Finance - Bank Charges, Interest & Sweeps - Solution Design Document (SDD)

WAVE	X.2
PROCESS	Finance - Bank Charges, Interest & Sweeps
LEVERS	Robotics
INTERVENTION	Finance - Bank Charges, Interest & Sweeps
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Document Approval and Version Control

Version	Date	Description	Reviewer	Role	Evidence of approval	Comments
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0.2	15th Oct, 2019	Ver 0.2 of SDD	Andrew Rowlands	Manager - Oracle System		Incorporated the review comments received on 11th Oct, 2019 from Andrew Rowlands. For few comment will update the section post discussion
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0.9	05th Nov, 2019	Ver 0.9 of SDD	Joyce Lam	Solution Architect		Incorporated the review comments received on 03rd Nov, 2019
1.0	10th Dec, 2019	Ver 1.0 of SDD				Updated Security Review Section on 10th Dec, 2019
1.1	13th Feb, 2020	Ver 1.1 of SDD	Scott Tran	Solution Architect		Updated 1. Workflow 3 on Historical Data Maintenance & Reference - As Is & To Be approach 2. Security Review Section

1. INTRODUCTION

This Solution Design Document (SDD) has been created basis the discussion with Bank Reconciliation team at the GSSC, onshore Finance team members along with input & reference from the Business Requirement Document. Details in this document include solution design, which captures the TO BE automated business processes, the target systems used and any risk, assumptions & dependencies of the proposed automation solution. The document is intended for those developing and supporting the RPA solution for **GSSC – Bank Charges, Interest & Sweeps** mapped to Oracle's Cash Management module.

1.1 Business Drivers

Below are the benefits that will be delivered though this solution

- Improve operational efficiencies
- Improve accuracy of processing
- Minimal dependencies
- Eliminating manual effort for Journal preparation

1.2 In-Scope / Out-of-Scope

This solution design document is built upon the Business Requirement Document created as part of the design phase. Refer Section 4 for detailed Solution Requirements.

> *"Refer Section 2.1 of Business Requirement Document (BRD) for details.*
>
> *4. Finance - Bank Charges Business Requirement Document (BRD)*
> *"*

1.2.1 Volumetric

Below section, helps to plan capacity and manage compute time.

As Is Activities	Description	Avg. Volume	AHT (Manual Processing)	Remarks
Bank Statement Download	Downloading of BSDR / NOCTR from Oracle Apps	31	5 mins per statement	Total number of Bank accounts In-Scope for BOT Solution
Journal Creation	Creates manual Journal Entries including Bank Charges, Sweeps, Interest and Transfers	95	25 mins per journal	Maximum number of Journals for 31 bank account that can be receive in any given month

2. Document References

This SDD references the following documents,which assists in designing detailed level solution:

Document	Link	Description	Remarks
Business Requirement Document (BRD)	4. Finance - Bank Charges	This Business Requirement Document (BRD) has been created following a site visit and workshops conducted with the Bank Reconciliation team at the GSSC, as well as discussions with Sydney based onshore Finance team members. Outputs included a high-level flowchart, which captures the business processes to be automated (via RPA), the target systems used and any assumptions. The main purpose of the BRD is to capture the business requirements to allow for the automation of the identified transactions.	NA

Business SOP	QM5491 - Oracle Exceptions and Reconciliation Completion.docx	The attached document provides keystroke details/screen captures about the GSSC Bank Charges Process	NA
Bank Account Master Data	Bank Details_Master Data 1.1.xlsx	Master Data file contains bank account details like nominal, transaction code, etc. for creation of Text / Contract file in turn used for RPA	Updating the Master Data file is an ongoing process. Any updation / deletion of Bank accounts and transaction types will require subsequent updates in the Master Data file followed by a separate sign off. Master Data will require sign off from the following group of stakeholders: • GSSC Bank Reconciliation team • Sydney based Onshore Finance team Members • EXL Automation Team
SOP - Oracle Simple GL Interface Co ntract Text file	Oracle Simple GL Interface Contract v1.0.docx	The Oracle Simple GL Interface Contract file contains specificatio ns based on which the Text / Contract file will be prepared by the BOT.	NA
Bank Statement sample	CE_STMT_LINES_VIEW.csv	This is sample file BOT will read from Oracle view	NA
BD Calendar Sample	BD calendar example.xlsx	This is sample BD calendar to be refer by BOT	This is the sample calendar. We will sanitize when developing BOT solution.

2.1 Resource Requirement

This section refers to the hardware, software, network resources and services required for the existence, operation and management of an RPA BOT Solution. These BOT will have to access QBE's network, Operating Systems and other QBE applications in order to perform any of the automated processes.

IT & Infra

Hardware Requirement:

- UIPath_IT_Setup_Requirements (Draft).xlsx
- Monitor/Screen with 1280*1024

Software Requirement:

- MS Office Excel 2010 (Minimum)
- SMTP or Exchange server for email notifications - No email will be stored. All emails to stakeholders will be sent via the Exchange server

Applications:

Systems	Version	Environment	Location	Remarks
Oracle Apps	Oracle R12	PROD	**http://eqprd.qbe.com.au**	Out of Scope for BOT Solution
Oracle Apps	Oracle R12	Dev + UAT	**http://finuat.qbe.com.au**	Out of Scope for BOT Solution

Oracle Server

Below details are required to read bank statement from Oracle view.

Oracle Server	**TBD**
User ID	TBD
Password	TBD
Select Query	TBD

*"**Oracle server details are pending from Oracle team*
"

User Profile:

"NOTE: BOT will only require access to read data from Oracle view. Below is just for reference purpose.
"

Name	Business Unit	Role	Email
Richard Mariado	GSSC - Bank Charges	Process SME and SPOC	<richard.mariado@qbe.com>

Network Drives

Below network / share drive are required in BOT solution.

Requirements	Details
Access to shared folder for Oracle GL TXT file import	/**u12t3**/app/oracle/**FINTST3**/apps/apps_st/appl/int/12.0.0/RPA/Inbound OR **u12**/app/oracle/**EQPRD**/apps/apps_st/appl/int/12.0.0/RPA/Inbound
Access to WaveX Git Repository	https://bitbucket.corp.qbe.com/projects/AL
Shared folder to access to business calendar	To be decided
Share Folder to save historical journals data	To be decided

"   *Note: Name of test instance (highlighted in **BOLD** above) can change*
"

Environment Infrastructure Diagram:

Below diagram define the environments and locations, which host applications like UiPath or Business Application like Oracle, CChange

- https://qbe-appservices.atlassian.net/wiki/spaces/PLEAP/pages/483034861/Infrastructure+Requirements+Summary+View
- https://qbe-appservices.atlassian.net/wiki/spaces/PLEAP/pages/494239949/Wave+X+High+Level+Solution+Design

Test VDI's

Below Test VDI will be required for SIT & UAT.

"Following with QBE Wave X team (Trevor Vella (Talenza) <trevor.vella@qbe.com>)
"

- TBD

2.2 UiPath License

Developer Licenses (Studio)	1	UiPath Studio is our Process and Workflow Designer tool. It runs only on Windows like the robot which mimics the user keystrokes of the target Desktop environment. It enables users to automate with highly intuitive tools (not code): process recorders, drag and drop widgets, re-use best practices templates or refer to other workflow libraries.
Runtime Client (Testing)	1	Robot runtime executes RPA workflows for back office activities. It is controlled, deployed and managed by our central process automation system - the Orchestrator.
Runtime Client (Prod)	1	Robot runtime executes RPA workflows for back office activities. It is controlled, deployed and managed by our central process automation system - the Orchestrator.
Orchestrator		Robot Management and Control System supporting: release management, centralized logging, reporting, auditing and monitoring tools, remote control, centralized scheduling, queue / robot workload management, assets management.

The following factors were analyzed as part of the SDD exercise for the number of licenses required:

1. 100% of the manual steps to prepare JE's for Bank Charges, Fees, Interest & Sweeps / Transfer will be automated by UIPath automation solution
2. BOT will at-least cover **12 Hrs**. runtime window
3. Based on current volumetric & ability to handle peak volume
4. Execute the maximum number of processes with minimal number of robots.

2.3 Operational Resource Requirements

- Dedicated Business SME support require in each of the development sprint to test & validate the logical modules.
- Until now, the GSSC Team has been manually processing *all Bank Charges, Interest & Sweeps*. However, with the introduction of this new automated solution, the team will now manually process only those cases identified as exceptions by the RPA solution.

