**EQUIPMENT LEASE PROCESS**

* **Workflow Group, Workflows, and Folder Path**
* **Workflow Project Folder : TCCC\_LeaseBilling**
* **Workflow Group : WFG\_BatchProcessing – Normal Path**

**Qn to Ray - why only EC1 and EC2 group assigned ?**

**We have kept rt for ecsa1 and ecsa2 (see variants) and its better to run in same ec-ecsa combination. Therefore. We kept ecsa1 and ecsa2 knowing the expected traffic.**

* TCCC\_LeaseBilling.WFL\_EquipLease\_Collection.Validate
  + Input Path
    - JDE\_COLL\_DIRECTORY /JDE/BRIM/ITC1/EL
    - JDE\_COLL\_FILENAME [EI][LF]\_.\*
  + Output is stored here ( 2 folders)
    - Without any processing logic – same as input file – send to ARCHIVE\_INPUT\_DIRECTORY (30 days)

/usr/sap/interfaces/MZP/LeaseBilling/Archive/Input

* + - After Processing Logic – send to

FORWARDING\_DIRECTORY /usr/sap/interfaces/MZP/LeaseBilling/Forward

FORWARDING\_DIRECTORY\_SEC /usr/sap/interfaces/MZP/LeaseBilling/Forward2

* + - FORWARDING\_FILENAME [EI][LF]\_.\*
* TCCC\_LeaseBilling.WFL\_EquipLease\_Processing.Processing
  + Input

/usr/sap/interfaces/MZD/LeaseBilling/Forward and

/usr/sap/interfaces/MZP/LeaseBilling/Forward2

* + Output :
    - Success Path - OUTPUT\_DIRECTORY /usr/sap/interfaces/MZP/LeaseBilling/Output
    - Error ones - REPROCESSING\_DIRECTORY

/usr/sap/interfaces/MZP/LeaseBilling/Reprocessing

* Also goes to Archive (may have error or success)

/usr/sap/interfaces/MZD/LeaseBilling/Archive/Processed

* + AGGREGATION\_STORAGE\_DIR /usr/sap/interfaces/MZD/LeaseBilling/AGG
    - ~~Used rarely – may need to clear the session file sometime.~~
    - Never done - confirmed by Ray
* TCCC\_LeaseBilling.WFL\_EquipLease\_Forwarding.Forward
  + Input
    - /usr/sap/interfaces/MZD/LeaseBilling/Output
  + Output to :
    - To JDE @ JDE\_ARCHIVE\_DIRECTORY /JDE/BRIM/ITC1/EL/ARCHIVE
* Qn : How often this runs – JDE picks this file and processes I believe to update in JDE – does file stay in this Archive ?

Ans - No JDE will remove the file

* + - Also stored in SAP (30 days)

ARCHIVE\_PROCESSED\_DIRECTORY

/usr/sap/interfaces/MZD/LeaseBilling/Archive/Processed

**Workflow Group : WFG\_Lease\_Reprocessing**

* **TCCC\_LeaseBilling.WFL\_EquipLease\_Processing.Processing**
  + Input:

REPROCESSING\_DIRECTORY /usr/sap/interfaces/MZD/LeaseBilling/Reprocessing

OUTPUT\_DIRECTORY /usr/sap/interfaces/MZD/LeaseBilling/Output

**Other Paths in the External Reference (Not used it seems)**

**Qn to Ray : These folders used or not**

* + - ERROR\_DIRECTORY /usr/sap/interfaces/MZD/LeaseBilling/Errors
    - EL\_DIST\_DIRECTORY /usr/sap/interfaces/MZD/LeaseBilling/Input
    - DUP\_RECORD\_DIRECTORY /usr/sap/interfaces/MZD/LeaseBilling/Duplicates

**SAMPLE FILES / UDR**

1. **Install File**
2. **Uninstall File**
3. **IF File – lock and unlock**

 

