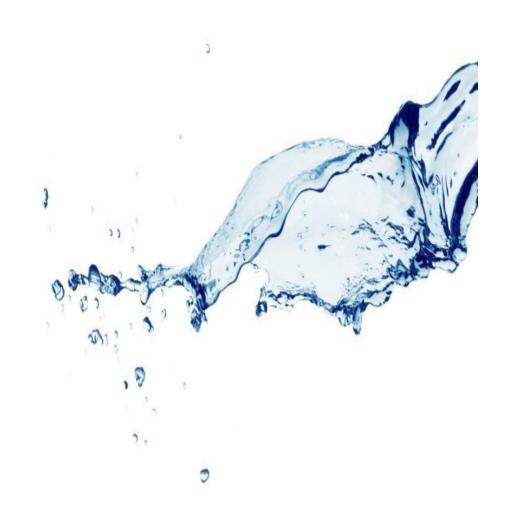
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Interplant Costing using Oracle Sourcing Rules with Oracle Supply Chain Cost Rollup in Oracle R12

OAUG Cost Management SIG February 17, 2015



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Presenters



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Summary of Experience

Cisco is a Specialist Master in the Dallas office of Deloitte Consulting.. He is a seasoned systems integrator and advisor for Oracle EBS engagements, with a particular interest in Oracle Discrete Manufacturing and Cost Management. He has sixteen years of consulting experiences. His project experience includes leading successful delivery for full life cycle Oracle EBS implementations and manufacturing transformations projects leveraging technology as a key enabler. He has designed product cost solutions using Oracle Discrete Costing.



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Summary of Experience

Atul is a Senior Consultant with more than 7 years of experience in supply chain management function. He has worked on large scale implementations of Oracle supply chain modules for clients across manufacturing industry vertical. He brings in expertise in Process Analysis, Process Redesign, Gap-Analysis and Data Migration strategy. He also has extensive experience in various oracle application implementation methodologies and project management. He has worked across various geographies and in multi-cultural environment showing strong teamwork and leadership skills.

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- ERP Applications
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 North America
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 America
- Applications Partner of the Year —
 Latin America

2013

- Industry Partner of the Year — Global
- Oracle Excellence awards for:
 - Manufacturing & Distribution
 - Security & Identity

2012

- Applications Partner of the Year — Global
- Oracle North
 American Excellence awards for:
 - Cloud Computing
 - Consumer & Retail Industry
 - Manufacturing & Distribution
 - Oil & Gas Industry
 - Supply Chain Management
 - Global Systems Integrator (SI)
 Applications
 Momentum

2011

- Middleware Partner of the Year — Global
- Oracle North American
 Titan awards for:
 - Cloud Computing
 - Communications, Media & Entertainment Industry
 - Consumer & Retail Industry
 - Financial/EnterprisePerformanceManagement
 - Global Systems
 Integrator (SI)
 Applications
 Momentum
 - Oracle WebCenter

2010

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- Oracle North
 American Titan
 Awards for:
- Global SI Apps
 Momentum
- Consumer Industry Solution
- Manufacturing and Distribution Solution
- Oracle Red Stack
 Solution

Executive Summary

Responsibilities exist for cost accounts to maintain interplant item costs – finished good costs recognized between plants. The current cost rollup process impacts 25 manufacturing plants and distribution centers and touches up to 425K items during the cost rollup process. This scope will increase with the Oracle EBS 12.1.3 global implementation.

This presentation discusses the features used to leverage out of the box functionality for the R12 Supply Chain Cost Rollup (SCCR). The implemented solution meets the client needs by providing:

- An effective global costing solution that provides timely and accurate product costs
- Flexibility to maintain one-off cost changes based on materiality and correction of errors
- Flexibility to perform a cost rollup and/or a cost update of an individual new item (item with zero frozen/standard cost) without waiting for the next systematic scheduled cost rollup/cost update
- Integration of consistent cost data across the enterprise
- Minimizing the use of custom programs

Project Background

Client Snapshot

- A global leader in the manufacturing of filtration systems
- Industry: Diversified Machinery
- Revenue: \$2.4 billion
- Employees: 12,500
- Products: Industrial Products and Engine Products

Project Overview

- Initial Start: October 2012
- Initiative: implement Oracle EBS R12.1.3 as the global solution across all regions
- Objectives: Providing a common systems platform to support growth
- Streamlining and standardizing transactional business processes
- Providing information visibility across geographies and businesses
- Enabling new business capabilities and corresponding productivity gains

Project Scope

- Discrete Manufacturing
- Product Information Management
- Order Management and Shipping
- Finance
- Advanced Supply Chain Planning,
- Quality
- Procurement

Problem Definition

Our client relies upon accurate product cost information as the basis for many of its pricing estimates used during the quoting and selling cycle of its products. From a completed business case, several opportunities were identified for the PTM processes.

