Ericsson Order Care

Realize Higher Consistency for Faster Time-to-Revenue

Orchestration Framework Configuration Guide

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Contents

1 Introduction 4
1.1 Purpose and Scope 4
1.2 Overview 4
1.3 Software Terms of Use 4
1.4 OF Features 4

2 Installation and setup 6
2.1 Install OF as an independent project 6
2.2 Configure OF in the Configuration Application 9
2.3 Configure OF in Velocity Studio 13
2.4 Access the OF Application 14

3 Create Participant and Order 15

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1 Introduction

1.1 Purpose and Scope

The purpose of this guide is to describe how to install and configure the Orchestration Framework (OF) module. The target audience for this guide is developers.

1.2 Overview

This document describes the OF module within the Order Management (OM) accelerator. OM allows you to dynamically orchestrate and assemble processes in runtime. The framework contains functionality to define and create microflows, Technical Action Specifications (TAS), and Fulfillment Plans (FP) through its own UI or integration with external applications through the use of APIs. The product is flexible; allow non-technical users to configure process flows from a defined set of micro-flows, which results in less time to market.

1.3 Software Terms of Use

The OF will be known in this Terms of Use as the Product. The Product can be used by an authorized user to perform the functions outline in this document and summarized in the software features section of this document.

Legal Activity: You will not use the Product to engage in or allow others to engage in any illegal activity. You will not use the Product for any purpose that is unlawful or prohibited by these Terms of Use.

Unauthorized Customization or Reverse Engineering: You may not use the Product to obtain information necessary for you to design, develop, or update unauthorized software. You may not reverse-engineer, decompile, disassemble, derive the source code of, change, or create derivative works from the Product.

Third party: You will not engage in use of the Product that will interfere with or damage the operation of the services of third parties by overburdening or disabling network resources through automated queries, excessive usage, or similar conduct. You may not authorize any third party to use the Product on your behalf without a separate written agreement.

1.4 OF Features

The OF application contains the following features:

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Plans

Plans allow you to configure, define, search, view, change, and delete the following:

- A customer-facing service, which is a service subscribed to by a subscriber.
- A subscriber state, which defines the current or desired set of customer-facing services held by a subscriber.
- A microflow, which is a fully modeled workflow within the platform.
- A Technical Action Specification (TAS), which consists of a microflow, along with any parameters, conditions, and compensating actions. The TAS is a reference to the microflow that is required to be invoked for each component that requires fulfillment.
- A TAS Service Level Agreement.
- A fulfillment plan, which specifies a series of TASs to be processed.
- A Subscriber Transition Strategy (STS), which provides the plan for moving a client from his current to his desired state. A fulfillment plan specifies the STS, along with optional parameters.

Status

You can view and search for the status of the following:

- A plan instance, which allows you to view the status of a given fulfillment plan.
- A worklist, which allows you to manage tasks and assign them to another user. You can also change a worklist; view the worklist's history, and more.
- A process, which allows you to search for process information and manage all processes.
- Messages in error status, which allows you to search for errors using various search criteria. You can also resubmit an error for reprocessing.

Testing

You can search for the following and perform testing:

- Subscriber state identifications, which allow you to view information about each CFS ID and its state. You can also add, delete, change, and test a CFS ID.
- Subscriber transition strategy identification, which allows you to display details for a given subscriber transition strategy. You can also add, delete, and change a subscriber transition strategy.

Tools

The following tools are available from the OF application:

- Event Log, which shows system messages.
- Select application, where you can exit the OF application and select a different application to open.
- Logout, which logs you out of the OF application and ends your session.
- Change your password by verifying your current and new passwords in the provided fields.

Reports

You can run the following reports and graphs from the OF application:

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- Completed by Participant by Month, where you can generate this report by participant type. This report shows the number of completed tasks for the current day to two weeks ago. You can also generate graphs based on the data used in this report.
- Completed by Fulfillment Plan by Month, where you can generate this report by fulfillment plan. This report shows the number of completed tasks from the current day to two weeks ago. You can also generate graphs based on the data used in this report.

