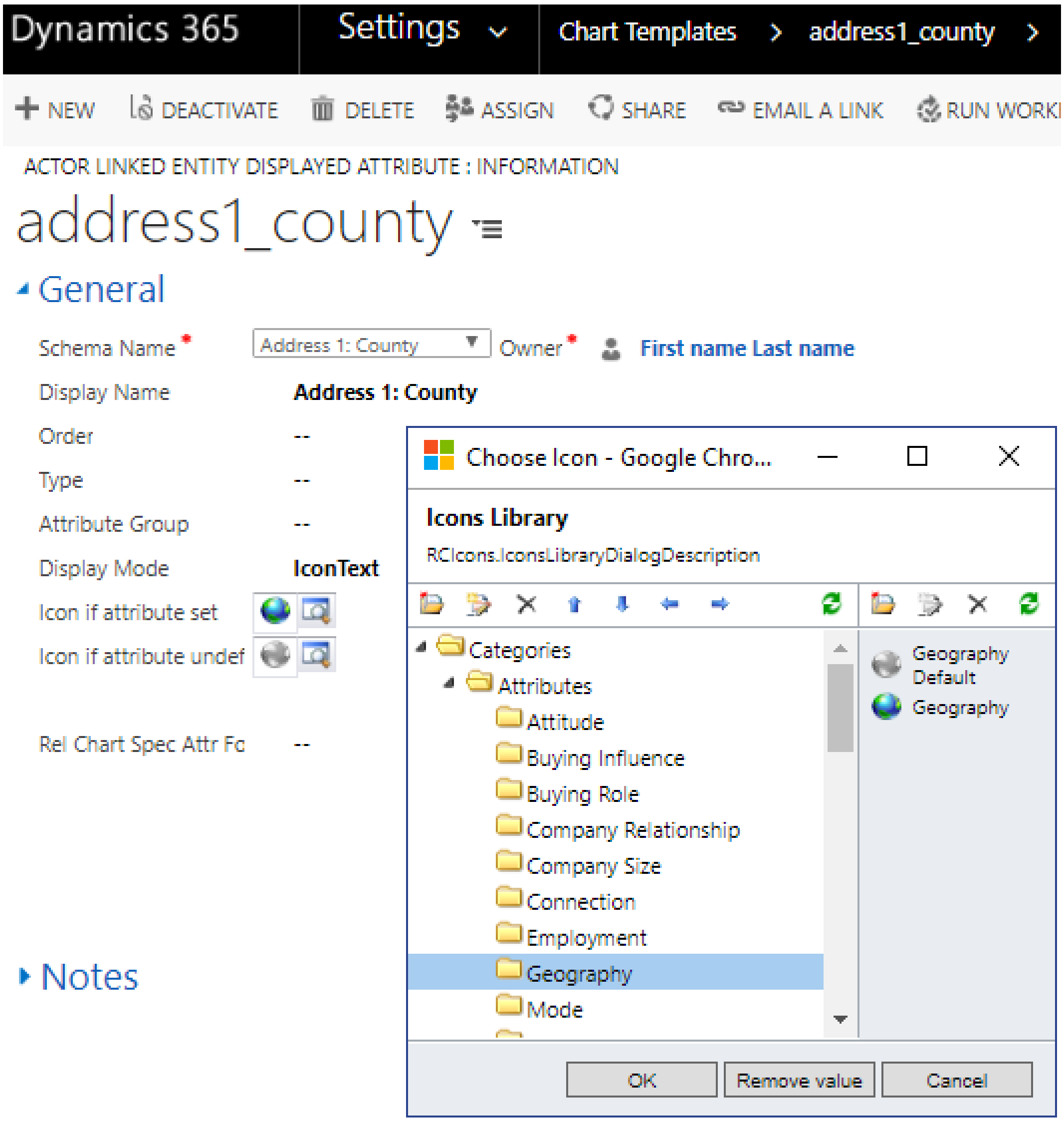
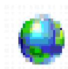


Fig. 9.6 The Add Linked Entity Attribute Form (Information).

A breakdown of all fields on this form is given in Table 9.1.

Table 9.1 Summary of all fields on the Add Linked Entity Attribute Form

Field Name	Purpose	Example
Schema Name	Defines the schema name of the Attribute to be displayed on the Actor.	Address1: Country
Display Name	Defines how the name will be displayed on an Actor.	Address1: Country
Order	Defines the order of attributes on the Actor.	10
Attribute Group	Defines the Attribute Group in which this attribute will be displayed.	Not defined
Type	Defines the data type of the Attribute to be displayed on the Actor.	String
Display Mode	Defines the display type of the Attribute to be displayed on the Actor (Text, Icon, IconText).	IconText
Icon if Attribute set	Defines the icon to be displayed against the Attribute if the value is set. (It will be applied if the Display Mode is set to Text or IconText).	
Icon if Attribute undefined	Defines the icon to be displayed against the Attribute if the value is undefined. (It will be applied if the Display Mode is set to Text or IconText).	
Relationship Chart Special Attribute for Icon Values Mapping	This option enables to extend Icons set for Linked Entity displayed attribute beyond two icons described above, it is possible to display specific Icon for each attribute value. Mapping of different icons to Linked Entity attribute value is performed via Relationship Charts attribute. Linked Entity attributes values are mapped to Icons using exact matching of Linked Entity attributes values and Relationship Charts attribute names. Use this lookup to select the Relationship Charts attribute; in order that the icons associated with the mapped values are displayed. Select the icon Attribute name from the list by clicking on the Lookup  button.	

10. Click **Save and Close**. The selected Attribute should now appear in the Linked Entity Attributes list.

10 Edit relationship between Actors

10.1 Hierarchical relationships

This section explains how to create Hierarchical relationships between Actors. It also describes how to change other relationship settings between Actors.

Go to **Settings** and choose **Chart Templates**.

1. Double click on a Chart Template in the list. A new window will open containing the Chart Template form. Select **Displayable Relationship Types** from the left-hand menu. A list of all valid relationship types for the current Chart Template will be displayed on the righthand side of the screen (see Figure 10.1).

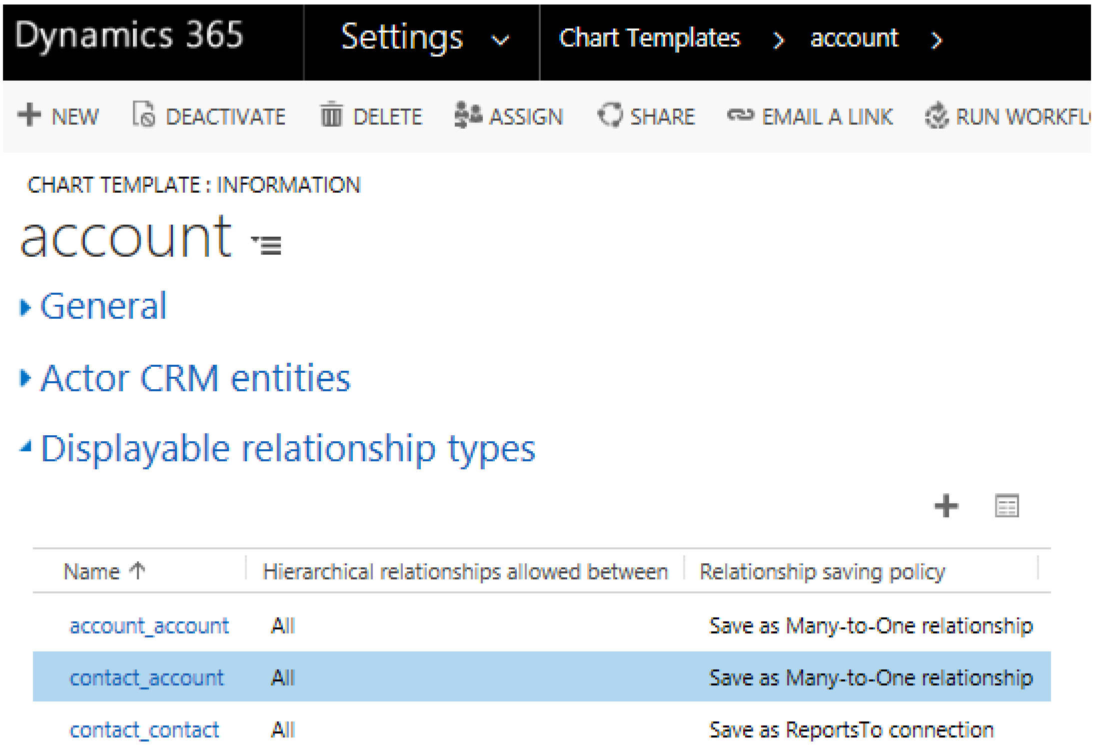


Fig. 10.1 The Chart Template Form – Displaying a list of all valid Relationship Types.

2. To edit a particular relationship type, double click on the row required. A new window will open containing the Displayable Relationship Type form (see Figure 10.2). A breakdown of all the fields on this form is given in Table 10.1.

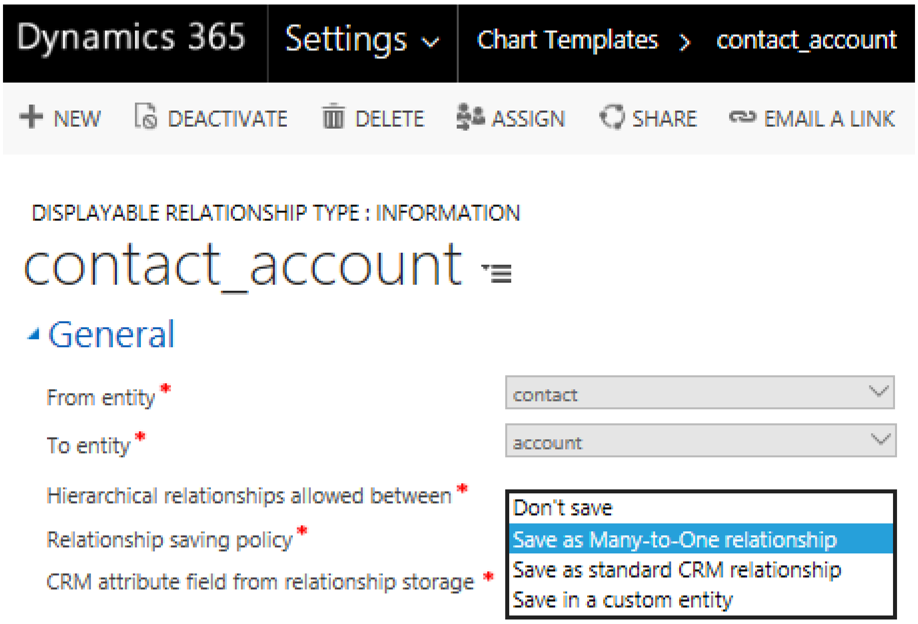


Fig. 10.2 The Displayable Relationship Type Form.

