O2\_GENAI\_INT3821

Techno-Functional Specification (Interface)

O2\_GENAI\_INT3821\_Advanced Shipment Notices (Cloud to Logfire)

Document Control Information

Document Information

|  |  |
| --- | --- |
| Document Identification | O2\_GENAI\_INT3821 |
| Document Name | O2\_GENAI\_INT3821\_Advanced Shipment Notices (Cloud to Logfire) |
| Project Name | O2\_GENAI\_INT3821 |
| Client | <Client ID> |
| Document Author | <author> |
| Document Version | V1.0 |
| Document Status | Draft |
| Date Released | XX-XX-2023 |

Document Edit History

| Version | Date | Additions/Modifications | Prepared/Revised by |
| --- | --- | --- | --- |
| 1 |  | Initial version | <Name> |
|  |  |  |  |
|  |  |  |  |

Document Review/Approval History

| Date | Document Version | Name | Organization/Title | Comments |
| --- | --- | --- | --- | --- |
| < dd-mmm-yyyy > | <Name> | <Organization/Title> | <Comments> | < dd-mmm-yyyy > |
|  |  |  |  |  |
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Distribution of Final Document

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# Summary

## Purpose/Justification

The scope of this document is to describe the process, how Oracle ICS will process the data from

Oracle application to logfire system.

## Integration Description and Overview

This document forms a basis for the detailed technical design for Advanced Shipment Notices.It captures all technical details to address the business requirements given in the functional specification “**LOG\_INT\_04 – Advanced Shipment Notices (Cloud to Logfire)**” for developing **the “ PO ASN from Cloud to Logfire (1.0)”** and  **OM IBShipment from Cloud to Logfire (1.0).** Also it will portray the technical process flow diagram for the object along with necessary information to implement effective and accurate interface to Oracle Cloud WMS (LogFire).

## Business Rules

NA

## Sample Output / Screen Layout

NA

## Definitions and Acronyms

| Acronym | Meaning | Description |
| --- | --- | --- |
| API | Application programming interface | The interface that a computer system, library or application provides in order to allow requests for services to be made of it by other computer programs, and/or to allow data to be exchanged between them. |
| ICS | Integration cloud service | Oracle cloud platform which supports end to end integration processes between multiple systems |
| DBCS | Database cloud service | Oracle database deployed in cloud platform which supports data definition and data manipulation language |
| SOAP | Simple object access protocol | A [protocol](https://en.wikipedia.org/wiki/Protocol_(computing)) specification for exchanging structured information in the implementation of [web services](https://en.wikipedia.org/wiki/Web_service) in [computer networks](https://en.wikipedia.org/wiki/Computer_network). |
| ASN | Advance shipment notice | Advanced shipment notice is a document that is sent to a buyer in advance of the buyer receiving the product. It can be used to list the contents of an expected shipment of goods as well as additional information relating to the shipment, such as order information, product description, physical characteristics, type of packaging, marking carrier information, and configuration of goods within the transportation equipment. |

# Functional Design

## Integration Details

|  |  |
| --- | --- |
| Integration System Name | O2\_GENAI\_INT3821\_Advanced Shipment Notices (Cloud to Logfire) |
| Integration Source | Oracle Cloud ERP |
| Integration Target | Logfire |
| Delivery or Retrieval Method | (MSV/SFTP/PGP/Web Service) <Ex: SFTP with PGP encryption.> |
| Full Extract / Changes Only | <Full file or changes only> |
| Expected Volume | <No of records> |
| Run Frequency/Schedule | Daily once with capability for Ad hoc run |
| Integration Notifications | <ex: Notifications will be sent to the production support team <insert contact details> when errors or warnings occur during an execution.  Triggers: Completed with Errors, Completed with Warnings, Failed, and Not Run due to Exceptions on Future Process> |

## Launch Parameters

| Parameter Name | Data Type | Parameter Type | Comments |
| --- | --- | --- | --- |
|  |  |  |  |

## Data Selection and Sorting

NA

## Key Logic

NA

## Data Mapping

Please refer the below document for detailed field mapping logic.

