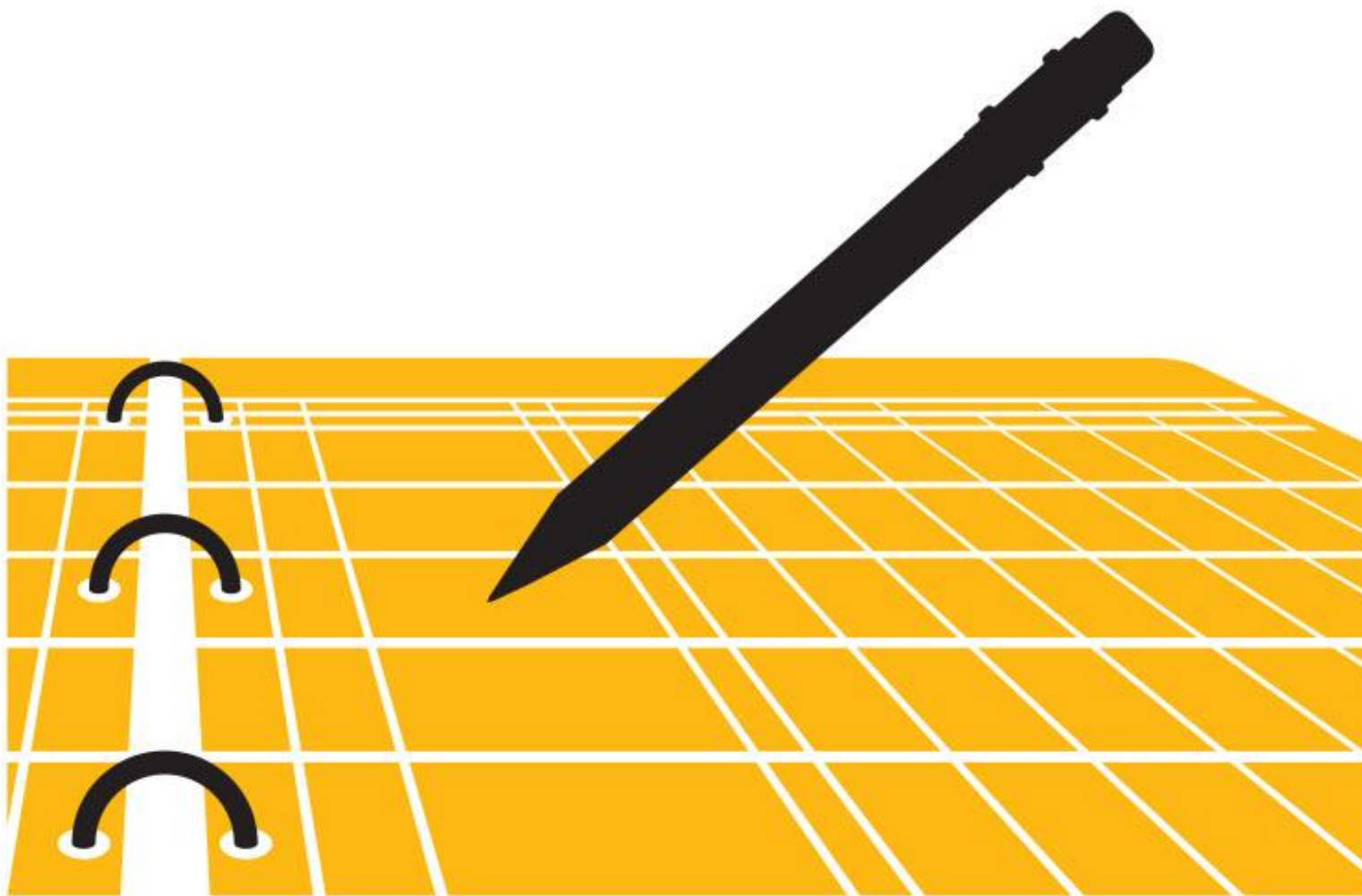


Document Version : 1.1 – Final
Date: March 31, 2017

Attribute-Based Planning for Supply Network Planning 1.0

General Configuration



Typographic Conventions

Type Style	Description
<i>Example</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.

Document History

Version	Date	Change
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1 About This Document

1.1 Purpose and Scope

The configuration guide provides a central starting point for the technical implementation and configuration of *attribute-based planning for supply network planning*. It describes all activities necessary for the implementation and configuration of *attribute-based planning for supply network planning*.

In addition, it provides information about included capabilities to be extended based on custom logic.

 Note

In this guide, we will refer to *attribute-based planning for supply network planning* as *ABP*.

1.2 Target Audience

This document is intended for the following target audiences:

- Consultants
- Partners
- Customers
- System administrators
- Support specialists

1.3 Glossary

Term	Abbreviation	Definition
Advanced Planning and Optimization	APO	Module of SAP SCM
Capable-to-Match	CTM	<p>An advanced supply chain management function in APO that complements APO SNP's multi-site supply chain planning strategies. The CTM engine performs a quick check of production capacities and transportation capabilities.</p> <p>CTM grades and works out multi-site production processes using time-dependent process parameters such as yield and process times. To exploit production capabilities to the maximum, the capacity check is performed down to the operational level. Planning strategies control the sequence of supply consumption and the multilevel BOM explosion.</p>
Characteristic		A property that describes and differentiates objects. Example: length, color, weight, and so on
Characteristic Aggregation Profile		A category of master data for <i>attribute-based planning for supply network planning</i> that defines the characteristics to be considered as grouping criteria for the aggregation of demands and supplies during the Capable-to-Match (CTM) planning run.
Characteristics-Dependent Planning	CDP	A planning functionality in SAP SCM, which considers the common characteristics of objects.
Characteristics Group		

Term	Abbreviation	Definition
Class		A group of similar objects described by means of characteristics that they have in common.
Core Interface	CIF	Interface for data transfer between an ERP system (SAP ERP) and a connected SCM system (such as SAP Advanced Planning and Optimization (APO) or SAP Supply Network Collaboration (SAP SNC)). The basis for the data transfer is the integration model on the ERP side.
Coverage Rule		A profile for <i>attribute-based planning for supply network planning</i> that defines which supply satisfies which demand objects, based on the characteristic value mapping. It is created only for one characteristic and can then be assigned to many location products. For more information, see the application help for <i>attribute-based planning for supply network planning</i> . Go to the SAP Help Portal and search for <i>attribute-based planning for supply network planning</i> .
Default Distribution Profile	DDP	A category of master data for <i>attribute-based planning for supply network planning</i> that defines disaggregation settings for planning algorithms based on characteristic value combinations. It consists of the profile itself, defining the characteristic value combinations and their weight for distribution, and the assignment of the profile to location products. For more information, see the application help for <i>attribute-based planning for supply network planning</i> . Go to the SAP Help Portal and search for <i>attribute-based planning for supply network planning</i> .

Term	Abbreviation	Definition
Demand Planning	DP	<p>An application component in the Advanced Planning and Optimization (APO) that allows you to forecast market demand for your company's products and produce a demand plan.</p> <p>APO Demand Planning has a data mart in which you store and maintain the information necessary for the demand planning process in your company. Using this information along with user-defined planning layouts and interactive planning books, you can integrate people from different departments into the forecasting process. The APO DP library of statistical forecasting and advanced macro techniques allows you to create forecasts based on demand history as well as any number of causal factors, and use a consensus-based approach to consolidate the results. Marketing intelligence and management adjustments can be added by using forecast overrides and promotions. The seamless integration with APO Supply Network Planning supports an efficient S&OP process.</p>
Disaggregation Horizon		<p>A category of master data for <i>attribute-based planning for supply network planning</i> that defines the time period in which the newly created APO orders are planned on a disaggregated level, that is, all mandatory characteristics are entered. Outside the disaggregation horizon, the characteristics can be blank.</p>

Term	Abbreviation	Definition
Forecast Release from Demand Planning to Supply Network Planning	DP2SNP	<p>A function specific to <i>attribute-based planning for supply network planning</i>, used to transfer forecast quantities from the APO Demand Planning component to the APO Supply Network Planning component to be used for supply planning. During the transfer the data is mapped and potentially adjusted.</p> <p>The functionality offers a flexible selection of key figures and characteristics to be downloaded and provides an easy way of reordering, changing and introducing your own release steps.</p>
Location Distribution Profile	LDP	<p>A profile for <i>attribute-based planning for supply network planning</i> that defines how to distribute forecast quantities from a distribution profile key figure for country or region to locations (typically distribution centers).</p>
Logical System		<p>A system in which applications sharing a common data basis run.</p> <p>In SAP terms, a logical system is a combination of system ID and client. Messages are exchanged between logical systems.</p>
Material Type		<p>A grouping together of materials with the same basic attributes such as raw materials, semi-finished products, or finished products.</p>
Period Aggregation Profile		<p>A profile for <i>attribute-based planning for supply network planning</i> that defines the time-based aggregation for demands and supplies during the Capable-to-Match (CTM) planning run. You can define different period sizes across the planning horizon (days, weeks, months) based on the period size selection and by maintaining the number of periods for the respective period size.</p>

Term	Abbreviation	Definition
Period Distribution Profile	PDP	A profile for <i>attribute-based planning for supply network planning</i> that defines how to distribute forecast quantities from the forecast periods to weekly periods.
Planning Characteristic		An attribute used for the segmentation of the transaction data, that is, the assignment of different characteristic values to individual transaction data elements.
Product Characteristic		Characteristic intended to be used for classification of products, that is, the assignment of characteristic values to a product.
Production Planning and Detailed Scheduling	PP/DS	A module in APO that enables the production within a plant to be planned while, at the same time, taking product and capacity constraints into account. The aim of this module is to increase throughput and to reduce product stock. This results in a feasible master production schedule.
Propagation Rule		A category of master data for <i>attribute-based planning for supply network planning</i> . It is a rule that prevents certain characteristics from becoming visible at certain locations based on propagation from the originating output node to the corresponding input nodes.
Purchase Order	PO	A request or instruction from a purchasing organization to a vendor (external supplier) or a plant to deliver a certain quantity of a product or to perform certain services at a certain point in time. The purchase order exists in APO in the form of an order.

Term	Abbreviation	Definition
Sales Order		<p>A customer request to the company for the delivery of goods or services at a certain time.</p> <p>The request is received by a sales area, which is then responsible for fulfilling the order.</p>
Sales Order Item		
SAP Fashion Management		<p>A solution for apparel, footwear, fashion, and accessories companies enabling vertical, omni-channel processes for wholesalers and retailers.</p> <p>SAP Fashion Management supports single harmonized master data with (optional) vertical planning, procurement, inventory management, availability checking, rescheduling, and order allocation.</p>
SAP Supply Chain Management	SAP SCM	<p>Encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management.</p>
Sourcing Condition		<p>A category of master data for <i>attribute-based planning for supply network planning</i> that restricts the usage of sources of supply to orders that contain specific characteristic values. It makes it possible to redirect demands based on their supply to be sourced from different supply or production sites, or to restrict certain production resources to be used only for supplying certain demands.</p> <p>For more information, see the application help for <i>attribute-based planning for supply network planning</i>. Go to the SAP Help Portal and search for <i>attribute-based planning for supply network planning</i>.</p>
Supply Network Planning	SNP	<p>Module within APO with focus on network and distribution planning</p>

Term	Abbreviation	Definition
Virtual Characteristic		<p>An attribute that can be used to hide the complexity from the user perspective in interactive planning for supply network planning.</p> <p>For more information, see the application help for <i>attribute-based planning for supply network planning</i>. Go to the SAP Help Portal and search for <i>attribute-based planning for supply network planning</i>.</p>

1.4 Related Information

For detailed information about the application, see the application help for *attribute-based planning for supply network planning*. Go to the [SAP Help Portal](#) and search for *attribute-based planning for supply network planning*.

For more information about components, installation and landscape information including deployment options, refer to the Installation Note for *attribute-based planning for supply network planning*. You can download it from <http://support.sap.com/swdc>. Go to *Installations and Upgrades -> Software Downloads -> By Alphabetical Index (A-Z) (index "A") -> ATTRIBUTE-BASED PLANNING -> ATTRIBUTE-BASED PLANNING 1.0 -> INSTALLATION*.

1.5 Important SAP Notes

Recommendation

Make sure that you read the SAP Notes before you start implementing the software. The SAP Notes contain the latest information about the installation as well as corrections to the installation information.

Also make sure that you have the up-to-date version of each SAP Note, which is available on SAP Service Marketplace at <https://service.sap.com/notes>.

SAP Note Number	Title
2304555	ABAP Add-on CDBASIS 100: Installation, CSPs
2307613	ABAP Add-on ABPERP 100: Installation, CSPs
2307625	ABAP Add-on ABPFMS 100: Installation, CSPs
2305859	ABAP Add-on ABPSCM 100: Installation, CSPs

2 Solution Overview

Attribute-based planning for supply network planning provides a solution for characteristic-based planning support in APO SNP and CTM which includes the following key features:

- Classification of materials during transfer to APO based on industry-relevant attributes.
- Translation of ERP industry-specific transaction data attributes into planning characteristics for APO
- Select location products based on classification data in selected processes within APO.
- Drill-down/filter transaction data quantities within SNP planning book based on planning characteristics.
- Release forecast from APO DP to SNP based on disaggregation profiles for regions, period and characteristic combinations.
- Filter sources-of supply based on characteristic values within APO CTM planning
- Propagate characteristic values within APO CTM planning
- Plan at different aggregation levels depending on planning horizon.

