

WebSphere. software

**Creating simple SAP
Portlets with
WebSphere Portlet
Factory**

Version 1.1

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1 Preface

1.1 Preface and scope

This document is intended to be a technical description and design document primarily targeted for use of technical people.

1.2 Author

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1.3 Disclaimer

This document is subject to change without notification and will not comprehensively cover the issues encountered in any customer situation. It should be used only in conjunction with the product literature accompanying the J2EE products from IBM and SAP.

2 Overview

This document should introduce a user how to use the WebSphere Portlet Factory capabilities to create portlets which could access SAP R/3 Systems to retrieve and display data.

3 Before the start

What is the target?

Create a portlet to get:

- a list of companies
- access the details
- Switch back to first page

What are the steps?

To create this:

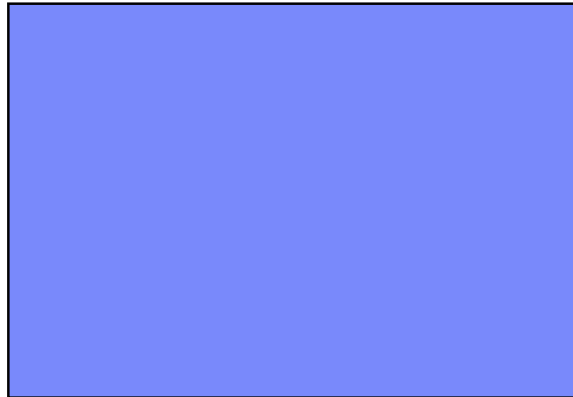
- Create a new empty model
- Add the SAP View and Form builder
- Add another one
- Use the second for the details
- Create a link backwards

4 How to

First of all there must be a running WebSphere Portlet Factory installation to follow the steps.

Also an accessible SAP system with right configured configuration file is needed.

1. Empty model



To create an empty model start the Designer and right click on the SAP_Workshop folder in the navigation tree. Select New -> WebSphere Portlet Factory Model

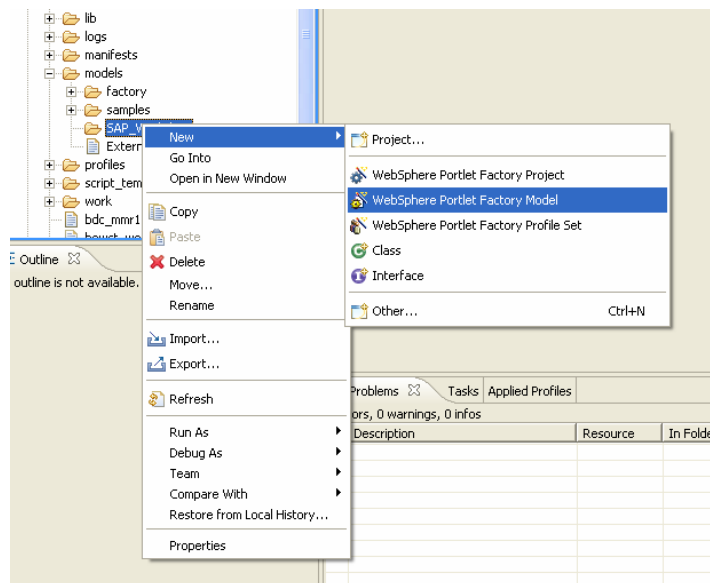


Figure 1 - create new model

Choose the available Project. You can have different Portlet Factory Web Projects in one workspace but in the VMWare environment there is just one.

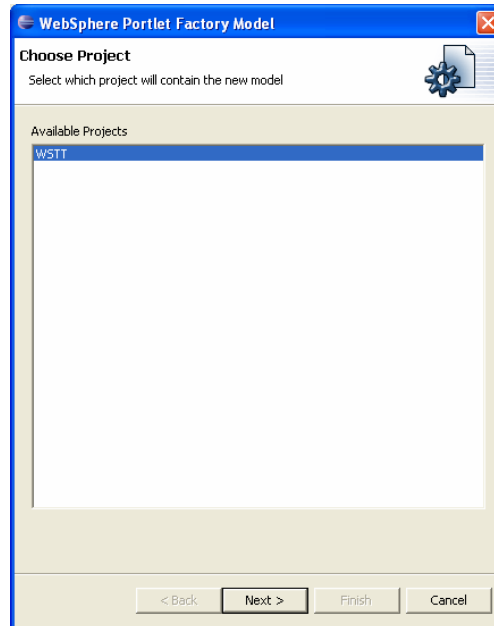


Figure 2 - choose server project

Start with an empty model and create every builder manually. There are several standard configurations available for specific topics.