2 Installation and setup

This section details how to install and configure OF in a development environment, which consists OF the following steps:

- Install OF as an independent project
- Configure OF
- Access OF

2.1 Install OF as an independent project

To install the OF module in a development environment as a separate project, complete these steps:

1 Install Ericsson Velocity Studio® by following the steps in the **Installer User Guide > Standard Install** of the product documentation.

2 Create a new schema in your database. Refer to **Installer User Guide** > **Standard Install** > **Database Initialization** for more information.

The following sample script can be used to create new database schemas:

```
DROP USER OFDB CASCADE;

CREATE USER OFDB  IDENTIFIED BY OFDB;

GRANT CONNECT TO OFDB  WITH ADMIN OPTION;

GRANT ALTER USER TO OFDB ;

GRANT CREATE PROCEDURE TO OFDB ;

GRANT CREATE SEQUENCE TO OFDB ;

GRANT CREATE SYNONYM TO OFDB ;

GRANT CREATE TABLE TO OFDB ;

GRANT CREATE TRIGGER TO OFDB ;

GRANT CREATE TYPE TO OFDB ;

GRANT CREATE USER TO OFDB ;

GRANT CREATE VIEW TO OFDB ;
```


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```
GRANT CREATE CLUSTER TO OFDB ;

GRANT CREATE INDEXTYPE TO OFDB ;

GRANT CREATE OPERATOR TO OFDB ;

GRANT CREATE SESSION TO OFDB ;

GRANT DROP USER TO OFDB ;

GRANT UNLIMITED TABLESPACE TO OFDB ;

