SAP APO SNP (Supply Network Planning) – Sample training content and overview
Course Objectives

At the completion of this course, you will be able to:

- Understand the concepts of SNP and supply chain network
- Identify and resolve problems in the supply chain
- Set-up and configure a supply chain network model
- Create a model that represents your supply chain network and all relevant locations, resources, and relationships
- Develop queries and collect information about the supply chain
- Detect and resolve problems in the supply chain using the Alert Monitor
- Set-up SNP master data and configure SNP
- Perform SNP runs using SNP Heuristics, the SNP Optimizer, and Capable to Match
- Execute a Deployment run to determine the distribution of available supply
- Use the Transport Load Builder to create multi-product loads
Supply Chain / APO Terminology

ERP – Enterprise Resource Planning
SAP – Systems, Applications and Products in Data Processing
ECC – ERP Central Component
SCM – Supply Chain Management
MRP – Materials Requirements Planning
MPS – Master Production Schedule
MPP – Master Production Plan
APO – Advanced Planner and Optimizer
S&OP – Sales and Operational Planning
DP – Demand Planning
SNP – Supply Network Planning
CTM – Capability To Match
Supply Chain / APO Terminology

PP / DS – Production Planning / Detailed Scheduling
DC – Distribution Center
API – Active Product Ingredients
RM – Raw Material
FG – Finished Goods
STR – Stock Transfer Requests
Sample Training content

Unit 1 - Supply Network Planning Concepts

Unit 2 - Importance of Supply Network Planning

Unit 3 - SAP APO Supply Network Planning books and terminology

Unit 4 - Heuristics Material Planning

Unit 5 - Capacity Leveling

Unit 6 - Alerts

Unit 7 - Real life SNP case and client demo and discussion

Unit 8 - Summary/Recap/Assessment
What is SNP?

- SNP is a SAP SCM/APO module help match a feasible replenishment plan to the demand plan
  - Balance mid to long term and facilitate critical and/or cross plant supply situations
  - Months 4-24
    - Dependent upon business requirements
    - View extended to 36 months to support long lead-time materials
- Role and Functionality Integration
  - Capacity Leveling
    - Backward/Forward scheduling
    - Select alternate resources and/or BOMs
  - Manage purchase requisitions / stock transfers
  - Fix orders
  - Safety Stocks
SNP process overview

Demand Planning

Consolidated Demand → Perform Multilevel Netting to Determine Production Requirements

Evaluate Rough Cut Capacity Requirements

Evaluate Key Materials availability

‘What if’ Demand

S&OP Process

Create constrained MPP

SNP

Commit Constrained MPP

SNP

PP/DS or Detailed Scheduling

Demand Planning

Consolidated Demand → Perform Multilevel Netting to Determine Production Requirements

Evaluate Rough Cut Capacity Requirements

Evaluate Key Materials availability

‘What if’ Demand

S&OP Process

Create constrained MPP

SNP

Commit Constrained MPP

SNP

PP/DS or Detailed Scheduling
SNP process overview

Match a feasible replenishment plan to the demand plan

- Using the supply chain to plan the material flow
- Planning the medium- to long-term horizon
- Cross-plant planning (infinite), period-based with manual adjustments
- Results: feasible plan

Production Locations

Distribution Centers

Demand Planning

Forecasts

Production Locations

Distribution Centers

Demand Planning

Forecasts

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SNP process overview

1. Set up Master Data and Supply Chain Model
2. Demand Plan Released to SNP
3. Event Management
4. Finalize SNP Plan (publish to ECC)
5. Perform Background SNP Planning Run
6. Review Plan/Resolve Problems

Diagram showing the process flow of SNP with steps in a cycle.
Supply Network Planning standard functionality

• Interactive Planning
  • Adjustment & Reconciliation of supply plan
  • “What-if?” scenarios

• Alerts
  • Exception Based Management
  • Alert Monitor

• Classical SNP- Functionalities
  • Considering Limited Capacities
  • Identifying the Source of Supply
  • Consider Bill of Materials

• Planning and Optimization Tools
  • Heuristic
  • Capable to Match (CTM)
  • Deployment
  • Constraint and cost based Optimization
  • Transport Load Building
  • Vendor Managed Inventory

• Integration
  • Feed of information from SAP R/3
  • Feed of data from Legacy systems
  • Transfer of Plans to R/3
  • Procurement, Production, Distribution and Transport

• Reporting
  • Availability of data for data warehouse solution
  • Download planning results to .xls
Sample Training content

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The strength of SNP lies in selecting the source of supply as well as in determining the approximate production date.

- SNP provide supply sites with:
  - Cross-plant and period-based Stock Transfer Requests (STR) which will be utilized across the full planning horizon to drive near-term production planning
  - Capacity planning/leveling to clear resource overloads by moving orders or partial order quantities into previous or subsequent periods using forward or backward scheduling
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SNP Terminology

Planning Book / Data View

Determines the content and layout of the interactive planning screen in APO and is used to view transactional data.

Planning Version

Set of data in APO consisting of master data and transactional data. Supply Planners work in the active version.

Production Horizon (Planning Time Fence)

Defined period of time where no automatic changes are carried out on planned orders by the heuristic algorithm and no new planned orders can be created via APO. Typically defined as the cumulative lead time of all BOM levels and must be defined in calendar days.

Supply Network Planning Book

Planning book used when creating, modifying, or viewing Master Production Schedules.
Example: Available Data Views in ZUS_9ASNP94:

- **CAPACITY_PLAN**
  - Resource consumption
  - Capacity leveling

- **SNP_PLAN**
  - Inventory balances
  - Production plan
  - Heuristic
  - Deployment
  - Days of supply

- **WHAT_IF**
  - Simulation planning
1. Double click to choose SNP data view

2. Double click to load selection ID into shuffler

3. Double click to load product into planning book

Selector area
SNP Planning book view
Plant perspective - Demo

- Distribution demand from DC
- Deployment confirmed distribution demand
- Purchase orders to DCs
- Planned production line
- Process orders
- Projected inventory
- On hand inventory
- Backlog
- Dependent demand at plant
SNP Planning book view
DC perspective - Demo

- Forecast at DC
- Distribution receipt from plant
- Deployment confirmed distribution receipts
- Purchase orders
- Projected inventory
- On hand inventory
- Days of supply at DC

- Backlog
- Target days supply
- Target stock level
- Target stock level
- Actual On Hand Inventory
- Days of Supply Aggregate
- Days of Supply (Loc Specific)
<table>
<thead>
<tr>
<th>Product</th>
<th>SNP PLAN</th>
<th>Un</th>
<th>Initial</th>
<th>02/17/2003</th>
<th>03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total demand</td>
<td>EA</td>
<td>46,500</td>
<td>8,050</td>
<td></td>
<td></td>
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<tr>
<td>Total receipts</td>
<td>EA</td>
<td>48,000</td>
<td>5,000</td>
<td></td>
<td></td>
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<tr>
<td>Projected Inv.</td>
<td>EA</td>
<td>135,250</td>
<td>132,200</td>
<td></td>
<td></td>
</tr>
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<td>Blocked Stock</td>
<td>EA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Inspection Stock</td>
<td>EA</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Restricted Stock</td>
<td>EA</td>
<td>33,500</td>
<td></td>
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</tr>
<tr>
<td>Unrestricted Stock</td>
<td>EA</td>
<td>100,300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrestricted Stock DOS</td>
<td>DY</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days of Supply (Aggreg.</td>
<td>DY</td>
<td>118</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days of Supply (Loc. Spc.)</td>
<td>DY</td>
<td>74</td>
<td>69</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Target days’ supply (Tim.)</td>
<td>DY</td>
<td>122</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network DOS (Aggreg.)</td>
<td>DY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Projected Invent</td>
<td>EA</td>
<td>140,250</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ATD Issues</td>
<td>EA</td>
<td>20,481</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATD Receipts</td>
<td>EA</td>
<td>133,600</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aggregate product at all locations**

