How to Setup Notifications in Fiori 2.0 Step-by-Step for 1809

SAP S/4HANA 1809 - Part 1

Wilson Wei
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<thead>
<tr>
<th>Document Version</th>
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<tbody>
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</thead>
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</tr>
</tbody>
</table>
TABLE OF CONTENTS

Document History.................................................................................................................................................. 2

ABSTRACT ............................................................................................................................................................. 4

CHAPTER 1  NOTIFICATION INTRODUCTION..................................................................................................... 5

CHAPTER 2  CREATING & ASSIGNING PFCG ROLES............................................................................................ 7

Create Roles from PFCG Role Templates................................................................................................................ 7

CHAPTER 3  CONFIGURING NOTIFICATION HUB ................................................................................................ 12

Create system alias................................................................................................................................................. 12

Create trust relationship........................................................................................................................................... 13

Activate SICF Service for OData V4....................................................................................................................... 17

Publish Notification OData Service........................................................................................................................ 18

Assign the OData service authorization to a PFCG role.......................................................................................... 20

Test the OData service.............................................................................................................................................. 24

Setup Push Channel................................................................................................................................................ 25
Abstract

Chapter 1 – Notification Introduction

Chapter 2 - Creating & Assigning PFCG Roles

2.1. Create Roles from PFCG Role Templates

Chapter 3 - Configuring Notification Hub

3.1. Create system alias
3.2. Create trust relationship
3.3. Activate SICF Service for OData V4
3.4. Publish Notification OData Service
3.5. Assign the OData service authorization to a PFCG role
3.6. Test the OData service
3.7. Setup Push Channel
Notification is a widely-used concept to directly inform users about situations that require an immediate action or attention. Fiori 2.0 offers this possibility with the Notification Channel, a framework for applications to deliver notifications to end users. From Fiori 2.0, SAP Fiori Launchpad provides a Notifications area that lets you know about important tasks and requests requiring your timely action or knowledge. They allow you to view immediate updates on the latest and most important events that are related to your business role.

The Launchpad consumes notifications from the notification channel, which is a Backend system that aggregates notifications from different notification providers configured in your environment.

There are three concepts to understand when activating notifications:

- **Notification Center** – the area in the Fiori Launchpad where notifications are displayed
- **Notification Hub** – Collects notifications to be shown in the Notification Center
- **Notification Provider** – Provides notification content to the Notification Hub

Below is the architecture of the Notification. This document will only cover the Launchpad Notification. Native push notification is not in the scope.
To enable notification, there are mainly three parts:

- Activate the Notification Hub in Frontend server- configure the SAP Gateway Notification Channel
- Activate Notification Provider in Backend server– we’ll configure two notification providers, one is a demo notification provider to verify the notification channel configuration and the other one is SAP Business Workflow notification provider which is the most widely used provider. SAP also provide other standard notification providers. SAP also provide the API for customer to create custom notification providers.
- Enable the Notification Center in the Fiori Launchpad

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**Note**

1. In this document, we will use the following environment:

   SAP FIORI FRONT-END SERVER 5.0
   SAP S/4HANA 1809 ON PREMISE

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**Requirement**

2. SAP/UI 751 SP00 or higher and GWFND 7.51 SP00 or higher on Notification Hub system.
3. SAP_BASIS 7.51 SP01 or higher on Backend system. (See Note: [2356153](#) - Business Workflow Extensions - Version 2)
4. Fiori Launchpad is configured (see note [2456330](#) - How to configure Fiori Launchpad step-by-step?)
5. If you want to use the workflow notification, Fiori My Inbox need to be configured (see note [2424054](#) - How to setup My Inbox 2.0 app)
Create Roles from PFCG Role Templates

The Notification Channel framework provides predefined roles as templates for developers, administrators, end users and so-called provider users. You can configure the roles based on the provided templates and assign roles to the users. There are two roles in Frontend system and three roles in Backend system.

