

Essbase Tips & Tricks





10.24.14



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Today's Agenda



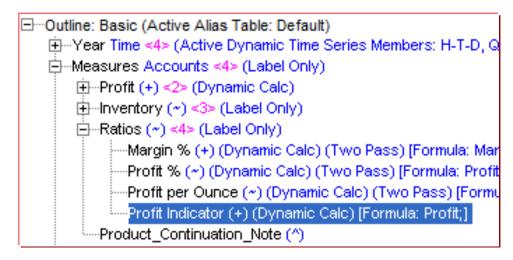
- Database Set up Options
 - Format Strings
 - Sharing Data
 - Partitions
 - Other Options
- Couple Calc Script Items
 - @XWRITE & @XREF
 - EXCLUDE
 - @MATCH weakness
 - Environment Variables in Calcs
 - ASO Calcs
- Administration items
 - Multi-processing exports
 - Transaction Logging & Replay
 - Implied Share Override
- Ancillary Tools Notes and updates

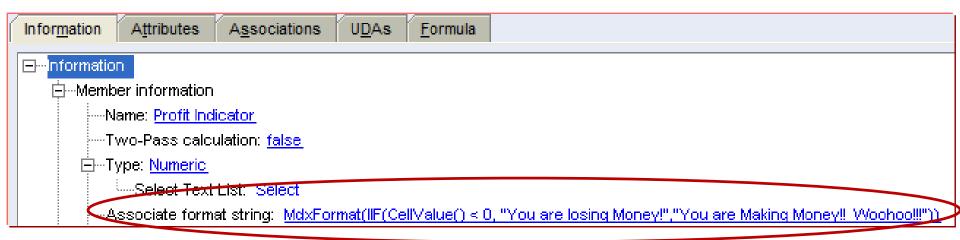




Format Strings

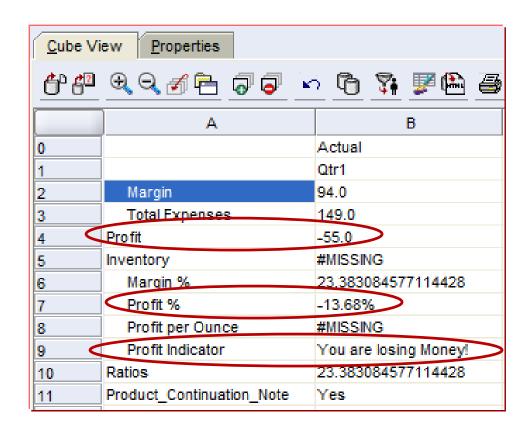
- Allow the application to preformat cells during retrieval
 - This is not storing formatted data in the database! Instead it is applying the formatting upon retrieval
 - Can be used for Textual Traffic Lighting







Format Strings – The Result!



- Not many Good references on this
 - Look in Technical Reference and search on "MdxFormat" then choose CellValue

Partitioning & Other Options



Partitions allow a database administrator or designer to move or reference data between Essbase databases. There are three types of partitions and they all have different characteristics.

- REPLICATED: This moves data from one database to another
- TRANSPARENT: This links one database to another and allows a user to see data from another database
- LINKED: This allows a user to see data from another database by taking the user to that database. Think about this as drill through from one Essbase database to another
- @XREF: Pulls data from another database into the database using the @XREF command. Planning uses this heavily. Good if you have a static link and it is formulaic
- @XWRITE: Sends data to another database

