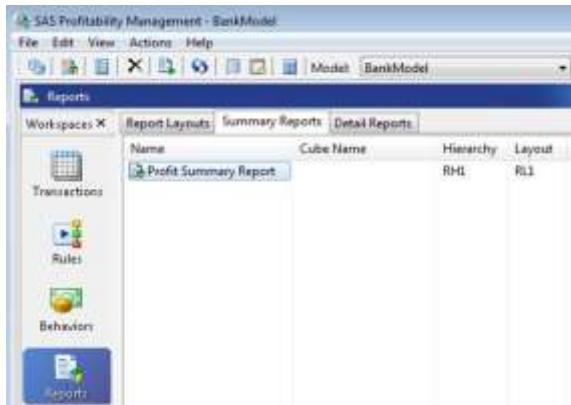


Calculate Finance Models and automate them using SAS Software Allocation Engine using SAS

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Abstract- SAS Profitability Management tool is an analytic application by SAS Institute which is that determines cost and profitability by modeling business processes as cost flows among accounts. Cost flows between accounts are modeled by various kinds of drivers including evenly-assigned, percentage, and calculated drivers. With this solution, organizations can make informed decisions that streamline processes, deliver revenue growth and reduce costs across the organization. All the companies have financial data with lot of algorithms and rule that need to be matched with input data to get the final allocated dollars. This can be automated saving hundreds of hours and lots of resources.

INTRODUCTION

There is large variety of finance data in big organizations. All the expenses are grouped in to different buckets like Operational Expenses, Warranty Related Expenses, Capital Expenses, Supply Chain Expenses, Advanced Services Cost of Goods and many more. Most of the time they are clubbed up and come as 1 huge row with input amount. The way the data ware house is designed or even the pods or source data houses, it will be very difficult to find where the total amount is getting distributed. For Ex: If one record has 1000 dollars the end user who is using this data has no idea how the 1000 dollars was used. That's when we use the driver tables and rules and matching criteria. All these

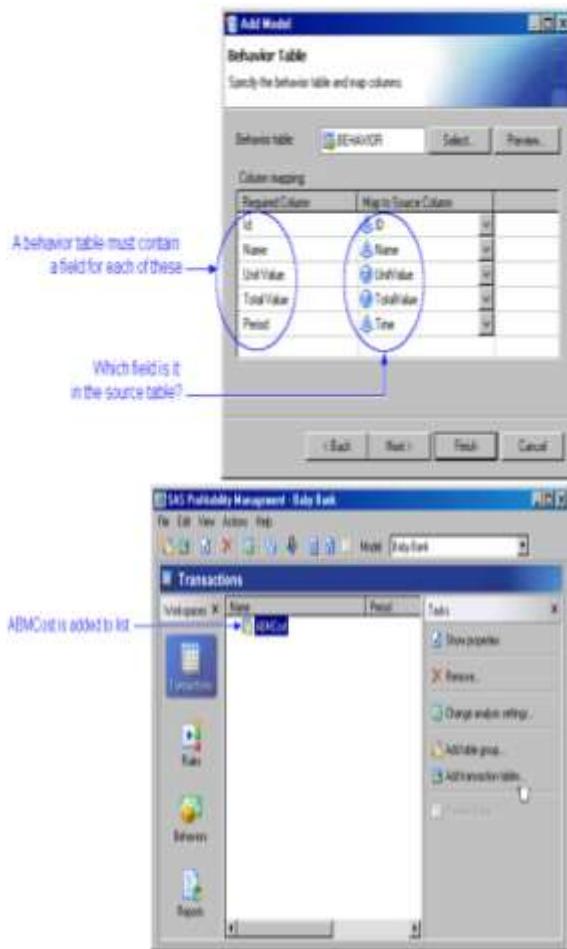
heavy-duty calculations and rules are done and are automated so the complete process can be scheduled, and the allocated data can be available instantaneously at any point of time.

THE STORY

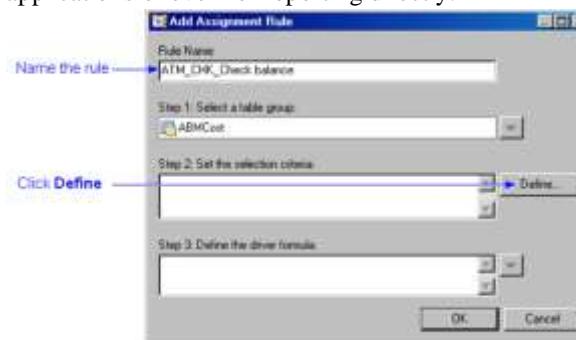
Let's take a simple example to understand the process better. There is one company X is Silicon Valley which gets the data from Teradata dataware house. It has large amounts of Finance data. This data is in raw format. So, the SAS Analyst writes procedures to pull data from the DW to SAS systems using some SAS Procedures. The tables are usually the source data, driver data, hierarchy related data and other set of data related to metadata like currency, country etc., This data has billions of records for all the continents around the globe. We import the tables in to SAS system and cleanse the data and store them as .sas7bdat files in the appropriate folder like Source data folder, Driver data folder and Metadata folder. All the macros and sas files are stored in a different folder for SAS files which have .sas file extensions.

Once we have all the tables and files ready we give permissions based on the privileges and team that person belongs. Once we have those ready we create a connection between the SAS tables and SAS Profitability Management using XML files and scripts. Once that is done, the SAS user will login to SAS profitability Management and the should be able to see the behavior table and driver tables for one particular period.

Behaviors, typically, are things that your customers do. For example, the customers of a bank can check their balance, make deposits, transfer funds, and make withdrawals. Each row will have unique id called behavior id. This is important to assign any rule to each record and also for tracing any issue related to particular record.



Once we have behavior and transaction ready, we create rules by using “create new rule” feature in SAS Profitability Management. Once the rule is created we assign that rule to particular behavior id and then that rule will actually calculate and gets the allocated value as output. That data will be stored in SAS directory which can be used by downstream applications or even for reporting directly.



CALCULATION USING A TOTAL VALUE

When a behavior table row contains a total value, the driver formula is used to calculate the number of units involved in each transaction chosen by the selection criteria. Then, the cost for that transaction is determined in the following way:

1. The total number of units for all transactions (chosen by the selection criteria) is calculated by adding the number of units (as determined by the driver formula) for all the transactions chosen by the selection criteria.
2. The cost per unit is calculated by dividing the total value (in the behavior table row) by the total number of units.
3. The cost for each transaction (value) is calculated by multiplying the cost per unit times the number of units (as determined by the driver formula) for that transaction.

CONCLUSION

All the above mentioned are automated on Linux box on Windows 7 as the client machine to use the SAS Profitability Management. Series of nested macros and SAS files are used. This is the best method to calculate the allocation percentages and automate them without lot of effort and can be the its always accurate based on the rule criteria.

REFERENCE

SAS Support Documentation
Contact Author for Code Snippets @
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