**Qn - Need to go over each column and check releavance or understand wat it is**

Why we have CAP\_Vx`x`ALUE and Unbundling related fields only in EL

* **Doc Type-Line Type Combinations**

EL file Scenairos

* New Install File / Lines

Doc Type-Line Type = UL – ES

* Removal / Uninstall

Doc Type-Line Type = IE-RS

* Replacement Scenario (replacing a new machine at the same outlet)

Doc Type-Line Type = UL-RS ( removal )

Will be Followed by a UL-ES – another serial no but same outlet

Admin Move Scenarios – someone from business move equipment from one outlet to another outlet. So should have atleast 2 rows – one for removal and one for install – the same serial number. (but no validation done in CM)

AM-ES (install)

AM-RS (remove)

IF file Scenairos

Ask som – wat happens in brim -- in case of locking/unlocking

**It has same combinations of doc type – line type as EL file**

1. **Do we have any other like RS/ES – no**
2. **Do we have UL and IE (replacement ?) - ignore**

**for IF file, Lock scenairio – we have Remove\_Indicator as LO , but what can be the doc type-line type for them – any combination**

* **UDR**

**external EquipRequest : identified\_by(!strStartsWith(outletId, "HDR") && !strStartsWith(outletId, "TRL") && ( ( documentType == "IE" && priceType == null ) || ( documentType == "UL" && lineType == "RS" && priceType == null ) || ( documentType == "AM" && lineType == "RS" && priceType == null ) || (strLength(priceType) == 3 ) ) ),**

**write logic of above line**

* **How to Check/Verify in SAP post Run of the file**

In Manage Subscription Contract Fiori App

For Install Scenario, Take the Equipment Serial Number from the JDE file and put in Technical Resource ID. You should see contract, click on it >> Check Status >> Technically Active.

For Uninstall Scenario, Technically – Inactive

A screenshot of a computer

Description automatically generated

* **Process Indicator and Comment Fields**

For New Initial Files

Process Indicator and Comment Fields are empty

If Record Processed Successfully

First at Validation step , secondly at processing step

Process Indicator = Y >> this is sent back to JDE for update

If Record Processing Fails

Goes to Reprocessing folder

Process Indicator = N.

Comments – Has error description from SAP service call

* **Reading Log File of Processing\_RT flow :**

Go to structure >>

TCCC\_LeaseBilling.PRF\_WS\_EquipLease\_SOM.cycles.WSCycle\_zbarPOSTLEASEEQUIPDATA

This is the response from sap for the input record

This structure has below params to determine success/error.

param\_ET\_ERROR:

Field Values for: ws.TCCC\_LeaseBilling.PRF\_WS\_EquipLease\_SOM.tns.BAPIRET2T [ws.MZ1649368884130.PRF\_WS\_EquipLease\_SOM.udr.tns.BAPIRET2T]

item: List of 0 elements.

param\_EV\_SUCCESS: X

This is success message

Add error message also here

**CODE LOGIC**

1. **TCCC\_LeaseBilling.WFL\_EquipLease\_Collection.Validate**

* **Agent : ADLS2 :** 
  + Reads file from /JDE/BRIM/EL (prod path) and sends to archive folder in sap @ /usr/sap/interfaces/MZD/LeaseBilling/Archive/Input without any processing.
* **Agent : RouteInfo : Analysis Agent** 
  + If filename starts with ‘IF’, send to route ‘if’, else send to route ‘normal’
* **Agent : Validate**

For EL file UDR and IF file

**Checks various validation :**

1. Consume Block :
2. Possible Doctype combinations (UL,IE,AM), UL should have install date, IE should have removal date, for AM/RS install date is needed and for AM/ES removal date is needed

sets process flag field to – N or Y depending on above validation

**sets comments field – if error or validation not passed.**

1. Reads UDR’s BP no and put in Map so we know unique BP numbers – needed to generate SECONDARY file logic.
2. Drain Block :
3. For Both EL and IF UDRs; (Why all the doctype/linetype logic is applied same for IF file ( and no logic on LO/UL ?)