One opportunity was to improve access and visibility to cost information to equip management with the ability to make more informed pricing decisions and identify focused cost reduction opportunities.

Improvement opportunities

Develop consistent method for capturing cost

Reduce the manual effort and reliance on custom tools to perform costing and cost analysis activities

Establish standards for bill of materials (BOM) structure, routing structure, and work center definition

High-level Solution

In today's organization where global sourcing is used extensively to drive cost for an item, the Oracle SCCR solution provides for an effective way to maintain standard cost across multiple locations and manufacturing sites and internal buying organizations.

The Supply Chain BOM provides an enhancement over traditional assembly cost rollup by pulling costs from source organizations. The SCCR provides the methods for an organization to simulate cost of an item in a destination organization when it is sourced out of different make/buy organizations.

Integrated supply chain cost:

- Costing
- Sourcing rules
- Master data organization

should be integrated

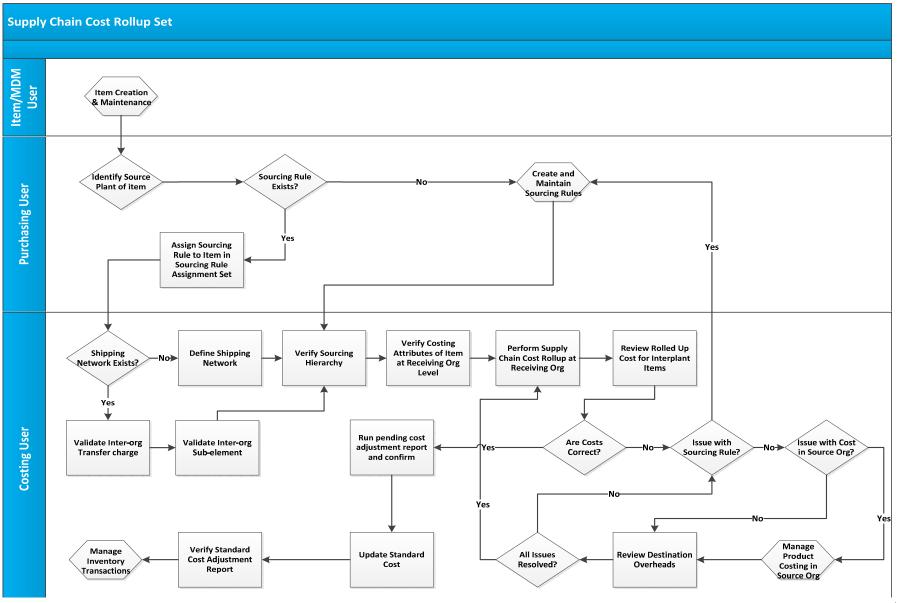
- Source of each item should be item identified either through sourcing rule or through BOM
- Item should be accurately identified as a make or a buy item in each integrated organization
- Additional mark-up should be identified either through an interplant mark-up at each organization level or through transfer pricing rules (This is an optional requirement)

Interplant Costing-Key Features

Key features of Oracle interplant costing solution are as follows

Business Need	Key Features	Value Proposition
Global Sourcing	Create multiple sources for an item to simulate final cost	Find the best source of components for the final assembly
Cross Currency sourcing	 Final cost can be obtained even from plants maintaining component cost in different ledger currency 	Aids global sourcing and responds to currency fluctuation
Overhead Absorption	 Overheads can be absorbed at each node of the supply chain, thus being a true representation of final cost 	Absorb analysis of overheads
Cost Visibility	Supply Chain cost rollup report provides visibility of cost added at each level at element level	Aids business Intelligence and cost analysis
	 You can save the details of the buy item costs by selecting Yes in the Preserve Buy Cost Details parameter 	
Blended Cost	 Use of percentage based allocation can provide for blended cost based on multiple sources 	Analysis of single source of item vs. multiple source

High-level Solution



Solution details

Supply Chain Cost Rollup

SCCR process can be used to roll up costs across multiple orgs connected to sourcing rules:

- Supports MFG where component items are manufactured in different orgs
- Rollup process uses Bill of Distribution and Sourcing rules defined in MRP
- Bill of Material is the representation of components that are used for an assembly or a subassembly
- Supply Chain Bill of Material combines the existing concept of the BOM as well as including the Supply Chain sourcing rules that exist
- Supply Chain Cost Rollup can be performed for items specifically belonging to one organization or for all organizations included in the Supply Chain
- Can setup mark ups for inter-org transfer costs, and transportation costs in the shipping networks

