

AXIAL SPONDYLOARTHRITIS (AxSpA) SCREENING TOOL

This build guide provides an overview with which to develop an electronic health record (EHR) screening tool using a SmartForm to determine if adults with chronic back pain should be evaluated by a rheumatologist for axSpA as a potential cause for their symptoms. The tool is not intended to be used for diagnosis or clinical assessment.

Role of SmartForm

SmartForm is a clinical decision support tool that enables healthcare providers to document clinical encounters more efficiently. The forms are customizable templates that include dynamic fields, checklists, and dropdowns to facilitate documentation of relevant information based on patient specific data.

What is Axial Spondyloarthritis?

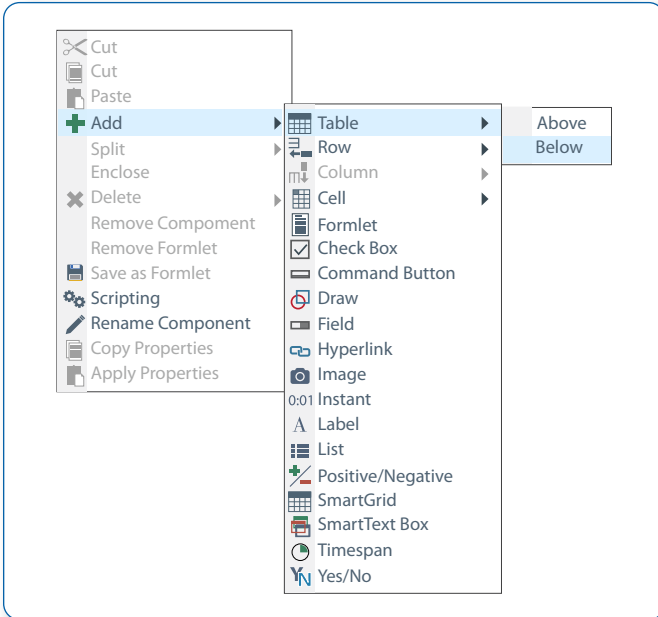
AxSpA is a chronic inflammatory disease that mainly affects the spine and the joints that connect the bottom of the spine to the pelvis (sacroiliac joints), causing longstanding back pain, stiffness, and limited mobility. It is a systemic disease, which means it may affect other joints, body parts, and organs. AxSpA is an under-recognized disease in non-rheumatology practices because of its heterogeneous clinical features that may be difficult to identify.

There are two types of axSpA:

- Ankylosing spondylitis (AS), also known as radiographic axSpA, causes damage to the sacroiliac joints that can be seen on x-rays.
- Nonradiographic axSpA (nr-axSpA) causes damage that may not be visible on x-rays but may appear on magnetic resonance images (MRIs).

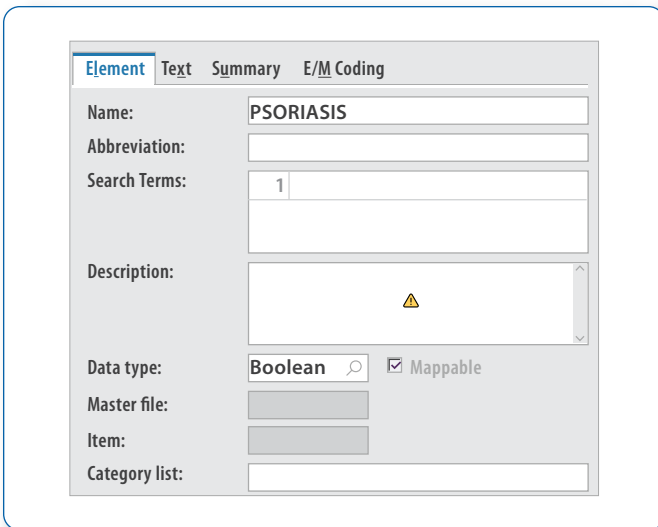
SMARTFORM BUILD

- Open new form in SmartForm designer. If no specific context is needed, use the General Form type and create in Advanced mode.
- Create a table and specify 2 columns and 10 rows.



