

Student Financials

External File Load Process (Creating a group for posting from an external file)

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External File Load Process

The PeopleSoft delivered External Files process is used to import charge and credit transactions from external sources using a flat-file transfer process. The file needs to be placed on the secured FTP server (sophie) where it can be retrieved by the External Files process. The External File Layout setup table defines the location of data within the file. The External Files process is used to load the defined external files where they are assigned a group ID. This group may be reviewed before posting. The group is then posted using the Group Post process.

This document will explain the following steps needed to take your charges or credits from an external source or Excel spreadsheet into a group for posting:

- **SFTP** - secured FTP server (sophie) and how to request access
- **Data File Preparation** – from an external system or Excel
- **External File Layout** – how to define the data to PeopleSoft
- **External Files Process** – to load the data into a group
- **Scheduling the External Files Process**

SFTP (Sophie) - secured FTP server, how to request access, and WinSCP

In order for the PeopleSoft application to read an external file it needs to be placed on a secured FTP server (SFTP). The CND secured FTP server is `sophie.cnd.nodak.edu`. It may be referenced as `\\172.16.129.92\home\` or `\\sophie.cnd.nodak.edu\home\`. It is commonly called `sophie` or `SFTP`. This is the server where the Student Financials PeopleSoft outbound files are placed for parking, housing, and other systems.

You will need to request access to SFTP. Instructions and forms are located on the UND ITSS website at <http://www.und.nodak.edu/dept/itss/forms.html>. Under the HECN Forms header click the link to NDUS-HECN Public Forms. You will need to complete and submit both NDUS-CND-014 to request access and NDUS-CND-017 which is the NDUS Confidential Information Agreement for Employees.

NDUS-CND-014 requires you to identify the directories for which you are requesting access. Following is a list of some of the Student Financials directories:

- aerospace
- bitek
- bookstore
- conted
- famis
- housing
- parking
- sfinterface – this one may have subdirectories for your business unit
- stuhealth

Requested Directory on form NDUS-CND-014 would be one of the directories shown along with the Business Unit, and possibly a subdirectory. For example, Pharmacy department at NDSU would request: **sfinterface\ndsu1\pharmacy**. Business Office personnel may need to request multiple directories.

If you need a new directory added, a new subdirectory added, or the Business Unit added to a directory or subdirectory, request this service via a help ticket.

When requesting access, remember to also request the same access for the person(s) in your office who provides your backup.

Sophie is not intended to be a storage facility for files. You must archive or delete files when you are through with them.

After you receive your login to SFTP, you will need to download the software WinSCP. It is available from the ITSS software download page.

<http://www.und.nodak.edu/dept/undhelp/downloads/softwaredownload.htm>

To install WinSCP:

1. Save the software to the Desktop
2. Double click the icon to install it.
3. During the install, accept the defaults.

To use WinSCP:

1. Go to Start – All Programs – WinSCP3 – WinSCP
2. Host Name is sophie.cnd.nodak.edu
3. Port is 22
4. Protocol is SFTP (allow SCP fallback)
5. The local (PC) folders are located on the left side of the screen and the server folders are located on the right side of the screen.
6. Note - during the first connection you may receive a warning that the server's host key is not cached in the registry. Click YES to continue.
7. To transfer a file, just drag and drop it.

Data File Preparation

Specifications

- Must be a flat file with no separators or delimiters. The data is column specific.
- Debit and Credit transactions (item types) should not be on the same file – Group Post may not process the file if there is a mix of item type codes.
- A separate item type is needed for debit and credit transactions. A negative sign cannot be used.
- Emplids and External Orgs cannot be processed on the same file.
- Data should be summarized

Required fields:

- Emplid or External Org Id
 - Must be zero-filled
- Amount
 - 10 characters, zero-filled with decimal point (0000023.44)
 - No negative sign – determined by item type

Other fields (values can be defaulted on layout):

- Item Type
 - Right-justified, zero-filled
- Reference Nbr
- Accounting Date
 - current date recommended
 - may use transaction date, be careful with old dates and GL
- Due Date
 - Blank or run date recommended
- Account Type
- Term
 - Zero-filled
 - If defaulted, must remember to modify layout each term
- Description
- Origin

To process data from Excel spreadsheet into a group:

- Enter data into an Excel spreadsheet. The end result will be a flat file so the data must be in fixed format. Make sure the columns have the correct width and the fields with leading zeroes (emplid, item type, term) are defined as text so that the zeroes are retained.
 - a. Column width = size of field
 - b. To retain leading zeroes, Format cells = text
 - c. Amount fields, Format cells = Custom 0000000.00
 - d. Delete any header or trailer rows
- Save the spreadsheet as 'Formatted Text (space delimited)(* .prn).
- Open from Notepad to verify that there are no spaces in the row and that all columns match the file layout. Rename with .dat file extension.
- Copy to SFTP/sophie in the proper directory.

