Dell – <RTR\_EPM\_ARCS\_DLR\_Odessa>

Technical Lean Specification

Inbound - EPBCS - Integration - EPM\_ARCS\_DLR\_Odessa - (RTR\_ARC\_INT\_17)

Document Control Information

Document Information

|  |  |
| --- | --- |
| Document Identification | RTR\_ARC\_INT\_17 |
| Document Name | **EPBCS - Integration - EPM\_ARCS\_DLR\_Odessa** |
| Project Name | Project Maverick |
| Client | Dell |
| Document Author |  |
| Document Version | V1.0 |
| Document Status | Draft |
| Date Released | XX-XX-2024 |

Document Edit History

| Version | Date | Additions/Modifications | Prepared/Revised by |
| --- | --- | --- | --- |
| 1 | 15-May-2025 | Initial version | Pavan Kumar |
|  |  |  |  |
|  |  |  |  |

Document Review/Approval History

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

Distribution of Final Document

The following people are designated recipients of the final version of this document:

| Name | Organization/Title |
| --- | --- |
| <Name> | <Organization/Title> |
|  |  |
|  |  |
|  |  |

Table of Contents

[ Summary 5](#_Toc198223661)

[1.1. Purpose/Justification 5](#_Toc198223662)

[1.2. Business Rules 6](#_Toc198223663)

[1.3. Sample Output 6](#_Toc198223664)

[1.4. Definitions and Acronyms 6](#_Toc198223665)

[ Oracle Cloud Technical Design 7](#_Toc198223666)

[1.5. Overview: 7](#_Toc198223667)

[1.6. Detailed Interface Design 7](#_Toc198223668)

[1.7. High Level Flow Diagram 7](#_Toc198223669)

[1.8. Interface Process 7](#_Toc198223670)

[1.9. Interface Details 8](#_Toc198223671)

[1.10. <RTR\_EPM\_ARCS\_DLR\_odessa> Interface Design 8](#_Toc198223672)

[1.11. Data File Format 10](#_Toc198223673)

[1.12. Web Services 10](#_Toc198223674)

[1.13. Conditions and Filters 10](#_Toc198223675)

[1.14. Environment Configurations 11](#_Toc198223676)

[1.15. Validation & Error Handling 11](#_Toc198223677)

[1.16. Rollback & Recovery 11](#_Toc198223678)

[1.17. Purging 11](#_Toc198223679)

[1.18. Notification Requirements 11](#_Toc198223680)

[1.19. Security Requirement 11](#_Toc198223681)

[1.20. File and Directory Locations 12](#_Toc198223682)

[1.21. Miscellaneous 13](#_Toc198223683)

[1.22. Components List 13](#_Toc198223684)

[1.23. Data Selection Criteria 13](#_Toc198223685)

[1.24. SQLs for Data Extraction/Selection/Filtration 13](#_Toc198223686)

[1.25. Data Transmission Mechanism (Required for Interfaces) 13](#_Toc198223687)

[1.26. File Layout / Report Output 13](#_Toc198223688)

[ Technical Unit Test 14](#_Toc198223689)

[ Application Setup and Technical Requirements 15](#_Toc198223690)

[1.27. Program/Report Scheduling 15](#_Toc198223691)

[1.28. Security and Controls Requirements 15](#_Toc198223692)

[1.29. Archiving & Purging 15](#_Toc198223693)

[ Interface Reporting Requirements 16](#_Toc198223694)

[2.1. Data Validation & Error Reporting 16](#_Toc198223696)

[2.2. Data Processing / Derivation / Validation / Transformation Rules 16](#_Toc198223697)

[2.3. Error handling and Retry Mechanism 16](#_Toc198223698)

[ Open and Closed Issues 17](#_Toc198223699)

[3.1. Open Issues 17](#_Toc198223701)

[3.2. Closed Issues 17](#_Toc198223702)

[ Appendix 18](#_Toc198223703)

# Summary

## Purpose/Justification

The purpose of this inbound integration using Oracle Integration Cloud(OIC) is automate the data loads in ARCS Application which is module of EPM (Enterprise Performance Management). We are using Account Reconciliation REST APIs to automate DLR Odessa. This integration aims to enhance efficiency, reduce manual intervention, and ensure timely and accurate run DLR Odessa.

