

Implementation of Web Dynpro Apps



Document History

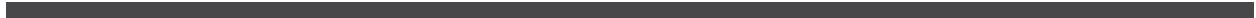
The following table provides an overview of the most important document changes.

Table 1

Version	Date	Description
1.0	2015-07-31	Preliminary Version

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1 Implementation of Web Dynpro Apps

Some analytical or transactional apps, especially in the Financials area, use the well-established **Web Dynpro** UI technology. This UI technology offers floorplan patterns, which are ideal for analytical or planning purposes.

i Note

From mobile devices or tablets, you cannot access Web Dynpro transactions through the SAP Fiori launchpad.

This guide tells you how to implement Web Dynpro apps.

Prerequisites

- You have installed and configured the system landscape. For more information about the system landscape, see *Setup of SAP Fiori System Landscape with ABAP Environment* [external document] .
- You have set up the SAP Fiori infrastructure. For more information, see *Configuration of SAP Fiori Infrastructure* [external document] .

Activities

1. Before you can implement a Web Dynpro app, you have to do some preparation. [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#) to learn where to find it.
2. The activation of an app makes it accessible in the system. See [App Activation \[page 9\]](#) to learn how to activate it.
3. We configured all Web Dynpro apps in the launchpad designer and the transaction `LPD_CUST` . See [Configuration of Web Dynpro Apps \[page 11\]](#) to review and understand the configuration.
4. We created roles for the front-end server and the back-end server, which make the app available and accessible for users. See [Authorization for a Web Dynpro App \[page 16\]](#) to learn how to grant app authorization to your users.

2 Preparation

Activities

- Access the SAP Fiori apps reference library to gather information about the app.
See [Collect Information from the SAP Fiori Apps Reference Library \[page 6\]](#) for more information.
- Create an RFC-connection from the front-end system to the back-end system.
See [Create RFC Connection to back-end system \[page 7\]](#) for more information.


i Note

You have to do this activity only once for all Web Dynpro apps.

2.1 Collect Web Dynpro Information from the SAP Fiori Apps Reference Library

The **SAP Fiori apps reference library** contains some app-specific information you require to understand and implement a Web Dynpro app.

Procedure

1. Access the **SAP Fiori apps reference library** by choosing fioriappslibrary.hana.ondemand.com/sap/fix/externalViewer/ 
2. In the *Categories* column, choose *All Apps* .
3. In the *Apps* column, enter the name of your app in the *Search by App Name* field and press .

i Note

You can also search using parts of your app name.

4. The system lists all apps that contain your search string. Choose the app you are interested in to display the *App Details* on the right-hand side.

The *Application Type* field in the header area of the *App Details* tells you the type of app:

- Analytical
- Transactional
- Fact Sheet
- FPM/WebDynpro
- Design Studio

i Note

The SAP Fiori apps reference library does not contain any SAP GUI for HTML apps.

5. Choose the *Implementation Information* tab page.
6. Select the delivery date of your back-end product and open the *Configuration* screen area.

Result

To implement **Web Dynpro** apps, you require the following data:

- For step *Activate ICF Service of Web Dynpro App in the Back-End Server* [external document] :
 - WebDynpro Component Name
- For step *Review Definition of Web Dynpro Tile in Launchpad Designer* [page 11] :
 - Technical Catalog
 - PFCG Role for Technical Catalog
 - Business Catalog (Launchpad)
 - Semantic Object
 - Action
- For step *Review Definition of Target Mapping in Launchpad Designer* [page 12] :
 - Business Catalog (Launchpad)
 - Semantic Object
 - Action
 - LPD_CUST Role
 - LPD_CUST Instance
- For step *Review Application Definition in Launchpad Definition (LPD_CUST)* [page 13] :
 - LPD_CUST Role
 - LPD_CUST Instance
 - WebDynpro Component Name
- For step *Maintain Business Group in Launchpad Designer* [page 14] :
 - Business Group (Launchpad)
- For step *Create Business Catalog Role* [page 16] :
 - PFCG role for Business Catalog
- For step *Create Authorization Role* [page 17] :
 - Authorization Role (PFCG Role)

2.2 Create RFC Connection to Back-End System

Web Dynpro apps are generated in the back-end system. To start Web Dynpro apps in the back-end system from the FIORI launchpad in the front-end system, you must establish an RFC-connection from the front-end system to the back-end system.

i Note

For technical reasons, you also need this RFC-connection if front-end components and back-end components are running on the same system.

Create an RFC-connection in the **front-end system** of the type **H - HTTP connection to ABAP System** with the name **SAP_ECC_FINANCIALS** (for all Web Dynpro apps from Financials).