**Expand to see inventory by status**

**Days of supply based on unrestricted inventory**

**National quality inspection, restricted, unrestricted inventory total**

**National days supply based on inventory at DCs**

**National DOS based on inventory in supply network**

**Projected network inventory**

---

SNP Planning book view Network /Supply Chain perspective - Demo
<table>
<thead>
<tr>
<th>Resource load</th>
<th>Available hours for resource</th>
<th>Required capacity in hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
<td>Loc</td>
<td>Capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production quantity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Required capacity in hours (Used when displaying dependent objects by PPM)
What if planning version

Forecast can be edited

Backup of forecast
Sample Training content

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Unit 8 - Summary/Recap/Assessment
Unit Objectives

At the completion of this unit, you will be able to:

- Explain the function of the APO SNP heuristic algorithm.
- List and describe the 3 types of SNP heuristic algorithms.
- Execute the SNP heuristic algorithm.
- Use the key terms in this course.
Heuristic Materials Planning

• A heuristic is an algorithm which is activated within the SNP Planning Book that has a pre-defined set of parameters to influence the creation of an MPS planning solution.
  • It is similar to an MRP run.
• The plan generated from this algorithm is not necessarily feasible (unconstrained plan).
  • The algorithm looks at demand and does a netting calculation using current inventory levels, target days of supply, and safety stock to generate a plan.
• Planner must use capacity leveling to formulate a feasible plan based upon plant capacity.
Factors Considered in the Heuristic Run

**External Procurement Relationship**
Defines which vendor supplies which product.

**Lot Sizing**
Lot-for-lot, fixed, target range of coverage, rounding profiles, rounding values.

**Production Horizon**
Planning Time Fence.

**Production Process Models**
Bill of Material (BOM) and Routing.

**Quota Arrangements**
Percentage of demand allocation to sourcing locations.

**Safety Stock**
Quantity that should satisfy the unexpectedly high demand in the coverage period.

**Target Days Supply**
Master data that controls inventory levels.

**Transportation Lanes**
Valid movements in the supply chain that link plant to DC and DC to DC. Contain the transportation lead time.
Heuristic Algorithms

- **3 Types of Heuristic Algorithms:**
  - **Location** – System plans the specified product at the specified location. Planned orders are only created when running this algorithm at the manufacturing site.
  - **Network** – System plans the specified product at all locations in the network where the product exists. The system explodes dependent demand for one BOM level. Planned orders are created for the specified product, but no other products.
  - **Multi-level** – System plans the specified product at all locations in the network AND all products that have dependent demand resulting from the specified products. Planned orders are created for all products with dependent demand.
Heuristic Algorithms

- **Best Practices:**
  - Use the Network Heuristic to plan Finished Goods.
    - Planned Orders for FGs will be created, deleted and modified.
    - Dependent Demand will be placed on RM Products.
  - Plan all FGs that use the same RM before planning the RM.
  - Use the Location Heuristic to plan RM Products.
  - If changes are made to the FG plan, the Location Heuristic should be re-run for the RM Product.
  - If site is using APO without PP/DS, need to plan at every level, i.e., FG, RM, API.
  - APO/SNP is “top-down” planning.
Heuristic Algorithms

- Automated heuristic run:
  - Location heuristic automatically runs daily for the DCs.
  - **Results:**
    - Distribution demands are created at plants.
    - Forecast changes will be reflected at the plant via the updated distribution demands.
    - Planned Orders are not created, deleted or modified.
  - Alerts at the plant indicate target stock level violations and backlogs.
Heuristic Algorithms
Steps to Plan a FG

1. Choose book ZUS_9ASNP94 and view SNP_PLAN
2. Choose selection profile
3. Double click FG at the plant location
Heuristic Algorithms
Steps to Plan a FG

4. Click the Network button

5. Message indicates heuristic is complete

6. Save the results

5 location product(s) was/were processed
Heuristic – **Time Dependent**

**Target Days of Supply Impact**

<table>
<thead>
<tr>
<th>Product</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>APO-F0031224548</td>
<td>X00040</td>
</tr>
<tr>
<td>APO-F0031224548</td>
<td>RX31</td>
</tr>
<tr>
<td>APO-F0031224548</td>
<td>RX31</td>
</tr>
<tr>
<td>APO-F0031224548</td>
<td>SP31</td>
</tr>
</tbody>
</table>

