



F E D E R A L  
S T U D E N T A I D

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**FSA Modernization Partner**

NSLDS II Reengineering  
System Interface Detail Design:  
Central Processing System  
Post-Screening Results/Error File Interfaces  
I-CPS-2

DRAFT

Version 1.0

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## Document Control

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1.0	Initial Issue	09/30/2002	Troy Edwards

## 1 Central Processing System (CPS)

The interfaces between CPS and NSLDS II will be important components of FSA’s student aid eligibility process. After an applicant has completed the Free Application for Federal Student Aid (FAFSA) and it has been processed in CPS, Pre-Screening requests will be sent to NSLDS II. NSLDS II will process these requests and compile financial aid information currently stored within the database on that particular applicant. NSLDS II will also perform additional weekly post-screening eligibility checks and send results to CPS.

CPS will also send a file to NSLDS II daily that contains updated student demographic data.

The CPS interfaces include:

- Pre-Screening Applicant File (**See I-CPS-1 Document**)
- Pre-screening Applicant Results File (**See I-CPS-1 Document**)
- Post-Screening Results File (**Section 1.2**)
- Post-Screening Error File (**Section 1.3**)
- Student Demographic File (**See I-CPS-3 Document**)
- Student Demographic Error File (**See I-CPS-3 Document**)

### 1.1 System Specifics

#### 1.1.1 NSLDS II

<b>Item</b>	<b>Description</b>
Production Platform (Vendor/Product Name/Version)	IBM/ Cluster 1600 Server/ 4 p-Series 660 Model 6M1 4 FastT500 Arrays
Operating System (Vendor/Product Name/Version)	Unix/AIX/V 5.1 Parallel Systems Support Program (PSSP)
DBMS (Vendor/Product Name/Version)	IBM/DB2 Universal Database (UDB)/Enterprise Extended v. 7.2
Transmission Protocol	TCP/IP
Production System IP Address	TBD
Production System Location	Meriden, CT
Contracting Organization	Accenture – Modernization Partner
Developer Location	Modernization Partner Offices – Washington DC

### 1.1.2 CPS

<b>Item</b>	<b>Description</b>
Production Platform <i>(Vendor/Product Name/Version)</i>	IBM/Mainframe
Operating System <i>(Vendor/Product Name/Version)</i>	IBM/OS 390
DBMS <i>(Vendor/Product Name/Version)</i>	IBM/DB2
Transmission Protocol	TCP/IP
Production System IP Address	TBD
Production System Location	Meriden, CT (VDC)
Contracting Organization	NCS Pearson
Developer Location	Iowa City, Iowa