2.4 Developers Requirements

- Dedicated UiPath developer require to develop, unit test & support the SIT / UAT activities

2.5 Other Requirements:

- Developer(s) access to QBE VDI, Dev & Test environment
- Intranet platform
- BOT(s) ID (Production & UAT) along with all required accesses
- Network drive for data storage & backups
- UAT / Sandbox environment including test data for UAT
- Exchange server access for alerts & notifications

2.6 Robot Access Guideline

- Each BOT account to have its own service account set up in Active Directory (AD) with its own email
- BOT will use its service account to access the network, shared drives, MS Office applications and send emails
- Robots are to be grouped based on team/business unit they serve. This is a logical grouping so that robots belonging to the same group can be used to carry out similar/related processes and have their service accounts granted access to the team's shared drives, group mailboxes, etc. They can be further grouped by their roles within the business unit for more specific controls.
- User accounts in target applications (e.g. Oracle, etc) *(if require)* are to be created for the processes they are required to perform. They should only be given the minimum level of access and sanction to complete the process.

3. As Is Process (L1)

- **GSSC BANK CHARGES DIGITAL SOP – AS IS PROCESS**
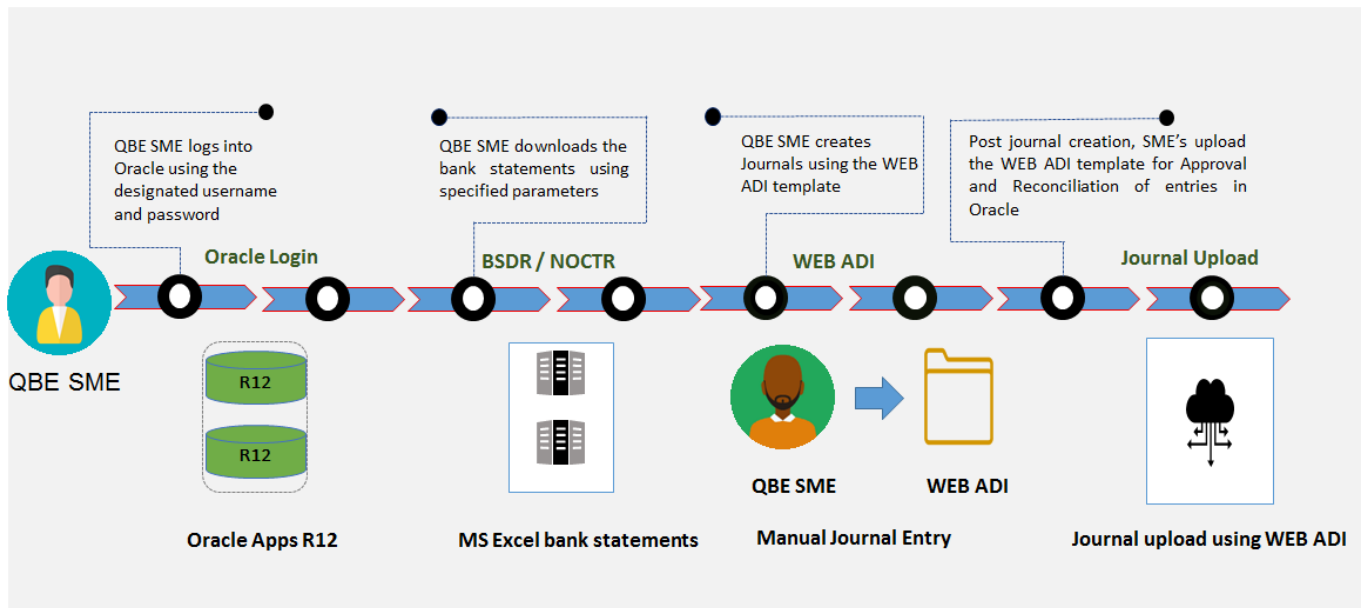
3.1 Solution Description

As a part of the TO BE process, the virtual employee i.e. BOT will refer Master data to check for bank statement for all the identified bank accounts in shared drive. Built in rules engine based on the Master data to identify the Transaction types, create the Accounting Transactions and other details for the Journal Entries in Text File format / Contract file. Once created as per Oracle GL Interface Contract, the BOT will drop the file at a designated Shared Folder location for the Oracle batch run process to pick up and execute.

***Once the journal entries are successfully posted to Oracle Financials, an Auto-Approval and Reconciliation mechanism within Oracle will be in place to match the entries as part of the Month End Bank Reconciliations for all 31 Bank Accounts.

'***Out of BOT Scope
"

### Solution Design Principles

- Build reusable solution components to be replicated across other products with minimal variation
- Minimal/No system changes required for the solution
- Stable, standardized and documented processes chosen for automation
- Address most common scenarios and identify additional to be prioritized in development backlog
- Designed - Secure, Scalable (on demand), maintainable & modular solution
- The Solution will ensure that Ownership and Maintenance of the BOT are developed and documented.

3.1.1 To Be Solution Diagram (L1)

BOT will read the bank statements from Oracle view to prepare journals. In case of any exceptions, BOT will send real-time notifications to the business team. All the Oracle application level exceptions to be handle by Oracle Team.
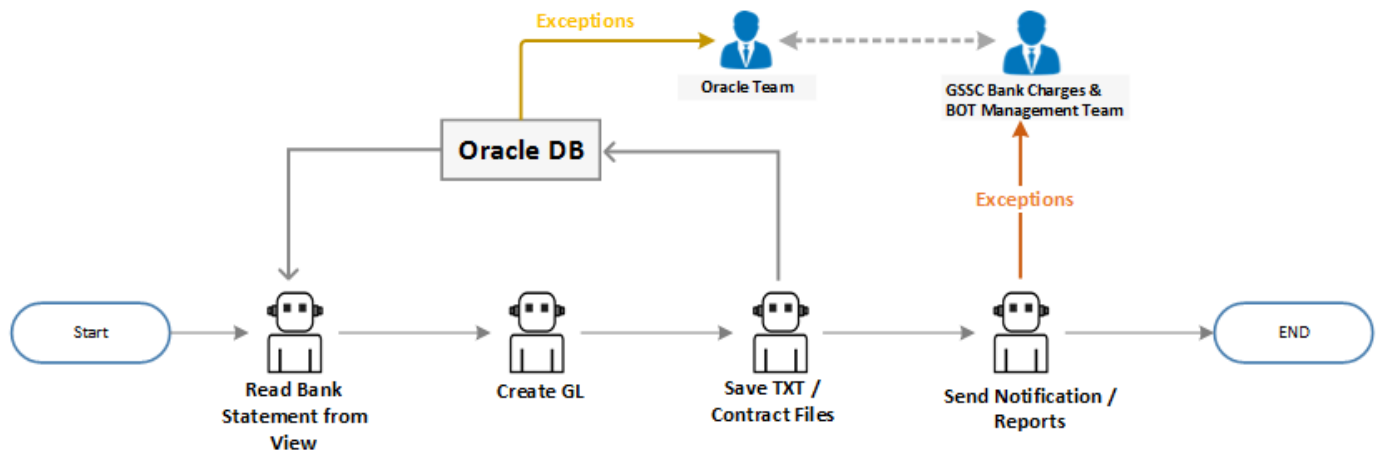
3.1.2 To Be Solution Diagram (L2)
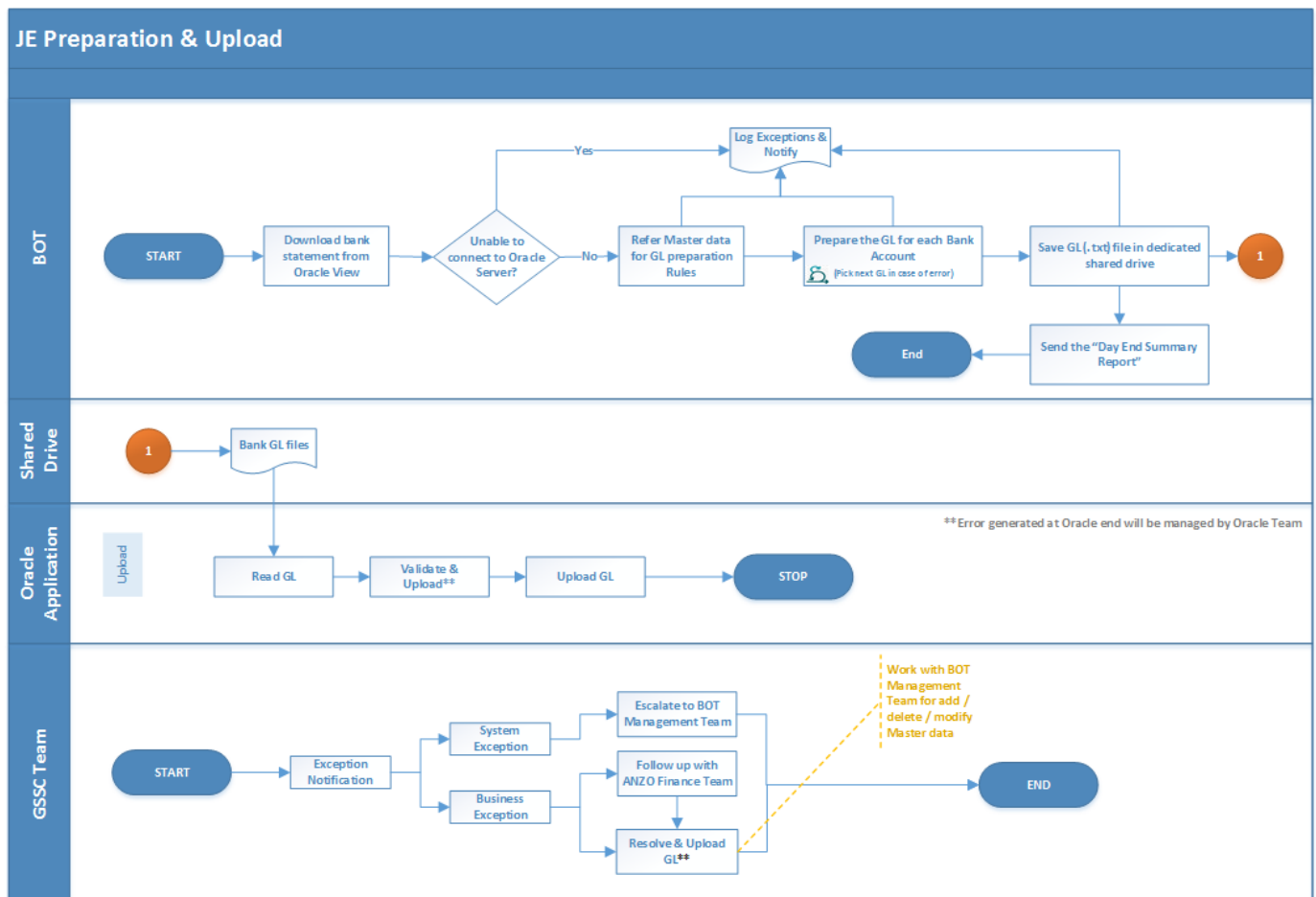
Features

