

How to...

Integrate a Web Dynpro Application into SAP Enterprise Portal 6.0

ENTERPRISE PORTAL 6.0 SP2

ASAP “How to...” Paper



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1 Scenario

This document describes how to call a Web Dynpro application from an SAP Enterprise Portal 6.0 iView. In general Web Dynpro integration only works with the SAP Enterprise Portal 6.0 SP2. With the SAP J2EE Engine Feature Pack there is no common server platform available which runs both Web Dynpro and SAP Enterprise Portal 6.0. At the moment, Web Dynpro is part of the SAP J2EE Engine 6.30 and the SAP Enterprise Portal 6.0 only runs on SAP J2EE Engine 6.20.

This means that a Web Dynpro application can only be called remotely using a URL.

2 Result

You have created an iView with a specific Web Dynpro iView template to call a Web Dynpro application remotely.

3 The Step By Step Solution

3.1 Prerequisites

It is assumed:

- You have installed the current version of the SAP J2EE Engine 6.30 that contains the Web Dynpro Runtime
- You have written a Web application based on Web Dynpro. The document “How to create a simple Web Dynpro application” describes step-by-step the declarative programming of a Web Dynpro application with the Web Dynpro Tools.
- You are using the SAP Enterprise Portal 6.0 SP2.

3.2 Available features

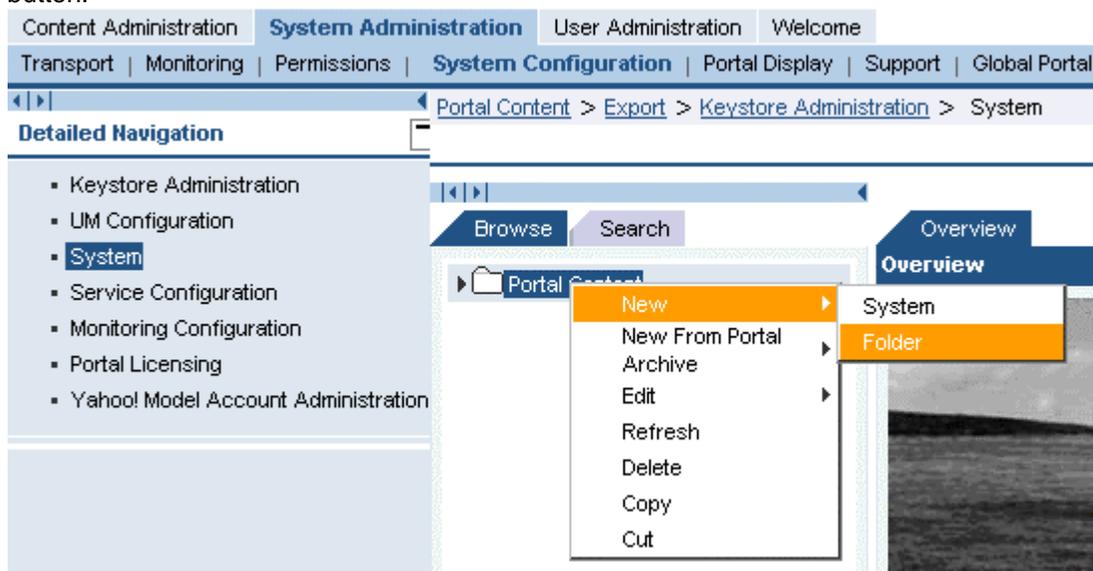
The integration contains the following features:

- You can create Web Dynpro-based iViews using a dedicated Web Dynpro iView template.
- Web Dynpro applications are called remotely using a URL.
- The Web Dynpro application automatically uses the current portal theme.
- Application parameters can be passed to the Web Dynpro application as startup parameters.

3.3 Telling the Portal Which System the Web Dynpro Application is Running On

In this integration scenario, SAP Enterprise Portal and the Web Dynpro application run on different servers. This means that you have to define the system on which the Web Dynpro application is running and create an alias for the system. Define the system on which the Web Dynpro application is running as follows:

1. In the portal, navigate to *System Administration* → *System Configuration* → *System*.
2. To call up the System Landscape Editor, choose the Browse tab → *Portal Content* folder. Creating a new folder is optional, you can also use an existing folder.
3. To create a new folder choose *New* → *Folder* in the context menu using the alternate mouse button.