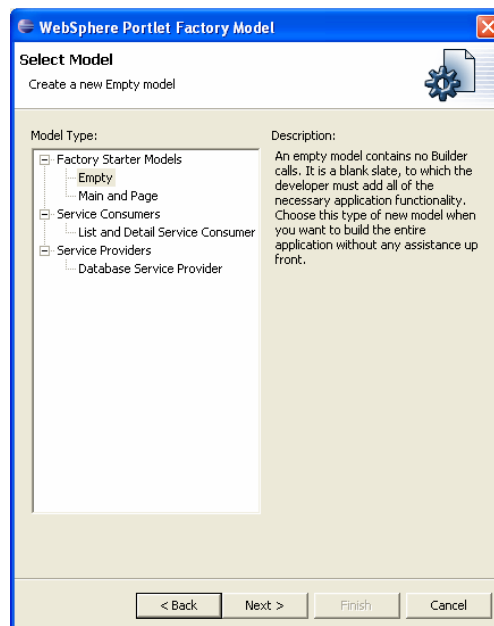


Figure 3 - choose empty model

Place the new Model in the SAP_Workshop subdirectory and name it FirstSAP.

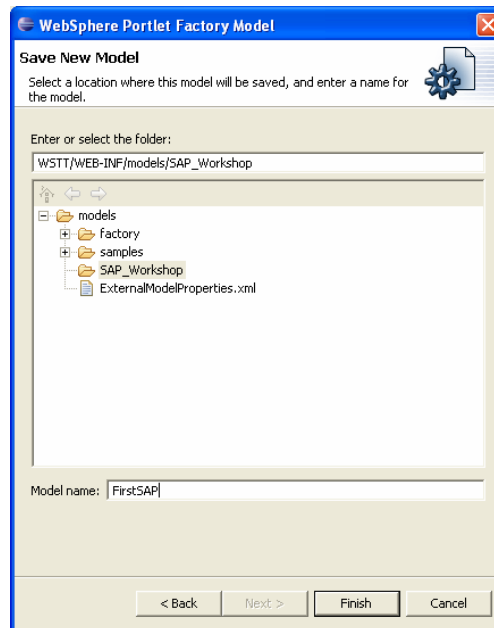


Figure 4 - label the new model

The new model opens automatically in the Eclipse.

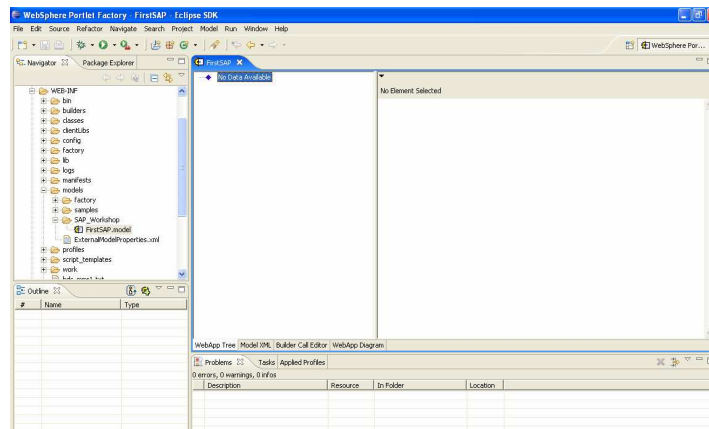
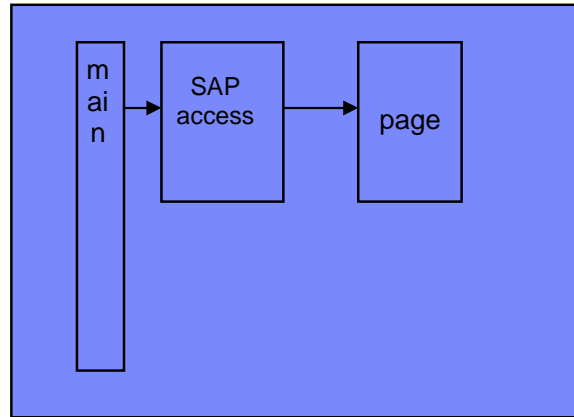


Figure 5 - new empty model created

2. SAP view and form - companylist



Use the Add a Builder Call to the Current Model button to open the builder selection list.

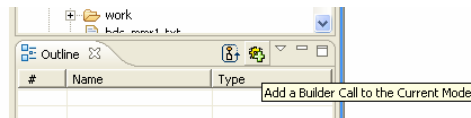


Figure 6 - add a new builder to the model

In the List scroll down until you can select the SAP View & Form Builder.

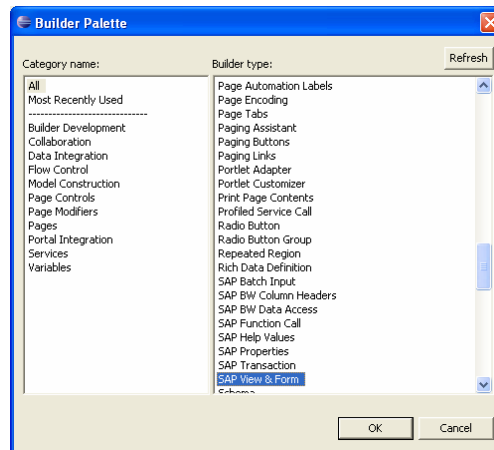


Figure 7 - select the "SAP View and Form" builder

Fill in the name, properties file and search pattern like shown below. Hit the Search Functions button and use the select box to fill in the BAPI_COMPANY_GETLIST.