alter user OFDB quota unlimited on users;
```

3 Run the `<product_installation_folder> \DDL\ CW.sql` file. Use your newly created database schema to run this script.
4 Open the `Velocity Studio\env\startVelocity Studio.cmd` file from your installation folder to start the Velocity Studio.
5 Create a project in Velocity Studio.

a Click **File** > **New** > **New Project** from the menu bar.

Figure 1 Create a new project

b From the Select an empty directory dialog, specify the folder where you want your new project to be saved.
c Provide the Internal Name for the project.

6 Click **Database** > **Connect** from the menu bar to connect to your newly created database schema.

7 From the Database Login dialog, click the **New** button to configure the database connection settings.

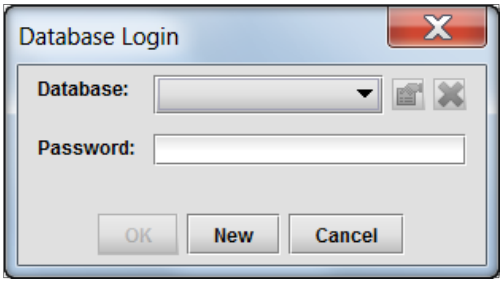

Figure 2 Database Login

From the Connection Properties dialog, enter the **Name** of the database, the name of the **User.**

8 Click the **New** button.

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From the Driver Properties dialog, click the **Driver type** field's drop-down menu and select **Oracle thin**. Proceed to enter the **Host**, **Port**, and **Service** information.

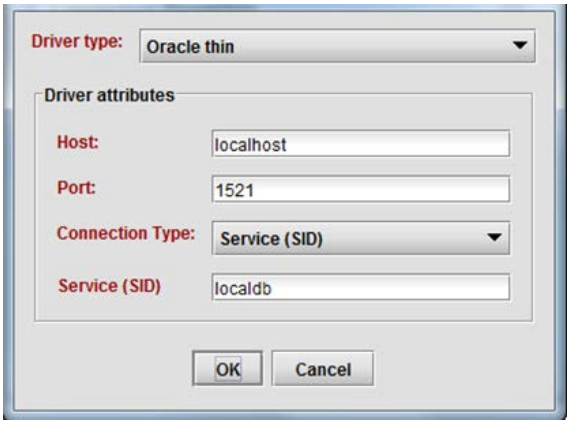

Figure 3 Driver Properties

9 Click the **OK** button.
The Connection Properties dialog reappears. Click the **Test** button and enter the password to test the connection.

10 Click the **OK** button to return to the Database Login dialog.
Enter the password and click the **OK** button to connect.