4. Give the folder a
 - a. **Folder Name**
 - b. **Folder ID**
 - c. **Folder ID Prefix**
 - d. **Master Language** and
 - e. **Description**.

- Please note that you have to edit the inputfields marked with a red asterisk.

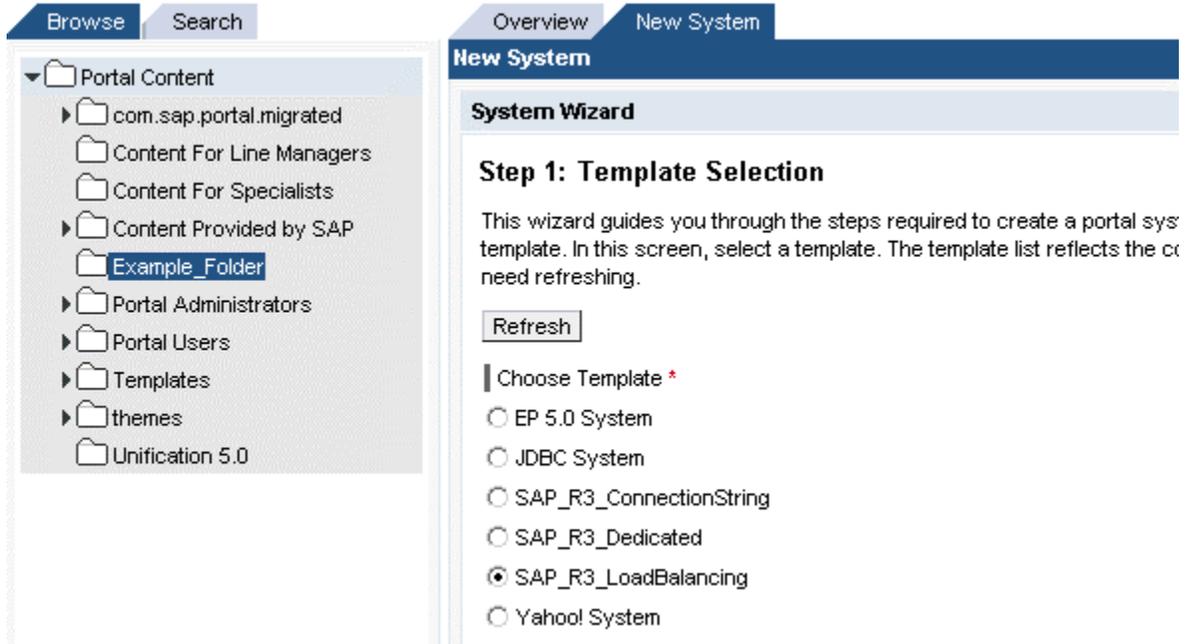
The screenshot shows the 'New Folder' wizard interface. At the top, there are two tabs: 'Overview' and 'New Folder'. Below the tabs is a blue header bar with the text 'New Folder'. The main content area is titled 'Folder Wizard' and contains 'Step 1: General Properties'. The form has the following fields:

- Folder Name ***: Text input field containing 'Example_Folder'.
- Folder ID ***: Text input field containing 'ExampleFolder'.
- Folder ID Prefix (Example: com.companyname)**: Text input field containing 'com.sap'.
- Master Language ***: Dropdown menu with 'English' selected.
- Description**: Text area with a vertical scrollbar.

At the bottom right of the form, there are four buttons: 'Cancel', 'Back', 'Next', and 'Finish'. The 'Finish' button is highlighted in blue.

- Choose *Finish*. The new folder will appear in the **Portal Content** directory.
- Highlight the newly-created folder in the Portal Catalog and choose the context menu button.
- Choose *New* → *System*. Launches the System Wizard.