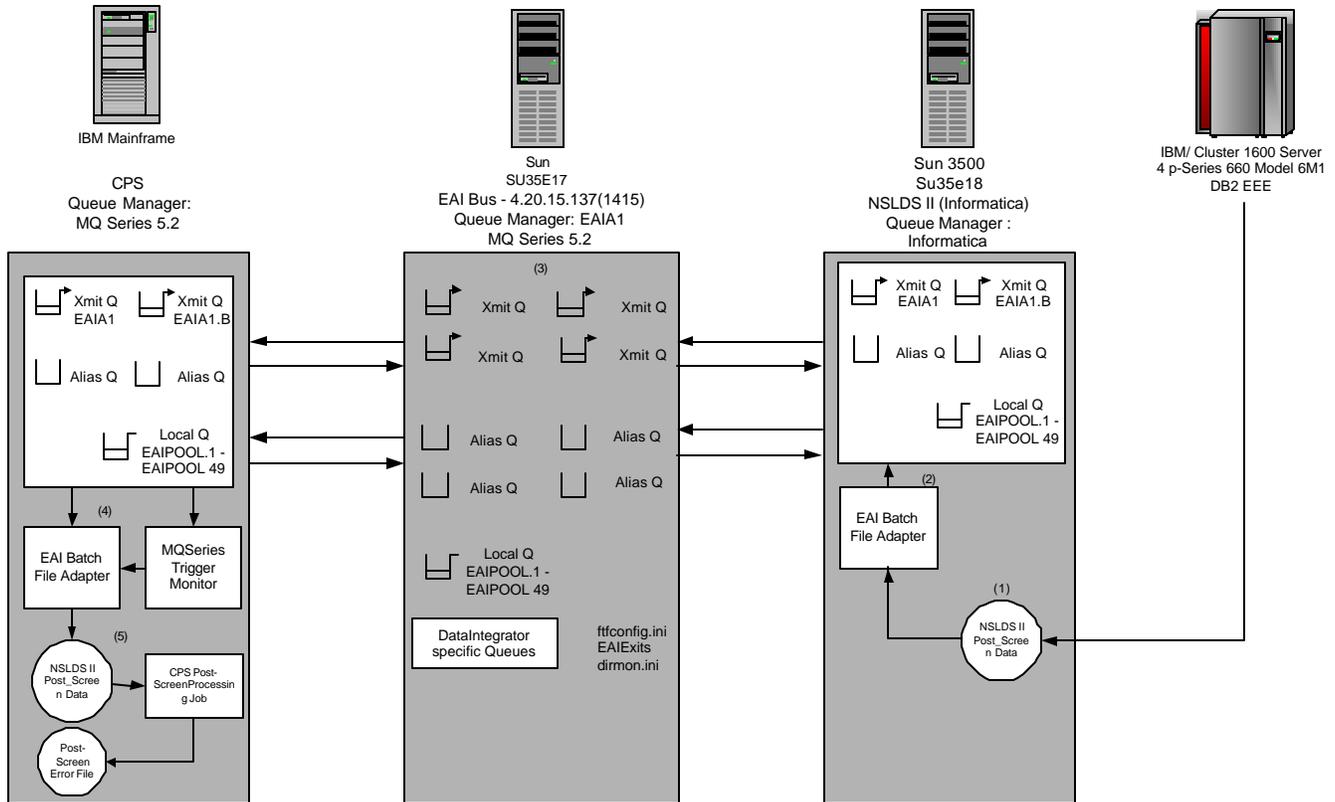
## 1.2 Post-Screening Results File

### 1.2.1 Interface Control Specifications

<b>Interface Name:</b>	Post-Screening Results
<b>Interface Type/Direction:</b>	Unidirectional, Batch Type
<b>Interface Short Description:</b>	<p>This document defines the processes utilized by CPS and NSLDS II to transport CPS Post-Screen data via the "EAI BUS".</p> <p>NSLDS II (Informatica) on a weekly basis performs an eligibility check that looks for financial aid changes for an applicant since the last time an Institution Student Information Report (ISIR) was produced for that applicant. A file is created containing all applicant financial aid history changes and is sent to CPS weekly in a flat file format. All post-screening results files will be sent through the EAI Bus. If errors are encountered by CPS during processing of the post-screening file, CPS will generate an error file and transmit it to NSLDS II also over the EAI Bus. Additional information can be found in the Post-Screen procedure document (P-Postscreen - 1).</p>
<b>Requesting Application: or Source Application:</b>	NSLDS II is the source of the Post-Screen data file
<b>Responding Application: or Destination Application:</b>	CPS receives the Post-Screen data file and responds with the Post-Screen Error File if necessary
<b>Detailed Technical Requirement References:</b>	5.026
<b>Interface Usage Frequency:</b>	Weekly

<b>Interface Usage Volume:</b>	7,100 Average, .8 MB Average File Size
<b>Output Media:</b>	Flat File
<b>Transmission Mechanism:</b>	EAI Bus

### 1.2.2 Interface Flow



### 1.2.3 Interface Flow Description

1. The NSLDS II system (Informatica) will create the Post-Screen Results File
2. The EAI Batch File Adapter will move the file to the EAI BUS
3. The EAI BUS will route the file to the NSLDS II server
4. The EAI Batch File Adapter will move the file to the CPS server
5. The CPS load job will process the Post-Screen Results file and write any errors to the Post-Screen Error File

### 1.2.4 Source System Functional Specifications

#	Responsibility
1	NSLDS II (Informatica) will extract the Post-Screen Data and save it as a flat file
2	The data extracted will be laid out as in section 1.2.8

	Each record will consist of: One Header Record One or More Detail Records One Trailer Record
4	An EAI batch file adapter will be supplied to initiate the file transfer from NSLDS II to CPS
5	NSLDS II will provide the EAI adaptor file transfer utility with the following input parameters: Input File Name – TBD