Procedure

1. Choose **Tools** > **Administration** > **Administration** > **Network** > **RFC Destinations** or start transaction **SM59**.
2. Create an RFC connection of the specified name and type.
3. Enter the **Target Host** under **Technical Settings** and save.

3 Activation of Web Dynpro Apps

Before you can use a Web Dynpro app, you have to activate it first.

3.1 Activate ICF Service of Web Dynpro App

To call a Web Dynpro app, you use a dedicated URL, which accesses your back-end system.

A component called the **Internet Communication Framework (ICF)** runs on your back-end system. The URL calls a service in the ICF (**ICF Service**). The ICF service executes one or more ABAP programs to compile the requested data and returns it to the web browser.

Each Web Dynpro app uses its own ICF service.

For security reasons, all ICF services initially are inactive and have to be activated first.

i Note

We recommend that you only activate the services for the apps you want to use.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- *WebDynpro Component Name*


This name specifies the **app-specific ICF service** .


To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#) .


Procedure

Activate the ICF services of your Web Dynpro app on your **back-end server** . In the **HTTP Service Hierarchy Maintenance** transaction, you find the ICF service under the path **/default_host/sap/bc/webdynpro/sap/<WebDynpro Component Name>** . Alternatively, you can use the *WebDynpro Component Name* as filter for the *Service Name* to locate it.




To activate an ICF service, proceed as follows:


1. Choose **Tools** > **Administration** > **Network** > **HTTP Service Hierarchy Maintenance** or start transaction **SICF** .
2. You are on the **Define Services** screen. The system defaults the *Hierarchy Type* SERVICE .
Choose  (Execute) or press **F8** .
3. You are on the **Maintain service** screen, which offers a filter area called *Filter Details* .

Enter the name of the ICF service you want to activate in the *ServiceName* field in the *Filter Details* screen area and choose  (*Apply*) .

 **Note**

If you know the path of the ICF service, you can also navigate to it in the *Virtual Hosts / Services* screen area.

4. The system filters the service hierarchy in the *Virtual Hosts / Services* screen area for the path leading to the filtered ICF service. Highlight the ICF service and choose  *Service/Host*  *Activate* .
5. The *Activation of ICF Services* dialog box appears.

Choose  (Yes) to activate the selected service including all the sub services.

4 Configuration of Web Dynpro Apps

You perform the configuration of Web Dynpro apps in the launchpad designer and the transaction `LPD_CUST`. We configured all transactional Web Dynpro apps and the analytical Web Dynpro apps for all existing queries for you, so that you only need to review their configuration and change it if required.

i Note

If you create new queries, you can configure new analytical Web Dynpro apps to execute them.

4.1 Review Definition of Web Dynpro Tile in Launchpad Designer

The tiles of all Web Dynpro apps are defined in the **launchpad designer**.

The definition of the tiles contains information such as the title and the subtitle but also the **semantic object** and the **action**. These two entities form a URL fragment called the **intent** with the form **#<semantic object>-<action>**. When the user clicks a tile, the FIORI launchpad automatically appends this intent to the URL and uses it to navigate to the Web Dynpro app.

Business catalogs contain all tiles, which usually belong to a user role. You later use the business catalogs to assign the launch authorization to users.

In this activity, you can review the definition of the Web Dynpro app tiles.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- Business Catalog (Launchpad)
- Technical Catalog
- Semantic Object
- Action

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori apps reference library \[page 6\]](#).

Procedure

1. In the Implementation Guide (IMG) on the **front-end server**, choose **► SAP NetWeaver ► UI Technologies ► SAP Fiori ► Adding Apps to SAP Fiori Launchpad (Using SAP Fiori Launchpad Designer) ► SAP Fiori Launchpad Designer (Current Client)** **►** or open the following URL with your web browser:

https://<server>:<port>/sap/bc/ui5_ui5/sap/arsvc_upb_admn/main.html?scope=CUST

2. Select the *Catalogs* view in the top left corner and search for the catalog with the technical name you retrieved from the *Business Catalog (Launchpad)* field from the SAP Fiori apps reference library. Choose the catalog.

i Note

You can also find the app in the *Technical Catalog* you retrieved from the SAP Fiori apps reference library. The technical catalogs contain all apps and target mappings belonging to an application area, for example FI. You as an administrator can use technical catalogs as repositories to create your own business catalogs. To access technical catalogs, your user requires the *PFCG Role for Technical Catalog* you retrieved from the SAP Fiori apps reference library.