This image is intended for illustrative purposes only.

- Left click on the green + icon in the first row and first column, then click the Yes/No option.
- With the Yes/No button you just added, click the Data Tab on the right and choose a Boolean type element to bind to. Set the context – Encounter is most appropriate here.
- Utilize the SmartData Manager to create SmartData Elements to bind to the form components. Find an appropriate location for new fields in the SmartData tree and create new elements with a type of Boolean for the Yes/No fields and Number for any numeric fields on the form.



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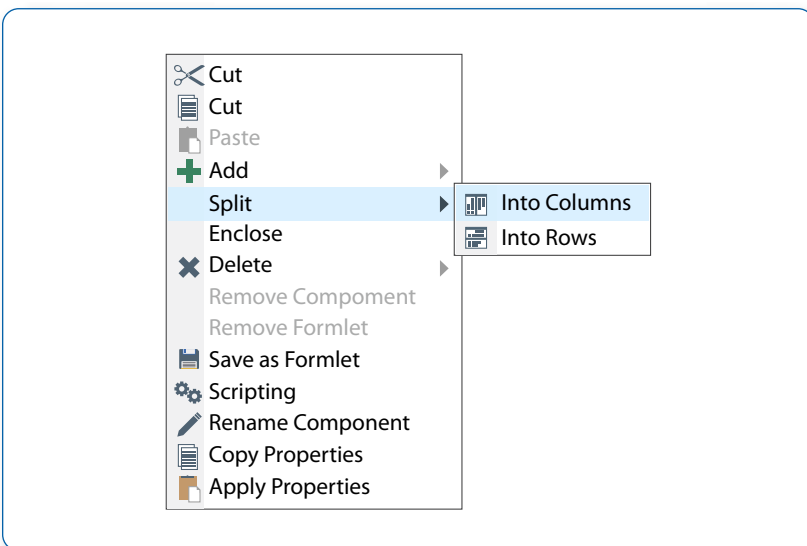
SMARTFORM BUILD

- On the properties tab, format the component. Add the appropriate prompt text in the prompt field and choose a prompt width and width of the entire element.
- Once aligned with the formatting of this field, right click on it and select copy. Then right click and paste onto the other elements in the first column of the table.
- Replace the prompt text and bound element on each row so they are all unique.

X-Ray/MRI sacroiliitis	Yes	No
Elevated ESR/CRP	Yes	No
HLA-B27+	Yes	No
Uveitis	Yes	No
IBD	Yes	No
Psoriasis	Yes	No
Back pain improvement with NSAIDs	Yes	No
Back pain improvement with exercise, not with rest	Yes	No
Alternating buttock pain	Yes	No
Fam Mx axial spondyloarthritis/uveitis/psoriasis/IBD	Yes	No

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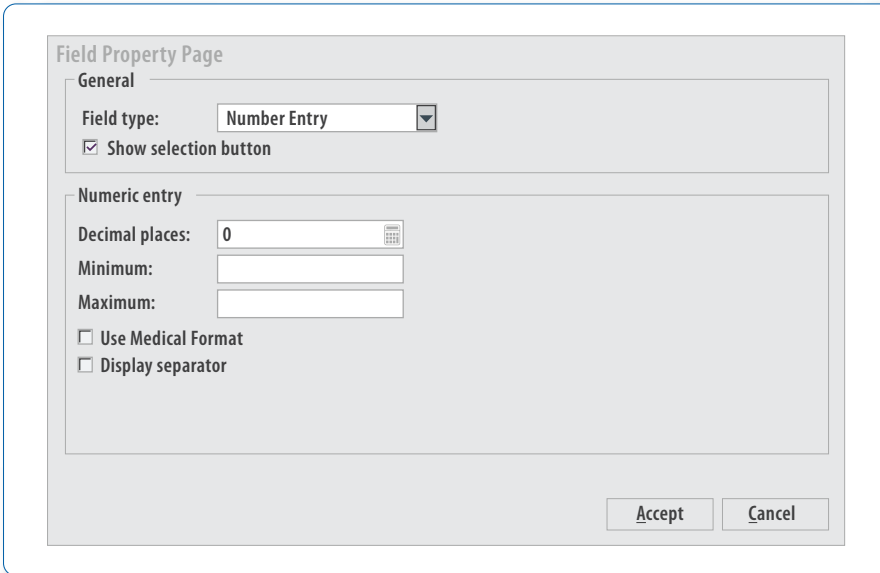
- Add a new row below the table to store the calculated score. Do this by selecting the table and adding it below so the new row is not in the table.
- Split the new element into two new columns. This will allow you to adjust the width of the new field component.