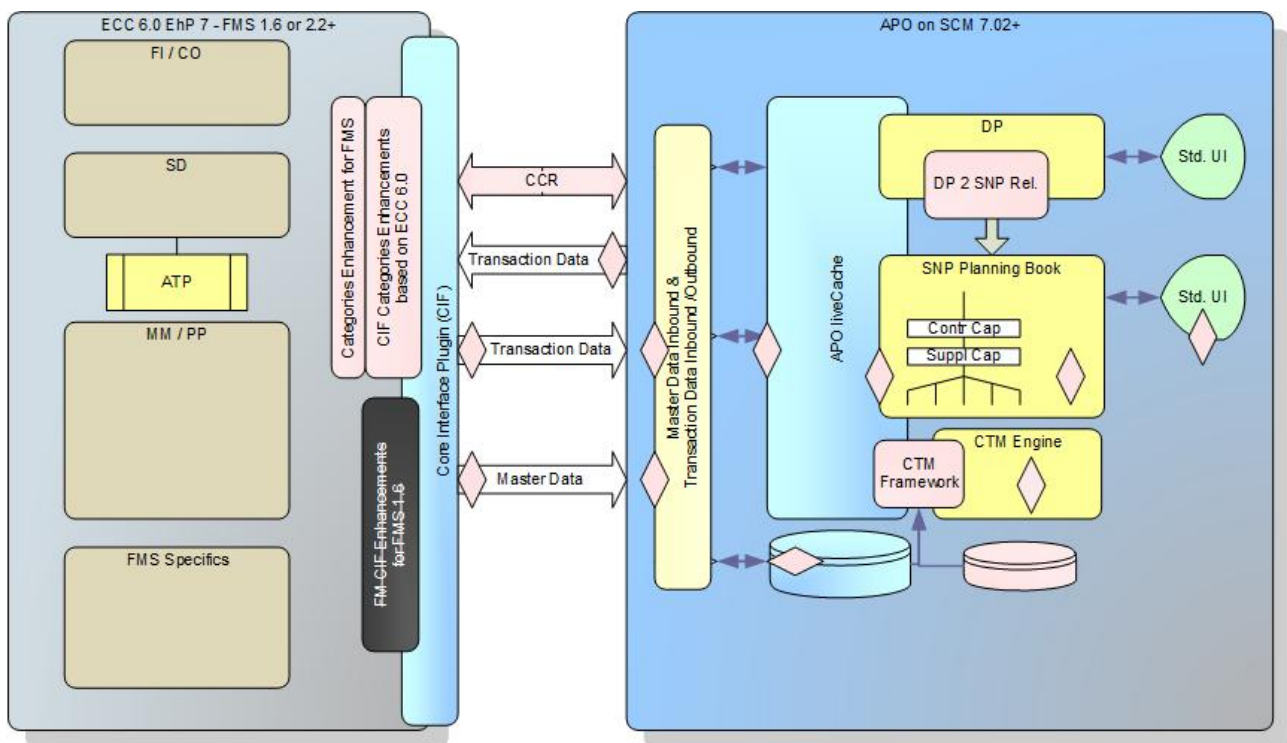


Figure 1: Solution Components

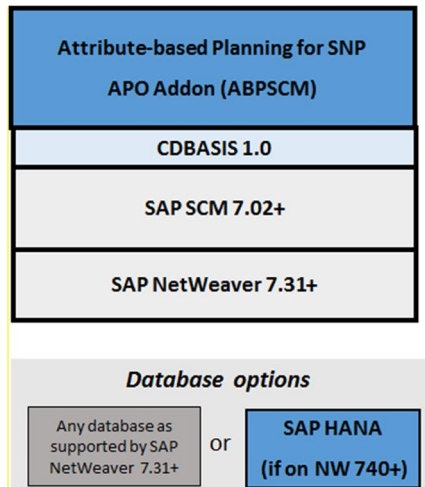


Figure 2: Software Component Stack for SCM 7.02+

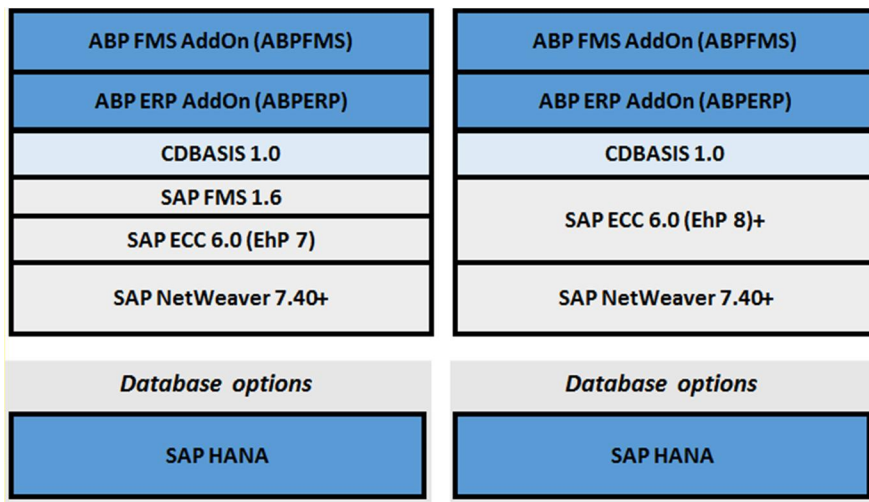


Figure 3: Software Component Stack for FMS 1.6 and FMS 2.2+

3 Setting up the Solution

3.1 Installing the Add-On

To install the add-on, the following packages must be downloaded and installed on the respective systems:

System	Packages
SAP ERP (non FMS)	CDBASIS100 ABPERP100
SAP ERP (FMS 1.6 or FMS 2.2+)	CDBASIS100 ABPERP100 ABPFMS100
SAP APO (SCM 7.02+)	CDBASIS100 ABPSCM100

For further information please refer to the installation/release notes.

SAP Note Number	Title
2304555	ABAP Add-on CDBASIS 100: Installation, CSPs
2307613	ABAP Add-on ABPERP 100: Installation, CSPs
2307625	ABAP Add-on ABPFMS 100: Installation, CSPs
2305859	ABAP Add-on ABPSCM 100: Installation, CSPs

Note

Please check the subsequent chapters for precondition notes that must be available within the respective systems **before** installing the add-on.

3.1.1 Precondition Notes in ERP

To install the add-on on your SAP ERP instance you must **first** implement the notes listed as a precondition within the installation note for ABP (SAP Note [2307613](#)).

3.1.2 Precondition Notes in FMS

There are no notes that you have to implement to install the ABP add-on for SAP Fashion Management. We however strongly recommend checking for important notes that are released for SAP Fashion Management and update your SAP Fashion Management instance with the latest notes.

For more information, please refer to the installation note for the ABP add-on for SAP Fashion Management (SAP Note [2307625](#))

3.1.3 Precondition Notes in APO

To install the add-on on your SAP APO instance you must **first** implement the notes listed as a precondition within the installation note for ABP (SAP Note [2305859](#)).

3.1.4 Business Functions in ERP

To enable ABP functionalities within your SAP ERP system (non- SAP Fashion Management) you will need to activate the following business functions:

- `CIF_SWFS_GEN_ADDON` Switch Enablement for Add-on
- `/ABPERP/CORE` ABP Switch for ECC Enhancements

To enable ABP functionalities within your SAP Fashion Management system you will need to activate the following business functions:

- `CIF_SWFS_GEN_ADDON` Switch Enablement for Add-on
- `/ABPERP/CORE` ABP Switch for ECC Enhancements
- `/ABPFMS/CORE` ABP Switch for FMS Enhancements

Note

If you want to activate the SAP Fashion Management adapter for ABP, you must ensure that the following business function is not activated **before** activating any ABP-related switch:

`FASHION_INT`

3.1.5 Business Functions in APO

If you have installed *attribute-based planning for supply network planning* add-on in ECC system you must ensure that the following business function is activated in the connected APO system.

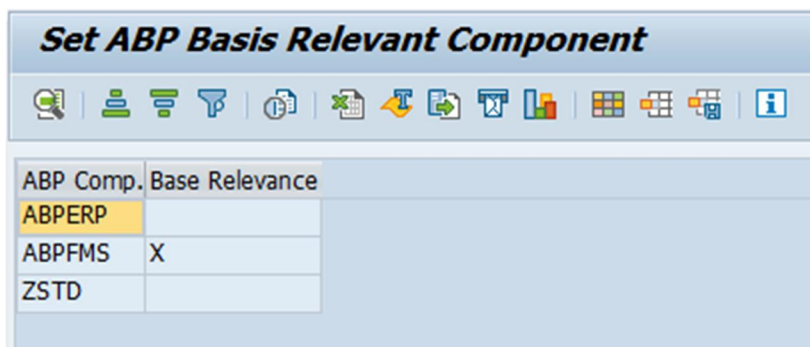
- /ABPSCM/CORE

There is also an optional switch for ABP CTM transaction which enables additional UI options for PP/DS master data selection, PP/DS orders creation, and continuous planning type selection:

- /ABPSCM/CTM_SNPPPD

3.1.6 ABP Component Settings in ERP

Use this program (Transaction: /ABPERP/BAS_REL_COMP) to define the industry-specific component for the implementations of destination-independent BADIs.



ABP Comp.	Base Relevance
ABPERP	
ABPFMS	X
ZSTD	

Figure 4: Example of ABP Basis Relevant Component

If you have installed multiple industry adapters within the same ERP system, you can choose which one to use depending on the CIF destination (logical system the integration scenario refers to). There are, however, features within the *attribute-based planning for supply network planning* solution which are executed independent of the CIF destination. To allow proper execution of the ABP logic, you need to set the correct industry adapter to be used for such parts.

i Note

The general assumption is that only one industry solution is used within ERP, or that multiple industry solution which are used together are mutually compatible with regard to the interpretation of industry-specific attributes and classification data. This means that all industry adapters installed within the same ERP system rely on the same interpretation of the ERP data model. To enable ABP data transfers to APO, always select the most specific industry adapter that supports ABP as relevant for the base layer.

3.1.7 IMOD Screen Regeneration

[Reports: RCIFCUST, RCIFIGEN, /ABPERP/CIF_SETUP]

The integration model creation screen should be extended by two new options for transfer of Distribution Profiles and Coverage Rules. This screen extension can be done based on two standard reports, RCIFCUST and RCIFIGEN. They generate the new screen dynamically based on the contents of customizing table CIFOBJINFO. The required entries for this table and the auxiliary tables CIFOBJINFT, CIFTEXTPOOL can be added automatically by the ABP report /ABPERP/CIF_SETUP.

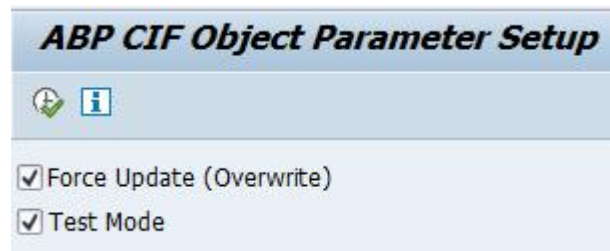


Figure 5: CIF IMOD Screen Generation Program

When the Customizing is maintained, first run RCIFCUST program and then RCIFIGEN.

i Note

Please read SAP Note [1320454](#) before running the standard reports for regeneration. Some additional steps may be required depending on your system release.

i Note

If the component IS-OIL is installed in the system, the report R_IS_OIL_CIF_EXIT should be commented out to avoid its execution during the IMOD screen generation. There is a known standard issue and currently this is the only workaround.

3.2 System Landscape Setup in SAP ERP

Some of the settings mentioned in the following sections will most likely be present in your system already, if you have an SAP ERP system operational.

3.2.1 Define Logical Systems

Define the logical system which represents the APO instance to integrate master data and transaction data via transaction SALE. Go to *Basic Settings ->Logical Systems ->Define Logical System*.

i Note

SAP Best Practice is to name logical systems like `<SystemID>CLNT<Client>`

3.2.2 Maintain Logical System for Own Client

Maintain the logical system for the actively used client via transaction `SALE`. Go to *Basic Settings ->Logical Systems ->Assign Logical System to Client*. This logical system is used as own logical system within communication to other systems.

3.2.3 Define RFC Destinations

Define the RFC destination, which points to the APO instance that is intended to be used for *attribute-based planning for supply network planning*. To do this, go to transaction `SALE` (*Basic Settings ->Communication ->Create RFC Connection*) or use transaction `SM59`.