<https://xx>

**Sample Files:**

<https://xx>

## Interface Trigger Details

NA

## Security & Control Requirements

Below are the security and control requirements for this interface:

|  |  |  |
| --- | --- | --- |
| **Security/Control ID** | **Description** | **Comments** |
|  |  |  |

## Encryption Requirements

NA

## Error Handling Logic

NA

## Assumptions

NA

## Dependencies

* The required application configuration / setup for both the source and target systems is complete prior to unit testing this integration.
* All data translations are identified and mapped.
* Receipts created by ASN and Transfer Orders closed in Oracle Cloud will be sent to LogFire to create Inbound Shipments.

## Application Setup Requirements

NA

## User/Job Role Assignments

NA

## Test Scenarios

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Scenario** | **Test Step and Expected Result** | **Actual Result** |  |
| Pass (Y/N) | |
| 1 | When there are no data to process. | The user should get a notification that there are no files to process |  | Y | |
| 2 | If the DBCS is down | The user should get a notification about the same as unexpected Error |  | Y | |
| 3 | If the MFT is not accessible | The user should get a notification about the same as unexpected Error |  | Y | |
| 4 | If there is any other due to which the ICS integration is not completed successfully | The user should get a notification about the same as unexpected Error |  | Y | |
| 5 | If the data load to logfire failed | 1. Last Updated run details should get populated in INTERFACE\_RUN\_DETAILS table.  2. Data should get populated in staging table po\_asn\_logfire\_Stg with status as Error.  3. Error Message Column Shows the Error Description.  4. User should get notified about process completion. |  | Y | |
| 6 | If the TransferOrder data load to Logfire is successful | 1. Last Updated run details should get populated in INTERFACE\_RUN\_DETAILS table.  2.Data should get populated in staging table po\_asn\_logfire\_stg with Status as Success  3. Data should be loaded into Inbound Shipment Header/Serial Number in LogFire.  4. User should get notified about process completion. |  |  | |

# Oracle Cloud Technical Design

## Overview

This document defines the technical component details required to implement the Advanced Shipment Notices load to logfire”. This Technical Specifications ( Interface MD70 LOG-INT-04 Advanced Shipment Notices document complements the Functional Specifications (LOG\_INT\_04 – Advanced Shipment Notices (Cloud to Logfire) document for Advanced Shipment Notices Integration from Oracle to Logfire and the set should be considered as the complete detailed design.

## Detailed Integration Design

The approach followed in order to build the interface for LOG-INT-04 Oracle to Logfire is:

* Integration in ICS is created and scheduled near real time.
* Integration will invoke DBCS procedure to get query based on the last run details.
* Query is based on the conditions specified in the mapping document.
* ICS integration invokes a SOAP connection for ERP query service with query as request to fetch the data.
* Fetched encoded records are written in ICS stage file using opaque schema.
* File is read in chunk and data inserted into the staging table - PO\_ASN\_LOGFIRE\_STG and an update is performed on INTERFACE\_RUN\_DETAILS DBCS to track processed data.
* Post Validation and transformation, valid transaction records are fetched from the staging table and mapped to LogFire end point for processing.
* WSDL for LogFire endpoint is invoked with mapped data.
* User is notified in case of any error while processing.

## High Level Flow Diagram

NA

## Integration Process

|  |  |
| --- | --- |
| **Process Step** | **Description** |
|  |  |
|  |  |
|  |  |

