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Solution Architecture

OVPP Solution

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**Revision History**

|  |  |  |
| --- | --- | --- |
| **Date** | **Person** | **Description of Change** |
| Feb 23, 2021 | Garrick van der Lee | First working draft created |
| Feb 23, 2021 | Garrick van der Lee | Updated after review session with Sanjel |

# Introduction

This document describes the overall solution architecture for the OVPP Solution.

# Architecture Overview

This section describes the high-level architecture overview. The overall solution will be delivered using a combination of SharePoint with data provided from Sanjel, Power Apps, Power BI And Power Automate.

# Features

This section details all the included features for the OVPP Solution.

## Pay Entry

The pay entry screen will be used by DAs to enter in Pay Entries manually as well as modify imported generated variable pay records.

### Business Requirements

The features table details the requirements of the Tracked Time Review feature.

|  |  |
| --- | --- |
| **ID** | **Business Requirements** |
| 1 | Ability to add new pay entries into the Pay Entry list |
| 2 | Grid view which will allow the ability to update existing pay entries items |
| 3 | DAs will have the ability to modify Pay entry details (Not Calculated Value) after Approved, this will trigger a new approval for the modified entry |
| 4 | DAs will have the ability to delete pay entries, causing the manager to approve the change |
| 5 | After a pay period is cut off, all pay entries for that cut-off date will be locked |

### SharePoint Architecture

This section defines the SharePoint architecture used to deliver the OVPP Solution feature. SQL IDs do not have to be GUIDs they can be strings that uniquely identify the corresponding values from SQL.

To Keep data consistency and maintain data integrity, we will use name for all referenced master data. In SharePoint List, no SQL ID for reference data is needed. The reference data column value must be select from the master list without modification. For example, Service Line cannot use “P,R” but use full name.

We need to introduce UniqueId, ModifiedDateTime, ModifiedBy columns in all transactional SharePoint lists, I am not sure if they are native columns in SharePoint list.

#### Pay Entry List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | No | Internal SharePoint ID |
| PayPeriod | SQL ID | No | ID or String |
| HomeServicePoint | SQL ID | No |  |
| WorkingServicePoint | SQL ID | No |  |
| ClientCompany | Text | No |  |
| EmployeeID | SQL ID | No | Either the Sharepoint ID or the ID from sql |
| JobNumber | Text | No |  |
| ServiceLine | Text | Yes | P, R |
| Revenue | Number | Yes |  |
| PayPosition | SQL ID | Yes |  |
| WorkAssignment | SQL ID |  |  |
| WorkType | SQL ID | No | Any Identifying field from sql |
| PayType | SQL ID | No |  |
| PayArea | SQL ID |  |  |
| Amount | Number |  | Foreign key to Tracker collection |
| Description | Text |  |  |
| MtsNumber | Text |  |  |
| JobUniqueID | SQL ID |  |  |
| Status | Text |  | Approved/Needs Approval/Cut Off |
| Amount | Number |  |  |
| JobProvince | Text |  | Two-digit abbreviation |
| UniqueId | Text |  | GUID |
| ModifiedDateTime | Text |  | Timestamp when the record is saved. |
| ModifiedBy | Text |  | User identifier |

#### Pay Period List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | No | Internal SharePoint ID |
| Name | Text | No | ID or String |
| StartDate | Text | No | Foreign key to Job collection |
| EndDate | Text | No |  |
| Status | Text | No | Approved/Needs Approval/Cut Off |

#### Approver List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| Approver | User | Yes |  |
| EmployeeID | SQL ID | Yes |  |
| ServicePoint | SQL ID | No |  |

#### Pay Summary List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| PayPeriodSharepointID | Number | Yes |  |
| PayPeriod | SQL ID | No |  |
| ServicePoint | SQL ID | No |  |
| Status | Text | Yes | Approved/Needs Approval/Cut Off |

#### Employee Pay Summary List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| PaySummaryID | Number |  |  |
| PayPeriodSharepointID | Number | Yes |  |
| PayPeriod | SQL ID | No |  |
| ServicePoint | SQL ID | No |  |
| Employee | SQL ID | No |  |
| Status |  |  |  |

#### Employee List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Employee Name | Text | Yes |  |
| HRPositionID | SQL ID | Yes |  |
| HomeServicePointID | SQL ID | Yes |  |
| Province Code | SQL ID | Yes |  |

#### Pay Position List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| PositionName | SQL ID | Yes |  |

#### Variable Pay Schedule List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Area SQL ID | SQL ID | Yes |  |
| Position SQL ID | SQL ID | Yes |  |
| RevenueStart | Number | Yes |  |
| RevenueEnd | Number | Yes |  |
| BaseAmount | Number | Yes |  |
| Total | Number | Yes |  |