In the SAP_Workshop.properties the SAP Host connection information is prefilled for the actual System. Check the Appendix for the file structure.

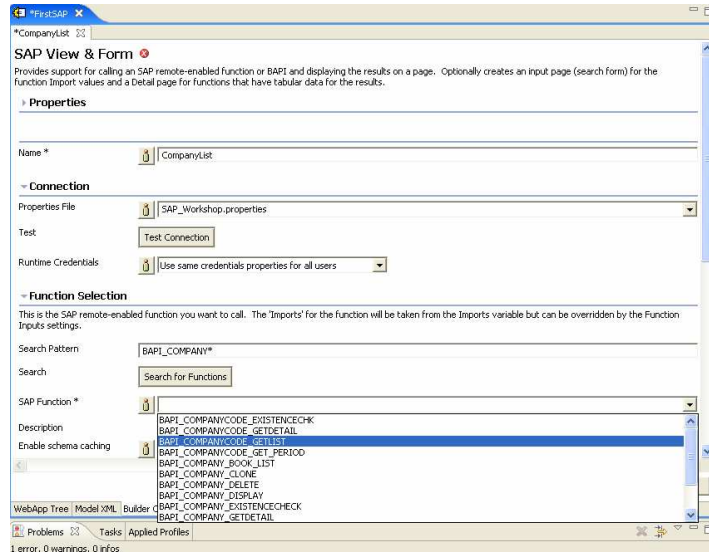


Figure 8 - fill the fields

The used BAPI offers several return tables, choose the Tables/COMPANYCODE_LIST

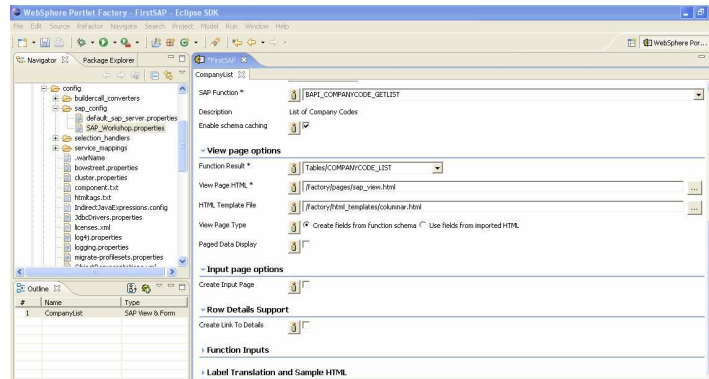
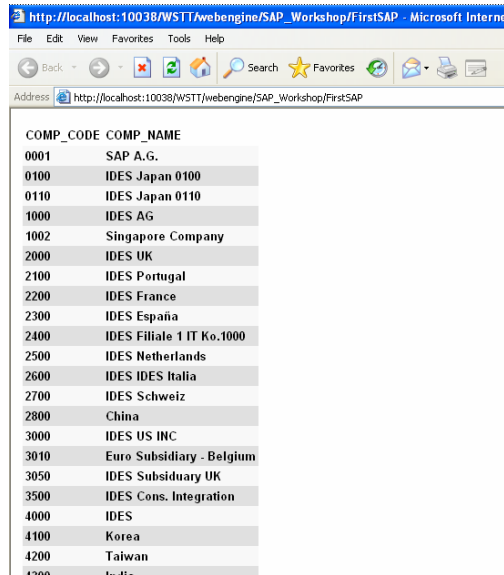


Figure 9 - Select Table

Save the model and hit the Run Button. This starts the new created model in a Browser for direct testing.

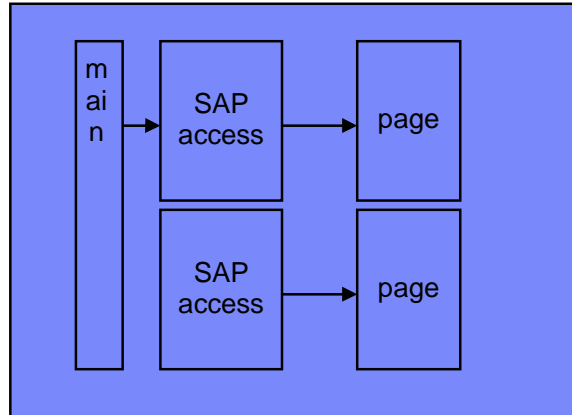


The screenshot shows a Microsoft Internet Explorer browser window with the address bar displaying `http://localhost:10038/WSTT/webengine/SAP_Workshop/FirstSAP`. The main content area displays a table with two columns: `COMP_CODE` and `COMP_NAME`. The table contains the following data:

COMP_CODE	COMP_NAME
0001	SAP A.G.
0100	IDES Japan 0100
0110	IDES Japan 0110
1000	IDES AG
1002	Singapore Company
2000	IDES UK
2100	IDES Portugal
2200	IDES France
2300	IDES España
2400	IDES Filiale 1 IT Ko.1000
2500	IDES Netherlands
2600	IDES IDES Italia
2700	IDES Schweiz
2800	China
3000	IDES US INC
3010	Euro Subsidiary - Belgium
3050	IDES Subsidiary UK
3500	IDES Cons. Integration
4000	IDES
4100	Korea
4200	Taiwan
4300	...