Supply Chain Costing – Key Concepts

Sourcing Rule

- A use of sourcing rule allows for rollup of cost when components of an assembly are sourced out of different organizations
- The concept further allows for partial sourcing of components from multiple organizations
- Each component can have its own different BOM in different organizations and it can be included in the rollup

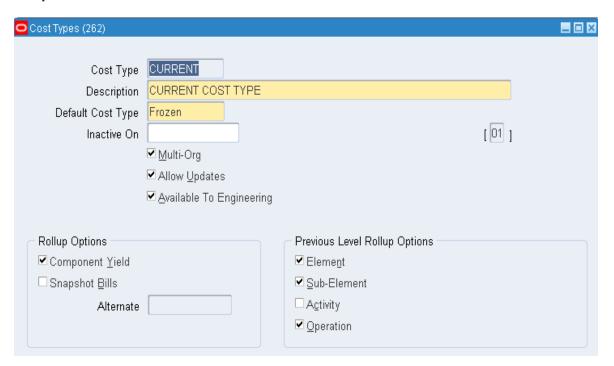
Bills of Distribution

- BOM's are a representation of all components that go into manufacturing of an assembly. This does not include sourcing information for each component
- BOM's used for SCCR combines the concept for SCCR and sourcing rule to create a Bills of Distribution

Prerequisites for Performing Supply Chain Costing

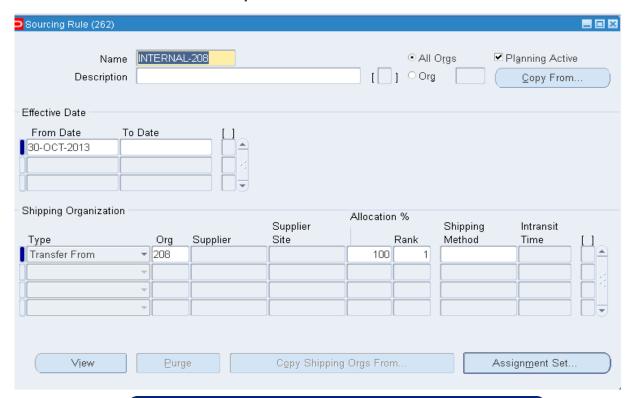
Below is a listing of the steps followed to utilize the SCCR:

1. Cost type should be available multiple organizations and it should allow for cost updates.



Prerequisites (cont'd)

2. A set of sourcing rules or bills of distribution need to be defined, which can be used for the cost rollup.

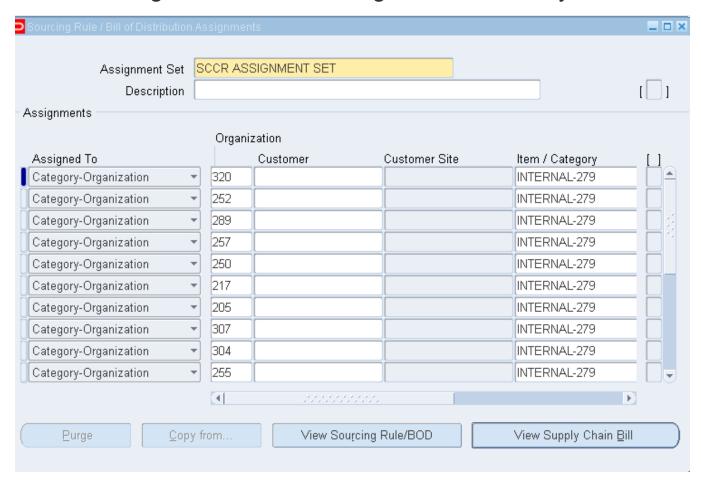


Transfer from 208 org to 262 org:

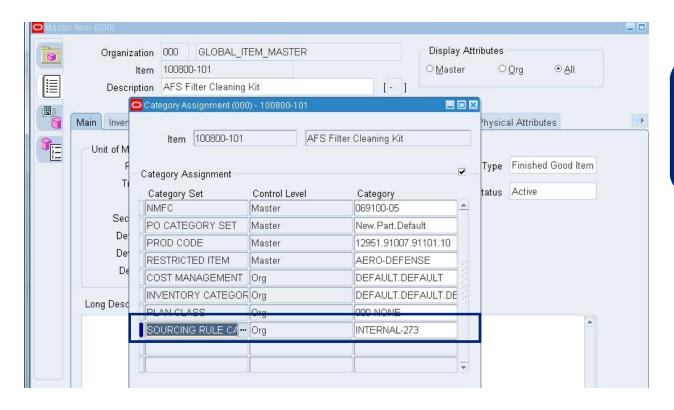
- Receiving Org = 262 (Distribution Org)
- Shipping Org = 208 (Manufacturing Org)
 - Transfer from 208 at 100%

Prerequisites (cont'd)

3. An assignment set is defined that associates items/item category to a sourcing rule. This assignment is used during SCCR to identify source for an item.



