Oracle Applications Purging and Cleanup Scripts.

Overview

Cummins Power Generation (Formerly Onan Corporation) is a division of Cummins Engine. Cummins Power Generation manufactures a complete line of gasoline, LP and diesel-powered generators for all types of uses.

Cummins Power Generation implemented Oracle Applications in two phases. The first phase went live on January 1 1998 and included subassembly manufacturing and distribution. The second phase went live on January 1 1999 and included a bolt on configurator that introduced "configure to order" to Order Entry. The second phase included the entire plant.

It became obvious after implementing the second phase that the table sizes were growing very quickly. The DBA’s ran scripts to list the largest tables and we used that as a starting point for our purge activity.

Note: There is not a purge script for every table below.

The Largest Tables in Oracle before Purging (Partial List From Largest to Smallest).

MTL_TRANSACTION_ACCOUNTS
MTL_MATERIAL_TRANSACTIONS
WIP_REQUIREMENT_OPERATIONS
CRP_RESOURCE_HOURS
SO_LINES_ALL
MRP_FORM_QUERY
CST_ITEM_COST_DETAILS
WIP_TRANSACTION_ACCOUNTS
BOM_INVENTORY_COMPONENTS
MTL_DEMAND_INTERFACE
SO_EXCEPTIONS
WIP_TRANSACTIONS
MRP_GROSS_REQUIREMENTS
BOM_EXPLOSION_TEMP
MTL_SUPPLY_DEMAND_TEMP
CRP_RESOURCE_PLAN
CHV_HORIZONTAL_SCHEDULES
FND_LOGINS
MTL_CATALOG_SEARCH_ITEMS
SO_LINE_DETAILS
PO_INTERFACE_ERRORS
WIP_OPERATION_RESOURCES
GL_IMPORT_REFERENCES
MTL_SYSTEM_ITEMS
CRP_FORM_QUERY
MRP_SCHEDULEDATES
CST_ITEM_COSTS
WIP_OPERATIONS
MRP_BOM_COMPONENTS
MRP_RECOMMENDATIONS
What to Purge

Clean-up Scripts

There are a few scripts in Oracle that should be run just to keep things cleaned up. The ones that we are aware of clean up the following tables:

MTL_DEMAND
Oracle Script: (OE_TOP/admin/sql/ oe308164.sql)
(INV_TOP/sql/INCDPG.sql)

BOM_EXPLOSION_TEMP
CST_EXPLOSION_TEMP
CST_ROLLUP_DELETE_TEMP

Oracle Script: (BOM_TOP/sql/ CSTCSROL.sql)

Note: The above script will only clean up the tables if the operation finishes successfully. If the user the Indented Bill Report, for example, errors due to lack of table space, the information in BOM_EXPLOSION_TEMP will not be purged. We created a custom nightly purge script to truncate this table every night.

MRP_GROSS_REQUIREMENTS
MRP_BOM_COMPONENTS

Custom Script: Truncate both tables.

Note: This script should only be run if ALL MPS/MRP's are going to be run for the given instance. The script actually truncates the tables allowing MPS/MRP to bypass the deletion of the records in the table, which extends the run time substantially.

SO_EXCEPTION
Custom Script: delete oe.so_exceptions
where LAST_UPDATE_DATE < (sysdate - 1)
This table will grow rapidly when sales orders fail Demand Interface – ie. When ATP is being checked.

MTL_SUPPLY_DEMAND_TEMP
This table, in some versions of Oracle Applications, does not get cleaned up after its use. According to Oracle Support, this “Temp” table can be truncated with out any adverse affect. (Do this during off-hours – this should not be run while users are checking Supply/Demand).