Figure 10 - running the model shows this

3. Another view and form – Company details



You need more detail information about the companies, so create a second SAP View & Form to retrieve them as well.

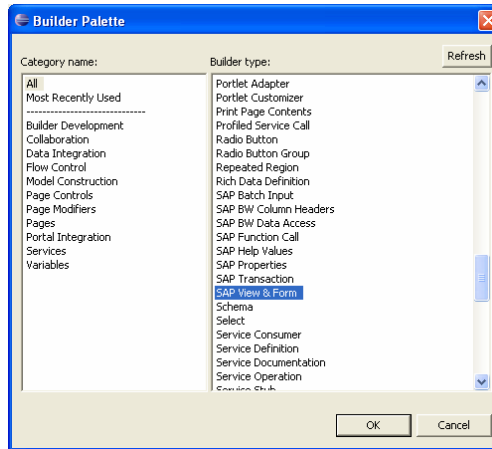


Figure 11 - add another "SAP View and Form"

Again enter name, properties file and the search pattern. This time select the BAPT_COMPANYCODE_GETDETAIL.

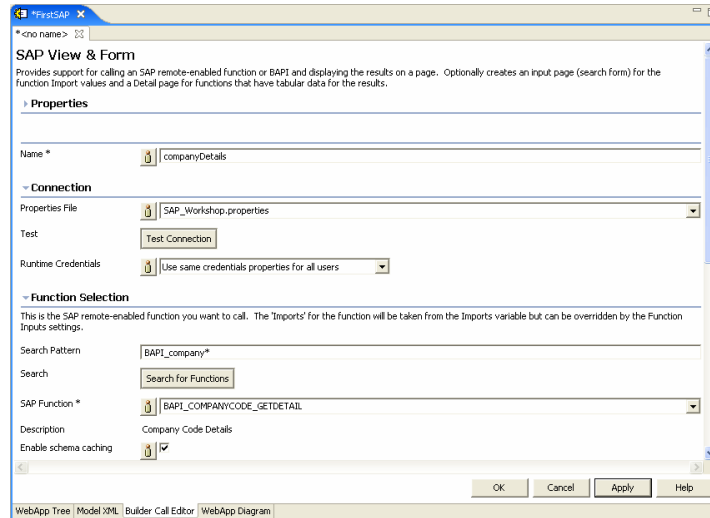


Figure 12 - fill the fields with the new information

As Function Result select the Exports/COMPANYCODE_DETAIL

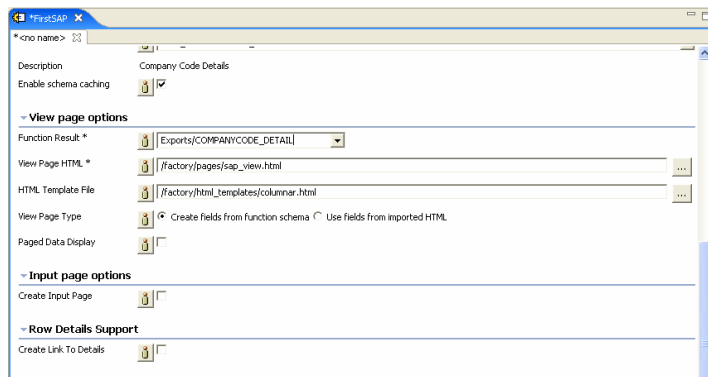


Figure 13 - Select Table

Press apply and you see an Error in the Problems tab.