Fetch from Map – Each BP number – and run this for all BP No

* 1. If only 1 row for that BP no and and adminmove is false – send to ‘out’ path
  2. If only 1 row for a BP no and For admin move is true,
     1. If document type is AM

If line type is RS (removal) – send to ‘out’ ,

Else (install) – send to ‘out\_sec’

* + 1. Else (doctype is not AM )

See if serial no in that udr found in the list holding all serial no for AM doctype udrs

If yes - send to ‘out\_sec’

Else to ‘out’

QN: in case only 1 record for the BP no and admin move – y sending install scenatio to out\_sec – there is nothing in out to be processed before this row in out sec

* 1. If more than 1 row for the BP no - iterate in loop
     1. For only first row of that BP no and If adminmove flag is false
        1. Send 1st row to ‘out’
     2. For only first row of that BP no and If Adminmove flag is true
        1. Check If current row doc type is not AM

Check the serial no in the list of AMSerials and if found

Then send to ‘out\_sec’

Else – send to ‘out’

* + - 1. If first row line type is RS (removal ) – send to ‘out’

Else (install) - send to ‘out\_sec”.

* + 1. Else (not first row of that BP no)
       1. See current record doctype is not admin move

Check if the first record of this bp no was sent to out\_Sec

If so – send to ‘out’

else to ‘sec\_out’

* + - 1. If line type is RS (removal) – send to out

Else (install) – send to sec\_out

* Agent: Route

Creates output to below file paths

FORWARDING\_DIRECTORY

/usr/sap/interfaces/MZP/LeaseBilling/Forward

FORWARDING\_DIRECTORY\_SEC

/usr/sap/interfaces/MZP/LeaseBilling/Forward2

1. **TCCC\_LeaseBilling.WFL\_EquipLease\_Processing**

Agent : RouteInfo

Routes udr of el and if to decoder and sends to RT

Agent : Prepare SOM request

Calls RT

Agent RT : WFB\_Manager

**Understand types of UDR – ConsumeCycle, Wrapper, Error, WorkflowState**

Put inputs in CCU object ( ConsumeCycleUDR)

LeaseWrapper wrap = udrCreate(LeaseWrapper);

wrap.request = (EquipRequest)ccu.Data;

wrap.ccu = **ccu**;

wrap.procKey = wrap.request.outletId + "#" + wrap.request.documentType + "#" +wrap.request.docNumber + "#" + "#" + wrap.request.equipSerialNumber;

wrap.kindOfRequest = "normal";

wrap.kindOfRequest = "if";

**Agent : SOM\_Req\_State: Aggregator**

**(why do we need an aggregator here ?)**

Session Key created using

wrap.procKey = wrap.request.outletId + "#" + wrap.request.documentType + "#" + wrap.request.docNumber + "#" + "#" + wrap.reuccuest.equipSerialNumber;

So it will be a different session for each Serial Number request/row

If ( udr = request )

Just send it ahead and set timeout for session to 20 seconds.

If (udr = response )

if(resp.resultCode == ERR\_OK) //Successful response

remove the session and send response back to Batch WFL

else (not success)

check retry count

if rety recount reached 10 , remove session and

if retry count not reached , retry again.

**Timeout block :**

If retry count exhasusted - msg – submisstion to SOM failed

If retry count pending – try again.