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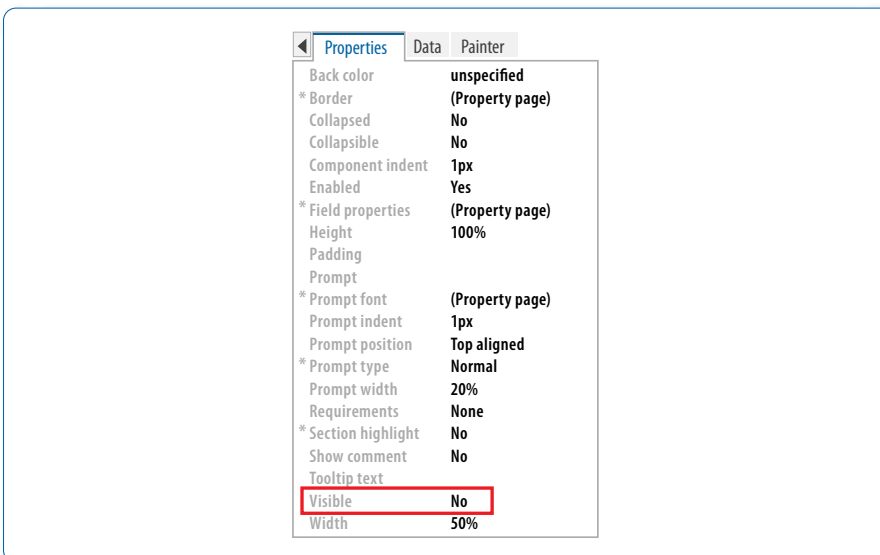
CRP, c-reactive protein; ESR, erythrocyte sedimentation rate; HLA-B27, human leukocyte antigen B27; IBD, inflammatory bowel disease; MRI, magnetic resonance imaging; NSAID, nonsteroidal anti-inflammatory drugs.

- Left click on the left column in this new row and add a Field component. Double click on it and change the field type from Base to Number entry.



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- Format the properties to match the formatting of the Yes/No components. Change the Enabled property to No—this prevents a user from manually entering a value for a field that should only calculate its own value.
- Bind a number type SmartData Element to your score field.
- In order to set up the scripting to calculate the score, assign the points for each Yes value by adding a numeric component in the second column on the table for each of the Yes/No components.
- Starting in the first row of the table's second column, next to the X-Ray/MRI sacroiliitis component left click on the green + and add a field component. Double click to open the property page and change the type to number entry. Then on the Properties tab change the Visible property to No.