Table 10.1. Summary of all fields on the Displayable Relationship Type Form

Field Name	Purpose	Example
From Entity	Defines the first entity in this relationship.	Contact
To Entity	Defines the second entity in this relationship.	Account
Hierarchical relationships allowed between	Defines the rules that control which relationships are valid between Actors and ghost Actors. Table 9.2 gives a breakdown of the available values.	All
Relationship Saving policy	Defines whether this relationship role will be saved between the Actor entities when this relationship is defined on a chart. Table 10.3 gives a breakdown of the available values	Save as ReportsTo connection

Table 10.2. A breakdown of the values for the 'Alternative Relationships allowed between' field

Values	The possibility of creating alternative relationships		
	From Entity to Entity	From Entity to Ghost (two-way relationship)	From Ghost to Ghost
All	Yes	Yes	Yes
Entities Only	Yes	No	No
Ghosts Only	No	No	Yes
Mixed Only	No	Yes	No
Except Entities	No	Yes	Yes
Except Ghosts	Yes	Yes	No
Except Mixed	Yes	No	Yes
None	No	No	No

Table 10.3. Summary of all values of the Relationship Saving Policy field

Relationship Saving Policy	Description
Don't save	Will not save the relationships in MS CRM, they will be saved with the chart definition only, and won't be available on this chart later.
Save as ReportsTo connection	Will save the relationships in the built-in Connections entity as connection with ReportsTo role (will use standard Microsoft Relationships Storage).
Save as Many-to-One relationship	Will save the relationships in MS CRM (they will be stored in the subordinate entity attribute, which contains id of the parent entity). The description of these fields is given in Table 10.5.
Save as a standard CRM connection	Will save the relationships in the built-in Connections entity (will use standard Microsoft Relationships Storage).
Save as a standard CRM relationship	Will save the relationships in the built-in Customer Relationships entity (will use standard Microsoft Relationships Storage).
Save in a custom entity	Will save the relationships in MS CRM (they will be stored in a special custom entity which needs to be created by the MS CRM Administrator). When this option is selected, additional fields will be shown on the form to select storage entity and to configure its relationship attributes. The description of these fields is given in Table 10.4.

Table 10.4. Custom relationship store entity configuration fields

Field Name	Purpose	Example
Relationship storage CRM entity	Select the entity where the relationship is stored from the dropdown list in the “Entity” field.	new_usercontact
CRM attribute field from relationship storage CRM entity to link with the "From" CRM entity	Select the field which is used in the selected Entity for building relationships with the business object indicated in the “From Entity” attribute of the Relationship (the foreign key for the 1st of the business object which participates in the relationship being described) from the dropdown list in the “From” field.	new_contactid
CRM attribute field from relationship storage CRM entity to link with the "To" CRM entity	Select the field which is used in the selected Entity for building relationships with the business object indicated in the “To Entity” attribute of the Relationship (the foreign key for the 2nd of the business object which participates in the relationship being described) from the dropdown list in the “To” field.	new_userid
Relationship value CRM attribute	Select the field which is used in the selected Entity as the relationship value. (For a standard CRM relationship this is a role field and for the custom entity this can be any field).	new_connection

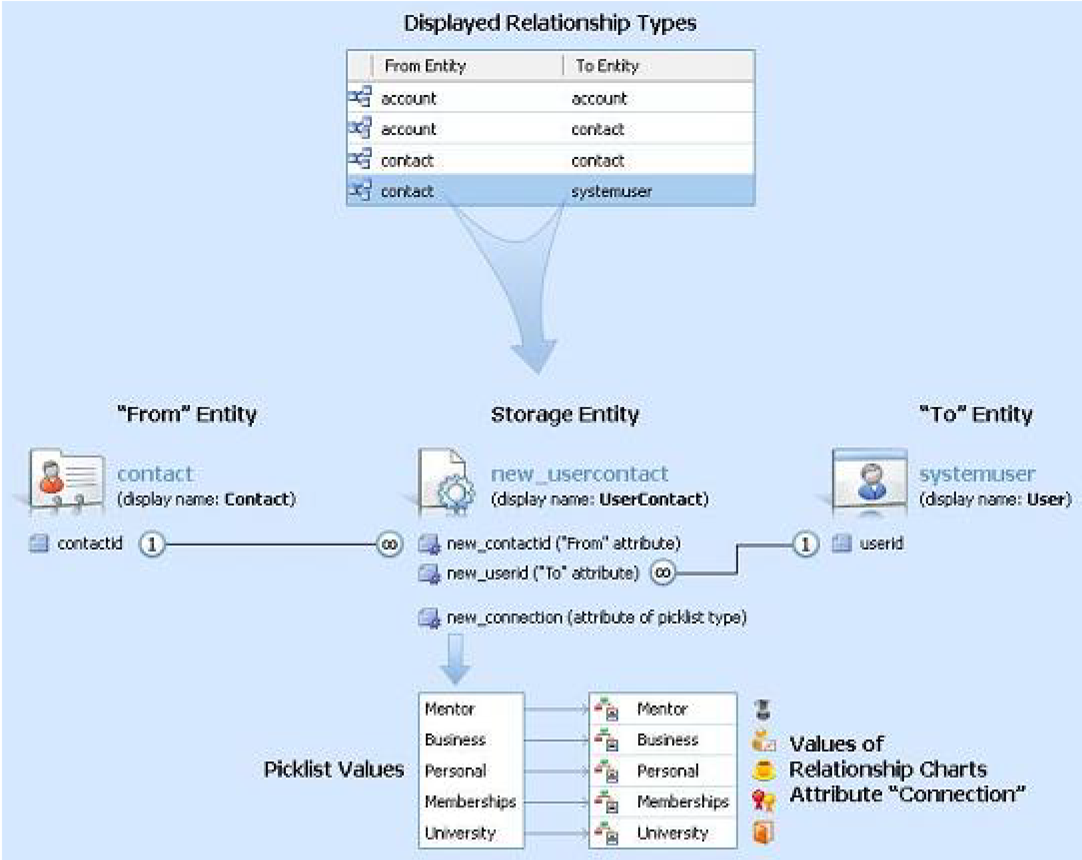


Fig. 10.3 Configuring Saving Relationships in a Custom Storage Entity.

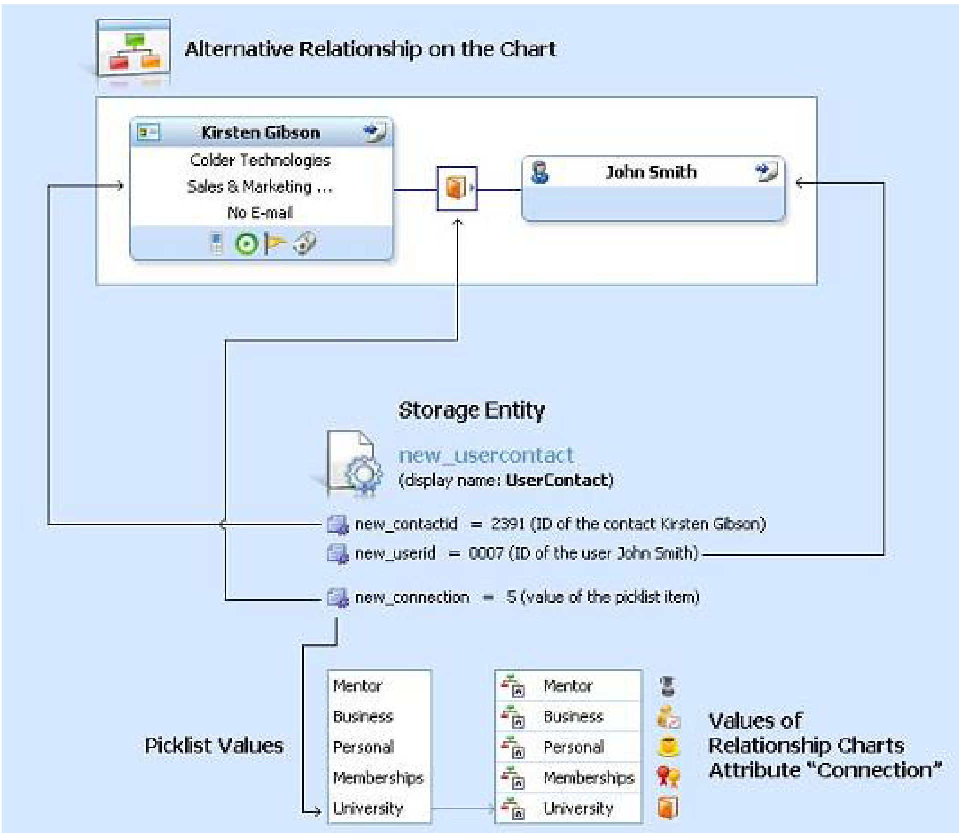


Fig. 10.4 Displaying alternative Relationship Attributes saved in a Custom Storage Entity on the Chart

Table 10.5. Many-to-One configuration fields

Field Name	Purpose	Example
Relationship storage CRM entity	Select the subordinate entity from the dropdown list in the “Entity” field.	contact
CRM attribute field from relationship storage CRM entity to link with the "To" CRM entity	Select the field that is used in the selected Entity for building relationships with the business object indicated in the “From Entity” attribute of the Relationship (attribute that contains “From entity” ID).	accountid

3. When all the parameters of the Displayed Relationship Attribute are set, click Save and Close to save the created relationship. Now it appears in the relationship chart.

10.2 Alternative relationships

This section explains how to select an Attribute and associate it with a specific relationship between Actors. It also describes how to change other relationship settings between Actors.

1. Go to **Settings** and choose Chart Templates.
2. Double click on a Chart Template in the list. A new window will open containing the Chart Template form. Select Displayable Relationship Types from the list (see Figure 10.1).
3. To edit a particular relationship type, double click on the row required. A new window will open containing the Displayable Relationship Type form (see Figure 10.2). A breakdown of all the fields on this form is given in Table 10.1.

To add new Attributes to the relationship type, click on Displayed Attributes from the left-hand menu. A list of all currently valid Relationship Chart Attributes will appear in the right-hand side of the window. To create a new Attribute, click ➕.

4. A new window will open containing the New Displayed Attribute Form (see Figure 10.5). A breakdown of all the fields on the form is given in Table 10.6.

