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Volume 5c SCF Interface Software Update Document Version 200803.0

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INTRODUCTION

This document outlines modifications made to the SCF Interface Software between versions. This document is to serve as a companion to the following documents:

- *SCF Interface Software Installation Guide*
- *SCF Interface Software Detailed Design Document*
- *SCF Interface Software Operator's Guide for rSCF*
- *SCF Interface Software Operator's Guide for mSCF*
- *I-SIPS Interface Software Operator's Guide for ISF*
- *I-SIPS Interface Software Operator's Guide for UTCSR*

SUMMARY OF CHANGES SINCE VERSION 200108.0

1. The names of the following scripts have been changed:

- files_to_mscf.pl has been changed to pull_from_remote.pl
- mscf_files_to_subdir.pl has been changed to files_to_subdir_from_pull.pl
- files_to_rscf.pl has been changed to push_to_remote.pl
- rscf_files_to_subdir.pl has been changed to files_to_subdir_from_push.pl
- send_mail_scf.pm has been changed to send_mail_local.pm

2. The following environmental variables have been changed:

- ISIPS_OUTGOING has been changed to ISIPS_OUTPUT
- ISIPS_INGEST has been changed to ISIPS_INPUT
- LOCAL_INGEST has been changed to LOCAL_INPUT
- MSCF_HOST has been changed to REMOTE_HOST
- MSCF_INGEST has been changed to REMOTE_INPUT
- RSCF_INGEST has been changed to LOCAL_INPUT

The following environmental variables have been added:

- export LOCAL_NAME=*local site name*
- export LOCAL_HOST=*local hostname*

3. The following changes have been made to the script push_to_remote.pl:

- Environmental variable REMOTE_INPUT is no longer used
- Remote input cache has been added as an input argument

4. The following changes have been made to the script files_to_subdir_from_push.pl:

- Subroutine get_subdir.pm is now called

5. The following changes have been made to the script get_subdir.pm:

- Environmental variable LOCAL_NAME has been added
- Initial subdirectory has been added as an input argument

6. Site names have been designated for each GLAS site. They are I-SIPS, mSCF, ALT, LIDAR, WFF, MIT, OSU, UCSD, UTCSR, UW, and rSCF. Refer to the *SCF Interface Software Installation Guide* for definitions of these names. These site names will be used in the PDR and PAN file names, the input and output cache names on the I-SIPS and mSCF, and in documentation.

7. The following keywords have been added to the PDR:

- DISTRIBUTION_ID
- DATA_VERSION
- DATA_TYPE

- FILE_TYPE
- START_TIME
- END_TIME
- ORIGINATING_SYSTEM
- NODE_NAME
- DIRECTORY_ID

8. The following keywords have been added to the PDR Input File:

- DISTRIBUTION_ID
- DATA_VERSION
- DATA_TYPE
- FILE_TYPE
- START_TIME
- END_TIME

SUMMARY OF CHANGES SINCE VERSION 200110.0

1. Added "Error during scp" (exit 30) to pull_from_remote.pl
2. Script files_to_subdir_from_pull.pl sends email if PDR indicates that filenum=0
3. Script mscf_files_to_subdir_from_pull.pl added to move files pulled from the I-SIPS to the appropriate subdirectory on the mSCF
4. Script read_fn_file.pl added to read FN files and create XFR files when the number of files in the distribution matches the expected number
5. Added "Error during scp" (exit 30) to push_to_remote.pl
6. Added "Error during scp" (exit 30) to files_to_subdir_from_push.pl
7. read_pdr_files.pm:
 - The variables \$dist_part and \$proc_type have been added to the output
 - The output variable name \$subdir has been changed to old_subdir
8. Script create_pdr_input.pm added to create PDR input file and PDR for one file
9. get_subdir.pm: Request ID added to input argument list
10. create_pdr.pl: New "PDR_TYPE" keyword added indicating that the PDR is accompanied by files in a "DISTRIBUTION".

SUMMARY OF CHANGES SINCE VERSION 200112.0

1. Added data_type and file_type to argument list in create_pdr_input.pm
2. read_pdr_files.pm: The variable \$time_stamp has been added to the global output
3. create_pdr.pl: Removed "PDR_TYPE" keyword since the request PDR has been replaced by the Product Order Request (POR).
4. verify_pdr.pm: The variable \$dist_id has been added to the global output
5. The following files now use the environmental variable LOCAL_NAME:

- pull_from_remote.pl
- files_to_subdir_from_pull.pl
- mscf_files_to_subdir_from_pull.pl
- read_fn_file.pl
- create_pdr.pl
- push_to_remote.pl
- files_to_subdir_from_push.pl
- check_for_pan.pl
- read_pdr_files.pm
- verify_pdr.pm
- create_pan.pm
- create_pdr_input.pm