- BOT will read bank statement from Oracle application View to prepare the journals
- BOT will prepare single TXT / Contract file for each of the bank account. For journals preparation rules BOT will refer Master data
- BOT will save TXT / Contract file in dedicated network drive path.
- BOT will attempt twice to read bank statements, in case unable to connect with Oracle server, BOT will send exception & stop for that

particular day. Unless scheduled to run again.

- If BOT unable to process journals during a particular transaction date; BOT will proceed to the next day and perform the same step
- Day End Summary report will contain details of all the journals posted for Oracle consumption

Workflow 1 – BOT Initialization & Management

BOT Solution initialization is the process of locating and using the defined values for variable data that is used by a BOT solution.
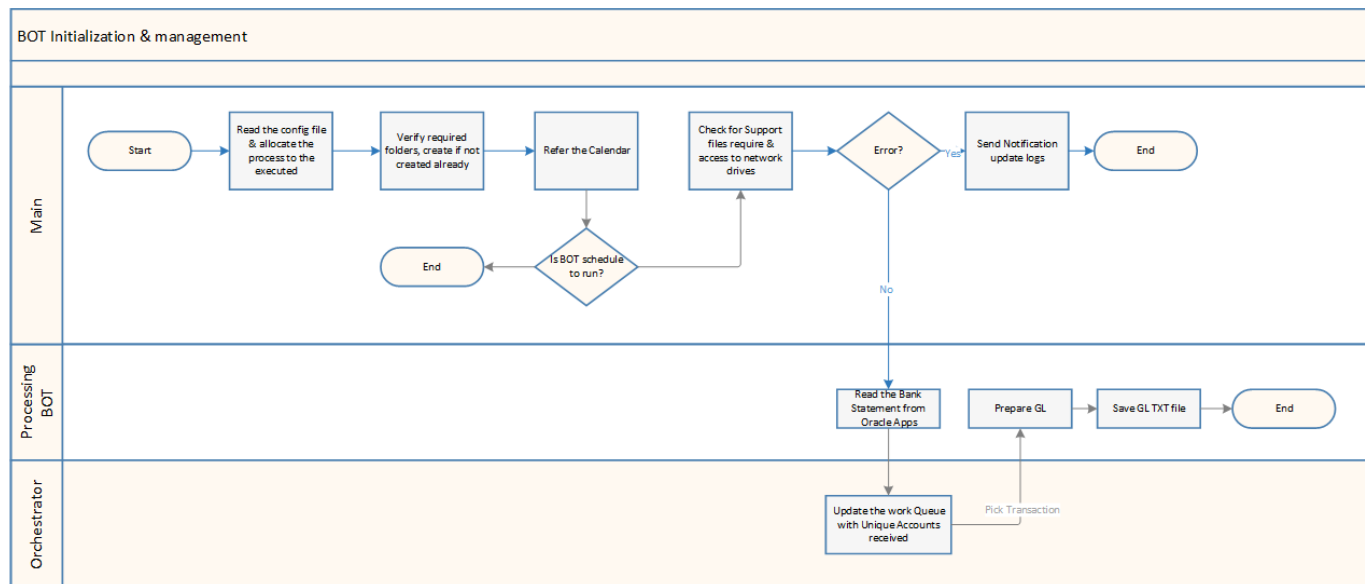
- Read the configuration file & initialize variables - Refer to section 5 for "**Solution Configuration set-up** - **Environment Variables & UiPath ReFramework Constants**"
- Verify Support files & access to network drives - Refer to section 2.1 for **"Resource Requirements - Network Drive**"
- Verify required folders, create if not created already - Refer to section 5 for "**Solution Configuration set-up** - **Environment Files & Folders**"
- BOT will add work-queue transactions on Orchestrator
- BOT to refer calendar & runs accordingly**

> "****Calendar will be manually maintained and updated at a shared file location as and when required, at least annually.*"

Workflow 2 - Rule Engine & Prepare JL

BOT solution will read, store (Temporary in memory), execute business rules to create journals from the Master data repository. This Master data, which will be the central repository for all rules, will be integrated in solution a configured file (MS Excel). Updating Master data will require support from BOT Managed services team.

**Rule Engine & Prepare Journal**

BOT flow: Start → Filter account details from downloaded statements → Is Account reference found in Master data? → (Yes) Refer the Master Data for journal rules → Run the rule engine & prepare journal → Is Error / Exception? → (No) Generate & save the text file (.TXT) for Oracle upload → Save processed statement in archive folder → Send day end summary → End

- Is Account reference found in Master data? → (No) Send Notification Error - "Account not Configured"
- Run the rule engine & prepare journal → Refer the historical journal data to avoid duplicates
- Is Error / Exception? → (Yes) Send Notification

Orchestrator flow: Pick the Work-Queue item (Pick Next) → Update Orchestrator Logs → Update transaction status → Pick Next

Features

- Transaction Type included - Calculation of Interest, Merchant Fee (GST/ without GST), Service Fees (NON GST), Service Fees (GST) & Inter Company Transfers Sweep for the bank accounts
- Master Data repository - contains bank account details like nominal, transaction code, etc. for creation of Text / Contract file in turn used by BOT to prepare journals
- Prepare Journal - Refer "**SOP - Oracle Simple GL Interface Contract Text file"** for detailed steps
- For all type of exceptions BOT will send notification to respective group, add exception logs on Orchestrator *(Refer Section 10 - Exceptions for Technical exceptions)*
- BOT to send "Day end summary report"
- BOT will refer the historical journals to avoid any duplicates.**
- BOT will refer the Account number present in Oracle View with Master data. In case account numbers are not available BOT will send error notification "Account number not configured", will update logs & mark that transaction as Skip in Orchestrator work-queue
- Refer "**Rule Engine - mapping to prepare journals"** below

*"**Historical data of completed transactions for 7 days to be maintained in Excel format for reference purpose. Threshold limit for number of days is configurable.*
"