3. The launchpad designer displays the tiles of the apps from this catalog on the right-hand side. Choose the app you want to implement.
4. The launchpad designer displays the *Configure* screen of the app. In the *Navigation* area, the *Use semantic object navigation* checkbox should be selected. This selection makes the following fields available for input. Review the following fields. The fields should contain the values you retrieved from the SAP Fiori apps reference library.
 - *Semantic Object* : <Semantic Object>
 - *Action* : <Action>The launchpad designer automatically fills the *Target URL* field with the intent **#<semantic object>-<action>**.
5. If all fields contain the correct values, go back to the catalog view.

4.2 Review Definition of Target Mapping in Launchpad Designer

All Web Dynpro apps must have a **target mapping** defined in the launchpad designer. This target mapping maps the **intent** defined in the app definition to a **target application**.

In this activity, you can review the definition of the target mapping.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- Business Catalog (Launchpad)
- Semantic Object
- Action
- LPD_CUST Role
- LPD_CUST Instance

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#).

Procedure

1. In the Implementation Guide (IMG) on the **front-end server** , choose ► *SAP NetWeaver* ► *UI Technologies* ► *SAP Fiori* ► *Adding Apps to SAP Fiori Launchpad (Using SAP Fiori Launchpad Designer)* ► *SAP Fiori Launchpad Designer (Current Client)* ► or open the following URL with your web browser:
https://<server>:<port>/sap/bc/ui5_ui5/sap/arsvc_upb_admn/main.html?scope=CUST
2. Select the *Catalogs* view in the top left corner and search for the catalog with the technical name you retrieved from the *Business Catalog (Launchpad)* field from the SAP Fiori apps reference library. Choose the catalog.
3. You are on the catalog view displaying the catalog you selected. Choose *Target Mapping* .
4. The launchpad designer displays all target mappings in the selected catalog. Click the line starting with the semantic object and the action entered in the *Configure* screen of your app. Choose *Configure* .
5. The launchpad designer displays the *Configure Target Mapping* screen.
 - On the *Intent* screen area, you see the *Semantic Object* and the *Action* , which was entered in the tile definition respectively retrieved from the SAP Fiori apps reference library.
 - On the *Target* screen area, the *Other SAP FIORI app* radio box should be selected as *Source of Navigation Target* . This selection makes the *Launchpad Role* field, The *Launchpad Instance* field, the *Application Alias* field, and the *Application ID* field available for input.
 Review the following fields:
 - *Launchpad Role* : <LPD_CUST Role>
 - *Launchpad Instance* : <LPD_CUST Instance>
 Note the entry in the *Application Alias* field.
6. If all fields contain the correct values, leave the launchpad designer.

4.3 Review Application Definition in Launchpad Definition (LPD_CUST)

All Web Dynpro apps must be defined in a launchpad in transaction LPD_CUST on the **front-end server** .

SAP delivers the following launchpads with financials applications:

Table 2

Role	Instance	Description
UIAPFI70	TRANSACTIONAL_CM	SAP sFIN Launchpad for CM-Transactions
UIAPFI70	TRANSACTIONAL_CO	SAP sFIN Launchpad for CO-Transactions
UIAPFI70	TRANSACTIONAL_FI	SAP sFIN Launchpad for FI-Transactions
UIAPFI70	TRANSACTIONAL_FO	SAP sFIN Launchpad for FO-Transactions

i Note

The launchpads is this customizing activity **do not** define the appearance or the content of the FIORI launchpad. They contain the definitions of apps, which can be executed from the FIORI launchpad and define how these apps can be started.

These launchpads contain the definitions of all Web Dynpro apps. In this activity, you can review the definition of the app that you want to implement to understand how it works in context with the tile definition and the target mapping in the launchpad designer.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- LPD_CUST Role
- LPD_CUST Instance
- *WebDynpro Component Name*

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori apps reference library \[page 6\]](#).

Procedure

1. In the Implementation Guide (IMG) on the **front-end server**, choose **SAP NetWeaver > UI Technologies > SAP Fiori > Define Navigation Targets > Define Navigation Targets** or start transaction LPD_CUST.
2. You are on the *Overview of Launchpads* screen. Double-click the launchpad specified by the *Role* and *Instance* collected from the SAP Fiori apps reference library.
3. You are on the *Change Launchpad Role* screen. Choose the application representing the Web Dynpro app you want to implement.
4. The system displays the setting of the application on the right-hand of the screen.
Review the following fields:
 - *Application Type* : **Web Dynpro ABAP**
 - *Namespace* : **SAP**
 - *Application* : **<WebDynpro Component Name>**
 - *System Alias* : **SAP_ECC_Financials**
5. Choose *Show Advanced (Optional) Parameters*.
The entry in the *Application Alias* field must be the same as the one in the target mapping.

i Note

The *Launchpad Role* and the *Launchpad Instance* from the target mapping in the launchpad designer indicate the right launchpad in LPD_CUST. The *Application Alias* identifies the correct application in the launchpad. The *Namespace* and the *Application* finally start the Web Dynpro.