Partitions

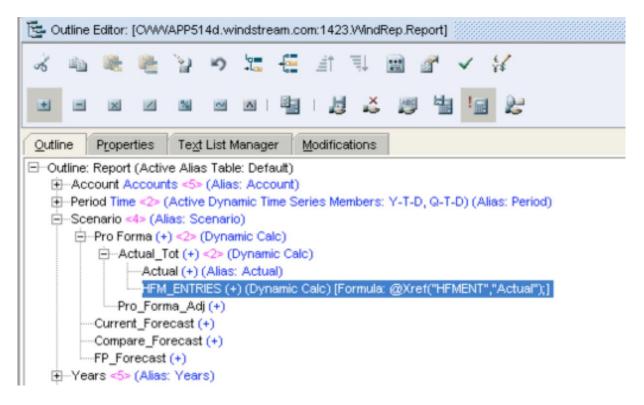


Source	Target	Replicated	Transparent	Linked
Block storage	Block storage	Yes	Yes	Yes
Aggregate storage	Block storage	No	Yes	Yes
Aggregate storage	Aggregate storage	No	Yes	Yes
Block storage	Aggregate storage	Yes	Yes	Yes

- Set up partitions in EAS
- Maintaining definitions can be tricky
- Can help with performance at times

@XREF instead of Partition





- Scenario dense
- Link Existing Reporting database with other "HFMENT" database

@XWrite instead of Partition



- @XWRITE sends data much like a replicated partition
- Still uses "Location Aliases"





 Very useful for Planning applications that have workflows in multiple databases



@Xwrite instead of CREATEBLOCKS



```
FIX (""RF3"", ""Working"", ""Jan"": ""Dec"", ""FY12"", ""US20566267"")

AGG (""Value"", ""SenderCC"");

""7776100"" (

@XWRITE((""Total Pri & Sec wCL82""->""SenderCC""->""Total Value"" * ""7776100%""->""US20566267_SC""->""Total CC""->""Input"" * -0.01), @LOOPBACK, ""7776100"", ""Allo
)

ENDFIX;

FIX (""RF3"", ""Working"", ""Jan"": ""Dec"", ""FY12"", ""US20566267_SC"", @DESCENDANTS(""Entity"", 0))

""7776100"" (

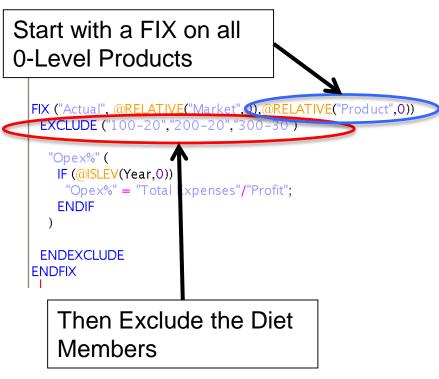
@XWRITE((""7776100%""->""Input"" * 0.01 * ""Total Pri & Sec wCL82""->""Total SENDCC""->""US20566267""->""Total Value""), @LOOPBACK, ""7776100"", ""Allocation In"");
)
ENDFIX;

@LOOPBACK
```

- @XWRITE creates blocks
 - Use @LOOPBACK to use @XWRITE to create blocks within database
- Formulas inside @XWRITE or VAR
- Send to a different POV than where the data originates