Workflow 3 - Historical Data Reference & Maintenance (As is approach)
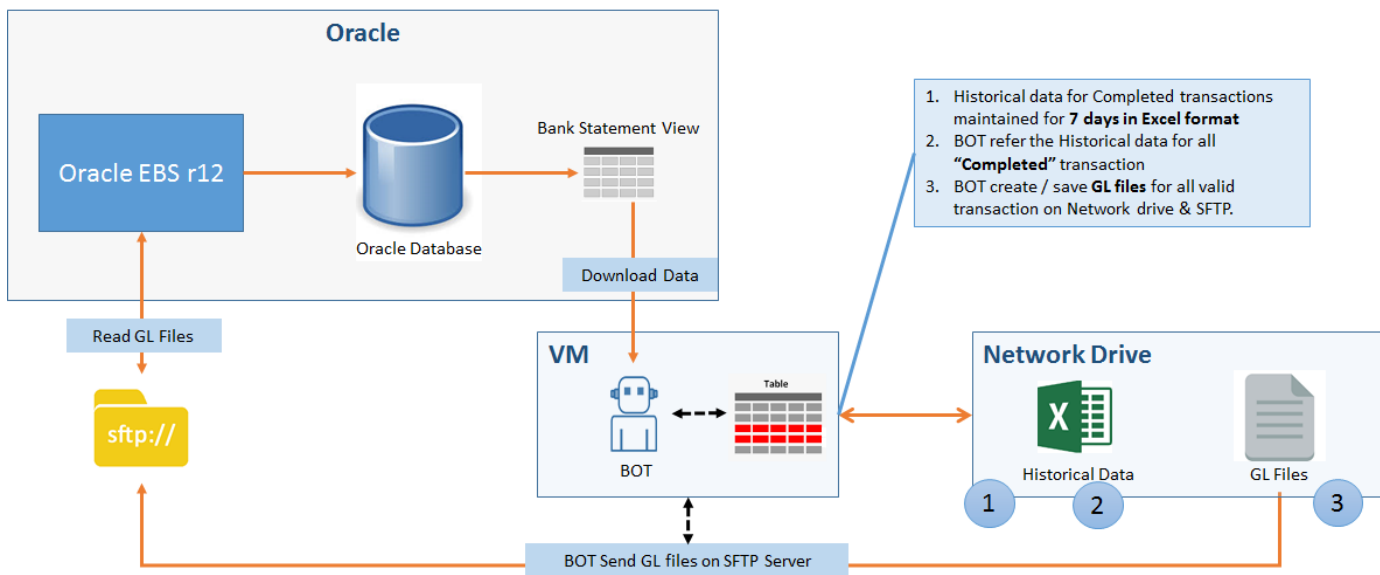
Workflow 3.1 - Historical Data Reference & Maintenance (To Be proposed approach)
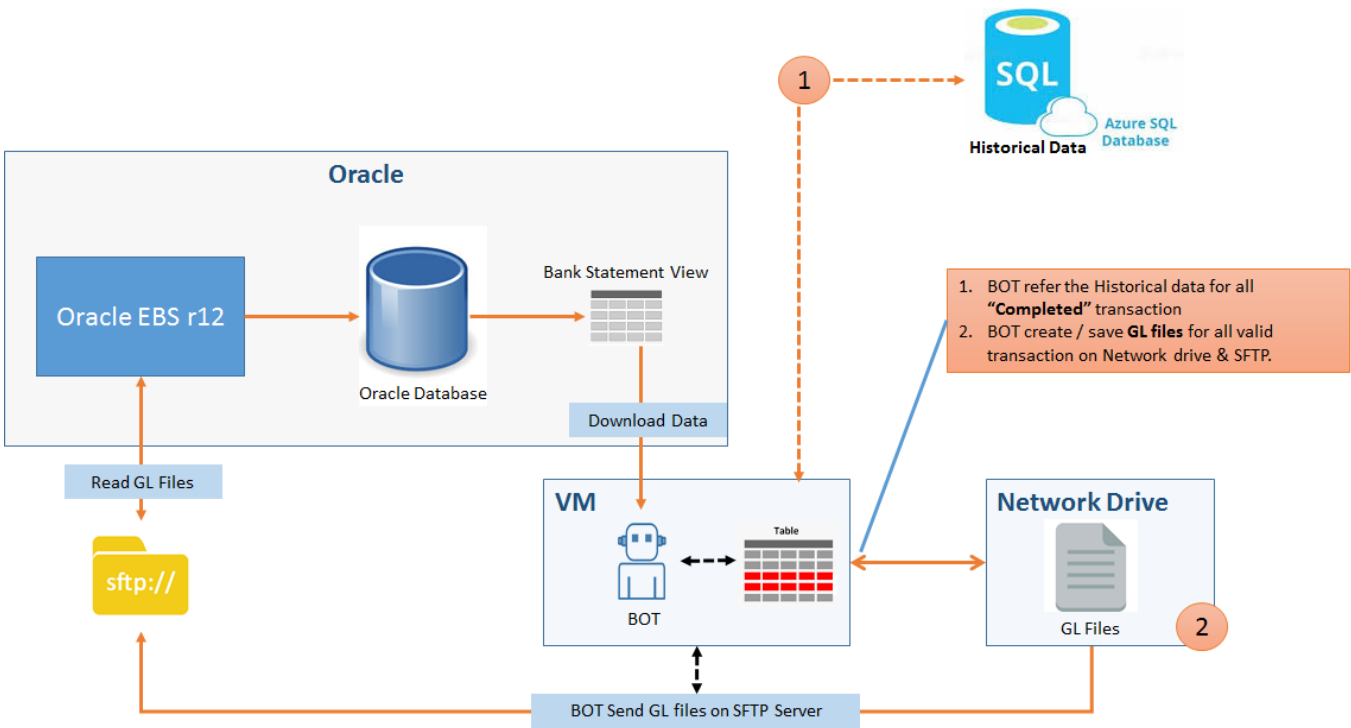
GST Calculation Rule (use exact denomination of the total signed amount to calculate GST, However after calculation of GST, Total signed amount should match the amount in the Bank statements up to 2 decimal places)

   Step 1: Calculate Expense

         Expense = Signed amount /1.10

   Step 2: Calculate GST

         GST = Expense * 0.10

Master Data -

This file contains bank account details like nominal, transaction code, etc. for creation of Text / Contract file in turn used for RPA.

Updates to the Master Data file is an ongoing activity. The current version of the Master Data file in use is version 1.2. Before we move to UAT and BAU, the Master data file will require separate sign off on the ongoing version.

Field	Description	Fields to be used in TO BE Solution
Account No.	Identifier for Ownership of an account	Yes
BANK	A financial institution which deals with credit and debit of money. Also involved in providing financial services	Yes
GL Account Name	A general ledger (GL) is a set of numbered accounts a business uses to keep track of its financial transactions and to prepare financial reports	Yes

Type	Contains the type of transactions carried out from GL account	Yes
Status	List out the status of the transactions which are either reconciled or unreconciled	Yes
Filter on Transaction Code	Identifier for the mode of payment generated after a transaction is carried out	Yes
Filter on Description	Identifier describing the type of transaction that is carried out.	Yes
File naming convention	Naming specification used to save the Bank Statement details.	Yes
Cash Nominal	Identifier used to distinguish payer account, business unit, location, Employee, Spare	Yes
Offset Nominal	Identifier used to distinguish payer account, business unit, location, Employee, Spare	Yes
GST Nominal (dependent on offset)	Identifier used to distinguish payer account, business unit, location, Employee, Spare	Yes

Master Data - Rule Engine - mapping to prepare journals

The below table define the rules engine built within solution to prepare journals.

> *"NOTE: Column reference below will get update once we have the sanitize version of Master Data.*
> *"*

Reference Fields	Master Data (Field Name)	Oracle View (Field Name)	Rules	Remarks
Account Number	Account No.	BANK_ACCOUNT_NUM	Read unique account number from oracle view and filter Master data on basis of account number	
Transaction Code	Filter on Transaction Code	TRX_CODE	Refer transaction code from Master data and apply filter on "Transaction code" in Oracle View	
Transaction Description	Filter on Description	TRX_TEXT	From the Master Data File, pick up the description type from column Q i.e. "Filter on Description" and depending on whether it is a suffix or prefix apply the same filter description under Oracle View column TRX_TEXT	Transaction code and description will be used in combination to filter out lines for journal entries
Debit/Credit		TRX_TYPE	Check if the transaction is credit or debit	
AMOUNT		AMOUNT	Create - Credit and Debit entries in the text contract file using amount present in Oracle View	
GST	GST Y/N		If "Yes" then calculate GST as per the rule	
Cash Nominal	Cash Nominal		Refer Cash Nominal	
Offset Nominal	Offset Nominal		Refer Offset Nominal	
Gst Nominal	GST Nominal		Refer GST Nominal	

TEXT / Contract file - Fields Mapping

Below table show the source column & fields mapping that will be use to prepare TEXT / Contract file - for sending balanced journal data to the Oracle General Ledger

Fields	Reference (Column reference from Master data or Oracle view)	Column Name (in reference file)	Rule OR Value	Remarks

