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Oracle Essbase

What's New with Essbase

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Agenda

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

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Essbase

Overview of new features

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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

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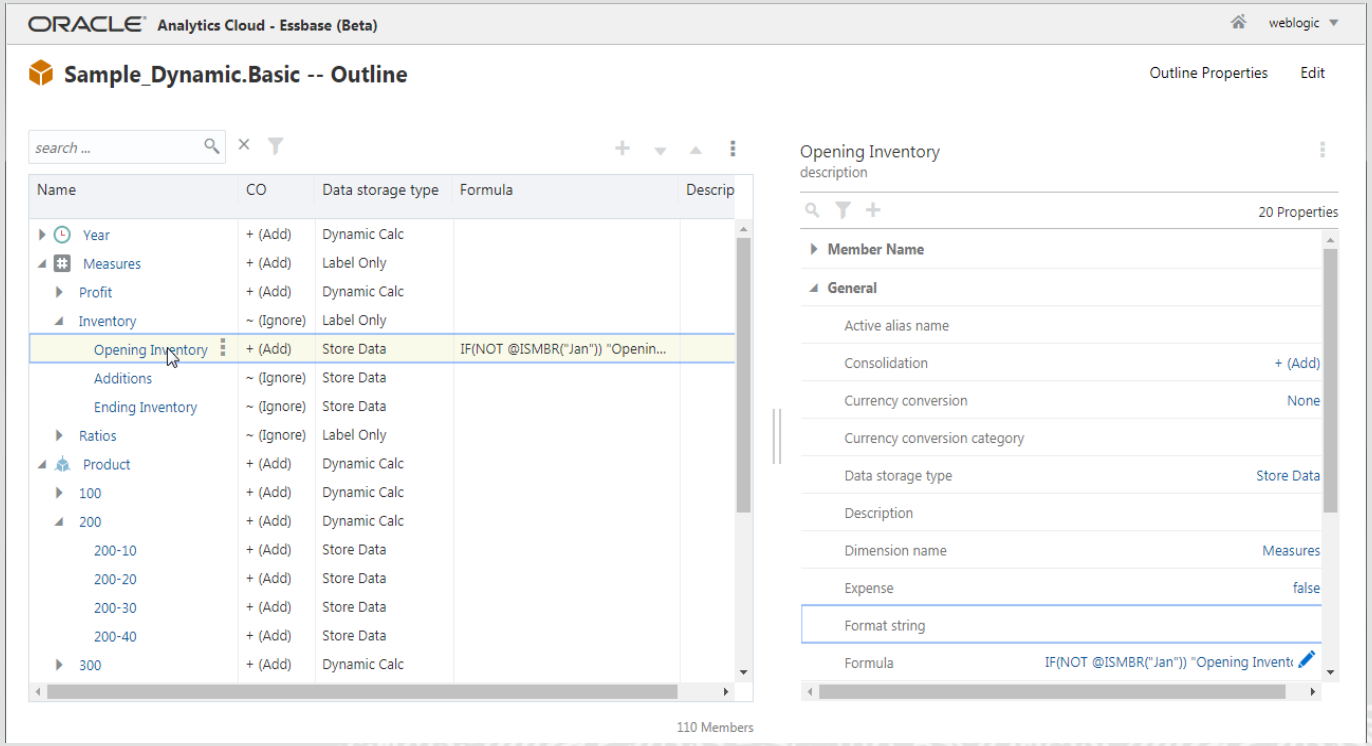
New tools for design and management