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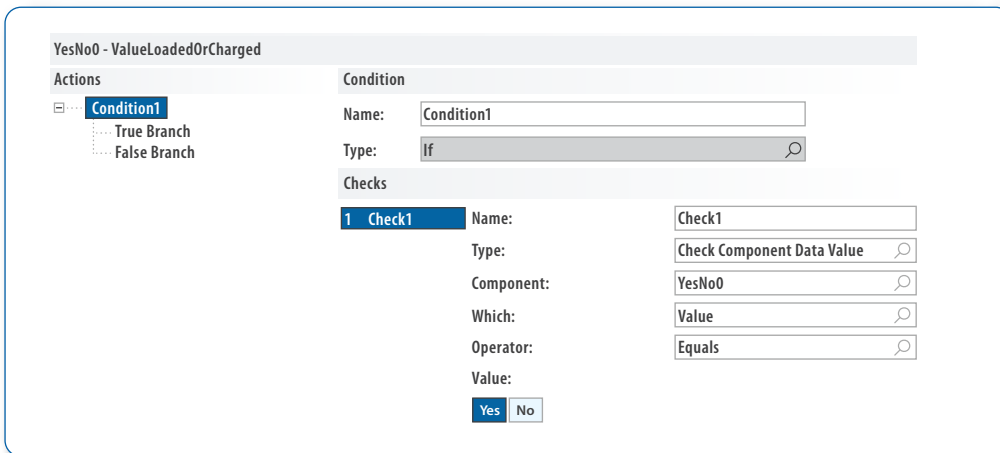
SMARTFORM BUILD

- Copy and paste the row into the remaining 9 components and replace the SmartData binding for each one so they are all unique.
- Navigate to the Scripting tab of the Yes/No component, select ValueLoadedOrCharged, then Add Condition and Add Check.



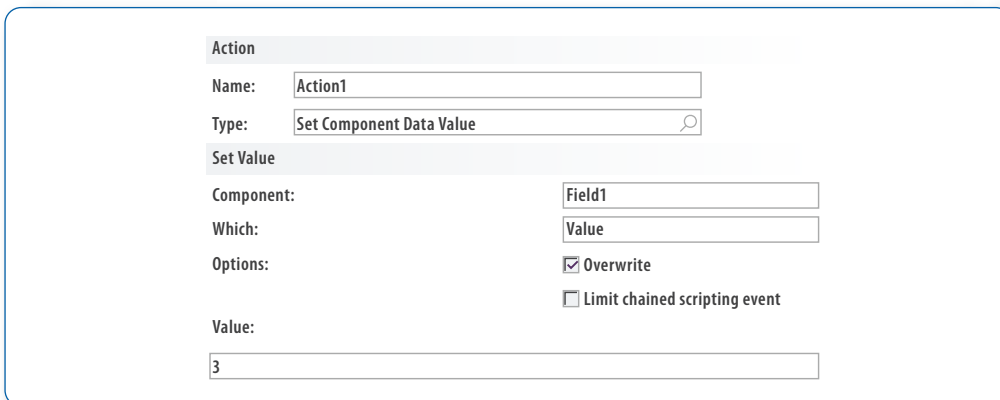
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- Set the Operator in the logic check to Equals and click the Yes button to check for a value of Yes.



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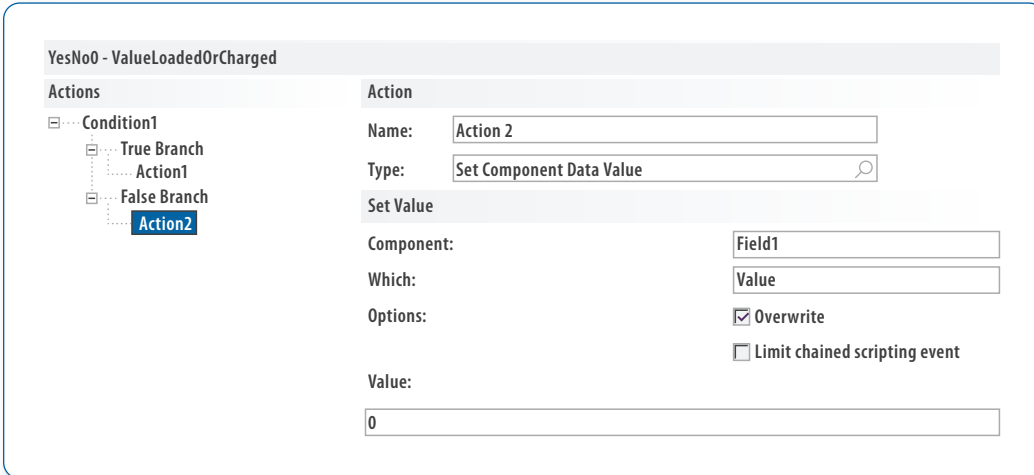
- Click on True Branch, then click Add Action. Change the component to the invisible field directly to the right of the Yes/No button.
- Click the Overwrite checkbox, and then type the point value corresponding with the Yes/No column the field is paired with in the Value box.



