

Payroll Report

Summary

In December 2015, The Tangerine call centre began the “My Evolution” (MEVO) phase and moved from the Aspect WFM platform to the Genesys WFM platform. At this point in time, a lot of the reporting frameworks that were used by the IDA and Workforce teams became invalid due to the incompatibilities in the raw data structures and workflow processes of the two systems.

In the first quarter of 2016, I began working on the Payroll report which translated payroll information exported from the Genesys Workforce Management (WFM) platform to a format compatible with the Tangerine Payroll infrastructure.

Evolution

In the pre Mevo world, we had a process in place where there was a translation of the Avaya WFM payroll data to the Tangerine payroll format. However, the translation was a black box where the steps involved both automated and manual were not transparent and were difficult to audit. Once a particular step in the data transformation pipeline was complete, the transformation step was lost to the next stage of the pipeline.

From the beginning, I decided the new payroll pipeline should be designed around the audit process. We should be able to see the raw data export from Genesys and the different translation steps that need to be performed to arrive at the final output.

A simplified version of the data transformation pipeline for the new payroll sheets are below:

1. Raw data exported from Genesys is populated in the Raw Data section at a daily interval
2. The Data Sanitizing step transforms the raw data to a format compatible with reduced and more efficient processing
3. Business rules such as Makeup Time and OT Bank time information are applied to the sanitized data to comply with regulation. At this point we have multiple views that show the raw data, sanitized data, OT Bank and Marked Time rule applications on a daily basis per Associate.

4. Additional business rules and views such as Shift trade information is then populated and applied to the pipeline.
5. The next stage of the data transformation pipeline involves manual adjustments made by the Payroll Administrator to correct scheduling errors or to comply with regulation.
6. Stage 6 of the data transformation pipeline involves manual last minute adjustments made by the Intraday Analysts (IDA) team that need to be made after the Payroll Administrator finalizes his or her stage of the pipeline.
7. The output data includes the raw data and subsequent changes applied to each stage of the pipeline.

The multiple views of this serialized pipeline allow us to audit every stage of the process hence vastly reducing the errors made.

The code in the Payroll sheets are designed to allow the Payroll administrator to quickly reset the data and generate new sheets for a different pay period with names that better fit the new timeframe. This can be done because I decided early on to use positional arguments in the data lookup operations rather than named arguments. The code below shows examples of positional row references rather than named row references.

```
Dim day1RawColumnIndex As Integer
day1RawColumnIndex = 3
Dim day14RawColumnIndex As Integer
day14RawColumnIndex = 16

Dim cellData As Date
Dim zeroDateValue As Date
zeroDateValue = TimeValue("00:00:00")

Dim decimalTimeValue As Double

mainTable = "Main_Table"
markedTimeTable = "Marked_Time_Table"

For Each row In Range(mainTable).Rows
    agent = row.Columns(row.ListObject.ListColumns("Agent").Index).Value
    For i = day1RawColumnIndex To day14RawColumnIndex

        If row.Columns(row.ListObject.ListColumns(i).Index).Value <> "Day Off" Then
            cellData = row.Columns(row.ListObject.ListColumns(i).Index).Value
            If cellData <> zeroDateValue Then
                decimalTimeValue = row.Columns(row.ListObject.ListColumns(i).Index).Value * 24
                row.Columns(row.ListObject.ListColumns(i).Index).NumberFormat = "0.00"
                row.Columns(row.ListObject.ListColumns(i).Index).Value = decimalTimeValue
            Else
                row.Columns(row.ListObject.ListColumns(i).Index).NumberFormat = "0.00"
                row.Columns(row.ListObject.ListColumns(i).Index).Value = 0
            End If
        Else
            row.Columns(row.ListObject.ListColumns(i).Index).NumberFormat = "0.00"
            row.Columns(row.ListObject.ListColumns(i).Index).Value = 0
        End If
    Next i
Next
```

The process of building these sheets involved a lot of collaboration with Harcharan Seehra who is the Payroll Administrator. I was able to get feedback at every step on what works and what did not work and was able to design the sheets around her procedural and audit processes while also suggesting modified processes that may work better.

Screenshots below show daily data at different stages of the data transformation pipeline.

Sanitize Raw Data							
Week 1 Raw							
Agent	Raw	Raw	Raw	Raw	Raw	Raw	Raw
Count:							

Map Marked Data (OT Bank & Makeup)							
Week 1 Marked Time: OT Bank and Makeup							
Marked	Marked	Marked	Marked	Marked	Marked	Marked	Marked

Output to Access Database							
Empl ID	Employee Name	STAT WK	PT STAT	50 Reg Adj	03 Reg OT	02 OT 1.5	PT STAT 30