DS.140 Integration Design Specification



PO PaaS Approval Validations Integration

SCM\_RICE\_356

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# Document Control

## Change Record

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2

## Reviewers

| Name | Position |
| --- | --- |
| FHL Business | Business User |
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|  |  |
|  |  |

Contents

1 Document Control ii

1.1 Change Record ii

1.2 Reviewers ii

2 Introduction 4

2.1.1 Scope for this Document 4

2.1.2 Intended Audience 4

3 Overview 5

3.1 Business Objectives 5

3.2 Major Features 5

3.3 Glossary 5

4 High-Level HIS to Fusion Integration flow 6

5 Technical Design Details 7

5.1 OIC Services 7

5.2 Oracle PaaS DBCS components 8

5.3 Technical flow 8

6 Data FIELD Mapping 12

6.1 File format 12

6.2 Frequency 12

7 Exception handling 13

7.1 Scenarios 13

8 Assumptions / Considerations 14

9 Open and Closed Issues 15

9.1 Open Issues 15

9.2 Closed Issues 15

# Introduction

### Scope for this Document

This analysis specification document is prepared to layout the PO PaaS approval validation integration.

### Intended Audience

This document is intended for the following groups to provide the action items and consideration that are required to complete the implementation of the various Supply Chain and Finance related functionalities from Oracle Fusion.

#### Fortis Business Users

This document will be helpful for Fortis Business users to understand the technical design and process change with the new structure implemented in Oracle. The business user will validate this document after the verification of the requirement.

#### PwC Technical Team

The PwC technical team will use this document as a source technical design document to develop the technical solution to implement / deploy in Oracle Fusion.

#### Fortis IT Team

The Fortis IT Team must facilitate the PwC technical team for requisite details and other elements required from Business. The Fortis IT team is also responsible to arrange and provide required technical information wherever is required.

# Overview

Fortis Healthcare Limited (FHL) is a chain of hospitals, headquartered in India. Fortis started its health care operations from Mohali where first Fortis hospital was started. Later, the hospital chain purchased the healthcare branch of the Escorts group and increased its strength in various parts of the country. The Fortis health care also operates its hospital in Vasant Kunj, Faridabad, Gurgaon. The FMRI hospital at Gurgaon is the headquarter of Fortis healthcare with all the major facilities at the hospital.

This specification document is prepared to layout the design of PO PaaS approval validation integration. Oracle PaaS DBCS has been used for validating the data before approving the PO from a dummy user.

## Business Objectives

The following are the business objectives.

1. To have a secure, reliable, and scalable design flow to validate all the POs which are submitted for approval via the PaaS DBCS database.
2. To have a solution providing the monitoring capabilities.

## Major Features

The proposed solution will have the following features involved:

1. A dummy user has been created in Oracle Fusion and configured as a first level approval for all the POs. Actual business approval hierarchy starts once the given PO is approved from this dummy user.
2. The PLSQL code has been written which fetches the PO which are pending for approval with this dummy user, validates the PO data and finally act accordingly.

## Glossary

REST

Representational State Transfer.

OIC

Oracle Integration Cloud

# High-Level HIS to Fusion Integration flow



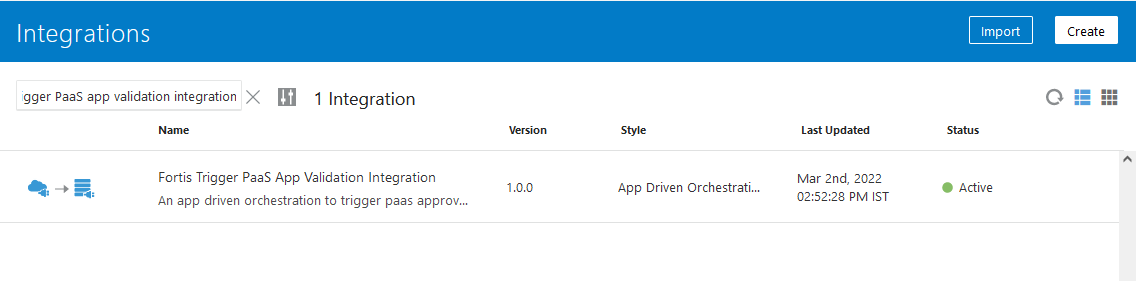
# Technical Design Details

This section describes the technical details of all the components involved in the design of PaaS approval validation integration for PO.