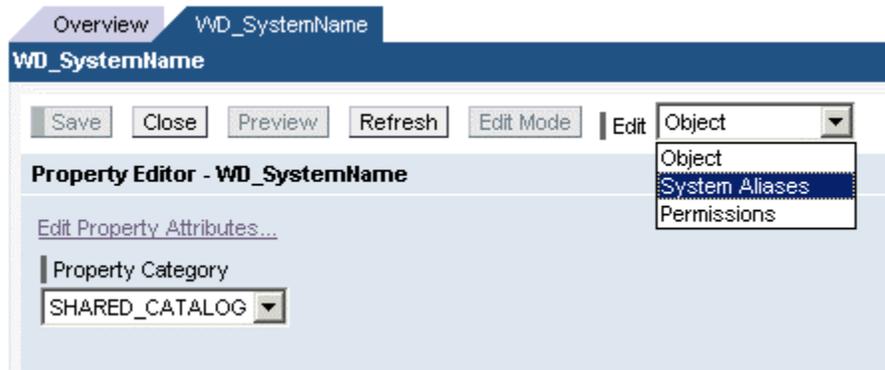
9. Select “SAP_R3_LoadBalancing System Template” from the Template Selection window screen and choose *Next* button.



10. Provide a system name, system ID and prefix for your system. The names are arbitrary, for example:
 - a. System Name, for example *WD_SystemName*
 - b. System ID, for example *WD_SystemID*
 - c. System ID Prefix, for example *com.sap*
 - d. Save As “System”
 - e. Choose the Master Language
 - f. Choose the push button *Next*
 - g. On the next screen all entries will be displayed in a summary that allows you to check the entries before finishing.
 - h. Choose *Finish*.

To create the alias for the system, first make sure that the new system is open. Proceed as follows:

1. Select System Aliases from the Edit dropdown list box in the toolbar at the top right.



2. Specify a name for the system alias, for example MySystem. Add the defined alias by pressing the button *Add*. Save your work using the button *Save*.

WD_SystemName

Save Close Preview Refresh Edit Mode Edit System Aliases

Create new aliases for this system or delete existing ones

Alias MySystem Add

Defined Aliases

Default	Alias

Page 1 / 1

Rename Set Default Remove

3. To edit the properties of the system, choose *Object* in the Edit dropdown list box at the top right.
4. In the Property Category dropdown list, choose WAS.
5. Maintain the following properties:
 - a. **WAS Host Name** = <host>.<domain>:50000 (this corresponds to the Web Dynpro server location and the port on which it is running eg. P78522.wdf.sap.corp:50000.)
 - b. **WAS Protocol** = http
8. Save your work.

The screenshot shows a web-based interface for editing properties. At the top, there are two tabs: 'Overview' and 'WD_SystemName'. Below the tabs is a blue header bar with the text 'WD_SystemName'. Underneath the header bar is a row of buttons: 'Save', 'Close', 'Preview', 'Refresh', 'Edit Mode', and 'Edit'. To the right of the 'Edit' button is a dropdown menu currently showing 'Object'. Below this row is a section titled 'Property Editor - WD_SystemName'. Inside this section, there is a link 'Edit Property Attributes...'. Below the link is a 'Property Category' dropdown menu with 'WAS' selected. Further down, there are four input fields: 'WAS description' (empty), 'WAS hostname' (containing 'p78522:50000'), 'WAS path' (empty), and 'WAS protocol' (a dropdown menu with 'http' selected).

