SNP: Deployment and Transportation Load Builder scenario 3 – Fair Share Rule – A "Proportional Distribution Based on Demands"

Applies to:

Supply Network Planning – Deployment and Transport Load Builder. For more information, visit the Supply Chain Management homepage.

Summary

This document is the 3rd document in continuation of the series describing the Concepts and Scenario of Supply Network Planning's Deployment and Transport load builder.

After the Goods are manufactured or ready to be supplied to the Distribution centers/Customers/VMI we can use the Deployment and Transport load builder functionalities to supply the finished goods to the Distribution centers/Customer Location and Vendor managed Inventory based on respective demand at the DCs and Locations.

There are various Fair Share Rules and Pull/Push rules that will be used to Deploy. In this document Fair Share Rule A – Proportional Distribution Based on Demands.

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Author Bio

Kiran Magar has over 11 years of experience in Supply Chain Management. He is a team-oriented Sr. Principal Consultant with 8 + years of experience in PP/PP-PI/QM, SCM DP and SNP implementations, SAP upgrade project management & execution and technical support management. He has delivered on many complex projects in Life Science Industry, Processing Industry, Automobile Industry and High Tech Industries.

Deepak Aparanji has over 13 years of experience in Supply Chain Management and Project execution. He is a team- oriented Principal Consultant with 9 plus years of experience in SAP (MM, PP, QM, SNP, PS, and APO-DP). He was involved in multiple SAP implementation projects, SAP Upgrades and SAP support projects. He has delivered many projects in Chemical, Steel, Hi-tech, Media industries.

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Introduction to Deployment and TLB

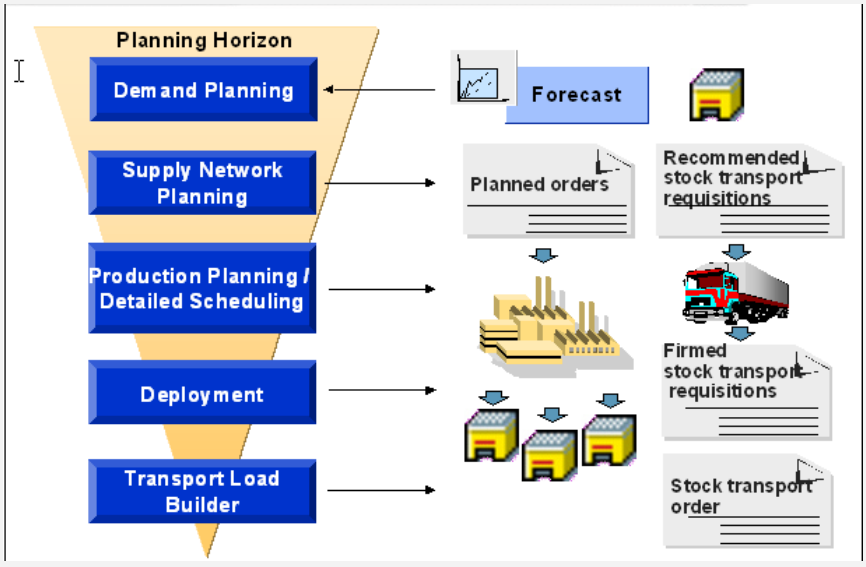
Deployment

Deployment is the process which determines what demands can be met with the existing supplies both for the In-house produced and Externally Procured. In other words Deployment functionality determines how and when the Inventory should be deployed to the Distribution centers, Customers or Vendor Managed Inventory locations.

- Deployment uses various Strategies like Fair share, Push, Pull-Push and minimum cost flow optimization. And these are maintained in the Deployment profiles
- If the Supply is equal to the Demand then Deployment confirms the SNP plan.
- When the Demand is more than the Supply – then the Deployment applies Fair Share Rule and calculates the plan for the deployment.

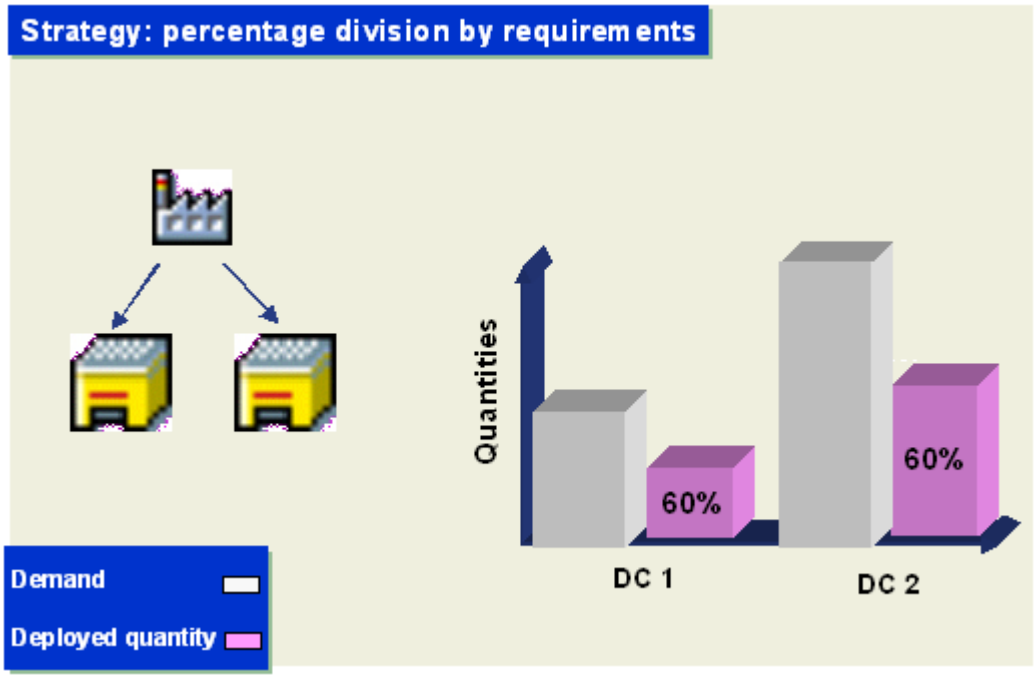
  Fair Share Rules can be as below
  - Proportional
  - Target fulfillment
  - Quota arrangements
  - Transportation Priority

Note: In this document we will demonstrate Fair Share rule – A, Proportional Distribution Based on Demands (Deployment – Heuristic) and subsequent TLB scenario



Fair Share Rule: A “Proportional Distribution Based on Demands”

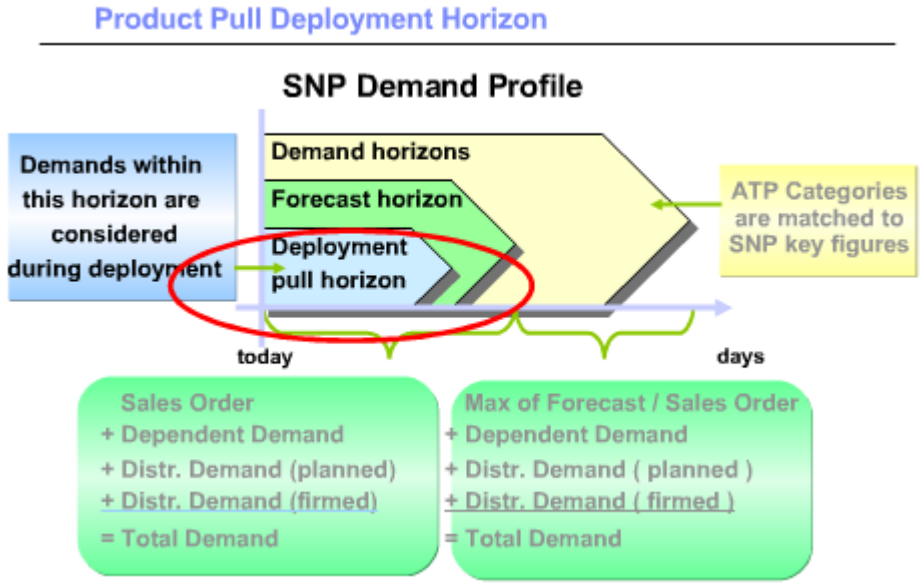
If you defined fair share rule A in the product master record, the quantities are deployed in proportion to the original demands in the distribution centers when the total distribution requirement exceeds the supply.



