

ORACLE

Oracle Essbase

What's New with Essbase

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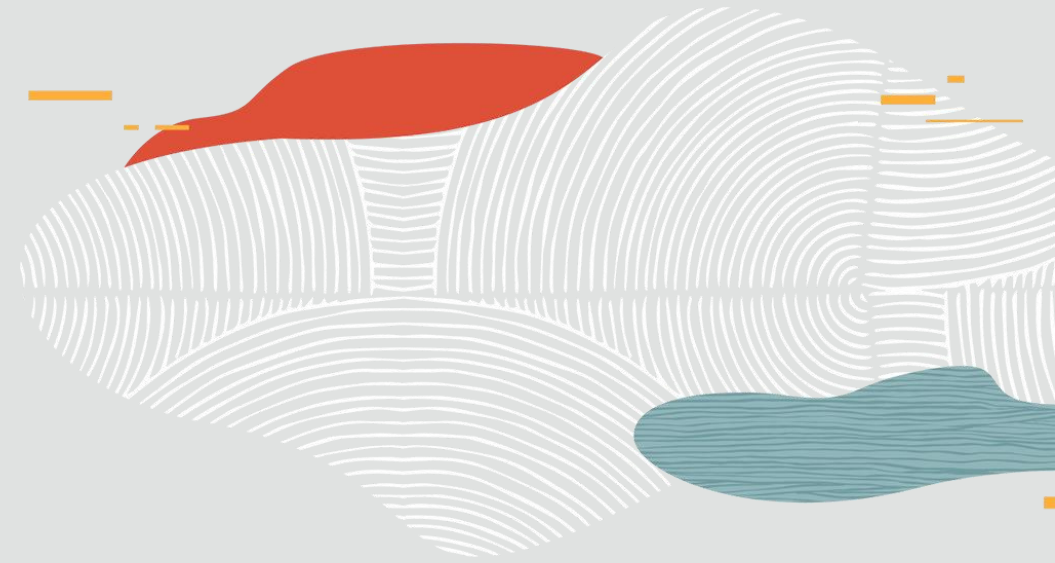
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Safe harbor statement

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Agenda

- **What's new with Essbase**
 - Overview of new features
 - Essbase Deployment
 - Essbase 19c new feature
- **Customer use case**



Essbase

Overview of new features

Essbase 19c overview

- Next Generation Essbase with Enhanced Capabilities and new Web UI:
 - New Tools for Design: Cube Designer, Table to Cube
 - New Tools for Development: Client Utilities CLI, MaxL
 - REST API's
 - Common Migration Utilities between versions
 - Enhanced Hybrid Engine
 - Deeper feature integration with Smart View
 - Data source platform integration
 - Scenario Management with Sandboxing
 - Improved Performance vs 11g

New tools for design and management

Do Everything in the new Essbase UI

- New database management and outline editor tools
- Support for database migration from on-premises deployments

ORACLE Analytics Cloud - Essbase (Beta)

Sample_Dynamic.Basic -- Outline

Name	CO	Data storage type	Formula	Descrip
Year	+ (Add)	Dynamic Calc		
Measures	+ (Add)	Label Only		
Profit	+ (Add)	Dynamic Calc		
Inventory	~ (Ignore)	Label Only		
Opening Inventory	+ (Add)	Store Data	IF(NOT @ISMBR("Jan")) *Openin...	
Additions	~ (Ignore)	Store Data		
Ending Inventory	~ (Ignore)	Store Data		
Ratios	~ (Ignore)	Label Only		
Product	+ (Add)	Dynamic Calc		
100	+ (Add)	Dynamic Calc		
200	+ (Add)	Dynamic Calc		
200-10	+ (Add)	Store Data		
200-20	+ (Add)	Store Data		
200-30	+ (Add)	Store Data		
200-40	+ (Add)	Store Data		
300	+ (Add)	Dynamic Calc		

Opening Inventory
description

20 Properties

Member Name

General

Active alias name

Consolidation + (Add)

Currency conversion None

Currency conversion category

Data storage type Store Data

Description

Dimension name Measures

Expense false

Format string

Formula IF(NOT @ISMBR("Jan")) *Opening Inventr

110 Members



New tools for design and management

Do It All in Excel

- Export cubes to Excel format
- Self-describing models within Excel
- Use Excel as an modeling tool