EXCLUDE in a Calc Script





- Fix on big group then EXCLUDE some members
- Saves have to write long or nested FIX statements
- Close with ENDEXCLUDE

```
Properties
                       Text List Manager
                                            Modifications
Outline
■ Outline: Basic (Active Alias Table: Default)
   —Year Time <4> (Active Dynamic Time Series Members: H-T-D, Q-T-D) (Dynamic
   —Measures Accounts <3> (Label Only)
      <u>i</u>--Profit (+) <2> (Dynamic Calc)
         <u>i</u> Margin (+) <2> (Dynamic Calc)
         Total Expenses (-) <3> (Dynamic Calc) (Expense Reporting)
      inventory (~) <3> (Label Only)
      = Ratios (~) <4> (Label Only)
            -Margin % (+) (Dynamic Calc) (Two Pass) [Formula: Margin % Sales:]
            Profit % (~) (Dynamic Calc) (Two Pass) [Formula: Profit % Sales:]
            Opex% (+)
           --Profit per Ounce (~) (Dynamic Calc) (Two Pass) [Formula: Profit/@ATTRIBU
  =-Product <5> {Caffeinated, Intro Date, Ounces, Pkg Type}
      <u>i</u> 100 (+) <3> (Alias: Colas)
            100-10 (+) (Alias. Cola) (Caffeinated: True; Intro Date: 03-25-1996; Our
          ----100-20 (+) (Alias: Diet Cola) (Cafeinated: True; Intro Date: 04-01-1996
          100-30 (+) (Alias: Caffeine Free Cola) (Caffeinated: False; Intro Date: 04-
      = 200 (+) <4> (Alias: Root Beer)
            200-10 (+) (Alias, Old Fashioned) (Caffeinated: True: Intro Date: 09-27-
           ---200-20 (+) (Alias: Diet Root Beer) (Caffeinated: True; Intro Date: 07-26-
            -200-30 (+) (Alias, Saspanila) {Caffeinated: False: Intro Date: 12-10-1996
            -200-40 (+) (Alias: Birch Beer) {Caffeinated: False: Intro Date: 12-10-199
      <u>i</u>--300 (+) <3> (Alias: Cream Soda)
            ·300-10 (+) (Alias: Dark Cream) {Caffeinated: True: Intro Date: 06-26-19
            300 20 (+) (Alias: Vanilla Cream) (Caffeinated: True; Intro Date: 06-26-1
          300-30 (+) (Alias: Diet Cream) (Offeinated: True; Intro Date: 06-26-199
      ±--400 (+) <3 > (Alias, Fruit 3oda)
      in Diet (~) <3> (Alias: Diet Drinks)
           --100-20 (+) (Alias: Diet Cola) (Shared Member)
            -200-20 (+) (Alias: Diet Root Beer) (Shared Member)
          300-30 (+) (Alias: Diet Cream) (Shared Member)

<u>★</u> Market <4> {Population}
     Scenario <4> (Label Only)
     -Caffeinated Attribute [Type: Boolean] <2>
     -Ounces Attribute [Type: Numeric] <4>

<u>→</u> Population Attribute [Type: Numeric] <3>

   intro Date Attribute [Type: Date] <7>
```

@MATCH



FIX("RECON_SOURCE") # FIX Source */

FIX(@MATCH("Entity", "VISA_DA_*")) # VISA_DA has no exceptions to the automation because it doesn't use TOTAL_KNOWN members */
 "600073" = "600073"->"VIP_SOURCE"->"NO_CRG"->&Prior_Yr;

ENDFIX

FIX(@REMOVE(@MATCH("Entity", "RECON_*"),@LIST("RECON_TOP_N_DIRECT","RECON_NATIONAL_DIRECT","RECON_BANKNONSPECIFIC")));
 "574047_NO_PM"(
 IF(@ISDESC("PARTNER_TOTAL"))
 "574047_NO_PM" = @MEMBER(@CONCATENATE("NO_PARTNER_",@SUBSTRING(@NAME(@CURRMBR("Entity")),6)))->"NET_CR_REV"->"\"

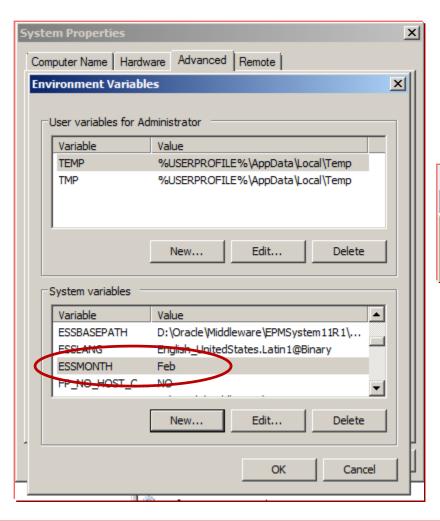
"564498" = @MEMBER(@CONCATENATE("NO_PARTNER_",@SUBSTRING(@NAME(@CURRMBR("Entity")),6)))->"NET_DR_REV"->"VIP_SOU @MEMBER(@CONCATENATE("TOTAL_KNOWN_",@SUBSTRING(@NAME(@CURRMBR("Entity")),6)))->"NET_DR_REV"->"SYSTEM_SOU