6. Added new routine update_error_table.pm that updates the ERROR database table on MSCF with error message. The following scripts call it:

- pull_from_remote.pl
- files_to_subdir_from_pull.pl
- mscf_files_to_subdir_from_pull.pl
- read_fn_file.pl
- create_pdr.pl
- push_to_remote.pl
- files_to_subdir_from_push.pl
- check_for_pan.pl
- read_pdr_files.pm
- verify_pdr.pm
- create_pan.pm
- create_pdr_input.pm

7. Metadata and validation & verification files are not given to the mSCF from the I-SIPS.
8. The run_scripts.ksh script invoked by the cron job appends or overwrites a file, /SCF/cron.log.### where ### is 001 to 010, every time it runs. Starting with cron.log.001, the file is appended until it reaches a certain size, then the next file, cron.log.002, is written. If the file does not exist it is created, otherwise it is overwritten. In this way, there is no need for cleanup since the log files just overwrite themselves and

since there are ten files, error messages are kept for a while in case problem troubleshooting is necessary.

9. A log file is included with each batch of files delivered to the rSCF. It is put into /SCF/product_sets/logs. The name of the log file includes the name of the user and the date the file is created. It contains the parameters of the request and any errors that may have occurred during processing. A log file will be received for a request even if no files are received and will indicate why no files were processed (i.e. no data were found matching the request parameters).
10. Added new routine send_mail_isips.pm that sends email to I-SIPS personnel. The following scripts call it:

pull_from_remote.pl

SUMMARY OF CHANGES SINCE VERSION 200205.0

1. The following files now use the environmental variable CRONDATE:

pull_from_remote.pl
files_to_subdir_from_pull.pl
mscf_files_to_subdir_from_pull.pl
read_fn_file.pl
push_to_remote.pl
files_to_subdir_from_push.pl
check_for_pan.pl
read_pdr_files.pm
verify_pdr.pm
create_pan.pm
create_pdr_input.pm

2. Added new routine pull_anc06_from_remote.pl that transfers anc06summary.txt file from I-SIPS to mSCF.
3. Added new routine pull_pan_from_remote.pl that pulls PAN files from a remote system.
4. Added new routine read_keyword.pm that reads a header line and parses the value from the keyword. The following scripts call it:

mscf_files_to_subdir_from_pull.pl
create_pdr.pl
read_pdr_files.pm
verify_pdr.pm

5. Added new routine get_cksum.pm that gets the checksum and file size of the input file. The following scripts call it:

mscf_files_to_subdir_from_pull.pl
files_to_subdir_from_pull.pl
files_to_subdir_from_push.pl
create_pdr.pl
verify_pdr.pm

6. Added new routine update_rev_file.pl that overwrites rev file with new ANC28 file and copies new rev file to remote sites.
7. Added new routine scp_rev_files.ksh that copies new rev file to remote sites. The following scripts call it:

update_rev_file.pl

8. Added new routine untar.ksh that untars a tar file. The following scripts call it:

files_to_subdir_from_push.pl

9. Added new routine `hdf_to_png.ksh` that converts an HDF file into one or more PNG files. The following scripts call it:

`files_to_subdir_from push.pl`

10. Added the National Snow and Ice Data Center (NSIDC) as another rSCF.

SUMMARY OF CHANGES SINCE VERSION 200208.0

1. For UTCSR, the host name changed from fermi.csr.utexas.edu to amundsen.csr.utexas.edu
2. Added an “Error Email Recipients” section to the following documents:
 - *SCF Interface Software Operator's Guide for rSCF*
 - *SCF Interface Software Operator's Guide for mSCF*
 - *I-SIPS Interface Software Operator's Guide for ISF*
 - *I-SIPS Interface Software Operator's Guide for UTCSR*

SUMMARY OF CHANGES SINCE VERSION 200212.0

1. For UTCSR, apid1984 (PRAP from EDOS) has been added to list of files received from the I-SIPS.
2. The following files now use the environmental variable LOCAL_OUTPUT:

pull_from_remote.pl
files_to_subdir_from_push.pl
3. For UTCSR and ISF, data types have been included in list of files received from the I-SIPS.