Deployment Master Data for Fair Share Rule A:

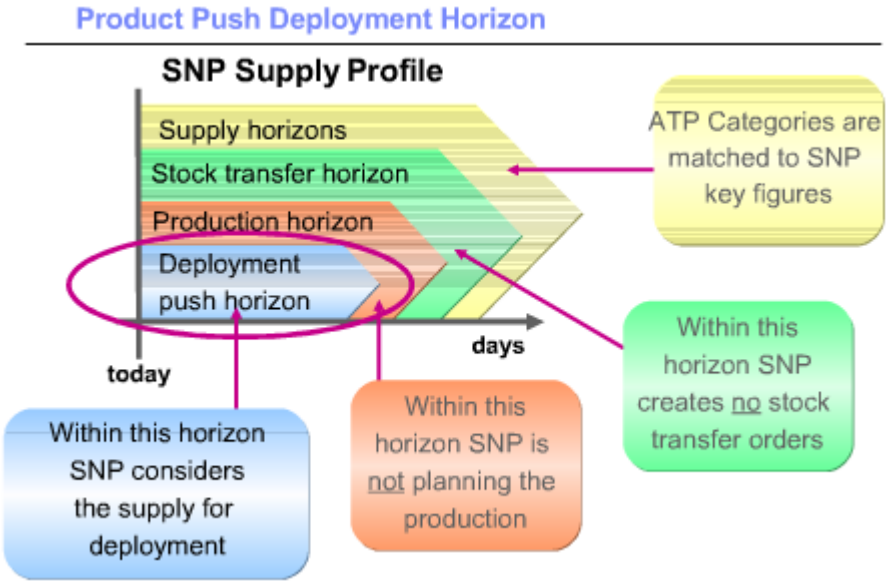
Pull Deployment Horizon:

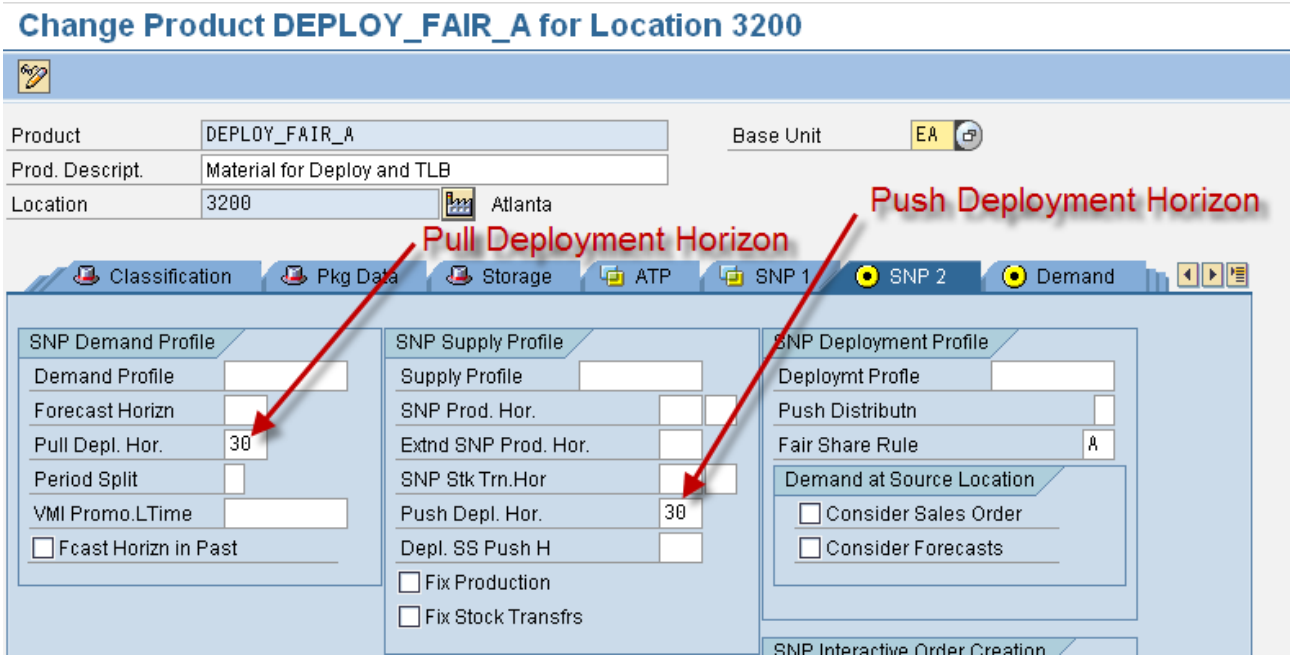
Period of time over which deployment considers the planned distribution demand. The horizon starts from today's date.



Product Push Deployment Horizon**:**

Period of time over which deployment considers receipts that were defined in the ATD Receipt category group of location master data. The horizon starts from today's date.





Transport Load Builder

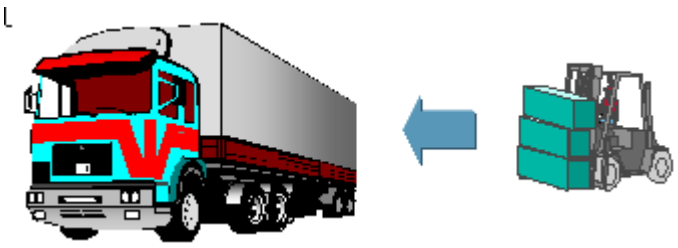
The primary purpose of the Transport Load Builder (TLB) is to use the results of the deployment run (single product transport recommendations) to create multi-product transport orders in a time period for a transportation zone.

It should be ensured that:

- The transportation methods are filled to maximum capacity
- No transportation method is dispatched that is not filled to minimum capacity
- For stock transport orders that could not be satisfied during the TLB run due to specified constraints, you can build transport orders manually

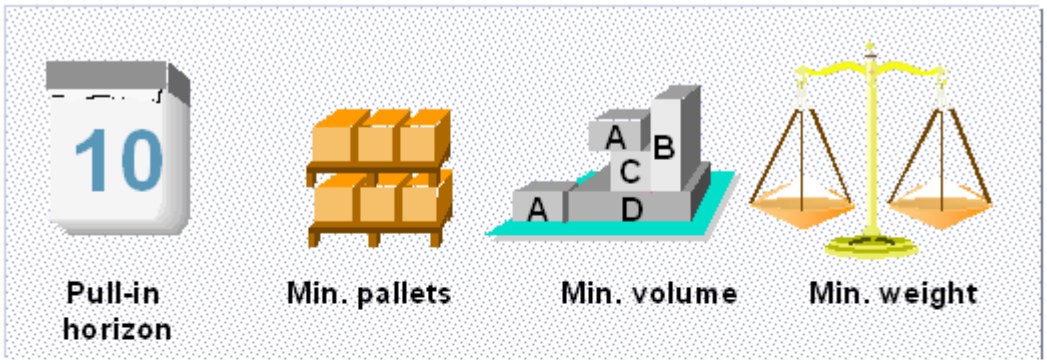
Factors considered in TLB run:

- Maximum range of coverage
- Minimum/Maximum load weight
- Maximum volume
- ATP check



TLB Master Data for Fair Share Rule B:

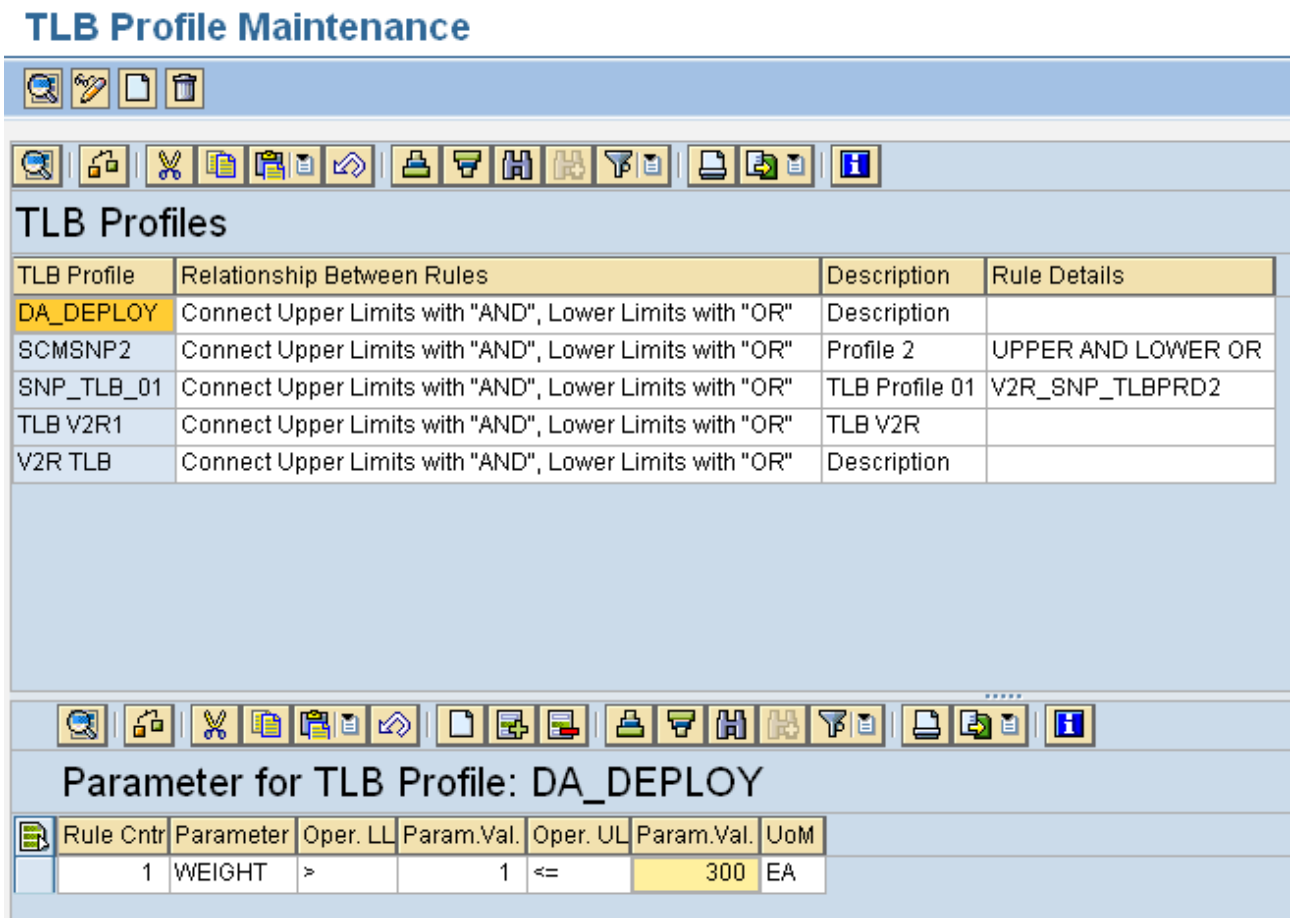
TLB Profile:



- SNP only plans the capacity of an entire transport fleet. The TLB looks first at individual transportation methods.

