

## **Pre/Post Functionality for Multi-Threadable Programs [prepost]**

### **Design Overview**

The Pre/Post module facilitates multi-threading by allowing general system administration functions (such as table deletions or mass updates) to be completed after all threads of a particular program have been processed. A brief description of all pre- or post-processing functions included in this program can be found in the Function-Level Description section.

This program will take three parameters: username/password to log on to Oracle, a program before or after which this script must run and an indicator telling whether the script is a pre or post function. It will act as a shell script for running all pre-program and post-program updates and purges (the logic was removed from the programs themselves to enable multi-threading & restart/recovery).

For example, to run the pre-program script for the ccext program, the following should be entered on the command line:

```
prepost user/password rpl pre
```

Tables affected: (this is not complete but includes mods made for SIR 36126)

It is possible that the users may be in the system at any given time. An indicator called Batch with Online Users indicator (btch\_w\_usr\_ind) has been created to determine if the environment is as such. If the indicator is set to 'Y', users can be online at any time. Some pre and post functions were modified so that these will only be performed based on the value of the btch\_w\_usr\_ind.

TABLE	SELECT	INSERT	UPDATE	INDEX	DELETE	TRUNCATE	TRIGGER
alloc_detail						No	Yes
alloc_detail						No	Yes
alloc_header						No	Yes
alloc_header						No	Yes
class_sales_forecast				Yes		Yes	
class_sales_forecast				Yes		Yes	
class_stock_on_hand				Yes		Yes	
cost_change_trigger_temp				Yes		Yes	
cost_susp	No	No	No		Yes		
cost_susp_head	No	No	Yes		No		
deal_sku_temp				Yes		Yes	
dept_sales_forecast				Yes		Yes	
dept_stock_on_hand				Yes		Yes	
edi_ord_temp				Yes		Yes	
fif_receiving				Yes		Yes	
forecast_rebuild				Yes		Yes	
hist_rebuild_mask				Yes		Yes	
if_tran_data				Yes		Yes	
item_forecast				Yes		Yes	
mc_rejections				Yes		Yes	
mod_order_item_hts	No	No	No	Yes	Yes	Yes	
on_order_temp	No	No	No	Yes	Yes	Yes	
ord_missed				Yes		Yes	
ord_temp				Yes		Yes	
ordhead	No	No	Yes		No	No	Yes
ordloc						No	Yes
ordsku						No	Yes
period	Yes	No	No		No		
pos_mods	No	No	No	Yes	Yes	Yes	
price_conflict				Yes		Yes	
reclass_item				Yes		Yes	
reclass_trigger_temp				Yes		Yes	
repl_attr_update_item				Yes		Yes	
repl_attr_update_loc				Yes		Yes	
repl_item_loc_updates				Yes		Yes	
req	Yes	No	No		Yes		
reqdetail	No	No	No		Yes		
sec_user_loc_matrix				Yes		Yes	
sec_user_prod_matrix				Yes		Yes	
sec_user_zone_matrix				Yes		Yes	
sim_expl				Yes		Yes	
subclass_sales_forecast				Yes		Yes	
subclass_stock_on_hand				Yes		Yes	
system_options	Yes	No	Yes	No	No		
system_variables	Yes	No	Yes	No	No		
tif_explode				Yes		Yes	

### **Scheduling Constraints**

Processing Cycle:	PHASE ALL (daily)
Scheduling Diagram:	See scheduling flow for description of all pre-post requirements in the daily run.
Pre-Processing:	N/A
Post-Processing:	N/A
Threading Scheme:	N/A (single threaded)

### **Restart Recovery**

N/A

### **Program Flow**

N/A

### **Shared Modules**

N/A

### **Function Level Description**

init():

- Check SYSTEM\_OPTIONS.btch\_w\_usr\_ind.
- Fetch the value of btch\_w\_usr\_ind to a global variable.
- If the field's value is 'Y', then users can be online at any time.

### ***Functions to be used by the individual program functions:***

modify\_indexes():

- Allows indexes to be disabled or rebuilt before and/or after the action that affects them. The individual program passes in the table name and mode (what action to take "disable" or "rebuild" ) and performs that action. The owner of the index is determined using the synonym\_trace function in the library oracle.pc.

modify\_partition\_indexes():

- Called by the modify\_indexes function to determine if the indexes that need modified are partitioned indexes. If so, then the statement is modified to take that into account to accomplish the action. Index\_owner, index\_name and mode is passed to this function. Nothing is passed back out.

truncate\_table():

- The table\_name is passed to this function so that it can be truncated. The owner of the table is determined by using the synonym\_trace function in the library oracle.pc.

modify\_trigger():

