Implementing the Alert Monitor Functionality Using Macro Alerts to Highlight Custom Alert Situations in APO DP

Applies to:

SAP SCM APO Demand Planning.

Summary

This paper provides a detailed step by step procedure for implementing the Alert Monitor and Macro Alerts for highlighting custom alert situations in APO DP. Any given alert situation in APO DP, for example, forecast deviating from average sales history by a given percentage can be highlighted and monitored using the Alert Monitor. It explains all the steps involved in setting up of an Alert Monitor and Macros in APO DP and its implications, along with useful implementation tips.

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Author Bio

The author has about 7 years of total industry experience and about 5 years of experience in SAP APO (DP & SNP), SAP BW and R/3 SD areas. He has worked in several APO and R/3 projects involving Implementation, Rollouts, and Application Support projects for major global clients. Mr. Srinidhi Acharya has been working with Wipro Technologies for over 2.5 years as an APO consultant.

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Introduction

The following procedure describes the one of the 'best practices' of setting up an Alert Monitor and the Macro alerts to highlight the 'alert' situations in APO DP.

Alert Types

The first step involves in defining an alert type. There 2 types of alert types available:

- Database Alert Type
- Dynamic Alert Type

Dynamic alert reflects the 'current' situation that exists in the Livecache. It is performance intensive and should be avoided if dealing with large number of alerts.

Database alert types are recommended to highlight planning situations as it was during the last Macro run or planning run. For performance reasons, database alert types are recommended when dealing with large number of alerts and data volume. We shall define a database alert type for our example. The database alert type needs to be defined using the following configuration:

MySAP SCM - Implementation Guide-> SCM Basis-> Alert Monitor->Maintain Database Alert Types for Demand Planning and SNP

Tips & Tricks

We can define a separate database alert type for APO DP macro alerts. This enables the demand planners to view only relevant DP alerts and also enables to setup a process for proper maintenance of Alerts on a periodic basis. This is particularly useful while setting up alert profiles and differentiating the alerts generated by other modules such as SNP or PP/DS. Separate alert profiles can be defined for demand planners and the DP database alert type defined can be assigned to the alert profiles which ensure that Demand Planners see only alerts relevant to them and not any other alerts.

Macros

The second step would be to define the Macro in the relevant planning book/data view for highlighting the alert situation. We will consider an example where an alert situation is highlighted when forecast for the current month varies from the average of past three months sales history by more than 20%. Similarly, any other similar situation can also be highlighted by configuring a relevant macro.

Database Alert Type defined in above step, is assigned to the alert step ('Update in Context: Standard status alert' shown below) in the macro. Execution of this macro, results in generation of an alert whenever forecast for the current month varies from the average of past three months sales history by more than 20%. These alerts can be viewed in Interactive Planning or Alert Monitor. However to view these alerts, we need to define an Alert Profile and assign the alert type, planning book, data view and relevant selection ID. This will be explained in detail in following steps.

Alert Macros can then be assigned to 'Start' event which will ensure that the macro executes whenever the demand planners load the selection and will get highlighted in the Interactive Planning. Else, the alert will not get highlighted in Interactive Planning unless the demand planners manually execute the Macro. The macros need to be executed in change mode in Interactive Planning for the alerts to be visible. Please also note that, the alerts can be generated by scheduling the Macro run in DP background jobs and viewed in Alert Monitor.

A sample code for defining the above mentioned Macro is given below. A different logic can also be applied to further simplify the code in the macro below. The following transaction / menu path can be used for defining the macros.