Item Category Assignment - MDM



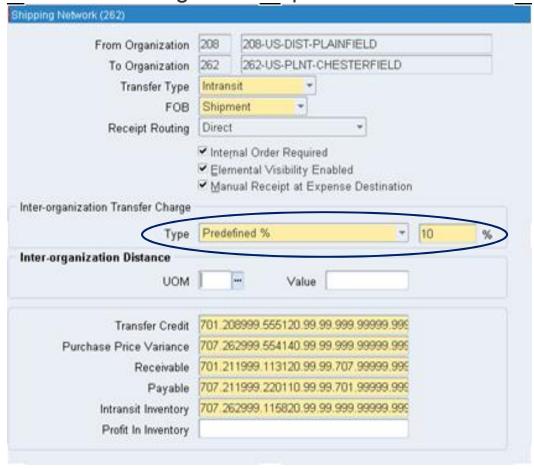
In order to create the sourcing rule assignment, there are two suggested ways:

- Assign Sourcing rule to Item/Org
- Assign Sourcing Rule to Item Category

For our client, we suggested use of item category which defines primary internal source of that Item. Our sourcing rule was created with 100% allocation and assigned to Item category. This simplified the design for the Bill of distribution.

Prerequisites (cont'd)

4. Create Shipping Networks: Note that the mark-up cost related to interorganization transfer charge is included in the SCCR. This mark-up is retrieved from the inter-organization parameters.



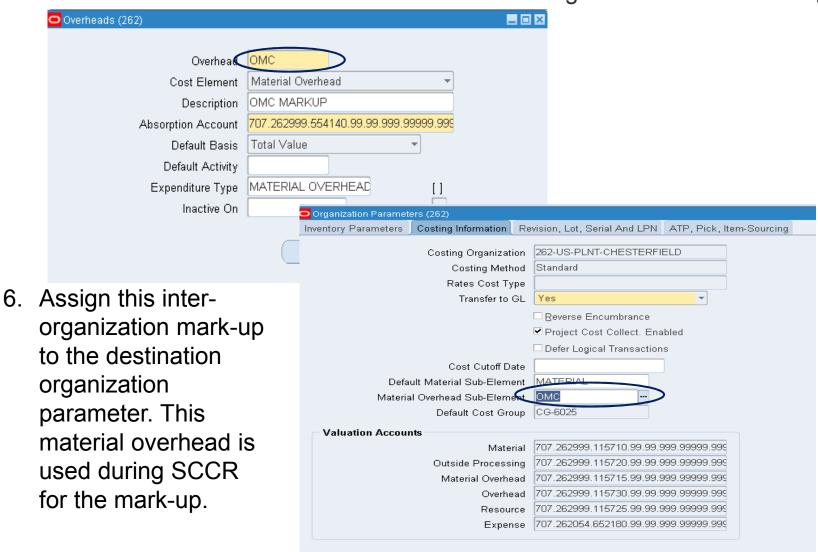
Setup inter-org transfer charge

Impacts SCCR

In this scenario will increase cost in receiving org by 10%

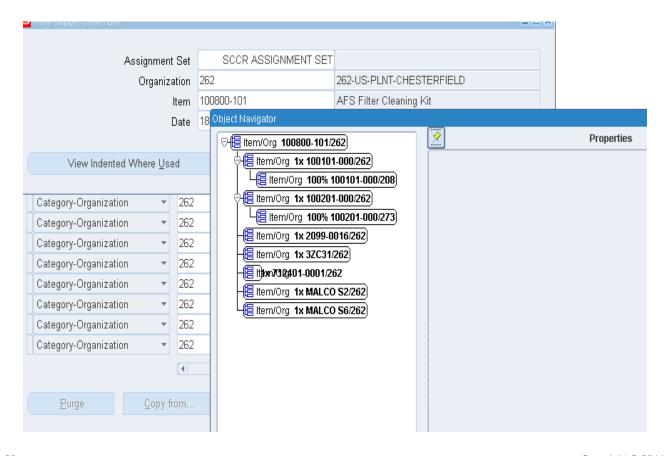
Prerequisites (cont'd)

5. Create Material Overhead Subelement for inter-organization transfer charge.



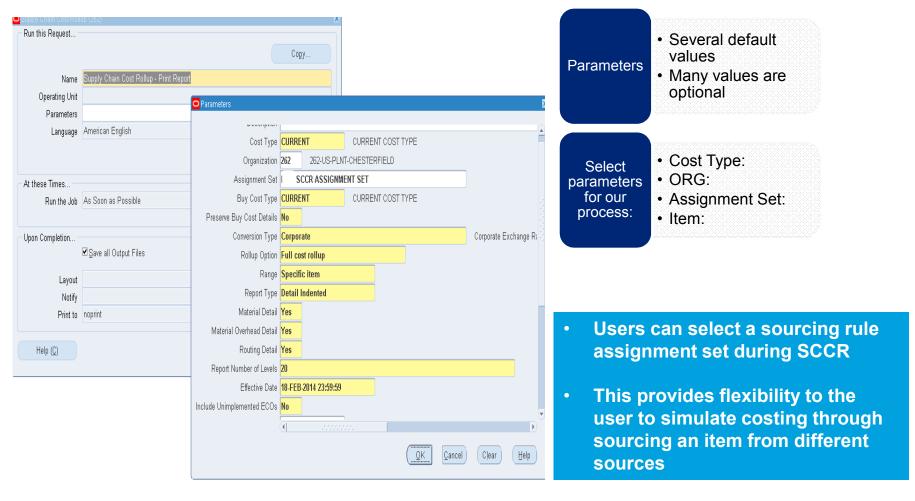
Supply Chain Bill

As reflected earlier, the SCCR uses the concept of supply chain bill to rollup cost. It combines the concept of sourcing rule and BOM to define the sourced cost for an item. In the indented bill, you can see the source of each item in the BOM. This is reflected below in the Supply Chain Bill form.



Executing the SCCR

While running the SCCR, make sure to select the desired Sourcing Assignment set to be used for SCCR. The parameters to submit the SCCR are reflected below.



Supply Chain BOM Report Output

Rollup ID: 244035

Supply Chain Bills of Material Indented Cost Report

```
Description:
                               Cost Type: CURRENT
                            Buy Cost Type: CURRENT
                 Preserve Buy Cost Details: No
                             Organization: 262 262-US-PLNT-CHESTERFIELD
                           Assignment Set:
                                              SCCR ASSIGNMENT SET
                          Conversion Type: Corporate
                              Report Type: Detail Indented
                          Material Detail: Yes
                 Material Overhead Detail: Yes
                           Routing Detail: Yes
                            Report Level: 21
                            Rollup Option: Full cost rollup
                                   Range: Specific item
                           Effective Date: 2014/02/18 23:59:59
                Include Unimplemented ECOs: No
                            Alternate BOM:
                        Alternate Routing:
                         Engineering Bill: No
                          Lot Size Option: Use Existing Lot Size
                         Lot Size Setting:
                                    Item: 100800-101
                               Item From:
                                 Item To:
                             Category Set: COST MANAGEMENT
                                 Category:
      Rollup ID: 244035
                                                                                                                                   Report Date: 18-FEB-2014 23:51:55
                                                      Supply Chain Bills of Material Indented Cost Report
                                                                                                                                        Page: 2
     Cost Type: CURRENT
 Buy Cost Type: CURRENT
                                                                                                                                Revision Date: 2014/02/18 23:59:59
Assignment Set: SOCR ASSIGNMENT SET
                                                                                                                                Alternate BOM:
Conversion Type: Corporate
                                                                                                                            Alternate Routing:
```

Supply Chain BOM Report Output (cont'd)

2		100201-000	AFS AIR FILT	e 273 000	Yes Yes No	Item	EA	1.00	0.00	1.00	192.81050	USD
	10	Resource	LAB05ASSY	273105MFG	Yes	Item	HR	2.00	1.00	2.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG		Res units	USD	20.43	2.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG		Res units	USD	22.51	2.00	22.51		0.00000
	10	Resource	LAB05BRAKE	273105MFG	Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG		Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG		Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05BURN	273105MFG	Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG		Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG		Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05DRILL	273105MFG	Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	Ro	llup ID: 2440:	35							Re	port Date: 18-FE	8-2014 23:51:55

Supply Chain Bills of Material Indented Cost Report

Cost Type: CURRENT Buy Cost Type: CURRENT

Assignment Set: SCCR ASSIGNMENT SET

Conversion Type: Corporate

Revision Date: 2014/02/18 23:59:59

Page: 3

Alternate BOM: Alternate Routing:

Organization: 262 262-US-PLNT-CHESTERFIELD Currency Code: USD
Assembly: 100800-101 AFS Filter Cleaning Kit Category: FINISHED GOODS.DEFAULT UOM: EA

Level	Op Seq	Item/ Cost Element	Description/ Sub-Element	Org/ Department	Last Rev	1 1	ed On F Asset/	Rollup /Costed	Planning %	Quantity/ te Or Amount B			Item Unit Cost/ Res Unit Cost	Currency Code Extended Cost
2		100201-000	AFS Air Filte	273	000	Yes	Yes No	Item		1.00	0.00	1.00	192.81050	
	10	Overhead	FIX05RIV	273105MFG			100 110	Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05FAB	273105MFG			Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG				Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05PNTR	273105MFG			Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG				Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05SAW	273105MFG			Yes	Item	HR	0.20	1.00	0.20	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG				Res units	USD	20.43	0.20	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.20	22.51		0.00000
	10	Resource	LAB05WASH	273105MFG			Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG				Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.00	22.51		0.00000
	10	Resource	LAB05WELD	273105MFG			Yes	Item	HR	0.00	1.00	0.00	25.78000	0.00000
	10	Overhead	FIX05RIV	273105MFG				Res units	USD	20.43	0.00	20.43		0.00000
	10	Overhead	VAR05RIV	273105MFG				Res units	USD	22.51	0.00	22.51		0.00000
3	1	1E1704	URETHANE, 1/4	273	000	Yes No	Yes No	Item 1.00	100 FT2	3.20	0.00	1.00	13.00828	USD
		Material	MATERIAL					Item	USD	12.52	1.00	12.52		0.00000
			DAMERT					Ta 2 2	1700	0.04	10 50	0.04		0.00000

Supply Chain BOM Report Output (cont'd)

Organization: 262 262-US-PLNT-CHESTERFIELD Currency Code: USD
Assembly: 100800-101 AFS Filter Cleaning Kit Category: FINISHED GOODS.DEFAULT UOM: EA

Level	-	Item/ Cost Element	Description/ Sub-Element	Org/ Department		 	Base 	In Rollu ed On Rol Asset/Co	lup sted Yield/	Planning %				Item Unit Cost/ Res Unit Cost	Currency Code Extended Cost
0		100800-101	AFS Filter Cl	262	000		Yes	Yes No	Item	EA	1.00	0.00	1.00	276.17460	USD
	11	Resource	LAB02AFS	262502DENG				Yes	Item	HR	0.00	1.00	0.00	41.79000	0.00000
	301	Resource	LAB07AFS	262107ASSY				Yes	Item	HR	0.50	1.00	0.50	22.59000	11.29500
	301	Overhead	FIX07AFS	262107ASSY					Res value	USD	1.22	11.30	1.22		13.79458
	301	Overhead	VAR07AFS	262107ASSY					Res value	USD	0.25	11.30	0.25		2.77970
.1	1	2099-0016	16 oz Nalgene	262	000	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	5.06859	USD
		Material	MATERIAL						Item	USD	4.57	1.00	4.57		4.57000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	4.57	0.11		0.49859
.1	1	3ZC31	Sprayer - 2 g	262	000	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	69.10802	USD
		Material	MATERIAL						Item	USD	62.31	1.00	62.31		62.31000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	62.31	0.11		6.79802
.1	1	712401-0001	16 oz bottle	262	000	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	2.27366	USD
		Material	MATERIAL						Item	USD	2.05	1.00	2.05		2.05000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	2.05	0.11		0.22366
.1	1	MALCO S2	Seamer Pliers	262	000	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	38.66323	USD
		Material	MATERIAL						Item	USD	34.86	1.00	34.86		34.86000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	34.86	0.11		3.80323
.1	1		Seamer Pliers	262	000	Yes	No	Yes No	Item 1.00		1.00	0.00			USD
		Material	MATERIAL						Item	USD	65.03	1.00			65.03000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	65.03	0.11		7.09477
.1	1	100101-000	AFS Air Filte	262	D	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	33.05118	USD
		Material	MATERIAL						Item	USD	29.80	1.00			29.80000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	29.80	0.11		3.25118
2		100101-000	AFS Air Filte	208	000		No	Yes No	Item	EA	1.00	0.00	1.00	2.87820	USD
		Material	MATERIAL						Item	USD	2.34	1.00	2.34		0.00000
		Material Overh	INTLFRT						Ttl value	USD	0.23	2.34	0.23		0.00000
.1	1	100201-000	AFS Air Filte	262	D	Yes	No	Yes No	Item 1.00	100 EA	1.00	0.00	1.00	28.01587	USD
		Material	MATERIAL						Item	USD	25.26	1.00	25.26		25.26000
		Material Overh	FIX07MOH						Ttl value	USD	0.11	25.26	0.11		2.75587

Supply Chain BOM Report Output (cont'd)

	10	Overhead Overhead	FIX05RIV VAR05RIV	273105MFG 273105MFG			Res units	USD	20.43 22.51	0.00	20.43 22.51		0.00000
.3	1	1E1704 Material Material Overh	URETHANE, MATERIAL DOMFRT	1/4 273	000 Yes	No Yes No	Item 1.00 Item Ttl value	100 FT2 USD USD	3.20 12.52 0.04	0.00 1.00 12.52	1.00 12.52 0.04	13.00828	0.00000 0.00000

276.17460 USD ____________

Cost Element	Standard Cost	Report Value	Difference	Percent
Material	223.88000	223.88000	0.00000	0.0
Material Overhead	24.42532	24.42532	0.00000	0.0
Resource	11.29500	11.29500	0.00000	0.0
Outside Processing	0.00000	0.00000	0.00000	0.0
Overhead	16.57428	16.57428	0.00000	0.0
Total	276.17460	276.17460	0.00000	

^{*} This cost may include this level material, material overhead or routing costs.

Rollup ID: 244035 Cost Type: CURRENT

Supply Chain Bills of Material Indented Cost Report

Buy Cost Type: CURRENT Assignment Set: SCCR ASSIGNMENT SET

Conversion Type: Corporate

Revision Date: 2014/02/18 23:59:59 Alternate BOM: Alternate Routing:

Page: 4

Report Date: 18-FEB-2014 23:51:55

Organization: 262 262-US-PLNT-CHESTERFIELD Assembly: 100800-101 AFS Filter Cleaning Kit The costs are computed based on the following sourcing rules:

Currency Code: USD Category: FINISHED GOODS.DEFAULT UOM: EA

Currency

Item	Receipt Org/ Source Type	Description/ Source Org or Vendor	Vendor Site	Ship Method	Source Percent	Source Item Unit Cost	Effective Cost	Cost Percent	Total Item Unit Cost
100201-000		AFS Air Filter Cleaner 1 Gallo 273 r Overhead Costs)		100.0	0.00000	0.00000 28.01587	0.0	28.01587 USD
100101-000	262 Transfer From User-Defined o	AFS Air Filter Oil 1 Gallon 208 r Overhead Costs			100.0	0.00000	0.00000 33.05118	0.0	33.05118 USD

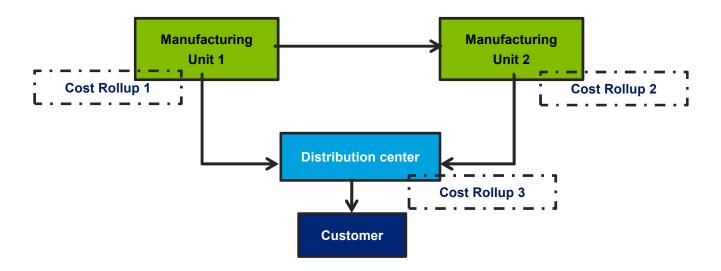
**** End of Report ****

[#] This cost includes previous levels not displayed on the report.

SCCR Schedule

Ensure that rollup schedule follows the path of supply chain:

- The path of supply chain is rollup should be run first in organization, which is the source, and then followed up in the destination org as far as possible.
- A good example of following the supply chain path is to run SCCR in a manufacturing unit first before running it at a distribution center

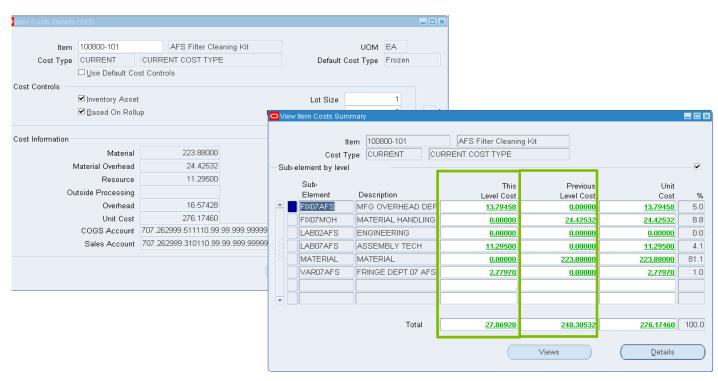


Supply Chain Item Costs

The benefit of running rollup in this sequence is that an organization wide sequence of rollup results in capturing real cost at the end of the supply chain (i.e., when the finished good finally reaches the customer).

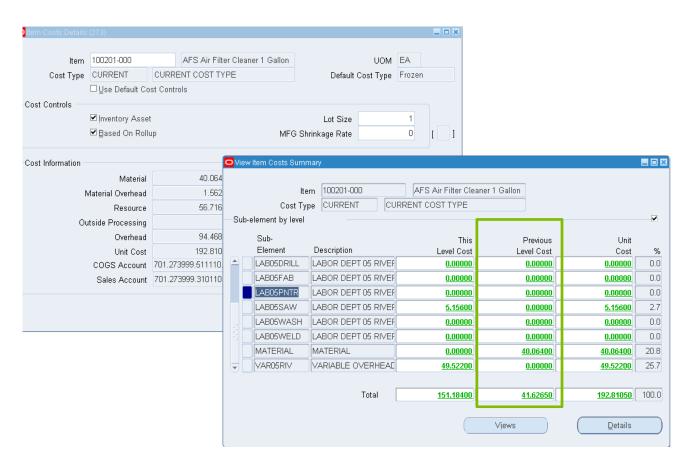
Some organization that have inventory orgs supplying to each other(as was the case with our client), run cost rollup in a cyclical fashion multiple times to get actual cost in each inventory org.

Final cost after rollup would reflect as below as per the above example. While viewing cost you can check Cost summary by level, which would reflect the cost collected from previous level.



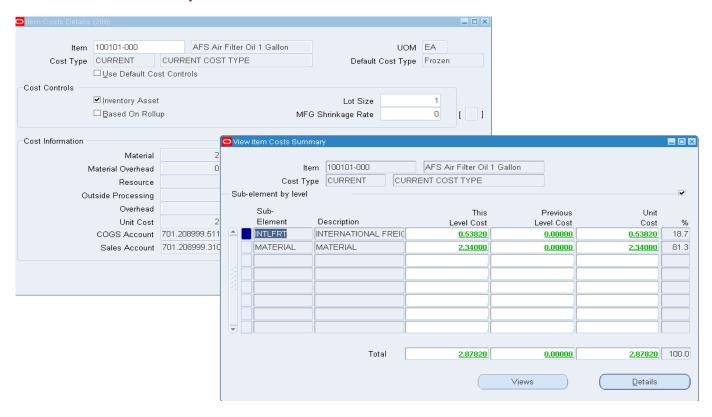
Supply Chain Item Costs (cont'd)

Because of Rollup Option selection - Full cost rollup, cost is rolled-up in previous level orgs as shown below, thus reflecting actual cost across the supply chain path.



Supply Chain Item Costs (cont'd)

Below is the cost for a component from first level, the cost of which can be seen in the full cost rollup.



After the SCCR's are complete, cost accounting is ready to perform the cost update. This establishes the frozen standard cost. Once the standard cost is set, you are able to cost inventory, work in process, BOM, receipts, and shipments.

Business Benefits

Organizations can derive the following benefits by maintaining the SCCR instead of the traditional assembly cost rollup:

Centralized Buying Organization

- This helps in determining correct sourcing decisions
- Promotes a philosophy of strategic costing in the organization

Cost Driven Organizations

 Supply chain-costing works as an important tool for cost analysis and cost reduction efforts by identifying non-value added costs across the supply chain

Savings to the Organization

 Cost management helps evaluate supplier quotes and supports and reports on the progress of strategic sourcing from a cost management perspective

Product Development

- Supply chain costing helps cost management and sourcing organizations integrate their process
- During new product development, supply chain cost management helps in identifying the best combination of Make/Buy organization decisions to bring down the cost of new product

Summary

By implementing Oracle Discrete Manufacturing and leveraging the SCCR features from the Cost Management module, our client has been able to improve accuracy and visibility of cost information across the enterprise.

With these improvements:

- They have complemented the ability to make more informed pricing decisions and to help obtain cost reduction goals
- The R12 SCCR process has eliminated unnecessary steps that were followed in the Oracle 11i cost rollup processes.
- The supply chain standard costing solution deployed with Oracle R12 has provided enhanced possibilities to model and simulate alternatives for sourcing, producing, distributing, and delivering products to end customers.
- Overall, the solution has provided timely and effective product cost information across the extended global supply chain

Thank You!

Deloitte.

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