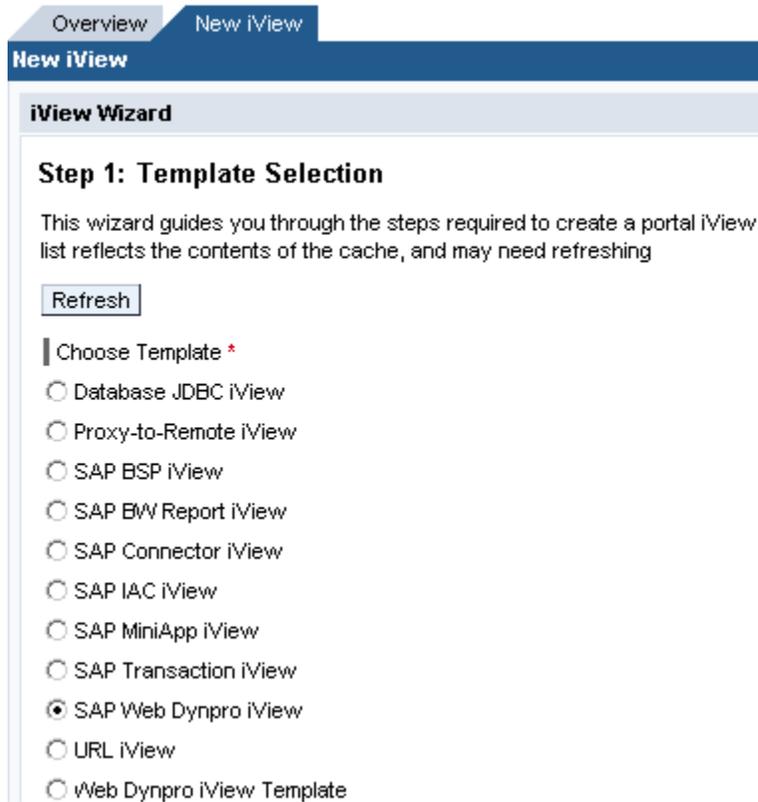
4 Creating a Web Dynpro-Based iView

4.1 Create a Web Dynpro iView

You can define your Web Dynpro iViews using the standard Web Dynpro iView template, **SAP Web Dynpro iView**, or the newly-created Web Dynpro iView template as follows:

1. In the portal, navigate to *Content Administration* → *Portal Content*. The Portal Content Studio is opened.
2. In the Portal Catalog, select the folder you defined previously, which should contain your new Web Dynpro-Based iView.
3. To select *New iView* use the context menu.

- The iView wizard appears on the right. Select the appropriate iView template (i.e. the standard iView template, *SAP Web Dynpro iView*). If the newly-created iView template does not appear in the list, choose *Refresh*.



- Choose *Next*.
- On the next screen define the **iView Name** and the **iView ID** of the iView. The name is used as the title for the iView. The key is the technical name and the iView ID prefix can be used to define your own namespace.
- Choose *iView*.

The screenshot shows the 'New iView Wizard' interface. At the top, there are tabs for 'Overview' and 'New iView'. Below the tabs is a header 'New iView' and a sub-header 'iView Wizard'. The main content area is titled 'Step 2: General Properties' and contains several form fields:

- iView Name ***: Text input field containing 'WebDynproApplication\iView'.
- iView ID ***: Text input field containing 'WDAppiViewID'.
- iView ID Prefix (Example: com.companyname)**: Text input field containing 'com.sap'.
- Save As**: Radio button group with 'iView Template' (unselected) and 'iView' (selected).
- Master Language ***: Dropdown menu showing 'English'.
- Description**: Text area with a scroll bar, currently empty.

Choose *Next*.

On the next screen you have to define the Web Dynpro-specific application parameters:

- **System**

Choose the system alias you want to use for your Web Dynpro application from the dropdown listbox. You have to create a system alias for each SAP J2EE Engine 6.30 first before you can run a Web Dynpro application on it. If you have not created an alias you cannot select the system you have defined.

At the moment there is no system type definition available for a SAP J2EE Engine 6.30. Therefore you have to use one of the available R/3 system types. You have to define only the WAS Host Name and WAS protocol parameters in the system definition. The WAS host name must look like <host>.<domain>:50000/

- **Development Component**

You have to define the development component containing your Web Dynpro application. If you are working locally without the DTR you have to define the Web Dynpro project used here. Make sure that both a development component and a Web Dynpro project contain the vendor name. For example, the following are possible values: **sap.com/tc~wd~tools** for a development component or **local/MyWebDynproProject** for a Web Dynpro project. For example in the How-To Guide **Creating a Simple Web Dynpro Application** the project is called local/WebDynpro_Basics.

Note: The specified name of the development component is the same as displayed in the SAP J2EE engine console using the LIST_APP command or as used in the Web Dynpro application URL.