Do Everything in the new Essbase UI

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



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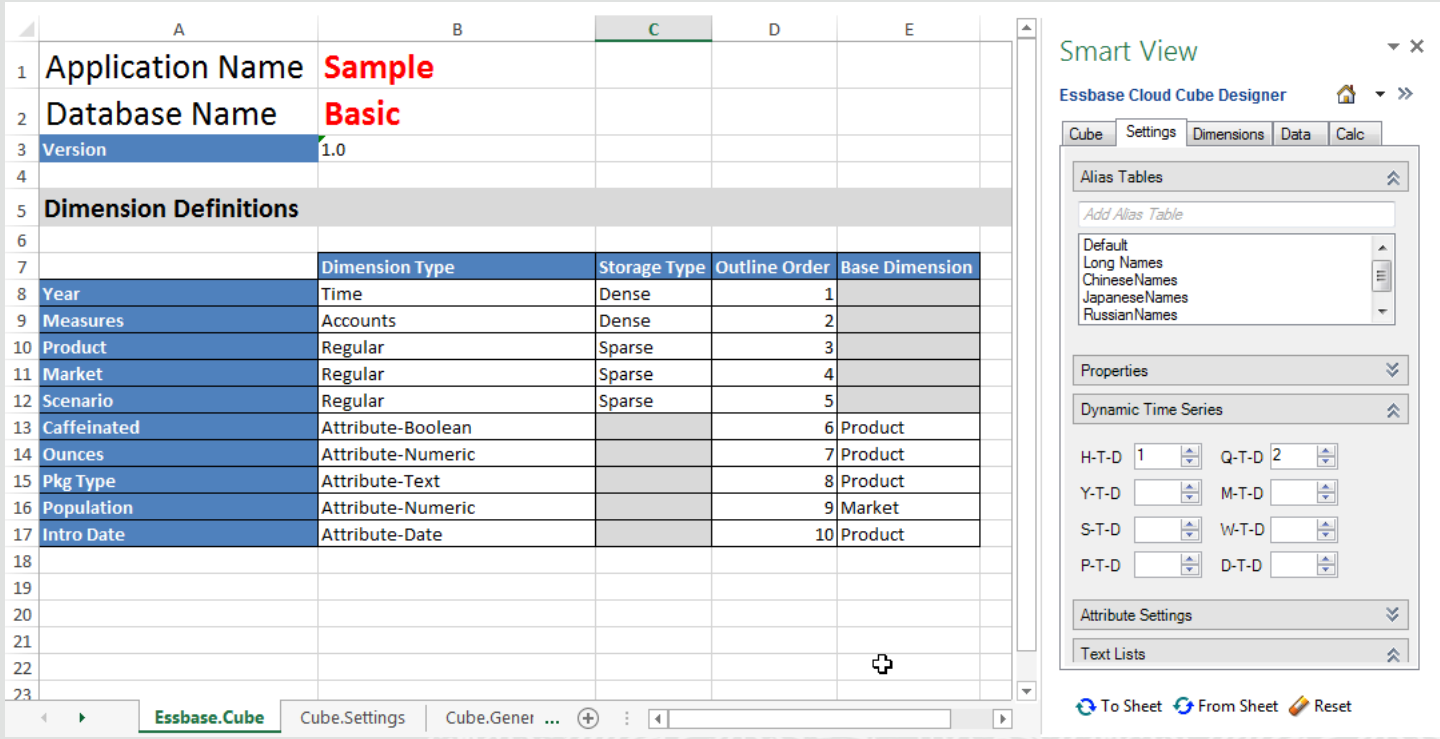
New tools for design and management

Do It All in Excel

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



	A	B	C	D	E
1	Application Name	Sample			
2	Database Name	Basic			
3	Version	1.0			
4					
5	**Dimension Definitions**				
6					
7		Dimension Type	Storage Type	Outline Order	Base Dimension
8	Year	Time	Dense	1	
9	Measures	Accounts	Dense	2	
10	Product	Regular	Sparse	3	
11	Market	Regular	Sparse	4	
12	Scenario	Regular	Sparse	5	
13	Caffeinated	Attribute-Boolean		6	Product
14	Ounces	Attribute-Numeric		7	Product
15	Pkg Type	Attribute-Text		8	Product
16	Population	Attribute-Numeric		9	Market
17	Intro Date	Attribute-Date		10	Product
18					
19					
20					
21					
22					
23					

