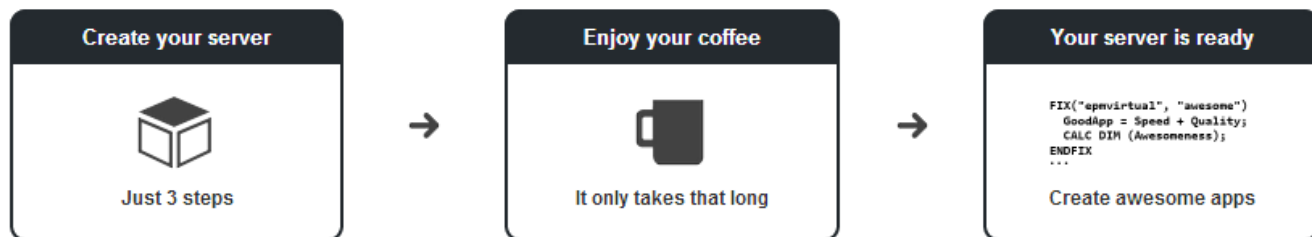


Dimensionality & Dimensions of Hyperion Planning

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This tutorial will take you through the dimensionality concepts of Hyperion Planning.

Dimensions are the basic foundation of the Hyperion Planning application and are composed of members and the place holders of the stored members in the outline.

Application dimensions together referred as an outline and it means the structure of an Hyperion planning application or cube.

Hyperion Planning application has a set of standard dimensions and custom dimensions. The standard dimensions are the mandatory dimensions of any planning application.

The Standard dimensions vary between the multi and single currency applications.

The list of standard dimensions for the single and multi currency application are as follows:

Single Currency

- Account
- Period
- Year
- Scenario
- Version
- Entity

Multi Currency

- Account
- Period
- Year
- Scenario
- Version
- Entity
- HSP_Rates
- Currency

The Standard dimensions are the mandatory dimensions for the planning application and a Hyperion Planning application can have additional custom dimensions. Although the limit on number of dimensions in an application is 20, the rule of thumb is; lesser the dimensions, better the performance of an application.

Planning application stores data in Essbase cubes. Essbase is a multi-dimensional database which is structured using the concept of dimensions. Dimensions will classify the data values and data is accessed and stored in a cube intersection consisting of a member from each of the dimensions in an application.

Lets look at the dimensions and its properties more detail in the following sections.

Account Dimension

Account dimension is one of the standard dimensions. The measures, metrics, and drivers of the application are part of the Account dimension.

Below figure shows the Account dimension view in a planning application:

Dimensions		
Performance Settings		
Evaluation Order		
Plan Type <All Plan Types> Dimension Account Search Name		
Actions View Detach		
Name	Alias (Default)	Data Storage
Account		Never Share
Statistics		Dynamic Calc
CapitalExpenditures	Capital Expenditures	Dynamic Calc
CapExLand	CapEx: Land	Store
CapExBuildings	CapEx: Buildings	Store
CapExLsholdImprov	CapEx: Leasehold...	Store
CapExMfgMach	CapEx: Mfg Mach...	Store
CapExOffFurn	CapEx: Office Fur...	Store
CapExCompEquip	CapEx: Computer...	Store
CapExCompSftwr	CapEx: Computer...	Store
CapExVehicles	CapEx: Vehicles	Store
OtherDrivers	Other Drivers	Dynamic Calc
PayrollDrivers	Payroll Drivers	Label only
RevenueDrivers	Revenue Drivers	Label only
Comments		Store
IncomeStatement	Income Statement	Dynamic Calc
BalanceSheet	Balance Sheet	Dynamic Calc
CashFlow	Cash Flow	Dynamic Calc

Account Dimension – Properties

In this section, we will go through about the member properties of the Account dimension. Select a member in the account dimension and click on view, it will lead to the below properties window,

Name: This is the name of the member

Description: This is an optional field where the description can be provided

Alias: It is an optional field where an alternate name(s) can be provided for the member

Member Properties	
	UDA
Name	CapitalExpenditures
Description	Capital Expenditures
Alias Table	Default
Alias	Capital Expenditures
Account Type	Saved Assumption
Variance Reporting	Expense
Time Balance	Flow
Skip	None
Exchange Rate Type	No Rate
Source Plan Type	Plan1
Data Storage	Dynamic Calc
Two Pass Calculation	<input type="checkbox"/>
Plan Type	Plan1 <input checked="" type="checkbox"/> Ignore
Data Type	Non Currency
Smart Lists	<None>

Account Type: The appropriate account type has to be selected for the member. The available account are as shown.

