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Demand Planning Integration Best Practices: SAP SCM Perspective – PART 4

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ABSTRACT

SAP Supply Chain Management is one of the key modules in SAP ERP and controls Production Planning, business forecasting and demand planning. It helps the organization to manage their supply chain process in a dynamic environment. SAP SCM is a complete software to cover key processes such as supply chain networking, supply chain planning and coordination, and supply chain execution.

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Introduction

Demand planning integration we now offer an integration of key figures from SAP Integrated Business Planning (SAP IBP) into the new flexible constraint framework available in SAP S/4HANA Production Planning and Detailed Scheduling (PP/DS). Will detail all the steps in Demand Planning. The purpose of this article is to describe the general configuration steps required to manually set up the configuration within the system landscape that has already been installed using the corresponding installation or configuration guides for installation.

This article supplements the existing Customizing documentation in the Implementation Guide (IMG) and provides additional information where required

Configuration

Change Backup InfoCube for Forecast Result

Here you create new dimensions for the InfoCube, then put each characteristics to corresponding dimension.

Methodology

To access the activity, use one of the following navigation options:

Transaction Code	RSA1
SAP Menu	Advanced Planning and Optimization → Demand Planning → Environment → Data Warehousing Workbench

In the Data Warehousing Workbench: Modeling window, choose InfoProvider from the Modeling section, expand InfoArea ZBPR_Y93_DPA_IA01 and choose InfoCube ZY93_IC02.
Go to change mode and select the folder Dimensions Folder at the right side of the screen. Right-click dimension ZY93_IC021 and choose Properties. Change the description to Product and confirm.

Right-click dimension ZY93_IC02T and choose Change Description. Change the description to Time and confirm. Right-click the folder Dimension and choose Create New Dimensions Choose Save.

Follow the table below to add the characteristics to the corresponding dimensions by drag and drop:
Right-click dimension Created on and choose InfoObject Direct Input. Insert the following values, and choose enter. Select the folder Key Figures and remove all key figures that are not part of the DataSource YDP_PA_DS01.

Choose Activate to activate the InfoCube. Choose Local Object if the Create Object Directory Entry dialog box appears. Create Transformation, DTP and InfoPackage. To access the activity, use one of the following navigation options:

Transaction Code	RSA1
SAP Menu	Information Systems → Business Information Warehouse → Modeling → RSA1 - Data Warehousing Workbench: Modeling

In the left part of the Administrator Workbench: Modeling window, in the Modeling section, choose Source System.

Right-click your Source system, for example, SH1CLNT185, choose Replicate DataSource in the context menu. Select the as DataSource(RSDS) radio button if the Data Source from Source System Unknown dialog box appears. A background job is triggered. Check in the job overview that this job has finished before proceeding to the next step.

In the Administrator Workbench screen, you are still in the source system view. Right-click the source system SH1CLNT185 and choose Display DataSources Tree in the context menu.
Choose the DataSources 9AYDP_PA_DS01 you have just created. Choose Change Mode.

Choose Active DataSource. Choose Local Object if the Create Object Directory Entry screen appears. In the left part of the Administrator Workbench: Modeling screen, in the Modeling section, choose InfoProvider.

Expand InfoArea ZBPR_Y93_DPA_IA01 and right-click InfoCube ZY93_IC02, choose Create Transformation….in the context menu.

In the Create Transformation dialog box, enter the value as below: Choose Start Transformation.
On the Transformation Create screen, drag the line between two tables (if they are linked automatically, then just check and skip this step):

Source Field	Target Field
CALMONTH	0CALMONTH
CALYEAR	0CALYEAR
/BIC/ZY93_BC01	ZY93_BC01
/BIC/ZY93_BC02	ZY93_BC02
/BIC/ZY93_BC03	ZY93_BC03
/BIC/ZY93_BC04	ZY93_BC04
/BIC/ZY93_BC05	ZY93_BC05
/BIC/ZY93_BC06	ZY93_BC06
/BI0/9AVERSION	9AVERSION
/BIC/ZY93_BK01	ZY93_BK01
/BIC/ZY93_BK04	ZY93_BK04
/BIC/ZY93_BK05	ZY93_BK05
/BIC/ZY93_BK06	ZY93_BK06
UNIT	ZY93_BK01, ZY93_BK04, ZY93_BK05, ZY93_BK06

On the Transformation Create screen, in right target table, choose the row 0CREATEDON. On the Rule Details window, choose Formula from drop list for Rule Type field and choose Change rule. In the prompt window, find SYST-DATUM Current Date from the field list and choose it, Current Date is written at the formula area. Choose Back. Choose Transfer Values. Choose Activate to activate the transformation. Choose Yes if the Log Display window appears. Choose Local Object if Create Object Directory Entry screen appears. Right-click Data Transfer Processes under InfoCube ZY93_IC02 again and choose Create Data Transfer Processes…in the context menu, enter the values below and confirm the dialog:

Field name	User actions and values
Data Transfer Proc.	9AYDP_PA_DS01 / SH1CLNT185 -> ZY93_IC02/Delta
DTP Type	Standard(Can be Scheduled)
Object Type	DataSource
DataSource	9AYDP_PA_DS01
Source System	SH1CLNT185

Choose Continue. Choose Activate Data Transfer Process. Choose Local Object if the Create Object Directory Entry screen appears.

Expand the Data Transfer Processes 9AYDP_PA_DS01 / SH1CLNT185 -> ZY93_IC02/Delta, Right-click DataSource 9AYDP_PA_DS01, choose Create InfoPackage…. in the context menu.
In the Create InfoPackage window, enter InfoPackage description ZBPR_Y93_9AYDP_PA_DS01_IP01_F, and choose Save. In the Scheduler (Maintain InfoPackage) window, select the Data Selection tab page, enter 001 for from value of /BI0/9AVERSION.