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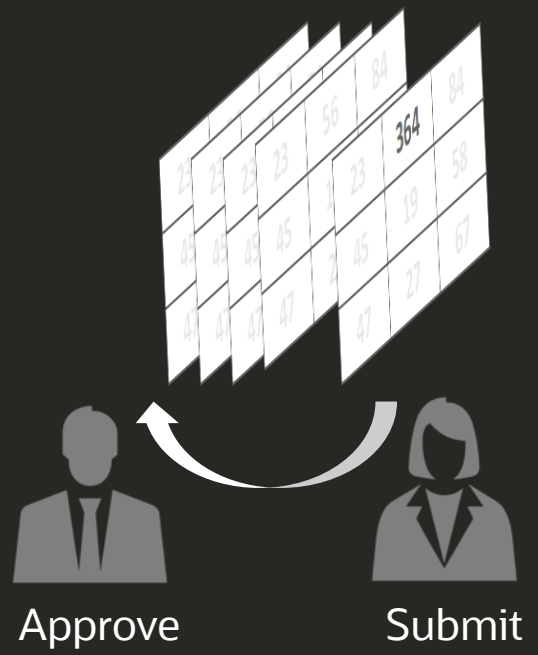
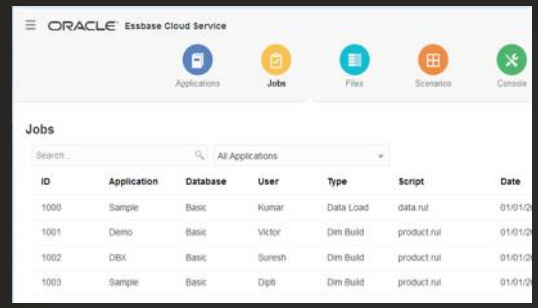
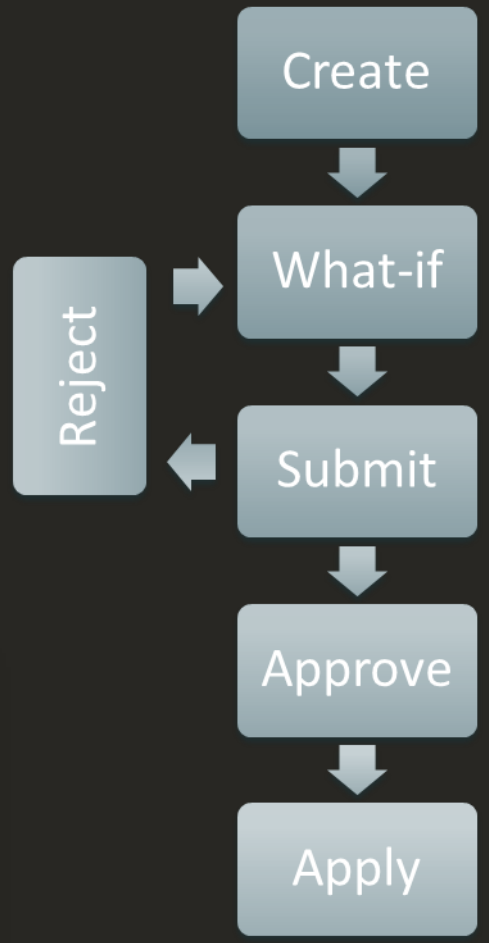
Sandboxing and scenario management