Note

SAP Best Practice is to name the RFC destination the same as the logical system. In that case, you will not need to define the mapping between logical system and RFC destination for RFC calls.

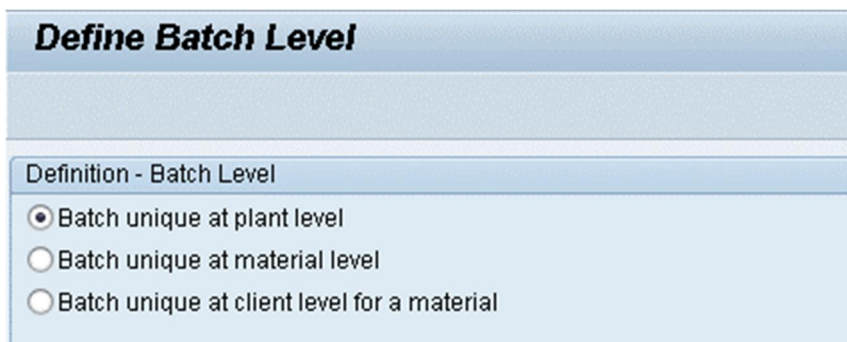
3.2.4 Define HTTP Destinations

Not applicable

3.2.5 Check Settings for Classification System in ERP

3.2.5.1 Setup/Check batch level

Customizing path: *SAP - Implementation Guide -> Logistics General -> Batch Management -> Specify Batch Level and Activate Status Management*.



Define Batch Level	
Definition - Batch Level	
<input checked="" type="radio"/>	Batch unique at plant level
<input type="radio"/>	Batch unique at material level
<input type="radio"/>	Batch unique at client level for a material

Figure 6: Example for Batch Level Settings

ABP generated classes used for batch classification are assigned to class type 022 or 023 depending on the batch level settings in the system:

- Plant level – 022
- Material or client level – 023

Note

The Fashion Management industry solution currently does not support the recommended setting material or client level. Within standard CIF integration, batch classification at plant level would be rejected as this is not supported for SCM systems. The ABP solution includes a specific logic to translate the class type 022 into 023 for transferring data to an ABP APO instance. This allows the integration of batch classification even if the setting is set to plant level. This however means that if the same batch is used for the same material in 2 plants with different APO relevant classification values, these classifications will overwrite each other - that is, APO will treat the batch as the same batch.

3.2.5.2 Setup/Check Characteristic Groups

Customizing path: [SAP - Implementation Guide -> Cross-Application Components -> Classification System -> Characteristics -> Define Characteristics Groups](#)

This Customizing is intended to define the characteristic groups that you want to assign to characteristics that are to be made APO-relevant.

Note

Characteristics not assigned to a characteristic group cannot be made APO-relevant. Also, for each characteristic group, you can choose to make them available as either product characteristic or planning characteristic, but not both. This means that you should define the characteristic groups in such a way that you can separate characteristics by the usage for APO.

 Example

Group	Chars Group
/ABP/PLAN	ABP Planning Characteristics
/ABP/PROD	ABP Product Characteristics
CU_GEN	CU General Characteristics
CU_STD	CU Standard Characteristics
FKL_ALM	Characteristics for ALM
LOBM_DIST	Local Characteristics
PPPI_01	Process Message Characteristics
PPPI_02	Process Instruction Characteristics
PPPI_03	Char. for Material Flow Betw. Orders
PPPI_04	Special Applications
SGT_SAP-C	Segmentation Characteristic

Figure 7: Example Screenshot for Setup/Check Characteristic Groups

i Note

This step can be executed manually or using the delivered report /ABPERP/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies. The report will generate default class groups which you can use to assign to characteristics that do not already use another characteristic group.

3.2.5.3 Setup/Check Status for Characteristics

Customizing path: *SAP - Implementation Guide -> Cross-Application Components -> Classification System -> Classes -> Maintain Object Types and Class Types.*

This Customizing is only required once, and only for the parts that are not yet set up in your system.

The following entries needs to be customized:

Status	Char. Status
0	In Preparation
1	Released
2	Locked

Figure 8: Status for Characteristics

3.2.5.4 Setup/Check Class Groups

Customizing path: *SAP - Implementation Guide -> Cross-Application Components -> Classification System -> Classes -> Define Class Groups.*

Group	Class Group
/ABP/SAP	Attribute Based Planning Group

Figure 9: ABP Class Group in ERP

i Note

This step can be executed manually or using the delivered report /ABPERP/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies.

3.2.5.5 Setup/Check Organizational Area for Classes

Customizing path: *SAP - Implementation Guide -> Cross-Application Components -> Classification System -> Classes -> Define Class Groups.*

Organizational Areas		
Class ...	Org.area	Organizational area
001	<input type="checkbox"/>	APO relevant org area
022	A	APO relevant
300	A	APO relevant

Figure 10 : Organizational Areas for Object Type Characteristic (CABN) in ERP

i Note

This step can be executed manually using the delivered report /ABPERP/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies.

3.2.5.6 Setup Status for Classes

Customizing path: *SAP - Implementation Guide -> Cross-Application Components -> Classification System -> Classes -> Maintain Object Types and Class Types.*

This Customizing is only required once, and only for the parts that are not yet set up in your system.

Entries for class type 001:

Ty.	S	Text
001	0	In Preparation
001	1	Released
001	2	Locked

Figure 11 : Status for Class Type 001 in ERP

Entries for class type 022/023:

Ty.	S	Text
022	0	In Preparation
022	1	Released
022	2	Locked

Figure 12 : Status for Class Type 022 in ERP

Entries for class type 300:

Ty.	S	Text
300	0	In Preparation
300	1	Released
300	2	Locked

Figure 13 : Status for Class Type 300 in ERP

3.2.6 Global Class Landscape Definition

This Customizing (Transaction: *SM30* with table */ABPERP/BAS_SYNC*) defines all relevant logical systems within your SAP ERP landscape that are to be connected to APO. This is only relevant if you have multiple SAP ERP systems connected to APO. In that case maintain all logical systems and mark one of the systems as master system. This will be the system, which, in case of question makes the decision regarding the class names of newly-generated classes. This

Customizing setting ensures that a class representing a certain set of generation criteria has the same name in all systems, and there are no overlaps in class numbering.

System Synchronization List	
Logical system	Master
X3BCLNT200	<input checked="" type="checkbox"/>
X3BCLNT300	<input type="checkbox"/>
	<input type="checkbox"/>

Figure 14 : Example Landscape for Class Generation

You will need to define one system (and only one system) as the master system. The new class name will be determined based on the number range in that system.

3.2.7 Class Generation

This program (Transaction: /ABPERP/BAS_MTCL_GEN: SCM Class & Assignment Generation) is required for newly-created and released materials before the attempt to integrate them with APO. The program will look up whether a class exists for the combination of material type, aggregated class generation criterion and custom criterion in any of the relevant systems. In case this class doesn't exist, the program will generate the class for types 022/023 and 300.

Generate Material Class Assignments for Attribute-Based Planning

Material Selection

Material		to		➔
Material Type		to		➔
Division		to		➔
Created On		to		➔

Display Results

Display Log

Logging Level

Figure 15 : Class Generation Program

3.3 System Landscape Setup in APO

3.3.1 Define Logical Systems

Define the logical systems which represent any other system communicating with your connected ERP instance through RFC.

 Recommendation

SAP Best Practice is to name logical systems for SAP instances like `<SystemID>CLNT<Client>`.

3.3.2 Maintain Logical System for Own Client

Maintain the logical system for the actively-used client. This logical system is used as an own logical system when communicating with other systems, as well as for the creation of master data objects locally.

3.3.3 Define RFC Destinations

Define the RFC destination which points to the ERP instance that is connected to your APO instance.

 Note

SAP Best Practice is to name the RFC destination the same as the logical system. In that case, you will not need to define the mapping between logical system and RFC destination for RFC calls.

3.3.4 Define HTTP Destinations

Not applicable

3.3.5 Check Settings for Classification System in APO

3.3.5.1 Setup/Check Characteristic Groups

[Customizing: *Cross-Application Components -> Classification System -> Characteristics -> Define Characteristic Groups*]

This Customizing is only required once, and only for the parts that are not yet set up in your system.

The following entries need to be customized:

Group	Chars Group
/ABP/PLAN	ABP Planning Characteristics
/ABP/PROD	ABP Product Characteristics
/ABP/VIRT	ABP Virtual Characteristics

Figure 16 : ABP Characteristic Groups in APO

i Note

This step can be executed manually using the delivered report /ABPSCM/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies.

3.3.5.2 Setup/Check Status for Characteristics

[Customizing: *Cross-Application Components -> Classification System -> Characteristics -> Maintain Object Types and Class Types*]

This Customizing is only required once, and only for the parts that are not yet set up in your system.

The following entry needs to be customized:

Status	Char. Status
0	In Preparation
1	Released
2	Locked

Figure 17 : Status for Characteristics in APO

3.3.5.3 Setup/Check Class Groups

[Customizing: *Cross-Application Components -> Classification System -> Classes -> Define Class Groups*]

This Customizing is only required once, and only for the parts that are not yet set up in your system.

Group	Class Group
/ABP/SAP	Attribute Based Planning Group

Figure 18 : ABP Class Group in APO

i Note

This step can be executed manually using the delivered report /ABPSCM/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies.

3.3.5.4 Setup/Check Organizational Area for Classes

[Customizing: *Cross-Application Components -> Classification System -> Classes -> Define Class Groups*]

This Customizing is only required once, and only for the parts that are not yet set up in your system.

Entries for Organizational Areas in APO:

Object Type Characteristic (CABN)	Organizational Area	Relevance
230	A	APO Relevant
300	A	APO Relevant
400	A	APO Relevant

Figure 19 : Organizational Areas for Object Type Characteristic (CABN) in APO

i Note

This step can be executed manually using the delivered report /ABPSCM/BAS_SETUP.

When executing the report, you will need to have a prepared transport request to record the changes that the report applies.

3.3.5.5 Setup Status for Classes

[Customizing: *Cross-Application Components -> Classification System -> Classes -> Maintain Object Types and Class Types*]

This Customizing is only required once, and only for the parts that are not yet set up in your system.

Entries for class type 230:

230	0	In Preparation
230	1	Released
230	2	Locked

Figure 20 : Status for Class Type 230 in APO

Entries for class type 300:

300	0	In Preparation
300	1	Released
300	2	Locked

Figure 21 : Status for Class Type 300 in APO

Entries for class type 400:

400	0	In Preparation
400	1	Released
400	2	Locked

Figure 22 : Status for Class Type 400 in APO

3.3.6 Logical System Groups

Several business objects are designed to be integrated from one or multiple master data systems. The integration from SAP ERP is part of the SAP SCM plugin in ERP.

In general, the external identifiers for such objects should be harmonized across the corporate landscape. To integrate the same object from different systems, mapping tables are part of the data model for all business objects that are intended to be integrated. To ensure that the same object being integrated from different systems is mapped to the same actual object in the APO system, a logical system group is used. This allows the mapping of different logical systems to the same group. This should be done whenever multiple harmonized systems are connected to the APO system. Mapping different systems to a logical system group assumes that the objects with the same identifiers are actually the

same object, and therefore updates from different system will update the same actual business object in the APO system.

There are however also cases where customers use the same identifiers for different objects of the same type in different ERP systems. This is especially likely if non-SAP systems are also involved.

Such logical systems should be assigned to different logical system groups. This will ensure that the CIF integration logic can differentiate between them. Even so, the business object in the APO system is identified uniquely based on a globally unique identifier (GUID). It also will need to have a unique external identifier. In case there are overlaps of external identifiers for different objects being integrated, the relevant BAdI needs to be implemented to define a suffix that is added to the external identifier being transferred from the external system. This suffix can be the logical system group, or any other suffix, that ensures uniqueness between colliding external identifiers being transferred from different system groups.

3.3.7 Define Logical System Groups

In this Customizing activity, you maintain the logical system groups. These are used during integration of master data. They group logical systems that integrate the same business objects using the same external keys.

The logical system group is required to create master data, and the user authorizations are based on this key.

Recommendation

SAP recommends using a LOCAL group for the current system (used for locally created master data) and 1-n additional logical system groups to assign harmonized external logical systems to them.

3.3.8 Assign Logical Systems to Logical System Group

In this Customizing activity, you assign the logical systems to a logical system group. The mapping is used to allow master data integration from multiple attached systems with the harmonized external object keys. Data can only be integrated in case the sending logical system has a logical system group assigned.

Recommendation

SAP recommends assigning the current (own) system to a separate logical system group to prevent key collisions when additionally integrating data from external systems. If the same keys are created or integrated from different groups, you need to implement the relevant BAdI to define a suffix for generating unique external keys in Advanced Planning and Optimization.

3.3.9 ABP Data Model Switch

[Customizing: [Advanced Planning and Optimization -> Attribute-Based Planning -> Core Interface -> Data Model for Orders](#)]

APO orders created by the ABP solution can contain several items (positions), and every item can have multiple schedule lines. If the destination ERP system does not support schedule lines or configuration at schedule line level, you should set the data model to 'item level' for the respective logical system.