**Distribution Receipt**

- 21 days before forecast

**Time Dependent Target DOS**

<table>
<thead>
<tr>
<th>Design</th>
<th>Graphic</th>
<th>Network</th>
<th>Multi</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNP PLAN</td>
<td>Un</td>
<td>02/17/2003</td>
<td>02/24/2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>03/17/2003</td>
<td>03/24/2003</td>
</tr>
<tr>
<td>Forecast</td>
<td>EA</td>
<td>1,200</td>
<td>1,600</td>
</tr>
<tr>
<td>Sales Order</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DistDemand (Planned)</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DistDemand (Confirmed)</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSTO (DC Demand)</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependent Demand</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total demand</td>
<td>EA</td>
<td>1,200</td>
<td>1,600</td>
</tr>
<tr>
<td>DistReceipt (Planned)</td>
<td>EA</td>
<td>1,200</td>
<td>1,600</td>
</tr>
<tr>
<td>DistReceipt (Confirmed)</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DistReceipt - FSTO Con</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production (Planned)</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process Orders &amp; Conf.</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total receipts</td>
<td>EA</td>
<td>1,200</td>
<td>1,600</td>
</tr>
<tr>
<td>Projected Inv</td>
<td>EA</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Backlog</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target days’ supply</td>
<td>DY</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Target stock level</td>
<td>EA</td>
<td>1,200</td>
<td>1,200</td>
</tr>
<tr>
<td>Actual On Hand Inventory</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days of Supply (Aggregate)</td>
<td>DY</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Days of Supply (Loc Spe)</td>
<td>DY</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Target days’ supply (Tim)</td>
<td>DY</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>
Heuristic Algorithms – Steps to Plan a RM

1. Choose book ZUS_9ASNP94 and view SNP_PLAN

2. Choose Selection Profile

3. Double click RM at the plant location
Heuristic Algorithms – Steps to Plan a RM

4. Click the Location button

5. Message indicates heuristic is complete

6. Save the Results

5. Message indicates heuristic is complete
Activity 4 Exercise: Run Location Heuristics for RM

• Once the unconstrained demand plan has been released to Supply Network Planning, requirements can be generated for a desired location and the desired product(s) using the Heuristics planning run.

• **Perform the following Captivate simulations:**
  
• SNP_Location_RM.htm
Key terms review

**Heuristic Algorithm:** Net change planning run performed in APO that can be location or network specific.

**Lead Time:** Time to manufacture a product.

**Location Heuristic:** Algorithm planning run that generates stock transfers, purchase requisitions and planned orders for one location – DC or plant.

**Lot Sizing:** Parameters that control the quantity of planned orders created in production planning calculations.

**MPS Planning Solution:** Tool that enables supply planners to create a consolidated statement of production requirements for a period(s) in the future consisting of planned orders for certain quantities and specific due dates.

**Multi-Level Heuristic:** Algorithm planning run that generates stock transfers, purchase requisitions and planned orders for one product at all locations AND all products that have dependent demand resulting from the specified product.

**Network Heuristic:** Algorithm planning run that generates stock transfers, purchase requisitions and planned orders for one product at all locations.
Key terms review

**Planned Order:** Request for a plant to trigger the production of a product in a certain quantity for a specific due date.

**Production Process Model (PPM):** Master data in APO comprised of a Bill of Material and a Routing.

**Quota Arrangement:** Method of splitting supply or demand requirements across locations.

**Safety Stock:** Quantity that should satisfy the unexpectedly high demand in the coverage period.

**Target Stock Level:** Amount of stock that should be maintained at a location.

**Transportation Lane:** Relationship between two locations (i.e., plant and DC) that defines the transit time, mode of transportation and the products that are valid to be shipped between the locations.

