

Release 1694

**Service Request 16996
ERS Interface Program**

Detail Design

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Introduction

Service Request 16996 – ERS Interface Program

The new Effort Reporting System is driven primarily by payroll data. The ERS design calls for the collection and storage of payroll activity using the sequential PAR file as input. Various other designs were considered, such as direct access to the DB2 PAR tables. But given the volume of data that has to be transferred and the desire to give campuses as much operational flexibility as possible, the decision was made to read the sequential PAR and produce a new flat-file for loading into ERS.

ERS requires several data elements and code translations from the CTL. Because ERS stores payroll data historically and does not have access to the ED B or CTL, the interface process must also perform all translations and lookups as it is preparing the output file.

Overview of PPS Modifications

A new batch program will be written to create the ERS interface file. This program will be added to PPS and can be run at any time using any sequential PAR as input – either directly from a compute or from a consolidated monthly PAR. This will provide campuses with operational flexibility in determining when to transfer data to ERS.

Programs

PPI441 – New COBOL Batch Program

Overview of the program PPI441:

PPI441 is a new batch DB2 program which extracts only the earnings portion of the input sequential PAR (in the CPWSSPAR format) file. An employee with a single XPAR record type is written into more than one sequential PAR records with different sequential record types.

Following are the details of the XPAR record types (position 22 – 23 of the sequential PAR):

EXP TRANSFER	– ‘65’	CANCELLATION	– ‘70’	OVERPAYMENT	– ‘75’
HAND DRAWN CHK	– ‘80’	R HAND DRAWN CHK	– ‘82’, and	CURR PR ACTIVITY	– ‘85’

Following are the details of the sequential PAR record types (position 26 – 27 of the sequential PAR):

Fixed	– ‘10’	HRS	– ‘21’	ADJ	– ‘22’	ERN	– ‘23’
DED	– ‘24’	WRK	– ‘25’, and	BAL	– ‘26’		

PPI441 skips a XPAR record that does not have any earnings (record type '23') even though it might have other record type(s) ('21', '23', '24', '25', or '26') record(s) present. Each XPAR record for a pay cycle has unique Primary GRS Control number (position 11–13 in the sequential PAR record) and one sequential fixed PAR record with record type '10' (Fixed).

Each ERS output extracted record by PPI441 contains two sections:

1. Earnings Section – Extracted from record type ‘23’ of the sequential PAR record for the unique Primary Control Number, and
2. Fixed section – Extracted from record type ‘10’ sequential PAR record for the unique Primary GRS Control Number of the pay cycle. This fixed section is same for all the earnings related to this Primary GRS Control Number (pay cycle).

Home department name in the fixed section is extracted from the PPPHME EDB table. Utility Program PPTCTUTL is called with Title Code as input to extract Personnel Program Code, Title Name Abbreviation, Overtime Exemptions Code, Academic Appointment Basis, and Title Code Academic Pay Period. Utility program PPDOSUTL is called with Distribution DOS Code as input to extract DOS Time Code and DOS Pay Category.

Logic of the program PPI441:

The program performs the following functions for each employee in the sequential PAR file until no more employees are found.

- Reads the sequential PAR (PAYAUDIT file) as input by calling the utility program PPSEQPAR. Program PPSEQPAR reads the sequential PAR file to get all the types of records (01 – PCR, 10 – FIXED, 21 –HRS, 22 – ADJ, 23 – ERN, 24 – DED, 25 – WRK, and 26 – BAL) of an employee (in the CPWSSPAR format). It then formats all the records for the pay cycle and record type of an employee into a single record format (CPWSXPAR format) and returns this single record to the calling program.
- For each single record of an employee received in the CPWSXPAR format, PPI441 calls the PPDB2PAR to unpack the sequential record into DB2 record formats (CPWPATBL format). CPWPATBL has working storage layouts, which resembles the DB2 tables used to store these records (fixed portion WS-EUDTABLE in PPPEUD table format, earning portion WS-ERNTABLE in PPPERN table format, etc).
- Using the internal EUD and ERN row records returned from PPDB2PAR program in the DB2 layout formats, PPI441 program constructs an ERS interface record in the output layout specified in the new copy member CPWSXERS.
- PPI441 calls PPTCTUTL, PPDOSUT2 to perform code translations and to retrieve additional data elements. It also queries CTL table PPPHME directly to translate the home department code and retrieve the department name.
- Writes the new ERS interface record to a sequential output file with DD name PPI441. It also writes a control report in the end and an error report if the program found any errors while running.

