DS.140 Integration Design Specification



PR PaaS Approval Validations Integration

SCM\_RICE\_361

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# Document Control

## Change Record

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## Reviewers

| Name | Position |
| --- | --- |
| FHL Business | Business User |
| FHL IT Group | Fortis IT Team |
|  |  |
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# Introduction

### Scope for this Document

This analysis specification document is prepared to layout the PR 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 PR PaaS approval validation integration. Oracle PaaS DBCS has been used for validating the data before approving the PR 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 PRs 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 PRs. Actual business approval hierarchy starts once the given PR is approved from this dummy user.
2. The PLSQL code has been written which fetches the PR which are pending for approval with this dummy user, validates the PR 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 PR.

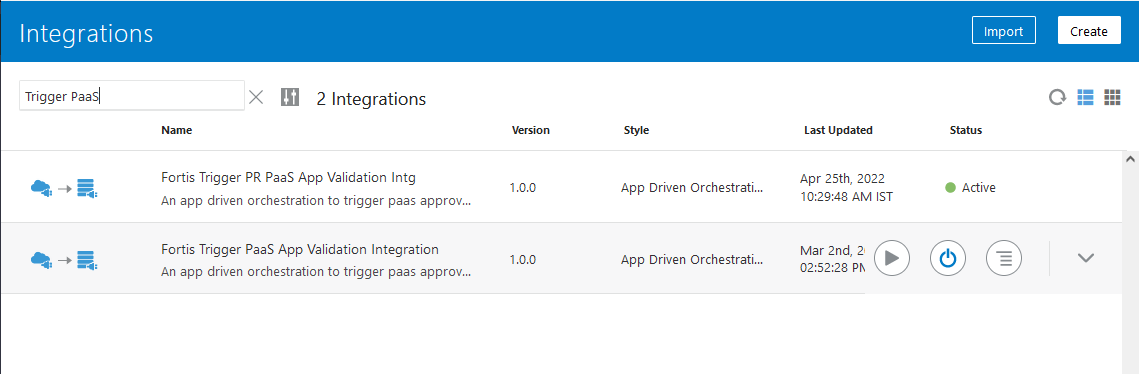
## OIC Services

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

|  |  |
| --- | --- |
| **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 |

Following OIC integration is an exact replica of the above integration, which invokes a PLSQL procedure as a parallel thread to process the PRs in parallel so that bulk PRs can be processed at the same time.

|  |  |
| --- | --- |
| **OIC Integration Name** | Fortis Trigger PR PaaS App Validation Intg |
| **OIC REST Endpoint URL** | https://oic-prod-nr5lr39yailj-bo.integration.ocp.oraclecloud.com:443/ic/api/integration/v1/flows/rest/FORT\_TRIG\_PR\_PAAS\_APP\_VALI\_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\_tbl1 | This is a table where all the PR 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\_PKG2 | This is a replica of the above procedure which was created to enable a parallel thread for processing PRs in parallel. |
|  | |

## Technical flow

Following is the complete technical flow for this integration design:

1. A common scheduled OIC integration (Fortis Trigger 10m Integration) invokes this PR 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\_pkg2. XXFH\_PR\_VALIDATION\_WRAPPER\_PRC. This wrapper checks if there any job already running for PR approval. If yes, it throws a warning that a job is already running and If no, it submits a new job which in turn calls procedure xxfh\_validate\_pr\_prc. This procedure has a following master cursor query which fetches the PR pending for approval with “Fortis Syadmin” user.

SELECT wft.tasknumber task\_number,

prh.requisition\_number trx\_number,

prh.requisition\_header\_id trx\_id,

'PR' trx\_type

FROM xxfh\_wftask wft, xxfh\_por\_requisition\_headers\_all prh

WHERE wft.category = 'Purchase Requisitions'

AND wft.taskdefinitionname = 'ReqApproval'

AND wft.state = 'ASSIGNED'

--AND prh.requisition\_number like '1114%'

AND wft.workflowpattern <> 'FYI'

AND prh.requisition\_header\_id IS NOT NULL

--AND wft.identificationkey LIKE

-- 'REQ\_' || prh.requisition\_header\_id || '%'

AND wft.identificationkey LIKE 'REQ\_%'

AND REGEXP\_SUBSTR (

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

'[^\_]+',

1,

1) = TO\_CHAR (prh.requisition\_header\_id)

AND wft.title LIKE '%' || prh.requisition\_number || '%'

AND prh.document\_status = 'PENDING APPROVAL'

AND wft.assignees = p\_user\_name || ',user'

AND NOT EXISTS

(SELECT 1

FROM xxfh\_saas\_validations\_tbl1 b

WHERE wft.tasknumber = b.task\_number

AND b.trx\_id = prh.requisition\_header\_id

AND b.trx\_type = 'PR'

UNION

SELECT 1

FROM xxfh\_saas\_validations\_tbl b

WHERE wft.tasknumber = b.task\_number

AND b.trx\_id = prh.requisition\_header\_id

AND b.trx\_type = 'PR')