Choose Save and Exit.

Create Process Chain - Forecast Backup
To access the activity, use one of the following navigation options:

Transaction code	RSPC
SAP SCM Menu	Demand Planning → Environment → Maintain Process Chains

In the process chain maintenance planning view, choose Create and enter values as follows:

Field name	User action and values	Comment
Process chain	YDP_BU_FORE-CAST	
Long description	DPA – Backup Forecast	

Choose Continue. In the Insert Start Process window, choose Create.

Field name	User action and values	Comment
Process variants	YDP_BU_FORE-CAST	
Long description	Back Up Forecast	

Choose Enter, then choose Save . In the Create Object Directory Entry, choose Local Object, go back then choose Continue. In the Process Chain Maintenance Modified Version window, the starting process is now visible. Choose Process Type. Choose Delete Index under the node Data Target Administration. In the Insert Delete Index window, choose Create. Then enter Process Variant YDP_BACKUP_ZY93_IC02_IDX and Long descriptio ZY93_IC02 Index, then choose Continue.

In the Process Maintenance
Delete Index window, choose InfoCube from the drop list. Then use F4 input help for Object Name, choose your InfoCube ZY93_IC02.
Choose Save. In the Create Object Directory Entry, choose Local Object, Go back then choose Continue.

Two jobs for Delete Index and Create Index are show. Expand the node Load Process and Post-Processing. Choose Execute InfoPackage and select Forecast InfoCube(ZBPR_Y93_9AYDP_PA_DS01_IP01_F) in the Insert Execute InfoPackage window and choose Continue. If Display More Chain window pop up, choose No. The Data Transfer Process 9AYDP_PA_DS01 / SH1CLNT185 -> ZY93_IC02/Delta is automatically inserted in the process chain view. The selected job is now on the right screen area. Link the starting process to the Load Data job, by selecting the start job and dragging a line to the Load Data job, choose …successful in the Action for… dialog box. Link the Load Data job to Delete Indexes job, choose …successful in the Action for… dialog box. Link the Delete Indexes job to Data Transfer Process job, choose …successful in the Action for… dialog box. Finally link the Data

Transfer Process job to Create Index job, choose …successful in the Action for… dialog box. Choose Save. Choose Activate to make the process chain active. Schedule Process Chain – Forecast Back up Normally, you need to back up forecast results at the end of each planning cycle for report and analysis purposes. You would manually trigger this process chain when necessary. This process chain is used for daily backup all manual changes which done in the planning process, for example, sales historical data correction, manual forecast, and etc.

Compared with the backups we describe in the next 2 chapters, this daily backup is mainly used for data restore purpose, to avoid data loss.

First, you need to generate an InfoCube which is used to daily backup the manual changes the planners has done in the planning process. The InfoCube is generated based on the planning area, only extract those key figures which would be changed manually.

To access the activity, use one of the following navigation options:

Transaction Code	/SAPAPO/MSDP_ADMIN
SAP Menu	Advanced Planning and Optimization → Demand Planning → Environment → Administration of Demand Planning and Supply Network Planning

Choose Planning Area YDP_PA.
Choose the menu path Extras → Data Extraction Tools.
On the DP/SNP Data Extraction screen, choose Generate DataSource, on the Generate export data source screen, enter DataSource name YDP_PA_DS04. Choose Execute.
Choose Yes if the Multiple DataSources for a planning object structure screen appears.
On the DataSource: Customer version Edit screen, hide the key figures except the following ones:

InfoObject ID	Short text
ZY93_BK04	Historical Sales Correction
ZY93_BK05	Historical Sales Override
ZY93_BK08	Manual Forecast
ZY93_BK09	Additional demand
ZY93_BK10	Local Fcst. Adj.
ZY93_BK11	Central Fcst. Adj
UNIT	Unit of measure

Choose Save. On the DP/SNP Data Extraction screen, choose Data backup and Choose Generate InfoCube from planning area, input the following values:

Field name	User actions and values	Comments
InfoCube	ZY93_IC04	
Description	Daily Backup YDP_PA – Manual Changes	
InfoArea	ZBPR_Y93_DPA_IA01	

Choose Execute. Choose Yes in the Check window to include the proportional factor in the InfoCube. Choose Continue in the Display logs window. Then Exit. The daily backup InfoCube for manual changes has been generated.

Here you create new dimensions for the InfoCube, then put each characteristics to the corresponding dimension. To access the activity, use one of the following navigation options:

Transaction Code	RSA1
SAP Menu	Advanced Planning and Optimization → Demand Planning → Environment → Data Warehousing Workbench

In the Data Warehousing Workbench: Modeling window, choose InfoProvider from the Modeling section, expand InfoArea ZBPR_Y93_DPA_IA01 and choose InfoCube ZY93_IC04.

Change to change mode and select the folder Dimensions Folder at the right side of the screen. Right-click dimension ZY93_IC041 and choose Properties. Change the description to Product and confirm. Right-click dimension ZY93_IC04T and choose Properties. Change the description to Time and confirm. Right-click folder Dimensions and choose Create New Dimensions.