Copy Members

CPFDXERS – New Copy Member

CPFDXERS will define the format of the ERS interface output file. The interface record length defined is 220.

CPWSXERS - New Copy Member

CPWSXERS will define the layout of the ERS interface record. The layout of the ERS extract file and how the fields are populated for this record is shown below:

PPS to ERS Interface File field Name	Description of Field Name	Data Extracted From the Following Table Field in copy member CPWPATBL.	Len	Start Pos
Fixed Portion – Populated from PPPEUD row format of CPWPATBL copy member.				
PAY-CYCLE-END-DATE	Cycle End Date	EUD-PAY-CYCLE-END-DATE	10	1
PAY-CYCLE-CODE	Cycle Code	EUD-PAY-CYCLE-CODE	2	11
EMPLOYEE-ID	Employee ID	EUD-EMPLOYEE-ID	9	13
RECORD-TYPE	Record Type EXP TRANSFER - 65 CANCELLATION - 70 OVERPAYMENT - 75 HAND DRAWN CHK - 80 R HAND DRAWN CHK - 82 CURR PR ACTIVITY - 85	EUD-RECORD-TYPE	2	22
PRI-GROSS-CTL	Primary Gross CTL	EUD-PRI-GROSS-CTL	3	24
ENTRY-SEQ-NO	Entry Sequence Number	ENTRY-SEQ-NO of ERN row	4	27
EMP-NAME	Employee Name	EUD-EMP-NAME	26	31
HOME-DEPT	Home Department Number	EUD-HOME-DEPT	6	57
HOME-DEPT-NAME	Home Dept Name	PPHME.HME-DEPT-NAME	30	63
Earning Portion – Populated from PPPERN row(s) format of CPWPATBL copy member.				
ERN-FAU	FAU	ERN-FAU of ERN row	30	93
ERN-TRANS-CODE	Trans Code	TRANCODE of ERN row	2	123
PAY-SCHED-CODE	Pay Schedule	PAY-SCHED-CODE of ERN row	1	125
RATE-TYPE-CODE	Pay Rate Type Code	RATE-TYPE-CODE of ERN row If '4', then move 'H' to RATE-TYPE-CODE. Otherwise move 'A'.	1	126
PAY-PER-END-DT	Pay Period End date	PAY-PER-END-DATE of ERN row	10	127
PAID-HOURS	Number of Hours Paid	PAID-HOURS of ERN row	7	137
PAID-AMOUNT	Total Amount Paid	PAID-AMT of ERN row	9	144
PAID-PERCENT	Percentage Paid for this earning	PAID-PERCENT of ERN row	7	153
PAYRATE	Pay Rate of the Distribution	DIST-PAYRATE of ERN row	11	160
TITLE-CODE	Title Code	TITLE-CODE of ERN row	4	171
TITLE-NAME	Name of the Title	PPTCTUTL call with TITLE-CODE	30	175
TC-PERSONL-PGM -CODE	Personnel Program Code	PPTCTUTL call with TITLE-CODE	1	205
TC-EXEMPT-CODE	Title Exemption Code	PPTCTUTL call with TITLE-CODE	1	206
TC-ACAD-APPT-BASIS	Title Academic Appt Basis	PPTCTUTL call with TITLE-CODE	1	207
TC-ACAD-PAY-PERIOD	Title Academic Pay Period	PPTCTUTL call with TITLE-CODE	1	208
DIST-DOS	DOS Code	DIST-DOS of ERN row	3	209
DOS-TIME-CODE	DOS Time Code	PPDOSUTL call with DIST-DOS	1	212
DOS-PAY-CATEGORY	DOS Pay Category	PPDOSUTL call with DIST-DOS	1	213
ERN-DERIVED-PCT	Earnings Derived Percentage	DERIVED-PCT of ERN row	7	214

JCL For PPI441

New JCL will be created for executing program PPI441.