**Interface Description and Overview**

This integration streamlines a critical financial data pipeline using OIC to enable secure, reliable, and efficient data movement from upstream systems (HAFT, ATP) to downstream EPM modules. It aligns with organizational goals around automation, accuracy, compliance, and real-time data availability. The Oracle Integration Cloud (OIC) will be used to connect with the Oracle Account Reconciliation System (ARCS) of Oracle EPM. This connection enables OIC to retrieve data from specific modules within the ERP and to transfer to ARCS. By leveraging OIC, we ensure a seamless account receivables subledger balance data loading process.

* **HAFT** – where the source data files reside.
* **ATP** – stores business metadata such as the current accounting period.
* **ARCS** – the destination where financial data is loaded and processed.

**Integration Layer:**

* OIC connects to the HAFT system and lists all the data files available for processing.
* OIC queries ATP to fetch the current reconciliation or accounting period required for the EPM data load.
* The listed files are downloaded from HAFT to OIC for further processing.
* The downloaded files are uploaded to the Oracle EPM system using REST APIs or file-based data management.
* A data load job is triggered in EPM using the current period retrieved from ATP.
* After the initial data load, an Auto Match job is executed to perform automatic transaction matching or validations in EPM (typically relevant for ARCS).
* Once successfully processed, the files are moved to an archive location for compliance and traceability.
* Sending notifications (success or failure) to relevant stakeholders upon completion.

|  |  |  |
| --- | --- | --- |
| **Reference Document Type** | **Reference Document Name** | **Reference Document Link** |
| Functional Specification |  |  |

## Business Rules

## Sample Output

## Definitions and Acronyms

| Acronym | Meaning | Description |
| --- | --- | --- |
| HAFT | High Availability and Fault Tolerance | HAFT is an enterprise file server system |
| OIC | Oracle Integration Cloud | OIC refers to Oracle Integration Cloud, a cloud-based integration platform from Oracle. |
| EMPCS | Oracle Enterprise Performance Management Cloud Services | A standalone service used to manage master, reference, and metadata across an enterprise. |
| ARCS | Account Reconciliation Cloud Services | For automating and streamlining the reconciliation process of financial accounts within Oracle's Enterprise Performance Management Cloud. |
| ERP | Enterprise Resource Planning | ERP is a software system that helps businesses manage and integrate their key operations like finance, HR, and supply chain in one platform. |

# Oracle Cloud Technical Design

## Overview:

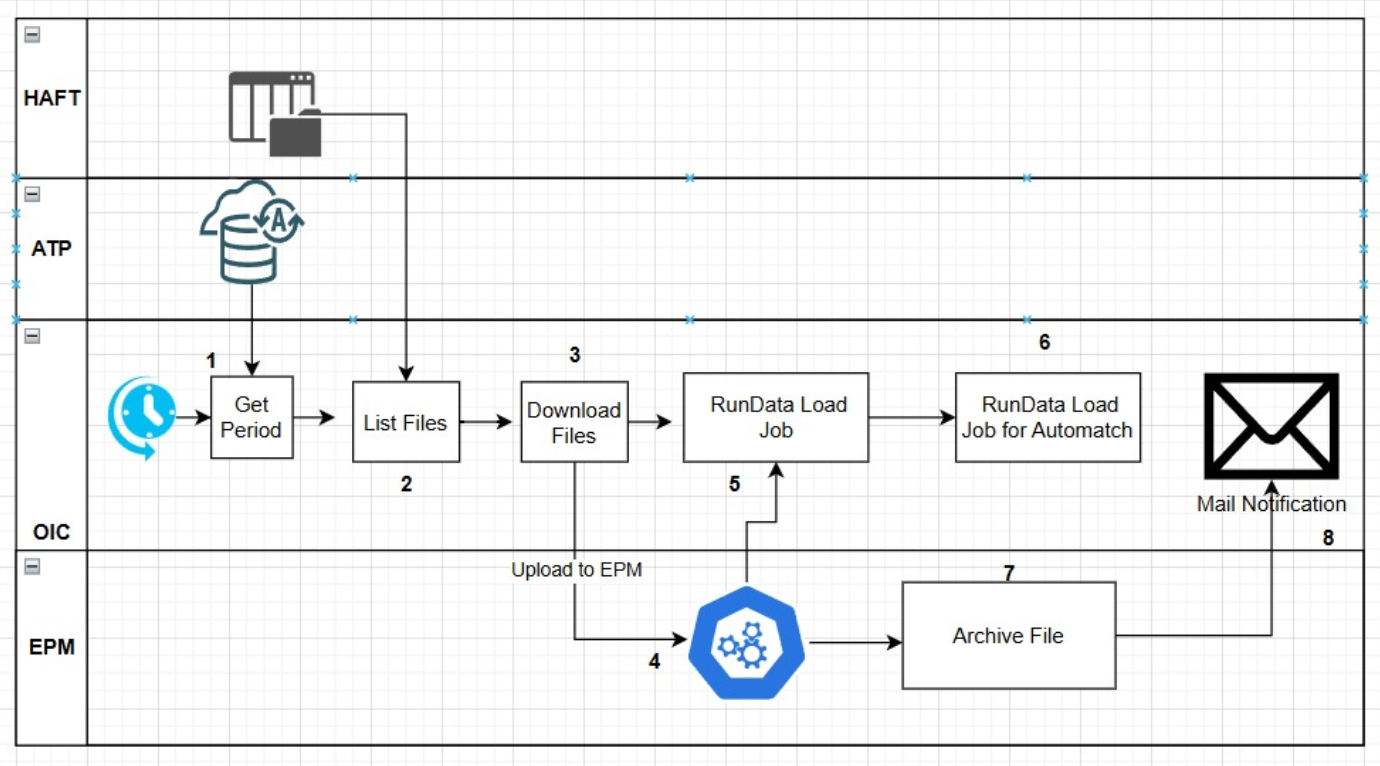
To connect to EPMCS, a rest adapter is required.