Dimension	InfoObject ID	Description
Time	0CALMONTH	Calendar year/month
	0CALYEAR	Calendar year
Product	ZY93_BC01	Product
	ZY93_BC02	Product Line
Customer	ZY93_BC04	Customer
Location	ZY93_BC03	Location
Region	ZY93_BC05	Region
Sales Org	ZY93_BC06	Sales Organization
Version	9AVERSION	APO Planning Version

Right-click dimension Created on and choose InfoObject Direct Input. Input the following values:

InfoObject ID	Description
0CREATEDON	Date on which the record was created

Select the folder "Key Figures" and remove all key figures that are not part of the DataSource YDP_PA_DS04. Choose Activate to activate the InfoCube. Choose Local Object if the Create Object Directory Entry dialog box appears.

To access the activity, use one of the following navigation options:

Transaction Code	RSA1
SAP Menu	Advanced Planning and Optimization → Demand Planning → Environment → Data Warehousing Workbench

In the left part of the Administrator Workbench: Modeling screen, in the Modeling section, choose Source System. Right-click your Source system, for example, SH1CLNT185, choose Replicate DataSources in the context menu. Select the as DataSource(RSDS) radio button if the Data Source from Source System Unknown dialog box appears. A background job is triggered. Check in the job overview that this job has finished before proceeding to the next step.

In the Administrator Workbench screen, you are still in the source system view. Right-click the source system SH1CLNT185 and choose Display DataSources Tree in the context menu.

Choose the DataSources 9AYDP_ PA_DS04 you just created before. Choose Change Mode.

Choose Active DataSource. Choose Local Object if Create Object Directory Entry screen appears. In the left part of the Administrator Workbench: Modeling screen, in the Modeling section, choose InfoProvider. Expand InfoArea ZBPR_Y93_DPA_IA01 and Right-click InfoCube ZY93_IC04, Choose Create Transformation….in the context menu. In the Create Transformation dialog box, enter the value as below:Field name	User action and values	Comment
Source of the Transformation		
Object Type	DataSource	From the drop list
DataSource	9AYDP_PA_DS04	
Source System	e.g. SH1CLNT185	

On the Transformation Create screen, drag the line between two tables (if they are linked automatically, then just check and skip this step):

Source Field	Target Field
CALMONTH	0CALMONTH
CALYEAR	0CALYEAR
/BIC/ZY93_BC01	ZY93_BC01
/BIC/ZY93_BC02	ZY93_BC02
/BIC/ZY93_BC03	ZY93_BC03
/BIC/ZY93_BC04	ZY93_BC04
/BIC/ZY93_BC05	ZY93_BC05
/BIC/ZY93_BC06	ZY93_BC06
/BI0/9AVERSION	9AVERSION
/BIC/ZY93_BK04	ZY93_BK04
/BIC/ZY93_BK05	ZY93_BK05
/BIC/ZY93_BK08	ZY93_BK08
/BIC/ZY93_BK09	ZY93_BK09
/BIC/ZY93_BK10	ZY93_BK10
/BIC/ZY93_BK11	ZY93_BK11
UNIT	ZY93_BK01, ZY93_BK04, ZY93_BK05, ZY93_BK06

On the Transformation Create screen, in right target table, choose the row 0CREATEDON.

On the Rule Details window, choose Formula from drop list for Rule Type field and choose Change rule. In the window, find SYST-DATUM Current Date from the field list and choose it. Current Date is written at the formula area. Choose Back. Choose Transfer Values. Choose Activate to activate the transformation. Choose Yes if the Log Display window appears. Choose Local Object if the Create Object Directory Entry screen appears. Right-click Data Transfer Processes under InfoCube ZY93_IC04 again and choose Create Data Transfer Processes…in the context menu, enter the value below and confirm the dialog:

Choose Continue. Choose Activate Data Transfer Process. Choose Local Object if the Create Object Directory Entry screen appears. Expand the Data Transfer Processes 9AYDP_PA_DS04 / SH1CLNT185 -> ZY93_IC04/Delta, Right-click DataSource 9AYDP_PA_DS04, choose Create InfoPackage…. in the context menu.

In the Create InfoPackage window, enter InfoPackage description ZBPR_Y93_9AYDP_PA_DS04_IP01_F, and choose Save. Choose Local Object if Create Object Directory Entry screen appears.

At Scheduler (Maintain InfoPackage) window, select Data Selection tab page, enter 001 for from value of /BI0/9AVERSION.

Choose Save and Exit.

Daily Back UP Manual Changes
Methodology

To access the activity, use one of the following navigation options:

Transaction code	RSPC
SAP SCM Menu	Demand Planning → Environment → Maintain Process Chains

In the Process Chain Maintenance Planning View, choose Create and enter values as follows:

Field name	User action and values	Comment
Process chain	YDP_BU_DAILY_ CHANGE	
Long description	YDP – Daily Backup Manual Changes	

Choose Continue. In the Insert Start Process window, choose Create.

Field name	User action and values	Comment
Process variants	YDP_BU_DAILY_ CHANGE	
Long description	Daily Backup Manual Changes	

C Choose Enter, then choose Save. In the Create Object Di rectory Entry, choose Local Object, go back then choose Continue. In the Process Chain Maintenance Modified Version window, the starting process is now visible. Choose Process Type. Expand the node Load Process and Post-Processing. Choose Execute InfoPackage and select the InfoCube for Daily Back-up Manual Changes in the Insert Execute InfoPackage window and choose Continue. The data transfer process 9AYDP_PA_DS04 / SH1CLNT185 → ZY93_IC04/Delta is automatically inserted in the process chain view. The selected job is now on the right screen area. Now add the 3rd step of the process chain. Choose process type: Complete Deletion of Data Target Contents under the node: Data Target Administration. In the Insert Complete Deletion of Data Target Contents window, choose Create.
Pr.