**Agent : Process SOM**



**Create this udr objectg**

Mapping with SOM SOAP Service (Writing logic is not yet completed till end)

WSCycle\_zbarPOSTLEASEEQUIPDATA wsc = udrCreate(WSCycle\_zbarPOSTLEASEEQUIPDATA)

|  |  |
| --- | --- |
| Fields Name | Fields mapped to SOM |
| FOR FILE TYPE | EL\* |
| param\_IV\_CAP\_VALUE | stringToDouble(leaseReq.capValue) |
| param\_IV\_COMPANY\_CODE | 0101 (if CC is 3 digit, append 0) |
| param\_IV\_COUNTRY | US |
| param\_IV\_CURRENCY | leaseReq.currency |
| param\_IV\_CUSTOMER\_ACN | strTrim(leaseReq.bpNumber) |
| param\_IV\_DOC\_TYPE | leaseReq.documentType |
| param\_IV\_EQUIP\_DESC | trimSize(leaseReq.equipDescription, SOM\_EQUIP\_DESC\_LEN) |
| param\_IV\_EQUIP\_TYPE | trimSize(leaseReq.equipmentType, SOM\_EQUIP\_TYPE\_LEN) |
| param\_IV\_IC\_CODE | strTrim(leaseReq.icCode) |
| param\_IV\_JDE\_DOC | leaseReq.docNumber |
| param\_IV\_LINE\_TYPE | leaseReq.lineType |
| param\_IV\_SERIAL | trimSize(leaseReq.equipSerialNumber, 10) |
| param\_IV\_SUB\_TYPE | TCCC\_VolumeRecords.APL\_VolumeRecords\_SAPCCFunctions.nvl(leaseReq.equipmentSubType,"N/A") |
| param\_IV\_LOAN\_INDICATOR | leaseReq.loanIndicator == "0" ? "N" : "Y" |
| param\_IV\_EQUI\_SALES\_IND | N |

if(wsc.param\_IV\_DOC\_TYPE == "UL")

|  |  |
| --- | --- |
| param\_IV\_OUTLET\_ACN | lpad(strTrim(leaseReq.outletId),"0",10 |
| param\_IV\_INSTALL\_DATE | convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null |
| param\_IV\_REMOVAL\_DATE | “ ” |
| param\_IV\_SUSP\_ACTION | "" |

if (stringToDouble(leaseReq.capValue) < 1.0)

|  |  |
| --- | --- |
| param\_IV\_CAP\_VALUE | 10.0 |

Is this total cost, if so why you put 10

Else

|  |  |
| --- | --- |
| param\_IV\_CAP\_VALUE | stringToDouble(leaseReq.capValue) |

//For installations triggered from ES

if(leaseReq.projectNumber == "FromES")

|  |  |
| --- | --- |
| param\_IV\_EQUI\_SALES\_IND | "Y"; |

//For removal process assiging install date to removal date ??

if( wsc.param\_IV\_LINE\_TYPE=="RS" || wsc.param\_IV\_LINE\_TYPE=="RN")

|  |  |
| --- | --- |
| param\_IV\_REMOVAL\_DATE | param\_IV\_INSTALL\_DATE |
| param\_IV\_INSTALL\_DATE | "" |
| param\_IV\_SUSP\_ACTION | CN |

if(wsc.param\_IV\_LINE\_TYPE=="RS")

|  |  |
| --- | --- |
| param\_IV\_ADMIN\_MOVE | R |

else if(wsc.param\_IV\_DOC\_TYPE == "IE") {

|  |  |
| --- | --- |
| param\_IV\_OUTLET\_ACN | lpad(strTrim(leaseReq.outletId),"0",10 |
| param\_IV\_REMOVAL\_DATE | convertDateString(leaseReq.removalDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null) |
| param\_IV\_INSTALL\_DATE | “ ” |
| param\_IV\_SUSP\_ACTION | CN |

//Adding this unbundling mapping only for removal scenarios

strToDouble(wsc. param\_IV\_UNBDLG\_FEE,leaseReq.unbundlingFeeTotal);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_LOG,leaseReq.unbundlingFeeLog);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_NSR,leaseReq.unbundlingFeeNsr);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_RMN,leaseReq.unbundlingFeeRmn);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_SVC,leaseReq.unbundlingFeeSvc);