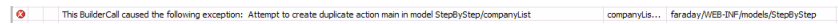
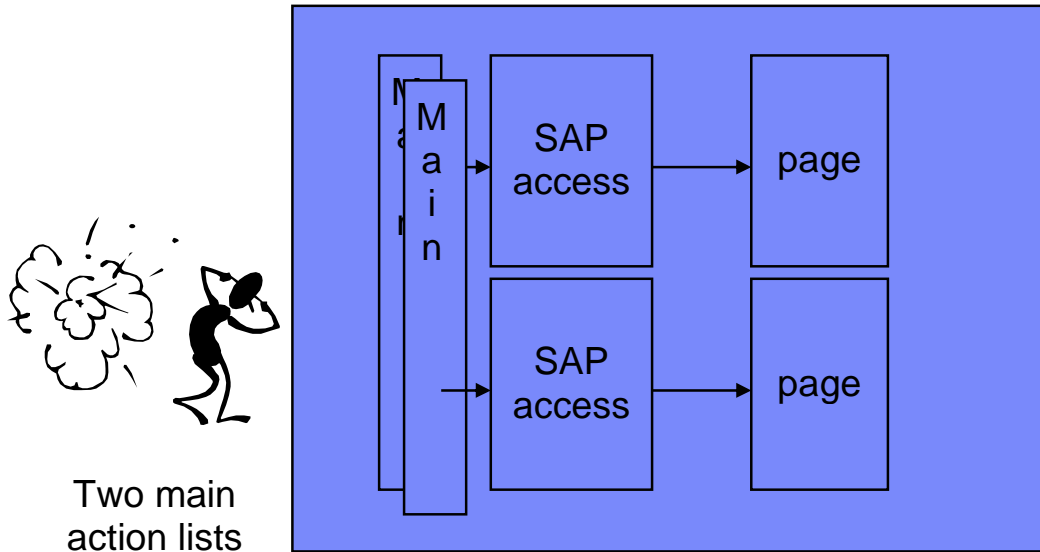


Figure 14 - a error is displayed



The Builder creates a main list, SAP access and the display page. Because there could only be one main list per model the error occurs.

To solve this error go to the Advanced Section and deselect the Generate Main.

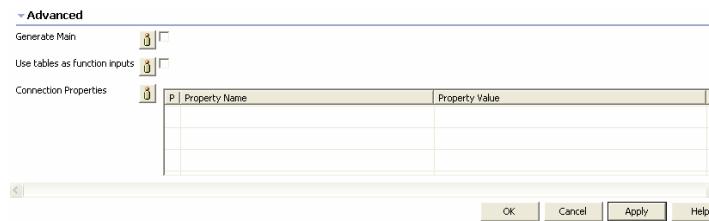
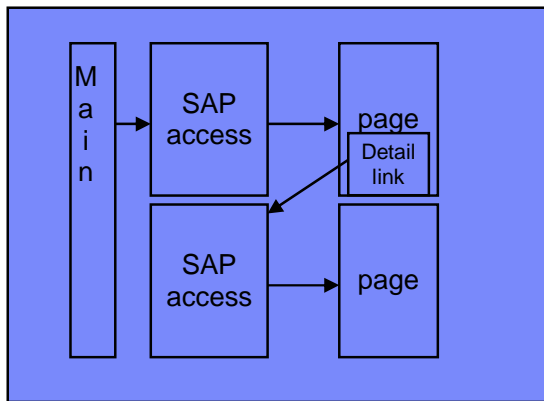


Figure 15 - remove the new main list

4. Use the second for the details



Use the selected row as input parameter

Now the error is gone, but the new Builder is not used at all. So create a Detail Link on the first page to call the second Builder and open the details.

Go to the CompanyList Builder and scroll down to the Row Details Support.

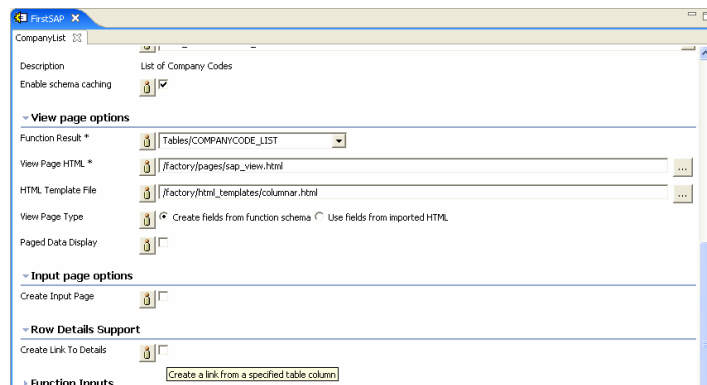


Figure 16 - add the detail link in the list

Activate the support and enter all necessary fields as shown below.

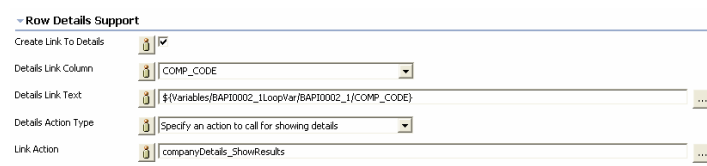


Figure 17 - Details form

Open the CompanyDetails Builder because the Function Input is needed to be set, because the call should open the details for one specific company.

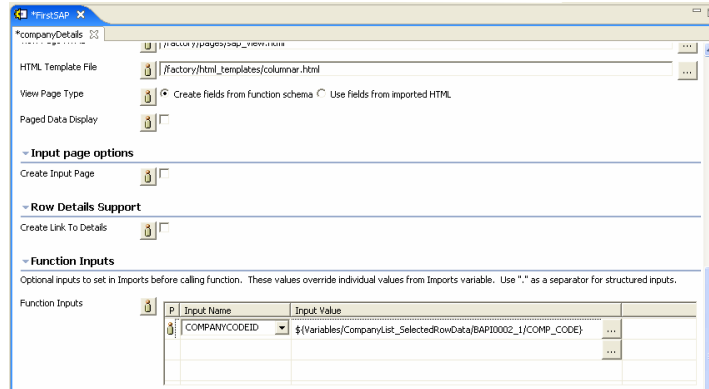


Figure 18 - add the input parameter in the detail builder

Run the model again and you see the change of the first page.



