Model Maintenance Best Practice

August 2020

Table of Contents

Introduction

Your Prophix model is similar to your bicycle. Each year when you take your bike out of the garage, you will go through a series of maintenance steps. This may include putting air in the tires, greasing the chain and tightening the brakes. You do this to ensure that the bike is riding as smoothly as possible.

There are also some steps that you can take to ensure that your Prophix model runs as smoothly as possible too. This document will offer out some basic steps that you can take to clean up some of the components within your model. These steps can be repeated either nightly, monthly, quarterly or annually depending on the complexity of your model(s).

Maintenance Steps

Size of the Database

As your Prophix model ages, so does the size of the model as you inherently add new data points. The size of the database will impact saving your changes in Model Manager and more importantly the time it takes to open reports.

Two options exist that would help reduce the size of the fact table:

1. Run an Optimize Fact Table process. This process contains two options
   a. Compress fact table data – this will reduce the number or records in the fact table by consolidating any records that exist for the same dimension combinations
   b. Remove orphaned records from fact table – this will remove any records from the fact table for dimensions members that no longer exist in the cube

Manage Data

Compress fact table data:

Remove orphaned records from fact table:

2. Remove zero values. Run a Remove Data process but be sure to select the 'Remove zero values only' option. This will clear any unnecessary records with a value of zero. You can run this process for all leaf members of your dimensions.

Remove data values from cube:

Remove zero values only:

It is recommended to run a 'Process full' Update Cube process following the processes above.

Processing Options

○ Process full
Completely rebuilds this cube, plus all other cubes that are related based on shared dimensions. The dimension contents will be recreated based on any changes previously made by running an Import Dimension process, and the cube data will also be repopulated to include changes resulting from any recent Import Data processes.

○ Process data
Repopulates the cube data only without changing the current cube structure in any way.

Accounts Dimension

Calculated accounts can contribute to performance related problems. Calculations are done using a combination of options. One formula type that should be avoided is the 'leaf formula'.

The leaf formula type is used to run the formula at the leaf level and aggregates the results at the parent level. By default, Prophix executes system calculations at run-time (i.e. when opening a report). If the calculations are slow, the impact is experienced every time a report is opened (even if the accounts in question are not in the report). To improve performance of these types of calculations, Prophix has a 'Procedural calculation' formula type.
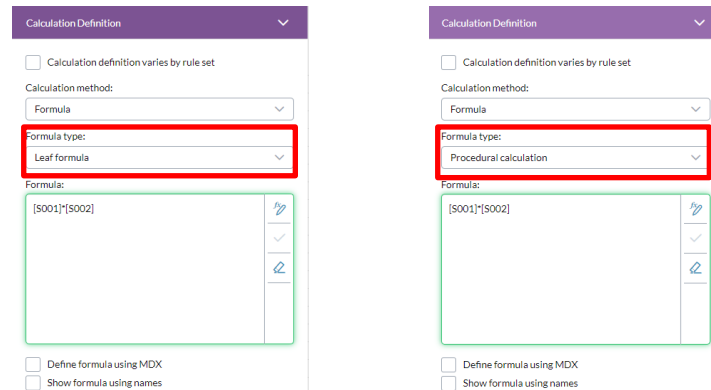

Procedural calculations can be executed by running the Procedural Calculation process in Process Manager. The calculation results are then stored in the fact table and this improves the query performance when opening reports or views and when entering data.
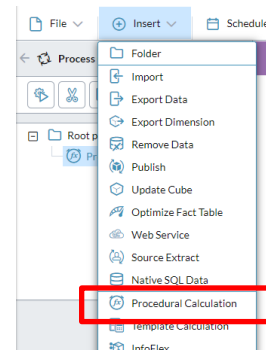
If end users would like to see the calculations updated without waiting for an advanced user or administrator to run this Procedural Calculation process, then data entry triggers can be deployed. To enable data entry triggers, from the Account dimension:

1. In the lip click the 'Edit Procedural Calculations' icon

2. Select the procedural calculation account and click the 'Generate' icon:
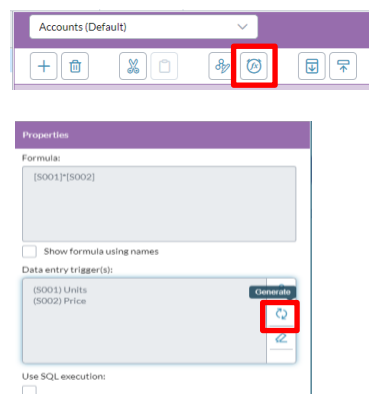
Versions Dimension

In many situations, we see an abundance of version members that have been created and most of them are typically obsolete after the planning year has passed, yet they are not always cleaned up. Having many versions can potentially cause performance issues, especially those that use the carry forward option and calculated type versions. Only versions necessary for reporting/planning purposes should be kept. It is recommended that only one or two carry forward versions be used at one time.

It is important to use the time intersect in conjunction with the versions as this will also help reduce calculated version members required. For example, separate budget versions for each planning year (ex. Budget 2019, Budget 2020) are not required. You can use one single budget version and select the appropriate members of the Time dimension to specify the planning timeframe. (ex. 2019 months when planning for the 2019 fiscal year, or 2020 months when planning for the 2020 fiscal year). A proposed Version dimension structure is provided here:

Version Name	Type	Start/End Period	Description
Actual	Actual	Not Defined	Actual Data
Plan	Plan	Not Defined	Budget Data
Budget Variance	Calculated	Not Defined	Actual to Budget
Budget Variance %	Calculated	Not Defined	Actual to Budget %
Forecast	Plan	Month/Quarter following closed period (constantly changing)	To be used for rolling projections
Forecast Variance	Calculated	Not Defined	Actual to Forecast
Forecast Variance %	Calculated	Not Defined	Actual to Forecast %

Note, an alternative to using versions to calculate variances is to use template-based calculations to generate the variance values.

Summary of Recommended Maintenance Steps

1. Reduce the size of the fact table by eliminating data for any dimension members that no longer exist and compress the fact table.

2. Run a Remove Data process to **remove zero** values.

3. Review the accounts dimension and ensure that 'Leaf formula' formula types are changed to 'Procedural calculation'.

4. Review the version dimension and remove unused members.