SAP Menu-> Demand Planning-> Environment-> Current Settings-> Macro Workbench-> /SAPAPO/ADVM

The following macro generates an alert whenever the final forecast figure (Consensus Forecast) of current month varies from the three month average sales history (Shipped Quantity) by more than 20%. Similarly, any other logic can also be built in the macro accordingly to highlight a given alert situation.

```
▽  ◯◯▣  Calculate Forecast Difference-DEMO
   ▽  🔊  Calculate the difference : ( 1 Iterations :  M 08-2007 ;  M 08-2007 )
      ▽  ▶▢▶ Row: Difference Forecast v Avg 3m past sales ( Frm  M 08-2007 ) =
            ▦ 100 * ABS(
            ▦ Row: CONSENSUS FORECAST ( Frm  M 08-2007 )
            ▦ -
            ▦ (
            ▦ Row: Shipped Qty ( Frm  M 07-2007 )
            ▦ +
            ▦ Row: Shipped Qty ( Frm  M 06-2007 )
            ▦ +
            ▦ Row: Shipped Qty ( Frm  M 05-2007 )
            ▦ ) / 3
            ▦ ) /
            ▦ (
            ▦ (
            ▦ Row: Shipped Qty ( Frm  M 07-2007 )
            ▦ +
            ▦ Row: Shipped Qty ( Frm  M 06-2007 )
            ▦ +
            ▦ Row: Shipped Qty ( Frm  M 05-2007 )
            ▦ ) / 3
            ▦ )
   ▽  🔊  Alert Generation : ( 1 Iterations :  M 08-2007 ;  M 08-2007 )
         ▦ IF
      ▽  ⛰ Alert
            ▶▢▶ Row: Difference Forecast v Avg 3m past sales ( Frm  M 08-2007 )
            ▦ > 20
      ▽  ⚡ Update in context : Standard status alert [ Fcst varies from avg 3m past sales %: & ] with
            ▶▢▶ Row: Difference Forecast v Avg 3m past sales ( Frm  M 08-2007 )
      ▽  ▦ Row: CONSENSUS FORECAST ( Attributes ) =
            ▦ CELL_RICON( 2 )
         ▦ ELSE
      ▽  ▦ Row: CONSENSUS FORECAST ( Attributes ) =
            ▦ CELL_RICON( 0 )
         ▦ ENDIF
```

Overall Alert Profiles & SDP Profiles

The third step involves creating an Overall Alert Profile and a Supply Demand Planning (SDP) profile. This enables the demand planners to view the alerts created by the above macros. The following transaction / menu path is used to create alert profiles. If no SDP alert profile & Overall Profile are created, then the users will not be able to see the alerts generated by the macros.

SAP menu -> Supply Chain Monitoring -> /SAPAPO/AMON1 - Alert Monitor.

First, an Overall Profile is created.
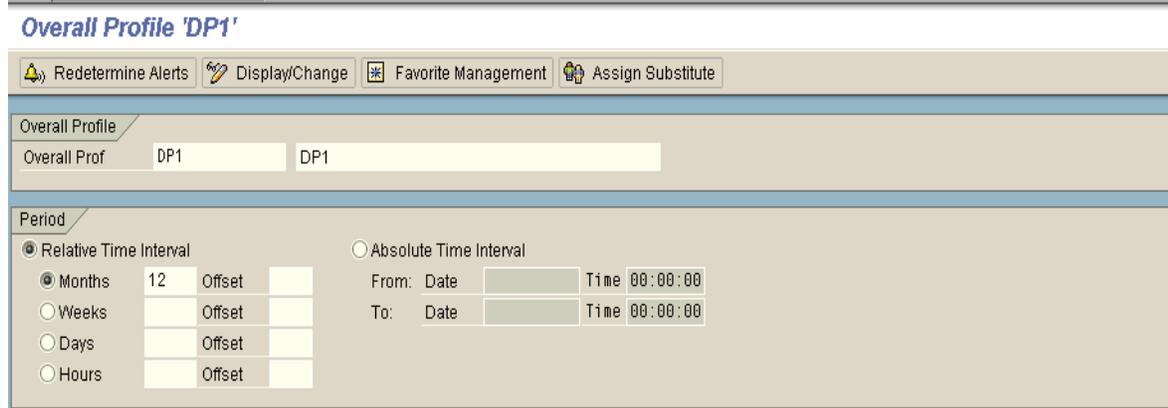
The Relative Time Interval controls the 'time horizon' over which the alerts are displayed in Alert Monitor. This controls which alerts the users will see in the Alert Monitor. Once the horizon is defined, if a macro generates an alert which is outside this horizon then that alert can only be viewed in Interactive Planning but will not be displayed in the Alert Monitor. This enables the users to control to view only the relevant period alerts in Alert Monitor, making it more meaningful rather than cluttering with too many irrelevant alerts.