Field name	User action and values	Comment
Data Source	9AYDP_PA_DS04	
Src. system	SH1CLNT185	
Older Than (No. of Days/Date)	31.12.9999	

Choose Save. In the prompted Create Object Directory Entry dialog box, choose Local Object, Go back then choose Continue. In the Process Chain Maintenance Modified Version window, the 5th step is now visible. Now link these steps by the same sequence they are created, by selecting the start job and dragging a line to the linked job, choose …successful in the Action for… dialog box. Choose Save. Choose Activate to make the process chain active.

Daily Backup Manual Changes

Normally, it is better to back up all your manual planning works every day. We recommend that you schedule this process chain as a daily job.

With this activity, the user can group the process chains logically, and then can easily find and manage the process chains. Here we just give an example. You can group the process chains as your unique requirement.

Methodology

To access the activity, use one of the following navigation options:

Transaction Code	RSPC
SAP Menu	Demand Planning → Environment → Maintain Process Chains

Choose the Process Chain Data Preparation YDP_LOAD_PRE. Choose Display/Change to make sure you are in the change mode.

Choose Display Components. In the Assign Display Grouping dialog box, choose F4. In the Selection dialog box, choose Create. In the Creation of a Grouping dialog box, enter the following data:

Field name	User action and values	Comment
Application comp.	YDP_DP	
Long description	Steps within the black box DP	

Choose Enter. In the Assign Display Grouping dialog box, choose Enter. In the Process Chain Maintenance Modified Version screen, choose Save. Choose Process Chains to refresh the change.
Choose the Process Chain YDP_FORECASTING, choose Display Components. In the Assign Display Grouping dialog box, choose F4. In the Selection dialog box, choose the Application Components YDP_DP you created in step 7. Repeat step 12 to step 14 to assign the process chain YDP_DATA_LOAD_PRE_EX, YDP_DATA_LOAD_PRE_ECC, YDP_CONSOLIDATING, YDP_RLSNP, YDP_RLECC to the Application Components YDP_DP.

Repeat step 2 to step 15 to assign the other Process Chains to the corresponding Application Components. Follow the table below for maintenance:

Process Chain	Application Components	Long Description
YDP_BU_CORR_HIST	YDP_BACKUP	YDP - Backup and Data Management
YDP_BU_BU_FORECAST		
YDP_BU_DAILY_CHANGE		
YDP_DATA_LOAD_FLAT	YDP_TRANS_LOAD	YDP - Data Load (Transaction Data)
ZDPA_ECC_TRANS_DATA		
ZBRP_Y93_ZDPA_PC01	YDP_MASTER_LOAD	YDP - Data Load (Master Data)
YDP_LOAD_PRE	YDP_SUB	YDP – Sub Process Chain

APO Forecast Alert Profiles

Maintain this alert profile if you want to monitor forecast alerts for Demand Planning. The profile allows you to maintain a user-specific selection of alerts corresponding to your area of responsibility.

Optional

You have specified priorities for forecast alerts in Customizing. If you do not specify priorities, the system issues all forecast alerts as warning messages, as standard.

In the Forecast Profile for Demand Planning, you have defined a diagnosis group. The diagnosis group contains the threshold values, which trigger an alert when they are exceeded. For Univariate forecasts these are always maximum values.

Methodology

To access the activity, use one of the following navigation options:

Transaction code	/SAPAPO/AMON_SETTING
SAP SCM Menu	Supply Chain Monitoring → Current Settings → Set Alert Monitor

In the Alert Profile Maintenance window, choose Create Profile. In the Create Alert Monitor Profile window, enter the value as follows:

Field name	User action and values	Comment
Category		
Application Profile	X	selected
Identification		
Profile ID		
Description	Forecast alert profile	
AMO Application	APO: Forecast Planning	Choose from drop list

Choose Create.
In the Alert Profile Maintenance: Change <your alert profile name> window, choose the Selection tab page at the right side of the window, in the Select Alert Types section, expand the node Demand Planning – Forecast Alerts, maintain the value as the table below:

Alert Types	Selection	Information	Warning	Error
MAD upper limit exceeded	X			
MAPE upper limit exceeded	X			

In the Object Selection section of the same screen, maintain the value as the table:

Field name	User action and values	Comment
Object Selection		
Planning Book	YDP_PB_MASS_JOB	The planning book name

Select the planning book for which the system should determine alerts. You can enter a selection restriction. If you enter a selection range for a specific characteristic, only those alerts will be displayed that have that particular characteristic. If you do not enter a selection, the system determines alerts for all selections in a planning book.

Choose Save. Expand the node APO: Forecast Planning at the left side of the window, then you can see the alert profile you just created.

APO Supply & Demand Planning Alert Profiles

Maintain this alert profile if you want to monitor macro-dependent alerts for Demand Planning. The profile allows you to maintain a user-specific selection of alerts corresponding to your area of responsibility. Here we only focus on database alerts that have a better performance compared with dynamic alerts.

You should create a macro under a planning book and data view, in the macro, an alert will be generated if some conditions are met, for example, if the adjustment by the central planner varies from the manual forecast more than 30%.