<table>
<thead>
<tr>
<th>Template Name</th>
<th>Description</th>
<th>Frontend Role</th>
<th>Backend Role</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>/IWNGW/RT_BEP_ADM</td>
<td>Role template for Backend admin</td>
<td></td>
<td>✓</td>
<td>ZNTBEPADM</td>
</tr>
<tr>
<td>/IWNGW/RT_HUB_ADM</td>
<td>Role template for hub admin</td>
<td>✓</td>
<td></td>
<td>ZNTHUBADM</td>
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<tr>
<td>/IWNGW/RT_NP_DEV</td>
<td>Role template for Notification provider developer</td>
<td></td>
<td>✓</td>
<td>ZNTDEV</td>
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<tr>
<td>/IWNGW/RT_USER_CONSU</td>
<td>Role template for end user</td>
<td>✓</td>
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<td>ZNTHUBUSR</td>
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<tr>
<td>/IWNGW/RT_USER_PRODU</td>
<td>Role template for Notification Channel producer user</td>
<td></td>
<td>✓</td>
<td>ZNTPRO</td>
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Below is an example regarding how to create a role from the role template, we also need to create the other roles in the table. From the above table, we know that the first admin role should be created in the Backend system.

1. Run transaction code PFCG in Backend system.
2. Input the Role name. In our example, it is called ZNTBEPADM.
3. Click the “Single Role” button.
4. Input “Description”.
5. Click “Save” button.

![Image](image1.png)

Figure 2 – Save the PFCGF role


![Image](image2.png)

Figure 3 – Change Authorization Data

8. Select “/IWBEP/RT_BEP_ADM” and click “Apply Template” button.
9. Click “Save” button.

10. Click the “Generate” button to generate the role profile.
11. Save the generated profile.

![Figure 7 – assign profile name for generated profile](image)

12. Click “User” tab.
13. Enter the ID of the Notification Channel Backend administrator.
14. Click “Save” button.

![Figure 8 – assign the role to the user](image)

15. Click “User Comparison” button.
16. Click “Complete comparison” button.

17. Close the popup.

18. Please repeat the above steps to create the other PFCG roles from the role template. Please make sure you create the roles in correct systems.

19. Assign the newly created roles to the eligible user based on their role.
Chapter 3
Configuring Notification Hub

In this session, you can find the information about configuring Notification Hub. Notification Hub collects notifications to be shown in the Notification Center.

**Note**
1. The configuration in this chapter should be performed in the **Frontend system**.

Create system alias

**Note**
2. For Embedded deployment, we need one system alias called LOCAL.
3. For Hub deployment, we need two system aliases, one is “Local”, the other one is pointing to the Backend system.

1. After login to the Hub system, run transaction code SPRO.
2. Select “SAP Customizing Implementation Guide”.
3. Select “SAP NetWeaver”.
4. Select “Notification Channel”.
5. Select “Notification Channel Hub”.
6. Select “Configuration”.
7. Select “Connection Settings”.
8. Execute “Manage SAP System Alias”.

![Display IMG](image-url)

**Figure 12 – Display IMG**
9. Create an SAP system alias called LOCAL, RFC destination to NONE. If it exists, please skip this step.

Figure 13 – Manage SAP System Alias overview

10. Click “New Entries” button.

11. Create an SAP system alias with the RFC destination pointing to the Backend system then Save it. If you are in Embedded scenario or if it exists, please skip this step.

Figure 14 – System Alias

Create trust relationship

In Push notification scenario, the Frontend system should trust the backend system.

1. Run transaction code SMT1 in Frontend system.
2. Click “New” button.

Figure 15– Transaction SMT1
3. Press Continue.

![Figure 16 – Build trust relationship](image1)

4. Select the RFC destination that pointing to the backend system.

![Figure 17 – Build trust relationship](image2)
5. Press Continue.

Figure 18 – Build trust relationship

6. Press Continue.

Figure 19 – Build trust relationship
7. Complete the selection.