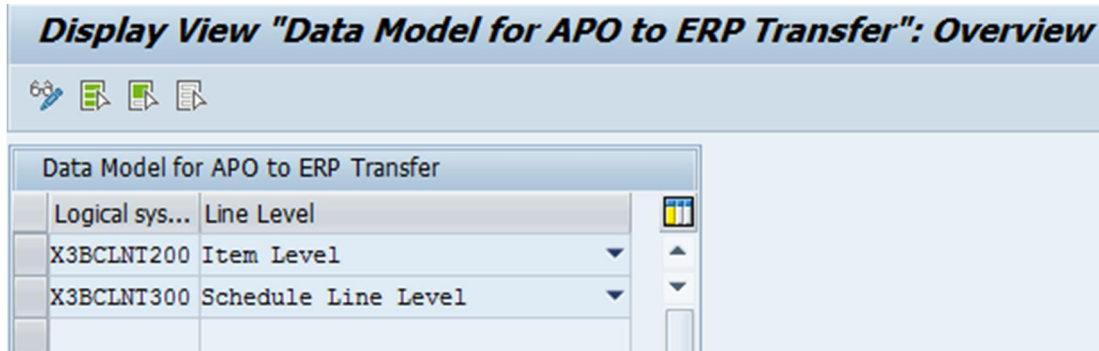


Figure 23 : Example for Data Model Settings in APO

If no settings are made, the default *Schedule Line Level* is assumed.

3.3.10 Setup Number Ranges (OPTIONAL)

If you intend to use the test reports to create transaction data locally, you will need to set up the relevant number ranges for the used order types.

The test reports use the following number range objects and number ranges:

Sales Orders:	SDEMO_PO 02
Ext Procurement:	SDEMO_PO 01
Stock (Batches):	/SAPAPO/VK 01
Stock Transfers:	/SAPAPO/PP 01
APO Order:	/SAPAPO/PP 01
Forecast:	FCST 01

Number ranges can be maintained with the transaction `SNRO`.



Maintain Intervals: Number Namespace

N..	From No.	To Number	NR Status	Ext
01	0000000001	0001999999	730	<input type="checkbox"/>
02	0002000001	0003999999	2000071	<input type="checkbox"/>

Figure 24: Example for Number Range Settings

3.3.11 Maintain Application Log Subobjects

ABP coverage rules and DDP transfer requires the relevant application log subobjects in CIFSCM log object.

Change View "Sub-objects": Overview

New Entries

Dialog Structure

- Objects
 - Sub-objects

Object: CIF... Application Log Object for Core Interface

Subobject	Sub-object text
ABPCOV	ABP Coverage Rules
ABPDDP	ABP Default Distribution Profile

Figure 25: Required CIF Subobjects

3.4 Activating Used Standard BAdIs

The solution includes implementations of SAP standard BAdIs. To benefit from the delivered solution logic, the following standard BAdIs that are used by the solution should be active:

On ERP side

Enhancement Spot: **CIF_EXT_IS_INTERNAL** (SAP-Internal BAdI Methods for Adapting CIF for IS)

BAdI Definition: CIF_EXT_IS_INTERNAL

BAdI Implementation: /ABPERP/CIF_EH_EXT_IS_INTERNAL

BAdI Definition: **CUSLNTRTO_ADDIN** (Determination validity for transfer in APO)

BAdI Implementation: /ABPFMS/CIF_EH_PDS

Enhancement Spot: **SGT_ES_SEGMENT** (Enhancement Spot for Segmentation)

BAdI Definition: BADI_SGT_SEGMENT (BAdI Definition for Segmentation)

Enhancement Implementation: /ABPFMS/CIF_EH_SEG_PR

BAdI Implementation: /ABPFMS/CIF_EH_FMS_SEG_IMPL

Enhancement Spot: **CCVX_EXT_INT** (SAP-Internal BAdI Methods for Adapting CIF)

BAdI Definition: CCVX_EXT_INT

BAdI Implementation: /ABPERP/CIF_EH_CCVX_EXT_INT

Enhancement Spot: **CIF_EXT_INT** (SAP-Internal BAdI Methods for Adapting CIF)

BAdI Definition: CIF_EXT_INT

BAdI Implementations:

- /ABPERP/CIF_EH_EXT_INT - CIF ABP Extensions on ERP level
- /ABPFMS/CIF_EH_EXT_INT - FMS-specific CIF extensions

On APO side

Enhancement Spot: **/SAPAPO/MC01_BUFF_CHAR_VALUES** (BAdI for MC01 Buffer Characteristics Values)

BAdI Definition: /SAPAPO/DEF_MC01_BUFF_CHAR_VAL

BAdI Implementation: /ABPSCM/BAS_EH_MC01_BUFF_CHVAL

Enhancement Spot: **/SAPAPO/CIF_DELTA3_CCV** (BAdI - CIF Delta3 CCV)

BAdI Definition: /SAPAPO/DEF_CIF_DELTA3_CCV

BAdI Implementation: /ABPSCM/CIF_EH_DELTA3_CCV

Enhancement Spot: **/SAPAPO/CIF_CCV** (BAdI for CIF Characteristics, Classes, Classification)

- BAdI Definition: /SAPAPO/DEF_CIF_CCV_CHARACTER (BAdI - CIF CCV Characteristics)
BAdI Implementation: /ABPSCM/CIF_EH_CIF_CCV_CHARACTER
- BAdI Definition: /SAPAPO/DEF_CIF_CCV_CLASS (BAdI - CIF CCV Class)
BAdI Implementation: /ABPSCM/CIF_EH_CIF_CCV_CLASS
- BAdI Definition: /SAPAPO/DEF_CIF_CCV_CLASSIF (BAdI - CIF CCV Classification)
BAdI Implementation: /ABPSCM/CIF_EH_CIF_CCV_CLASSIF

Enhancement Spot: **/SAPAPO/CIF_CONVERSION** (BAdI - CIF Conversion)

BAdI Definition: /SAPAPO/DEF_CIF_CONVERSION

BAdI Implementation: /ABPSCM/CIF_EH_CIF_CONVERSION

Enhancement Spot: **/SAPAPO/CIF_DELTA3_SCH** (BAdI - CIF Delta3 SCH)

BAdI Definition: /SAPAPO/DEF_CIF_DELTA3_SCH

BAdI Implementation: /ABPSCM/CIF_EH_CIF_DELTA3_SCH

Enhancement Spot: **/SAPAPO/CIF_PO_INBOUND_CCV** (BAdI - CIF Purchase Order Inbound for Characteristics)

BAdI Definition: /SAPAPO/DEF_CIF_PO_INBOUND_CCV

BAdI Implementation: /ABPSCM/CIF_EH_PO_INB_CCV

Enhancement Spot: **/SAPAPO/CIF_ORDER_EXTRACT** (BAdI - CIF Order Extract)

BAdI Definition: /SAPAPO/DEF_CIF_ORDER_EXTRACT

BAdI Implementation: /ABPSCM/CIF_EH_ORDER_EXTRACT

Enhancement Spot: **/SAPAPO/DM_CP** (BAdI - DM CP)

BAdI Definition: /SAPAPO/DEF_DM_CP

BAdI Implementation: /ABPSCM/CIF_EH_DM_CP

Enhancement Spot: **/SAPAPO/DM_NODE** (BAdI - DM Node)

BAdI Definition: /SAPAPO/DEF_DM_NODE

BAdI Implementation: /ABPSCM/CIF_EH_DM_NODE

Enhancement Spot: **/SAPAPO/DM_ORDER** (BAdI - DM Order)

BAdI Definition: /SAPAPO/DEF_DM_ORDER

BAdI Implementation: /ABPSCM/CIF_EH_DM_ORDER

Enhancement Spot: **/SAPAPO/DM_PROD** (BAdI - DM Prod)

BAdI Definition: /SAPAPO/DEF_DM_PROD

BAdI Implementations: /ABPSCM/CIF_EH_DM_PROD

/ABPSCM/SNP_EH_DM_PROD

Enhancement Spot: **/SAPAPO/DM_PURCHASE** (BAdI - DM Purchase)

BAdI Definition: /SAPAPO/DEF_DM_PURCHASE

BAdI Implementation: /ABPSCM/CIF_EH_DM_PURCHASE

Enhancement Spot: **/SAPAPO/CTM_EXT** (CTM Engine Post processing Interface enhancement)

BAdI Definition: /SAPAPO/CTM_MD

BAdI Implementation: /ABPSCM/CTM_EHI_CTM_MD

BAdI Definition: **/SAPAPO/CTM_PLPAR** (BAdI for changing planning parameters before transfer)

BAdI Implementation : /ABPSCM/CTM_EH_PLPAR

BAdI Definition: **/SAPAPO/PWB_SOS** (BAdI for Source Determination)

BAdI Implementation : /ABPSCM/SNP_EH_SOS

4 Customizing Attribute-Based Planning for Supply Network Planning ERP-Add-On

In general, the menu entry for the *attribute-based planning for supply network planning* Add-On is located within the *SAP Easy Access* menu under *Logistics @ Central Functions @ Supply Chain Planning Interface @ Attribute-Based Planning*.

4.1 General Customizing

The general Customizing is a Customizing table that allows you to control various settings, without the need to switch between different Customizing transactions for each of them.

The general Customizing provides access to Customizing and operational settings. These settings are based on and application area and parameter key. For some settings, optional parameters are supported.

Parameters that are marked as 'Customizing only' can only be maintained as Customizing and typically require a transport from a development or Customizing system to the subsequent system.

Parameters that are marked as 'operational only' can only be maintained as operational and typically are maintained within the respective system directly. You may certainly transport them manually.

Parameters that are marked as both (Customizing and operational) can be maintained as Customizing and transported and additionally as operational within the respective system. In case both are maintained the operational setting overrides the Customizing setting for the same parameter and option.

From within the selection screen of the report you can choose to maintain parameters of all components or a selected component of the solution. You also can choose whether you want to access the settings for display, update or transport. The mode can be changed within the loaded maintenance view also.

The following list defines the currently available settings, their options and their impact on the solution.

Application Area	Parameter Key	Optional Parameter
BAS	COVR_CHAR	N/A
<p>The parameter is used to determine the name of the special ABP characteristic, which will be automatically included in ABP generated classes and assigned to the coverage rules integrated with APO. The characteristic itself should be created in the customer system in advance, via transaction CT04</p>		
Allowed Optional Parameters		
None		
Allowed Parameter Values		
<characteristic name>	Any existing characteristic name (max 30 characters)	

Application Area	Parameter Key	Optional Parameter
BAS	LOGLEVEL	N/A
<p>The parameter defines the level of details in the base component logging, that is, ABP class generation/ assignment/ display/ repair and setup reports.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0	No Logging	
1	Minimal Logging	
2	Key Information	
3	Extended Logging	
4	Technical Logging (SAP)	

Application Area	Parameter Key	Optional Parameter
SNP	SNP_SOURCE_COND	9ASNP94
The parameter defines the usage of SNP sourcing conditions dependent on the SNP planning book (optional parameter = SNP planning book name).		
Allowed Optional Parameters		
Name of the SNP planning book	Name of the SNP planning book	
Allowed Parameter Values		
SPACE	Sourcing conditions deactivated	
X	Sourcing conditions activated	

Application Area	Parameter Key	Optional Parameter
CIF	CHECKVAL	N/A
The parameter is used to switch on/off the characteristic values validity check within the configuration of master and transactional data transferred to APO via CIF. In case of invalid characteristic value, the warning message will be added into the CIF log. (This check is quite performance intensive. Therefore, it is switched-off by default)		
Allowed Optional Parameters		
None		
Allowed Parameter Values		
X	Check values validity	
SPACE	Do not check values	

Application Area	Parameter Key	Optional Parameter
CIF	PRODCHAR	N/A
<p>The parameter is used to switch on/off the tolerance of incomplete product classification, that is, when the switch is active, missing characteristics are added to the classification with initial value. It can lead to issues with data selection in APO, since the product characteristics are mandatory, but CIF will not block these products any longer. Typically, such characteristics are supposed to be filled via customer BAdI implementation.</p>		
Allowed Optional Parameters		
None		
Allowed Parameter Values		
X	Switch is ON	
SPACE	Switch is OFF (no tolerance - all product characteristics should be valued)	

Application Area	Parameter Key	Optional Parameter
CIF	LOGLEVEL	None
<p>The parameter defines the default level of details for ABP messages in the standard CIF log coming from the ABP enhancements during the CIF transfer.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0	No Logging	
1	Minimal Logging	
2	Key Information	
3	Extended Logging	
4	Technical Logging (SAP)	

4.2 Characteristic Customizing for ABP

4.2.1 Characteristic Group Relevance

Characteristic Groups for ABP view is used to define which criterion types could be used as a source for product and planning attributes in the detailed selection. Characteristic group restricts the selection of characteristics for each criterion type in the value help, and doesn't allow saving if the wrong characteristic is entered manually. The product-relevancy checkbox indicates which characteristic groups are allowed for product characteristics selection.