The screenshot displays the Essbase Cloud Cube Designer interface. On the left, an Excel spreadsheet shows the cube model. The 'Application Name' is 'Sample' and the 'Database Name' is 'Basic'. The 'Version' is '1.0'. The 'Dimension Definitions' table is as follows:

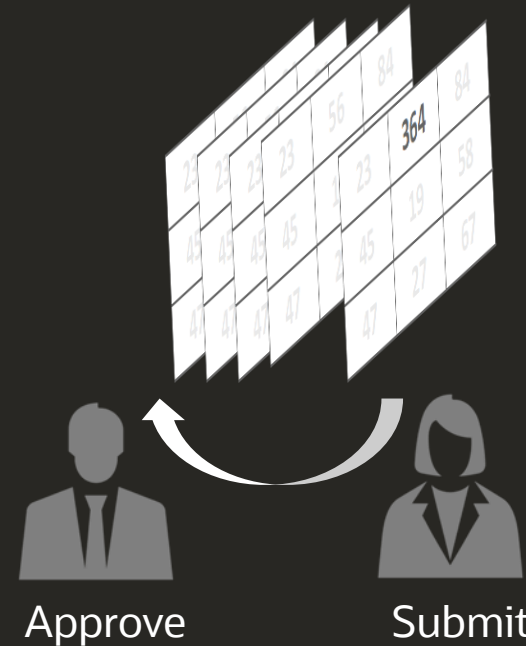
	Dimension Type	Storage Type	Outline Order	Base Dimension
Year	Time	Dense	1	
Measures	Accounts	Dense	2	
Product	Regular	Sparse	3	
Market	Regular	Sparse	4	
Scenario	Regular	Sparse	5	
Caffeinated	Attribute-Boolean		6	Product
Ounces	Attribute-Numeric		7	Product
Pkg Type	Attribute-Text		8	Product
Population	Attribute-Numeric		9	Market
Intro Date	Attribute-Date		10	Product

On the right, the 'Smart View' interface is visible, showing the 'Essbase Cloud Cube Designer' window. It includes tabs for 'Cube', 'Settings', 'Dimensions', 'Data', and 'Calc'. The 'Alias Tables' section lists 'Default', 'Long Names', 'ChineseNames', 'JapaneseNames', and 'RussianNames'. The 'Dynamic Time Series' section shows settings for H-T-D (1), Q-T-D (2), Y-T-D, M-T-D, S-T-D, W-T-D, P-T-D, and D-T-D. The 'Attribute Settings' and 'Text Lists' sections are also visible.

Sandboxing and scenario management

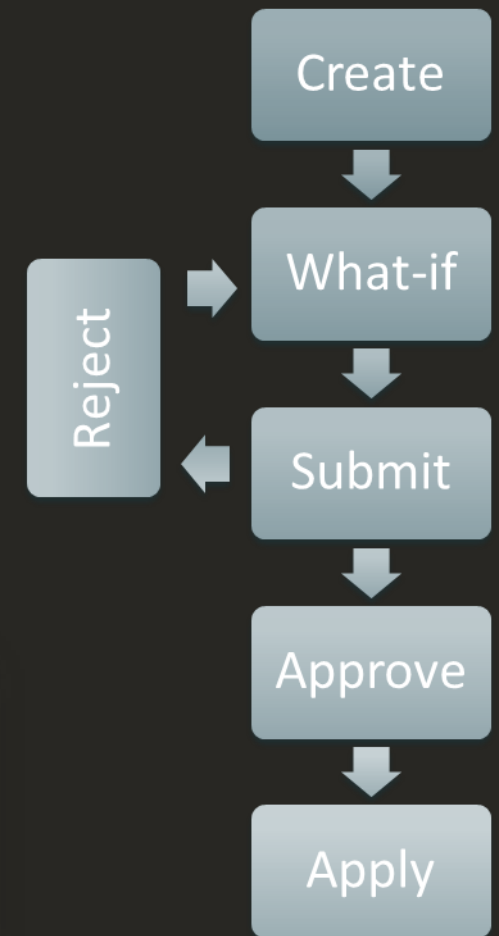
Create Unlimited Sandboxes

- “Onion skin” like sandboxes, unlimited sandboxes with no impact on cube size or performance
- Only delta entries are saved in the sandboxes
- Define approval flows for sandbox submission back to baseline



The screenshot shows the Oracle Essbase Cloud Service interface. At the top, there are navigation icons for Applications, Jobs, Files, Scenarios, and Console. Below this is a 'Jobs' section with a search bar and a table of job entries.