MTL_ATP_RULE
According to Oracle Support, many of these records are a result of the "Bogus ATP Rules" creation issue. This script has been known to work as well:

SQL > DELETE FROM MTL_ATP_RULES WHERE CREATED_BY = 0;
SQL > COMMIT;

MRP_SALES_ORDER_UPDATES
There is a standard Oracle script to delete rows from this table called mrppgupd.sql. We looked at the script and decided that we wanted to keep some of the consumption records around so we added a date parameter to the script. Now only those items without matching records in MTL_DEMAND and with Status = 5 and NEW_SCHEDULE_DATE greater than 90 days old will be deleted. The new script is named mrppgupd_delete.sql See Appendix.
**Transaction Purge**

Once these scripts were in place, we decided to work on purging the largest tables first (biggest bang for the buck). The tables first approached were the Transaction Tables.

NOTE: Be sure to run Compile Demand History before purging any transaction data (see appendix).

As with any organization, we had to ask all of the appropriate Functional groups for their input before we could do any purging. Finance, Cost, & WIP are some of the groups that we needed to talk to in order to determine how much transactional data we could purge. It was agreed to that a rolling 90 days would be sufficient transaction history to give everybody what he or she needed to do their jobs.

The Tables affected by the Transaction Purge are:
- MTL_TRANSACTION_ACCOUNTS
- MTL_MATERIAL_TRANSACTIONS
- MTL_TRANSACTION_LOT_NUMBERS
- MTL_UNIT_TRANSACTIONS
- MTL_MATERIAL_TXN_ALLOCATIONS

To do Transaction purge we went to a responsibility in Oracle that includes the Transaction information (i.e.: Inventory) (see appendix). We purged transaction data in weekly buckets to make sure that the run times were manageable.

**Purging Standard Cost Update History**

When you update costs and choose to save details, information associated with the update is retained so that you can rerun adjustment reports. When you no longer need such information, purge it. If you do not purge this information, the WIP purge that follows will not purge all of the WIP job headers because some of the items are referenced in the Standard Cost Update History tables.

To purge Standard Cost Update History, see appendix.

**WIP Purge**

Then we decided to work on purging the next largest block of tables - WIP. Again, we had to ask all of the appropriate Functional groups for their input before we could do any purging. Finance, Cost, & WIP are some of the groups that we needed to talk to in order to determine how much WIP Discrete Job data we could purge. It was agreed to that a rolling 90 days would be sufficient WIP Discrete Job history to give everybody what he or she needed to do his or her jobs (it also matched up well with the Transaction Purge procedure).

The Tables affected by the Transaction Purge are:

<table>
<thead>
<tr>
<th>Table Name</th>
<th>WIP Purge Report Parameter Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIP_DISCRETE_JOBS</td>
<td>Header</td>
</tr>
<tr>
<td>WIP_ENTITIES</td>
<td>Header</td>
</tr>
<tr>
<td>WIP_PERIOD_BALANCES</td>
<td>Header</td>
</tr>
<tr>
<td>CST_STD_COST_ADJ_TEMP</td>
<td>Header</td>
</tr>
<tr>
<td>RCV_TRANSACTIONS</td>
<td>Header</td>
</tr>
<tr>
<td>WIP_OPERATIONS</td>
<td>Detail</td>
</tr>
<tr>
<td>WIP_OPERATION_RESOURCES</td>
<td>Detail</td>
</tr>
<tr>
<td>WIP_REQUIREMENT_OPERATIONS</td>
<td>Detail</td>
</tr>
<tr>
<td>WIP_MOVE_TRANSACTIONS</td>
<td>Move Transactions</td>
</tr>
<tr>
<td>WIP_TRANSACTIONS</td>
<td>Resource Transactions</td>
</tr>
</tbody>
</table>
To do WIP purge we went to a responsibility in Oracle that includes the Discrete WIP Job information (i.e.: WIP) (see appendix). We purged the WIP Discrete Job detail Information (Everything but the Header, see table above) in weekly buckets first and then went through a second pass going after the Headers also in weekly buckets to make sure that the run times would be manageable.

**Note:** We set Include Configurations to NO for both passes. These items will be addressed at a future date – likely covered when we start working on the Sales Order Purge Process.