- Allows triggers to be disabled or enabled before or after certain processes. The table\_name, trigger name and mode( "DISABLE" or "ENABLE") are passed to this function and the appropriate action is taken. No values are passed back to the calling function.

update\_btch\_runtime\_ind():

- Updates the btch\_runtime\_ind on the system\_options table to 'Y' once the batch cycle has begun and to 'N' after the batch cycle has run if the btch\_w\_usr\_ind on the same table is 'Y'.

policy\_enable():

- Enables or disables policies if btch\_w\_usr\_ind is set to 'N'.

truncate\_user\_sec\_table()

- Checks for the value of the btch\_w\_usr\_ind field from the SYSTEM\_OPTIONS table.
- If the field's value is 'N' and the pre function is run, the function:
  - Truncates the user security tables and prepare for the user product security rebuild, user location security rebuild or user zone security rebuild.
  - Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- If the field's value is 'Y' and the post function is run, the function:
  - Switches the on-line application view to the sec\_user\_prod\_matrix, sec\_user\_loc\_matrix and sec\_user\_zone\_matrix tables on which user security were rebuilt.
  - Truncates the user security tables which are not the current on-line application view.
- This is a function used to run the sprdrld, slocrbld and szonrbld pre functions that will truncate the sec\_user\_prod\_matrix, sec\_user\_loc\_matrix and sec\_user\_zone\_matrix tables respectively.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

update\_security\_indicator():

- reset the update\_sec\_XXX\_ind to 'N' on the system\_variables table where XXX represents prd, loc or zon if it is user product security rebuild, user location security rebuild or user zone security rebuild, respectively. Running the sprdrld, slocrbld and szonrbld post programs will use this function.

table\_view\_check():

- Returns the permanent table that is set as the current table view.

create\_table\_view():

- Changes the current table view with the permanent table passed as an argument to the function.

### ***Individual Program Functions***

salweek\_post():

- Updates the last end-of-week date on the SYSTEM\_VARIABLES table to today's date after all weekly stock ledger data has been processed.

salmth\_post():

- Updates the following SYSTEM\_VARIABLES columns to reflect the current date's values after all monthly stock ledger data has been processed:
  - last\_eom\_half\_no
  - last\_eom\_month\_no
  - last\_eom\_date
  - next\_eom\_date
  - last\_eom\_start\_half
  - last\_eom\_end\_half
  - last\_eom\_start\_month
  - last\_eom\_mid\_month
  - last\_eom\_next\_half\_no
  - last\_eom\_day
  - last\_eom\_week
  - last\_eom\_month
  - last\_eom\_year
  - last\_eom\_week\_in\_half

rpl\_pre():

- Truncates the following tables before replenishment extracts are performed.
  - ORD\_TEMP
  - ORD\_MISSED
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

pcovrl\_pre():

- Truncates the PRICE\_CONFLICT table before new conflicts are found and written.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

rplatupd\_pre():

- Truncates the MC\_REJECTIONS table so that it is free to hold new mass change rejections.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

rilmaint\_post():

- Truncates the REPL\_ITEM\_LOC\_UPDATES table after these records are processed so the table is free to hold new updates.

- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

rplatupd\_post():

- Truncates the holding tables REPL\_ATTR\_UPDATE\_ITEM and REPL\_ATTR\_UPDATE\_LOC after their records have been processed.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

sccext\_post():

- Updates all processed supplier cost change record statuses to 'Extracted' if btch\_w\_usr\_ind is set to 'N'.

rplbld\_pre():

- Updates replenishment order origins from 'Current System Generated' to 'Past System Generated' before processing. Enables the following triggers:  
RMS\_TABLE\_OHE\_AIUR  
RMS\_COL\_OHE\_STATUS\_AUR  
RMS\_TABLE\_ALH\_AIDR  
RMS\_TABLE\_OSK\_AIUR  
RMS\_COL\_ALD\_QA\_AUR  
RMS\_TABLE\_ALD\_AIUDR  
RMS\_TABLE\_OLO\_AUR  
RMS\_COL\_OLO\_QTYORDERED\_AUR

rplapprv\_post():

- Disables the following triggers:  
RMS\_TABLE\_OHE\_AIUR  
RMS\_COL\_OHE\_STATUS\_AUR  
RMS\_TABLE\_ALH\_AIDR  
RMS\_TABLE\_OSK\_AIUR  
RMS\_COL\_ALD\_QA\_AUR  
RMS\_TABLE\_ALD\_AIUDR  
RMS\_TABLE\_OLO\_AUR  
RMS\_COL\_OLO\_QTYORDERED\_AUR

hstbld\_post():

- Truncates the holding table MASK\_REBUILD after building history records.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

poscdnld\_post():

- Clears the config\_status and loc\_grp\_status in POS\_LOC\_GRP. Sets all values of extract\_req\_ind to 'N'.
- Clears the status column in POS\_MERCH\_CRITERIA.

