CRM Administrator Guide

Contents

Introduction

CRM is a custom data modeling application. The CRM application is available as an add-on module for any client using the Intrafinity.NET platform. The core feature set of CRM is the ability for our clients to define custom object type definitions. These base object type definitions will be a set of custom attributes. At its core, the CRM application can be thought of as a user-friendly wrapper for a traditional database.

Creating Objects

If you have already created your object types, this section of the manual will show you how to enter your data.

If you have not yet set up your object types, we recommend you jump ahead to **Creating Object Types** and return to this section once your object types have been created and configured.

Quick Create

One way to create objects is by using the Quick Create option that appears in the sidebar if you are on the **Home** tab or a tab for any **Object Type** you have created.

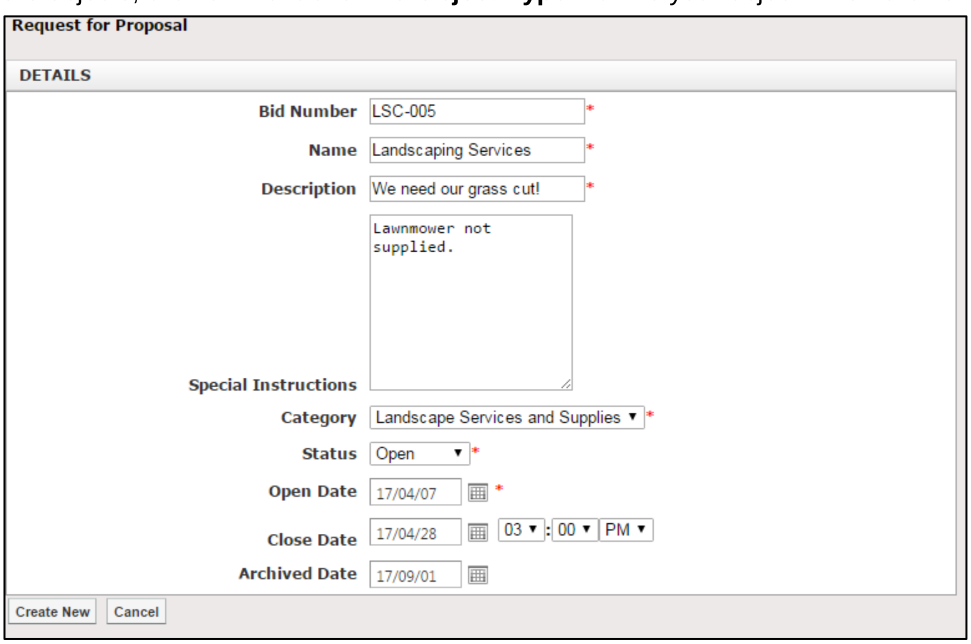
From the **Home** tab, use the **Select a Type** dropdown to choose which object type your object is. From the specific **Object Type** tabs the system assumes that you are creating an object for that specific tab's object type.

To create the object, fill out the fields in the sidebar and click **Create New**.

Note: *Only the mandatory fields for an object type will appear in the* ***Quick Create*** *sidebar. As such, all fields that appear in the* ***Quick Create*** *view must be filled out when creating the object.*

Creating Objects Manually

To manually create objects, click on the tab for the **Object Type** that fits your object. Then click on **New**.



Enter the data for your object and click **Create New**.

Creating and Using Views

By default, each object type will display all entries. If you wish to only see particular entries within an object type, you can create a new view to do this.

To create a new view, click on the tab of an **Object Type**. Then click **Create New View**.

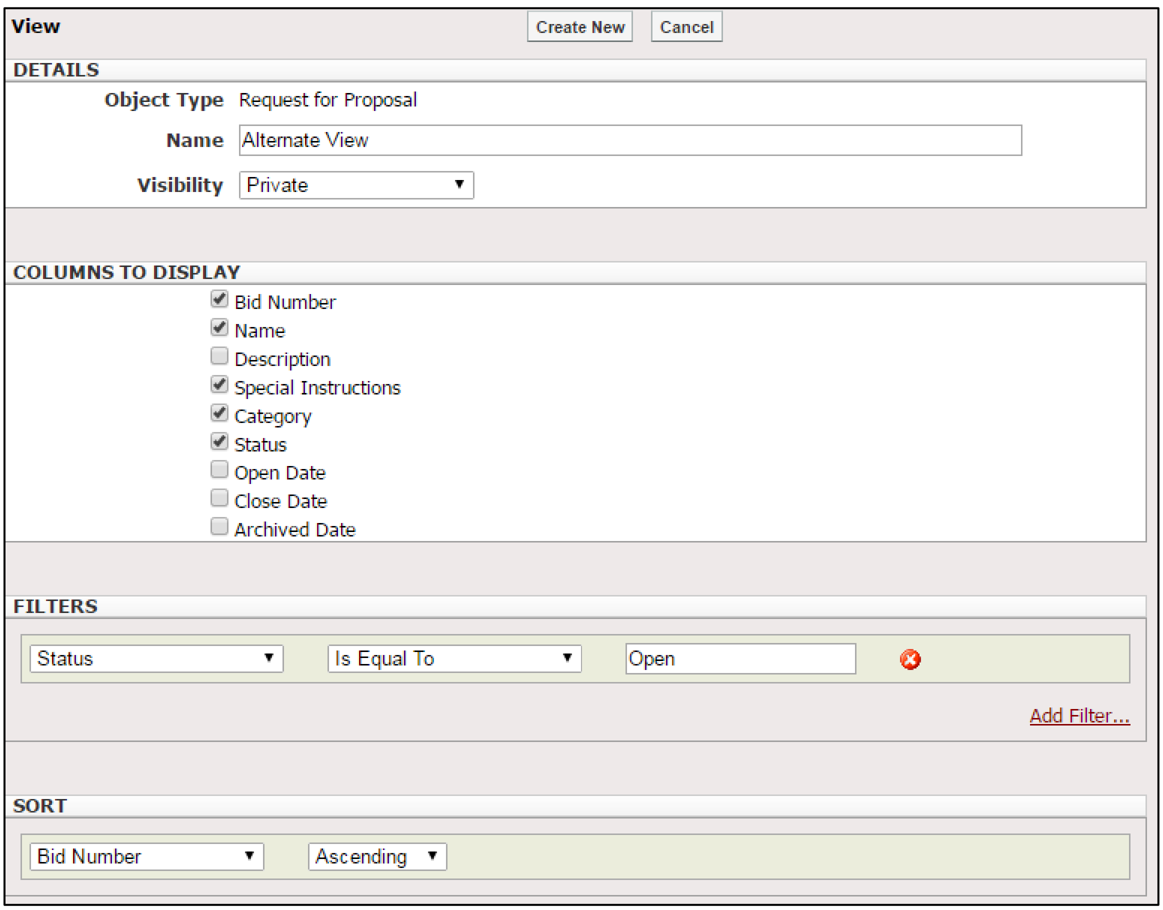
Give a **Name** to your new view and choose whether you want to view to be **Public** or **Private**. If the view is **Public** other users viewing the CRM module will be able to access it. If the view is **Private** then only the current user will be able to use the view.