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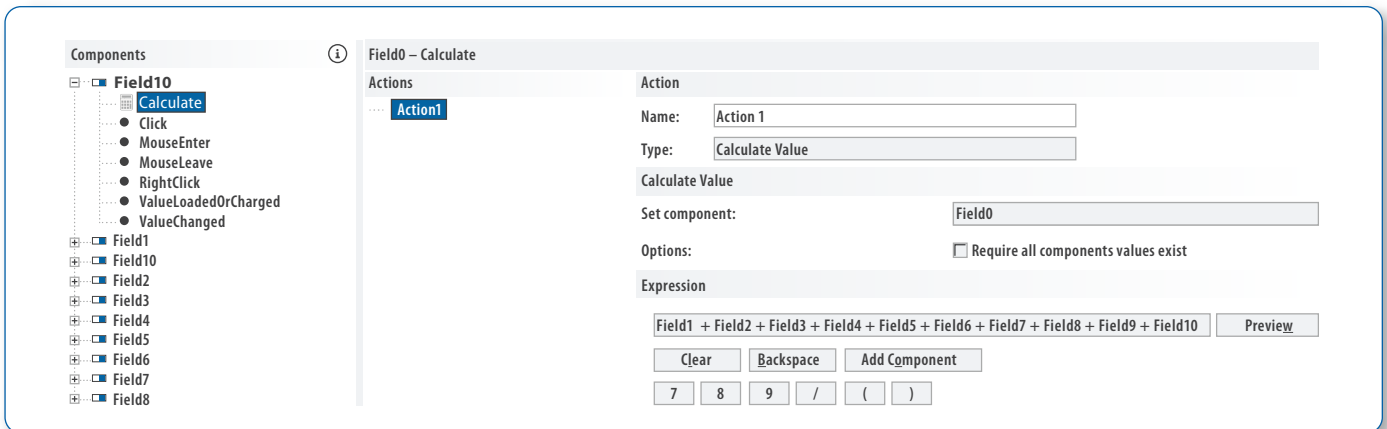
SMARTFORM BUILD

- Next, under the False branch, add the same logic but with a value for 0. This sets the value of this score component to 0 when Yes is not selected.



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- Repeat this for each Yes/No component, ensuring that the score value you assign corresponds with that component and that the score is being applied to the appropriate hidden field component.
- Click on the score field and go to the Scripting tab. Left click the Calculate node under the field on the left, then click Add Action. Add the values of the 10 fields to set values into when Yes is clicked.



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- Use the Preview tab to ensure that the components all behave correctly and that the score calculates the correct value.
- When the form is validated as working correctly, click the Release checkbox and Accept to create the form and make it available for use.

Designer	Preview	Scripting
X-Ray/MRI sacroiliitis	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Elevated ESR/CRP	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
HLA-B27+	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Uveitis	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
IBD	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Psoniasis	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Back pain improvement with NSAIDs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Back pain improvement with exercise, not with rest	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Alternating buttock pain	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Fam Mx axial spondyloarthritis/uveitis/psoriasis/IBD	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="text"/>
Score	<input type="text"/>	

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Preview of form in web activity:

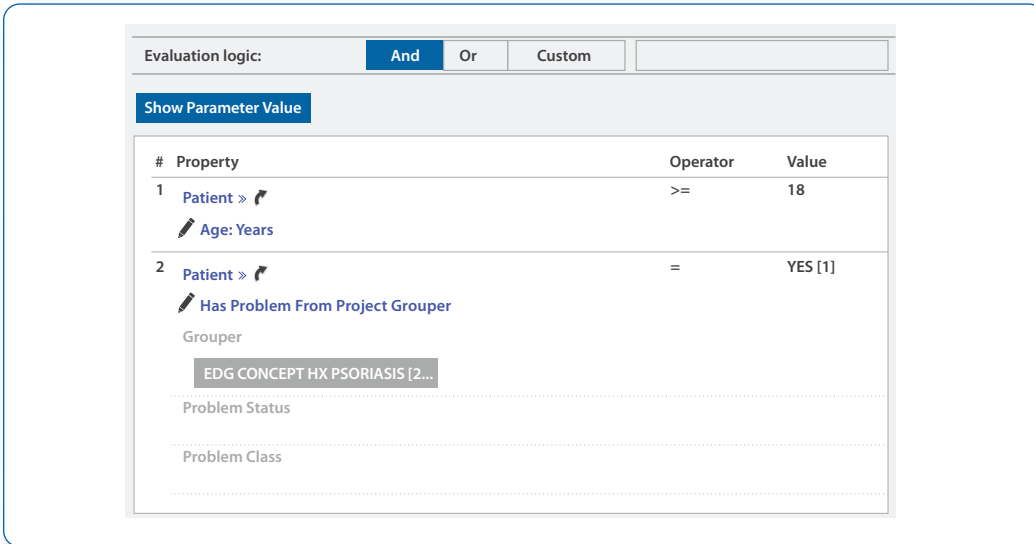
☐
SmartForm Hyperspace Web Preview

X-Ray/MRI sacroiliitis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Elevated ESR/CRP	<input type="checkbox"/> Yes <input type="checkbox"/> No
HLA-B27+	<input type="checkbox"/> Yes <input type="checkbox"/> No
Uveitis	<input type="checkbox"/> Yes <input type="checkbox"/> No
IBD	<input type="checkbox"/> Yes <input type="checkbox"/> No
Psoniasis	<input type="checkbox"/> Yes <input type="checkbox"/> No
Back pain improvement with NSAIDs	<input type="checkbox"/> Yes <input type="checkbox"/> No
Back pain improvement with exercise, not with rest	<input type="checkbox"/> Yes <input type="checkbox"/> No
Alternating buttock pain	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fam Mx axial spondyloarthritis/uveitis/psoriasis/IBD	<input type="checkbox"/> Yes <input type="checkbox"/> No
Score	0 <input type="text"/>

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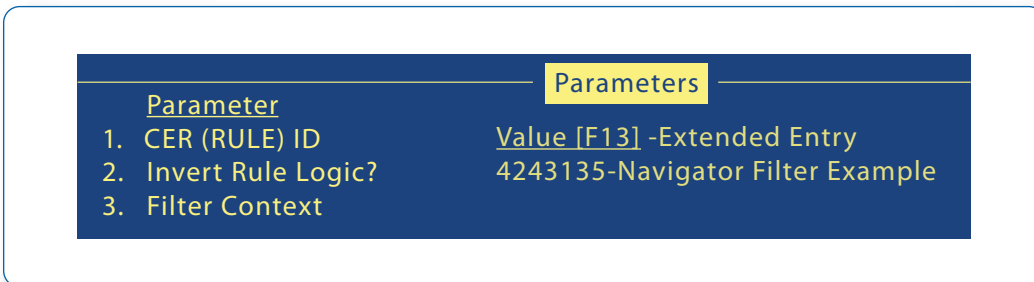
NAVIGATOR FILTER STEPS:

- Create a copy of LPP 23003 MR RULE-BASED NAVIGATOR SECTION FILTER.
- Create a Patient context rule and add any criteria that should show/hide the navigator section to which the filter LPP will be attached. An example is shown below for patients 18 years or older and who have a psoriasis diagnosis in their problem list.



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- Link the rule to your navigator filter LPP.



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- By default, the filter will *show* the navigator section to which it's linked when the rule is true and hide when it is false. Set the invert rule logic field accordingly.
- Link the filter LPP in the navigator you want to conditionally show.

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