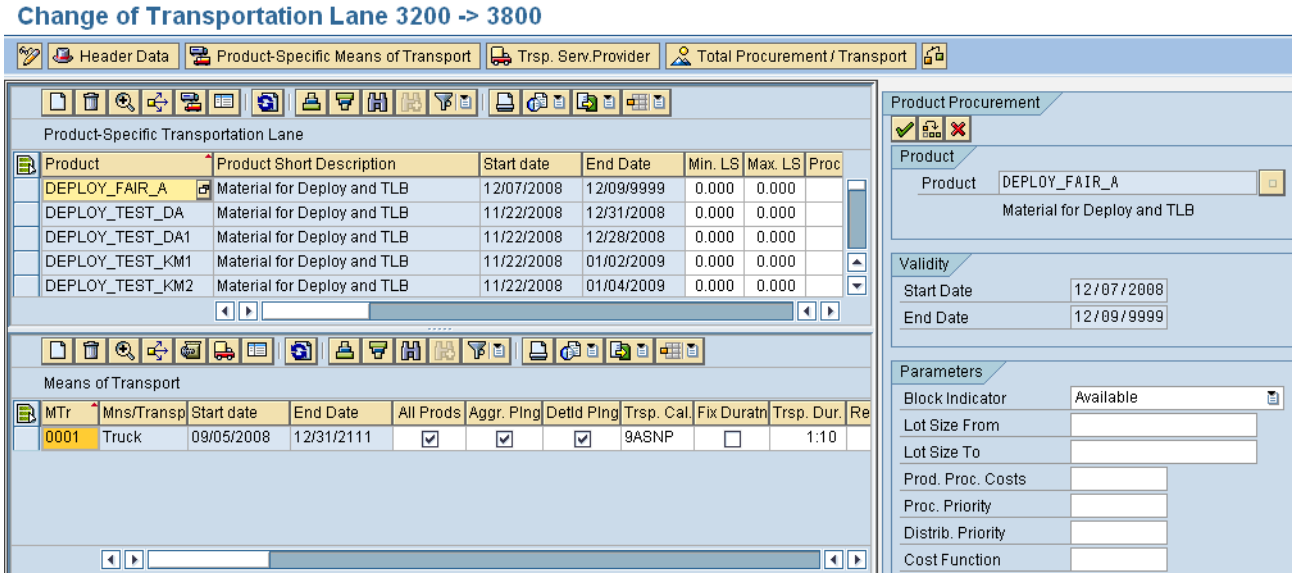
- The minimum values for capacity (cubic volume and weight) and pallets to build a load and the maximum amount of product per load are defined in the TLB profile. The system checks the planned transport orders against the minimum and maximum values.
- The system uses the parameters defined in the TLB profile to calculate the transport orders. The transport orders are always multiples of the rounding value defined in the lot size profile.

- The TLB uses the lane-dependent lot size profile to determine how to build transport loads based on the available transport orders.

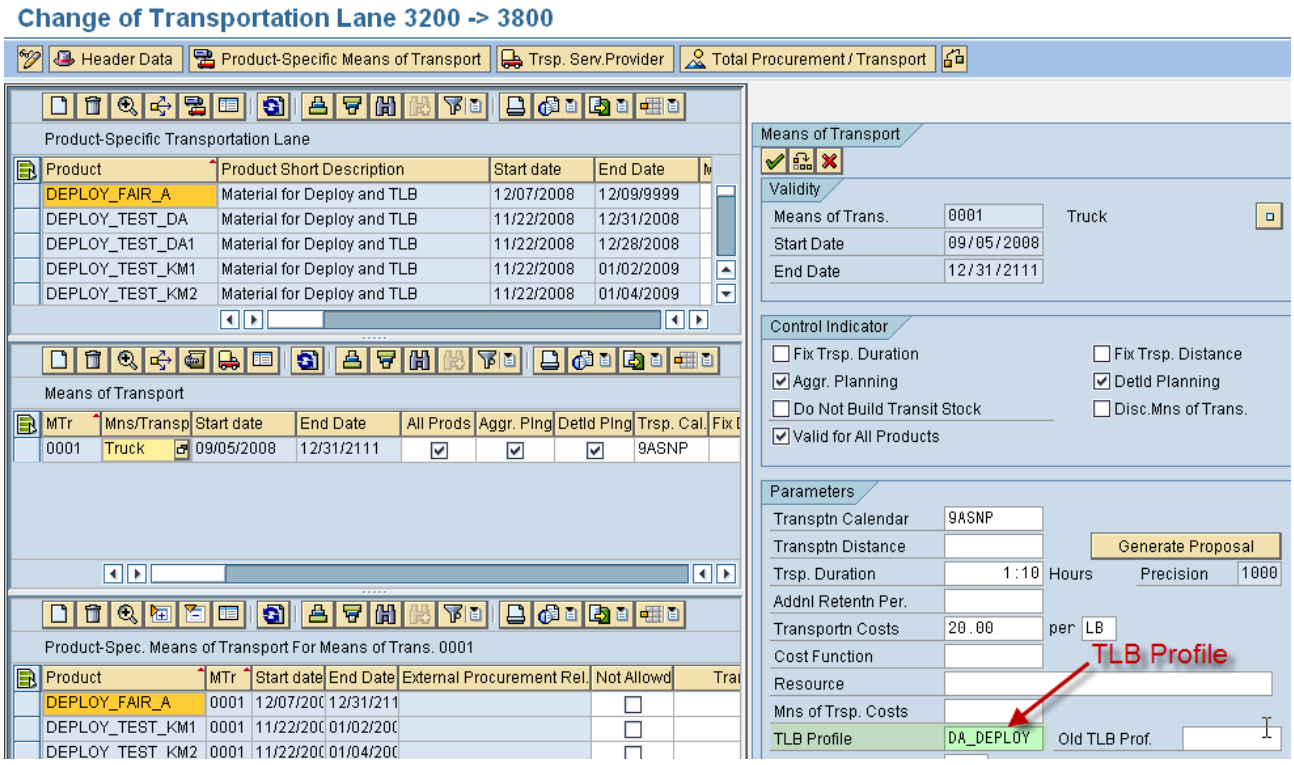


Transportation Lane:

2 Transportation lanes are created for Start Location 3200 (Plant) and Destination Location 3400 & 3800 (D.C.)



Means of Transport: 0001 maintained with TLB Profile



Scenario

Brief Description of the Deployment Scenario

Product is produced in 3200 manufacturing plant to meet the demand in its distribution centers 3400 and 3800. However, due to capacity constraints, there is insufficient supply to meet the demand. Deployment determines a fair share replenishment of the distribution centers to address the problem immediately.

Material Master Settings in SNP

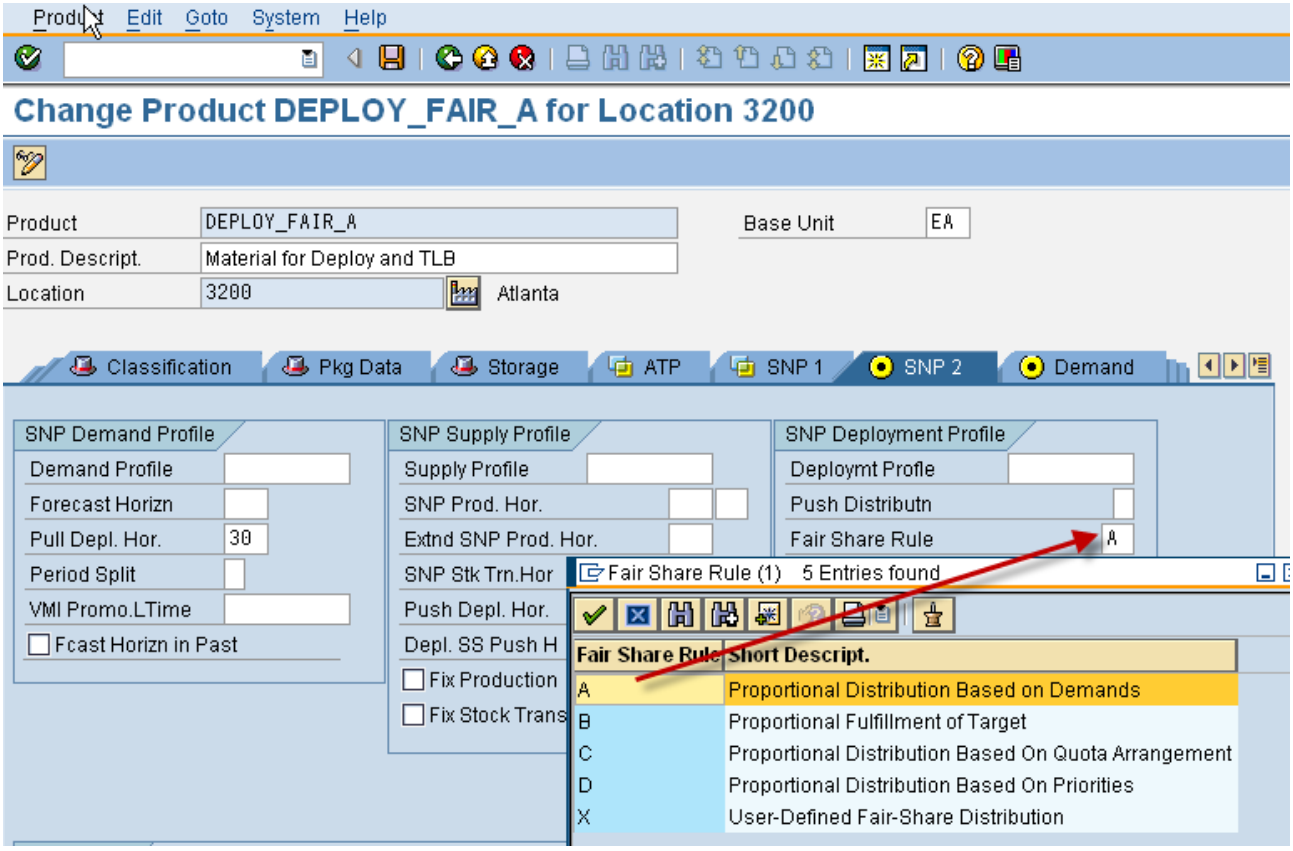
1. Maintain Fair Share Rule in Product View:

