Creating and Editing Fields

Introduction

Fields are the heart of any configurator.

They are where the configurator user defines the configured product.

But fields do so much more.

Learn how the data stored within a field is different from how that data is shown on-screen.

See how field-level help, constraints, and formatting all work together to give your user a field that's easy to complete.

Data Types and Controls

We've all filled in forms on the web before.

In a web-based form, a field stores the information the user provides, so that the data can be used later.

But in a configurator, fields can also store other information.

For example, a field can store the results of a calculation or the results of a query from another system.

In the cube configurator example, we created a new configurator and set up a page and a group.

Inside the group is a field, but that field does not appear in our UI.

Let's review the basic properties of a field to see why.

In the explorer, drill down in the UI node until you reach the field.

Click directly on the "Field" node in the explorer, and you'll see the field properties appear on the right.

Like many UI components, fields have a name and a label.

In our example, we want to let the user choose the height of their cube.

Change the programming name of the field to "fHeight", and the label the user sees to "Height".

The next two properties of a field are very important to set correctly.

First is the data type. We need to specify what kind of data this field will store. Is it text, or a number? Maybe it's a date, or a color?

As you can see, many types of information can be stored in a field.

The examples here can help you decide which data type is best for any field you create.

We'll focus on text and number datatypes first.

It's important to choose the right data type for any field.

As your configurator grows, it can become difficult to change the data type of a field.

In this example, we know that height is a numerical measurement.

We can anticipate that mathematical calculations could be performed with it.

Therefore, set this field's data type to a number.

Now for the second important property of a field: the control.

Controls are the ways data can be shown on-screen.

Think of the data type as what kind of information is stored inside this field, and the control as how that data appears to your user.

Your configurator has many kinds of controls available including color pickers, text boxes, sliders and selects.

Controls help your user enter information easily and accurately.

It's up to you as an administrator to pick a control that's best for each specific field.

In our example, we've selected the number data type, so the control property shows us all the ways that a number can be displayed to your user.

For now, let's start with the most basic number control, the Numberbox.

Change the control property from "None" to "Numberbox".

Since we've chosen a control, the field finally appears in the preview.

You can click on the preview to see how this Numberbox control works.

You can type a number directly, or you can click the arrows to adjust the number.

Additional field properties let you show the label of the field or hide it.

You can also make the field visible or not.

Fields can also be enabled or disabled.

An enabled field is one your user can edit.

If you turn off the enabled checkbox, your field is locked. your user cannot make changes to it.

The field would be for display only.

Only rarely would you make a field searchable.

You can learn more about this property in the documentation.

Finally, you can set the field's default value.

In our example, zero is not a good default value. We want to sell a cube with some height to it.

According to the specifications, custom cubes can range from 1 to 10 centimeters tall.

Change the Value of the field to 5, or some other number between 1 and 10.

Here's a tip. It's easy to change the control of a field.

You're not changing the data, just the way the data appears.

For example, we started with a simple Numberbox control.

Change it from "Numberbox" to "slider".

You'll now see the field rendered as a slider control in the preview. It's the same data, with the same constraints, just drawn differently.

Click 'Save' to save changes to the field.

Field Help

Some of the people using your configurator may have used it many times, and just want a simple form.

Other people may be using it for the first time and need some guidance.

How do you keep a simple interface for the advanced users, but give lots of help to the new users? It's easy with field help.

In your configurator editor, be sure the field you want to add help to is selected in the explorer.

You'll see the properties of that field shown to the right.

In the properties, open the help expander.

You'll see three different ways you can add help to a field.

You can add one, two, or all three.

All help types will appear in a small icon next to the field.

First, you can add a description.

This is a great place to clarify any technical terms, or to provide a little more marketing information.

Second, you can add help media.

Pick any media from the media folder to show here. A picture is worth a thousand words!

Third, you can add a help URL.

This will appear as a clickable "learn more" link that can open a resource on the internet, like a page on your corporate web site.

Mix and match the 3 different types of help to create the best user experience.

Data Type Options

You've seen how a field is, at the most basic level, just two things: information stored the right way using the datatype and shown on-screen in the best way by choosing the control.

Let's see how we can fine-tune those two things in the last two expanders of the field properties: the data type options and the formatting options.

When you selected the datatype for your field, an expander displayed the ways you can adjust that datatype.

In our example, we chose "number" as the datatype.

The precision is how many digits after the decimal point are stored.

For example, if you want to store a currency, you would have a precision of two.

To store whole numbers, use a precision of zero.

The step controls the amount added or removed every time the user clicks the up or down arrow.

For example, if the height could be specified to the quarter inch, you would set a step of point two five. Since that's 2 digits, your precision would be 2.

Or, If the height could be configured down to an eighth of an inch, you would have a step of point one two five. That's 3 digits to the right of the decimal point, so your precision would be 3.

Since you have the clickable preview of the field shown to the right, it's easy to test your settings to ensure they work well.

Here, we'll set the precision to 0 and the step to 1.

Finally, you can constrain the value of the field. Turn this on, and you can specify a minimum and maximum value.

According to the specifications, custom cubes can range from 1 to 10 centimeters tall.

Set the constrain value to true and

Set the min and max to 1 and 10.

These have all been the data type options for numbers.

When you select other data types, you'll see other options appear.

Best practice would be to add these constraints only on fields your user is editing.

For other fields that show calculated results, you typically don't need any constraints at all.

Formatting and Control Options

Formatting options and control options don't adjust the data the user entered. They just make it easier to read.

The Format expander lists ways you can add optional formatting to the field.

The format you specify is applied only when the user is done editing the field.   It won't get in the way of their editing, and it's not changing the value in the field itself.

For example, you can select "number" to have a thousands separator and decimal separator shown.

Or select "none" to simply show the digits.

You can add a prefix or suffix to appear before or after the number.

This is usually where you add a unit of measure for display.

For our example, add a suffix of "cm" for centimeters.

Below the Format expander, another expander of options can appear depending on the selected control. Since we chose a "slider" control for this number field, you see a "slider" expander of properties appear. You can accept the defaults or make adjustments in how the slider is displayed. As you adjust properties, see the results appear in the preview.

In our example, we'll accept the defaults.

Recap

You've learned about Fields, the basic building block of well-designed configurators.

You saw how the data stored within a field is different from how that data is shown on-screen.

You've learned how field-level help, data type constraints, and formatting all work together to give your user a field that's easy to complete.

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