Figure 19 - the new list

Use the Link of one company to get to the detail page.

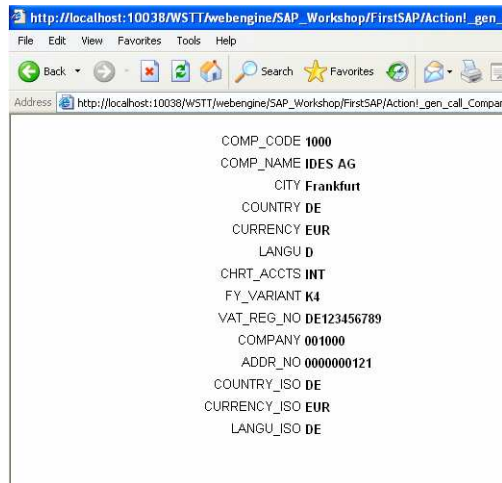
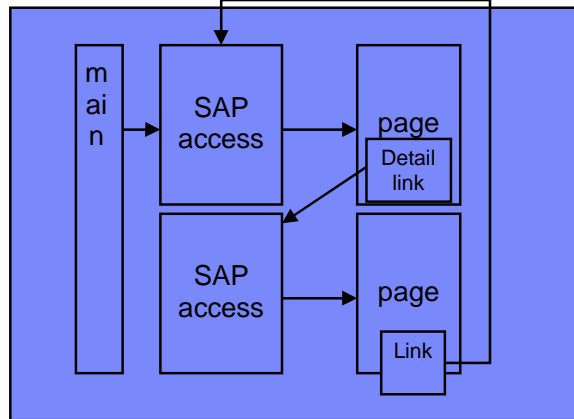


Figure 20 - the automatic result page

5. Create link backwards



After you opened one detail page there is no way back to the first page. Because this option makes sense, add a Link to the detail page.

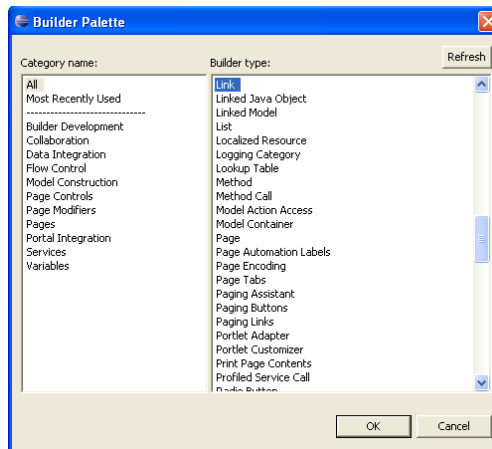


Figure 21 - insert link builder

Enter the name and select the Relative to Named Tag, the formula changes and offers new inputs.

Select the page, tag, placement and enter a new tag name as shown below. Enter a Link text and select the CompanyList_ShowResults action.

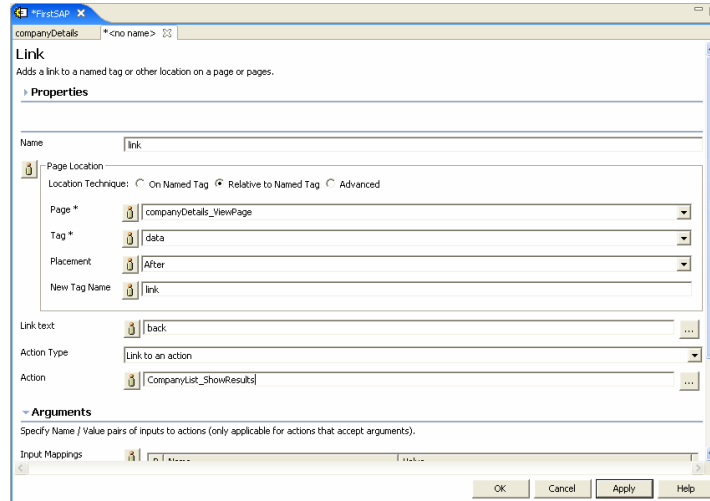


Figure 22 - place the link on the page and set action

Run the model again and you see the new created link appears on the detail page.



Figure 23 - Details with link

Now enhance the model to run as a portlet in a WebSphere Portal. Add a Portlet Adapter builder to the model.