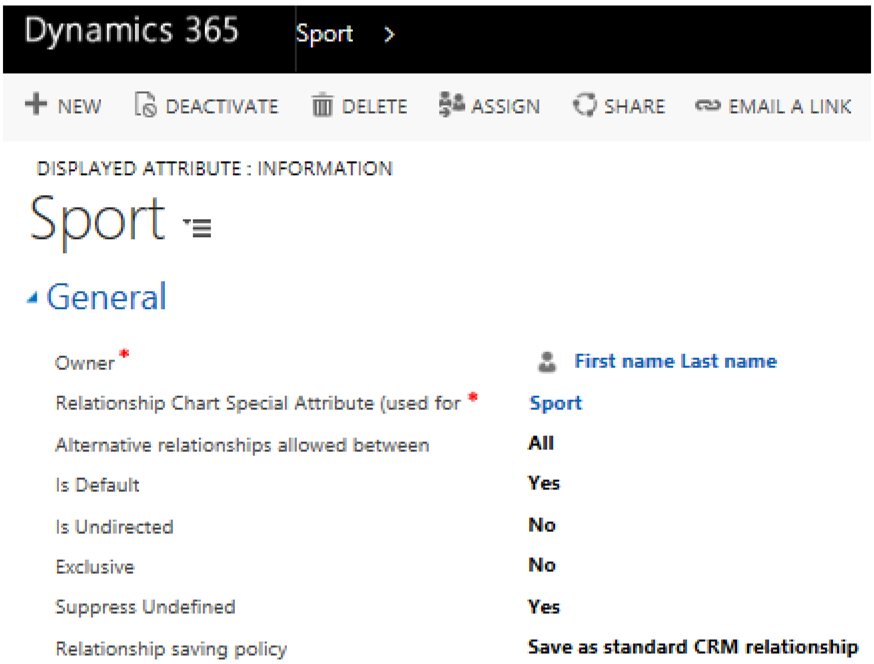


Fig. 10.5 The New Displayed Attribute Form.

Table 10.6. Summary of all fields on the Displayable Relationship Type Form

Field Name	Purpose	Example
Relationship Charts Special Attribute (used for relationships)	Defines the Relationship Charts Attribute to be used in this relationship.	Company Relationship
Alternative Relationships allowed between	Defines the rules that controls which relationships are valid between Actors and ghost Actors. Table 9.2 gives a breakdown of the available values.	All
Is Default	Defines whether the relationship icon will be automatically added between Actors when a relationship is created.	Yes
Is Undirected	Defines whether this relationship has a direction.	No
Exclusive	Defines whether this relationship will be the only one relationship of this type. If this relationship is changed on the chart, then it is lost for this Actor.	No
Suppress Undefined	If its value is set to "Yes", then the relationship Attribute on the chart is assigned a default value instead of "Undefined" in case its value was not defined beforehand. If its value is set to "No", then the "Undefined" Attribute value is used. In this case, the CRM relationship role for the undefined Relationship Attribute value must be assigned.	Yes
Relationship Saving Policy	Defines whether this relationship role will be created between the Actor entities when this relationship is defined on a chart. Table 10.3 gives a breakdown of the available values.	Save as standard CRM connection

When all the parameters of the Displayed Relationship Attribute are set, click **Save and Close** to save the created relationship Attribute. Now it appears in the relationship Attributes list.

10.3 Creating a Relationship Type Between Entities of Two Specific Types

1. Go to **Settings** and choose **Chart Templates**.
2. Double click on the required Relationship Chart Template (for example, Account Organization Chart). A window will open; choose **Displayable Relationship Types** item from the list (see Figure 10.6).

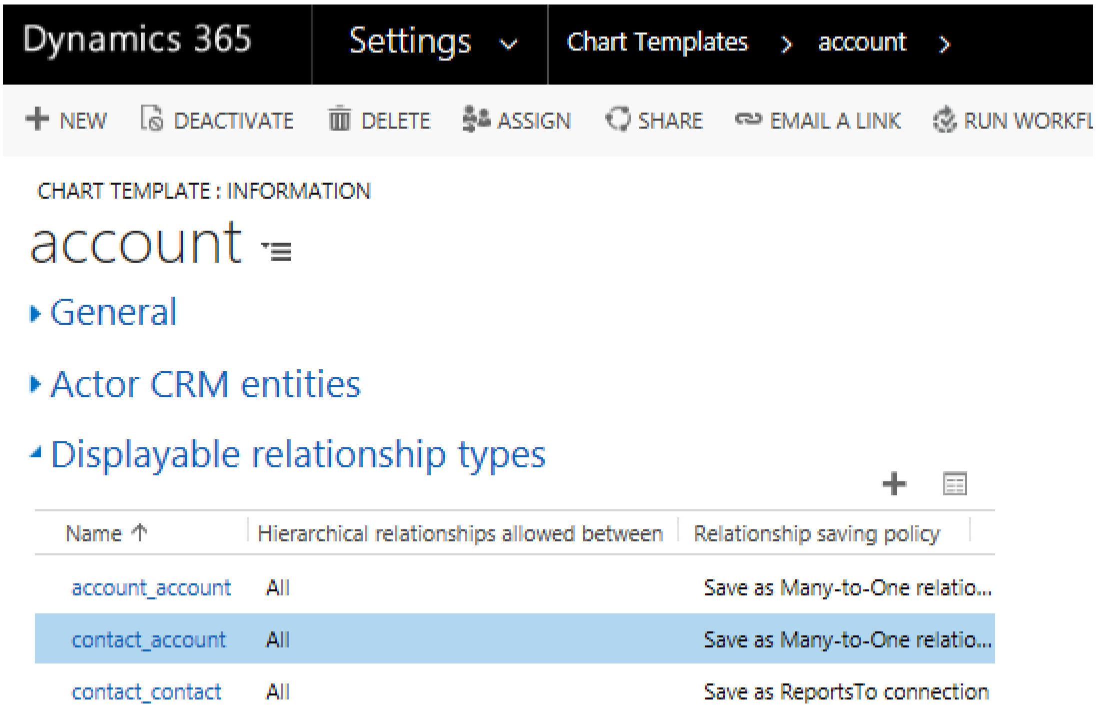


Fig. 10.6 The Chart Template Form – Displaying a list of all valid Relationship Types.

3. Click the ➕ button. A new window will open (see Figure 10.7).

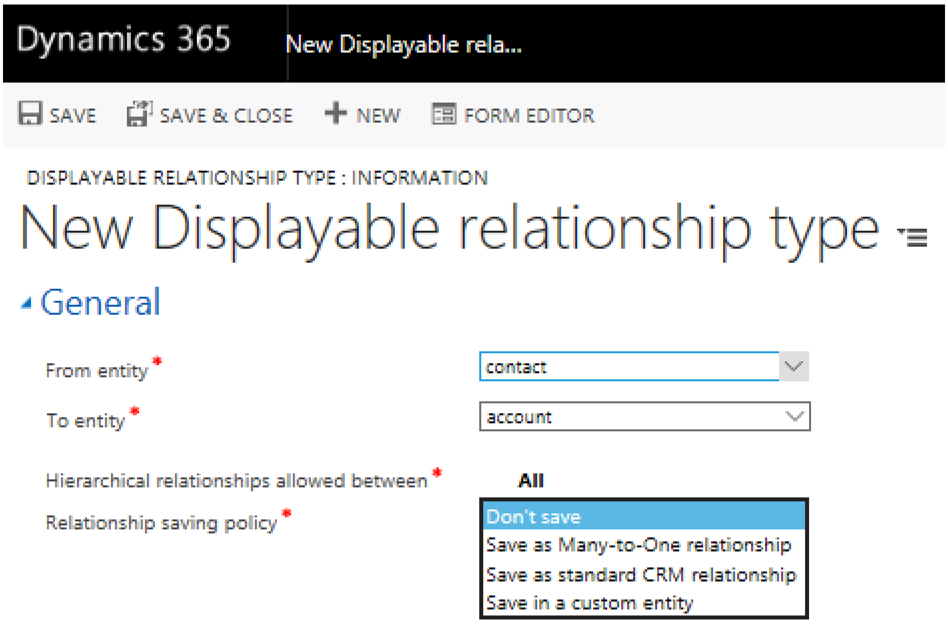
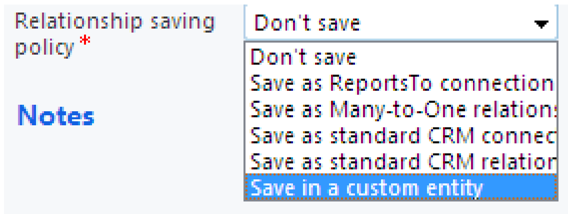


Fig. 10.7 The Displayable Relationship Type Form.

4. In the opened window choose the From and To Entities, and allowance of the Hierarchical Relationships. For example select "contact" as From Entity and "systemuser" as To Entity, if you are creating the relationship between Contact and User entities. Allowance of the Hierarchical Relationships field defines between what types of actors (e.g. Entities and Ghosts) the Hierarchical Relationships are allowed. For example, if "Entities Only" is selected, Hierarchical Relationships will only be allowed between Entity Actors and will be prohibited between Ghost Actors and between Ghost and Entity Actors. Click the **Save** button.
5. After the Relationship Type is saved, the **Displayed Attributes** item will appear in the navigation pane. Click it.
6. Click the **New** button. A new window will open.
7. In the new window choose the **Relationship Charts Special Attribute** using the lookup button ( ). The values of this attribute will be displayed in the relationship box between the selected entities. For example, if you are creating a relationship between Contact and User entities, and you have created a new Relationship Charts Special Attribute "Connection" to designate the type of connection between a contact and a user, then you can select it now and on the chart a special icon for the connection will be displayed in the relationship box. If you want to create a new Relationship Charts Special Attribute, follow the instructions given in Section 7 "CREATE A RELATIONSHIP CHARTS SPECIFIC ATTRIBUTE".
8. Choose "Yes" for the Suppress Undefined field for now, or refer to the section "The Displayed Attribute for the Displayable Relationship Type Edit form".
9. Click **Save and Close** and return to the Relationship Attribute editing form.

10. If you prefer the Relationships for the created Relationship Type to be stored only in the Relationship Chart in which they were created, choose "Don't save" as the value for the Relationship saving policy (See screenshot below). Now the Relationship Type is created and you can click **Save** or **Save and Close**.
11. To save the Relationship in a custom entity, choose **"Save in a custom entity"** value from the Relationship saving policy dropdown list.