STATUS			New	
LEDGER_ID	Ledger ID List		2021	Values per Appendix A. Generally, expect "2021" only for the main QBEAU ledger. However, other target ledgers need to have separate values supplied.
ACCOUNTING_DATE		SYSTEM DATE		BOT will pick system date & will prepare transaction entries for all UNRECONCILED Journals. Bank statement received on or after the cut-off will be rolled over to the next month for BOT processing.
CURRENCY_CODE	Oracle View	CURRENCY_CODE		
ACTUAL_FLAG			A	
JE_CATEGORY_NAME			Misc Bank Payment/Receipt	
JE_SOURCE_NAME			RPA	
BALANCING_SEGMENT	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Populate based on Business Unit segment value	
BUSINESS_UNIT	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Nominal 1st 4 digit	
LOCATION	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Nominal 2nd 4 digit	
ACCOUNT	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Nominal 3rd 6 digit	
PREMIUM_CLASS	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Nominal 4th 3 digit	
PROFIT_COST_CENTRE	Master Data	Cash Nominal/Offset Nominal/GST Nominal	Nominal 5th 6 digit	
INTERCO			Default to "0000"	
SPARE			Default to "00000000"	
ENTERED_DR	Oracle View	AMOUNT		
ENTERED_CR	Oracle View	AMOUNT		
JOURNAL_BATCH_NAME			**BOTNAME-TODAYDATE**-JNL-BNK CHG	highlighted in **BOLD** is dynamic value **BOTNAME** = BOT LAN ID **TODAYDATE** = Current Date
JOURNAL_HEADER_DESC			BANK CHARGE **<MONTH YYYY>**	highlighted in **BOLD** is dynamic value **<MONTH YYYY>** = Current Month Year For Ex: **OCT 2019**
JOURNAL_LINE_DESC	Oracle View	TRX_TEXT		

4. Solution requirements

BR NO	Solution Objective	Description	SD NO	Reference
BR01	Systems	Systems involved in the To-Be process are Oracle Cash Management, UiPath , QBE network folders, Windows, and Oracle Financials	SD01	Refer to section 2 - **Resource Requirement**

BR02	Access	Approval will be required for authorization (Password will set to never expire) of virtual employee to access Oracle Apps R12 for downloading bank statements.	SD02	BOT solution to read bank statement from Oracle View. Refer to Section 2 for further details
BR03	Automation	This project aims to eliminate manual effort to prepare and post the journal entries by enabling an automated journal entry creation functionality. QBE entities in scope for Wave X transformation include ANZO Finance and GSSC Finance.	SD03	Refer to BRD for detail In-Scope / Out-Of-Scope Refer to section 3 for TO BE Solution NOTE: Any addition and deletion of Bank accounts within the scope of BOT will require this document to be updated at multiple locations
BR04	Journal Format	Text / contract file as replacement to the Web-ADI file to be prepare by BOT for each bank account	SD04	Refer to Section **2 - SOP - Oracle Simple GL Interface Contract Text file**
BR05	File storage	File storage and shared drive location details will be a part of the SDD.	SD05	Refer to Section **2.1 - Resource Requirement - Network Drive**
BR06	No Approval	As a part of the AS IS process a maker checker mechanism is in place to approve the journals after they are successfully posted to Oracle. The TO BE process will eliminate any maker checker activity and will introduce an auto approval procedure which is in scope for Oracle	SD06	Maker checker mechanism will be Out of Scope for BOT solution. Threshold will be included in Day End Summary reports for reference
BR07	Reporting	There are no reporting scenes as a part of the AS IS process. However, the TO BE solution will incorporate reports being sent out at various trigger points to the stakeholders and SMEs.	SD07	Refer to Section **7.2 Report / Data Requirement**
BR08	Communication	Communication alerts will be sent out at various trigger points to various SMEs and Stakeholders.	SD08	Refer to Section **7.1 - Alert & Notification & Section 10 - Exceptions**
BR09	Escalation	A planned set of procedures and controls in place to deal with any unforeseen circumstances.	SD09	Refer to BRD section 11 for **Escalation Matrix**
BR10	Exceptions	Explicit details about the Business and System Exceptions will be captured in the SDD.	SD10	Refer to Section 10 - **Exceptions for Technical Exceptions**
BR11	Errors	Error codes and error logs will be captured in details in the SDD	SD11	Refer to Section 10 - **Exceptions**
BR12	Controls	Mitigation plan for any risk involving downloading of bank statements, preparation of Text / Contract file and dropping it in the shared folder location will be owned by the BOT support team. Mitigation plan for any risk covering Text/contract file validation, upload to Oracle, auto approval and reconciliation will be owned by the Oracle team.	SD12	Refer to Section 12 - **Risk & Mitigation**
BR13	Ownership	The BOT solution will require ownership by a group who has the required knowledge and technical skills.	SD13	Thomas to share the details for managed services
BR14	Maintenance	The solution needs to be able to be amended reasonably easily due to any change in business requirements. For example, this may mean a change in systems or version; and changes to the Bank Accounts and / or Transactions and / or the accounting, as defined in the Master Data File.	SD14	Refer to section 3.1 Solution Description - "**Solution Design Principles**"
BR15	Change Management	There needs to be appropriate Change Management processes, such as sign-offs and testing. Security needs to be in place to ensure that changes cannot be made without required Change Management.	SD15	For GSSC Bank charges, Interest, Fees and Sweeps/Transfers, Support and Maintenance model to be followed as outlined by QBE RPACoe
BR16	Bank Accounts	There are a list of 31 bank accounts which are in scope for this project.	SD16	Refer to section 2 - Document Reference - "**Bank Account Master Data**" for details Bank Accounts.xlsx
BR17	Transactions	Calculation of Interest, Merchant Fee (GST), Service Fees (NON GST), Service Fees (GST), Inter Company Transfers and Sweep for the bank accounts.	SD17	Refer to section 2 - Document Reference - "**Bank Account Master Data**" for details Bank Accounts.xlsx
BR18	Frequency	Journal preparation is carried out by GSSC team on BD-2 of every month for Bank Charges and Fees and BD-1 for Bank Sweeps.	SD18	Journal preparation will be carried out by the BOT till BD-2 of every month for Bank Charges and Fees and BD-1 for Bank Sweeps. Refer to section 6 - "**Scheduling & Starting**"

BR19	Time	The current average handling time for downloading BSDR, creation of Journal Entry, uploading on Oracle by a QBE SME is nearly 30 minutes per Journal Entry. It is expected that the To-Be process will result in a greatly efficient process, and significant time savings.	SD19	Refer to section 6 - **"Scheduling & Starting"**
BR20	Documentation	Appropriate systems and process documentation is to be created and maintained, including applicable DTP creation and amendments as applicable.	SD20	Run book / Release Notes to be share during parallel run This will contain procedures to begin, stop, supervise, and debug the BOT Solution. It may also describe procedures for handling special requests and contingencies.
BR21	Policy	The solution is to adhere to required QBE policies and standards, including IT and accounting requirements. This will include storage of Journal Entries and Supporting Documentation.	SD21	BOT Solution to adhere all QBE standards & polices Automation Guidelines
BR22	Audit	The solution should satisfy any internal and external audit requirements, and internal controls.	SD22	Refer detailed QBE Logging standard : https://qbe-appservices.atlassian.net/wiki/spaces/COE/pages/516227241/Logging+Standards
BR23	Reconciliation	As a part of the AS IS process, reconciliation or matching of journal entries are performed by a QBE SME within Oracle Apps after the journals are successfully posted. However, as a part of the TO BE process, reconciliation is out-of-scope of the RPA. However, it is expected that this solution will enable efficient auto-matching to occur in the applicable Bank Reconciliation. To cater above requirement of auto-matching within Oracle - BOT solution needs to ensure, that the amount and description of the journal should match the amount and description in the bank statement.	SD23	Reconciliation is out of scope for BOT solution. Same will carried out as separate activity within Oracle. However, to ensure auto reconciliation successfully done within Oracle, BOT solution will align with reconciliation function i.e. the amount and description of the journal should match the amount and description in the bank statement Oracle / testing team needs to identify & share the root cause of the issue wherein auto-reconciliation process got failed, accordingly development team will fix BOT solution
BR24	Testing	A set of conditions or scenarios will be used by the tester to judge the robust nature of the solution developed and also identify the defects/errors that happened during the development phase thereby ensuring a high quality product being delivered in the end.	SD24	QBE Testing team will involve for SIT & UAT - Testing will include all parts of the solution, including reading, preparation of TXT / Contract file & posting of 95 journals for Oracle consumption as part of the solution will be tested. /wiki/spaces/COE/pages/547423565 Performance Testing Automation Testing

5. Solution Configuration set-up:

This section specifies how projects in the solution are built and deployed.

Root: \\<***ServerName***>\<***LANID***>\My Documents\<ProcessName>\<ThreadName>\

G:\RPA\Dev\Finance\BankCharges

G:\RPA\Test\Finance\BankCharges

The ***root*** folder, aka ***root*** directory, is the highest folder in any folder-based hierarchy

Configuration Variables

Folder Name	Description
<ServerName>	G:\
<Env>	Dev\Test\Prod
<ProcessName>	Finance

<ThreadName>	BankCharges

Environment Files & Folders

An **environment** variable is a dynamic "object" in solution, containing an editable value.

Below section will help solution to know what directory to create **files** in, where to store temporary **files**, and where to find configuration settings etc.

