

Load Data into Oracle HCM Cloud Using HCM Data Loader Transformation Fast Formula

By: Ashish Harbhajanka

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Introduction

I hope most of you know how to use HCM Data Loader Tool to load data into Oracle HCM Cloud Application and while HCM Data Loader is a great tool to facilitate data load, customers or in general most consultants too are comfortable working with excel files.

Customers are comfortable sharing data into Excel and then there is a need of making changes to the file to convert the file into .dat file which can then be loaded using HCM Data Loader.

However, if there are simple transformation logic which needs to be applied the logic can be applied in a fast formula of type "HCM Data Loader". These kind of formula is also referred to as Transformation Formula.

The way the entire process works is:

- You get data in a predefined template and either Excel or CSV (most preferred approach, one may choose other file type too, but am not very sure about all supported types. CSV for sure works which is what will be considered here)
- Making use of Transformation formula to make transformation to the data
- Loading Data using HDL

We will demonstrate the entire process with a worked-out example.

Worked-Out Example

For this example, we would try to load Absence Entry Records into Application. One may choose a different business object if required.

For this example, we use the below data file

PersonNumber	Employer	AbsenceType	AbsenceReason	AbsenceStatus	ApprovalStatus	StartDate	StartTime	EndDate	EndTime	Comments
691	US1 Legal Entity	Vacation		SUBMITTED	APPROVED	06-04-2020	08:30	08-04-2020	16:30	Data Loaded Using Transformation Formula
691	US1 Legal Entity	Vacation		SUBMITTED	APPROVED	09-04-2020	08:30	10-04-2020	16:30	Data Loaded Using Transformation Formula
691	US1 Legal Entity	Vacation		SUBMITTED	APPROVED	13-04-2020	08:30	14-04-2020	16:30	Data Loaded Using Transformation Formula
691	US1 Legal Entity	Vacation		SUBMITTED	APPROVED	15-04-2020	08:30	17-04-2020	16:30	Data Loaded Using Transformation Formula

We will also have to make use of a Transformation Fast Formula. We will call this Transformation Fast Formula as "GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV"

Fast Formula Text

```
/*
*****
*
* FORMULA NAME: GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV
* FORMULA TYPE: HCM Data Loader
* DESCRIPTION: This formula will create PersonAbsenceEntry HDL File from CSV File
* CHANGE HISTORY:
*****
Version      Date      Created By      Comments
-----
1.0          09-Jun-2020  Ashish Harbhajanka  Initial Version
*****
/* Inputs */
INPUTS ARE OPERATION (text), LINENO (number), LINEREPEATNO
(number), POSITION1 (text), POSITION2 (text), POSITION3 (text), POSITION4 (text),
POSITION5 (text), POSITION6 (text), POSITION7 (text), POSITION8 (text), POSITION9 (text),
POSITION10 (text), POSITION11 (text)
```

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```
DEFAULT FOR POSITION1 IS 'NO DATA'
DEFAULT FOR POSITION2 IS 'NO DATA'
DEFAULT FOR POSITION3 IS 'NO DATA'
DEFAULT FOR POSITION4 IS 'NO DATA'
DEFAULT FOR POSITION5 IS 'NO DATA'
DEFAULT FOR POSITION6 IS 'NO DATA'
DEFAULT FOR POSITION7 IS 'NO DATA'
DEFAULT FOR POSITION8 IS 'NO DATA'
DEFAULT FOR POSITION9 IS 'NO DATA'
DEFAULT FOR POSITION10 IS 'NO DATA'
DEFAULT FOR POSITION11 IS 'NO DATA'
DEFAULT FOR LINEREPEATNO IS 1