AND ROWNUM < 101

--order by prh.requisition\_number desc

ORDER BY wft.ASSIGNEDDATE;

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

* You have submitted an emergency PR with a non PH/MC item.
* You have submitted PR for consigned item descriptiom.
* You have entered the same item twice at line <line\_num>, please keep a single line for a given item.
* You have submitted an emergency PR without Supplier batch / Security Gate entry / Invoice details. Please ensure that no emergency PR line is submitted without these details.
* You have submitted an emergency PR with a past date under "Manufacturer Batch Expiry Date" at PR line level. Please ensure to have a future date in this field.
* You have submitted an emergency PR which has "Manufacturer Batch Expiry Date" within 7 days at the PR line level.
* Please select non-consigned items only in an Emergency PR.
* Valid Consignment Agreement missing for a consigned item at line <line\_number>.
* Please select destination type as ‘SCM Only’
* Please select Destination Type as Inventory for DTH Deliver-to-Location.
* You have submitted a PR Capex procurement without a project code. Please ensure that a valid project code is used for the PR line for Capex procurement.
* You have submitted a PR with a project code for Non-Capex item procurement. Please ensure that no project code is used for the PR line for Non-Capex procurement.
* You have submitted a PR for OP procurement. As per the roles assigned, you are not eligible to raise PR for OP Pharmacy procurement. Kindly ensure the correct selection of location on the PR

1. Once a PR 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 PR.
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.

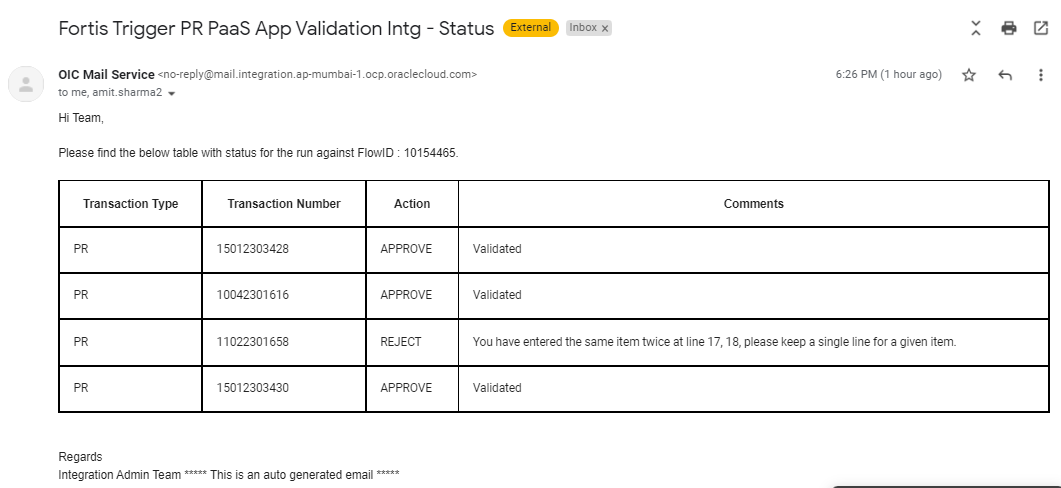
# Exception handling

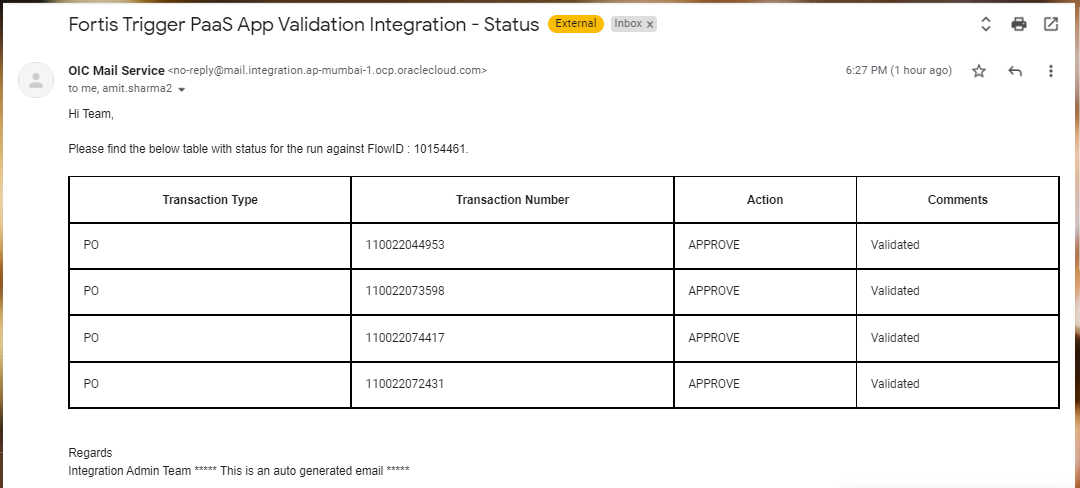
There can be various scenarios for an error to occur. This section defines those error scenarios and the exception handling has been done to notify and act accordingly.

## 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 |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |