Kentico allows you to create your own settings and use them to configure custom parts of the application. You can work with the values of custom settings in two ways:

- Through the API in custom code
- Inside macro expressions

Creating a custom module

Each setting in the system must belong under a module. You cannot create custom settings for the default modules included in Kentico. To add custom settings, first create a custom module:

1. Open the **Modules** application.
2. Click **New module**.
3. Type a display name for the module (for example *Custom settings*).
4. Click **Save**.

You do not need to create any classes, permissions or user interface for the module — you can use an empty module as a container for custom settings.

Alternatively, you can use the default **Custom** module (only recommended for ad-hoc, non-transferable settings).

Defining custom settings

The system organizes settings according to the following hierarchy:

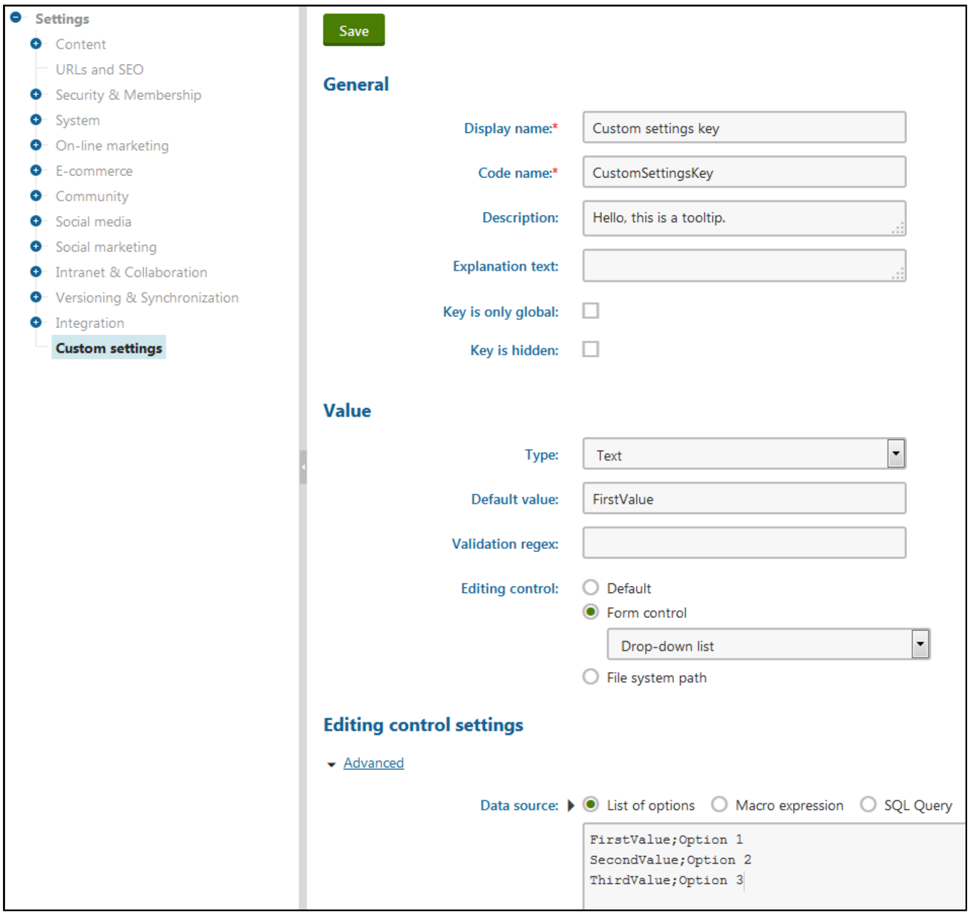
- **Categories** – represent separate pages in the settings interface. You can create categories under other categories in a tree structure.
  - **Groups** – divide categories into sub-sections. Groups make it easier to navigate in categories that contain a large number of setting keys.
    - **Keys** – individual settings.