Account Type

Saved Assumption	▼
Expense	
Revenue	
Asset	
Liability	
Equity	
Saved Assumption	

Revenue

Variance reporting: This option will be selected based on the selected account type. Though we can edit the default options and change the setting. Apart from account type Expense all other accounts are default Non-expense

Time Balance: This property will determine the nature of aggregation. By default, it will be selected based on the account type.

- Flow: This option will add Jan, Feb and Mar values to Quarter1
- First: This option uses the beginning value of Jan to Quarter1
- Balance: This option uses the ending value that is of March to Quarter1
- Average: This option averages the data value of Jan, Feb and March
- Weighted Average – Actual-Actual: This setting assumes that the year is leap year. The Q1 value will be calculated by first multiplying the monthly values with the no of days of the month and the sum all the values post multiplication and divide by the total number of days of the quarter
- Weighted Average-Actual_365: This setting does not assume that the year is leap year. The Q1 values are calculated by first multiplying the monthly values with the number of days of the month and then summing all the values post multiplication and dividing by the total number of days in the quarter.

Time Balance

Flow

Flow

First

Balance

Average

Fill

Weighted Average - Actual_Actual

Weighted Average - Actual_365

The below table describes how the data spreading depends on the time balance property,

Time Balance property	Jan	Feb	Mar	Quarter1
First	20	30	40	20
Balance	20	30	40	40
Flow	20	30	40	90
Average	20	30	40	30
Weighted Average_Average	20	30	40	30
Weighted Average_Actual_Actual	20	30	40	30

Skip: This property will handle the missing values and zero values.

Exchange Rate Type: This property is applicable to only multi-currency applications. It tells the account member that which table to look for exchange rates.

Data Storage: The following are the data storage options,

- **StoreData:** This option will store the data in the database and consumes the disk space.
- **DynamicCalcAndStore:** This setting does not store data until a user retrieves data for the first time.
- **Dynamic Calc:** This setting never stores data and retrieves data every time a user requests. It is mostly used for account dimension members.
- **ShareData:** This setting can be used for alternate hierarchies.
- **NeverShare:** This setting can be used when a parent has single child to avoid implicit sharing.
- **LabelOnly:** This setting is for navigational convenience. It does not have the ability to store data.

Two-Pass Calculation: This setting can be used for percentage or ratio calculation

Plan Type: It will display the application cube name

Aggregation Options: This setting tells how the data has to be aggregated to its parent

Data Type: The data type tells how to display the values

Entity Dimension

Entity dimension is one of the standard dimensions that defines business organization hierarchy. The dimension typically includes geographical regions, departments and business units in an organization.

Below figure shows the Entity dimension view in the planning application,

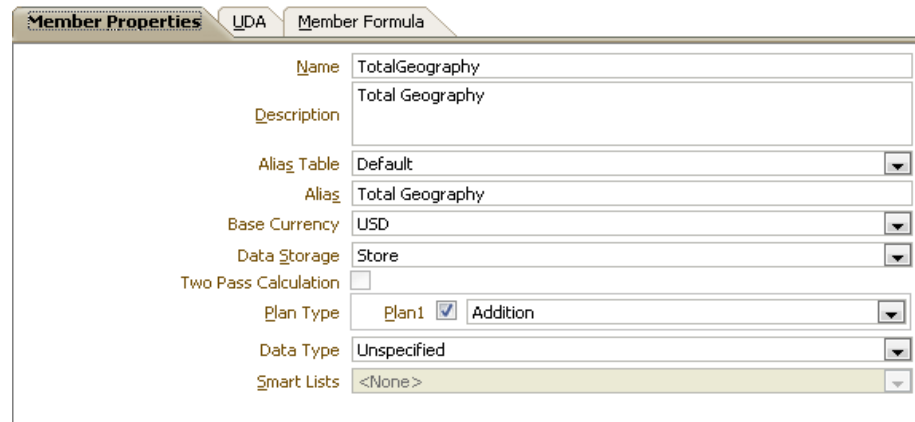
Dimensions		
Performance Settings Evaluation Order		
Plan Type <All Plan Types> Dimension Entity Search Name		
Actions View XYZ Detach		
Name	Alias (Default)	Data Storage
Entity		Never Share
TotalGeography	Total Geography	Store
E01	North America	Store
E02	Latin America	Store
E02_0	Latin America Corp...	Store
E02_201	Argentina	Never Share
E02_201_1000	Argentina Sales	Store
E02_202	Brazil	Never Share
E02_203	Colombia	Never Share
E02_204	Peru	Never Share
E02_205	Venezuela	Never Share
E03	EMEA	Store
E04	APAC	Store
E05	Corporate HQ	Store
Function		Store

Entity Dimension – Properties

In this section, we will go through about the member properties of the Account dimension. Select a member in the account dimension and click on view, it will lead to the below properties window (refer to the account dimension section for repeating properties),