Data File Name

HECN external system interface naming standard (suggested only):

- 1 'X' for External file
- 2 'S' for student(person) or 'C' for company(external org)
- 3:4 2 character Business Unit (BS, DS, LR, MA, MB, MI, ND, NS, UN, VC, WS)
- 5:6 2 character system description (HS, PK, BK, BI, FA, etc.)
- 7:8 'DB' for debit file or 'CR' for credit file
- .dat extension

For example: Housing Student Charge file for WSC is XSWSHSDB.dat.

You may use whatever naming standards you wish but it does help to be consistent. However, the extension **must** be .dat or .DAT.

We do not put the date in the file name because scheduled jobs must specify the file name on the runcontrol and it would need to be modified each day. External system interfaces (housing, parking, etc.) write files with the same name to sophie each day.

Sophie is not for storing data. Once the file is processed, it should be deleted.

Sample File:

```
04318210000015.002200000048001130T8828
04829250000050.002200000048001130T8527
05744200000030.002200000048001130T8507
04528420000030.002200000048001130T8570
04478630000030.002200000048001130T9216
06041570000030.002200000048001130T8677
```

Columns 1-7	(7)	emplid
Columns 8-17	(10)	amount of transaction
Columns 18-29	(12)	item type
Columns 30-33	(4)	term
Columns 34-53	(20)	reference number

External File Layout

External File Layout is required to define each field on the data file to the External File load process. You may use an existing layout or create a new one.

See PeopleBooks for additional documentation on this process.

An example of the External File Layout follows:

The screenshot shows the Oracle External File Layout configuration page. The breadcrumb trail is: Favorites | Main Menu > Set Up SACR > Product Related > Student Financials > External File Layouts. The page title is "External File Layouts". The record type is "WSC01" with layout ID "EXAMPLE" and description "ExampleStudent Charge File". The short description is "ExampleStu". There are checkboxes for "Use Header Flag" and "Use Trailer Flag", both of which are unchecked. A "Trailer" field is present but empty. At the bottom, there are "Save", "Add", and "Update/Display" buttons. The breadcrumb trail at the bottom is: Record Types | Field Details 1 | Field Details 2 | Field Details 3 | Control Totals.

The screenshot shows the Oracle External File Layout configuration page, specifically the "Detail Field Use" section. The breadcrumb trail is: Favorites | Main Menu > Set Up SACR > Product Related > Student Financials > External File Layouts. The page title is "External File Layouts". The record type is "WSC01" with layout ID "EXAMPLE" and description "ExampleStudent Charge File". The "Detail Field Use" table is as follows:

Use	Field	Start	Length	Format	Default	Date	Prefix
<input checked="" type="checkbox"/>	Customer ID	1	7	Student Gp	NO		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Amount	8	10				
<input checked="" type="checkbox"/>	Item Type	18	12				
<input type="checkbox"/>	Reference Nbr						
<input type="checkbox"/>	Accounting Date				Today		
<input checked="" type="checkbox"/>	Due Date				Run		
<input type="checkbox"/>	Billing Date						
<input checked="" type="checkbox"/>	Account Type				MIS		

At the bottom, there are "Save", "Add", and "Update/Display" buttons. The breadcrumb trail at the bottom is: Record Types | Field Details 1 | Field Details 2 | Field Details 3 | Control Totals.

ORACLE®

Favorites | Main Menu > Set Up SACR > Product Related > Student Financials > External File Layouts

Home | Add to Favorites | Sign out

Record Types | Field Details 1 | **Field Details 2** | Field Details 3 | Control Totals

SetID: WSC01 Layout ID: EXAMPLE ExampleStudent Charge File

Detail Field Use (continued)

Use	Field	Start	Length	Default
<input checked="" type="checkbox"/>	Term	30	4	<input type="text"/>
<input type="checkbox"/>	Bank Tracer Nbr	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Charge Priority	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Description	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	Application Nbr	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Contract Nbr	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Contract ID	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Refund ID	<input type="text"/>	<input type="text"/>	

[Record Types](#) | [Field Details 1](#) | [Field Details 2](#) | [Field Details 3](#) | [Control Totals](#)

ORACLE®

Favorites | Main Menu > Set Up SACR > Product Related > Student Financials > External File Layouts

Home | Add to Favorites | Sign out

Record Types | Field Details 1 | Field Details 2 | **Field Details 3** | Control Totals