To create settings, open the **Modules** application, edit (✎) one of your custom modules and select the **Settings** tab:

1. Click **New category** (+).
2. Type a **Display** and **Code name** for the category.
   - (Optional) You can set the category's icon image through the **Icon path** property. Enter the path to the image, either as a full relative path from the web project root (e.g. *~/App_Themes/Default/Images/CMSModules/list.png*) or a short path beginning under the App_Themes *Images* folder (e.g. *CMSModules/list.png*).
3. Click **Save**.
4. On the **Settings** sub-tab of the category and click **New settings group**.
5. Type a **Display** and **Code name** for the group.
6. Click **Save**.
7. Return to the **Settings** tab of the category and click **New settings key** inside the group.
8. Fill in the properties of the settings key:

General	
Display name	Sets the caption displayed next to the key in the settings interface.
Code name	Serves as a unique identifier for the setting (for example in the API).
Description	Sets a tooltip that the system displays in the settings interface when hovering over the key's caption or help icon. You can describe the purpose of the setting, allowed values, etc.
Explanation text	Adds text that the system displays directly below the setting in the settings interface (**Settings** application).

Key is only global	If checked, all sites in the system share the same value for the key. You can only see global keys when editing *(global)* settings.
Key is hidden	If checked, the system does not display the key in the **Settings** application. You can use hidden settings to store the values of configuration options that you set through the API.
Value	
Type	Selects the data type of the setting key's value: - Boolean (Yes/No) - Integer number - Floating-point number - Text - Long text The settings interface validates the entered value against the selected type.
Default value	The default value of the key. Administrators can reset settings to their default value by clicking **Reset these settings to default** in the settings editing interface.
Validation regex	Allows you to define custom validation rules for the setting's value through a regular expression.
Editing control	Specifies the interface element used for editing the key's value in the settings form. - **Default** – the setting key uses a basic textbox or checkbox (for *Boolean* values) interface. - **Form control** – allows you to choose one of the form controls registered in the system. You can configure the parameters of the selected form control in the *Editing control settings* section. - **File system path** – directly specifies the path to a user control file in the web project, for example: *~/CMSFormControls/SimpleCountrySelector.ascx*



General

Display name:* Custom settings key

Code name:* CustomSettingsKey

Description: Hello, this is a tooltip.

Explanation text:

Key is only global: □

Key is hidden: □

Value

Type: Text

Default value: FirstValue

Validation regex:

Editing control: ○ Default ● Form control (Drop-down list) ○ File system path

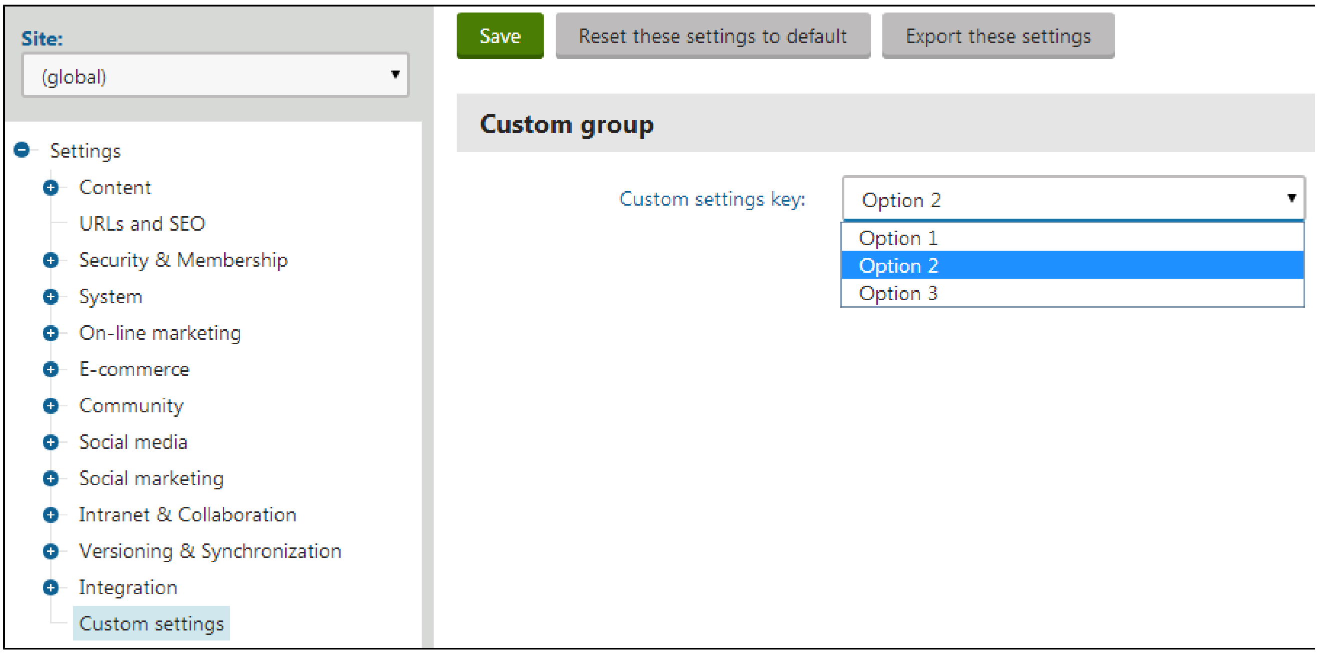
Editing control settings

Data source: ● List of options ○ Macro expression ○ SQL Query

```
FirstValue;Option 1
SecondValue;Option 2
ThirdValue;Option 3
```

9. Click **Save**.

Administrators (and users with the *Configure settings* permission for the *CMS* module for non-global settings) can now configure the value of the custom setting in the **Settings** application.



Site: (global)

Custom group

Custom settings key: Option 2

Managing custom settings

To manage your custom settings, edit the parent module in the **Modules** application, and select the **Settings** tab. The settings hierarchy here defines the structure of the **Settings** application's interface.

> ⚠ **Restrictions**
>
> - You cannot modify the settings under the default modules in Kentico.
> - You can only work with the settings of the module that you are editing (settings of other modules are grayed out).

You can perform the following actions:

- Edit the properties of setting categories (names and icon path) on the **General** tab.
- Click **Edit** (✎) to modify the properties of setting keys or groups.
- To move an item within the settings hierarchy, edit the item and select the target location through the **Parent category** or **Group** property.
- Click **Up** (⌃) or **Down** (⌄) to change the order of categories, groups or setting keys.
- Click **Delete category** (🗑) or **Delete** (🗑) to remove setting items.

Loading the values of settings in code

To make settings affect the behavior of websites (or the entire application), you need to work with the setting values in your custom code. For example in event handlers, web parts, modules or any other components. You can load values of both the default and custom settings.

Call the following methods of the *SettingsKeyInfoProvider* class according to the data type that you wish to use for the setting's value:

- **GetBoolValue**
- **GetValue** (for string values)
- **GetIntValue**
- **GetDecimalValue** (usable with settings of the *Floating-point number* type)
- **GetDoubleValue** (usable with settings of the *Floating-point number* type)

The methods accept a string parameter that identifies the setting in the following format: ***<site code name>.<settings key code name>***

> ⚠ **Note**: When loading global-only settings, only enter the code name of the required settings key in the parameter.

For example:

```
using CMS.DataEngine;
using CMS.SiteProvider;

...

string value = SettingsKeyInfoProvider.GetValue(SiteContext.CurrentSiteName + ".
CMSDefaultAliasPath");
```

Getting setting values in macro expressions

⚠ **Note**: Only users with the Global administrator privilege level can create macros that load the values of settings. The *Configure settings* permission for the *CMS* module is not sufficient for this purpose.

Macro expressions allow you to:

- Dynamically insert the values of settings into most fields in the Kentico administration interface
- Work with settings in macro conditions or other expressions with advanced logic

You can load values of both the default and custom settings.

Use the following expression to get setting values inside macros: ***Settings.<settings key code name>***

For example:

```
{% Settings.CMSStoreFilesInFileSystem %}
```

The macro returns the setting's value for the currently running site (or the global value for global-only settings). If you need to access the global value of a setting, you can use the following macro expression: *GlobalObjects.SettingsKeys.<settings key code name>.KeyValue*