Choose which columns will be included in your view by checking them within **Columns to Display.**

You can also add a filter to your list by clicking **Add Filter**… Then just choose which element you want to filter and what to filter for.

Note: *Your view can include as many filters you wish.*

Finally choose the element to sort your list and whether it should be ascending or descending. Then click **Create New**.



To see the new view, go back to the **Object Type** tab and click on the **View** dropdown to select the view.

Creating Object Types

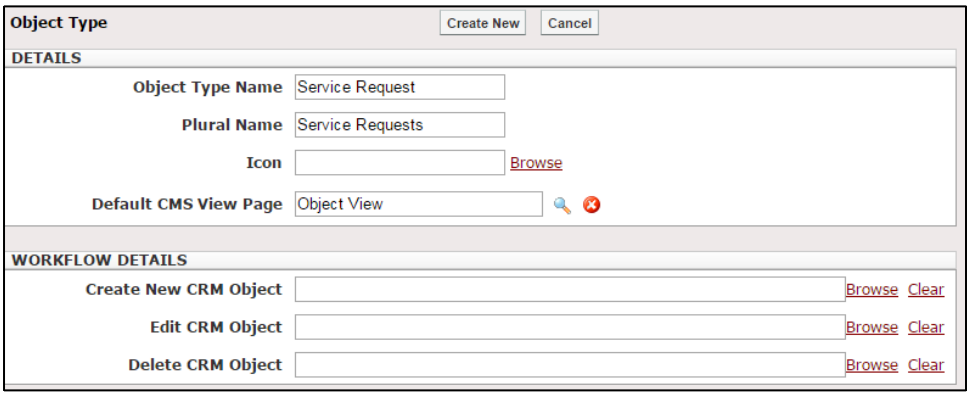
Across the top of the CRM page, you should see a series of tabs, with one for each of the existing CRM Object Type Definitions, and a final tab for configuration. Click the **Configuration** tab. You will now be at the **Manage Object Types** screen.

Click **New** at the top of the page to create an object type. Enter an **Object Type Name**, provide an applicable **Plural Name** for the object.

If you want to have an icon appear on the tab for the CRM Object, click **Browse** to the right of the **Icon**.

Click on the to specify a **Default CMS View Page**.

If you want to use workflows for updating, creating and deleting CRM objects, click **Browse** to the right of the appropriate workflow task and select a workflow.



Click **Create New** to create the object type.

After the successful creation of the new CRM Object Type, you will be brought to a screen for managing the new object type you just created.

Creating an Attribute

To create a new attribute for an object type, click on an object type. In the bottom half of the screen you will see **[Name of Object] Attributes**. Click **New** to create your new attribute.

Enter in the **Display Title** you wish to use for the attribute and then click the blue up arrow. This will automatically create an **Attribute Key** to go with the **Display Title**. You may also choose to enter a **Display Title Plural**.

Choose whether or not you wish to make this attribute mandatory with the **Mandatory Attribute** check box. If this is the first attribute you have added to the object type, you will have no choice but to select **Mandatory Attribute**. This attribute will also be set as the title attribute, as we will discuss later in the manual. If this is the first attribute you have created for the object type, it will be mandatory by default.

Next choose the data type you wish to use with your attribute. The complete list of available attribute types:

String: A string field, represented by a text box. This is perhaps the most common data type.

CRM Relationship: Represents a relationship between one CRM object and another CRM Object. The attribute itself defines the set of two CRM Object Types that can be related. *See CRM Relationships Below.*

Shared Enumerations: A shareable custom list of data/value pairs. Shared enumerations can be represented as either a listbox, dropdown list, or CRM Object Picker control. Shared Enumerations are defined in the shared enumeration administrative interface, and can be reused among multiple CRM Object Type definitions. *See Shared Enumerations Below.*

Enumeration: A one-time custom list of data/value pairs, represented as a dropdown list. *See Enumerations Below.*

HTML Memo: A rich text field.

Email Address: A textual data type. Data entered into an email address field will be validated to ensure that email address format is valid.

URL - A textual data type. Data entered into a URL field will be validated to ensure that format is a valid URI.

Boolean: A true/false attribute, represented by a checkbox.

Date: A Date field, represented by a date picker control.

Date and Time: A date and time field, represented by a date and time picker control.

Money: A currency field, represented by a textbox. Validated to ensure that data provided is a valid amount.

Number: A numeric field, represented by a textbox. Validated to ensure that data provided is a valid number.

Time of Day: A time field, represented by a date and time picker control.

Title Attributes

When you added the first attribute, you probably noticed the following message:

Mandatory Attribute

The first attribute added to a CRM object definition will automatically set as the title attribute. Since the title attribute is required, this field is required to be mandatory. The designated title field may be modified at a later time.

All CRM Objects will have a designated title. The title is the textual content that will be displayed whenever the object is referenced through a relationship to another CRM object.

By default, when you add the first attribute, it will be designated as the title attribute. After additional attributes have been added, the title attribute may be switched to one of these attributes through the attribute list interface.

Available Attribute Types

The complete list of available attribute types are:

- **American Phone Number**
- **Boolean:** With a Boolean field, you can store a Yes or No value for the object.
- **Canadian Postal Code:** This field allows you to store a postal code or zip code.
- **CRM Relationship:** An attribute that represents a relationship between one CRM object and another CRM Object. The attribute itself defines the set of two CRM Object Types that can be related. *See CRM Relationships Below.*
- **Date:** A date field, represented by a date picker control.
- **Date and Time:** A date and time field, represented by a date and time picker control.
- **Decimal**
- **Email Address**
- **Enumeration:** A one-time custom list of data/value pairs, represented as a dropdown list. *See Enumerations Below.*
- **HTML Memo:** A Rich text content field, represented by a rich text editor control. Validated to ensure that the content entered is valid XHTML syntax.
- **Integer**
- **Learning Standard:** Associate the object with a Learning Standard. On many sites, this will not be relevant.
- **Money:** A currency field, represented by a textbox. Validated to ensure that data provided is a valid amount.
- **NOC:** In this field you can store a NOC value. On many sites, this will not be relevant.
- **Related Enumeration:** If your object type has one or more CRM Relationships, you can store a related enumeration with this attribute.
- **Shared Enumerations:** A shareable custom list of data/value pairs. Shared enumerations can be represented as either a listbox, dropdown list, or CRM Object Picker control. Shared Enumerations are defined in the shared enumeration administrative interface, and can be reused among multiple CRM Object Type definitions. See *Shared Enumerations* below*.*
- **String:** A string field, represented by a text box. To make a larger box, increase the **Text Area Height**.
- **Thumbnail:** This field allows an image to be added to objects.
- **Time of Day:** A time field, represented by a date and time picker control.
- **URL:** A text field. Data entered into a URL field will be validated to ensure that format is a valid URI. Additionally, URLs will appear as clickable links that will open in a new window.
- **Users:** With this field you can assign privileges to users to allow them to make changes to an object.