ABP Criterion T...	ABP Criterion Description	Group	Chars Group Description	Prod Relev
ADD_CHAR	Additional characteristics	/ABP/ADD	ABP additional groups	<input type="checkbox"/>
ADD_CHAR	Additional characteristics	SGT_SAP-C	Segmentation Characteristic	<input type="checkbox"/>
CHAR_PRFL	Characteristic profile	/ABP/PLAN	ABP Planning Characteristics	<input type="checkbox"/>
CHAR_PRFL	Characteristic profile	/ABP/PROD	ABP Product Characteristics	<input checked="" type="checkbox"/>
MAT_GRP	Material group (Merch.cat)	/ABP/ADD	ABP additional groups	<input type="checkbox"/>
MAT_GRP	Material group (Merch.cat)	/ABP/PLAN	ABP Planning Characteristics	<input type="checkbox"/>
MAT_GRP	Material group (Merch.cat)	/ABP/PROD	ABP Product Characteristics	<input checked="" type="checkbox"/>
MAT_GRP	Material group (Merch.cat)	LOBM_DIST	Local Characteristics	<input type="checkbox"/>
SEGM_STR	Segmentation Structure	SGT_SAP-C	Segmentation Characteristic	<input type="checkbox"/>

Figure 26: Example for ABP Characteristic Group Settings in ERP

i Note

Characteristics that belong to characteristic groups that are marked as product characteristic-relevant can only be used as product characteristics.

4.2.2 Characteristic Relevance for Material Types

[TA: /ABPERP/BAS_CHARS: SCM Characteristic Customizing]

This Customizing is only required for new material types or new characteristics, and only if these are to be integrated with APO.

This view is used to define the list of material types which are supposed to be APO-relevant. You can define the different set of characteristics in a generated class for each material type and custom criterion. The lock indicator defines that the maintenance for a particular material type and custom criterion is final, and cannot be changed any more. This typically means that there are already generated classes, and that the current settings were already applied for integrated objects, and further maintenance could cause severe inconsistencies. Therefore, it's not possible to open sub nodes in the edit mode.

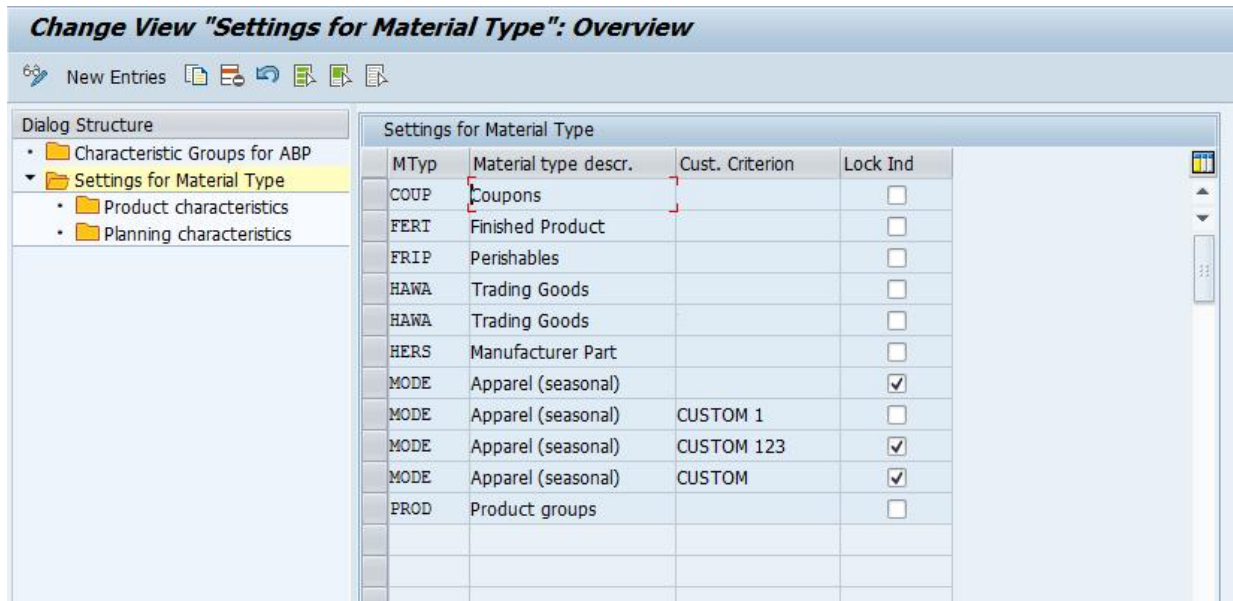


Figure 27: Example for ABP Material Type Settings in ERP

Product Characteristics

In the *Product Attributes* sub node, you can define which characteristics will be considered as product attributes in APO. These characteristics will be assigned to characteristic group /ABP/PROD in APO and can be used to select products. Product characteristics are always considered mandatory.

Classes generated and assigned to a material will contain all maintained characteristics for that material type and custom criterion.

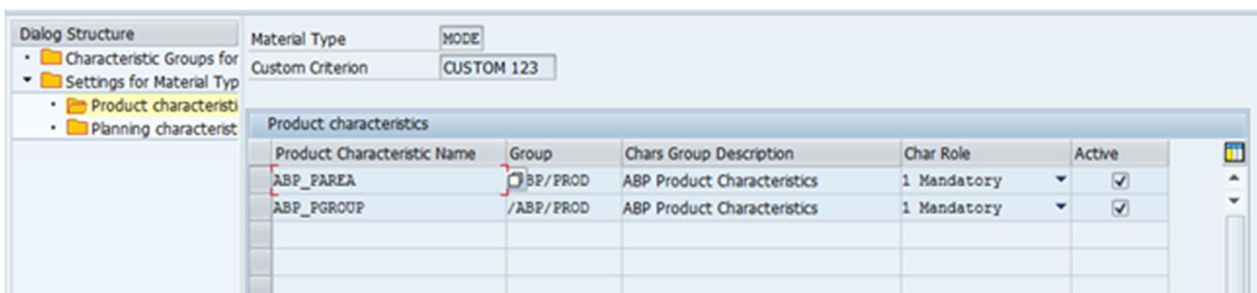


Figure 28: Example for ABP Product Characteristics for Material Type in ERP

Planning Characteristics

In *Planning Attributes* sub node, you can define which characteristics will be considered as planning attributes in APO. These characteristics will be assigned to the characteristic group /ABP/PLAN within APO and can be considered during the planning runs.

Display View "Planning characteristics": Overview

Material Type:
 Custom Criterion:

Dialog Structure

- Characteristic Groups for
- Settings for Material Typ
 - Product characteristi
 - Planning characterist

ABP Criterion Type	Planning Characteristic ...	Group	Chars Group Description	Char Role	Active
CHAR_PRFL	JP_JEANS_COLOR	LOBM_DIST	Local Characteristics	1 Mandatory	<input checked="" type="checkbox"/>
CHAR_PRFL	ABP_JEANS_MSIZE	LOBM_DIST	Local Characteristics	1 Mandatory	<input checked="" type="checkbox"/>
ADD_CHAR	ABP_SO_REF	/ABP/ADD	ABP additional groups	2 Optional	<input checked="" type="checkbox"/>
SEGM_STR	CHANNEL	SGT_SAP-C	Segmentation Characteristic	1 Mandatory	<input checked="" type="checkbox"/>
SEGM_STR	QUALITY	SGT_SAP-C	Segmentation Characteristic	1 Mandatory	<input checked="" type="checkbox"/>
SEGM_STR	SUPPLYTYPE	SGT_SAP-C	Segmentation Characterstc	1 Mandatory	<input checked="" type="checkbox"/>

Figure 29: Example for ABP Planning Characteristics for Material Type in ERP

 **Caution**

Consider this basic setup for the APO integration carefully. As soon as classes have been generated for a material type, the Customizing for that material type is locked and cannot be changed any more.

5 Customizing Attribute-Based Planning APO Add-On

In general, the menu entry for the *attribute-based planning for supply network planning* add-on is located within the *SAP Easy Access* menu under *Advanced Planning and Optimization @ Attribute-Based Planning*.

5.1 General Customizing

The general Customizing is a Customizing table that allows you to control various settings, without the need to switch between different Customizing transactions for each of them.

The general Customizing provides access to Customizing and operational settings. These settings are based on an application area and parameter key. For some settings, optional parameters are supported.

Parameters that are marked as *Customizing Only* can only be maintained as Customizing, and typically require transport from a development or Customizing system to a subsequent system.

Parameters that are marked as *Operational Only* can only be maintained as operational, and typically are maintained within the respective system directly. You may certainly transport them manually.

Parameters that are marked as both (Customizing and operational) can be maintained as Customizing and transported, and can be maintained additionally as operational within the respective system. In case both settings are maintained, the operational setting overrides the Customizing setting for the same parameter and option.

From within the selection screen of the report you can choose to maintain parameters of all components or a selected component of the solution. You also can choose whether you want to access the settings for display, update or transport. The mode can be changed within the loaded maintenance view also.

The following list defines the currently available settings, their options and their impact on the solution.

5.1.1 Core Interface (CIF)

Application Area	Parameter Key	Optional Parameter
CIF	LOGLEVEL	None
<p>The parameter defines the default level of details for ABP messages in the standard CIF log coming from the ABP enhancements during the CIF transfer.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0	No Logging	
1	Minimal Logging	
2	Key Information	
3	Extended Logging	
4	Technical Logging (SAP)	

5.1.2 Master Data

Application Area	Parameter Key	Optional Parameter
MD	LOGLEVEL	None
<p>The parameter defines the default level of details in ABP MD API logging. It is not relevant for MD UI reports (DDP, PDP, LDP, and so on) since they have the highest default log level to provide the user with the full information in the dialog mode. Therefore, the API log-level is ignored.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0	No Logging	
1	Minimal Logging	
2	Key Information	
3	Extended Logging	
4	Technical Logging (SAP)	

5.1.3 DP to SNP Forecast Release

Application Area	Parameter Key	Optional Parameter
D2S	ATP_CATEGORY	None
The parameter is used during forecast release as the default target ATP category for all key figures		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
Valid ATP Category	Existing ATP category from APO Customizing	
	If no value is maintained, the forecast release logic will use ATP category "FC"	

Application Area	Parameter Key	Optional Parameter
D2S	LCA_NOROUND_ZERO	None
The parameter is used during forecast liveCache upload. If enabled, demand values will not be rounded to zero. Values which would have been rounded to zero will then be set to one instead.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
X	Demand values will not be rounded to zero (min. is 1 then)	
	Demand values can be rounded to zero by the logic	

Application Area	Parameter Key	Optional Parameter
D2S	LOGLEVEL	None
The parameter is used as default log level for the DP2SNP forecast release application. The higher the level is set, the more messages will be written.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
1	Minimal logging	
2	Detailed log	
3	Full Logging	

Application Area	Parameter Key	Optional Parameter
D2S	PRE_CONSUMPTION_PGRP	None
This parameter defines the processing group for the demand groups created by the pre-consumption logic		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
Valid processing group	Processing group also needs to be maintained in the Customizing for processing groups	
	If no valid value is maintained, the demand groups created in pre-consumption step cannot be processed further	

Application Area	Parameter Key	Optional Parameter
D2S	WEEKSTART	None
This parameter specifies, which weekday is the first of the week. 0 and 7 stand for Sunday, the other values for the days in-between.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-7	0-7 (0 = Sunday, 1= Monday ... and 7 = Sunday)	

5.1.4 Capable to Match (CTM)

Application Area	Parameter Key	Optional Parameter
CTM	LOGLEVEL	None
Currently this parameter is not used.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0	No Logging	
1	Minimal Logging	
2	Key Information	
3	Extended Logging	
4	Technical Logging (SAP)	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_USEM	None
<p>The parameter defines whether the shared memory usage is switched on/off during the ABP CTM Batch report run in the parallel mode. When the switch is activated, each CTM profile listed in the batch profile and executed in a separate task is registered in the shared memory. Its status (read/write to LC) can be monitored in the main report that allows the precise launching of new tasks without the overload of resources.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
X	Shared memory will be used	
	Shared memory will not be used	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_BT_W	None
The parameter defines the time that the system waits for before every RFC call (except the first one) during the asynchronous CTM batch run.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_ER_T	None
The parameter defines the maximum number of tries for rerunning the package after the error during the asynchronous CTM batch run. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_IN_W	None
The parameter defines the time that the system waits for before the next try of the package processing, after the first RFC failure during the asynchronous CTM batch run.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_RP_W	None
The parameter defines the time that the system waits for between the RFC failures during the asynchronous CTM batch run.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM (Batch Report)	BCPAR_T	None
The parameter defines the maximum number of tries for rerunning the task after the RFC failure, during the asynchronous CTM batch run. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	CALCRESCAP	None
The parameter defines whether the resources capacity calculation is ON/OFF during the master data generation. This data is optional, since it is only used for display in simulation mode. During the CTM planning run, the calculation is always executed online (within RFC) to have up-to-date information. The deactivation of this parameter can improve the performance during the master data generation step.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
X	Capacity of the Resources will be calculated	
	Capacity of the Resources will not be calculated	