//For removals triggered from ES

if(leaseReq.projectNumber == "FromES")

|  |  |
| --- | --- |
| param\_IV\_EQUI\_SALES\_IND | Y |
| param\_IV\_ADMIN\_MOVE | N |

else if(wsc.param\_IV\_DOC\_TYPE == "AM") {

if(wsc.param\_IV\_LINE\_TYPE == "RS"){

//Removal scenario, populate removal fields

|  |  |
| --- | --- |
| param\_IV\_DOC\_TYPE | “IE” |
| param\_IV\_ADMIN\_MOVE | “A” |
| param\_IV\_REMOVAL\_DATE | convertDateString(leaseReq.removalDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null) |
| param\_IV\_INSTALL\_DATE | "" //convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |

//Adding this unbundling mappings only for removal scenarios

strToDouble(wsc.param\_IV\_UNBDLG\_FEE,leaseReq.unbundlingFeeTotal);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_LOG,leaseReq.unbundlingFeeLog);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_NSR,leaseReq.unbundlingFeeNsr);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_RMN,leaseReq.unbundlingFeeRmn);

strToDouble(wsc.param\_IV\_UNBDLG\_FEE\_SVC,leaseReq.unbundlingFeeSvc);

} else if(wsc.param\_IV\_LINE\_TYPE == "ES"){

//Install scenario, populate install fields

|  |  |
| --- | --- |
| param\_IV\_DOC\_TYPE | "UL"; |
| param\_IV\_ADMIN\_MOVE | "A" |
| param\_IV\_INSTALL\_DATE | convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |
| .param\_IV\_REMOVAL\_DATE | “ “ |
| .param\_IV\_OUTLET\_ACN | = lpad(strTrim(leaseReq.outletId),"0",10); |
| param\_IV\_PRICE\_TYPE |  |

printReq(wsc);

wsc.context = in;

udrRoute(wsc, "som\_req");

} else if(in.kindOfRequest == "if") {

|  |  |
| --- | --- |
| IF\_EquipRequest leaseReq | (IF\_EquipRequest)in.requestIF |

WSCycle\_zbarPOSTLEASEEQUIPDATA wsc = udrCreate(WSCycle\_zbarPOSTLEASEEQUIPDATA);

debug("Company code: [" + leaseReq.companyCode + "] + strTrim: [" + strTrim(leaseReq.companyCode) + "]");

//Fix to manage all possible values on the codes from thirsty

if(strREContains(leaseReq.companyCode,"101")){

wsc.param\_IV\_COMPANY\_CODE = "0101";

}

else if(strREContains(leaseReq.companyCode,"1551")){

wsc.param\_IV\_COMPANY\_CODE = "1551";

}

if(leaseReq.country == null || strLength(strTrim(leaseReq.country)) == 0) {

wsc.param\_IV\_COUNTRY = "US";

}

else{

wsc.param\_IV\_COUNTRY = strTrim(leaseReq.country);

}

|  |  |
| --- | --- |
| param\_IV\_CURRENCY | leaseReq.currency |
| .param\_IV\_CUSTOMER\_ACN | strTrim(leaseReq.bpNumber); |

if(strLength(wsc.param\_IV\_CUSTOMER\_ACN) < SOM\_BPNUMBER\_LEN) {

|  |  |
| --- | --- |
| param\_IV\_CUSTOMER\_ACN | lpad(leaseReq.outletId, "0", SOM\_ACN\_LEN) |