### 1.2.5 Destination System Functional Specifications

#	Responsibility
1	The EAI BUS will deliver the Post-Screening data file to the CPS server
2	The EAI Adaptor takes the following information as input: Queue manager name - TBD Queue name - TBD Sync point counter - TBD Output file name – TBD
3	CPS will process the file and generate an error file if necessary (format discussed in section 1.2)

### 1.2.6 Interface Assumptions

#	Assumption
1	MQSeries Queue Manager is installed / configured for the NSLDS II / CPS environment
2	The EAI architecture will be configured to support the transfer of data from NSLDS II to CPS
3	The file formats and logic is based on the 2002/2003 Award Year. Additional updates could be needed as requirements for the 2003/2004 Award Year are finalized
4	Detailed Post-Screen functionality is outlined in the Post-Screen Procedures document (P-Postscreen-1)

### 1.2.7 Error Messages

Errors Detailed in Error File Description in Section 1.3.7

1.2.8 File Layout

**Header Record Layout**

<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
Record Type	1 - 1	1	Char.	'0'	NA	NA
Header Title	2 - 30	29	Char.	"POSTSCREENING REQUEST HEADER"	NA	NA
Award Year	31 - 34	4	Char.	"2003" (For Award Year 2002-2003)	NA	NA
Submit Date	35 - 42	8	Char.	Date on which the post-screening requests are submitted. Format CCYMMDD.	NA	NA
Processing Date	43 - 50	8	Char.	Date on which post-screening processes the file. Format CCYMMDD.	NA	NA
Filler	51 - 112	62	Char.	Attribute to complete record length.	NA	NA

**Detail Record Layout**

<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
Record Type	1 - 1	1	Char.	'1'	NA	NA
Current SSN	2 - 10	9	Char.	Student's SSN.	NA	Prescreening_Ap plicant/Current_ SSN
First Name	11 - 19	9	Char.	Student's First Name.	NA	Prescreening_Ap plicant/First_Na me
Last Name	20 - 35	16	Char.	Student's Last Name.	NA	Prescreening_Ap plicant/Last_Na me
Current DOB	36 - 43	8	Char.	Student's Date of Birth. Format CCYYMMDD.	NA	Prescreening_Ap plicant/CPS_Dat e_of_Birth
Reason Code	44-45	2	Char	Code indicating reason for post-screening request	NA	Prescreening_Ap plicant/Reason_ Code
CPS Original SSN	46 - 54	9	Char.	Student's original SSN.	NA	Prescreening_Res ult /CPS_Original_S SN
CPS Name ID	55 - 56	2	Char.	First two characters of student's last name.	NA	Prescreening_Res ult /CPS_Name_ID

<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
CPS Transaction	57 – 58	2	Char.	CPS transaction.	NA	Prescreening_Result /CPS_Transaction
Filler	59 - 112	54	Char.	Attribute to complete record length.	NA	NA