ID	Application	Database	User	Type	Script	Date
1000	Sample	Basic	Kumar	Data Load	data.nul	01/01/2
1001	Demo	Basic	Victor	Dim Build	product.nul	01/01/2
1002	DBX	Basic	Suresh	Dim Build	product.nul	01/01/2
1003	Sample	Basic	Dipti	Dim Build	product.nul	01/01/2



Essbase scenario modeling

A few clicks = Modeling, and can easily be done over and over

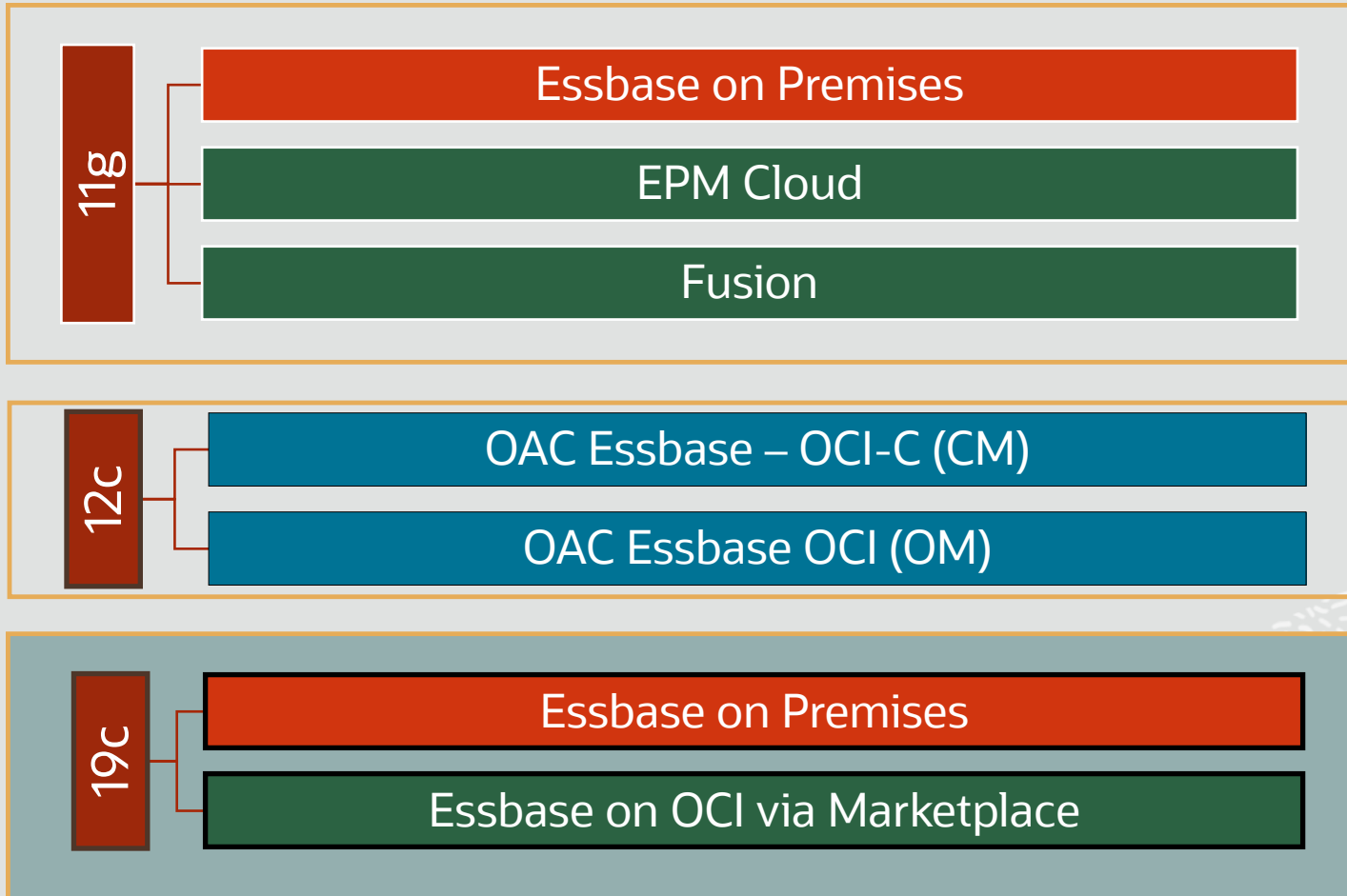
The screenshot displays the Oracle Data Visualization interface for a project titled "Spend Planning CPR". The interface includes a navigation pane on the left with a tree view of data sources: SpendPlanning Spend, SpendF1, Calendar, Purchase organization, Product, Supplier, My Calculations, and Value Labels. The main area shows three donut charts and two tables. The top chart, "Projected Addressable Spend by Gen2, Product", shows a total of 571K with segments for IT and Equipment (83.5%), Building (14.0%), Office Supplies (1.12%), and Maintenance (1.37%). The middle chart, "Prior to Adjustment Addressable Spend by Gen2, Product", shows the same total of 571K but with a different distribution: IT and Equipment (70.0%), Marketing (10.0%), Building (10.0%), Office Supplies (5.0%), Maintenance (2.00%), Legal (2.00%), and Transportation (1.00%). The bottom chart, "Adjusted Projected Addressable Spend by Gen2, Product", shows a total of 399,924.55. Below the charts are two tables: "Projected Addressable Spend by Gen2, Product" and "Adjusted Projected Addressable Spend by Gen2, Product".