> By default the **Relationship saving policy** field contains **"Save as standard CRM relationship"** value. Select **"Save as standard CRM connection"** value to use CRM Connections.

12. Click **Save**. Do not close this window.
13. Next you must specify the storage properties for the created Relationship Attribute. To do this you must have the corresponding CRM Custom Entity created.
14. Return to the **Settings** window and choose **Customization** from the navigation pane. Then click **Customize the System**.
15. Click **New**. A new window will open.

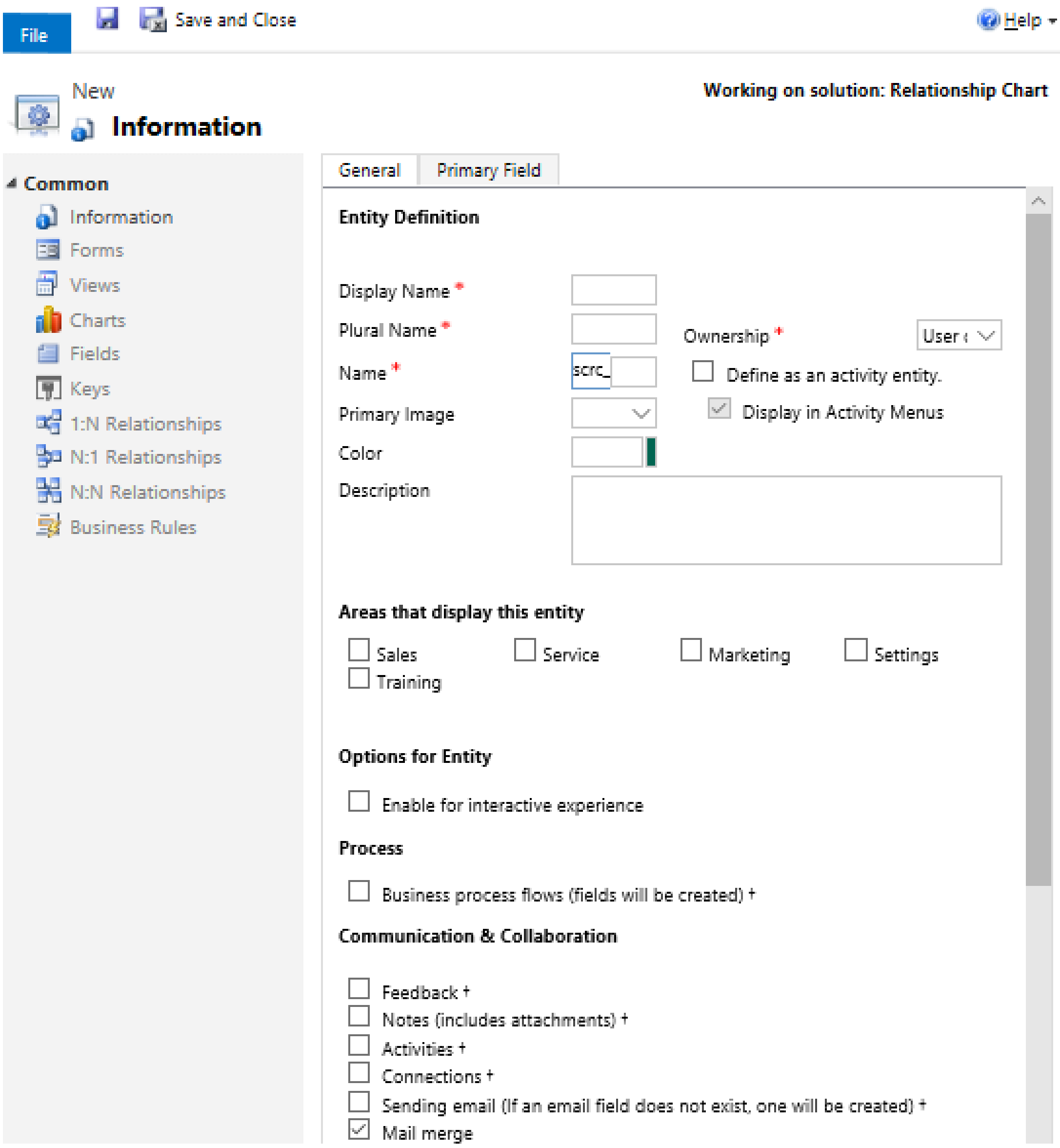
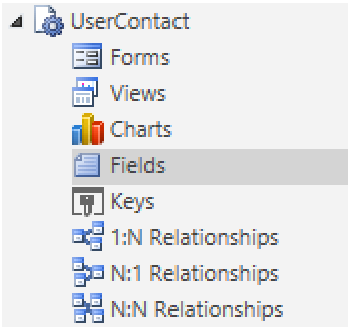


Fig. 10.8 The New Custom Entity Form.

In the opened window enter the Display Name, Plural Name and Ownership. The Name field is filled automatically, but you can change its value. For example, if you are creating the relationship between Contact and User entities for the Account Organization Chart Template, you can set the Display Name to "UserContact", the Plural Name to "UserContacts", and the owner to "User". Click **Save**.

16. After the Entity is saved, extra items in the navigation pane become enabled. Choose the Fields item.



17. Click **New**. A new window will open.

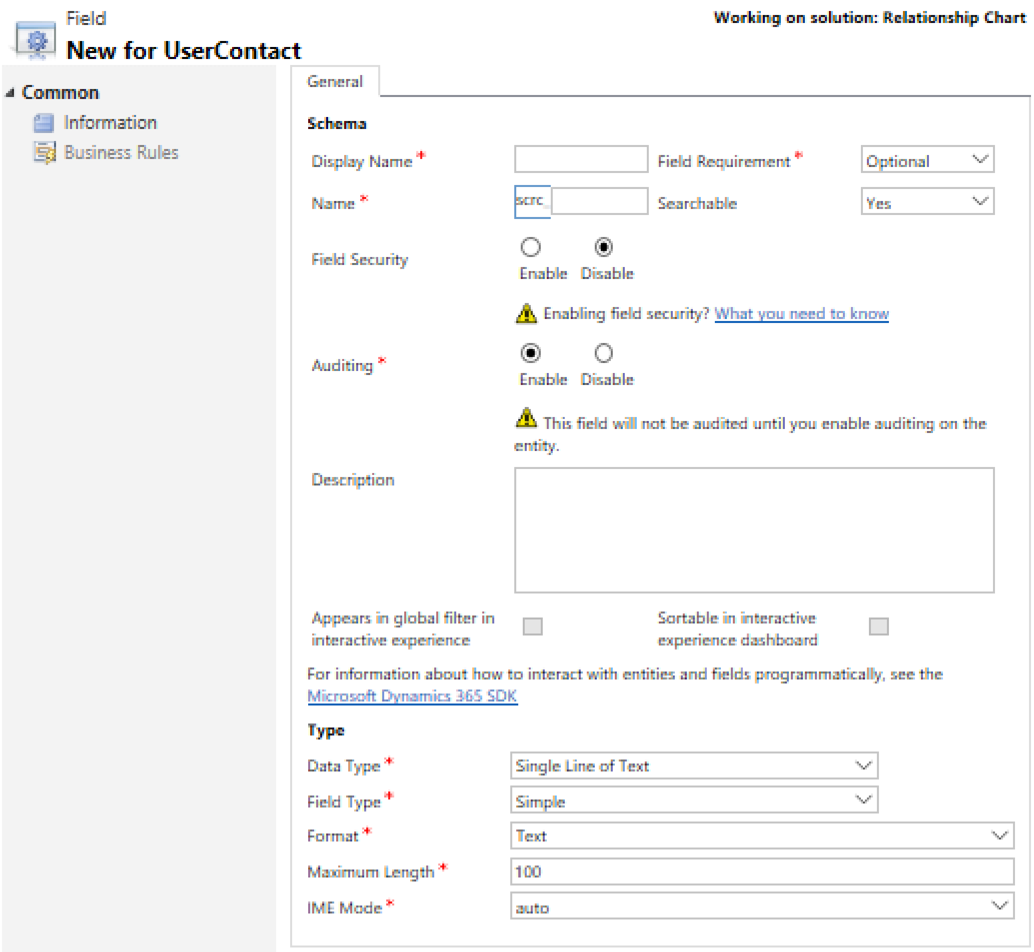
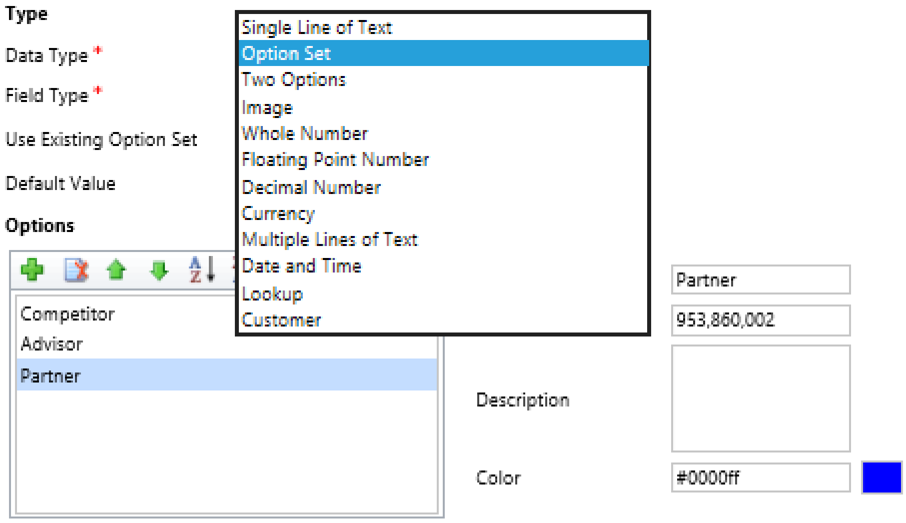


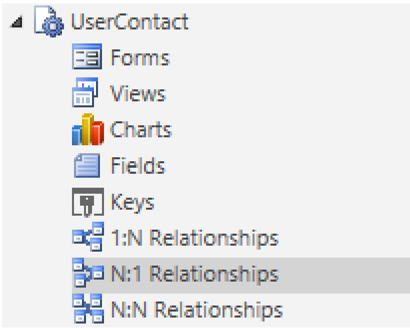
Fig. 10.9 The New Field Form.

18. Enter the Display Name value. Choose the “Option Set” value for the Type. Then add the picklist values using the **Add** button.



The Labels for the added picklist items must be equal to the corresponding Values of the Relationship Charts Attribute chosen in step 7. For example, if you selected the Connection attribute, the values must be as follows: Business; Memberships; Mentor; Personal; University. Click **Save and Close** and return to the Entity window.