Transaction Code: /SAPAPO/MAT1

Fair Share Rule: A

Pull Deployment Horizon: 30

Push Deployment Horizon: 30



Deployment Scenarios

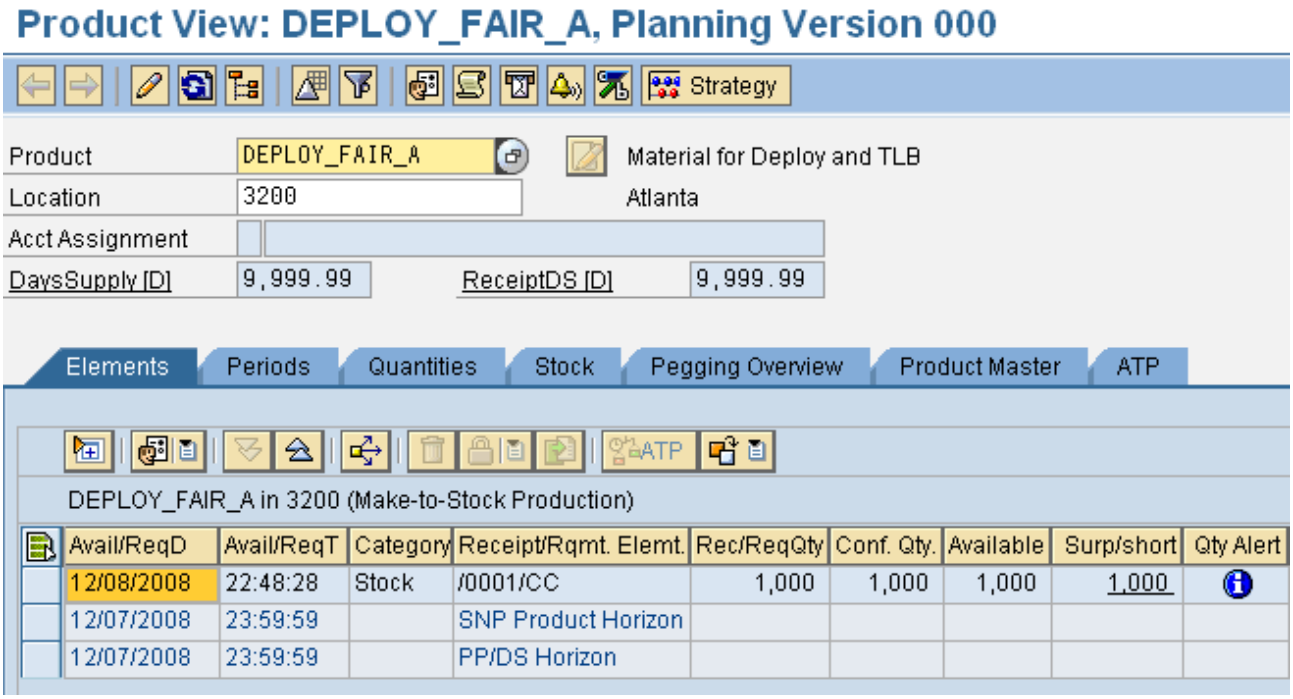
1. Product View for 3200

Transaction: Product View /SAPAPO/RRP3

Planning Version: 000

Product: DEPLOY_FAIR_A

Location: 3200



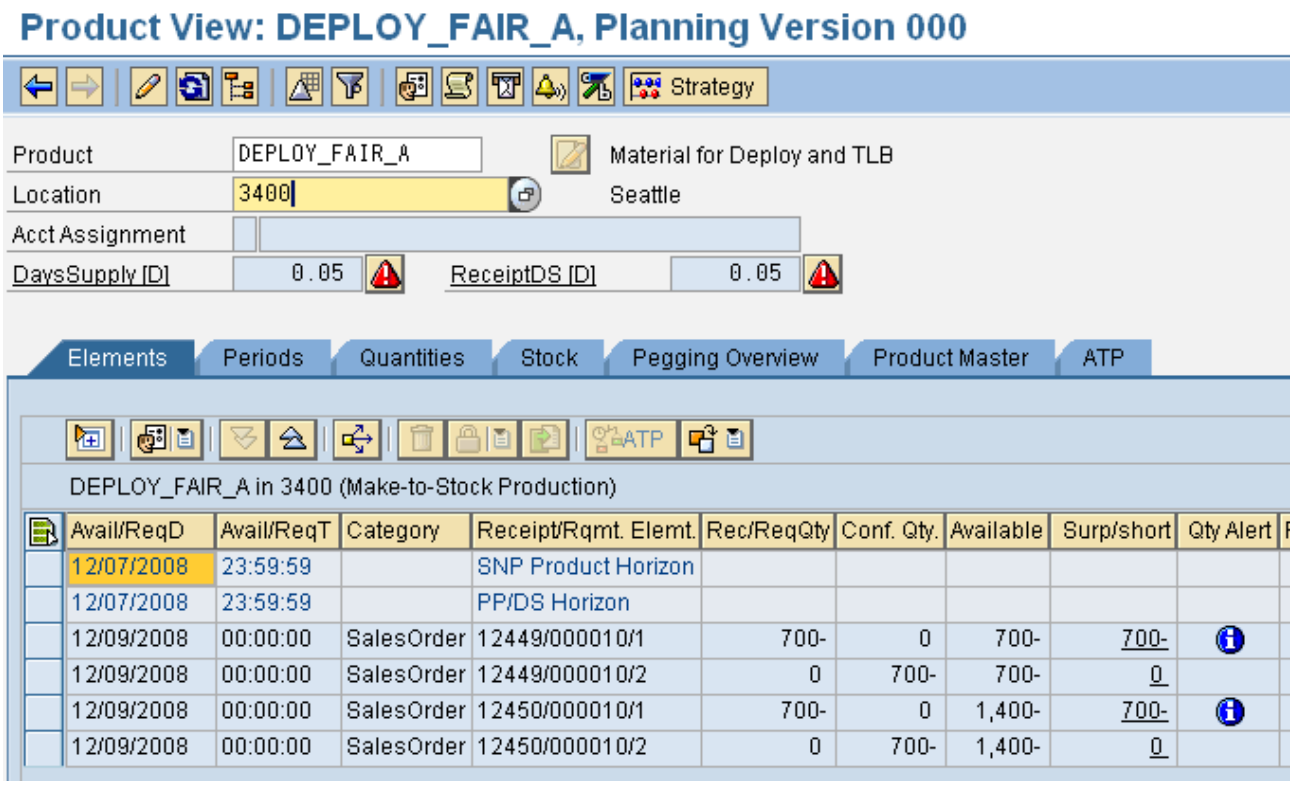
2. Product view for 3400

Transaction Product View: /SAPAPO/RRP3

Planning Version: 000

Product: DEPLOY_FAIR_A

Location: 3400