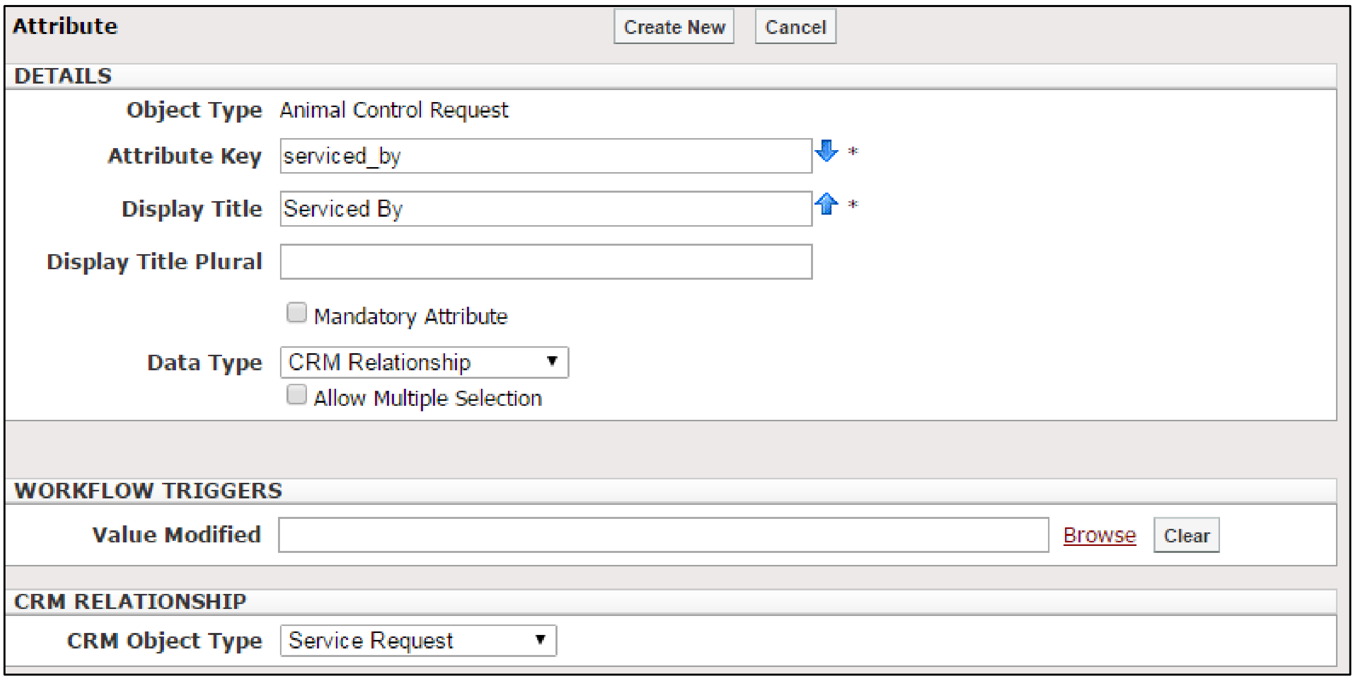
CRM Relationships

As mentioned above, a relationship attribute can be established to define any type of relationship between two custom CRM Objects. Some examples of relationships would be the Employee of a Corporation, the Publisher of a Book, or the Product Line of a Manufacturer.

To establish a new relationship, navigate to the Create New Attribute screen, and select CRM Relationship from the data type list. Once the CRM Relationship is selected, you will see two new fields appear:

Allow Multiple Selection: If this option is unchecked, a dropdown list will appear. If checked, a list box will appear. If the CRM Picker Control is enabled for CRM Relationships, it will appear in place of the dropdown list or list box.

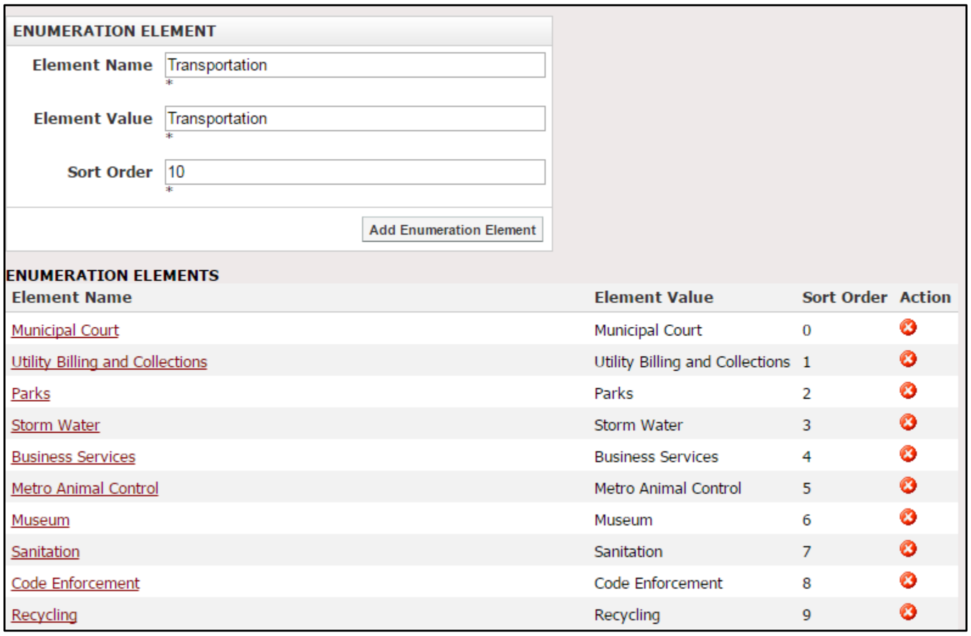
CRM Relationship Object Type: A dropdown listing all of the established custom object types. From this list, choose the appropriate object type that you wish to form the relationship with.



Enumerations

An enumeration is a one-time list of name/value pairs.

After creating an enumeration, you will see a new interface for creating enumeration elements. For each new value you wish to add, specify an **Element Name**, **Element Value and Sort Order**, and then click **Add Enumeration Element**. After the element has been added, it will be displayed in the Enumeration Elements list below.