Gen2, Product	Projected Addressable Spend
IT and Equipment	477,123.62
Building	79,981.89
Office Supplies	6,391.54
Maintenance	7,823.74
Grand Total	571,320.78

Gen2, Product	Adjusted Projected Addressable Spend
IT and Equipment	399,924.55
Marketing	28,566.04
Building	57,132.08
Office Supplies	11,426.42
Maintenance	28,566.04



Essbase versions





Essbase Deployment

Essbase 21c On Premises (just released)

Feature comparison for 11g and 19c on premises

Feature	Essbase 11g	Essbase 19c
Outline/Metadata Management	EAS Console	Web UI/Cube Designer
Security (User/Group Management)	Shared Services Security	Customer LDAP integrated thru WebLogic/IDCS
Smart View	Supported	Supported in addition to Web UI Analyze
EAS / Essbase Studio	Supported	Unsupported
Essbase JAPI/CAPI	Supported	Supported + REST API Support
Varying Attributes	Supported	Supported for Migrated Applications only
Application mode	Option: Non-Unicode or Unicode	Unicode only
Currency Conversion Module	Supported	Supported for Migrated Applications only

Essbase 19c new features

Feature	Essbase 19c
Federated Partitions	Ability to query Data Sources with zero footprint Essbase partition
Data Source / Connections	New Construct to abstract data sources for Rule files, DT, Partitions.
Sandboxing and Scenario Mgmt.	Light weight Scenario management capability with workflow
Cube Designer	Smart View Excel plug-in for offline Outline Management
CLI + MAXL Client	REST API based CLI utility for admin activities and HTTPS-based MAXL client for remote execution of MAXL statements
Modern Web Based UI	Modern UI with close feature parity with EAS Console
Excel Templates	Domain and product feature-based templates for quick start app development
Simplified Security	With 3 User Roles and 4 application privileges for security management
ADW Support	ADW can be a source data for Essbase

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Essbase

19c New Features

Essbase 19c new features

Delivered:

- Web UI outline Ease of Use Enhancements
- Hybrid Mode: with new dependency analysis
- LCM: selective artifact migration
- Federated Partitions

Longer Term:

- Custom Properties
- Hot Backup
- Shadow Cube
- Cube Designer Expert Mode

Web UI outline enhancements

- Context-sensitive ribbon for member actions
- “Dynamification” by dimension or branch
- Dynamic Time Series
- Alias Table addition and member alias assignment
- Performance improvements