Application Area	Parameter Key	Optional Parameter
CTM	MDPAR_ER_T	None
<p>The parameter defines the maximum number of tries for rerunning the package after the error during the asynchronous master data generation. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0 - 255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	MD_AGE	None
<p>The parameter defines the validity period for the generated master data, starting from the generation date. After this, the period system proposes that the user regenerate the MD.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Days	

Application Area	Parameter Key	Optional Parameter
CTM	MDPAR_IN_W	None
<p>The parameter defines the time that the system waits for before the next try of the package processing, after the first RFC failure during the asynchronous MD generation.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM	MDPAR_RP_W	None
The parameter defines the time that the system waits for between the RFC failures during the asynchronous MD generation.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM	MDPAR_T	None
The parameter defines the maximum number of tries for rerunning the task after the RFC failure during the asynchronous master data generation. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	PACKSIZE_POST	None
The parameter specifies the number of IO nodes that are used to build packages of pegging areas for demand and supply retrieval from liveCache.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-99999999	Number of IO nodes	

Application Area	Parameter Key	Optional Parameter
CTM	PACKSIZE_PRE	None
The parameter specifies the number of IO nodes that are used to build packages for CTM supply saving in the liveCache.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-99999999	Number of IO nodes	

Application Area	Parameter Key	Optional Parameter
CTM	PACKSTAT	None
The parameter specifies the number of pegging areas that are used to build packages for the liveCache statistics retrieval. This functionality is executed once per CTM run for the entire scope, to get the number of anticipated IO nodes for each pegging area. This number is then considered during the package building for the IO nodes details retrieval from the liveCache. In case of a big number of pegging areas in scope, it makes sense to split it for a better performance. By default, the package size is set to 999999.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Number of pegging areas	

Application Area	Parameter Key	Optional Parameter
CTM	FILTER	None
The parameter defines whether the characteristic filter is on or off during the liveCache statistics retrieval. This functionality is executed once per CTM run for the entire scope, to get the number of anticipated IO nodes for each pegging area. This number is then considered during the package building for the IO nodes details retrieval from the liveCache. Characteristics consideration increases the runtime. So, it can be switched off by this parameter for an improvement in performance. However, the side effect could be a bigger number of IO nodes packages because of inflated statistics.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
X	Filter is ON	
	Filter is OFF	

Application Area	Parameter Key	Optional Parameter
CTM	SIM_MAX	None
<p>The parameter specifies the maximum number of IO nodes for display on the demand/supply simulation result screen. The lower the number, the faster is the simulation run.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Number of IO nodes	

Application Area	Parameter Key	Optional Parameter
CTM	SIM_WEEKS	None
<p>The parameter specifies the period for which the TD simulation run is executed, starting from today. The shorter the period, the faster is the simulation run.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Number of weeks	

Application Area	Parameter Key	Optional Parameter
CTM	TDBUF_SIZE	None
<p>The parameter specifies the memory limit for the 'global buffer usage' option. This means that when the transactional data selection scope is bigger than this parameter, the system automatically switches from buffering to database saving.</p>		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
	Gigabytes - Decimal (length 20)	

Application Area	Parameter Key	Optional Parameter
CTM	TDPAR_BT_W	None
The parameter defines the time that the system waits for before every RFC call (except for the first one) during the asynchronous TD selection.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM	TDPAR_ER_T	None
The parameter defines the maximum number of tries for rerunning the package after the error, during the asynchronous TD selection. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	TDPAR_IN_W	None
The parameter defines the time that the system waits for before the next try of the package processing after the first RFC failure during the asynchronous TD selection.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM	TDPAR_RP_W	None
The parameter defines the time that the system waits for between the RFC failures during the asynchronous TD selection.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

Application Area	Parameter Key	Optional Parameter
CTM	TDPAR_T	None
The parameter defines the maximum number of tries for rerunning the task after the RFC failure during the asynchronous TD selection. When the limit is reached, the execution of the package is not repeated anymore, and it is considered faulty.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	ENGSLOTS_T	None
The parameter defines the maximum number of tries that system makes to determine whether the CTM engine optimization server has available slots. When the limit is reached, the determination procedure is stopped with the relevant error message.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-255	Number of tries	

Application Area	Parameter Key	Optional Parameter
CTM	ENGSLOTS_W	None
The parameter defines the time that the system waits for between the tries to determine whether the CTM engine optimization server has available slots.		
Allowed Optional Parameters		
None	n/a	
Allowed Parameter Values		
0-32767	Seconds	

5.1.5 SNP Interactive Planning

To enable the functionality of sourcing conditions, make the following settings in *Maintain General Customizing*. From the *SAP Easy Access* menu, choose *Logistics @ Central Functions @ Supply Chain Planning Interface @ Attribute-Based Planning*.

In the section *Usage Scope Selection* choose *Operational Settings*. In the section *ABP Component Selection* choose *SNP Parameters*. In the section *Processing Option* choose *Update*.

In the overview, add the following new entry and save your changes:

Component = SNP

Parameter Key = SNP_SOURCE_COND

Parameter Option = 9ASNP94

Parameter Value = x

Description = Usage of SNP sourcing conditions dependent on the SNP Planning Book

5.2 Customizing for DP to SNP Forecast Release

Several Customizing activities have to be completed, so that the forecast release report can release demands successfully.

5.2.1 Release Steps

In this Customizing activity, you can maintain the release steps for the forecast release and the sequence in which they should be executed.

The entries have the following structure:

- Step Code: Unique identifier for the release step. Must be also used as a filter value in the BAdI implementations for the steps

- Release Step Name: Short text describing the release step.
- Step Order: Defines the sequence the release steps are executed in. the lower the value, the earlier the step is executed.

Note

The release steps LDP and LCA do not have to be maintained in this table as they are enabled by default. Also, LDP is always the first release step and LCA is always the last release step. This cannot be influenced by the Customizing.

Maintained release steps can be assigned to processing groups in the processing groups Customizing.

5.2.2 Processing Groups

In this Customizing activity, you can maintain processing groups and assign the release steps to them that should be executed for key figures, which use the processing group.

The entries have the following structure:

- Processing Group Code: Unique identifier for the processing group.
- Processing Group Name: Short text describing the processing group.

Choose an entry from the processing groups and select "Step Assignment" to assign release steps to your processing group.

- Step Code: Unique Identifier of the step which should be assigned to your processing group.

Processing groups can be assigned to keyfigures, so that all release steps maintained in the respective processing group are executed for the keyfigure.

5.2.3 Keyfigures

In this Customizing activity you can maintain all keyfigures which can be used in the DP to SNP forecast release. Assign a processing group to your keyfigure, so that the forecast release does know which steps to execute for your keyfigure. You can also assign an own ATP category to your keyfigures, which will overrule the setting from the general Customizing for the ATP category

The entries have the following structure:

- Keyfigure Code: Unique identifier for your keyfigure. They value must be an actual keyfigure from BW.
- Keyfigure Name: Short text describing the keyfigure.
- Processing Group Code: Unique identifier for the processing group assigned to this keyfigure.
- ATP Category: Target ATP category for this keyfigure for the upload into the liveCache.

5.2.4 Characteristic Mappings

In this Customizing activity, you can maintain DP characteristics, which can be defined for two different uses:

- Define as Object: DP characteristics defined as an object, can be either used for specifying the object type 'product' or for specifying the object type 'region'. The respective characteristic value will then be used as external key for that object type during forecast release processing.
- Define as Characteristic: DP characteristics defined as characteristic can be mapped against SNP characteristics, so that their values are carried over into SNP characteristics. These values will be attached to forecasts that are uploaded to the liveCache without further mapping.

The entries have the following structure:

- Characteristic: Name of the DP characteristic. Must be a valid DP characteristic.
- Mapping Type: Defines how the DP characteristic is used in the forecast release
 - Object: Can be defined as product or region by choosing an object type
 - Characteristic: Can be mapped against SNP by assigning SNP characteristics in the sub-step
- Object Type: Can be assigned to DP characteristics with the mapping type object
 - Product: DP characteristic will be used as product identifier (for example, 9AMATNR)
 - Region: DP characteristic will be used as region identifier (for example, 0CONTINENT)

For the forecast release report to work, a product and a region have to be determined for the first release step object. The planning area that you are using must contain a characteristic for product and a characteristic for region. You can maintain several characteristics to reflect a product or a region. The release report will suggest the first characteristic it finds in the planning area and in the Customizing as the default value on the initial screen.

To assign SNP characteristics to your DP characteristics with mapping type characteristic, select your characteristic and choose [Characteristic Assignment](#).

- Characteristic Name: The name of the SNP characteristic that the DP characteristic should be mapped against.

You can assign several SNP characteristics to your DP characteristics. The release report will check if the SNP characteristics exist in the classification of the products, and will map against the first hit.

Note

DP characteristics, which should be mapped to SNP characteristics have to be picked at least as grouping criteria in the extended characteristic definition in the forecast release report. Otherwise there will be no values downloaded for the DP characteristics from DP, and the logic will not be able to map the values.

5.3 Customizing for SNP Interactive Planning

5.3.1 Virtual Characteristics

Virtual characteristics allow you to group actual characteristics to hide the complexity of the selection from the user perspective, within interactive planning for SNP.

This can be useful if you have various characteristics representing, for example, size. If the user is not required to work with specific sizes or select each characteristic related to a product, then these actual characteristics can be grouped under a virtual characteristic to make the selection simpler.

To create virtual characteristics, do the following:

1. Call transaction `CT04`.
2. Assign the characteristic group `/SAP/VIRT` to that characteristic.
3. Call transaction `/ABPSCM/SNP_VCHAR`. Go to *Maintain Virtual Characteristics* from the *SAP Easy Access* menu under *Advanced Planning and Optimization -> Attribute-Based Planning -> Interactive Planning -> Settings and Profiles*.
4. Create a new virtual characteristic mapping entry, and assign all actual characteristics that should be processed as part of the virtual characteristic.

Note

For each product class, only one of the assigned actual characteristics must be relevant. Products not referencing any of the assigned characteristics are allowed.

Note

Characteristics assigned to a virtual characteristic will be hidden from the characteristic selection within the SNP shuffler, header drill-down settings and detail view settings. When you change the virtual characteristic settings (that is, assign additional characteristics to a virtual characteristic) existing selections and settings in the SNP planning book might become invalid.

Alternatively, you can change the assignment to virtual characteristic within the transaction of interactive planning. In this case, the usage of the virtual characteristic Customizing is switched-off. Before the selection of objects via selection profile, you can view and change (switch on/off) the current virtual characteristic assignment via *Display Current Filter* from the toolbar in the pane above *Selection Profile*. If the checkbox *Switch Off Virtual Characteristic* has already been selected, you can deselect the checkbox to activate the assignment to the virtual characteristic again.

6 Enhancements of the Solution

Attribute-based planning for supply network planning is designed to be enhanced based on code enhancements that can be done by customers or partners. Code enhancements are realized through BAdI implementations.

6.1 Master Data

6.1.1 CIF Enhancements ERP to APO

The following enhancement spot allows you to implement additional custom logic within the ABP master data transfer from ERP to APO.

- /ABPERP/CIF_EH_ADAPTER_CUST

The enhancement spot contains the following BAdI definitions:

- **BAdI: /ABPERP/CIF_EH_ADAPTER_CUST**
- IF: /ABPERP/IF_CIF_ADAPTER_CUST

The BAdI Interface includes the following methods relevant for master data transfers:

Method CHANGE_MATERIAL_OUT

The method allows you to change the material and material related data transferred to APO

Method CHANGE_CLASSIFIG_OUT

The method allows you to change the classification data for materials transferred to APO. In case you have defined product characteristics where the values cannot be automatically determined based on dedicated industry logic, you will need to implement this method to determine the classification values for such characteristics.

Method CHANGE_COVERAGE_RULE_DATA

This method allows you to change coverage rule data transferred to APO. The BAdI method will only be called in case the integration model specifies that coverage rules should be transferred.

Method CHANGE_DISTR_PROFILE_DATA

This method allows you to change the default distribution profile data transferred to APO. The BAdI method will only be called in case the integration model specifies that default distribution profiles should be transferred.