**Unconstrained Plan:** MPS schedule created by the heuristic algorithm that may not be feasible due to the lack of resource capacity.
Unit Recap

- Heuristics create an unconstrained plan that meets safety stock, target days of supply and lead time requirements.
- Run network heuristics to plan finished goods.
  - The specified product is planned at all locations in the network where it exists.
- Run location heuristics to plan RM products.
  - The specified product is planned at a specific location.
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Unit 8 - Summary/Recap/Assessment
At the completion of this unit, you will be able to:

- Create a level plan for a single resource.
- Concurrently create a level plan for multiple resources.
- Use the APO automated capacity leveling algorithm.
- Use the key terms in this course.
Key terms

**Capacity Leveling:** The constraining of a supply plan based on the capacity available at the manufacturing site producing the material. Capacity values are based on data transferred from R/3.

**Capacity Plan:** Result of the Master Production Schedule that indicates capacity requirements and utilization by time period.
Capacity Leveling – Single Resource

- Supply Planner manually moves planned orders into time buckets.
- Supply Planner can immediately view the capacity consumption created by the planned order.
- This activity is useful when a product can only be produced on a single resource.
1. Select the Capacity Planning view, appropriate selection profile and double-click the resource to load it.

2. Display dependent objects by PPM

When Planned Orders are changed, the capacity requirements are immediately changed.
• Supply planner manually moves planned orders into time buckets.

• Supply planner can immediately view the capacity consumption created by the planned order on the chosen resource.

• This activity is useful when a product can be produced on multiple resources.
Step 1

1. Select the Capacity Planning view, appropriate selection profile and select the resources. Click to load.

2. Use APO-resource header to show Details(all)

3. Capacity plan grid expands by resource
Capacity Leveling – Multiple Resources

Step 2

1. Display dependent objects by PPM

2. Quantity view expands by resource and PPM
Activity 2 Exercise Capacity Leveling: Single Resource

• After the unconstrained plan is generated, fit the plan to capacity.

• Perform the following Captivate simulations:

• SNP_Capacity_Leveling_Manual.htm
Capacity Leveling – Automated Algorithm

- APO capacity leveling algorithm automatically level loads a single resource based on user defined parameters.
- Algorithm attempts to move planned orders to time bucket close to where the overload is occurring.
- User defined parameters include:
  - Products that can have planned orders moved.
  - Time buckets to level.
  - Scheduling direction.
  - Priority rules.
- The algorithm is useful when creating a level plan for a resource that has many products with capacity requirements as well as many overloaded time buckets.
Capacity Leveling Step 1 – Period Structure Settings

- Able to switch to different planning buckets by clicking in the Planning Book/Data View section. Override the standard settings with “current” settings.

1. After loading the data, click **Period Structure Settings**.

   ![Period Structure Settings](image1)

2. Click **Current Settings**, then enter **Planning Start date** and a **TB profile ID**.

   ![Current Settings](image2)

   - First time bucket displayed starts the week of the date entered in the planning start date.

   ![First Time Bucket Displayed](image3)

   - Able to switch to different planning buckets by clicking in the Planning Book/Data View section. Override the standard settings with “current” settings.
Capacity Leveling Step 2 – All or Selective Products

The Supply Planner has a decision to make at this point. Does he/she want Capacity Leveling to move planned orders for certain product(s) or is he/she indifferent about which planned orders are moved?

Choose Details (all) from product header

Determine products creating this consumption

Consumption by product
Capacity Leveling Step 2 – All or Selective Products

If Decision is to move planned orders for certain product(s), select the product(s).

In this example, only planned orders for product APO-F00031860401E will be moved into another time bucket.

If Supply Planner does not want to specify products, then do not use CTRL or SHIFT to select any products. By default, algorithm will randomly choose which planned orders to move.
Capacity Leveling Step 3 – Choose Time Buckets

In this example, only planned orders for product APO-F00031860401E will be moved into 9/16/2002 time bucket.

If planned orders cannot “fit” into the selected time buckets, APO will not move the orders into non-selected time buckets.
Capacity Leveling Step 4 – Start Capacity Leveling

Click **Capacity leveling** icon.