ORACLE Essbase

Sample.Basic -- Outline

Actions Inspect Sort Copy/Move Data Storage Type Dimension Type Others

Name	Operator	Data Storage Type
▶ Year		Dynamic Calculation
▶ Measures		Label Only
▶ Product		Store Data
▶ 100	+ (Add)	Store Data
▶ 100-10	+ (Add)	Store Data
▶ 100-20	+ (Add)	Store Data
▶ 100-30	+ (Add)	Store Data
▶ 200	+ (Add)	Store Data
▶ 300	+ (Add)	Store Data
▶ 400	+ (Add)	Store Data
▶ Diet	+ (Add)	Store Data
▶ Market		
▶ Scenario		
▶ Caffeinat		
▶ Ounces		
▶ Pkg Type		
▶ Population		
▶ Intro Date		

Context menu for Product:

- Inspect
- Set 'Dynamic' ▶
- Sort Children ▶
- Insert Row Above
- Add Sibling
- Add Child
- Move Up
- Move Down
- Delete

Block Storage Outline

General Aliases Dynamic Time Series Textual Measures

Series	Enabled	Generation	Default	Long Names	ChineseNames	Je
H-T-D	<input checked="" type="checkbox"/>	1				
Y-T-D	<input type="checkbox"/>	1				
S-T-D	<input type="checkbox"/>	1				
P-T-D	<input type="checkbox"/>	1				
Q-T-D	<input checked="" type="checkbox"/>	2				
M-T-D	<input type="checkbox"/>	1				
W-T-D	<input type="checkbox"/>	1				



Hybrid Calc (Zig-Zag)

Sophisticated dependency analysis allows for so-called zig-zag calculations to be done dynamically.

PARENT	CHILD	STORAGE	TIMEBALANCE	FORMULA
	Measures			
Measures	Demand			
				IF ((@ISLEV(Product, 0)) AND (@ISLEV(Calendar, 0)) AND (@ISMBR("FY16-Jan")) "Beginning Inventory" = 100; ELSEIF ((@ISLEV(Product, 0)) AND (@ISLEV(Calendar, 0))) "Beginning Inventory" = @PRIOR("Ending Inventory"); ENDIF;
Measures	Beginning Inventory	X	F	
Measures	Ending Inventory	X	L	"Ending Inventory" = "Beginning Inventory" + "Production" - "Demand";

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
			FY16-Jan	FY16-Feb	FY16-Mar	FY16-Apr	FY16-May	FY16-Jun	FY16-Jul	FY16-Aug	FY16-Sep	FY16-Oct	FY16-Nov	FY16-Dec	FY2016
1															
2	P1-a1	Beginning Inventory	100	2226	-1299	2000	9593	11227	14886	20589	27890	28562	25011	29499	100
3	P1-a1	Demand	3095	4170	6663	1190	3768	4808	2705	2032	7388	9589	1367	6291	53066
4	P1-a1	Production	5221	645	9962	8783	5402	8467	8408	9333	8060	6038	5855	6701	82875
5	P1-a1	Ending Inventory	2226	-1299	2000	9593	11227	14886	20589	27890	28562	25011	29499	29909	29909
6															
7			FY16-Jan	FY16-Feb	FY16-Mar	FY16-Apr	FY16-May	FY16-Jun	FY16-Jul	FY16-Aug	FY16-Sep	FY16-Oct	FY16-Nov	FY16-Dec	
8	P1-a1	Beginning Inventory	100	2226	-1299	2000	9593	11227	14886	20589	27890	28562	25011	29499	
9	P1-a1	Demand	3095	4170	6663	1190	3768	4808	2705	2032	7388	9589	1367	6291	
10	P1-a1	Production	5221	645	9962	8783	5402	8467	8408	9333	8060	6038	5855	6701	
11	P1-a1	Ending Inventory	2226	-1299	2000	9593	11227	14886	20589	27890	28562	25011	29499	29909	



CLI LCM export/import of select artifacts

- LCM export with `-gal` option
- Modify [artifact list](#)
- LCM import using artifact list and optional `-ta` [target application name]
- Modified [artifact list](#)

```
c:\temp\cli>esscs lcmexport -h
Lcm export application to specified filename and local directory
usage: esscs lcmexport [-v] -a <application> [-z <zipFileName>] [-ld <localDirectory>]
[-T <threadsCount>] [-skip] [-o] [-isl] [-gal] [-fsc] [-dr]
where
-gal,--generateartifactlist      generate file with list of artifacts from zip export
-isl,--include-server-level      server artifacts are eligible for LCM operations

c:\temp\cli>esscs lcmexport -a Sample -z Sample.zip -ld c:\temp -isl -gal
'lcmexport' job submitted with job id 65
Execution is in progress
.. Execution completed successfully in 4 seconds.
Downloading LCM exported zip file ...
Successfully downloaded to c:\temp\Sample.zip

Successfully generated list of artifacts for the application 'Sample' into file 'c:\temp\Sample.txt'
```

```
c:\temp\cli>esscs lcmimport -z c:\temp\Sample.zip -isl -al c:\temp\Sample1.txt -ta taSample
Uploading files to 'user directory'
Files uploaded successfully
Uploaded files validated successfully
'lcmimport' job submitted with job id 66
Execution is in progress
.....
Execution completed successfully in 13 seconds.
```