**Trailer Record Layout**

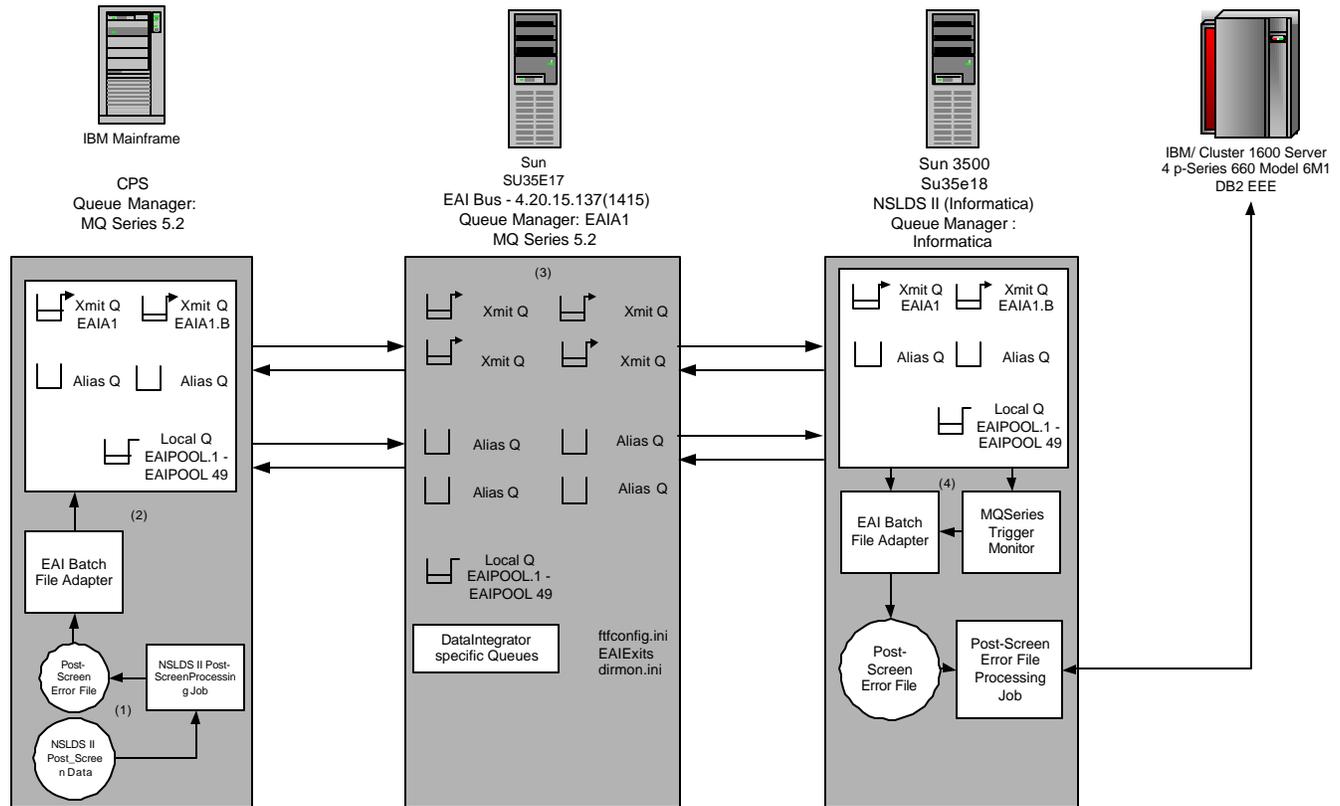
<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
Record Type	1 – 1	1	Char.	'9'	NA	NA
Trailer Title	2 – 31	30	Char.	Value 'POSTSCREENING REQUEST TRAILER'	NA	NA
Record Count	32 – 40	9	Num. 9(9)	Total count of detail records on this file. Does not include header and trailer.	NA	NA
Filler	41 – 112	72	Char.	Attribute to complete record length.	NA	NA

### 1.3 Post-Screening Error File

#### 1.3.1 Interface Control Specifications

<b>Interface Name:</b>	Post-Screening Error File
<b>Interface Type/Direction:</b>	Unidirectional, Batch Type
<b>Interface Short Description:</b>	<p>This document defines the processes utilized by CPS to transport the Post-Screen error file to NSLDS II via the EAI BUS.</p> <p>NSLDS II (Informatica) on a weekly basis performs an eligibility check that looks for financial aid changes for an applicant since the last time an Institution Student Information Report (ISIR) was produced for that applicant. A file is created containing all applicant financial aid history changes and is sent to CPS weekly in a flat file format. The Post-Screening Results files will be sent through the EAI BUS. If errors are encountered by CPS during processing of the post-screening file, CPS will generate an Error file and transmit it to NSLDS II also over the EAI BUS. Additional information can be found in the Post-Screen procedure document (P-Postscreen - 1).</p>
<b>Requesting Application: or Source Application:</b>	CPS is the source of the Post-Screen error file
<b>Responding Application: or Destination Application:</b>	NSLDS II receives the Post-Screen error file
<b>Detailed Technical Requirement References:</b>	5.027
<b>Interface Usage Frequency:</b>	Weekly
<b>Interface Usage Volume:</b>	Under ten records average per file
<b>Output Media:</b>	Flat File
<b>Transmission Mechanism:</b>	EAI Bus