The following existing custom enhancements abilities for master data can be still used with the ABP solution:

User exits for transferring master data from ERP to APO:

- CIFLOC01 - Enhancement for Transferring Customer-Specific Loc. Fields
- CIFMAT01 - Enhancement for Transferring Customer-Specific Material Fields

BAdIs for receiving master data from ERP into APO:

- SMOD_APOCF005 - Inbound Processing: Product;
IF: IF_EX_SMOD_APOCF005;
METHOD: EXIT_/SAPAPO/SAPLCIF_PROD_001 - Inbound processing Product;
- SMOD_APOCF001 - Inbound Processing: Location;
IF: IF_EX_SMOD_APOCF001;
METHOD: EXIT_/SAPAPO/SAPLCIF_LOC_001 - Inbound processing Location;
- SMOD_APOCF035 - Inbound Processing of Classification;
IF: IF_EX_SMOD_APOCF035;
METHOD: EXIT_/SAPAPO/SAPLCIF_CHR30_004 - Inbound Processing Classification;
- SMOD_APOCF31 - Inbound Processing of Characteristics;
IF: IF_EX_SMOD_APOCF31;
METHOD: EXIT_/SAPAPO/SAPLCIF_CHR30_001 - Inbound Processing of Charact. Master Data ;
- SMOD_APOCF32 - Inbound Processing of Classes;
IF: IF_EX_SMOD_APOCF32;
METHOD: EXIT_/SAPAPO/SAPLCIF_CHR30_002 - Inbound Processing Class Master Data .
- **BAdI: /ABPERP/CIF_EH_BATCH_CUST**
- IF: /ABPERP /ABPERP/IF_CIF_BATCH

Method GENERATE_BATCH_NUMBER

The method allows you to apply a custom artificial batch number for non-batch managed stocks during the CIF transfer.

Note

ABP CIF (for example, for FMS) allows you to transfer the stocks for non-batch managed materials. Since non-batch stocks are not supported in APO, there is a special logic on the ECC side which generates the artificial batch number for such stocks, so that they can be transferred. The mapping is saved in /ABPERP/CIFBATCH table. By default, the next batch number from the standard number range is taken.

6.1.2 BAPI Interfaces for ABP Master Data

Attribute-based planning for supply network planning provides the following BAPIs to maintain or retrieve ABP master data.

Coverage Rules:

/ABPSCM/MD_BAPI_COV_WRITE

/ABPSCM/MD_BAPI_COV_READ

The ERP Add-On uses CIF function module /ABPSCM/CIF_COV_INBOUND to integrate coverage rules from ERP. This function module handles CIF specific queues and logging and calls the above-mentioned master data RFC function.

Default Distribution Profiles

/ABPSCM/MD_BAPI_DDP_WRITE

/ABPSCM/MD_BAPI_DDP_READ

The ERP Add-On uses CIF function module /ABPSCM/CIF_DDP_INBOUND to integrate default distribution profiles from ERP. This function module handles CIF specific queues and logging and calls the above-mentioned master data RFC function.

Location Distribution Profiles

/ABPSCM/MD_BAPI_LDP_WRITE

/ABPSCM/MD_BAPI_LDP_READ

Period Distribution Profiles:

/ABPSCM/MD_BAPI_PDP_WRITE

/ABPSCM/MD_BAPI_PDP_READ

Sourcing Conditions:

/ABPSCM/MD_BAPI_SCN_WRITE

/ABPSCM/MD_BAPI_SCN_READ

6.1.3 Enhancements for ABP Master Data in ERP

The following enhancement spot allows you to implement additional custom logic within the ABP class generation process.

- /ABPERP/BAS_CLASS_GEN

The enhancement spot contains the following BAdI definitions:

- **BAdI: /ABPERP/BAS_CLASS_GEN**
- IF: /ABPERP/IF_BAS_CLASS_GEN

The BAdI Interface includes the following methods:

Method SELECT_MATERIALS

This method allows you to define the custom criterion attribute for selected materials in addition to industry criterions.

Method GENERATE_CLASS_DATA

This method can be used to adjust ABP class data before actual class creation.

Method MAT_CLASSES_ASSIGN

This method can be used to adjust material-to-class assignments.

6.1.4 Enhancements for ABP Master Data in APO

The following enhancement spot allows you to implement additional prefix or suffix (suffix recommended) if you would like to integrate ABP master data that is not harmonized from different ERP systems..

- Enhancement spot: /ABPSCM/ES_MD_LOGGROU
- BAdI Definition: /ABPSCM/BADI_MD_LOGGROU
- Interface: /ABPSCM/IF_MD_BADI_LOGGROU

The BAdI interface contains the following methods:

Method GET_EXTENSION_COV

Set Prefix and/or Suffix for Coverage Profiles

Method GET_EXTENSION_DDP

Set Prefix and/or Suffix for Default Distr. Profiles

Method GET_EXTENSION_LDP

Set Prefix and/or Suffix for Location Distr. Profiles

Method GET_EXTENSION_PDP

Set Prefix and/or Suffix for Period Distr. Profiles

6.1.5 Component determination enhancement

The following enhancement spot is used to change the outcome of the base utility class methods.

/ABPERP/BAS_UTIL

The enhancement spot contains the following BAdI definition:

BAdI /ABPERP/BAS_UTIL

IF: /ABPERP/IF_BAS_UTIL

Method: CHANGE_INSTALLED_COMPONENT

Allows user to adjust the base-relevant component determination.

Note

Base-relevant component doesn't depend on the CIF destination (for example, used for ABP class generation), and is determined from the /ABPERP/COMPS system table by default. It can be initially set via the utility report /ABPERP/BAS_SET_BAS_REL_COMP.

6.2 Transaction Data

6.2.1 CIF Enhancements ERP to APO

The following enhancement spot allows you to implement additional custom logic within the ABP transaction data transfer from ERP to APO or vice versa.

- /ABPERP/CIF_EH_ADAPTER_CUST

The enhancement spot contains the following BAdI definitions:

- **BAdI: /ABPERP/CIF_EH_ADAPTER_CUST**
- IF: /ABPERP/IF_CIF_ADAPTER_CUST

The BAdI Interface includes the following methods relevant for transaction data transfers sent to APO:

Method CHANGE_PUR_ORD_OUT

The method allows you to change data for purchase orders

Method CHANGE_PUR_REQ_OUT

The method allows you to change data for purchase requisitions.

Method CHANGE_STOCK_OUT

The method allows you to change data for inventory (batch and non-batch stock). Please note that stocks for ABP have to always reference a batch when being transferred to APO.

Method CHANGE_PLPR_ORDER_OUT

The method allows you to change data for planned order and production orders.

Method CHANGE_SALES_ORDER_SELECT_OUT

The method allows you to change the selection of sales documents (sales orders, SD schedule agreements, ...).

Method CHANGE_SALES_ORDER_OUT

The method allows you to change the data for sales documents (sales orders, SD schedule agreements, ...).

Method CHANGE_PIR_INITIAL_OUT

The method allows you to change the data for planned independent requirements.

Method CHANGE_USER_CHARS_VALUES

The method allows you to change the configuration data for transferred transaction data.

Method CHANGE_IMOD_DESTINATION

This method allows you to adjust the destination settings for selected transaction data object types.

6.2.2 CIF Enhancements APO to ERP

The following enhancement spot allows you to implement additional custom logic within the ABP transaction data transfer from APO to ERP.

- /ABPERP/CIF_EH_ADAPTER_CUST

The enhancement spot contains the following BAdI definitions:

- **BAdI: /ABPERP/CIF_EH_ADAPTER_CUST**
- IF: /ABPERP/IF_CIF_ADAPTER_CUST

The BAdI Interface includes the following methods relevant for transaction data transfers received from APO:

Method CHANGE_PUR_BEFORE_IN

The method allows you to change the data for received procurement documents from APO.

Standard CIF provides the following customer-exits for custom adjustments within the ERP inbound process:

- CIFORD01 - Enhancement for Incoming Orders Interface;
- CIFPUR02 - Enhancement of Purchase Order Interface (Inbound);

6.3 CTM Planning Enhancements

Since the standard CTM master and transactional data selection was replaced by *attribute-based planning for supply network planning* logic, this part can't be enhanced by means of existing standard APO BAdIs. Only the ABP BAdIs should be implemented.

6.3.1 CTM Profile Settings

The following enhancement spot is used to extend the capable-to-match (CTM) profile UI logic.

/ABPSCM/CTM_PROFILE_SETTINGS

The enhancement spot contains the following BAdI definition:

BAdI: /ABPSCM/CTM_BADI_PROFILE_SET

IF: /ABPSCM/IF_CTM_PROF_SETTINGS

Different BAdI methods allow you to influence the appearance and the behavior of different screen elements:

Method: DEFSET_SETTINGS_CHANGE

ABP CTM has some constraints in comparison to the standard CTM. However, the same profile is used in both cases. Thus, ABP CTM has a built-in logic which resets some profile settings to ABP defaults according to these constraints, before each CTM run. Method DEFSET_SETTINGS_CHANGE allows you to adjust the defaults depending on your needs (for example, when some constraints need to be added/removed).

Method: TAB_STRATEGIES_MD_CHANGE

Allows you to adjust the screen logic of the CTM profile tab 'Strategies->Master Data'. For example, enable/disable some options.

6.3.2 CTM Master Data Generation

The collection of master data during the master data generation for a CTM profile can be extended through a BAdI. Different BAdI methods allow adjusting the collected master data objects to influence planning scope and planning behavior:

/ABPSCM/CTM_MD_SELECTION

The enhancement spot contains the following BAdI definition:

BAdI: /ABPSCM/CTM_MD_SELECTION

IF: /ABPSCM/IF_CTM_MD_SELECTION

//The interface is documented

The BAdI Interface includes the following methods:

Method: BASE_SEL_LOC_MODIFY

Allows you to adjust the base selection of locations that have been determined based on the master data selection settings.

The method is called for primary and secondary location determination separately.

This method is called during the CTM MD generation.

Method: BASE_SEL_MAT_MODIFY

Allows you to adjust the base selection of products that have been determined based on the master data selection settings.

This method is called during the CTM MD generation.

Method: BASE_MATLOC_MODIFY

Allows a custom determination of location product combinations which will then be used to determine a filter list for location products that shall not be included.

This method is called during the CTM MD generation.

Method: MATLOC_MODIFY

Allows you to adjust CTM attributes for location products and dependent entities. This also includes characteristic settings.

Use this method to influence the netting relevance for specific characteristics, location product-specific disaggregation horizon or time dependent safety stock.

This method is called during the CTM MD generation.

Method: SOURCES_EXT_MODIFY

Allows you to adjust CTM attributes for sources of supply used for external procurement or transport.

This method is called during the CTM MD generation.

Method: SOURCES_INT_MODIFY

Allows you to adjust CTM attributes for sources of supply used for in-house production (planned order creation).

This method is called during the CTM MD generation.

Method: RESOURCES_MODIFY

Allows you to adjust CTM attributes for resources.

This method is called during the CTM MD generation.

Method: GET_RULES_MODIFY

Allows you to adjust CTM attributes for DDP, Sourcing Conditions or Propagation Rules.

This method is called during the CTM MD generation.

Method: MATLOC_HORIZONS

Allows you to adjust horizons at location product level to be used during CTM run.

This method is called during the actual CTM preprocessing to allow adjustments to horizon settings based on the current time.

Method: RESOURCE_CAPACITIES

Allows you to adjust resource capacities to be used during CTM run.

This method is called during the actual CTM preprocessing to allow adjustments to resource capacities based on the current planning situation.

6.3.3 CTM Pre-Processing

The processing of transaction data during the pre-processing steps of a CTM run can be extended through a BAdI. Different BAdI methods allow adjusting the processed demand and supply data to influence aggregation behavior and prioritization:

/ABPSCM/CTM_TD_SELECTION

The enhancement spot contains the following BAdI definition:

BAdI: /ABPSCM/CTM_TD_SELECTION

IF: /ABPSCM/IF_CTM_TD_SELECTION

The interface is documented

The BAdI Interface includes the following methods:

Method: BUILD_SSTCK

Allows the creation of virtual safety stock orders which are considered as additional demands during CTM run.

The method is called within the parallel processing part of the CTM preprocessing.

Method: CLASSIFY_SUPPLIES

Allows you to adjust the supply classification which is the basis for aggregation.

The method is called within the parallel processing part of the CTM preprocessing.

Method: CLASSIFY_DEMANDS

Allows you to adjust the demand classification which is the basis for aggregation. Especially, you can adjust the field PRIOKEY within demands. This field is later used for aggregation as well as for prioritization (alphanumeric sort). You can therefore adjust the priority keys within this BAdI method to not require performance critical adjustments of the prioritization itself.

The method is called within the parallel processing part of the CTM preprocessing

Method: PRIORITIZE_DEMANDS

Allows you to adjust the demand prioritization after aggregation. If you implement this method, you can decide whether you only want to adjust the PRIOKEY of aggregated demands and leave it to the standard logic to prioritize them or whether you set the priority yourself.

The method is called outside the parallel processing part of the CTM preprocessing and thus is more critical to performance.

Method: COMPLETE_DEMANDS

Allows you to adjust the demand data to be sent to the CTM engine.

The method is called outside the parallel processing part of the CTM preprocessing after prioritization and thus is more critical to performance.

The following standard BAdI can be used to influence the planning behavior of the CTM engine. The BAdI method is still supported with the ABP solution.

BAdI: /SAPAPO/CTM_PLPAR

IF: /SAPAPO/IF_EX_CTM_PLPAR

Method: PLPAR_MODIFY Change planning parameters before transfer to engine

Method: CTMCUST_MODIFY Change Customizing after reading

6.3.4 CTM Post-Processing

The processing of transaction data during the post-processing step of a CTM run can be extended through a BAdI.