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







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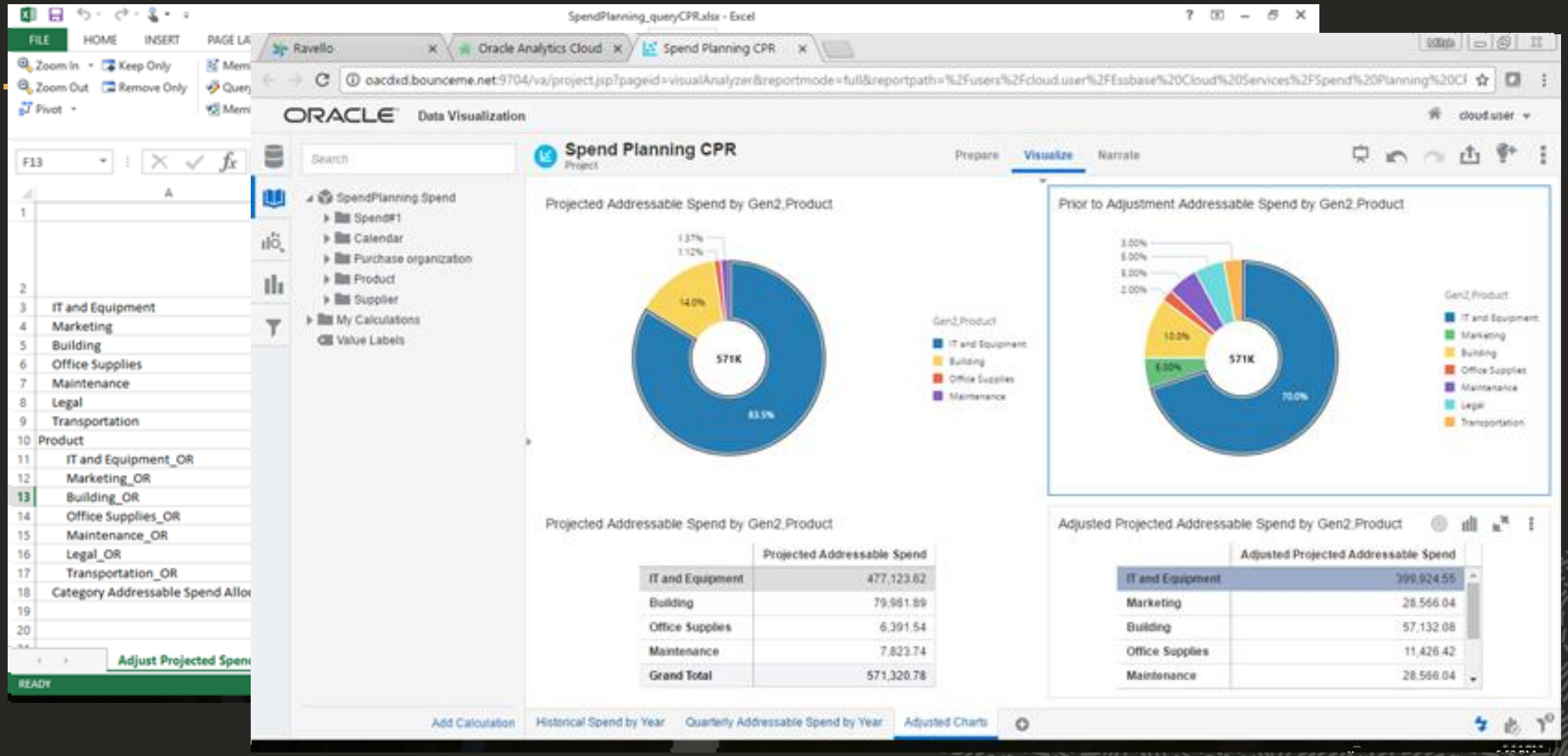
Essbase scenario modeling