- **Application Name**

The application name is the name of the Web Dynpro application, for example **WelcomeApplication**.

- **Application Parameters**

If your Web Dynpro application has startup parameters you can define specific values for this iView. Imagine you have two parameters `parameter1` and `parameter2`. In this case you could define the following application parameter string:

`parameter1=value1¶meter2=value2`.

The screenshot shows the 'iView Wizard' interface for 'Step 3: Application Parameter'. The title bar includes 'Overview' and 'New iView' tabs, with 'New iView' selected. The main content area is titled 'iView Wizard' and 'Step 3: Application Parameter'. Below the title, there is a prompt: 'Enter the parameter(s) of the application for which you want to create the iView'. The form contains several fields:

- 'System *': A dropdown menu with 'MySystem' selected.
- 'DeployableObject *': A text input field containing 'local/WebDynpro_Basics'.
- 'Application Name *': A text input field containing 'WelcomeApplication'.
- 'Application Parameters': An empty text input field.
- 'sap_csf_dev': A radio button group with '0' selected and '1' unselected.
- 'sap_csf_trace': A text input field.

 A mouse cursor is visible over the 'System' dropdown.

To enable the Client Side Framework (CSF) trace you should use the following three CSF parameters:

- **sap_csf_dev**

Choose "0" as default and "1" if you want to debug the CSF on the client.

- **sap_csf_trace**

This parameter defines the granularity of the CSF trace. The trace statements of the CSF trace are added to the server-side trace. Therefore you have at least two options to display the CSF trace: Display the server-side trace with the appropriate tools or use the **sap_csf_transmission** parameter (as described below) to display it in a separate browser window.

You have the following options:

- "0" as default (i.e. no trace is written)
- "1" to display only errors and warnings in the CSF trace
- "2" to display errors, warnings and important application tasks
- "3" to display errors, warnings, important application tasks and a detailed debug trace.

- **sap_csf_transmission**

This parameter is used to define the content of the debug browser window opened by the CSF. This only works together with **sap_csf_trace**.

You have the following options:

- "0" as default (i.e. no additional browser window is opened)
- "1" to display the bandwidth used
- "2" to display the bandwidth used and the data sent from the server to the client
- "3" to display the bandwidth used, the data sent from the server to the client and also the data sent from the client to the server.

If there are problems with the CSF a useful combination of these parameters is:

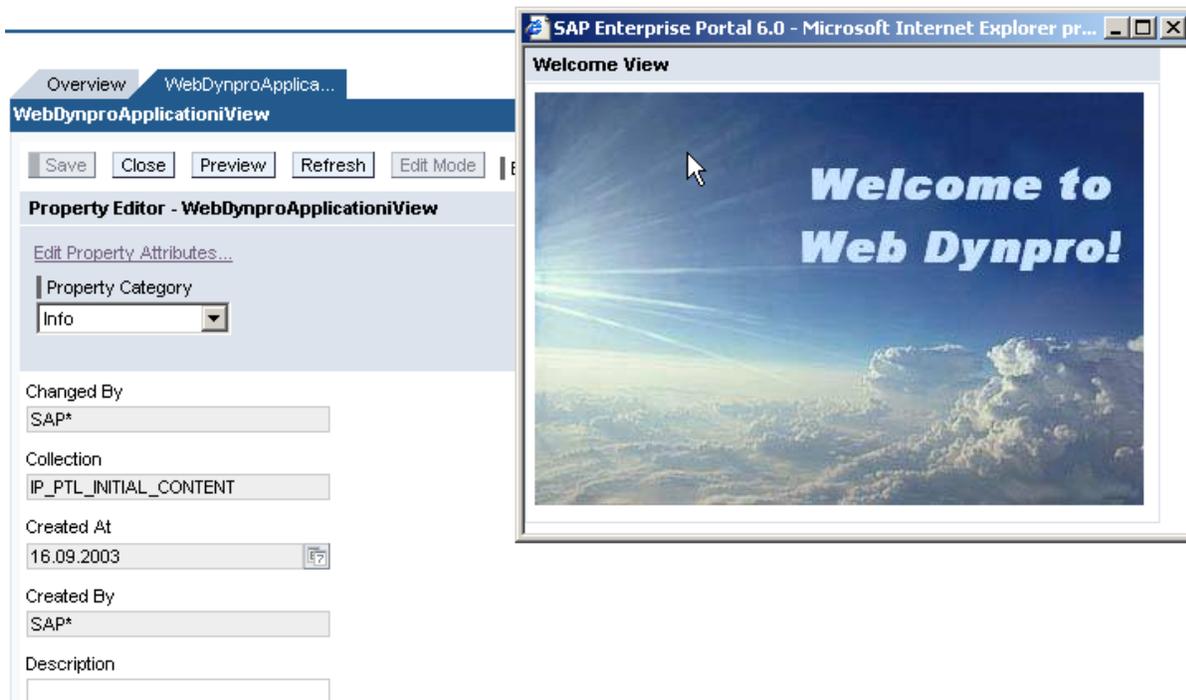
- SAP_CSF_DEV = 1
- SAP_CSF_TRACE = 3
- SAP_CSF_TRANSMISSION = 3.