**Integration Layer:**

* Get period from DB.
* Get file from Haft server
* Run data load using rest adapter
* Check the job status whether the job is completed or not
* Run transaction data load for auto match
* Get the job status for auto match
* Notify to stake holders

## Detailed Interface Design OIC will trigger the schedule-based integration by assigning parameters, retrieve period details from ATP, fetch the file from Haft Server, upload it to EPM, run the data load and auto match data load via REST API calls, check the job statuses, archive the file in EPM, and notify the stakeholders with the details.

## High Level Flow Diagram



## Interface Process

|  |  |
| --- | --- |
| **Process Step** | **Description** |
| Step1 | The OIC will trigger the schedule based integration by assigning schedule parameters |
| Step2 | Get period details from ATP |
| Step3 | Get file from Haft Server |
| Step4 | Upload file to EPM |
| Step5 | Run the data load using rest api call |
| Step6 | Check the job status |
| Step7 | Run the auto match data load using rest api call |
| Step8 | Check the job status |
| Step9 | Archive file in EPM |
| Step10 | OIC will notify the details to stake holder |

|  |  |
| --- | --- |
| **NFR Category** | **Applicability** |
| Encryption / Decryption - Data Security |  |
| Interface SLA |  |
| Date/time format alignment on Payload |  |
| Sequence of Processing |  |
| Uniqueness of Payload |  |
| Logging for SRE Applications |  |
| Auto reprocessing Scenarios |  |
| Determination of if the interface will be trigger/Invoke or both |  |
| Full Payload Processing or Partial Processing Allowed |  |

## Interface Details

Oracle Integration Cloud (OIC) facilitates data retrieval from Enterprise Performance Management (EPM) as part of the inbound integration process. Obtain the file from the haft server here. To conduct the data load and verify the status, first upload to EPM and call the rest api to process the data. Run the rest api once again to verify the automatch. Place the file in the archive.If the job is finished, it notifies the stake holder.

## <RTR\_EPM\_ARCS\_DLR\_odessa> Interface Design

|  |  |
| --- | --- |
| **Interface Design** | |
| **Interface System Name** | RTR\_EPM\_ARCS\_DLR\_ODESSA |
| **Interface Type** | Inbound from Odessa |
| **Interface Tool** | OIC |
| **Data Source** (check all that apply) |  |
|  |  |
| **Transformation** | Doc Transformation <name of file>  **XSLT <name of XSLT file(s)>**  None |
| **Delivery / Retrieval Service** |  |
| **Output/Inbound Filename** |  |
| **File Format** |  |
| **Sequence Generators** |  |
| **Document Retention** | <number of days> |
| **Interface System User** | <document the ISU or user ID of custom report owner> |
| **Interface System Security Group** | <document the ISSG or Not Applicable> |
| Additional Information | <Document any details not described above.> |