}

|  |  |
| --- | --- |
| param\_IV\_DOC\_TYPE | leaseReq.documentType |
| param\_IV\_EQUIP\_DESC | = trimSize(leaseReq.equipDescription, SOM\_EQUIP\_DESC\_LEN) |
| param\_IV\_EQUIP\_TYPE | = trimSize(leaseReq.equipmentType, SOM\_EQUIP\_TYPE\_LEN) |
| param\_IV\_IC\_CODE | = strTrim(leaseReq.icCode); |
| param\_IV\_JDE\_DOC | leaseReq.docNumber |
| param\_IV\_LINE\_TYPE | = leaseReq.docNumber |
| param\_IV\_SERIAL | = trimSize(leaseReq.equipSerialNumber, 10); |
| param\_IV\_SUB\_TYPE | TCCC\_VolumeRecords.APL\_VolumeRecords\_SAPCCFunctions.nvl(leaseReq.equipmentSubType,"N/A") |
| .param\_IV\_LOAN\_INDICATOR | = leaseReq.loanIndicator == "0" ? "N" : "Y"; |
| param\_IV\_EQUI\_SALES\_IND | “N” |
|  |  |

if(wsc.param\_IV\_DOC\_TYPE == "UL")

|  |  |
| --- | --- |
| param\_IV\_OUTLET\_ACN | lpad(strTrim(leaseReq.outletId),"0",10) |
| .param\_IV\_INSTALL\_DATE | convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |
| param\_IV\_REMOVAL\_DATE | “ “ |

//For removal process assiging install date to removal date

if( wsc.param\_IV\_LINE\_TYPE=="RS" || wsc.param\_IV\_LINE\_TYPE=="RN")

|  |  |
| --- | --- |
| param\_IV\_REMOVAL\_DATE | wsc.param\_IV\_INSTALL\_DATE |
| param\_IV\_INSTALL\_DATE | “ ” |

if(wsc.param\_IV\_LINE\_TYPE=="RS"){

|  |  |
| --- | --- |
| param\_IV\_ADMIN\_MOVE | “R” |

else if(wsc.param\_IV\_DOC\_TYPE == "IE") {

|  |  |
| --- | --- |
| param\_IV\_OUTLET\_ACN | lpad(strTrim(leaseReq.outletId),"0",10) |
| param\_IV\_REMOVAL\_DATE | = convertDateString(leaseReq.removalDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |
| .param\_IV\_INSTALL\_DATE | = ""; //convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |
| .param\_IV\_ADMIN\_MOVE | “N” |

else if(wsc.param\_IV\_DOC\_TYPE == "AM") {

if(wsc.param\_IV\_LINE\_TYPE == "RS"){

//Removal scenario, populate removal fields

|  |  |
| --- | --- |
| param\_IV\_DOC\_TYPE | “IE” |
| param\_IV\_ADMIN\_MOVE | “A” |
| .param\_IV\_REMOVAL\_DATE | = convertDateString(leaseReq.removalDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null) |
| param\_IV\_INSTALL\_DATE | = ""; //convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |

} else if(wsc.param\_IV\_LINE\_TYPE == "ES"){

//Install scenario, populate install fields

|  |  |
| --- | --- |
| param\_IV\_DOC\_TYPE | "UL"; |
| .param\_IV\_ADMIN\_MOVE | "A" |
| param\_IV\_INSTALL\_DATE | = convertDateString(leaseReq.installDate, JDE\_DATE\_FORMAT, SOM\_DATE\_FORMAT, null); |
| param\_IV\_REMOVAL\_DATE | "" |
| param\_IV\_OUTLET\_ACN | lpad(strTrim(leaseReq.outletId),"0",10); |

}

}

|  |  |
| --- | --- |
| param\_IV\_SUSP\_ACTION | leaseReq.removalIndicator |

Handle\_Response:

This agent is responsible for updating the records comments and processed Indicator depending in the response received from SOM, and if the indicator is “N”(that means we have an error) then route the record to Reprocessing location and also to Forwarding Workflow, else then its only routed to Forwarding workflow.

1. **TCCC\_LeaseBilling.WFL\_EquipLease\_Forwarding**

Responsible for sending the records with the updated indicator and comments to JDE as well as to an Archive location*(/usr/sap/interfaces/MZP/LeaseBilling/Archive/Processed/(current\_year)/(current\_month)*) in CM.