19. To allow the creation of relationships, you must add two new many-to-1 relationships for the created entity, linking it to the entities between which you want a relationship. For example, if you are creating the relationship between Contact and User entities for the Account Organization Chart Template, you should create the following Many-to-1 relationships: one, linking the UserContact entity with User CRM entity, and the other, linking it with the Contact CRM entity. To do this, choose the N:1 Relationships item from the navigation pane.



20. Click the button. A new window will open.

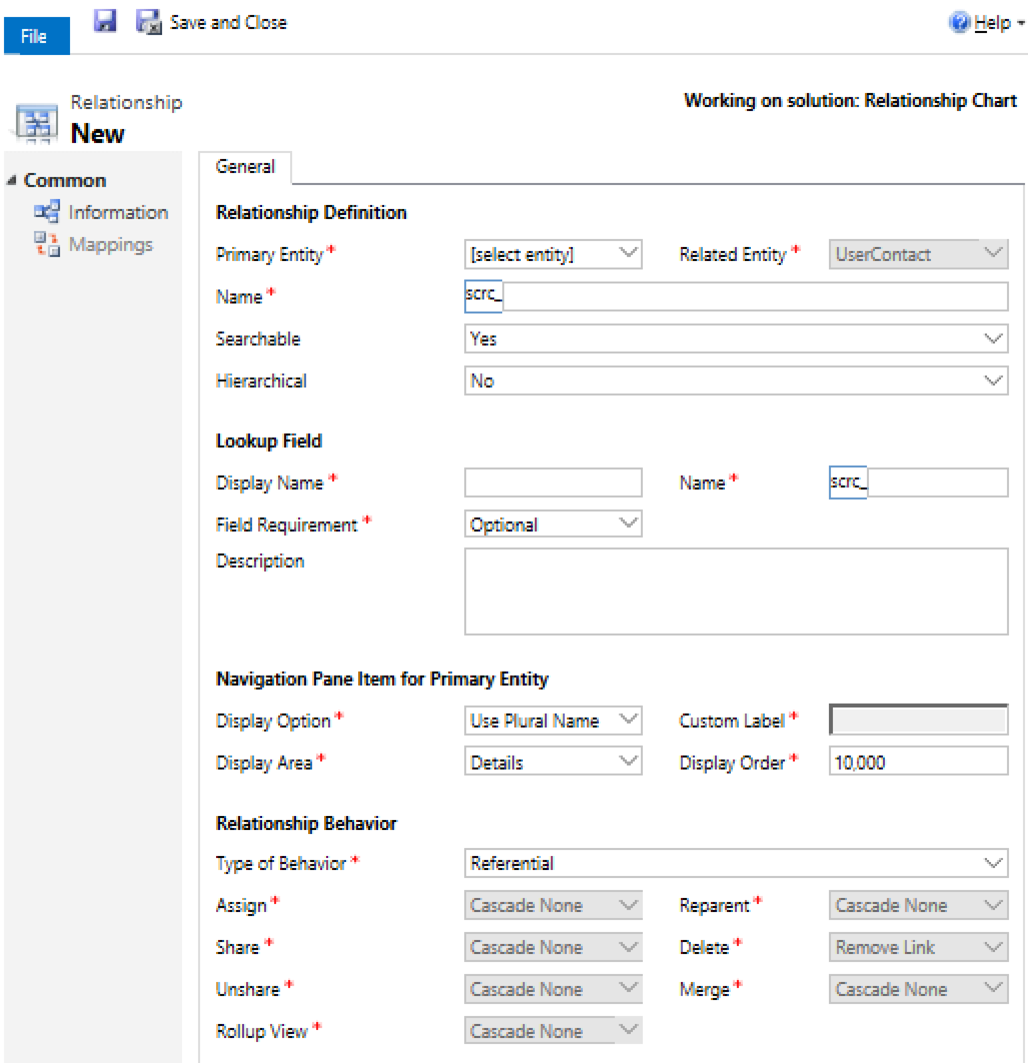
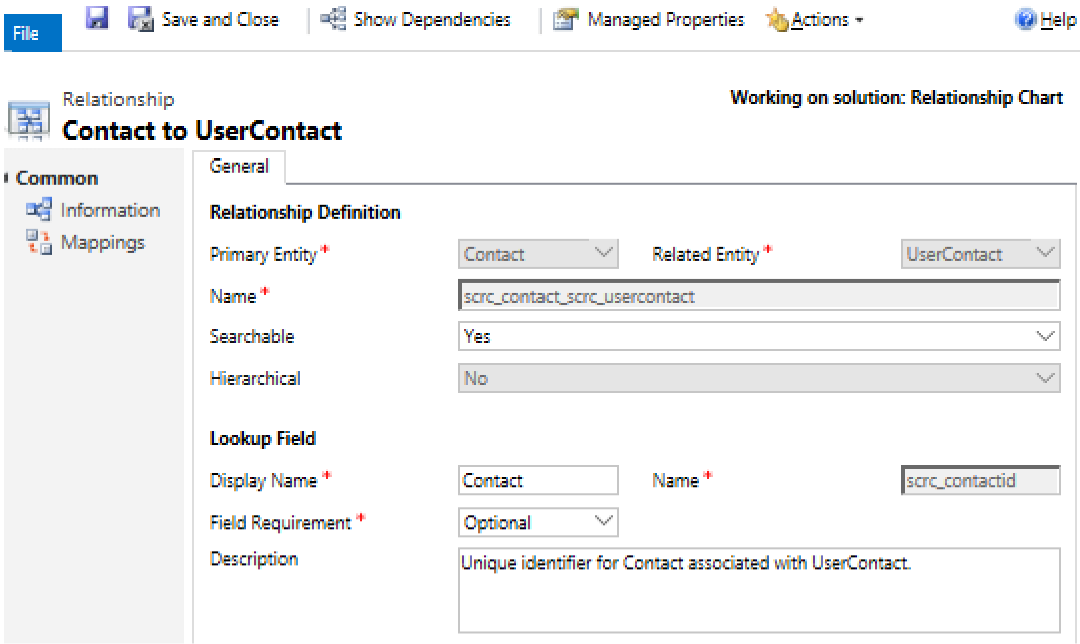


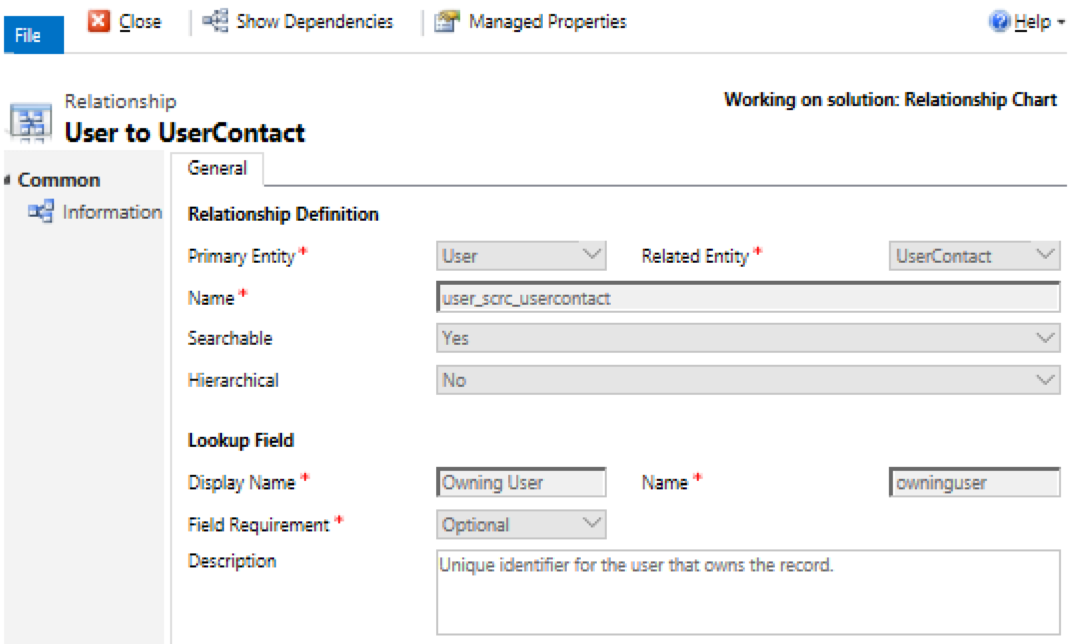
Fig. 10.10 The New Many-to-1 Relationship Form.

21. In the opened window choose the Primary Entity for Relationship Definition, and the Display Name for the Relationship Attribute. For example, if you are creating the relationship between Contact and User entities, you should do the following:

a) Click the **New Many-to-1 Relationship** button. In the opened window select Contact as the Primary Entity and enter “Contact” in the Display Name field of the relationship Attribute section. Then click **Save and Close**.



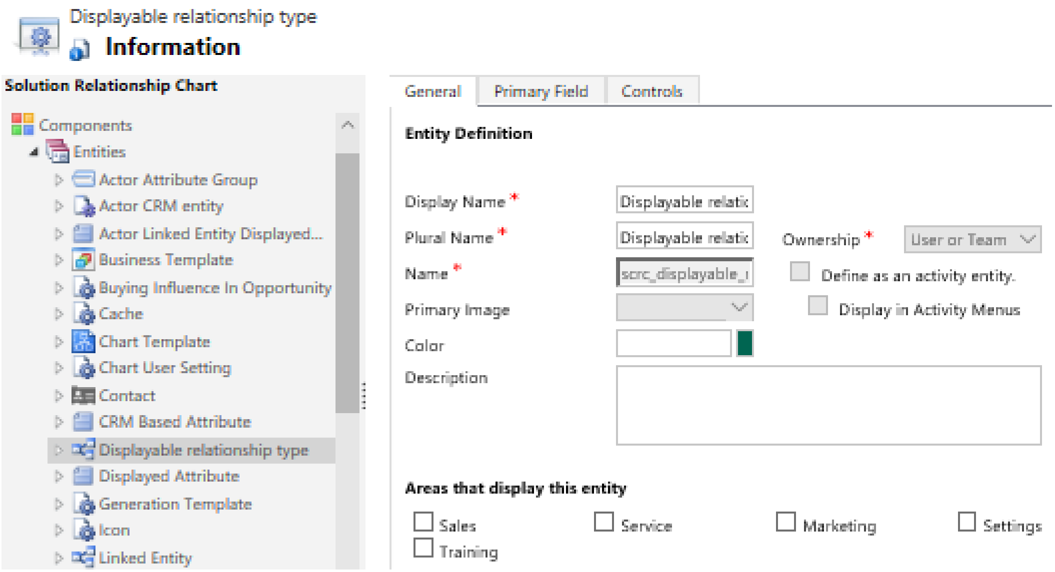
6) Click the **New Many-to-1 Relationship** button again. In the opened window select User as the Primary Entity and enter “User” in the Display Name field of the Relationship Attribute section. Then click **Save and Close** again.