SetID: WSC01 Layout ID: EXAMPLE ExampleStudent Charge File

Detail Field Use (continued)

Use	Field	Start	Length	Default
<input type="checkbox"/>	Check Nbr	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Payment ID Nbr	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Reversal Indicator	<input type="text"/>	<input type="text"/>	

[Record Types](#) | [Field Details 1](#) | [Field Details 2](#) | [Field Details 3](#) | [Control Totals](#)

[Record Types](#) | [Field Details 1](#) | [Field Details 2](#) | [Field Details 3](#) | **Control Totals**

SetID: WSC01 Layout ID: EXAMPLE ExampleStudent Charge File

Control Field Use				
Use	Field	Start	Length	Default
<input type="checkbox"/>	Control Count	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	Control Amount	<input type="text"/>	<input type="text"/>	
	Origin:	<input type="text"/>	<input type="text"/>	BUSOF <input type="text"/>
	Currency Code:	<input type="text"/>	<input type="text"/>	USD <input type="text"/>

Control Field Location

Header

Trailer

Save

Add Update/Display

[Record Types](#) | [Field Details 1](#) | [Field Details 2](#) | [Field Details 3](#) | [Control Totals](#)

External File Load Process

Once the data file has been copied to SFTP/sophie and the external file layout is available defining the data file to PeopleSoft, you are ready to load the external file. The delivered PeopleSoft External File process is used for this purpose.

Procedures for External File Load process:

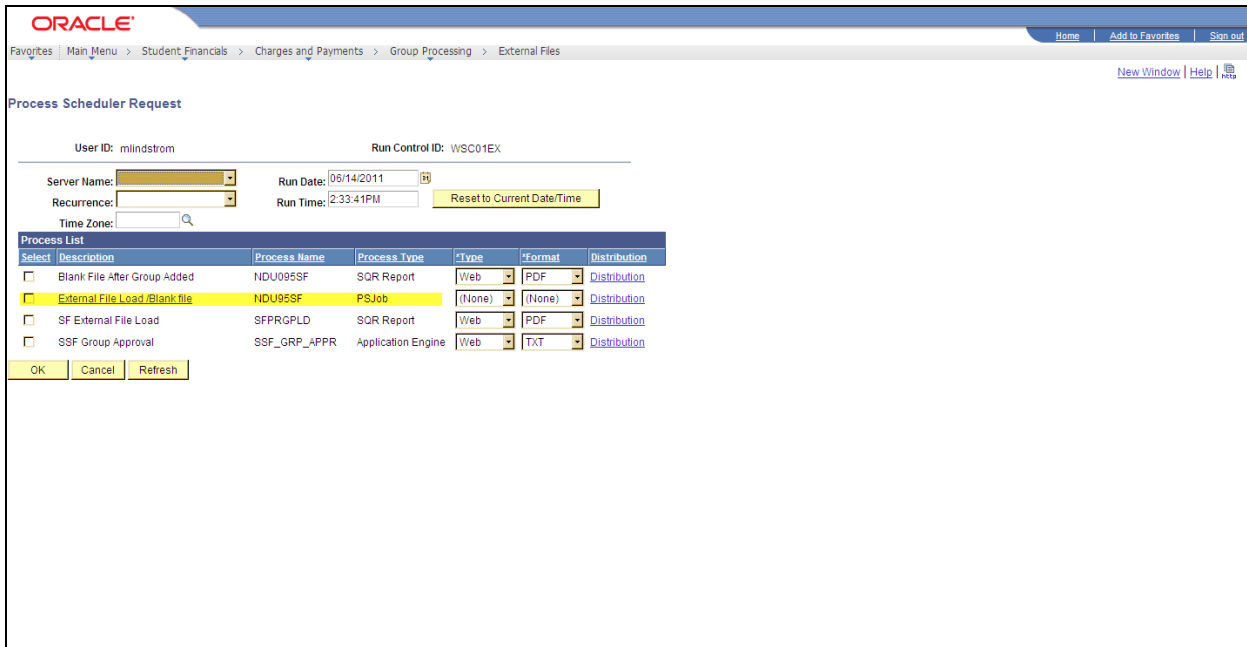
1. In the application, navigate to Main Menu > Student Financials > Charges and Payments > Group Processing > External Files.
2. Select your Run Control or create a new one.
3. Verify Run Control information:
 - o Business Unit
 - o File Name – do NOT specify the .dat file extension here, however it must be on the file
 - o File Directory
 - i. \\sophie.cnd.nodak.edu\home\ + directory – this is the new one
 - ii. \\172.16.129.92\home\ + directory (this IP address currently works but may be replaced by sophie.cnd.nodak.edu at a later date).
 - iii. If the entire file directory path doesn't fit in the File Directory field, you must put the remainder of it in the File Name field. These two fields are concatenated to retrieve the file. Make sure that there is a '\ ' between each of the subdirectories and the file name.
 - iv. The File Name and File Directory are not case sensitive.
 - v. If you are testing in another environment, the subdirectories are further defined as STG, TST or DEV. The Production environment is defaulted. In order to use a test file, you need to specify the appropriate subdirectory.
 - o Group Type – choose from dropdown
 - o Balance the Group – do not check
 - o Report Only – also prints a report if checked.

