SCM-APO Data Archiving

Our clients are always screaming on the Application Support Team members due to Very Slow performance. Executing any transaction is taking long time. After 3-4 years also we are still not stable on SCM - APO. Can some one do the root cause analysis.

You must be familiar with this type of dialogue on your day to day Application Support work.

Customer is using business application productively. Hence the volume of master data and transaction data can grow rapidly, which can slow down the business application's performance. As performance is reduced the business application's cost would go up.

At a time the data which get generated in the system would not require for the current data analysis purpose. Can we store such data in the other location so that when required we can refer it from that location?

Yes. SAP's Data Archiving functionality is the answer by which we can improve the performance of the business application.

SAP data archiving, an SAP NetWeaver function, enables you to control your data volume on a long term basis by relocating data that is no longer needed in the current business processes to archive files.

The data which get archived is the read only data. We cannot edit the archived data.

Basics of Data Archiving:

Data archiving is a service provided by SAP NetWeaver which removes mass data that the system no longer needs on line, but which must still be accessible as and when required from the database.

Data in the database can only be archived using archiving objects which contains the data structure and context.

SAP also offers XML-based archiving, as of SAP Web Application Server 6.40. XML archiving objects are used to write data in the form of resources either to a file system or directly to a WebDAV system, which takes on the role of the storage system shown in the figure 1.

Archiving Objects: The majority of the archiving objects the SAP Data Archiving concept is based on the Archiving Development Kit(ADK).

As of SAP Web AS 6.40 SAP offers an additional technology especially designed for XML-based archiving. This new technology comprises the XML-Data Archiving Services (XML-DAS) and the XML DAS connector.

Archiving is carried out with the help of Archive Administration, transaction code SARA.

For some application it is possible to start archiving directly from the application menu. In this case application specific parameters such as archiving object or the archiving program appear as default values.

Archiving objects for each application component are predefined in the system.

High Level Archiving Procedure:

The archiving procedure is divided into three main step:

1) Creation of archive files: In the write phase the data to be archived is written sequentially into newly created archive files.
2) Delete from the Database: The delete program reads the data from the archive files and then deletes it from the database.
3) Storage of archive files: The newly created archive files can then be moved to a storage system or copied to a tape. The removal to an external storage system can be triggered manually or automatically. It is also possible to store the data before the delete phase.

In the XML-based archiving this step no. 3 does not exist as a separate step. The data can be written directly to a WebDAV system. The archive programs are generally scheduled in the background. SCM-APO Archiving Procedure based on ADK

SAP Advanced Planning and Optimization supports two types of Data Archiving as below:

- Master Data
- Production tracking information Archiving SCM-APO's Master Data

Data archiving removes master data from the database that is no longer relevant to the operational business. The archived data is stored in archive files that can be accessed by the system in read only mode.

Following SCM-APO APO Master data can be archive

1) Master data for Product Interchangeability which has archiving object as CA_INCMD
2) Master data for Location Interchangeability which has archiving object as CA_INCMD

To archive the interchangeability group you require special authorization as following
Archiving object CA_INCMD for archiving and deleting interchangeability groups for interchangeability master data for products and locations.

The Archiving object CA_INCMD uses the XML-based archiving of the central data archiving service provided by SAP Netweaver. To be able to archive interchangeability groups, you follow the instructions in the procedure for XML data archiving.

Archiving SCM-APO’s Production tracking information

In production planning and detailed scheduling, only production tracking information (archiving object PPS_AHT) is archived. Archiving removes data that is no longer relevant to day-to-day business from the database. The archived data is stored in archive files.

Procedure of Archiving Production tracking information

The archiving object PPS_AHT enables you to archive production tracking information that is no longer needed in the system.

Due to the high volume of data, SAP recommends the regular archiving of production tracking information. Archiving using the archiving object PPS_AHT is restricted to production tracking information only. There are no other relationships to the other archiving objects.

Data required for archiving objet PPS_AHT can be used from following tables:

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/SAPAPO/AHT_TRCO</td>
<td>Production tracking information per order including customer</td>
</tr>
<tr>
<td>/SAPAPO/AHT_TRCS</td>
<td>Production tracking Information: Customer’s additional data including customer</td>
</tr>
<tr>
<td>/SAPAPO/AHT_TRIF</td>
<td>Production tracking information document</td>
</tr>
</tbody>
</table>

The following programs are supplied for the archiving object PPS_AHT

<table>
<thead>
<tr>
<th>Program</th>
<th>Function</th>
<th>Functionality Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHTGL_TRACKINGINFO_ARCH_WRI</td>
<td>Write</td>
<td>The residence time of the data must have expired for production tracking information to be archived. We have to specify the residence time as a parameter in the write program. In the variant of write program specify the order and the alternative identification as the selection criteria for the production tracking information. Selection processing option: Select Test Run if you only want to simulate archiving. Select Archive if you want to archive the production tracking information. Select Archive and Delete if the program is to archive the data and then delete it from the database.</td>
</tr>
<tr>
<td>AHTGL_TRACKINGINFO_ARCH_DEL</td>
<td>Delete</td>
<td>Depending on the setting in customizing, if the archiving process was successful, the archiving program will delete the data from the system immediately after it has been archived. You can run the deletion program separately.</td>
</tr>
<tr>
<td>AHTGL_TRACKINGINFO_ARCH_DSP</td>
<td>Display</td>
<td>With this program you can display the archived data</td>
</tr>
</tbody>
</table>

Selection Variant for Write

Maintain selection variant for write as per the business requirement. SCM-APO Data archiving objects are not very strong as SAP R/3 objects. In APO only 2 objects are present.