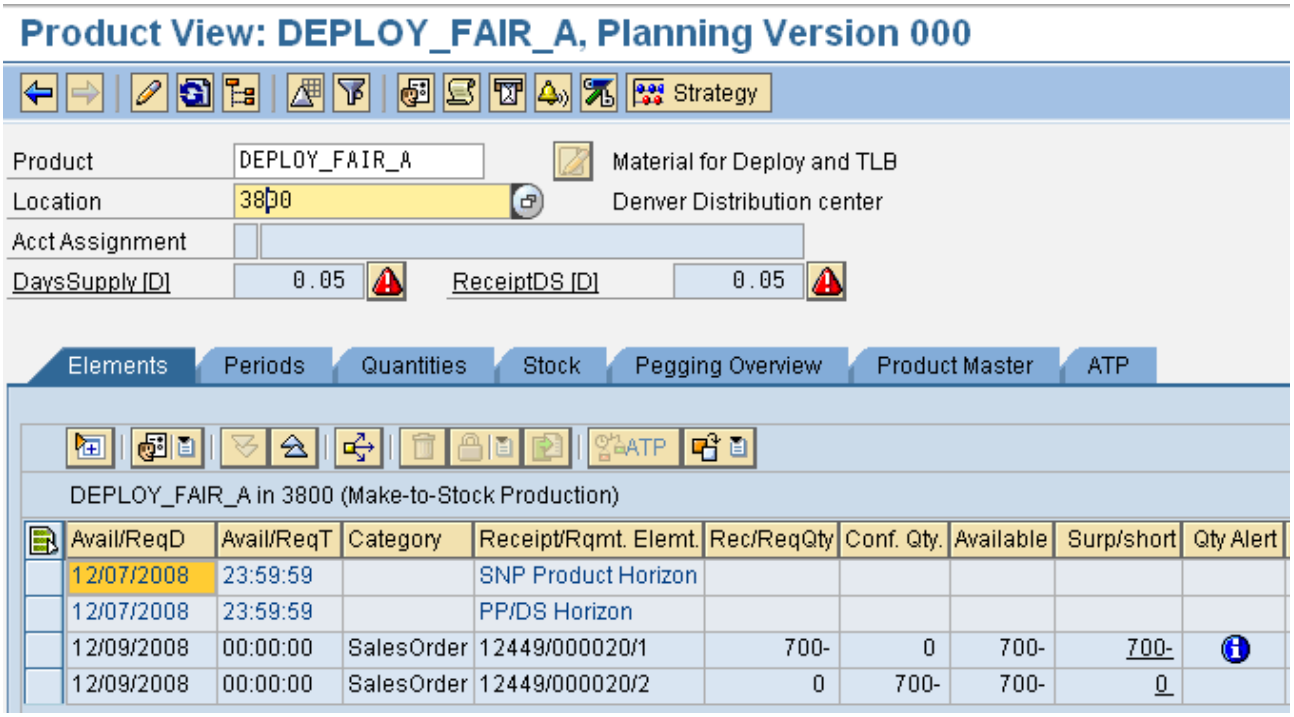
3. Product view for 3800

Transaction Product View: /SAPAPO/RRP3

Planning Version: 000

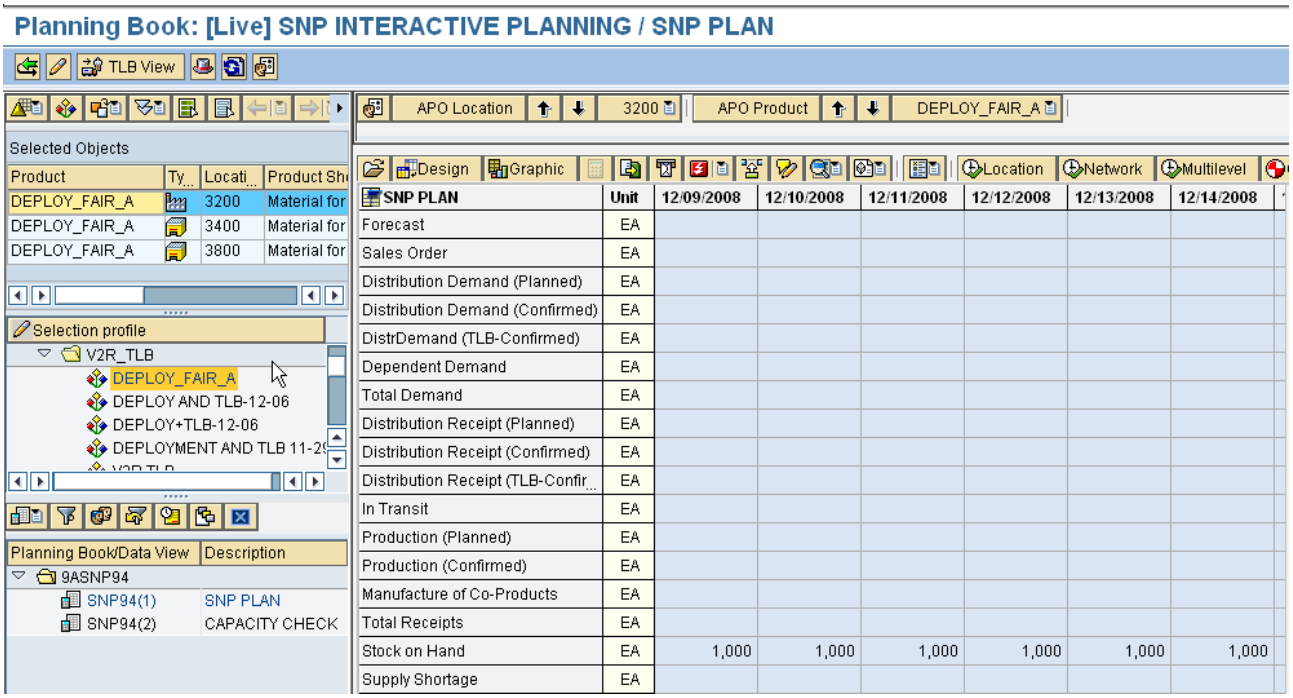
Product: DEPLOY_FAIR_A

Location: 3800



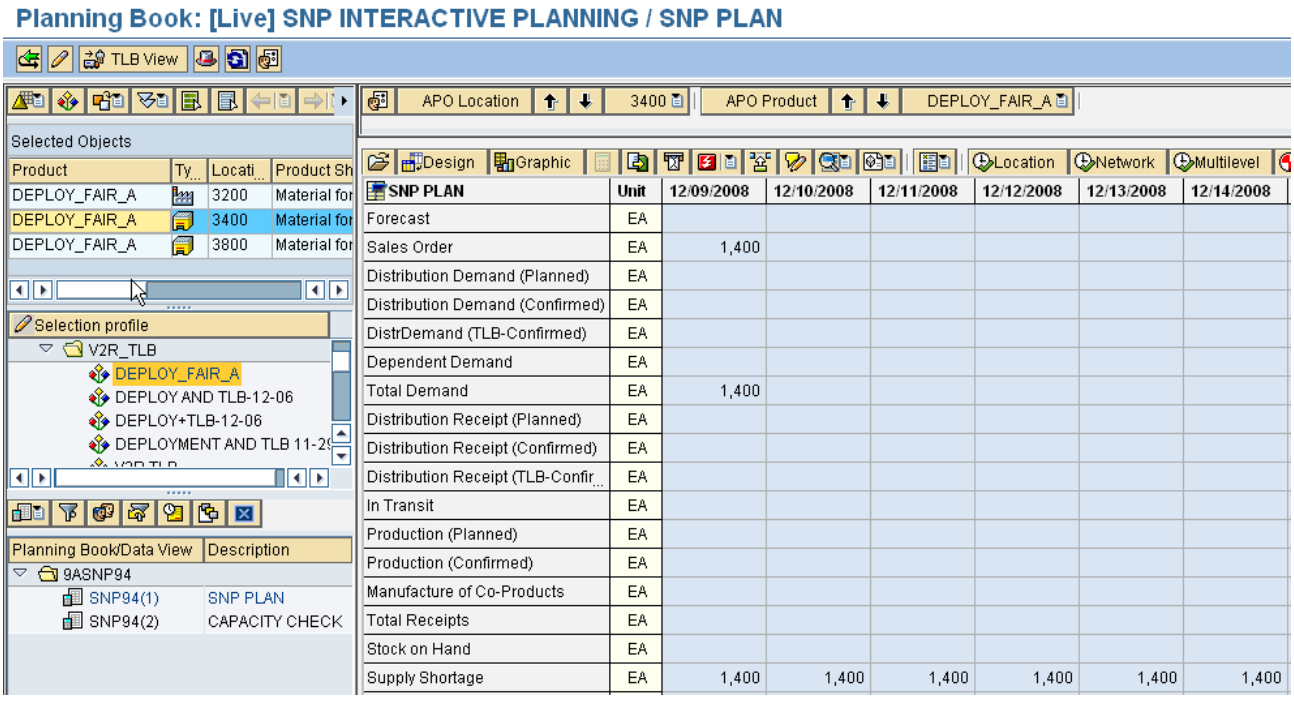
4. Planning Book for Material DEPLOY_FAIR_A at Manufacturing Plant 3200

Transaction Code: /SAPAPO/SNP94



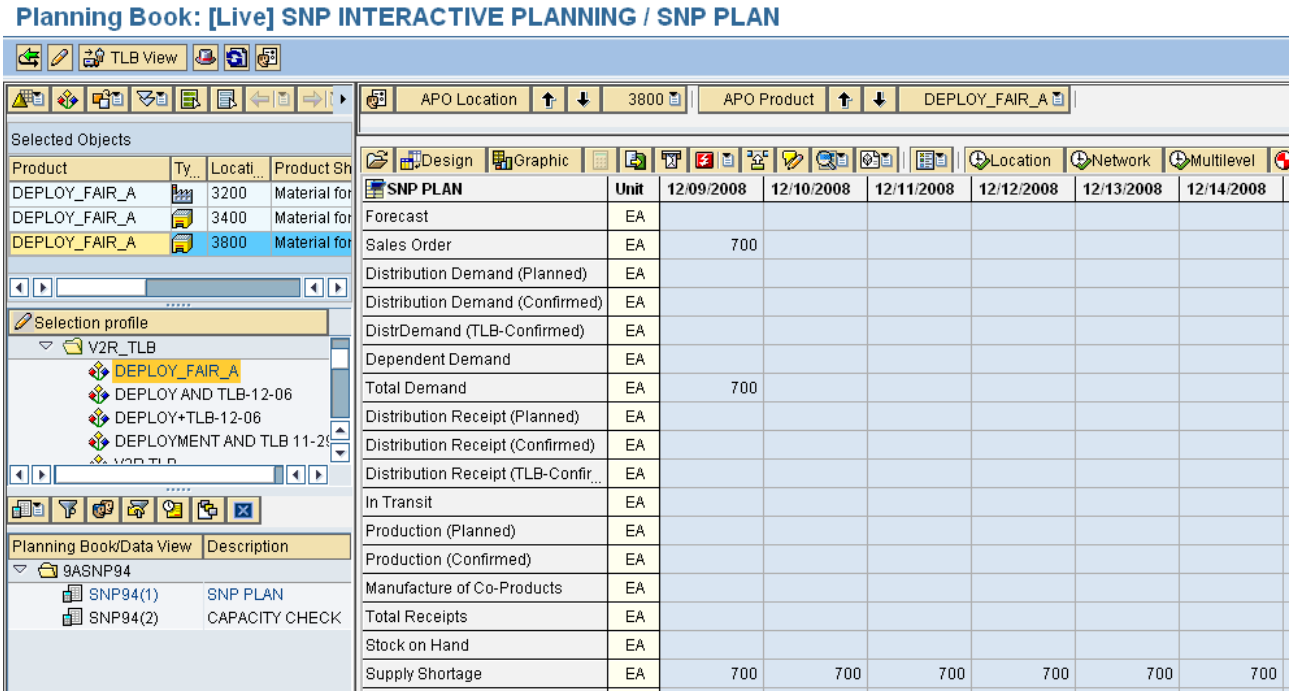
5. Planning Book for Material DEPLOY_FAIR_A at Manufacturing Plant 3400