We enter a 12 month horizon in our example which will display any alerts generated 12 months into the future horizon. This setting ensures a 'rolling' horizon. If a fixed absolute horizon is needed then the 'Absolute Time Interval' needs to be defined and dates specified which will display any alerts generated within those dates.

Next, an SDP profile is defined within the Overall Profile. Database Alert Type defined earlier & used in our Macro is assigned to this SDP profile.
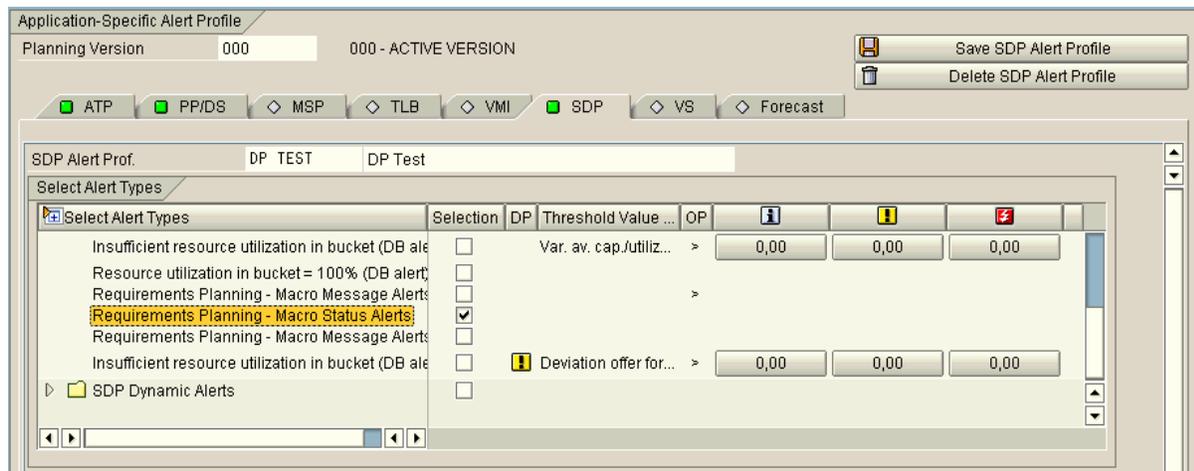
The Planning book in which the above macro is created is assigned to this SDP profile. Data view which contains the macro created above is also assigned to the SDP profile. Selection IDs can be further defined and assigned to the SDP profile thus enabling the viewing alerts for relevant data.
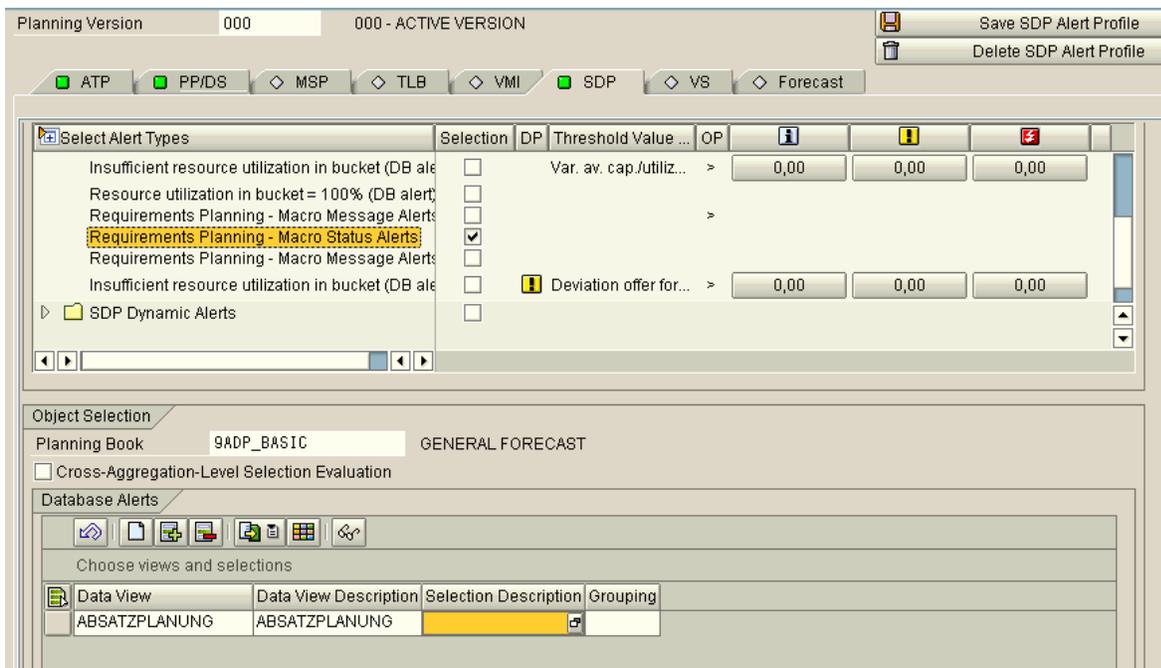
Tips & Tricks