@MEMBER(@CONCATENATE("TOTAL_KNOWN_",@SUBSTRING(@NAME(@CURRMBR("Entity")),6)))->"PROC_METHOD_ACCTS"->"S"

- Good for doing Allocations or Eliminations
- Careful, doesn't always throw error when wrong
 - @MATCH("Entity","RECON_*") &
 @MATCH("Enity","RECON_*) both Validate!
 - Use SET EMPTYMEMBERSETS ON while testing at least







Only available to BSO

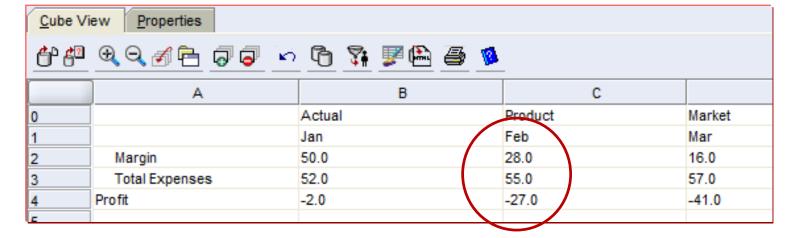
Script

//ESS_LOCALE English_UnitedStates.Latin1@Binary
CLEARDATA "Actual"->\$ESSMONTH;



Environment Variables in Calcs – Results!

Before



After

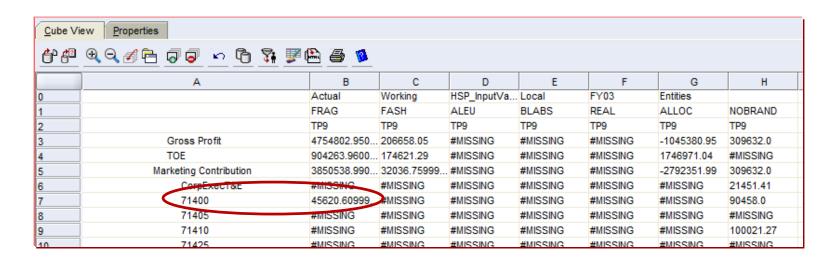
Cube Vi	ew <u>Properties</u>			
<u></u>		<u> 6 🐉 📝 🙆 🥝 </u>	_	
	A	В	С	
0		Actual	Product	Market
1		Jan	Feb	Mar
2	Margin	50.0	#MISSING	16.0
3	Total Expenses	52.0	#MISSING	57.0
4	Profit	-2.0	#MISSING	-41.0
r				



Clear Specific Regions in ASO

 Continues to expand the ability of ASO to be more like BSO and more of an OLAP database than just a reporting tool.

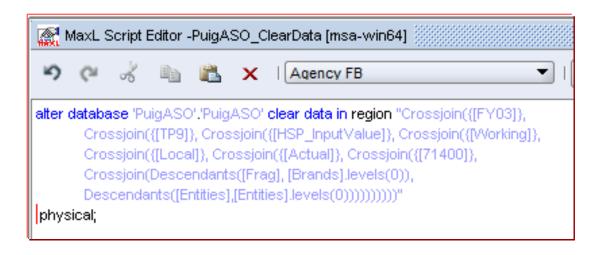
alter database appname.dbname clear data in region {MDX set expression} [physical];



Let's try and write a statement to just clear account 71400 for TP9 for Actual scenario, local currency, Working version, Fiscal Year 03 all Entities and all the Brands under FRAG.



Clear Data in ASO – Results!