Thus you will define the two foreign keys, intended for storing the relationships between two required entities (in our example User and Contact entities).

22. After you finish editing the Entity (for example, UserContact entity as mentioned above), you have to publish it in order to enable your created entity. To do this click **Publish** on the main toolbar.
23. Now return to the **Displayed Attribute** window.

Settings → Relationship Chart Administration → Chart Template Owner Entity → Displayable relationship type



24. Select the CRM entity for relationship storing, using the look up button ( ). Select the newly created entity from the list in the opened window and click **OK**. In our example it is the UserContact entity.

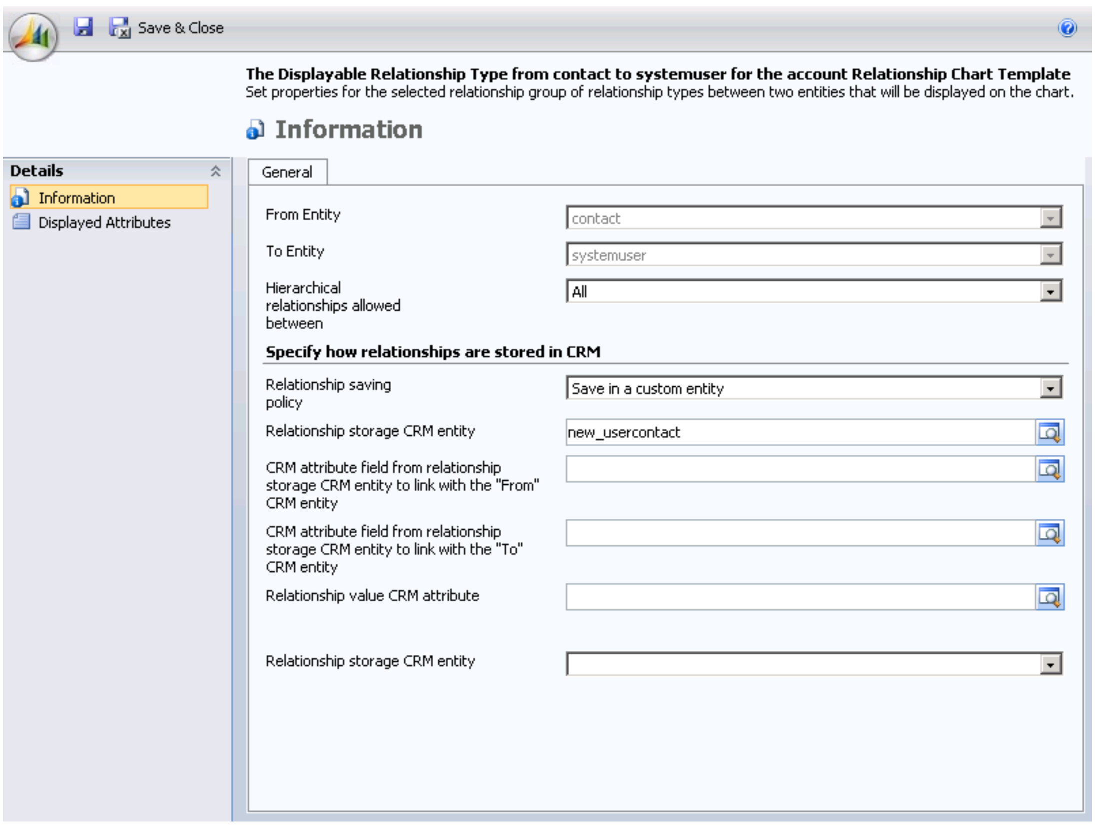


Fig. 10.11 The Displayable Relationship Type Form.

25. Next, select the From and To attributes from the entity relationship attributes list using the appropriate look up buttons ( ). In our example it is the "Contact" and the "User" attributes (which you have created above).

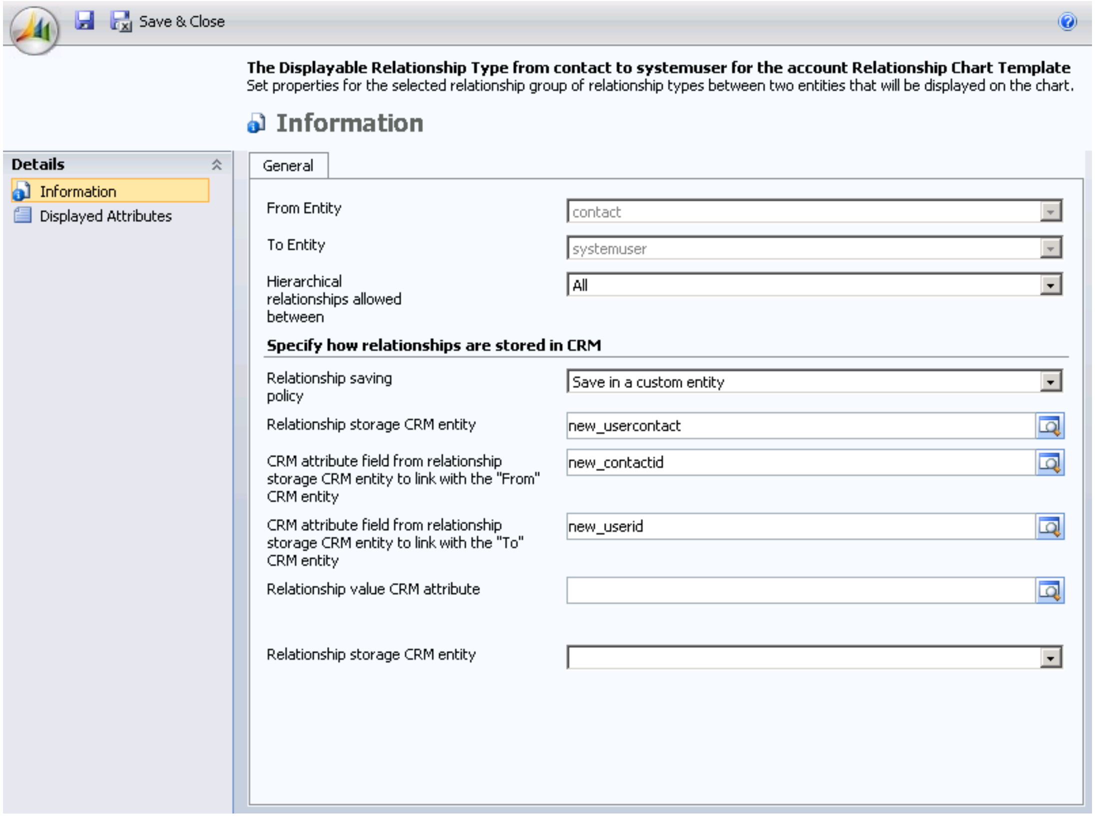


Fig. 10.12 The Displayable Relationship Type Form.

26. Finally select the Relationship Value CRM Attribute using the look up button ( ).In our example it is the Connection attribute for the newly created UserContact entity. Select the attribute from the list in the opened window and click **OK**.

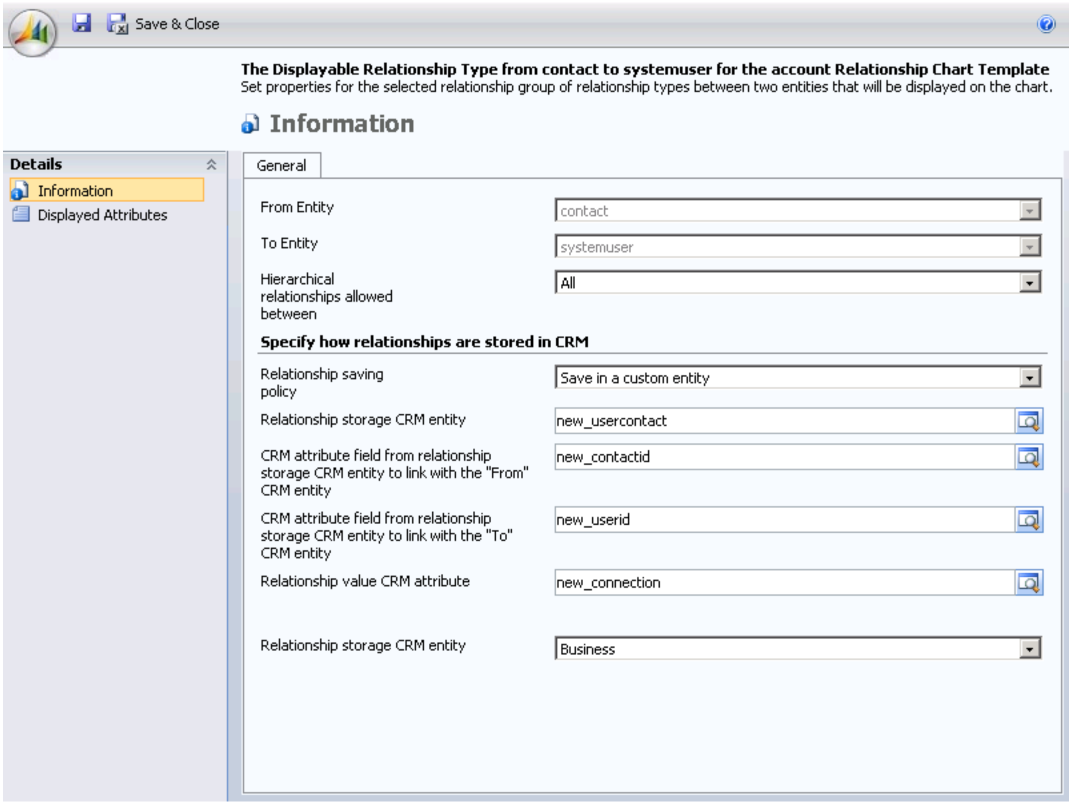


Fig. 10.13 The Displayable Relationship Type Form.

27. Now click the **Save and Close** button of the Displayed Attribute window. Click the **Save and Close** button of the Displayable Relationship Type window. Now it appears in the relationship types list.