Transaction Code: /SAPAPO/SNP94

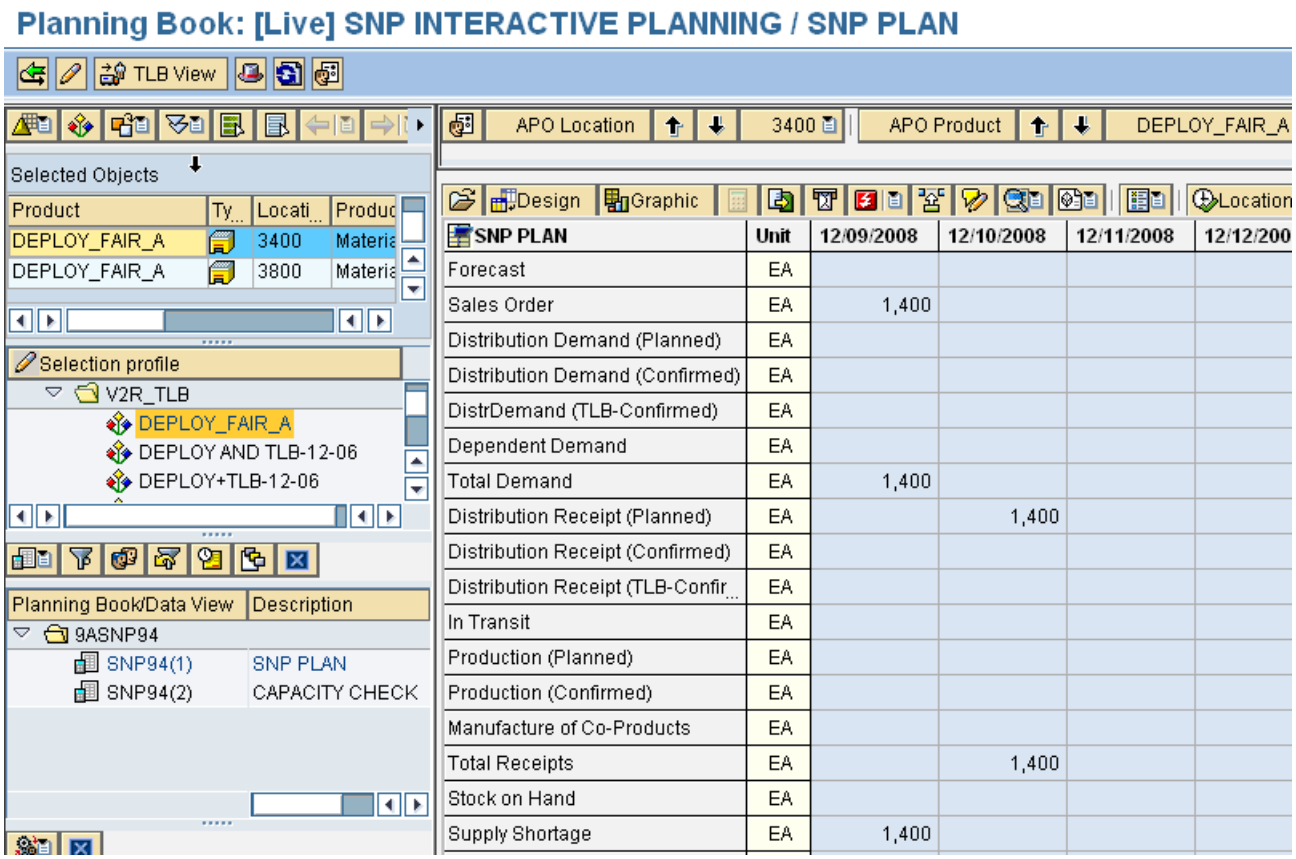


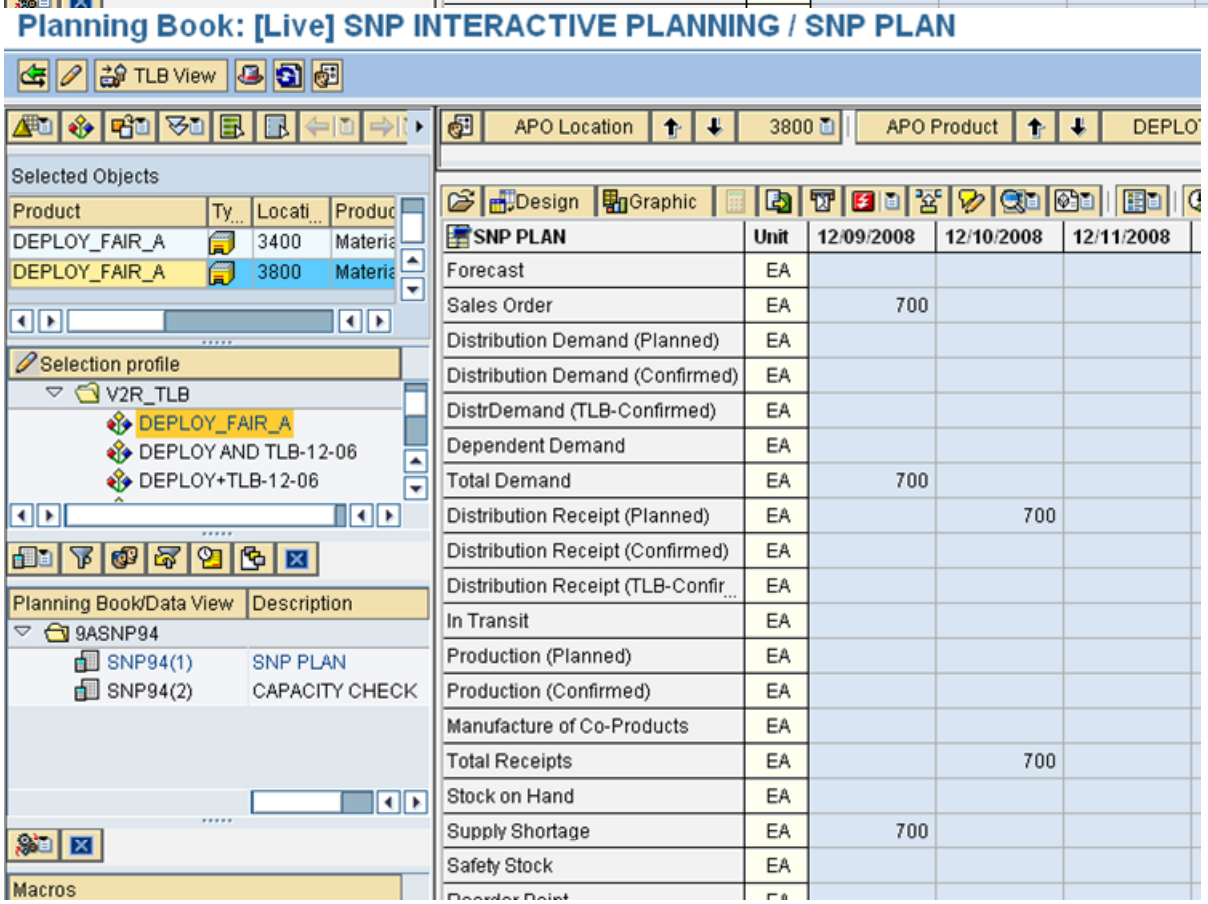
6. Planning Book for Material DEPLOY_FAIR_A at Manufacturing Plant 3800