After defining the Web Dynpro-specific parameters the next wizard screen is displayed, which allows you to define the standard iView parameters.

If you use the standard Web Dynpro iView template your Web Dynpro iView uses automatic resizing. If you want to define a fixed height or a full-screen iView you have to adjust this parameter.

You can now use your Web Dynpro iView in the same way as any other iView, i.e. you can add the iView to pages, worksets or roles.

To preview the Web Dynpro application, choose the button *Preview* in the Portal Content Studio.

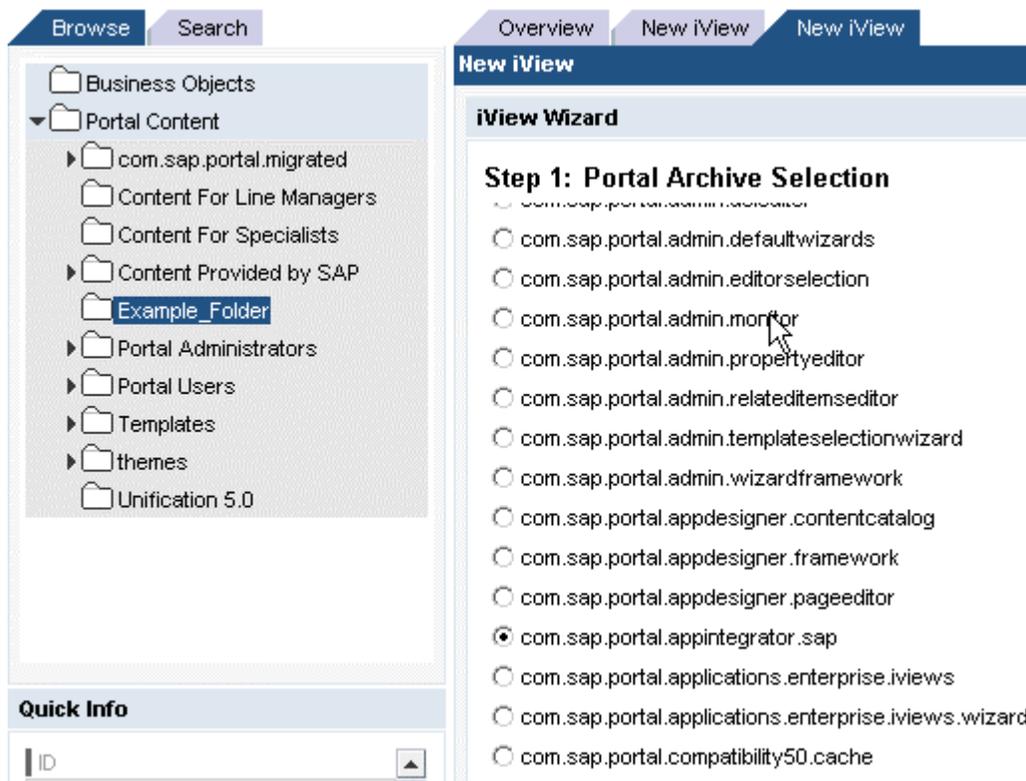


4.2 Create a Web Dynpro iView template

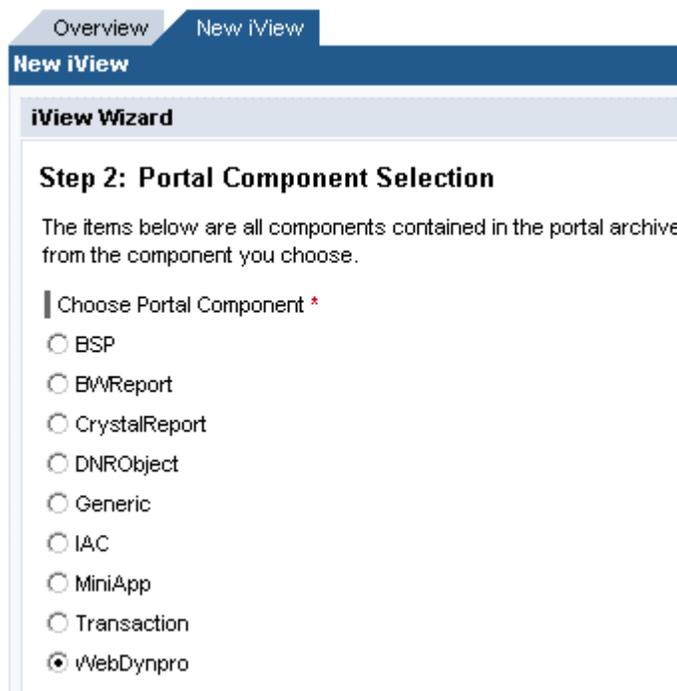
You can also create your own Web Dynpro iView template. This is useful if you want to create a group of iViews which all have the same parameters. You specify these parameters in the template.

To create a Web Dynpro-based iView you should use the standard Web Dynpro iView template, **SAP Web Dynpro iView**, which appears when you create a new iView.

1. In the portal, navigate to **Content Administration** → Portal Content. Launches the Portal Content Studio.
2. Choose *Portal Content*.
3. Create a folder, which should contain your Web Dynpro portal content or use the already created folder, for example the Example_Folder.
4. Open the context menu and choose *New From Portal Archive -> iView*.
5. Select the archive **com.sap.portal.appintegrator.sap** archive in the list **Portal Archive Selection**.



- In the next step select the component **WebDynpro**.