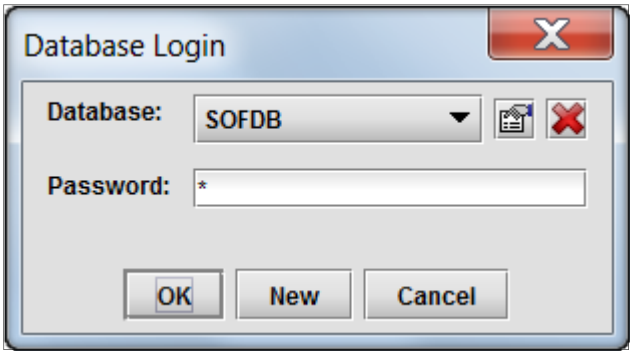

Figure 6 Database Login

11 Click **Runtime** > **Run** from the menu bar or by click the **Run** button ( ) under the menu bar to run the framework.

12 The Select Application dialog appears; click the **New** button.

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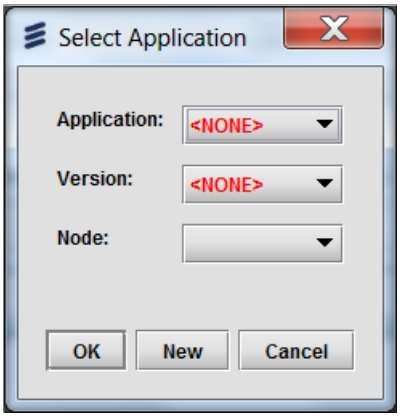

Figure 8 Select Application

13 Provide the information for the Version and Description fields.

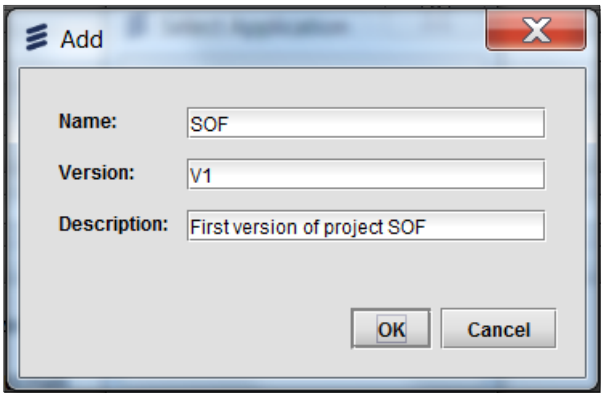

Figure 9 Add Application Version

14 Click the **OK** button from **Add** and **Select Application** dialogs.

Note: The Velocity Studio runs in Configuration mode until the Configuration application is properly set up, and the application metadata has been run.

2.2 Configure OF in the Configuration Application

To configure the OF, do the following:

1 In your Web browser, access the System Configuration application by entering http://localhost:8080/cwf/configApp as the URL.
2 Enter upadmin as both your Username and Password, and then press the Enter key. The main screen of configuration application displays:

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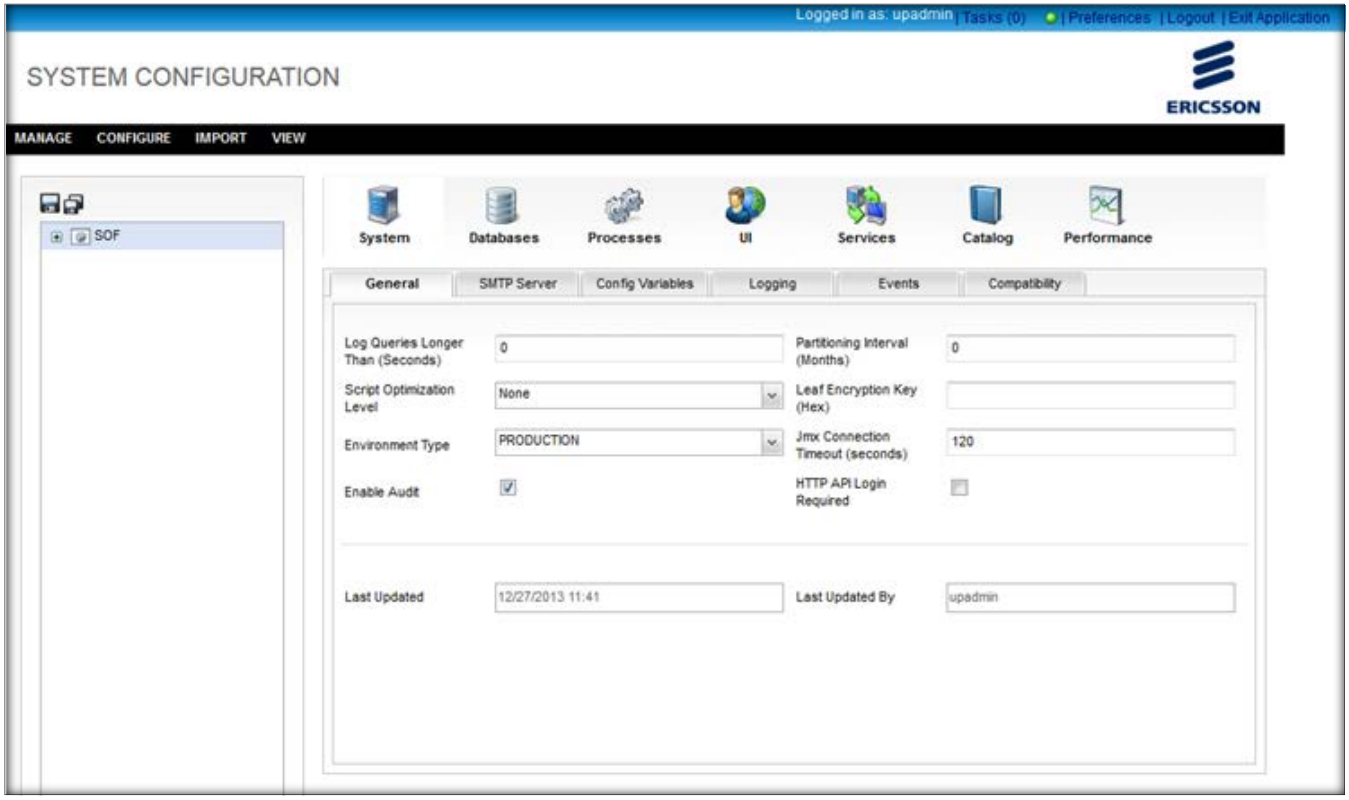

Figure 10 System Configuration Application

3 Select the main node (for example, SOF) from the node menu section, and then click the **Database** tab.
4 Clicking **Databases** > **Logical Connection** displays the logical connections to the database, which are responsible for enabling the AVM to send database commands to the database, to carry out different functionalities.