Transaction Code: /SAPAPO/SNP94



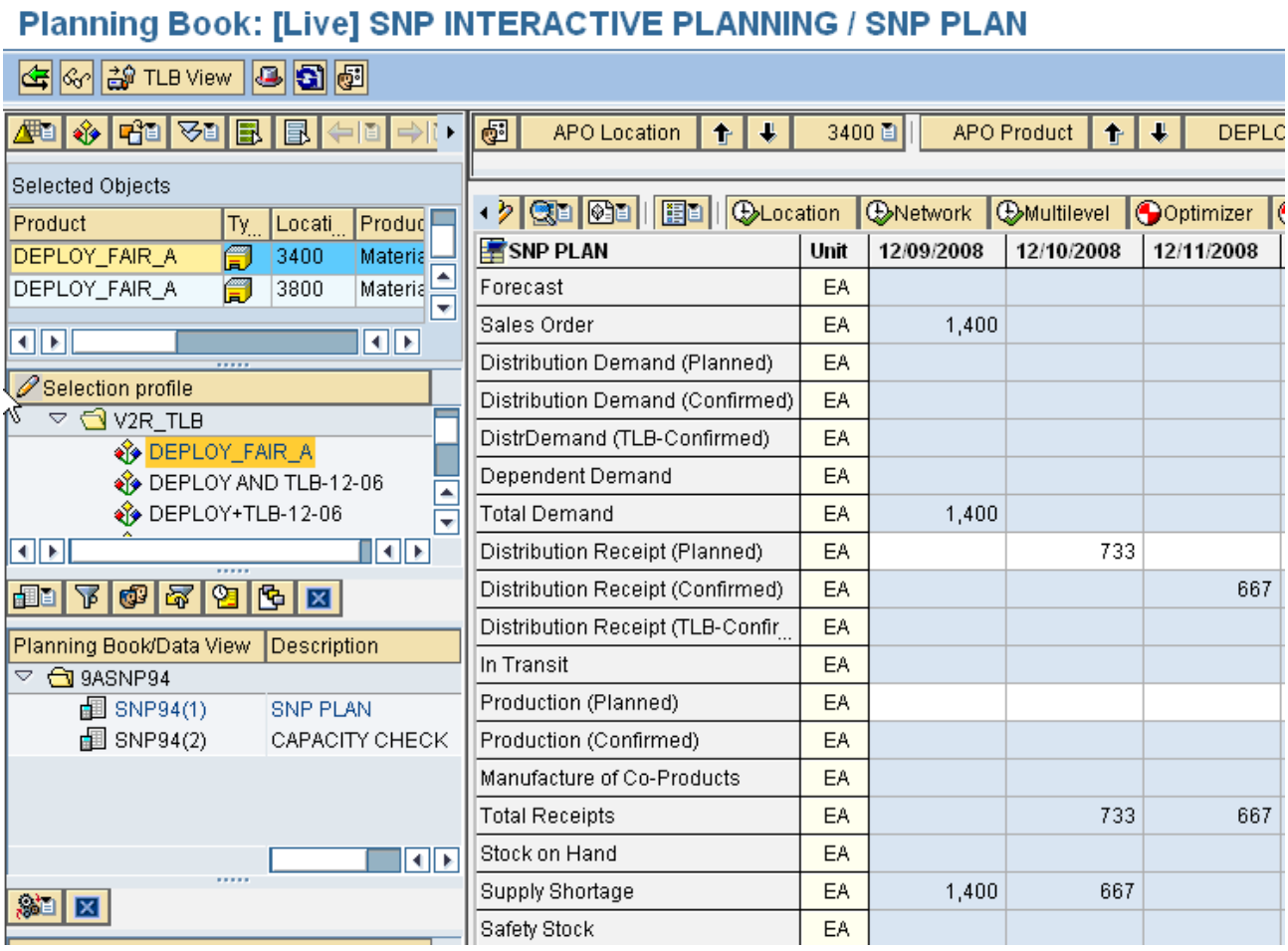
On running Location Heuristic at Distribution centers 3400 and 3800 the demand



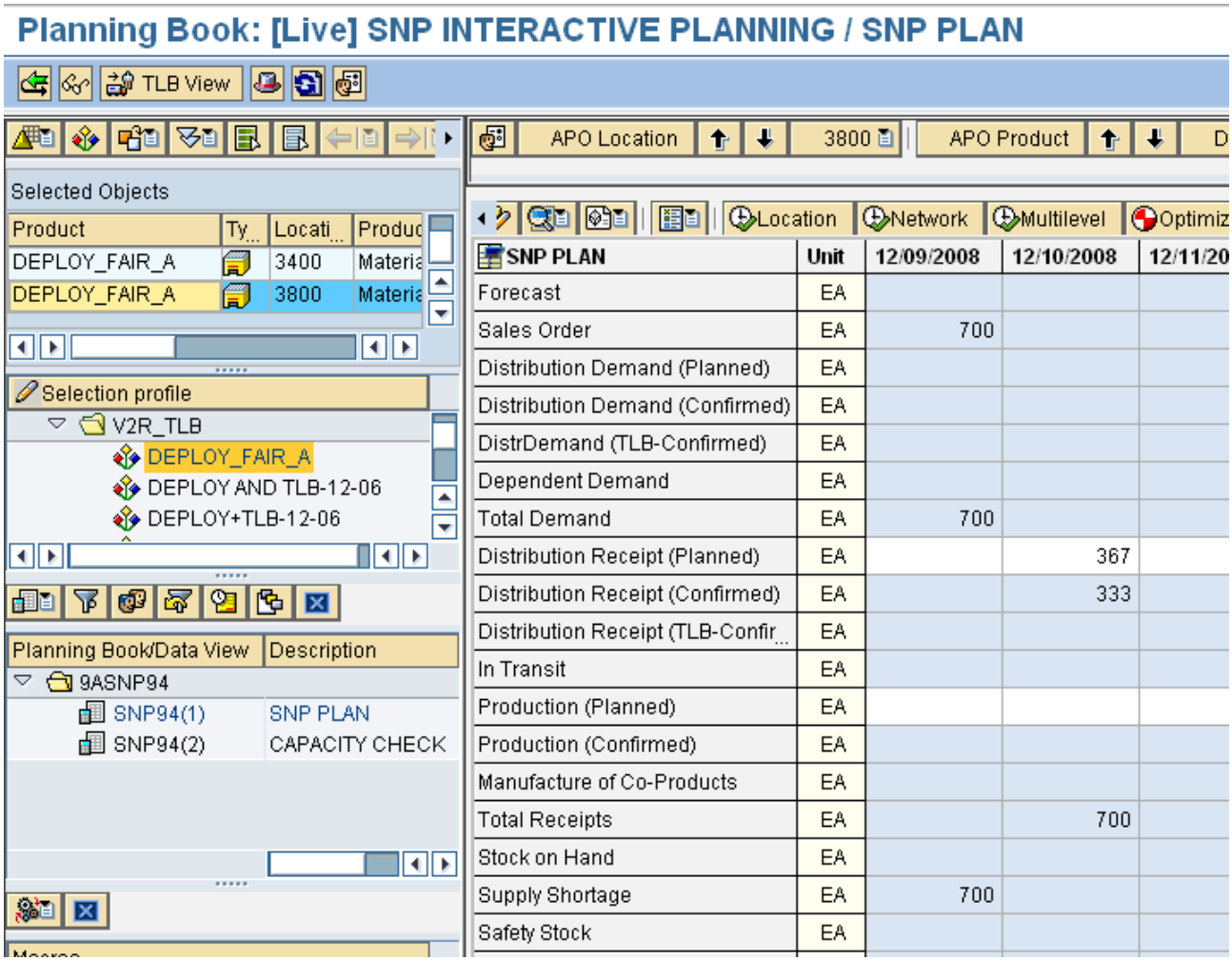


7. Run Deployment at manufacturing plant 3200- Based on the Fair Share Rule A, 667 units were deployed to DC 3400 and 333 units were deployed to DC 3800

8. Now, if you goto Product View for DC: 3400, you can see the confirmed Distribution Receipt of 667



9. Also, if you goto Product View for DC: 3800, you can see the confirmed Distribution Receipt of 333



Brief Description of the Transportation Load Builder (TLB) Scenario:

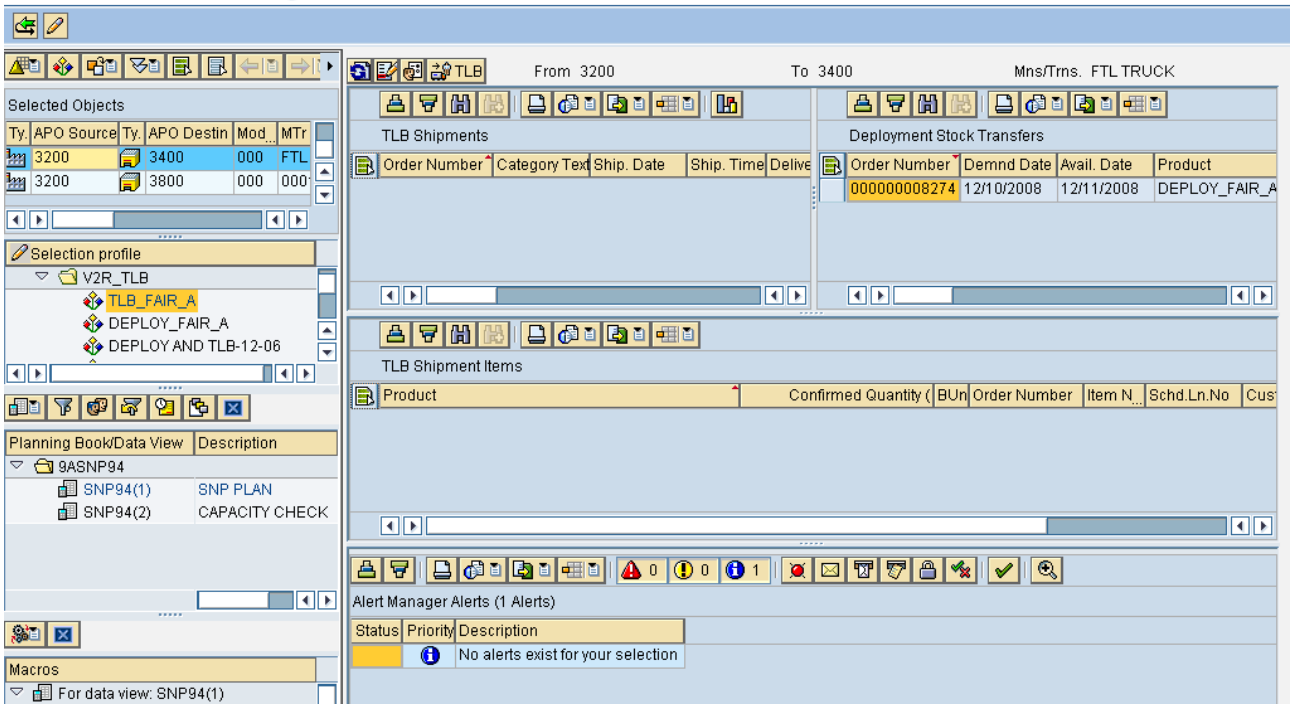
After the deployment run, the transportation planner needs to group the different orders going from manufacturing plants to distribution centers. The orders must be grouped to meet the minimum requirement by weight, volume and number of pallets to ensure that transportation vehicles are filled to maximum capacity.