Methodology

To access the activity, use one of the following navigation options:

Transaction code	/SAPAPO/AMON_SETTING
SAP SCM Menu	Supply Chain Monitoring → Current Settings → Set Alert Monitor

In the Alert Profile Maintenance window, choose Create Profile. In the Create Alert Monitor Profile window, enter the value as follows:

Choose Create. In the Alert Profile Maintenance: Change <your alert profile name> window, choose the Selection tab page at the right side of the window, in the Select Alert Types section, expand the node SDP – Database Macro Alerts, maintain the value as the table below:

Alert Types	Selection	Comment
Requirements Planning – Macro Status Alerts	X	

In the Object Selection section of the same screen, maintain the value as the table:

Field name	User action and values	Comment
Object Selection		
Planning Book	YDP_PB_CENTRAL_PLAN	Your planning book name

In the Database Alerts section of the same screen, maintain the value as follows:

Field name	Selection Description	Comment
YDP_DV_FC_REV	YDP_MP_ALL_PROD_LOC	Your selection

Here select the planning book and then data views for all the database or dynamic alerts for which you want the system to determine alerts. If you want to choose all the database alerts for a planning book, enter a blank row in the selection area for data views. In this project, we make an example for the macro-dependent alert. Please refer to Macro: Central adj/man. fcst > 30% BG COL = RE(Planning book: YDP_PB_CENTRAL_PLAN, Data View: YDP_DV_FC_REV). You would maintain the macro-dependent alert based on your specific business requirement.

Maintain this overall alert profile if you want to track alerts in APO Alert Monitor. The profile allows you to maintain a user-specific selection of alerts corresponding to your area of responsibility, and can be set up to track alerts by planning folder.

Access the transaction using one of the following navigation options:

Transaction code	/SAPAPO/AMON_SETTING
SAP SCM menu	Advanced Planning and Optimization → Supply Chain Monitoring → Current Settings → Set Alert Monitor

In the Alert Profile Maintenance window, choose Create Profile. In the Create Alert Monitor Profile window, enter the value as follows:

Field name	User action and values	Comment
Category		
Overall Profile	X	selected
Identification		
Profile ID	YDP_OAP	
Description	Overall alert profile	

Choose Create. In the Alert Profile Maintenance: Change <your overall alert profile name> window, choose the Setting tab page at the right side of the window, maintain the value follows:

Field Name	User action and values	Comment
Planning Version	001	
Period		
Relative Time Interval	X	Selected
Months	12	
Application-Specific Alert Profiles		
Alert Profile for APO: Forecast Planning	YDP_FP01	Your forecast alert profile
Alert Profile for APO: Supply & Demand Planning	YDP_SDP01	Your supply & demand planning alert profile

Choose Save. Expand the node Overall Alert Profiles at the left side of the window. You can see the alert profile you just created.

Assign Planners to Alert Profiles

To link specific users to specific alert profiles, if you want to display the alert at interactive planning screen, you have to maintain the relationships. The planners are not able to see any alerts in Interactive Planning unless their SAP user ID is assigned to an alert profile. To access the activity, use one of the following navigation options:

Transaction code	/SAPAPO/SDPALPR
SAP SCM Menu	Demand Planning → Environment → Current settings →Assign Planners to Alert Profile

In the Assign Planner to Alert Profile window, you can assign each planner for specific alert profiles. Maintain value as table:

Field name	User action and values	Comment
Plannr	XXXX	Planner user id
Planning Area	YDP_PA	
FCS profl.	YDP_FC01	Forecast alert profile, if relevant
SDP Profl.	YDP_SDP01	Supply & demand planning alert profile, if relevant

Choose Save.

Setting up Roles and Authorizations

The SAP authorization concept protects transactions, programs, and services in SAP systems from unauthorized access. On the basis of the authorization concept, the administrator assigns authorizations to the users that determine which actions a user can execute in the SAP system, after he or she has logged on to the system and completed the authentication process.

To access business objects or execute SAP transactions, a user requires the corresponding authorizations, since business objects or transactions are protected by authorization objects. The authorizations represent instances of generic authorization objects and are defined according to the tasks and responsibilities of the employee. The authorizations are grouped into an authorization profile that is associated with a role. The user administrators then assign the corresponding roles

Role Overview

Modified versions of the SAP Standard delivered roles are used in this scenario in order to restrict to specific planning books and selection ID used in the demand planning scenario and to use the Business Intelligence (BI) authorization concept.

For more information on authorization objects relevant to Demand Planning, see the application help for Demand Planning:

The table below lists the major access restriction for the different roles:

Business Role	SAP SCM Role	Copy from standard role	Planning Area Accessible	Planning Book Accessible	Data View Accessible	BI Authorization
Local Demand Planner (AME area)	YDP_IP_LOC_AME	SAP_SCM_FCS_PLN_STD (Demand Planner Standard)	YDP_PA	YDP_PB_LOCAL_PLAN	YDP_DV_LOC_ADJ	YDP_LOC_AME
Local Demand Planner (APJ area)	YDP_IP_LOC_APJ	SAP_SCM_FCS_PLN_STD	YDP_PA	YDP_PB_LOCAL_PLAN	YDP_DV_LOC_ADJ	YDP_LOC_APJ
Local Demand Planner (EU area)	YDP_IP_LOC_EU	SAP_SCM_FCS_PLN_STD	YDP_PA	YDP_PB_LOCAL_PLAN	YDP_DV_LOC_ADJ	YDP_LOC_EU
Central Demand Planner	YDP_IP_CTR_ALL	SAP_SCM_FCS_PLN_EXP (Demand Planner Expert).	YDP_PA	YDP_PB_CENTRAL_PLAN YDP_PB_MASS_JOB	*	YDP_CTR_ALL
Demand Planning Administrator	YDP_MP_ALL_ADMIN (YDP_IP_CTR_ALL is also assigned)	SAP_SCM_FCS_PLN_ADM	*	*	*	0BI_ALL

Business Intelligence (BI) has its own authorization concept that differs in some details from the normal SAP authorization concept. You can use the BI authorization concept to restrict the ability to access specific characteristics or characteristic values in Demand Planning.