11 Generation Templates

Generation Templates allows users to populate charts with actors and their relationships automatically. To create a new Generation Template, complete the following steps:

1. Go to **Settings** and select **Chart Templates**.
2. Double click on the required Relationship Chart Template (for example, Account Organization Chart). A window will open; choose the Generation Templates item (see Figure 11.1) and click + button, then click ⌕ and + New .

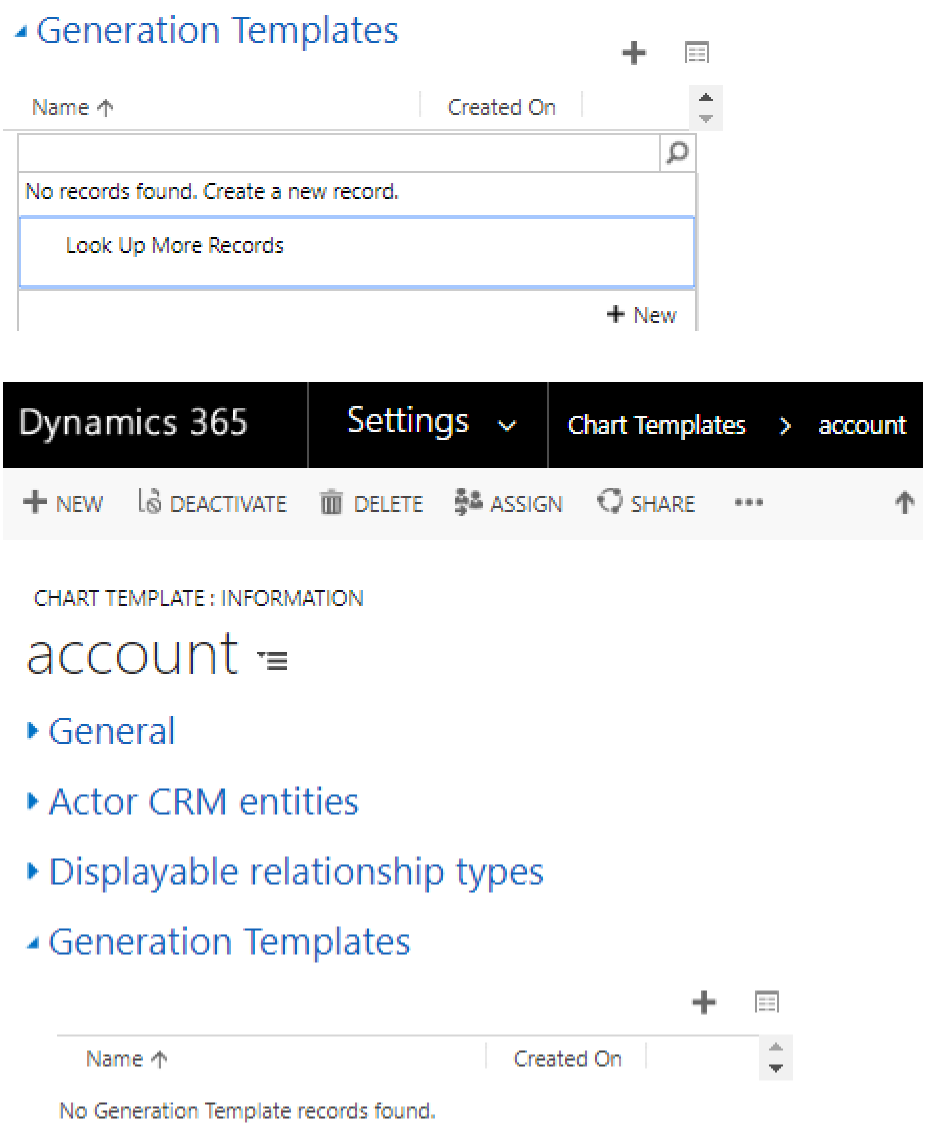


Fig. 11.1 The Chart Template Form – Displaying a list of existing Generation Templates.

3. You will navigate to the New Generation Template form (see Figure 11.2). Type the name, select icon and enter XML for Generation Template. Click **Save**.

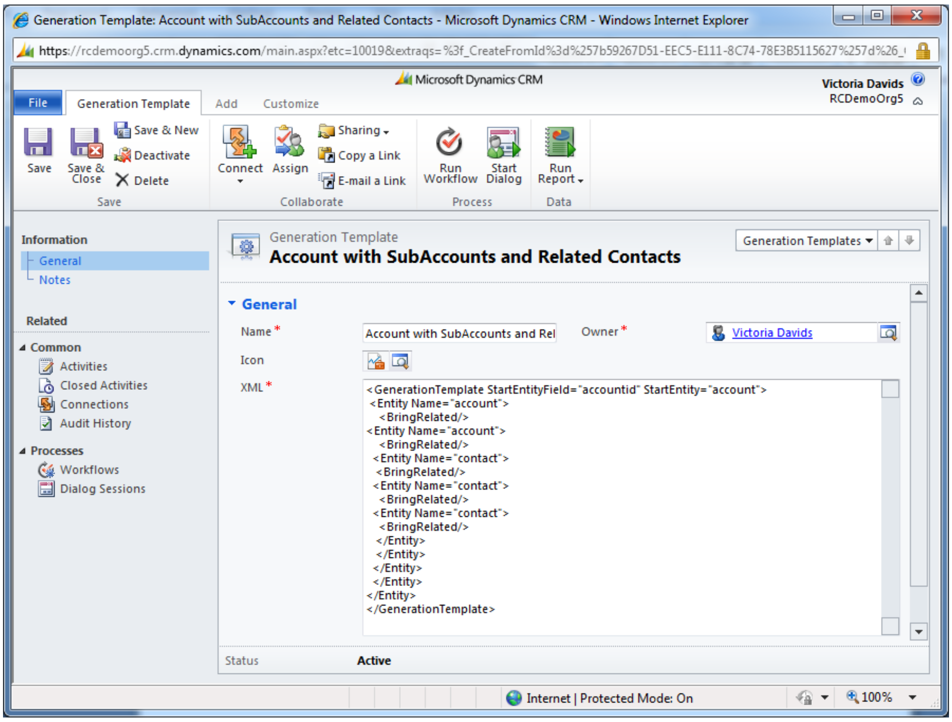
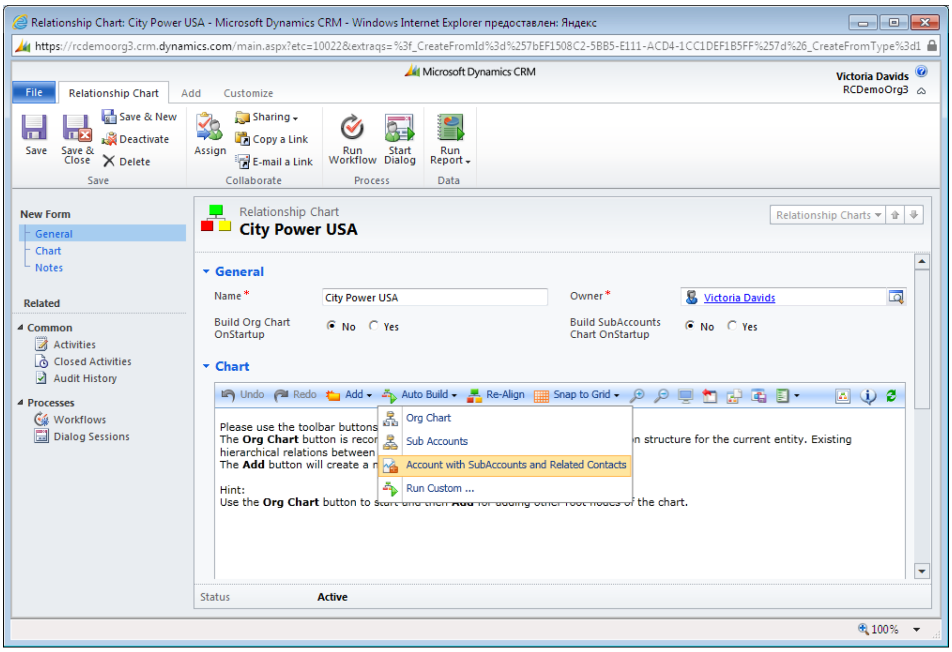


Fig. 11.2 New Generation Template form.

After you save and publish your template, users will be able to see it in the AutoBuild section on the toolbar.



Use “Run Custom…” button to generate custom charts directly from the Chart grid using XML files.

12 Attribute Groups

Attribute groups allow you to separate information displayed for the actor by type. The Administrator can set any quantity of groups for each type of actor on a chart.

1. Go to **Settings** / **Chart Templates**.
2. Double click on the required Relationship Chart Template (for example, Account Organization Chart). A window will open; choose the Actor CRM Entities item in the navigation pane (for example, Contact).
3. Choose the Attribute Groups item in the navigation pane (see Figure 12.1). You will see the Attribute Groups grid that contains Group Name, Description and / Number of Attributes columns.

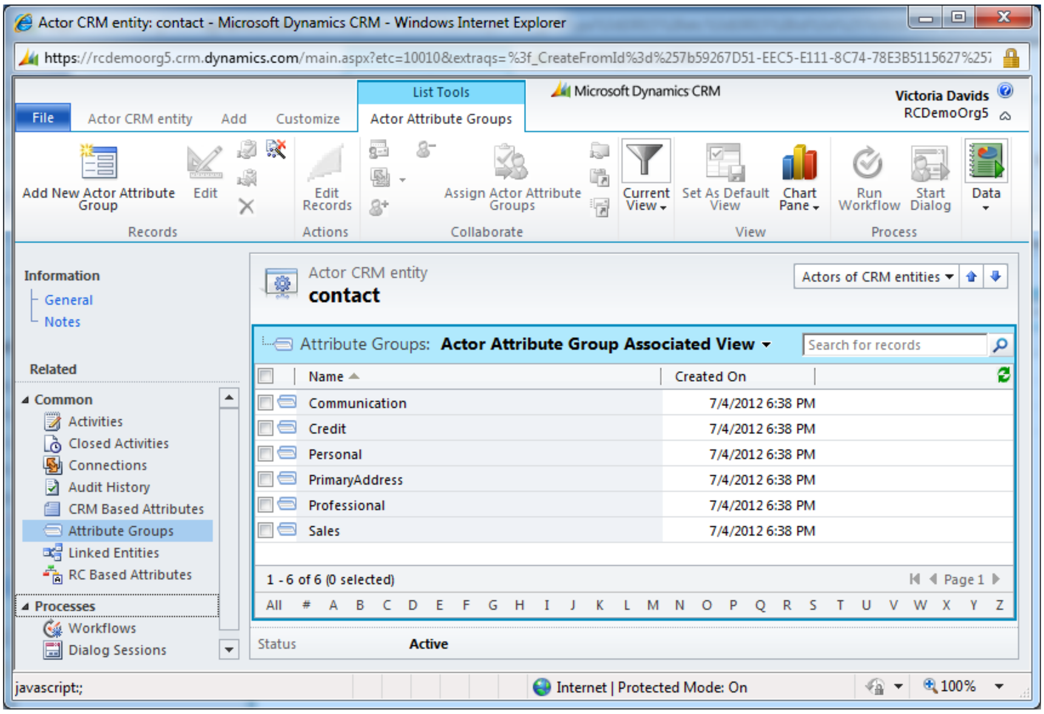


Fig. 12.1 Attribute Groups.