Key Sub Folders	Comments
\\Root\<ProcessName>\<ThreadName>\Archive\	Contains processed process template.
\\Root\ <ProcessName>\<ThreadName>\Audit\Screenshot\	Contains screenshot of runtime exceptions.
\\Root\<ProcessName>\<ThreadName>\Temp\	Any files which require temporarily during process.
\\Root\<ProcessName>\<ThreadName>\GICreation\	Contains all thread related task files.
\\Root\ <ProcessName>\<ThreadName>\Support\	This folder will have support and configuration files.

UiPath ReFramework Constants

UiPath ReFramework is a framework that brings together the functions required for Enterprise RPA. Below Constants act like a global variable

Name	Value	Description
MaxRetryNumber	0	Must be 0 if working with Orchestrator queues. If > 0, the robot will retry the same transaction which failed with application exception. Must be integer
TimeoutShort	5000	Timeout short value in milliseconds, for activities which are likely to fail. Must be integer
TimeoutMedium	30000	Timeout medium value in milliseconds. Must be integer
TimeoutLong	120000	Timeout short value in milliseconds, for slow apps. Must be integer
ExScreenshotsFolderPath	Exceptions_Screenshots	Where to save exceptions screenshots - can be a full or a relative path.
DelayShort	00:00:01	Delay short value in milliseconds, for activities where it is necessary to wait a little. Must be integer
DelayMedium	00:00:05	Delay medium value in milliseconds, for activities where it is necessary to wait a moderate amount of time. Must be integer
DelayLong	00:00:10	Delay long value in milliseconds, for activities where it is necessary to wait a long time. Must be integer
AccuracyLow	0.6	Image accuracy low value, for images that have high contrast. Must be double
AccuracyMedium	0.8	Image accuracy medium value, for images that have normal contrast. Must be double
AccuracyHigh	0.9	Image accuracy high value, for images that have low contrast. Must be double
LogMessage_GetTransactionData	Processing Transaction Number:	Static part of logging message. Calling Get Transaction Data
LogMessage_GetTransactionDataError	Error getting transaction data for Transaction Number:	Static part of logging message. Error retrieving Transaction Data.
LogMessage_Success	Transaction Successful.	Static part of logging message. Processed Transaction successful

LogMessage_BusinessRuleException	Business rule exception.	Static part of logging message. Processed Transaction failed with business exception
LogMessage_ApplicationException	System exception.	Static part of logging message. Processed Transaction failed with application exception

Orchestrator Assets

UiPath Assets represent shared variables or credentials that can be used in different automation projects *(if any)*. Below give you the opportunity to store specific information so that the Robots can easily have access to it.

Asset name	Value	Remarks
BankCharges-Oracle-Cred	Username: qberpa	Contact Person - Cassandra
Stores credential for Oracle View		
ENV-Finance-BankCharges-Config	Please refer to attached Config File	Stores Config file
BankCharges-MasterDataSheetName	Master Data 1.15	Master Data File sheet name
BankCharges-MasterDataFilePath	G:\RPA\Dev\Finance\BankCharges\Support\Bank Details_Input Files_GSSC bank charges v 1.15.xlsx	Master Data File Path
BankCharges-FTP-Cred	Username: botftp	Contact Person- Cassandra
Stores credential for FTP		
BankCharges-EmailTemplate	***This is an auto-generated mail. Please do not reply.*** {0}This mail is to notify that BOT encountered with an error/exception {0}Date:{1} {0}Exception Logs: {2} {0}Type of Exception: {3} {0}Trigger Point: {4} {0}Remarks: {5} {0}Thanks & Regards {0}Kitt BOT	Exception Email Template
BankCharges-EmailTo		Stores the email id for BOT notifications
Cred-Email-BankCharges		BOT Email ID
FTP-Host	orafind01e0.qbe.com.au	
FTP-Port	22	
FTP-RemotePath	/u12t3/app/oracle/FINTST3/apps/apps_st/appl/int/12.0.0/RPA/inbound	Stores path for FTP Upload for Oracle consumption.
Data-Source	FINCON3	
BankCharges-EmailUnmatchedTemplate	***This is an auto-generated mail. Please do not reply*** {0}PFA Day End Summary Report processed by BOT. {0}Thanks & Regards {0}Kitt BOT	Day End Summary Email Template
BankCharges-GlEmailTemplate	***This is an auto-generated mail. Please do not reply*** {0}PFA Gl Files created by BOT. {0}Thanks & Regards {0}Kitt BOT	GL File(s) Email Template

Cred-Master-Data-File	Username: Master Data	Master data file password

Tasks - required to execute solution Successfully OR Other tasks that are leveraging this Bot to complete their process.

Task Name	Description
CloseAllApplications	Close all running Applications.
GetAppCredentials	Get credentials from Orchestrator
InitAllApplications	Application initialization
InitAllSettingsJson	Read global or local configuration files
KillAllProcesses	kill all running applications
SetTransactionStatus	Set transaction status in Work-Queue item
TakeScreenshot	Take screenshots (if enable)
GetTransactionData	Get Bank detail to be pick up from Master data repository
CheckForMasterDataFile	Check if Master Data File is present or not
CreateJournal	Create GI File
FilterBankStatement	Filter Bank Statement
ReadUniqueBankAccountNumbers	Read Unique Bank Account Numbers
ReferCalendar	Refer Business Calendar
SendExEmail	Send exception email
SendExEmailAttachment	Send Day End Summary Report and GL files
ChangeStatusofTransactionItems	Change the status of transaction items present in queue
CompressFolders	Compress Contract Files folder
DeleteRecordPrior45days	Delete records in Historical Data prior to 7 days
DownloadBankStatement	Downlod Bank Statement from Oracle View.
FilterMatched&UnMatchedBankSt	Filter valid and invalid transactions
FTPFileUpload	Upload GL Files on FTP remote location
UpdateCompletionData	Update completed records in Historical Data

6. Scheduling and Starting

Below section helps to avoid overlapping BOT(s) executions and manage its schedule.
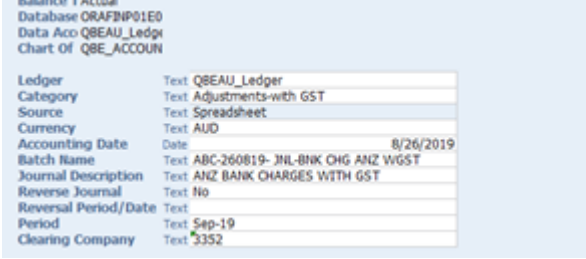
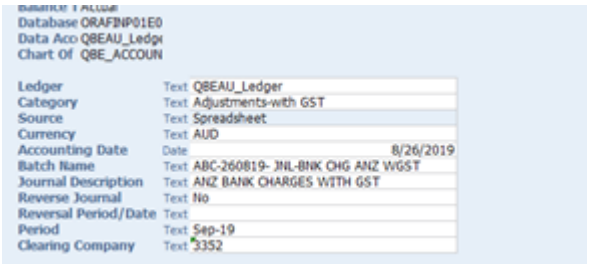Execution Frequency: **Daily till BD-2 for Bank Charges, Interests, Fees,**

Daily till BD-1 for Sweeps/Transfers**

Timings: 9:30 AM (SYD)

> *"**BOT solution will refer to the business calendar* (Refer to Section 2 - Document Reference). *It will not create any journal entry on BD-1, transactions happening on BD-1 will be rolled over to the BOT solution on BD1 of the next month*

BOT schedule representation

Cut-off date	Transaction type	BOT Run Status	Accounting Date	Remarks
BD-2 Eg. 30th October	Bank Charges, Interest, fees, Sweeps/transfers	· Last run of the month for bank charges, interest and fees starting at 9:30 AM SYD time. All transactions which are **unreconciled** will be considered for JE by the BOT. Statements arriving post 9:30 AM SYD on BD-2 and are of the type Bank Charges Interest, fees will be rolled over to the next month BD1 and **NOT ON BD-1** · Usual run for Sweeps	BD-2 date: Date on which the JE (Text/Contract) is created Eg. 30th October Attached is the Screenshot from the WEB ADI (AS IS Process) file which refers to the Accounting date: Date on which this WEB ADI file is created 	BOT will identify the type of transaction from the Master Data file
BD-1 Eg: 31st Oct	Sweeps/Transfers	· **NO RUN for Bank charges, Interest and Fees**. Transaction entries if any arriving on BD-2 post 9:30 AM SYD, BD-1 will be rolled over to BD1 of the next month · **Usual run for Sweeps**	BD-1 date: Date on which the JE (Text/Contract) is created Eg. 31st October Attached is the Screenshot from the WEB ADI (AS IS Process) file which refers to the Accounting date: Date on which this WEB ADI file is created	BOT will identify the type of transaction from the Master Data file

BD1 1st Nov	Bank Charges, Interest, fees, Sweeps	· **All Unreconciled Transaction rolled over from BD-2, BD-1 plus new transactions arriving on and before 9:30 AM SYD BD1 and are of the type Bank Charges, Interest, Fees, Sweeps/transfers will be considered.**	BD1 date: Date on which the JE (Text/Contract) is created Eg. 1st Nov Attached is the Screenshot from the WEB ADI (AS IS Process) file which is the date on which the JE is created	BOT will identify the type of transaction from the Master Data file

Database ORAFINP01E0
Data Acc QBEAU_Ledge
Chart Of QBE_ACCOUN

Ledger	Text QBEAU_Ledger
Category	Text Adjustments-with GST
Source	Text Spreadsheet
Currency	Text AUD
Accounting Date	Date 8/26/2019
Batch Name	Text ABC-260819- JNL-BNK CHG ANZ WGST
Journal Description	Text ANZ BANK CHARGES WITH GST
Reverse Journal	Text No
Reversal Period/Date	Text
Period	Text Sep-19
Clearing Company	Text 3352

7. Operations Control & Alerting

Below table show the ownership and responsibility (RACI Model) at each stage of RPA build lifecycle.