**Note:** We currently have a TAR (12603958.600) logged with Oracle Support in an attempt to speed up this process. A Bug has been sent to Oracle Development and we have tested a preliminary script (no patch number yet) and it brought down the run time by half.

### Purge Concurrent Request and/or Manager Data Program

Sign on as System Administrator GUI and run the program “Purge Concurrent Request and/or Manager Data” and give it a date parameter where all records before that date will be purged. Use this program to delete:

- request log files, concurrent manager log files, and report output files from your product directories maintained by the operating system
- records (rows) from Application Object Library database tables that contain history information about concurrent requests and concurrent manager processes.

Use this program to compute performance statistics for each of the concurrent programs, if the Concurrent: Collect Request Statistics profile option is set to "Yes".

#### Parameters for Running the Purge

<table>
<thead>
<tr>
<th>Entity</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Purges records from database tables that record history information for concurrent requests, history information for concurrent managers, and purges request log files, manager log files, and report output files from the operating system.</td>
</tr>
<tr>
<td>Manager</td>
<td>Purges records from database tables that record history information for concurrent managers, and purges manager log files from the operating system.</td>
</tr>
<tr>
<td>Request</td>
<td>Purges records from database tables that record history information for concurrent requests, and purges request log files and report output files from the operating system.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Enter the number of days for which you want to save concurrent request history, log files, and report output files. The purge program deletes all records older (in days) than the number you enter. For example, if you enter &quot;5&quot;, then all concurrent request history, log files, and report output files older than five days is purged.</td>
</tr>
<tr>
<td>Count</td>
<td>Enter the number of (most recent) records for which you want to save concurrent request history, log file, and report output files. The purge program starts from the most recent records, retains the number you enter, and purges all remaining records. For example, if you enter &quot;5&quot;, then the five most recent concurrent request history records, request log files, manager log files, report output files are saved, and all remaining records are purged.</td>
</tr>
</tbody>
</table>

The Tables affected by the Purge are:
- FND_CONCURRENT_REQUESTS
- FND_CONCURRENT PROCESSES

### Login Purge

http://www.ssiworldwide.com/northamerica/tcmoaonl/ppt/Purging2 Onan 9-12-00
Every time someone logs on to Oracle Applications, Oracle keeps track of that activity. And over time these tables begin to grow. Sign on as System Administrator GUI and run the program “Purging Signon Audit Data” and give it a date parameter where all records before that date will be purged. (This can also be run from a script – see below). It has been agreed to at our site to retain at least 90 days of login audit history – this purge will be run once a month.

The Tables affected by the Purge are:
FND_LOGIN_RESP_FORMS
FND_LOGIN_RESPONSIBILITIES
FND_LOGINS
FND_UNSUCCESSFUL_LOGINS
Appendix:
(Information from Oracle 10.7 Application Documentation)

Summarizing Demand History

You can summarize demand histories for all items, items within a category, or a specific item.

To specify the parameters by which demand history is summarized:

1. Navigate to the Demand History Items window. The Find Demand History Items window appears.
2. Enter search criteria to query the items for which you want to summarize demand. Choose Find to start the search and display the information in the Demand History Items window.

Note: If you do not enter search criteria, when you choose Find the search is made for all items.

3. Determine the bucket size for demand history summarization. If you want demand history by day and by week and by monthly period, you must compile each bucket type.

Day: Use workday periods. Compiles the transaction history back for the previous 260 daily periods.

Week: Use weekly periods. Compiles the transaction history for the previous 260 weekly periods.

Period: Use manufacturing calendar periods. Compiles transaction history for the previous 260 monthly periods. The type of period is determined by the organization calendar you defined in the Define Calendar form.

If Oracle Inventory finds that the bucket type has already been compiled, the process attempts to save processing time. Oracle Inventory checks to see if the accounting period has been closed, and does not recompile any transactions from a closed period. No new transactions can be entered in a closed period. Therefore, it is not necessary to recompile those transactions.

4. Optionally, enter period start and end dates. Either or both may be left blank.

Purging Transaction History

You can purge all transaction history and associated accounting information for your current organization, where the transaction date is before and including the purge date you enter and is in a closed period.