## Data File Format

|  |  |
| --- | --- |
| Property Name | Value |
| File Format |  |
| Sample Data File |  |

## Web Services

**Rest API**

**Submit the job**

**URL**: ([hostname)/ aif/rest/V1/jobs](https://dellepm1-test-delltechnologies.epm.us-phoenix-1.ocs.oraclecloud.com/armARCS/rest/v1/jobs)

**Input Parameters**

JobName: DLR\_Odessa\_{CountrySpecific}

JobType: INTEGRATION

Import\_Mode: Replace

Export\_Mode: Replace

Period: May-25 Format

To get the job status

**URL: (hostname)/** **aif/rest/V1/jobs /{jobID}**

**submit the job for automatch**

**URL:** ([hostname) /arm/rest/v1/jobs](https://dellepm1-test-delltechnologies.epm.us-phoenix-1.ocs.oraclecloud.com/armARCS/rest/v1/jobs)

**Input Parameters**

JobName: runautomatch

ReconTypeId: DFS-Fixed\_Funding

To get the job status

**URL: (hostname)/** **arm/rest/v1/jobs/{jobID}**

## 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

## Purging

## 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** |

|  |  |
| --- | --- |
| File Storage Link |  |
| Folder Location for Output Data File | GE4/RTR\_ARC\_INT\_17/IN |
| 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 |
| HAFT Connection | RTR\_HAFT\_CONN |

## Miscellaneous

## Components List

| Component Name | Component Type | Purpose |
| --- | --- | --- |
|  |  |  |

## Data Selection Criteria

| Table Name | Select | Insert | Update | Delete |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## SQLs for Data Extraction/Selection/Filtration

Get period details from ATP

* + ATP connection Name : RTR ATP DB CONN
  + Schema : RTR\_INT
  + Table Name : RTR\_ARC\_INT\_03\_Period\_list
  + Package : default package
  + Procedure Name : PRC\_RTR\_ARC\_008

## Data Transmission Mechanism (Required for Interfaces)

## File Layout / Report Output

# Technical Unit Test

| Sr. No | Conditions to be tested | Expected Result | Executed? |
| --- | --- | --- | --- |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |

# Application Setup and Technical Requirements

## Program/Report Scheduling

## Security and Controls Requirements

## Archiving & Purging

# Interface Reporting Requirements



## Data Validation & Error Reporting

## Data Processing / Derivation / Validation / Transformation Rules

## Error handling and Retry Mechanism

After a file has been processed in the EPM input location, it is moved to the archive directory with its processing status appended to the filename. Files that fail during processing are retained in the archive and can be reprocessed. Reprocessing is performed by executing the Common Integration manually on an ad hoc basis.

Ad-Hoc Execution of Common Integration

Run Parameters: we will pass schedule parameters

Input File Name: Name of the failed file to be reprocessed

Input File Location: /inbox/archive/LOC\_Odessa\_ {CountrySpecific}

Output File Location: Archive directory

Output File Name:

Success file name: \*.txt\_Success

Error FileName: \*.txt\_Error

**EPM Input and Archive locations**

|  |  |  |
| --- | --- | --- |
| FileName | Input Directory | Archive Directory |
| GLDetails\_US\_DFS\_USD\_YYYYMMDDHHmm.txt | inbox/LOC\_Odessa\_US | inbox/archive/LOC\_Odessa\_US |
| GLDetails\_AU\_DFS\_AUD\_YYYYMMDDHHmm.txt | inbox/LOC\_Odessa\_ANZ | inbox/archive/LOC\_Odessa\_ANZ |
| GLDetails\_IE\_DFSII\_USD\_YYYYMMDDHHmm.txt | inbox/LOC\_Odessa\_NoBk\_EMEA | inbox/archive/LOC\_Odessa\_NoBk\_EMEA |
| GLDetails\_IE\_DFS\_EUR\_YYYYMMDDHHmm.txt | inbox/LOC\_Odessa\_Bank\_EMEA | inbox/archive/LOC\_Odessa\_Bank\_EMEA |

Haft Inbox location : GE4/RTR\_ARC\_INT\_17/IN

Archive Location: Archive directory for processed and failed files

# Open and Closed Issues



## Open Issues

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

## Closed Issues

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

# Appendix