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



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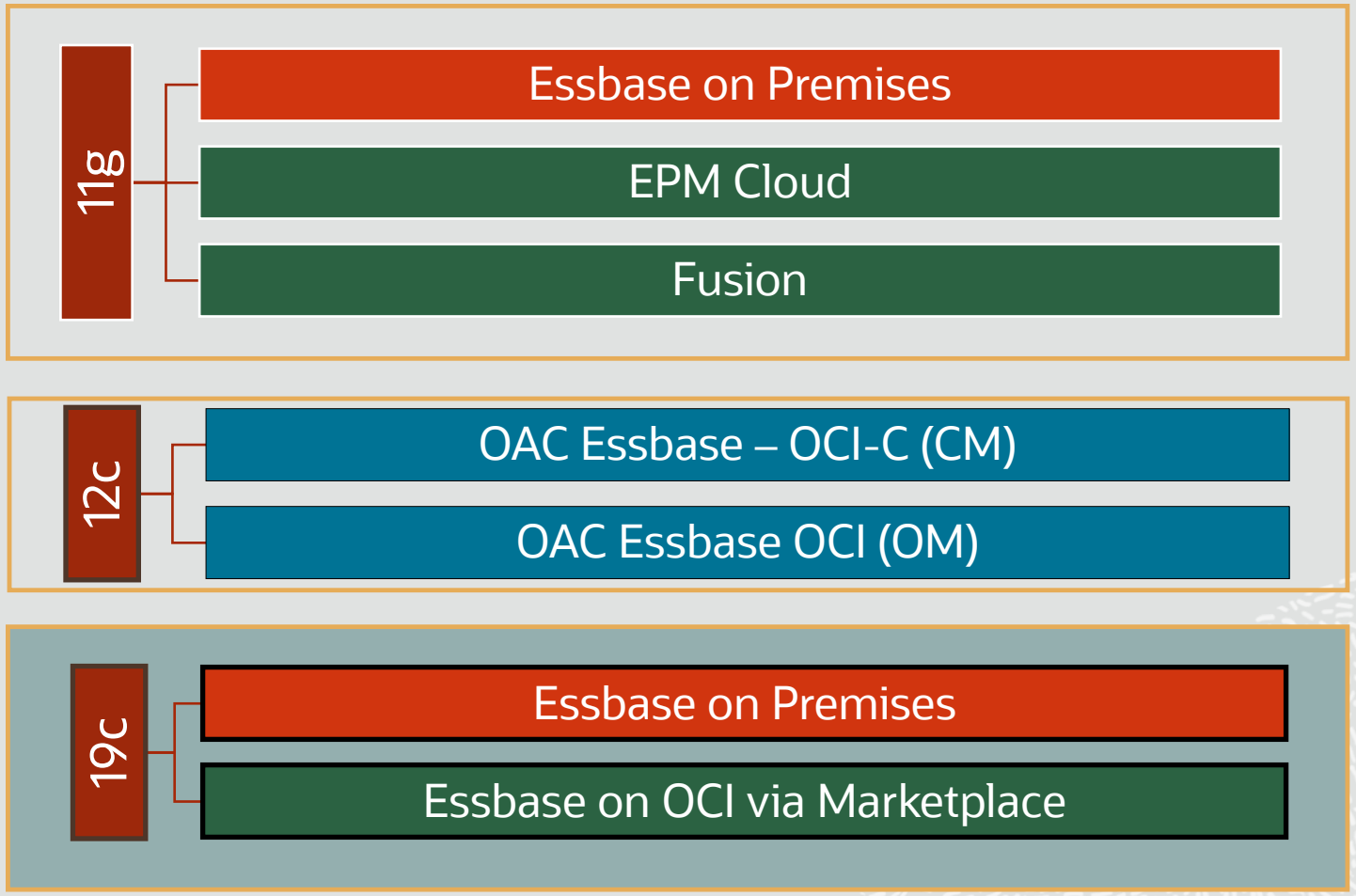
Essbase versions



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Essbase Deployment

Essbase 21c On Premises (just released)

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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

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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

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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