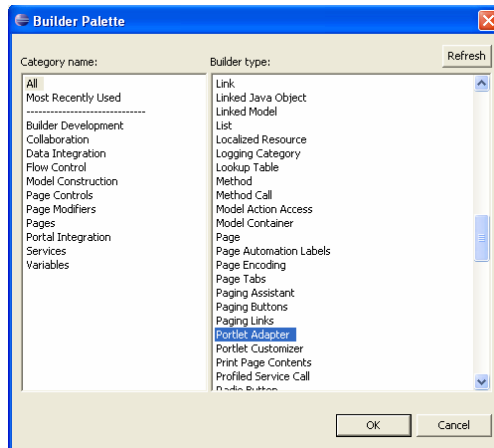


Figure 24 - Add portlet Adapter

Enter a name, title, short title and description as shown below.

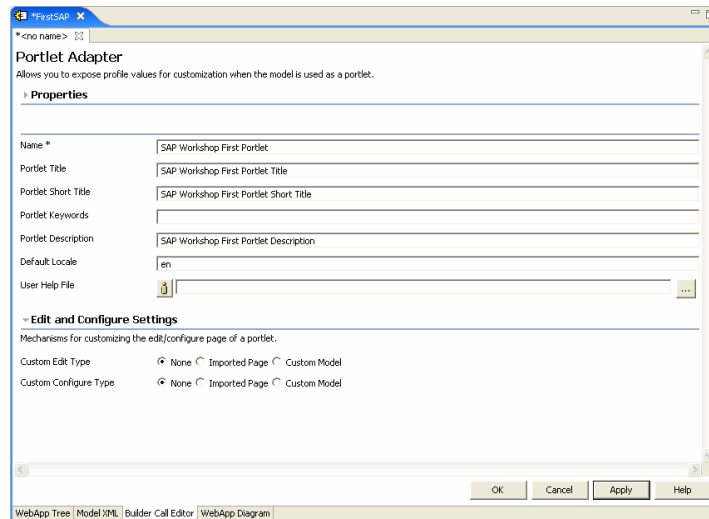


Figure 25 - Portlet Adapter form

Save the model and Rebuild the portlet war file.

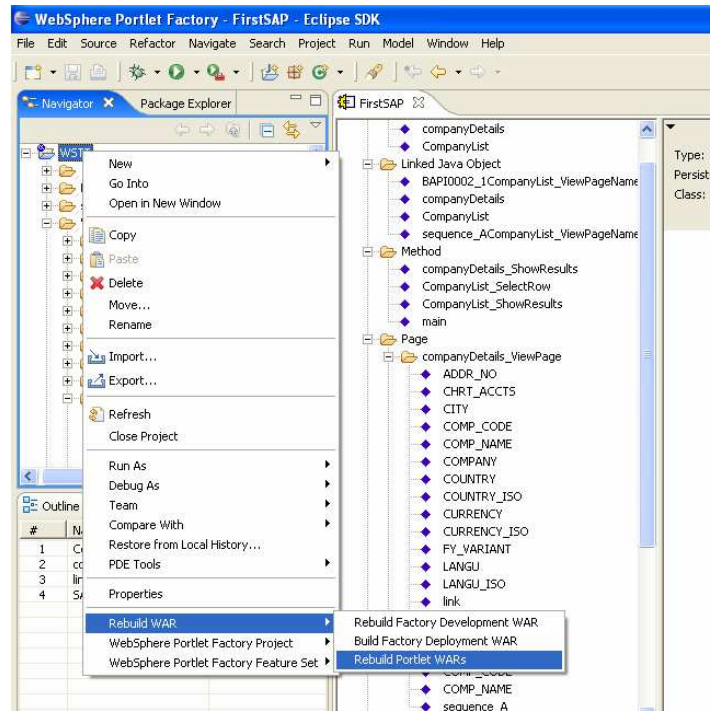


Figure 26 - Rebuild portlet war

Switch to your WebSphere Portal and navigate to the SAP Workshop page. Click on the right and select the Edit Page Layout.

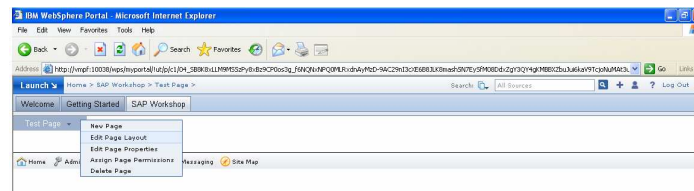


Figure 27 - Edit page layout

Search for the Portlet, select it and press OK.

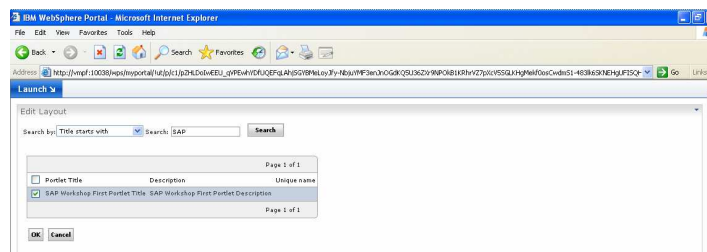


Figure 28 - Add portlet to page

The portlet is added to the page. Press Done to accept the changes.