If we have more than one demand planner managing different product groups or geographies out of a single planning book/data view, then we can create different Overall Profiles for each of the demand planners, assign the alert type, planning book, data view and then assign specific selection IDs for each of the planners. When the users login to the Alert Monitor, only alerts generated for the data within that selection ID is displayed. This ensures that the planners will see alerts relevant only to their set of data.

Alert Profile Assignment

The next step is to assign the above created SDP profile to the demand planner's SAP user IDs, enabling them to view alerts in Interactive Planning. Please note that the planners will **not be** able to see any alerts in Interactive Planning unless their SAP user ID is assigned to an alert profile. They can see the alerts in Alert Monitor though, provided their SDP alert profile is assigned to the Overall Profile.

SAP menu -> Demand Planning -> Environment -> Current Settings -> /SAPAPO/SDPALPR – Assign Planners to Alert Profiles

Database Alert deletion and Maintenance

Once the demand planners view the alerts and rectify the situation in Interactive planning, the 'old' or 'viewed' alerts need to be deleted from the system. For database alert types, the alerts will not disappear automatically once the situation is rectified in Interactive Planning. The alerts need to be either deleted manually or using a scheduled program. This is recommended in order to avoid the 'irrelevant' alerts from accumulating and keep the alert monitor meaningful.

Program **/SAPAPO/AMON_REORG** needs to be scheduled to run on periodic basis to delete the alerts. Relevant alert types and time intervals can be specified thus ensuring only the relevant DP alerts are deleted. When the alerts are re-determined the next time, only the relevant alerts will be displayed in the alert monitor. If the alert situation of a previous alert has been rectified by the planners, then that alert will not re-appear again, thus ensuring the users do not see any 'obsolete' alerts.

Tips & Tricks

Schedule this program to be run before the alert macro background job is executed. This ensures that database alerts of any alert situation already rectified by planners is deleted and will not re-appear when alerts are generated afresh by the macro and re-determined in alert monitor. This prevents 'obsolete' alerts from accumulating in alert monitor and keeps them meaningful.

Deletion of Alerts

Selection Options

Applications
- ● All Applications
- ○ Selected Applications   to

Further Restrictions

Planning Version	000	to	
Alert Object Type	4000	to	
Alert Type	4100	to	
Priority		to	

Time Alert was Written...
- ● Absolute Time   Date   08-22-2007   Time   11:14:45
- ○ Relative Time   Number of Days in Past

Simulation Run   ☐

Alert Generation and Viewing

The alerts are generated by executing the relevant Macros in the background jobs. They can also be generated by manually executing Macros in Interactive Planning.