![Capacity Leveling Profile](image_url)
Capacity Leveling Step 5 – Select Scheduling Direction

Choose the **Scheduling direction** from the drop down menu

**Backward scheduling:** APO will search time buckets before the overloaded time bucket to determine if available capacity exists and if planned orders will “fit” into the time bucket. APO will not place planned orders inside the production horizon.

**Backward + forward:** APO will first search time buckets before the overloaded time bucket (up to the production horizon) to determine if available capacity exists and if planned orders will “fit” into the time bucket. If available capacity is not found, APO will search time buckets after the overloaded time bucket.

**Forward scheduling:** APO will search time buckets after the overloaded time bucket to determine if available capacity exists and if planned orders will “fit” into the time bucket.
Capacity Leveling
Step 6 – Set Maximum Load

Enter the **Maximum** resource capacity to be used for leveling.
Capacity Leveling
Step 7 – Select Settings

**Level fixed orders** – selecting this option will allow the algorithm to ‘move’ fixed orders

**Set order fixing** - selecting this option will fix the planned orders generated by the algorithm
10 **No priority**: Capacity leveling does not take into account any product or order priorities. This is the recommended setting if it is most important for you to have optimal resource utilization. Specifying a priority can have a negative effect on the capacity leveling results for optimal resource utilization.

20 **Order size**: Capacity leveling takes into account orders according to their size. For example, you can specify that during backward scheduling, large orders are moved to the earlier periods first.

30 **Product priority**: Capacity leveling takes into account the orders according to the priority specified for products in the location product master. For example, you can specify that during forward scheduling, unimportant products are first moved to later periods.
Capacity Leveling Step 9 – Select Sort Sequence

Select the **Sort sequence** from the drop down menu.

This feature works in conjunction with Order prioritization.

For example, an Order prioritization of “20” *Order Size* and a Sort Sequence of “A” *Ascending* will instruct the algorithm to move the smallest order first.
Select the Planning buckets profile. Select the same profile you have active in the planning book.
Capacity Leveling Step 11 – Select Capacity Leveling Method

Select the Capacity leveling method “10 Heuristic method”

Click the **Execute** icon
Capacity Leveling Before and After

Before Capacity Leveling

Load is spread over time buckets and capacity is leveled.

Resource overload

After Capacity Leveling

Load is spread over time buckets and capacity is leveled.
Activity 4 Exercise
Capacity Leveling

• Identify a time bucket that has a resource overload. Execute “forward” capacity leveling for the time bucket with the resource overload.

• **Perform the following Captivate simulations:**
  • SNP_Capacity_Leveling_Single.htm
Unit Recap

- Capacity Requirements are defined in the PPMs.
- Use three methods of capacity leveling:
  - Manual leveling for a single resource.
  - Manual leveling for multiple resources concurrently.
  - APO automated algorithm.
Sample Training content

Unit 1 - Supply Network Planning Concepts

Unit 2 - Importance of Supply Network Planning

Unit 3 - SAP APO Supply Network Planning books and terminology

Unit 4 - Heuristics Material Planning

Unit 5 - Capacity Leveling

Unit 6 - Alerts

Unit 7 - Real life SNP case and client demo and discussion

Unit 8 - Summary/Recap/Assessment
Unit Objectives

• At the completion of this unit, you will be able to:
• Explain the types of alerts in used in Supply Network Planning.
• View alerts in the APO Alert Monitor.
• Use the key terms in this course.
Accessing Alerts

- Alert monitor allows supply planners and material schedulers to monitor the state of the MPS plan according to exceptions.

- There are two ways to view the alerts:
  - From the MRP_ALERT Data View in the appropriate planning book.
  - From the Alert Monitor transaction.