Two pass calculation: This setting can be used for percentage or ratio calculation

Base Currency: This setting is applicable only to the Multi-currency application. Provide the currency for that entity



The screenshot shows the 'Member Properties' window with the following fields and values:

Field	Value
Name	TotalGeography
Description	Total Geography
Alias Table	Default
Alias	Total Geography
Base Currency	USD
Data Storage	Store
Two Pass Calculation	<input type="checkbox"/>
Plan Type	Plan1 <input checked="" type="checkbox"/> Addition
Data Type	Unspecified
Smart Lists	<None>

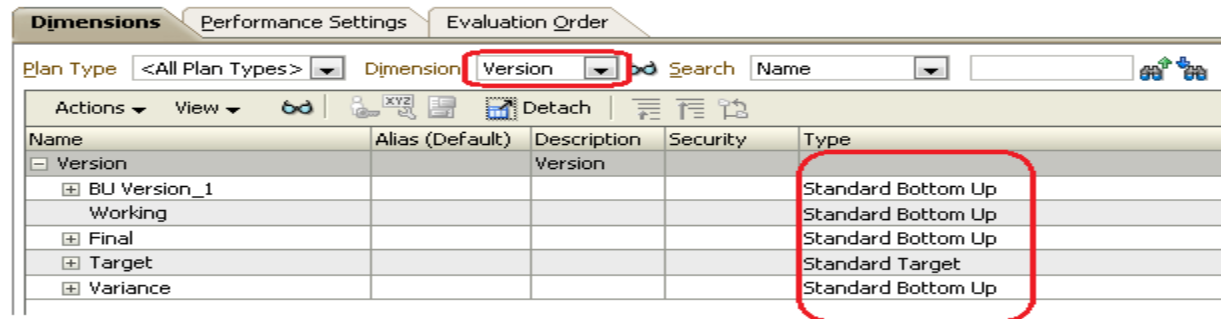
Version Dimension

Version Dimension is used to enable the versioning functionality for the Planning applications. Two types of members can be created in the version dimension,

- Standard bottom up
- Standard Target

One can enter data only at level zero or base level members in Standard Bottom Up. Whereas in standard target, data entry is possible at any level of the hierarchy.

Below figure shows the version dimension view in the planning application,



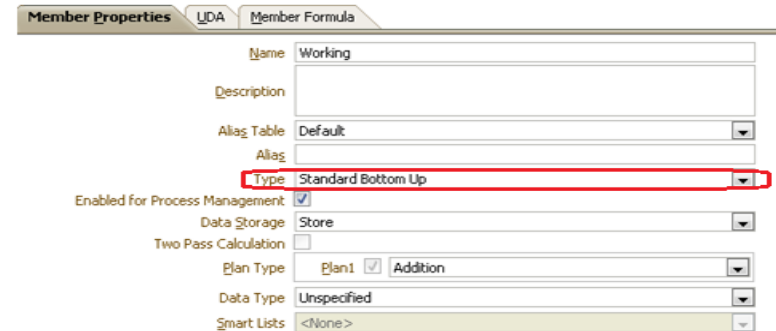
Name	Alias (Default)	Description	Security	Type
[-] Version		Version		
[+] BU Version_1				Standard Bottom Up
Working				Standard Bottom Up
[+] Final				Standard Bottom Up
[+] Target				Standard Target
[+] Variance				Standard Bottom Up

Version Dimension – Properties

In this section, we will go through about the member properties of the version dimension. Select a member in the version dimension and click on view, it will lead to the below properties window,

Type: This setting decides the type of the version

Enable process management: This setting will tell which version member to participate in the workflow processes.



Member Properties		LDA	Member Formula
Name	Working		
Description			
Alias Table	Default		
Alias			
Type	Standard Bottom Up		
Enabled for Process Management	<input checked="" type="checkbox"/>		
Data Storage	Store		
Two Pass Calculation	<input type="checkbox"/>		
Plan Type	Plan1 <input checked="" type="checkbox"/> Addition		
Data Type	Unspecified		
Smart Lists	<None>		

Note: Version member, whose type is standard target cannot be enabled for workflow.

Scenario Dimension

Scenario dimension helps broad categorization of data in the planning application. Entity dimension is always associated with the scenario and version dimension.

Below figure shows the Scenario dimension view in the planning application,

Dimensions

Performance Settings

Evaluation Order

Plan Type

<All Plan Types>

Dimension

Scenario

Search

Name

Actions

View

Detach

Name	Alias (Default)	Description	Security	Start Period	Start Yr.	End Period	End Yr.	Exch. Table
[-] Scenario		Scenario						
Current				Jan	FY11	Dec	FY14	
[+] Plan				Jan	FY11	Dec	FY13	
Forecast				Jul	FY11	Dec	FY13	
[+] Actual				Jan	FY11	Jun	FY14	

Plan, Actual, and Forecast are the most common Scenario members as we need a 'Plan' scenario member to enter planned or budget numbers, and the 'actual' member is need to enter actual data.