#### OVPP Pay Schedule List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| Pay Type | SQL ID | Yes |  |
| Area SQL ID | SQL ID | Yes |  |
| Position SQL ID | SQL ID | Yes |  |
| Base Rate | Number | Yes |  |
| KM Rate | Number | Yes |  |
| Min KMs | Number | Yes |  |
| Total | Number | Yes |  |

Since each pay type calculation is specific and not all of them fit in one standard structure, it will be easy to handle it case by case. Sanjel will provide pay schedule and calculation formula per pay type.

So we will be easily maintain the calculation consistency among eService auto-calculated entries and PowerApps calculated manual entries.

#### Pay Types List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Name | Text | Yes |  |
| Action | Choice | Yes | Calculated OVPP, Use Quantity, Use Min KM |

#### Service Point List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Location | Text | Yes |  |

#### Area List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Area | Text | Yes |  |

#### Variable Pay Percentages List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| SQL ID | SQL ID | Yes |  |
| Position ID | SQL ID | Yes |  |
| Sort Order | Number | No |  |
| Area | SQL ID | Yes |  |
| Threshold | Number | Yes |  |
| Percent | Number | Yes |  |

#### Pay Period Summary List

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Column Type** | **Required** | **Comments** |
| ID | Number | Yes | Internal SharePoint ID |
| PayPeriodSharePointID | Number | Yes |  |
| District | SQL ID | Yes |  |
| PayPeriod | SQL ID | Yes |  |
| Amount | Number | Yes |  |
| Status | Text | Yes | Approved/Needs Approval/Cut Off |

## Pay Summary Screen

The pay summary screen will be used by DA and approving Manager to review and approve pay summaries and to cut off pay periods.

### Business Requirements

The features table details the requirements of the Invoice module update feature.

|  |  |
| --- | --- |
| **ID** | **Business Requirements** |
| 1 | VP summary is updated dynamically |
| 2 | VP summary can be broken into pay type |
| 3 | Pay Period can only be cut off per District/Service Line by DA |
| 4 | Approval for entry id done by the working district manager and Approval for summary is done by Home District Manager |
| 5 | Once Cut off, all entries are considered pending locked, can still be edited by the DA and if so, they need to be reapproved before being cutoff again |
| 6 | Once a Pay period has been cut off all pay entries and work activities are locked |
| 7 | Employee Statement can be printed in batch or individually |
| 8 | The ability to lock out pay period for specific users |

# Workflows

All workflows are to be created using Power Automate. The following workflows are required:

|  |  |
| --- | --- |
| **ID** | **Workflows** |
| 1 | Printed Employee Summary |
| 2 | Notification Flow for Managers with Pending Approvals |

Details for each of these workflows are described in the following subsections.

## Printed Employee Summary

This workflow generates a PDF using HTML templating and the required SharePoint data related to the employees selected for summary for a pay period.

## Notification Flow for Managers with Pending Approvals

Signals managers to go through their pay periods and approve pending pay summaries.

# Reports

The following limitations are pertinent to the solution architecture:

|  |  |
| --- | --- |
| **ID** | **Limitation** |
| 1 | Payroll Summary report |

## Payroll Summary Report

This report will be built in Power BI and will enable payroll users to view summarize pay periods, from which they will be able to view individual pay summaries based on Service Line/District and export the pay period to an appropriate ADP CSV file.

### Business Requirements

|  |  |
| --- | --- |
| **ID** | **Business Requirements** |
| 1 | Pay Period Summary is updated dynamically while pay period is cut off or approved. |
| 2 | Payroll Admin can export payroll summaries within the pay period by pay code into separated CSVs for ADP import purposes. |
| 3 | Once the Pay Period Summary is exported, the pay, all pay entries and work activities underneath are not able to re-open for modification |
| 4 | Pay Period can only be re-opened by Payroll Admin to allow pay entries and work activities to be modified and re-approved. |

# Integrations

The following is assumed:

|  |  |
| --- | --- |
| **ID** | **Assumption** |
| 1 | Sanjel’s SQL Data warehouse will have all data mapped to their corresponding SharePoint lists |

# Outstanding Questions

|  |  |
| --- | --- |
| **ID** | **Question** |
| 2 | Can we make assumptions about approvers from employee position data? |

# Contacts and Notices

Please do not hesitate to contact us with any questions or concerns you may have. We are always here to help.

Sincerely,

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