Since organizations are set up differently for each implementation and assignments of local planners are specific to the implementation, you may modify the authorization based on your realized organizational structure by following the steps mentioned below. This section describes how to create or modify the role based on the organization's requirement.

Authorization Relevant InfoObjects

We only enable navigation attribute Area (attribute of characteristic Region) in the demand planning object structure for BI authorizations control. The authorization relevant flag need to be set up on the InfoObjects definition in the BI Administrator Workbench. Access the activity using the following navigation options:

Transaction code	RSA1
SAP SCM Menu	Information Systems →Business Information Warehouse →Modeling →Data Warehousing Workbench: Modeling

Choose InfoObjects in the left window.

Expand the InfoArea Tree RDS Dem and Planning in the middle window.
Expand the InfoObject Catalog Char. Of RDS DP in the middle window. Choose Characteristic Region in the middle window. Choose the Attribute tab page in the right window. If you are currently in display mode, choose Display <-> Change above to switch to change mode.

Find the row of attribute ZY93_BC09 (Area), and tick the field AuthorizRelevant. Choose Activate to acitvate the infoobject. In addition, other InfoObjects are also required to be flagged as authorization relevant. In standard delivered SAP, these objects are not flagged as authorization relevant, so you need to change the following objects following the hits above.

0TCAACTVT - Activity in Analysis Authorizations
0TCAIPROV - Authorizations for InfoProvider
0TCAVALID - Validity of an Authorization
You can find these characteristics under InfoArea Unassigned Notes and InfoObject Catalog Unassigned Characteristics. By using Search in the middle window, you can locate the 3 characteristics mentioned above more efficiently.

Maintain Analysis Authorization

You create four authorizations here to control the access to different Areas. The authorization is assigned to different roles later.

Access the activity using the following navigation options:

Transaction Code	RSECADMIN
SAP SCM Menu	Advanced Planning and Optimization → Demand Planning →Environment → Manage Analysis Authorizations

Choose Maintenance on the Authorizations tab page. Input the 1st authorization name YDP_LOC_AME in the field Authorization, and choose the Create. On the next screen, input name YD_LOC_AME in the field Short Text:

Choose Insert Row. Input 0TCAACTVT in the column Charact./ Dimensions, then choose Enter.

Repeat step 5 and step 6 to add Characteristic 0TCAIPROV and 0TCAVALID. Select the all the 3 rows you have just inserted, and choose Full Authorizations (for these 3 characteristics, there is no restriction here). Choose Insert Row.

Use Selection help (F4) in the field Charact./Dimensions to choose InfoObject ZY93_BC05__ZY93_BC09 (Area), then choose Enter. Select the row ZY93_BC05_ZY93_BC09 (Area), and choose Details. On the Value Authorizations tab page, choose Insert Row.

Input or use the selection help to choose EQ in the field Operator and AME in the field Technical Character.(from), then choose Enter.

If there the Log Display window appears, choose Enter. Choose Back twice to return to the initial screen. Use the copy function by choosing the pushbutton on the initial screen to create the other 3 authorizations YDP_LOC_APJ, YDP_LOC_EU, and YDP_CTR_ALL.

Each time you have copied the new authorization, select the row ZY93_BC05__ZY93_BC09 (Area), and choose Details. On the new screen, change the field according to the table below:
Save the new authorization each time you have finished the steps above.

Different roles are defined for Local Planner, Central Planner, and DP Administrator in this section.
In the role maintenance transaction (t-code: PFCG), you can review the authorizations associated with this role. Access the activity in SAP SCM system by navigating as follows:

Transaction code	PFCG
SAP SCM Menu	Tools → Administration → User Maintenance →Role Administration → Roles

On the Role Maintenance screen, enter the following value:

Parameter	Value
Role	SAP_SCM_FCS_PLN_STD

Choose Copy Role. In the dialog box that appears, make the following entries:

Parameter	Value
from role	SAP_SCM_FCS_PLN_STD
to role	YDP_IP_LOC_AME

Choose Copy All. Choose Change for the newly created role and make the following entry:

Parameter	Value
Description	Demand Planning Local Planner – AME Area

Choose Save. Choose the Authorizations tab page. Choose Expert Mode for Profile Generation. Choose Delete and Recreate Profile and Authorizations. Choose Manually to add new authorization objects. In the Manual selection of authorizations box, enter the

two authorization objects S_TCODE and S_RS_AUTH in the Authorization Objects area, then choose Continue (Enter). In the authorization objects tree, expand the authorization you have just insert: Manually Cross-Application Authorization Objects (AAAB) Manually Transaction Code Check at Transaction start (S_TCODE) Manually Transaction Code Check at Transaction start (S_TCODE) ® Transaction Code (TCD)

Choose the white bar of the authorization field Transaction Code (TCD). In the Field values box, input SU53 in the 'From' field. In the second row, input /SAPAPO/MC62 in the 'From' field. Then choose button Transfer (Enter). Now the yellow lights have been turned to green in front of these lines. In the authorization objects tree, expand the authorization you have just inserted: Business Information Warehouse (RS) ® Manually BI Analysis Authorizations in Role (S_RS_AUTH) ® Manually BI Analysis Authorizations in Role (S_RS_AUTH) ® BI Analysis Authorizations: Name of an Authorization (BIAUTH). Choose the white bar of the authorization field BI Analysis Authorizations: Name of an Authorization (BIAUTH). In the Field values box, input YDP_LOC_AME in the 'From' field. Then choose Transfer (Enter). Now the yellow lights have turned to green in front of these lines.