- Sets the status\_ind column in POS\_STORE to 'N'.

posdnld\_post():

- If btch\_w\_usr\_ind is set to 'N':
  - Clears the POS\_MODS table after all records have been downloaded to the POS.
  - Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
  - The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

edidlprd\_post():

**THIS FUNCTION SHOULD BE RUN AFTER THE edidlprd PROGRAM!**

It needs to be run as follows from the command line:

prepost username/password **edidlprd** post

- Deletes old records from the EDI\_DAILY\_SALES table after they have been processed.

fcstrbld\_post():

- Truncates the holding table FORECAST\_REBUILD after all records have been processed.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

vrplbld\_post():

- Truncates the EDI\_ORD\_TEMP table after all replenishment orders have been build from the data held there.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

cntrordb\_post():

- Set the last\_cont\_order\_date on system\_variables to vdate.

fifgldn1\_post()

- If Oracle Financials is being used, delete everything from the fif\_receiving table and repopulate it from the if\_tran\_data table
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

fsadnld\_post():

- Updates the load\_sales\_ind to 'N' for all records on the appropriate domain table – domain\_dept, domain\_class, or domain\_subclass, where system\_options.domain\_level = 'D', 'C', or 'S', respectively.

whstrasg\_post():

- deletes all warehouse store assignment records from the warehouse store assignment table if the assignment date (wh\_store\_assign.assign\_date) is less than or equal to the current date (period.vdate) minus the warehouse store assignment history days (system\_options.wh\_store\_assign\_hist\_days).

costcalc\_post ()

- If btch\_w\_usr\_ind is set to 'N', truncate the permanent table that the deal\_sku\_temp view is pointing to.
- If btch\_w\_usr\_ind is set to 'Y', truncate the permanent table that the deal\_sku\_temp view is not pointing to.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.
- Truncates the item\_loc table.

tifposdn\_post()

- If btch\_w\_usr\_ind is set to 'N':
  - Truncate tif\_explode table.
  - Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
  - The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.
  - Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.

htsupld\_pre()

- Truncates the mod\_order\_item\_hts table so that reports will be correct and not include data from previous runs of htsupld.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

onordext\_pre():

- Truncates the on\_order\_temp table.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

reclsldly\_pre()

- If btch\_w\_usr\_ind is set to 'N':
  - Disables the trigger RMS\_TABLE\_RCS\_BIDR on the reclass\_item table.
  - The user running this program for this function must have been granted the 'alter any trigger' system privilege, or be the owning schema user.

reclsldly\_post()

- If btch\_w\_usr\_ind is set to 'N':



- Enables the trigger RMS\_TABLE\_RCS\_BIDR on the reclass\_item table.
- The user running this program for this function must have been granted the 'alter any trigger' system privilege, or be the owning schema user.

#### ibcalc\_pre()

- Updates the status on ib\_results to 'U'npocessed where the status = 'W'orksheet so after ibcalc is run, multiple records in 'W'orksheet status will not exist for each item/location.

#### fcstprg\_pre()

- Disables any indexes prior to the truncation on following tables. This is run BEFORE the fcstprg.pc program on **PARTITIONED TABLES** only.
  - ITEM\_FORECAST
  - DEPT\_SALES\_FORECAST
  - CLASS\_SALES\_FORECAST
  - SUBCLASS\_SALES\_FORECAST
- The user running this program for this function must have been granted the 'alter any index' system privilege, or be the owning schema user.

#### fcstprg\_post()

- Rebuilds the indexes following truncation of following tables.
  - ITEM\_FORECAST
  - DEPT\_SALES\_FORECAST
  - CLASS\_SALES\_FORECAST
  - SUBCLASS\_SALES\_FORECAST
- The user running this program for this function must have been granted the 'alter any index' system privilege, or be the owning schema user.

#### Sohrlup\_pre()

- Truncates the subclass\_stock\_on\_hand, class\_stock\_on\_hand, and dept\_stock\_on\_hand tables.
- Disables any indexes prior to the truncation on the associated tables and rebuilds/enables them following the truncation.
- The user running this program for this function must have been granted the 'drop any table' and 'alter any index' system privilege, or be the owning schema user.

#### prmpcupd\_post()

- Truncates the prmpcupd\_item\_loc\_temp table if btch\_w\_usr\_ind is set to 'N'.

#### precostcalc1\_pre():

- Switches the cost\_change\_trigger\_temp and reclass\_trigger\_temp views if btch\_w\_usr\_ind is set to 'Y'.

#### precostcalc2\_pre():

- Switches the deal\_sku\_temp view if btch\_w\_usr\_ind is set to 'Y'.

### I/O Specification

N/A

## **Technical Issues**

N/A