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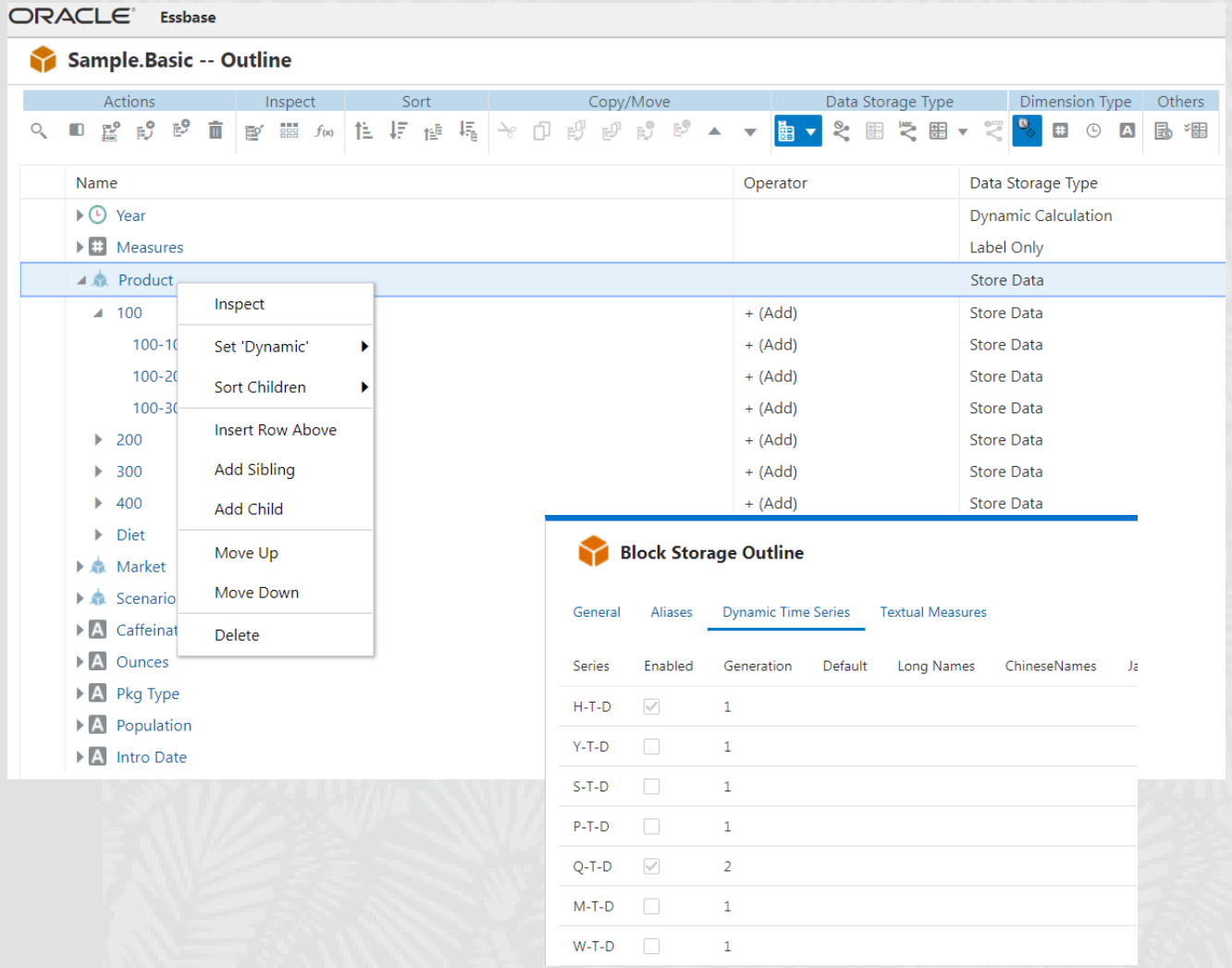
Web UI outline enhancements

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



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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			

Measures	Beginning Inventory	X	F	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	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
1			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
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															

			FY16-Jan	FY16-Feb	FY16-Mar	FY16-Apr	FY16-May	FY16-Jun	FY16-Jul	FY16-Aug	FY16-Sep	FY16-Oct	FY16-Nov	FY16-Dec
7														
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