5 Clicking **Databases** > **Physical Connection** displays the physical connections to the database, which are responsible for defining database connection parameters to be used by logical connections.
6 To add a physical connection, complete these steps:

   a From the Physical Connection page, click the **Add** button.

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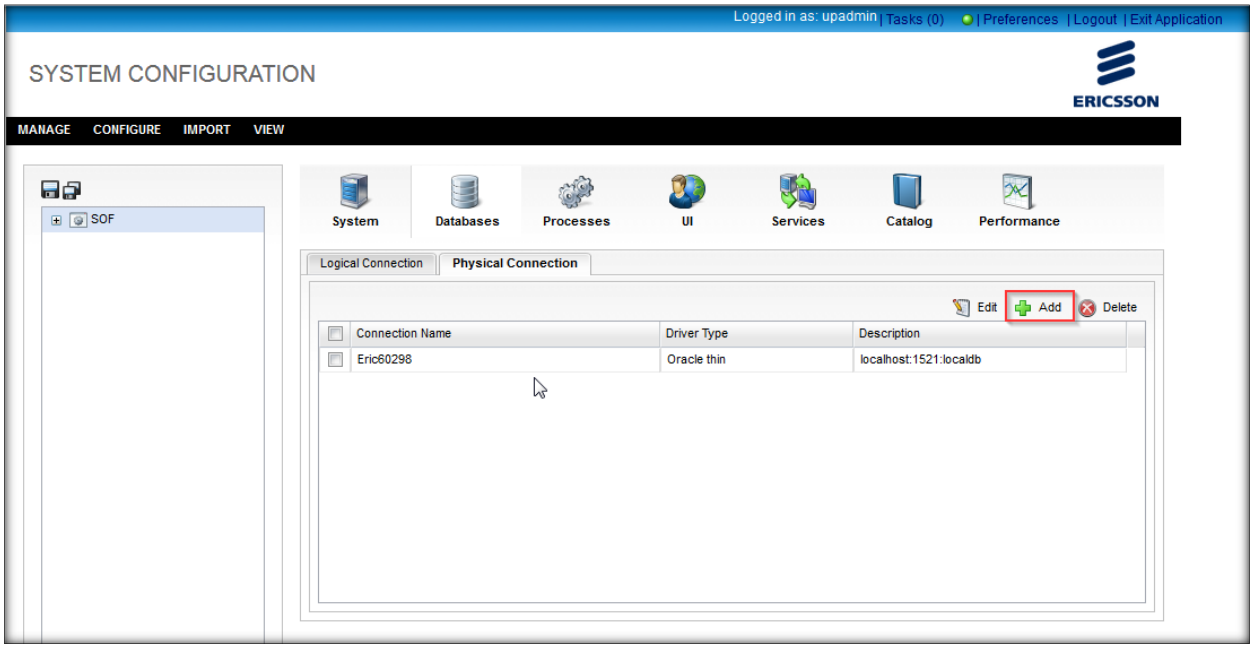

Figure 11 Add Physical Connection

b The New Physical Connection dialog appears. Enter the database credentials; when you have finished, click the **Apply** button. A message appears, indicating that you have successfully updated your Oracle thin connection.

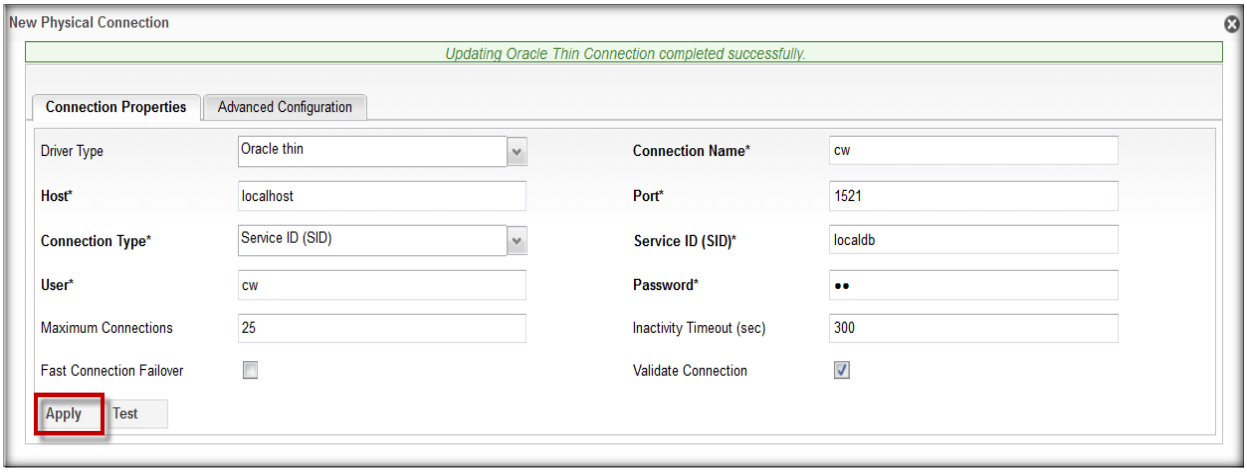

Figure 12 New Physical Connection

c To test your connection settings, click the **Test** button. If your connection settings are properly set up, a confirmation message appears.

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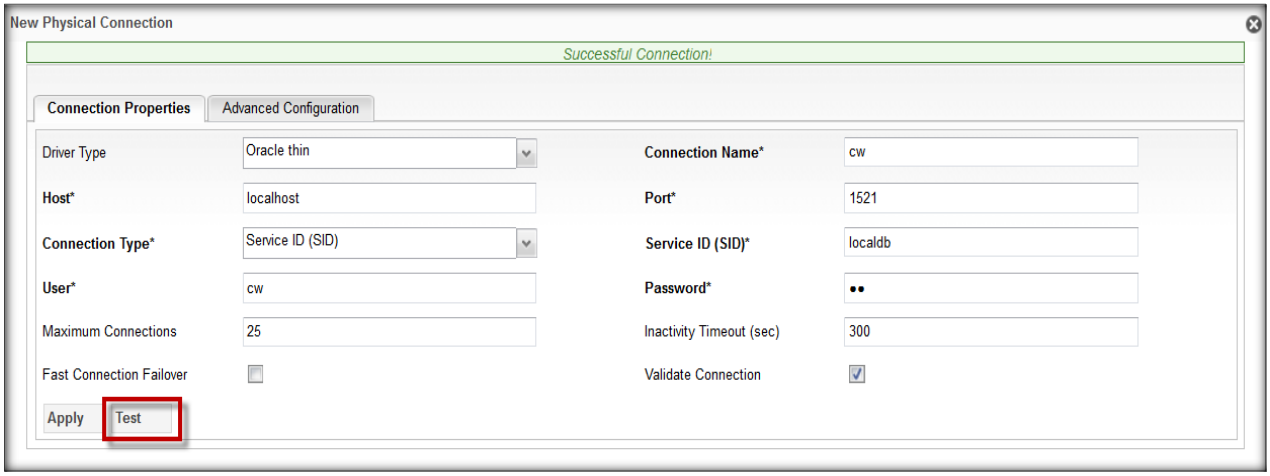

Figure 13 Test Connection

Note: The database attributes in the Configuration application need to match the database attributes in the Velocity Studio. For more information, refer to the Configuration User Guide.

7 Click the Logical Connection tab to associate your logical connections to the physical connection you have just created, double-click each of the following logical connections and select your newly created physical connection from the drop-down list:

- **ARCHIVE**
- **ORDER**
- **PE_ORDER**

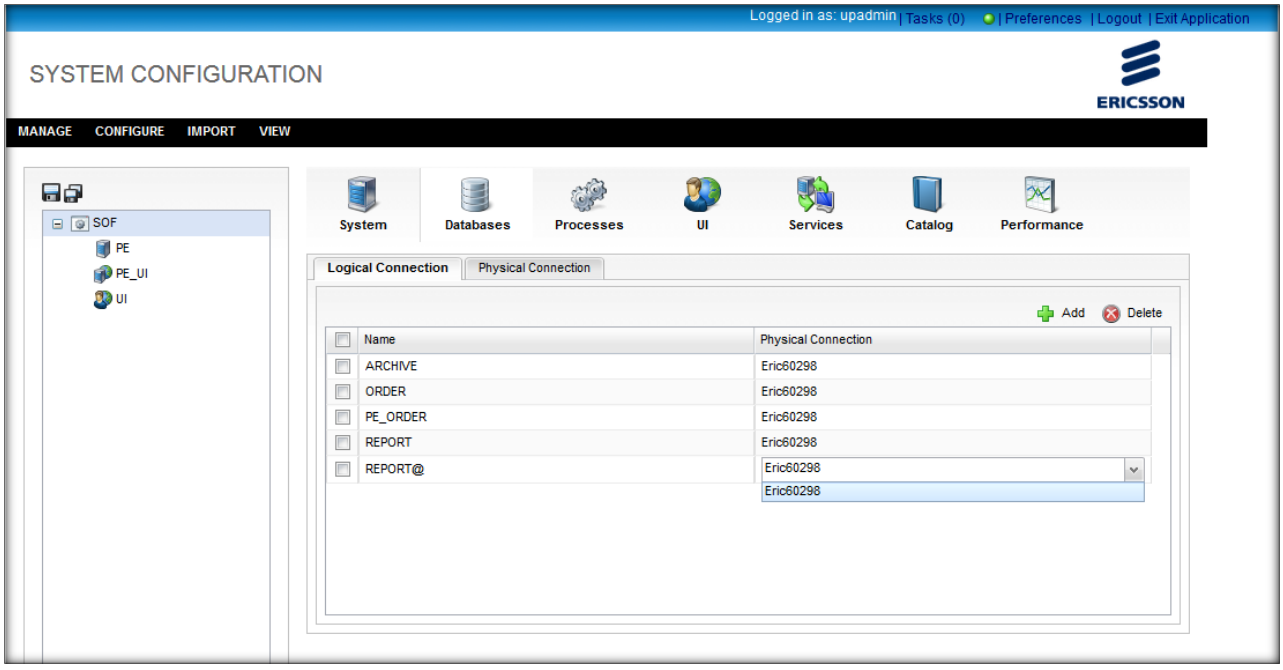