<table>
<thead>
<tr>
<th>Planning book/data view</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZUS_9ASNP96</td>
<td>MRP ALERT</td>
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<tr>
<th>SAP menu</th>
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<tbody>
<tr>
<td>Supply Chain Monitoring</td>
</tr>
<tr>
<td>/SAPAPO/SCC02 - Supply Chain Cockpit</td>
</tr>
<tr>
<td>/SAPAPO/AMON1 - Alert Monitor</td>
</tr>
</tbody>
</table>
Types of Alerts

• Supply planner SNP alerts:
  • Resource overload – resource is loaded more than 100%.
  • Backlog – projected inventory is less than 0.
  • Target stock level shortfall – projected inventory is less than the target stock level (for products with safety stock).

• Supply planner DP alerts:
  • DP sales pace – sales are on pace to exceed forecasts.
  • Missing proportional factor – percentages to use when allocating forecasts to a DC are missing.
  • Missing Demand Planner ID – indicates when Demand Planner ID has not been assigned to product with a forecast.
Types of Alerts

• **Material scheduler alerts:**
  - **Daily backlog** – projected inventory for RM product is less than 0.
  - **Over supply** – projected inventory for RM product exceeds days of supply threshold set in APO product master data.

• **Distribution planner alerts:**
  - **Deployment needs to be executed** - indicates when supply exists at the plant that does not have an allocation created.
  - **Unrestricted Stock < 10 Days of Supply** - indicates when a DC to DC transfer may be necessary.
Alert Monitor

1. Select Favorite
2. Choose alert type
3. Place check in box
4. Select layout

Add Favorites to your selection

Right click on Alert then select Supply and Demand Planning to jump to planning book
Alert Monitor

- **Alert “Favorite”**
- “Favorite” includes an “SDP Alert Profile”.
- **SDP Alert Profile:**
  - Selects type of alerts to display.
  - Indicates planning book.
  - Chooses data view.
  - Chooses selection ID (filters products for which user will see alerts).

Favorite is required for each combination of alert type, planning book, data view and selection ID.
Activity 2 Exercise
Alert Monitor

• Use APO to view alerts in the alert monitor.

• Perform the following Captivate simulations:
  • SNP_Alerts.htm
Unit Recap

• Alert messages in APO quickly direct supply planners and material schedulers to potential issues.

• Alert favorites are created to “filter” the types of alerts visible to each user.
Sample Training content

Unit 1 - Supply Network Planning Concepts

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Unit 5 - Capacity Leveling

Unit 6 - Alerts

Unit 7 - Real life SNP case and client demo and discussion

Unit 8 - Summary/Recap/Assessment
Books meet the road!

- In-class exercises for different topics
- Real hands on the SAP APO system
- Discuss real life experience / client case studies
- Round table discussion / interaction /forums within the class
- Get prepared for SAP APO/SCM certifications
- Mock up interview tips, questions and preparations
Sample Training content

Unit 1 - Supply Network Planning Concepts

Unit 2 - Importance of Supply Network Planning

Unit 3 - SAP APO Supply Network Planning books and terminology

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Unit 6 - Alerts

Unit 7 - Real life SNP case and client demo and discussion

Unit 8 - Summary/Recap/Assessment
Summary/Recap

At the completion of this course, now you are able to:

• Understand the concepts of SNP and supply chain network
• Identify and resolve problems in the supply chain
• Set-up and configure a supply chain network model
• Create a model that represents your supply chain network and all relevant locations, resources, and relationships
• Develop queries and collect information about the supply chain
• Detect and resolve problems in the supply chain using the Alert Monitor
• Set-up SNP master data and configure SNP
• Perform SNP runs using SNP Heuristics, the SNP Optimizer, and Capable to Match
• Execute a Deployment run to determine the distribution of available supply
• Use the Transport Load Builder to create multi-product loads
At the completion of this course, you are able to:

- Describe your roles and responsibilities in the Master Production Scheduling process using SAP APO for Supply Network Planning.
- Navigate and organize data in the SAP APO Planning Book.
- Create, change and display a Master Production Schedule using SAP APO for Supply Network Planning.
- Level load a plant using the Capacity Leveling functionality of SAP APO for Supply Network Planning.
- Create and change a planned order in SAP APO for Supply Network Planning; either manually or through Heuristics.
THANK YOU