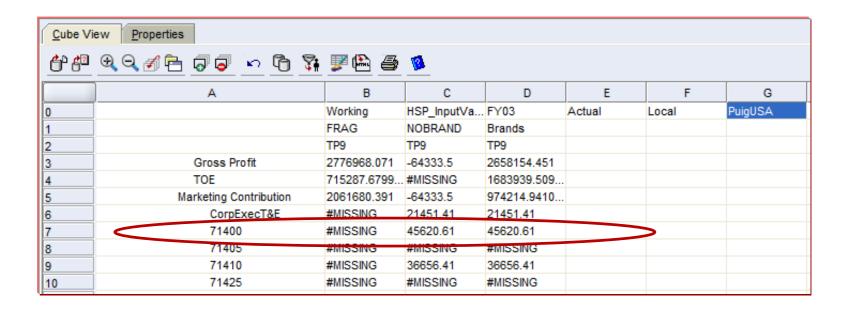


<u>C</u> ube Vie	ew Properties							
<u></u>	<u>QQ#6</u> 55 <u>~ 6 </u>	<u> </u>						
	Α	В	С	D	Е	F	G	Н
0		Actual	Working	HSP_InputVa	Local	FY03	Entities	
1		FRAG	FASH	ALEU	BLABS	REAL	ALLOC	NOBRAND
2		TP9	TP9	TP9	TP9	TP9	TP9	TP9
3	Gross Profit	4754802.950	206658.05	#MISSING	#MISSING	#MISSING	-1045380.95	309632.0
4	TOE	904263.9600	174621.29	#MISSING	#MISSING	#MISSING	1746971.04	#MISSING
5	Marketing Contribution	3850538.990	32036.75999	#MISSING	#MISSING	#MISSING	-2792351.99	309632.0
6	CornEvecT&E	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	21451.41
7	71400	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	90458.0
8	71405	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING
9	71410	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	#MISSING	100021.27





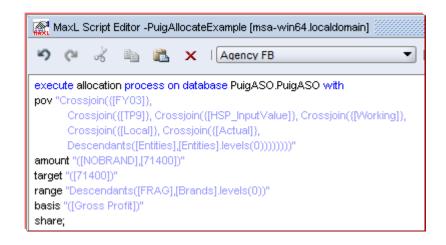
- Two options to utilize this function
 - Calc Manager
 - Calc Manager uses @MDALLOCATE
 - MaxL
 - Example Below

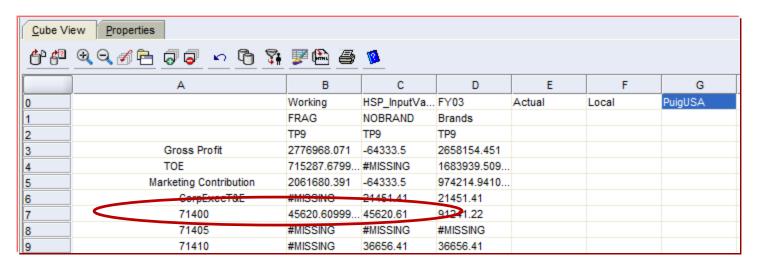




ASO Allocations - Example

- Allocate Account 71400 across FRAG Brands from NOBRAND
 - We use amount of "([NOBRAND],[71400])" which equates to "NOBRAND"->"71400"; in BSO





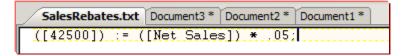


Custom ASO Calcs - Example

Done via MaxL with custom calculation file

	Α	В	С	D	E	F	G	Н	I	J
1		HSP_InputValue	FY03	Actual	Working	Local	С			
2		HERRERA	RABANNE	PUIG	RICCI	PRADA	PAYOT	COMMEDG	OthNonPuig	FRAG
3		TP9	TP9	TP9	TP9	TP9	TP9	TP9	TP9	TP9
4	Net Sales	1,424,378.90	235,429.80	35,241.00	567,223.90	168,884.08	24,419.25	#Missing	#Missing	2,455,576.93
5	chg.prov.sales.ret	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
6	Royalty Income	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
7	42500	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
8	42528	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
9	42501	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
10	Sales Rebates	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
11	Exch.Dif.Sales	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing	#Missing
12	Net Revenues	1,424,378.90	235,429.80	35,241.00	567,223.90	168,884.08	24,419.25	#Missing	#Missing	2,455,576.93
13	cos	793.24	#Missing	#Missing	#Missing	256,170.62	#Missing	#Missing	#Missing	256,963.86
14	Gross Profit	1,423,585.66	235,429.80	35,241.00	567,223.90	(87,286.54)	24,419.25	#Missing	#Missing	2,198,613.07