ENUMERATION ELEMENT

Element Name: Transportation

Element Value: Transportation

Sort Order: 10

Add Enumeration Element

ENUMERATION ELEMENTS

Element Name	Element Value	Sort Order	Action
Municipal Court	Municipal Court	0	
Utility Billing and Collections	Utility Billing and Collections	1	
Parks	Parks	2	
Storm Water	Storm Water	3	
Business Services	Business Services	4	
Metro Animal Control	Metro Animal Control	5	
Museum	Museum	6	
Sanitation	Sanitation	7	
Code Enforcement	Code Enforcement	8	
Recycling	Recycling	9	

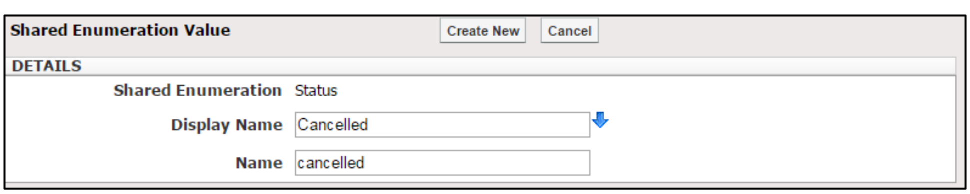
Shared Enumerations

Shared enumerations are similar in nature to regular enumerations, with the difference being that they can be shared (or reused).

To create a new shared enumeration, begin by clicking the **Shared Enumerations** link from the left-hand navigation tree on the configuration tab. Click **New** under **Shared Enumerations**.

Enter a new Shared Enumeration **Title** and click **Create New**. Select the newly created shared enumeration from the list of available shared enumerations, and then click **New** under **Shared Enumeration Values**.

On the next screen, the **Display Name** represents the value that will be displayed on the screen to end users, while the **Name** is the key that will be used by the database. The name should be a string with no spaces or non-alphanumeric characters. By entering a **Display Name** and clicking the blue arrow, the **Name** field will be filled out automatically.


Shared Enumeration Value — Create New — Cancel

DETAILS

Shared Enumeration: Status

Display Name: Cancelled

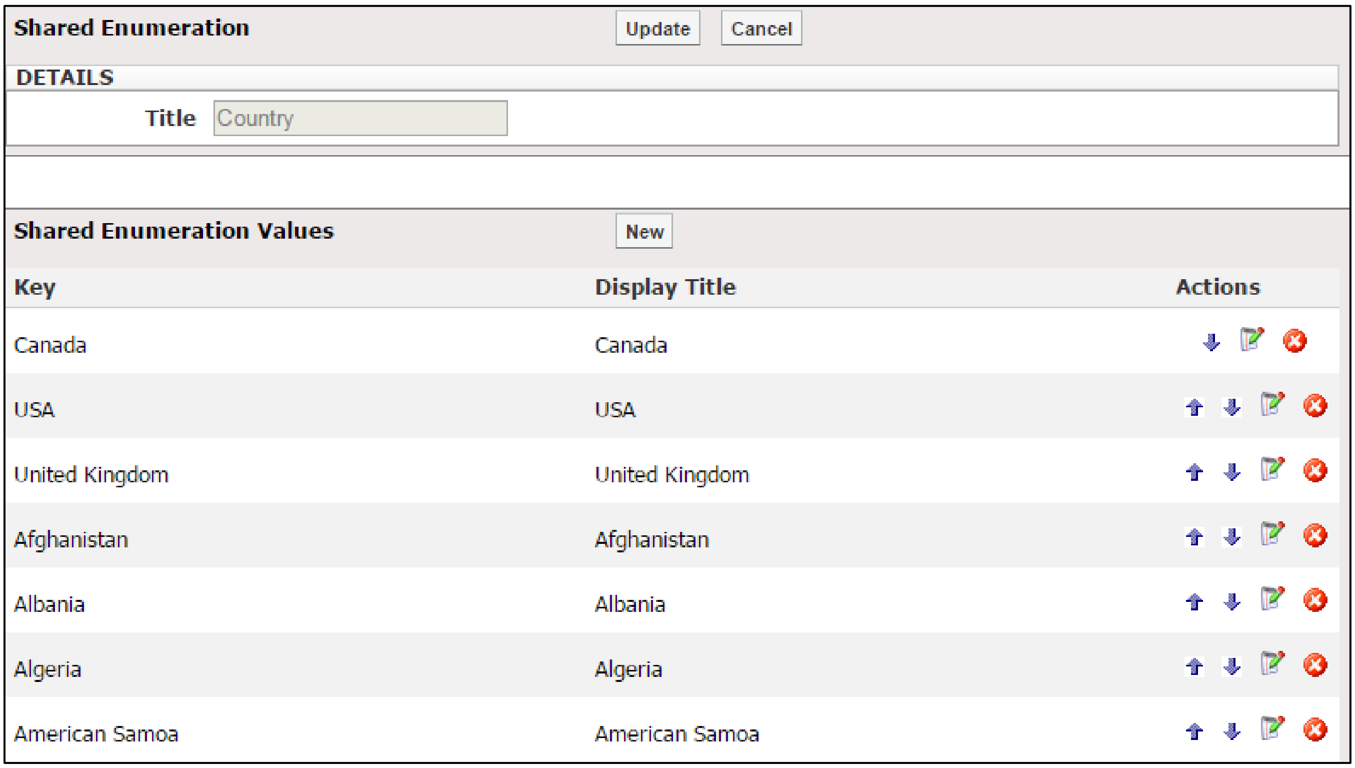
Name: cancelled

Managing Shared Enumerations

There are some other elements to consider when working with shared enumerations.

In addition to the creating your own shared enumerations, there are a number of system enumerations that are included by default. These enumerations work just like the manually created enumerations except they are pre-populated with elements.

By clicking one of these shared system enumerations, you can edit, create and delete new elements just as you would with a normal shared enumeration.



If you wish to change the order of the enumerations, you can use the and .

To edit one of the options, click the icon.

To remove an option, use the icon.

Workflow Triggers

You can also set up triggers for your objects or attributes. A workflow can be triggered when an object is created, updated or deleted. A workflow can also be triggered if a particular attribute within the object is updated.