Control Table Updates

System Messages Table (PPPMSG)

The following message will be added to this table:

MSG_NUMBER	→44101	MSG_REFERENCE	→0
MSG_SEVERITY	→4	MSG_TURNAROUND	→0
MSG_TEXT	→ INVALID PAYROLL AUDIT FILE		
MSG_BATCH_SEVERITY	→5	MSG_ONLIN_SEVERITY	→5

Bind Member

PPI441:

A plan bind will be created for the new program PPI441.

```
BIND -
  PLAN(PPI411) -
  MEMBER(PPI411, -
    PPMSSG2, -
    PPPRMUT2, -
    PPDOSUT2, -
    PPTCTUTL) -
  ACTION(REPLACE) -
  VALIDATE(RUN) -
  ISOLATION(CS) -
  FLAG(W) -
  ACQUIRE(USE) -
  RELEASE(COMMIT) -
  EXPLAIN(NO)
```

Attachments

Attachment A – Layout of the PPS to ERS Extract File

Attachment A: Layout of the PPS to ERS Extract File.

Effort Reporting System				
Copy member (CPWSXERS)				
Position	Length/ Format	Field Description	Data Element #	Comments
1 – 10	10 mm/dd/yyyy	Pay Cycle End Date	PAR0140	
11 – 12	2	Pay Cycle Code	PAR0190	
13 – 21	9	Employee ID	PAR0120	
22 – 23	2	Record Type	PAR0280	
24 – 26	3	PRI Gross Control	PAR0130	
27 – 30	4	Entry Sequence Number		Part of PAR0110, not defined as an individual element
31 – 56	26	Employee Name	PAR0571	
57 – 62	6	Home Department	PAR0720	
63 – 92	30	Home Department Name	HME1000	From Home Department Table
93 – 122	30	Earnings FAU	PAR3070 PAR3080 PAR3085 PAR3090 PAR3095 PAR3100	
123 – 124	2	Earnings Transaction Code	PAR3590	
125	1	Pay Schedule Code	PAR3140	"M" for Monthly "B" for Biweekly "S" for Semi-monthly
126	1	Rate Type Code	PAR3300	"H" or "A"
127 – 136	10 mm//dd/yyyy	Pay Period End Date	PAR3750	
137 – 143	7 999.99 or -999.99	Paid Hours	PAR3980	
144 – 152	9 99999.99 or -99999.99	Paid Amount	PAR3990	
153 – 159	7 9.9999 or -9.9999	Paid Percent	PAR4000	
160 – 170	11 99999.9999 or -99999.9999	Pay Rate	PAR3260	
171 – 174	4	Title Code	PAR3846	

Effort Reporting System				
Copy member (CPWSXERS)				
Position	Length/ Format	Field Description	Data Element #	Comments
175 – 204	30	Title Name (Abbreviation)	TCT1040	From Title Code Table
205	1	Title Code Personnel Program Code	TCT1050	From Title Code Table
206	1	Overtime Exemption Code in TCT	TCT3360	From Title Code Table
207	1	Title Code Academic Appointment Basis Code	TCT2180	From Title Code Table
208	1	Title Code Academic Pay Period	TCT2190	From Title Code Table
209 – 211	3	Distribution DOS	PAR3870	
212	1	DOS Time Code	DOS8500	From Description of Service Table
213	1	DOS Pay Category	DOS1600	From Description of Service Table
214 – 220	7	Earnings Derived Percent	PAR0343	