Object is to calculate Sales Rebates in account 42500 of 5% of Net Sales Start with calculation file definition:





Custom ASO Calcs - Example

MaxL Script Editor -Puig_SalesRebates [msa-win64] SourceRegion is Agency FB msa-win64 everything on the execute calculation on database PuigASO.PuigASO with right hand side of local script_file "D:\Client\Puig\SalesRebates.txt" pov "Crossjoin({[FY03]}, Crossjoin({[TP9]}, Crossjoin({[HSP_InputValue]}, Crossjoin({[Working]}, your calculations in Crossjoin({[Local]}, Crossjoin({[Actual]}, Crossjoin(Descendants([Frag], [Brands].levels(0)), Descendants([Entities],[Entities].levels(0))))))))" the calc file SourceRegion "({[Net Sales]})"; SalesRebates.txt | Document3 * | Document2 * | Document1 * ([42500]) := ([Net Sales]) * .05;

ruig FRAG TP9 2,455,576.93 3 #Missing #Missing
TP9 g 2,455,576.93 g #Missing
2,455,576.93 #Missing
g #Missing
_
#Missing
#Missing
122,778.85
g #Missing
g #Missing
122,778.85
g #Missing
2,332,798.08
256,963.86
2,075,834.22
9 9 9 9

Multi-Threaded Exports



```
SPOOL ON TO '/work/PennHist-prod/logs/Hourly_Budget_Load.log';
set timestamp on;
                                                                                    Multi-Threaded
alter application 'PennPln1' disable connects;
                                                                                     Export
alter system logout session on application 'PennPln1' force;
alter application PennPln1 unload database Revexp;
alter system unload application PennPln1;
alter system load application PennPln1;
ALTER APPLICATION PennPln1 LOAD DATABASE 'Revexp';
EXPORT DATABASE PennPln1.Revexp LEVEL0 DATA IN COLUMNS TO DATA_FILE '/work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0_1.txt',
    '/work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0_2.txt',
    '/work/PennPlan-prod/RevExp/PennPln1 Revexp Level0 3.txt',
    '/work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0_4.txt',
                                                                                      Put the Export
    '/work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0_5.txt',
   '/work/PennPlan-prod/RevExp/PennPln1 Revexp Level0 6.txt';
                                                                                      back to one file
alter application 'PennPln1' enable connects;
SHELL awk FNR-1 /work/PennPlan-prod/RevExp/PennPln1 Revexp Level0 1.txt /work/PennPlan-prod/RevExp/PennPln1 Revexp Level0 2.txt
SHELL cp /work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0.txt /work/PennPlan-prod/RevExp/PennPln1_Revexp_Level0_$1.txt;
```

- 60% improvement in export speeds
- Careful putting multiple files back together
 - Header row in Column format is in each file





- Greatly enhances Essbase backup strategies and allows for roll forwards of transactions
- This is an example of Oracle making Hyperion software more "IT Ready"

Step 1 – Enable Logging

Essbase.cfg setting:

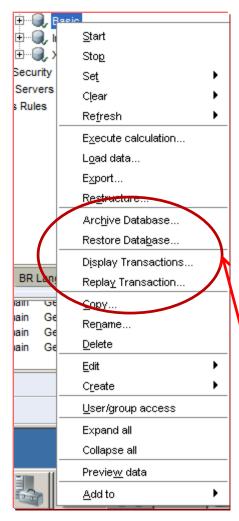
TRANSACTIONLOGLOCATION [app name][db name] LogLocation NATIVE ENABLE|DISABLE

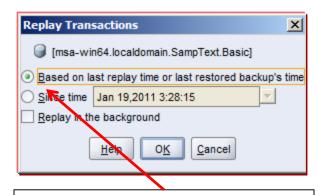
- My example
 - TRANSACTIONLOGLOCATION SampText D:\esbTransactions\Logs NATIVE ENABLE
 - If you leave out the App Name it will take effect for the server

Transaction Logging in EAS

MINDSTREAM®

. 2.