## 

## Integration Details

NA

### Integration\_Name Integration Design

|  |  |
| --- | --- |
| **Integration Design** | |
| **Integration System Name** | O2\_GENAI\_INT3821 |
| **Integration Type** | Inbound  Outbound |
| **Integration Tool** | HCM Extract  BIP  HDL  PBL  REST Services |
| **Data Source** (check all that apply) | Custom Report <insert report name>  Cloud Connect Template Type <specify CCW/PICOF/Other>  Web Service <insert WWS name or external web service>  File Inbound into Oracle <insert file name> |
|  |  |
| **Transformation** | Doc Transformation <name of file>  XSLT <name of XSLT file(s)>  None |
| **Delivery / Retrieval Service** | <insert delivery/retrieval details such as UCM/SFTP/PAAS> |
| **Output/Inbound Filename** | <filename or Not Applicable> |
| **File Format** | <csv, pipe delimited, Not Applicable> |
| **Sequence Generators** | <list> |
| **Document Retention** | <number of days> |
| **Integration System User** | <document the ISU or user ID of custom report owner> |
| **Integration System Security Group** | <document the ISSG or Not Applicable> |
| Additional Information | <Document any details not described above.> |

**<Needed in case of HCM Extracts>**

|  |  |
| --- | --- |
| **HCM Extract Details** | |
| **Entity Names** | * <list if applicable> |
| **Parameters** | * <list if applicable> |
| **Links** | * <document the logic, if applicable> |
| **Filters** | * <list if applicable> |

### HCM Extracts <Needed in case of HCM Extracts>

<oracleCloudTechnicalDesign.integrationDetails.hcmExtractsNeededInCaseOfHcmExtracts>

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **HCM Extract Attribute Details** | | | | | |
| **Column** | **Entity Name** | **Attribute Name** | **Conditional Action** | **Conditional Replacement** | **Comments** |

### BI Reports

**NA**

|  |  |
| --- | --- |
| **Integration Details** | |
| **Entity Names** | * Provide the HDL or PBL entity/entities which are getting loaded |
| **Integration Attributes** | * List of attributes |
| **Integration Maps** | * <list if applicable> |
| **Validation** | * <list if applicable> |
| **Defaulting Logic** | <List of any attributes whose values are defaulted > |
| **Additional Logic** | Add any additional logic specific to the interface |
| **Deployment Details** | Details of Deployment (PaaS or Client Network) |
| **Database Details** | Database connection details for the program |

## Data File Format

Na

## Custom Database Objects

|  |  |  |  |
| --- | --- | --- | --- |
| Schema | Object Name | Object Type | Purpose |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Custom Stored Procedures

|  |  |  |  |
| --- | --- | --- | --- |
| Schema | Object Name | Object Type | Purpose |
|  |  | Procedure/Function/Package |  |
| Pseudocode |  | | |

## BI Publisher Report Details

|  |  |
| --- | --- |
| BI Publisher Details | |
| Data Model Name |  |
| Report SQL | <SQL Query> |

## FBDI Processing

NA

## Web Services

NA

## UCM Upload (for FBDI Processing)

NA

## Enterprise Scheduler Services (ESS)

NA

### ESS Job details

| Program | Short Name | Application | Description | Executable Name | Output Format |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

### ESS Parameters

| Program Name | Parameter Name | Value | Comment |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

## Conditions and Filters

| Sr. No | Data Condition | Business Rule |
| --- | --- | --- |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

## Environment Configurations

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Parameter Name | Environment | Value |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |

## Validation & Error Handling

| Sr. No. | Error Scenario | Description | Handling Processing |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

## Rollback & Recovery

NA

## Purging

NA

## Notification Requirements

| Sr. No. | Error Scenario | Description | Action |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |

## Security Requirement

|  |  |
| --- | --- |
| Transport Protocol | HTTP  FTP |
| Message Protocol | SOAP  REST  File  IDoc |
| Authentication Mode | Basic  Certificate based  PGP |

## File and Directory Locations

|  |
| --- |
| **ENVIRONMENT: Development** |

|  |  |
| --- | --- |
| SFTP Link |  |
| Folder Location for Output Data File |  |
| File Name for Output Data File |  |
| Output Data File Format | TXT  CSV  XML  Other |
| Folder Location for Error File (if any) |  |
| File Name for Error File (if any) |  |
| Error File Format (if any) | TXT  CSV  XML  Other |