## OIC Services

An App driven orchestration has been designed in OIC to build a REST Endpoint URL, which triggers a PLSQL procedure to process the POs.

|  |  |
| --- | --- |
| **OIC Integration Name** | Fortis Trigger PaaS App Validation Integration |
| **OIC REST Endpoint URL** | https://oic-prod-nr5lr39yailj-bo.integration.ocp.oraclecloud.com:443/ic/api/integration/v1/flows/rest/FORTI\_TRIGG\_PAAS\_APP\_VALID\_INTG/1.0/paas/approvalValidation/ |
| **Method** | POST |



## Oracle PaaS DBCS components

This integration design uses the following components from Oracle PaaS DBCS:

|  |  |  |
| --- | --- | --- |
| **DB Component** | **Component name** | **Details** |
| **Tables** | xxfh\_saas\_validations\_tbl | This is a common table where all the PR/PO/BPA records are stored which are getting processed via the PaaS approval validation integration. |
| xxfh\_wftask | This is BPM task table which contains the details of approval notification with its complete details. |
| **Package** | XXFH\_SAAS\_APP\_VALIDATION\_PKG | This package contains a procedure xxfh\_validate\_po\_prc which basically fetches the PO which are pending for approval with “Fortis Sysadmin”, validates them and finally approve/reject them. |

## Technical flow

Following is the complete technical flow for this integration design:

1. A common scheduled OIC integration (Fortis Trigger 10m Integration) invokes this PO PaaS approval validation integration at every 10 minutes.
2. Once the OIC integration is invoked, it internally invokes the PLSQL procedure xxfh\_saas\_app\_validation\_pkg. XXFH\_PO\_VALIDATION\_WRAPPER\_PRC. This wrapper checks if any job for PO approval is already running. If yes it sends a warning else it submits a new job which in turn calls procedure xxfh\_validate\_po\_prc . This procedure syncs all the PO and BPA which are yet to be approved and then calls the wrapper XXFH\_BPA\_VALIDATION\_WRAPPER\_PRC . Later, this procedure has a following master cursor query which fetches the BPA pending for approval with “Fortis Syadmin” user.

SELECT wft.tasknumber task\_number,

poh.segment1 trx\_number,

poh.po\_header\_id trx\_id,

'PO' trx\_type,

wft.title,

poh.vendor\_site\_id

FROM xxfh\_wftask wft, xxfh\_po\_headers\_all poh

WHERE wft.category = 'Purchasing'

AND wft.taskdefinitionname = 'DocumentApproval'

AND wft.state = 'ASSIGNED'

AND wft.workflowpattern <> 'FYI'

--Mod for ver 10.00 starts

AND ROWNUM < 101

--AND wft.identificationkey LIKE

-- 'PO\_' || poh.po\_header\_id || '%'

AND REGEXP\_SUBSTR (

REPLACE (wft.identificationkey, 'PO\_', ''),

'[^\_]+',

1,

1) = TO\_CHAR (poh.po\_header\_id)

--Mod for ver 10.00 ends

AND wft.title LIKE '%' || poh.segment1 || '%'

AND NVL (poh.document\_status, 'OPEN') IN ('OPEN',

--mod for ver 2.00 starts

'CLOSED',

--mod for ver 2.00 ends

'PENDING APPROVAL' --mod for ver 3.00 starts

,

'CLOSED FOR RECEIVING' --mod for ver 3.00 ends

)

AND poh.type\_lookup\_code != 'BLANKET'

AND wft.assignees = p\_username || ',user'

AND NOT EXISTS

(SELECT 1

FROM xxfh\_saas\_validations\_tbl b

WHERE wft.tasknumber = b.task\_number

AND b.trx\_id = poh.po\_header\_id

AND b.trx\_type = 'PO');

1. The procedure further loops through each & every PO record and validates them as per the following validations.

* Item (line#) included is not a consigned item. Please ensure that only consigned items are included in the PO.
* Promised Delivery Date are changed on the PO having PH/MC items. Please revert the original values and resubmit the Change Order.
* Promised Delivery Date are changed on the PO. Please revert the original values and resubmit the PO.
* Taxes on the PO line(s) <line\_num> must be same as tax on item master.
* Payment Terms are changed on the PO having PH/MC items which are not among the terms mentioned on the associated BPA / Supplier site. Please revert the original values and resubmit the PO for approval.
* The list price on the PO line(s) <line\_num> must be the same as the List price of an Item in Item master.

1. Once a PO is validated from all the above validations, it invokes procedure xxfh\_saas\_app\_validation\_pkg .xxfh\_call\_approval\_api to take action on the BPM approval task for the given PO.
2. This procedure invokes Fusion BPM REST API via the apex\_web\_service.make\_rest\_request function.

**Server details:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Server** | **Host name** | **Port** | **Service Name** | **Username** |
| Oracle PaaS DB | 140.238.225.129 | 1521 | PRODPDB1.fhpubsn.fhvcn.oraclevcn.com | XXFH & XXFH\_RO |

**Oracle PaaS Table design:**

* + - 1. Table: XXFH\_SAAS\_VALIDATIONS\_TBL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Table Column** | **Data Type** | **Length** | **Remarks** |
| 1 | OIC\_FLOW\_ID | NUMBER | 22 |  |
| 2 | TASK\_NUMBER | VARCHAR2 | 50 | Task number for the BPM approval notification |
| 3 | TRX\_ID | NUMBER | 22 | requisition\_header\_id if TRX\_TYPE = 'PR' po\_header\_id if TRX\_TYPE = 'PO' or 'BPA' |
| 4 | TRX\_NUMBER | VARCHAR2 | 50 | requisition number if TRX\_TYPE = 'PR', PO Number if TRX\_TYPE = 'PO', BPA Number if TRX\_TYPE = 'BPA' |
| 5 | TRX\_TYPE | VARCHAR2 | 50 | PR/PO/BPA |
| 6 | ACTION | VARCHAR2 | 20 | APPROVE/REJECT |
| 7 | COMMENTS | VARCHAR2 | 4000 |  |
| 8 | API\_STATUS\_CODE | VARCHAR2 | 240 |  |
| 9 | API\_RESPONSE | CLOB | 4000 |  |
| 10 | PROCESS\_FLAG | VARCHAR2 | 1 |  |
| 11 | ERROR\_MESSAGE | VARCHAR2 | 4000 |  |
| 12 | CREATION\_DATE | DATE | 7 | WHO columns |
| 13 | CREATED\_BY | VARCHAR2 | 20 |
| 14 | LAST\_UPDATE\_DATE | DATE | 7 |
| 15 | LAST\_UPDATED\_BY | VARCHAR2 | 20 |