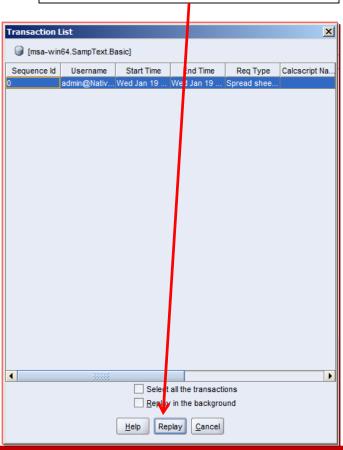
Choose parameters to view different groups of transactions

Archive & Restore
Database, Display & Replay
Transactions are accessed
by right clicking Database

Transaction List allows replay of specific transactions or all

transactions

3.



Implied Share Override

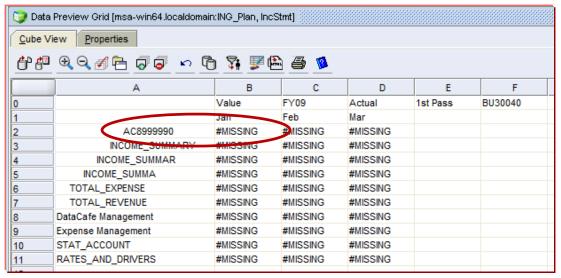


- Essbase.cfg setting
 - IMPLIED_SHARE [app name] TRUE|FALSE
- Two API Functions are available for this setting as well:
 - EssOtlGetImpliedShare and EssOtlSetImplied Share

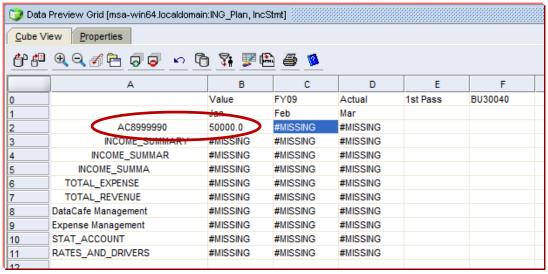
```
Essbase config settings (essbase.cfg)
SERVERPORTEND 33700
AGENTDESC hypservice
                                         □ Outline: IncStmt (Active Alias Table: Default)
CLEARLOGFILE FALSE
                                            NETRETRYCOUNT 1000
                                                ☐···INCOME_STATEMENT (+) <3> (Label Only) (UDAS: Revenue, Flow).
NETDELAY 800
                                                   ⊟--INCOME_SUMM (+) <1> (Dynamic Calc) (UDAS: Revenue, Flow)
CALCCACHE TRUE
                                                      Ė--INCOME_SUMMA (+) <1> (Dynamic Calc) (UDAS: Revenue, Flow).
CALCCACHEDEFAULT 5000000
                                                          ⊟-INCOME_SUMMAR (+) <1> (Dynamic Calc) (UDAS: Revenue, Flow)
CALCCACHEHIGH 199999999
                                                             ⊟--INCOME_SUMMARY (+) <1> (UDAS: Revenue, Flow)
CALCLOCKBLOCKHIGH 500
                                                                   AC8999990 (+) (Alias: Income Summary (AC8999990)) (UDAS: Revenue, Flow)
CALCLOCKBLOCKDEFAULT 500
CALCLOCKBLOCKLOW 200
SERVERTHREADS 40
AGENTTHREADS 10
IMPLIED_SHARE ING_Plan FALSE
```







Before and after lock and send to 0-Level member shows data is retained and therefore implied share suppression works



Ancillary Tools – Some Notes



Dodeca



- Great adhoc and report generating tool for Essbase
- CXO Cockpit



- Easy to implement Dashboard tool works great with Essbase
- Savant
 - Text & Voice natural queries for Essbase



- EPM Shield
 - Monitor Essbase and other useful admin tools





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For a copy of this presentation with detailed notes, please go to http://www.mindstreamanalytics.com/presentations.html