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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.
```


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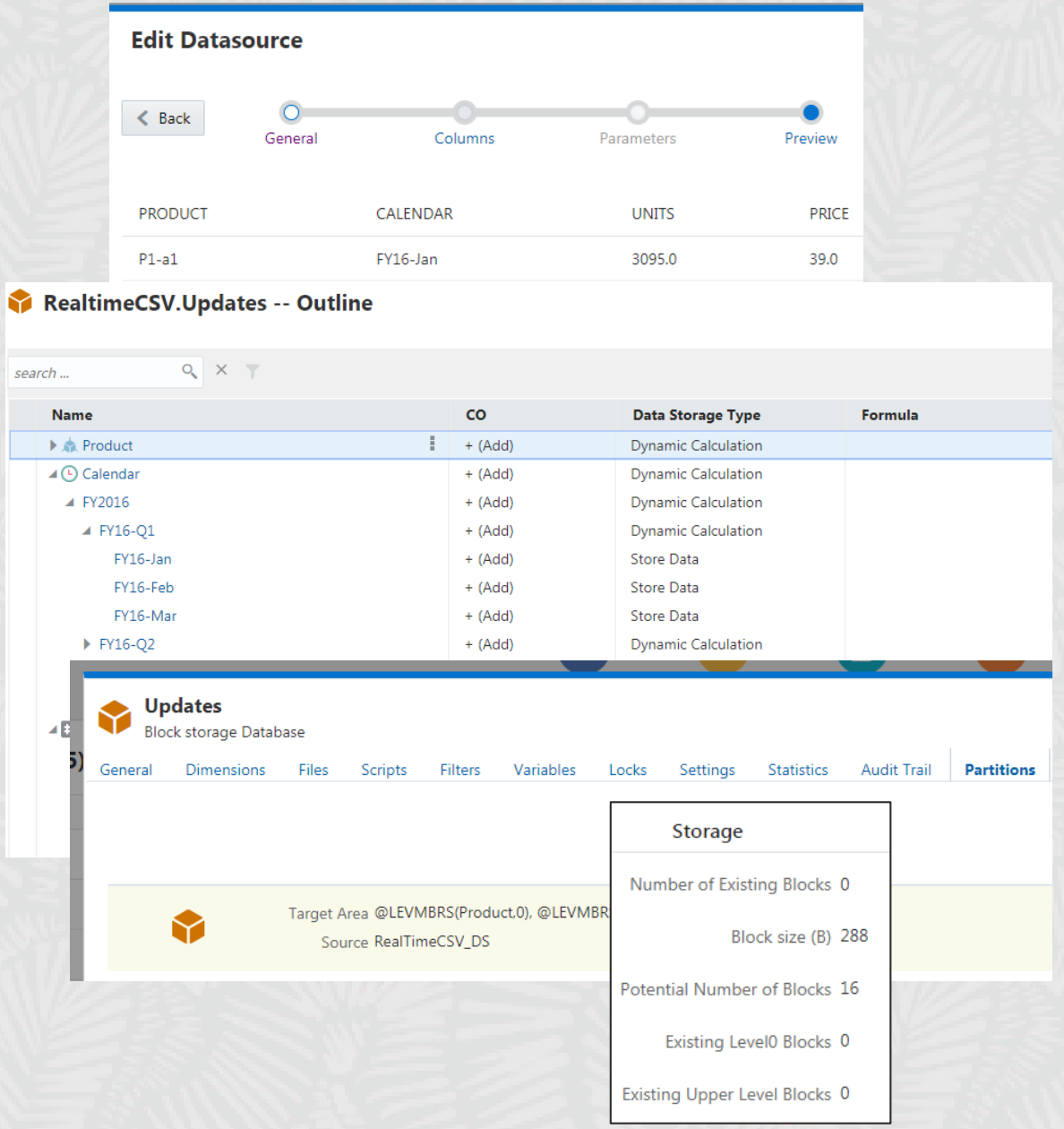
Real time partition

- 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



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Customer NDA

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

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Customer NDA

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