* + - 1. Table: XXFH\_WFTASK

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Table Column** | **Data Type** | **Length** | **Remarks** |
| 1 | ASSIGNEES | VARCHAR2 | 4000 | User name with whom the notification is pending |
| 2 | ASSIGNEESDISPLAYNAME | VARCHAR2 | 4000 |  |
| 3 | CREATOR | VARCHAR2 | 4000 |  |
| 4 | ASSIGNEDDATE | TIMESTAMP(6) WITH TIME ZONE | 13 |  |
| 5 | CREATEDDATE | TIMESTAMP(6) WITH TIME ZONE | 13 |  |
| 6 | FROMUSER | VARCHAR2 | 4000 |  |
| 7 | FROMUSERDISPLAYNAME | VARCHAR2 | 4000 |  |
| 8 | STATE | VARCHAR2 | 4000 | ASSIGNED if the notification is pending for approval |
| 9 | TASKNUMBER | VARCHAR2 | 4000 | Unique number of the notification |
| 10 | UPDATEDBY | VARCHAR2 | 4000 |  |
| 11 | UPDATEDBYDISPLAYNAME | VARCHAR2 | 4000 |  |
| 12 | UPDATEDDATE | TIMESTAMP(6) WITH TIME ZONE | 13 |  |
| 13 | WORKFLOWPATTERN | VARCHAR2 | 4000 |  |
| 14 | TITLE | VARCHAR2 | 4000 | Approval notification subject |
| 15 | IDENTIFICATIONKEY | VARCHAR2 | 4000 | Key column which identifies the base transaction for which the notification is pending for approval |



# Data FIELD Mapping

NA

## File format

NA

## Frequency

The PaaS approval validation integration is scheduled to run every 10 minutes.

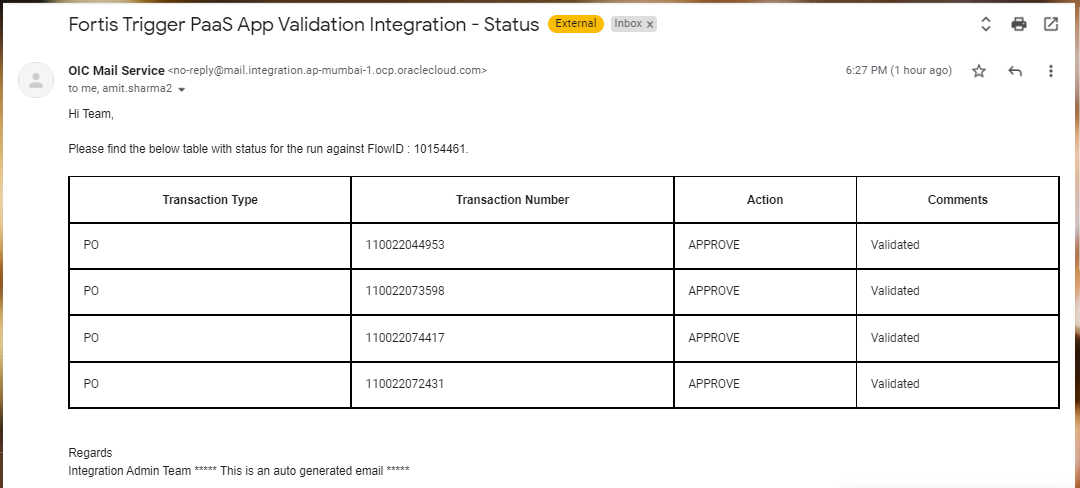
# Exception handling

There can be various scenarios for an error to occur. This section defines those error scenarios and the exception handling has been done to notify and act accordingly.

## Scenarios

In a tabular format give list of scenarios and exception handling

* If any of the step or node fails within the OIC integration, Global Fault section is configured within this OIC integration to send an OIC error notification with relevant details.
* The email id has been stored in OIC Lookup: Fortis\_FaultNotification\_EmailAddress\_Lookup against the given OIC integration name.
* It also sends a notification every 10 mintes with the details of the PR/PO/BPA which have been processed in the given run. This notification also acts as a confirmation that the integration has been running fine.



# Assumptions / Considerations

The Proposed Solution will have the following technical considerations.

In the future, if any product bug arises in functionality then this process needs to be revisited after the bug is fixed.

# Open and Closed Issues

## Open Issues

| ID | Issue | Resolution | Responsibility | Target Date | Impact Date |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Closed Issues

| ID | Issue | Resolution | Responsibility | Target Date | Impact Date |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
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