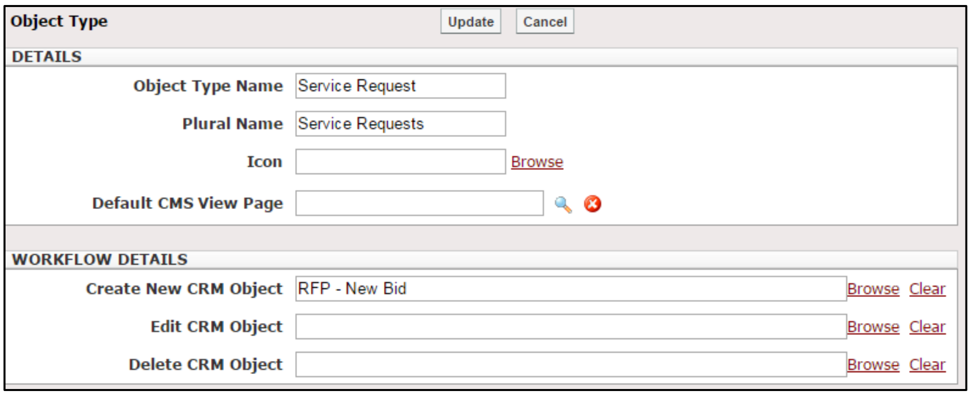
Object Workflows

To set a workflow trigger for when an object of a given object type is created, updated or deleted, click on the click on the **Configuration** tab and then **Object Types**. Then click the **Object Type** you wish to add the trigger for.

Click **Edit** to bring up the Object Type properties.

In the **Workflow Details** section, click **Browse** beside the action you want to associate with a workflow.

In the window that opens, select the workflow you wish to associate with the action.



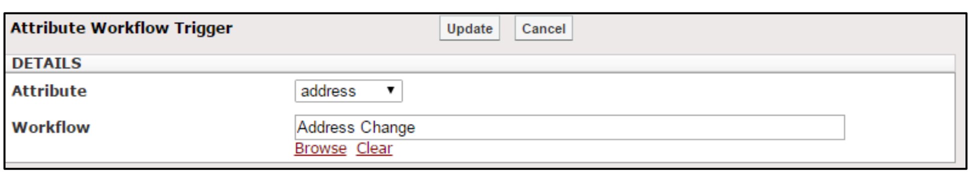
Once you have made the changes you wish, click **Update** to save your change.

Object Attribute Workflows

To set a workflow trigger on a specific attribute, click on the **Configuration** tab and then **Object Types**. Then click the **Object Type** you wish to add the trigger for.

Click the **New** button beside **Attribute Workflow Triggers**.

Choose the **Attribute** that you want to use for the trigger. Then click **Browse** to choose the associated workflow.



Select the workflow you wish to use and click **Update**.

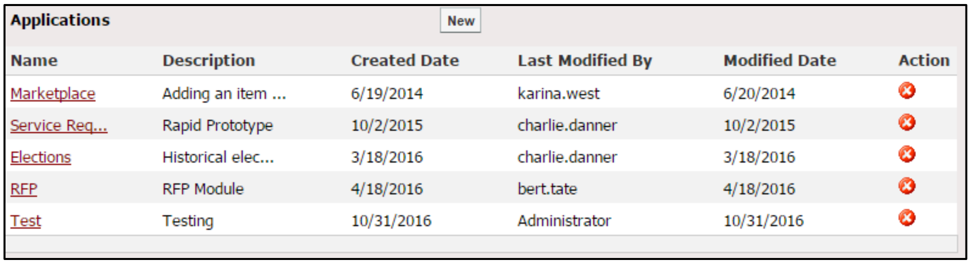
Whenever someone updates the value for that attribute on an object, it will kick off the assigned workflow.

Note: *You can see any outstanding tasks that have been assigned to you from these workflows on the* ***Home*** *tab.*

For more information on creating workflows, see the *Workflow Guide*.

Creating Applications

Using CRM, you can configure which tabs are displayed. To do so, you must create a new application.



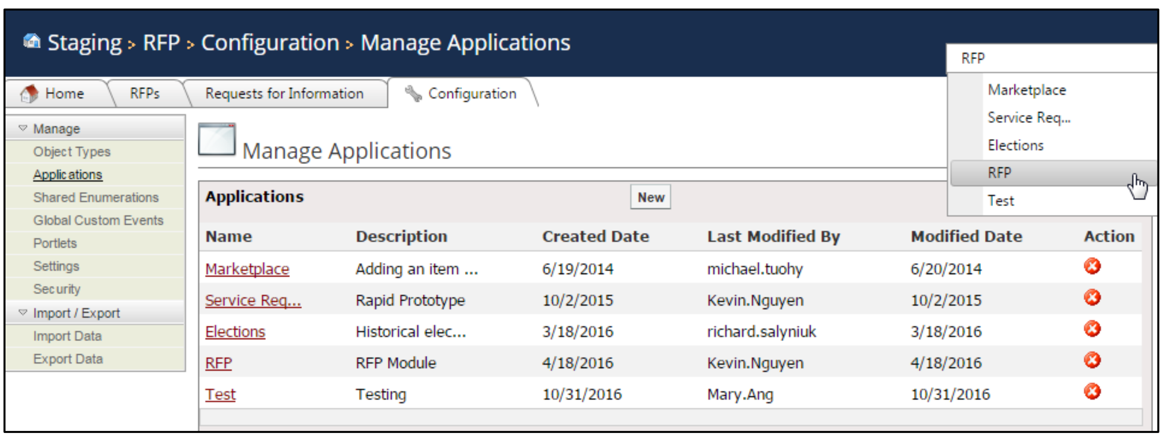
Applications New

Name	Description	Created Date	Last Modified By	Modified Date	Action
Marketplace	Adding an item ...	6/19/2014	karina.west	6/20/2014	
Service Req...	Rapid Prototype	10/2/2015	charlie.danner	10/2/2015	
Elections	Historical elec...	3/18/2016	charlie.danner	3/18/2016	
RFP	RFP Module	4/18/2016	bert.tate	4/18/2016	
Test	Testing	10/31/2016	Administrator	10/31/2016	

To create an application, go to the **Configuration** tab and click on **Applications**. Then click **New** under **Applications**.

Type in the N**ame** of your new application and click **Create New**.

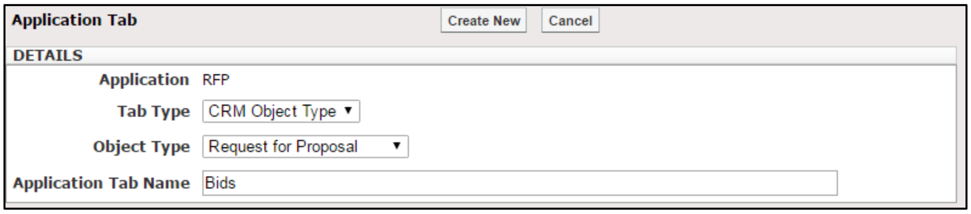
You can now switch to your new application by clicking on it from the dropdown menu on the top right portion of the page.



Creating Tabs

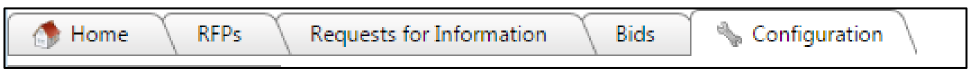
To add tabs to an application, click on the **Configuration** tab and then click **Applications**. Then click the **Name** of the application you are adding tabs to and click **New** under **Application Tabs**.