IF OPERATION='FILETYPE' THEN
  OUTPUTVALUE='DELIMITED'
ELSE IF OPERATION='DELIMITER' THEN
  OUTPUTVALUE=','
ELSE IF OPERATION='READ' THEN
  OUTPUTVALUE='NONE'
ELSE IF OPERATION = 'NUMBEROFBUSINESSOBJECTS' THEN
  (
    OUTPUTVALUE = '1'
    RETURN OUTPUTVALUE
  )
ELSE IF OPERATION = 'METADATALINEINFORMATION' THEN
  (
    METADATA1[1] = 'PersonAbsenceEntry' /*FileName*/ /*Reserved*/
    METADATA1[2] = 'PersonAbsenceEntry' /*FileDiscriminator*/ /*Reserved*/
    METADATA1[3] = 'PersonNumber'
    METADATA1[4] = 'Employer'
    METADATA1[5] = 'AbsenceType'
    METADATA1[6] = 'AbsenceReason'
    METADATA1[7] = 'AbsenceStatus'
    METADATA1[8] = 'ApprovalStatus'
    METADATA1[9] = 'StartDate'
    METADATA1[10] = 'StartTime'
    METADATA1[11] = 'EndDate'
    METADATA1[12] = 'EndTime'
    METADATA1[13] = 'Comments'

RETURN METADATA1
)

ELSE IF OPERATION='MAP' THEN
  /*HDL Related Outputs*/
  (
    IF LINEREPEATNO = 1 THEN
      (
        IF POSITION1 <> 'PersonNumber' THEN
          (
            LINEREPEAT = 'Y'
            FileName = 'PersonAbsenceEntry'
            BusinessOperation = 'MERGE'
            FileDiscriminator = 'PersonAbsenceEntry'
```

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```
PersonNumber = trim(POSITION1)
Employer = trim(POSITION2)
AbsenceType = trim(POSITION3)
AbsenceReason = trim(POSITION4)
AbsenceStatus = trim(POSITION5)
ApprovalStatus = trim(POSITION6)
/*
StartDate =
TO_CHAR(TO_DATE(POSITION7,'YYYY/MM/DD'))
*/
StartDate = trim(POSITION7)
StartTime = trim(POSITION8)
EndDate = trim(POSITION9)
/*
EndDate =
TO_CHAR(TO_DATE(POSITION9,'YYYY/MM/DD'))
*/
EndTime = trim(POSITION10)
Comments = trim(POSITION11)

RETURN
BusinessOperation,FileName,FileDiscriminator,PersonNumber,Employer,AbsenceType,AbsenceReason,AbsenceStatus,ApprovalStatus,Comments,StartDate,StartTime,EndDate,EndTime,LINEREPEAT,LINEREPEATNO
)
)
)

ELSE
OUTPUTVALUE='NONE'
RETURN OUTPUTVALUE
/* End Formula Text */
```

We would need to register this Fast Formula in Application.

Navigation: Setup and Maintenance->Fast Formula->Create- Provide Name, Formula Type, Description, Start Date and then add the formula text and compile. Once done the application screen should appear as below:

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Fast Formulas: GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV

[View History](#)

*Formula Name GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV

Effective As-of Date 6/13/20

Type HCM Data Loader

Formula Overview

Formula Details

► Formula Name

Effective Start Date 1/1/51

Effective End Date

Description This formula will create Pers

Compile Status

Formula Details

End Date Edit ▼

Formula Text

```
1 /******
2 * FORMULA NAME: GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV
3 * FORMULA TYPE: HCM Data Loader
4 * DESCRIPTION: This formula will create PersonAbsenceEntry HDL File from CSV File
5 * CHANGE HISTORY:
6 *****/
7 Version      Date      Created By      Comments
8 -----
9 1.0          09-Jun-2020  Ashish Harbhajanka  Initial Version
10 *****/
11 /* Inputs */
12 INPUTS ARE OPERATION (text), LINENO (number), LINEREPEATNO (number), POSITION1 (text), POSITION2 (text), POSITION3 (text),
13 POSITION5 (text), POSITION6 (text), POSITION7 (text), POSITION8 (text), POSITION9 (text), POSITION10 (text), POSITION11 (text)
14
15 DEFAULT FOR POSITION1 IS 'NO DATA'
16 DEFAULT FOR POSITION2 IS 'NO DATA'
17 DEFAULT FOR POSITION3 IS 'NO DATA'
18 DEFAULT FOR POSITION4 IS 'NO DATA'
19 DEFAULT FOR POSITION5 IS 'NO DATA'
20 DEFAULT FOR POSITION6 IS 'NO DATA'
21 DEFAULT FOR POSITION7 IS 'NO DATA'
22 DEFAULT FOR POSITION8 IS 'NO DATA'
23
```

In the next step we would have to upload the CSV file to UCM. We have to use “File Import and Export” option.