## Miscellaneous

NA

## Components List

NA

## Data Selection Criteria

NA

## SQLs for Data Extraction/Selection/Filtration

NA

## Data Transmission Mechanism (Required for Interfaces)

NA

## File Layout / Report Output

NA

# Technical Unit Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Scenario** | **Test Step and Expected Result** | **Actual Result** |  |
| Pass (Y/N) | |
| 1 | When there are no data to process. | The user should get a notification that there are no files to process |  | Y | |
| 2 | If the DBCS is down | The user should get a notification about the same as unexpected Error |  | Y | |
| 3 | If the MFT is not accessible | The user should get a notification about the same as unexpected Error |  | Y | |
| 4 | If there is any other due to which the ICS integration is not completed successfully | The user should get a notification about the same as unexpected Error |  | Y | |
| 5 | If the data load to logfire failed | 1. Last Updated run details should get populated in INTERFACE\_RUN\_DETAILS table.  2. Data should get populated in staging table po\_asn\_logfire\_Stg with status as Error.  3. Error Message Column Shows the Error Description.  4. User should get notified about process completion. |  | Y | |
| 6 | If the TransferOrder data load to Logfire is successful | 1. Last Updated run details should get populated in INTERFACE\_RUN\_DETAILS table.  2.Data should get populated in staging table po\_asn\_logfire\_stg with Status as Success  3. Data should be loaded into Inbound Shipment Header/Serial Number in LogFire.  4. User should get notified about process completion. |  |  | |

# Application Setup and Technical Requirements

## Programs/Report and Parameters

<applicationSetupAndTechnicalRequirements.programsReportAndParameters>

## ESS Program, Scheduling and Executables

NA

## Security and Controls Requirements

Below are the security and control requirements for this interface:

|  |  |  |
| --- | --- | --- |
| **Security/Control ID** | **Description** | **Comments** |
| SXXX | User generating BI report should have duty role of “Business Intelligence Authoring” | Exclusive User shall be used to generate BI report of projects detail extract in Oracle ERP Cloud |

## Archiving & Purging

NA

# Interface Reporting Requirements

## Data Validation & Error Reporting

NA

### Data Processing / Derivation / Validation / Transformation Rules

NA

### Error handling and Retry Mechanism

1. This interface supports partial processing of data records in the DBCS staging table.
2. If invocation of LogFire REST- Processor service fails, an email notification is sent and Interface status is updated to "Error" in PO\_ASN\_LOGFIRE\_STG.
3. Mentioned below are a few sample Error Code/Notification and messages encountered and the recommendations to resolve them

|  |  |  |  |
| --- | --- | --- | --- |
| Notification | ERROR MESSAGE | CAUSE | RECOMMENDATIONS |
| No Data to be processed | There are no data to be processed for the interface. | There are no data in ERP Cloud for processing or DBCS staging table does not have data or the data records do not have the Interface status column set to ‘New’. | Create a Valid data or correct the Interface status column by setting it to ‘New’ for records to be picked up by the interface. |
| Unexpected Error | Some unexpected error happened while processing a batch for the interface. | This notification can be sent out if any of the process fails abruptly which can be either due to the ICS/ DBCS services being down/unresponsive or can also be due to incorrect package being called or any unhandled exception etc. | Check ICS Dashboard for details. |

|  |  |  |  |
| --- | --- | --- | --- |
| ERROR CODE | ERROR MESSAGE | CAUSE | RECOMMENDATIONS |
| Data Validation Error | Data Validation Error | One of the required fields for the entity is missing. | Pass all the required fields. |
| lpn\_nbr is required | lpn\_nbr is required | The Lpn Number is missing | Pass Valid LPN Number. |

## Data Reconciliation

NA

# Open and Closed Issues

## Open Issues

| Issue Id | Description | Opened By | Responsible | Due Date |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Closed Issues

| Issue Id | Description | Resolution | Signoff | Closed Date |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |

# Appendix

<appendix>