Figure 14 Associate Logical Connections to the Physical Connection

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Note: You can select the **Active configuration** checkbox for **PE**, **PE_UI**, or **UI node.**

8 Click the **Save** button to save your configuration settings, and exit the configuration application.

2.3 Configure OF in Velocity Studio

Go back to the Velocity studio, and follow these steps to continue the configuration on the Velocity Studio side.

9 Click **Runtime** > **Stop** from the menu bar, to stop the runtime in Velocity Studio.
10 Click the root metadata icon (for example, OF Project) in the left navigation menu, and then click the **Library** tab.
11 Click the **Add** button to launch the **Select a template JAR** dialog.
12 Proceed to select the SOF JAR file specified in the diagram from the <*product_installation_folder*> **\modules** folder. The files to be added are:
   - **serviceOrchestrationFramework.jar**
   - **customer.jar**
   - **cwl_report.jar**

   a A dialog appears as:

Figure 17 Copy File Dialog

   b Select **Yes** or **No** in the dialog. If **Yes** is selected, the JAR files are copied locally to your `<project folder>\templates` folder. If **No** is selected, then the JAR files are not copied locally.

13 Once the files are added, save the project metadata and reload or open the project for the library files to take effect.
14 Run **SOF.sql** file from ***<installation_folder>*\modules\SOF\DDL** folder.
15 To make the existing database schema compatible with the new file, upgrade the database by following these steps:

   a Select **Database** > **Upgrade System** from the menu bar to open the Upgrade SQL dialog.
   b Specify the directory and the name of the SQL file (for example, upgrade.sql), and then click the **Save** button to create the file.
   c Use SQLPlus to connect to the appropriate database and run the SQL file.
   Note: If there are no system upgrades, a dialog box appears, indicating that no upgrades are required.

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16 Click **Runtime** > **Run** to start the runtime. The Velocity Studio runs in configuration mode as two new logical connections are available in the System Configuration application. Follow the steps 7 and 8 in the 2.1.2 section of this document to associate new logical connections to the physical connection.
17 Go back to the Velocity Studio and click **Runtime** > **Stop** from the menu bar, to stop the runtime in Velocity Studio.
18 Click **Runtime** > **Run** from the menu bar or click the run button ( ) to start the framework.

Note: Make sure you select the active node from Select application dialog. You might need to take another upgrade for the database to reflect the changes.

2.4 Access the OF Application

To access the OF application, complete the following steps:

1 Open a Web browser and enter the http://<localhost>:<port>/cwf/login Web address in a Web browser. For example, http://localhost:8080/cwf/login.
2 Enter the username and password to log in (for example, upadmin in both the **Username** and **Password** fields) and then click the **OK** button.
3 Assign the OF privileges from User Profile Management Application. Consider the following steps:

a Select the Manage menu option and then the Groups submenu.
b On the Search Group page, click on the Search button to get the list of the user groups.
c Double-click the appropriate user group (for example, User Profile Administrators).
d Click the **Privileges** tab.
e On the Select Privilege(s) page, first click the Edit button and then click the **Add** button. The Search Privilege(s) page appears with the available privileges for that group. Select the OF privileges and click the **Select** button.

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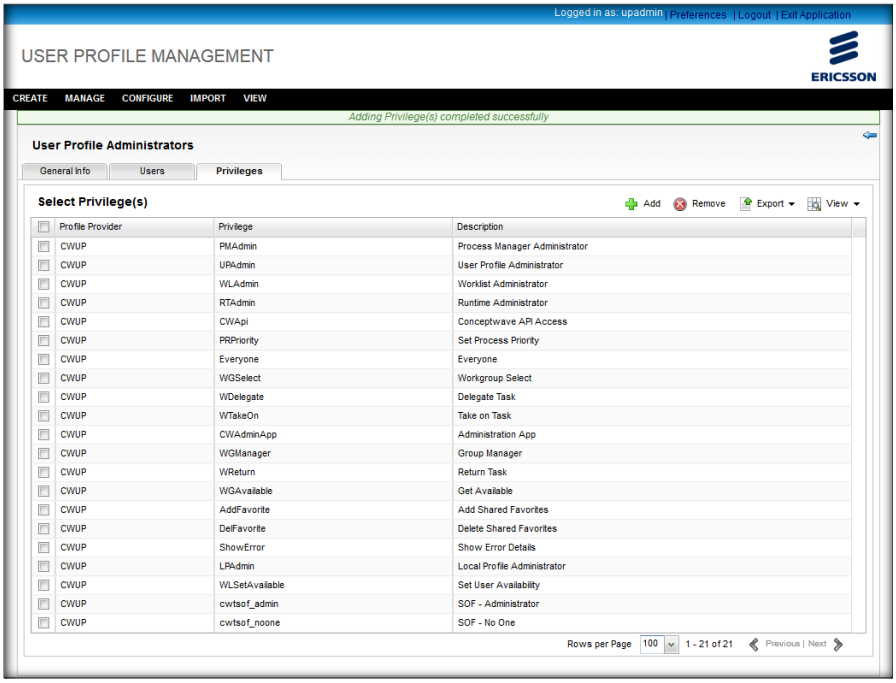

Figure 19 Assign Privileges

4 A message appears, indicating that you have successfully added the privileges. These privilege grants full access to the OF application.

5 Click the **Logout** option and log back in as described in the step 1. The **Select Application** dialog appears. Select the **Orchestration Framework** and then click the **Select** button to access the application.

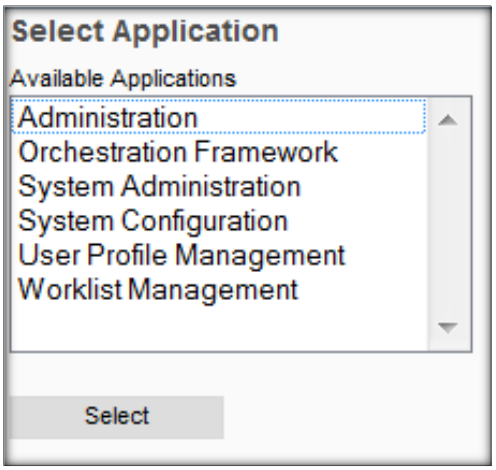

Figure 20 Select Application Dialog

6 The OF application's home page appears.

3 Create Participant and Order

To create flows in OF, a Participant and Order must be created. Refer to the Velocity Studio User Guide for sections on Metadata Objects and Business Process Metadata that contain information on creating a Participant and Order.

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