There are 2 methods of viewing the alerts generated by the above macros:

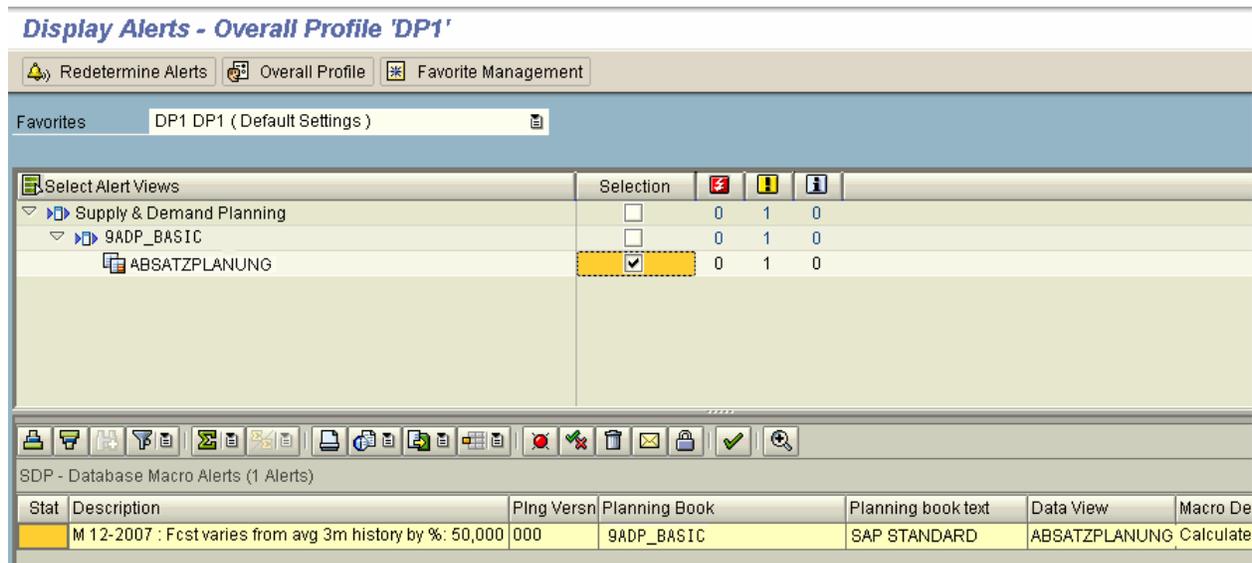- Alert Monitor
- Interactive Planning

Please note that the Overall Profile & SDP profile needs to be created and assigned before viewing alerts using either of the methods.

Viewing Alerts in Alert Monitor

The transaction for viewing alerts in alert monitor is **/SAPAPO/AMON1** - Alert Monitor. The demand planners can view alerts in the alert monitor. The relevant Overall Profile is assigned to the 'Favorite Management'. This ensures that the relevant Overall Profile is prompted whenever the planner launches the alert monitor.

Press the 'Re determine Alerts' button to display the alerts. All alerts in the data views assigned to the given SDP profile are displayed.

