`

Knowledge Base Article

Product Group: Software
Product: Oracle database with CMSW7400 @ptitude Analyst
Version: 11gR2

Abstract

This article discusses typical database maintenance activities for SKF @ptitude Analyst software using Oracle as the database type. The activities are generic and may be applied to databases not connected to @ptitude Analyst.

Overview

On some SKF @ptitude Analyst systems, especially online systems without archiving, performance of the system degrades over time. There may be other reasons for the performance to degrade, and this document will attempt to address some of the commonly known reasons.

1. Execute Rebuild Indexes on regular basis (once or twice a week). This can also be scheduled for standard databases.

   Execute dbTools.Rebuild_Index_All

2. Check UTC tables for data that should not be there. If there are too many users to check on, just rebuild the tables and clear all tables.

   Execute dbTools.Rebuild_UTC_Tables

3. Check server specifications.

   1) Check hard drive space available

   2) Check hard drive fragmentation

   3) Check resources utilization using Task Manager > Performance > Resource Monitor
      i. CPU utilization: Should be less than 100%, much less would be ideal
      ii. RAM utilization: Should not all be consumed, minimum 4 GB, 8GM is recommended
      iii. Check Network activity
      iv. Check I/O operations
      v. Check Disk activities

4. Is this a Virtual Image (VI)? How many VIs on the box?

5. Get a count of concurrent users on @ptitude Analyst.

6. Check Measurement and MeasReading tables count

7. Clean up unused routes and workspaces. This will reduce propagate alarm refresh time when not needed. Reference points are removed.

8. Set up Monitor and Schedule under POINT Properties to clean up measurements. Ensure that each POINT has a reasonable archive schedule. Discuss this with the customer, but it is not reasonable to keep every measurement forever.

9. Ensure that after commissioning the online system, each Monitor has the Archive option turned ON.

   Note: For online systems that have been running for a while with the Archive function turned off, turning on the Archive function will take a significant amount of time (many hours) for the initial pass of archiving to fully clean up the measurements and MeasReading tables. Archiving needs to run for a day or two before evaluating performance again or before SKF Service Engineers should arrive on site. It is recommended the Archive function is fully run before attempting to reorganize measurement and MeasReading tables (Step 12).

10. Set up configuration tool to clean up hierarchy objects marked for deletion.

11. If XMLImport/XMLExport is not running then truncate DeleteMeas table.

12. Defrag (Rebuild) Measurement and MeasReading tables. From time to time, the Measurement table will need to be re-ordered. This is based on the customer's perception of the system becoming slow. To re-order the Measurement table, perform the following steps:

    1) Ensure a recent backup (DMP file) of the database exists.

    2) Take a baseline timing measurement of the functions there are concerns about.

    3) Locate the current version of @ptitude Analyst script files - usually a subdirectory of the program directory (C:\Program Files\SKF-RS\SKF @ptitude Analyst) called DbAssist\Oracle.

    4) Place the following five files (located in the attached zip folder) in that working directory:

       - Meas_rd_reorg.sql
       - Meas_rd_reorg_exp.Bat
       - Meas_rd_reorg_imp.Bat

- MRDExp.txt
- MRDImp.txt

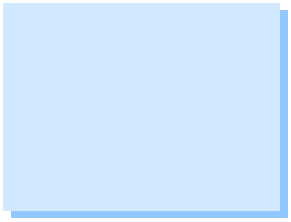
5) Edit the Meas_rd_reorg_exp.bat and Meas_rd_reorg_imp.bat files. Replace CHANGE_TO_CUSTOMERS_DB_INSTANCE_NAME with the database to be worked on.

6) Log all users out of the system, including Monitor.

7) Run Meas_rd_reorg_exp.Bat. This will take approximately two hours, depending on the system.

8) Verify the export succeeded by viewing the meas_rd_exp.LOG file created.

9) Verify a current backup of the entire database exists (Step 12-1). This is the last chance before major changes are made to the database!



10) Run Meas_rd_reorg_imp.Bat THIS WILL DROP (DELETE) THE MEASREADING TABLE AND RECREATE IT. This will take approximately one hour, depending on the system.

11) When the import is complete, verify by viewing the meas_rd_imp.LOG file created.

12) Run @ptiutde Analyst. Test and record the performance (against tests run in Step 12-2).

13) Back up the new database (as a DMP file) in its entirety.

14) Re-establish a connection to the online devices.

15) Verify new measurements are being stored.

16) Demonstrate the performance to the customer.

17) Inform the users they can now log in.

12. Clean up RouteWkspaceParents table.

Verify if table has duplicate databases:

```
Select ParentId, count(*) DuplicateCount
From RouteWkspaceParents
Group by ParentId
```

If many duplicates exist then clean up the table. Connect as skfuser1 to database and execute command below:

`

```
Create table SKFParentTemp ( ParentId Number);
Insert into SKFParentTemp (ParentId)
Select Distinct ParentId from RouteWkspaceParents;
Truncate Table RouteWkspaceparents;
Insert into RouteWkspaceparents
Select ParentId from SKFParentTemp;
Commit;
Drop table SKFParentTemp;
```

13. Keep EventLog table to a manageable size. Ensure the table size is not in the 100Ks:

```
Select count(*) from EventLog;
```

For further assistance, please contact the Technical Support Group by phone at 1-800-523-7514 option 8, or by e-mail at TSG-CMC@skf.com.