Navigation: Tools->File Import and Export

Overview

▲ Search

File	PersonAbsenceEntry.csv
Account	<null> ▼
Processed	<null> ▼
Process ID	
Owner	
Upload Date Later Than	6/13/20 11:50 PM
Last Updated Date Later Than	m/d/yy h:mm a
<div>Search Reset</div>	

▲ Search Results

Actions ▼ View ▼ + X

File	Account	Owner	Upload Date	Process ID	Content ID
PersonAbsenceEntry.csv	hcm/dataloader...	HCM_I...	6/13/20 11:56 PM		UCMFA02563865

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In the next step we would need to use this content id and submit a payroll flow.

Navigation: My Client Groups -> Payroll -> Submit a Flow -> Load Data From File

The screenshot shows the 'Payroll Checklist' screen with the subtitle 'Load Data from File : A001'. At the top, there are two progress indicators: '2/2 Completed' and '0 Completed with Alerts'. Below these are sections for 'Tasks' and 'Parameters'. The 'Parameters' section contains the following details:

Parameter	Value
Content Id	UCMFA02563865
Transformation Formula	GENERATE_ABSENCE_ENTRY_HDL_FROM_CSV
Formula Type	HCM Data Loader
Process Configuration Group	DEFAULT GROUP

Below the parameters is a section for 'Linked Flow'.

Once submitted we should be able to see the status of task too

This screenshot shows the 'Payroll Checklist' screen with the subtitle 'Load Data from File : A001'. It includes the same progress indicators as the previous screenshot. The 'Tasks' section now displays a list of tasks with their status and activity:

Status	Activity	Process
✓ Completed	Generate Data Loader File	Payroll Process
✓ Completed	Initiate Data Loader	Payroll Process

Also, we should now be able to view that a Data load process should have triggered.

Navigation: My Client Groups -> Data Exchange -> HCM Data Loader (Import and Load Data)

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Import and Load Data Import File

My Recent Data Sets - Filtered Hide Filters

Filters Reset Save

Saved Search
My Recent Data Sets - Filtered

Match ☒ All ☐ Any ** At least one is required

**** Data Set**
Starts with

**** Content ID**
Starts with

**** Last Updated Date**
After 6/7/20 12:00 AM

Created By

Equals

Data Sets

View Format Refresh Stop Delete Review Progress Review Processes Extract Failed Lines Freeze Detach Wrap

Data Set	Content ID	Import Status	Load Status	Messages	Import Success(%)	Total Lines	Failed Lines	Load Success(%)	Total Objects
A001.zip	UCMFA02563866	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		100	4	0	100	4

Columns Hidden 12

Business Objects

View Format Refresh Review Progress Stop Load Extract Failed Lines Freeze Detach Wrap

Business Object	Load Order	Import Status	Load Status	Messages	Import Success(%)	Total Lines	Failed Lines	Load Success(%)	Total Objects	Failed Objects	Last Updated Date	Failure Line File
Absence Entry	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		100	4	0	100	4	0	6/13/20	

Columns Hidden 9

As a last step, we should perform a verification step

Verification

We have loaded Absence Records for Person# 691.

We would now need to verify whether the absence records got loaded. We can verify the same using the following navigation

Navigation: My Client Groups -> Person Management -> Search for Person# 691 -> Manage Records

691

Absence Records x

Manage Absences and Entitlements

Absences

Most Recent or Current Absence

Type Vacation

Dates 4/15/20 - 4/17/20

Status Completed

Duration 24.000 Hours

Next Scheduled Absence
None scheduled.

Pending Actions

Existing Absences

View Add Recalculate Time Period Last 6 months Type Status

Dates	Employer	Type	Duration	Status
4/15/20 - 4/17/20	US1 Legal Entity	Vacation	24.000 Hours	<input checked="" type="checkbox"/> Completed
4/13/20 - 4/14/20	US1 Legal Entity	Vacation	16.000 Hours	<input checked="" type="checkbox"/> Completed
4/9/20 - 4/10/20	US1 Legal Entity	Vacation	16.000 Hours	<input checked="" type="checkbox"/> Completed
4/6/20 - 4/8/20	US1 Legal Entity	Vacation	24.000 Hours	<input checked="" type="checkbox"/> Completed