The screenshot shows a web interface for creating a new iView. At the top, there are two tabs: 'Overview' and 'New iView', with 'New iView' being the active tab. Below the tabs is a header 'New iView' and a sub-header 'iView Wizard'. The main content area is titled 'Step 2: Portal Component Selection'. It contains the text: 'The items below are all components contained in the portal archive from the component you choose.' Below this text is a section titled 'Choose Portal Component *' with a list of radio button options: BSP, BWReport, CrystalReport, DNROject, Generic, IAC, MiniApp, Transaction, and WebDynpro. The 'WebDynpro' option is selected, indicated by a filled radio button.

- Choose *Next*.
- Specify the **iView Name**, for example Web Dynpro iView Template
- Also specify an **iView ID** and the **Master Language**
- You can also specify an **iView ID Prefix** and a **Description**.

11. Select **Save As iView Template**.

Overview New iView

New iView

iView Wizard

Step 3: General Properties

iView Name *
Web Dynpro iView Template

iView ID *
WebDynproiViewTemplate

iView ID Prefix (Example: com.companyname)
com.sap

Save as
 iView Template
 iView

Master Language *
Englisch

Description

12. Choose *Next*.
13. Choose *Finish* to create the iView template.

5 Using the Current Portal Theme

The application developer does not have to do anything in order to use the current portal theme. The Web Dynpro runtime uses the current portal theme automatically. If you start the Web Dynpro application outside the portal the standard SAP theme is used.

If a customer has defined his own portal theme using the Style Sheet Editor the CSF styles required are also generated automatically. This only works for the SAP Enterprise Portal 6.0.

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