For **Tab Type**, choose **CRM Object Type** and then choose the **Object Type** you want to add as a tab. The **Application Tab Name** will automatically propagate with the name of the **Object Type** (though if you wish to change the tab name, simply update the text).



When you have finished your configuration, click **Create New**.

You will now have a new tab available in the application.



Application Security

To configure application security, click on the application you wish to configure and you will see the **Roles** available at the bottom of the page.

There are three roles available, **CRM Application Administrators**, **CRM Application Authors**, and **CRM Application Browsers**. CRM Application Administrators will have full control over the application. CRM Root Authors will have read, write, create, and delete control for the application and CRM Browsers will have read access only.

To add a user or group to a role, click the **+** sign next to the role and then click the Add button. Use the user picker to choose the user(s)/group(s) you want to give access to.

Configuring CRM Settings

To configure CRM settings, go to the **Configuration tab** and click **Settings**.

Here you can configure the following options:

List Render Format: Choose to render your list portlet with an **Unordered List**, a **Comma Delimited List**, and a **Semi-Colon Delimited List**.

Hide Relationships in View-Only Properties Table: If this is checked, then people with read-only access to the CRM will not be able to see the relationships tab.

Hide Relationship Type column in Relationship tabs: If this is checked, the relationship type will not be displayed in the relationship tab.

CRM Global Search Landing Page: To choose the page that a user should be sent to when clicking on a CRM object in search results, click **Browse**. Navigate to a page with a CRM Object View portlet and click **Select**.

Thumbnail file size: Specify the maximum file size of thumbnails, in MB.

Hide object template icons on tabs: If this is set then no icons will be displayed in the tabs for the various object types.

CRM Object Buttons Display Position: Choose if the buttons to update the CRM objects appear at the **Top**, **Bottom** or **Both**.

CRM Object Locking: This setting allows you to control how long a CRM object will be locked for when a user starts to edit it. It will remain locked until the user finishes their change or the time runs out. While an object is locked another user cannot edit it.

CRM Pick List Control Enabled: If this is checked, then when the number of objects in a list exceeds the **CRM Pick List Threshold** the CRM Picker Control will appear instead of the dropdown. This can be set for both **CRM Relations** and for **Shared Enumerations**.

CRM Pick List Threshold: If the **CRM Pick List Control** is enabled then the number specified here determines how many items a dropdown should contain before the picker control is used. If this number is set to 0 then the picker control will dropdown be used. This can be set for both **CRM Relations** and for **Shared Enumerations**.

Disable XHTML Validation on Rich Text Editor: If this checked, the rich content will not be checked to ensure validity when updating content.

Managing CRM Security

To access CRM security settings, go to the **Configuration** tab and click on **Security**.

There are three roles available, **CRM Root Administrators**, **CRM Root Authors**, and **CRM Root Browsers**. CRM Root Administrators will have full control over the CRM module. CRM Root Authors will have read, write, create, and delete control over the CRM module and CRM Browsers will have read access only.

To add a user or group to a role, click the + sign next to the role and then click the Add button. Use the user picker to choose the user(s)/group(s) you want to give access to.

Importing Data

With the **Import Data** module, you can import records directly into an object type. This can be done using an Excel file, a CSV file or an XML file.

To access the **Import Data** module, click on the **Configuration** tab and then click on **Import Data**.

If you have not already set up the data you would like to import, you can use the **Generate Template** function to create a template for you. Just click on **XML** or **CSV** to download the appropriate template.

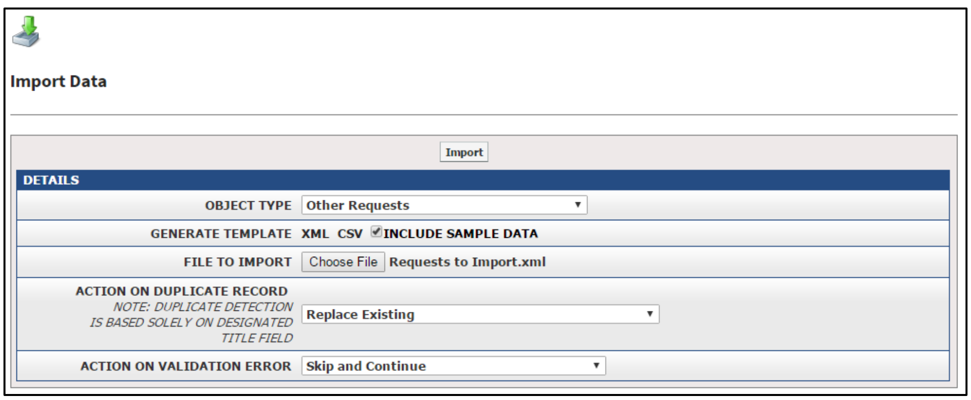
***Note:** If you check **Include Sample Data** you can get a sample of how the data you are going to import should be formatted.*

Once you have your data ready to import, choose the **Object Type** you would like to import your data to.

Click **Browse** and select the file you will import.

Choose your **Action on Duplicate Record**. This allows you to specify what action to take should some of your data already exist in the **Object Type**.

Choose your **Action on Validation Error** to specify what the import should do if it finds the formatting for data you are importing to be invalid.



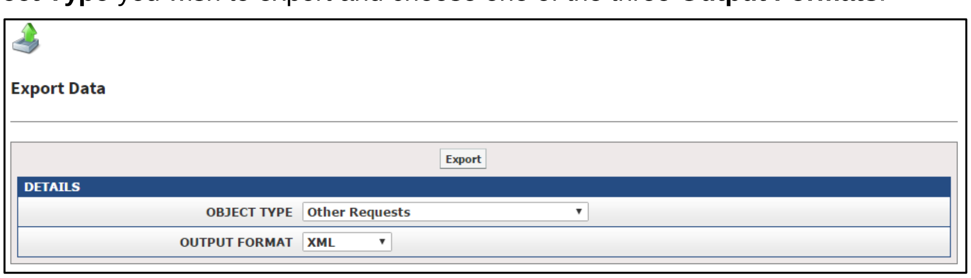
Once you are ready to import, click **Import** to import your data.

Exporting Data

With the **Export Data** module, you can export **Object Type** data for analysis in other forms.

To get to the **Export Data** module, click on the **Configuration** tab and then click **Export Data**.

Choose the **Object Type** you wish to export and choose one of the three **Output Formats**.



When you are ready to export your data, click **Export.**

Using CRM Portlets

There are a number of CRM portlets that can be used to make CRM content visible from within the CMS. These portlets are particularly useful for displaying CRM information to visitors to your site.