8. Logon to the Backend system (currently we are in the Frontend system) and run transaction code SM59.

9. Find the RFC destination which is pointing the Frontend and select the “trust” then save the configuration.

10. Press “Remote Logon” and make sure you could log on to the Frontend system successfully.

Figure 20 – Build trust relationship

Figure 21 – Set the trust relationship

Figure 22 – Test remote connection
Activate SICF Service for OData V4

1. Run transaction code SICF.
2. Enter “/sap/opu/odata4” in the Service path field and click “Execute” button.

![Figure 23 – SICF view](image)

The screen will display as below:

![Figure 24 – Activate SICF service](image)

3. Right click the SICF node and click “Activate Service” item.

![Figure 25 – Activate SICF service](image)

4. Press “Yes”.

![Figure 26 – Activate SICF service](image)
Publish Notification OData Service

OData V4 service /IWNGW/NOTIFICATION_SRV is used to create notification and execute all other task with respect to this notification.

6. Execute “Publish the Notification OData Service’ or run transaction code /N/IWFND/V4_ADMIN.

![Figure 27 – Display IMG view](image1)

7. Click “Publish Service Groups” button.

![Figure 28 – Publish OData Service Groups](image2)
9. Click “Get Service Groups” button.

![Get Service Groups](image1)

**Figure 29 – Get Service Groups**

10. Select “/IWNGW/NOTIFICATION” and click “Publish Service Groups” button.

![Publish OData Service Group](image2)

**Figure 30 – Publish OData Service Group**

11. Click “Save” button.

![Publish OData Service Group](image3)

**Figure 31 – Publish OData Service Group**
12. Close the popup.

Assign the OData service authorization to a PFCG role

1. Run transaction code PFCG to change the PF CG role for end user, this role is based on the template /IWNGW/RT_USER_CONSU.

2. Select the “Authorization Default” from the dropdown list as below.
3. Select “TADIR Service”.

**Figure 35 – Select TADIR Service**

4. Select “G4BA SAP Gateway OData V4 Backend Service Gro”.

**Figure 36 – Select Service Type**

5. Input “/IWNGW/NOTIFICATION” and Press “Copy”.

**Figure 37– Add the service name**
6. Save the configuration.

Figure 38 – Save the configuration

7. After saving the configuration, the “Authorization” tab turns red.

Figure 39 – Check the role status


9. Select “Read old status and merge with new data” then confirm the settings.

Figure 40 – Update the role status
10. Press the “Generate” button.

Figure 41 – Generate the authorization profile

11. Confirm the generation.

Figure 42 – Generate the authorization profile

12. Now, the “Authorization” tab turns green.

Figure 43 – Confirm the role status
Test the OData service

1. Run transaction code /N/IWFND/V4_ADMIN
2. Open ‘Service Groups’ folder.
3. Open “/IWNGW/NOTIFICATION” folder.
4. Open “Local” folder.
5. Open “Available Services” folder.
6. Select newly created OData Service /IWNGW/NOTIFICATION_SRV.
7. Click “Service Test” button to test the service.
8. Click “Execute” button.

The connection works well.
Setup Push Channel

Notifications use an ABAP Push Channel to push notifications to the Fiori Launchpad. The recommended approach is to use a WebSocket connection for this purpose. WebSockets establish a bidirectional communication channel between server and client. Using WebSockets a server can push notifications to the client.

1. Run transaction code “SPRO”.
2. Navigate to “Manage WebSocket Endpoint”.
3. Click “Execute” button.

Figure 47 – Display IMG view

4. Enter “NOTIFICATION_PUSH_APC” in Service Name field.
5. Click “Execute” button.

Figure 48 – SICF view
6. Right click the SICF node and click on "Activate Service".

![Image](image1.png)

**Figure 49 – Activate SICF Service**

7. Click the “Yes” button to activate the service.

![Image](image2.png)

**Figure 50 – Activate SICF Service**

8. Select “Notification Channel”.
9. Select “Notification Channel Hub”.
10. Select “Administration”.
11. Select “Push Channel settings”.
12. Execute “Activate and maintain Push channels”.

26
13. Click “New Entries” button.

14. Enter SAP_WEBSOCKET as Push Channel ID.

15. Specify the sequence number, for example, 10 (this is the sequence in which the push channel will be processed).

16. Activate it and click “Save” button.

17. Select a transport request and click “Save” button.