4. Click **Add New Attribute Group** to create a new group. You will navigate to the New Attribute Group form (see Figure 12.2).

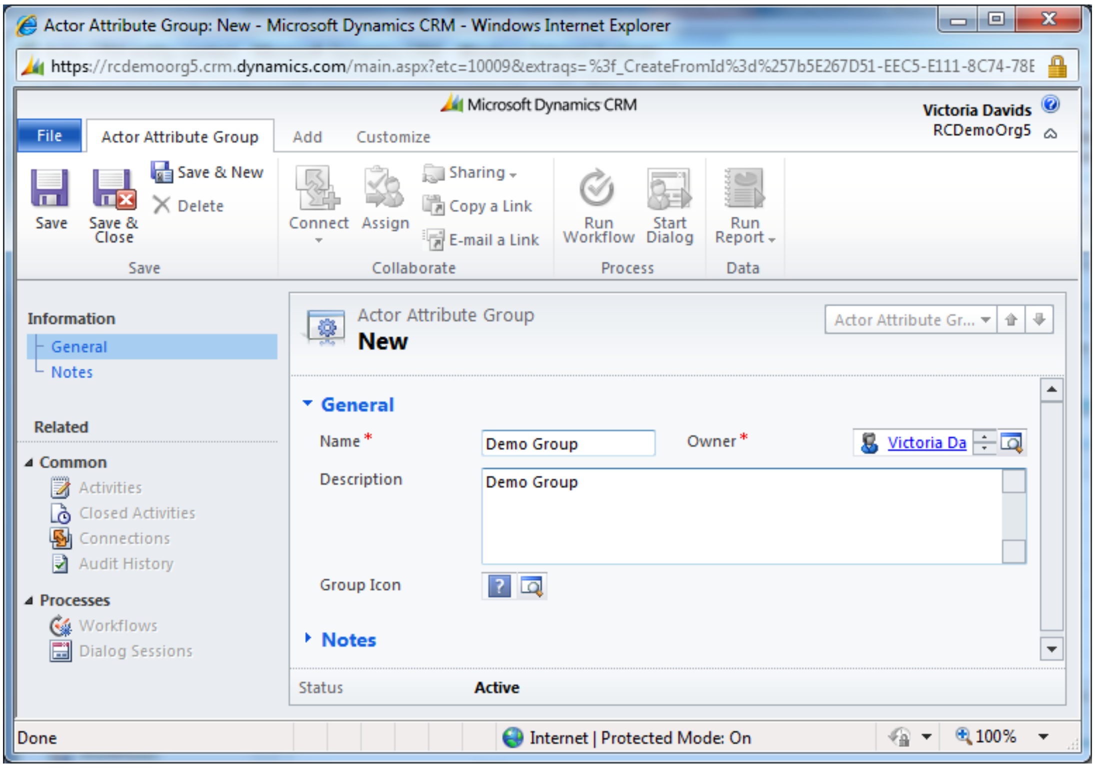


Fig. 12.2 New Attribute Group.

5. Type the Name and Description of the new group. Click button for icon selection. Click **Save**.
6. You can select the attributes for the created Attribute Group in the CRM Based Attributes and Relationship Chart Attributes on the Actor CRM entities form. (See Section 6 “DISPLAY MICROSOFT CRM BASED ATTRIBUTES IN RELATIONSHIP CHARTS” and Section 7 “CREATE A RELATIONSHIP CHARTS SPECIFIC ATTRIBUTE”).
7. Click **Save and Close** on the Attribute groups form and click **Save and Close** on the Actor CRM entities form.

13 Work with the Icon Library

As you have seen throughout this guide, Relationship Charts makes heavy use of icons for displaying different Actors and Attributes. The Icon Library is the central repository for registering icons with Relationship Charts to allow them to be used elsewhere in configuration.

You can access the Icon Library through any form that requires uploading icons. When you click the lookup button to select an icon, you will see the **Icon Library** window (see Figure 13.1).

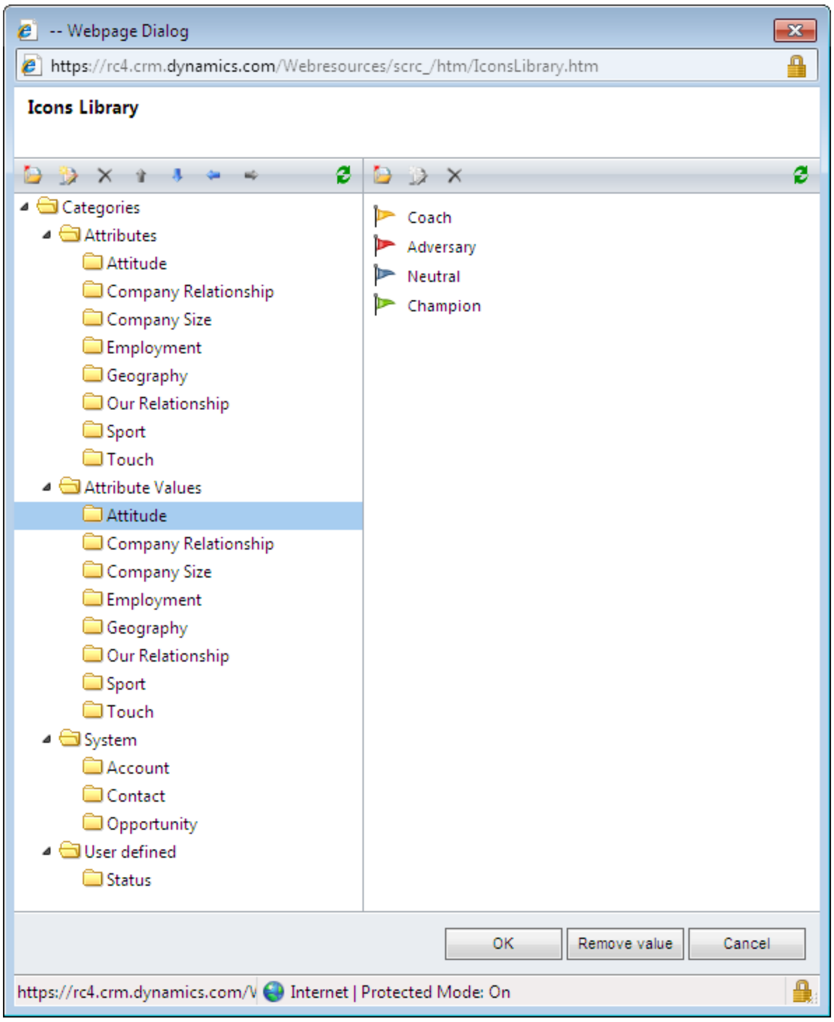


Fig. 13.1 The Relationship Charts Icon Library.

Icons are grouped into categories by meaning (for example, icons representing Attitude values are nested in the Attitude category). Categories are presented in the tree on the left. Select a category by clicking on its name in the tree; the icons under the selected category then appear in the list on the right. To create a new category, click the **Add new category** button.

You can change the selected category name by clicking on the **Edit selected category** , delete it using **Delete selected category** or change categories order and nesting using the **Move buttons** . Refresh the categories tree by clicking on **Refresh tree** .

Create a new icon by clicking in the right column. Click to edit the icon and its properties. Delete icons by clicking **Delete**.

Once you have found the icon you're looking for, you can edit the icon by double clicking on the icon name. A new window will open containing the Icon form (see Figure 13.2). Table 13.1 gives a breakdown of every field on this form.

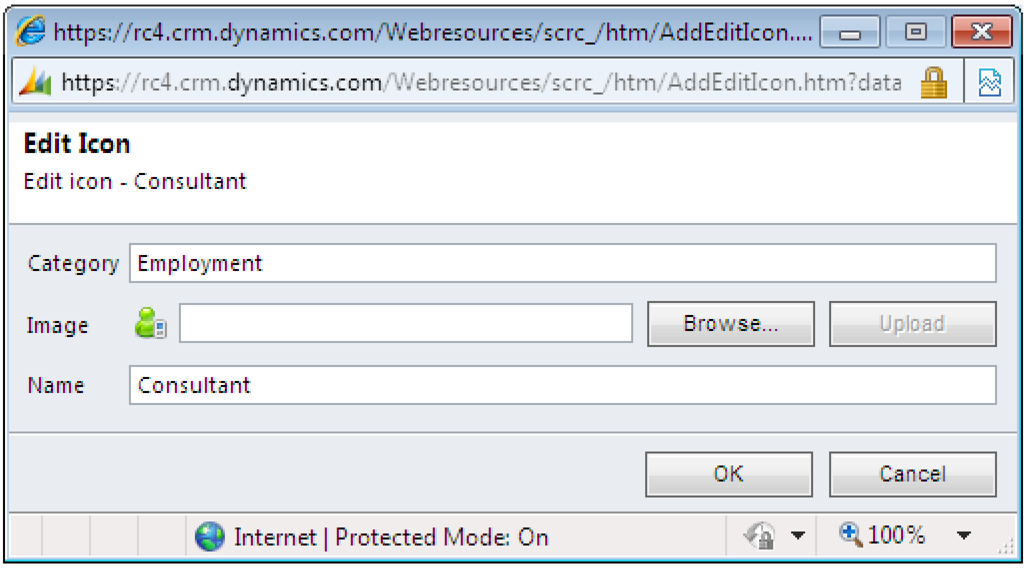


Fig. 13.2 The Icon Form.

Table 13.1. Summary of all fields on the Icon Form

Field Name	Purpose	Example
Category	Defines the category for the icon. (read-only)	Employment
Image	An image of the particular icon. Click Browse to select the image from your computer. Then click Upload to upload the selected image into the system.	
Name	Defines the display name of the icon.	Consultant

Click **OK** to save the changes or **Close** to discard them.

Appendix 1 — Table of figures

Appendix 2 — List of tables