### 1.3.2 Interface Flow



### 1.3.3 Interface Flow Description

1. The CPS system processes the NSLDS II Post-Screen File and creates the Post-Screen Error File
2. The EAI Batch File Adapter will move the file to the EAI BUS
3. The EAI BUS will route the file to the EAI server
4. The EAI Batch File Adapter will move the file to the NSLDS II server

Invocation of EAI Batch File (receive) adapter may invoke the NSLDS II Error File processing job

### 1.3.4 Source System Functional Specifications

#	Responsibility
1	CPS will process the NSLDS II Post-Screen data file and will produce the Post-Screen Error File and save it as a flat file.
2	The data extracted will be laid out as in section 1.3.8 Each record will consist of: One Header Record One or more Detail Record One Trailer Record
3	An EAI batch file adapter will be supplied to initiate the file transfer from CPS to NSLDS II
5	CPS will provide the EAI adaptor file transfer utility with the following input parameters:

	Input File Name - TBD
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### 1.3.5 Destination System Functional Specifications

#	Responsibility
1	The EAI BUS will deliver the Post-Screening Error file to the NSLDS II server
2	The EAI Adaptor takes the following information as input: Queue manager name - TBD Queue name - TBD Sync point counter - TBD Output file name - TBD

### 1.3.6 Interface Assumptions

#	Assumption
1	MQSeries Queue Manager is installed / configured for the NSLDS II / CPS environment
2	The EAI architecture will be configured to support the transfer of data from NSLDS II to CPS
3	The file formats and logic is based on the 2002/2003 Award Year. Additional updates could be needed as requirements for the 2003/2004 Award Year are finalized
4	Detailed Post-Screen functionality is outlined in the Post-Screen Procedures document (P-Postscreen-1)

### 1.3.7 Error Messages

Code	Message
1	No Match
2	Process Date Later than as of Date
3	More than 40 Transactions Already on Database
4	Record Format Problem

### 1.3.8 File Layout

#### Header Record Layout

Data Element	Field Position	Length	Type	Description	Edits	Mapping
Record Type	1-1	1	Char.	'0'	NA	NA
Header Title	2-27	26	Char.	"POSTSCREENING ERROR HEADER"	NA	NA
Header Award Year	28-31	4	Char.	"2003"	NA	NA
NSLDS Submit Date	32-39	8	Date	Date on which the request is submitted. Format is CCYYMMDD.	NA	NA
NSLDS Process Date	40-47	8	Date	Date on which Postscreening processing takes place. Format is CCYYMMDD.	NA	NA
Header Date	48-55	8	Date	Date on which CPS processed this file. Format is CCYYMMDD.	NA	NA
Filler	56-75	20	Char.	Filler	NA	NA

#### Detail Record Layout

Data Element	Field Position	Length	Type	Description	Edits	Mapping
Record Type	1-1	1	Char.	'2'	NA	NA
Current SSN	2-10	9	Char.	Student's SSN	NA	NA
First Name	11-19	9	Char.	Student's First Name	NA	NA

<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
Last Name	20-35	16	Char.	Student's Last Name	NA	NA
Date of Birth	36-43	8	Date	Student's Date of Birth. Format CCYYMMDD.	NA	NA
Original SSN	44-52	9	Char.	Student's Original SSN	NA	NA
Name ID	53-54	2	Char.	First Two Characters of Student's Last Name	NA	NA
Transaction	55-56	2	Char.	CPS Transaction	NA	NA
Error Reason	57-57	1	Char.	"1" = No Match "2" = Process Date Later than As of date "3" = More than 40 Transactions Already on Database "4" = Record Format Problem	Update reason code in appropriate table	Prescreen_Results/Postscreen_CPS_Reject_Code
Filler	58-75	18	Char.	Filler	NA	NA

**Trailer Record Layout**

<b>Data Element</b>	<b>Field Position</b>	<b>Length</b>	<b>Type</b>	<b>Description</b>	<b>Edits</b>	<b>Mapping</b>
Record Type	1 - 1	1	Char.	'9'	NA	NA
Trailer_Title	2 - 30	29	Char.	"POSTSCREENING ERROR TRAILER"	NA	NA
Record_Count	31 - 39	9	Num. 9(9)	Total count of error records on this file. Does not include header and trailer.	NA	NA
Filler	40 - 75	36	Char.	Attribute to complete record length.	NA	NA