Expand the tree

Standard APO Authorization Objects (APO). There are nine authorization objects with yellow light. And unter the tree Standard Basis – Central Functions (BC_Z), there are other authorization objects with yellow light. Choose Generate from the application toolbar. In the Generate Profile dialog box, choose Generate. In the window, keep the text proposed by system and choose Execute (Enter). Choose Back twice. Repeat these steps for the following values: Modify or add the authorization objects for the role YDP_IP_LOC_APJ according to the table below:
Modify or add the authorization objects for the role YDP_IP_LOC_EU according to the table below:

In the role maintenance transaction (t-code: PFCG), you can review the authorizations associated with this role. Access the activity in SAP SCM system by navigating as follows:
Choose Save. Choose the Authorizations tab page. Choose Expert Mode for Profile Generation. Choose Delete and Recreate Profile and Authorizations. Choose Manually to add new authorization objects. In the Manual selection of authorizations box, enter the two authorization objects S_TCODE and S_RS_AUTH in the Authorization Objects area, then choose Continue (Enter). In the authorization objects tree, expand the authorization you have just insert: Manually Cross-Application Authorization Objects (AAAB) Manually Transaction Code Check at Transaction start (S_TCODE) Manually Transaction Code Check at Transaction start (S_TCODE) ® Transaction Code (TCD)

Authorization Object	Field Name	Content
S_TCODE	TCD	SU53
S_RS_AUTH	BIAUTH	YDP_CTR_ALL
	ACTVT	(=)
	APO_PLBK	(+)*
	APO_VIEW	(+)*
	ACTVT	(+)*
	APO_MAKRON	(+)*
	ACTVT	(=)
	ACTVT	(=)
	APO_ATP_AR	(=)
	ACTVT	(+)*
	APO_PROD	(+)*
	APO_FUNC	(=)
	APO_PAREA	(+) YDP_PA
	ACTVT	(+)*
	APO_IOBJNM	(+) *
	APO_PAREA	(+) YDP_PA
	ACTVT	(+)*
	APO_LOC	(+)*
	ACTVT	(+)*
	APO_MACRO	(+)*
	APO_PLBK	(+)*
	APO_VIEW	(+)*
	ACTVT	(+)*
	APO_KENN	(+)*
	APO_MOD	(+)*
	ACTVT	(+)02,03,16
	APO_DVIEW	(+)*
	APO_PLBK2	(+)YDP_PB_CENTRAL_PLAN, YDP_PB_MASS_JOB
	ACTVT	(+)*
	APO_LOC	(+)*
	APO_PROD	(+)*
	ACTVT	(+)02,03
	APO_PROMID	(+)*
	ACTVT	(+)*
	APO_LOC	(+)*
	APO_PLNR	(+)*
	APO_RES	(+)*
	ACTVT	(+)02,03,16
	APO_PAREA	(+)YDP_PA
	APO_PLBK2	(+)YDP_PB_LOCAL_PLAN
	APO_SELTXT	(+)YDP_IP_LOC_APJ
	APO_VERS	(+)001
	ACTVT	(+)*
	APO_STSID	(+)*
	ACTVT	(+)*
	APO_APKZ	(+)*
	APO_KENN	(+)*
	APO_MOD	(+)*
	APO_VERS	(+)*
	ACTVT	(=)
	TLANGUAGE	(+)*
	TRANOBJ	(+)*

	ACTVT	(=)
	ALG_OBJECT	(+) APO_FCS
	ALG_SUBOBJ	(+)*

Result

Generated all the authorization profiles needed for the scenario

Creating SAP SCM Users and Assign Proper Roles

You create four users here for different business role users. The access authorization is controlled by assigning different roles to each user.

You need to assign the default planning book to each DP user. When a planner opens the demand planning desktop, he or she sees the planning book assigned to them. Note that you can assign only one planning book to a user.

You can restrict the users' authorization so that they can only navigate to a specified planning book or a specific data view.

To access the activity, use one of the following navigation options:
Choose New Entries.
Change the following two lines, the first without the transaction code as shown in the table:

If you set an indicator in the Specific book column, the user whose name you have entered in the left column can only navigate to the specified planning book in interactive demand planning (the user can access all the data views for this planning book).

If you set an indicator in the Specific View column, the user you have entered in the left column can use this planning book and the planning view only and cannot navigate to other planning books and views in the interactive demand planning.

To restrict a person's authorization (for example, for a local planner), so that they can only use planning book YDP_PB_LOCAL_PLAN and data view YDP_DV_LOC_ADJ, you have to maintain the table as follows:

Conclusion

In this article able to describe few case studies, methodologies and results related to Process flow, Bucket Profile in Demand Planning, Planning Area, Planning Book and Data View and Forecasting. SAP Supply Chain Management, Demand planning, Forecasting will have more number of case studies and methodologies. We'll cover few more in next article [1-25].