Attention: You should be extremely cautious when purging transaction information. Once you commit the process, Oracle Inventory removes all related information from the database. You cannot view or report on this information once you purge it. For example, you can no longer report purged information with the Accrual Reconciliation Report, the Transaction Register, and so on.

Warning: Since the Job/Lot Composition functionality in Oracle Work in Process depends on the material transaction history, you should not enter a purge date which purges material transactions that are part of a genealogy you want to retain. See: Viewing Job Lot Composition and the Job Lot Composition Report.

Prerequisites

- At least one closed period for your organization. See: Maintaining Accounting Periods.

To purge transactions:
1. Navigate to the Purge Transactions or All Reports window.

2. Enter Transaction Purge in the Name field. The Parameters window appears.

3. Enter a date. Oracle Inventory purges transaction information if the transaction date is less than or equal to this date. This date must be less than or equal to the most recently closed period date.

4. Enter a name for your purge.

5. Choose Submit to launch the process.

**Purging Standard Cost Update History**

When you update costs and choose to save details, information associated with the update is retained so that you can rerun adjustment reports. When you no longer need such information, purge it.

**Prerequisites**

- To define, update, or delete cost information, the Privilege to Maintain Cost security function must be included as part of the responsibility.

To purge standard cost update history:

1. Navigate to the Purge Cost Update History window. (Responsibility = Cost Management GUI. Item Cost / Standard Cost Update / Purge Cost Update History)

2. In the Update Date field, select the Standard Cost Update History that you want purged. (all Standard Cost Update History files before that date will also be purged.

3. Select whether to purge only the cost update adjustment details available, only the item cost history, or both. (Always do both).

**Purging WIP Jobs & Schedules**

You can purge discrete jobs that were closed in accounting periods that are now closed. You can also purge repetitive schedules that were cancelled or complete with no charges in a closed accounting period. You can purge all detail information -- material requirements, resource requirements, and operations -- associated with jobs and schedules. You can also purge move and/or resource transactions associated with jobs and repetitive schedules. For quality and customer service tracking purposes, you can choose to retain as-built configuration histories for discrete jobs that build assemble to order items. You can purge all discrete job and repetitive schedule information (details, transactions and headers) by choosing to purge headers.

Attention: Although all purge Yes/No parameters default to No, you should exercise extreme caution when purging. Once you submit a purge request with a Purge Only or Purge and Report action type, all related information is removed from the database.

**Prerequisites**

- You must have at least one closed period for your organization. See: Period Close.

To select whether to purge discrete jobs, repetitive schedules, or both and specify whether and how to report purge information:
1. Navigate to the Purge Discrete Jobs. The Parameters window appears.

2. Select a Job Type.

All Jobs/schedules: Purge information for discrete jobs with statuses of Closed and repetitive schedules with statuses of Cancelled and Complete-No Charges. All Jobs/schedules is the default.

Discrete jobs: Purge information for discrete jobs with a status of Closed.

Repetitive Schedules: Purge information for repetitive schedules with statuses of Cancelled or Complete-No Charges.

3. Select an Action Type.

You can choose from the following:

Purge and Report: Purge the selected jobs/schedules and print a report. You can print the report in Full, Summary, or Detail format. If you select Purge and Report, you must select a Report Type.

Report Only: Print a report listing the selected jobs/schedules but do not purge them. You can print the report in Full, Summary, or Detail format. If you select Report Only, you must select a Report Type.

Purge Only: Purge the selected jobs/schedules but do not print a report. If you choose Purge Only, you must specify that the Report Type is None.

Note: Printing a report before submitting a purge request allows you to view the exceptions that might arise and determine how many records are to be deleted from related tables as a result of the purge.

4. Enter a Cutoff Date.

This date must be less than or equal to the close date of the most recently closed accounting period.