SUMMARY OF CHANGES SINCE VERSION 200302.0

1. The following files now use the optional environmental variable TEST=yes:

mscf_files_to_subdir_from pull.pl

2. The perl scripts should be placed in a versioned subdirectory under the home directory (i.e. ~ /src/perl/200304.0). The scripts are then linked to the ~ /src/perl/ops directory and run from there. Korn shell scripts only reside in ~ /src/perl/ops. This path is one of the environmental variables used to run the scripts.
3. Korn shell scripts transferring data between the I-SIPS and the mSCF have been separated out and renamed into the following:

run_scripts_push_isips.ksh
run_scripts_pull_isips.ksh
run_scripts_mscf.ksh

SUMMARY OF CHANGES SINCE VERSION 200304.0

1. File sizes now compared with PDR value rather than file checksums in the following files:

mscf_files_to_subdir_from_pull.pl
files_to_subdir_from_pull.pl
files_to_subdir_from_push.pl
verify_pdr.pm

2. Added the output arguments \$filesize and \$dir_id to read_pdr_file.pm
3. Changed output argument \$filesize to \$fsize in get_cksum.pm
4. Added new routine pull_from_remote_lock.pl that creates a lock file when pulling data. It uses the environmental variable LOCK_FILE.
5. Added optional input arguments \$use_dir and \$data_dir to verify_pdr.pm
6. New assumption in pull_from_remote_lock.pl:
 - Uses DIRECTORY_ID keyword in PDR as download directory for all data files. Default is \$input_dir where PDR is.
 - Special request data are downloaded to requestID.dist_part subdirectory
7. New assumption in mscf_files_to_subdir_from_pull.pl:
 - Special request data are in requestID.dist_part subdirectory

SUMMARY OF CHANGES SINCE VERSION 200306.0

1. Added new routine create_pdr_gzip.pl that gzips a file if it is > 500 MB.
2. Modified files_to_subdir_from_push.pl to gunzip .gz files
3. In mscf_files_to_subdir_from_pull.pl if the PDR indicates that the number of files is 0, the PDR is no longer left in the ingest directory, but moved to the special requests directory and an FN file is created.
4. The following files now use the new environmental variable SCP_TRY_X:

pull_from_remote.pl
pull_from_remote_lock.pl
push_to_remote.pl

so that if an scp fails, it is tried SCP_TRY_X number of times before erroring out.

5. Added the environmental variable REV_FILE_NAME to the routine:

mscf_files_to_subdir_from_pull.pl

6. The following files now use the new environmental variable REV_FILE_PATH:

mscf_files_to_subdir_from_pull.pl

7. The environmental variable READ_REV has been changed to BIN_PATH in the following routines:

update_rev_file.pl
mscf_files_to_subdir_from_pull.pl

8. Data date (\$dt) has been added as an argument to create_pdr_input.pm
9. \$data_date had been added as an optional command line argument to create_pdr.pl
10. Added new routine create_rev_text.pm that reads the rev file and creates a text file for SCF website. Called by the following routines:

update_rev_file.pl

11. Added new routine scp_file_web.ksh that copies a file to SCFWEB and SCFWEB2 only. Called by the following routines:

update_rev_file.pl

12. The following files now use the new environmental variable WEB_PATH:

update_rev_file.pl

13. \$op_arg had been added as an optional command line argument to create_pdr_gzip.pl.
This is an optional argument that if available will be added to the PDR file name.

SUMMARY OF CHANGES SINCE VERSION 200308.0

1. Added new routine `update_dist_file_table.pm` that updates the `DISTRIBUTION_FILES` database table. Called by the following routines:

`mscf_files_to_subdir_from_pull.pl`

2. Removed argument `$local_name` to call to `hdf_to_png.ksh`. Script now calls IDL routine `hdf2png.pro` to convert files from HDF to PNG rather than using `image_convert`.

3. Removed call to `hdf_to_png.ksh` from `files_to_subdir_from_push.pl`

4. Added IDL routine `hdf2png.pro`. The following scripts call it:

`hdf_to_png.ksh`

5. Added new script `push_to_remote_lock.pl` that that creates a lock file when pushing data. It uses the environmental variable `LOCK_FILE`.

6. The following files now use the new environmental variable `DEL_FILE`:

`mscf_files_to_subdir_from_pull.pl`

SUMMARY OF CHANGES SINCE VERSION 200401.0

1. Added input argument subject_line to send_mail_local.pm
2. Added input argument subject_line to send_mail_isips.pm
3. Added new script send_mail_user.pl that that sends mail to input email address

SUMMARY OF CHANGES SINCE VERSION 200404.0

1. The following files now use the new environmental variable CRONLOG in run_scripts.ksh:
 - files_to_subdir_from_push.pl
 - pull_from_remote_lock.pl
 - push_to_remote_lock.pl
 - pull_pan_from_remote.pl

SUMMARY OF CHANGES SINCE VERSION 200610.0

1. GZIP_DIR has been added as an environmental variable to create_pdr_gzip.pl.

SUMMARY OF CHANGES SINCE VERSION 200708.0

1. DEL_HEAD_FILE and DELETED_DATA_PATH have been added as environmental variables to mscf_files_to_subdir_from_pull.pl.