Real time partition

- Partition data in RDB table or file
- Outline containing these members
- Partition between source and outline
- Real time data access as RDB or file content is updated
- Zero blocks in the partition

Edit Datasource

← Back General Columns Parameters Preview

PRODUCT	CALENDAR	UNITS	PRICE
P1-a1	FY16-Jan	3095.0	39.0

RealtimeCSV.Updates -- Outline

search ...

Name	CO	Data Storage Type	Formula
Product	+ (Add)	Dynamic Calculation	
Calendar	+ (Add)	Dynamic Calculation	
FY2016	+ (Add)	Dynamic Calculation	
FY16-Q1	+ (Add)	Dynamic Calculation	
FY16-Jan	+ (Add)	Store Data	
FY16-Feb	+ (Add)	Store Data	
FY16-Mar	+ (Add)	Store Data	
FY16-Q2	+ (Add)	Dynamic Calculation	

Updates

Block storage Database

General Dimensions Files Scripts Filters Variables Locks Settings Statistics Audit Trail **Partitions**

Storage
Number of Existing Blocks 0
Block size (B) 288
Potential Number of Blocks 16
Existing Level0 Blocks 0
Existing Upper Level Blocks 0

Target Area @LEVMBRS(Product.0), @LEVMBRS
Source RealTimeCSV_DS



Agenda

- **What's new with Essbase**
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- **Customer use case**

About the current solution

Dynamic Forecast 18 months rolling planned income statement

- Create Cross-functional Planning solution, evaluating effectively market signals, better and faster anticipate trends in an increasingly volatile environment
- Improve the quality of the Financial scenarios, assumptions provided to managers to take timely and relevant Business decisions

Audience

- Business Unit , Country Business Manager, Market head
- Sales, BU Controllers and FP&A
- Market Head and CFO at market

Corporate Financial reporting

Extensively used by Finance, the Essbase Corporate product is covering the main financial areas for management reporting and controlling purposes.

Functional areas covered for actuals and Forecast figures: Sales statistics, Income Statement, Balance Sheet, Market Share solution

What was the motivation for this PoC

Cost Reduction

- Remove Exalytics support costs
- Lower overall support costs

Scalability

- Dynamic scaling instead of scaling and purchasing HW for peak load

Flexibility

- Reduce Technical complexity
- Costs based on market's adoption to solution / Pay for what you use
- Aligned with cloud strategy