6. If all fields contain the correct values, leave the transaction.

4.4 Maintain Business Group in Launchpad Designer

Business groups contain tiles that are displayed by default on the entry page of the Fiori launchpad. For a user to be able to see the tiles of a business group, you have to assign the *PFCG role for Business Catalog* to the user.

You can change the content of the delivered business groups or can create new ones.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- Business Group (Launchpad)

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#).

Procedure

1. In the Implementation Guide (IMG) on the **front-end server**, choose **▶ SAP NetWeaver ▶ UI Technologies ▶ SAP Fiori ▶ Adding Apps to SAP Fiori Launchpad (Using SAP Fiori Launchpad Designer) ▶ SAP Fiori Launchpad Designer (Current Client)** or open the following URL with your web browser:
https://<server>:<port>/sap/bc/ui5_ui5/sap/arsvc_upb_admn/main.html?scope=CUST
2. Select the *Groups* view in the top left corner and search for the business group with the technical name you retrieved from the *Business Group (Launchpad)* field from the SAP Fiori apps reference library. Choose the business group.
3. Now you can do the following:
 - Add new tiles by choosing the empty tile with the + sign. Then just select the tiles you want to add.
 - Delete tiles by clicking a tile and holding the mouse button until a trash can appears in the corner. Drag and drop the tile to the trash can to delete it.
 - Change the order of tiles by dragging them to a new position.

5 Authorizations for Web Dynpro Apps

End users need the same user ID on the front-end server as on the back-end server. These user IDs require the following authorizations to run a Web Dynpro app:

- On the front-end server, they need authorization to launch an app on the FIORI launchpad.
- On the back-end server, they need authorization to execute the transaction behind a Web Dynpro app.

5.1 Create Business Catalog Role

On the front-end server, you copy the template role for the business catalog containing the app and assign it to your end user. The end user then has access to the business catalog and can launch the app.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- *PFCG role for Business Catalog*

This name specifies the template role that authorizes the user to access the business catalog containing the app.

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#).

Procedure

To copy a template role to your namespace, proceed as follows:

1. Choose ► *Tools* ► *Administration* ► *User Maintenance* ► *Role Administration* ► *Roles* or start transaction **PFCG**.
2. You are on the *Role Maintenance* screen.
In the *Role* field, enter the template role.
3. Choose ► *Role* ► *Copy*.
4. The *Query* dialog box appears. The system defaults the template role in the *From Role* field. Enter the role name to which you want to copy the template role in the *To Role* field, for example `Z_<name of template role>`.
Choose *Copy All*.

Assign the copy of the template role to the relevant end user IDs on the front-end server.

5.2 Create Authorization Role

On the back-end server, you copy the template role that contains the authorizations to execute the app and assign it to your end user. The end user then has authorizations to access the data and perform the transactions offered by the app.

Prerequisites

You have collected the following information from the SAP Fiori apps reference library:

- *Authorization Role (PFCG Role)*

This name specifies the template role that authorizes the user to access the data and perform the transactions offered by the app.

To access this information, follow the procedure [Collect Web Dynpro Information from the SAP Fiori Apps Reference Library \[page 6\]](#).

Procedure




To copy a template role to your namespace, proceed as follows:

1. Choose **Tools** > **Administration** > **User Maintenance** > **Role Administration** > **Roles** or start transaction **PFCG**.
2. You are on the *Role Maintenance* screen.
In the *Role* field, enter the template role.
3. Choose **Role** > **Copy**.
4. The *Query* dialog box appears. The system defaults the template role in the *From Role* field. Enter the role name to which you want to copy the template role in the *To Role* field, for example `Z_<name of template role>`.
Choose *Copy All*.

Assign the copy of the template role to the relevant end user IDs on the back-end server.

Typographic Conventions

Table 3

Example	Description
<Example>	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, "Enter your <User Name>".
▶ Example ▶ Example ▸	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
www.sap.com 	Textual cross-references to an internet address
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456 	Hyperlink to an SAP Note, for example, SAP Note 123456 
<i>Example</i>	<ul style="list-style-type: none"> Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. Cross-references to other documentation or published works
Example	<ul style="list-style-type: none"> Output on the screen following a user action, for example, messages Source code or syntax quoted directly from a program File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
EXAMPLE	Keys on the keyboard

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