To add any of these portlets to a CMS page, click on **Advanced** -> **Switch to Design Mode**. Click **Add Portlet to Region** on the region where you wish to place your portlet. Choose **CRM** for your **Category**, place a checkmark beside your desired portlet and click **Update Page**.

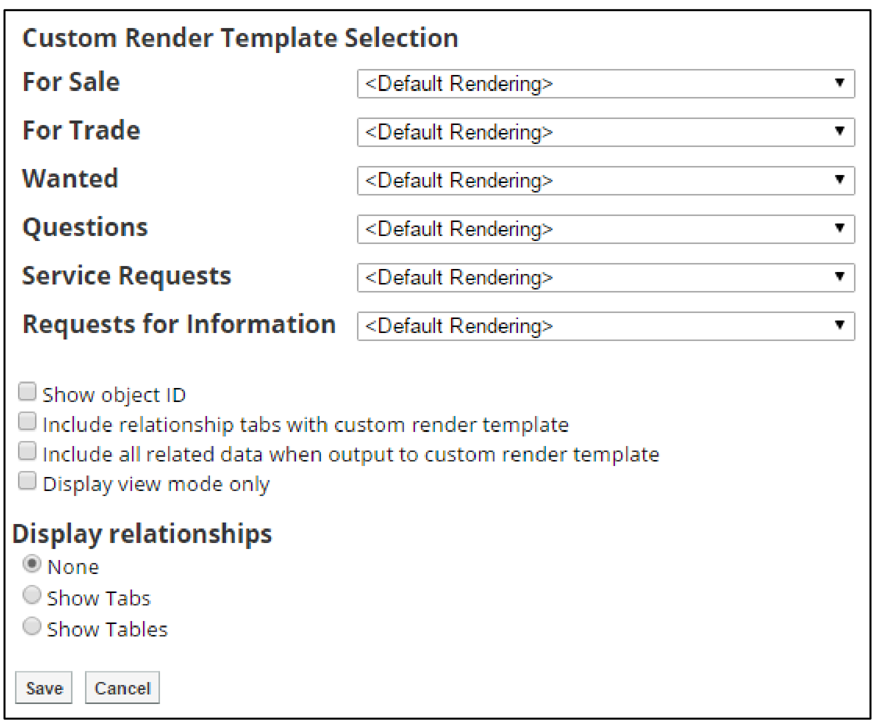
CRM Object View

The **CRM Object View** portlet allows you to view individual objects that have been displayed via the **CRM Object List** portlet.

After adding the portlet to the page, go to **Advanced -> Switch to Design Mode** and click **Edit** for the **CRM Object View** portlet.

When configuring the portlet, first choose what rendering to use for each object type from the **Custom Render Template Selection**. A specific render template can be used for each object type or you may use the default rendering template.

You can also specify whether or not to **Show object ID** when the user views the object and whether you wish to **include relationship tabs with custom render template** and if you wish to **include all related data when output to custom render template**.



When you have finished configuring the portlet, click **Save**.

CRM Advanced Search

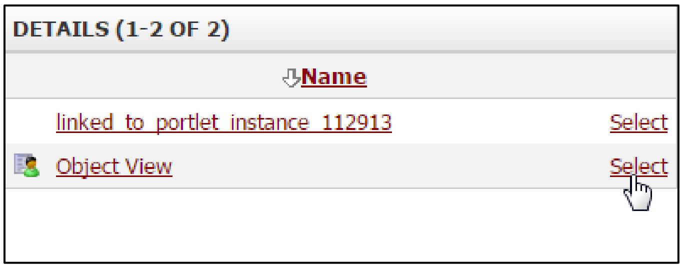
The **CRM Advanced Search** portlet allows users to search for particular elements within the CRM data. If a user clicks on one of the items in the search results, they will then be taken to a page using the **CRM Object View** portlet to view the object.

After adding the portlet to the page, switch to **Design Mode** and click for the **CRM Advanced Search** portlet.

Search Settings

Fill out the **Title** of your portlet.

Click on the icon to select the **Default View Page**. Navigate to the location of the view page and click **Select** to choose the page.

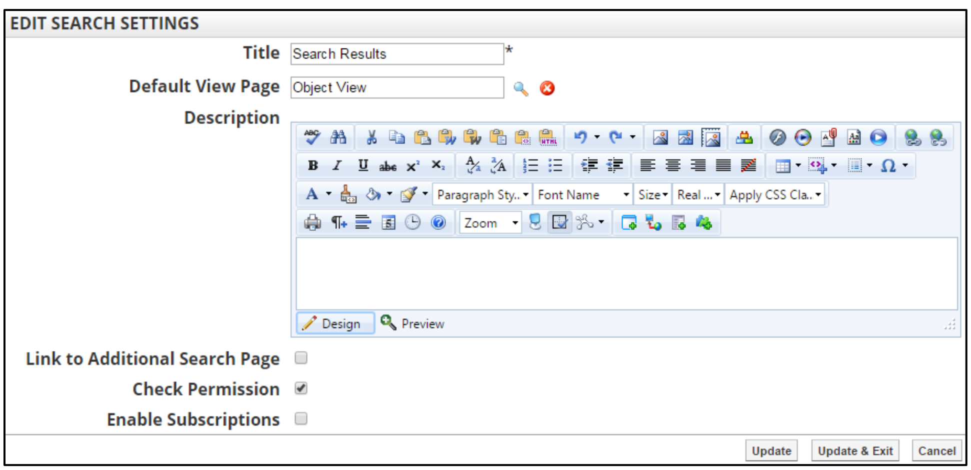


You may fill in the optional **Description** field of the portlet.

You can choose to link the page to an **Additional Search Page**. This allows you to create a link to another page on the site that will be displayed below the main search bar on the Search Results page.

If users should only be able to see search results for objects they have read-access, enable the **Check Permission** option.

If you would like users to be able to subscribe to any changes to a specific search result, check **Enable Subscriptions**. If this is enabled, users will be able to sign up to be notified (immediately or on a daily or weekly basis) when a new item fits their search criteria or there is a change to an existing item.



To save your configuration settings, click **Update**.

Object Types

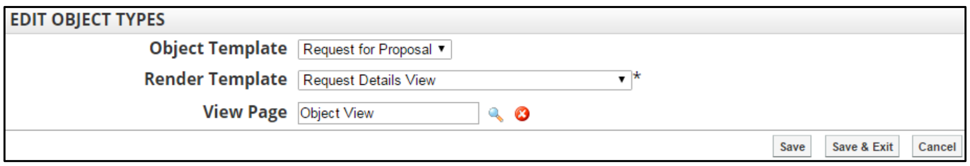
The **Object Types** tab determines which objects can be searched for.

To add an item, click **Add Searchable Object**.

Use the **Object Template** dropdown to choose the template to use for the object.