Role	Area	DEV	SIT	UAT	PROD/BAU
Business Manager	GSSC - Business	I	I	A	A
SME	GSSC - Business	C	C	R	R
Oracle Application Support	ANZO	C	C	C	I
Scrum Master	ANZO	R	R	R	I
Compliance & Security	ANZO	I	C	I	C & I
Delivery / Project Manager	EXL	A	A	A	C & I
Business Analyst	EXL	R	R	C & I	C & I
RPA Technical Architect	EXL	R	R	R	C & I
Developer	EXL	R	R/C	R/C	C & I
RPA Test Manager	ANZO	I	A	C	C & I
Tester	ANZO	I	R/C	R/C	C & I
RPA UAT Manager	ANZO	-	I	R	C & I
BAU Manager	ANZO	C & I	C & I	C & I	R

7.1 Alerting & Notification**

All the alerts & notification will be on real-time basis. Except 'Day End Summary' Report or any other Business required report

Refer Section 10.1 i.e. Business & Technical Exception

Scenario	Email	Recipient(s)	Remarks

Day and summary	E.g.: Hi All, Please find attached day end summary of <ThreadName> for <DD.MM.YYYY>. Thanks and Regards <LANID>	bank.reconciliation@qbe.com	Thresholds will be incorporated in reporting when defined fully
Exceptions (if any)	E.g.: Hi All, <Business / Technical> exception "<Exception Description>" generated on <DD.MM.YYYY>. <Error Screenshot (Optional)> Thanks and Regards <LANID>	bank.reconciliation@qbe.com	

7.2 Report / Data Requirement

Below are BOT operational and management built in reporting requirements

Report	Frequency	Data	Receiver / location	Retention Period	Description / Remarks
Day End Summary Report	Daily	No. of Journals processed, Exception, AHT	bank.reconciliation@qbe.com	TBD	This report will be created at the end of the processing day showing following: • Successfully posted journals in the shared folder location for Oracle consumption • Threshold reporting will be part of this report
Business and system exception	Real-time	Detail of error, Date & Time	Orchestrator	TBD	This log will contain details description of error generated while BOT processing

Samples Reports: <To Be Updated>

> "NOTE: Reporting template sample to be shared by GSSC team
> "

8. Data Security & Credentials

8.1 Data Privacy

Data Sensitivity Matrix

The follow table describes the data fields created, moved or stored by the process(es) that are in addition or different to the manual process being automated.

Process/Configuration Item	Data fields	Source	Destination	Screenshot	Classification
<The process or configuration items in this SDD which uses the data>	*<List of fields which the process stores &/or move>*	*<Source of the data. This can be file directory, email, applications &/or other systems>*	*<Where the data is moved to or stored by the process>*	*<Supporting screenshots if applicable>*	*<Classification of the data fields as defined by QBE 's Classifiation Guide and Tips >*
Support File	Account No. BANK GL Account Name Type Status Filter on Transaction Type Filter on Transaction Code Filter on Description GST Y/N Cash Nominal (if -ive should be credit, if +ive should be debit) Offset Nominal GST Nominal (dependent on offset)	Master Data	G:\RPA\Test\Finance\BankCharges\Support\	NA	Confidential

Process/Configuration Item	Data fields	Source	Destination	Screenshot	Classification

JE Text / Contract file		JE Text / Contract file	**BOT Archive Data**	NA	Confidential
	STATUS		G:\RPA\Test\Finance\BankCharges\Archive\		
	LEDGER_ID		**Secure FTP**		
	ACCOUNTING_DATE		/**u12t3**/app/oracle/**FINTST3**/apps/apps_st/appl/int/12.0.0/RPA/Inbound OR		
	CURRENCY_CODE				
	ACTUAL_FLAG		**u12**/app/oracle/**EQPRD**/apps/apps_st/appl/int/12.0.0/RPA/Inbound		
	JE_CATEGORY_NAME				
	JE_SOURCE_NAME				
	BALANCING_SEGMENT				
	BUSINESS_UNIT				
	LOCATION				
	ACCOUNT				
	PREMIUM_CLASS				
	PROFIT_COST_CENTRE				
	INTERCO				
	SPARE				
	ENTERED_DR				
	ENTERED_CR				
	JOURNAL_BATCH_NAME				
	JOURNAL_HEADER_DESC				
	JOURNAL_LINE_DESC				
Historical Journals	BANK_NAME BANK_NUMBER BANK_BRANCH_NAME BRANCH_NUMBER BANK_ACCOUNT_NUM STATEMENT_NUMBER STATEMENT_DATE GL_DATE STATEMENT_LINE_ID TRX_DATE TRX_CODE TRX_TYPE AMOUNT TRX_TEXT CURRENCY_CODE STATUS	Oracle View	G:\RPA\Test\Finance\BankCharges\Support\	NA	Confidential
Orchestrator Work Queue	Bank Account Number	Work Queue	**BankChargesWorkQueue**	NA	Confidential

8.2 User and Credential Manager

The table below lists the users and access required to execute the process(es)

Application/Drive	Process	Role	Model User	User	Description/Comments
<Application where access is required>	*<The process or sub-process which requires the access>*	*<The user role responsible for running the process. Choose from a list of defined roles or create one if not available>*	*<A sample user to base the access on if applicable>*	*<The user to be used to execute the process if known at design>*	*<Any additional description on comments regarding the access>*

| DATABASE CONNECTION

Username : qberpa**

Hostname : orafind01e0.qbe.com.au

Port : 1531

SID : FINTST3

DATABASE CONNECTION

Username : qberpa**

Hostname : orafind01e0.qbe.com.au or 10.88.6.90

Port : 1546

SID : FINPRJ3

```
**Database user will only have
access to the Oracle View
"QBE_RPA_CE_BANK_STMT_LINES_V" &
password set to never expire.
``` | GSSC bank charges interest & fees | Read Only | NA | BOT ID to be updated | To read bank statement from Oracle View |
|---|---|---|---|---|---|
| **FTP Login**

Username : botftp

Port: 22

/**u12t3**/app/oracle/**FINTST3**/apps/apps_st/appl/int/12.0.0/RPA/Inbound OR

u12/app/oracle/**EQPRD**/apps/apps_st/appl/int/12.0.0/RPA/Inbound OR

/**u12p3**/app/oracle/**FINPRJ3**/apps/apps_st/appl/int/12.0.0/RPA/**inbound**

Note: Details highlighted in BOLD will get change as per the environment i.e. Test or PROD | Save TXT / Contract files | Write Only | NA | BOT ID & Cassandra Chew <cassand.chew@qbe.com> | BOT will save TXT / Contract file in folder for Oracle |
| G:\QIA\Fin_Tech\FinRep\Bank\ | Historical Journal data | Read / Write | NA | BOT ID to be updated | BOT will refer historical journals for future reference to avoid duplicates |

8.3 Ports

8.3.1 UiPath Ports

TCP Ports

Port	Description
443	Default port for communication between Users and Orchestrator with the connected Robots.
1443	Default port for communication between Orchestrator and the SQL Server machine.
9200	Communication between Orchestrator and Elasticsearch.
9300	Communication between Elasticsearch nodes, if applicable.
6379	Communication between Orchestrator and the Redis server. Only applicable for high availability installations.
26379	Communication among Redis Sentinel nodes, if applicable.
5601	Default port used by the Kibana plugin, if applicable.
3389	Required for RDP automation, needed for High-Density Robots.