If you choose to purge Details in the Purge Options window, the system purges the details (material requirements, resource requirements, and operations) of Closed jobs and Cancelled and Complete-No Charges repetitive schedules with closed, completed, or cancelled dates less than or equal to this date. If you choose to purge Move, Resource, or Move and Resource Cost Transactions, the system purges transactions with dates less than or equal to this date for Closed jobs and Cancelled and Complete-No Charges schedules.

Attention: If you enter a date that is earlier than closed, cancelled or completed date of a selected job or repetitive schedule, the system only purges job and repetitive schedule detail and transaction information up to the date you enter.

5. Select Yes for Include Configurations to include discrete jobs that build either configured items or models in the purge. Select No to exclude configured items.

If Oracle Bills of Materials purges the configured item that you build in Work in Process, then Oracle Bills of Material replaces the configured item on the job with the model the configuration was based on. You do not want to include configurations if you need this information for customer support. For example, if a customer complains that you did not build the configuration he or she ordered.

If you do include configurations, you still have access to lot and serial information using the View Job Lot Composition form or the lot and serial transactions in Oracle Inventory.

6. Select whether to purge or not purge Headers.
If you purge Headers, all information associated with the parent record and all associated details (material requirements, resource requirements, and operations) and transactions (move and resource transactions) are automatically purged. Shop floor statuses associated with jobs and/or repetitive schedules are also purged. Sales order allocations associated with discrete jobs are also purged.

Attention: When you choose to purge headers, the options to include details, move transactions, and resource transactions are automatically selected. You cannot choose to purge header and choose not to purge details are purged even if you choose not to purge details, move transactions, and resource transactions.

7. Select whether to purge Details.

You can selectively purge Details -- material requirements, resource requirements, and operations -- without purging headers. Selective purging allows you to retain pertinent historical information. For example, you can retain operation information but purge move transactions associated with these operations.

8. Select whether to purge or not purge Move Transactions

You can selectively purge Move Transactions associated with the selected discrete jobs, repetitive schedules, or both. If the move transaction date is less than or equal to the cutoff date you entered, move transactions for repetitive schedules with Cancelled and Complete-No Charges statuses or discrete jobs with Closed statuses are purged.

9. Select whether to purge or not purge Resource Transactions associated with jobs and/or repetitive schedules.

You can selectively purge Resource Transactions associated with the selected discrete jobs, repetitive schedules, or both. Only resource transactions for repetitive schedules with Cancelled and Complete-No Charges statuses are purged, regardless of whether the transaction date is less than or equal to the cutoff date you entered.

10. Select one of the following Report Types:

Full: The report lists all job and/or schedule records selected for the purge, the table and number of rows affected as well as those records that cannot be purged because of purge rule violations. Full is the default option.

Summary: The report lists all job and/or schedule records selected for the purge but in a tabular form. The table and row detail is omitted although exception information is included.

Exception: The report lists only those job and/or schedule records that cannot be purged because of purge violation rules. Exception information is included.

None: The report lists only the purge options selected (e.g. Headers, Schedule Details, Move Transactions, Resource Transactions), but does not list tables affected and records purged.

11. Choose OK to save your work.

To submit a request to purge the selected job and schedule information:

`$MRP_TOP/sql/mrppgupd_delete.sql`
Modification of script from Oracle mrppgupd.sql
`$MRP_TOP/SQL/mrppgupd_select.sql`
`$MRP_TOP/SQL/mrppgupd_delete.sql`

http://www.ssiworldwide.com/northamerica/tcmoaucppt/Purging2_0nap_9-12-00`
REM $Header: mrppgupd.sql 50.3 96/10/28 11:15:29 porting ship $
/*==============================================================================*/
RUN admin sql mrppgupd_delete.sql

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OVERVIEW:
Purge the MRP_SALES_ORDER_UPDATES table

DELETE  FROM mrp_sales_order_updates upd
WHERE  upd.process_status = 5
      and  upd.new_schedule_date < (sysdate - 90)
      and  not exists
           (select null
                    from   mtl_demand dem
                    where  dem.demand_id = upd.sales_order_id)
 /
commit /
exit /