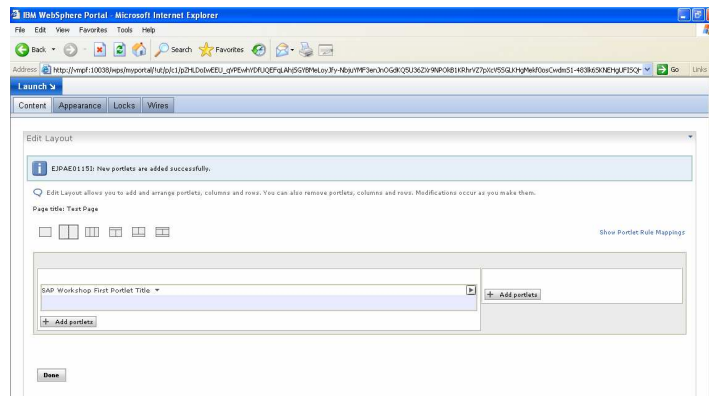


Figure 29 - Portlet added

Now the model is deployed on the Portal Server and added to a page. But notice that the list is too long to fit on a portal page. So add paging to the portlet.

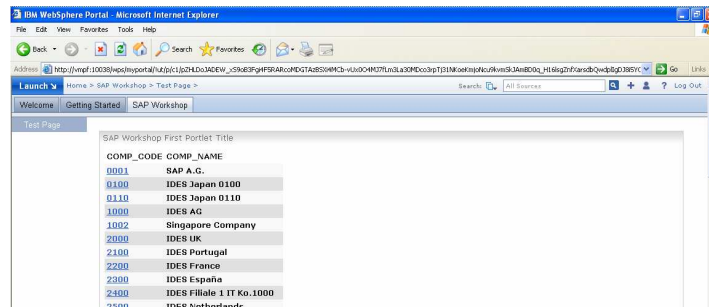


Figure 30 - Portlet view of model

Switch pack to the Eclipse tool and open the CompanyList builder. Select the Paged Data Display and enter "14" for the Rows per page.

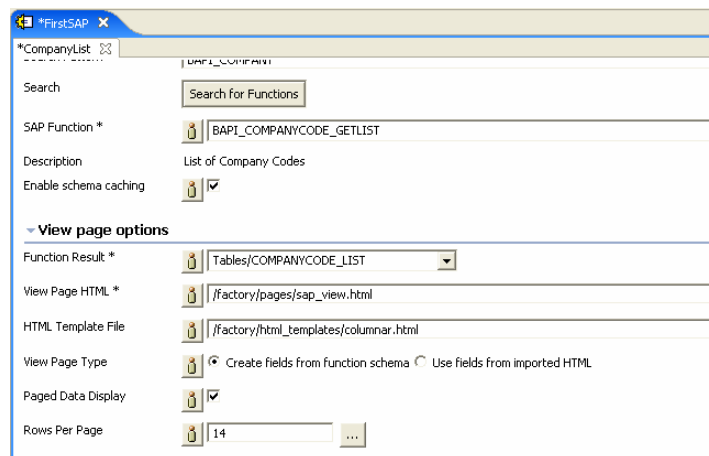


Figure 31 - Create paging

Save the model. Log out from the Portal front-end and login again. Navigate to the page to view the new, updated model.

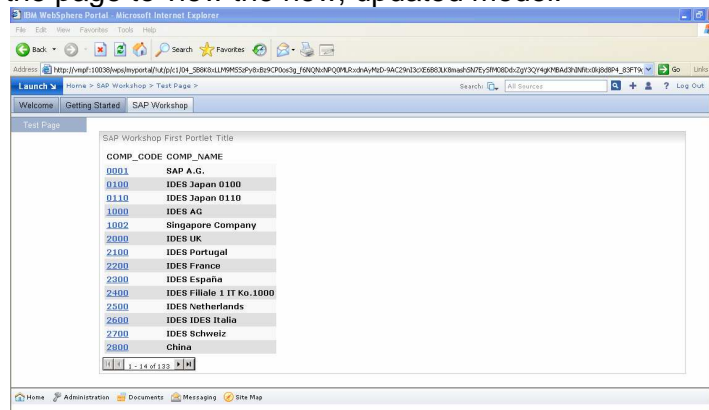


Figure 32 - Portlet view with paging

5 Appendix

5.1 SAP configuration

To use a SAP backend system the connection data need to be provided to the Portlet Factory.

The “default_sap_server.properties” gives an example how the files should look.

```
# SAP application server
jco.client.ashost=<SERVER HOST>
# Logon user
jco.client.user=<USER NAME>
# Logon password
jco.client.passwd=<PASSWORD>
# SAP client
jco.client.client=<CLIENT NUMBER>
# Logon language
jco.client.lang=<LANGUAGE>
# SAP system number
jco.client.sysnr=<SYSTEM NUMBER>
```

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