Use the **Render Template** dropdown to choose how the you want the object to appear.

You can set the **View Page** to choose the page you will be taken to when viewing the search result. By default, this will use the **Default View Page** set on the **Search Settings** tab.



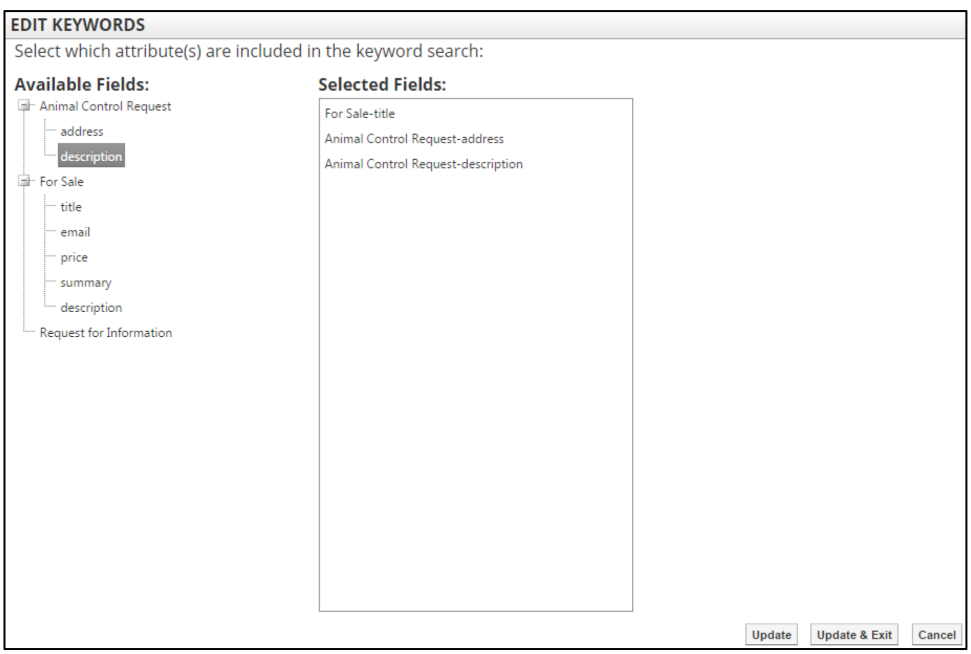
When you have set up the object, click **Save**.

Keywords

The **Keywords** tab allows you to choose which text fields you want to include in the search. You will be able to select for any fields that are associated with the object types you added in the **Object Types** tab.

To add a field, click the **+** to the left of the Object Type.

Click and drag the name of the field from **Available Fields** to the **Selected Fields** box.



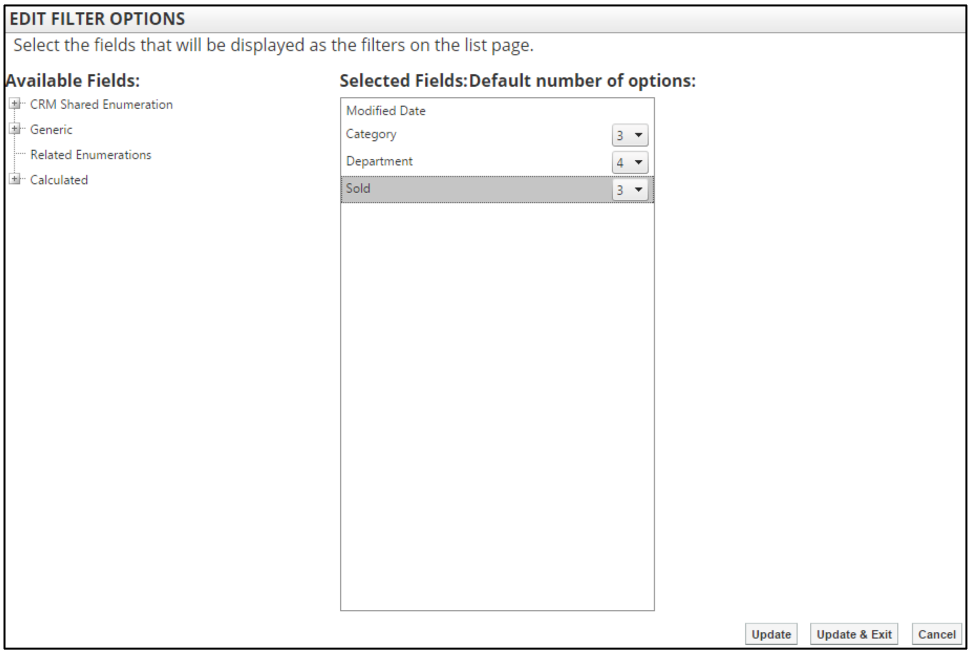
When you have finished making your changes, click **Update**.

Filter Options

In the **Filter Options** tab you are able to determine which fields you can use to filter your search results. These will show up in the left side of the page when viewing the Advanced Search Results portlet.

To add a field, click the **+** to the left of the field category, and drag and drop the desired item to the **Selected Fields** box.

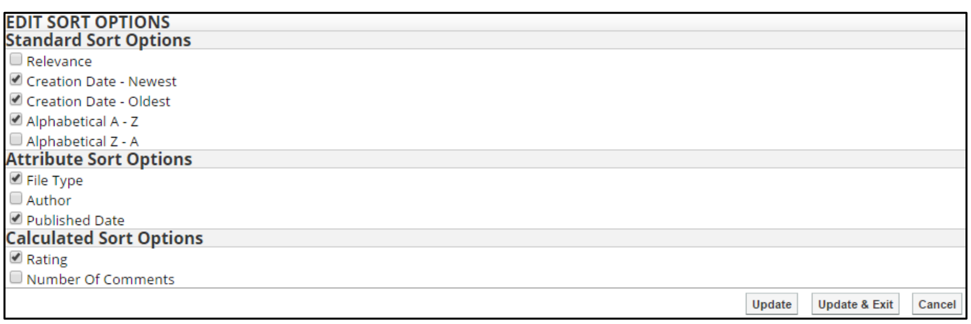
In the **Selected Fields** box, if the field is an enumeration field, you can use the dropdown to specify how many options will show up in the sidebar by default. Users will be able to view the full list of options by clicking **More**.



When you have made your configuration changes, click **Update**.

Sort Options

The **Sort Options** tab allows you to determines which sort options will appear when using the search interface. These options will appear as a dropdown menu on the top right of the **Search Results** window.



Check the options you wish to include and click **Update**.

Rules

Within the **Rules** tab you can add rules that will limit the search results that the user will be able to access. The items will only be included in the search result if they comply with the rules. For example, you can have a rule to only show results for objects that user has created.

After setting up your rules, click **Update** to save your changes.