Demand Planners can view alerts of more than one planning book by creating different Overall Profiles/SDP Profiles for different planning books and adding them to 'Favorite Management'. Alert Monitor also enables to restrict the horizon over which the alerts are to be displayed thus helping demand planners to see only the relevant alerts unlike Interactive Planning, where all alerts across the horizon are displayed and may result in cluttering, making it difficult to browse through.
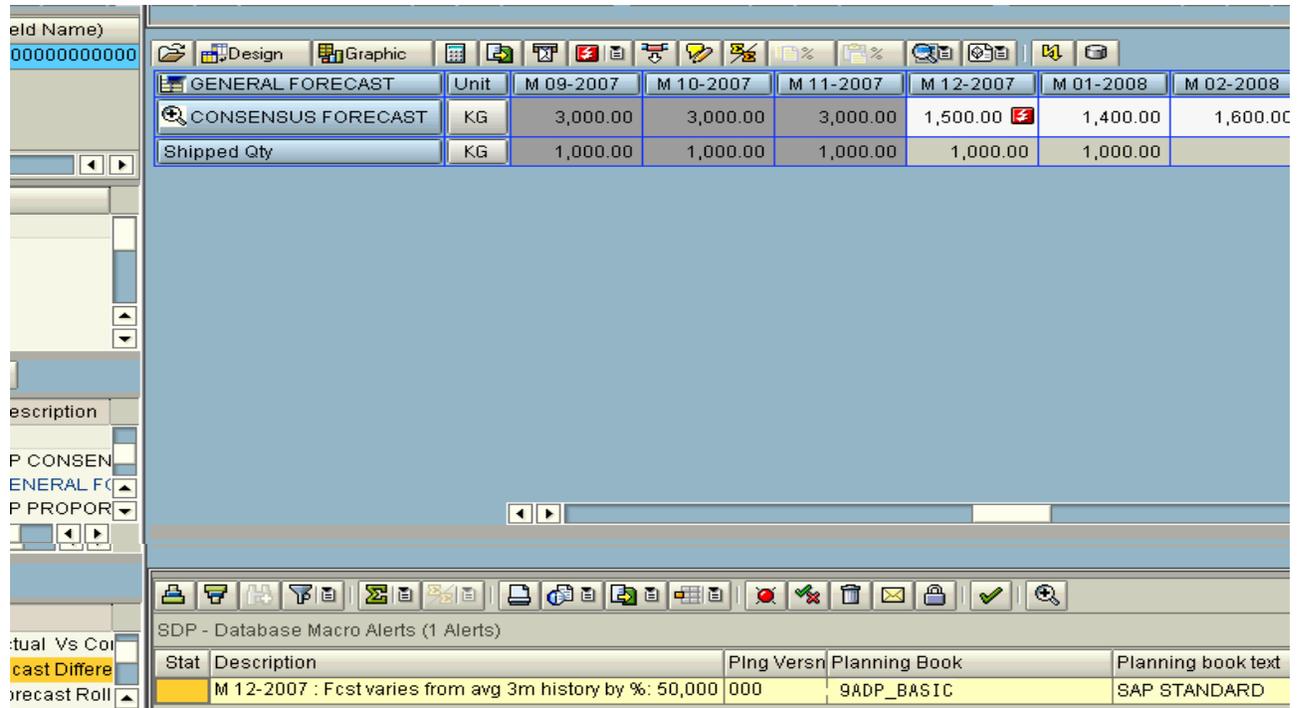
Thus, the alert monitor makes it easy for the planners to monitor all alert situations in different planning books from one place and take action accordingly. Please note that the planners will not be able to rectify the alert situation from the Alert Monitor itself, but will have to log into the respective planning books to do the same. Once the alert situation is rectified in Interactive Planning, the database alert needs to be deleted either manually or using the deletion report. When alerts are re-determined the next time, this rectified situation will not show up as alert in the alert monitor.

Viewing Alerts in Interactive Planning

Only alerts generated for the respective planning book can be viewed. When the selection is loaded in Interactive Planning, if the Macros are put in event 'Start' or 'Default', the Alerts get highlighted for the given period / key figure.

To view the generated alerts in Interactive Planning, the ![icon] button needs to be clicked. The generated alerts are displayed at the bottom of the screen as shown below. Please note that the user ID should be assigned to the SDP profile as mentioned earlier. Else, the alerts cannot be displayed. Planners can control whether to see all alerts for the planning book or only alerts relevant to loaded selection by choosing accordingly.

The planners can then analyze and rectify the alert situation in Interactive Planning. The database alerts should be deleted once the alert situation is rectified which ensures the alert is not displayed the next time the alert macro executes.

Potential Issues

The situations for which the demand planners need to view the alerts needs to be identified carefully. The number of alerts needs to be minimized as much as possible to avoid performance issues and also to make the alerts meaningful. If too many alerts are generated, the monitoring becomes difficult as browsing through each one of them will be cumbersome and the alert monitor functionality may lose its relevance.

Related Content

- [Macro-Dependent Alerts](#)
- [Monitoring Alerts for Demand Planning](#)
- [Overall Alert Profile](#)

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