/ABPSCM/CTM_INT_ORDER_CREATE

The enhancement spot contains the following BAdI definition:

BAdI: /ABPSCM/CTM_INT_ORDER_CREATE

IF: /ABPSCM/IF_CTM_INT_ORD_CREATE

Method: CHARACTERISTICS_MODIFY

Allows you to adjust the configuration data of orders created by the CTM run before they are posted to the liveCache.

The following standard BAdI can be used to adjust orders that have been created by the CTM planning algorithm. The BAdI method is still supported with the ABP solution.

BAdI: /SAPAPO/CTM_ORDERS

IF: /SAPAPO/IF_EX_CTM_ORDERS

Method: ORDERS_MODIFY

Allows you to adjust the CTM order data before liveCache Update

6.4 DP 2 SNP Forecast Release Enhancements

There are three enhancement spots available for the DP to SNP forecast release.

- The first one can be used to define an own source for the demand data that the forecast release report operates on
- The second can be used to retrieve the sales order data for the pre-consumption step of the forecast release
- The third one can be used to introduce custom steps into the forecast release

6.4.1 DP Forecast Download

By implementing the BAdI of this enhancement spot, an own source for the demand data, which the forecast release logic operates on, can be defined. The data has to be transformed into the internal processing format, which is defined in the exporting parameter of the demand groups, in the BAdI implementation.

The standard download of demand data can be either executed additionally afterwards or suppressed. This depends on the setting of the respective export checkbox in the download method of the BAdI.

- /ABPSCM/ES_D2S_DP_DOWNLOAD

The enhancement spot contains the following BAdI definition:

- **BAdI: /ABPSCM/BADI_D2S_DP_DOWNLOAD**
- IF: /ABPSCM/IF_D2S_BADI_DP_DOWNL
- Methods: DOWNLOAD

Purpose: Downloading demand data from a custom source

6.4.2 Forecast Pre-consumption Step

By implementing the BAdI of this enhancement spot, the sales order data used for pre-consumption can be specified. If the BAdI for the sales order data retrieval is not implemented, the pre-consumption step will be skipped as there is no data to be consumed.

- /ABPSCM/ES_D2S_PROCESS_PCO

The enhancement spot contains the following BAdI definition:

- **BAdI: /ABPSCM/BADI_D2S_GET_SO**
- IF: /ABPSCM/IF_D2S_BADI_GET_SO
- Methods: GET_SALES_ORDERS

Purpose: Downloading sales order data from a custom source

6.4.3 Custom Release Steps

This Enhancement spot can be used to introduce own custom steps to the forecast release.

- /ABPSCM/ES_D2S_FC_RELEASE

The enhancement spot contains the following BAdI definition:

- **BAdI: /ABPSCM/BADI_D2S_PROCESS_STEP**
- IF: /ABPSCM/IF_D2S_BADI_PROC_STEP
- Methods: EXECUTE

Purpose: Introduce own steps into the forecast release

The BAdI is delivered with five standard steps and their default BAdI implementations:

- /ABPSCM/EH_D2S_DEF_PROC_LDP -> Location Distribution
- /ABPSCM/EH_D2S_DEF_PROC_PDP -> Period Distribution
- /ABPSCM/EH_D2S_DEF_PROC_DDP -> Default Distribution
- /ABPSCM/EH_D2S_DEF_PROC_PCO -> Pre-Consumption
- /ABPSCM/EH_D2S_DEF_PROC_LCA -> Upload to liveCache

To introduce an own custom step, the filter value STEPCODE must match the step code in the step Customizing table.

6.5 SNP Interactive Planning Enhancements

6.5.1 Create/Change DDP

This Enhancement spot can be used to introduce custom default distribution profiles or adjust the automatically determined one for the SAP interactive planning disaggregation.

- /ABPSCM/SNP_DDP_CHANGE

The enhancement spot contains the following BAdI definition:

- **BAdI: /ABPSCM/SNP_DDP_CHANGE**
- IF: /ABPSCM/IF_SNP_DDP_CHANGE
- Methods: DDP_CHANGE

Purpose: Adjust automatically determined DDP for disaggregation of orders in SNP planning book.

6.5.2 ABP based Sourcing Condition in SNP interactive Planning

This classic BAdI implementation can be used to change the sorting of valid sources of supply, or sources' data according to your needs.

- /ABPSCM/SNP_EH_SOS

The enhancement spot contains the following BAdI definition:

- **BAdI: /SAPAPO/PWB_SOS**
- IF: /SAPAPO/IF_EX_PWB_SOS
- Methods: PWB_USEX_SOS

For the prerequisites, see [SNP Interactive Planning](#).

7 Security Information

Attribute-based planning for supply network planning is based on SAP ECC 6.0 EhP7, SAP ECC 6.0 EhP8, FMS 1.6 or FMS 2.2 or higher, SCM 7.02 APO and above. Therefore, the related guides also apply to *attribute-based planning for supply network planning*.

For more information about specific security-related topics, see the following resources on SAP Service Marketplace:

Topic	Quick Link on SAP Service Marketplace or SDN
Security	http://service.sap.com/security
Platforms	http://service.sap.com/platforms
Infrastructure	http://service.sap.com/securityguide
Related SAP Notes	http://service.sap.com/notes http://service.sap.com/securitynotes

For a complete list of available SAP Security Guides, see SAP Service Marketplace at <http://service.sap.com/securityguide>.

7.1 Authorization Concept

7.1.1 Authorization Objects

The following table lists the security-relevant authorization objects that are used by *attribute-based planning for supply network planning* within the APO system.

Authorization Object	Field	Value	Description
/ABPSCM/CT	ABP CTM Planning		
/ABPSCM/CT	ACTVT		Activity
/ABPSCM/CT	APO_VERS		APO Planning Version
/ABPSCM/DP	ABP DP Release		
/ABPSCM/DP	ACTVT		Activity
/ABPSCM/DP	APO_VERS		APO Planning Version
/ABPSCM/MA	ABP MD Profile Assignments		
/ABPSCM/MA	ACTVT		Activity
/ABPSCM/MA	/ABPSCM/MO		ABP MD Object Type

Authorization Object	Field	Value	Description
/ABPSCM/MA	APO_LOC		APO Location Number
/ABPSCM/MA	APO_PROD		APO Product Number
/ABPSCM/MA	APO_VERS		APO Planning Version
/ABPSCM/MP	ABP MD Profile Maintenance		
/ABPSCM/MP	ACTVT		Activity
/ABPSCM/MP	/ABPSCM/MO		ABP MD Object Type
/CDBASIS/C	General Customizing Access		
/CDBASIS/C	ACTVT		Activity
/CDBASIS/C	/CDBASIS/A		General Customizing: Application
/CDBASIS/C	/CDBASIS/S		Customizing Usage Scope

The following table lists the security-relevant authorization objects that are used by *attribute-based planning for supply network planning* within the SAP ERP system.

Authorization Object	Field	Value	Description
/ABPERP/CL	ABP Classification		
/ABPERP/CL	ACTVT		Activity
/ABPERP/SU	ABP Setup Reports		
/ABPERP/SU	ACTVT		Activity
/CDBASIS/C	General Customizing Access		
/CDBASIS/C	ACTVT		Activity
/CDBASIS/C	/CDBASIS/A		General Customizing: Application
/CDBASIS/C	/CDBASIS/S		Customizing Usage Scope

8 Operations Information

Designing, implementing, and running your SAP applications at peak performance 24 hours a day is vital for your business success. This chapter contains important information on how to smoothly operate *attribute-based planning for supply network planning*. This chapter describes the tasks to execute and the tools to use.

Attribute-based planning for supply network planning is based on SAP ECC 6.0 EhP7, SAP ECC 6.0 EhP8, FMS 1.6 or FMS 2.2 or higher, SCM 7.02 APO and above. Therefore, the general operations information that is covered in the related operations guides also applies to *attribute-based planning for supply network planning*.

The operations information specific to *attribute-based planning for supply network planning* is described in the following chapters.

8.1 Monitoring

You can use the standard means of system monitoring that are part of the SAP NetWeaver platform.

In addition, you can use the activity trace functionality that comes with the *attribute-based planning for supply network planning* solution. This feature supports tracing selected activities within the system.

To activate activity traces, call transaction `/CDBASIS/ACT_C` and select a function that you want to monitor from the list of available functions. Set the active indicator to activate tracing in the system. Set the expiry horizon (days) that you want to use to consider traces as outdated for cases where the activity status is *Error* and for cases where the activity status is *Successful*. The expiry horizon is used for the cleanup of outdated traces.

When you activate activity traces you should also schedule the cleanup periodically. To do so, call transaction `/CDBASIS/ACT_DEL` and maintain the desired cleanup settings. You can then execute the cleanup directly or schedule it as a background job (also periodically).

To review activities that have been traced, call transaction `/CDBASIS/ACT_M` and select the function that you want to review. Choose whether only traces with error status shall be selected or also traces with warning status or information status. Choose the horizon of traced activities and choose *Execute*. You can limit the number of traces that are displayed based on the maximum hits display option.

A list of traced activities that match your criteria is displayed. If an application log has been created for that activity, it will be linked and you can navigate to the application log by clicking on the log number. You should ensure that the application logs that you intend to review are not deleted before, based on standard application log cleanup (see *Error Logs*).

8.1.1 Alert Monitoring

The solution does not include any specific alert monitoring.

8.1.2 Error Logs

You can use the standard means of error logging that are part of the SAP NetWeaver platform. This mainly refers to the system log and application log. Many functions within the ABP solution create Application Logs which are visible in the standard application log display.

In addition, you can use the Application Log display and cleanup functionality that comes with the ABP solution. This feature supports alternative time selection criteria and display of hierarchical application logs (messages are part of a hierarchy). To use this feature, call transaction `/CDBASIS/LOG_D`.

The solution also includes the ability to search for messages or strings within application logs and thus enables you to identify specific activities where a dedicated error has occurred or a dedicated object was involved. To use this feature, call transaction `/CDBASIS/LOG_S`.

The solution also includes a dedicated log cleanup feature which allows you to control the deletion of application logs based on the status of the included messages (error vs. success). To use this feature, you need to setup the expiry horizons for such application log objects and subobjects. To do this, call transaction `/CDBASIS/LOG_E`.

Settings you maintain for a log object without subobject apply to all subobjects that do not have an explicit entry of their own. The maintained expiry horizons reflect the number of calendar days. You can use this feature for application log objects from the ABP solution as well as any other application log object.

To use the expiry horizon-based cleanup, call transaction `/CDBASIS/LOG_DEL` and maintain the desired filter criteria for the cleanup. You can decide to execute the cleanup in test mode which will create an application log (object `/CDBASIS/` subobject `LOG_MSG`) that identifies the logs that would be deleted. Using the provided expiry-based application log cleanup you should schedule the report (in non-test mode) periodically and exclude such application log objects from the standard application log cleanup (Transaction `SLG2`).

8.1.3 Workload Monitoring

You can use the standard means of workload monitoring that are part of the SAP NetWeaver platform.

8.1.4 Interface Monitoring

You can use the standard means of interface monitoring that are part of the SAP NetWeaver platform. For CIF integration, SAP standard solution uses the application log depending on the logging settings for CIF. For more information, see the application help for SAP Supply Chain Management on the SAP Help Portal at <https://help.sap.com/scm>.

8.1.5 Background Job Monitoring

You can use the standard means of job monitoring that are part of the SAP NetWeaver platform.

9 Data Archiving

The *attribute-based planning for supply network planning* solution does not provide specific archiving for SAP standard objects or ABP objects.

10 HANA Specifics

The *attribute-based planning for supply network planning* solution is designed to be operated with any database system compatible to SAP NetWeaver. For APO, the minimum release supported by HANA is SCM 7.12. For ERP, the minimum release supported with HANA is ECC 6.0 EhP7 (that is, ECC 6.17). As the solution is designed to run on any database, it does not include specific features that are limited to be used with SAP HANA in Memory DB. The design, however, reflects certain aspects that improve benefits when the migration to SAP HANA is made. This especially applies to data compression and data inserts/updates.

Some DB tables require additional indices on a classical database to operate efficiently when accessing the data. These indices are not required on SAP HANA, and will therefore not be instantiated if operated on SAP HANA. On SAP HANA, the access to such DB tables is faster while saving the space for the indices.

11 Volume-based License

The license for the *attribute-based planning for supply network planning* solution is volume based.

12 Disclaimer

The information stated herein is based on the feature set available in the release that is listed in the beginning of this document. SAP reserves the right to adjust and extend the configuration options of the solution in future releases. Certain options may be extended also as part of future service packs. This especially applies to additional country content that is made available.

Included screenshots from the system are only intended for illustration or explanation reason and may not be exactly represented in the system as shown in this guide.

The implementation of BAdIs is generally considered custom code and thus a resulting misbehavior of the solution is not covered as part of the general maintenance agreement for this solution. You should generally not change internal attributes that are used by the solution to control the system behavior despite that in some cases such attributes are exposed to the BAdI interfaces.

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