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Customer NDA

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

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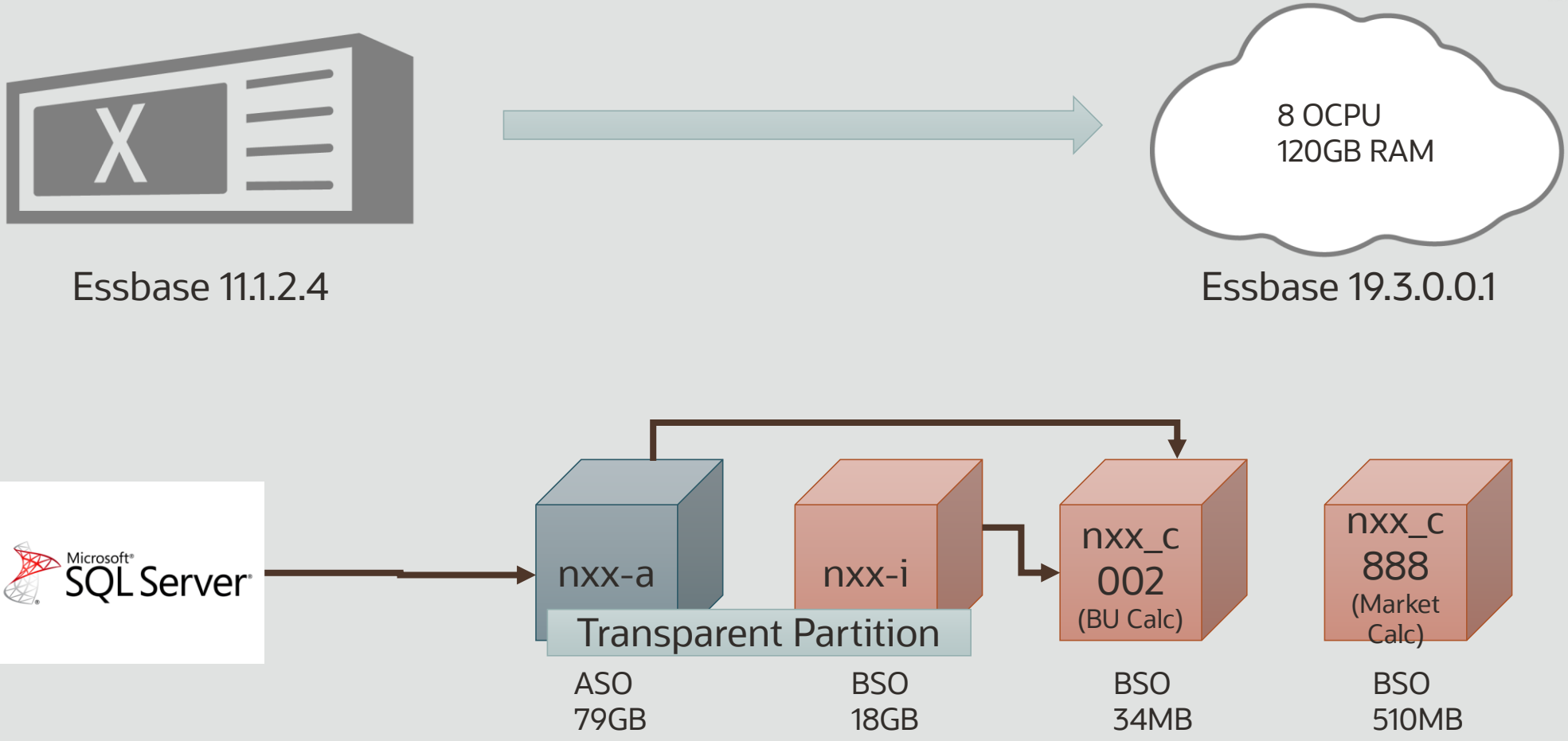
Customer NDA

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



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Customer NDA

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**

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Customer NDA

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

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