TLB – Interactive Planning

- Deployment run results in recommended transport orders.
- Transport Load Builder then enables you to manipulate the recommended transport orders within the time period you specify to build a feasible, consolidated transport load.
- Interactive planning displays the relevant values such as cumulative volume, cumulative weight, and capacity consumed so that you can determine when a load is complete.
- TLB Interactive planning desktop is similar to the other interactive planning desktops in SNP.
- The profile selection, planning books/data view, and macros are on the far left side of the screen
- Work is displayed on the right side with three sub area
  - TLB-confirmed shipments appear on the left hand side of the work area.
  - Transport recommendations appear on the right side of the work area
  - Transport order items appear on the bottom half of the work area

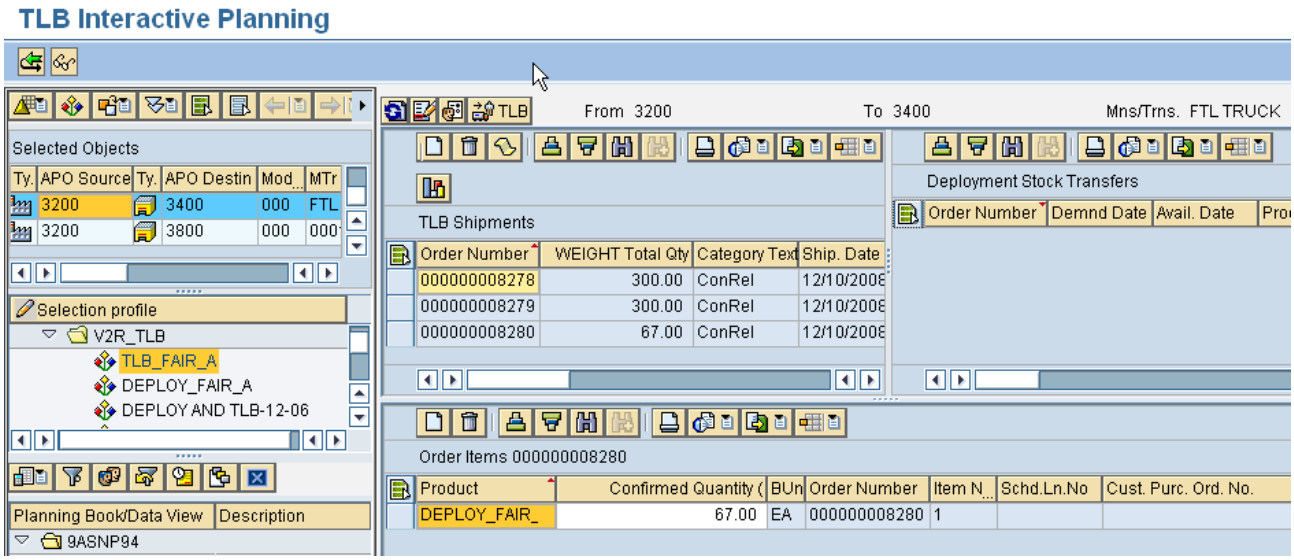
TLB Interactive Planning before TLB Run for Transportation lane with source location 3200 (Plant) and destination location 3800 (D.C.).

TLB Interactive Planning

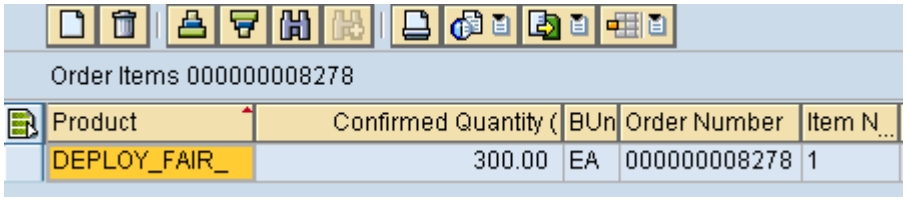


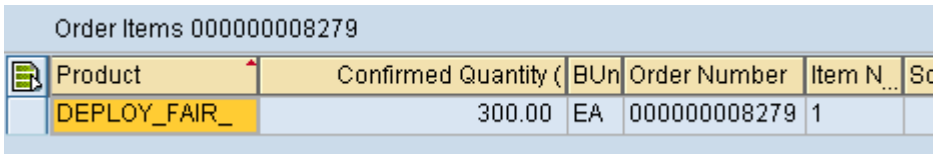
Click on Change icon (Ctrl+F2) and run TLB

After TLB Run you can see TLB order created under TLB Shipments:



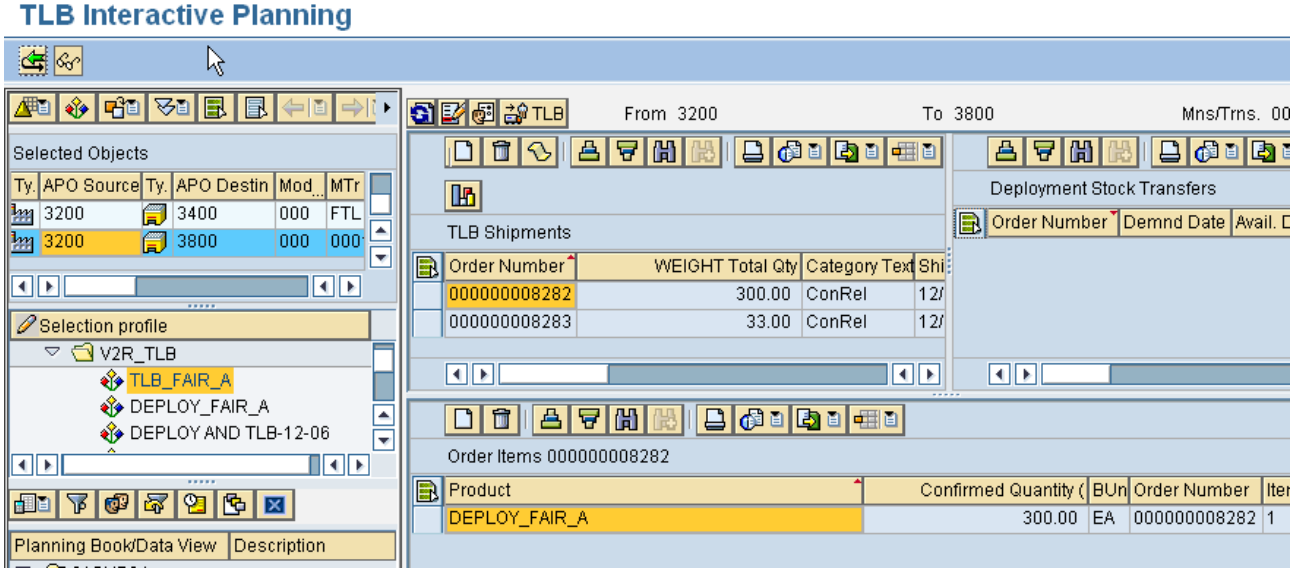
Double clicking the order will open the order item under TLB Shipment Items.



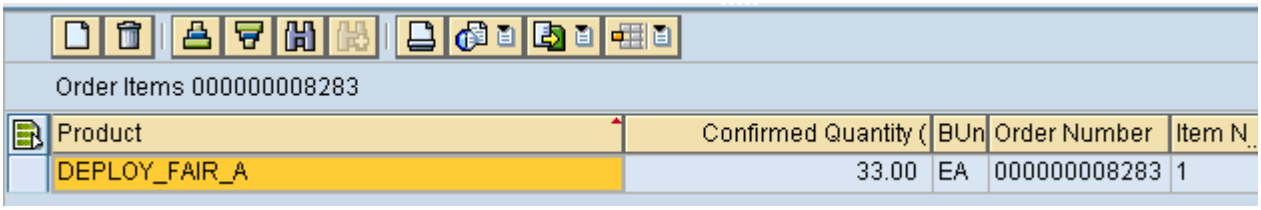


3 TLB Stock transfer order of 300, 300 & 67 EA Quantity created.

Similarly run TLB for APO Destination 3400 (D.C.)



2 TLB Stock transfer order of 300 & 33 EA quantities created.


Order Items 000000008283

Product	Confirmed Quantity (	BUn	Order Number	Item N
DEPLOY_FAIR_A	33.00	EA	000000008283	1

You can confirm the TLB run by going back to SNP Interactive planning and refresh the screen.

Related Content

For more details please see-

- SNP Deployment and Transportation Load Builder Scenario-1 Fair Share Rule "C" by Quota Arrangement
- Supply Network Planning (SNP): Deployment and Transportation Load Builder Scenario 2 - Push Rule by Quota
- SAP Help: www.help.sap.com
- Deployment Help (SCM 5.0): http://help.sap.com/saphelp_scm50/helpdata/en/1c/4d7a375f0dbc7fe10000009b38f8cf/frameset.htm
- TLB Help (SCM 5.0): http://help.sap.com/saphelp_scm50/helpdata/en/1c/4d7a375f0dbc7fe10000009b38f8cf/frameset.htm
- For more information, visit the Supply Chain Management homepage: https://www.sdn.sap.com/irj/sdn/bpx-scm

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