References

1. Analyzing Demand Planning. Learning SAP https://learning.sap.com/learning-journey/discovering-end-to-end-business-processes-for-the-intelligent-enterprise/analyzing-demand-planning_c51b50fc-7ec6-43e9-96e0-5842d1122d4d.
2. Demand Planning. SAP HELP https://help.sap.com/docs/SAP_SUPPLY_CHAIN_MANAGEMENT/d8a0d82aa9c041028502c8c175143205/7ee8fd508d67e85ee10000000a44538d.html?version=7.0.
3. Demand Sensing in IBP. SAP Blogs https://blogs.sap.com/2023/03/23/demystifying-demand-sensing-in-sap-ibp-how-it-brings-value-to-your-supply-chain/.
4. Demand Planning. SAP HELP https://help.sap.com/doc/saphelp_scm700_ehp02/7.0.2/en-US/7e/e8fd508d67e85ee10000000a44538d/content.htm?no_cache=true.
5. Jomerce PJ (2018) PP/DS for SAP S/4HANA (Advanced Planning) : A powerful planning and scheduling tool. SAP Blogs Available at https://blogs.sap.com/2018/02/12/ppds-for-sap-s4hana-advanced-planning-a-powerful-planning-and-scheduling-tool/.
6. Berthold von Haaren (2023) Production Planning Integration – Synchronized Planning for Production Using Key Figure Integration and the New Flexible Constraint Heuristic. SAP Blogs https://blogs.sap.com/2023/11/02/production-planning-integration-synchronized-planning-for-production-using-key-figure-integration-and-the-new-flexible-constraint-heuristic/.
7. Ulrich Mast (2022) SAP S/4HANA Manufacturing for planning and scheduling – Release 2022 is now available, SAP Blogs https://blogs.sap.com/2022/11/01/sap-s-4hana-manufacturing-for-planning-and-scheduling-release-2022-is-now-available/.
8. Gayatree Bhattacharyya (2022) Flexible Integration with PP/DS for SAP S/4HANA. SAP Blogs https://blogs.sap.com/2022/01/05/flexible-integration-with-pp-ds-for-sap-s-4hana/.
9. Ahmet Tasdelen (2021) Basic configuration of embedded PP/DS in S/4 HANA. SAP Blogs https://blogs.sap.com/2021/01/04/basic-configuration-of-embedded-pp-ds-in-s-4-hana/.
10. Gerhard Welker (2020) Highlights for Manufacturing in SAP S/4HANA 2020. SAP Blogs https://blogs.sap.com/2020/12/15/highlights-for-manufacturing-in-sap-s-4hana-2020/.
11. Phillip Dent (2019) Production Planning and Detailed Scheduling in SAP S/4HANA – What Does It Mean to Me?. SAP Blogs https://blogs.sap.com/2019/02/19/production-planning-and-detailed-scheduling-in-sap-s4hana-what-does-it-mean-to-me/.
12. Venkadesh Seetharaman (2019) PP/DS on S/4 HANA (Advanced Planning) Insights. SAP Blogs https://blogs.sap.com/2019/01/17/ppds-on-s4-hana-advanced-planning-insights/.
13. Jomerce PJ (2018) Production Scheduling Board with PP/DS for SAP S/4HANA (Advanced Planning) on SAP S/4HANA 1709 FPS1. SAP Blogs https://blogs.sap.com/2018/02/15/production-scheduling-board-with-ppds-for-sap-s4hana-advanced-planning-on-sap-s4hana-1709-fps1/.
14. Pranit Bankar (2023) Planning with Characteristics using SAP S/4HANA DSC Edition of PP/DS. SAP Blogs https://blogs.sap.com/2023/06/21/planning-with-characteristics-using-sap-s-4hana-dsc-edition-of-pp-ds/.
15. Berthold von Haaren (2023) Exploring the Benefits of Synchronized Planning for Production. SAP Blogs https://blogs.sap.com/2023/05/25/exploring-the-benefits-of-synchronized-planning-for-production/ .
16. Tom Arne Altmueller (2021) Business benefits of a PP/DS for SAP S/4HANA implementation. SAP Blogs https://blogs.sap.com/2021/03/17/business-benefits-of-a-pp-ds-on-sap-s-4hana-implementation/.
17. Pradeep Vijay (2015) SCM Core Interface- Handbook (PART-1). SAP Blogs https://blogs.sap.com/2015/01/21/scm-core-interface-handbook-part-1/.
18. Roman Gorbenko (2020) Integrate It! SAP EWM and SAP ERP integration via CIF. Step-by-step guide. SAP Blogs https://blogs.sap.com/2020/08/17/integrate-it-sap-ewm-%d0%b8-sap-erp-integration-via-cif.-step-by-step-guide/.
19. Balakrishna Gajula (2020) Master Data transfer through CIF using BTEs. SAP Blogs https://blogs.sap.com/2020/08/24/

master-data-transfer-through-cif-using-btes/.

20. CIF Customizing in SAP ECC or SAP S/4HANA. SAP Blogs https://help.sap.com/docs/SAP_INTEGRATED_BUSINESS_PLANNING/68fa1e86fe6f41d98421d1ce13a08a9f/a37c66e3e4de42d891ea922a2e65d4c6.html.
21. How to Perform CIF Post Processing. SAP HELP https://help.sap.com/docs/SAP_INTEGRATED_BUSINESS_PLANNING/68fa1e86fe6f41d98421d1ce13a08a9f/a37c66e3e4de42d891ea922a2e65d4c6.html.
22. Luke Krogh (2022) How To Choose A Forecasting Model in SAP S/4HANA. SAP Blogs https://blogs.sap.com/2022/04/08/how-to-choose-a-forecasting-model-in-sap-s-4hana/.
23. Girish MP (2021) Sales Forecasting & Planning using SAP Analytics Cloud. SAP Blogs https://blogs.sap.com/2021/09/21/demand-forecasting-planning-using-sap-analytics-cloud/.
24. Oleksandr Golubet (2021) Planning and Forecasting with SAP Profitability and Performance Management Solution – A modern approach, SAP Blogs https://blogs.sap.com/2021/01/27/planning-and-forecasting-with-sap-profitability-and-performance-management-solution-a-modern-approach/.
25. Hardik Shah (2023) SAP success metrics and cloud deployment options. SAP Blogs https://blogs.sap.com/2023/11/02/sap-success-metrics-and-cloud-deployment-options/.

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