Performance

- Accommodate nightly loads & calcs
- Cope with increasing adoption

All success criteria as defined prior to the PoC have been met

Results are
the same

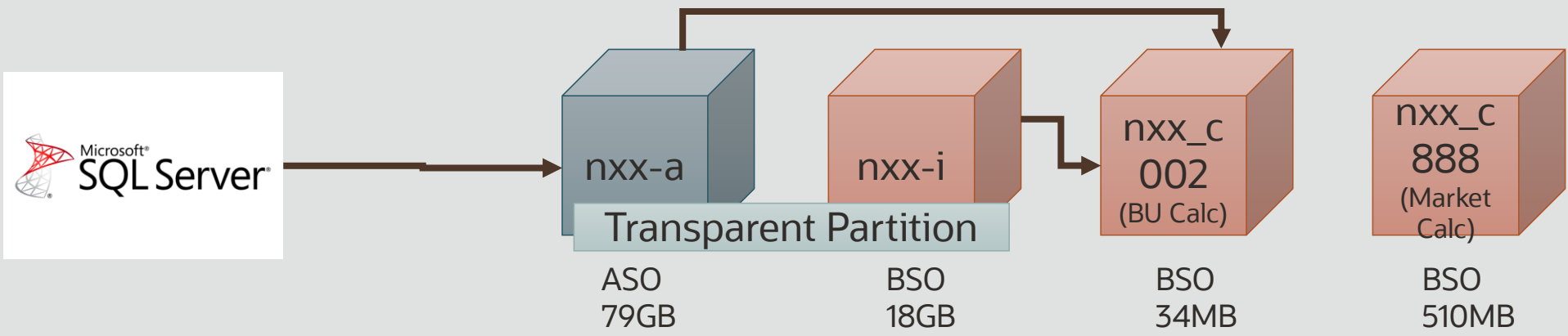
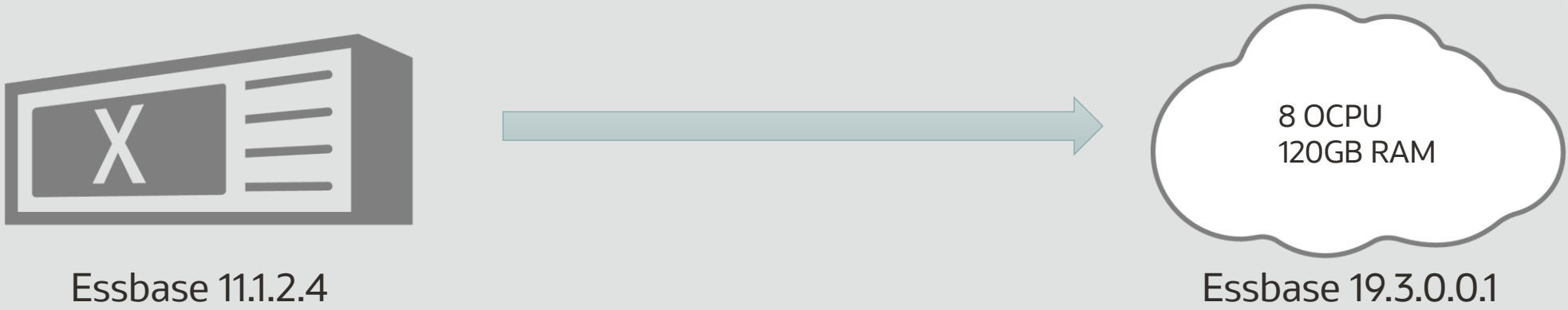
Calculation
time is equal
or better

Partition
creation
performance
is equal

Response
time is equal
or better

Access from
on-prem
SmartView

We tested migration of both aggregate and input cubes and their load and calculation



Overview of tested cases

#	Test Case	Performance ELY	Performance OCI	Remarks
✓ 1	Migrate cubes to the cloud			
✓ 2	Create partition	20 minutes	20 minutes	
✓ 3	Calculate ASO cube	25 minutes	21 minutes	
✓ 4	Retrieve data from partition + SmartView	Instantly	Instantly	
✓ 5	Reproduce BU Calc	29 seconds* (10 sec for calc)	26 seconds (7 sec for calc)	Changes to file handling required
✓ 6	Reproduce Market Calc	536 seconds	276 seconds	Cloud is twice as fast
✓ 7	Load data from SQL Server	64 seconds	82 seconds	
✓ 8	Connect source to Essbase cloud			Certified
✓ 9	Test creation of filter using Maxl			
✓	Total time used	3329 seconds	2844 seconds	Cloud ~8 mins faster

Financials: in a nutshell

TCO reduced by +67% and +70% incl. HW

Customer is using Essbase since many years for the driver-base planning and Financial Reporting solution in Finance. Essbase is supported by Exalytics (in-memory machines) to deliver fastest performance, accelerate complex retrieves and reduce calculation time.

In term of licenses /hdw:

- BI Foundation Suite licenses
- 12 Exalytics machines
- 1.5 mUSD support / year

Technical and functional maintenance

- 2 external Functional FTE full 550 k\$ / year
- Technical support contract 250 k\$ / year

Hardware and internal customer resources not included

2,150 m\$ /year

OCI subscriptions :

Essbase 19c Marketplace

- Cores based on market zone 451 k\$ ARR

ATP (incl Block st/ VM/Load Bal): 53 K\$ ARR

FastConnect - 10 Gbps (2x): 12,5 k\$ ARR

Technical and functional maintenance

- 1 external Functional FTE full 200 k\$

716 k\$ /year

Thank You!