8.3.2 Other

Secure FTP	22
Database	1531 & 1536

8.4. Retention Period

Reference	Data	Location	Retention period
1	Bank statement data that the bot downloads from the Oracle database view.	Spreadsheets on G: drive	• 7 days • The bot will clean up files older than 7 days • Files are also sent via email to certain GSSC team members
2	Contract file. The bot produces this data and sends it to the Oracle server via SFTP.	Spreadsheets on G: drive	• 7 days • The bot will clean up files older than 7 days • The bot will create a copy of this file to a GSSC shared drive location: G:\OneFinance\Journal Approval\RPA Journals - Bank Fees, Interests, and Sweeps • GSSC requires these files for audit purposes and will manage retention of this data manually within their team.
3	Historical data file. This file contains a record of the line items processed by the bot.	Spreadsheets on G: drive	• 7 days • The bot will clean up records / files older than 7 days
4	End-of-day report	Spreadsheets on G: drive	• 7 days • The bot will clean up files older than 7 days
5	Bank account details	Orchestrator	• 7 days • The bot will clean up records older than 7 days

8.5. Summary – Action perform by BOT solution

1. Read bank statement from Oracle View
2. Update the Bank Account details on Orchestrator work-queue

3. Refer Master Data rules to prepare journals
4. Create Journals upload the copy on Secure FTP as well as save in Archive data**
5. Maintain Historical data of transaction pass / failed for reference
6. Send notification in case of business / technical exceptions

`**Default period for data retentions will be 5 days unless specified.`

9. Assumptions

9.1 Technical

All the required IT infrastructure, software and business applications and respective licenses and accesses are available
There will be no plan to change any relevant in-scope business applications. Relevant test instances access to these applications will be provided
Development team & BOTs Ids must have access to required files on network location through Citrix
Dev, Test, UAT and Production environment must be identical
Issues related to Oracle or system / application downtime will be out of scope for BOT solution.

9.2 Business

Any IT infrastructure changes during the development phase should be informed to the development team to validate and make sure that there is no impact to BOTs and the solution procedure.
All require approvals are in place in regards to data compliance & security
Benefit estimation based on the volume, AHT details provided in discussions during Frame & Discover phases. Any deviation in volumetric will have an impact on projected benefits
All relevant missing information will be assumed to be an exception.
Any exception generated by Oracle. For Ex. If journal upload get failed due to Account closed in Oracle apps, will be handled manually by GSSC & Oracle team
In case of catastrophic downtime of the UiPath automated elements of the solution for 12 hours or more, the GSSC Team is prepared to take over the processing of *all* pending Journal creation requests until the system problem can be resolved. *GSSC team will manually post the journals and complete the manual reconciliation on the same day. This is a control checkpoint which will avoid duplicate journals in case Bot resumes activity and manual journals were posted by the GSSC team. This will apply to journals pertaining to bank fees, interests, charges, and sweeps*
Subject Matter Experts (SMEs) will be available to support the delivery of this process automation

10. Exceptions

10.1 Technical exceptions

Below list contains the errors or unexpected events that disturbs the natural flow of the BOT. Further technical exceptions may be added during development and testing

Exception	Error Code	Description
Ex_ViewNull	TE01	Oracle View is blank
Ex_AccountNotConfigured	TE02	is not configured in Master Data File

Ex_MasterDataFileNotPresent	TE03	Master Data File is not present at shared folder
Ex_NoUnreconciledData	TE04	No Unreconciled Data present
Ex_BankAccountNoColumnNotPresent	TE05	BANK_ACCOUNT_NUM column is not present in Bank Statement
Ex_ColumnMissing	TE06	Column is missing in Master Data File
Ex_ColMissing	TE07	Column is missing in Bank Statement CSV View
Ex_NoTransactionEntriesFound		No debit and credit entries found for:
Ex_BDCalendarNotFound		BD Calendar file not found
Ex_BDCalendarSheetNotFound		BD Calendar sheet BD not found
Ex_BDColumnNotFound		Mandatory column not found in Business Calendar
Ex_CurrentDateNotFound		Current date not found in BD Calendar file
Ex_InvalidTransactionType		Transaction type is not valid
Ex_InvalidNominal		Offset or Cash Nominal is not valid
Ex_InvalidGSTNominal		GST Nominal is not valid

"

**For Exceptions like failure to open Excel or connect to shared drive, BOT will attempt twice & stop permanently (unless schedule again) in case of failure, sending notification email to respective group & generate Alert on Orchestrator.

"

11. Escalation Matrix

Action/Escalation	Escalation Level	Name	Organization
For any action/changes/discrepancy related to bank account data	Level 1	Richard Mariado, Gem Dizon and Generic email addresses for Bank Reconciliation and AO Finance Systems. Details about the email ID to be a part of SDD	GSSC Bank Charges QBE Team
For any action/changes/discrepancy related to bank account data	Level 2	Glenn Manio	GSSC Bank Charges QBE Team
For any action/changes/discrepancy related to Oracle text / contractual template or Oracle Apps R12	Level 1	Generic email addresses for Bank Reconciliation and AO Finance Systems. Details about the email ID to be a part of SDD	For GSSC Bank charges, Interest, Fees and Sweeps/Transfers, Support and Maintenance model to be followed as outlined by QBE RPACoe
For any action/changes/discrepancy related to Oracle text / contractual template or Oracle Apps R12	Level 2	For GSSC Bank charges, Interest, Fees and Sweeps/Transfers, Support and Maintenance model to be followed as outlined by QBE RPACoe	For GSSC Bank charges, Interest, Fees and Sweeps/Transfers, Support and Maintenance model to be followed as outlined by QBE RPACoe

12. Dependency

13. Risk & Mitigation

Category	Risk	Potential Failure Mode	Mitigation

Business	Unable to read Bank Statement	I. Oracle down II. Incorrect or Oracle ID Blocked	1. BOT to send notification to business & oracle team 2. User to raise snow ticket to unblock Oracle ID 3. Manually run the process during that period
Business	Business logic changes	I. Incomplete or error in transaction	1. BOT to capture the error or exception in logs & send notifications 2. Proactive collaboration with Business & Oracle team 3. Follow change management practice setup for LEAP COE 4. Governance, reviews and sign offs
Business	Bank account added or deleted	BOT will not prepare journals for such accounts	1. Prior notification from GSSC Team regarding to update the Master data file 2. Follow the LEAP RPA COE Change Management Process
Business	Lack of Business Readiness	I. Lack of SME availability for assessments, testing etc. II. Lack of reviews and approvals for requirements, design, tollgates	1. Proactive time commitments required during project execution 2. Governance, reviews and sign offs 3. Ensure ownership is driven by the business sponsor
Technology	Non-availability of test environment and test data	I. Delay in development II. Lower in-year benefit	1. Identify all in-scope systems upfront 2. Share data requirements at-least 3 weeks prior to development start date
Technology	Application compatibility with UiPath	I. Not able to capture objects properties II. Automate using keystroke or Screen scraping	1. Work with IT team to find work-around 2. Develop API's
Technology	System or Application latency	I. Technical Exceptions II. Low automation efficiency III. Higher RPH	1. Work with infra & application teams 2. Trained & optimize BOT to manage latency
Technology	Isolated RPA Deployments	I. Failure of IT design and changes II. IT Security Non-compliance III. Unapproved solution architecture	1. Involve IT Stakeholders from beginning on steering committee 2. Obtain Enterprise Architecture approvals for RPA adoption

12. Dependency

Below are BOT solution dependencies completion of same is reliant before move into Prod.

Dependencies	Remarks
Oracle Details like Server, User ID & Password	Details used by BOT to read data from Oracle
Oracle View	BOT will read data from Oracle view to prepare the journals.
Oracle Job to upload TXT / Contract file	Oracle automated job will read the TXT / Contract from the share folder saved by BOT
Access to share drive	BOT solution will maintain historical data of transactions posted for future reference
Business Calendar	Financial calendar that act as basis for BOT to run.

13. Design Review/Approval

Final review and conclusion subject to the designated authority only.

Nature of Sign off	Designated Authority	Signature	Conditions	Date	Role
Reviewer	Colin Tse				
Reviewer	Tim Sutton				
Reviewer	Cassandra Chew				
Reviewer	Andrew Rowlands				
Reviewer / Approver	Joyce Lam	Joyce Lam	Approval is provided from the IT perspective. The following items are to be complete for for complete sign-off: • The storage format of the historical journals & Master Data (Excel or Access) are still to be decided. • The shared drives & access to these drives are still to be confirmed • Security review and clearance		
Reviewer	John John Romualdo				
Reviewer / Approver	Glenn Manio				
Reviewer	Ruth Viray				
Reviewer	Wei Li				
Reviewer	Garth Shanks				
Reviewer	Vinod Kotrike				

Open items

The following discussion points which were still open while writing Version 0.7 of the SDD. Please find the status below:

Open Items	Status	Remarks
Oracle Details (Server, Select Query, User ID & Password)	Open	Pending with Oracle Team
Shared folder to access to business calendar	Open	Pending with discussion with Garth Shanks
Test VDI For SIT & UAT	Open	Pending with Trevor Vella
Retention Period for historical logs / data	Open	Required inputs from QBE
BR13 - Ownership	Open	
BR14 - Maintenance	Open	
BR15 - Change Management	Open	

**In addition, there are compensating controls which are outside of the BOT solution. In particular this will include the bank reconciliation process, which should identify any unmatched / missing transactions.