The screenshot displays the Oracle PeopleSoft 'External Files' configuration interface. At the top, the Oracle logo is visible on the left, and navigation links for 'Home', 'Add to Favorites', and 'Sign out' are on the right. The breadcrumb trail reads: 'Favourites | Main Menu > Student Financials > Charges and Payments > Group Processing > External Files'. Below the breadcrumb, there are links for 'New Window' and 'Help'. The main content area is titled 'External Files' and shows the 'Run Control ID' as 'WSC01EX'. There are three buttons: 'Report Manager', 'Process Monitor', and 'Run'. A 'Parameters' section contains the following fields:

- Business Unit: WSC01 (Williston State College) with a search icon and a 'Report Only' checkbox.
- File Name: wsc01STQXSWSHSDB
- File Directory: \\sophie.cnd.nodak.edu\home\housing
- Group Type: H with a search icon.
- Layout ID: EXAMPLE with a search icon.
- Balance the Group:
- Restrict to Invoice:

At the bottom of the parameters section, there are buttons for 'Save', 'Return to Search', 'Refresh', 'Add', and 'Update/Display'.

4. Press the Run button.
5. Select Process to run
 - External File Load/Blank File will load your file and blank it out so that it cannot be reprocessed. This is recommended, especially if you are scheduling the process on Process Scheduler.
 - SF External File Load will load your file and leave it intact.



6. Check Process monitor to see if Process completes with Success Status.
7. If not, check your file name and directory path combination to make sure it is correct. The .out file for the process SFPRGPLD will show the errors and list the file the program is trying to open. If it says 'Unable to open input file', check the file it is trying to open and match that to the subdirectory in sophie. Below is an example of the .out file showing an invalid path (home is missing between sophie and housing).

```

SFPRGPLD - Group Posting Process

c:\sadv\sql\

Program Began: 14-JUN-2011 01:37:33.000000_PM

Operator ID: mlindstrom

Run Control ID: WSC01EX

Business Unit: WSC01
File Name: \WSC01\stg\XSWSHSDB
Directory: \sophie.cnd.nodak.edu\housing

Unable to open input file - \sophie.cnd.nodak.edu\housing\WSC01\stg\XSWSHSDB.dat

Error on line 207:
(SQR 3301) Program stopped by user request.

SQR for PeopleSoft: Program Aborting.

```

8. When completed, return to the Run Control to submit additional jobs, if necessary. Do NOT submit the next job until the first one is completed. If you are using the same Run Control, it may pick up the wrong parameters.
9. Proceed to Group Processing to verify the group before posting. If using a new file layout, always verify that all the fields are defined and formatted correctly. You can do this by checking the Group Line Entry tab to see the individual transactions and verify that the student name is correct, the item type description matches, the amount is in the correct format, etc.
10. If the group is in error and has not been posted, you may delete it using the NDU Group Post Delete process found at NDU Applications > Student Financials > Process > NDU Group Post Delete. You will need your Group ID.
11. Post the group.

Scheduling the External File Process

To process an inbound external file on a regular schedule via Process Scheduler:

Initial setup:

1. The department contacts the Business Office with request to process an external file.
2. Determine fields on the file and what defaults will be used on the external file layout.
3. External File Layout template is created by the Business Office.
4. Requestor submits security form NDUS-CND-014 requesting access to the secure FTP server directory where files will be written.
5. Submit the request via a ticket that the ITSS Production Control area creates a job to run NDU95SF process for each file. You will need to provide them with all of the run control parameters such as the file name and file directory. They will also need to when the file will be available for processing and the frequency of the run (days of the week). They will set the job up to be automatically submitted to create the group based on the information provided. A second process in the job will blank out the input file to prevent it from accidentally being processed multiple times in the event a new file does not overwrite it.

Ongoing:

6. The department or system creates the file and places it on sophie according to schedule.
7. Process scheduler runs the scheduled External Load process to create the group and blank out the file.
8. Business Office reconciles the group and posts it.
9. Reconciliation with external source before or after post depending on information available.