Scenario Dimension – Properties

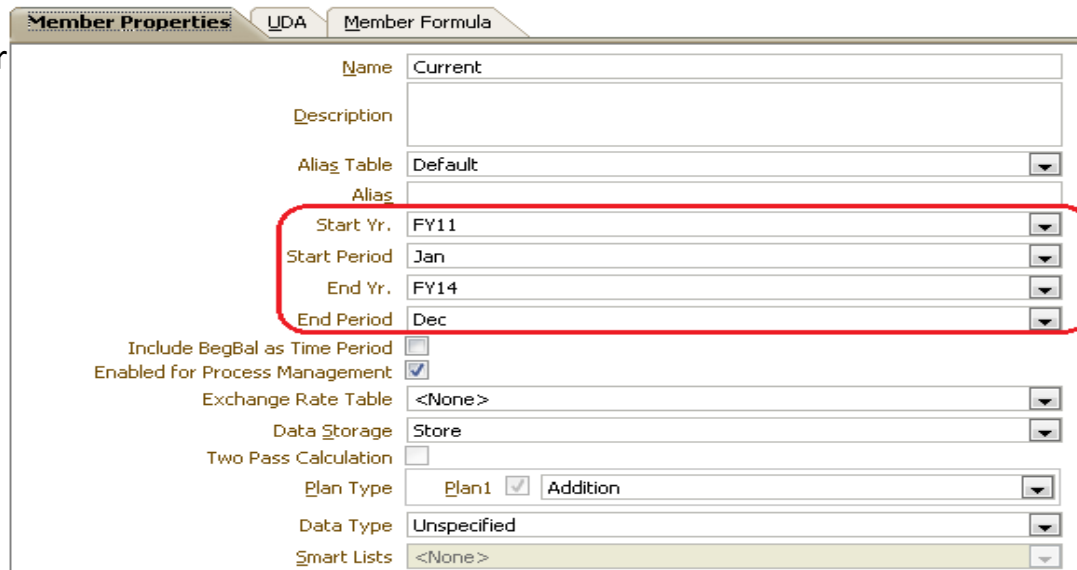
In this section, we will go through about the member properties of the Scenario dimension. Select a member in the scenario dimension and click on view, it will lead to the below properties window,

Start Yr.: This field will have the starting year

Start Period: The starting period of a financial year

End Yr.: This field will have the ending year

End Period: The ending period of a financial year



Member Properties	
UDA	Member Formula
Name	Current
Description	
Alias Table	Default
Alias	
Start Yr.	FY11
Start Period	Jan
End Yr.	FY14
End Period	Dec
Include BegBal as Time Period	<input type="checkbox"/>
Enabled for Process Management	<input checked="" type="checkbox"/>
Exchange Rate Table	<None>
Data Storage	Store
Two Pass Calculation	<input type="checkbox"/>
Plan Type	Plan1 <input checked="" type="checkbox"/> Addition
Data Type	Unspecified
Smart Lists	<None>

Year & Period Dimensions

Year dimension has years and while we create a Planning application, the number of years required can be defined.

Dimensions		
Performance Settings		
Evaluation Order		
Plan Type	<All Plan Types>	Dimension
Year		Search
Name		
Action	View	Detach
Year	Alias (Default)	Description
FY11		
FY12		
FY13		
FY14		
No Year		No Year

Dimensions			
Performance Settings			
Evaluation Order			
Plan Type	<All Plan Types>	Dimension	Period
Search	Name		
Actions	View	Detach	
Name	Alias (Default)	Start Period	End Period
Period			
+ BegBalance			
- YearTotal			
+ Q1		Jan	Mar
+ Jan			
+ Feb			
+ Mar			
+ Q2		Apr	Jun
+ Q3		Jul	Sep
+ Q4		Oct	Dec

The Period Dimension has more information to give us than the 'Year' dimension. It has summary time periods such as 'Year Total' and Quarters and has members reflecting months that is, from Jan to Dec. The 'Period' dimension again is entirely created by our selection while we create Planning application.

Dense and Sparse

Defining a dimension dense or sparse has a huge impact on the performance of the application. The definition of Dense or Sparse impacts the performance of the cubes and determines the design of the cube.

Dense dimension has high probability of data in the cube whereas the sparse dimension has less probability of data in the cube. The dense and sparse combination determines the data block size and this data block can be imagined as bricks which make up the whole cube.

By default, Account and Period dimension can be dense dimensions and the rest of the dimensions are sparse.

thank you

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